S-TEC Corporation

ODA-700096-SW
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(817) 215-7600

ORGANIZATION DESIGNATION AUTHORIZATION PROCEDURES MANUAL

SUBMITTED BY: _____ Ben Morrow S-TEC Corporation Lead ODA administrator DATE:_____ REVISED DATE:	APPROVED BY: _____ Ben Morrow S-TEC Corporation Lead ODA administrator DATE APPROVED:_____
APPROVED BY: _____ Fran Cox Federal Aviation Administration Manager, Delegation Systems Certification Office, AIR-7J0 DATE APPROVED:_____	APPROVED BY: _____ Paul Stoelting General Manager S-TEC Corporation DATE APPROVED:_____
APPROVED BY: _____ Carlton N. Cochran Federal Aviation Administration Manager, Fort Worth Manufacturing Inspection District Office DATE APPROVED:_____	APPROVED BY: _____ James F. Kline Federal Aviation Administration Manager, Fort Worth Aircraft Evaluation Group DATE APPROVED:_____

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APPENDICES

I. LOG OF REVISIONS

REVISION LEVEL	PAGE	REVISION DESCRIPTION	APPROVAL	DATE
-	ALL	Initial Release	FAA	July 1, 2009
1.0	2, 5,15, 21, 118, 119, 121-131 All	Correct typographical error on header of each page. Remove Jim Smisek as ODA administrator throughout manual. Added Randy Harper as ODA administrator throughout manual. Correct ODA number in header, missing “0”. Section 7.0, AFS-640 should be AFS-750. AR delegation outside of scope, Aaron Kidwell. Added Roger Smith as General Manager and updated Organizational Chart Page 121. Relocated ODA to Main Facility page 133.	Dr. Ingrid Knox for Michele Owsley	12-08-09
1.1	7, 11, 20, 42, 53, 121, 133, 146, 344, 346, 364,	Added note regarding UM"s. Added CCB. Remove Flight Operations. Remove CFS103 and added EFRM 7.2-03-01. Upon receipt of the EFRM the ODA will fill out Form 103. Remove Section 45 Paragraph d(2)(b0) and add Paragraph 018. Updated ODA Holder and Unit Organizational Chart. During STC projects all assigned Unit Members are dedicated ODA personnel and will not “share ODA UM duties” with any other department or individual. Updated Appendix E Page Numbers. Remove existing Form 309 and add correct Form 309. Remove existing Form 310 and add correct Form 310. Remove Flight Operations and add Engineering.	Randy Harper	04-18-11
1.2	All 15, 9, 21, 22, 24, 28, 31, 33, 44, 49, 52 111, 113 117 121 thru 131 162 209 268, 269 284 286 287,288	Change Michele Owsley to Monica Merritt. Change Walter Hutchings to Jim Orchard. Change Bruce Cain to Carlton Cochran. Correct revisions and dates of FAA doc. Correct capital A in administrator. Delete Kathy Hott. Corrected typographical and grammar errors to make document more uniform, removed Avionics and Surveillance System Group. Added Applicant Compliance Statement. Added 19 Supplier Control Update Organization Chart and delete unrelated personnel, ,pages 122, 123, 124, 125, 126, 127. 128, 129, 130, 131 Replaced FAA Form 8100-11 with current revision. Replace Revision – of ODA Form 102 with Revision A. Replaced Revision – of ODA Form 108 with Revision A. Instructions ODA Form 200 add item (5) STC Project Feasibility/Planning Review and new step (f) Applicant Compliance Statement under item 15. Replaced Revision – of ODA Form 200 with Revision B.	Randy Harper	11-29-11

REVISION LEVEL	PAGE	REVISION DESCRIPTION	APPROVAL	DATE
1.3	2, 3, 4, 14, 15, 16, 22, 23, 33, 52, 53, 63, 65, 69, 70, 75, 92, 96, 97, 102, 105, 113, 114, 115, 121, 123, 134, 135, 148, 149, 151, 153, 155, 158, 160, 161, 162, 163, 165, 175, 187, 188, 189, 191, 197, 198, 202, 203, 219, 234, 264, 265, 283, 284, 285, 286, 287, 288, 289, 293, 294, 307, 313, 316, 325, 356, 363, 369, 370, 371, 372, 373, 374, 375, 376.	Updated Table of Contents. Change Monica Merritt to J. R. Holton. Updated revisions on reference documents. Made titles on FAA forms consistent throughout document. Replaced tables 4-2 and 4-3 from order 8100-8 with paragraph 402-406. Corrected appendix from 3 to C in par. 3 of self audit responsibilities. Replaced Unit Organizational Chart and ODA Chart with current revisions. Added two TSOA ratings that were inadvertently left off. Updated page numbers on Appendix E sample forms. Added Form 112 to Project Electronic Document Management. Added form 109 to the administrative electronic document management. Updated FAA forms 8100-1, 8100-9, 8100-11, 8110-1, 8110-12, 8120-10, 8130-6, and 8130-9. Updated ODA forms 102, 106, 200, 204, 205, 208, 400, and 403. Added ODA Form 112 Instructions for Continued Airworthiness Change Impact Assessment with instructions. ECO process corrected the release of drawing to documentation control instead of production. Added Appendix H, Memorandum Documenting Supplement Type Certificate Technical Data Retention Procedures. Added Stephen Joseph, Alternate ODA administrator.	Randy Harper Randy Harper	03-04-13 06-25-13

REVISION LEVEL	PAGE	REVISION DESCRIPTION	APPROVAL	DATE
1.4	2, 16, 120, 134	Replaced Lead ODA administrator Randy Harper ODA 100.3 with Lead ODA administrator Stephen Joseph ODA 100.5. Alternate ODA administrator changed to TBD.	Stephen Joseph	09-27-13
1.5	3, 6, 7, 15, 16, 18, 20, 23, 24, 25, 26, 28, 29, 30, 31, 34, 36, 42, 49, 55, 57, 59, 60, 61, 63, 65, 67, 69, 70, 71, 77, 80, 81, 82, 83, 85, 88, 89, 91, 94, 95, 96, 99, 100, 101, 102, 103, 104, 107, 111, 113, 115, 117, 118, 120, 122, 123, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 140, 142, 143, 144, 145, 146, 147, 148, 149, 150, 154, 163, 175, 190, 203, 258, 259, 260, 265, 286, 287, 288, 289, 290, 291, 295, 296, 298, 299, 300, 301, 302, 303, 304, 317, 318, 321, 326, 327, 328, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 358, 359, 365.	Updated table of contents. Updated revisions on Guidance Material. Changed 11061M and 11062M from issue to issue/amend. ODA07U1109 added-x where necessary for continuity. Clarified the adding of unit members to the ODA and unit member listing. Added note addressing service documents. Added for compliance inspection, to be documented on ODA Form 301. Clarified item 5 under Issuance of Special Airworthiness Certificate. Inserted current ODA Holder and ODA Unit organization charts. ODA administrator required functions removed 11160 and 11066M. Flight test pilot, flight analyst, structural, powerplant, mechanical systems and equipment, and electrical systems and equipment removed 11160. Inspection/Airworthiness removed 11066M. Incorporated changes per 8100.15, add Equivalent Level of Safety (ELOS), identified any recommended areas for FAA specific findings based on paragraph 11-7d of FAA Order 8100.15, and ODA to submit quarterly inspection unit member's training status report to OMT. Updated Instructions for form 8100-11, form 8130-9, and form 111. Updated ODA forms 104, 105, 201, 205, 208, 210, 211, and 403 with new revisions.	Stephen Joseph	12-31-13

REVISION LEVEL	PAGE	REVISION DESCRIPTION	APPROVAL	DATE
2.0	2, 3, 4, 7, 8, 10, 11, 12, 15, 17, 18, 24, 25, 26, 31, 32, 33, 35, 60, 61, 87, 106, 111, 112, 113, 115, 118, 128, 129, 130, 140, 144, 145, 196, 344, 345, 346, 361, 370	To incorporate changes per 8100.15B Change 1. Change title of Roger Smith to President. Added CPN to abbreviations. Replaced ODA Form 301 with 301A. Updated Table of Contents and Appendix E Sample Forms page numbers. Reference Documents updated 1350.14A to 1350.14B, added W-Chg 1 to 8100.15B, and updated change 1 to 2 on 8150.1C. Removed Cobham PLC and added Genesys Aerosystems Group Inc. Added to Manual Control, Administrative Changes; Definitions/Form Updates/References; FAA Signed Agreements; Changes That Do Not Affect Procedures. Added statement that –x denotes current revision. Added process for completing the CPN on behalf of the OMT Lead. Added to Major revision process, notification to OMT for removal of UM if for ODA-related performance. STIR removed assistant administrator for review signature and added for approval to ODA administrator. Corrected paragraph numbering in two places. FAA training updated General Session and Inspection Unit members training. Updated requirements for submittal of PNL. Updated requirements for Off Site STC procedures. Updated Powerplant Unit Member required to 1 for DAU projects. Updated organizational charts. Added note to Appendix F for use of qualified UM without notification to OMT.	Stephen Joseph	7-21-14
2.1	11, 17, 18, 21, 22, 62, 70, 112, 118, 137, 372	Reference Documents updated 2150.3B W/Chg 4 to W/Chg 6 and 8110.42C to 8110.42D. Corrected amendment on 21.101 from 21-92 to 21-96. Corrected titles on 8110.37E and 8110.48. FAA Control, removed “The FAA will indicate approval of the manual within 30 business days.”. Added Subpart A to Document 8707 throughout manual. Updated process for revision of 8707 for addition of new models to be prior to project. Removed typical FAA Concurrence within thirty days for PNL’s. Changed Flight Test ODA unit member for the routing of Form 104, to Assistant to the ODA administrator. Electrical Systems and Equipment ODA unit Required Function Capabilities remove X for form 103.	Stephen Joseph	12-8-14

REVISION LEVEL	PAGE	REVISION DESCRIPTION	APPROVAL	DATE
3.0	2, 3, 4, 16, 17, 18, 19, 20, 21, 23, 24, 25, 27, 31, 33, 38, 39, 40, 46, 49, 53, 54, 56, 57, 60, 62, 63, 64, 65, 67, 69, 70, 71, 72, 73, 75, 76, 77, 79, 80, 83, 86, 87, 88, 89, 91, 94, 96, 97, 100, 101, 102, 105, 106, 107, 108, 109, 110, 112, 113, 116, 118, 119, 120, 122, 124, 125, 127, 128, 129, 130, 131, 132, 133, 138, 139, 140, 141, 142, 143, 144, 145, 149, 155, 162, 170, 171, 163, 173, 187, 188, 198, 200, 266, 253, 275, 276, 281, 292, 293, 294, 295, 296, 319, 363, 368, 369, 370	Updated Table of Contents. Updated signature page to show all FAA signatures. Updated Abbreviations and Definitions removed DOT, EP, ICAO, and SFA, added DAR. Reference Documents updated to current revision levels and change note to say latest revisions. Updated title for S-TEC General Manager to President. Added Compliance Report throughout document. Added Genesys e-mail address to Lead ODA administrator contact information. Updated requirements for MME. Updated minimum unit member audits to 100 percent and 33 % minimum of data packages to an effort will be made to review all data packages. Updated 48 hours to 24 hours for a potentially unsafe condition. Updated Service Difficulties to remove Form EFRM 7.2-03-01 and updated process. S001 7.0B added procedures for approval of Process Specifications. Added Compliance Report to data that will be compiled, maintained, managed by use of ODA form 200. Change ACO to DSCO throughout document. Remove 42 from MIDO. Procedure S001 added note for responsibility of receiving approval of technical data by appropriate discipline unit members. Updated ASW-150 to ASW-130 throughout document for FAA restructure. Procedure S006 removed Flight Test UM recommended approval for AFMS, will now issue compliance to regulations. Updated MOU. Procedure S009 add new ASW-130 policy for electronic submittal of STC's. Procedure S011 added information to better define conformity data package. Procedure S015 added note to have correspondence for MIDO submittal sent to ODA. Procedure S018 updated Off Site procedure per FAA memorandum. Removed reference to representative of Quality Assurance. Clarified location of records, as hangar. Updated Management Organization chart. Revised UM required Function Capabilities to add forms 110 and 111. Added form 104 to Project Electronic Document Management. Replaced FAA form 8130.29 with 8130.2 throughout document. Added new revisions of FAA forms 8100-2, 8110-2, 8110-12 and 8130-3. Added revision A of ODA form 103, 108 and 110. Added information about risk assessment to instructions for FAA for 8110-1. Change Chelton to Genesys throughout document for EFIS and ADAHRS, updated for company product name change.	Loc Nguyen	03-28-16

REVISION LEVEL	PAGE	REVISION DESCRIPTION	APPROVAL	DATE
4.0	2, 3, 4, 17, 18, 19, 20, 22, 24, 25, 30, 38, 39, 56, 58, 64, 65, 66, 72, 73, 74, 75, 123, 124, 125, 126, 127, 128, 132, 135, 140, 142, 146, 146, 147, 148, 149, 150, 151, 152, 167, 168, 169, 170, 171, 172, 173, 174, 175, 183, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 345, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357. 358, 359, 360, 365, 377, 378, 379, 389, 393, 394	Updated AEG information on sheet 2. Changed ASW-130 to AIR-7J0 throughout Manual. Updated Table of Contents, Added RFMS or Rotorcraft Flight Manual Supplement throughout Manual. Updated revision of FAA Order 8130.2. Updated ODA unit member training requirements. Add requirements for authorization to accept ICA's. Added training for personnel preparing ICA's. Replaced ODA Form 207 TIR with FAA Form 8110-31 throughout Manual. Updated title and revision on 8130.2. Updated change number on FAA order 2150.3B, 8100.15B, 8110.4C, and 8110.49. Updated revision on 8110.48, 8150.1 and AC 21.101-1. Added Part 27 throughout Manual. Added 8110-54A "Instructions for Continued Airworthiness Responsibilities, Requirements and Contents" throughout Manual. Added FAA Notification and Investigating Safety Concerns, Added Subpart B to Subpart A of 8707 throughout Manual. Added sending of AFMS/RFMS to the AEG for review and acceptance. Added function code 11180A, Perform Review and Acceptance of Instructions for Continued Airworthiness (ICA). Added items for ICA to S001 and S002. Added Procedure S020, 11180A for ICA. Added C4c and C106 to Technical Standard Order Authorizations. Added Part 27 software limitations to Electrical Systems and Equipment functions capabilities. Updated page numbers for Appendix E Sample Forms. Added revised FAA Form 8110-1 and updated instructions. Added revised FAA Form 8110-26. Added instructions for FAA Form 8110-31 (Part II). Replaced ODA Form 102 to show form number. Added current revision of ODA Form 112. Added current revision of ODA Form 200. Added current revision of ODA Form 211. Added ODA Form 212. Added current revision of ODA form 310.	Richard Snyder	9-7-2017

REVISION LEVEL	PAGE	REVISION DESCRIPTION	APPROVAL	DATE
4.1	2, 3, 4, 11, 136, 137, 139, 140, 401.	Replaced Roger Smith President with Bill Flood General Manager. Updated MOU, Organization charts, Table of Contents.	Stephen Joseph	4-08-21
4.2	2, 11, 136, 137, 139, 140, 141, 401.	Updated MOU and Organization charts. Changed Bill Flood's title from General Manager to President.	Stephen Joseph	8-10-21
4.3	2, 11, 22, 136, 139, 140.	Updated MOU and Organization charts. Replaced Lead ODA administrator Stephen Joseph ODA 100.5. With Lead ODA administrator Ben Morrow ODA 100.6. Changed Alternate ODA administrator to TBD.	Ben Morrow	3-02-22
4.4	2, 11, 28, 136, 137, 138, 139, 140, 401.	Replaced Bill Flood President with Sharmila Durairaj General Manager. Updated MOU and Organization charts.	Ben Morrow	6-13-22
5.0	3, 4, 11, 15, 16, 17, 19, 20, 21, 24, 27, 33, 34, 35, 37, 38, 42, 45, 50, 51, 52, 53, 61, 67, 69, 70, 71, 76, 90, 126, 128, 135, 140, 142, 146, 150, 158, 167, 173, 182, 183, 184, 185, 186, 187, 188, 190, 221, 227, 302, 306, 321, 339, 341, 385, 386, 396, 397, 398, 399, 400, 404, 405, 410,	Addition of new and longer forms, update page numbers. Addition for new revision of manual. Add electronically distributed manual on company website with UM's being responsible for maintaining manual, for both ODA manual and Unit Member Listing. Remove AEG, CD, RGL, and DIN. Add AED, DRS, and DMS. Change ACO to ACOB and change drawing to Data for MDL. Added Note "Orders referenced with-in this document refer to the specified revision or latest revision. Add Part 29, effect on September 1992 to 14 CFR. Updated change and revision on FAA order 2150.3C. Updated change for 8100.15B.Updated Revision of 8110.37 and 8110.49. Added change to 8110.42. Corrected title on 8130.2. Added 8110-54A. Changed AC 00-58B to 00-68 where applicable. Added (dba) Genesys Aerosystems. Corrected Figures A3 and A4.added in their discipline, and in the latest applicable FAA airworthiness standards, policies, and procedures. Change ACO to ACOB throughout manual. Change form 111 to 110. Insert ODA Responsibilities to Prevent and Address Unit Member Interference. Change RGL to DRS throughout manual. Add Part 29 to Appendix A and were applicable in manual. Add "ODA has full ICA delegation". Remove to send items via "Federal Express, UPS, or US postal Service Next Day Letter" on CD when possible. Add FAA Order 4040.26 where required. Change paper copy to electronic copy. Replace holder chart. Appendix A add "As senior management of the ODA holder, we will protect ODA UMs from actions that constitute inference including reprisal for reporting suspected interference. We understand that changing the employment status, pay, duties, work, location or retention status may be investigated by the FAA." Added 500 series form per FAA notice 8100.17 Replace forms 8110-12, 8130-6, 8130-9, ODA forms 111, 112, 201, 204, 205, and 400 with instructions. Appendix G Remove S-TEC and S-TEC Genesys and add avionics.	Ben Morrow	3-22-23

REVISION LEVEL	PAGE	REVISION DESCRIPTION	APPROVAL	DATE
5.1	2, 11, 12, 139, 140, 143, 144, 360, 361, 413.	Replaced Sharmila Durairaj General Manager with Paul Stoelting General Manager. Updated MOU and Organization charts. Update ODA form 211 per FAA Memorandum Flight Manual Approvals and Delegation of Signature Authority.		

II. LIST OF EFFECTIVE PAGES

The list of pages affected by a revision will be listed in the "Page" column of the "Log of Revisions" in the previous section. This list will provide a record of each page of subject revision.

A complete replacement distribution of this manual will be provided to the FAA OMT and all ODA unit members at any revision or change. The process for conducting these revision changes is provided in Section III "Manual Control".

Following are examples of revisions for both minor and major change revisions of this manual.

Example – Minor Revision

REVISION LEVEL	PAGE	REVISION DESCRIPTION	APPROVAL	DATE
0.0	ALL	Initial Release	FAA	
0.1	11 19 24 63a	Para 3.c(3) - Correct typographical error Para 8.c - Change location of training records Para 15.a(3) - Revise STC application procedure Add Unit Member 300.6 - Rufus Amos, FAA-DER	ODA admin	

Example – Major Revision

REVISION LEVEL	PAGE	REVISION DESCRIPTION	APPROVAL	DATE
0.0	ALL	Initial Release	FAA	
1.p1	11 19 24 63a	Para 3.c(3) - Correct typographical error Para 8.c - Change location of training records Para 15.a(3) - Revise STC application procedure Add Unit Member 300.6 - Rufus Amos	ODA admin	
1.p2	63b	Add Unit Member 300.7 - Ferd Berkel	ODA admin	
1.0	ALL	Incorporate all previous minor revision changes Para 15.b - Change of STC Amendments procedure	FAA	

III. MANUAL CONTROL

A. Changes Requiring FAA Approval

Revision of, or changes to this manual except for those identified here must be approved by the FAA before implementation.

"Minor Revision"
Minor revisions have no appreciable effect on the operation methodology or regulatory requirement of the ODA unit member functions as set forth in this manual. Typical revisions not requiring FAA prior approval will be, but not limited to:

ADMINISTRATIVE CHANGES:

1. Spelling,
2. Grammar,
3. Typos,
4. Punctuation,
5. Abbreviations and Acronyms,
6. Cross References,
7. Table of Contents,
8. Revision Control Sheet Updates,
9. Formatting,
10. Page Numbers (not major section numbers),
11. Sub-paragraph Numbers (not major section numbers),
12. List of Controlled Manual Holders (as applicable),

DEFINITIONS / FORM UPDATES / REFERENCES:

1. Clarity additions to match FAA standard definitions,
2. Updated to latest, most current FAA forms and/or instructions,
3. Internal company form number changes,
4. Minor changes to company / ODA forms that do not affect the intended purpose, content or usage of the form,
5. Update of the revision levels and paragraph citations of FAA orders / ACs as long as the manual procedures are not changed,

FAA SIGNED AGREEMENTS

Incorporation of an update to an MOU and/or signed FAA agreement already contained or referenced in the manual,

CHANGES THAT DO NOT AFFECT PROCEDURES:

1. Addition of information required by revisions to FAA orders (for example: 8110.4; 8100.15; 8130.2, etc.), that provides additional clarification or guidance but does not make substantive changes to the procedures or requirements,
2. Minor revisions to clarify content without altering the intent or procedures,
3. Internal organizational name change (not organizational structure). Any name change for the ODA holder or changes in the ODA holder/unit organizational structure must be submitted for approval,
4. Facility arrangement changes,
5. STC project data distribution changes,
6. Addition or removal of forms listed in appendix E,

“Major Revision”
All other revisions and changes require FAA approval.

B. FAA Control

All revisions to this manual requiring FAA approval will be submitted by the organization’s ODA administrator and approved by the OMT Lead prior to incorporation into the manual.

The OMT will return the signed manual to the ODA administrator for distribution.

C. S-TEC Control

1. When the ODA administrator determines that the manual requires revision or change, a determination of minor/major revision will be made by the ODA administrator. The following process appropriate to the determination will be followed by the ODA administrator.

a. Minor Revision Process

1. The ODA administrator will incorporate the revisions and changes into the manual. The Log of Revisions will be revised to reflect the pages and paragraphs, or sections affected by the revisions or changes. A chronological

listing of the minor revisions will be maintained by incrementing the "decimal number suffix" of the current revision level of the manual and listing a description of the revision in the Log of Revisions. All pages of the revised manual will indicate the current revision level of the manual.

2. The ODA administrator will place the new minor revision into effect immediately making it the current revision. At that time, any previous revisions are cancelled. The current revision will be distributed in the following manner**:**

   (a) A letter explaining the minor manual revision change along with the revised manual will be prepared and submitted to the OMT for concurrence within 30 calendar days after the manual is revised. At the same time a letter explaining the minor manual revision change along with the revised manual will be prepared and submitted to the active ODA unit members. The revised manual will be distributed electronically by using the company website. ODA unit members and the OMT lead will be assigned login access to the latest revision of the ODA manual using the company website.

   (b) ODA unit members will be responsible for maintaining a current ODA Procedures Manual revision

   (c) The ODA administrator will retain Master copies of past revisions indefinitely or until surrendered to the FAA.

b. Major Revision Process

1. The ODA administrator will incorporate the revisions and changes into the manual. The Log of Revisions will be revised to reflect the pages and paragraphs, or sections affected by the revisions or changes. A draft of the entire manual incorporating the major and all prior minor revisions will be prepared to communicate the proposed major revision to the FAA. Each draft of the major revision will be denoted by a "p" and decimal number suffix. The decimal number will be created from the proposed revision number, starting at x.p1, sequencing to x.p2, x.p3, x.p4, and so on, for each draft in work, where x is the proposed new major revision number. All pages of the revised manual will indicate the current revision level of the manual.

2. When the FAA indicates written acceptance of the proposed major revision, the ODA administrator will prepare a final draft for FAA review and approval by:

a. Incorporating any changes as agreed to by the ODA administrator and the OMT.
b. Changing the revision number to the ascending whole number by changing the denoted decimal number suffix to “x.0”.
c. ODA administrator signature and date.

3. The ODA administrator will submit the final draft to the OMT Lead for FAA review and approval.

4. The OMT will review and approve the major revision change and communicate a written response of the approval as outlined in Paragraph b. “FAA Control” of this Section.

5. When the ODA administrator receives FAA approval of the major revision to the manual, the new revision will be placed into effect immediately and become the current revision. At that time, any previous revisions are cancelled. The current revision will be distributed in the following manner**:**

   (a) The revised manual will be distributed electronically and by using the company website. ODA unit members will be assigned login access to the latest revision of the ODA manual using the company website.

   (b) ODA unit members will be responsible for maintaining a current ODA Procedures Manual revision.

   (c) The ODA administrator will retain master copies of past revisions indefinitely or until surrendered to the FAA.

(a) To whom is on the distribution list, and allowed access to the manual revisions,
(b) Date of notifications of revisions provided to the ODA unit members, and

IV. ABBREVIATIONS AND DEFINITIONS

14CFR	Title 14 of the Code of Federal Regulations
ACOB	Aircraft Certification Office Branches
AD	Airworthiness Directive
AED	Aircraft Evaluation Division
AFM	Aircraft Flight Manual
AFMS	Aircraft Flight Manual Supplement
AFS	Flight Standards Aircraft Registration Branch
ASI	Aviation Safety Inspector
CAR	Corrective Action Request
CCB	Configuration Control Board
CCL	Compliance Check List (ODA Form 202)
CIP	Conformity Inspection Plan (ODA Form 203)
CPN	Certification Project Notification
DAR	Designated Airworthiness Representative
DER	Designated Engineering Representative
DMS	Designee Management System
DRS	Dynamic Regulatory System
ELOS	Equivalent Level of Safety
FAA	Federal Aviation Administration
FCOM	Flight Crew Operating Manual
FSDO	Flight Standards District Office
ICA	Instructions for Continued Airworthiness
ID	Identification
MDL	Master Drawing / Data List
MIDO	Manufacturing Inspection District Office
MMEL	Master Minimum Equipment List
MOU	Memorandum of Understanding
ODA	Organization Designation Authorization
OMT	Organization Management Team
PMA	Parts Manufacturing Approval
PNL	Program Notification Letter
PSCP	Project Specific Certification Plan (ODA Form 201)
RFC	Request for Conformity (FAA Form 8120-10)
RFMS	Rotorcraft Flight Manual Supplement

ABBREVIATIONS AND DEFINITIONS (CONT'D)

SDR	Service Difficulty Report
STC	Supplemental Type Certificate (FAA Form 8110-2)
STIR	Supplemental Type Inspection Report (FAA Form 8110-26)
TC	Type Certificate
TCDS	Type Certificate Data Sheet
TIA	Type Inspection Authorization (FAA Form 8110-1)
TIR	Type Inspection Report (FAA Form 8110-31)
TSO	Technical Standards Order
UM	Unit Member

Data Drawings, specifications, requirements documents, design definition documents, test plans, and test reports containing sufficient descriptive and substantiating compliance information to completely describe the design of the modification or installation.

STC Package The compilation of but not limited to the PNL, PSCP, CCL, CIP, STC data with substantiating FAA regulation compliance determinations, Compliance Report, FAA response information and FAA-ODA communications pertinent to the project, Instructions for Continued Airworthiness, Aircraft Flight Manual Supplement, Conformity records, Type Inspection Authorization, Supplemental Type Inspection Report, Type Inspection Report, STC Board meeting summaries, and other information pertinent to issuance of the STC.

Business Day Based on a five day, forty hour work week, with days of operation of Monday through Friday. A business day does not include published Government and Company holidays on which normal business operations are not conducted.

V. REFERENCE DOCUMENTS

Note: Orders referenced within this document refer to the specified revision or latest revision.

14 CFR part	**FAA Orders**	**Title**
	1350.14B	Records Management
21 effective 16 Apr 2011 21.3 amdt 21-101 21.33 amdt 21-92 21.47 amdt 21-101 21.53 amdt 21-92 21.101 amdt 21-100 21.113 amdt 21-101 21.115 amdt 21-77 21.197 amdt 21-92 23 in effect on 17 Feb 1987 27 in effect on 30 Jan 2012 29 in effect on 16 Sept 1992 34 in effect on 31-Dec-2012 36 in effect on 04 Aug 2005 39 in effect on 21 Aug 2002 43 in effect on 02 Apr 2010	2150.3C W/Chg 7 4040.26C 8100.8D 8100.15B W/Chg 3 8110.4C W/Chg 6	FAA Compliance and Enforcement Program Aircraft Certification Service Flight Test Risk Management Designee Management Handbook Organization Designation Authorization Procedures Type Certification Designated Engineering Representative

145 in effect on 31 Jan 2004 145.203 amdt 145-27 183 in effect on 14 Nov 2005 183.45 amdt 183-12 183.61 amdt 183-14 183.63 amdt 183-14 183.67 amdt 183-12 183 subpart D in effect on 14 Nov 2005	8110.37F 8110.48A 8130.2J 8130.21H W/Chg 1 8110.42D W/Chg 1 8150.1D 8110.49A 8110.54A	(DER) Handbook How to Establish the Certification Basis for Changed Aeronautical Products Airworthiness Certification of Products and Articles7 Procedures for Completion and Use of the Authorized Release Certificate, FAA Form 8130-3, Airworthiness Approval Tag Parts Manufacturer Approval Procedures Technical Standard Order Program Software Approval Guidelines Instructions for Continued Airworthiness Responsibilities, Requirements and Contents

Advisory Circulars	AC 00-68 Aircraft Certification Service Voluntary Disclosure Reporting Program AC 21-40A Guide for Obtaining a Supplemental Type Certificate AC 21.101-1B Establishing The Certification Basis of Changed Aeronautical Products
S-TEC unit member listing	S-TEC ODAA07U1109 (latest rev)
Other	S-TEC Supplemental Type Certificate directory document #8707 Subpart A and B

1. PREFACE & INTRODUCTION

A. This procedures manual establishes the responsibilities and procedures to be followed when performing the functions authorized by the FAA under the ODA procedures of 14 CFR part 183 subpart D.

B. All formal ODA unit communications with the FAA will be conducted by:

Ben Morrow
Lead ODA administrator
S-TEC Corporation
One S-TEC Way
Mineral Wells, TX 76067
817-215-7750
Ben.Morrow@s-tec.com or Ben.Morrow@genesys-aerosystems.com

C. Communications will be conducted via telephone, email, FAX, and USPS, UPS or FedEx Letter. All formal ODA operations related communications will be conducted via written letter only, while STC projects and general communications will be conducted via any of the methods previously mentioned.

D. To simplify identification of the parties within this document the Federal Aviation Administration will be referred to as FAA, the FAA Organization Management Team will be referred to as OMT, and S-TEC Corporation will be referred to as S-TEC.

2. AUTHORIZED FUNCTIONS AND LIMITATIONS

A. STC ODA AUTHORIZED FUNCTIONS

S-TEC is authorized to perform the following STC functions under 14 CFR part 183, subpart D, and FAA Order 8100.15:

Function Code	Function	Limitations
11010E	Approve Technical Data and Find Compliance to the Airworthiness Standards	Refer to (1) and (2) below
11020E	Issue STCs and /or Amendments	Refer to (1) and (2) below
11040E	Approve Operational and Repair Information	Refer to (1) and (2) below
11050E	Approve Airworthiness Limitations Information	Refer to (1) and (2) below
11070E	Establish Conformity Inspection Requirements	Refer to (1) and (2) below
11080M	Determine Conformity of Parts and Test Articles	Refer to (1) and (2) below
11090M	Determine Conformity of Test Setup	Refer to (1) and (2) below
11100M	Determine Conformity of Installations, including TIA Inspections on a Product	Refer to (1) and (2) below
11110E	Perform Compliance Inspections	Refer to (1) and (2) below
11061M	Issue/Amend Standard Airworthiness Certificates	Refer to (1) and (2) below
11062M	Issue/Amend Special Airworthiness Certificates	Refer to (1) and (2) below
110610M	Issue replacement for a lost, stolen, or mutilated standard or special airworthiness certificate.	Refer to (1) and (2) below
11180A	Perform Review and Acceptance of Instructions for Continued Airworthiness (ICA)	Refer to (1) and (2) below

Note: All authorized functions except issuance/amendment of STC's may be performed by the ODA prior to receiving the FAA response to the PNL. The functions completed prior to the PNL response are "at risk" and may have to be revised or redone based on the requirements of the PNL response.

B. LIMITATIONS

1. The ODA holder is limited to operations, alterations, modification, installations, and certification actions listed above as associated with:

   Avionics & Surveillance products;
   Autopilot systems
   Cockpit instruments (attitude gyros, HSI, turn coordinator, etc.)
   Electronic Flight Instrument Systems (EFIS)
   Data Acquisition Unit (DAU) systems
   Attitude Reference systems (ARS)
   Heading Reference systems (HRS)
   Air Data systems (ADS)
   Air Data Attitude Heading Reference systems (ADAHRS)
   Navigation equipment
   Communication equipment
   Emergency Locator Transmitters (ELT)
   Direction Finding (DF) equipment
   Antenna (HF, VHF, SHF, UHF, GPS)

   And other directly related products when combined or as required with products and systems listed above.

2. The ODA holder is limited to operations, alterations, modification, installations, and certification actions listed above as associated with:

   CAR 3, make and model aircraft; as listed in S-TEC Corporation STC Directory Document 8707 Subpart A or B (Latest Revision)

   14 CFR Part 23, 27, or 29, make and model aircraft; as listed in S-TEC Corporation STC Directory Document 8707 Subpart A or B (Latest Revision).

   Note: All proposed model changes to STC Directory Document 8707 Subpart A or B will be submitted to FAA for concurrence prior to any revision. FAA concurrence will be acknowledged by signature of OMT on S-TEC Corporation Form 86375, “New STC ST-XXXX kit number for STC directory”.

   Note: Revisions to STC Directory Document 8707 Subpart A or B must be completed for new model additions prior to the applicable ODA project.

After FAA concurrence is received per signature on noted forms, Document 8707 Subpart A or B will be revised by S-TEC engineering to include change details specified in Form "Proposed Addition of New" block. Revised document will then be reviewed for correctness and form 86375 initialed by ODA Lead administrator in the "implemented by" area prior to release.

The ODA holder must obtain FAA concurrence on the application of all Equivalent Level of Safety (ELOS) revisions.

3. The ODA holder must obtain FAA concurrence before accomplishing an alteration that affects any AD requirements or airworthiness limitations.

4. The ODA holder must obtain FAA approval for projects that affect aircraft noise or fuel venting and exhaust emissions.

5. The ODA is limited to the specific products, parts, processes, or appliances identified in this procedures manual.

6. Prototype alterations when authorized by OMT must be accomplished at a FAA acceptable facility and by a FAA authorized entity. Off-site facilities can be used when qualified in accordance with 14CFR part 43 and agreed to by the OMT. Procedures for off-site operations are described in (Ref Procedure S018) in section 15 of this procedures manual).

7. Additional Limitations.

   a. The ODA <u>will not</u> perform the following and will rely upon the FAA to:

      1. Interpret Airworthiness Standards.

      2. Approve Issue Papers.

      3. Approve compliance findings involving acoustical change requirements of 14CFR part 36.

      4. Approve compliance findings involving exhaust emissions requirements of 14CFR part 34.

      5. Approve the application of ELOS provisions applied under the provisions of 14CFR part 21.

6. Approve the Airworthiness Limitations section of Instructions for Continued Airworthiness.

7. Approve original and changes to Master Minimum Equipment List.

8. Approve elimination or extension of life limits on life-limited components.

9. Approve elimination or revision of AFM limitations that were incorporated as a result of an Airworthiness Directive.

10. Approve changes to the primary aircraft flight crew operating manual.

8. Policy/Facilities

a. Policy Requirements

The ODA unit will stay informed of the latest FAA policies applicable to the projects it performs and propose certification plans that conform to these policies.

9. Authorized Facilities

a. The following are facilities with a FAA certificated entity where prototype STC alterations and PMA/TSOA efforts will be performed:

1. S-TEC Corporation
   Certification Hangar
   FAA-CRS FF2R818K
   One S-TEC Way
   Mineral Wells, TX 76067

3. ORGANIZATIONAL STRUCTURE AND RESPONSIBILITIES

A. S-TEC management is responsible for:

1. Establishing corporate policies that will not conflict with FAA regulations or policy. The management is to remain independent of, and not interfere with, the findings and activities conducted under the ODA authority.

2. Provide and maintain adequate qualified personnel to accomplish the delegated activities.

3. Ensuring that all ODA personnel receive the training required by this ODA Procedure Manual.

4. Provide the necessary support and personnel and facilities in support of internal or FAA audits or evaluations when they are being accomplished.

B. S-TEC management will ensure that:

1. All ODA personnel have the knowledge and skills sufficient to perform their duties.

2. All ODA personnel have sufficient authority within the organization to make binding decisions to assure that products meet the applicable regulations, conform to the type design, and are in condition for safe operation.

3. No ODA unit member will be asked by management to improperly use his/her authority on behalf of the company.

4. Regulatory, policy, guidance, and procedural material necessary for the ODA personnel to perform their duties is readily available.

C. Organization Chart:

S-TEC Corporation (ODA holder), doing business as (dba) Genesys Aerosystems.

The ODA Unit operates under direction of the ODA holder and has a staff of Unit Members necessary to fulfill the functions and limitations specified in Section 2.

The ODA administrator maintains managerial reporting to S-TEC General Manager.

All ODA unit members report directly to the ODA administrator. A pictorial representation of the organization responsibilities is provided in Appendix B.

4. ODA ADMINISTRATOR AND ODA UNIT DUTIES AND RESPONSIBILITIES

A. ODA administrator responsibilities

The ODA administrator is the focal point for the organization and has the primary responsibility and authority as the ODA administrator for assuring compliance with FAA regulations, policy, guidance and directives.

1. All forms the ODA administrator is authorized to sign are listed in Appendix D.

2. The ODA administrator is responsible for managing the performance of all authorized functions, including the incorporation of corrective action for all deficiencies identified by the OMT.

3. All formal incoming and outgoing FAA correspondence will be directed to and from the ODA administrator. This will include concurrence of compliance with major vs. minor determination (Ref Appendix G)

B. ODA Unit Member Responsibilities

These individuals are responsible for approving substantiation data and reports, determining conformity, issuing airworthiness certificates and performing other FAA authorized functions as delegated.

1. Certain statements, forms and certificates must be signed by the ODA administrator or appointed ODA unit members.

2. All forms the ODA unit members are authorized to sign are listed in Appendix D.

3. Each ODA unit member's authority and limitations are maintained on the ODA unit listing in S-TEC document number ODAA07U1109-x (-x denotes current revision). Latest revision of UM listing should be verified with the ODA administrator prior to use.

4. To have official FAA approval status, the ODA unit member's signature on documents must be signed by the individual and contain the ODA Authorization number. The manner and form of these reports, documents, and forms will be in accordance with current FAA policy.

C. ODA Unit Member Identification, Authority, Function, Limitations

Each individual within the ODA unit is identified with his authority, authorization number, functions and limitations defined in the ODA unit listing.

1. The authority of engineering and flight test ODA unit members will be documented by function code(s) from FAA Order 8100.15 and the form of the DER charts defined in FAA Order 8110.37, 8100.8.

2. The authority of inspection ODA unit members are clearly defined by function codes from FAA Order 8100.15. Each ODA unit member's authority and limitations are maintained in the ODA unit listing in S-TEC document number ODAA07U1109-x.

All ODA unit members will:

a. Comply with the procedures in the approved procedures manual.

b. Comply with the instructions and direction and cooperate with the ODA administrator.

c. Meet the qualifications for his specific functions under the ODA.

d. Cooperate with the FAA when the FAA oversees the ODA holder.

5. REQUIRED CAPABILITIES AND ODA UNIT POSITIONS

A. S-TEC will ensure the ODA unit is staffed with personnel authorized to perform the functions of the organization as described in Appendix D.

1. Each authorized function correlates to at least one ODA unit member's authority as defined on the ODA unit listing shown in S-TEC document control number ODAA07U1109-x, Latest revision of UM listing should be verified with the ODA administrator prior to use.

2. The ODA administrator will notify the OMT Lead any time the ODA unit is not capable of performing a function described in Appendix D.

3. The ODA unit members must meet the requirements of FAA Order 8100.8 for designees performing similar functions.

4. Prior to appointment each Unit Member will be evaluated in accordance with Order 8100.8, Chapter 4, Table 4-1, paragraphs 402-406.

5. Unit Members will also meet the following minimum qualifications.

a. **ODA administrator.** The ODA administrator must have technical experience with the functions performed under the ODA and a broad range of management experience. This experience must enable him to manage the entire ODA unit activities effectively. The following are the minimum requirements for an ODA administrator:

(1) At least five years of working experience with the FAA on projects similar to those authorized under the ODA. This experience must include various levels of technical airworthiness responsibilities and experience (for example, compliance engineer, quality assurance inspector, manufacturing inspector, or airworthiness inspector), and management experience in one or more technical disciplines (such as, engineering, manufacturing, airworthiness, maintenance, or quality assurance).
(2) Comprehensive knowledge of FAA regulations, policies, and procedures applicable to the ODA functions.
(3) Demonstrated sound judgment and integrity.
(4) Sufficient technical knowledge, training, skill, and experience for the specific type(s) of ODA

.

Note: For an ODA administrator to be authorized to accept ICA's, the individual shall also be a current or former Engineering Unit Member/DER or Inspection Unit Member/DAR, and have prior experience preparing or reviewing ICA's. It is also desirable that the individual have experience as a pilot or with aircraft maintenance.

b**. Engineering and Flight Test ODA Unit Members.**

(1) An engineering or flight test ODA unit member must meet the qualifications for **a DER.** These qualifications are defined in FAA Order 8100.8, Designee Management Handbook specified in Chapter 4, Tables. The ODA unit members need to meet only those requirements for the functions and areas they will perform. However, the requirement to have direct working experience with the FAA may be satisfied by having direct working experience within an ODA holder's or other delegated organization.

(2) **Qualification Requirements for an ODA Unit Member Making Findings to Foreign Requirements.** The OMT may authorize (on a case by case basis) an ODA holder to make findings of compliance with foreign regulations in support of STC validation programs. Each ODA unit member authorized to make such findings must thoroughly understand the foreign requirements and be knowledgeable of their application. This knowledge typically will be evidenced by participation on previous validation programs with the foreign authority and the FAA. The ODA unit member listing must identify, for each ODA unit member, the foreign requirements to which the ODA unit member is authorized to make findings.

c. Manufacturing and Maintenance ODA Unit Members.

(1) Each ODA unit member performing airworthiness, conformity or maintenance inspections must meet the qualifications to perform those inspections in FAA Order 8100.8. However, the requirement to have direct working experience with the FAA may be satisfied by having direct working experience within an ODA holder's or other delegated organization.
(2) Each ODA unit member determining conformity of installations must have five years of experience performing conformity inspections of installations on a product.
(3) Each ODA unit member performing type inspection authorization (TIA) inspections must have five years of experience inspecting aircraft

systems installations and be able to determine airworthiness of the aircraft before flight testing.

(4) Each ODA unit member performing TIA inspections involving weight and balance of aircraft must have knowledge of weight and balance practices described in FAA Advisory Circular (AC) 120-27, Aircraft Weight and Balance Control.

(5) Each ODA unit member determining conformity of compliance test setups must have two years of experience performing conformity inspections of compliance test setups.

6. ODA UNIT LISTING

A. The S-TEC ODA, under the direction of the ODA administrator, will maintain a current listing of ODA unit members, as provided in S-TEC Document Control No. ODAA07U1109-x.

The ODA unit listing will be distributed electronically either via company website ODA login and/or via email when changes or revisions are made.

1. The list will be provided to the OMT immediately upon a change or revision by methods described above.

2. The listing contains names, signatures, functions and limitations for each ODA unit member.

3. The location and name of company will be provided for any ODA unit member located at facilities other than the ODA holder's address.

4. The authority and limitation for each individual corresponds to the ODA organization's authority and functions defined in Appendix D.

5. Authority for each individual is stated by function code from FAA Order 8100.15. Engineering and flight test functions are further defined using the charts from FAA Order 8110.37.

B. The OMT will be notified, by means of a revised Unit Member Listing, S-TEC document number ODAA07U1109-x., of any ODA unit member placement on inactive status. Adding a unit member to the Inactive status means the unit member will not perform any functions under the ODA. This status is primarily for illness or other long term absence. Return of a unit member from inactive status will also be through revision of the unit member listing document number ODAA07U1109-x and submittal to OMT.

NOTE: The OMT must be notified and provided contact information for the individual if removal of a unit member from the active listing was based on ODA-related performance.

7. ODA UNIT SELECTION AND APPROVAL PROCEDURES

A. S-TEC will determine that proposed ODA unit members are qualified to perform the authorized functions as described in Paragraph 5. S-TEC will evaluate the proposed ODA unit members using the process prescribed in this section.

B. Evaluation and Approval Process – Individuals without Current 14CFR Part 183 Delegation (including individuals with prior Part 183 delegations and ODA unit member candidacy).

1. The proposed unit member will complete and submit ODA Form 105 and a resume' describing in detail prior experience history, to the ODA administrator. Also, if the proposed unit member was a prior DER candidate, submit a copy of the DER candidacy letter depicting the designated functions.

2. The ODA administrator will evaluate, using the guidance provided in FAA Order 8100.8, Chapter 4, Appendix Figures A-3 and A-4, the proposed unit member as applicable to individual designees performing similar (DER, DAR) functions.

3. The ODA administrator will consult with the OMT Lead and acquire (DMS, other) information, if available, on the proposed unit member to ensure that proposed unit members are acceptable to the OMT and verify training appropriate for the designation.

4. The ODA administrator will convene an Evaluation Panel upon satisfactory preliminary review of the proposed ODA unit member.

   a. The Evaluation Panel will consist of two existing ODA unit members and the ODA administrator, one of which will be of the same discipline as the proposed ODA unit member.

   b. The Evaluation Panel either will interview the applicant or document why an interview was not necessary. The Evaluation Panel should determine what questions will be asked before meeting with the applicant.

   c. Following the interview (if required), the Evaluation Panel evaluates the applicant's qualifications and the results of the interview against the appointment criteria and must arrive at a decision.

d. ODA unit member recommendation by the Evaluation Panel requires unanimous vote to move forward on appointment.

e. Formal documentation on ODA Form 105 of the Evaluation Panel and approval signatures will be retained in the ODA unit member file.

5. The ODA administrator will make the ODA unit member appointment and will revise the ODA unit listing as provided for in Section 6.

C. Evaluation and Approval Process – Individuals with Current 14CFR Part 183 Delegation.

1. The proposed unit member will complete and submit ODA Form 105, a resume' describing in detail prior experience history and a copy of the DER designation letter depicting the designated functions, to the ODA administrator.

2. The ODA administrator will evaluate, using the guidance provided in FAA Order 8100.8, Chapter 4, Tables 4-1 and 4-2, the proposed unit member as applicable to individual designees performing similar functions.

3. The ODA administrator will consult with the OMT Lead and acquire designee (DMS) information, if available, on the proposed unit member to ensure that proposed unit members are acceptable to the OMT and verify training appropriate for the designation.

4. The ODA administrator will convene an Evaluation Panel only if the ODA administrator is unable to satisfactorily evaluate ODA unit member qualifications.

a. The Evaluation Panel will consist of two existing ODA unit members and the ODA administrator, one of which will be of the same discipline as the proposed ODA unit member.

b. The Evaluation Panel will interview the applicant or document why an interview was not necessary. The Evaluation Panel should determine what questions will be asked before meeting with the applicant.

c. Following the interview (if required), the Evaluation Panel evaluates the applicant's qualifications and the results of the interview against the appointment criteria and must arrive at a decision.

d. ODA unit member recommendation by the Evaluation Panel requires unanimous vote to move forward on appointment.

e. Formal documentation on ODA Form 105 of the Evaluation Panel and approval signatures will be retained in the ODA unit member file.

5. The ODA administrator will make the ODA unit member appointment and will revise the ODA unit listing as provided for in Section 6.

8. TRAINING

A. The ODA administrator and ODA unit personnel will receive in-house and FAA training in accordance with the procedures set forth in this section. In-house training will be available for FAA attendance or training material will be made available for FAA review.

In-house and FAA training will be presented or delivered in a classroom environment (on or off-site), internet on-line, via email, via teleconference, via Power Point Presentation, or via other methods determined appropriate and acceptable to the ODA administrator. Regardless of what presentation or delivery method, written attendance/confirmation certification will be required for the training records.

1. ODA Training

S-TEC will provide training as administered by the ODA administrator to staff members to ensure continued compliance with the ODA Procedure Manual and the FAA regulations.

Training will be provided for the responsibilities to prevent and address unit member interference. (Ref. Section 9.E.5)

Initial training will be provided upon appointment of ODA unit members, prior to performance of a delegated function, and when a major revision of the manual is approved. In-house training will be conducted every 24 months. Specific dates for the training will be established by the ODA administrator.

a. The ODA administrator will prepare or oversee preparation of training material as appropriate for recurrent or as required when ODA unit changes are implemented. The training will consist of one or all of the following topics:

1. Detailed review of the latest approved revision of this manual.

2. Review of functions delegated to the ODA unit members.

3. S-TEC internal processes.

4. ODA authority and responsibility when performing authorized functions.

5. Applicable FAA regulations, policy, and guidance material.

6. Any other topic deemed necessary by the ODA administrator.

b. In-house ODA unit members will be allocated company time to enable them to remain knowledgeable in their discipline, and in the latest applicable FAA airworthiness standards, policies, and procedures.

c. Company personnel assigned to prepare ICA shall receive training as detailed below.

1. Review of FAA Order 8110.54

2. Review of ODA Manual Procedure S020 and associated Forms

3. Review of example accepted S-TEC ICA.

A training file shall be maintained to document the training provided to company personnel regarding ICA preparation.

2. FAA Training

In addition to the training attended in-house, ODA unit members will also attend FAA sponsored training at FAA designated sites or on-line.

a. The ODA administrator will attend delegation workshops bi-annually or upon notification by the FAA.

b. New ODA unit members must have attended either a DER standardization or an FAA provided seminar as required of designees performing similar functions in accordance with Order 8100.8 within one year prior to appointment as a unit member. It is the responsibility of the ODA unit member to provide proof of attendance to the ODA administrator or the Assistant to the ODA administrator when FAA seminars have been attended for training record. Engineering unit members may complete the “On-line ODA Engineering Initial Training” instead of the online DER initial training if they have not previously completed DER initial training.

c. All ODA unit members will attend FAA provided seminars as required of designees performing similar functions in accordance with Order 8100.8. The training intervals are annually, every calendar year for engineering unit members and every three years for inspection unit members. Engineering unit members are only required to attend the on-line DER recurrent technical sessions. Attendance at the DER recurrent general session is not required.

ODA Unit members who only perform original airworthiness approvals or conformity inspections of engines, propellers and articles, must complete the web-based Recurrent Manufacturing ODA Unit Member Course as their recurrent training rather than the "Recurrent Engines, Propellers, and Articles Seminar" required by Order 8100.8. It is the responsibility of the ODA unit member to provide proof of attendance to the ODA administrator or the Assistant to the ODA administrator when FAA seminars have been attended for training record.

d. ODA unit members will attend FAA provided standardization and recurrent workshops in addition to those listed above as deemed necessary by the OMT and/or the ODA administrator.

B. Training Records

ODA unit member training records will be maintained as provided for in Section 16, Records.

9. SELF AUDIT RESPONSIBILITIES

A. Self-audits will be performed in March of each year and as requested by the OMT. A self-audit will evaluate the personnel, procedures, and records used to perform authorized functions and all administrative procedures followed by the organization. Self-audit of UM personnel will follow the guidelines in paragraph C or D below, as appropriate

B. Self-audits will consist of:

1. Assignment by the ODA administrator of impartial knowledgeable and qualified S-TEC company auditors or outside DER/unit member consultants to perform the self-audit. The audit team will consist of five individuals, one each with competence in: Administrative discipline, Electrical discipline, Mechanical/Structures discipline, Flight Operations discipline, and Quality discipline. One of the individuals will be selected as and participate as the lead auditor.

2. The auditors will make an effort to review all of the STC data packages approved or amended during the previous twelve months and 100% minimum of the ODA unit member records.

    a. The auditors will evaluate STC data compliance requirements, conformity accuracy, package completion and document revision levels will be reviewed.

    b. The auditors will evaluate the extent that the manual procedures were followed in developing the STC data package.

3. The auditors will complete an audit of the ODA unit using the guidance of FAA Order 8100.15 Appendix C, FAA Order 8100.8, and requirements of ODA Self Evaluation Checklist/Report, ODA Form 102.

    a. The self audit will include performance evaluation of the ODA unit members.

    b. The self audit will include evaluation of the procedures used to perform all authorized functions and the other requirements of the ODA authorization, including ODA unit appointment and training, and service difficulty support.

c. The self-audit will include evaluation of whether the ODA holder has complied with this procedures manual.

4. A self audit report will be prepared by the Lead Auditor and will consist of detailed findings of the audit, submitted within five business days of audit completion date to the ODA administrator using ODA Self Evaluation Checklist/Report, ODA Form 102 and any attached Corrective Action Request forms, ODA Form 108. The self audit report will include:

   a. Airworthiness standard noncompliance, root cause, and corrective action.

   b. Any regulatory noncompliance, root cause, and corrective action.

   c. Any Procedures Manual noncompliance, root cause, and corrective action.

   d. Any FAA Policy noncompliance, root cause, and corrective action.

   e. Any Technical Discrepancy, root cause, and corrective action.

   f. Any Procedures Manual Discrepancy, root cause, and corrective action.

   g. Any unsatisfactory determination in any unit member performance, root cause, and corrective action.

   h. Any Special Emphasis Item or Observation for Improvement.

5. Follow-up of audit corrective action will be performed as specified in the self-audit report**.** The proposed corrective actions will be reviewed within five business days of submittal by the ODA administrator and determination made as to disposition of the Corrective Action Request (CAR(s)) in accordance with the procedures outlined in Section 17. Any changes to any process in this manual will be considered for the next minor revision of the manual.

6. The ODA holder will maintain records of self audits for a minimum of five years and submit copies to the OMT within fourteen days after completion date of the audit.

7. The ODA holder will notify FAA within 24 hours of any noncompliance of an operations safety nature that may require an emergency 14CFR part 39 action.

All others require 72 hour notification. A notification due on Saturday, Sunday, or holiday may be delivered on the next working day.

8. The ODA holder will notify the FAA within five business days of any noncompliance of other than operations safety.

9. All FAA notifications will comply with the criteria in FAA Order 2150.3 and AC 00-68.

C. Engineering Unit Member Self-audits

1. Engineering Unit Member (UM) Annual Evaluation.

These following instructions will be used for engineering unit member (UM) completion and submittal of a UM/ODA Interaction Tracking form 110, listing activity during the previous 12 months, and coordination between the ODA administrator and evaluator(s) for completion of individual Performance Evaluation Forms (ODA Form 111).

2. Interaction Tracking Form.

a. The ODA administrator shall ensure an evaluation notification is made to each engineering UM at least 30 days before their scheduled evaluation is due or takes place. 15 days prior to scheduled evaluation date each UM must submit to the ODA administrator a properly completed Interaction Tracking Form (ODA form 110) before the UM appointment can be evaluated. A blank copy of ODA Form 110 will be provided to the UM by the ODA administrator. Form detail instructions are included below.

b. As indicated on the engineering UM Interaction Tracking Form, the UM must provide a brief summary of activity over the previous year. The UM will list any outside engineering and any ACOB engineering contacts worked with on behalf of S-TEC during the previous year as well as a listing of ODA STC projects. This summary will address all technical disciplines in which the UM was authorized.

c. If the engineering UM has delegations in more than one technical discipline, they must submit a tracking form for each appointment. Because the form must be submitted every 12 months, the ODA is assured of being informed of key interactions. The evaluation method is intentionally flexible to allow the ODA administrator to establish the appropriate level of review.

NOTE 1: If an engineering UM is delegated in more than one discipline, the ODA must evaluate performance and activity for each appointment. Lack of activity in a particular appointment is grounds for terminating the UM's delegation for that appointment.

NOTE 2: The UM/ODA Interaction Tracking Form and UM Performance Evaluation Form (ODA Forms 110, 111) are completed annually for the review and documentation of UM oversight. UM performance since the previous evaluation is the basis for the UM continued delegation.

3. Engineering UM Evaluation Procedures

a. Notification to ODA Engineering Personnel Involved in the Evaluation.

b. Multiple Disciplines. If the Engineering UM has authority in only one technical discipline, then the ODA administrator and one UM in the same discipline are the only evaluators. Otherwise, an evaluator must be assigned for each of the other technical disciplines the UM has approval authority in. The ODA administrator must coordinate the review of the renewal package with the other evaluators, including notifying them that the UM has submitted the interaction tracking form.

c. Within Each Engineering Discipline. If the UM has worked with multiple ODA personnel within a specific discipline, the evaluator for that discipline may coordinate the review of the evaluation package with those engineers or flight test pilots. The evaluator may use as many reviewers as they see necessary. However, at least one outside person from any other engineering group and/or FAA ACOB the UM has worked with during the year will also be contacted.

d. The Engineering UM's Files. Files will be evaluated for acceptable activity level, notes on submittals, consultation letters, or any correspondence that would suggest the need for a more critical review. The evaluators will be cognizant of the UM's activities, within their discipline, during the previous 12 months.

e. Engineering UM Independence. Each evaluator will make a determination as to whether the UM has adequate independence to perform assigned duties and adequately administer the pertinent regulations.

f. Unauthorized Activity. Each evaluator will compare the Engineering UM's activity during the previous year to the delegated functions and authorized areas and ensure that no activities are outside the UM's authorization.

g. Not Observed (N/OB).” The N/OB choice is used to indicate that the evaluator and UM are unaware of activity in the area being evaluated. For example, it is very possible that the UM may not have been involved in the identification of significant issues during the review period. In this case, the Not Observed choice is appropriate and would not affect the renewal recommendation. If there is a continued ODA need, justify renewal in the Remarks section.

h. Personal Contact. If personal interaction with the Engineering UM is necessary to resolve a significant performance problem noted, the Remarks section of the UM Evaluation Form will identify the method of resolution agreed to by the evaluator/UM of each issue raised. The evaluator will prepare a paper copy of such a form to be maintained in the UM file. The UM will sign the paper copy verifying their concurrence. If the UM's signature cannot be obtained, a formal letter documenting the needed resolution will be given to the UM and copied in the UM’s file.

4. ODA delegation Continuation Action

a. ODA administrator Approval. After the other evaluators have completed their performance evaluation forms the ODA administrator shall complete the “official" Engineering UM Performance Evaluation Forms (ODA form 110). These forms must incorporate the ratings and recommendations of all evaluators or contain the administrator’s justification within the remarks section. The completed form will be retained in the UM file to document performance and, possibly, to be used as the basis for a termination decision. Other UM Performance Evaluation Forms and the interaction tracking forms will also be maintained in the UM file.

b. Continued Delegation. If there is no change in approval status, the ODA administrator will inform the UM.

5. Causes for Termination of Delegations

a. The following are conditions for Engineering UM delegation termination.

(1) **Termination of employment** with S-TEC.
(2) **Retirement from S-TEC.** Applies to a UM who works for S-TEC and ceases to function as a designee upon retirement from the company.
(3**) Upon Request** of the UM or S-TEC ODA administrator.
(4) **UM leaves** the employment of S-TEC.

(5) **Insufficient Activity**. When the ODA administrator finds that the designee has not had sufficient activity to warrant continuance of the delegation.
(6**) Lapse of Qualifications.** When the ODA administrator finds the UM's qualifications for a specific activity have lapsed.
(7) **Lack of Care, Judgment, or Integrity.** When the ODA administrator finds the UM has not demonstrated the care, judgment, or integrity necessary to exercise the delegation properly.
(8) **Lack of ODA need or Ability to Manage.** The ODA administrator no longer needs the services of the UM or no longer has the resources to manage the designee. The lack of need or ability to manage cannot be the result of one of the other termination conditions. If it is, the other termination condition is considered the termination reason.
(9) **Non-submittal of Continued Delegation Request**. When an UM does not request continued delegation.
(10**) Unsatisfactory Performance.** When the ODA administrator finds that the designee has not properly exercised or satisfactorily performed the duties of the delegation.
(11**) Any Other Appropriate Reason**. Any other reason considered appropriate by the ODA administrator.

b. When evaluating to terminate a delegation based on performance-related issues, the ODA administrator can consider options to aid in improving the UM's performance to a satisfactory level. These options include counseling the UM, providing on-the-job training, recommending the UM take additional formal training, closely monitoring the UM's work activities for a determined amount of time, and reducing the authorized areas/functions before making a termination decision. If the ODA administrator determines that the UM has not improved to the ODA's satisfaction, then the UM's delegation will be terminated. At this point and at the discretion of the ODA administrator, the UM may not be permitted to reapply to the ODA organization.

D. Inspection Unit Member self-audits will include:

The following instructions will be used for inspection unit member (UM) self evaluations and will include annual completion and submittal by the ODA administrator (or his delegated qualified inspection unit member) of a Inspection UM Management Report, ODA form 310, documenting the unit member activity during the previous 12 months.

Note: Not all assessment activities are conducted during the annual assessment period as many are included in basic oversight. These oversight activities

(supervision, monitoring, and tracking) are not necessarily separate oversight activities. They generally are conducted together as part of the ongoing oversight activity. The ODA administrator will provide direct supervision by interfacing with the FAA MIDO (as applicable) focal point while evaluating these self-assessment activities.

The ODA administrator will ensure through the ODA unit member self evaluation process that only qualified inspection unit members perform the authorized functions in accordance with the pertinent regulations, related policies, and procedures.

1. The ODA administrator or his qualified designee (Reviewer) shall ensure an evaluation notification is made to each inspection unit member at least 30 days before their scheduled evaluation is due or takes place.

2. As part of unit member assessment, the reviewer will make a general project assessment ensuring the unit member is performing assigned authorized functions in accordance with the appropriate regulations, policies, and procedures specified within the ODA manual.

3. During the annual evaluation the reviewer will:

   a. Ensure that the unit member has acquired and maintains all guidance material necessary to perform the authorized function(s).
   b. Determine that the unit member is performing within the scope of their authorized function(s).
   c. Verify the unit member's attendance at the appropriate standardization or recurrent seminar is in accordance with this manual (within previous 24 month's).
   d. Verify the unit member was assigned ongoing activities to justify continuance of the function delegation.
   e. Ensure the unit member has the capability for direct communication to appropriate management level personnel if required.
   f. Verify that the unit member is aware of the FAA coordination process specified within this manual for authorization to work outside the geographic area.
   g. Ensure the unit member understands and has within the previous 12 months performed at least one or more of the following activities consistent with their delegated functions, and knows to contact the ODA administrator to obtain any special direction or instructions before performing the following:
      1. Issuance of recurrent standard airworthiness certificate
      2. Issuance of recurrent/original special airworthiness certificate

3. Issuance of special flight permits
4. Issuance of domestic airworthiness approval for parts or appliances
5. Issuing export certificate/approval tag

h. Emphasize that the unit member should seek the ODA administrator's assistance relative to any concerns connected with the authorized functions.

i. Conduct a one-on-one meeting to discuss the unit member's performance. If the unit member fails to demonstrate knowledge of acceptable methods, techniques, and practices the reviewer (if other than ODA administrator) will report details to the ODA administrator who will determine and initiate appropriate corrective action (for example, additional training or counseling).

Within 30 days of completed corrective action, the ODA administrator will conduct a follow up session to determine if the unit member's performance is acceptable. If the unit member's performance remains unsatisfactory, the ODA administrator will consider possible termination of the unit member's delegation.

NOTE: ODA administrator will act on any safety-related situations immediately

4. The reviewer will evaluate the unit member's activity by reviewing the work records and reports for accuracy, and by observing the unit member's activity to ensure that they use proper procedures and satisfactory inspection techniques or methods as follows:

a. During the evaluation the reviewer will witness the unit member's inspection of a completed part to ensure satisfactory inspection techniques are used. Depending on part availability, it may be necessary to use either an in-process or a noncommercial part or product to fulfill this requirement. If the reviewer determines that no suitable product is available, the designee may demonstrate inspection techniques and knowledge of the pertinent guidance material by simulating this requirement.

b. Ensure that all documentation initiated by a designee is processed in accordance with the appropriate regulations, guidance material (for example, Orders, ACs, and Notices), and any direction provided by the ODA administrator. Review a sample of the unit member's documentation and discuss any discrepancies.

c. Review completed documentation of authorized function(s) performed by the unit member. The reviewer should use their discretion based on the experience of the unit member in establishing the level of review.

5. Inspection unit member “on-going” specific assessment considerations.

The following areas (as applicable) specific to the Inspection delegation will also be assessed by the reviewer during the annual evaluation. During the previous 12 months relating to specific projects the Inspection UM must have:

a. Demonstrated knowledge of certification procedures for products and parts of 14 CFR part 21 and the ODA manual.
b. Shows understanding of the ASI involvement/role in the STC process per Order 8110.4 when applicable.
c. Demonstrated the ability to interpret drawings with respect to characteristics such as material, dimensions, general notes, and clearances to determine inspection requirements.
d. Demonstrated the ability to interpret any special processes (for example, welding, heat treat, coating/plating, and nondestructive testing).
e. Demonstrated the ability to inspect parts with the use of standard inspection equipment (for example, micrometer, hardness testers, and height gauges) to determine part conformity.
f. Demonstrated the ability to interpret inspection procedures/records that control fabrication and assembly of components (for example, piece part components, and aircraft structural assemblies,).
g. Demonstrated the ability to interpret test results of products/components to FAA-approved test plans.
h. Demonstrated the ability to conduct inspections leading to airworthiness certificate of aircraft per this manual.
i. Demonstrated the ability to conduct inspections leading to airworthiness certificate using FAA Form 8100-1, Conformity Inspection Record.
j. Demonstrated knowledge of the applicable FAA guidance, directives, and policy contained on the FAA website for the inspection authorization delegated.
k. Demonstrated knowledge of aircraft registration requirements of 14 CFR part 47.
l. Demonstrated knowledge of registration and data plate requirements of 14 CFR part 45.
m. Demonstrated knowledge of the type certificate data sheets, aircraft specifications, and aircraft listings.
n. Demonstrated knowledge of airworthiness directives of 14 CFR part 39.
p. Demonstrated knowledge of maintenance requirements of 14 CFR part 43.

q. Demonstrated general knowledge of the aircraft conformity requirements (FAA Form 8130-9).
r. Demonstrated general knowledge of the aircraft weight and balance requirements.
s. Demonstrated knowledge of proper aircraft ballast safety precautions.
t. Demonstrated general knowledge of the coordination requirement with FAA flight test personnel (FAA STC) with regard to type inspection authorizations (TIA) and conformity inspections.
u. Demonstrated general knowledge of the coordination requirement with ODA flight test personnel with regard to type inspection authorizations (TIA) and conformity inspections.

6. The reviewer will verify the ODA inspection unit member has complied with all provisions of this manual.

7. The reviewer will document unsatisfactory performance issues and the date of follow up on ODA Form 310, Inspection Unit Member Management Report.

8. The reviewer will record the unit member's evaluation by documenting all data pertaining to the designee's activities as follows:

   a. Document the tracking of unit member activity on ODA Form 310
   b. Document Annual Witnessing and the Annual One-on-One Meeting in the remarks section of ODA Form 310
   c. Verify the unit member's work activity as recorded by unit member on previously completed Summary Activity Reports (refer to appendix 5, figure 4 of order 8100.8) or equivalent (ODA form 309).
   d. All forms will be retained in the unit member's file

E. ODA Responsibilities to Prevent and Address Unit Member Interference

Preventing interference with Unit Members performances of their authorized functions on behalf of the FAA is necessary to ensure that such functions are properly conducted. The definition of "interference" in 49 U.S.C. § 44742(d)(2) includes not only acts that a reasonable person would conclude were intended to influence or prejudice the Unit Members performances of authorized functions, but also the presence of non-ODA unit duties or activities, that, regardless of the intent of the person or organization imposing those duties or activities, conflict with the performance of authorized functions by the ODA Unit Member. Interference includes reprisal, such as changing the employment status, pay, duties, work location, or retention status, of any Unit Member for reporting or considering

reporting a concern related to interference with the performance of authorized functions.

1. The ODA holder must conduct an anonymous survey of the ODA unit members regarding ODA holder interference. The survey will be conducted by the ODA or ODA Holder Human Resources on an annual basis. All Unit Members must complete annually ODA Form 501 via an anonymous process.

   The ODA administrator or ODA Holder delegated individual must review all completed 501 Forms for assessment of ODA effectiveness in monitoring and correcting any alleged or actual interference. If unreported interference has been communicated, then the ODA administrator or delegated individual will investigate and document the incident on ODA Form 503.

2. ODA Form 502 should be used to formally capture any interference, perceived interference, or witnessed interference by the ODA or ODA holder. The ODA Form 502 shall be available on the company website via the ODA login and supported ODA resources or physically provided by the ODA administrator or Human Resources Director.

   The ODA administrator, Unit Members, or other ODA Holder individuals may report any witnessed or suspected interference directly to the FAA via the OMT or FAA Hotline.

3. The ODA administrator or Human Resources will conduct investigations of reports of alleged interference with Unit Members. ODA Form 503 must be started as soon as the alleged interference is reported via Form 502 or other method. The Form 503 Sections I and II must be completed and communicated to the OMT within 2 business days of learning of the incident. Investigation of the incident and final results must be completed on ODA Form 503 Section III and IV within 30 days of the initial incident report. Extensions may be requested per Notice 8100.17. Final investigation results must be reported to the OMT with 15 calendar days of its completion.

4. As part of the ODA self-audit procedures required in Section 9, the ODA self-audit must review all reports of alleged interference that occurred during the evaluation period and submit a summary to the OMT. The summary will include all of the reports during the evaluation period documented by ODA Form 503. Any resulting indicators, patterns of actual and potential interference, and improvements that have been made or needing to be made should be included in the summary.

5. Training will be provided for all personnel who are expected to be involved in ODA-authorized functions or interactions with Unit Members.

Training will address the following:

- FAA regulatory requirements and policy related to UM interference and ODA holder internal procedures related to UM interference.
- The potential for a civil penalty under 49 U.S.C. § 44742(b)(1) for an act of interference with a UM's performance of authorized functions if committed by supervisory employees of an ODA holder that manufactures transport category airplanes;
- Roles and responsibilities of the ODA holder and ODA unit related to preventing, addressing, and reporting interference with a UM;
- Contact information for the OMT; and
- Information on the FAA's Hotline reporting program (refer to https://hotline.faa.gov/).

Unit Member training records will be maintained following Section 8 and 16 of the ODA procedures manual.

6. UM and FAA Communication

Communication between the ODA holder, ODA administrators, Unit Members and the OMT is essential for the success of the ODA program, and thus, is in no way prohibited. The ODA holder is responsible for ensuring Unit Members follow the ODA holder's procedures manual, as well as the FAA regulations and policy related to the performance of the ODA holder's authorized functions. Notice 8100.17 clarifies that the FAA recognizes direct communication between Unit Members and the OMT or other FAA staff as an important part of the ODA system. This procedures manual includes the preferred procedures for Unit Members seeking guidance and clarification from within the organization. The ODA holder, through this procedures manual or otherwise, does not prohibit communication to be initiated by a Unit Member. If the OMT needs information regarding the ODA holder's programs, schedules, and corrective actions, OMT members should contact the ODA administrator rather than individual Unit Members to provide that information; however, the ODA holder may not prohibit either the OMT or other FAA staff from communicating with a Unit Member.

Unit Members are free to communicate directly with the OMT or other FAA staff without restriction. It is requested that the Unit Member share the results of communication with the ODA administrator to ensure that the ODA, and all Unit Members receive similar guidance, when appropriate.

10. GUIDANCE MATERIAL

A. S-TEC will obtain, maintain, and make available to the ODA unit, any FAA regulations, policy, and guidance related to the authorized functions.

B. S-TEC ODA Procedures Manual

1. All unit members will be provided the latest ODA Procedures Manual and any revisions, which must be in their possession to exercise the privileges as an ODA unit member.

C. FAA Regulatory and Guidance Library

1. Internet access to the FAA DRS will be provided to all onsite ODA unit members.

2. ODA unit members off-site will be required to have internet access to the FAA DRS to maintain status as an ODA unit member.

11. DURATION OF AUTHORIZATION

S-TEC issued ODA under 14CFR part 183.45 is effective until the expiration date listed on the letter of designation and is not transferable. The FAA Administrator may terminate or suspend the ODA at any time for a reason identified in 14CFR Part 183.67.

12. MAINTENANCE OF ELIGIBILITY

S-TEC is required to continually meet the requirements of this authorization or notify the FAA Administrator within 48 hours of any change that could affect the company's ability to meet the requirements of 14CFR part 183. A notification due on Saturday, Sunday, or a holiday will be delivered on the next business day.

13. FAA INSPECTION

Upon request, S-TEC will allow the FAA to inspect the facilities, products, and records related to the functions performed under this authorization.

14. SERVICE DIFFICULTIES

S-TEC will evaluate and report specified failures required by 14CFR part 183.63, and other applicable reporting requirements (Reference Section 17 of this manual).

S-TEC will evaluate and report all reported failures, malfunctions, and defects regarding S-TEC products in accordance with the following procedures.

A. For approvals or Certificates issued or obtained under the ODA (or previous delegation authority), S-TEC ODA administrator and authorized delegates will evaluate all general issues including but not limited to:

1. Unfavorable trend of data or procedure non-compliances
2. Internal or External audits
3. ODA requirement (See Section 17 of this manual)
4. Single (not a trend) non-compliances deemed serious by the ODA administrator or ODA OMT
5. Employee suggestions
6. Management review
7. Process improvements

B. S-TEC ODA will evaluate field reported failures, malfunctions, and defects for identification of potentially UNSAFE or NON-COMPLIANCE conditions related to STC / product certificates or approvals S-TEC holds as follows:

1. S-TEC Customer Service department on a daily basis receives and responds to routine and urgent customer / operator complaints, inquiries in accordance with S-TEC approved Process and Procedures. All initial information is recorded by customer service in the Syteline ERP System for further detail evaluation by customer service technical staff. When information gathered from these users, dealers, installers, and maintenance facilities, etc. indicates there is a possible issue in the field with an S-TEC product that requires further investigation and/or potential corrective action by the ODA, the Director of Customer Support shall issue a corrective action request within 24 hours for evaluation / disposition.

2. Upon receipt of phone or e-mail notification of a potentially unsafe or non-compliance issue from Customer Support, the ODA will fill out ODA Form 103 (Service Difficulty Report (SDR), and attach any supplemental information), the ODA administrator will establish and schedule a Problem Review Panel, which will include the ODA administrator and appropriate unit members as determined by the ODA administrator within pertinent disciplines to evaluate the reported failure, malfunction, or defect.

Note: The ODA administrator will determine exact UM participation in the Problem Review Panel based on UM(s) having process / product knowledge, allocated time, authority and skill in the required technical disciplines to solve the problem and implement corrective actions (E.g., Electrical Systems & Equipment UM, Mechanical Systems & Equipment UM, Structural UM, Flight Test UM, etc, considering specific details of reported condition).

3. This ODA Problem Review Panel will within 48 hours of receipt of SDR conduct this problem assessment meeting using Form 109 to review the SDR reported condition to:

    a. Determine cause
    b. Define corrective action(s) required
    c. Based on operational safety conditions determine the urgency and criticality of the corrective action(s)
    d. Disposition SDR ODA Form 109 as appropriate
    e. Generate a CAR if necessary
    f. The SDR review process requires the review panel to address:

        1. Evaluation Team. Identify team members and determine goals and objectives.
        2. Problem Definition. This step provides the starting point for solving the problem or non-conformance issue. The SDR must have a “correct” problem description to identify causes. The SDR and supporting condition specific information must use terms that are understood by all.
        3. Developing Interim Containment Actions. Provide temporary actions to contain the problem and “fix” until permanent correction is in place and document actions in an Action Item Table.
        4. Identifying and Verifying Root Cause. Analyze for the “root cause” of the problem and identify and verify the Escape Point.
        5. Identify Permanent Corrective Actions. Provide solutions that address and correct the root cause. Solutions determined to be the best of all the alternatives. Document and verify the Permanent Corrective Action in an Action Item Table.
        6. Implementing & Validating the PCA. Implement and validate to ensure that corrective action does “what it is supposed to do.” Detect any undesirable side effects. Document this on the Action Item Table. Return to root cause analysis, if necessary.
        7. Preventing recurrence. Determine what improvements in the system and processes would prevent the problem from recurring. Ensure that corrective action remains in place and is successful.

g. The type of STC certificate data used during the evaluation will vary based on reported condition, some examples would be:
    1. Wiring Diagrams
    2. Structural attachment drawings
    3. Equipment Environmental Qualifications
    4. Software Qualification

C. A database of SDR submittals and responses, corrective actions will be maintained under the direction of the ODA administrator and records will be maintained in accordance with Section 16.

D. If the review board determines ODA OMT notification is required due to a potentially unsafe condition in a product, part or appliance the OMT will be notified within 48 hours of the review unless a condition exists that might affect Safety of Operations/Flight safety in which case notification will be made to the OMT within 24 hours. In either case a copy of the Corrective Action report and supporting analysis information will be supplied to the OMT Lead. These notifications will be via e-mail and/or telephone based on condition urgency.

E. If the review board determines ODA OMT notification is required due to a product part or appliance not meeting the applicable airworthiness requirements. Notification to the OMT will be made within three business days for airworthiness issues. These notifications will be via e-mail.

F. Based on problem review panel determinations, the ODA will require S-TEC engineering to generate any information necessary to implement corrective action needed for safe operation of the product, part or appliance.

G. If corrective action by the user of the product is necessary for safety because of any noncompliance or defect specified in the paragraphs above, S-TEC engineering will;

1. Propose to the ODA administrator a corrective action method and schedule implementing and distributing by certified mail an S-TEC issued Service Bulletin, or;

2. Submit to the ODA administrator the information necessary for the issuance of an Airworthiness Directive under 14CFR Part 39.

NOTE: The ODA administrator will report and coordinate these activities with ODA team per Section 17 of this manual.

NOTE: S-TEC service documents are managed by the Technical Publications Department. Indication of FAA/ODA approval of recommended actions prescribed in the service documents, when required shall be consistent with the methods presented in AC 20-114. These approvals should only apply to the type certification data.

H. It is the responsibility of all ODA unit members to take timely and effective corrective action to resolve problems and unfavorable trends in functions for which they are responsible.
I. Comprehensive corrective action and preventive action will always be implemented to the degree necessary to eliminate recurring or potential non-compliances.
J. Procedures and processes will be revised and those changes documented as a result of all corrective actions as applicable.
K. Corrective action will be taken as a result of any of the following, as applicable:

    1. Unfavorable trend of data or procedure non-compliances
    2. Internal or External audits
    3. ODA requirement
    4. Non-compliances identified by self audits, the ODA administrator or the OMT
    5. Employee suggestions
    6. Management review
    7. Process improvements

    If a CAR for submittal to the ODA is determined to be required, the procedures described in Section 17 of this manual will be followed.

L. FAA Safety Recommendations forwarded by OMT will be addressed as applicable.
M. FAA Service Difficulty Reports (SDR) forwarded by OMT will be addressed as applicable.

15. PROCEDURES

Procedure Number: **S001**

Function Code **11010E**

Procedure Title: **Approve Technical Data and Find Compliance to the Airworthiness Standards (Development and Approval of Data)**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11010E in accordance with FAA Order 8100.15 to specify requirements for development and approval of project data.

2.0 GENERAL:

S-TEC engineering will provide drawings, specifications, requirements documents, design definition documents, test plans, and test reports (herein referred to as “data”, see definitions Section IV) to show compliance with the applicable airworthiness requirements. The data will contain sufficient descriptive and substantiation compliance information to completely define / describe the design of the modification or installation.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: None

6.0 RESPONSIBILITY: Structures, Electrical Systems and Equipment, Power Plant, Mechanical Systems and Equipment and Hardware/Software, and Flight Test ODA engineering unit members will approve design descriptive / compliance data only within their delegated disciplines and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. S-TEC engineering personnel including unit members of the ODA organization will accomplish the preparation and approval of the following data.

Note: Structures, Electrical Systems and Equipment, Power Plant, Mechanical Systems and Equipment, Hardware/Software and Flight Test ODA engineering unit member approval of applicable design data will be accomplished using latest revision of FAA guidance material and 14 CFR Parts 21, 23, 27 or 29 as applicable for a particular system or function. ODA Engineering checklists may be used when developed by ODA engineering unit members based on same FAA guidance material, FAA Advisory Circulars, Orders, Notices, current FAA Policy Memorandums or other FAA guidance and Aerospace Industry materials as applicable for a given certification project.

Note: The Lead ODA administrator is responsible for ensuring that the data is provided to and reviewed by the appropriate discipline engineering unit members. The engineering discipline decision plus sending, tracking, and receiving of the approvals may be delegated to the Assistant to the ODA administrator if the experience level of the assistant is suitable.

1. Master Data List (MDL) - S-TEC engineering will manage all data submitted to the ODA unit by use of an MDL. The MDL will provide a complete listing of drawings, plans, specifications, reports, and any other information necessary in defining the alteration type design as applicable to the STC.

2. Drawings and Design Definition Documents - S-TEC engineering is responsible for submitting acceptable drawings, design definition documents, and other substantiating documents to the ODA unit. These data must include enough detail to completely describe and or define the modification.

3. Technical Analysis Reports - Airworthiness substantiation usually involves technical analysis reports of one or more types such as but not limited to, Weight and Balance Calculations, Structural Analysis, and Electrical Load Analysis. S-TEC engineering will furnish these items as appropriate for each STC project.

   Note: Engineering analysis is an integral part of showing compliance. It encompasses the full range of analytical techniques such as textbook formulas, computer algorithms, computer modeling/simulation, or structured assessments. The ODA unit will approve the data, not the analytical technique. S-TEC engineering will use a well-established analysis technique to guarantee the validity of the result. The analysis must show the data are valid. The ODA unit is

responsible for finding the data accurate, and applicable, and that the analysis does not violate the accepted assumptions.

The appropriate discipline ODA unit member will approve these analyses. Appropriate discipline ODA unit members will determine and make findings of compliance per each STC project CCL (ODA Form 202, Appendix E).

4. Test Plans and Reports - Testing is often required to demonstrate compliance. S-TEC engineering will produce test plans or procedures required to allow ODA unit to make findings of compliance.

Note: S-TEC engineering will submit test plan(s) early enough for the ODA unit to review and approve the plan(s) before the start of any test. In the plan(s), engineering will describe the items requiring test and include a list of all equipment necessary for the test. Describe how to calibrate the equipment (when calibration is required) and include calibration verification signoff before the test, also include required conformity details of the test article and setup, and list the specific applicable airworthiness standards. Describe how compliance is to be shown, and include a test procedure with step-by-step format and defined pass/fail criteria.

Also include a signoff page for witnessing of official tests, the ODA witness will verify by signature that the procedures in the approved test plan were followed and that any data captured by test instrumentation is valid data for the test in question.

The appropriate discipline ODA unit member will approve these test plans and procedures, witness the tests when necessary, and evaluate the results for compliance. Satisfactory results and limitations will be documented by the appropriate discipline ODA unit member in report form and then approved and documented on FAA Form 8100-9 by an appropriate discipline ODA unit member.

5. Vendor and Sub-Contractor Data - Vendor and sub-contractor data can be utilized in the STC data package.

Note: Any vendor data utilized as STC design data must be listed, identified, evaluated, properly qualified, and approved and documented on FAA Form 8100-9 by an appropriate discipline ODA unit member.

6. Deviations to Prototype Articles - Deviations to prototype articles will be documented by S-TEC engineering in the form of a drawing or document providing adequate detail and description to clearly identify the deviation.

Note: These deviations will be approved and documented on FAA Form 8100-9 by an appropriate discipline ODA unit member.

7. Instructions for Continued Airworthiness – S-TEC engineering will prepare an ICA in accordance with 14CFR part 23 Appendix G, part 27 Appendix A, or part 29 Appendix A. Prior to preparing the ICA, the engineering personnel assigned will determine either:
   1) a new ICA will be developed for the STC project; or
   2) a revised ICA will be completed for the STC project; or
   3) the project does not impact the current ICA

In general, all new STC projects will require development of a new ICA. Revised ICA will usually only be applicable to STC amendment or major/minor change projects. For items 2) and 3) above, the personnel assigned to the ICA development effort will first review existing STC records to identify which ICA documents are potentially affected by the amendment or major/minor change project. Then, ODA Form 112 will be utilized to conduct and document the ICA change impact assessment.

The ICA need only address continued airworthiness of the design change for which application was made, as well as parts or areas affected by the design change. Prior to re-issuance of the Standard Airworthiness Certificate and delivery to owner of the modified aircraft, S-TEC will furnish one set of ICA to the aircraft owner/operator.

B. Appropriate discipline ODA unit members will be responsible for substantiating compliance with all airworthiness requirements for the design and installation of the systems and all components (including items previously approved and used in other applications) involved in the STC.

The ODA unit members will review and validate all data including data developed by parties other than S-TEC engineering when presented to the ODA that are intended to be used as substantiation of compliance for the STC project.

The ODA unit members will also be responsible for finding that the altered product is of a proper design for safe operation. In order to determine this, the ODA unit members will consider S-TEC engineering and aircraft manufacturer design philosophy, principles, and operational assumptions.

Appropriately authorized ODA unit members will be responsible for approving any new or revised Process Specifications. In addition to engineering review and approval, new and revised Process Specifications require manufacturing approval and shall be reviewed by an ODA inspection unit member. The inspection unit member shall utilize Form 104 to document the specification review and approval.

Note: Prior to submitting a proposed Process Specification for UM review, the Lead ODA administrator will coordinate with Quality Assurance personnel to ensure the appropriate approved supplier(s) have been visited to verify that:

1. The Process Specification procedures are possible;
2. That the supplier(s) has appropriate personnel to complete the procedures, and;
3. That all required tooling and materials are or will be available.

Note: Drawings that include Process Specifications will be reviewed by an authorized engineering UM to verify that the specification callout is appropriate for the component(s) and includes all information required by the specification such as class or type.

The approval status of all S-TEC Process Specifications will be tracked utilizing the Process Specification Tracker which will be maintained by the Assistant to the ODA administrator.

An ODA engineering compliance inspection lets the ODA unit review an installation and its relationship to other installations on a product. This inspection ensures that the systems and components are compatible and meet the requirements of the airworthiness and operational standards. Do not confuse ODA engineering compliance inspections with a conformity inspection done by ODA inspectors. A conformity inspection determines conformity to engineering data, while an ODA compliance inspection determines compliance with the regulations.

1. The ODA unit will approve the design only when the ODA unit has a complete understanding of the design and assumes full responsibility for the integrity and completeness of compliance findings for the design and installation of the alteration as determined by the CCL.

2. The ODA unit members have the responsibility to review and approve data applicable to the STC project and verify compliance with the CCL.

    a. ODA unit members are authorized to approve data associated with their discipline and as identified on the CCL. Data contained on a signed FAA Form 8100-9 processed under this ODA Authority constitutes "FAA Approved Data".

    b. The ODA unit members will review data defining the new design or the change to the type design to determine compliance with the CCL. The

data supporting findings of compliance will be approved on the FAA Form 8100-9, Statement of Compliance with Airworthiness Standards.

Compliance findings records will be assigned unique tracking numbers by the ODA administrator or authorized assistant. The tracking number will comply with the format defined in Project Electronic Document Management of Appendix E.

c. ODA unit members will include as part of their approval signature, their name typed or printed in legible letters and their ODA delegation ID, example:

SIGNATURE(S) OF AUTHORIZED REPRESENTATIVE(S)	NAME	CLASSIFICATION(S)	DATE
Rufus Ames	Rufus Ames DAS 900.9	Structures	10/12/07

FAA Form 8100-9 (2-02)

d. ODA unit members that are off-site will FAX or send electronic version of the completed form 8100-9 when necessary to expedite certification processes. The FAX or electronic version of the completed 8100-9 is valid and acceptable for use until the original arrives at the ODA administrative office. It is the responsibility of the cognizant ODA unit member to ensure that form 8100-9 originals are received by the ODA administrator within fifteen calendar days of FAX or electronic transmission.

3. Lower level design/substantiation data developed by suppliers is acceptable for use and approval by ODA unit members provided it meets the intent of the design approval and requirements of the CCL.

C. During the preliminary project evaluation and initiation process the ODA administrator and/or the OMT will identify any FAA specific findings, equivalent levels of safety, or FAA participation requirements. Coordination criteria of the identified issues will be included in the PSCP.

1. When regulatory findings and equivalent levels of safety issues have been defined by the FAA, the necessary data to show compliance will be completed by S-TEC engineering and submitted to the ODA unit.

The appropriate discipline ODA unit members will determine whether the alteration or modification complies with the FAA issue requirement. When authorized in writing by the OMT to find compliance, the appropriate discipline ODA unit members will approve the data. When not authorized by the OMT to find compliance, the data will be submitted to the OMT for approval.

2. When a STC project involves issues related to 14CFR part 34 or 14CFR part 36, the necessary data to show compliance will be completed by S-TEC engineering and submitted to the ODA unit.

   The appropriate discipline ODA unit members will determine whether the alteration or modification complies with the FAA regulatory requirement. When authorized in writing by the OMT to find compliance, the appropriate discipline ODA unit members will approve the data. When not authorized by the OMT to find compliance, the data will be submitted to the OMT for approval.

3. When a project involves issues related to:
   a. ICA
   b. Evaluation of operational suitability
   c. Changes to MMEL
   d. AFM
   e. FCOM
   f. Crew qualifications
   g. Emergency evacuation procedures

The necessary data to show compliance will be completed by S-TEC engineering and submitted to the ODA unit. The ODA will coordinate simultaneous submittal of the data to the OMT and AED. Upon acceptance/approval of AED, the OMT lead will provide written confirmation to the ODA.

Compliance determinations and approvals will be recorded on ODA Form 200 (Appendix E) and copies kept in the STC package file.

8.0 FORMS (appendix E)

a. FORM 200	STC Project Master Data File Checklist
b. FORM 202	Compliance Check List (CCL)
c. FORM 203	Conformity Inspection Plan (CIP)
d. FORM 8100-9	Statement of Compliance with Airworthiness Standards

Procedure Number: **S002**

Function Code **11020E**

Procedure Title: **Issue Supplemental Type Certificates and/or Amendments**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11020E requirements in accordance with FAA Order 8100.15 to specify the process to be used for issuance of an STC.

2.0 GENERAL:

The ODA unit will issue STC's and related airworthiness certificates as delegated under 14CFR part 183, subpart D and will issue an STC to S-TEC only. The specific functions delegated to the ODA unit are listed in Section 2.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: None

6.0 RESPONSIBILITY: ODA administrator and engineering unit members for Structures, Electrical Systems and Equipment, Power Plant, Mechanical Systems and Equipment and Hardware/Software as applicable will generate, project data, forms, and checklists as required and review design data packages as required within their delegated disciplines in accordance with limitations as specified in individual "ODA Unit Member List" document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. Project Initiation

1. Procedures for review of the FAA Form 8110-12 by the ODA unit.

a. S-TEC engineering will prepare and submit an Application for Supplemental Type Certificate FAA Form 8110-12 (Per Appendix E) for all new STC requests to the ODA administrator along with a Project Specific Certification Plan (PSCP), Compliance Checklist (CCL), Conformity Inspection Plan (CIP), and any other plans, checklists, or documents necessary to allow the ODA administrator to determine the STC project feasibility.

The PSCP and CCL will specify the proposed certification basis. The certification basis for each project will be the applicable FAA regulations in effect on the date of STC application and when required any later amendments the ODA administrator finds directly applicable unless otherwise coordinated and agreed to by the OMT.

The PSCP will include as minimum although not limited to those items listed in Appendix F and follow the format defined in Appendix E.

2. The ODA administrator will hold a preliminary STC board meeting (ODA Form 208 Appendix E) at which a determination of project feasibility will be made by the ODA administrator in cooperation with the cognizant ODA unit members considering the following:

   a. The proposed design will be discussed with appropriate ODA unit members and applicable regulatory requirements will be determined. The effect the project scope will have on the weight, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product will be considered.
   b. Timing/scheduling necessary for obtaining ODA approval varies with the complexity of each modification. Inspections, meetings, tests, etc., will be planned, scheduled, and provided well in advance to the ODA to assure appropriate personnel are available.
   c. The ODA administrator will evaluate the ability of the ODA unit's experience and capability to determine that project alteration design complies with the airworthiness standards and will be in a condition for safe operation.
   d. The ODA administrator will evaluate any off-site facility's capabilities per Procedure 018 if the project is to be performed at an off-site location.

3. The ODA administrator or authorized assistant will assign a project number to each STC project for the purpose of identification and tracking during the certification process. Instructions on assigning numbers are defined in Project Electronic Document Management section of Appendix E.

B. Procedures for development of the Program Notification letter (PNL) and coordination of the PNL with the ODA unit.

1. The ODA administrator will coordinate with the ODA unit members for review and concurrence with the original PNL submittal items and any later supplements or changes.

2. The ODA administrator will coordinate via telephone and/or email with the OMT Lead and OMT members and identify any specific findings of compliance to be addressed in the PSCP as follows:

   a. Determine regulatory interpretations and equivalent level of safety findings.
   b. Determine compliance for emissions and noise requirements of 14CFR parts 34 and 36.
   c. Determine compliance in areas evaluated by the AED. These include ICA, evaluation of operational suitability, Impact assessment of existing ICA, Changes to MMEL, AFM, FCOM, crew qualifications, and emergency evacuation procedures.
   d. Determine compliance, when necessary, in areas involving new design concepts that require the formulation of special conditions in accordance with 14CFR part 21.16, 21.101.
   e. Participate in compliance findings in areas involving known safety related problems.

3. The following types of changes may be conducted without submittal of a PNL:

   a. New or amended STCs when the OMT is provided evidence of an association between the TC holder for the product and the STC ODA holder in which the TC ODA holder agrees to provide the STC ODA holder with access to any necessary type design data.
   b. Major changes in type design which do not result in amendment of the STC, i.e., revision to the face sheet or any continuation sheets. This activity may be conducted for the following types of changes:

      1. Material changes involving materials with similar properties and substantiation methods.
      2. Process changes involving processes of similar complexity and skills.
      3. Supplier changes
      4. Equipment substitutions (i.e., different radio, similar TSO'd article).
      5. Relocation of equipment.
      6. Addition of serial numbers to STC applicability.

   c. Amended STC, or major change for Autopilot systems and projects with the same scope and limitations of ODA projects that have been previously completed satisfactorily.

   NOTE: A PNL is required for any project:

   1. That is a Part 27 or Part 29 project;

2. That is a significant change pursuant to 14 CFR 21.101;

3. Involving items on the applicable directorate's issues list, unless; the issue has been dispositioned on that ODA holder's previous project through a completed stage 4 issue paper, the issue paper is marked for reuse, and all reuse conditions are met. Such as issue paper shall be referenced in the PSCP and noted in the CPN;

4. Requiring issuance of an equivalent safety finding, exemption, or special condition, i.e., one that does not already exit as part of the product's certification basis;

5. Requiring a determination of compliance to a requirement for which the ODA holder has not previously demonstrated experience;

6. Involving a novel or unusual design feature not previously introduced, or a method of compliance not previously accepted by the OMT, for use on the ODA holder's projects;

7. Involving issuance of a new, approved model list STC;

8. Involving a change that is the subject of a planned airworthiness directive (AD) or affects compliance with an existing AD, e.g., an alternative method of compliance is required; and

9. For which the required FAA involvement, pursuant to paragraph 11-7d of FAA Order 8100.15, cannot be established in advance.

NOTE: The ODA administrator shall notify the OMT of any planned certification project, or changes to an existing certification project, if it is unclear whether a PNL is required, or if there is any question regarding the ODA holder's authority to complete the project.

NOTE: New STC or STC major change certification activity not requiring a PNL may only be conducted for STCs or major changes for which the OMT can establish beforehand that the project will not require FAA specific findings and that the ODA holder and unit have the appropriate knowledge and understanding of the product manufacturer's design philosophy, principles, operational assumptions and operator procedures.

4. The following requirements apply to projects conducted without submittal of a PNL:

a. certification project notification (CPN) information will be provided to the OMT via letter or e-mail. The CPN information will include all of the data identified in FAA Order 8110.115, figure 1 and will highlight the project as "No PNL ODA Project".
b. The CPN letter or e-mail shall also include OMT notification information regarding planned off site installations, use of foreign registered aircraft, and should contain the wording "ODA has full ICA delegation" in the Project Summary Description.
c. The normal procedures regarding PSCP, CCL and CIP preparation, and the reporting requirements of FAA Order 8100.15 paragraphs 3-16c and 11-53 are still applicable.

5. The PNL will include as a minimum the following:

a. FAA Form 8110-12. (Instructions defined in Appendix E).
b. A PSCP (Form 201) with content defined in Appendix F.
c. A CCL (Form 202) as defined in Appendix E.
d. A CIP (Form 203) as defined in Appendix E.
e. Identify any novel or unusual aspects of the program including any international aspects or foreign airworthiness authorities involved.
f. Identify any design changes that are considered a "significant project" according to the definition in FAA Order 8110.4, Chapter 1, Para 1-6 (r)(s) and the guidance provided in AC 21.101A.
g. Specify who will perform the design, if other than the S-TEC ODA, the scope of any other party's involvement in the design, and provide a description of how the S-TEC ODA will manage the other party's activities.
h. Identify any recommended areas for FAA specific findings based on paragraph 11-7d of FAA Order 8100.15.
i. Identification and description of any related major change incorporated or being incorporated without submittal of a PNL.

C. The ODA administrator or authorized delegate will compile, maintain, manage by use of ODA Form 200 (Appendix E), and make available to the FAA an STC package file which will consist of but not be limited to the following:

1. STC Application, PSCP, CCL and Program Notification, and revisions to these documents
2. FAA response information and FAA-ODA communications pertinent to the project
3. STC Data as defined in process 11010E
4. Instructions for Continued Airworthiness

5. Aircraft Flight Manual Supplement
6. Conformity records
7. Type Inspection Authorization
8. Supplemental Type Inspection Report
9. Type Inspection Report
10. STC Board meeting summaries
11. Compliance Report

D. FAA Notification

1. The ODA administrator will prepare and submit a PNL to the FAA only after thoroughly reviewing and determining that the ODA unit has or can obtain the appropriate knowledge and understanding of the product manufacturer's design philosophy, principles, and operational assumptions required to determine compliance with the airworthiness standards and determine no unsafe features or characteristics exists in the altered product.

2. Distribution of the PNL to the FAA will be to the OMT Lead, MIDO, and AED simultaneously via e-mail in the form of electronic documents.

3. Distribution of the PNL revisions, supplements, and changes to the FAA will be to the OMT Lead, MIDO, and AED simultaneously via e-mail. The OMT Lead will respond with concurrence typically within thirty business days of receipt signature date with copies of each to the ODA file.

4. Upon confirmation of PNL receipt by the OMT Lead, the Assistant to the ODA administrator will complete the Certification Project Notification (CPN) on behalf of the OMT Lead, if requested. The Assistant to the ODA administrator will follow the procedures provided in FAA Order 8110.115 for the notification process.

8.0 FORMS

a. FORM 200	STC Project Master Data File Checklist
b. FORM 201	Project Specific Certification Plan
c. FORM 202	Compliance Checklist
d. FORM 203	Conformity Inspection Plan
e. FORM 208	STC Project Feasibility/Planning Review
f. FORM 8110-12	Application for STC

Procedure Number: **S003**

Function Code 11020E

Procedure Title: **Issue Supplemental Type Certificates and/or Amendments** (**Risk Assessment)**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11020E requirements in accordance with FAA Orders 8100.15 and 4040.26 to specify assessment to be made prior to any compliance testing.

2.0 GENERAL:

Prior to certification flight-testing of the STC project aircraft, the ODA administrator will coordinate an interim STC board meeting of S-TEC certification engineering, the cognizant ODA unit members, and the FAA when applicable (potential High Risk, unique design, ELOS, etc.) to review and determine the flight test risk.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: FAA Order 4040.26

6.0 RESPONSIBILITY: ODA administrator and engineering unit members for Flight Test, Structures, Electrical Systems and Equipment, Power Plant, Mechanical Systems and Equipment and Hardware/Software will comply with requirements as applicable only within their delegated disciplines and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. Flight Test Plans will include a Risk Management Plan per FAA Order 4040.26.

B. The below meetings will include/verify:

1. Technical Review Board meeting has been conducted with attendees required and documented per ODA Form 204 (Appendix E), Attendance at a Minimum will include ODA Admin UM, Project Mgr, S-TEC certification engineering, Inspection/Airworthiness UM, Design Discipline UM’s.

2. A Risk Assessment has been completed with attendees required and documented per ODA Form 400 (Appendix E), Attendance will include all UM listed on Form 400.

3. A TIA/Safety Review Board meeting has been conducted with attendees required and documented per ODA Form 205 (Appendix E) to examine and review the completed aircraft modification, certification ground and flight test process, and flight test risk and mitigating factors. Attendance will include all UM listed on Form 205.

All unit members involved with the STC board meetings will initial the TIA concurrences block and submit the document to the ODA administrator for approval. If changes are required to a TIA after issuance, it will be revised by re-issuing the TIA with a letter revision of the document control number (located in the lower right margin). Each appropriate ODA unit member will again initial the TIA concurrences block and submit the document to the ODA administrator for approval.

When High Risk flight test is determined as a result of the Risk Assessment, the FAA OMT concurrence of the assessment and alleviation factors will be required prior to flight testing.

8.0 FORMS:

a. FORM 204 STC Project Technical Review Board Agenda / Minutes
b. FORM 205 TIA/Safety Review Board Agenda / Minutes
c. FORM 400 Flight Test Risk Assessment and Alleviation

Procedure Number: **S004**

Function Code 11020E

Procedure Title: **Issue Supplemental Type Certificates and/or Amendments** (**Project Completion)**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11020E requirements in accordance with FAA Order 8100.15 to specify the process to be used for issuance of an STC.

2.0 GENERAL:

Upon completion of the STC project all of the required data developed for the project is compiled using a STC Project Master File Checklist ODA Form 200 (Appendix E).

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: None

6.0 RESPONSIBILITY: ODA administrator will assemble design, compliance, and project data as required for final signoff. ODA Engineering unit members for Flight Test, Structures, Electrical Systems and Equipment, Power Plant, Mechanical Systems and Equipment and Hardware/Software will participate within their delegated disciplines and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. Upon completion of the STC project all of the required data developed for the project will be compiled using a STC Project Master File Checklist ODA Form 200 (Appendix E), for review and acceptance by the ODA administrator.

B. The ODA administrator will verify that the data approvals are in compliance with the latest revision of the CCL and that all regulatory compliance requirements have been met.

C. The ODA administrator will coordinate a meeting of the project cognizant ODA engineering unit members and the FAA if required, for review and concurrence of the final STC project data. Each unit member will conduct a final review of all project data, drawings, reports, and pertinent information related to their disciplines using the CCL (Project Form 202).

D. Upon confirmation that the project meets all applicable standards and airworthiness requirements, and that the product as modified by the data on which the STC is based is of proper design for safe operation, the STC Project Statement of Final Review for Certification, ODA Form 210 (Appendix E), will be signed by each ODA unit member indicating concurrence.

8.0 FORMS:

a. FORM 200 STC Project Master File Checklist
b. FORM 202 Compliance Checklist
c. FORM 210 STC Project Statement of Final review

Procedure Number: **S005**

Function Code **11020E**

Procedure Title: **Issue Supplemental Type Certificates and/or Amendments (Issuance of STC Certificate)**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11020E requirements in accordance with FAA Order 8100.15 to specify the process to be used for issuance of an STC Certificate.

2.0 GENERAL:

This section specifies the STC process leading to project completion and issuance of the STC Certificate.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: None

6.0 RESPONSIBILITY: ODA administrator /assistant will assemble complete STC certificate package as required within their delegated disciplines and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. AIR-7J0 assigns a block of STC numbers that identifies the type of product and location of the issuing ACOB (Ref 8110.4, appendix 1, Figure 5). The ODA administrator will then assign a number to the project currently in use.

B. Only upon completion of the STC Project Statement of Final Review for Certification will the ODA administrator issue a STC, FAA Form 8110-2 (Appendix E), for the project.

C. The STC will be prepared in accordance with applicable processes within this manual and appendix E at the time of STC issuance. The ODA administrator will determine the

description of the design data and the limitation statements to be placed on the STC certificate.

D. Simultaneous to issuance of the STC, the ODA administrator will complete and sign the Organization Designation Authorization Statement of Completion FAA Form 8100-11 (Appendix E), for submittal to the FAA.

E. The ODA administrator will within thirty calendar days of the STC issuance or amendment, e-mail an electronic copy of the un-signed STC, FAA Form 8110-2 to the ACOB at ***7-ASW-AVS-AIR-ASW190-DDS-ODA@faa.gov***. When submitting the electronic copy, include the STC number and project number in the subject field.

F. The ODA administrator will within thirty calendar days of the STC issuance or amendment, submit the following to the FAA DSCO, AIR-7J0:

(1) The ODA Statement of Completion, FAA Form 8100-11
(2) An electronic copy of the signed STC, FAA Form 8110-2
(3) An electronic copy of the approved AFMS/RFMS
(4) An electronic copy of the Compliance Report
(5) Any other data identified in the OMT's response to the PNL

8.0 FORMS:

a. FORM 8110-2 Supplemental Type Certificate
b. FORM 8100-11 ODA Statement of Completion

Procedure Number: **S006**

Function Code **11040E**

Procedure Title: **Approve Operational and Repair Information (Aircraft Flight Manual Supplement Approval)**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11040E requirements in accordance with FAA Order 8100.15 to specify process used for approval of Flight Manual Supplements.

2.0 GENERAL: Process specifies the details for approval of Flight Manual Supplements.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: None.

6.0 RESPONSIBILITY: ODA administrator will sign/approve supplements and Flight Test UM will approve compliance to the regulations as required only within their delegated functions and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. S-TEC engineering will prepare and submit an AFMS/RFMS that addresses the operations and regulator’s requirements of the aircraft modification, alteration, and/or installation. The AFMS/RFMS will be formatted to follow ODA Form 211 (Appendix E).

   If the modification impacts cruising speeds, range, endurance, or fuel consumption information published in either an FAA-approved aircraft flight manual or an unapproved pilot operating handbook, the S-TEC ODA unit will determine how the modification affects this information. If the modification changes any of the information, S-TEC will either:

   1. Publish new cruising speeds, range, endurance, or fuel use performance data, or

2. Prohibit, in the limitations section of the flight manual supplement, the use of the fuel consumption data in the AFM for the original type design. State in the performance section of the supplement that the data in the AFM for the original type design is not approved for use.

B. The AFMS/RFMS will include any system and or aircraft limitations defined during the project. Any limitations will be approved by the appropriate unit member(s).

C. The Assistant to the ODA administrator will be responsible for routing the AFMS/RFMS for review and comment by other appropriate discipline ODA unit members as listed and documented on ODA Form 104.

D. The AFMS/RFMS will be reviewed by the Flight Test ODA unit member and when found acceptable for approval will provide a FAA Form 8100-9 with “Approval” of the appropriate 14 CFR regulations to the ODA administrator.

E. The AFMS/RFMS will then be sent to the AED for review and acceptance.

F. The ODA administrator will approve, by signing, the AFMS/RFMS except when the FAA has requested in the PNL response notification that the ACOB will review the AFMS/RFMS for final approval.

8.0 FORMS:

a. FORM 104 Document Review & Comment tracking
b. FORM 211 Airplane or Rotorcraft Flight Manual Supplement
c. FORM 8100-9 Statement of Compliance with Airworthiness Standards

Procedure Number: **S007**

Function Code **11050E**

Procedure Title: **Approve Airworthiness Limitations Information**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11050E requirements in accordance with FAA Order 8100.15 to specify System or related Aircraft Limitations, Replacement Times, Inspection Intervals or required Maintenance Actions.

2.0 GENERAL:

This section addresses determining airworthiness limitations for new systems and aircraft modifications as part of an ODA STC project.

Note: Any airworthiness limitations determined during the design phase will be included in the document as applicable.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: None.

6.0 RESPONSIBILITY: The ODA administrator will approve airworthiness limitations specified by the ODA engineering unit members as required only within their delegated disciplines and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES: Prior to issuance of any supplemental type certificate the ODA engineering unit members will evaluate the required systems and / or modification to the following criteria:

A. Establish Airworthiness Limitations

1. The ODA engineering unit members will review the equipment manufacturer’s installation manuals, pilot’s guides and other relative information as well as project design(s) to establish the requirements to be satisfied in showing compliance.

2. The ODA engineering unit members will then review “typical” limitation information in section B below and specify limitations appropriate to the new system/modification. This listing will be complete and include any additional limitations deemed necessary not shown below.
3. The ODA engineering unit members will review each imposed airworthiness limitation with the ODA administrator unit to ensure that the airworthiness limitations are understood.
4. The specified listing of limitations will be provided to the engineering ODA unit member(s) responsible for continued airworthiness of the product.
5. The originating ODA engineering unit member will forward the proposed limitations to the ODA administrator for approval prior to any supplemental type certificate issuance. The ODA administrator will recommend any additional airworthiness limitations he feels are necessary to insure safe operation.

B. Typical Limitations (Not all inclusive): The following airworthiness limitations pertaining to equipment, systems, and powerplant installations/modifications at a minimum will be evaluated and prescribed as applicable.

1. Any required Mandatory Equipment Replacement Times
2. Any required Mandatory Equipment Inspection Times
3. Inspection Procedures for Mandatory Inspections as applicable
4. Any required Structural Inspections
5. Any Fuel System Inspection requirements (EIDS system)
6. Any Scheduled Maintenance Tasks (Cleaning, inspecting, lubricating, adjusting, etc)
7. Any Servicing/Overhaul requirements
8. Any Weight and Balance Special Considerations
9. Any “Pre-Flight” testing requirements
10. Any Operational “after maintenance” testing requirements
11. Any Software or Database “update cycle” requirements
12. Any Special Inspections requirements (E.g. Bi-Annual Altimeter Tests)
13. Any other airworthiness limitations deemed necessary (Ref 14 CFR 43.16, 91.403)

8.0 FORMS:

N/A

Procedure Number: **S008**

Function Code **11070E**

Procedure Title: **Establish Conformity Inspection Requirements**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11070E requirements in accordance with FAA Order 8100.15 to establish conformity requirements.

2.0 GENERAL: An ODA engineering unit member establishes the requirements for the extent and kind of conformity inspections required. Conformity inspections verify and provide the objective documentation that the test articles, parts, assemblies, installations, functions, and test setups conform to the design data. Critical parts necessary for the safe operation of the aircraft require a conformity inspection. All components which are to be part of an initial STC modification and require tests, other than flight tests (such as structural, fuel flow, etc.) require a complete part conformity inspection before the test is started. All modifications which require flight-testing must have a complete part conformity inspection prior to the issuance of a TIA and have a satisfactory installation conformity before FAA ground or flight tests will be conducted. In-process/hidden inspections when required will be complied with in accordance with RFC.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: None.

6.0 RESPONSIBILITY: ODA Engineering unit members for Structures, Electrical Systems and Equipment, Power Plant, Mechanical Systems and Equipment and Hardware/Software establish the requirements for the extent and kind of conformity inspections required and will issue a Request for Conformity. The ODA engineering unit member will specify conformity requirements as applicable to design and installation data only within their delegated disciplines and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. INITIATING THE CONFORMITY INSPECTION PROCESS

1. An ODA engineering unit member or ODA administrator issues the Request for Conformity, FAA Form 8120-10. Upon verification that the appropriate data approvals have been completed. See Appendix 4, figure 1 of FAA Order 8110.4 for instructions on how to complete this form.
    a. Each RFC will be assigned a unique tracking number by the originating unit member.
    b. Only with this tracking number is the RFC to be considered approved.
    c. The status of the RFC will be kept in a RFC Log.
    d. The RFC is to be provided to the Inspection unit member to initiate the formal ODA conformity process.

B. PARTS/COMPONENTS PRODUCED BY CONTRACTED VENDORS OR SUPPLIERS

1. Parts or components manufactured by a contracted vendor or supplier that does not have a production approval for that part, or a part used for a structural test, will require issuance of a RFC.
    a. The conformities will take place at the supplier/vendor facility.
    b. The conformities will be performed by the Inspection unit member.
    c. Issuance of FAA Form 8130-3 Authorized Release Certificate/Air-worthiness Approval tag is required for these conformities.
    d. Follow on conformities at a vendor facility will be at the discretion of the ODA Inspection unit member upon coordination with the ODA administrator.

C. PARTS PRODUCED BY TSO OR PMA USED IN CERTIFICATION TESTING

1. These approvals indicate that the part produced has been determined to conform to a FAA approved design.
2. The part's approval by TSO or PMA indicates that a part conformity will not be necessary for its use in a certification project.
3. Refer to FAA Order 8110.4, Chapter 2, Section 2-5, Paragraph 2-5, c.(3)) for the requirements related to the use of TSO or PMA items in certification testing.

8.0 FORMS:

a. Form 8120-10 Request for Conformity
b. FORM 8130-3 Authorized Release Certificate, Airworthiness Approval Tag

Procedure Number: **S009**

Function Code **11080M**

Procedure Title: **Determine Conformity of Parts and Test Articles**

1.0 PURPOSE: to establish procedures necessary to execute Function Code 11080M requirements in accordance with FAA Order 8100.15 to describe the procedures to be followed by the ODA inspection unit member when establishing conformity of parts and test articles.

2.0 GENERAL: An ODA inspection unit member will determine whether products, components, parts, or test articles conform to design data. The ODA uses conformity inspections for both quality assurance and engineering purposes. ODA conformity is a validation of S-TEC's conformity. The ODA inspection unit member is to perform a conformity inspection upon receipt of FAA form 8120-10, Request for Conformity. S-TEC is responsible for identifying the test articles that will be used to generate compliance data, and for conducting 100 percent S-TEC conformity of those test articles as required by 14 CFR § 21.33(a)(b).

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: 14 CFR 21.33(a)(b)

6.0 RESPONSIBILITY: ODA inspection unit members perform conformity inspections of parts and test articles. The inspection unit member will perform conformity requirements as applicable regarding installations only within their delegated discipline and within limitations as specified in individual "ODA Unit Member List" document number ODAA07U1109-x and capabilities charts located in appendix D. An ODA inspection unit member performs conformity inspections per the requirements of the Request for Conformity.

7.0 PROCEDURES:

A. RECEIVING THE STATEMENT OF CONFORMITY

1. An FAA Form 8130-9, Statement of Conformity will be submitted to the ODA before the ODA inspection unit member begins the conformity inspection.

2. S-TEC Quality Assurance Director or his/her delegates in writing must sign Statement of Conformity.
3. When the conformity inspection is conducted away from S-TEC's manufacturing facility, S-TEC will use one of the following procedures for signing the statement of conformity:

    a. S-TEC will send an authorized representative to the manufacturer's facility to inspect the prototype article and sign the statement of conformity.
    b. S-TEC will delegate, in writing, a representative at the supplier to complete the FAA Form 8130-9. This representative is an agent of S-TEC and acts on S-TEC's behalf. In this case, the agent must submit a copy of the agent's letter with the FAA Form 8130-9.

A. RECEIVING THE REQUEST FOR CONFORMITY (RFC)

1. Conformity inspection verifies and provides objective documentation that the test articles, parts, assemblies, installations, functions, and test setups conform to the design data
2. The ODA inspection unit member verifies the product conforms to the drawings, specifications, and special processes. An ODA conformity inspection must be successfully accomplished before any certification ground or flight tests are conducted. Conformity inspections are requested by ODA engineering unit members using FAA Form 8120-10, Request for Conformity, or FAA Form 8110-1, Type Inspection Authorization (TIA).
3. A Conformity Tracking Log (ODA Form 206) will be maintained and list all RFCs and subsequent Conformity Inspection Records produced. Conformity records will be assigned unique tracking numbers by the ODA administrator or authorized assistant. The tracking number will comply with the format defined in Appendix E.

B. CONFORMITY INSPECTION PROCEDURES FOR DETAIL PARTS AND ASSEMBLIES:

1. Upon the receipt of the 8120-10, Request for Conformity, the ODA inspection unit member will review the level of conformity established on the RFC. Verify that the data on the RFC is correct.
2. The ODA inspection unit member will review the FAA Form 8130-9 prior to initiating the FAA conformity inspection and verify the form contains the correct information related to the conformity inspection being conducted. The ODA inspection unit member will verify a company inspection has been conducted and documented on company inspection record (Company Conformity Form

86371). The ODA inspection unit member will document the inspection on a FAA Form 8100-1, Conformity Inspection Record.

3. The ODA inspection unit member conducting the conformity inspection will determine the level of inspection based on S-TEC's quality control system, procedures, experience, equipment and facilities. The product's complexity and effect on air safety are also used to determine how much inspection is warranted.
4. The ODA inspection unit member will review the information referenced on the RFC and conduct the inspection as follows:

    a. Ensure S-TEC's quality representative has presented a complete drawing package referenced on the RFC including the quality control records to support S-TEC's inspection. Review the design data to determine the level of conformity inspection required by reading drawing notes and reviewing the parts list. The parts list will be a guide to ensure all parts are installed in accordance with design data.
    b. Verify that any drawing changes are incorporated in the drawings and have been approved by ODA engineering unit members.
    c. Ensure the parts or test articles have been presented for conformity inspection, verifying the part number and serial number, if applicable.
    d. Inspect the part or assembly by verifying the critical and major characteristics:
        1. Dimensions
        2. Fits
        3. Tolerances
        4. Clearance
        5. Interference
        6. Ventilation
        7. Drainage
        8. Compatibility with other installations
        9. Servicing
        10. Maintenance requirements
        11. Special Processes
5. Regardless of S-TEC's experience, ODA inspection unit members are responsible for determining that S-TEC performed a complete conformity inspection. In witnessing conformity inspections, the ODA inspection unit member will consider the following at a minimum:

    (a) The materials used in the fabrication process conform to design data by verifying the evidence shows traceability from the raw material to the prototype part, and chemical and physical properties were identified.

(b) When special processes are referenced on the design data, the ODA inspection unit member will verify the process specification is approved by ODA engineering unit members. Verify the part or assembly show the process produces consistent parts that meet the design data.
(c) Verify workmanship adds to the quality of the product and ODA engineering has established criteria to identify workmanship practices.

6. Upon completion of the conformity inspection the ODA inspection unit member will record the inspection on FAA Form 8100-1, Conformity Inspection Record. Instructions for completing the form are on the back side of the form. The ODA inspection unit member compiles and prepares a conformity package that consists of the following:

    a. FAA form 8120-10, Request for Conformity
    b. FAA Form 8100-1, Conformity Inspection Record
    c. FAA Form 8130-9, Statement of Conformity
    d. FAA Form 8130-3, Authorized Release Certificate, Airworthiness Approval Tag (if applicable)
    e. A copy of S-TEC's design data, i.e. Master Data List, drawings, and quality control records supporting the conformity
    f. FAA form 8100-9, Statement of Compliance with Airworthiness Standards, if applicable

7. If the ODA inspection unit member discovers an unsatisfactory condition, they will accomplish the following:

    a. The discrepancy shall be documented on FAA Form 8100-1 as "UNSAT" and sufficient information describing the condition will be provided in the comments.
    b. The documented findings will be provided to S-TEC Quality to be addressed using current S-TEC procedures to disposition and correct the immediate non-conformance. If the "UNSAT" cannot be readily resolved, then an authorized ODA engineering unit member must disposition the "UNSAT" on appropriate engineering document.
    c. If the current configuration does not conform to the design data specified on the RFC it will be documented as an "UNSAT". Note: Design changes will require an RFC revision change or the statement "or later ODA approved revision" to clear this "UNSAT".
    d. All **unsatisfactory** conditions will be resolved by S-TEC providing the ODA unit member an acceptable corrective action per S-TEC procedures.

e. S-TEC will provide copies of any S-TEC engineering activity to the ODA inspection unit member to clear any "UNSAT" condition on FAA Form 8100-1.

f. Re-inspection by the ODA Inspection unit member will be required when rework or design changes are warranted. This re-inspection will occur after S-TEC has provided a corrective action acceptable to the ODA Inspection unit member.

8. When inspections are to be conducted outside the geographic area the ODA inspection unit member must notify (via fax or email attachment) the ODA administrator and provide a request for Designee Geographic Expansion Authorization, FAA Form 8130-13 to the managing MIDO. The managing MIDO will coordinate with the geographic MIDO having responsibility for the area in which the work will be performed. No inspections will be performed until approval has been received from the managing MIDO.

a. **FAA Conformity Inspections at Supplier Locations** - FAA Conformity Inspections may be completed at supplier locations, using one of the following options:

1. The FAA Conformity Inspection may be performed by the local FAA office in the supplier's region through coordination with the FAA OMT
2. An ODA Unit Member may travel to the supplier to complete the FAA Conformity Inspection
3. A qualified member of the supplier's organization may be appointed to perform functions as an S-TEC ODA Unit Member.

b. **Completion and Processing of Conformity Inspection Records or Forms** - The ODA Inspection Unit Member conducting the requested FAA Conformity Inspection will document the results, as applicable, on the following forms:

1. FAA Form 8100-1, Conformity Inspection Record (for all Conformity Inspections)
2. FAA Form 8130-3, Authorized Release Certificate/Airworthiness Approval Tag (if requested on the RFC)

c. The ODA Inspection Unit Member will assemble all the documentation required by the RFC into a data package for submittal to the administrator or his designee. The package will include:

1. FAA Form 8120-10, Request For Conformity
2. FAA Form 8130-9, Statement of Conformity
3. FAA Form 8100-1, Conformity Inspection Record

4. FAA Form 8130-3, Authorized Release Certificate/Airworthiness Approval Tag (if required)

8.0 FORMS:

a. FAA Form 8130-9 Statement of Conformity
b. FAA Form 8120-10 Request for Conformity
c. FAA Form 8110-1 Type Inspection Authorization
d. FAA Form 8100-1 Conformity Inspection Record
e. FAA Form 8130-3 Authorized Release Certificate, Airworthiness Approval Tag
f. FAA Form 8100-9 Statement of Compliance with Airworthiness Standards
g. FAA Form 8130-13 Designee Geographic Expansion Authorization
h. ODA Form 206 Conformity Tracking Log

Procedure Number: **S010**

Function Code **11090M**

Procedure Title: **Determine Conformity of Test Setup**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11090M requirements in accordance with FAA Order 8100.15 to define the requirements to be met when conforming a test setup during certification testing.

2.0 GENERAL: An ODA inspection unit member determines conformity of the test setup. Engineering Certification Tests are used by S-TEC to demonstrate compliance with a requirement, or to collect quantifiable product or component data necessary for showing compliance. S-TEC certification tests include part qualification, system function, fatigue, flammability, temperature survey, landing gear drop tests, ground vibration, and electromagnetic interference tests.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: None

6.0 RESPONSIBILITY: An ODA inspection unit member performs test setup conformity inspections. The inspection unit member will perform conformity requirements as specified within design data only within their delegated discipline and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. CONFORMITY INITIATION

1. Receive original 8130-9 Statement of Conformity
    a. Verify form is completed and note any deviations
    b. Verify form is signed and dated by S-TEC or authorized agent
2. Review copy of 8120-10 Request for Conformity and determine conformity requirements
3. Review applicable test plan identified on 8120-10, Request for Conformity, and determine the following:

a. Items to be tested
b. Test equipment to be used in performance of the test
c. Calibration status of the required test equipment
d. Conformities required by the test plan
e. Test Articles specified by test plan have been successfully conformed as part of test set up conformity

B. CONDUCTING TEST PLAN CONFORMITY

1. Conduct the inspection in order to determine the test setup is in accordance with the test plan.
2. Record inspection results on FAA Form 8100-1.
3. If the test setup does not conform to the test plan, it is to be considered nonconforming, and:
    a. Record the discrepancy as an “UNSAT” on FAA Form 8100-1
    b. Provide sufficient descriptive information of the condition
    c. The ODA Inspection unit member will resolve the discrepancy utilizing one of the following methods:
    d. The “UNSAT” will be remedied by:
        1. Rework of the condition by S-TEC
        2. Engineering change by S-TEC
        3. Disposition of the condition by an ODA engineering unit member

C. CONFORMITY COMPLETION

1. Record the inspection results on FAA Form 8100-1, Conformity Inspection Record
2. Compile and a conformity package consisting of the following and forward to the ODA administrator or his designee:
    a. FAA Form 8120-10, Request for Conformity
    b. FAA Form 8100-1, Conformity Inspection Record
    c. FAA Form 8130-9, Statement of Conformity
    d. FAA Form 8130-3, Authorized Release Certificate, Airworthiness Approval Tag
    e. FAA Form 8100-9, Statement of Compliance with Airworthiness Standards, when applicable
    f. A copy of S-TEC design data, i.e. test plan, Master Data List, drawings, and quality control records supporting the conformity

FORMS:

a. FAA Form 8100-1 Conformity Inspection Record

b. FAA Form 8100-9 Statement of Compliance with Airworthiness Standards
c. FAA Form 8120-10 Request for Conformity
d. FAA Form 8130-3 Authorized Release Certificate, Airworthiness Approval Tag
e. FAA Form 8130-9 Statement of Conformity

Procedure Number: **S011**

Function Code **11100M**

Procedure Title: **Determine Conformity for Installation and TIA Inspection on a Product**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11100M requirements in accordance with FAA Order 8100.15 to establish the required actions to be taken upon issuance of the Type Inspection Authorization, FAA Form 8110-1.

2.0 GENERAL:

A. The ODA administrator will issue the TIA after the examination of the technical data required for the Supplemental Type Certificate compliance, the completed TIA will be forwarded to the Inspection Unit Member
    1. The TIA will identify conformity requirements, authorized flight tests, any special limitations (additions or changes to the limitations document) deemed appropriate for the test aircraft, and include a formal assessment of the risks associated with the flight tests.

B. TIA Preparation

    1. The ODA administrator will prepare a draft TIA on FAA Form 8110-1. The TIA is not prepared until proper coordination is accomplished with each affected ODA Unit Member and, when appropriate, the FAA OMT so that all required information for each discipline's portion of the inspection.
    2. A finalized and signed copy of the TIA will be given to the required ODA Inspection Unit Members by the ODA administrator or his designee.

C. TIA INFORMATION

    1. FAA Form 8110-1, Type Inspection Authorization contains:
        a. Cover page, which provides information related to:
            1. S-TEC's name
            2. Aircraft type
            3. Certification basis
            4. Nature of the type design or modification
            5. Certification project number
            6. Internal ODA coordination

b. Page two, which provides information related to:
    1. Type design or modification description
    2. Any unique features or special interfaces
    3. Applicable parts of 14 CFR and / or any FAA policy in which compliance will be shown.
c. Section 18, Part I, which provides:
    1. Point of contact at conformity site including phone number, location of aircraft/conformity site
    2. Conformity instructions for the ODA inspection unit member
    3. Instructions for the ODA unit member to change the aircraft's airworthiness certificate to a FAA Form 8130-7, Special Airworthiness Certificate, Experimental, Showing Compliance with Regulations, for flight testing

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES:

A. FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products

6.0 RESPONSIBILITY: An ODA inspection unit member performs conformity inspections on installations and TIA. The inspection unit member will perform conformity requirements as specified within RFCs and only within their delegated discipline and within limitations as specified in individual "ODA Unit Member List" document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. TIA Part 1 Completion by ODA Inspection Unit Member

1. When a copy of the finalized and signed TIA is received by the administrator or his designee he will assign Part 1 of the TIA to an ODA Inspection Unit Member.
2. In the case where the TIA Conformity Inspection is required in area outside the FAA OMT's geographical area, the administrator or his designee must notify the FAA OMT by Designee Geographic Expansion, FAA Form 8130-13.
3. The TIA inspection ensures that the aircraft is in conformity with the design data appropriate for accomplishing the tests and the aircraft is in a condition for safe operation. The Unit Member must complete all requests listed in

Item 18, Part 1. These items may include, but are not limited to the following:

a. Obtain a completed Statement of Conformity, FAA Form 8130-9, from S-TEC.
b. Conduct Conformity Inspection to the appropriate approved design data.
c. Verify actual weighing and balancing of the aircraft as designated on the TIA.
d. Verify procedures exist for adequately removing and installing ballast for the various flight test configurations.
e. Verify that the airspeed indicator and altimeter have been calibrated within the timeframe designated on the TIA.
f. Verify that any thermocouples have been calibrated within the timeframe designated on the TIA.
g. Verify that the instrumentation package is installed in accordance with the Flight Test Plan, and that instrumentation calibrations are current.
h. Verify the pitot static system has been leak checked within the timeframe designated on the TIA.
i. Verify functional ground operational testing has been accomplished. Witness rigging of the engine and flight controls as designated on the TIA.
j. Verify all instrument markings and placards are in accordance with FAA approved drawings.
k. Verify and record the engine model and serial number.
l. Verify that applicable ADs have been accomplished.
m. Conduct any other inspections or tests deemed necessary.
n. Conduct a general airworthiness inspection of the test aircraft in accordance with 14 CFR Part 43, and issue a “Showing Compliance with FAA Regulations” experimental airworthiness certificate FAA Form 8130-7 in accordance with FAA Order 8130.2, if applicable.

B. The ODA Inspection Unit Member will document results for each item of the TIA inspection on FAA Form 8100-1. The form should document all discrepancies, nonconformities and subsequent corrective actions taken for resolution. Items documented as Unsatisfactory (UNSAT) may require dispositioning with authorized ODA Engineering Unit Members for resolution. If design changes are necessary to clear the UNSAT, FAA Form 8100-9, Statement of Compliance with Airworthiness Standards, will be prepared and listed on the 8100-1 form. When “UNSATS” identified on the 8100-1 form have been satisfactorily dispositioned, the ODA Inspection Unit Member will brief the assigned ODA Flight Test Unit Member regarding the completion of TIA Item 18, Part 1.

C. After completing the TIA inspection, the ODA Inspection Unit Member will complete FAA Form 8110-26 Part I, Supplemental Type Inspection Report.

D. The ODA Inspection Unit Member will assemble all the documentation required by TIA Item 18, Part 1 into a data package for submittal to the administrator or his designee. The ODA Unit will submit a copy of the data package to the OMT if required, and maintain the original copy in the ODA Unit project files.

E. Supplemental Type Inspection Report

1. FAA Form 8110-26, Supplemental Type Inspection Report (STIR), is to be prepared once Section 18, Part I of the TIA has been accomplished. The STIR must be complete prior to STC issuance. The STIR shall document the results of all TIA inspections and tests, and:

    a. Is prepared by the ODA inspection unit member
    b. The STIR must be reviewed and signed by another Inspection ODA unit member or the ODA administrator
    c. Is to be submitted to the ODA administrator upon completion for approval

F. FINAL CONFORMITY DATA PACKAGE

1. The ODA inspection unit member is to compile a conformity data package that consists of:

    a. FAA Form 8110-26, Supplemental Type Inspection Report
    b. FAA Form 8110-1, Type Inspection Authorization
    c. FAA Form 8120-10, Request for Conformity
    d. FAA Form 8100-1, Conformity Inspection Record
    e. FAA Form 8130-9, Statement of Conformity
    f. FAA Form 8130-3, Authorized Release Certificate, Airworthiness Approval Tag, if applicable.
    g. FAA Form 8100-9, Statement of Compliance with Airworthiness Standards, if applicable
    h. A copy of S-TEC's design data, i.e. Master Data List, (drawings and other quality control records supporting the conformity may be retained with the Company Conformity records)
    i. Any other data required by Section 18, Part 1 (some data from this section may be retained with the aircraft books)

G. The final conformity data package is to be submitted to the ODA administrator.

8.0 FORMS:

a. Form 8110-26 Supplemental Type Inspection Report
b. Form 8110-1 Type Inspection Authorization
c. Form 8120-10 Request for Conformity
d. Form 8100-1 Conformity Inspection Record
e. Form 8130-9 Statement of Conformity
f. Form 8130-3 Authorized Release Certificate, Airworthiness Approval Tag
g. Form 8100-9 Statement of Compliance with Airworthiness Standards
h. Form 8130-7 Special Airworthiness Certificate

Procedure Number: **S012**

Function Code **11110E**

Procedure Title: **Perform Compliance Inspections (Aircraft Ground Evaluation)**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11110E requirements in accordance with FAA Order 8100.15 to specify steps to be taken prior to and during aircraft Ground Evaluations per approved test plans.

2.0 GENERAL:

The ODA administrator will delegate qualified Engineering Unit Member(s) to perform the compliance inspection(s). This unit member(s) will be specified in the Project Specific Certification Plan with specific functions and / or tests to be witnessed. Actual testing will be accomplished using ODA approved test plans only.

NOTE: An engineering compliance inspection will be done for any aspect of product design and installation where compliance with the certification requirements cannot be determined through the review of drawings or reports. Do not confuse this inspection with a conformity inspection done by ODA inspection Unit Members. An engineering compliance inspection determines compliance to the regulations. As such an engineering compliance inspection provides an opportunity for the ODA engineering unit member to review an installation and its relationship to other installations on the subject aircraft. This inspection ensures systems and components are compatible with each other, perform properly and meet the applicable requirements of the airworthiness and operational standards.

NOTE: The product must conform to the type design before conducting the engineering compliance inspection shown in section 7.0 below. The findings will be documented in a report by S-TEC to be included as part of the substantiating data. Engineering compliance inspections may not be delegated outside the ODA or to unit members that are not specifically delegated this function under the ODA approval. Engineering unit members will request additional guidance from the ODA administrator for any area of test plans not clearly understood in order to effectively make the findings on behalf of the ODA.

Prior to testing, the ODA unit will assemble all required members as listed on ODA Form 204 in accordance with form instruction in Appendix E to perform a technical review of the project prior to the start of any official ground testing. Actual testing will be accomplished using ODA approved test plans only. The ODA administrator will be responsible for ensuring that all

appropriate unit members have initialed form 204 after the review team has performed the following:

A. Technical Review Board meeting conducted to examine and determine the technical data required for type certification is completed or has reached a point where it appears that the aircraft, component, or system being examined will meet the pertinent regulations.

B. Requirement for the issuance of a TIA, or a RFC that defines the FAA conformity inspection requirements when TIA is not necessary.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: None

6.0 RESPONSIBILITY: ODA administrator, unit members as applicable. The team members will perform technical review and actual compliance testing requirements within their delegated discipline and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

Delegated engineering unit member(s) shall perform the following:

A. Determine scope of the area / tests to be inspected / evaluated for compliance.

(1) Determine which regulations apply as listed in ODA approved Test Plan(s).
(2) Review applicable listed regulatory requirements and any referenced technical data to identify items for inspection / test.
(3) Coordinate inspection requirements with S-TEC engineering and ODA unit inspectors.
(4) Notify S-TEC engineering of any special attention or requirements for areas to be inspected.
(5) Request conformity inspection verification by ODA inspectors.
(6) For any areas without clear conformity verification Inspect aircraft personally with the engineering representative(s) of S-TEC and determine compliance with the regulatory requirements.
(7) Document any required inspections and results resulting from item 6.
(8) Any non compliance found during compliance inspection will be evaluated for possible test suspension and notification of S-TEC engineering will be made. The notification will include reference to the specific regulatory requirements.

(9) Re-inspect any changes to verify that the non-compliance items have been adequately resolved. Verify that type design drawings as applicable have been revised to reflect the changes made that resolved the non-compliance.
(10) Any non compliance requiring immediate correction (Prior to continuing tests) will be processed in accordance with approved ODA procedures prior to restart of test.

B. Witness performance of test procedures as described in ODA-approved test plan(s).

(1) The ODA-authorized witness and S-TECs knowledgeable representative who is capable of performing the test shall be present at all times during actual testing.
(2) Verify that data captured by test instrumentation appears to be valid data for the test in question.
(3) ODA approved test plan(s) will be performed as written with any required/proposed deviations or errors noted on the hard copy test plan(s) used. This hard copy test plan shall be considered “official” and used to record and support any required changes to aircraft or test plan(s) submitted to S-TEC engineering and ODA Unit.
(4) For lengthy tests, witness at least the most appropriate or critical portions of the tests and conduct a post-test examination.
(5) After completion of test, the ODA-authorized witness will sign the “official” test plan hand marked during the test to show the results were obtained by properly following the approved test plan. This signed “hard copy” record shall identify the test and include the results obtained, the decisions reached, and any recommendations to be made to S-TEC. A copy of this record will be included in the ODA file along with the official test report generated.
(6) S-TEC must satisfactorily resolve all noncompliance prior to the ODA issuing the STC, amended STC.
(7) File all supporting data in the ODA file through the ODA administrator.

8.0 FORMS: (appendix E)

a. FORM 204 STC Project Technical Review Board Agenda / Minutes
b. FORM 8100-9 Statement of Compliance With Airworthiness Standards

Procedure Number: **S013**

Function Code **11110E**

Procedure Title: **Perform Compliance Inspections (Aircraft Pre-Flight Inspection)**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11110E requirements in accordance with FAA Order 8100.15 to specify steps to be taken during aircraft preflight Evaluations.

2.0 GENERAL:

The ODA administrator will delegate qualified Engineering Unit Member(s) to perform the compliance inspection(s). This unit member(s) will be specified in the Project Specific Certification Plan with specific functions and / or evaluations to be performed.

NOTE: An engineering compliance inspection will be done for any aspect of product design and installation where compliance with the certification requirements cannot be determined through the review of drawings or reports. Do not confuse this inspection with a conformity inspection done by ODA inspection Unit Members. An engineering compliance inspection determines compliance to the regulations. As such an engineering Pre-Flight compliance inspection provides an opportunity for the ODA engineering unit member to review an installation and an aircraft to ensure alteration completion status and airworthiness of the subject aircraft prior to flight. This inspection ensures the modification is complete, the installed systems perform properly and the aircraft meets the applicable requirements of the airworthiness and operational standards (Ref 14 CFR § 21).

NOTE: The aircraft must conform to the type design before conducting the engineering compliance inspection shown in section 7.0 below. The findings will be documented in a report by S-TEC to be included as part of the substantiating data. Engineering compliance inspections may not be delegated outside the ODA or to unit members that are not specifically delegated this function under the ODA approval. Engineering unit members will request additional guidance from the ODA administrator for any area of test plans not clearly understood in order to effectively make the findings on behalf of the ODA.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: None.

6.0 RESPONSIBILITY: ODA engineering UM for Structures, Electrical Systems and Equipment, Power Plant, Mechanical Systems and Equipment, and Inspection Unit Members as assigned by ODA administrator. The team members will perform an aircraft alteration / airworthiness assessment within their delegated discipline and within any limitations as specified in individual "ODA Unit Member List" document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

Delegated engineering unit member(s) shall perform the following:

A. Determine condition of aircraft evaluated for compliance.

(1) Determine which regulations apply.
(2) Review applicable regulatory requirements and any guidance materials to identify items for inspection.
(3) Coordinate inspection requirements with S-TEC engineering and ODA unit inspectors.
(4) Notify S-TEC engineering of any special attention or requirements for areas to be inspected.
(5) Request conformity inspection verification by ODA inspectors.
(6) For any areas without clear conformity verification Inspect aircraft personally with the engineering representative(s) of S-TEC and determine compliance with the regulatory requirements.
(7) Document any required inspections and results resulting from item 6.
(8) The Inspection ODA unit member will inspect the STC project aircraft for general airworthiness condition, document the inspection on ODA form 301, and will issue an experimental airworthiness certificate to the aircraft, for the purpose of "Research and Development" aircraft operation, in accordance with the procedures outlined in Process 11062M of this manual.
(9) Any non-compliance found during compliance inspection will be evaluated for possible test suspension and notification of S-TEC engineering will be made. The notification will include reference to the specific regulatory requirements.
(10) Re-inspect any changes to verify that the non-compliance items have been adequately resolved.
(11) Any non-compliance requiring immediate correction (Prior to flight) will be processed in accordance with approved ODA procedures prior to release for flight.

B. Provide Documented Evidence of aircraft Airworthiness and Test Readiness

S-TEC engineering and the ODA unit member(s) performing evaluation will provide the following documentation to the Inspection ODA unit member:

1. A copy of the completed aircraft records showing that either an annual or a 100hr inspection of the aircraft has been completed or is currently effective.

2. A declaration that there is no outstanding or uncompleted Airworthiness Directives on the STC project aircraft.

3. A listing of all other prior STCs applied to the STC project aircraft.

4. An appropriate S-TEC representative will inspect the STC project aircraft installation, modification, or alteration in accordance with 14CFR part 21.33 and submit an FAA Form 8130-9.

5. After completion of the evaluation, the ODA-authorized unit member will provide a copy of all applicable records to the ODA administrator**.**

6. The ODA administrator will file all data in the ODA project file.

8.0 FORMS: (appendix E)

a. FORM 8130-9 Statement of Conformity
b. FORM 8130-7 Special Airworthiness Certificate

Procedure Number: **S014**

Function Code **11110E,**

Procedure Title: **Perform Compliance Inspections (Certification Flight Testing)**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11110E requirements in accordance with FAA Order 8100.15 to specify steps to be taken during flight testing per approved test plans.

2.0 GENERAL:

The ODA administrator will delegate a qualified Flight Test Unit Member to perform the flight test compliance inspection(s). This unit member(s) will be specified in the Project Specific Certification Plan with specific functions and / or tests to be witnessed. Actual testing will be accomplished using ODA approved test plans only.

NOTE: A Flight Test compliance inspection will be done to show compliance to the regulations as specified within the ODA approved test plans. A flight test compliance inspection determines compliance to the regulations. As such a flight test compliance inspection provides an opportunity for the ODA flight test unit member to assess the operational and system performance aspects of the installed system(s) on the subject aircraft and meet the applicable requirements of the airworthiness and operational standards.

NOTE: The product must have been released for flight per procedure S013 of this manual. The findings will be documented in a report by S-TEC to be included as part of the substantiating data. Flight Test compliance inspections may not be delegated outside the ODA or to unit members that are not specifically delegated this function under the ODA approval. Engineering unit members will request additional guidance from the ODA administrator for any area of test plans not clearly understood in order to effectively make the findings on behalf of the ODA.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: None.

6.0 RESPONSIBILITY: ODA administrator, flight test unit members as applicable. The team members will perform compliance flight testing requirements within their delegated discipline

and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

Note: Only upon successful completion of the approved ground tests will the Flight Test ODA unit member or FAA Flight Test personnel complete the flight evaluation tests required as defined in the TIA Part 2 to show compliance.

Delegated Flight Test unit member(s) shall perform the following:

A. Perform Certification Flight Tests per ODA approved Test Plans IAW TIA.

(1) The ODA administrator will coordinate with the FAA flight test personnel of the flight timeframes as soon as possible if the FAA has requested to participate in the certification flight test.
(2) Determine which regulations apply as listed in ODA approved Test Plan(s).
(3) Review applicable listed regulatory requirements and any referenced technical data to identify items for inspection test.
(4) Perform certification flight tests in accordance with approved test plans as authorized by the TIA.
(5) Document any non-compliance found during testing for evaluation and possible test suspension and / or re-testing. Non-compliance notification of S-TEC engineering will be made. The notification will include reference to the specific function / failure and regulatory requirements.
(6) Re-test any changes to verify that the non-compliance items have been adequately resolved.
(7) Any non compliance requiring immediate correction (Prior to continuation of flight) will be processed in accordance with approved ODA procedures prior to restart of testing.

B. Documentation completion showing compliance with approved test plans IAW TIA.

(1) Inspection ODA unit member and the Flight Test ODA unit member or FAA Flight Test personnel will complete a Supplemental Type Inspection Report (STIR) and Type Inspection Report (TIR).
(2) The Supplemental Type Inspection Report (STIR, Part 1) FAA Form 8110-26 (Ref Appendix E) will be completed in accordance with related ground test procedures and inspections based on the project’s TIA. The STIR preparation is the responsibility of the Inspection unit member.
(3) Inspection noted in STIR part 1 will be documented on a FAA Form 8100-1, Conformity Inspection Record.

(4) Submit completed STIR and TIR establishing compliance to the ODA administrator for signature approval and incorporation in the Master Data File (within 10 days).
(5) 8100-1s are to be included in the final report along with the Weight and Balance Report, a copy of Special Airworthiness Certificates, FAA Form 8130-7 and Limitations, FAA Forms, 8120-10, 8130-9, 8130-3 and 8100-9 when applicable.

8.0 FORMS: (appendix E)

a. FORM 8100-1 Conformity Inspection record
b. FORM 8100-9 Statement of Compliance with Airworthiness Standards
c. FORM 8110-1 Type Inspection Authorization
d. FORM 8110-26 Supplemental Type Inspection Report
e. FORM 8120-10 Request for Conformity
f. FORM 8130-3 Authorized Release Certificate/Airworthiness Approval Tag
g. FORM 8130-7 Special Airworthiness Certificate
h. FORM 8130-9 Statement of Conformity

Procedure Number: **S015**

Function Code, **11061M**

Procedure Title: **Issuing Standard Airworthiness Certificates**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11061M requirements in accordance with FAA Order 8100.15 to identify the appropriate method and process for the issuance of Standard Airworthiness Certificates.

2.0 GENERAL: Section 21.183(d) prescribes the basic requirements for issuance of standard airworthiness certificates for used aircraft.

- **New Certificate Issuance**

a. Upon completion of a STC project, the ODA inspection unit member will issue a new Standard Airworthiness Certificate in accordance with the procedures outlined in FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products , Chapter 3 Section 3, and processes specified in this manual.

- **Reissue Certificate**

b. Upon completion of a STC project, the ODA inspection unit member will reinstate the original Standard Airworthiness Certificate, held in suspense for TIA flight-testing, as currently provided for in FAA Order 8130.2.

NOTE: Documents other than the original will be stamped COPY

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES:

A. A FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products
B. 14 CFR Part 21

6.0 RESPONSIBILITY: ODA administrator, ODA inspection members as applicable. The unit members will coordinate as required and each member will provide support within their delegated discipline and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

PREPARATION FOR ISSUING A NEW STANDARD AIRWORTHINESS CERTIFICATE

A. The ODA Unit will comply with the requirements of 14 CFR part 21.183 and 21.29 that prescribe the basic requirements for issuance of standard airworthiness certificates for aircraft.

B. Record Inspection - The ODA Unit will review records and documentation for compliance to requirements provided in FAA Order 8130.2, Chapter 3, Standard Airworthiness Certification. The Inspection ODA Unit Member will complete the following record inspections as applicable:

1. Obtain from S-TEC a properly completed FAA Form 8130-6, Application for U.S. Airworthiness Certificate, completed in accordance with FAA Advisory Circular 21-12, and any other documents required for certification. S-TEC must have the form completed and the appropriate sections signed before submitting it to the ODA administrator or his designee. (Note: The application may not be signed by the ODA Unit Member responsible for issuing the certificate.)
2. Contact AFS-750, Flight Services Regulatory Support Division, to determine that an application for airworthiness certification has not previously been denied. If it was denied, the reasons stated in the denial letter must be rectified before issuing an airworthiness certificate.
3. Arrange with the applicant to make the aircraft, aircraft records, and any other data necessary to establish conformity to its type design available for inspection and review.
4. Determine that the aircraft is properly registered in accordance with 14 CFR Part 47, and marked in accordance with 14 CFR Part 45.
5. As applicable, ensure compliance with the noise standards of 14 CFR part 21.93(b), 14 CFR part 21.183(e), 14 CFR part 36, Standards: Aircraft Type and Airworthiness Certification, or 14 CFR part 91.
6. Determine the ICA has been accepted prior to issuance.
7. Review aircraft records to determine if any required maintenance, inspections, etc. have been accomplished.
8. Review the aircraft's weight and balance data for accuracy and currency for the aircraft submitted.
9. Determine that all relevant ADs have been complied with.
10. Establish that all required documentation and records have been provided for the aircraft, (i.e., an up-to-date approved flight manual or draft flight test plan documentation, equipment list, and maintenance records and manuals as required).
11. Determine that the aircraft has been flight tested.

C. Aircraft Inspection - Inspect the aircraft for compliance to requirements provided in FAA Order 8130.2 Chapter 3, Standard Airworthiness Certification. The inspection includes, but is not limited to, the following:

1. The aircraft is eligible by make and model using the TCDS, aircraft specification, or aircraft listing, as applicable.
2. The aircraft data plate meets the requirements of 14 CFR Part 45.11, as applicable.
3. The information on the aircraft data plate is correct, matches the information on FAA Form 8130-6, and is in accordance with 14 CFR Part 45.13, as applicable.
4. The aircraft nationality and registration marks are in accordance with 14 CFR Part 45.
5. The flight control system operates properly.
6. The engine(s), propeller(s), and associated instruments operate in accordance with the manufacturer's instructions.
7. The pitot static system and associated instruments operate properly.
8. Verify that the altimeter has been tested per 14 CFR Part 91.411 and 14 CFR Part 43, Appendix E.
9. Verify that the transponder has been tested 14 CFR Part 91.413 and 14 CFR Part 43, Appendix F.

D. Issuance of Standard Airworthiness Certificate

E. If it is determined that the aircraft meets the requirements for the certification requested, the appropriate ODA Unit Member should complete the following:

1. Complete sections V and VIII of FAA Form 8130-6, Application for U.S. Airworthiness Certificate, as appropriate.
2. Issue FAA Form 8100-2 Standard Airworthiness Certificate.
3. Make an aircraft logbook entry.
4. Examine, review, and route the certification package to the administrator or his designee.

F. The administrator or his designee will send the airworthiness certification package (including the original application, supporting documentation and a duplicate airworthiness certificate designated as "copy") to the MIDO. The ODA Unit will retain the original 8100-1 and a copy of the certificate and the application along with any other pertinent information.

G. The ODA Unit Member should advise the applicant that the Airworthiness Certificate must be displayed in the aircraft in accordance with 14 CFR Part 91.203(b).

H. If the aircraft does not meet the requirements for the certification requested and the airworthiness certificate is denied, the administrator will forward a denial letter to the applicant, stating the reason(s) for denial. A copy of the denial letter will be attached to the application and will be made part of the aircraft record. A copy of the denial letter and application file will be routed to the FAA OMT.

Note: Only Form 8100-2 (Government Printing Office pad only) will be used for all certification of aircraft.

Note: A completed FAA Form 8130-6, Application for U.S. Airworthiness Certificate signed by either the aircraft registered owner or an authorized agent. If an authorized agent signs the 8130-6 a notarized agent letter is required.

Note: Copies of the above items shall be retained for the STC Master Data file.

REINSTATING THE ORIGINAL STANDARD AIRWORTHINESS CERTIFICATE

A. After flight testing has been completed and either the aircraft has been returned to its original configuration or the ODA approves the change in type design in writing via supplemental type certificate (STC), the ODA Inspection Unit Member will reinstate the suspended standard airworthiness certificate. The ODA Inspection Unit Member will do the following:

B. The application is then forwarded to the MIDO for submittal to AFS-750 with the special airworthiness certificate and operating limitations attached.

C. Makes a signed and dated entry in the aircraft maintenance records (logbook) fully explaining what has occurred, and includes the following statements as applicable:

1. Show compliance flight tests. “I find this aircraft meets the requirements for the reinstatement of the current standard airworthiness certificate and the inspection was performed based on all installations and modifications related to (insert STC number), performed from (insert date the modification(s) was first installed) to (insert current date).”
2. R&D flight tests. “I find this aircraft meets the requirements for the reinstatement of the current standard airworthiness certificate, following completion of R&D flight testing, based on an inspection confirming reconfiguration of the aircraft to the approved type design.”
3. This certification process does not replace or change the dates or times of scheduled inspection requirements (for example, annual or 100-hour inspections). The next inspection is due (insert date or time as applicable).”

4. If required, ensures copies of all airworthiness certificate is attached to the completed type inspection report and forwards that type inspection report to the MIDO.

D. DISPOSITION OF FORMS AND RECORDS

1. Within fifteen calendar days after the Standard Airworthiness Certificate has been issued or reissued, the ODA inspection unit member will submit the following to the MIDO, as applicable:

   a) One copy of the original Standard Airworthiness Certificate FAA Form 8100-2.
   b) The original of the terminated Special Airworthiness Certificate FAA Form 8130-7 (Experimental Research and Development) and its operating limitations attachments.
   c) The original Application for U.S. Airworthiness Certificate FAA Form 8130-6 (Experimental Show Compliance).
   d) The original of the terminated Special Airworthiness Certificate FAA Form 8130-7 (Experimental Show Compliance) and its operating limitations attachments.
   e) The original Application for U.S. Airworthiness Certificate FAA Form 8130-6 (Standard).
   f) One copy of original Standard Airworthiness Certificate FAA Form 8100-2 and any operating limitations attachments.
   g) A copy of all items above and a copy of the Aircraft Logbook entry and the FAA Form 337 will be submitted to the ODA administrator and be kept in the ODA STC project file.

Note: A copy of the airworthiness package MIDO submittal correspondence shall be provided to the Assistant to the ODA administrator for the ODA project file.

8.0 FORMS

a. FAA Form 8100-1	Conformity Inspection Record
b. FAA Form 8100-2	Standard Airworthiness Certificate
c. FAA Form 8130-9	Statement of Conformity
d. FAA Form 8130-7	Special Airworthiness Certificate
e. FAA Form 8130-6	Application for U.S. Airworthiness Certificate
f. FAA Form 337	Major Repair and Alteration
g. ODA Form 403	Experimental Operating Limitations

Procedure Number: **S016**

Function Code **11062M**

Procedure Title: **Issuing/Amending Special Airworthiness Certificates**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11062M requirements in accordance with FAA Order 8100.15 to identify the appropriate method and process for the issuance of Special Airworthiness Certificates.

2.0 GENERAL:

A. A Special Airworthiness Certificate, Experimental, Research and Development is to be issued prior to company flight testing by S-TEC.

B. A Special Airworthiness Certificate, Experimental, Showing Compliance with Regulations, is to be issued prior to ODA flight testing.

C. The issuance of each Special Airworthiness Certificate is to be accomplished in accordance with 14 CFR Part 21, Subpart H, and procedures in this manual.

NOTE: (Function Code 11062M), the appropriate designated Inspection ODA unit member is authorized to issue a Special Airworthiness Certificate for the purpose of operating the aircraft experimental category for Research & Development and Show Compliance. Prior to certificate issuance the ODA Inspection unit member will coordinate with the MIDO identified with the OMT to gain acceptance of the aircraft operating limitations until such time as this requirement is removed by the FAA.

3.0 DEFINITIONS: Refer to Section IV of this manual

4.0 ACROMYMS: Refer to Section IV of this manual

5.0 REFERENCES:

A. 14 CFR Part 21 Subpart H
B. FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products

6.0 RESPONSIBILITY: ODA administrator, ODA inspection members as required. The unit members will coordinate as required and each member will provide input within their

delegated discipline and within limitations as specified in individual "ODA Unit Member List" document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. Preparation for Issuance of a Special Airworthiness Certificate, Experimental for Research & Development and Show Compliance.

1. Within the limits of its authority, the ODA Unit is authorized to issue original Special Airworthiness Certificates and related approvals in accordance with the requirements of 14 CFR Part 21, related to airworthiness certificates, and FAA Orders 8130.2.

2. The ODA Unit is responsible for determining that the products or parts submitted to them conform to the approved type design, are in a condition for safe operation, and meet any other specified requirements. In no case may any TIA operations be conducted unless there is an appropriate airworthiness certificate issued to that aircraft.

B. Record Inspection - Review records and documentation for compliance to requirements provided in FAA Order 8130.2 Chapter 4, Special Airworthiness Certification. The assigned ODA Inspection Unit Member will complete the following record inspections:

1. Obtain from S-TEC a properly completed FAA Form 8130-6, Application for U.S. Airworthiness Certificate, completed in accordance with FAA Advisory Circular 21-12, and any other documents required for certification. S-TEC must have the form completed and the appropriate sections signed before submitting it to the administrator or his designee.
2. For experimental certification, obtain from S-TEC a Program Letter that identifies the aircraft, purpose of the certificate, area over which the operations are to be conducted, duration of the program, recommended operating limitations and conditions appropriate in accordance with FAA Order 8130.2, flight test areas if necessary, and three-view dimensional drawings or photographs of the aircraft (Refer to 14 CFR Part 21.193 for additional information).
3. If required, obtain MIDO approval of any operating limitations and conditions and flight test areas the FAA considers necessary for safety.
4. Determine that the aircraft has been ground run, if required, and all company quality documentation requirements have been complied with. If the aircraft has not been flight tested, issue FAA Form 8130-7, Special Airworthiness Certificate, for showing compliance with airworthiness regulations 14 CFR Part 21.189 (a)(2), 21.185 (d), and 91.319 (b). Record the flight test in

the aircraft records and verify and certify that the requirements of 14 CFR Part 91.319 (b) have been met.

5. Complete all other applicable record inspection reviews.

C. Aircraft Inspection - Inspect the aircraft for compliance to requirements provided in FAA Order 8130.2, Chapter 4, Special Airworthiness Certification. The assigned ODA Inspection Unit Member will arrange with S-TEC to complete an aircraft inspection to determine that it meets inspection criteria provided in the following:

1. The aircraft is eligible by make and model using the TCDS, aircraft specification, or aircraft listing, as applicable.
2. The ID plate meets the requirements of 14 CFR Part 45.11, as applicable.
3. The information on the ID plate is correct, matches the information on FAA Form 8130-6, Application for U.S. Airworthiness Certificate, and is in accordance with 14 CFR Part 45.13, as applicable.
4. The aircraft nationality and registration marks are in accordance with 14 CFR Part 45.
5. For Experimental Airworthiness Certificates, the word “Experimental” is displayed in accordance with 14 CFR Part 45.23.
6. Verify that a Passenger Warning placard is displayed inside the aircraft per FAA Order 8130.2, Section 11 Paragraph 165 d. (3) (e).
7. Verify that the flight control system operates properly.
8. The engine(s), propeller(s), and associated instruments operate in accordance with the manufacturer’s instructions.
9. Verify that the pitot static system and associated instruments operate properly.
10. Verify that the altimeter has been tested per 14 CFR Part 91.411 and 14 CFR Part 43, Appendix E.
11. Verify that the transponder has been tested per 14 CFR Part 91.413 and 14 CFR Part 43, Appendix F.

D. Issuance of Special Airworthiness Certificate **-** If it is determined that the aircraft meets the requirements for the special certification requested, the assigned ODA Inspection Unit Member should complete the following and submit it to the ODA administrator or his designee:

1. Complete sections V and VIII of FAA Form 8130-6, Application for U.S. Airworthiness Certificate, as appropriate.
2. Issue FAA Form 8130-7, Special Airworthiness Certificate and Operating Limitations.
3. Make an aircraft logbook entry.
4. Examine, review, and route the certification file.

5. The ODA administrator or his designee must send the certification package to the FAA MIDO.

Note: The assigned ODA Inspection Unit Member should advise S-TEC that the Airworthiness Certificate and attached operating limitations must be displayed in the aircraft in accordance with 14 CFR part 91.203(b).

Note: If the aircraft does not meet the requirements for the certification requested and the airworthiness certificate is denied, the administrator or his designee will forward a denial letter to S-TEC, stating the reason(s) for denial. A copy of the denial letter will be attached to the application and will be made part of the aircraft record. A copy of the denial letter and application file will be routed to the FAA OMT.

E. Establish Operational Limitations

1. The ODA flight test and engineering unit members will review the project test plan(s) and establish the requirements to be satisfied.
2. The ODA flight test and engineering unit members will then review FAA Order 8130.2 current revision to develop limitations appropriate to the required flight. This listing will be complete and include any additional limitations deemed necessary.
3. The ODA Flight Test unit member will review each imposed operating limitation with the ODA engineering unit to ensure that the operating limitations are understood.
4. The specified listing of limitations will be provided to the inspection ODA unit member who will enter specified limitations on the 8130-7 (or attached sheet).
5. The inspection ODA unit member will forward the proposed limitations to the ODA administrator for review and approval prior to any airworthiness certificate issuance (under ODA function codes)
6. The ODA administrator will also add any limitations he feels are necessary to insure safe operation.
7. After ODA administrator approval the inspection ODA unit member will forward the proposed limitations to MIDO for approval prior to any flight.
8. MIDO approval document or e-mail will be included in ODA project file.
9. Inspection ODA unit member will issue Airworthiness Certificate including specified limitations (Per ODA function code Processes).

F. After thorough review the ODA inspection unit member will submit to the MIDO:

1. S-TEC's Program Letter that contains:
   a) Description of the purpose of the experiment
   b) Aircraft configuration

c) Program objectives
d) Estimated duration of program
e) Estimated number of flights required
f) Sufficient detail over which geographic areas the flight tests will be conducted
g) The letter must be detailed enough to permit the ODA inspection unit member to review the conditions and limitations necessary to ensure safe operation of the aircraft

2. FAA Form 8130-6, Application for U.S. Airworthiness Certificate

3. Proposed experimental operating limitations will be developed per FAA Order 8130.2, Chapter 4, Section 11, paragraph 4128.

4. Upon receiving Form No. 403 showing approval from the MIDO, the ODA inspection unit member issues a FAA Form 8130-7, Special Airworthiness Certificate, Experimental, Research and Development, or show compliance including attaching “Limitations” sheet developed per instructions below.

Note: After completing the issuance of the special airworthiness certificate, the documentation package related to the issuance of the certificate is to be sent to the MIDO for processing.

Note: A copy of the airworthiness package MIDO submittal correspondence shall be provided to the Assistant to the ODA administrator for the ODA project file.

8.0 FORMS:

a. FAA Form 8100-1 Conformity Inspection Record
b. FAA Form 8130-7 Special Airworthiness Certificate
c. FAA Form 8130-6 Application for U.S. Airworthiness Certificate

Procedure Number: **S017**

Function Code **110610M**

Procedure Title: **Issue Replacement for Lost, Stolen, or Mutilated Standard or Special Airworthiness Certificate**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 110610M requirements in accordance with FAA Order 8100.15 when replacing airworthiness certificates.

2.0 GENERAL:

The ODA may issue a replacement airworthiness certificate originally issued by the ODA when a certificate is declared lost, has been mutilated, or is no longer legible.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES:

A. FAA Order 8130.2 Airworthiness Certification of Aircraft and Related products.
B.

6.0 RESPONSIBILITY: ODA administrator, ODA Inspection members as applicable. The unit members will coordinate as required and each member will provide input within their delegated discipline and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. Replacement for a Lost, Stolen or Mutilated Standard or Special Airworthiness Certificate.

1. The ODA Unit may issue a replacement airworthiness certificate when a certificate is declared lost, has been mutilated, or is no longer legible, in accordance with the requirements of FAA Order 8130.2.

2. The replacement airworthiness certificate must carry the original issue date of the certificate being replaced, preceded by a capital “R” in the date block of the certificate.

3. Replacement certificates also will be issued when the aircraft registration number has been changed. In these cases a new application for airworthiness certification is not required. The request will be made by a letter.

4. Written Request for a Replacement Certificate **-** The request will be made to the ODA Unit by the registered owner, certificate operator or authorized agent with a copy of his authorized agent letter. The request will include a signed statement certifying the following information:

a) Aircraft registration number
b) Serial number
c) Make and model of the aircraft
d) Reason the replacement certificate is needed

Note: In the case of a request for N-number change, the registered owner must also forward a copy of FAA form 8050-64 authorizing the registration number change.

B. Issuance of Replacement Certificate by ODA Unit - A replacement certificate may be issued without supporting documentation by the ODA Unit if the date of issuance and the airworthiness classification and/or category of the lost or mutilated certificate can be positively established from the aircraft records, or from the remains of the certificate.

1. If there is insufficient data on which to base issuance of the replacement certificate, the ODA administrator or his designee will request copies of the appropriate data, such as the application form or previously issued airworthiness certificate (Blue Ribbon Package on the aircraft registration number), from the FAA Oklahoma City Registry Office (AFS-750).

2. Before issuing a replacement certificate, the ODA administrator must review the aircraft records and, if necessary, inspect the aircraft to ensure that the request is justified and the aircraft is eligible for the airworthiness certificate requested.

3. The replacement certificate will be issued on the applicable FAA Form:

a) 8100-2, Standard Airworthiness Certificate, or
b) 8130-7, Special Airworthiness Certificate.

Note: A copy of the replacement certificate will be forwarded to the FAA OMT.

C. Records including copies of the applicable FAA Forms 8100-2, Standard Airworthiness Certificate or 8130-7, Special Airworthiness Certificate and the applicant request with signed statement will be maintained in accordance with this manual.
D. A copy of the replacement certificate must be forwarded to the MIDO.

Amendment / Replacement

1. A standard or special airworthiness certificate may be amended when there is;
    a. A modification to the aircraft, such as one that has been approved by an STC or amended TC, that changes the category of the aircraft specified in block No. 4 of the standard airworthiness certificate.
    b. A change to the exceptions specified in block No. 5 of the standard airworthiness certificate.
    c. A change in the aircraft model specified in block No. 2 of the standard airworthiness certificate.
    d. A change in the operating limitations for an aircraft with a special airworthiness certificate.
    e. A ODA may amend a standard airworthiness certificate under 14 CFR 21.451(b)(3).
    f. When a certificate is amended, the issuance date will be the current date; also, the capital letter “A” will be typed in front of the date.
    g. Any amendment of an airworthiness certificate will require submission of FAA Form 8130-6, Application for U.S. Airworthiness Certificate. An appropriate record entry, in accordance with chapter 8 of order 8130.2, will be made in the aircraft records documenting the issuance of the amended certificate.

8.0 FORMS:

a. Form 8130-6 Application for U.S. Airworthiness Certificate
b. Form 8100-2 Standard Airworthiness Certificate
c. Form 8130-7 Special Airworthiness Certificate
d. 8050-64 Assignment of Special Registration Number (Owner Operator)

Procedure Number: **S018**

Function Code **N/A**

Procedure Title: **Off Site STC Procedures**

1.0 PURPOSE: To establish procedures necessary to execute off site STC procedure requirements in accordance with FAA Order 8100.15.

2.0 GENERAL:

A. Off-site STC facilities will be re-evaluated every two years by the ODA unit.
B. One ODA inspection unit member with one ODA engineering unit member or the ODA administrator will conduct the evaluation of the off-site facility and personnel using ODA Form 209 to conduct and document the evaluation. An on-site physical inspection is required as part of the assessment for facilities that are not FAA certificated.
C. A copy of the off-site facility evaluation and recurring evaluation when necessary will be maintained in each STC Project records file.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES:

A. None

6.0 RESPONSIBILITY: ODA administrator, ODA engineering and Inspection members as applicable. The unit members will coordinate as required and each member will provide input within their delegated discipline and within limitations as specified in individual “ODA Unit Member List” document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

a. ODA prototype installations may be conducted at any location by any entity determined by the ODA holder’s evaluation as having the appropriate skills and equipment needed to ensure the conformity of the prototype installation. This may include repair stations operating under the authority of 14 CFR 145.203.

NOTE 1: If the prototype aircraft is being approved for return to service, the ODA holder must ensure the prototype installation is conducted in accordance with the applicable regulations or requirements of the airworthiness authority of the State of Registry or other entity responsible for the airworthiness of the product.

NOTE 2: Any prototype installation that requires on-site FAA participation as part of the project or for ODA supervision or any other reason is subject to the availability of FAA funding and resourses.

NOTE 3: Any prototype installations on projects classified as significant pursuant to 14 CFR 21.101 must be accomplished at FAA-certified facilities.

1. The ODA administrator will evaluate and document the acceptability off-site entity and facility using the STC Project Off-site Evaluation Checklist, ODA Form 209 (Appendix E). The evaluation will determine at minimum the following:

   a. The off-site entity has experience performing similar types of alterations on the make and model product being altered;

   b. Decisions about workmanship, quality, conformity, deviations, and safety are made without undue influence or pressure; and

   c. Documentation generated at off-site locations complies with the ODA procedures manual.

   d. For installations at CAA certificated facilities, the ODA holder must have oversight of personnel at the facility and remain directly in charge of the prototype alteration work performed at the facility.

2. Inspection ODA unit members will follow the same inspection procedures as those defined for a STC Project – Original or Amendment, except where the PSCP and/or CIP provide defined deviations as concurred with by the OMT.

3. An Inspection ODA unit member will be present at the off-site facility during the fabrication, installation, modification, or alteration portion of the off-site project, except where the PSCP and/or CIP provide defined deviations as concurred with by the OMT. Additionally, if the project

aircraft undergoes other repairs or alterations simultaneously during the project, the Inspection ODA unit member must be present if the other activity could affect any portion of the prototype STC installation, modification, or alteration.

4. Engineering ODA unit members will follow the same data approval and deviation approval procedures as those defined for a STC Project – Original or Amendment, except where the PSCP and/or CIP provide defined deviations as concurred with by the OMT.

5. All ODA unit members must be able to provide advisory and technical assistance to support a project at an off-site location.

6. The off-site entity:

   a. Will be responsible for the installation, modification, and alteration efforts;

   b. Will be responsible for documenting the effort in the aircraft or product records.

7. All ODA unit members and the OMT will have access to the off-site location to perform any inspection they deem necessary.

b. The processes, tooling, and equipment used at the off-site facility will be:

1. Equivalent to those at the S-TEC ODA primary facility;

2. Appropriate for the alteration; and

3. Able to produce articles and products conforming to the type design.

c. To prevent the use of nonconforming or unsafe articles obtained by the off-site entity from outside sources, the S-TEC ODA will evaluate the off-site entity's purchasing and receiving inspection system and ensure that:

1. Purchase orders and contracts contain sufficient detailed specifications (such as control drawings), design data, inspection, tests, and FAA requirements to ensure purchased articles and services meet the requirements of the type design data.

2. Conformity of processes and raw materials to design data is independently verified through any as required, witness, inspection, test,

and analysis by the Inspection ODA unit members (An ODA unit member will not accept materials solely upon review of a certificate of conformance from the supplier).

3. S-TEC manages and maintains configuration control and final design change approvals for all items, including supplier-designed parts (S-TEC ODA will not delegate these responsibilities to off-site entities).

4. Data must clearly identify which method or process is to be used when industry or military process specifications offer alternate methods of operation or special processes.

5. The off-site entity receives prototype articles or parts only from S-TEC ODA -approved suppliers.

6. Incoming articles and material conform to the type design data before acceptance and installation.

7. Articles obtained from sub-tier suppliers will be subject to the same degree of control by S-TEC ODA.

d. The ODA administrator will coordinate with the OMT lead during preparation of the PSCP and PNL of plans for a prototype installation to be completed at an off-site facility. The PSCP will include the following information:

NOTE: For projects at non-FAA certificated facilities, the ODA administrator will submit preliminary information to the OMT identifying the facility, description of alteration, planned installation dates and any other information requested by its OMT at least 60 days prior to any installation activity or planned assessment site visit.

1. Location of the off-site facility.

2. Ratings and limitations of the off-site entity, including the entities certificate number and the name of the entities FSDO principal inspector or responsible CAA personnel

3. Documentation of the evaluation of the off-site entity and facility.

4. A list of the ODA unit members, including their disciplines, who will perform functions at the off-site facility.

5. Pertinent details of the project, including the off-site entity's involvement in engineering data development, conformity inspections, and any certification testing.

   The PSCP will be revised and submitted to the OMT lead anytime a change occurs to the above.

6. The S-TEC ODA will not start any off-site STC project until the ODA administrator has received concurrence of the off-site entity and facility from the OMT.

e. The S-TEC ODA will notify the MIDO with responsibility for the off-site entity's geographic area, of plans to perform authorized functions at the off-site location, when outside of the managing MIDO's geographic area.

Procedure Number: **S019**

Function Code **N/A**

Procedure Title: **STC Amendment / Revision Procedures**

1.0 PURPOSE: To establish procedures necessary to execute an STC amendment or revision in accordance with FAA Order 8100.15.

2.0 GENERAL:

A. The ODA unit is responsible for amending or revising its issued STC (s) when determined to be necessary.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES:

B. None

6.0 RESPONSIBILITY: ODA administrator, ODA engineering and administrative members as applicable. The unit members will coordinate as required and each member will provide input within their delegated discipline and within limitations as specified in individual "ODA Unit Member List" document number ODAA07U1109-x and capabilities charts located in appendix D.

7.0 PROCEDURES:

A. The ODA unit is responsible for amending its issued STC(s) when determined necessary.
   1. STC amendment procedures are the same as a new STC project as outlined in this Section, procedures S001 through S016 as applicable, although depending on the extent and degree of the original design impact, not all of the procedure steps will be required. The ODA administrator will determine and document the deviations and appropriate amendment process in the PSCP for

the project. Coordination with the OMT Lead will be consistent with that of a normal STC project.

2. Upon completion of the amended certification process an amended STC FAA Form 8110-2 (Ref S002) will be issued with an amendment date. The amendment process must be such that the data and STC retains all configurations that remain in service.

3. When duly authorized by the OMT to amend an STC originally issued by the FAA, the ODA unit will include the "-D" designation in the STC number.

B. STC DATA REVISION

1. The ODA unit has the authority to revise its own issued STC's when determined necessary.

2. The STC data revision will encompass changes that do not significantly change the design or airworthiness criteria of the STC including correcting typographical errors, drawing corrections, revisions to clarify system operation or minor changes that provide for product improvement and increased system safety. Changes or revisions not meeting this criteria would be addressed as STC Amendment as noted above.

3. The STC data revision will require revision of the data tree documents up to and including the MDL.

4. "Original" revised data will be approved and documented on FAA Form 8100-9 by the appropriate discipline ODA unit members and maintained in the STC project files.

5. The STC data revision does not require re-issuing the STC.

C. STC RE-ISSUE

1. The STC Certificate will be re-issued by the ODA administrator when there is a need to replace a lost or destroyed certificate.

D. STC TRANSFER

Only the FAA can transfer an ODA or DAS issued STC. The ODA unit will not transfer an STC by reissuing it in another party's name. If the ODA holder wishes to transfer an STC to another party it will follow the standard procedures for transfer of a type certificate as defined in 14CFR part 21.47 and FAA Order 8110.4, paragraph 4-19,n.

Procedure Number: **S020**

Function Code **11180A**

Procedure Title: **Perform Review and Acceptance of Instructions for Continued Airworthiness (ICA)**

1.0 PURPOSE: To establish procedures necessary to execute Function Code 11180A requirements in accordance with FAA Order 8100.15 to specify process used for review and acceptance of ICA.

2.0 GENERAL: Process specifies the details for review and acceptance of ICA.

3.0 DEFINITIONS: Refer to Section IV of this manual.

4.0 ACRONYMS: Refer to Section IV of this manual.

5.0 REFERENCES: FAA Order 8110.54

6.0 RESPONSIBILITY: ODA administrator will sign/approve.

7.0 PROCEDURES:

A. The S-TEC Certification Department will prepare and submit an ICA that addresses the continued airworthiness requirements of the aircraft modification, alteration and/or installation. The ICA will be formatted to follow ODA Form 212 (Appendix E).

The content of the document will be consistent with 14 CFR part 23.1529, 27.1529, or 29.1529 as appropriate, and FAA Order 8110.54. Additional guidance regarding ICA development is provided in Procedure Number: S001 Section 7.0, A.,7.

NOTE: Prior to preparing an ICA, the assigned engineering personnel will be responsible for reviewing the applicable ICA regulation as identified on the project compliance checklist. The assigned personnel will also be responsible for checking the current revision of FAA Order 8110.54 and any applicable Advisory Circulars or Policy Memorandum. A review of the aircraft model(s) Airworthiness Directives will also be conducted to determine any ICA applicability. The above review will be conducted utilizing the FAA website Regulatory and Guidance Library. For assistance, contact an ODA Unit Member or the Assistance to the ODA administrator.

B. The ICA will be developed utilizing the current STC project installation and design data such as installation drawings, component drawings, wiring diagrams and installation instructions. Final review and acceptance of the ICA will be completed after the installation drawings to be included in the ICA Appendix have been released. The final review will include a reconciliation of the ICA with the released design data. As required in Procedure S004, Issue Supplemental Type Certificate and/or Amendments (Project Completion), and the ODA Form 210 Instructions, a copy of the ICA will be provided to each discipline unit member for final review.

C. Any ICA Airworthiness Limitations require ODA administrator approval under function code 11050E, as delineated in Procedure Number: S007,

D. Validation of the ICA will be conducted during installation of the system and during the company ground and flight testing phases of the STC project when the various components are removed, adjusted, calibrated, etc. and re-installed.

NOTE: The Certification Department will coordinate with the Flight Test Operation a division of the Customer Support Department for the validation actions. Any disagreements between the departments will be brought to the department heads for resolution.

NOTE: Maintenance tasks that are consistent with standard practices or that have been utilized previously with the same system on similar aircraft installations do not require validation.

E. The ICA will include the following information regarding distribution and revsion:

ICA's are provided with each STC kit sold. Any airworthiness or flight safety revisions will be immediately made available to all affected dealers. Aircraft operators or maintenance personnel may contact S-TEC Corporation at 1-800-USA-STEC to verify that they have the latest revision, or to request a copy of the current ICA.

A Log of Revisions section is included in the ICA and will be utilized to document all changes. Change recommendations should be submitted to:

S-TEC Corporation
One S-TEC Way
Mineral Wells, Texas 76067
Toll Free: 800-872-7832
flysafe@s-tec.com, fly-safe@s-tec.com, info@s-tec.com

F. Any ICA related Voluntary Disclosures will be accomplished in accordance with AC 00-68.

G. ICA Acceptance.

NOTE: ICA may not be accepted for:

(1) Security-related projects (military/homeland security, etc.).

(2) Changes associated with ADs, including alternative methods of compliance (AMOC).

(3) Projects using a maintenance review board (MRB) or maintenance type board (MTB) process.

Prior to acceptance of the ICA, the Lead ODA administrator will perform a review of the document to ensure all FAA Order requirements have been met. Refer to ODA Form 112.

16. RECORDS

S-TEC will ensure records are maintained as required by 14 CFR part 183.61 in a secured document vault under direction of the ODA administrator. Records will be arranged and/or organized by project number and will be compatible with FAA records control system as described in FAA Order 1350.14.

Records will be available for FAA review upon request. Records normally kept at other locations will be made available at the S-TEC facility as requested for inspections and oversight. These records will be provided within five business days of formal written request from the OMT Lead.

All records will be submitted to the OMT lead upon surrender or termination of the ODA.

A. Content of records

1. The ODA holder will retain the following data and information for the duration of the authorization:

   a. General Records

      1. Any records generated and maintained under the prior DAS authorization.

      2. For approvals and certificates under the ODA:

         (a). The application and data required to be submitted by the regulations.

         (b). The data and records documenting the ODA unit's approval, determination of compliance, or review.

         (c). A list of the products, components, parts, or appliances for which ODA unit members have issued a certificate or approval, P/N 8707 Subpart A and B

         (d). The names, responsibilities, qualifications, and example signature of the individuals who perform, or have performed, functions of the ODA unit. (Including historical records).

         (e). A copy of each Installation Instructions or System Operating manual approved by the ODA unit.

(f). All other records required by the approved ODA procedures manual.

(g). Any correspondence between the ODA holder and the OMT related to functions or activity performed with the authorization.

(h). The FAA approved ODA Procedures manual and all revisions.

b. STC Project Records

1. The PNL and associated FAA response and correspondence

2. Application for Supplemental Type Certificate, FAA Form 8110-12

3. Minutes of any Review Board meetings held by the ODA unit

4. PSCP including all revisions, ODA Form 201

5. CCL including all revisions, ODA Form 202

6. CIP including all revisions, ODA Form 203

7. Equivalent Level of Safety findings

8. Special Conditions findings

9. Exemptions

10. Findings of Compliance, FAA Form 8100-9

11. Applicant Compliance Statement Per FAR 21.20

12. AED data submittals, concurrences, and correspondence

(a). evaluation of operational suitability,

(b). changes to MMEL,

(c). FCOM,

(d). Crew qualifications,

(e). Emergency evacuation procedures,

13. ICA and acceptance memorandum.
14. FAA issued specific approval of test and analysis reports when required by the PSCP as additional defined requirement of the OMT.
15. AFMS/RFMS
16. Requests for Conformity, FAA Form 8120-10
17. Statements of Conformity, FAA Form 8130-9
18. Conformity Inspection Records, FAA Form 8100-1
19. Authorized Release Certificate/Airworthiness Approval Tags, FAA Form 8130-3, when issued for conformity
20. Flight Test Risk Assessment / Alleviation, ODA Form 400
21. TIA, FAA Form 8110-1 when used
22. TIR, FAA Form 8110-31
23. STIR, FAA Form 8110-26
24. Applications for U.S. Airworthiness Certificate, FAA Form 8130-6
25. Airworthiness Condition Checklist, ODA Form 301
26. Standard Airworthiness Certificate, FAA Form 8100-2
27. Special Airworthiness Certificate, FAA Form 8130-7 and Operating Limitations
28. TCDS (either at time period of project or time period of certification basis)
29. STC Project Master Data File Checklist, ODA Form 200
30. STC Project Master Data List
31. STC Data Package (drawings and documents that provide complete definition of the Supplemental Type Design as listed on the MDL)
32. STC Project Offsite Evaluation, ODA , when applicable
33. STC Project Statement of Final Review, ODA Form 210
34. STC, FAA Form 8110-2 with original approval signature
35. ODA Statement of Completion, FAA Form 8100-11
36. Compliance Report

Training Records

All training records for both ODA and FAA training attended by the ODA unit members.

Service Difficulty Records

Service difficulty paper copy records and electronic database file.

2. The ODA holder will retain the following data and information for five years after issuance:

    a. Records of the ODA holder’s self-audits and implementation of corrective actions.

b. Records of any reported service difficulties associated with any design approval or certificate (STC) issued under the ODA.

3. The ODA holder will maintain a list of STC projects completed. The list will include make, model, manufacturer's serial number and registration number of the products altered to substantiate the STCs issued by the ODA unit.

B. Location of records

Records will be maintained and secured in the ODA unit record vault located in the hangar at:

S-TEC Corporation
One S-TEC Way
Mineral Wells, TX 76067

C. Submittal of Records

The ODA administrator will within thirty calendar days of the STC issuance or amendment, submit the following to the FAA DSCO:

1. The ODA Statement of Completion, FAA Form 8100-11
2. A paper copy of the signed STC, FAA Form 8110-2
3. An electronic copy of the signed STC, FAA Form 8110-2
4. An electronic copy of the approved AFMS/RFMS
5. Any other data identified in the OMT's response to the PNL
6. Applicant Compliance Statement
7. Compliance Report

D. Coordination of Approvals in Support of TC ODA Holder:
Reserved

17. CORRECTIVE ACTION

S-TEC will implement corrective action to resolve any problems with the ODA holder procedures or personnel as requested by the FAA in accordance with Order 2150.3.

A. The ODA administrator upon notification by FAA or by S-TEC that corrective action is required, will initiate a requirement for the ODA unit to generate a Corrective Action Requests (ODA Form 108) to require an evaluation which will include the following "top level" actions:

1. Determine the cause of the condition.
2. Determine whether the problem is systematic or isolated in nature.
3. Review the procedures that led to the approval and determine if the procedures are adequate and if qualified ODA unit members performed them.
4. Develop any proposed corrective or remedial action.
5. Submit its determination of the cause of the condition and proposed remedial action within 30 calendar days.
6. Evaluate the cause of the condition and proposed remedial action in conjunction with the ODA holder as warranted.
7. Verify that appropriate corrective or remedial action is implemented.

Note: It is the responsibility of the ODA unit members to take timely and effective corrective action to resolve problems and unfavorable trends in functions for which they are responsible. Major findings that are considered serious in nature will require immediate action for containment of the issue; however, a more comprehensive action is still required to be outlined in the response. In addition, the corrective action affectivity and completion date must be stated.

B. Upon notification of a non-compliance, the following procedure will be implemented:

1. A CAR will be initiated by an ODA unit member and issued to the ODA administrator to determine the root cause of the noncompliance. Results of the investigation will be recorded on the CAR.

2. The ODA administrator will track all CARs by number and maintain a listing of all CARs. The listing will include:

   a. CAR number

   b. CAR issue date

   c. CAR close date

d. CAR non-compliance or discrepancy description

e. Affected STC project number

f. Affected ODA unit member(s)

g. Description

3. The CAR will establish the need for an evaluation panel and generate an investigation of the non-compliance relating to the product, process, or procedure. The 8-D method of problem solving listed below will be utilized as defined on ODA Problem Solving Worksheet, ODA Form 109. The following evaluation and investigation steps at minimum will be followed:

   "D-1" – Establish the team. Establish a small group of people with the process/ product knowledge, allocated time, authority and skill in the required technical disciplines to solve the problem and implement corrective actions.

   "D-2" – Problem Definition. This step provides the starting point for solving the problem or non-conformance issue. There needs to be a "correct" problem description to identify causes. Use terms that are understood by all.

   "D-3" – Developing Interim Containment Actions. List temporary actions to contain the problem and "fix" until permanent correction is in place. Document actions in the Action Item Table.

   "D-4" – Identifying and Verifying Root Cause. Analyze for the "root cause" of the problem. Identify and verify the Escape Point.

   "D-5" - Identify Permanent Corrective Actions. Solutions that address and correct the root cause. Solutions determined to be the best of all the alternatives. Document and verify the Permanent Corrective Action in the Action Item Table.

   "D-6" – Implementing and Validating the PCA. Implement and validate to ensure that corrective action does "what it is supposed to do." Detect any undesirable side effects. Document this on the Action Item Table. Return to root cause analysis, if necessary.

   "D-7" – Preventing recurrence. Determine what improvements in the system and processes would prevent the problem from recurring. Ensure that corrective action remains in place and is successful.

4. Resulting comprehensive corrective action will be taken by the ODA unit to eliminate the root cause of the non-compliances identified on each CAR. The cognizant ODA unit member(s) will be issued the CAR for disposition of "Action Required" when appropriate.

5. Upon completion of the "Action Required" by the ODA unit member(s) as described on the CAR, the ODA unit member(s) will complete the CAR Response section of the CAR form and issue the completed form to the ODA administrator.

6. Upon performance completion of the open CAR the item will be closed by the ODA administrator.

7. Every CAR issued will be audited by the ODA holder to ensure that the corrective action has been taken and that it is effective.

8. The ODA administrator will forward a final report to the OMT within the prescribed time based on severity (24-48 hours as applicable).

C. Corrective actions developed must be comprehensive in order to prevent recurrence of the finding and shall address the following:

1. What was the immediate action taken to fix the problem;

2. What was done to identify the root cause and prevent recurrence;

3. Does this finding affect product certification, and

4. Does this finding affect aircraft safety of operation.

D. Comprehensive corrective action and preventive action will be implemented to the degree necessary to eliminate recurring or potential non-compliances.

E. Procedures and processes will be revised and those changes documented as a result of corrective action as applicable.

F. Voluntary Disclosure in accordance with AC 00-68 will be accomplished when necessary.

18. MANUFACTURING ACTIVITY REPORTING

ODA will submit manufacturing summary information reports for manufacturing/airworthiness work performed by the organization. The reports will be submitted to, Manager of ASW MIDO quarterly on ODA Form 309.

19. SUPPLIER CONTROL

Upon request, S-TEC will allow the FAA access to all suppliers for the purpose of inspecting the facilities, product/articles and records related to the functions performed under this authorization, as applicable.

20. FAA NOTIFICATIONS

For any approvals, authorizations, certificates issued or acceptance of instructions for continued airworthiness (ICA) under an ODA, the ODA holder shall notify the OMT lead of any item it identifies that:

(1) Might result in an unsafe condition.

(2) Requires corrective action.

(3) Does not meet the airworthiness standards.

(4) Is an error made when issuing an operational approval.

(5) Does not meet applicable operational certification requirements.

NOTE: Potentially unsafe conditions require 24 hour notification. All others require 72 hour notification. A notification due on Saturday, Sunday, or holiday may be delivered on the next working day.

21. INVESTIGATING SAFETY CONCERNS

(1) The ODA holder shall investigate potentially unsafe, or non-compliant conditions in any product, article, authorization, or certificate, as required by the FAA. As part of this investigation, the ODA holder shall:

a. Determine the cause of the condition.

b. Determine whether the problem is systemic or isolated.

c. Review the procedures that led to the approval and determine if the procedures are adequate and if qualified ODA unit members performed them.

d. Develop and propose corrective action per Section 17.

(2) The ODA holder shall submit its determination of the cause of the condition and proposed corrective action within 30 calendar days from FAA notification, or as required by the OMT. The ODA holder shall submit any information it has to support FAA corrective action if further action is necessary to ensure the safe operation of the product.

APPENDIX A - Page 1 of 3

Memorandum of Understanding
Between
Federal Aviation Administration
And
S-TEC Corporation

Organization Designation Authorization (ODA-700096-SW)

This Memorandum of Understanding is effective upon the parties whose signatures are below. The Federal Aviation Administration will not institute changes without giving prior notification to S-TEC Corporation. S-TEC Corporation will not deviate from this MOU without prior coordination and approval from the Delegation Systems Certification Office, AIR-7J0. Whenever the authorization holder's signatories change, this memorandum must be re-issued and signed by all parties.

_____ _____

Paul Stoelting, General Manager — Date
S-TEC Corporation

_____ _____

Ben Morrow, Lead ODA administrator — Date
S-TEC Corporation

APPENDIX A - Page 2 of 3

Basis and Requirements for Designation of Authority

Title 49 of the U.S. Code is the legislative instrument governing U.S. aviation.

Section 44701(a) establishes the FAA Administrator's responsibility to prescribe minimum standards and regulations governing the design, manufacture, maintenance and operation of aviation products.

To fulfill these responsibilities, the FAA Administrator has various resources to do this, including the authority to delegate to others. Section 44702(d), Delegation, describes this authority:

1. Subject to regulations, supervision, and review the FAA Administrator may prescribe, the Administrator may delegate to a qualified private person, or to an employee under the supervision of that person, a matter related to:
   a. The examination, testing, and inspection necessary to the issuance of a certificate under this chapter; and
   .b. Issuing the certificate.
2. The FAA Administrator may rescind a designation under this subsection at any time for any reason which the Administrator considers appropriate.

Authorization and Role of a FAA Designation

Order 8100.15 sets out policy, procedures, and conditions under which an organization granted an Organization Designation Authorization.

The ODA holder and ODA unit must comply with the same standards, procedures, and interpretations applicable to FAA employees accomplishing similar tasks. The ODA holder is also required to observe all conditions and limitations imposed by the Administrator on the authority delegated.

We understand that the Organization Designation Authorization is a privilege, not a right, and that our authorization may be terminated at any time, for any reason, at the discretion of the FAA Administrator.

Statement of Acceptance of Responsibilities and Obligations

S-TEC General Manager Paul Stoelting and Lead ODA administrator understand and accept on behalf of S-TEC Corporation,

APPENDIX A - Page 3 of 3

the responsibilities and obligations, as detailed in our Letter of Designation and Orders 1350.14, 2150.3, 4040.26, 8100.8, 8100.15, 8110.4, 8110.37, 8130.2, 8130.21, 8110.54 associated with those functions authorized by the Administrator.

As senior management of the ODA holder, we will protect ODA UMs from actions that constitute interference, including reprisal for reporting suspected interference. We understand that changing the employment status, pay, duties, work location, or retention status may be investigated by the FAA.

As an authorized Supplemental Type Certification ODA holder, we will:

a. Function in accordance with the responsibilities, privileges, and limitations in the relevant regulations and orders;

b. Comply with the requirements of our procedures manual;

c. Dedicate the required resources for the effective performance of the authorized functions;

d. Remain knowledgeable in STC standards, policies, and procedures and the applicable airworthiness standards;

e. Consider the products type design as well as the aircraft manufacturer's type design philosophy, principles, and operational assumptions when making findings of compliance;

f. Consider the actual operator procedures employed by the operator of the product and the impact of any alterations previously made to the product;

g. Ensure personnel attend FAA-sponsored and in-house training as required;

h. Cooperate with the FAA during oversight activities and while exercising this authority;

i. Allow FAA review or participation on any projects as requested by the Organization Management Team;

j. Provide the ODA administrator(s) the authority to manage the ODA's functions without influence from others;

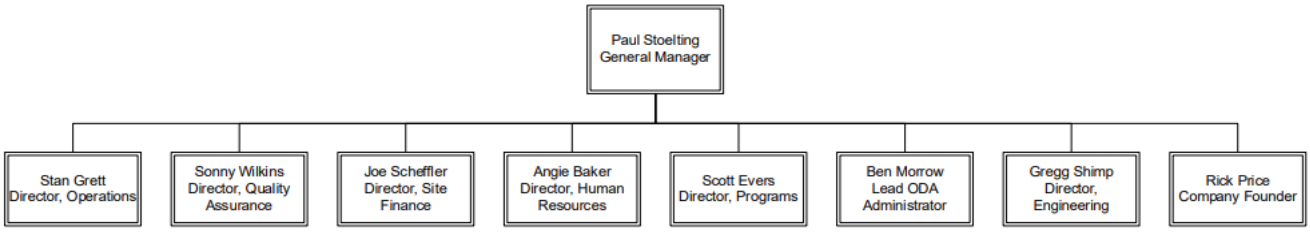
k. Ensure the ODA unit members are free from any conflicting restraints while performing the delegated functions and have sufficient authority and independence to enable the ODA unit to administer the pertinent regulation(s) effectively;

l. Notify the FAA if we violate the terms of this memorandum.

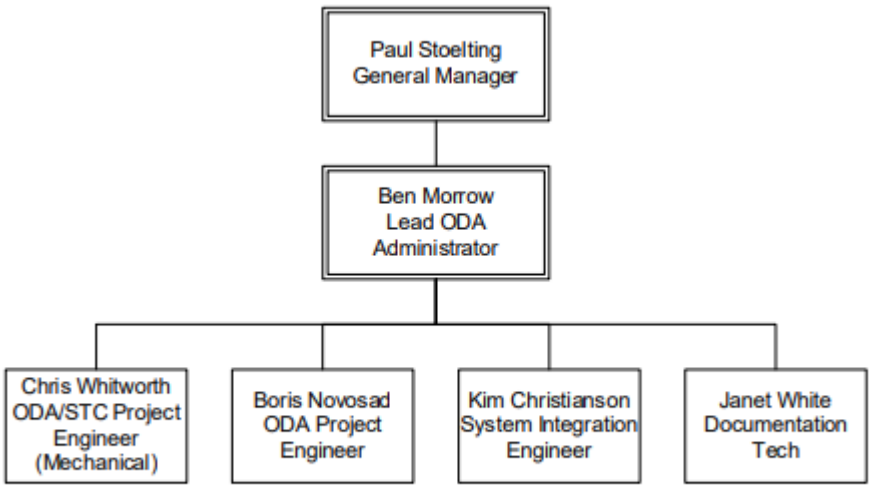
---------- END OF MEMORANDUM ----------

APPENDIX B

ODA Holder and Unit Organizational Chart



Organizational Chart Detail ODA



(Refer to S-TEC document control number ODAA07U1109-x for the current complete listing of ODA unit members.)

Note: All Unit Members when assigned to a project are “dotted line” to the General Manager. UM’s have direct access to top management if required.

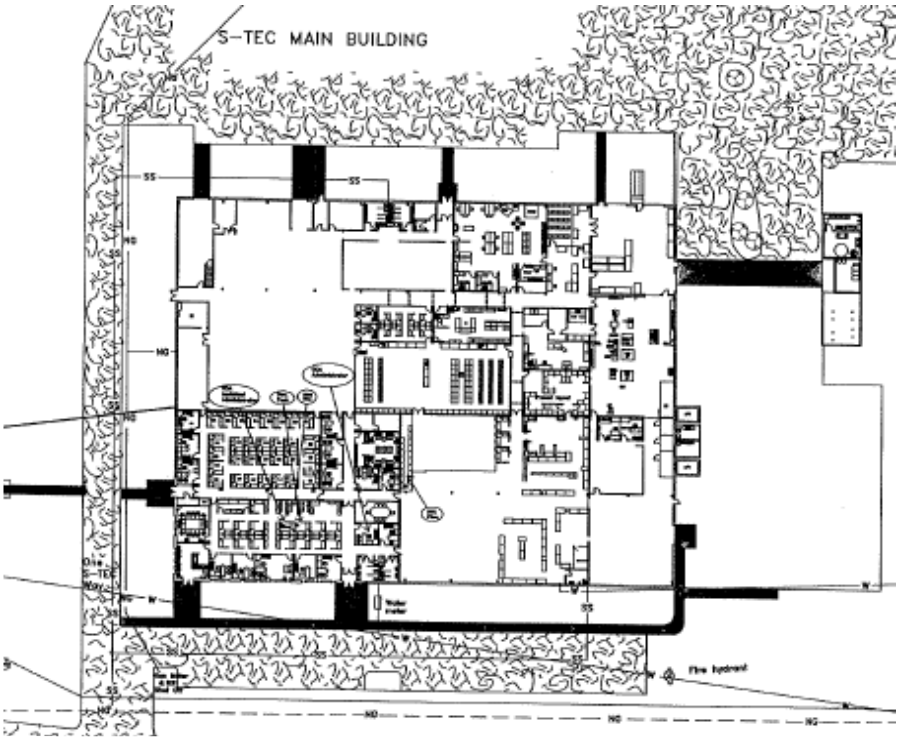
Note: During STC projects all assigned Unit Members are dedicated ODA personnel and will not “share ODA UM duties” with any other department or individual.

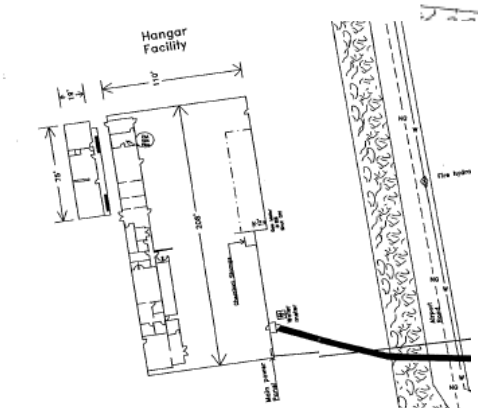
APPENDIX C

ODA Facilities

S-TEC has a long-term lease on a 28,000 square-foot hangar for, Certification and Product Support on the Mineral Wells, Texas (MWL) airport where in the ODA is administered. Additional facilities include a 57,000 square-foot building for S-TEC product line administration, engineering, and manufacturing adjacent to the Mineral Wells Airport.

Office and Hangar Space





ODA Holder Ratings

S-TEC, in addition to the ODA holds the following FAA certificates/ratings:

FAA Certificated Repair Station - Air Agency Certificate No. FF2R818K

Parts Manufacturing Authorization – PQ0445SW

Technical Standard Order Authorization –PT0445SW for C3b, C3d, C4c, C6d, C9c, C34e, C36e, C40c, C43c, C44b, C47, C49b, C52a, C52d, C55, C71, C88a, C106, C113, C198.

APPENDIX D

Required ODA Unit Capabilities and Positions

A. ODA Unit

The ODA unit consists of individuals with unique and specialized expertise in various areas of aircraft certification, engineering administration, and engineering disciplines. The ODA unit members combined under the direction of the ODA administrator comprises the ODA unit.

B. ODA Unit Members

Each ODA unit member will be aware of and avoid potential conflicts of interest between responsibilities to the FAA and the role as the ODA holder's employee.

(1) The ODA group administration will provide the functions listed in below charts.

ODA administrator Required Function Capabilities	
Number of administrator(s) required: STC: 1	
ODA Function	**Description**
11010E	Approve Technical Data and Find Compliance to the Airworthiness Standards
11020E	Issue STCs and/or Amendments
11040E	Approve Operational and Repair Information
11050E	Approve Airworthiness Limitations Information
11070E	Establish Conformity Inspection Requirements
11080M	Determine Conformity of Parts and Test Articles
11090M	Determine Conformity of Test Setup
11100M	Determine Conformity of Installations, including TIA Inspections on a Project
11110E	Perform Compliance Inspections
11061M	Issue/Amend Standard Airworthiness Certificates
11062M	Issue/Amend Special Airworthiness Certificates
110610M	Issue replacement for a lost, stolen, or mutilated standard or special airworthiness certificate
11180A	Perform Review and Acceptance of Instructions for Continued Airworthiness
E= Aircraft Certification Office, M= Manufacturing, O= Flight Standards District Office, A=AED	

Authorized Areas	
FAA Communication/Coordination	O,M,A
ODA unit member list	O,M
ODA Procedures Manual – Major Revisions	O,M
ODA Procedures Manual – Minor Revisions	O,M,A
Program Notification Letters (PNL)	O,M
Program Specific Certification Plans (PSCP)	O,M
Certification Compliance Checklist (CCL)	O,M
Conformity Inspection Plan (CIP)	O,M
Request for Conformity (RFC)	O,M,A
Type Inspection Authorization (TIA)	O,M,A
Master Data List (MDL)	O,M,A
Type Inspection and Supplemental Type Reports (TIR/STIR)	O,M,A
Flight Manual Supplements	O,M,A
Supplemental Type Certificates	O,M,A
STC Project Meeting/Agenda minutes	O,M,A
ODA unit Meeting/Agenda minutes	O,M,A
ODA unit member records	O,M,A
STC Project records	O,M,A
Service Difficulty Reports	O,M,A
Corrective Action Request/Response	O,M,A
Legend: M = Manage O = Organize administrate A = Approve R = Recommend Approval A1 = Accept	

Notes and Additional Requirements:

An ODA administrator will have technical experience with the functions performed under the ODA and a broad range of management experience. This experience will enable management of the entire ODA unit activities. The ODA administrator will meet these minimum requirements:

[1] At least five years of working experience with the FAA on projects similar to those authorized under the ODA. This experience must include various levels of technical airworthiness responsibilities and experience (for example, compliance engineer, quality assurance inspector, manufacturing inspector, or airworthiness inspector), and management experience in one or more technical disciplines (such as, engineering, manufacturing, airworthiness, maintenance, or quality assurance).

[2] Comprehensive knowledge of FAA regulations, policies, and procedures applicable to the ODA functions.

[3] Demonstrated sound judgment and integrity.

[4] Sufficient technical knowledge, training, skill, and experience for the type of ODA held.

FAA Forms Authorized for Signature

8100-1	8100-2	8100-9, MDL ONLY	8100-11	8110-1	8110-2	8110-12	8110-26	8120-10	8130-3	8130-6		8130-7	8130-9	8130-13	8110-31
NA	NA	X	X	X	X	X	NA	NA	NA	NA		NA	NA	NA	X

S-TEC ODA Forms Authorized for Signature

100	101	102	103	104	105	106	107	108	109	110	111	112	200	201	202	203	204	205	206		208	209	210	211	212	301	309	310	400	401	403
X	X	X	X	NA	X	X	X	X	NA	X	X	X	NA	X	X	X	NA	NA	NA		NA	X	X	X	X	NA	NA	X	X	NA	NA

Engineering and Flight Test ODA unit members will provide the following minimum Function capabilities to the ODA unit:

Electrical Systems and Equipment ODA unit Required Function Capabilities

Number of Unit Members Required: 1

ODA Function	Description
11010E	Approve Technical Data and Find Compliance to the Airworthiness Standards
11040E	Approve Operational and Repair Information
11050E	Approve Airworthiness Limitations Information
11070E	Establish Conformity Inspection Requirements
11110E	Perform Compliance Inspections

E= Aircraft Certification Office, M= Manufacturing, O= Flight Standards District Office

Authorized Areas (Ref 8110.37)	
Detail Design and Installation (1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H)	A
Equipment Qualification Tests (2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H)	A
Software (3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H) (2)	A,R
Service Documents (4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H)	A
Electrical Load Analysis (5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H)	A
Safety Analysis (6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H)	A
Lightning/HIRF Protection (7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H)	A
Project Specific Certification Plan (PSCP)	C
Certification Compliance Checklist (CCL)	C
Conformity Inspection Plan (CIP)	C
Request for Conformity (RFC)	O
Type Inspection Authorization (TIA)	C
Witness Tests and Compliance Inspections (1)	A
Test Reports	A
STC Data Review as required on specific documents	C

Legend: M = Manage O = Organize administrate A = Approve R = Recommend Approval C = Concur

Notes and Additional Requirements:
(1) Specific tests, inspections, and reports as specified in the PSCP.
(2) Software approvals limited to Part 23/A-E and Part 27 Levels C-E. Recommend Approvals for Part 27 or 29 Levels A and B.

FAA Forms Authorized for Signature

8100-1	8100-2	8100-9	8100-11	8110-1	8110-2	8110-12	8110-26	8120-10	8130-3	8130-6	8130-7	8110-31	
		X	X					X					

S-TEC ODA Forms Authorized for Signature

100	101	102	103	104	105	106	107	108	109	110	111	211	200	201	202	203	204	205	206		208	209	210	301	309	400	401	
X	X			X	X	X				X	X			X	X	X						X	X			X		

Mechanical Systems and Equipment ODA unit Required Function Capabilities

Number of Unit Members Required: 1

ODA Function	Description
11010E	Approve Technical Data and Find Compliance to the Airworthiness Standards
11040E	Approve Operational and Repair Information
11050E	Approve Airworthiness Limitations Information
11070E	Establish Conformity Inspection Requirements
11110E	Perform Compliance Inspections

E= Aircraft Certification Office, M= Manufacturing, O= Flight Standards District Office

Authorized Areas (Ref 8110.37)	
Detail Design and Installation (1A, 1B, 1C, 1D, 1F, 1H, 1I, 1J, 1K)	A
Equipment Qualification Tests (2A, 2B, 2C, 2D, 2F, 2I, 2J, 2K)	A
Safety Analysis (4A, 4B, 4C, 4D, 4F, 4G, 4H, 4I, 4J, 4K)	A
Flammability (5I, 5K)	A
Lightning/HIRF Protection (6A, 6B, 6F, 6G, 6H, 6I, 6J, 6K)	A
Service Documents (7A, 7B, 7C, 7D, 7F, 7G, 7H, 7I, 7J, 7K)	A
Project Specific Certification Plan (PSCP)	C
Certification Compliance Checklist (CCL)	C
Conformity Inspection Plan (CIP)	C
Request for Conformity (RFC)	O
Type Inspection Authorization (TIA)	C
Witness Tests and Compliance Inspections (1)	A
Test Reports	A
STC Data Review as required on specific documents	C

Legend: M = Manage O = Organize administrate A = Approve R = Recommend Approval C = Concur

Notes and Additional Requirements:
(1) Specific tests, inspections, and reports as specified in the PSCP.

FAA Forms Authorized for Signature

8100-1	8100-2	8100-9	8100-11	8110-1	8110-2	8110-12	8110-26	8120-10	8130-3	8130-6	8130-7	8110-31
		X	X					X				

S-TEC ODA Forms Authorized for Signature

100	101	102	103	104	105	106	107	108	109	110	111	211	200	201	202	203	204	205	206	208	209	210	301	309	400	401
X	X			X	X			X	X	X	X			X	X	X					X	X			X	

Structural ODA unit Required Function Capabilities

Number of Unit Members Required: 1

ODA Function	Description
11010E	Approve Technical Data and Find Compliance to the Airworthiness Standards
11040E	Approve Operational and Repair Information
11050E	Approve Airworthiness Limitations Information
11070E	Establish Conformity Inspection Requirements
11110E	Perform Compliance Inspections

E= Aircraft Certification Office, M= Manufacturing, O= Flight Standards District Office

Authorized Areas (Ref 8110.37)	
Static Analysis (1A, 1B, 1C, 1D, 1F, 1I, 1J)	A
Dynamic Analysis (2A)	A
Fatigue Analysis (3A, 3B, 3C, 3D)	A
Design and Construction (4A, 4B, 4C, 4D, 4F)	A
Flutter/Ground Vibration (5A)	A
Safety Analysis (6A)	A
Service Documents (9A)	A
Material & Process Spec. (10I2, 10J3)	A
Damage Tolerance Evaluations (12A)	A
Project Specific Certification Plan (PSCP)	C
Certification Compliance Checklist (CCL)	C
Conformity Inspection Plan (CIP)	C
Request for Conformity (RFC)	O
Type Inspection Authorization (TIA)	C
Witness Tests and Compliance Inspections (1)	A
Test Reports	A
STC Data Review as required on specific documents	C

Legend: M = Manage O = Organize administrate A = Approve R = Recommend Approval C = Concur

Notes and Additional Requirements:
(1) Specific tests, inspections, and reports as specified in the PSCP.

FAA Forms Authorized for Signature

8100-1	8100-2	8100-9	8100-11	8110-1	8110-2	8110-12	8110-26	8120-10	8130-3	8130-6	8130-7	8110-31
		X	X					X				

S-TEC ODA Forms Authorized for Signature

100	101	102	103	104	105	106	107	108	109	110	111	211	200	201	202	203	204	205	206	208	209	210	301	309	400	401
X	X			X	X					X	X			X	X	X					X	X			X	

Powerplant ODA unit Required Function Capabilities

Number of Unit Members Required: 1 For DAU Projects

ODA Function	Description
11010E	Approve Technical Data and Find Compliance to the Airworthiness Standards
11040E	Approve Operational and Repair Information
11050E	Approve Airworthiness Limitations Information
11070E	Establish Conformity Inspection Requirements
11110E	Perform Compliance Inspections

E= Aircraft Certification Office, M= Manufacturing, O= Flight Standards District Office

Authorized Areas (Ref 8110.37)	
Indicating Systems (9A, 9B, 9C, 9D)	A
Lightning/HIRF Protection (10A, 10B, 10C, 10D)	A
Safety Analysis (19A, 19B, 19C, 19D)	A
Service Documents (20A, 20B, 20C, 20D)	A
Material & Process Spec. (10I2, 10J3)	A
Damage Tolerance Evaluations (12A)	A
Project Specific Certification Plan (PSCP)	C
Certification Compliance Checklist (CCL)	C
Conformity Inspection Plan (CIP)	C
Request for Conformity (RFC)	O
Type Inspection Authorization (TIA)	C
Witness Tests and Compliance Inspections (1)	A
Test Reports	A
STC Data Review as required on specific documents	C

Legend: M = Manage O = Organize administrate A = Approve R = Recommend Approval C = Concur

Notes and Additional Requirements:
(1) Specific tests, inspections, and reports as specified in the PSCP.

FAA Forms Authorized for Signature

8100-1	8100-2	8100-9	8100-11	8110-1	8110-2	8110-12	8110-26	8120-10	8130-3	8130-6	8130-7	8110-31
		X	X					X				

S-TEC ODA Forms Authorized for Signature

100	101	102	103	104	105	106	107	108	109	110	111	211	200	201	202	203	204	205	206	208	209	210	301	309	400	401
X	X			X	X					X	X			X	X	X					X	X			X	

Flight Analyst ODA unit Required Function Capabilities

Number of Unit Members Required: 0

ODA Function	Description
11010E	Approve Technical Data and Find Compliance to the Airworthiness Standards
11040E	Recommend Approve Operational and Repair Information
11050E	Approve Airworthiness Limitations Information
11110E	Perform Compliance Inspections

E= Aircraft Certification Office, M= Manufacturing, O= Flight Standards District Office

Authorized Areas (Ref 8110.37)	
Flight Test Plans (1D, 1F, 1G,1I,)	A
Flight Test Instrumentation (2D, 2F, 2G, 2I)	A
Weight and Balance Surveillance (3F, 3I)	A
Flight Test Data Recording (4D, 4F, 4G, 4I)	A
Flight Test Data Reduction/Analysis (5D, 5F, 5G, 5I)	A
Flight Test Data Expansion (Code 6) Not Delegated	N/A
Compile Flight Test Reports (7D, 7F, 7G, 7I)	A
Compile Performance Substantiation Reports (Code 8) Not delegated	N/A
Compile Type Inspection Reports (9D, 9F, 9G, 9I)	A
Aircraft Flight Manual (10D, 10F, 10G, 10I)	A
Project Specific Certification Plan (PSCP)	C
Certification Compliance Checklist (CCL)	C
Conformity Inspection Plan (CIP)	C
Request for Conformity (RFC)	O
Type Inspection Authorization (TIA)	C
Witness Tests and Compliance Inspections (1)	A
Test Reports	A
STC Data Review as required on specific documents	C

Legend: M = Manage O = Organize administrate A = Approve R = Recommend Approval C = Concur

Notes and Additional Requirements:
(1) Specific tests, inspections, and reports as specified in the PSCP.

FAA Forms Authorized for Signature

8100-1	8100-2	8100-9	8100-11	8110-1	8110-2	8110-12	8110-26	8120-10	8130-3	8130-6	8130-7	8110-31
		X	X	X								

S-TEC ODA Forms Authorized for Signature

100	101	102	103	104	105	106	107	108	109	110	111	211	200	201	202	203	204	205	206	208	209	210	301	309	400	401
X	X			X	X					X	X			X	X	X					X	X			X	X

Flight Test Pilot ODA unit Required Function Capabilities

Number of Unit Members Required: 1

ODA Function	Description
11010E	Approve Technical Data and Find Compliance to the Airworthiness Standards
11040E	Recommend Approve Operational and Repair Information
11050E	Approve Airworthiness Limitations Information
11110E	Perform Compliance Inspections

E= Aircraft Certification Office, M= Manufacturing, O= Flight Standards District Office

Authorized Areas (Ref 8110.37)	
Flight Test Plans (1B, 1D, 1F, 1G, 1I)	A
Conduct Ground Tests and Evaluations (2B, 2D, 2F, 2G, 2I)	A
Conduct Flight Tests and Evaluations (3B, 3D, 3F, 3G, 3I)	A
Compile Test Reports (4B, 4D, 4F, 4G, 4I)	A
Type Inspection Report (5B, 5D, 5F, 5G, 5I)	A
Aircraft Flight Manual (6B, 6D, 6F, 6G, 6I)	A
Project Specific Certification Plan (PSCP)	C
Certification Compliance Checklist (CCL)	C
Conformity Inspection Plan (CIP)	C
Request for Conformity (RFC)	O
Type Inspection Authorization (TIA)	C
Witness Tests and Compliance Inspections (1)	A
Test Reports	A
STC Data Review as required on specific documents	C

Legend: M = Manage O = Organize administrate A = Approve R = Recommend Approval C = Concur

Notes and Additional Requirements:
(1) Specific tests, inspections, and reports as specified in the PSCP.

FAA Forms Authorized for Signature

8100-1	8100-2	8100-9	8100-11	8110-1	8110-2	8110-12	8110-26	8120-10	8130-3	8130-6	8130-7	8110-31
		X	X									

S-TEC ODA Forms Authorized for Signature

100	101	102	103	104	105	106	107	108	109	110	111	211	200	201	202	203	204	205	206	208	209	210	301	309	400	401
X	X			X	X					X	X			X	X	X					X	X			X	X

Inspection/Airworthiness ODA unit Required Function Capabilities	
Number of Unit Members Required: 1	
ODA Function	**Description**
11080M	Determine Conformity of Parts and Test Articles
11090M	Determine Conformity of Test Setup
11100M	Determine Conformity of Installations, including TIA Inspections on a Project
11061M	Issue/Amend Standard Airworthiness Certificates
11062M	Issue/Amend Special Airworthiness Certificates
110610M	Issue replacement for a lost, stolen, or mutilated standard or special airworthiness certificate

Notes and Additional Requirements:

FAA Forms Authorized for Signature													
8100-1	8100-2	8100-9	8100-11	8110-1	8110-2	8110-12	8110-26	8120-10	8130-3	8130-6	8130-7	8130-9	8130-13
X	X		X				X		X	X	X		X

S-TEC ODA Forms Authorized for Signature																																		
100	101	102	103	104	105	106	107	108	109	110	111	211	200	201	202	203	204	205	206		208	209	210	301	309	400	401	403
X	X			X	X	X					X			X	X	X						X	X	X		X		X

APPENDIX E

Sample Forms (Includes FAA and ODA Forms)

Sample forms are shown below, the ODA administrator or assistant will provide the actual form to be used in completion of the subject.

Project Electronic Document Management

Each completed document produced by the ODA unit in conjunction with a certification project will have a unique tracking number assigned by the ODA administrator or authorized assistant and will be maintained in a controlled access folder on a secure server at the S-TEC facility.

The document number system description follows:

ODAP07-01 A 070901 _ A or 01 or 200.2-01 (except FAA forms)

A **B** **C** **D**

A = ODA Project Number

B = See chart below

C= Date (yymmdd)

D = See chart below

B= Document Type	**D**= 1) AR unit member number - Designee ID number + 2digit sequence, or 2) Sequence number - 2 digit Sequence number beginning with 01, or 3) Revision Letter (- is Initial Release) Note: Letter p1 thru p9 is reserved for Preliminary Draft Releases

Document Type	Document Description	Revision Letter	Sequence Number	Designee ID
A	STC Project Master Data File Checklist - ODA Form 200	X		
B	Application for Supplemental Type Certificate – FAA Form 8110-12	X		
C	Project Specific Certification Plan - ODA Form 201	X		
D	Compliance Check List - ODA Form 202	X		
E	Conformity Inspection Plan - ODA Form 203	X		
F	Request for Conformity - FAA Form 8120-10		X	

G	Conformity Inspection Record - FAA Form 8100-1		X	
H	Airworthiness Condition Checklist - ODA Form 301			X
I	Application for Airworthiness Certificate - FAA Form 8130-6	NA	NA	NA
J	Standard and Special Airworthiness Certificate - FAA Forms 8100-2 and 8130-7	NA	NA	NA
K	Conformity Tracking Log - ODA Form 206	X		
L	Correspondence Letter - ODA Form 101		X	
M	Reserved			
N	Reserved			
O	Offsite STC Project Evaluation - ODA Form 209	X		
P	Reserved			
Q	STC Project Technical Review Board Agenda/Minutes - ODA Form 204	X		
R	Flight Test Risk Assessment/Alleviation - ODA Form 400	X		
S	Safety Review Board Agenda/Minutes - ODA Form 205	X		
T	Type Inspection Authorization - FAA Form 8110-1	X		
U	Flight Test Checklist - ODA Form 401		X	
V	Supplemental Type Inspection Report - FAA Form 8110-26	X		
W	Type Inspection Report, TIA Part II - FAA Form 8110-31	X		
X	Statement of Compliance with Airworthiness Standards – FAA Form 8100-9*			X
Y	STC Project Statement of Final Review - ODA Form 210	X		
Z	ODA Statement of Completion - FAA Form 8100-11	X		
AA	Designee Geographic Expansion Authorization 8130-13	X		
AB	Instructions for Continued Airworthiness Change Impact Assessment – ODA Form 112			X
AC	Document Review & Comments Tracking (ODA Form 104)		X	

* Form tracking is specific to DER's tracking numbers.

Administrative Electronic Document Management

Each completed document produced by the ODA unit in conjunction with an administrative action or function will have a unique tracking number assigned by the ODA administrator or authorized assistant and will be maintained in a controlled access folder on a secure server at the S-TEC facility.

The document number system description follows:

ODAA07 A 0901 _ A or 01 or 200.2-01

A **B** **C** **D**

A = ODA Administrative Document - Year

B = See chart below

C= Date (mmdd)

D = See chart below

B= Document Type	**D**= 1) AR unit member number - Designee ID number + 2digit sequence, or 2) Sequence number - 2 digit Sequence number beginning with 01, or 3) Revision Letter (- is Initial Release) Note: Letter p1 thru p9 is reserved for Preliminary Draft Releases

Document Type	Document Description	Revision Letter	Sequence Number	Designee ID
C	Document Review & Comments Tracking (ODA Form 104)	-	X	-
L	Letters (ODA Form 101)	-	-	X
M	Memorandum (ODA Form 100)	-	-	X
P	ODA Procedures Manual (This document)	X	-	-
R	STC Projects Manufacturing Activity Report (ODA Form 309)		X	
S	ODA Problem Solving Worksheet (ODA Form 109)			X
T	Training Records	-	-	X
U	ODA Unit Member List	X	-	-

FAA Form 8100-1 - Conformity Inspection Record

Instructions

1. List the FAA assigned project number along with date of TIA or Request for Conformity, as applicable.

2. Self-explanatory.

3. List S-TEC engineering or the manufacturer, or both. (The manufacturer can be the party producing or responsible for the product).

4. List the date the inspection began.

5. List the date the inspection ended.

6. If inspecting an aircraft, list the make, model, N-number, and serial number. For an engine or propeller, list the make, model, and serial number.

7. Aviation safety inspectors must type or print name, sign, and enter office identification. Unit members must type or print name, sign, and list their unit member identification number.

8. Assign consecutive numbers for each item inspected.

9. List the name or description of the part, appliance, assembly, drawing, document, specification, or name of the process being evaluated.

10. List the technical data that describes the item listed in Block 9. i.e., drawing number, document number, process specification number, etc.

11. List the revision level and date of the technical data described in Block 10.

12. List the number of items that were determined satisfactory or unsatisfactory. Do not record individual characteristics.

NOTE: (An item is a single article or unit containing one or more dimensional characteristics or features.)

13. Enter comments in this block that will support any information given in Blocks 8 through 12. i.e., unsatisfactory conditions, corrective actions taken, reference to other item numbers listed, serial numbers, type of inspection accomplished, destination of exported products, buyer furnished equipment, parts processed through manufacturer's maintenance facility, part new or newly overhauled, condition of part or assembly, etc.

14. To be used for supplementing items 1-13.

NOTE: Unsatisfactory conditions are corrected in one of two ways:

Method 1: If action is presented to correct an unsatisfactory condition, the action is entered in Block 13 and the number in the UNSAT column of Block 12 is lined through and initialed. The number of items now determined satisfactory is entered in the SAT column next to the corrective action entry.

Method 2: If corrective action is not presented, the inspector will continue the inspection by entering the next item inspected. When corrective action to the unsatisfactory condition is eventually presented, assign the item a new number and record the number in Block 8. Complete Blocks 9 and 10, enter a new revision and date if data has changed, and enter the number of items determined satisfactory in Block 12. Record both the corrective action taken and the item number of the unsatisfactory condition in Block 13. Place the item number in parenthesis. Next, line through and initial the number in the UNSAT column located next to Block 13 containing the unsatisfactory condition. Record the corrective action entry item number along with the unsatisfactory condition statement and place the number in parenthesis.

Form Example (Reduced size)

Conformity Inspection Record

1. Project Number, TIA/Request Date:

2. SHEET of Sheets

3. Applicant/Manufacturer:

4. Beginning Date:

5. Ending Date:

6. Model:

7. Inspected By:

8. Item No.	9. Nomenclature of Item Inspected	10. Drawing, Document, Specification, etc.	11. Revision and Date	12. No. of Items Determined		13. Comments
				SAT.	UNSAT.	

FAA Form 8100-1 (8-10) Superseded Previous Edition

(Instructions on page 2)

(Form Backside)

FAA Form 8100-2 - Standard Airworthiness Certificate

Instructions

The blocks on Form 8100-2 must be completed using the information obtained from a FAA Form 8130-6 completed and signed by S-TEC engineering.

1. Enter the capital letter “N” followed by the registration number assigned to the aircraft.

2. Self explanatory.

3. Self explanatory.

4. Enter the appropriate category of the aircraft.

If there is no category, as in the case of aircraft certificated prior to adoption of the regulations that established categories, enter the aircraft specification, TCDS, or listing number as applicable. Example: “CAR 4a” for a Bellanca 14-13; “ATC 614” for an Aeronca LC.

5. Under Exceptions, enter the exemption number and a brief description of any exemptions from the applicable airworthiness standards (CAR 3, 4b, 5, 6, 7, or equivalent CFR) that have been granted for the aircraft (see aircraft specification or TCDS).

If no exemptions exist, enter “None.”

Date of Issuance - For an original or recurrent certificate, enter the date the certificate is issued.

For a replacement or exchanged certificate, enter the date of the “original” certificate issuance and insert the letter “R” or “E,” respectively, before the date.

When the certificate is being amended, insert the letter “A” before the new issuance date.

FAA Representative - Insert the name and ODA unit member number of the authorized ODA unit member issuing the certificate under the signature. The signature must be in permanent ink on the original and copies.

Designation Number - Insert the letters “ODA” followed by the ODA unit number.

Form Example (Reduced size)

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION-FEDERAL AVIATION ADMINISTRATION

STANDARD AIRWORTHINESS CERTIFICATE

1 NATIONALITY AND REGISTRATION MARKS	2 MANUFACTURER AND MODEL	3 AIRCRAFT SERIAL NUMBER	4 CATEGORY

5 AUTHORITY AND BASIS FOR ISSUANCE

This airworthiness certificate is issued pursuant to 49 U.S.C. § 44704 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefore, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation, except as noted herein.

Exceptions:

None

6 TERMS AND CONDITIONS

Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the FAA, this airworthiness certificate is effective as long as the maintenance, preventative maintenance, and alterations are performed in accordance with Parts 21, 43, and 91 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.

DATE OF ISSUANCE	FAA REPRESENTATIVE	DESIGNATION NUMBER

Any iteration, reproduction, or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years or both.
THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.

FAA Form 8100-2 (04-11) Supersedes Previous Edition

FAA Form 8100-9 - Statement of Compliance with Airworthiness Standards

Instructions

FAA Project No. - Enter the ODA Project No. as assigned by the ODA administrator or NA if not for a specific project.

Make - Enter the manufacturer of the part or component when the approval is for a part or component used on a STC project or product make as listed on the product's type certificate data sheet when applicable.

Model No. - Enter the model number or part number of the part or component when the approval is for that part or component used on a STC project or either the aircraft model series or the specific aircraft model number, as appropriate and as listed on the product's type certificate data sheet when applicable. If the approval is applicable to multiple models, list them separately.

Name of Applicant/Authorization No. - Enter the name S-TEC Engineering for the approval or authorization. This will always be "S-TEC Corp" followed by the ODA authorization number ODA-700096-SW.

Identification **-** Enter the report, drawing, analysis, or document number, revision level, and date of the revision.

Title **-** Enter the title of the report, drawing, analysis, or document. Below this enter the exact extent of the approval. An example would be Notes 1 thru 4 or similar statements in the following example.

Example:

LIST OF DATA	
IDENTIFICATION	TITLE
ABC Manual 1234 Dated 10/20/03	Converter Regulatory Installation Manual
1000047 Revision A Dated 10/20/03	Drawing - Converter Regulator Cooling Mod.
1000048 Revision C Dated 10/20/03	Drawing - Scoop Assy. - Converter Regulator Cooling
	NOTE: 1) This approval addresses electrical design details only. 2) This approval addresses mechanical design details only. 3) All engineering aspects of the above listed data are approved herein. This approval is only for the engineering data to the extent the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as "Applicable Requirements." 4) This form constitutes FAA approval of all the engineering data necessary for substantiation of compliance to necessary requirements for the entire alteration.

Purpose of Data **-** Enter the type of project (i.e., In support of original STC, STC data revision, STC amendment, etc.). Refer to the PSCP for a description of the project and the purpose of the data.

Example:

PURPOSE OF DATA
In support of STC revision for the purpose of pitch servo design improvement. Or In support of STC amendment for the purpose of adding aircraft model listing.

Applicable Requirements **-** Enter the exact regulation(s) paragraphs, subparagraphs, or other appropriate airworthiness requirements with which the data comply. This includes applicable amendment levels. If the list is too long, attach additional sheets. It is not sufficient for the ODA unit member to merely indicate "structural regulations" or other generalizations.

Examples:

APPLICABLE REQUIREMENTS *(List specific sections)*

14 CFR 25.1301(all), 25.1309(a), 25.1359(d)(3)

CAR 6.200; .201; .202(a),(b); .260; .300; .301; .302; .303; .304(a),(b)

In support of 14 CFR § 21.601(b)(2)and RTCA DO-178B

Certification - Enter the number of additional sheets or enter N/A if there are none. Check the “Approve these data” block if the ODA unit member is approving the data or the “Recommend approval of these data” if the ODA unit member is recommending that the FAA approves the data.

NOTE: “Recommend approval” will be used for those delegated functions identified in the PNL response letter from the OMT on projects where FAA participation and oversight is required.

Signatures of Authorized Representative(s) - Enter the ODA unit member’s hand signature in “blue” ink in the Signature block, their typed or printed name(s) in the Name block, their ODA unit identification number(s) in the name block, discipline in the classification block, and the date of approval in the Date block. An ODA unit member’s signature constitutes approval or recommendation for approval of the technical data effective of the date as indicated on the form.

Form Example (Reduced size)

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION STATEMENT OF COMPLIANCE WITH AIRWORTHINESS STANDARDS	FAA Project No.

AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION

MAKE	MODEL NO.	TYPE (Aircraft, Engine, Propeller, etc.)	NAME OF APPLICANT/AUTHORIZATION NO.
			S-TEC Corporation ODA-700096-SW One S-TEC Way, Mineral Wells TX 76067

LIST OF DATA

IDENTIFICATION	TITLE
	NOTE: This Data approval is in support of Organizational Designation Project and DOES NOT constitute DER approval of the data listed herein and is not valid for any other purpose or application.

PURPOSE OF DATA

APPLICABLE REQUIREMENTS (List specific sections)

CERTIFICATION - As directed by the Administrator and in accordance with the conditions and limitations of authorization under 14 CFR, data listed above and on attached sheets numbered _____ have been examined in accordance with established procedures and found to comply with applicable requirements of the Airworthiness Standards listed.

☐ **Recommend approval of these data**

I (We) Therefore: ☐ **Approve these data**

SIGNATURE(S) OF AUTHORIZED REPRESENTATIVE(S)	NAME	CLASSIFICATION	DATE

FAA Form 8100-9 (2-02) Electronic version (Adobe)

FAA Form 8100-11 - ODA Statement of Completion

Instructions

1. Enter the name of the ODA holder, normally this will be “S-TEC Corporation”.

2. Enter the ODA authorization number, normally this will be “ODA-700096-SW”.

3. Describe the STC Project. Include the information in the following order:
   a. STC number issued or amended.
   b. Project description exactly as it appears on the issued STC, FAA Form 8110-2. If an amendment project, include a brief statement to describe the purpose of the amendment.
   c. Project prototype aircraft N-number, Make, Model, and Serial Number.

4. Select the type of project.

5. No entry - Not applicable for STC projects.

6. Enter a list of the approved data applicable to showing regulatory compliance.
Note: It is acceptable to reference a document list as an attachment provided that document list is permanently affixed as an appendix to the FAA Form 8100-11.

7. Enter date, name of the ODA administrator, and signature.

Form Example (Reduced size)

US Department of Transportation
Federal Aviation Administration

Organization Designation Authorization
Statement Of Completion

GENERAL USE OF FORM: This form documents the completion of all FAA approvals required for the indicated project or repair or alteration. Signature by the organization's representative indicates that all required substantiation data has been reviewed and the design has been found to comply with all applicable regulatory requirements. For major repairs and major alterations, this form indicates that all required data to accomplish the repair or alteration are listed here and approved.

1. ODA HOLDER NAME:	2. AUTHORIZATION NUMBER:

3. PROJECT DESCRIPTION: (Include model and serial number for repairs and alterations)

4. TYPE OF PROJECT:

☐ TC ☐ STC ☐ PMA ☐ Major Type Design Change	**The type design, substantiating data, and operating limitations are complete, and comply with all applicable regulatory requirements. Authorized ODA unit members have accomplished and documented all required approvals and inspections. All actions defined by the agreed-to Program Notification Letter have been accomplished and FAA specific findings completed.**
☐ Major Repair ☐ Major Alteration	**The data listed here has been approved by authorized ODA unit members and found to comply with the listed airworthiness requirements. No other FAA data approvals are necessary for the repair or alteration as defined by this data.**

5. AIRWORTHINESS REQUIREMENTS (For major repair or major alteration only):

6. LIST OF DATA (For major repair or major alteration only):

7. CERTIFICATION: I certify that the above statements are true and that the organization has completed all necessary approvals.

Date	Name (ODA *Administrator or ODA Unit Member*)	Signature

FAA Form 8100-11 (1-12)

FAA Form 8110-1 - Type Inspection Authorization

TYPE INSPECTION AUTHORIZATION

Project Number:

Date:

TYPE INSPECTION AUTHORIZATION, FAA FORM 8110-1

The Type Inspection Authorization (TIA) is prepared by the ACO on FAA Form 8110-1 and is used to authorize official conformity, airworthiness inspections, and flight tests necessary to fulfill certain requirements for Type Certificate (TC), Supplemental Type Certificate (STC), amended TC, and amended STC certification (refer to FAA Order 8110.4, Type Certification). The TIA is not prepared until coordination is accomplished with each appropriate engineering discipline such that all required information relative to the engineering discipline's portion of the inspection or authorization is included. The TIA is issued when the examination of the technical data required for type certification is completed or has reached a point where it appears that the aircraft or component being examined will meet the applicable regulations. The AIR Risk Management process must be performed and documented within or attached to the TIA for all FAA ground and flight tests conducted under the TIA. The Risk Management assessment is required prior to signing the TIA. (Refer to FAA Order 4040.26, Aircraft Certification Service Flight Test Risk Management Program)

1. Type Inspection Authorization: Enter the FAA flight test and/or manufacturing office that is requested to perform the flight test and/or ground inspection.
2. Project No.: Enter the FAA project number established for the project.
3. Date: Enter the current date.
4. Name of applicant: As shown on the project application.
5. Address: As shown on the project application. Note: A post office box is not acceptable.
6. Block 1 Inspection Authorized For: Identify type of product, whether new or altered, and if altered, the original type certificate number.
7. Block 2 Certification Basis: List the complete certification basis for the project. A reference may be made to additional pages as required.
8. Block 3 Category: For aircraft only, identify the proper category.
9. Block 4 Description of Alteration: For alteration, include the description of the alteration being made. A reference may be made to additional pages as required.
10. Block 5 Operating Limitations: For Aircraft, reference page that identifies approved limitations or reference to approved flight manual.
11. Block 6 Powerplant: For engine powered aircraft, identify engine information and operating limitations and type certificate data sheet number. For turbine engine operating limitations, reference supplemental page that identifies approved limitations or reference to approved flight manual or engine operating instructions.
12. Block 7 Propeller: For propeller equipped aircraft, identify propeller information and type certificate data sheet number. Reference supplemental page that identifies approved limitations or reference to approved flight manual.
13. Block 8: For rotorcraft, identify rotor rpm limits.
14. Block 9 Inspection Report: Identify if 100-hour inspection has been completed.
15. Block 10 Equipment List: Identify if equipment list has been verified for correct weight and moment arm of each item of installed equipment. Indicate if equipment list is attached and identify the manufacturer's report number if appropriate.
16. Block 11 Originated By: Indicate the project office symbol.
17. Block 12 (Part 1): Indicate if the manufacturing inspector is requested to accomplish ground inspection in support of Type Inspection Report - Part 1. Identify on supplemental page the specific instructions for inspections to be accomplished. Include the following information at the beginning of the supplemental page for Block 12:
    Point of contact at conformity site (including name and phone number), location of aircraft/conformity site, and (if applicable) DAR requested by the applicant

FAA Form 8110-1 (05/2016) Page 1

TYPE INSPECTION AUTHORIZATION

Project Number:

Date:

18. Block 12 (Part 2): Indicate if the flight test office is requested to accomplish flight test in support of Type Inspection Report - Part 2. Identify on supplemental page the specific instructions for tests to be
19. accomplished.
Block 12 (Special): The TIA may contain a section titled "Operational and Maintenance Requirements" that provides for certain other operational evaluations identified by the AEG.

NOTE: For Ground tests to be witnessed by other than manufacturing or flight test personnel, identify who is going to witness the tests and include instructions of what is to be accomplished.

20. Block 13 Concurrences: Identify the office symbol of all participating offices. Initials are evidence of office concurrence.
21. Approval: Identify date and title of approval authority. This may be ACO manager or the ACO manager may delegate to appropriate branch or project manager.

TYPE INSPECTION AUTHORIZATION

Project Number:

To: ☐ Flight Test	☐ Manufacturing	Date:
Name of Applicant	Address (Number, street, city, and zip code)	

1.0 Inspection Authorization for

☐ Airplane ☐ Engine ☐ Propeller ☐ Rotorcraft	Other (specify)	☐ New Model (Give model number)	
		☐ Altered Model (Give name of original Manu. and Model no.)	Original T.C. Data Sheet No.

2.0 Certification Basis

3.0 Category - For Aircraft Only (Check all applicable items)

☐ Normal ☐ Utility ☐ Acrobatic ☐ Transport ☐ Restricted ☐ Other (Specify)

4.0 Description of Alteration

5.0 Operating Limitations

6.0 Powerplant

Engine Model	Manufacturer	Data Sheet No.
Operating Limitations		

7.0 Propeller

Make and Model		Data Sheet No.	Diameter
Hub Model No.	Blade Model No.	Limitations	

8.0 Rotorcraft

	Maximum	Minimum
Power on Rotor Limits - RPM		
Power off Rotor Limits - RPM		

9.0 Inspection Report

100 Hour Inspection completed ◯ Yes ◯ No

10.0 Equipment List

Is equipment list correct as to weight and arm of each item? ◯ Yes ◯ No

Equipment list attached? ◯ Yes ◯ No

Mfr. Report no.

11.0 Originated by

Routing Symbol

12.0 Type Inspection Report

☐ A. Complete applicable portions of type inspection report, part 1

☐ B. Complete applicable portions of type inspection report, part 2

◯ See attached pages for instructions

◯ See attached pages for Special Test (Define divisions of responsibilities)

FAA Form 8110-1 (05/2016) Page 3

TYPE INSPECTION AUTHORIZATION

Project Number:

Date:

13.0 Concurrences					
Routing Symbol	Initials and Date	Routing Symbol	Initials and Date	Routing Symbol	Initials and Date

APPROVAL		
Date:	Title Manager	Signature

TYPE INSPECTION AUTHORIZATION

Project Number:

Date:

Block 12. Supplemental Page

12. Enter tasks to be conducted by Manufacturing Inspection branch, Flight Test branch, and AEG (if applicable):

Part 1. The Manufacturing Inspection Branch, A -1 , is requested to accomplish the following:

Include the following information, if applicable:

Point of contact at conformity site:

Phone number of point of contact:

Location of aircraft/conformity site:

(if applicable) DAR or DMIR requested by the applicant:

Part 2. The Flight Test Branch, A -1 , is requested to accomplish the following:

Special. The TIA may contain a section titled "Operational and Maintenance Requirements" that provides for certain other operational evaluations identified by the AEG.

NOTE: For Ground tests to be witnessed by other than manufacturing or flight test personnel, identify who is going to witness the tests and include instructions of what is to be accomplished.

FAA Form 8110-1 (05/2016) Page 5

TYPE INSPECTION AUTHORIZATION

Project Number:

Date:

TIA Documentation for Risk Management - Instructions for applicants without FAA-Accepted Risk Management Process

1. General - Enter general description of the project.

2. TIA Risk Management - Enter the highest risk level (high, medium, or low) in order to provide overall visibility of risk level to management.

3. Enter identified hazards and procedures integrated to reduce or mitigate, to the maximum extent possible, the level of risk expected during the tests described in this TIA. Describe Risk Management plan or specifics. It may refer to applicant's approved test plan, or stand- alone risk management plan for this project.

4. Enter signature and date of Flight Test Manager or his/her designee.

5. TIA Operating Limitations. List additional limitations resulting from safety reviews and/or refer to approved test plan section containing such limitations.

TYPE INSPECTION AUTHORIZATION

Project Number:

Date:

TIA for Applicants without FAA Accepted Risk Management Process

General

TIA Risk Management

This TIA has been assessed as insert risk level risk. The following hazards have been identified and procedures integrated to reduce or mitigate, to the maximum extent possible, the level of risk expected during the tests described in this TIA:

Flight Test Branch Manager Date

TIA Operating Limitations:

TYPE INSPECTION AUTHORIZATION

Project Number:

Date:

TIA Documentation for Risk Management - Instructions for applicants with FAA-Accepted Risk Management Process

1. General - Enter general description of the project.

2. TIA Risk Management - The flight safety and Risk Management program of the [*applicant's name*] will be used to analyze hazards and minimize risks associated with flight testing authorized by this TIA. (*Reference ACO's documented acceptance of the applicant's risk management process.*)

3. Enter signature and date of Flight Test Manager or his/her designee.

4. TIA Operating Limitations. List additional limitations resulting from the ACO's review of the company's Risk Management for this specific project.

TYPE INSPECTION AUTHORIZATION

Project Number:

Date:

TIA for companies with FAA-Accepted Risk Management Process

General

TIA Risk Management

The flight safety and Risk Management program of the _____ will be used to analyze hazards and minimize risks associated with flight testing authorized by this TIA. (*Reference ACO's documented acceptance of the applicant's risk management process.*)

Flight Test Branch Manager

Date

TIA Operating Limitations:

FAA Form 8110-2 - Supplemental Type Certificate

INSTRUCTIONS FOR PREPARATION OF FORM 8110-2, STC

1. **Import STC.** If approving the STC by following the requirements of 14 CFR 21.29, insert the word "IMPORT" immediately below "Supplemental Type Certificate." Under the Description of Type Design Change, include data from the foreign Civil Aviation Authority's original STC describing the design change and include any limitations under the Limitation and Conditions section. Otherwise, leave blank.

2. **Revoked or Suspended Certificate**. Enter "REVOKED" or "SUSPENDED" immediately below "Supplemental Type Certificate", when the FAA has made the decision to revoke or suspend the STC.

3. **Surrendered Certificate**. Enter "SURRENDERED" immediately below "Supplemental Type Certificate", when the certificate holder elects to surrender its STC. In addition, under "This certificate issued to", enter the following statement:

   This certificate has been surrendered by:
   [Enter Company Name]
   [CMACO Branch signature and date.]

4. **Abandoned Certificate.** Enter "ABANDONED" immediately below "Supplemental Type Certificate", when the FAA determines there has been no activity with the STC holder for three or more years from the date we initiate an investigation of the status of the certificate, and the FAA has not been able to locate the certificate holder. Mark the bottom of the FAA's copy of the STC with the following note:

   Note: The FAA has determined on [DATE of abandonment determination] that this STC has been abandoned in accordance with FAA Order 8110.4

5. **Number**. Enter the STC number underneath "Supplemental Type Certificate", as obtained from the CPN database tool or equivalent database.

6. **Certificate issued to**. Enter the name and street address of the person/company to whom the Aircraft Certification Office (ACO) Branch or delegated representative of the Administrator issues the STC. This information must match exactly the name and street address on the FAA Form 8110-12.

7. **Part of the Code of Federal Regulations**. Enter the applicable part of Title 14, Code of Federal Regulations or its predecessor.

8. **Original Product to include Make and Model.** Include the TC number and "Make" of the product being altered. In most cases, "Make" is the common name of the type certificate holder. Do not use the abbreviated name of the TC Holder as listed on the TCDS (upper-right corner) unless the abbreviated name is also the "Make". If the entity that holds the rights to the design permits another entity to build that product, the product "Make" would be the product name assigned by the entity that holds rights to the product design. List all applicable models with model designations identical to those on the TCDS. Do not use the Make-Model-Series

description of the original product, unless it has been confirmed with the applicant that this installation eligibility is correct and all aircraft included for the Make-Model-Series have been found compliant. If the applicant has only substantiated the change on specific serial number aircraft and cannot account for compliance across all variants of the Make-Model or Make-Model-Series, a list of those serial numbers must be included in the Limitation and Conditions section.

9. **Description of Type Design Change.** Include a description of the design change and identify the controlling document (for example, the Master Drawing List). Include required references as part of the design change, such as airplane flight manual (AFM) supplements, instructions for continued airworthiness (ICA), loading instructions, drawings, drawing lists, and so forth. When producing multiple parts or kits, request the applicant to separate the installation data from the manufacturing data. Then, include the installation data list on the STC so the installer knows what data are required for installation of the design change.

10. **Limitations and Conditions**. This section identifies the specific limitations and conditions required for full compliance with the STC. At a minimum, include the following:

    a Clearly show references to previous design changes. These changes are the ones enabling the newly altered product to be airworthy or those required to complete the installation. Identify here whether the STC is limited to a product definition more specific than the make-model-series description on the TCDS. If only specific serial numbers are eligible, list the serial number or include reference to a document, which controls the eligible serial numbers. If no serial numbers are defined (e.g., installation is applicable to all serial numbers), include the following note:

    This STC is applicable to all serial numbers for this Make-Model <or> Make-Model-Series (as applicable)

    b For multiple STCs and Approved Model List (AML) STCs, include the following notes:

    1) *The installer must determine whether this design change is compatible with previously approved modifications.*

    2) *If the holder agrees to permit another person to use this certificate to alter a product, the holder must give the other person written evidence of that permission.*

    c When approving a one-only STC, include notes 1) and 2). Include note 3) if applicable:

    1) *The installer must determine whether this design change is compatible with previously approved modifications.*

    2) *You cannot use descriptive data from this design change to duplicate other products. This approval is limited to only the installation made in [Make of Product], [Model][Serial No.]. This STC does not permit manufacturing of parts for multiple installations.*

If the person who will use this STC is not the STC holder, include the following note:

3) *If the holder agrees to permit a person to use this certificate to alter a product, the holder must give this person written evidence of that permission.*

d Include a statement similar to the following, when the STC makes provisions for equipment installation but the STC does not include approval of the equipment. This prevents completion of the installation without further approval or prevents use of the equipment provisions for other purposes:

This approval is limited to only the installation of [equipment] provisions. The FAA has not certified the equipment for which these provisions are intended. You must get additional FAA approval to install this equipment. The FAA must evaluate the installation to ensure it complies with the applicable airworthiness standards.

e For STCs that change a product's TCDS, the applicant must develop the revised information for the STC, when the applicant's change requires revision of any information contained on the product's TCDS. Include the revised information in this section of the STC following the TCDS format.

11. Date of application. Enter the date of application from FAA Form 8110-12.

12. Date of issuance. This is the date the ACO Branch or delegated representative of the Administrator initially issued the STC. Do not release the STC or STC number, or give it to the applicant, before the STC is issued.

13. Date reissued. This is the date that the ACO Branch or delegated representative of the Administrator reissued the STC. If the ACO Branch or delegated representative of the Administrator previously reissued the STC, add the new reissue date to those dates existing from each prior reissue. For additional entries that cannot be entered on the front page of the certificate, use continuation sheets but clearly state "Date Reissued – cont." The ACO Branch or delegated representative of the Administrator reissues an STC to do the following (other changes to the certificate are considered amendments):

a Change the holder's name or address,

b Transfer the STC to a new holder,

c Correct administrative errors, or

d Replace a lost or destroyed original certificate.

14. Date amended. This is the date that the ACO Branch or delegated representative of the Administrator amended the STC. If the ACO Branch or delegated representative of the Administrator previously amended the STC, add the new amended date to those dates existing from each prior amendment. For additional entries that cannot be entered on the front page of

the certificate, use continuation sheets but clearly state "Date Amended – cont." The ACO Branch or delegated representative of the Administrator amends an STC for changes in the following sections of the STC: Original Product, Description of Change, or Limitation and Conditions.

15. Signature and Title. The manager of the issuing ACO Branch or a delegated representative of the Administrator signs the STC.

16. Transfer endorsement. Reserve page 2 of the STC (FAA Form 8110-2) as a sheet for transfer endorsements. The transfer endorsement page is to be used to notify the appropriate ACO Branch of the transfer of this STC. The ACO Branch will reissue the certificate in the name of the transferee and forward it to them.

17. Continuation Sheets.

a Use continuation sheets when you need more space to do the following:

1) Describe the design change,

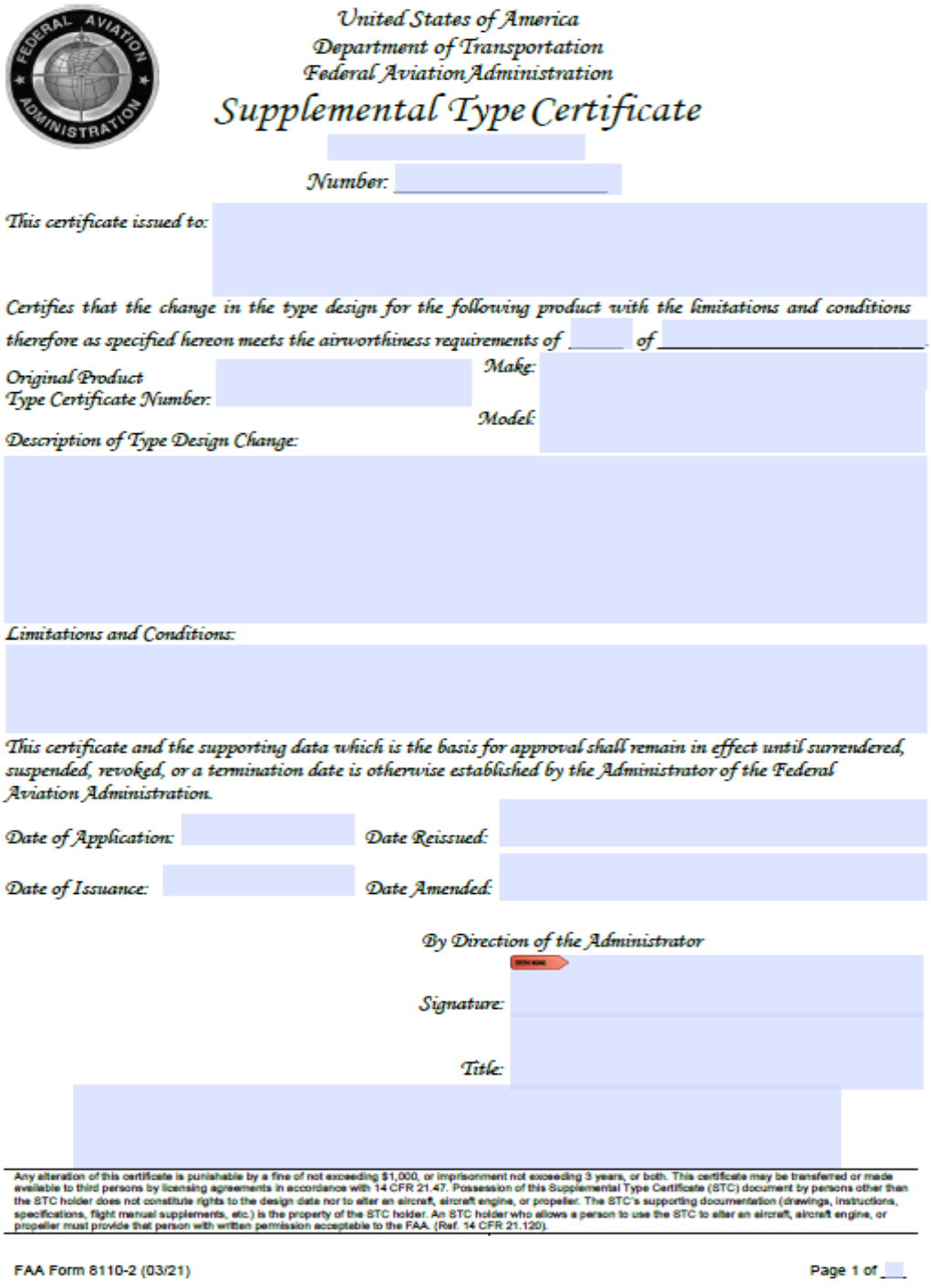
2) Identify the regulations and the complying amendments. When the certification basis differs from the original basis, the ACO Branch or a delegated representative of the Administrator must include the applicable portions of the certification basis as shown on the TCDS of the TC product, including all ELOS findings, exemptions, and directly related amendments. If other amendments are also involved, such as those with effective dates before the date of the STC application, the STC certification basis must reflect the combination of applicable regulations. The ACO Branch or a delegated representative of the Administrator shows this combination by listing the regulations and amendment level of each regulation for the changed product. When STC special conditions exist, the ACO Branch or a delegated representative of the Administrator must list them by number and date, and explain them on the STC continuation sheet, if appropriate; and

3) Include additional limitations and conditions, such as operation limitations, equipment installations, weights, and so forth.

b In the STC, reference the continuation sheets in a note under the applicable paragraph, for example, "See continuation sheets 3 through x." Insert "END" below the last sentence on the continuation sheet. Number all continuation sheets and give the latest effective date of the STC on the last page. This date is the latest issuing date or the last amendment date.

NOTES:
1. In the absence of a color printer, it is permissible to print the form in black and white.
2. References to ACO Branch within this form include certification offices such as Aircraft, Engine, Military, Delegation System Certification and Boeing Aviation Safety Oversight Offices.

Form Example (Reduced size)



United States of America
Department of Transportation
Federal Aviation Administration

Supplemental Type Certificate

Number:

This certificate issued to:

Certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of _____ of _____.

Original Product Type Certificate Number:

Make:

Model:

Description of Type Design Change:

Limitations and Conditions:

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of Application:

Date Reissued:

Date of Issuance:

Date Amended:

By Direction of the Administrator

Signature:

Title:

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with 14 CFR 21.47. Possession of this Supplemental Type Certificate (STC) document by persons other than the STC holder does not constitute rights to the design data nor to alter an aircraft, aircraft engine, or propeller. The STC's supporting documentation (drawings, instructions, specifications, flight manual supplements, etc.) is the property of the STC holder. An STC holder who allows a person to use the STC to alter an aircraft, aircraft engine, or propeller must provide that person with written permission acceptable to the FAA. (Ref. 14 CFR 21.120).

FAA Form 8110-2 (03/21)

Page 1 of ___

United States of America
Department of Transportation
Federal Aviation Administration

Supplemental Type Certificate

Number: _____

INSTRUCTIONS: The transfer endorsement below may be used to notify the appropriate FAA Aircraft Certification Office of the transfer of this Supplemental Type Certificate. The FAA will reissue the certificate in the name of the transferee and forward it to him.

Transfer Endorsement

Transfer the ownership of Supplemental Type Certificate Number: _____

To (Name and address of transferee):

From (Name and address of grantor):

Extent of Authority (if licensing agreement):

Date of transfer:

Signature of grantor: _____

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with 14 CFR 21.47. Possession of this Supplemental Type Certificate (STC) document by persons other than the STC holder does not constitute rights to the design data nor to alter an aircraft, aircraft engine, or propeller. The STC's supporting documentation (drawings, instructions, specifications, flight manual supplements, etc.) is the property of the STC holder. An STC holder who allows a person to use the STC to alter an aircraft, aircraft engine, or propeller must provide that person with written permission acceptable to the FAA. (Ref. 14 CFR 21.120).

FAA Form 8110-2 (03/21) Page 2 of ___

United States of America
Department of Transportation
Federal Aviation Administration

Supplemental Type Certificate

(Continuation Sheet)

Number: _____

Any alteration of this certificate and/or the Type Certificate Data Sheet is punishable by a fine not exceeding $1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred or made available to third persons by licensing agreements in accordance with Title 14 of the Code of Federal Regulations, part 21, section 21.47 (14 CFR 21.47). A transfer must be endorsed as provided on the reverse hereof. A Type Certificate holder who allows a person to use the Type Certificate to manufacture a new aircraft, aircraft engine, or propeller must provide that person with a written licensing agreement acceptable to the FAA. (Ref. 14 CFR 21.55).

FAA Form 8110-2 (03/21)

Page ___ of ___

FAA Form 8110-12 - Application for STC

Instructions

1. Enter the name of S-TEC Corporation, to whom the STC will be issued. The name will appear on the certificate exactly as it is entered here.

2. Check the block for “Supplemental Type Certificate.”

3. Check the product involved (aircraft, engine, or propeller).

4. Self explanatory.

Note: A post office box will not be accepted.

5 and 6. Leave blank for STCs.

7. The application will be dated and signed by S-TEC engineering manager or authorized agent as the certifying official. The certifying official must be the person duly authorized to sign for S-TEC Corporation.

Form Example (Reduced size)

U.S. Department of Transportation
Federal Aviation Administration

**APPLICATION FOR TYPE CERTIFICATE,
PRODUCTION CERTIFICATE, OR
SUPPLEMENTAL TYPE CERTIFICATE**

1. Name Of Applicant	2. Application made for : ☐ Type Certificate ☐ Production Certificate ☐ Supplemental Type Certificate ☐ Amended Type Certificate ☐ Amended Supplemental Type Certificate	3. Product Involved: ☐ Aircraft ☐ Engine ☐ Propeller

4. Address	City	State	Zip Code

5. TYPE CERTIFICATE (Complete item 5a) or AMENDED TYPE CERTIFICATE (Complete items 5a, 5b and 5c)

a. Model designation(s) (All models listed are to be completely described in the required technical data, including drawings representing the design, material, specifications, construction, and performance of the aircraft, aircraft engine, propeller which is the subject of this application.)

b. Description of modification.

c. Existing Type Certificate No.

6. PRODUCTION CERTIFICATE *(Complete items 6a-e below. Submit with this form, in manual form, one copy of quality control data or changes thereto covering new products, as required by applicable CFR.)*

a. Factory address (if different from above)	b. Application is for ☐ New production certificate ☐ Additions to Existing Production Certificate *(Give P.C. No.)* _____	d. P.C. No. e. T.C./S.T.C. No.
c. Applicant is holder of or a licensee under a Type Certificate or a Supplemental Type Certificate *(Attach evidence of licensing agreement and give certificate number)*		

7. SUPPLEMENTAL TYPE CERTIFICATE *(complete 7a, b, d-f)* **or AMENDED SUPPLEMENTAL TYPE CERTIFICATE** *(Complete items 7a-f below)*

a. Make(s) and model designation(s) of product(s) to be modified

b. Description of modification

c. Existing Supplemental Type Certificate No (if applicable).

d. Will data be available for sale or release to other persons? ☐ Yes ☐ No	e. Will parts be manufactured for sale? *(Ref. 14 CFR 21.303)* ☐ Yes ☐ No

f. One-Only STC? ☐ Yes ☐ No, If Yes, will type design be sufficient for reproducibility? ☐ Yes ☐ No

8. CERTIFICATION – I certify that the above statements are true.

Signature of certifying official	Title	Date

FAA Form 8110-12 (09/20) SUPERSEDES PREVIOUS EDITION

Page 1 of 1

FAA Form 8110-26 - Supplemental Type Inspection Report

Instructions

As the blocks on the form are not numbered, the individual blocks will be identified below by the identifiers in sequence as they appear in the blocks, followed by the instructions for each block.

Project No. **-** Enter the Project number in this block.

Date **-** Enter the date of the TIA.

Product **-** Enter the applicable product (i.e., aircraft, engine, etc.).

Make **-** Enter the name of the product manufacturer.

Model **-** Enter the model of the product.

Identification and Serial No. **-** For an aircraft, enter the Registration number (N-number) and serial number.

Serial Nos. Eligible **-** Enter the serial numbers eligible for the modification. For a multiple STC, enter "Multiple."

Product Specification or TC Data Sheet **-** Record the product specification or TC Data Sheet number.

Rev. No. **-** Enter the revision number of the product specification or TC Data Sheet.

Certification Basis (Part and Amendments) **-** Enter the applicable certification basis for the product. For an aircraft, enter the applicable TC Data Sheet identifier.

Applicant **-** Enter the name of S-TEC engineering.

Address **-** Enter the address of S-TEC engineering.

Modifier – Enter name of modifier.

Address – Enter address of modifier.

Description of Modification **-** Describe the modification being made to the product.

Attachments - List any and all attachments to the STIR.

Inspection Conducted By - Identify the individuals conducting the inspection.

Report Prepared By - Identify the individual preparing the report. The block must also be signed by the preparer.
Date - Enter the date the report was prepared.

Report Reviewed By - Identify the individual reviewing the report. The block must also be signed by the reviewer.
Date - Enter the date that the report was reviewed.

Report Approved By - Identify the individual approving the report. The block must also be signed by the approving authority.
Date - Enter the date that the report was approved.

Administrative Data Section

A. - Enter the dates of the inspection.

B. - Enter the location where the inspection was conducted.

C. - Self-explanatory

D. - Self-explanatory

E. - Self-explanatory

F. - Self-explanatory

G. - Self-explanatory

H. - Self-explanatory

Remarks - Enter any comments applicable to blocks A through H of the Administrative Data section.

TIA Comments Section
This section will list the actions taken by the inspector as a result of the issuance of the TIA, and the order and numbering of the entries in this block will correspond to the instructions as listed on the TIA.

1.1 **-** Enter “See attached weight and balance report dated XX/XX/XX” and ensure that the updated weight and balance report is incorporated as an attachment to the STIR.

1.2 through 1.4 - Remain blank. The appropriate information is to be included as part of the weight and balance report.

2.1 **-** Self-explanatory.

3.1 **-** Self-explanatory.

3.2 - Self explanatory.

3.3 - Self explanatory.

4.1 **-** Self explanatory.

5.1 **-** Self explanatory.

5.2 - Self explanatory.

6.1 **-** Self explanatory.

7.1 **-** Self explanatory.

8.1 **-** Self explanatory.

8.2 - Self explanatory.

8.3 - Self explanatory.

8.4 - Self explanatory.

8.5 - Self explanatory.

9.1 - Self explanatory.

9.2 - Self explanatory.

Note: Attach all supporting data as listed in the “Attachments” section on Page 1 of the STIR.

Form Example (Reduced size)

U.S. Department of Transportation
Federal Aviation Administration

SUPPLEMENTAL TYPE INSPECTION REPORT (STIR)

Project No.		Date	
Product			
Make			
Model			
Identification and Serial No.			
Serial Nos. Eligible			
Product Specification Or TC Data Sheet		Rev No.	
Certification Basis (Part and Amendments)			
Applicant			
Address			
Modifier			
Address			
Description of Modifications			
Attachments			
Inspection Conducted by		Date	
Report Prepared by		Date	
Report Reviewed by		Date	
Report Approved by			

FAA Form 8110-26 (04-16)

Page 1 of 6

SUPPLEMENTAL TYPE INSPECTION REPORT

General Instruction

This form provides a means whereby inspectors may record the results of inspections and/or tests, on modified products presented for supplemental type certificates, accomplished in accordance with instructions contained in the Type Inspection Authorization (TIA).

A. Answer each question on this form by placing a check in the appropriate "YES" , "NO", or "NA" (Not Applicable) block, or by filling in the answer, as appropriate. When an answer requires an explanation, record the explanation under "REMARKS" or on page 4 (TIA comments).

B. The applicant's weight and balance report may be used in lieu of the weight and dimensional page of this form, provided it contains all the information requested. Weight and balance should be included in attachment section of report, when required.

C. Original FAA Form 8130-9 (317) and FAA Form 8100-1 should be part of the attachments section of this report.

Table of Regulations*

14CFR			CAR							Subject
	Balloon	Cert'n	N.U.A	T-Cat	Glider	N-Rotor	T-Rotor	Eng.	Prop	
21.31			3.14[2]	4b.14[2]		6.14[2]	7.14[2]			Type Design
21.33		1.15(a)	3.15	4b.15	5.15	6.15	7.15	13.15	14.15	Insp. & Tests
21.35			3.16(b)	4b.16	5.16	6.16	7.			Flight Tests
.29			3.72[2]	4b.104		6.104	7.104			Empty Wt. & C.G.
.31		3.72	31.51	4b.105		6.105	7.105			Removable Ballast
.605	31.35		3.293	4b.302		6.302	7.302			Fabrication Method
.871			3.401	4b.391		6.390	7.390			Leveling Means
.1301(a)(4)			3.652							Equipment - Label
.1301(b)				4b.601(b)		6.601(b)	7.601(b)			Equipment - Label
.1301(c)				4b.601(c)		6.601(c)	7.601(c)			Equipment Install
.1351(b)(1)			3.681			6.617				Elec - Haz & Prot'n
.1351(b)(2)	31.71(b)			4b.622(b)(2)			7.622(b)(2)			Elec - Haz/ Mal. Fail
.1431			3.721							Elec - Hazard
.1431(a)							7.653(a)			Elec - Hazard
.1431(b)							7.653(b)			Electronic Effect
.1431(c)				4b.650(c)						Electronic Effect

* All regulations are those in effect on or preceding date of recodification.
1 For airworthiness standards, except balloons, a missing FAR denotes a generic requirement, e.g. 14 CFR parts 23, 25, 27, 29.
2 In part, see CFR Re-Designation Tables

SUPPLEMENTAL TYPE INSPECTION REPORT

Administrative Data

A. Period of Inspect from: _____ to: _____

B. Where conducted? _____

C. Number of conformity inspections conducted and recorded on FAA Form 8100-1 and recorded in project file. _____

D. Were design changes needed to correct deficiencies revealed by FAA Inspection? ☐ Yes ☐ No
If yes, identify changes on page 4 (TIA comments), or on attachment.

E. Have all products/articles subjected to inspections and/or tests been properly recorded by part numbers(s), serial number(s), or registration number(s), as appropriate, on page 1 or in attachment? ☐ Yes ☐ No

F. Does the applicant have on file inspection records showing conformity to the type design and acceptable quality of the product? ☐ Yes ☐ No

G. Check appropriate block(s) for any FAA forms that have been submitted by the applicant prior to, or at the time of application.

☐ FAA Form 8110-12 Date: _____ ☐ FAA Form 8130-6 Date: _____

☐ FAA Form 337 Date: _____ ☐ FAA Form 8130-9 (317) Date: _____

H. Is supplemental type approval recommended? ☐ Yes ☐ No

Remarks:

_____

If "Yes", items should be explained under appropriate TIA comments.

FAA Form 8110-26 (04-16)

Page 3 of 6

SUPPLEMENTAL TYPE INSPECTION REPORT

TIA Comments

The following comments are made with respect to special inspections and/or tests conducted by reason of instructions contained in Section 12 of the TIA, and are identified in accordance with TIA numbering. Additional pages may be used as needed. Item 12 - Part I

1.0 Empty Weight and Corresponding Center of Gravity

1.1 Describe Leveling Marks or Means

1.2 Location of Datum Ref: § .871

1.3 Horizontal Distance (inches) from Datum to average Front Main Scale CL

Horizontal Distance (inches) from Datum to average Rear Main Scale CL

Horizontal Distance (inches) from Datum to Auxiliary Scale CL

4.1 Empty Weight

	Scale Reading	Tare	Net Weight
Forward Left Main Scale			
Forward Right Main Scale			
Rear Left Main Scale			
Rear Right Main Scale			
Auxiliary Scale			
Empty Weight			

NOTE: *The empty weight and corresponding center of gravity must be determined by weighing the aircraft with --*

(1) Fixed Ballast

(2) Unusable Fuel

(3) Full operating fluids, including (i) oil (ii) hydraulic fluid and (iii) other fluids required for normal operation of aircraft systems, except potable water, lavatory precharge water, and water intended for injection in the engines.

Center of Gravity is _____ inches ☐ Forward ☐ Aft of Datum Ref: § .29

SUPPLEMENTAL TYPE INSPECTION REPORT

2.0 Removable Ballast

2.1 If removable ballast is used to show compliance with the flight requirements, is the place for carrying ballast installed and marked in accordance with the change to the type design? ☐ Yes ☐ No ☐ N/A
Ref: §.31

3.0 Fabrication Process

3.1 a. Has the applicant shown that materials, products, parts, processes, construction, and assemblies conform to the specifications and drawings shown in the change to the type design? ☐ Yes ☐ No ☐ N/A

b. Has the product been changed between the time it was shown to comply with item 3.1.a. of this report and the time it was presented for FAA Inspection? Record any changes on FAA Form 8100-1. ☐ Yes ☐ No ☐ N/A

c. Has the applicant made all inspections and tests necessary to determine

(1) Compliance with the applicable airworthiness and noise/emission requirements; ☐ Yes ☐ No ☐ N/A

(2) That the materials and products conform to the specifications in the changed type design; ☐ Yes ☐ No ☐ N/A

(3) That the parts of the product conform to the drawings in the changed type design; ☐ Yes ☐ No ☐ N/A

(4) That the manufacturing processes, construction, and assembly conform to those specified in the type design? ☐ Yes ☐ No ☐ N/A
Ref: § 21.33

3.2 Has the suitability and durability of materials used for parts, the failure of which could adversely affect safety:

a. Been established by experience or tests? ☐ Yes ☐ No ☐ N/A

b. Been established through approved specifications that ensure their having the strength and other properties assumed in the design data? and ☐ Yes ☐ No ☐ N/A

c. Been evaluated to take into account the affects of environmental conditions, such as temperature and humidity, expected in service? ☐ Yes ☐ No ☐ N/A
Ref: § .603(a)

3.3 Have high standards of workmanship been used in the fabrication of parts? ☐ Yes ☐ No ☐ N/A
Ref: §.603(b)

4.0 Fabrication Process

4.1 Are changes to the fuselage or wing in conformity to the change in type design? ☐ Yes ☐ No ☐ N/A
Ref: § 21.31

5.0 Control System

5.1 Are changes to the control system in conformity to the change in type design? ☐ Yes ☐ No ☐ N/A

5.2 Do the control surface travels conform to the change in type design? ☐ Yes ☐ No ☐ N/A
Ref: § 21.31(a)

6.0 Personnel and Cargo Accommodations

6.1 Are changes to the personnel and cargo compartments in conformity with the change to the type design? ☐ Yes ☐ No ☐ N/A
Ref: § 21.31(a)

SUPPLEMENTAL TYPE INSPECTION REPORT

7.0 Powerplant Installation

7.1 Does the powerplant installation conform to the change in type design? ☐ Yes ☐ No ☐ N/A
Ref: § 21.31(a)

8.0 Equipment

8.1 Are changes to the installed equipment in conformity to the change in type design? ☐ Yes ☐ No ☐ N/A
Ref: § 21.31(a)

8.2 Is each item of equipment installed in accordance with the change in type design

a. Labeled as to the identification, or operation limitations, or any applicable combination of these factors; and ☐ Yes ☐ No ☐ N/A

b. Installed according to limitations specified for that equipment? ☐ Yes ☐ No ☐ N/A
Ref. § .1301 (b) and (c)

8.3 Are the electrical, radio, and electronic systems included in or affected by the change in the type design free from hazards in themselves, in their method of operation, and in their effects on other components? ☐ Yes ☐ No ☐ N/A
Ref. § .1351(b)(1)(i), .1431 or .1431(a)

8.4 Are electrical cables and wire bundles included in or affected by the change in type design protected from fuel, oil, water, and other detrimental substances, and from mechanical damage? ☐ Yes ☐ No ☐ N/A
Ref. § .1351(b)(1)(ii)

8.5 Are the changes to the radio and electronic equipment, controls, and wiring installed so that operation of any one unit or system of units will not adversely affect the simultaneous operation of any other radio or electronic unit or system of units required by the airworthiness or operation rules? ☐ Yes ☐ No ☐ N/A
Ref. § .1351(b)(1)(i), .1431 or .1431(a)

9.0 Function and Reliability Testing

9.1 Did the change in type design necessitate F & R tests? ☐ Yes ☐ No ☐ N/A
Ref. § 21.35

9.2 Did the altered systems and installations function satisfactorily during the F & R tests? ☐ Yes ☐ No ☐ N/A
Ref. § 21.35

FAA Form 8110-31 - Type Inspection Report

Part II - Flight Test Report. Flight test personnel complete the required sections of the report. For the first page enter the following information:

(1) **Project Number:**

(2) **Flight Tests Conducted by:** Enter name(s) and roles (e.g.: Flight Test Pilot, Flight Test Engineer, etc.) of flight test personnel. If a designee, provide DER number.

(3) **Report Prepared by:**

(4) **Report Approved by:** Enter name, title, and date of manager reviewing and approving report.

1.0 Administrative Information. Enter sufficient administrative or general flight test information to show compliance with 14 CFR Part 21 requirements. The information must include, but not be limited, to the following:

1.1 Description of flight test item/modification.

1.2 Flight test instrumentation description.

1.3 Test Aircraft. Enter serial number and registration number of aircraft tested.

1.4 Test Sites. Enter location and date of aircraft testing. It is required to specify the test locations if the location of the tests was a determining factor. The location must be included to avoid any discrepancies regarding the test site.

1.5 Alterations made during FAA flight testing. Include a chronological list of all changes made to the prototype product during the test program and identified as “made by the applicant” or “required by the FAA as a result of type certification tests showing noncompliances.”

1.6 Flight test log (excluding function and reliability test) with total official FAA flight test time. Include information such as takeoff weight, takeoff center of gravity (c.g.), and flight number, if applicable.

1.7 Total number of flight hours for function and reliability test (if required).

1.8 Explanation for credit given to other than FAA flight time.

1.9 Survival Equipment **(**life rafts, survival first aid kits, Emergency Locator Transmitter (ELT), survival tools, etc.)

1.10 Personal Protective Equipment (oxygen bottles, oxygen masks, smoke hoods, firefighting gloves, fire extinguishers, Nomex flight suits, etc.)

2.0 Certification Information. Sufficient certification information must indicate operating limitations to include:

2.1 Category (normal, utility, acrobatic, etc.).

2.2 Type of operations (visual flight rules, instrument flight rules, day, night, icing, etc.).

2.3 Approved maneuvers may be presented, if appropriate.

2.4 Equipment required for each type of operation. This entry must agree with the limitations section of the Airplane/Rotorcraft Flight Manual (AFM/RFM).

2.5 Limitations for weight, center of gravity, airspeeds, power plant operations, and recommended airspeeds for climbs, auto-rotations, and approaches.

3.0 Applicable Requirements. Sufficient information must show compliance with TIA and 14 CFR requirements. For type certification divide the TIR into sections such as equipment and flight operation, power plant operation, performance, and handling qualities.

4.0 Flight Test Results and Findings. Include information on the results and findings of the flight tests and inspections described in the TIA, Block (12)b. A brief description of each test and the results of the tests must be included. Reference to the flight cards contained in an appendix can be made if adequate data are included on the flight cards to

support completion of the TIA. Include a chronological list of all changes made to the prototype product during the test program and identified as “made by the applicant” or “required by the FAA as a result of type certification tests showing non-compliances.

5.0 Operational evaluations identified by the Aircraft Evaluation Division (AED). Include information on the results and findings of operational evaluations identified and conducted by the AED.

6.0 Appendices. Include additional information necessary to show compliance with TIA and 14 CFR requirements. Reference this information in the Table of Contents in the TIR. Additional information may include, but is not limited to: flight test data, approved flight test plan, applicant's flight test report, AFM/RFM or AFM/RFM supplements with dates of approvals, flight logs and flight cards, and the associated TIA.

Form Example (Reduced size)

Federal Aviation Administration

Type Inspection Report for

(1) Project Number:

Part II - Flight Test Report

(2) Flight Tests Conducted by:

(3) Report prepared by: Date:

(4) Report approved by: Date:

FAA Form 8110-31 (04-16) Page 14

TYPE INSPECTION REPORT - Part II - Flight Test Report

1.0 Administrative Information

1.1 Description of flight test item/modification:

1.2 Flight test instrumentation description:

1.3 Test Aircraft:

Serial Number	Registration Number

1.4 Test Sites:

1.5 Alterations made during FAA flight testing:

TYPE INSPECTION REPORT - Part II - Flight Test Report

1.6 Flight test log (excluding function and reliability test) with total official FAA flight test time (include information such as takeoff weight, takeoff center of gravity (c.g.), and flight number, if applicable):

1.7 Total number of flight hours for function and reliability test (if required):

1.8 Explanation for credit given to other than FAA flight time:

1.9 Survival equipment (life rafts, survival first aid kits, Emergency Locator Transmitter (ELT), survival tools, etc.):

1.10 Personal protective equipment (oxygen bottles, oxygen masks, smoke hoods, fire fighting gloves, fire extinguishers, Nomex flight suits, etc.):

TYPE INSPECTION REPORT - Part II - Flight Test Report

2.0 Certification Information (operating limitations:)

2.1 Category (normal, utility, acrobatic,etc.):

2.2 Type of operations (visual flight rules, instrument flight rules, day, night, icing, etc.):

2.3 Approved maneuvers:

2.4 Equipment required for each type of operation:

2.5 Limitations for weight, center-of-gravity, airspeeds, power plant operations, and recommended airspeeds for climbs, auto-rotations, and approaches:

3.0 Applicable Requirements

TYPE INSPECTION REPORT - Part II - Flight Test Report

4.0 Flight Test Results and Findings

5.0 Operational Evaluations Identified and Conducted by the AEG

6.0 Appendices

FAA Form 8120-10 - Request for Conformity

Instructions

RFC Tracking Number - Enter the tracking control number issued by the ODA administrator or assistant.

To - This will typically be the S-TEC ODA although in the event of FAA oversight the entry will be the FAA office that has ODA program oversight if requested in the PNL response.

Project No. - Enter the ODA project number for the project.

Date - Enter the request date.

Part Conformity/Installation/Other - Check the applicable blocks.

S-TEC engineering Name - Enter the name of S-TEC engineering as shown on the original project application.

Company Name - Enter the name of the supplier, vendor, or test firm where the desired inspection will occur.

Street/City/State/Zip - Enter the address of the company named above. A post office box is not acceptable.

Time/Date Available - If you know when the product, part, assembly, appliance, or test article will be ready, enter the expected date.

Type Installation - Enter a brief descriptive statement, which includes the product, part, assembly, appliance, or test article to be inspected (for example, landing gear assembly, galley flammability test articles, wing spars, and so forth).

Make/Model - Identify the end product being certificated or modified.
Quantity - Enter the quantity of parts requiring inspection.

Requesting document such as a purchase order (P.O.) and date - Reference S-TEC engineering's letter or other correspondence identifying the pending certification test.

Design Data - Identify the data to be used for the inspection, that is, drawings (including revision and date).

Special Instructions - Enter any special instructions, as necessary.

S-TEC Engineering Contact - Enter the name, title (if known), and telephone number of the person to contact at either S-TEC engineering's or the vendor organization to arrange the inspection.

FAA Project Manager - Enter the name and telephone number of the ODA administrator.

FAA Project Engineer - Enter the name and telephone number of the ODA unit member involved in the pending test. In "Remarks," (if applicable), enter:

a. The name of the designated ODA engineering representative authorized to disposition unsatisfactory conditions found during conformity inspection.
b. The name of the designated airworthiness representative requested by S-TEC engineering.

MIO type certification management specialist (TCMS) - Leave blank.

MIDO Project Principal Inspector - Enter the name and telephone number of the responsible Inspection ODA unit member.

"Form Blocks" - Place a check mark in each applicable block:

a. TIA Issued: Check this block for requests to supplement a previously issued type inspection authorization (TIA).
b. TIR Required: Check this block to have related conformity inspection records placed in the pending type inspection report (TIR) or supplemental type inspection report (STIR) (when the FAA has issued a TIA).
c. 8130-3 Tags Required: Check this block when you will move or ship the inspection articles from the inspection site to a remote testing site, and want assurance that the article will be inspected. FAA Form 8130-3 is the conformity inspection tag.
d. FAA Form 8100-1 Required: Check this block for every request. FAA Form 8100-1 is the conformity inspection record.
e. FAA Form 8130-9 Required: Check this block for every request. The FAA requires this form under 14 CFR Part 21.53.

Reviewed By - Enter the name, title, and office symbol of FAA project engineer reviewing the FAA conformity document.

Continuation Sheet - Enter additional information on Design Data, Special Instructions, and Remarks, if necessary.

Form Example (Reduced size)

REQUEST FOR CONFORMITY, FAA FORM 8120-10

U.S. Department of Transportation
Federal Aviation Administration

REQUEST FOR CONFORMITY

RFC Tracking Number:

Revision: , Rev. Date: **Page 1 of**

To: **Attention:**
Project No.:
Initial Date:

Request for Conformity Inspection:

☐ **Part Conformity**
☐ **Installation**
☐ **Other (Specify)**

A conformity inspection pertaining to the subject is requested for the following:

Applicant Name:
Company Name:
Street:
City: **State:** **Zip:**
Time/Date Available: ☐ **Applicant will Contact FAA**
Type Installation:
Make/Model/Series: **Quantity:**
Requesting Document (P.O.) and Date:
Design Data: (with Rev/Date)
Special Instructions:
Applicant Contact: **Phone:**
FAA Project Manager: **Phone:**
FAA Project Engineer: **Phone:**
MIO Type Certification Mgmt spec: **Phone:**
MIDO Project Principal Inspector: **Phone:**
Remarks:

☐ **T.I.A. Issued (Type Inspection Authorization)**
☐ **FAA Form 8100-1 Required (Conformity Inspection Report)**
☐ **T.I.R. Required (Type Inspection Report)**
☐ **FAA Form 8130-9 Required (Statement of Conformity)**
☐ **8130-3 Tags Required (Airworthiness Approval Tag)**

NOTE: Please return this request for conformity with the FAA conformity documentation to the Project Principal Inspector (PI) then to the MIO Type Certification Management Specialist (TCMS), and then to the FAA Project Engineer (PE).

Reviewed FAA Project Engineer, Axx-xxx
By:

FAA Form 8120-10 (10-10) Supersedes Previous Edition

REQUEST FOR CONFORMITY, FAA FORM 8120-10 (CONTINUED)

U.S. Department of Transportation

Federal Aviation Administration

REQUEST FOR CONFORMITY

RFC Tracking Number: **Page** **of**

Revision:

Continuation Sheet

Design Data (continued):

Special Instructions (continued):

Remarks (continued):

FAA Form 8120-10 (10-10) Supersedes Previous Edition

FAA Form 8130-3 – Authorized Release Certificate / Airworthiness Approval Tag

Instructions 184

Procedures and authorized use of FAA Form 8130-3 are contained in FAA Order 8130.21, Procedures for completion and use of the Authorized Release Certificate, FAA Form 8130-3 Airworthiness Approval Tag. Follow instructions of FAA Order 8130.21, Paragraph 14, Block-by-Block Instructions for Completion of FAA Form 8130-3.

For any special form interpretation, discuss with your local Manufacturing Inspection Office OMT representative.

Form Example (Reduced size)

1. Approving Civil Aviation Authority/Country:	2.	3. Form Tracking Number:
FAA/United States	**AUTHORIZED RELEASE CERTIFICATE** FAA Form 8130–3, AIRWORTHINESS APPROVAL TAG	
4. Organization Name and Address:		5. Work Order/Contract/Invoice Number:

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:

12. Remarks:

13a. Certifies the items identified above were manufactured in conformity to:	14a. ☐ 14 CFR 43.9 Return to Service ☐ Other regulation specified in Block 12
☐ Approved design data and are in a condition for safe operation. ☐ Non-approved design data specified in Block 12.	Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

13b. Authorized Signature:	13c. Approval/Authorization No.:	14b. Authorized Signature:	14c. Approval/Certificate No.:
13d. Name (Typed or Printed):	**13e. Date (dd/mmm/yyyy):**	**14d. Name (Typed or Printed):**	**14e. Date (dd/mmm/yyyy):**

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.

Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1.

Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

FAA Form 8130–3 (02–14) NSN: 0052-00-012-9005

FAA Form 8130-6 - Application for U.S. Airworthiness Certificate

Instructions

Section I. Aircraft Designation

1. **-** Enter the U.S. nationality designator (the letter "N") followed by the registration marks as shown on the aircraft registration certificate.

2. - Enter the name of the builder or manufacturer as it appears on the aircraft ID plate in accordance with 14CFR part 45.13(a)(1).

3. - Enter the model designation as shown on the aircraft ID plate in accordance with 14CFR part 45.13(a)(2). Trade names must not be used.

4. - Enter the year of manufacture if shown on the aircraft ID plate or as reflected in the aircraft's records.

5. - Enter the serial number as shown on the aircraft ID plate in accordance with 14CFR part 45.13(a)(3).

6. - The engine make is the name of the manufacturer as it appears on the engine ID plate in accordance with 14CFR part 45.13(a)(1). Abbreviations can be used, for example, "P&W," "GE," "CMC," etc. When no engines are installed, as in the case of the glider or balloon, enter "N/A."

7. - When engine(s) are installed, enter the complete designation as shown on the engine ID plate; for example, "O-320-A1B," "PT6A-20A," or "CFM-56-3C-1," in accordance with 14CFR part 45.13(a)(2).

8. - When applicable, enter the number of engines installed on the aircraft.

9. - Enter the name of the manufacturer as shown on the propeller identification marking. Enter "N/A" if propellers are not installed. (Reference 14CFR part 45.13(a)(1).)

10. - When applicable, enter the model designation as shown on the propeller identification marking.

11. - This block must not be checked by an ODA unit member.

Section II. Certification Requested

A. - When applicable place a check in the appropriated box relating to this application.

B. **-** When applicable place a check in the appropriated box relating to this application.

Section III. Owner's Certification

NOTE: Do not complete this section when application is being made for a special flight permit.

A. - Enter the name and address exactly as shown on the aircraft registration certificate.

If Dealer, Check Here. This block must be checked ONLY if the aircraft is registered under a dealer's aircraft registration certificate.

B. - This section must be completed when application is being made for a standard, primary, light-sport, provisional, limited, restricted, or multiple airworthiness certificate.

Aircraft Specification or Type Certificate Data Sheet

(a) When application is being made for a multiple airworthiness certificate, enter the
certification basis for each certificate being requested.

(b) If the TCDS or specification for a new aircraft or model has been approved, but not yet published, enter the date of approval, the TC or specification number, and the word "Preliminary."

(c) When application is being made for an LSA airworthiness certificate, enter the applicable consensus standard and revision information from the statement of compliance. If no statement of compliance exists for the aircraft, enter "N/A."

(d) Enter "N/A" when the application is being made for an experimental certificate.

Airworthiness Directives - This block must be completed to indicate compliance with all applicable ADs in accordance with 14CFR part 39 and 14CFR part 21.99, regardless of the type of airworthiness certificate being requested.

(a) Enter the number of the last biweekly supplement to the summary of ADs available as of the date of application, for example, Biweekly 97-06, published on

March 24, 1997. When an LSA is equipped with certificated equipment or appliances, use the applicable ADs for the certificated equipment and/or appliances.

(b) For LSA, enter all applicable service directives available as of the date of application. If there are not any service directives, enter “N/A.”

Aircraft Listing - Enter “N/A.”

Supplemental Type Certificate - This block is applicable to all standard airworthiness certifications and special airworthiness certifications in the restricted, limited, provisional, and primary categories for aircraft with one or more STCs installed, and must be filled out at the time of application. The STC number of each STC installed must be entered. If more space is required, an attachment will be used.

NOTE: Enter “N/A” when the application is being made for an experimental certificate.

C. - This section must be completed regardless of the type of airworthiness certificate being requested.

Check If Records Are in Compliance With 14CFR part 91.417 - This block applies to all aircraft covered by this section and must be checked to indicate that the recordkeeping requirements of 14CFR part 91.417 have been met. For example, to comply with 14CFR part 91.417(a)(2)(i), the aircraft maintenance record must include the total time-in-service of the airframe, engines, propellers, and rotor; and to comply with 14CFR part 91.417(a)(2)(ii), the record must include the current status of the life-limited parts of the airframe, engines, propellers, rotor, and appliances. All record entries must be in English.

Total Airframe Hours - This block applies to all aircraft covered by this section. The total time-in-service of the aircraft, including production flight test time, will be entered.

Experimental Only - When submitting an application for the renewal of an experimental certificate, when requesting a change back to a standard certificate, or when requesting a change back to LSA category certificate, the hours flown since the previous certificate was issued or renewed must be entered. If the application is for an original issuance of an experimental certificate, enter “0.”

D. - This block applies to all aircraft covered by this section and must be completed. If the signature is by the owner’s agent, a notarized letter from the registered owner authorizing the agent to act on the owner’s behalf is required.

Section IV. Inspection Agency Verification

This section must be completed only if application is being made for a standard airworthiness certificate in accordance with 14CFR part 21.183(d). This section must be left blank for all other certification actions.

NOTE: 14CFR part 21.183(d)(2) states that an experimentally certificated aircraft that previously had been issued a different airworthiness certificate under 14CFR part 21.183, and is being returned to the standard airworthiness category, is exempt from the 100-hour inspection set forth in 14CFR part 43.15.

Section V. FAA Representative Certification

This section must be completed by the Inspection ODA unit member that inspects the aircraft and issues the certificate.

A. - Check the applicable block.

B. - Check the applicable block.

Date - Enter the date the inspection was completed.

District Office - The Inspection ODA unit member must enter the designation of the district office geographically responsible for monitoring their activities.

Designee's Signature and No - Enter the ODA unit number, preceded by "ODA" as applicable. The Inspection ODA unit member signature must be signed in ink above the typed or printed name and ODA unit member number on the original and copy(ies). The typed name and signature must be legible and must not obliterate preprinted information on Form 8130-6.

FAA Inspector's Signature - No entry in this blank - reserved for FAA inspector only.

Section VI. Production Flight Testing

No entry is required in this section. This section applies only to a manufacturer applying for a special flight permit for the purpose of flight testing production aircraft under the provisions of 14CFR part 21.197(a)(3).

Section VII. Special Flight Permit Purposes Other Than Production Flight Test

A. - The entries in this section must be the same as the corresponding data recorded on the aircraft's registration certificate and, as applicable, on the aircraft's ID plate.

B. - Enter the present location of the aircraft in the From box and the aircraft's intended destination in the To box.

Via - Entry must contain the name of an airport or city at some intermediate point in the flight to provide a general description of the route flown. For example, a flight from Kansas City, Missouri, to Dallas, Texas, may be via Wichita, Kansas, and Oklahoma City, Oklahoma, in accordance with 14CFR part 21.199(a)(2).

Duration - Entry must reflect the overall duration of the special flight permit and need not be the same as the planned duration of the actual flight. Factors such as fueling stops, weather conditions, overnight stops, or any other reasonable condition must be given consideration when establishing the duration.

C. - This entry must specifically detail the conditions in which the aircraft does not comply with the applicable airworthiness requirements in accordance with 14CFR part 21.199(a)(4).

D. - This entry must contain in detail the restrictions S-TEC engineering considers necessary for safe operation of the aircraft; for example, reduced airspeed or weight, turbulence avoidance, and flightcrew member limitations or qualifications. This item must be carefully reviewed by the ODA administrator to determine that the restriction would ensure safe operation of the aircraft. Any deficiencies must be resolved before issuance of the special flight permit. The ODA administrator also will prescribe additional conditions and limitations deemed necessary for safe operation.

Section VIII. Airworthiness Documentation

This section must be completed by the Inspection ODA unit member who inspects the aircraft and issues the airworthiness certificate. However, this section is not applicable when a special flight permit is being issued.

A. - This block applies to all aircraft covered by this section. The Inspection ODA unit member will check this block when an FAA-approved aircraft flight manual, listing of operation limitation, placards, etc., as applicable to the category of certificate requested, are in the aircraft in accordance with 14CFR part 91.9.

B. - Check this block when operating limitations have been issued and a copy is attached for retention in the permanent record. (This applies to aircraft certificated in categories other than standard.)

C.- Self-explanatory.

D. - Self-explanatory.

E. - Self-explanatory.

F. - The following is considered a satisfactory statement for the aircraft record entry: “I find that the aircraft meets the requirements for the certification requested and have issued a (standard) (special) airworthiness certificate dated. The next inspection is due. Signed: John Smith, ODA (unit member number), ODA (unit number).”

NOTE 1: The next inspection date is not necessary when the aircraft is under a continuous maintenance program.

NOTE 2: In the case of aircraft that had a previous due date, the date entered is the same. The aircraft gains no additional time because it was not in the standard category.

G. - Check the block to indicate Form 8130-9 or, when LSA, statement of compliance, Form 8130-15, and attach when required.

H. - Do not check this block.

I. - If applicable, enter the appropriate CFR or CAR under which the previous airworthiness certificate was issued, and check the block to indicate that the original of the certificate is attached. If the previously issued certificate is not available, the Inspection ODA unit member will state the reason on an attachment.

J. - The applicable section of part 21, subpart H, must be entered.

K. - Check the block to indicate that a completed applicable copy of the manufacturer’s statement of compliance, Form 8130-15, is attached for retention in the aircraft’s permanent record.

Form Example (Reduced size)

U.S. Department of Transportation
Federal Aviation Administration

APPLICATION FOR U.S. AIRWORTHINESS CERTIFICATE

INSTRUCTIONS - Print or type. Do not write in shaded areas; these are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required, use attachment. For special flight permits complete Sections II, VI, and VII as applicable.

I. AIRCRAFT DESCRIPTION

1. REGISTRATION MARK	2. AIRCRAFT BUILDER'S NAME (Make)	3. AIRCRAFT MODEL DESIGNATION	4. YR. MFR.	FAA CODING
5. AIRCRAFT SERIAL NO.	6. ENGINE BUILDER'S NAME (Make)	7. ENGINE MODEL DESIGNATION		
8. NUMBER OF ENGINES	9. PROPELLER BUILDER'S NAME (Make)	10. PROPELLER MODEL DESIGNATION	11. AIRCRAFT IS (Check if applicable)	IMPORT

II. CERTIFICATION REQUESTED

APPLICATION IS HEREBY MADE FOR: (Check applicable items)

A 1 ☐ STANDARD AIRWORTHINESS CERTIFICATE (Indicate category) — NORMAL | UTILITY | ACROBATIC | TRANSPORT | COMMUTER | BALLOON | OTHER

B ☐ SPECIAL AIRWORTHINESS CERTIFICATE (Check appropriate items)

7 ☐ PRIMARY

9 ☐ LIGHT-SPORT (Indicate Class) — Airplane | Power-Parachute | Weight-Shift-Control | Glider | Lighter than Air

2 ☐ LIMITED

5 ☐ PROVISIONAL (Indicate class)
- 1 ☐ CLASS I
- 2 ☐ CLASS II

3 ☐ RESTRICTED (Indicate operation(s) to be conducted)
- 1 ☐ AGRICULTURE AND PEST CONTROL
- 2 ☐ AERIAL SURVEY
- 3 ☐ AERIAL ADVERTISING
- 4 ☐ FOREST (Wildlife conservation)
- 5 ☐ PATROLLING
- 6 ☐ WEATHER CONTROL
- 0 ☐ OTHER (Specify)

4 ☐ EXPERIMENTAL (Indicate operation(s) to be conducted)
- 1 ☐ RESEARCH AND DEVELOPMENT
- 2 ☐ AMATEUR BUILT
- 3 ☐ EXHIBITION
- 4 ☐ AIR RACING
- 5 ☐ CREW TRAINING
- 6 ☐ MARKET SURVEY
- 0 ☐ SHOW COMPLIANCE WITH THE CFR
- 7 ☐ OPERATING (Primary Category) KIT BUILT AIRCRAFT
- 8 ☐ OPERATING LIGHT-SPORT
  - 8 A ☐ Existing aircraft without an airworthiness certificate & do not meet § 103.1
  - 8 B ☐ Operating Light-Sport Kit-built
  - 8 C ☐ Operating light-sport previously issued special light-sport category airworthiness certificate under § 21.190
- 9 ☐ UNMANNED AIRCRAFT
  - 9 A ☐ RESEARCH AND DEVELOPMENT
  - 9 B ☐ MARKET SURVEY
  - 9 C ☐ CREW TRAINING
  - 9D ☐ EXHIBITION
  - 9E ☐ SHOW COMPLIANCE WITH THE CFR

8 ☐ SPECIAL FLIGHT PERMIT (Indicate operation to be conducted, then complete Section VI or VII as applicable on reverse side)
- 1 ☐ FERRY FLIGHT FOR REPAIRS, ALTERATIONS, MAINTENANCE, OR STORAGE
- 2 ☐ EVACUATE FROM AREA OF IMPENDING DANGER
- 3 ☐ OPERATION IN EXCESS OF MAXIMUM CERTIFICATED TAKE-OFF WEIGHT
- 4 ☐ DELIVERING OR EXPORTING
- 5 ☐ PRODUCTION FLIGHT TESTING
- 6 ☐ CUSTOMER DEMONSTRATION FLIGHTS

C 6 ☐ MULTIPLE AIRWORTHINESS CERTIFICATE (Check ABOVE "Restricted Operation" and "Standard" or "Limited" as applicable)

III. OWNER'S CERTIFICATION

A. REGISTERED OWNER (As shown on certificate of aircraft registration) — **IF DEALER, CHECK HERE** ☐

NAME	ADDRESS

B. AIRCRAFT CERTIFICATION BASIS (Check applicable blocks and complete items as indicated)

☐ AIRCRAFT SPECIFICATION OR TYPE CERTIFICATE DATA SHEET (Give No. and Revision No.)	☐ AIRWORTHINESS DIRECTIVES (Check if all applicable ADs are complied with and give the number of the last AD SUPPLEMENT available in the biweekly series as of the date of application)
☐ AIRCRAFT LISTING (Give page number(s))	SUPPLEMENTAL TYPE CERTIFICATE (List number of each STC incorporated)

C. AIRCRAFT OPERATION AND MAINTENANCE RECORDS

☐ CHECK IF RECORDS IN COMPLIANCE WITH 14 CFR section 91.417	TOTAL AIRFRAME HOURS	3 EXPERIMENTAL ONLY (Enter hours flown since last certificate issued or renewed)

D. CERTIFICATION - I hereby certify that I am the registered owner (or his agent) of the aircraft described above, that the aircraft is registered with the Federal Aviation Administration in accordance with Title 49 of the United States Code 44101 et seq. and applicable Federal Aviation Regulations, and that the aircraft has been inspected and is airworthy and eligible for the airworthiness certificate requested.

DATE OF APPLICATION	NAME AND TITLE (Print or type)	SIGNATURE

IV. INSPECTION AGENCY VERIFICATION

A. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete the section only if 14 CFR part 21.183(d) applies)

2 ☐ 14 CFR part 121 CERTIFICATE HOLDER (Give Certificate No.) — 3 ☐ CERTIFICATED MECHANIC (Give Certificate No.) — 6 ☐ CERTIFICATED REPAIR STATION (Give Certificate No.)

5 ☐ AIRCRAFT MANUFACTURER (Give name or firm)

DATE	TITLE	SIGNATURE

V. FAA REPRESENTATIVE CERTIFICATION

(Check ALL applicable block items A and B)

A. I find that the aircraft described in Section I or VII meets requirements for ☐ THE CERTIFICATE REQUESTED — 4 ☐ AMENDMENT OR MODIFICATION OF CURRENT AIRWORTHINESS CERTIFICATE

B. Inspection for a special flight permit under Section VII was conducted by: ☐ FAA INSPECTOR ☐ FAA DESIGNEE ☐ CERTIFICATE HOLDER UNDER ☐ 14 CFR part 65 ☐ 14 CFR part 121 OR 135 ☐ 14 CFR part 145

DATE	MIDO/FSDO OFFICE	4 FAA INSPECTOR'S SIGNATURE or DESIGNEE'S SIGNATURE AND NO.	1 FAA INSPECTOR'S CERTIFICATION FILE REVIEW SIGNATURE

FAA Form 8130-6 (06/20) SUPERSEDES PREVIOUS EDITION — Page 1 of 2

VI. PRODUCTION FLIGHT TESTING

A. MANUFACTURER

NAME | ADDRESS

B. PRODUCTION BASIS *(Check applicable item)*

- PRODUCTION CERTIFICATE *(Give production certificate number)*
- TYPE CERTIFICATE
- OTHER

C. GIVE QUANTITY OF CERTIFICATES REQUIRED FOR OPERATING NEEDS

DATE OF APPLICATION | NAME AND TITLE *(Print or type)* | SIGNATURE

VII. SPECIAL FLIGHT PERMIT PURPOSES OTHER THAN PRODUCTION FLIGHT TEST

A. DESCRIPTION OF AIRCRAFT

REGISTERED OWNER | ADDRESS

BUILDER *(Make)* | MODEL

SERIAL NUMBER | REGISTRATION MARK

B. DESCRIPTION OF FLIGHT | CUSTOMER DEMONSTRATION FLIGHTS ☐ *(Check if applicable)*

FROM | TO

VIA | DEPARTURE DATE | DURATION

C. CREW REQUIRED TO OPERATE THE AIRCRAFT AND ITS EQUIPMENT

PILOT | CO-PILOT | FLIGHT ENGINEER | OTHER *(Specify)*

D. THE AIRCRAFT DOES NOT MEET THE APPLICABLE AIRWORTHINESS REQUIREMENTS AS FOLLOWS:

E. THE FOLLOWING RESTRICTIONS ARE CONSIDERED NECESSARY FOR SAFE OPERATION: *(Use attachment if necessary)*

F. CERTIFICATION - I hereby certify that I am the registered owner (or his agent) of the aircraft described above; that the aircraft is registered with the Federal Aviation Administration in accordance with Title 49 of the United States Code 44101 et seq. and applicable Federal Aviation Regulations; and that the aircraft has been inspected and is safe for the flight described.

DATE | NAME AND TITLE *(Print or type)* | SIGNATURE

VIII. AIRWORTHINESS DOCUMENTATION (FAA/DESIGNEE use only)

- ☐ A. Operating Limitations and Markings in Compliance With 14 CFR Section 91.9, As Applicable
- ☐ B. Current Operating Limitations Attached
- ☐ C. Data, Drawings, Photographs, etc. *(Attach when required)*
- ☐ D. Current Weight and Balance Information Available in Aircraft
- ☐ E. Major Repair and Alteration, FAA Form 337 *(Attach when required)*
- ☐ F. This inspection Recorded in Aircraft Records
- ☐ G. Statement of Conformity, FAA Form 8130-9 *(Attach when required)*
- ☐ H. Foreign Airworthiness Certification for Import Aircraft *(Attach when required)*
- ☐ I. Previous Airworthiness Certificate Issued in Accordance With 14 CFR Section _____ CAR _____ *(Original attached)*
- ☐ J. Current Airworthiness Certificate Issued in Accordance With 14 CFR Section _____ *(Copy attached)*
- ☐ K. Light-Sport Aircraft Statement of Compliance, FAA Form 8130-15 *(Attach when required)*

FAA Form 8130-6 (06/20) SUPERSEDES PREVIOUS EDITION

Page 2 of 2

FAA Form 8130-7 - Special Airworthiness Certificate

Instructions

The blocks on Form 8130-7 must be completed using all applicable information obtained from completed Form 8130-6.

A. - This section is applicable to all categories of special airworthiness certificates.

Category/Designation - Enter the category of special airworthiness certificate being issued, for example, restricted, limited, light-sport, etc. For experimentally certificated gliders, the words “Glider” are to be put in parentheses after the word “Experimental” for the respective type of aircraft. For experimentally certificated LSA, put in “Experimental.”

Purpose - Enter the operating purpose for which the special airworthiness certificate is being issued, as shown by the blocks checked by S-TEC engineering under section II, block B, on Form 8130-6. If the application is for a limited category airworthiness certificate, the Purpose entry must be “N/A.” For LSA category aircraft, enter one of the five classes of LSA: airplanes, gliders, powered parachutes, weight-shift-control aircraft, and lighter-than-air aircraft (balloons and airships). There are six classes of LSA experimental purposes: airplanes, gliders, powered parachutes, weight-shift-control aircraft, lighter-than-air aircraft (balloons and airships), and gyroplanes. For example, an LSA glider will be listed in the purpose as “light-sport, glider.”

B. - Enter the name and address of the manufacturer only if the application is for a special flight permit for the purpose of production flight testing. In all other cases, enter “N/A” in both spaces under this section.

C. - This section is applicable for a special flight permit for purposes other than production flight testing. The Flight From and Flight To spaces must be the same as that shown on Form 8130-6, section VII, item B. When the aircraft is to be flown outside the United States, enter “Subject to D(2) on reverse side” in section C on the face side of the special airworthiness certificate.

D. - This section is applicable to all categories and purposes except production flight testing. Information to complete the entries in this section would be contained in section I of the application for airworthiness certificate.

E. - This section is applicable to all categories of special airworthiness certificates.

Date of Issuance - Enter the date the certificate is issued. However, in those cases where a certificate is being exchanged or replaced, enter the date of the original certificate and insert the letter “E” or “R.”

Expiry - Enter the date of expiry if the application is for an experimental or special flight permit. An experimental certificate for R&D, showing compliance with regulations, crew training, or market surveys is effective for 1 year after the date of issue or renewal, unless a shorter period is deemed necessary. The duration of light-sport, amateur-built, exhibition, and air racing experimental certificates is unlimited unless good cause exists to establish a specific period. Additionally, LSA that have been grandfathered into LSA experimental purpose by rule exception and that have preexisting exemptions have an expiration date. For a provisional certificate, the entry will be in accordance with 14CFR part 21.217.

Operating Limitations Dated _____ Are a Part of This Certificate - Enter the date of the operating limitations. Do not repeat or paraphrase limitations printed on the back of the certificate. Enter “N/A” if the limitations on the reverse side of the certificate are adequate for the purpose.

Signature of FAA Representative - Type or print the Inspection ODA unit member name and sign above.

Designation or Office No. - Enter the ODA unit number.

Form Example (Reduced size)

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION		
	PURPOSE N/A		
B	MANU-FACTURER	NAME N/A	
		ADDRESS N/A	
C	FLIGHT	FROM N/A	
		TO N/A	
D	N-7897T		SERIAL NO. 172A-001
	BUILDER Cessna Aircraft Corp.		MODEL 172A
E	DATE OF ISSUANCE 01/31/2001		EXPIRY Unlimited
	OPERATING LIMITATIONS DATED ARE PART OF THIS CERTIFICATE		
	SIGNATURE OF FAA REPRESENTATIVE Joe Mendez *Joe Mendez*		DESIGNATION OR OFFICE NO. NW24

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (07/04) *SEE REVERSE SIDE*

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14, Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the Administrator as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR Part 21, Section 21.181 or 21.217.

FAA Form 8130-9 Statement of Conformity

Instructions

This form will be submitted to the ODA under the following circumstances:

1. By S-TEC for a supplemental type certificate at the time he presents an aircraft or parts thereof to the ODA for tests and/or conformity.

This form will be completed as follows:

Section I. Aircraft. Complete the pertinent part of any of only this section when certification covers an aircraft or part thereof.

Section II. Engine. N/A

Section III. Propeller. N/A

Section IV. Certification.

Item A. Check this block when an aircraft or part thereof is presented for flight or ground tests and/or conformity during type certification or supplemental type certification.

Item B. N/A Item C. N/A Item D. N/A
The certification must be signed by an authorized person who holds a responsible position in the organization and has the necessary experience.

Form Example (Reduced size)

U.S. Department of Transportation
Federal Aviation Administration

STATEMENT OF CONFORMITY

Section I - Aircraft

1. Make	2. Model
3. Serial No.	4. Registration No.

Section II - Engine

1. Make	2. Model
3. Serial No.	

Section III - Propeller

1. Make	2. Hub Model
3. Blade Model	4. Hub Serial No.
5. Blade Serial No.	

Section IV – Certification

I hereby certify that:

☐ A. I have complied with Section 21.33(a).

☐ B. The aircraft described above, produced under type certificate only (CFR 21 Subpart F), conforms to its type certificate, is in a condition for safe operation, and was flight checked on _____
(Date)

☐ C. The engine or propeller described above, presented herewith for type certification, conforms to the type design therefor.

☐ D. The engine or propeller described above, produced under type certificate only (CFR 21 Subpart F), conforms to its type certificate and is in a condition for safe operation. The engine or, if applicable, the variable pitch propeller was subjected by the manufacturer to a final operational check on _____
(Date)

Deviations:

Signature of Certifier	Title
Organization	Date

FAA Form 8130-9 (06/20)

Page 1 of 1

FAA Form 8130-13 – Designee Geographic Expansion Authorization

INSTRUCTIONS FOR COMPLETING THE DESIGNEE GEOGRAPHIC EXPANSION AUTHORIZATION FORM

General:

A. Type (or legibly print) all information except the signatures.
B. Item 1 and items 26 through 31 are to be completed by the designee's Certificate Management Office.
C. Items 2 through 25 are to be completed by the designee.

Item Number:

(1) Enter the number assigned by the Certificate Management Office.
(2) Enter the name of the designee's Certification Management Office.
(3) Enter the name of the Advisor assigned to the designee.
(4) Enter the date this form was initiated.
(5) Enter the complete mailing address of the designee's Certification Management Office.
(6a) Enter the telephone number of the Certification Management Office or assigned Advisor.
(6b) Enter the FAX telephone number of the Certification Management Office.
(7a) Enter the abbreviation for the type of designation currently held *(e.g. DMIR, DAR, ODAR, DOA, DAS).*
(7b) Enter the name of the designee's Certificate Management Office.
(8) *(When applicable)* Enter the project number(s) assigned by the FAA.
(9) *(When applicable)* Enter the date the FAA ACO/MIDO/FSDO office released the project for additional action.
(10) *(When applicable)* Enter the number assigned by the requesting office, as shown on the applicable *FAA Forms, e.g., 8110-1, 8120-10, etc.*
(11) List the functions that will be completed at the expanded location.
(12) Enter the name of the FAA office that has oversight responsibility at the expanded location.
(13) Enter the estimated date the project will start.
(14) Enter the estimated number of calendar days required to complete the project.
(15) Enter the location(s) where the inspections/functions will be conducted.
(16) Enter the full name of the applicant.
(17) Enter the mailing address of the applicant *(either PO Box number or street address).*
(18) Enter the mailing address city.
(19) Enter the two-letter abbreviation for the mailing address state.
(20) Enter the mailing address zip code.
(21a) Enter the phone number of the applicant.
(21b) Enter the FAX number of the applicant.
(22) Enter any additional information and/or remarks by the designee.
(23) Signature of designee that filled out the form.
(24) Enter the designee's FAA assigned number.
(25) Enter the date of the request.
(26) Enter the name of the designee's Certification Management Office.
(27) Enter all special instructions given to the designee.
(28) Enter the name of the FAA employee granting this request.
(29) Enter the date of the granted request.
(30) Enter the signature of the FAA employee granting this request.
(31) Enter the name of the FAA office granting this request.

FAA Form 8130-13 (6-00) Supersedes Previous Edition

U.S. Department of Transportation
Federal Aviation Administration

Designee Geographic Expansion Authorization

1. Control #

2. Office Name:

3. ATTN: | 4. Date:

5. Address:

City: State: Zip Code:

6a. Telephone Number: ( ) | 6b. Fax Number: ( )

7. I hereby request authorization to perform the (*Designee type*) 7a._____ functions identified below outside the geographical boundaries of *(FAA Office)* 7b._____.
The function(s) pertain to: _____
_____.

8. Project Number(s): | 9. Project Date: | 10. FAA Form 8120-10#:

11. Authorized Function(s) will consist of:

12. FAA geographic oversight office of activity:

13. The activity is scheduled to begin on:

14. The estimated time required to complete the function(s): _____ Calendar Days.

15. Location(s) where the function(s) will be performed:

16. Name of Applicant: *(Last, First, Middle)*

17. Address: *(either PO Box or Street)*

18. City: | 19. State: | 20. Zip Code:

21a. Telephone Number: ( ) | 21b. Fax Number: ( )

22. Remarks: *(If needed, continue remarks on plain paper and attach it to this form.)*

23. Signature: | 24. Designee Number: | 25. Requested Date:

26. The above identified designee is authorized to perform the requested functions outside the geographical area of the *(FAA Office)* _____ .
All FAA documentation required as a result of the specific task(s) must be submitted to this office within seven (7) days of accomplishment.
The above identified designee shall contact the cognizant FAA office within the area in which the authorized function(s) will be performed, to advise them of her/his presence and activities.
NOTE: For any Designee Expansion Authorizations for activities to be undertaken in other countries, the cognizant Civil Aviation Authority must be notified in advance. A return notification authorizing permissibility for the designee's work activities, from the cognizant Civil Aviation Authority, is required prior to entry into the country.

27. SPECIAL INSTRUCTIONS/REMARKS: *(If needed, continue special instructions on plain paper and attach it to this form.)*

28. Authorized By: *(Print Name)* | 29. Date:

30. Signature:

31. Office Name:

FAA Form 8130-13 (6-00) Supersedes Previous Edition See instructions on reverse side NSN: 0052-00-917-4001

ODA Form 100 - ODA Memorandum Template

Instructions

ADMINISTRATION

Memo Date - Enter the date of Memo issuance.

Memo Number - Enter the tracking control number issued by the ODA administration assistant or as determined by the either the "Project Electronic Document Management or Administrative Electronic Document Management" instructions at the beginning of Appendix E.

To - Self explanatory.

From - Self explanatory.

Subject - Self explanatory.

Project - Enter the ODA project number if applicable. Leave blank if no ODA project is associated with the memo.

Response Requested - Self explanatory.

Request Date - Enter the date of expected response.

MESSAGE

Enter the content of message conveyed.

RESPONSE

Enter the content of the response conveyed.

Response From - Self explanatory.

Response Date - Self explanatory.

Form Example (Reduced size)

Memorandum

ADMINISTRATION

Memo Date:	Memo Number:
To:	From:
	Subject:
	Project:
Response Requested: ☐ NO ☐ YES	Response Request Date:

MESSAGE

RESPONSE

Response From:	Response Date:

ODA Form 101 - ODA Correspondence Letterhead Template

Instructions

Date - Enter the date of Correspondence issuance.

Document Number - Enter the tracking control number issued by the ODA administration assistant or as determined by the either the “Project Electronic Document Management or Administrative Electronic Document Management” instructions at the beginning of Appendix E.

To - Self explanatory.

Subject - Self explanatory.

Attention - Self explanatory.

Dear - Insert the name of individual addressed in the correspondence.

Insert Text - Insert the body of your correspondence text.

Signature Name - Enter the correspondence originators name.

Signature Title - Enter the correspondence originators title only if applicable.

Cc - Enter individuals who are to be copied this correspondence.

Enclosures - List any attachments to this correspondence.

Form Example (Reduced size)

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Date:

Document No.

To:

Subject:

Attention:

Dear ,

Insert Text

Regards,

Signature Name
Signature Title

Cc:
Enclosures:

One S-TEC Way, Mineral Wells, Texas 76067,
(817) 215-7600

ODA Form 101-.doc
Page 1 of 1

ODA Form 102 - ODA Self Evaluation Checklist

Instructions

Date – Enter beginning date of the evaluation.

Evaluators – Enter name(s) of each evaluator.

Projects Evaluated – Enter each project as evaluated.

Type of Evaluation – Check appropriate box.

Section 1 – Organization and Responsibility section 1-1 through 1-13 check appropriate box.

Section 2 – Project Management section 2-1 through 2-27 check appropriate box.

Section 3 – Design Data Approval section 3-1 through 3-23 check appropriate box.

Section 4 - Conformity Inspection and Records section 4-1 through 4-14 check appropriate box.

Section 5 – Testing section 5-1 through 5-8 check appropriate box.

Section 6 – Airworthiness Certification section 6-1 through 6-9 check appropriate box.

Section 7 – Flight Testing section 7-1 through 7-4 check appropriate box.

Section 8 – Continued Airworthiness section 8-1 through 8-12 check appropriate box.

Section 9 – Production Approvals check appropriate box.

Section 10 – Operations Certification check appropriate box.

Date – Enter ending date of the evaluation.

Form Example (Reduced size)

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ODA Self Evaluation Checklist

Evaluation Date Period	Evaluators	Projects Evaluated
Begin: End:	1) 2) 3) 4)	1) 2) 3) 4)

Type of Evaluation
☐ Routine Scheduled Annual
☐ Unscheduled prior to FAA Evaluation
☐ Other - Reason:

SECTION 1 - ORGANIZATION AND RESPONSIBILITY

Satisfactory	Unsatisfactory	Not Applicable	Not Evaluated	Section Element	Element Description	Applicable 14CFR Section	Evaluation Criteria
☐	☐	☐	☐	1-1	Does the procedures manual contain the information required by the regulations and Order 8100.15?	183.53	1) The procedures manual contains; a) The requirements outlined in 14CFR 183.53, b) The requirements outlined in FAA Order 8100.15 appropriate to STC ODA. 2) The procedures manual is FAA approved.
☐	☐	☐	☐	1-2	Does the ODA holder comply with its procedures manual?	183.57	The organization complies with all of the procedures prescribed in the manual.
☐	☐	☐	☐	1-3	Is the ODA holder operating within its approved delegation authority?	183.49	Approvals issued are within the limitations defined in the manual.
☐	☐	☐	☐	1-4	Does the ODA holder assure that it continues to meet the criteria for holding its authorization?	183.55	1) The organization continues to meet the requirements for the ODA. 2) The ODA holder notifies the FAA of any changes that impact their ability to perform any authorized function. 3) The MOU signatories have not changed.
☐	☐	☐	☐	1-5	Does the ODA administrator and staff have sufficient authority to administer the pertinent CFR effectively?	-	1) The ODA administrator and staff is in an organizational position with sufficient authority to administer the pertinent CFR effectively. 2) The ODA administrator is actively involved in engineering processes and airworthiness activities. 3) The ODA administrator and staff

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							is not adversely influenced by company responsibilities.
☐	☐	☐	☐	1-6	Are the ODA unit members' authority clearly defined and do they operate within their authority?	-	1) The ODA unit member's authorities and responsibilities are defined in the ODA unit list. 2) The ODA unit members are knowledgeable of their authority and limitations. 3) Authority for ODA unit members is defined in accordance with FAA Order 8100.8. 4) The ODA unit members perform only within the authority and limits established.
☐	☐	☐	☐	1-7	Does the ODA Holder provide in-house training to its ODA unit members?	-	1) The ODA holder has an established in-house training program structured for the organization's ODA unit members. 2) The in-house training is scheduled at least every two-years. 3) The training material includes, a) Review of the functions delegated to the organization. b) Review of the organization's processes/procedures manual. c) Review of the ODA unit member's authority and responsibility when performing authorized functions. d) Review of FAA rules, orders, policy and guidance material relative to the functions performed by the organization. e) Review of documentation and forms used by the organization. f) Technical training as required. 4) In-house training occurs at least every two years. 5) Training material is available to the FAA and if applicable, FAA is allowed to attend.

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☐	☐	☐	☐	1-8	Do the ODA administrators and ODA unit members attend FAA sponsored training and/or seminars?	-	1) ODA administrators have attended workshops or training as required by the FAA. 2) Engineering ODA unit members have attended a DER standardization seminar and recurrent seminars as required by Order 8100.8. 3) Manufacturing ODA unit members have attended designee standardization and recurrent seminars as required. 4) The ODA holder maintains training records for each of its ODA administrator and ODA unit members.
☐	☐	☐	☐	1-9	Does the ODA holder retain records in accordance with the appropriate regulations?	183.61	1) A record retention system that complies with applicable regulations, orders, and data storage agreements has been established. 2) Technical data files and alteration records, original application data, inspection records, and service difficulty records, as applicable, are maintained in accordance with data storage agreements and made available to the FAA. 3) A listing of products, components, parts, or appliances for which the organization unit had performed an authorized function. 4) Procedures make the records and data that support approvals available to the FAA for examination.
☐	☐	☐	☐	1-10	Are documents and forms, identified and listed in the procedures manual used to document the approval of the data and to make findings of compliance?	-	1) Procedures provide for documenting approved data and findings of compliance on specified forms.
☐	☐	☐	☐	1-11	Does the ODA holder have and comply with procedures prescribed in the procedures manual for performing self-evaluations?	183.53	1) Procedures provide for, a) General requirements for scheduling and performing the self evaluations. b) Documenting the evaluation results and demonstrating that all necessary corrective actions are taken. c) Monitoring trends and providing necessary remedial actions. d) Periodic evaluation of the ODA unit member's

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							documentation, processes, oversight criteria contained in FAA orders, FAA policy memorandums, and so on. e) Periodic process evaluations of inspection of design and or repaired articles to ensure conformity to type design and compliance with the airworthiness standards. f) Maintaining records of the self-evaluation and providing copies to the FAA upon request. 2) The ODA holder complies with the self-audit requirements in its manual.
☐	☐	☐	☐	1-12	Does the ODA holder have and comply with procedures for the appointment of ODA unit members?	183.53	1) The procedures manual must include as a minimum methods for, a) Submitting application. b) Application review. c) Technical criteria for qualification review. d) Interview processes. e) Evaluation of interview results. f) Rating applicant. g) Providing initial orientation and training upon appointment. h) Coordination with FAA. 2) The completed documentation must include at least, a) ODA unit member's application (statement of qualifications) requesting appointment. b) Documentation to support application in accordance with 8100.8 or other approved documents. c) Evaluation forms. d) Interview results and rating. e) Documentation to support the appointment. f) Training was completed in accordance with procedures upon appointment.
☐	☐	☐	☐	1-13	Are the ODA unit members qualified to perform the functions authorized as defined in Order 8100.8, Designee Management Handbook or FAA Order 8900.1, Flight Standards Information Management System (as applicable)?	-	1) ODA unit members must have as a minimum, a) Knowledge and experience required by Order 8100.15 to perform their authorized functions and keep current. b) Be in position that allows the ODA unit member to execute his/her approved authority without any company pressure. c) Have access, as applicable, to

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							the current FAR's, policy and guidance material and the delegated organization's procedures manual. d) Possess integrity, sound judgment, and cooperative attitude. 2) The appointment of ODA unit members based on existing FAA designation should at a minimum include, a) The same function(s), as applicable, as existing FAA designation. b) Documentation, in accordance with the above, for expanded functions.

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SECTION 2 - PROJECT MANAGEMENT							
Satisfactory	Unsatisfactory	Not Applicable	Not Evaluated	Section Element	Element Description	Applicable 14CFR Section	Evaluation Criteria
☐	☐	☐	☐	2-1	Has the certification basis or airworthiness requirements been established and used for project?	-	1) Procedures include, as a minimum, a) Method used to determine certification basis, b) Method of documenting certification basis applicability, c) Validation that the certification basis has been complied with. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	2-2	Did the program notification contain the information (certification plan, schedule, and so on) required by the FAA approved procedures manual?	-	1) Project description, scope and schedule where properly described and communicated in the initial program notification. 2) Projects which were determined not to require a program notification were properly determined as defined by the FAA approved procedures manual.
☐	☐	☐	☐	2-3	Does the ODA holder determine whether a project is significant or non-significant before submitting the program notification?	-	1) Procedures include, as a minimum, a) Method used to determine and document the project criticality assessment. b) Method to incorporate the assessment findings into the program notification or other program notification form. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	2-4	Was an adequate Conformity Plan containing all of the necessary elements written for each certification project as required by FAA approved procedures manual?	-	1) Each project has a conformity inspection plan that includes the following information as applicable, a) General description of the aircraft modification. b) Definitions of terms used in the plan. c) Brief introduction of certification program. d) Applicant conformity inspections (who is authorized to sign the FAA Form 8130-9). e) FAA conformity inspection guidelines and exceptions. f) FAA conformity inspection identification and initiation of FAA Form 8120-10 or other

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							acceptable document. g) FAA Conformity inspection tracking by applicant. h) Applicant first article inspections. i) Tooling inspection and control. j) Material review prior to STC. k) Software conformity inspections when necessary. l) Description and location of facilities to manufacture and test the product. m) Description and location for final assembly of product. n) Supplier agreements with applicant. o) FAA conformity inspections of parts modified or replaced during FAA flight test. p) FAA conformity inspections for test setup. q) FAA conformity inspections conducted on ground test articles. r) FAA conformity of spare parts. s) Experimental certification of aircraft including location of flight testing. t) Flight test aircraft maintenance and re-inspection procedures to reestablish FAA conformity. u) Supplier conformity requirements and procedures. v) Identification of non-domestic suppliers. w) Verifying the conformity of critical and major characteristics of materials, parts, and assemblies. x) Evaluating processes to ensure production of consistent and uniform products. y) Observing tests of important functional parameters of systems, modules, components and completed products.
☐	☐	☐	☐	2-5	Was a Certification Plan written for each certification project and contain all of the necessary elements as required by FAA approved procedures manual?	-	1) A certification plan was written for each certification project in the procedures manual. 2) The certification plan for certification projects addresses the elements required by Order 8100.15.
☐	☐	☐	☐	2-6	Was the certification project accomplished in accordance with the certification plan?	-	1) Certification projects were accomplished in accordance with the certification plan.

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☐	☐	☐	☐	2-7	Where significant changes to the program's scope or schedule adequately communicated to the FAA?	-	1) Major changes, if applicable, to the scope or schedule of a project are communicated in writing to the FAA. 2) Changes to the certification plan were documented and communicated with the FAA. 3) Any changes not reported were correctly determined to be of a minor nature.
☐	☐	☐	☐	2-8	When determining the certification basis, has the ODA unit made a determination of compliance with the regulatory requirements for a design change to a type certificate or supplemental type certificate?	-	1) Procedures include, as a minimum, a) Method of determining if the design change is "substantial". b) Method of determining if the design change is "significant" or "not significant" used in c) If the existing certification is found to be inadequate, a method of updating the certification basis using later appropriate regulatory standards and special conditions (14 CFR 21.16). d) Method of defining the cumulative effects of design changes. Include the resultant determination of the level of significance for the design change and the use of later appropriate regulatory requirements... 2) There is evidence of observance to established procedures. a) Method of documenting certification basis for all design changes. b) There is evidence of observance to established procedures.
☐	☐	☐	☐	2-9	Is the certification basis appropriate for the type certificate design submitted?	21.115	1) Procedures include, as a minimum, a) Method of documenting certification basis (regulatory) applicability, including the position relative to complying with later standards. b) Method used in evaluating the basic regulatory requirements together with applicable service experience. 2) It is documented (that is, compliance checklist) that the applicable regulator requirements were addressed based on the date of application.

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							3) When determining the certification basis, the evaluated facility made a determination on the use of the latest airworthiness standards. 4) Applicable regulatory requirements can be from 14 CFR parts 21, 23, 25, 27, 29, 31, 33, 34, 35, 36, and 39 as recommended by the delegated authorization and concurred with by managing FAA Aircraft Certification office. 5) Additional requirements may result from special conditions. 6) Changes to the certification basis were documented and communicated to the FAA appropriately and concurred by the FAA.
☐	☐	☐	☐	2-10	Were special conditions or any exemptions required and included in the certification basis and certification plan?	-	1) It is documented that special conditions or exemptions were addressed in certification plan. 2) Special conditions or exemptions were documented in the certification basis.
☐	☐	☐	☐	2-11	Were equivalent level of safety findings coordinated with the ACO?	-	1) Evidence exists that the FAA approved the use of the equivalent level of safety findings prior to the authorization holder's use.
☐	☐	☐	☐	2-12	Are program notification letters reviewed by the staff prior to submittal to the FAA?	-	1) Procedures include a method to coordinate the program notification letter and certification plan internally with engineering, flight test, and inspection staff members prior to submitting the letter to the FAA. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	2-13	Is the FAA response to the program notification letters obtained prior to the issuance of the certificate?	-	1) Procedures include a method to disposition the FAA response or requirements to the Program Notification. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	2-14	Did the ODA holder follow the action specified, if any, in the response to the Program Notification Letter (PNL)?	-	1) Procedures ensure that, a) FAA-requested participation and/or specific findings are included in the testing and inspection schedule b) FAA-requested participation and/or specific findings are completed and documented 2) Evidence of observance to procedures. 3) Evidence that the authorization holder followed the instruction in the response.

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☐	☐	☐	☐	2-15	Are AD's identified for the product evaluated for their effect on change in the type design?	-	1) Procedures include, as a minimum, a) Identification of applicable ADs. b) Evaluation of the effect the AD has on the modification/repaired product.
☐	☐	☐	☐	2-16	Does the ODA holder coordinate milestones and unique project requirements with appropriate disciplines within the facility?	-	1) Procedures provide for communicating milestones and unique project requirements with the appropriate ODA personnel. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	2-17	Are there means for the identification and resolution of significant technical, regulatory, and administrative issues that occur during the certification process within the facility, and with the OMT?	-	1) Procedures include, as a minimum, a method to, a) Identify issue(s). b) Identify staff member participation. c) Request the FAA for an issue paper(s) if required. d) Incorporate the findings of the issue paper into type design. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	2-18	Do ODA unit members communicate with each other for project coordination and, when applicable with the OMT?	-	1) Procedures provide for, a) Communication between ODA unit and management b) Communication between ODA unit members for project coordination. c) Communication between ODA unit and the FAA. d) Coordination of multi-discipline review and approval, for example, airframe, systems, propulsion, flight test, and inspection. e) ODA unit members to review each data package possible overlaps. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	2-19	Are compliance inspections being conducted by authorized staff members?	-	1) Procedures provide for, a) Method to identify compliance inspection requirements. b) Method to document and disposition the findings of the compliance inspection. c) Identification of staff members authorized to conduct compliance inspections.
☐	☐	☐	☐	2-20	When applicable, is the AFM/AFMS (Aircraft Flight Manual or Aircraft Flight Manual Supplement) properly formatted, documented, coordinated,	-	1) Procedures include a method to, a) Determine whether an AFM or AFMS is necessary. b) Assure that the AFM or AFMS is properly formatted.

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					approved, and controlled?		c) Assure that the document has been coordinated with all engineering disciplines. d) Assure that the AFM or AFMS is approved and referenced properly on the approval certificate prior to the issuance of the type certificate or supplemental type certificate. e) Process revisions to the AFM or AFMS. 2) There is evidence of observance to the established procedures.
☐	☐	☐	☐	2-21	Does the ODA unit process and approve a TIA?	-	1) Procedures include, as a minimum, a method to, a) Document the required official certification inspections and tests. b) Coordinate the TIA and flight test plans with all applicable ODA unit members. c) Ensure approval of the risk assessment prior to approval. d) Approve TIA before flight test. e) Make and approve changes to the TIA. f) Control and file the TIA. g) Include FAA participation, as required. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	2-22	Does the ODA unit process and approve a document, such as a TIR/STIR, which documents those official conformity, airworthiness inspections, and flight tests necessary to fulfill the requirements for STC certification?	-	1) Procedures include, as a minimum, a method to, a) Document the results of the official certification inspections and tests. b) Approve the required document, including, as applicable, coordination with other staff members. c) Make and approve changes to this document. d) Control and file this document. e) Identify timely completion of the document. f) Include FAA participation, as required. 2) The TIR or STIR contains all of the information required by Order 8110.4.
☐	☐	☐	☐	2-23	Are changes to the approved data identified, documented, and approved?	-	1) Procedures include a method to be used when approving changes to type design.

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☐	☐	☐	☐	2-24	Does the ODA administrator obtain concurrence from the applicable staff members that all items are completed prior to the issuance of the STC?	-	1) Procedures should include the process by which the evaluated facility will obtain concurrence from engineering, flight test, and inspection prior to the issuance of the STC to verify that all project items are completed; for example, a) STC product eligibility is correct. b) Certification basis is documented. c) Installation or drawing list is the latest approved revision. d) All limitations and conditions are listed in the document. e) Conformity inspections have been completed and documented.
☐	☐	☐	☐	2-25	Prior to issuance of the approval does the evaluated facility ensure that the Instructions for Continued Airworthiness have been accepted by the Aircraft Evaluation Group?	-	1) ICA's are submitted when required. 2) There is evidence of FAA acceptance of ICA's.
☐	☐	☐	☐	2-26	Prior to issuing an STC, does the evaluated facility ensure that a type certificate has been issued for the aircraft being modified and/or repaired?	-	1) A type certificate has been previously issued for the product being altered.
☐	☐	☐	☐	2-27	Are STC certificates properly completed?	-	1) Procedures include a method on how to properly complete the STC certificate (FAA form 8110-2), to include the STC Continuation Sheet (FAA Form 8110-2-1), when required.

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SECTION 3 - DESIGN DATA APPROVAL							
Satisfactory	Unsatisfactory	Not Applicable	Not Evaluated	Section Element	Element Description	Applicable 14CFR Section	Evaluation Criteria
☐	☐	☐	☐	3-1	Is the design, including changes, adequately described and substantiated? (drawings, specifications, reports and so on)?	-	1) The data included as a minimum, a) Sufficient detail to define the characteristics necessary to fabricate, alter, install, inspect and test the part/product/appliance. b) Information on dimensions, material, processes necessary to define the structural strength of the product. c) Adequate substantiation is provided for the type design and changes. d) Airworthiness Limitations section of the Instructions for Continued Airworthiness as required by the applicable airworthiness standards. e) Other data necessary to allow the determination of the airworthiness, noise characteristics, fuel venting, and exhaust emissions. f) Life limited parts are properly identified on the drawings in accordance with 14 CFR part 45.
☐	☐	☐	☐	3-2	Do the drawings and specifications adequately call out dimensions, tolerances, materials and processes?	-	1) The detail of the descriptive type design data includes as a minimum. a) Listing of drawings and specifications. b) Information on dimensions. c) Specifications for materials and processes. d) Sufficient detail to define the characteristics necessary to fabricate, modify, install and inspect the part/product/appliance. e) Information on dimensions, material, process necessary to define the structural strength of the product. f) Airworthiness Limitations as required to be part of the Instructions for Continued Airworthiness. g) Other data, typically ground and flight tests, necessary to

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							determine the airworthiness of the modified product. h) Other data to assure the noise characteristics, fuel venting and exhaust emissions of later modified products are equivalent to the prototype installation. i) Other data necessary to describe and substantiate the design of the product. 2) Critical and major characteristics are identified on the drawing(s). 3) Data submitted in any process for approval should not contain terms that are subject to various degrees of interpretation. 4) Procedures to qualify the product to the specification.
☐	☐	☐	☐	3-3	Does the substantiating data include all the information necessary to find compliance (for example, test results, analysis, and so on), and are they technically accurate and complete?	-	1) The descriptive data include as a minimum. a) Airworthiness Limitations section of the Instructions for Continued Airworthiness as required by the applicable airworthiness standards. b) Other data necessary to allow the determination of the airworthiness, noise characteristics, fuel venting, and exhaust emissions. 2) The compliance and substantiating data were reviewed and approved by the appropriate ODA unit members. 3) Did the assumptions, data, design, and test conditions used substantiate compliance? 4) The computer tools were accurate, validated and applicable to the design. 5) The software level for the system is adequate to meet the criticality level assigned in the hazard assessment or the system safety assessments and compliance with DO-178( ) was shown.
☐	☐	☐	☐	3-4	Is the type design data, technical data, and/or repair data (including changes) documented and controlled?	-	1) Procedures include as minimum, a) Methods for documenting and retaining data approvals. b) A means of controlling the issuance and distribution of approval documents. c) A means of documenting and controlling test plans, reports, and data. d) A means of documenting and

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							controlling required documents, for example, instructions for continued airworthiness, flight manuals, installation/operation instructions.
☐	☐	☐	☐	3-5	During the approval process, does the ODA unit determine and classify the type of data being approved?	-	1) Procedures include, as a minimum, a) Determination and classification of change in type design. b) For organizations approving major repair data, determination and classification of repair as major or minor. 2) There is evidence of observance to established procedures. 3) There is evidence that changes to the design data, or a repair have been properly classified as major or minor.
☐	☐	☐	☐	3-6	Is the type design data, technical data, and/or repair data approved?	-	1) Procedures include, as a minimum, a) Description of the data approval process, including personnel authorized to approve the data. b) Methods to obtain complete design data and approval documents in accordance with the certification plan. c) Methods to approve master document (data) and/or certification compliance checklist. d) Methods to approve test plans, data, and reports. e) Methods to approve required documents, for example, instructions for continued airworthiness, flight manuals, installation instructions. 2) There is evidence that the procedure is being used.
☐	☐	☐	☐	3-7	Are the means of compliance (MOC) correct to show compliance to the airworthiness standards?	-	1) The MOC are appropriate to substantiate compliance with the airworthiness standards: a) Any previously approved data used to substantiate compliance was applicable and valid. b) Required means of compliance is used when specified by the airworthiness standards-test, analysis, etc. c) If project did not require PNL, means of compliance were appropriate based on FAA

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							Orders or policies, industry standards, or previously accepted means of compliance.
☐	☐	☐	☐	3-8	Did the certification Plan, including compliance checklist, provide for adequate description (including test, analysis, and so on) and establish and FAA acceptable certification basis for each project/repair?	-	1) The certification basis is correctly identified in the compliance checklist along with the correct means of compliance. 2) There is evidence that the FAA has accepted the proposed certification basis. 3) Changes to the certification basis has been forwarded to the FAA for coordination and approval. 4) The Certification Plan is in sufficient detail and updated as applicable for each project. 5) Special conditions or equivalent level of findings have been forwarded to the FAA for approval.
☐	☐	☐	☐	3-9	Do the materials and process specifications follow appropriate industry practices?	-	1) When industry or military material or process specifications offer different materials or methods of operations or processing, the drawing should clearly identify which material or method of operation or processing must be used.
☐	☐	☐	☐	3-10	Is there adequate data to support major changes/major repairs, including to accomplish the change/repair?	-	1) Major design changes at a minimum must include the following, a) Substantiating and descriptive data. 2) Major repair data at minimum must include the following, a) Substantiating and descriptive data and amendments thereto. b) Any tests conducted and results. c) Work instructions necessary to accomplish the repair.
☐	☐	☐	☐	3-11	Is the incorporation of changes to type design / repair data done appropriately and accordance to approved procedures?	-	1) Ensure that all design changes have been incorporated into the drawing or data when engineering orders/change records were issued against that data. 2) Assure that the data on the engineering change orders/change records have been incorporated, in total, into the type design. 3) A procedure is used to ensure the incorporation of engineering changes on the drawing and in the production of the part. 4) Evidence of appropriate control of vendor design changes. 5) A procedure is in place to ensure

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							the incorporation of changes in the repair documents.
☐	☐	☐	☐	3-12	Where deviations to the type design appropriately addressed on the FAA Form 8130-9 and FAA Form 8100-1?	-	1) An engineering ODA unit member properly reviewed and dispositioned all deviations prior to FAA testing and STC approval. 2) Previously produced parts were reviewed for any material review action or they were re-inspected and all deviations were recorded for engineering evaluation. 3) All parts were FAA—conformed unless it was shown that they had no adverse effects for the certification test. 4) Deviations were incorporated into the data as a one only or the drawings were revised. 5) Repairs or Use–As-Is dispositions are not rolled over (sustained) into numerous production parts. 6) Deviations are evaluated for root cause and corrective action.
☐	☐	☐	☐	3-13	If the System Safety Assessment (SSA) are required – Did they identify and properly addresses all failure conditions/modes including the failure conditions that prevent continued safe operation?	-	1) The various Functional Hazard Assessments (FHAs) methodically identify all failure conditions, provide an accurate description of the effects, classify each one's severity (minor, major, hazardous, catastrophic) according to published guidance, and the classifications are consistent with the effects described. 2) The FHAs are logically structured to cover all systems and to cover failure conditions that may cross multiple system boundaries. 3) The various System Safety Assessments (SSAs) address all failure conditions identified in the FHAs and include the appropriate depth of analysis according to published guidance. 4) In the SSAs, where Failure Modes and Effects Analysis (FMEAs) are used, it is methodical, complete, and shows there are no single point failures which would result in a catastrophic effect. 5) In the SSAs, where Fault Tree Analysis (FTAs) are used: The logic of the FTAs accurately reflect the architecture of the design; the base event failure rates are appropriate and justified if needed; any

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							latencies are properly identified and their exposure timed accounted for in the calculations; and the tree has been properly "reduced" to ensure the validity of any redundancy claims via AND" gates. 6) The assumptions used on the FHA and SSA process are sound, valid, and conservative. 7) The computer tools used were accurate, validated, and applicable to the design.
☐	☐	☐	☐	3-14	Were test plans adequate to successfully conduct the test?	-	1) All certification test plans were approved by all appropriate ODA unit members. 2) The test plans were in sufficient detail to conduct the test, including a) A description of the item(s) to be tested, including FAA conformity inspection requirements. b) A list of applicable regulations/airworthiness standards. c) A list of all test equipment necessary to conduct the test. d) A description of how the equipment will be calibrated (calibration is required) and approved prior to the test. e) A description of how the compliance will be shown prior to the test. f) A test procedure written in a step-by-step format including pass-fail criteria.
☐	☐	☐	☐	3-15	When applicable, does the AFMS (Aircraft Flight Manual Supplement) contain all of the information needed?	-	1) The AFMS includes the information required by the regulations and FAA policy. a) Operating Limitations. b) Operating Procedures. c) Performance Information.
☐	☐	☐	☐	3-16	Are minor design changes approved under a method acceptable to the FAA?	21.95	1) There is evidence that the FAA has accepted a method to approve minor design changes and that the evaluated facility is using the approved method.
☐	☐	☐	☐	3-17	If an airworthiness directive was issued, were required design changes incorporated into the FAA-approved design?	21.99	1) There is evidence that the design changes necessary to correct unsafe conditions identified in ADs have been incorporated into the FAA-approved design.
☐	☐	☐	☐	3-18	Is there Software Configuration Management Plan (SCMP) or procedure to control airborne software configuration?	-	1) Procedures provide for, a) Installation of the correct version of the software in the certification test article or in the

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							delivered product in accordance with the FAA-approved design in the certification program. b) Method by which controlled software containing the FAA-approved design data is transitioned into production. c) The media containing the software installed in the product is directly traceable to the Software Configuration Management (SCM) library. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	3-19	Has a criticality assessment and the software verification been accomplished in accordance with RTCA/DO-178 or other accepted/approve documents (for example, RTCA/DO-236, and so on)?	-	1) Procedures provide for a properly documented software criticality assessment and verification process. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	3-20	Is there a Configuration Index Document (CID) listing all software documents under configuration control and defining the hardware and software part numbers?	-	1) Procedures provide for traceability of hardware and software part numbers to the drawing control system. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	3-21	Are there practices and procedures for reporting, tracking and resolving software problems?	-	1) Procedures provide for, a) Methods for corrective action, for problems found, include provisions for airborne software and hardware/software combinations. b) Procedures may parallel or be part of hardware corrective action procedures. c) Method to dispose and delete obsolete or non-current software. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	3-22	Are there methods and facilities to protect computer programs from unauthorized access, inadvertent damage, or degradation?	-	1) Procedures provide for, a) Configuration control of the airborne software within the product design files. b) Limited access to software files. c) Separate archives for master and duplicates. d) That master and duplicates are not revived by the same machine simultaneously. e) Procedures provide for environmental control and special handling of programmed media. 2) There is evidence of observance

						to established procedures.
☐	☐	☐	☐	3-23	Are there procedures to ensure that the software development environment (that is, compilers, loaders, linkers, editors, emulators, and so on) is identified, documented and archived for each version of the delivered airborne software version?	-	1) Procedures provide for methods to identify, document, and archive the software development environment for each version of delivered airborne software. 2) There is evidence of observance to established procedures.

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SECTION 4 - CONFORMITY INSPECTION AND RECORDS							
Satisfactory	Unsatisfactory	Not Applicable	Not Evaluated	Section Element	Element Description	Applicable 14CFR Section	Evaluation Criteria
☐	☐	☐	☐	4-1	Are FAA Forms 8130-9, Statements of Conformity properly submitted?	-	1) There is evidence that, a) The method for verifying the statement of conformity has been submitted to the appropriate delegated facility staff member. b) The statement of conformity has been signed by an authorized person who holds a responsible position in the manufacturing organization or repair station. c) The applicant has only delegated inspections to qualified persons in accordance with FAA Order 8110.4. d) The statements of conformity that are delegated by the applicant have the applicant's letter of delegation attached to the FAA Form 8130-9.
☐	☐	☐	☐	4-2	Are conformity inspections documented?	-	1) Procedures include, as a minimum, a method to, a) Obtain a completed FAA Form 8130-9, Statement of Conformity from the applicant. b) Conduct conformity inspections in accordance with the conformity plan and FAA Order 8110.4. c) Complete FAA Form 8100-1, conformity inspection records. d) Document the detail parts, assemblies, and installation conformities record on the conformity inspection record, including design data revision level and release date of design data. e) Document and coordinate disposition of nonconformities or deviations with authorized engineering ODA unit members. f) Verify and/or conform that special processes called out in design data have been accomplished in accordance with the process requirements.

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						-	2) There is evidence of observance to established procedures.
☐	☐	☐	☐	4-3	Does equipment used for inspection have the degree of accuracy necessary to determine conformity of the characteristic being inspected?	-	1) Procedures provide for, a) The degree of accuracy and a current calibration of all measurement devices and test equipment. b) Measurement devices and test equipment capable of the accuracy necessary and adequate for the intended purpose, including measurement devices and test equipment substituted for those specified. c) A list of measurement devices and test equipment used to determine conformity of characteristics being inspected. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	4-4	Are conformity inspections records generated and tracked for in-process conformity inspections and do these records reflect the final approval design?	-	1) Procedures provide for a method to assure that in-process conformity records, a) Are generated and maintained. b) Reflect the final approved design. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	4-5	Do the inspection ODA unit members conduct conformity inspections at the supplier/vendor when conformity can not or will not be determined upon receipt?	-	1) Procedures provide for, a) Only inspection ODA unit members may conduct conformity inspections. b) Method to conduct conformity inspections at suppliers/vendors. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	4-6	Are methods for identification, control, and disposition of nonconforming products or parts provided?	-	1) Procedures provide for, a) Methods used for identification, control, and disposition of nonconforming prototype products or parts. b) Methods to secure nonconforming material, with access limited to authorized personnel. c) Engineering disposition of nonconforming items, including standard repairs. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	4-7	Is software identified and marked both externally and internally in accordance with the engineering design requirements?	-	1) Work instructions detail the identification and marking requirements. 2) Software header identification corresponds to marking on

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							hardware. 3) There is evidence of observance to established procedures.
☐	☐	☐	☐	4-8	Are special processes evaluated and coordinated between engineering and inspection ODA unit members?	-	1) Procedures provide for the engineering and inspection organizations to review process specifications prior to release to ensure that, a) It is capable of consistently producing articles that meets the requirements in the type design. b) Inspection equipment is available that will adequately verify conformity to approved design, and that can be controlled for accuracy, when required. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	4-9	Do the inspection ODA unit members verify that the approved data are adequate for a multiple approval and determine that the installation is airworthy?	-	1) Procedures provide for a method to, a) Verify that the approved data are adequate for multiply parts and installations. b) Determine that the installation is airworthy. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	4-10	Do products and parts conform to approved type design data?	-	1) The aircraft, assemblies and or part conforms to design data (select a sample and inspect as necessary). 2) Parts are adequately installed in conformance with design data. (If available, select a sample and inspect as necessary).
☐	☐	☐	☐	4-11	Were FAA conformity inspections accomplished according to FAA approved procedures, including parts provided by suppliers?	21.33	1) The FAA Form 8100-1 or other approved form used as the inspection records show, a) Sufficient detail to determine the degree of inspections performed. b) Inspection records show who did the inspection. c) Special processes were done (for example, heat treatment, welding, chemical and so on) and were found to be in conformance. d) In-process inspections were done for assemblies and complex parts. e) All non conformities and discrepancies are accurately documented. f) Procedures are adequate to

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							ensure re-inspection of any parts that are reworked or replaced. (This includes inspection of installation of new parts as well as inspection of the parts.) g) The applicant accomplished appropriate root cause and corrective actions for any unsatisfactory dispositions that affect production parts. h) Preparation of FAA Form 8100-1 is adequate. i) FAA Form 8100-1 is signed by ODA unit member inspector that performed the FAA conformity inspection. 2) The ODA unit member inspector considers the following when performing conformity inspections, a) Materials, • Raw materials used in the fabrication process were in conformity with the type design data and materials specifications • Evidence was available to assure that chemical and/or physical properties were identified and checked as appropriate. • Documented evidence to show traceability from the raw stock to the prototype part. • Part and or process deviations are recorded against the submitted design data (including material review dispositions). b) Processes and Processing, • There is a process specification for each special process. • The process specifications have been approved by an engineering ODA unit member. • The process will produce consistent conforming parts during production in accordance with the type design and there is statistical or other evidence to indicate this. • Is the process being

							operated in accordance with the process specification? Are any deviations recorded? c) Critical and Major Characteristic, • The applicant identified and inspected all of the critical and major characteristics. • The applicant has a record of these inspections. • The inspection and surveillance indicates that the above inspections were accurate and adequate. d) Workmanship, • The workmanship does not degrade the quality of the product. • The workmanship can be duplicated under production conditions. • Criteria have been established to identify workmanship practices. e) Adequacy of Drawings and Related Change Records, • The part can be produced and inspected using the information on the drawing. • Drawing tolerances are practicable and attainable under production conditions and evidence supports this • All of the changes incorporated into the drawings have been approved by engineering ODA unit members (including one-time only deviations in the prototype article submitted for FAA testing). • Type design engineering changes in production parts are properly documented and incorporated. f) Non-conforming parts/materials, • Material review procedure is adequate to ensure appropriate disposition for non-conformities. • There is determination of root cause for observed non-conformities and

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							adequate corrective action taken to prevent reoccurrence. • Use as is or repair dispositions for non-conformities have been approved by engineering ODA unit members, and have they been incorporated in the type design (one-time only engineering orders). g) Software, • Software products (version description document, source code, object code, documentation, test procedures, loaded hardware/firmware, and so on) are properly identified, including revision levels, when compared to the hardware and software engineering drawings. • Software problem reports have been properly disposition. • Records indicate that appropriate developmental procedures such as DO 178 have been placed under configuration control for all software products, including support software. • Verification and acceptance tests have been successfully executed, to approved test procedures, and recorded. • Records indicate that the object code was compiled from released source code in accordance wit approved procedures. • Records indicate engineering ODA unit member approval of the software, prior to loading into the system or product. • The product loaded correctly with released object code. • The load was verified in accordance with applicable procedures, for example checksums, cycle

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							redundancy checks, load maps. h) Dispositions of Unsatisfactory Conditions, • Unsatisfactory conditions are recorded and corrected by engineering ODA unit member prior to FAA tests.
☐	☐	☐	☐	4-12	Was the conformity plan accomplished?	-	1) There is evidence that the conformity inspection plan was accomplished by sampling. 2) All planed FAA conformity inspections were completed prior to testing and TC/STC certification. 3) All applicant conformity inspections were completed and documented correctly on FAA Form 8130-9. 4) All part, assembly and installation conformities have been identified and planned according to the conformity inspection selection guidelines and exceptions. 5) All FAA conformity inspections are tracked to completion. 6) Critical production tooling has been modified to the latest approved design configuration. 7) Software conformity inspections were planned and accomplished as planned. 8) FAA conformed parts that were subsequently modified or replaced during flight test were re conformed by ODA unit member inspectors. 9) FAA certification test setups were conformed and documented by the ODA unit member inspector prior to the test. (No post test conformity inspections). 10) Where ground test articles are used, FAA conformity inspections were properly accomplished prior to FAA certification tests (No post test conformity inspections). 11) Maintenance functions performed on the flight test aircraft, that may affect conformity and certification aspects of the test, are documented and reviewed by the ODA unit member.
☐	☐	☐	☐	4-13	Was valid rationale used to request or not request FAA conformity inspections?	-	1) There is evidence that the test article and design changes are reviewed by the ODA unit to determine the need for FAA

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							conformity inspection. 2) The justification to request or not request FAA conformity inspections is provided for in the conformity inspection plan.
☐	☐	☐	☐	4-14	Where all discrepancies identified and documented by the applicant prior to FAA conformity inspections?	-	1) Non-conformities/deviations are satisfactory dispositioned by the appropriate ODA unit member. 2) Non-conformities/deviations are documented on 8130-9/8100-1.

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SECTION 5 - TESTING							
Satisfactory	Unsatisfactory	Not Applicable	Not Evaluated	Section Element	Element Description	Applicable 14CFR Section	Evaluation Criteria
☐	☐	☐	☐	5-1	Were tests conducted to show compliance with the applicable airworthiness standards?	21.33	1) There is evidence that required tests were conducted. 2) Test plan deviations were appropriately dispositioned. 3) Re-tests were performed for unsatisfactory test results.
☐	☐	☐	☐	5-2	Were the conducted tests described in the test plan?	-	1) The appropriate ODA unit member approved all certification test plans. 2) The approved test plans were in sufficient detail to conduct the test, including, a) A description of the item(s) to be tested, including FAA conformity inspection requirements. b) A description of the test setup and equipment necessary to conduct the test. c) A description of how the equipment will be calibrated and approved prior to the test. d) A description of how the compliance will be shown prior to the test. e) A test procedure written in a step-by-step format.
☐	☐	☐	☐	5-3	Are conformity inspections completed prior to conducting certification tests?	-	1) Certification conformity inspections are accomplished, for example, parts, installation, and/or test setup. 2) Conformity inspection records are reviewed.
☐	☐	☐	☐	5-4	Are nonconforming products/parts dispositioned by engineering ODA unit members prior to tests?	-	1) Procedures provide for engineering ODA unit members to determine, a) Nonconformities do not affect the test results. b) Nonconformities do not affect the functionality or interface of the equipment. c) Design changes are incorporated into the type design, if necessary. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	5-5	Does test equipment have the	-	1) Test plans provide for,

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					degree of accuracy necessary to verify the characteristics measured or tested?		a) Measurement devices and test equipment capable of the accuracy necessary and adequate for the intended purpose, including measurement devices and test equipment substituted for those specified. b) Current calibration of all measurement devices and test equipment. c) A list of measurement devices and test equipment used.
☐	☐	☐	☐	5-6	Are test results documented and approved?	-	1) Documentation includes as a minimum. a) Test results reflect test plan requirements. b) Approval of test results by appropriate ODA unit member.
☐	☐	☐	☐	5-7	Are certification test discrepancies documented and dispositioned?	-	1) Test discrepancies are documented. 2) Discrepancies are dispositioned appropriately, for example, re-evaluate test procedures, rework, and re-conform test setup, redesign or retest.
☐	☐	☐	☐	5-8	Did the results of any testing identify an unsafe feature or characteristic?	-	1) Unsafe conditions were documented and addressed satisfactorily.

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SECTION 6 - AIRWORTHINESS CERTIFICATION							
Satisfactorily	Unsatisfactorily	Not Applicable	Not Evaluated	Section Element	Element Description	Applicable 14CFR Section	Evaluation Criteria
☐	☐	☐	☐	6-1	Have FAA Form 8130-6, Application for Airworthiness Certificate been properly completed and submitted to the FAA, as applicable?	-	1) The owner or owner's agent completed the application in accordance with Order 8130.2. 2) The notarized owner's agent letter is submitted with the application if necessary. 3) The application may not be signed by the ODA unit member responsible to issue the certificate.
☐	☐	☐	☐	6-2	Have limitations and conditions been obtained prior to issuing experimental airworthiness certificates?	-	1) There is evidence that the necessary limitations and conditions have been obtained from the MIDO prior to issuing experimental airworthiness certificates. 2) Operating limitations must be appropriate in accordance with Order 8130.2.
☐	☐	☐	☐	6-3	Have applicable airworthiness certificates been obtained for the purposes for which the aircraft is flown?	-	1) There is evidence that the proper airworthiness certificates have been obtained for the purposes for which the aircraft is flown.
☐	☐	☐	☐	6-4	Are AD incorporated?	39.9	1) There is evidence that applicable ADs have been complied with prior to operating the product.
☐	☐	☐	☐	6-5	Were all discrepancies satisfactorily dispositioned prior to issuance or reinstatement of the standard Airworthiness Certificate (for example, going from experimental to standard)	-	1) The aircraft conformed to the approved design and was in a condition for safe operation before the airworthiness certificate was issued. 2) After the test program, the test product was reworked to the approved design data prior to airworthiness certification.
☐	☐	☐	☐	6-6	If an export airworthiness approval has been issued, have the necessary documents and instructions been forwarded to the aviation authority of the importing country, or to other locations as specified in the special requirements of importing countries in AC 21-2?	-	1) There is evidence that all the documents and information necessary for proper operation of the product being exported have been forwarded to the cognizant aviation authority. 2) For unassembled aircraft, this includes manufacturing assembly instructions and an FAA-approved flight test check off form.
☐	☐	☐	☐	6-8	Are flight manuals, supplements, and current weight and balance data (if applicable) furnished with each aircraft before issuance of	-	1) Procedures provide for the furnishing of aircraft flight manuals, supplements, and current weight and balance data with each aircraft.

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					standard or restricted airworthiness certificate?		2) There is evidence of observance to established procedures.
☐	☐	☐	☐	6-9	Have FAA Form 8130-3, Authorized Release Certificates, been properly issued by authorized ODA unit members?		1) Procedures provide for the identification of ODA unit members authorized to issue FAA Form 8130-3, "Authorized Release Certificate". 2) Authorized Release Certificates were completed in accordance with FAA Order 8130.21. 3) There is evidence of observance to established procedures.

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SECTION 7 - FLIGHT-TESTING							
Satisfactory	Unsatisfactory	Not Applicable	Not Evaluated	Section Element	Element Description	Applicable 14CFR Section	Evaluation Criteria
☐	☐	☐	☐	7-1	In the case of aircraft, does the ODA holder have a flight safety program in accordance with FAA Order 4040.26?	-	1) Procedures provide for a flight safety program that includes, as a minimum: a) Risk assessment and mitigation. b) Monitoring of crew duty hours. c) Periodic review of accidents and incidents. d) Mandatory safety meetings. e) Safety review board meetings for medium and high risk tests. f) Identification of ODA unit members authorized to approve risk assessment. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	7-2	Was the aircraft or component in compliance or likely to comply prior to FAA flight testing?	-	1) The applicant conducted tests or otherwise showed compliance to the regulations prior to FAA flight tests. 2) FAA conformity inspections were completed and unsatisfactory conditions were properly dispositioned by the appropriate ODA unit member prior to FAA flight tests.
☐	☐	☐	☐	7-3	Was the Type Inspection Authorization, including revisions/supplements, complete and accurate?	-	1) All elements of the Type Inspection Authorizations (TIA) were found acceptable in accordance with the following: a) The required flight safety (risk) assessment was conducted in an acceptable manner and properly documented prior to conducting the flight tests b) the airworthiness certification of the flight test article was accomplished and appropriate for the TIA flight-testing. c) The TIA identified all required limitations and information, including any special operating limitations required for the flight test article. d) The TIA identified all FAA conformity inspections required to accomplish the flight tests. e) The TIA identified all FAA

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							ground and flight tests required to demonstrate compliance with the airworthiness standards. f) Flight Test Plans adhered to all FAA policy and procedures, and deviations were properly coordinated. g) The tests identified on the TIA are adequate to demonstrate compliance with the applicable airworthiness standards. h) The testing included Human Factors evaluation, if required. i) Verification that the flight test aircraft conforms to the type design prior to compliance testing. j) Verification of each flight test configuration for compliance testing including test equipment. k) Verification of product attributes applicable to the flight test. For example, weight and balance, flight control tensions and travels. l) Witnessing ground operational tests. m) Safety inspections. n) Verification that the product is safe for operation. o) Verification that other tests such as operational suitability are prescribed. p) Verification of coordination with AEG Operation section (FOEB, FSB, and Flight Testing). 2) Specific airworthiness standards applicable to the product involved are reviewed to insure a complete and effective inspection is accomplished.
☐	☐	☐	☐	7-4	Did the Supplemental Type Inspection Report document results of all required ground tests, inspections, and flight tests?	-	1) The Supplemental Type Inspection Report (STIR) documented that all Type Inspection Authorization (TIA) requirements were accomplished, analyzed and found to comply with the criteria, requirements, and regulations in accordance with the following: a) Part I to the TIR documented all FAA conformity requirements as specified in the TIA. b) Part I to the TIR included proper documentation and disposition of any unsatisfactory

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							conformity items. c) Part II to the TIR included all required administrative items, including certification basis, serial effectivity, flight test log, and documentation of any unusual items or non-compliance with the airworthiness standards. d) Part II of the TIR shows that each required flight test was accomplished satisfactorily in accordance with the TIA. e) Part II of the TIR shows that any tests accomplished contrary to the instructions and conditions authorized by the TIA are documented and found to comply with the appropriate airworthiness standards. f) Part II to the TIR documented results of each TIA flight test item, including any required analysis of test results and human factors evaluation (if required), and shows compliance to the appropriate airworthiness standards. g) The TIR (Parts I and II) were reviewed by appropriate inspection and technical ODA unit members prior to approval. h) The TIR was completed and approved within the required time. i) Other tests such as operational suitability were successfully completed and documented in the TIR. j) Deviations to the approved TIA and test plan were documented and approved prior to conducting the tests. k) The flight test results and any discrepancies and non-compliances were documented and approved. l) The TIR/STIR form includes references to the applicable airworthiness standards. 2) There is evidence of compliance with the FAA approved procedures manual. 3) The TIR/STIR report is completed accurately in accordance with the FAA approved procedures manual and is completed within the

							required time frame.

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SECTION 8 - CONTINUED AIRWORTHINESS							
Satisfactory	Unsatisfactory	Not Applicable	Not Evaluated	Section Element	Element Description	Applicable 14CFR Section	Evaluation Criteria
☐	☐	☐	☐	8-1	Does the ODA holder make available Instructions for Continued Airworthiness, including changes, to appropriate persons?	21.50	1) There is evidence that the Instructions for Continued Airworthiness, including changes, have been furnished or made available, as applicable, to the appropriate persons.
☐	☐	☐	☐	8-2	Are Instructions for Continued Airworthiness developed for all design approvals or changes, when appropriate?	-	1) Procedures provide for a method to: a) Ensure ICA are developed for all design approvals, or determine that revisions to the ICA are not necessary. b) Coordinate the ICA with the OMT and AEG. c) Ensure ICA's are in compliance with and FAA Order 8110.54r. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	8-3	Does the ODA holder specify new inspection criteria or repair limits, when applicable?	-	1) Procedures include development of inspection criteria or repairsble limits, for example, crack lengths, dent depth, and wear limits when applicable. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	8-4	Are there procedures for receiving feedback on service problems from users/installers of the product/part thereof?	-	1) Procedures provide for: a) Identification of an individual to receive reports of service difficulties. b) A system of tracking for accountability. c) Maintaining the data files in accordance with the regulations. d) Ensuring the information is complete. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	8-5	Are service problems investigated and prompt corrective actions taken, by the evaluated facility?	-	1) Procedures provide for: a) A method of investigating, identifying, locating and reporting suspected unsafe products. b) FAA notification of potential unsafe conditions. c) Prompt corrective action, which includes, as a minimum: • Root cause determination

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							and correction of deficient design or manufacturing. • A means of reporting, purging, tracking, and accountability of known unsafe products. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	8-6	When corrective action is required by ADs, is information on the design change made available to all owners and operators of the product?	21.99	1) There is evidence that all applicable descriptive data and information covering approved design changes made as a result of AD incorporation or improvements which contribute to the safety of the product have been made available to product users.
☐	☐	☐	☐	8-7	Is a record or file of reported service difficulties generated and maintained?	183.63	1) There is evidence that a record, or file as applicable, has been generated and maintained. 2) When procedures of preparing a record or file of service difficulties have been established, they should provide for, as a minimum: a) Dates of receipt, what was reported, and action taken. b) Record legibility, completeness, and accuracy. c) Requirements that tape files, microfilm, and so on, used for record retention exhibit legible data, acceptance stamps and/or signatures, as required.
☐	☐	☐	☐	8-8	Is there a means for keeping users of the product/part thereof informed of service information?	-	1) Procedures provide for informing product users of service-related information for suspected or known unsafe conditions, for example, service bulletins. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	8-9	Does the ODA holder evaluate the effect on continued airworthiness or service issues for the product based on results from follow-on life cycle testing?	-	1) Procedures provide for the evaluation of test results from follow-on life cycle testing for their effect on the continued airworthiness of the product. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	8-10	Do authorized personnel approve data for service bulletins and maintenance manuals?	-	1) Procedures define specific organizational and individual responsibilities for approving data in service bulletins and maintenance manuals. 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	8-11	Are service bulletins, maintenance manuals, and changes thereto, forwarded to the	-	1) Procedures provide for the submittal of service bulletin and maintenance manual issuances,

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					delegation oversight ACO?		and changes thereto, to the managing ACO 2) There is evidence of observance to established procedures.
☐	☐	☐	☐	8-12	Does the ODA holder investigate unairworthy conditions or unsafe features or characteristics reported by the FAA?	183.63	1) There is evidence that the evaluated facility has: a) Investigated reports of unairworthy conditions or unsafe features or characteristics reported by the FAA. b) Reported investigation results and the action, if any, taken

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SECTION 9 - PRODUCTION APPROVALS							
Satisfactory	Unsatisfactory	Not Applicable	Not Evaluated	Section Element	Element Description	Applicable 14CFR Section	Evaluation Criteria
☐	☐	☐	☐		NO REQUIREMENTS FOR STC		

SECTION 10 – OPERATIONS CERTIFICATION							
Satisfactory	Unsatisfactory	Not Applicable	Not Evaluated	Section Element	Element Description	Applicable 14CFR Section	Evaluation Criteria
☐	☐	☐	☐		NO REQUIREMENTS FOR STC		

ODA Form 103 – Service Difficulty Report

Instructions

SDR No. – The SDR number will be entered by the ODA administrator or assistant

Date – Enter date the SDR was prepared by the submitter

Submitter – Type or print name of person responsible for the SDR.

Customer Service / Repair Station / Quality Control – Self explanatory.

Specific Aircraft Affected

- Registration Number – Enter the aircraft registration number
- Manufacturer – Enter the name of the aircraft manufacturer
- Model/Series – Enter the model number (not model trade name) of the aircraft
- Serial Number – Enter the manufacturers serial number of the aircraft
- Time in Service – Enter the total time in service of the aircraft

Specific Part Causing Problem

- Manufacturer – Select either S-TEC or Other and identify the manufacturer
- Part Number – Enter the part number of the specific part
- Serial Number – Enter the serial number if part is identified with one
- Time in Service – Enter the total time in service of the specific part
- PMA / TSO – Select appropriate and if TSO include TSO number on part
- Part Condition – Provide brief description of part condition (ex. New, Used, Modified)

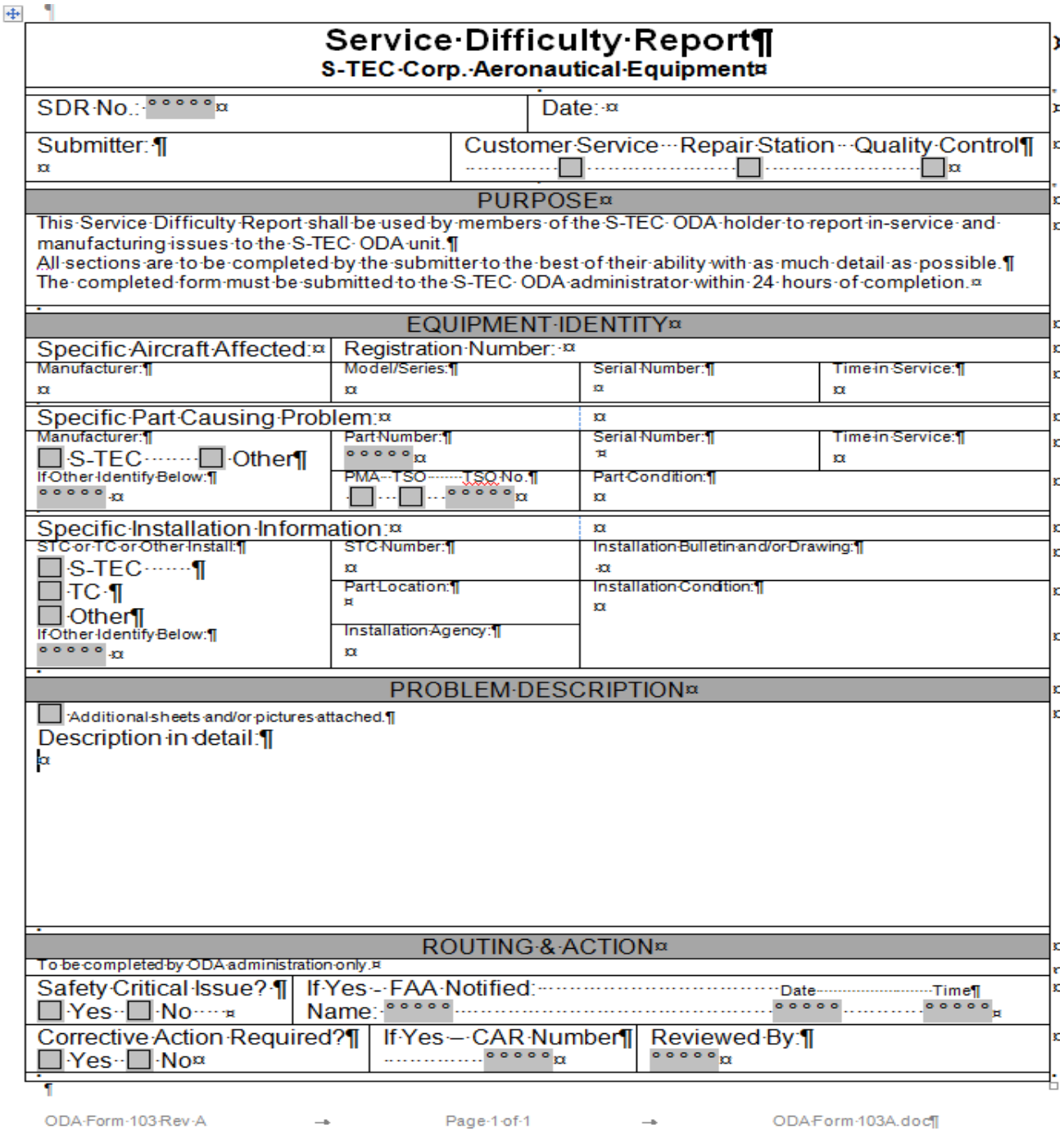
Specific Installation Information

- STC/TC/Other – Select the installation basis of the part, if Other list type (ex. Experimental, Field Approval, Foreign, etc.)
- STC Number – Enter the STC number if installed under STC
- Installation Bulletin and/or Drawing – List the data on which the part is listed
- Part Location – Enter the part location (ex. Roll, Pitch, Trim, Instrument panel, etc.)
- Installation Condition – Describe the installation workmanship, issues, etc.
- Installation Agency – List the entity or company that is responsible for the installation of the specific part

Problem Description – Describe in as much detail as necessary the problem and associated conditions. Include pictures if necessary to provide a clear definition of the problem.

Routing and Action – Self explanatory.

Form Example (Reduced size)



Service Difficulty Report
S-TEC Corp. Aeronautical Equipment

SDR No.: °°°°°

Date:

Submitter:

Customer Service ☐ Repair Station ☐ Quality Control ☐

PURPOSE

This Service Difficulty Report shall be used by members of the S-TEC ODA holder to report in-service and manufacturing issues to the S-TEC ODA unit.
All sections are to be completed by the submitter to the best of their ability with as much detail as possible.
The completed form must be submitted to the S-TEC ODA administrator within 24 hours of completion.

EQUIPMENT IDENTITY

Specific Aircraft Affected:

Registration Number:

Manufacturer:	Model/Series:	Serial Number:	Time in Service:

Specific Part Causing Problem:

Manufacturer:	Part Number:	Serial Number:	Time in Service:
☐ S-TEC ☐ Other If Other Identify Below: °°°°°	°°°°°		
	PMA ☐ TSO ☐ TSO No. °°°°°	Part Condition:	

Specific Installation Information:

STC or TC or Other Install:	STC Number:	Installation Bulletin and/or Drawing:
☐ S-TEC ☐ TC ☐ Other If Other Identify Below: °°°°°	Part Location:	Installation Condition:
	Installation Agency:	

PROBLEM DESCRIPTION

☐ Additional sheets and/or pictures attached.
Description in detail:

ROUTING & ACTION

To be completed by ODA administration only.

Safety Critical Issue?	If Yes – FAA Notified:	Date	Time
☐ Yes ☐ No	Name: °°°°°	°°°°°	°°°°°

Corrective Action Required?	If Yes — CAR Number	Reviewed By:
☐ Yes ☐ No	°°°°°	°°°°°

ODA Form 103 Rev A → Page 1 of 1 → ODA Form 103A.doc

ODA Form 104 – Document Review & Comment Tracking

Instructions

Instructions provided on the form body.

Form Example (Reduced size)

Document Review & Comment Tracking

Document No.:	ODA Project No.:
Revision Level:	Date:
Originator:	
Response Date:	

PURPOSE & INSTRUCTIONS

This form is to be used when an ODA document requiring review by the ODA unit members does not have or require a concurrence statement within the subject document.

This form provides for ODA document review and tracking review acknowledgements and comments of those individuals as listed below. The ODA administrator will determine the appropriate discipline unit members to be included in the review and will adjust the list accordingly.

The ODA unit members may opt out of the review and comment cycle for a document by dating and placing N/A in the Initials block. Comments are to either be made in red ink on the above listed and attached document or listed in the comments section below.

Any ODA unit member listed by name below must return this to the originator by the response date listed above regardless of their review status.

REVIEW ACKNOWLEDGEMENTS

Project Manager:	Date:	Initials:
ODA assistant administrator:	Date:	Initials:
Electrical Engineering ODA unit member:	Date:	Initials:
Mechanical Engineering ODA unit member:	Date:	Initials:
Structures Engineering ODA unit member:	Date:	Initials:
Flight Test Engineering ODA unit member:	Date:	Initials:
Inspection ODA unit member:	Date:	Initials:
ODA unit member:	Date:	Initials:
ODA unit member:	Date:	Initials:
:	Date:	Initials:
:	Date:	Initials:

ODA Form 104 Rev A Page 1 of 2 ODA Form 104-.doc

COMMENTS

ODA Form 105 - ODA Unit Member Statement of Qualification & Evaluation Panel Report

Instructions

Unit Member Name - Insert Unit Member Name

Unit Member Social Security No. - Insert Unit Member Social Security No.

Unit Member Address - Insert Unit Member Address

Unit Member Date of Birth - Insert Unit Member Date of Birth

Unit Member Telephone - Insert Unit Member Phone Number

Unit Member Citizenship - Insert Unit Member Citizenship

Unit Member Experience / Certifications / Education - Insert Unit Member Experience / Certifications / Education

Unit Member Designation - Insert Unit Member Designation

Recommendation - Insert Recommendation

Unit Member Evaluation Panel Information - Insert Unit Member Evaluation Panel Information

Form Example (Reduced size)

S-TEC
ODA

ODA Unit Member
Statement of Qualifications
&
Evaluation Panel Report

APPLICANT

Unit Member Name (Last, First, Middle)		Social Security No.
Address (Street, City, State, Zip)		Date of Birth
Phone Number	Email	US Citizen ☐ Yes ☐ No

EXPERIENCE / CERTIFICATIONS / EDUCATION

Employment — (Provide 5 years minimum employment history) (An attached Resume' containing the requested data is acceptable in lieu of completing this section.)

Dates Begin	Dates End	Employer	Position / Title / Duties

Certificates — (List all FAA and US Government certificates pertinent to the designation sought)

Type	Certificate No.	Rating	Issue Date

Education — (List all Education and Training pertinent to the designation sought) (An attached Resume' containing the requested data is acceptable in lieu of completing this section.)

Dates Begin	Dates End	Name of School	Curriculum or Study Program

Certification — I certify that the above statements are true to the best of my knowledge and that I am familiar with the Federal Aviation Regulations pertinent to the designation sought.

Date	Signature	

ODA Form 105 Rev A Page 1 of 3 ODA Form 105A.doc

S-TEC
ODA

QUALIFIERS

☐ FAA DER or DAR - Current/Previous/Candidate

-or-

☐ Demonstrated:

DER - 8 years of responsible engineering experience (substitution IAW FAA Order 8110.37 permitted)

DAR - 5 years of experience in inspection of and managing programs leading to issuance of airworthiness certificates (substitution IAW FAA Order 8110.37 permitted)

-and-

☐ Completed FAA DER/DAR Standardization Seminar

-and-

☐ Completed FAA DER/DAR General Standardized Criteria Test (FAA Order 8110.37 Appendix 1 or online FAA Certificate of Completion)

DESIGNATION

Note: Select only one - A separate form must be submitted for each discipline.

14CFR part 23	**14CFR part 25**
☐ Electrical Systems and Equipment	☐ Electrical Systems and Equipment
☐ Mechanical Systems and Equipment	☐ Mechanical Systems and Equipment
☐ Structural	☐ Structural
☐ Powerplant	☐ Powerplant
☐ Propeller	☐ Propeller
☐ Acoustical	☐ Acoustical
☐ Flight Test Pilot	☐ Flight Test Pilot
☐ Conformity Inspection	☐ Conformity Inspection
☐ Airworthiness Inspection	☐ Airworthiness Inspection
14CFR part 27	**14CFR part 29**
☐ Electrical Systems and Equipment	☐ Electrical Systems and Equipment
☐ Mechanical Systems and Equipment	☐ Mechanical Systems and Equipment
☐ Structural	☐ Structural
☐ Powerplant	☐ Powerplant
☐ Propeller	☐ Propeller
☐ Acoustical	☐ Acoustical
☐ Flight Test Pilot	☐ Flight Test Pilot
☐ Conformity Inspection	☐ Conformity Inspection
☐ Airworthiness Inspection	☐ Airworthiness Inspection

Special Notes/Exceptions/Limitations List Here:

Note: Specific function(s) for which appointment will be authorized is identified on attached designation chart.

S-TEC
ODA

RECOMMENDATION		
I recommend the person identified above be appointed designation listed.		
Unit Member Name	Unit Member Discipline	Mentor to Candidate ☐ Yes ☐ No
Signature		Unit Member Number

EVALUATION PANEL		
Date of Evaluation Panel Review	Location of Evaluation Panel Review	
On the date listed the ODA Administrator and evaluating Unit Members listed below conducted a technical knowledge, regulatory knowledge, and ethical character evaluation of the candidate Unit Member. It has been determined by all of the evaluating Unit Members that the candidate Unit Member meets the requirements as defined in the ODA Procedures Manual to participate as a designated Unit Member of the ODA with the authorizations and limitations defined on the attached designation chart.		
Acknowledgements		
Evaluating Unit Member Name	Signature	ODA Member ID
Evaluating Unit Member Name	Signature	ODA Member ID
Evaluating Unit Member Name	Signature	ODA Member ID
ODA Administrator Name	Signature	ODA Member ID
Comments		

ODA Form 106 – ODA Inspection Unit Member Performance Evaluation

Instructions

Self explanatory.

Form Example (Reduced size)

ODA Inspection Unit Member Performance Evaluation

ODA Unit Member No.	ODA Unit Member Name:
Evaluation Period: From	To
Date of Evaluation:	Evaluator Name:

Type of Evaluation:
- ☐ Routine Scheduled Annual
- ☐ Unscheduled prior to FAA Evaluation
- ☐ Other - Reason:

PURPOSE

Conduct an evaluation of the unit member and rate performance in each of the following categories. For any rating other than Satisfactory, the evaluator is required to document in the "REMARKS" section how the concern has been or will be resolved.

Corrective action items will be listed below to allow for generation of ODA Corrective Action Request.

RECORDS EVALUATION

Criteria Item	Satisfactory	Need Imprvmt	Unsatisfactory	Not Observed	Evaluation Criteria
1.	☐	☐	☐	☐	Activity level in ODA unit
2.	☐	☐	☐	☐	Communicates clearly and regularly with ODA unit
3.	☐	☐	☐	☐	Application of Regulations, Policy, and Guidance
4.	☐	☐	☐	☐	Adherence to the ODA Procedures Manual
5.	☐	☐	☐	☐	Adherence to ODA unit member requirements
6.	☐	☐	☐	☐	Shows integrity, sound judgment, cooperative attitude
7.	☐	☐	☐	☐	Shows technical competence in area of appointment
8.	☐	☐	☐	☐	Attendance at required training
9.	☐	☐	☐	☐	Quality of submittals
10.	☐	☐	☐	☐	Timeliness of submittals
11.	☐	☐	☐	☐	Meets annual renewal requirements

REMARKS

☐ Additional sheets of remarks are attached

RESULTS

☐ Acceptable – No action required ☐ Acceptable with Corrective Actions or Changes as noted in Remarks ☐ Suspend	Evaluator Signature:

ODA Form 106 Rev A Page 1 of 1 ODA Form 106-.doc

ODA Form 107 - ODA unit member Training Certificate

Instructions

Attendees Name - Enter the Attendees full legal name.

Training Course Name - Enter the name of the course attended.

Training Location - Enter the location the course was held.

Date - Enter the date the course was held, if a multiple day course include all dates the course was conducted.

ODA administrator - ODA administrator is to sign with full legal name and include the ODA designation number below the line.

Form Example (Reduced size)

S-TEC
ODA

Certificate of Completion

Attendees Name
has successfully completed the

Enter Training Course Name

held at Enter Training Location
on Enter Date

_____
ODA administrator

This certificate provides evidence of required training attendance. This training is in accordance with the training requirements of the S-TEC ODA Procedures Manual.

ODA Form 107 Rev- ODA Form 107-.doc

ODA Form 108 - ODA Corrective Action Request/Plan/Response

Instructions

Section 1 – Management.

CAR Number – Self explanatory.

Issue Date – Self explanatory.

Issued By – Check appropriate box.

Assigned To – Name of person responsible for responding to the CAR.

Closed By – Check appropriate box.

Closed Date – Self explanatory.

STC Affected – Check appropriate box (if yes, enter STC number).

ODA Unit Member Affected – Check appropriate box (if yes, enter unit member number).

Voluntary Disclosure – Check appropriate box (if yes, enter voluntary disclosure number).

Immediate Action Required – Check appropriate box.

Immediate Action Requirement – Enter explanation.

Section II - Request

Date or Request – Self explanatory.

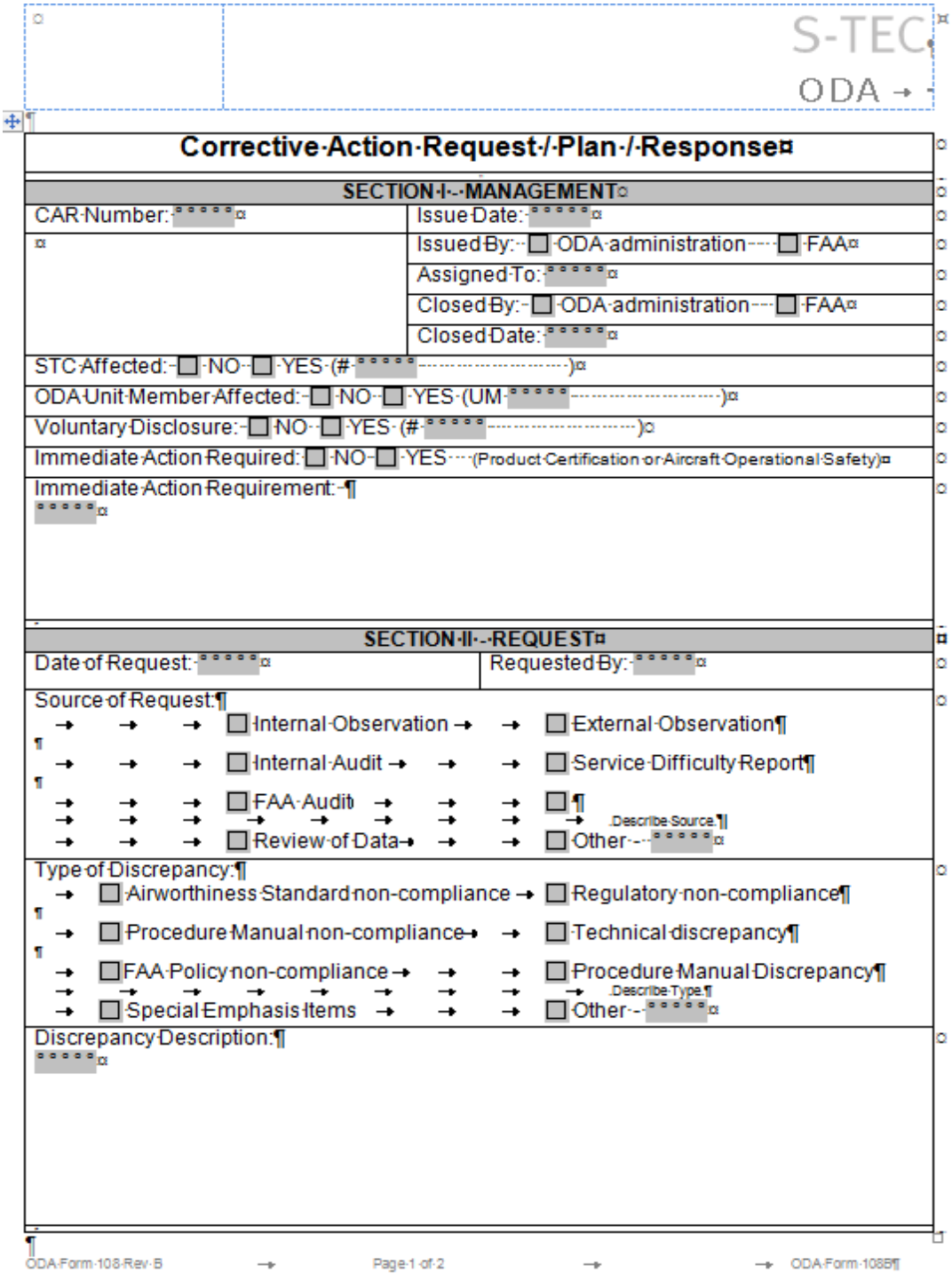
Requested By – Enter name.

Source of Request – Check appropriate box (if other give a brief description).

Type of Discrepancy – Check appropriate box (if other give a brief description).

Discrepancy Description – Enter explanation.

Form Example (Reduced size)



Corrective Action Request / Plan / Response

SECTION I -- MANAGEMENT

CAR Number: *****

Issue Date: *****

Issued By: ☐ ODA administration ☐ FAA

Assigned To: *****

Closed By: ☐ ODA administration ☐ FAA

Closed Date: *****

STC Affected: ☐ NO ☐ YES (# *****)

ODA Unit Member Affected: ☐ NO ☐ YES (UM *****)

Voluntary Disclosure: ☐ NO ☐ YES (# *****)

Immediate Action Required: ☐ NO ☐ YES (Product Certification or Aircraft Operational Safety)

Immediate Action Requirement:

*****

SECTION II -- REQUEST

Date of Request: *****

Requested By: *****

Source of Request:

☐ Internal Observation ☐ External Observation

☐ Internal Audit ☐ Service Difficulty Report

☐ FAA Audit ☐

Describe Source

☐ Review of Data ☐ Other -- *****

Type of Discrepancy:

☐ Airworthiness Standard non-compliance ☐ Regulatory non-compliance

☐ Procedure Manual non-compliance ☐ Technical discrepancy

☐ FAA Policy non-compliance ☐ Procedure Manual Discrepancy

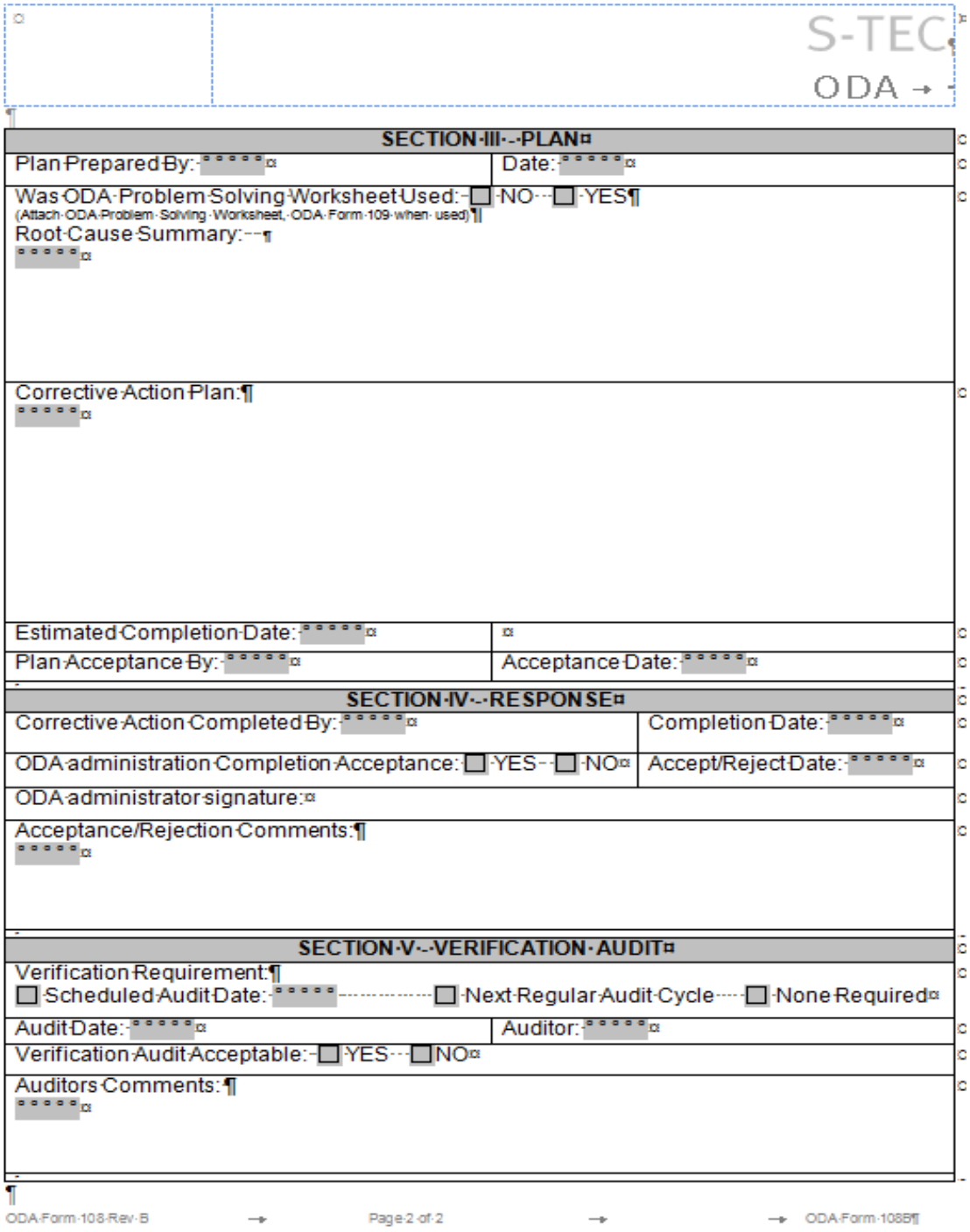
Describe Type

☐ Special Emphasis Items ☐ Other -- *****

Discrepancy Description:

*****

ODA Form 108 Rev B Page 1 of 2 ODA Form 108B



SECTION III – PLAN	
Plan Prepared By:	Date:
Was ODA Problem Solving Worksheet Used: ☐ NO ☐ YES (Attach ODA Problem Solving Worksheet, ODA Form 109 when used) Root Cause Summary:	
Corrective Action Plan:	
Estimated Completion Date:	
Plan Acceptance By:	Acceptance Date:

SECTION IV – RESPONSE	
Corrective Action Completed By:	Completion Date:
ODA administration Completion Acceptance: ☐ YES ☐ NO	Accept/Reject Date:
ODA administrator signature:	
Acceptance/Rejection Comments:	

SECTION V – VERIFICATION AUDIT	
Verification Requirement: ☐ Scheduled Audit Date: ☐ Next Regular Audit Cycle ☐ None Required	
Audit Date:	Auditor:
Verification Audit Acceptable: ☐ YES ☐ NO	
Auditors Comments:	

ODA Form 108 Rev B → Page 2 of 2 → → ODA Form 108B

ODA Form 109 - ODA Problem Solving Worksheet

Instructions

Tracking Number - The number will be determined as provided by in the document number explanation at the beginning of this section.

Initiator - Name of the person conducting the process utilizing this form.

Occurrence Date - Self explanatory

Suspense Date - Date by which this process requires completion.

Action Date - Date by which corrective or administrative action will occur.

Emergency Response Action Required - Self explanatory

The form contains self explanatory instructions to follow which provides for completion of the analysis process offered by use of the form.

Form Example (Reduced size)

ODA Problem Solving Worksheet

Tracking Number:	Initiator:	
Occurrence Date:	Suspense Date:	Action Date:
Emergency Response Action Required: ☐ Yes ☐ No		

PURPOSE

This problem solving worksheet form is a vehicle for the ODA team to articulate thoughts and provides scientific determination to details of problems and provides solutions. The worksheet allows the "team" to get to the root cause of a problem, develop a corrective action plan, check that the solution actually works, and then a preventive action plan is developed. The "problem" is addressed and cured, not just the symptom.

PROCESS

Step	0	1	2	3	4	5	6	7	8
Action	Planning Stage	Establish Team	Problem Definition	Interim Containment Action	Identify & Verify Root Cause	Identify Permanent Corrective Action	Implement & Validate Corrective Action	Prevent Recurrence	Recognize Team Effort
	☐	☐	☐	☐	☐	☐	☐	☐	☐

0 PLANNING

This method of problem solving is appropriate in "cause unknown" situations and is not the right tool if concerns center solely on decision-making or problem prevention.

Does this problem warrant/require a team evaluation? ☐ Yes ☐ No

Comments:

1 EVALUATION TEAM

Name	Department	Knowledgebase	Responsibility

Team Goals:

Team Objectives:

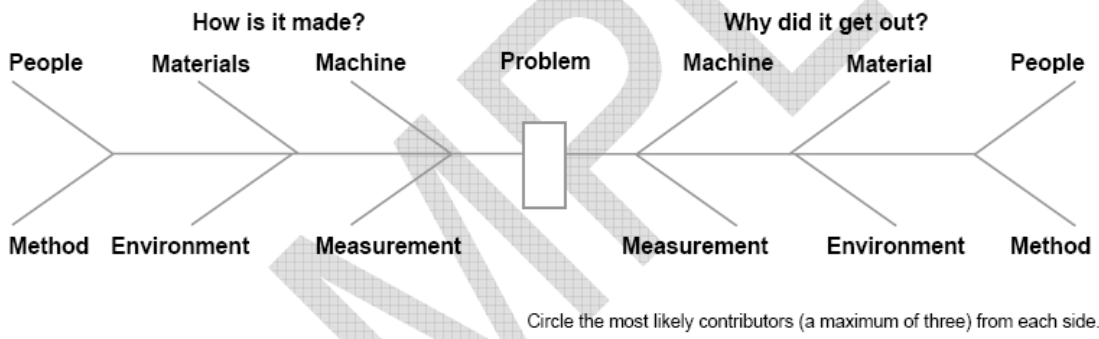
	PROBLEM DEFINITION	
	This step provides the starting point for solving the problem or non-conformance issue. There needs to be a "correct" problem description to identify causes. Use terms that are understood by all.	
2	☐ Problem pertains to parts, assemblies, or installations - Go to step 2A ☐ Problem pertains to processes or procedures - Go to step 2B ☐ Problem pertains to personnel - Go to step 2C	
2A	Part Number, Assembly Number, or Installation Drawing Number:	
	STC Number:	S-TEC Kit Number:
	Aircraft Make, Model, Serial No. (If applicable)	
	Other pertinent information associated with the problem:	
	☐ Sketches or photos of issue are attached.	
	Continue to Section 2D	
2B	Process or Procedure Number or Description:	
	STC Number:	S-TEC Kit Number:
	Aircraft Make, Model, Serial No. (If applicable)	
	Other pertinent information associated with the problem:	
	☐ Sketches or photos of issue are attached.	
	Continue to Section 2D	
2C	Name of person:	
	Department:	ID Number:
	Affected person, project, or product: (If applicable)	
	Other pertinent information associated with the problem:	
	Continue to Section 2D	

2D

Problem Description:

	IS	IS NOT
Who	Who is affected by the problem? Who first observed the problem? To whom was the problem reported?	Who is not affected by the problem? Who did not find the problem?
What	What type of problem is it? What has the problem (part id, lot #s, etc)? What is happening with the process & with containment? Do we have physical evidence of the problem?	What does not have the problem? What could be happening but is not? What could be the problem but is not?
Why	Why is this a problem (degraded performance)? Is the process stable?	Why is it not a problem?
Where	Where was the problem observed? Where does the problem occur?	Where could the problem be located but is not? Where else could the problem be located but is not?
When	When was the problem first noticed? When has it been noticed since?	When could the problem have been noticed but was not?
How Much/ Many	Quantity of problem (ppm)? How much is the problem costing in dollars, people, & time?	How many could have the problem but don't? How big could the problem be but is not?
How Often	What is the trend (continuous, random, cyclic)? Has the problem occurred previously?	What could the trend be but is not?

3	**INTERIM CONTAINMENT ACTION**	
	List temporary actions to contain the problem and "fix" until permanent correction is in place. Document actions in the Action Item Table.	
	Action items:	
4	**IDENTIFY & VERIFY ROOT CAUSE**	
	Analyze for the "Root Cause" of the Problem. Identify and verify the Escape Point.	
4A	Possible causes of the problem:	
	1) 2) 3) 4)	5) 6) 7) 8)
4B	Cause and Effect Diagram	



Circle the most likely contributors (a maximum of three) from each side.

4C	Ask – Why did this happen? Ask – Why did this happen? Ask – Why did this happen? Ask – Why did this happen? Ask – Why did this happen?
4D	Action Plan:

5	**IDENTIFY PERMANENT CORRECTIVE ACTION** Select solutions determined to be the best of all the alternatives. Document and verify the Permanent Corrective Action (PCA) in the Action Item Table. List solutions that address and correct the root cause:
6	**IMPLEMENT AND VALIDATE THE PERMANENT CORRECTIVE ACTION** Implement and validate to ensure that corrective action does "what it is supposed to do." Detect any undesirable side effects. Document this on the Action Item Table. Return to root cause analysis, if necessary.
7	**PREVENT RECURRENCE** Determine what improvements in systems and processes would prevent problem from recurring. Ensure that corrective action remains in place and successful.
7A	Identify other similar problem opportunities, situations, or issues: 1) 2) 3) 4) 5)
7B	Identify documents, data, and processes that may be affected:

Document/Data/Process	Responsibility / Who / Department	Completion Date

8	**RECOGNIZE TEAM EFFORT** **Congratulate your team - Celebrate successful conclusion of the problem solving effort.**

RESULTS OF PROBLEM SOLVING EFFORT - WAS IT EFFECTIVE

Y / N	Respondent Name	Comments

ACTION ITEM TABLE		
Corrective Action Request Number	Identified Problem	Containment / Corrective Action Summary

ODA FORM (110), UM INTERACTION TRACKING

UM/ODA/FAA INTERACTION TRACKING FORM

NAME:_____ UM #_____
(PRINT: Prefix, Last Name, First Name, Middle Name, Suffix)
TEL. #:_____ FAX #:_____
DESIGNATION(s):_____
(Structures, Systems, Propulsion, Adm., etc.)
ACTIVITY: FROM_____ TO _____
ODA ADMINISTRATOR Name:_____
(PRINT)
ODA #:_____
UM SIGNATURE:
_____DATE:_____

PROVIDE A **BRIEF** SUMMARY OF YOUR ACTIVITIES, WHICH REQUIRED INTERACTION WITH ODA/ODA PERSONNEL IN THE FOLLOWING KEY AREAS. INCLUDE PROJECT DESCRIPTIONS, PRODUCT MODELS (AIRCRAFT, ENGINES, PROPELLER, EQUIPMENT, ETC.) AND/OR ODA/ODA PROJECT NUMBERS, YOUR SPECIFIC CONTRIBUTIONS TO EACH APPLICABLE INTERACTION, AND YOUR PRIMARY INDIVIDUAL ODA ENGINEERING CONTACTS.

1. DEVELOPMENT OF CERTIFICATION PLANS/COMPLIANCE CHECKLISTS:

2. IDENTIFICATION AND RESOLUTION OF SIGNIFICANT TECHNICAL ISSUES (ISSUE PAPERS, EQUIVALENT SAFETY: *(FINDINGS, SPECIAL CONDITIONS, EXEMPTIONS, ETC.)*

3. REVIEW AND APPROVAL OF COMPLIANCE DATA:

4. INVOLVEMENT IN PROJECT MANAGEMENT/ADMINISTRATION:

5. REVIEW AND APPROVAL OF REPAIR/ALTERATION DATA INCLUDING PROCESS SPECIFICATIONS:
(ACTIVITIES IN SUPPORT OF ODA FORM 337, REPAIR STATIONS, ETC.)

6. INVESTIGATION AND RESOLUTION OF SIGNIFICANT SERVICE DIFFICULTIES:

7. PARTICIPATION IN TECHNICAL EXCHANGES: *(MEETINGS AND TELECONS ON GENERAL TECHNICAL SUBJECTS)*

8. PARTICIPATION IN ODA TRAINING/SEMINARS:

FOR ODA USE ONLY

☐ ALL REQUIRED UM EVALUATION FORMS COMPLETED ☐ UM DELEGATION RENEWED

ODA ADMINISTRATOR SIGNATURE: _____ DATE: _____

ODA Form 110

SUBMITTAL OF THIS FORM IS MANDATORY FOR UM DELEGATION

ODA Form 110 Instructions

PERFORMANCE ELEMENT DEFINITIONS

1. DEVELOPMENT OF CERTIFICATION PLANS/COMPLIANCE CHECKLISTS:
Indicate projects where you have identified applicable regulations and methods of compliance for a design or design change. Indicate programs that required you to provide program schedules, which identified critical milestones leading to ODA certification. List ODA/FAA personnel, i.e., engineers, flight test pilots, inspectors, and other ODA/FAA designees where communications took place in the course of this activity. Note: Detail project information is not required.

2. IDENTIFICATION AND RESOLUTION OF SIGNIFICANT TECHNICAL ISSUES:
For the certification projects in which you have participated, describe your work with the ODA in identifying certification related areas of new technology, areas where compliance methodology may have been new or controversial, or areas where existing regulations or policy were inadequate. Identify Issue Papers that resulted from your efforts and your contribution to the resolution of those issues.

3. REVIEW AND APPROVAL OF COMPLIANCE DATA:
Describe, in detail, your activities in reviewing and approving (or recommending for approval) compliance data. Compliance data consists of both type design data and type certification data. Type design data includes drawings, specifications, and other data which defines the product. Type certification data includes test plans, test reports, analyses, or other data used to demonstrate compliance with the applicable FARs. Note: Do not describe design details that may be considered proprietary by the applicant.

4. INVOLVEMENT IN PROJECT MANAGEMENT/ADMINISTRATION:
Describe your project management/administration activities. Describe how you insured effective coordination between the applicant and the ODA, and how you facilitated certification program activities (e.g., the submittal of compliance data, and the scheduling of conformities, testing, compliance inspections, etc.).

5. REVIEW AND APPROVAL OF REPAIR/ALTERATION DATA INCLUDING PROCESS SPECIFICATIONS:
Indicate your coordination activities with the ODA in approving repair or alteration data, especially on critical or life-limited parts. Describe when the coordination occurred, how the appropriate regulations were identified to the ODA, and the nature of supporting substantiating data.

6. INVESTIGATION AND RESOLUTION OF SIGNIFICANT SERVICE DIFFICULTIES:
Describe your UM role in identifying and/or resolving specific significant service difficulties. Be sure to identify key ODA contacts and any service information that resulted from your efforts.

7. PARTICIPATION IN TECHNICAL EXCHANGES:
Please describe important UM/ODA technical exchanges in which you have participated, such as general technical meetings with ODA specialists or management, and discussions with ODA specialists concerning technical issues related to your delegation. Note: Do not describe design details that may be considered proprietary by the applicant.

8. PARTICIPATION IN ODA TRAINING AND/OR SEMINARS:
Describe the ODA sponsored technical conferences, seminars, workshops, and presentations you have attended within this appointment period relating to your UM authorization.

Form Example (Reduced Size)

ODA·Form·(111),·UM·Performance·Evaluation¶

¶

UM·PERFORMANCE·EVALUATION·FORM¶

¶
NAME:_____·UM·#:_____
(PRINT:··Prefix,·Last·Name,·First·Name,·Middle·Name,·Suffix)¶
TEL.·#:_____·FAX·#:_____
DESIGNATION(s):_____
→ (Structures,·Systems,·Propulsion,·Adm.,·etc.)¶
☐·Yes → ·☐·No·····EXECUTIVE·LEVEL·UM'S·ONLY:··Has·the·UM's·title/position·adversely·affected·the·ability·to·perform·delegated·functions·objectively·and·independently?·(Written·summary·attached)¶
EVALUATION:··FROM·_____·TO·_____
ODA·EVALUATOR·
Name:_____¶
(PRINT)¶
ODA#_____¤

¶

For·the·above-named·UM,·rate·performance·in·each·of·the·following·categories·by·placing·an·"X"·under·column·**SAT**·for·Satisfactory,·column·**NEEDS-IMPR**·for·Needs·Improvement,·column·**UNSAT**·for·Unsatisfactory,·or·column·**N/OB**·for·Not·Observed.··For·any·rating·other·than·Satisfactory,·the·ODA·evaluator·is·required·to·contact·the·UM·directly,·and·to·document·in·the·"REMARKS"·section·how·the·concern·has·been·or·will·be·resolved.··Resolution·action·may·range·from·a·recommendation·for·non-renewal·to·an·indication·that·the·UM·has·agreed·to·work·closely·with·the·ODA·during·the·next·evaluation·period·to·resolve·the·concern.··Indicate·your·recommendation·for·renewal·at·the·bottom·of·the·form·above·your·signature.¶

¤	¶ SAT¤	NEEDS¶ IMPR¤	¶ UNSAT¤	¶ N/OB¤
1.···ACTIVITY·LEVEL¤	☐¤	☐¤	☐¤	☐¤
2.···DIRECT·ODA·CONTACT¤	☐¤	☐¤	☐¤	☐¤
3.···UM/ODA·INTERACTION·TRACKING·FORM¤	☐¤	☐¤	☐¤	☐¤
4.···APPLICATION·OF·REGULATIONS,·POLICY,·AND·GUIDANCE¤	☐¤	☐¤	☐¤	☐¤
5.···ADHERENCE·TO·UM·PROCEDURES¤	☐¤	☐¤	☐¤	☐¤
6.···SHOWS·INTEGRITY,·SOUND·JUDGMENT,·COOPERATIVE·ATTITUDE¤	☐¤	☐¤	☐¤	☐¤
7.···SHOWS·TECHNICAL·COMPETENCE·IN·AREA·OF·APPOINTMENT¤	☐¤	☐¤	☐¤	☐¤
8.···ATTENDANCE·AT·REQUIRED·TRAINING¤	☐¤	☐¤	☐¤	☐¤
9.···ABILITY·TO·COMMUNICATE·CLEARLY¤	☐¤	☐¤	☐¤	☐¤
10.··QUALITY·OF·SUBMITTALS¤	☐¤	☐¤	☐¤	☐¤
11.··TIMELY·IDENTIFICATION·OF·SIGNIFICANT·ISSUES¤	☐¤	☐¤	☐¤	☐¤
12.··TIMELY·SUBMITTAL·OF·DATA¤	☐¤	☐¤	☐¤	☐¤

REMARKS:··(Explain·all·**Needs·Impr**,·Unsat,·N/Ob·evaluations·and·provide·resolution;·Attach·additional·pages·as·required)¶

¶

¶

Recommend·Renewal?·→·····☐·Yes·····☐·No·→·····☐·Change·authorization·as·noted·in·Remarks¶
Evaluator·Signature:_____·Date:_____¶
UM·Signature:_____··Date:_____¶
→ → → ·····(if·required)¶

ODA·Form·111_B¶

¶

COMPLETION·OF·THIS·FORM·IS·MANDATORY·FOR·UM·CONTINUED·DELEGATION·¶

ODA Form 111 Instructions

PERFORMANCE ELEMENT DEFINITIONS

1. ACTIVITY LEVEL: The UM is actively utilizing the delegated authority. Typical indication would be the submittal of completed ODA Form 8100-9 in the delegated area. If 8100-9s are not submitted, the UM may be actively assisting the ODA in other ways such as witnessing testing or identifying and resolving certification issues, although the authority itself is not utilized.

2. DIRECT ODA CONTACT: In the delegated area, the UM has direct contact with the ODA on technical and project issues. The UM keeps the ODA informed of activities. Indicators would be office visits, phone calls, attendance at project meetings, or attendance at Designee Conferences.

3. UM/ODA INTERACTION TRACKING FORM: The UM submitted the required key interaction form. Indicator would be a complete, accurate, and timely interaction form.

4. APPLICATION OF REGULATIONS, POLICY , AND GUIDANCE: The UM properly applied airworthiness requirements and technical or administrative policy and guidance. Indicators may include a showing of understanding and proper application of regulations etc. during the course of certification projects, including meetings with the ODA, and appropriate compliance findings.

5. ADHERENCE TO DER PROCEDURES: The UM followed the DER handbook and other national or local directives in performing UM functions. Indicators would be submittal of properly completed 8100-9s, coordinating with ODA on unique and novel design features, receiving permission to witness or conduct tests, verification of conformity prior to witnessing tests, properly utilizing authority, etc. UM procedures require coordination with ODA Engineering on unique or novel designs, generation of Certification Plans, appropriate and timely requests for conformity, generation of tests plans, verification of satisfactory conformity findings prior to witnessing certification tests when delegated by the ODA and approval of compliance data in a timely and correct sequential manner. The UM should have a good understanding of when the UM may "Approve" vs. "Recommend Approval" for a compliance submittal (8100-9) and a clear understanding of the discrete areas of delegation that the UM may address.

6. SHOWS INTEGRITY, SOUND JUDGMENT AND COOPERATIVE ATTITUDE: The UM was honest, complete, and forthcoming with information in all dealings with the ODA. The UM exercised sound judgment in making technical and project decisions. Conduct was professional, and the UM fully cooperated with the ODA in resolving technical and program issues. Indicators may be direct experience with the UM, including participation in certification meetings, where the UM is forthcoming and cooperatively seeks resolution of issues.

7. SHOWS TECHNICAL COMPETENCE IN AREA OF APPOINTMENT: The UM's technical work and interaction with the ODA, particularly on complex technical issues, shows the UM's competence in the delegated area. Indicators of competence would include properly developed test plans,

appropriate compliance findings, and technically accurate and complete substantiation and test reports.

8. ATTENDANCE AT REQUIRED TRAINING: The UM attended any training required by the Agency, including that which may be required by the administering ACOB. Indicator would be attendance at required training, seminars, conferences, etc.

9. ABILITY TO COMMUNICATE CLEARLY: The UM communicated effectively, both orally and in writing, such that technical and administrative issues are clearly understood. Indicators would be effective oral communications during certification meetings, telephone conversations, and other direct contacts with ODA employees. Written reports, substantiation, and communications are complete and well organized.

10. QUALITY OF SUBMITTALS: The UM's data submittals are complete, logically arranged, legible, accurate, and clearly establish compliance with the applicable airworthiness requirements such that review by the ODA may be minimal. Indicators would be test plans, test reports, substantiation, drawings, etc. that meet the listed criteria.

11. TIMELY IDENTIFICATION OF SIGNIFICANT ISSUES: As early as practical in the program, the UM identified to the ODA areas of new technology, unusual design features, or those areas requiring special guidance or direct ODA involvement. Indicators would include timely informal contacts to alert the ODA to areas of concern and participation in certification meetings to identify significant technical issues for Issue Papers.

12. TIMELY SUBMITTAL OF DATA: UM submittal of compliance data was in a time frame consistent with program schedule and required ODA review. UM consistently avoids last minute "data dumps," thus allowing adequate time for ODA actions prior to critical program milestones.

ODA Form 112 – Instructions for Continued Airworthiness Change Impact Assessment

Instructions

1. Project Number – Self Explanatory

2. Aircraft type – Self Explanatory

3. STC Number – Self Explanatory

4. Completed by – Enter name.

5. Date – Self Explanatory

6. Change Determination – Enter explanation.

7. DOC # - The number will be determined as provided by in the document number explanation at the beginning of this section.

8. Page # - Self Explanatory

9. Requirements – Self Explanatory

Form Example (Reduced size)

STEC-ODA¶
10-27-2022 → → INSTRUCTIONS-FOR-CONTINUED-AIRWORTHINESS-CHANGE-IMPACT-ASSESSMENT¶
→ → → → → (REFERENCE-8110.54())¶

¶

This document serves as instructions for continued airworthiness (ICA) **"change impact assessment".** Completion of this assessment will determine requirement for use of existing, and or need for revised, changed, or new ICA when an S-TEC ODA STC is revised or amended for a minor or major change. Each item in the table below (and appendix G part 23 or appendix A part 27 paragraphs as noted) will be compared to existing or proposed changed ICA, and the aircraft design change to insure continued ICA applicability, validity.¶

¶

Project Number: (or N/A)	**Completed by:**
Aircraft Type:	**Date:**
STC Number:	

¶

¶

REFERENCE FAA ORDER 8110.54()¶

¶

New or Changed STC. *ICA for an STC or changed STC (amended STC) should cover only the items changed or affected by the design change for which application is made. This includes other systems, parts, or areas of the aircraft. For example, if an STC describes how to install a global positioning system (GPS), it will not affect — and doesn't need to address — ICA for the aircraft engine.*¶

(1) However, the submitted ICA must include all applicable items from the regulations for the installation. Also, the ICA must include any appropriate information about the GPS antenna and its installation. If the GPS is critical to operations, requirements for periodic performance checks must also be in the ICA. We consider ICA that cover only the affected design change as complete under 14 CFR § 21.50(b) for STCs.¶

(2) If the change does not affect or change the existing ICA or maintenance documentation, the applicant can submit an impact assessment of the need for ICA to the ACOB. The assessment must show that the STC project does not change any information, procedures, process, requirements, or limitations in the current ICA or maintenance documentation. Therefore, the original design approval holder's ICA still applies. After completing the assessment, the applicant must submit either recommended changes or a statement that the existing ICA applies to the ACOB.¶

¶

Changes to ICA. *Title 14 CFR § 21.50(b) requires that the DAH make changes to the ICA available to any person required to comply with them. The DAH provides changes following a program they wrote and the ACOB and responsible AEG accepted. Or they can follow previously established procedures acceptable to the FAA. Design approval holders should format the changes to supplement the original ICA. To prevent confusion, they should clearly say what's being changed.*¶

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Change Determination ____Minor_____¶
Date _____¶

¶

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ODA Administrator Acceptance _____¶
Date _____¶

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¶ Section Break (Next Page)

DOC #: _____ → → → → → → ODA-Form-112_B¶
Page #: _____¶

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Appendix·A.··Part·23·Airplane·ICA·Checklist¶

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REQUIREMENT¤	Regulation· Appendix¤	Location· In·ICA¤
(→)·ICA·for·each·aircraft·engine.¤	G23.1(b)¤	¤
(→)·ICA·for·each·propeller.¤	G23.1(b)¤	¤
(→)·ICA·for·each·appliance·required·by·this·chapter.¤	G23.1(b)¤	¤
(→)·Required·information·on·the·interface·of·(→)·appliances,· (→)·aircraft·engines,·and·(→)·propellers·with·the·aircraft.¤	G23.1(b)¤	¤
(→)·If· ICA·are·not·supplied·by·the·manufacturer·of·an¶ (→)·appliance,·(→)·aircraft·engine,·or·(→)·propeller·installed·on·the· aircraft,·the·ICA·for·the·aircraft·must·include¶ (→)·the·information·essential·to·the·continued·airworthiness·of·the· aircraft.¤	G23.1(b)¤	¤
(→)·Applicant's·program·showing·how·they·or·the·manufacturers·of· products·and·appliances·installed·on·the·airplane·will·distribute·changes· to·the·ICA.¤	G23.1(c)¤	¤
(→)·ICA·in·a·manual·or·manuals.¶ (→)·Manuals·arranged·for·easy·and·practical·use.¤	G23.2(a)· G23.2(b)¤	¤
(→)·Manuals·prepared·in·English.¤	G23.3¤	¤
(·····)·Manuals·must·include·introductory·information·explaining·the· airplane's·features·and·data·necessary·for·maintenance·or·preventive· maintenance.¤	G23.3(a)(1)¤	¤
(→)·Description·of·the·(→)·aircraft·and·its·systems·and·installations,¶ (→)·aircraft·engines·and·its·systems·and·installations,·(→)·propellers· and·its·systems·and·installations,·and·(→)·appliances·and·its·systems· and·installations.¤	G23.3(a)(2)¤	¤
(→)·Basic·control·and·operating·information·describing·(→)·how·the· aircraft·components·and·systems·are·controlled·and·(→)·how·the· aircraft·components·and·systems·are·operated,·including¶ (→)·any·special·procedure·and·limitations.¤	G23.3(a)(3)¤	¤

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REQUIREMENT¤	Regulation· Appendix¤	Location· In·ICA¤
(→)·Servicing·information·covering·(→)·servicing·points,·(→)· capacities·of·tanks,·(→)·capacities·of·reservoirs,·(→)·types·of·fluids· used,·and·(→)·pressures·applicable·to·the·various·systems.¤	G23.3(a)(4)¤	¤
(→)·Location·of·access·panels·for·(→)·inspection·and¶ (→)·servicing.¤	G23.3(a)(4)¤	¤
(→)·Servicing·information·covering·(→)·locations·of·lube·points·and¶ (→)·lube·used.¤	G23.3(a)(4)¤	¤
(→)·Equipment·required·for·servicing.¤	G23.3(a)(4)¤	¤ ¤
(→)·Tow·instructions·and·limitations.¤	G23.3(a)(4)¤	¤ ¤
(→)·Mooring·information.¤	G23.3(a)(4)¤	¤ ¤
(→)·Jacking·information.¤	G23.3(a)(4)¤	¤ ¤
(→)·Leveling·information.¤	G23.3(a)(4)¤	¤ ¤
(→)·Scheduling·information·for·each·part·of·the·(→)·aircraft,· including·recommended·periods·for·(→)·cleaning,·(→→)·inspecting,¶ (→)·adjusting,·(→)·testing,·and·(→)·lubricating;·and·(→)·the·work· recommended·at·these·periods.·Include·any·special·notes,·cautions·or· warnings·in·the·maintenance·section·of·the·manual.¤	G23.3(b)(1)¤	¤
(→)·Scheduling·information·for·(→)·aircraft·engines,·including· recommended·periods·for·(→)·cleaning,·(→)·inspecting,·(→)· adjusting,·(→)·testing,·and·(→→)·lubricating;·and·(→)·the·work· recommended·at·these·periods.¶ **Note:**·This·information·may·be·in·the·FAA·accepted· aircraft·engine·ICA.·Include·any·special·notes,·cautions·or· warnings·in·the·maintenance·section·of·the·manual.¤	G23.3(b)(1)¤	¤
(→)·Scheduling·information·for·(→)·the·aircraft's·auxiliary·power· unit,·including·recommended·periods·for·(→)·cleaning,¶ (→)·inspecting,·(→)·adjusting,·(→)·testing,·and·(→)·lubricating;¶ and·(→)·the·work·recommended·at·these·periods.¤	G23.3(b)(1)¤	¤

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STEC-ODA¶
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→ → → → → {REFERENCE-8110.54()}¶
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REQUIREMENT¤	Regulation· Appendix¤	Location· In·ICA¤
(→)·Scheduling·information·for·(→)·aircraft·propellers,·including· recommended·periods·for·(→)·cleaning,¶ (→)·inspecting,·(→)·adjusting,·(→)·testing,·and¶ (→)·lubricating;·and·(→)·the·work·recommended·at·these·periods.· Include·any·special·notes,·cautions·or·warnings·in·the·maintenance· section·of·the·manual.¤	G23.3(b)(1)¤	¤
(→)·Scheduling·information·for·(→)·aircraft·accessories,·including· recommended·periods·for·(→)·cleaning,¶ (→)·inspecting,·(→)·adjusting,·(→)·testing,·and¶ (→)·lubricating;·and·(→)·the·work·recommended·at·these·periods.· Include·any·special·notes,·cautions·or·warnings·in·the·maintenance· section·of·the·manual.¤	G23.3(b)(1)¤	¤
(→)·Scheduling·information·for·(→)·aircraft·instruments,·including· recommended·periods·for·(→)·cleaning,¶ (→)·inspecting,·(→)·adjusting,·(→)·testing,·and¶ (→)·lubricating;·and·(→)·the·work·recommended·at·these·periods.· Include·any·special·notes,·cautions·or·warnings·in·the·maintenance· section·of·the·manual.¤	G23.3(b)(1)¤	¤
(→)·Scheduling·information·for·(→)·aircraft·equipment,·including· recommended·periods·for·(→)·cleaning,¶ (→)·inspecting,·(→)·adjusting,·(→)·testing,·and¶ (→)·lubricating;·and·(→)·the·work·recommended·at·these·periods.· Include·any·special·notes,·cautions·or·warnings·in·the·maintenance· section·of·the·manual.¤	G23.3(b)(1)¤	¤
(→)·Degree·of·inspection·for·each·part·of·the·(→)·aircraft·and·its¶ (→)·aircraft·engines,·(→)·the·auxiliary·power·unit,·(→)·propellers,· (→)·accessories,·(→)·instruments,·and·(→)·equipment.¤	G23.3(b)(1)¤	¤
(→)·Applicable·wear·tolerances.¤	G23.3(b)(1)¤	¤
Applicant·may·refer·to·an·(→)·accessory,·(→)·instrument,·or¶ (→)·equipment·manufacturer·as·the·source·of·this·information·if· applicant·shows·(→)·that·the·item·is·exceptionally·complex·and· requires·specialized·maintenance·techniques,·test·equipment,·or· expertise.¤	G23.3(b)(1)¤	¤

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REQUIREMENT¤	Regulation·Appendix¤	Location·In·ICA¤
(→)·Recommended·overhaul·periods·and·necessary·cross-references·to·the·ALS.¤	G23.3(b)(1)¤	¤
(·····)·Troubleshooting·information·describing·(·····)·probable·malfunctions,·(·····)·how·to·recognize·those·malfunctions,·and·(·····)·remedies·for·them.¤	G23.3(b)(2)¤	¤
(→)·Description·of·the·order·and·method·of·(→)·removing·and¶ (→)·replacing·products·(aircraft·engines·and·propellers)·with·any·precautions.¤	G23.3(b)(3)¤	¤
(→)·Description·of·the·order·and·method·of·(→)·removing·and¶ (→)·replacing·parts,·with·any·precautions.¤	G23.3(b)(3)¤	¤
(→)·Other·instructions,·including·(→)·storage·limitations·and·procedures·for·(→)·testing·system·during·ground·running,·(including·trim·checks,·alignment,·and·calibration),·(→)·making·symmetry·checks,·(→)·weighing·and·determining·the·center·of·gravity,¶ (→)·lifting,·and·(→)·shoring.¤	G23.3(b)(4)¤	¤
(→)·Diagrams·of·structural·access·plates·and·information·needed·to·gain·access·for·inspections·when·access·plates·are·not·provided.¤	G23.3(c)¤	¤
(→)·Details·for·applying·special·inspection·techniques,·including·radiographic·and·ultrasonic·testing,·where·such·processes·are·specified.¤	G23.3(d)¤	¤
(→)·Information·needed·to·apply·protective·treatment·to·structure·after·inspection·and/or·maintenance.¤	G23.3(e)¤	¤
(→)·All·data·on·structural·fasteners,·such·as·(→)·installation·requirements,·(→)·type,·(→··)·identification,·(→·)·discard·recommendations,·and·(→)·torque·values.¤	G23.3(f)¤	¤
(→)·List·of·special·tools·needed.¤	G23.3(g)¤	¤
(→)·For·commuter·category·aircraft:··electrical·loads·applicable·to·the·various·systems.¤	G23.3(h)(1)¤	¤

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REQUIREMENT¤	Regulation¶ Appendix¤	Location¶ In ICA¤
(→) For commuter category aircraft: · methods of balancing control surfaces.¤	G23.3(h)(2)¤	¤
(→) For commuter category aircraft: · identification of primary and secondary structures.¤	G23.3(h)(3)¤	¤
(→) For commuter category aircraft: · any special repair methods applicable.¤	G23.3(h)(4)¤	¤
(→) ICA must contain a section, titled Airworthiness Limitations, that is (·····) segregated and (·····) clearly distinguishable from the rest of the document.¶ **Note:** · The appropriate ACOB office will evaluate and approve the Airworthiness Limitations Section (ALS) in the applicant's ICA. · Airworthiness Limitations cannot be altered, established or cancelled without coordinating with the appropriate Certificate Management Aircraft Certification Office.¤	G23.4¤	¤
(→) ALS must describe each (→) mandatory replacement time, · · (→) structural inspection interval, and (→) related structural inspection procedure, including (→→) envelope structural integrity, · required for type certification.¤	G23.4¤	¤
(→) If ICA consist of multiple manuals, the ALS required by this paragraph must be in the principal manual.¤	G23.4¤	¤
(→) ALS must contain a legible statement in a prominent location that reads : · "The Airworthiness Limitations Section is FAA approved and specifies maintenance required under 14 CFR §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has¶ been FAA approved." If there are no new (including changes) · airworthiness limitations associated with the project, the airworthiness · limitations section should include the following statement: · "There are · no new (or additional) airworthiness limitations associated with this · equipment and/or installation."¤	G23.4¤	¤

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Appendix·B.··Part·27·Rotorcraft·ICA·Checklist¶

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REQUIREMENT¤	Regulation· Appendix¤	Location· In·ICA¤
(·)·ICA·for·each·aircraft·engine.·¤	A27.1(b)·¤	¤
(·)·ICA·for·each·rotor.·¤	A27.1(b)·¤	¤
(·)·ICA·for·each·appliance·required·by·this·chapter.·¤	A27.1(b)·¤	¤
(·)·Required·information·on·the·interface·of·(·)·appliances,·(·)·aircraft·engines,·and·(·)·rotors·with·the·rotorcraft.·¤	A27.1(b)·¤	¤
(·)·If·ICA·are·not·supplied·by·the·manufacturer·of·an·(·)·appliance,·(·)·aircraft·engine,·or·(·)·rotor·installed·on·the·rotorcraft,·the·ICA·for·the·rotorcraft·must·include·the·(·)·information·essential·to·the·continued·airworthiness·of·the·rotorcraft.·¤	A27.1(b)·¤	¤
(·)·Applicant's·program·showing·how·they·or·the·manufacturers·of·products·and·appliances·installed·on·the·rotorcraft·will·distribute·changes·to·the·ICA.·¤	A27.1(c)·¤	¤
(·)·ICA·in·a·manual·or·manuals.·¶ (·)·Manuals·arranged·for·easy·and·practical·use.·¤	A27.2(a)· A27.2(b)·¤	¤
(·)·Manuals·prepared·in·English.·¤	A27.3·¤	¤
(·)·Manuals·must·include·introductory·information·explaining·the·rotorcraft's·features·and·data·necessary·for·maintenance·or·preventive·maintenance.·Includes·any·other·information·on·the·(·)·content,·(·)·scope,·(·)·purpose,·(·)·arrangement,·(·)·applicability,·(·)·definitions,·(·)·abbreviations,·(·)·precautions,·(·)·units·of·measurement,·(·)·referenced·publications.·¤	A27.3(a)(1)·¤	¤
(·)·Description·of·(·)·rotorcraft·and·its·systems·and·installations,·(·)·aircraft·engines·and·its·systems·and·installations,·(·)·rotors·and·its·systems·and·installations,·and·(·)·appliances·and·its·systems·and·installations.·¤	A27.3(a)(2)·¤	¤
(·)·Basic·control·and·operating·information·describing·(·)·how·the·rotorcraft·components·and·systems·are·controlled·and·¶ (·)·how·the·rotorcraft·components·and·systems·are·operated,·including·(·)·any·special·procedure·and·limitations.·¤	A27.3(a)(3)·¤	¤

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REQUIREMENT¤	Regulation·Appendix¤	Location·In·ICA¤
(·)·Servicing·information·covering·(·)·servicing·points,·(·)·capacities·of·tanks,·(·)·capacities·of·reservoirs,·(·)·types·of·fluids·used,·and·(·)·pressures·applicable·to·the·various·systems.·¤	A27.3(a)(4)·¤	¤
(·)·Location·of·access·panels·for·(·)·inspection·and·(·)·servicing.·¤	A27.3(a)(4)·¤	¤
(·)·Servicing·information·covering·(·)·locations·of·lube·points·and·(·)·the·lube·used.·¤	A27.3(a)(4)·¤	¤
(·)·Equipment·required·for·servicing.·¤	A27.3(a)(4)·¤	¤
(·)·Tow·instructions·and·limitations.·¤	A27.3(a)(4)·¤	¤
(·)·Mooring·information.·¤	A27.3(a)(4)·¤	¤
(·)·Jacking·information.·¤	A27.3(a)(4)·¤	¤
(·)·Leveling·information.·¤	A27.3(a)(4)·¤	¤
(·)·Scheduling·information·for·each·part·of·the·(·)·rotorcraft,·including·recommended·periods·for·(·)·cleaning,·(·)·inspecting,·(·)·adjusting,·(·)·testing,·and·(·)·lubricating;·and·(·)·the·work·recommended·at·these·periods.·¤	A27.3(b)(1)·¤	¤
(·)·Scheduling·information·for·(·)·aircraft·engines,·including·recommended·periods·for·(·)·cleaning,·(·)·inspecting,·(·)·adjusting,·(·)·testing,·and·(·)·lubricating;·and·(·)·the·work·recommended·at·these·periods.·¶ **Note:**·This·information·may·be·in·the·accepted·aircraft·engine·ICA.·¤	A27.3(b)(1)·¤	¤
(·)·Scheduling·information·for·(·)·the·rotorcraft's·auxiliary·power·unit,·including·recommended·periods·for·(·)·cleaning,·(·)·inspecting,·(·)·adjusting,·(·)·testing,·and·(·)·lubricating;·and·(·)·the·work·recommended·at·these·periods.·¤	A27.3(b)(1)·¤	¤
(·)·Scheduling·information·for·(·)·rotorcraft·rotors,·including·recommended·periods·for·(·)·cleaning,·(·)·inspecting,·(·)·adjusting,·(·)·testing,·and·(·)·lubricating;·and·(·)·the·work·recommended·at·these·periods.·¤	A27.3(b)(1)¤	¤

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REQUIREMENT¤	Regulation·Appendix¤	Location·In·ICA¤
(·)·Scheduling·information·for·(·)·rotorcraft·accessories,·including·recommended·periods·for·(·)·cleaning,·(·)·inspecting,·(·)·adjusting,·(·)·testing,·and·(·)·lubricating;·and·(·)·the·work·recommended·at·these·periods.·¤	A27.3(b)(1)·¤	¤
(·)·Scheduling·information·for·(·)·rotorcraft·instruments,·including·recommended·periods·for·(·)·cleaning,·(·)·inspecting,·(·)·adjusting,·(·)·testing,·and·(·)·lubricating;·and·(·)·the·work·recommended·at·these·periods.·¤	A27.3(b)(1)·¤	¤
(·)·Scheduling·information·for·(·)·rotorcraft·equipment,·including·recommended·periods·for·(·)·cleaning,·(·)·inspecting,·(·)·adjusting,·(·)·testing,·and·(·)·lubricating;·and·(·)·the·work·recommended·at·these·periods.·¤	A27.3(b)(1)·¤	¤
(·)·Degree·of·inspection·for·each·part·of·(·)·rotorcraft·and·its·(·)·engines,·(·)·the·auxiliary·power·unit,·(·)·rotors,·(·)·accessories,·(·)·instruments,·and·(·)·equipment.·¤	A27.3(b)(1)·¤	¤
(·)·The·applicable·wear·tolerances.·¤	A27.3(b)(1)·¤	¤
Applicant·may·refer·to·an·(·)·accessory,·(·)·instrument,·or·(·)·equipment·manufacturer·as·the·source·of·this·information·if·applicant·shows·(·)·that·the·item·is·exceptionally·complex·and·requires·specialized·maintenance·techniques,·test·equipment,·or·expertise.·¤	A27.3(b)(1)·¤	¤
(·)·Recommended·overhaul·periods·and·necessary·cross-references·to·the·ALS.·¤	A27.3(b)(1)·¤	¤
(·)·Inspection·program·that·includes·(·)·the·frequency·and·(·)·extent·of·the·inspection·necessary·to·provide·for·continued·airworthiness.·¤	A27.3(b)(1)·¤	¤
(·)·Troubleshooting·information·describing·(·)·probable·malfunctions,·(·)·how·to·recognize·those·malfunctions,·and·(·)·remedies·for·them.·¤	A27.3(b)(2)·¤	¤
(·)·Descriptions·of·the·order·and·method·of·(·)·removing·and·¶ (·)·replacing·aircraft·engines·with·any·necessary·precautions.·¤	A27.3(b)(3)·¤	¤
(·)·Descriptions·of·the·order·and·method·of·(·)·removing·and·¶ (·)·replacing·rotors·with·any·necessary·precautions.·¤	A27.3(b)(3)·¤	¤
(·)·Descriptions·of·the·order·and·method·of·(·)·removing·and·(·)·replacing·parts·with·any·necessary·precautions.·¤	A27.3(b)(3)¤	¤

¶

¶

¶

STEC-ODA¶
10-27-22 → → INSTRUCTIONS-FOR-CONTINUED-AIRWORTHINESS-CHANGE-IMPACT-ASSESSMENT¶
→ → → → → (REFERENCE-8110.54())¶
¶
¶

REQUIREMENT¤	Regulation Appendix¤	Location In ICA¤
(·) Other instructions, including (·) storage limitations and procedures for (·) testing system during ground running, (·) making symmetry checks, (·) weighing and determining the center of gravity, (·) lifting, and (·) shoring.¤	A27.3(b)(4)¤	¤
(·) Diagrams of structural access plates and information needed to gain access for inspections when access plates are not provided.¤	A27.3(c)¤	¤
(·) Details to apply special inspection techniques, including radiographic and ultrasonic testing where such processes are specified.¤	A27.3(d)¤	¤
(·) Information needed to apply protective treatment to structure after inspection.¤	A27.3(e)¤	¤
(·) All data on structural fasteners, such as (·) identification, (·) discard recommendations, and (·) torque values and installation requirements, if any.¤	A27.3(f)¤	¤
(·) List of special tools needed.¤	A27.3(g)¤	¤
(·) ICA must contain a section, titled Airworthiness Limitations, that is (·) segregated and (·) clearly distinguishable from the rest of the document.¶ **Note:** The appropriate ACOB office will evaluate and approve Airworthiness Limitations Section (ALS) in the applicant's ICA.¤	A27.4¤	¤
(·) ALS must describe each mandatory replacement time, structural inspection interval, and related structural inspection procedures approved under 14 CFR § 27.571.¤	A27.4¤	¤
(·) If the ICA consist of multiple manuals, the ALS required by this paragraph must be in the principal manual.¤	A27.4¤	¤
(·) ALS must contain a legible statement in a prominent location that reads: "The Airworthiness Limitations Section is FAA approved and specifies inspections and other maintenance required under 14 CFR §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved."¤	A27.4¤	¤

¶

¶

DOC-#:_____ → → → → → → ODA-Form-112_B¶
Page-#:_____¶ A-9¶

ODA Form 200 - STC Project Master Data File Checklist

Instructions

A. List Heading Information

(1) List ODA Project Number

(2) List Aircraft Make/Model

(3) List Prototype Serial No.

(4) List Project Description

B. List the Following 15 Steps if item is not used indicate by using N/A in the space

(1) List Application and date with referenced PNL letter

(2) List Project Specific Certification Plan and date with referenced PNL letter

(3) List Conformity Plan and date with referenced PNL letter

(4) List Program Notification Letter (PNL) and date

(5) STC Project Feasibility/Planning Review and date

(6) List Correspondence from the FAA
- [a] List PNL Response date
- [b] List Equivalent level of safety findings
- [c] List FAA Special Conditions
- [d] List Exemptions

(7) List Design Data
- [a] List Master Data List No.

(8) List Substantiating Documents/Reports (as applicable)
- [a] List System Safety Assessment
- [b] List Structural Substantiation
- [c] List Weight and Balance
- [d] List Electrical Loads Statement
- [e] List Electrical Load Analysis

[f] List Ground Test Plan
[g] List Ground Test Report
[h] List Flight Test Plan
[i] List Flight Test Report
[j] List Hardover/Trim Runaway Test Plan
[k[List Hardover/Trim Runaway Test Report
[l] List EMI/RFI Test Plan
[m] List EMI/RFI Test Report
[n] List Temperature Survey Plan
[o] List Temperature Survey Report
[p] List Installation Instructions

(9) List Supporting Documentation (examples listed below)
[a] List Ground Test Plan Air Data and Pitot Static System Procedure
[b] List Ground Test Report Air Data and Pitot Static System Report
[c] List ADAHRS Alignment Procedure
[d] List ADAHRS Alignment Report
[e] List Airspeed Configuration Data Report
[f] List HIRF and Lightning Protection Certification Report
[g] List Overbraid Installation Specifications

(10) List Request for Conformity 8120-10
[a] List Part
[b] List Installation

(11) List Statement of Compliance for Airworthiness Standards 8100-9
[a] List Engineering AR-Structures.
[b] List Engineering AR-Mechanical
[c] List Engineering AR-Electrical
[d] List Flight Test AR
[e] List Compliance Checklist

(12) List Pre-Flight Test
[a] List STC Project Technical Review Board Agenda/Minutes ODA Form 204
[b] List Flight Test Risk Assessment and Alleviation ODA Form 400
[c] List TIA/Safety Review Board Report ODA Form 205

(13) List Type Inspection Authorization
[a] List Type Inspection Authorization FAA Form 8110-1
[b] List STIR FAA Form 8110-26 and attachments
[c] List Statement of Conformity FAA Form 8130-9 and attachments
[d] List Conformity Insp. Records FAA Form 8100-1

[e] List Authorized Release Certificate FAA Form 8130-3
[f] List Type Inspection Report FAA Form 8110-31

(14) List Experimental Certificate/Standard Certificate
[a] List Application for Experimental to Show compliance FAA Form 8130-6
[b] List Experimental Certificate to Show compliance FAA Form 8130-7
[c] List Experimental Operating Limitations FAA Form
[d] List Application for Standard Airworthiness Certificate FAA Form 8130-6
[e] List Standard Airworthiness Certificate FAA Form 8100-2

(15) List Final Documentation
[a] List AFMS/RFMS ODA Form 211 S-TEC No.
[b] List Pilots Operating Manual(s) S-TEC No.
[c] List Briefing Card ODA Form 401
[d] List ICA and acceptance date
[e] List STC Project Statement of Final Review ODA Form 210
[f] Applicant Compliance Statement
[g] List Compliance Report
[h] List Supplemental Type Certificate FAA Form 8110-2

(16) Post STC Documentation
[a] Submittal to FAA

Form Example (Reduced size)

S-TEC
ODA

ODA·STC¶
MASTER·DATA·FILE·CHECKLIST →

ODA·Project·No.:·*****¤	Aircraft·Make/Model:·*****¤
ODA·STC·No.:·*****¤	Prototype·Serial·No.:·*****¶
Project·Description:·*****¤	

	ITEM	DOCUMENT·NUMBER,·REVISION·AND·DATE
1.	Application·for·STC·FAA·form·8110-12	
2.	Project·Specific·Certification·Plan·ODA·form·201	
3.	Conformity·Plan·ODA·form·203	
4.	Program·Notification·Letter	
5.	STC·Project·Feasibility/Planning·Review	
6.	Correspondence·from·the·Administrator	
	PNL·Response	
	Equivalent·level·of·safety·findings	
	FAA·Special·Conditions	
	Exemptions	
7.	DESIGN·DATA	
	Master·Data·List	
8.	SUBSTANTIATING·DOCUMENTS/REPORTS·(as·applicable)	
	System·Safety·Assessment	
	Structural·Substantiation	
	Weight·and·Balance	
	Electrical·Loads·Statement	
	Electrical·Load·Analysis	
	Ground·Test·Plan	
	Ground·Test·Report	
	Flight·Test·Plan	
	Flight·Test·Report	
	Hardover/Trim·Runaway·Test·Plan	
	Hardover/Trim·Runaway·Test·Report	
	EMI/RFI·Test·Plan	
	EMI/RFI·Test·Report	
	Temperature·Survey	
	Temperature·Survey·Report	
	Installation·Instructions	
9.	SUPPORTING·DOCUMENTATION	

ODA·Form·200·Rev.·E → Page·1·of·2 → ODA·Form·200_E¶

10.	REQUEST FOR CONFORMITY 8120-10	
11.	STATEMENT OF COMPLIANCE 8100-9	
	Engineering AR-Structures	
	Engineering AR-Mechanical	
	Engineering AR-Electrical	
	Flight Test AR	
	Compliance Checklist ODA form 202	
12.	PRE-FLIGHT TEST	
	Technical Review Committee Report ODA form 204	
	Flight Test Risk Assessment ODA form 400	
	Safety Review Board Report ODA form 205	
13.	TYPE INSPECTION AUTHORIZATION	
	Type Inspection Authorization FAA Form 8110-1	
	STIR and attachments FAA form 8110-26	
	Statement of Conformity and attachments FAA form 8130-9	
	Conformity Inspection Record FAA form 8100-1	
	Authorized Release Certificate 8130-3	
	Type Inspection Report FAA form 8110-31	
14.	EXPERIMENTAL CERTIFICATE/STANDARD CERTIFICATE	
	Application for Experimental to Show compliance	
	Experimental Certificate to Show compliance	
	Experimental Operating Limitations	
	Application for Standard Airworthiness Certificate FAA form 8130-6	
	Standard Airworthiness Certificate FAA form 8100-2	
15.	FINAL DOCUMENTATION	
	AFMS (or RFMS)	
	Pilots Operating Manual(s)	
	Briefing Card ODA form 401	
	ICA and acceptance date	
	Statement of Final Review ODA form 210	
	Applicant Compliance Statement	
	Compliance Report	
	Supplemental Type Certificate FAA form 8110-2	
16.	POST STC DOCUMENTATION	
	Submittal to FAA	

ODA Form 200 Rev. E → Page 2 of 2 → ODA Form 200_E

201 - Project Specific Certification Plan Template

Instructions

Project Title - Enter a summarization of the project.

Aircraft Make & Model - Self explanatory

ODA Project - Self explanatory

Document No. - Self explanatory

Rev - Self explanatory

Date - Self explanatory

Signature Block - Self explanatory

This document template is to be used as a guide for preparation of a PSCP of the ODA unit. The detail and utilization will be predicated by the project complexity and type.

Form Example (Reduced size)

¤ S-TEC

¶

▪ ¶

▪ ¶

▪ ¶

▪

Project·Specific·Certification·Plan¶

for·a¶

(Enter·Project·Title)¶

in¶

¶

(Enter·Aircraft·Make·&·Model)·Aircraft¶

¶

ODA·Project·(Enter·Project·Number)¶

¶

¶

¶

DOCUMENT·NO:··(Enter·Control·Number)¶

Rev·°°°°°··¶

DATE:··(Enter·Date)¶

¶

¶

¶

·Prepared·By:¶ ¶ Date:¤
Approved·By·Company·Project·Manager:¶ ¶ Date:¤
Approved·By·ODA·administrator:¶ ¶ Date:¤
FAA·Concurrence·By:¶ ¶ Date:¤

Unit·Member·Concurrence¤	
Electrical·Systems¶ ¶ ¤	Electrical·HIRF¤
Mechanical·Systems¶ ¶ ¤	Software·/·CEH¤
Structures¶ ¶ ¤	Powerplant¤
Flight·Test¶ ¶ ¤	Inspection/Airworthiness¤

|↵|

→ →¶

Page Break

ODA·Form·201·Rev·B → Page·1·of·7 → ODA·Form·201¶

¶

REVISION PAGE

REVISION	DESCRIPTION	APPROVED	DATE
-	Initial Release		

Page Break

All reports, analyses, drawings, documents, or other data provided to the FAA by S-TEC are confidential/proprietary and are only to be used by FAA employees in conjunction with S-TEC certification projects, Supplemental Type Certificates (STC), Parts Manufacturing Approvals (PMA), or Technical Standard Orders (TSO). Release of this information or data in any form to any other party without prior written consent of S-TEC Corporation is prohibited.

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TABLE OF CONTENTS

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¶

1. → PROJECT DESCRIPTION¶

¶

Insert a complete concise description of the proposed modification effort.¶

¶

2. → STC APPLICANT INFORMATION¶

¶

Insert detailed information about the STC applicant. This information should match that inserted on FAA Form 8110-12. If the applicant is different than the ODA holder, a statement shall be made here and an Appendix providing a copy of the Agent Authorization Letter will be attached.¶

¶

3. → AIRWORTHINESS REQUIREMENTS¶

¶

3.1 Original Aircraft Certification Basis¶

→ Type Certification Basis is reflected on Type Certificate Data Sheet No. (Insert TCDS No.), Revision (Insert Rev No.), Dated (Insert TCDS Date).¶

¶

(Include the following paragraph only when an original STC is being amended.)¶

3.1.1 Original STC Modification Certification Basis ¶

→ As approved, (Insert STC Approval Date), listed following:¶

¶

(List the 14CFR regulations with amendment id applied to the previous STC)¶

¤	¤
¤	¤
¤	¤

¶

3.2 Modification Certification Basis¶

→ Those 14CFR regulations as listed in attached Appendix B will be complied in this STC project.¶

¶

3.3 System Special Requirements/Conditions/Exemptions/Equivalent Safety Findings¶

→ (List any Special Requirements, Conditions, Exemptions, or Equivalent Levels of Safety considerations here.)¶

¶

3.4 Complex Electronic Hardware Requirements¶

→ (List any complex electronic hardware considerations here.)¶

¶

3.5 Software Requirements¶

→ (List any software considerations here.)¶

¶

3.6 Noise and Emissions Requirements¶

→ (List any 14CFR part 34 and 36 considerations here.)¶

¶

¶

4. → CERTIFICATION COMPLIANCE¶

¶

4.1 Compliance Checklist¶

→ Previous compliance per Paragraph 3.1 will be maintained and compliance per Paragraphs 3.1 thru 3.6 will be applied to this STC project.¶

¶

4.2 Responsible Individuals¶

FAA Coordinator .....→..... (List responsible FAA person & telephone number)¶

S-TEC ODA administrator...→....(List responsible ODA administrator & telephone number)¶

Company Project Manager ...→....(List responsible Company person & telephone number)¶

¶

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Electrical·Systems·UM ....⇒.....(List·responsible·ODA·Unit·Member·&·telephone·number)¶
Mechanical·Systems·UM ...⇒.....(List·responsible·ODA·Unit·Member·&·telephone·number)¶
Structures·UM .....⇒.....(List·responsible·ODA·Unit·Member·&·telephone·number)¶
Electrical·HIRF·UM .....⇒.....(List·responsible·ODA·Unit·Member·&·telephone·number)¶
Powerplant·UM .....⇒.....(List·responsible·ODA·Unit·Member·&·telephone·number)¶
Software·UM .....⇒.....(List·responsible·ODA·Unit·Member·&·telephone·number)¶
Flight·Test·UM.....⇒.....(List·responsible·ODA·Unit·Member·&·telephone·number)¶
Inspection/Airworthiness·UM ⇒.(List·responsible·ODA·Unit·Member·&·telephone·number)¶

¶

4.3·Compliance·Demonstration¶

a.· Compliance· to· the· Compliance· Checklist· will· be· determined· by· evaluation· comparison· to· the· Compliance·Checklist,·refer·to·Appendix·B.¶

b.·Conformity·will·be·established·per·the·Conformity·Inspection·Plan,·refer·to·Appendix·C.·Conformity·of·the·modification·will·be·established·via·RFC·issued·by·the·ODA·administrator.·¶

c.·Flight·performance·analysis·and·verification·will·be·performed·by·a·Flight·Test·UM·and·appropriate·test·reports·to·document·the·compliance·results·will·be·produced.¶

d.·No·flight·crew·training·requirements.¶

e.·No·Emergency·Evacuation·demonstration·required.¶

⇒ ¶

¶

5.⇒TYPE·DESIGN·DATA¶

¶

5.1·Documentation·Location·and·Control¶

⇒ All·documentation·providing·for·FAA·certification·and·compliance·substantiation·for·this·STC·project·will·be·generated·under·the·direction·of·the·S-TEC·project·manager.·All·documentation·will·be·housed·and·maintained·in-house·by·the·S-TEC·engineering·department.·Responsible·ODA·UM's·listed·in·Section·4·will·be·responsible·for·approval·of·the·submitted·data·as·appropriate·to·their·delegation.¶

¶

5.2⇒The·following·documentation·will·provide·for·compliance·substantiation·of·this·STC·amendment·project:¶

¶

Project·Specific·Certification·Plan ⇒ ⇒ ⇒ ⇒ Doc·No.··(Insert·Doc·No.)¶
Compliance·Check·List ⇒ ⇒ ⇒ ⇒ ⇒ Doc·No.··(Insert·Doc·No.)¶
Conformity·Inspection·Plan ⇒ ⇒ ⇒ ⇒ ⇒ Doc·No.··(Insert·Doc·No.)¶
Master·Data·List ⇒ ⇒ ⇒ ⇒ ⇒ Doc·No.··(Insert·Doc·No.)¶
Installation·Drawing ⇒ ⇒ ⇒ ⇒ ⇒ Doc·No.··(Insert·Doc·No.)¶
Flight·Test·Analysis·Report ⇒ ⇒ ⇒ ⇒ ⇒ Doc·No.··(Insert·Doc·No.)¶
Installation-level·drawings ⇒ ⇒ ⇒ ⇒ ⇒ Master·Data·List·¶
(List·additional·data·applicable·to·the·STC·project.)¶

¶

5.3⇒FAA·Advisory·Circulars¶

AC·21-101-1 ⇒ ⇒ ⇒ Advisory·Material·For·The·establishment·Of·The·¶
⇒ ⇒ ⇒ ⇒ Certification·Basis·of·Changed·Aeronautical·Products.¶
AC·23.1309-1C ⇒ ⇒ Equipment,·Systems·and·Installations·in·Part·23·Airplanes.¶
AC·23-17B ⇒ ⇒ ⇒ Systems·and·Equipment·Guide·for·Certification·of·Part·23·Airplanes.¶
(List·additional·Advisory·Circulars·to·be·used·as·guidance·material·for·the·STC·project.)¶

¶

5.4⇒Technical·Standard·Orders/·RTCA·documents¶

TSO·C9c ⇒ ⇒ ⇒ ⇒ Automatic·Pilot·Systems¶
(List·additional·TSO·and/or·RTCA·documents·to·be·used·for·the·STC·project.)¶
¶

¶

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¶

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¶

6.→NOVEL·OR·UNUSUAL·DESIGN·REQUIREMENTS¶

¶

(List·any·novel·or·unusual·design·feature·expectation·with·this·STC·project.)¶

¶

¶

7.→GROUND·AND·FLIGHT·TESTING¶

¶

7.1·System·Safety·Evaluation·and·Flight·Test·Risk·Assesment¶

A·thorough·technical·review,·system·safety·evaluation,·and·flight·test·risk·assessment·will·be·conducted·prior·to·any·ground·and·flight·testing.·The·results·of·those·meeting·and·evaluations·will·be·documented·in·accordance·with·the·ODA·Procedures·Manual.¶

¶

7.2·Ground·Testing¶

→ Ground·test·will·consist·of·the·normal·pre-flight·functional·checkout·of·the·system·operation.¶

¶

7.3·Flight·Testing¶

A·performance·analysis/verification·flight·will·be·conducted·to·demonstrate·the·system·characteristics·are·in·compliance·with·the·requirements·of·14CFR·parts·listed·on·the·CCL·and·the·aircraft·exhibits·safe·operation·under·all·of·the·conditions·certified·to.¶

¶

Flight·Test·risk·assessment:·(Mark·the·box·appropriate·to·the·Flight·Test·risk·expectations.)¶

¶

☐LOW → ☐MED → ☐HIGH¶

¶

→ Flight·test·activities·by·the·S-TEC·ODA·Flight·Test·UM·will·be·conducted·with·the·aircraft·under·Experimental·airworthiness·certificate·for·the·verification·flight.¶

¶

8.→AIRWORTHINESS·CERTIFICATION¶

¶

8.1→S-TEC·currently·holds·Parts·Manufacturing·Authority·PQ0445SW·for·the·production·of·replacement·parts·under·14CFR21.303.··S-TEC·additionally·holds·Air·Agency·Certificate·FF2R818K·providing·limited·airframe·authorization.··All·component·fabrication·and/or·purchase·associated·with·this·STC·will·be·controlled·by·the·FAA·Approved·Quality·Processes·defined·with·these·FAA·certifications.¶

¶

8.2→There·is·no·plan·to·use·any·non-domestic·suppliers·for·this·STC·project.¶

¶

¶

9.→CERTIFICATION·SCHEDULE¶

The·following·dates·are·tentative·and·subject·to·change:¶

Item· →	→	Date¶
¶		
Project·Specific·Certification·Plan	→	(Insert·Date)¶
Certification·Compliance·Check·List	→	(Insert·Date)¶
Conformity·Inspection·Plan	→	(Insert·Date)¶
FAA·Program·Notification·Letter	→	(Insert·Date)¶
Analysis/Verification·Flight·Test	→	(Insert·Date)¶
FAA·Response·to·Program·Notification·Letter	→	(Insert·Date)¶
Issue·STC	→	(Insert·Date)¶
STC·Data·Package·to·FAA	→	(Insert·Date)¶

¶

¶

¶

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¶

10. AIRCRAFT MANUALS¶

¶

10.1 Parts List¶

Parts List will be produced in a form that will adequately cover the modification and installation of the equipment involved in this STC project.¶

¶

10.2 Instructions for Continued Airworthiness¶

A ICA will be prepared and provided to the ACO and AEG for acceptance for this STC project. Wiring diagram of the installed system will be included in the ICA.¶

¶

10.3 Master Minimum Equipment List¶

MMEL will not be affected by this STC project.¶

¶

10.4 Flight Crew Operating Manual¶

A Flight Crew Operating Manual will not be required for this STC project.¶

¶

¶

11. AIRPLANE FLIGHT MANUAL SUPPLEMENT¶

¶

An Airplane Flight Manual Supplement will be produced for this STC project. The AFMS will be reviewed by the Flight Test UM and a "Recommend for Approval" will be provided to the ODA administrator for final approval.¶

¶

¶

12. EQUIPMENT APPROVALS¶

¶

Equipment items not approved a TSO will be produced and approved under the S-TEC Parts Manufacturing Authority PQ0445SW for the production of replacement parts under 14CFR21.303. Upon issuance of the proposed STC Amendment, S-TEC will make application to AIR-882 to revise the existing PMA supplement if required.¶

¶

¶

12. ALTERATION LOCATION¶

¶

The STC project modification work and ground and flight verification test performed at the S-TEC, Mineral Wells, TX facility.¶

¶

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ODA Form 202 - Compliance Check List Template

Instructions

Project Title - Enter a summarization of the project.

Aircraft Make & Model - Self explanatory

Document No. - Self explanatory

Rev - Self explanatory

Date - Self explanatory

Signature Block - Self explanatory

This document template is to be used as a guide for preparation of a CCL of the ODA unit. The detail and utilization will be predicated by the project complexity and type.

Form Example (Reduced size)

¶

14CFR·Compliance·Checklist¶

for¶

(Enter·Project·Title)¶

in¶

(Enter·Aircraft·Make·&·Model)·Aircraft¶

¶

DOCUMENT·NO:·(Enter·Control·Number)¶

¶

¶

¶

Prepared·By:¶ ¶ ¶ Date:¤
Approved·By·Company·Project·Manager:¶ ¶ ¶ Date:¤
Approved·By·ODA·administrator:¶ ¶ ¶ Date:¤
FAA·Concurrence·By:¶ ¶ ¶ Date:¤

Unit·Member·Concurrence¤	
Electrical·Systems¶ ¶ ¤	Lightning·/·HIRF¤
Safety·Analysis·¶ ¤	Software·/·CEH¤
Structures¶ ¶ ¤	Mechanical·Systems¶ ¤
Flight·Test¶ ¶ ¤	Inspection/Airworthiness¤

→ →¶

Page Break

S-TEC·Corporation¶

All·reports,·analyses,·drawings,·documents,·or·other·data·provided·to·the·FAA·by·S-TEC·are·confidential/proprietary·and·are·only·to·be·used·by·FAA·employees·in·conjunction·with·S-TEC·certification·projects,·Supplemental·Type·Certificates·(STC),·Parts·Manufacturing·Approvals·(PMA),·or·Technical·Standard·Orders·(TSO).··Release·of·this·information·or·data·in·any·form·to·any·other·party·without·prior·written·consent·of·S-TEC·Corporation·is·prohibited.¶

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¶

REVISION·PAGE¶

¶

REVISION¤	DESCRIPTION¤	RELEASED·BY¤	DATE¤
--¤	Initial·release¤	¤	¤
¤	¤	¤	¤
¤	¤	¤	¤

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NOTE·(1)· → 14·CFR·Part·23/27/29·paragraphs·not·listed·in·this·checklist·are·considered·to·be·non-applicable.··Regulations·specifically·listed·in·this·checklist·will·have·findings·of·compliance·as·applicable·and·determined·by·the·appropriate·discipline·ODA·Unit·Member.··This·checklist·is·subject·to·change·as·determined·by·the·ODA·administrator.¶

NOTE·(2) → This·document·is·Appendix·B·to·the·Project·Specific·Certification·Plan.¶

NOTE·(3) → Unit·Members·making·the·findings·of·compliance·for·the·listed·regulatory·requirements:¶

E·–·Electrical·Systems¤	SW·–·Software·/·CEH¤	SA·–·Safety·Analysis¤	LH·–·Lightning·/·HIRF¤
S·–·Structures¤	M·–·Mechanical·Systems¤	F·–·Flight·Test¤	I·–·Inspection·¤

¶ Section Break (Next Page)

¶

S-TEC

14 CFR		Unit Member								SUBJECT / DESCRIPTION	COMPLIANCE METHOD / REFERENCE DATA
Part	Amdt	E	SW	SA	LH	S	M	F	I		
(Enter part number)		☐	☐	☐	☐	☐	☐	☐	☐	(Enter the applicable regulation part verbatim, list only the specific regulation paragraph applicable.)	(Describe compliance method and list compliance documents)
		☐	☐	☐	☐	☐	☐	☐	☐		
(Enter Special Condition Number)		☐	☐	☐	☐	☐	☐	☐	☐	(Enter the special condition verbatim, list only the specific paragraph applicable.)	(Describe compliance method and list compliance documents)

All reports, analyses, drawings, documents, or other data provided to the FAA by S-TEC are confidential/proprietary and are only to be used by FAA employees in conjunction with S-TEC certification projects, Supplemental Type Certificates (STC), Parts Manufacturing Approvals (PMA), or Technical Standard Orders (TSO). Release of this information or data in any form to any other party without prior written consent of S-TEC Corporation is prohibited.

ODA Form 203 - Conformity Inspection Plan Template

Instructions

Prepared By – Self-explanatory.

Approved By Company Project Manager – Self-explanatory.

Approved By ODA administrator – Self-explanatory.

FAA Concurrence By – Self-explanatory.

Unit Member Concurrence – Each unit member identified (by type) is to indicate their concurrence with the conformity plan by initialing in the block indicating their specific discipline.

Part I – S-TEC engineering & Project Information

Date – Enter the date upon which the conformity plan was created.

Document No. – Enter the tracking control number issued by the ODA administration assistant or as determined by either the "Project Electronic Document Management or Administrative Electronic Document Management" instructions at the beginning of Appendix E.

Plan Revision Level – Self-explanatory.

Applicant name – Enter S-TEC Corporation.

Project Number – Self-explanatory.

Aircraft model(s) to be modified – Self-explanatory.

General Description of project – Enter a brief description of the work being performed to the project aircraft.

Part II – Names of Focal Points - Self-explanatory.

Part III – General Information - Self-explanatory.

Form Example (Reduced size)

¶

CONFORMITY·INSPECTION·PLAN¤

Prepared·By:¶ ¶ Date:¤	Unit·Member·Concurrence¤
Approved·By·Company·Project·Manager:¶ ¶ Date:¤	Electrical·Systems¶ ¶ ¤ / Lightning·/·HIRF¤
Approved·By·ODA·administrator:¶ ¶ Date:¤	Safety·Analysis¶ ¶ ¤ / Software·/·CEH¤
FAA·Concurrence·By:¶ ¶ Date:¤	Structures¶ ¶ ¤ / Mechanical·Systems¤
	Flight·Test¶ ¶ ¤ / Inspection/Airworthiness¤

¶

Part·I¶
Applicant·&·Project·Information¤

Date:¶ °°°°°¤	Document·No.:¶ °°°°°¤	Plan·Revision·Level:¶ °°°°°¤
a.·Applicant·name:¶ ¶ **S-TEC·Corporation¤**	b.·Project·number:¶ ¶ °°°°°¤	
c.·Aircraft·model(s)·to·be·modified:¶ ¶ °°°°°¤		
d.·General·Description·of·project:¶ ¶ °°°°°¤		

Part·II¶
Names·of·Focal·Points¤

a.·Quality·Assurance:¶ ¤	¶ °°°°°¤
b.·Test·&·Evaluation:¶ ¤	¶ °°°°°¤
c.·Engineering¶ ¤	¶ °°°°°¤
d.·Inspection·UM(s)¶ ¶	Part·Conformity:·°°°°°¤
	Installation·Conformity:··°°°°°¤
	TIA/STIR:··°°°°°¤
e.·Engineering·UM(s)¶ ¤	°°°°°¤

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Part III General Information			
a. Is an FAA Approved Repair Station doing the modification?		☐ Yes ☐ No	
b. List the location(s) where the modification and installation will be done: *****			
c. Describe the maintenance requirements needed for maintaining the aircraft during the project: *****			
d. Aircraft Information:	Is Aircraft U.S. Registered	☐ Yes ☐ No	
	List Aircraft Registration Number *****		
	STC Notification letter for foreign Registered Aircraft and Validation/Acceptance of In-Process STC (See AIR-4 policy memo 99-03)	Date Letter Sent by FAA: *****	Date Reply from CAA: *****
Part IV Inspection Systems			
a. → Describe the type of planning, travelers, work orders, etc. used for inspection: *****			
b. Are suppliers going to be used for the project?		☐ Yes ☐ No	
c. If so, describe the supplier(s) and their involvement in the project: *****			
d. Is the supplier(s) quality system(s) approved by applicant?		☐ Yes ☐ No	
e. Is the supplier(s) special processes approved for this project?		☐ Yes ☐ No	
f. If the supplier(s) are not approved for the special processes explain how will they be approved: *****			
Part V Applicant Conformity Inspections			
a. → List company inspection procedures to be used to perform Conformity Inspection: *****			
b. Are these procedures equivalent to the conformity inspection criteria in FAA Order 8110.4 Chapter 5?		☐ Yes ☐ No	
c. If not, what alternative procedures will be used to ensure the same level of inspections are made by the applicant? *****			
d. Name of person(s) from the applicant responsible to sign the 8130-9 Statement of conformity in accordance with 14 CFR §21.50 and §21.33: ***** *If delegated to applicant's supplier applicant must submit a letter of delegation in accordance with 8110.4 chapter 5. Applicant must assure the same level of conformity inspection is performed as outlined in 8110.4.*			

Page Break

Part·VI¶ FAA·Conformity·Inspections·Identification·and·Tracking¤	
a.··Name·of·AR(s)·responsible·to·generate·the·8120-10·request·for·conformity·for·this·project:¶ °°°°°¶ ¶ ¤	
b.··Explain·how·the·8120-10's·will·be·coordinated·with·AR's:¶ °°°°°¶ ¤	
c.·Explain·how·the·applicant·will·track·the·initiation·and·completion·of·Conformity·Inspections:¶ ¶ °°°°°¤	
d.·Name·of·person(s)·responsible·to·track·the·conformity·inspections·for·the·applicant:¶ °°°°°¶ ¤	
Part·VII¶ Conformity·Description¤	
a.·Part·Conformity¤	Description·of·parts·and·assemblies·to·be·conformed:¶ °°°°°¶ ¶ ¤
b.·Installation¶ ····Conformity¤	Description·or·parts/assemblies/equipment/engines·requiring·installation·conformity:¶ °°°°°¶ ¶ ¤
c.·Test·Conformity¤	Description·of·test·equipment·being·used·requiring·installation·conformity:¶ °°°°°¶ ·¤
	Description·of·test·set·up·conformity:¶ °°°°°¶ ·¤
d.·Flammability·and·Fire-blocking·test·coupon·conformity¤	Description·of·test·instrumentation·requiring·installation·conformity:¶ °°°°°¶ ¤
	Description·of·tests·requiring·test·set·up·conformity:¶ °°°°°¶ ¤
e.·Conformity·Inspection·Deviations·(See·Order·8110.4·Chapter·5)¤	Name·of·engineering·AR's·responsible·to·approve·deviations·and·unsatisfactory·conditions·listed·on·FAA·Form·8130-9·and·FAA·Form·8100-1:¶ °°°°°¶ ¤
f.·Post·Conformity·Modifications·and/or·Replacements¤	Description·of·how·modifications·or·replacement·of·FAA·conformed·parts·will·be·re-conformed:¶ °°°°°¶ ¤
	Person·responsible·for·tracking·modifications·or·replacements:¶ °°°°°¶ ¤
g.·Flight·Testing¤	Location(s)·of·TIA·flight·tests:¶ °°°°°¶ ¶ ¤
	Estimated·date·of·flight·test:¶ °°°°°¤

Page Break

Part VIII Airworthiness Certification and Return to Service at Completion of Program	
a. Who will make application for FAA Form 8130-6? (See AC 21-12)	Experimental Certificate: _____ Standard airworthiness certificate: _____
b. Describe the plan to incorporate all required design changes to the test aircraft to make the aircraft eligible for a Standard Airworthiness Certificate (if applicable): _____	
c. Name of Company applying for PMA after issuance of STC (if applicable): _____	
This Conformity Inspection Plan describes the actions regarding the modification and type design activities necessary to ensure all required Conformity Inspections and related activities are accomplished in support of the STC project. The plan establishes guidelines and policies for identification and tracking of FAA required Conformity Inspections performed by at the applicant's facility and its approved suppliers. The Conformity Inspection Plan will be reviewed and accepted by the Federal Aviation Administration prior to its implementation. FAA Conformity Inspections will be identified, coordinated, and tracked for completion in accordance with procedures described above. **Changes to this plan require a revision number/letter.** Implementation of this plan will be to established procedures written or referenced in the plan.	

ODA Form 204 - STC Project Technical Review Board Agenda/Minutes

Instructions

This form is to be used as both the meeting announcement with agenda and record of the meeting attendees and minutes.

Project No. - Self explanatory

Project Description - Self explanatory

Meeting Date - Announcement - Enter the planned meeting date.
Minutes - Enter the actual meeting date.

Meeting Time - Announcement - Enter the planned meeting time.
Minutes - Enter the actual meeting time.

Location - Announcement - Enter the planned meeting location.
Minutes - Enter the actual meeting location.

Call in Number - Enter the telephone number to use for those at remote locations.

Requested Attendees - Enter the names of the requested meeting attendees.

Attended - Mark meeting attendance status.

RSVP Requested - Self explanatory

STATUS-COMMENTS - Meeting minutes only, record discussion on each of the topics.

ACTION ITEMS - Self explanatory

Form Example (Reduced size)

ODA

STC·Project¶
Technical·Review·Board·¶
Meeting·Agenda/Minutes¤

ADMINISTRATION¤

Project·No.:·°°°°°→ → → Project·Description:·°°°°°¶
Meeting·Date:·°°°°°·····Meeting·Time:·°°°°°·¶
Location:·°°°°°·····Call·In·Number:·°°°°°¤

Requested·Attendees:¶ ¶	Attended?¤
ODA·administrator·-·→ → °°°°°¶ ¶	☐·Yes····☐No¶ ¤
ODA·Alt.·administrator·-· → °°°°°¶ ¶	☐·Yes····☐No¶ ¤
Project·Manager·-· → → °°°°°¶ ¶	☐·Yes····☐No¶ ¤
Electrical·UM·-·→ → → °°°°°¶ ¶	☐·Yes····☐No¶ ¤
Mechanical·UM·-· → → °°°°°¶ ¶	☐·Yes····☐No¶ ¤
Structures·UM·-· → → °°°°°¶ ¶	☐·Yes····☐No¶ ¤
Insp./Airworthiness·UM·-· → °°°°°¶ ¶	☐·Yes····☐No¶ ¤
Flight·Test·UM·-· → → °°°°°¶ ¶	☐·Yes····☐No¶ ¤
Company·Test·Pilot·-·→ → °°°°°¤	☐·Yes····☐No¶ ¤

RSVP·Requested:··☐·NO··☐·YES·····RSVP·Date:·°°°°°¶
RSVP·to·either·the·ODA·administrator·or·assistant¤

STATUS·-·COMMENTS¤

Type·Design·Data:¶
°°°°°¤

Modification·Completion:¶
°°°°°¤

Part/Installation·Conformity:¶
°°°°°¤

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¤	S-TEC ODA

¶

Compliance:¶ °°°°°¤
Aircraft·Airworthiness/Inspection·Status:¶ °°°°°¤
Pre-TIA·Flight·Risk·Assessment:¶ °°°°°¶ ¶ ¶ ¤

ACTION·ITEMS¤

Completed	Action·Item·Description¤	Responsibility¤	Suspense·Date·or¶ Prior·to·Operation¤
☐·1¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·2¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·3¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·4¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·5¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·6¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·7¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·8¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·9¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·10¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·11¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·12¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·13¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤
☐·14¤	°°°°°¶ ¤	°°°°°¤	°°°°°¤

¶

ODA Form 205 - TIA/Safety Review Board Agenda/Minutes

Instructions

This form is to be used as both the meeting announcement with agenda and record of the meeting attendees and minutes.

Project No. - Self explanatory

Project Description - Self explanatory

Meeting Date - Announcement - Enter the planned meeting date.
Minutes - Enter the actual meeting date.

Meeting Time - Announcement - Enter the planned meeting time.
Minutes - Enter the actual meeting time.

Location - Announcement - Enter the planned meeting location.
Minutes - Enter the actual meeting location.

Call in Number - Enter the telephone number to use for those at remote locations.

Requested Attendees - Enter the names of the requested meeting attendees.

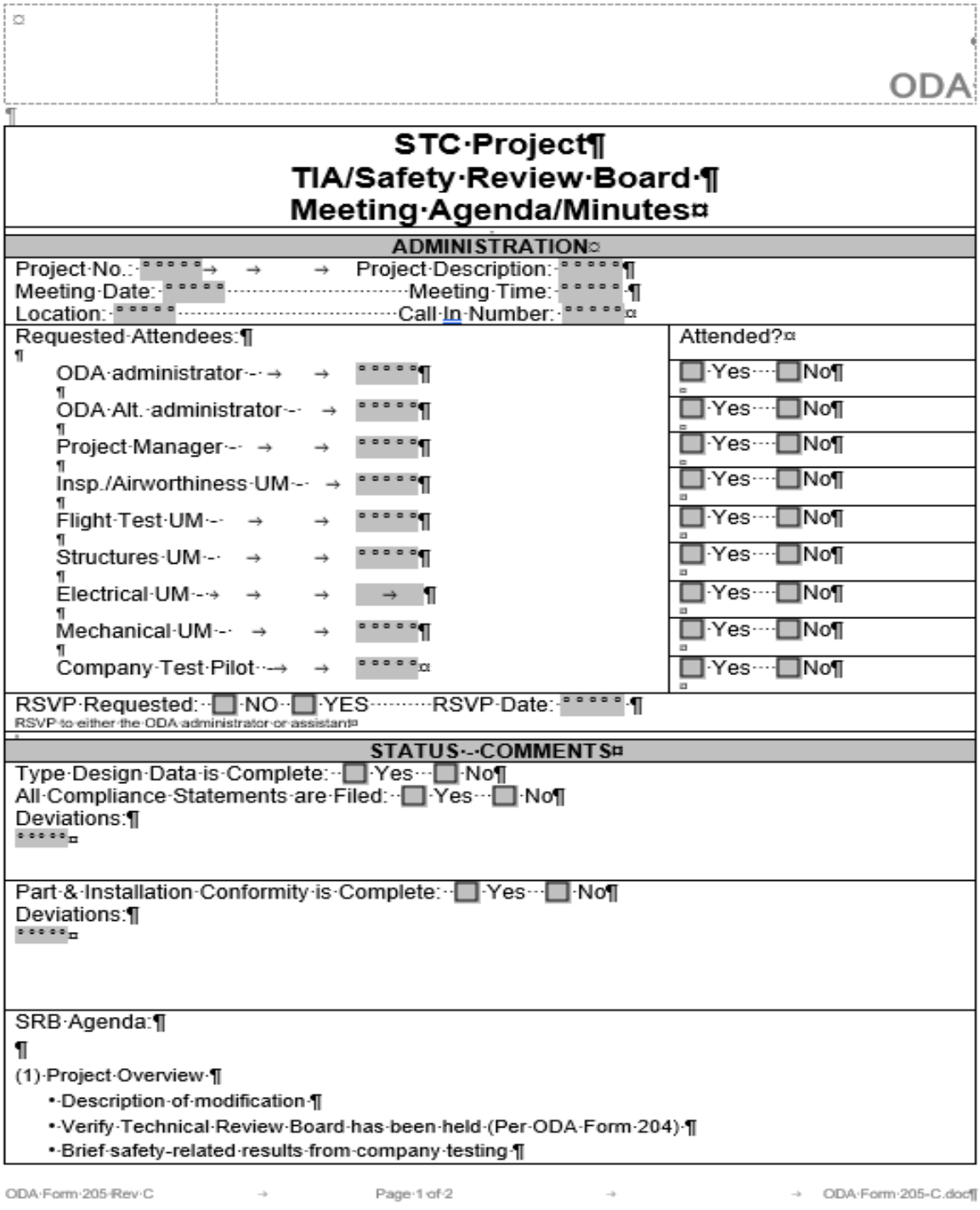
Attended - Mark meeting attendance status.

RSVP Requested - Self explanatory

STATUS-COMMENTS - Meeting minutes only, record discussion on each of the topics.

ACTION ITEMS - Self explanatory

Form Example (Reduced size)



ODA

STC·Project¶
TIA/Safety·Review·Board·¶
Meeting·Agenda/Minutes¤

ADMINISTRATION¤

Project·No.:·°°°°°→ → → Project·Description:·°°°°°¶
Meeting·Date:·°°°°°·····Meeting·Time:·°°°°°·¶
Location:·°°°°°·····Call·In·Number:·°°°°°¤

Requested·Attendees:¶	Attended?¤
ODA·administrator·-·→ → °°°°°¶	☐·Yes····☐·No¶
ODA·Alt.·administrator·-· → °°°°°¶	☐·Yes····☐·No¶
Project·Manager·-· → → °°°°°¶	☐·Yes····☐·No¶
Insp./Airworthiness·UM·-· → °°°°°¶	☐·Yes····☐·No¶
Flight·Test·UM·-· → → °°°°°¶	☐·Yes····☐·No¶
Structures·UM·-· → → °°°°°¶	☐·Yes····☐·No¶
Electrical·UM·-·→ → → → ¶	☐·Yes····☐·No¶
Mechanical·UM·-· → → °°°°°¶	☐·Yes····☐·No¶
Company·Test·Pilot·-·→ → °°°°°¤	☐·Yes····☐·No¶

RSVP·Requested:··☐·NO··☐·YES·····RSVP·Date:·°°°°°·¶
RSVP·to·either·the·ODA·administrator·or·assistant¤

STATUS·-·COMMENTS¤

Type·Design·Data·is·Complete:··☐·Yes···☐·No¶
All·Compliance·Statements·are·Filed:··☐·Yes···☐·No¶
Deviations:¶
°°°°°¤

Part·&·Installation·Conformity·is·Complete:··☐·Yes···☐·No¶
Deviations:¶
°°°°°¤

SRB·Agenda:¶
¶
(1)·Project·Overview·¶
- Description·of·modification·¶
- Verify·Technical·Review·Board·has·been·held·(Per·ODA·Form·204)·¶
- Brief·safety-related·results·from·company·testing·¶

ODA·Form·205·Rev·C → Page·1·of·2 → → ODA·Form·205-C.doc¶

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(2) Test Plan Review
- Purpose and Objectives
- Method of Test
- Test limitations
- Limitations from baseline design (if applicable)
- Changes from baseline design (if applicable)
- Success Criteria
- Go / No-Go Criteria (instrumentation, test support requirements, etc.)
- Schedule

(3) Test Article
- Configuration, especially as related to test hazards such as control rigging
- Review any Open Problem Reports (OPR) related to system software and airborne electronic hardware (AEH).

(4) Safety Review
- Risk Assessment (Per ODA Form 400)
- Test Hazard Analysis Review (Medium and High Risk per Flight Test Plan Worksheets)

(5) Safety Equipment availability and applicability to the test/environment

(6) Review of decisions and actions. ODA Form 205 will be generated and placed in the project file

TIA Review and Discussion -- Comments:

Review of decisions and actions:

ACTION ITEMS

Completed	Action Item Description	Responsibility	Suspense Date or Prior to Operation
☐ 1			
☐ 2			
☐ 3			
☐ 4			
☐ 5			

ODA Form 206 - Conformity Tracking Log

Instructions

Project Number – Insert ODA Project Number

Project Description – Insert Project Description

Comments – Enter any comments pertinent to the Conformity Log

Conformity Log – Self explanatory

Form Example (Reduced size)

S-TEC
ODA

STC Project
Conformity Tracking Log

ADMINISTRATION	
Project No.:	
Project Description:	

COMMENTS
Comments:

CONFORMITY LOG

Completed	Request for Conformity Number	Conformity Inspection Record Number	Completion/Closed Date
☐			
☐			
☐			
☐			
☐			
☐			
☐			
☐			
☐			
☐			
☐			
☐			
☐			
☐			

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ODA Form 208 - STC Project Feasibility/Planning Review

Instructions

This form is to be used as both the meeting announcement with agenda and record of the meeting attendees and minutes.

Project No. - Self explanatory

Project Description - Self explanatory

Meeting Date - Announcement - Enter the planned meeting date.
Minutes - Enter the actual meeting date.

Meeting Time - Announcement - Enter the planned meeting time.
Minutes - Enter the actual meeting time.

Location - Announcement - Enter the planned meeting location.
Minutes - Enter the actual meeting location.

Call in Number - Enter the telephone number to use for those at remote locations.

Requested Attendees - Enter the names of the requested meeting attendees.

Attended - Mark meeting attendance status.

RSVP Requested - Self explanatory

STATUS-COMMENTS - Meeting minutes only, record discussion on each of the topics.

ACTION ITEMS - Self explanatory

Form Example (Reduced size)

STC Project Feasibility/Planning Review

ADMINISTRATION

Project No.:
Meeting Date: Meeting Time:
Location: Call In Number:

Requested Attendees:	Attended?
ODA administrator -	☐ Yes ☐ No
ODA Asst. administrator -	☐ Yes ☐ No
Project Manager -	☐ Yes ☐ No
Engineering Manager -	☐ Yes ☐ No
Insp./Airworthiness UM -	☐ Yes ☐ No
Flight Test UM -	☐ Yes ☐ No
Structures UM -	☐ Yes ☐ No
Electrical UM -	☐ Yes ☐ No
Mechanical UM	☐ Yes ☐ No
Flight Ops Manager -	☐ Yes ☐ No

RSVP Requested: ☐ NO ☐ YES RSVP Date:
RSVP to either the ODA administrator or assistant

STATUS - COMMENTS

STC Project is: ☐ New ☐ Amendment
Project Description:

Description of Candidate Aircraft:

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Location of Modification Work: ☐ S-TEC ☐ Remote
If Remote provide details and discussion:

Proposed Schedule:

Type Design Documentation Requirements:

Certification Basis and Requirements:

Ground and Flight Test Requirements:

Project Risk Assessment:

ACTION ITEMS

Completed	Action Item Description	Responsibility	Suspense Date or Prior to Operation
☐ 1			
☐ 2			
☐ 3			
☐ 4			
☐ 5			
☐ 6			

S-TEC
ODA

☐ 7			
☐ 8			
☐ 9			
☐ 10			

ODA Form 209 - STC Project Off-site Facility Evaluation

Instructions

ODA Project Number - Insert ODA Project Number

Aircraft Make - Insert Make of Aircraft

ODA STC No. - Insert ODA STC No.

Model Aircraft - Insert Model of Aircraft

Project Description - Insert Project Description

Facility Information - Insert Facility Information

Complete Evaluation check list

Obtain Approval Signatures

Form Example (Reduced size)

STC Project
Off-Site Evaluation

ODA Project No.:	Aircraft Make:
ODA STC No.:	Aircraft Model:
Project Description:	

FACILITY INFORMATION

This Facility is: ☐ New - Not Previously Evaluated
☐ Previously Evaluated and Approved
☐ Previously Evaluated and Not Approved

Facility Certification No.:

Facility Name:
Address:
City: State: Zip:
Main Phone: FAX:

Contacts	Name	Phone or Email
General Manager		
Project Manager		
Quality Assurance		
Production		
Purchasing		

Quality Manual Document No.: Rev.: Date:

APPROVALS

Off-site Representative:	Title:	Date:
Evaluated By:	☐ Approved ☐ Not Approved	Date:
Reviewed By:	☐ Approved ☐ Not Approved	Date:
ODA administrator Concurrence:	☐ Approved ☐ Not Approved	Date:
Comments:		

EVALUATION	
Off-site facilities have experience performing similar types of alterations on the make/model product being altered.	
☐ Yes ☐ No	Comments:
Decisions regarding workmanship, quality, conformity, deviations, and safety are made without undue influence or pressure.	
☐ Yes ☐ No	Comments:
Off-site personnel have been briefed on proper compliance with the ODA Procedures Manual and the use of forms identified in the ODA Procedures Manual. (List in the Comments the Off-site person(s) who will be responsible for ODA Procedures compliance.)	
☐ Yes ☐ No	Comments:
Off-site personnel have been briefed and fully understand that the Off-site facility will be responsible for all company installation work, inspection, and return to service functions associated with the project.	
☐ Yes ☐ No	Comments:
The Off-site facility has the qualified personnel capable of producing articles and products conforming to the Type Design. (Review resume's of a random sample of both production and quality inspection people to be associated with the project.)	
☐ Yes ☐ No	Comments:
Review and ensure the Off-site facilities fabrication and installation record forms meet the requirements of FAA Order 8110.4 Chapter 5 for inspection record.	
☐ Yes ☐ No	Comments:
Suitable office space is available for ODA inspection and engineering unit member(s) during the installation operations of the project.	
☐ Yes ☐ No	Comments:

FAA and ODA unit members shall have full access to any Off-site facilities utilized in the performance of the project to perform any required inspection of products or processes used on the project.	
☐ Yes ☐ No	Comments:
The type of processes, tooling, and equipment available at the Off-site facility are appropriate for the project.	
☐ Yes ☐ No	Comments:
The Off-site tooling and equipment requiring calibration are properly maintained and in calibration cycle. (Review the Quality Control manual and verify acceptable practices for tool control and calibration. Perform a spot check of a calibrated or special tool which would be required to perform a function on the project.)	
☐ Yes ☐ No	Comments:
Purchase orders/contracts provide sufficient detailed information, design data, inspection, tests, and FAA requirements to ensure articles or services purchased meet the requirements of the Type Design data.	
☐ Yes ☐ No	Comments:
Purchase orders/contracts for materials, parts, and processes stipulate that deviations or substitutions are not acceptable without ODA unit review and approval by an appropriate delegated ODA unit member.	
☐ Yes ☐ No	Comments:
Off-site personnel have been briefed and fully understand that the Off-site facility is responsible for conformity to the Type Design of processes and raw materials provided by the vendor/supplier and must not be accepted solely after reviewing a certificate of conformance from the supplier.	
☐ Yes ☐ No	Comments:

Off-site personnel have been briefed and fully understand that the ODA unit shall approve all project vendors/suppliers the Off-site facility will receive articles and parts for the project only from those approved by the ODA unit.	
☐ Yes ☐ No	Comments:
Suppliers/vendors to the Off-site facility have been briefed and formally advised of their requirements for completion of the project.	
☐ Yes ☐ No	Comments:
Off-site personnel have been briefed of the entire project expectations/requirements and schedule and have agreed to complete the project under the direct guidance of the ODA unit.	
☐ Yes ☐ No	Comments:

ODA Form 210 - STC Project Statement of Final Review

Instructions

Make and Model - Insert Make and Model

Project Description - Insert Project Description

ODA Project Number - Insert ODA Project Number

Acquire a PDF copy of ICA, AFMS/RFMS and proposed STC

Send an email of PDF copies along with ODA Form 210 to each Discipline to review and acquire his/her signature

Submit to the ODA administrator for Final Signature

Form Example (Reduced size)

STATEMENT OF FINAL REVIEW FOR CERTIFICATION

1. AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION

MAKE/MODEL NUMBER	PROJECT DESCRIPTION	ODA PROJECT NUMBER

2. I CERTIFY THAT A FINAL REVIEW OF THE DATA (Including a review of the ICA, AFMS, proposed STC wording, AND A VISUAL INSPECTION OF THE AIRCRAFT RELATED TO MY DISCIPLINE HAS BEEN COMPLETED (IF APPLICABLE) AND ACCORDINGLY I FIND THEM IN COMPLIANCE WITH ALL APPLICABLE FEDERAL AVIATION REGULATIONS:

ODA TITLE	SIGNATURE	DATE
ODA Systems and Equipment Unit Member (Mech)		
ODA Systems and Equipment Unit Member (Elec)		
ODA Structures Unit Member		
ODA Powerplant Unit Member		
ODA Flight Test Pilot Unit Member		

3. I CERTIFY THAT A FINAL REVIEW OF THE DATA RELATED TO MY DISCIPLINE HAS BEEN COMPLETED AND ACCORDINGLY I FIND THEM IN CONFORMITY WITH THE APPROVED DATA :

ODA TITLE	SIGNATURE	DATE
ODA Inspection Unit Member		

4. I CERTIFY THAT THE ABOVE UNIT MEMBER STATEMENTS ARE TRUE:

ODA TITLE	SIGNATURE	DATE
ODA administrator		

ODA Form 210 Rev A ODA Form 210-.doc

ODA Form 211 – Airplane or Rotorcraft Flight Manual Supplement

Instructions

Make and Model - Insert Make and Model

System Details - Insert applicable details in each section following format shown.

ODA administrator - Insert ODA administrator name and ODA number.

Submit to the ODA administrator for Final Signature

Form Example (Reduced size)

S-TEC¶
¶

- **AIRPLANE·(or·ROTORCRAFT)·FLIGHT·MANUAL·SUPPLEMENT¶**
- **FOR·THE·¶**
- **[INSERT·SYSTEM]¶**
- **INSTALLED·ON¶**
- **MODEL·¶**

¶

REPORT:·ST-XXX-M-0001¶
¶
¶
Reg.·No.:·_____¶
¶
·Ser.·No.:·_____¶

¶
This·supplement·must·be·attached·to·the·latest·XXXXX·Model·XXX·Pilot's·Operating·Manual·and·FAA·Approved·Airplane·(or·Rotorcraft)·Flight·Manual·when·the·S-TEC·XXX·is·installed·in·accordance·with·STC·XXXX·dated·XX-XX-XX.¶
¶
The·information·contained·in·this·document·supplements·or·supersedes·the·basic·manual·only·in·those·areas·listed.·For·limitations,·procedures·and·performance·information·not·contained·in·this·supplement,·consult·the·basic·airplane·(or·rotorcraft)·flight·manual.¶
¶
¶
¶
_____→ → _____¶
Manager,·Flight·Test·&·Human·Factors·Branch,·AIR-710 → → Approved·Date¶
Federal·Aviation·Administration¶
¶
¶
Dated:·XX-XX-XX¶
Revision·X·Date:·XX-XX-XX¶
¶
¶Section Break (Next Page)

AFMS·(or·RFMS)·for·a·XXX·in·a·XXX·Model·XXX → Page·2·of·11¶

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REVISION·PAGE¶

¶

REV.·NO.¤	¶ FAA·APPROVAL¤	¶ SUMMARY·DESCRIPTION¤
-¤	[Name]¶ Lead·ODA·administrator¶ ODA-700096-SW¶ [Date]¤	Initial·Release¶ ¶ ¶ ¶ ¤
¤	¤	¤
¤	¤	¤

¶

¶

Page Break

AFMS·(or·RFMS)·for·a·XXX·in·a·XXX·Model·XXX → Page·3·of·11¶

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SECTION·I:·GENERAL¶

¶

This·supplement·is·to·acquaint·the·pilot·with·the·features·and·functions·of·the·[insert·system]·and·to·provide·operating·instructions·for·the·system·when·installed·in·the·models·listed·in·this·supplement.··The·aircraft·(or·rotorcraft)·must·be·operated·within·the·limitations·herein·provided·when·the·autopilot·is·in·use.¶

¶

SECTION·II:·LIMITATIONS¶

¶

1. → The·[insert·pilot's·operating·handbook,·part·number·and·date]·or·later·must·be·carried·in·the·aircraft·(or·rotorcraft)·and·be·available·to·the·pilot·while·in·flight.¶

¶

2. → Autopilot·and·Yaw·Damper·operation·prohibited·above·245·KIAS·up·to·21,300·ft.··Above·21,300·ft.,·autopilot·and·yaw·damper·operation·is·limited·to·.55·MACH.¶

¶

CAUTION¶

¶

The·autopilot·IAS·mode·does·not·automatically·limit·the·airspeed·to·.55·MACH·when·above·21,300·ft.··The·pilot·should·closely·monitor·airspeed·at·all·times·when·using·IAS·and·other·pitch·modes·of·operation·to·avoid·exceeding·aircraft·limit·speeds.¶

¶

3. → Autopilot·coupled·missed·approach·maneuver·not·authorized·until·the·aircraft·is·in·a·stabilized·climb·with·gear·and·flaps·retracted.¶

CAUTION¶

¶

The·aircraft·may·exhibit·some·oscillations·at·high·power·and·the·flaps·not·retracted.·The·pilot·should·reduce·power·and/or·retract·flaps·if·this·condition·is·encountered.¶

¶

4. → The·autopilot·and·yaw·damper·must·be·disengaged·from·the·aircraft·controls·for·takeoff·and·landing.¶

¶

5. → Approved·for·Category·I·ILS·and·non-precision·approach·operations.¶

¶

6. → Approved·for·WAAS·lateral·and·vertical·approaches·with·the·appropriate·navigation·equipment.¶

¶

7. → Autopilot·use·prohibited·below·200'·AGL·during·coupled·approach·operations.¶

¶

SECTION·III:·EMERGENCY·PROCEDURES¶

¶

AUTOPILOT¶

¶

In·the·event·of·an·autopilot·malfunction,·or·anytime·the·autopilot·is·not·performing·as·expected·or·commanded;¶

¶

1. → Aircraft·Control----------→----------MAINTAIN¶
(Manually·control·aircraft·attitude·by·overpowering·the·autopilot)¶

¶

2. → Autopilot·----------→----------DISC¶
(Press·the·red·AP·DISC/TRIM·INTR·button·on·the·control·wheel)¶

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DATE:·¶
REVISION·X·DATE:¶

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¶

3. → AP·Master·Switch ---------- → ---------- OFF¶

¶

4. → AP·Circuit·Breaker·(Co-pilot's·CB·panel) ---------- → ---------- PULL¶

¶

NOTE¶

¶

Do·not·reengage·the·autopilot·until·the·problem·has·been·identified·and·corrected.¶

¶

CAUTION¶

¶

The·autopilot·will·disconnect·and·the·aural·autopilot·disconnect·alert·will·sound·when·the·stall·warning·is·activated.··¶

¶

Bank·angle·and·Altitude·loss·during·a·malfunction·and·recovery:¶

¶

1. → The·following·altitude·losses·were·recorded·after·a·malfunction·with·a·3·second·recovery·delay:¶

¶

Configuration →	Altitude·Loss¶
Climb →	-100'¶
Cruise →	-220'¶
Descent →	-250'¶
Single·Engine·Cruise →	-200'¶

¶

2. → The·following·altitude·losses·were·recorded·after·a·malfunction·with·a·1·second·recognition·delay:¶

¶

Configuration →	Altitude·Loss¶
Maneuvering →	-100'¶
Approach·(Coupled·or·Uncoupled) →	-80'¶
Single·Engine·Approach →	-80'¶

¶

Single·Engine·Operations·–·Autopilot·Mode:¶

¶

Engine·failure·during·an·autopilot·approach·operation:··¶

¶

1. → Autopilot → DISC·(if·required)¶

→ (Conduct·remainder·of·approach·manually·if·required)¶

¶

CAUTION¶

¶

During·a·sudden·engine·failure·at·low·speed,·(below·115·KIAS),·the·autopilot·may·be·unable·to·maintain·attitude·and·heading.·The·pilot·must·take·immediate·action·to·overpower·the·autopilot,·disconnect·the·autopilot,·and·deal·with·the·engine·failure.·Once·the·propeller·is·feathered·and·aircraft·trimmed·for·the·engine·out·condition,·the·autopilot·can·be·re-engaged.·The·pilot·should·be·alert·for·sluggish·autopilot·operation·and·revert·to·manual·control·of·the·aircraft·if·the·autopilot·does·not·perform·as·expected.¶

¶

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Engine·failure·during·normal·climb,·cruise,·and·descent:··¶

¶

CAUTION¶

¶

During·a·sudden·engine·failure·at·high·power,·the·autopilot·will·be·unable·to·maintain·attitude·and·heading.·The·pilot·must·take·immediate·action·to·overpower·the·autopilot,·disconnect·the·autopilot,·and·deal·with·the·engine·failure.·Once·the·propeller·is·feathered·and·aircraft·trimmed·for·the·engine·out·condition,·the·autopilot·can·be·re-engaged.·The·pilot·should·be·alert·for·sluggish·autopilot·operation·and·revert·to·manual·control·of·the·aircraft·if·the·autopilot·does·not·perform·as·expected.¶

¶

1. → AP----------→----------DISC¶

¶

2. → Aircraft·----------→----------RETRIM¶
(Perform·normal·aircraft·engine·out·procedures)¶

¶

3. → Aircraft·yaw·trim----------→----------ADJUST¶
(Maintain·throughout·all·single·engine·operations)¶

4. → AP----------→---------- RE-ENGAGE¶

¶

TRIM¶

¶

In·the·event·of·a·Trim·Runaway¶

¶

1. → Aircraft·Control----------→----------MAINTAIN¶
(Manually·control·aircraft·by·overpowering·the·trim·servo)¶

¶

2. → Autopilot·disconnect/Trim·Interrupt·switch----------→---------- DEPRESS·AND·HOLD¶
(Pilots·Control·Wheel)¶

¶

3. → Elevator·Trim·ON/OFF·Switch ----------→----------OFF¶

¶

4. → Pitch·Trim·Circuit·Breaker ----------→----------PULL¶

¶

5. → Manual·Trim----------→---------- RETRIM·AS·REQUIRED¶

¶

NOTE¶

¶

Yaw·Damper·malfunction·during·climb,·cruise·or·descent·with·a·three·second·delay·in·recovery·initiation·could·result·in·14°·of·yaw·and·35°·bank·and·100·ft.·altitude·loss.¶

¶

In·the·event·of·a·Yaw·Damper·System·failure:¶

¶

1. → Aircraft·control----------→----------MAINTAIN¶
(Manually·control·aircraft·attitude·by·overpowering·trim·servo)¶

¶

2. → Autopilot·Disconnect·Switch·----------→---------- PRESS¶
(Pilot's·Control·Wheel)¶

¶

3. → Rudder·Trim----------→---------- RETRIM·AS·REQUIRED¶

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¶

NOTE¶

Reengage·the·autopilot.··If·the·Yaw·Damper·problem·persists,·deselect·the·Yaw·Damper·by·pressing·the·YD·Button·on·the·Autopilot.··This·will·allow·the·pilot·to·use·all·A/P·functions·except·the·Yaw·Damper.¶

¶

SECTION·IV:··NORMAL·PROCEDURES¶

¶

This·section·contains·preflight·procedures·for·the·autopilot,·trim·and·yaw·damper·systems.··For·detailed·normal·operating·procedures,·including·system·description,·pre-flight·and·in-flight·procedures·refer·to·the·Intelliflight·2100·Pilot's·Operating·Handbook·(POH)·(P/N·87251),·dated·9-30-07·or·later.¶

¶

AUTOPILOT· SYSTEM·PRE-FLIGHT· PROCEDURES¶

¶

NOTE¶

¶

Full·system·voltage·is·required·for·this·test,·either·by·running·the·aircraft·engine·or·by·using·a·suitable·A.P.U.¶

¶

NOTE¶

During·the·ADAHRS·initialization·period·the·aircraft·must·not·be·moved·for·three·minutes,·minimum.¶

¶

1. → Avionics·Master·Switch ---------- ON¶

¶

2. → Trim·Master·Switch ---------- ON¶

¶

3. → Autopilot·Self·Test ---------- COMPLETE¶

¶

4. → ADAHRS·INITIALIZATION ---------- COMPLETE·¶
("A/P·READY"·is·displayed)¶

¶

NOTE¶

If·the·system·fails·to·initialize·it·will·annunciate·"A/P·FAIL"·and·not·allow·any·mode·to·function.··If·the·ADAHRS·system·malfunctions·it·will·annunciate·"ATTITUDE· FAIL"·and·not·allow·any·mode·to·function.¶

¶

5. → A/P·BUTTON ---------- PRESS¶
(A/P,·FD,·YD·indicators·illuminate·and·servos·engage.··Roll·and·Pitch·annunciate.··Steering·bars·appear·on·PFD)¶

¶

6. → HDG·(on·AP)---------- ENGAGE¶

¶

7. → PFD·HDG·BUG ---------- PRESS·HDG·(··SYNCH·KNOB¶
(HDG·Bug·moves·to·center)¶

¶

8. → Hdg·(··Synch·Knob·(on·PFD)---------- MOVE·HDG·BUG·LEFT·AND·RIGHT¶
(Aileron·control·and·Steering·bars·should·follow·HDG·bug)¶

¶

9. → IAS·BUTTON· ---------- PRESS¶

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(IAS·indicates·"110")¶

¶

10. → Rocker·Switch----------→---------- PRESS·AND·HOLD·UP¶
(IAS·number·increases)¶

¶

11. → Rocker·Switch·----------→----------PRESS·AND·HOLD·DN·BUTTON¶
(IAS·number·decreases)¶

¶

12. → VS·BUTTON ----------→----------Press·VS·¶
(Indicates·"0")¶

¶

13. → Rocker·Switch·----------→----------PRESS·UP·BUTTON· UNTIL· +500·IS·DISPLAYED¶
(Steering·Bar· moves·up·and·pitch·control·moves·slowly·aft-·pilot·may·have·to·assist·a·heavy·yoke)¶

¶

14. → Rocker·Switch·----------→----------PRESS·DN·BUTTON· UNTIL· -500·IS·DISPLAYED¶
(Steering·bar·moves·down·and·pitch·control·moves·slowly·in·(forward))¶

¶

15. → ALT·BUTTON ----------→---------- PRESS¶
(ALT·HOLD· is·displayed)¶

¶

16. → Pitch·control·----------→----------SLOWLY·PULL·AFT¶
(Autotrim·runs·nose·down·after·3·sec.·and·trim-in-motion·is·displayed·and·voice·annunciated)··¶

¶

17. → Pitch·control·----------→---------- SLOWLY·PUSH·FORWARD¶
(Trim·runs·nose·up·after·3·sec.·and·"Trim-In-Motion"· is·displayed·and·voice·annunciated)¶

¶

18. → PFD·ALTIMETER----------→----------SET·ALTITUDE· TO·FIELD·ELEVATION.· ¶

¶

19. → VS·mode· ----------→----------SELECT¶

¶

20. → Altitude·selector·knobs·(on·AP)----→---- SELECT·AN·ALTITUDE· 100'· BELOW·FIELD·ELEVATION¶

¶

21. → BARO·knob·(on·PFD)----------→---------- SLOWLY·REDUCE·ALTITUDE¶
(Match·altitude·that·selected·on·the·A/P·altitude·selector.·A/P·should·display·"Altitude·Hold"·when·the·two·altitudes·match.)¶

¶

22. → CWS·BUTTON----------→----------PRESS·AND·HOLD.¶
(All·servos·disengage·and·controls·are·free.·CWS· annunciator·is·displayed)¶

¶

23. → CWS·BUTTON·----------→---------- RELEASE·CWS·BUTTON.¶
(Servos·reengage)¶

¶

24. → YAW·DAMPER----------→----------ENGAGE.¶

¶

25. → Yaw·trim·knob·----------→---------- ROTATE·CW¶
(Right·rudder·pedal·moves·slowly·forward)¶

¶

26. → Yaw·trim·knob·----------→----------ROTATE·CCW¶
(Left·rudder·pedal·moves·slowly·forward)¶

¶

27. → Yaw·trim·knob·----------→----------RE-CENTER¶

¶

28. → DISC·switch----------→---------- PRESS¶

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(All·A/P·modes·disconnect·followed·by·aural·tone·and·voice·annunciation)¶

¶

29. → GO·AROUND·BUTTON ----------→---------- PRESS¶
(FD·mode·illuminates.·Roll·and·Pitch·annunciate·and·pitch·steering·bar·moves·to·8°·up·position)¶

¶

MANUAL·ELECTRIC· TRIM· TEST¶

¶

1. → TRIM·MASTER·SWITCH ----------→---------- VERIFY·ON¶

¶

2. → Trim·switch ----------→---------- MOVE·EACH·SEGMENT·FORE·AND·AFT¶
(Trim· should·not·run)¶

¶

3. → Trim·switch ----------→---------- MOVE·BOTH·SEGMENTS·FORWARD¶
(Trim· should·run·nose·down.)¶

¶

4. → Trim·switch ----------→---------- MOVE·BOTH·SEGMENTS·AFT¶
(Trim· should·run·nose·up)¶

¶

5. → DISC/TRIM·INTR·SWITCH ----------→---------- PRESS·AND·HOLD·WHILE· TRIM· IS·RUNNING¶
(Trim· motion·should·stop)¶

¶

6. → DISC/TRIM·INTR·SWITCH· ----------→---------- RELEASE·¶
(Trim· motion·should·resume)¶

¶

NOTE¶

¶

If·either·the·manual· electric·trim·or·Autotrim·fails·any·portion·of·the·preflight·test,· turn·the·Elevator·Trim· master·switch·off.··DO·NOT·USE·THE·ELECTRIC· TRIM· UNTIL· THE· FAULT· IS· CORRECTED.··With· elevator·trim·switch·off,·the·autopilot· trim·UP/DN·indicators·and·audio·warning· are·activated.··If·the·electric·trim·fails,· or·has·an·in-flight·power·failure,·the·system·automatically·reverts·to·an·out-of-trim·annunciation·and·audio·warning.·Should·this·occur,·turn·the·elevator·trim· master·switch·off,·and·revert·to·manual·aircraft·trim·until·the·fault·is·corrected.·¶

¶

NOTE¶

¶

BEFORE·FLIGHT,· VERIFY·THAT· THE·AUTOPILOT· IS·DISENGAGED·AND·ALL· TRIM·SYSTEMS·ARE·SET·FOR·TAKEOFF.¶

¶

AUTOPILOT· SYSTEM·FLIGHT· PROCEDURES¶

¶

For·detailed·normal·operating·procedures·including·in-flight·procedures,·refer·to·the··IntelliFight·2100·Pilot's· Operating·Handbook·P/N·87251·dated·9-30-07· or·later.·The· following·modes·and·procedures·presented· below·are·provided·for·clarity·and/or·increased·emphasis·in·addition·to·the·information·provided·in·the· Intelliflight·2100·Pilot's·Operating·Handbook.¶

¶

WAAS·APPROACHES¶

¶

With·the·introduction·of·the·WAAS·GPS·capability,·specifically·the·Garmin·400W/500W· series·of·GPS· Navigation·Radios,·the·pilot·has·additional·capability·available·for·approaches.·The·S-TEC·01304·DFCS· mod·L·has·been·modified·to·utilize·this·capability.¶

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¶

LNAV·APPROACHES¶

¶

There·is·little·difference·in·flying·a·LNAV·approach·(lateral·guidance·only)·with·the·WAAS·capable·GPS·than·there·is·with·a·non-·WAAS·capable·unit.·The·pilot·can·conduct·the·approach·in·either·NAVGPSS·or·APRGPSS.·The·WAAS·capable·GPS·will·have·approach·procedures,·procedure·turns·(if·appropriate),·and·missed·approach·procedures·that·the·autopilot·will·fly·in·NAVGPSS/APRGPSS·mode·with·little·or·no·pilot·intervention.·Vertical·maneuvering·is·the·responsibility·of·the·pilot.·It·is·highly·recommended·(and·the·Limitations·state)·that·the·autopilot·be·disconnected·at·the·go-around·point.·¶

¶

ILS·OR·WAAS·VERTICAL· APPROACHES¶

¶

With·the·introduction·of·the·WAAS·capable·GPS·units,·some·nomenclature· changes·have·been·incorporated·into·the·autopilot.·For·the·ILS·approaches,·the·pilot·will·see·APR·and·GS·displayed·on·the·autopilot·when·the·aircraft·is·on·the·LOC·and·on·Glideslope.·The·pilot·will·see·GPSL·(GPS·Lateral)· and·GPSV·(GPS·Vertical)·displayed·on·the·autopilot·when·on·the·inbound·course·and·on·the·Glidepath·for·the·WAAS·approach.·The·APRGPSS·mode·is·used·to·initiate·the·WAAS·vertical·approach.·¶

¶

To·arm·the·automatic·glideslope·(GS)·or·glidepath·(GPSV)·capture·function·the·following·conditions·must·be·met:¶

¶

1. → NAV·or·GPS·receiver·must·be·tuned·to·the·appropriate·localizer·frequency·or·an·approved·LPV,·LNAV/VNAV,·or·LNAV+V·GPS·WAAS·approach·is·loaded.¶

¶

2. → Glideslope·signal·must·be·valid·for·the·ILS·approach—·no·flag.¶

¶

3. → Autopilot·must·be·in·APR·(ILS)· or·APRGPSS·(WAAS)· and·any·appropriate·pitch·modes·(PITCH,·VS,·IAS,·or·ALT).¶

¶

4. → Aircraft·must·be·full·scale·deflection·up·to·approximately·½·dot·below·the·GS·centerline,·for·2·seconds·and·within·one·dot·of·the·localizer·centerline· for·automatic·arming·to·occur.¶

¶

Glideslope/Glidepath·arming·will·occur·when·the·above·conditions·have·existed·for·2·seconds.··GS/GPSV·will·be·displayed·in·the·armed·position·(below·the·engaged·pitch·mode).·GS/GPSV·will·be·displayed·in·the·upper·pitch·mode·window·at·Glideslope/Glidepath·capture.·¶

¶

Approach·the·Glideslope/Glidepath·with·the·flaps·set·to·approach·at·approximately·130·KIAS.·At·the·Glideslope/Glidepath·intercept,·lower·the·landing·gear·and·adjust·power·for·desired·descent·speed.·If·in·a·descent·for·the·GS/GPSV,·the·pilot·may·want·the·landing·gear·extended·prior·to·GS/GPSV·interception.¶

¶

Once·on·the·Glideslope/Glidepath,·the·pilot·should·make·power·adjustments·in·small,·smooth·increments·for·best·tracking·results.·At·the·missed·approach·point·or·the·decision·height,·disconnect·the·autopilot·for·landing·or·for·go-around.¶

¶

NOTE¶

¶

If,·during·the·approach,·the·aircraft·goes·off·LOC/GPSL·centerline·by·one·dot·(50%),·the·autopilot·may·re-enter·capture·mode·and·aggressively·maneuver·to·recapture·the·centerline.·Bank·angles·of·up·to·30°·can·be·expected.·If·the·pilot·is·uncomfortable·with·this·maneuvering,·it·is·suggested·that·the·autopilot·be·disconnected·with·the·DISC/TRIM·INTR· or·TRIM· switch·(both·actions·leave·up·the·FD)·and·the·pilot·manually·fly·the·approach.¶

¶

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¶

GO-AROUND·MODE¶

¶

If·a·missed·approach·is·required,·the·pilot·may·press·the·Go-Around·button,·which·will·engage·the·Flight·Director·in·the·Go-Around·mode.··The·Pilot·can·then·hand·fly·the·aircraft·with·reference·to·the·steering·bars·or·the·autopilot·may·be·reengaged·after·the·aircraft·has·been·reconfigured·for·and·established·in·a·stabilized·climb.·With·WAAS·capable·radios,·the·use·of·NAVGPSS·or·APRGPSS·will·allow·the·autopilot·to·laterally·fly·the·missed·approach.·Vertical·maneuvering·(climb·rates·and·level-off·altitudes)·are·the·responsibility·of·the·pilot.¶

¶

SELECTING·MISSED·APPROACH·ALTITUDE¶

¶

When·conducting·an·ILS·approach·the·pilot·can·program·the·missed·approach·altitude·into·the·altitude·selector·once·established·on·the·final·approach·altitude·and·before·glide·slope·capture.··Simply·dial·in·the·missed·approach·altitude.··At·glide·slope·capture·the·displayed·altitude·will·be·replaced·with·dashes·and·cannot·be·adjusted·during·the·approach.··At·the·missed·approach·point·press·the·GO-AROUND·button·that·will·disengage·the·autopilot·and·engage·the·Flight·Director·in·ROLL·and·PITCH·modes,·and·configure·the·aircraft·for·the·go-around.··Next,·press·the·Altitude·Selector·center·knob·once,·which·will·bring·up·the·preset·missed·approach·altitude.··The·pilot·should·fly·the·aircraft·by·reference·to·the·steering·command·bars.··The·autopilot·may·be·engaged·by·pressing·the·A/P·button·when·a·safe·altitude·has·been·reached.¶

¶

YAW·TRIM¶

¶

The·aircraft·is·equipped·with·an·autopilot·yaw·trim/damper.·When·the·autopilot·is·engaged,·the·yaw·trim/damper·automatically·begins·to·damp·yaw·motions·of·the·aircraft.·The·yaw·trim/damper·attempts·to·maintain·a·ball·centered·trim·for·all·conditions·of·flight.·However·on·aircraft·that·have·different·yaw·trim·requirements·with·speed·and·power·changes,·the·yaw·trim/damper·may·run·out·of·authority.¶

¶

If·the·ball·is·not·centered,·the·pilot·can·adjust·the·yaw·trim·with·the·Yaw·Trim·Knob.·The·normal·position·for·the·Yaw·Trim·Knob·is·with·the·line·vertical.·Slowly·turning·the·knob·in·the·direction·of·the·displaced·ball·(left·displaced·ball-turn·CCW)·will·normally·correct·the·problem.¶

¶

If·the·Yaw·Trim·Knob·is·full·left·or·right,·the·pilot·needs·to·disengage·YD·and·retrim·the·aircraft·with·the·aircraft·rudder·trim.··The·pilot·should·return·the·autopilot·Yaw·Trim·Knob·to·the·vertical·position·and·re-engage·the·autopilot.¶

¶

SECTION·V:··PERFORMANCE¶

¶

No·change·to·the·basic·manual¶

¶

SECTION·VI:··WEIGHT·AND·BALANCE¶

¶

No·change·to·the·basic·manual¶

¶

SECTION·VII:··SYSTEM·DESCRIPTION¶

¶

The·**S-TEC·2100·Autopilot**·(PN·1304-07-01-011)·is·a·three-axis·attitude·based·Digital·Flight·Control·System·**(DFCS)**·for·aircraft·equipped·with·the·**Avidyne·Primary·Flight·Display·(Entegra·I)**·or·similarly·performing·and·equipped·aircraft.··The·system·provides·roll,·pitch,·and·yaw·modes·with·integrated·altitude·selector·and·alerter·modes.·The·autopilot·utilizes·an·**ADAHRS**·for·attitude·reference.·The·roll·computer·accepts·steering·inputs·from·the·navigation·radios·and·the·**ADAHRS**·system·while·the·pitch·computer·

FAA·APPROVED¶

DATE:·¶

REVISION·X·DATE:¶

receives·signal·inputs·from·the·**ADAHRS**,·accelerometer,·glideslope·deviation·indicator,·vertical·speed·modifier,·airspeed·indicator,·and·altitude·selector·/·alerter.·Sensing·for·trim·annunciation·and·automatic·elevator·trim·is·provided·by·the·pitch·servo.·Drive·for·the·trim·servo·is·provided·by·the·pitch·computer.·The·yaw·damper·provides·yaw·axis·stabilization·by·means·of·a·remote·mounted·sensor·/·amplifier·and·a·rudder·servo.·The·yaw·damper·also·uses·a·separate·panel·mounted·yaw·trim·control·knob.¶

¶

Detailed·description·and·operating·information·may·be·found·in·Intelliflight·2100·Autopilot·Pilot's·Operating·Handbook,·PN·87251·dated·September·30,·2007·or·later·approved·revision.¶

¶

The·following·Switches,·Rheostats,·and·Circuit·Breakers·are·added·when·a·2100·DFCS·is·installed.¶

¶

ITEM¤	AMPERAGE¤	LOCATION¤
AP·MASTER¤	¤	Left·of·Pilot's·PFD¤
TRIM·MASTER¤	¤	Above·Pilot's·PFD¤
AP·CONTROLLER¤	¤	Center·Instrument·Panel¤
YAW·TRIM¤	¤	Above·Pilot's·PFD¤
AP·DISC·TRIM·INTR¤	¤	Control·Yoke¤
CWS¤	¤	Control·Yoke¤
GA¤	¤	Left·Throttle·Handle¤
CMPTR¤	5¤	Co-pilot's·CB·Panel¤
TRIM¤	2¤	Co-pilot's·CB·Panel¤
PILOT·ADAHRS·1A/1B¤	5¤	Co-pilot's·CB·Panel¤
COPILOT'S·ADAHRS·2A/2B¤	5¤	Co-pilot's·CB·Panel¤

¶

¶

SECTION·VIII:·AIRPLANE·HANDLING,·SERVICING,·AND·MAINTENANCE¶

No·Change¶

¶

SECTION·IX:·SUPPLEMENTS¶

¶

No·Change¶

¶

SECTION·X:·OPERATING·TIPS¶

¶

No·Change¶

ODA Form 212 – Instructions for Continued Airworthiness

Instructions

Project Title - Enter a summarization of the project.

Aircraft Make & Model - Self explanatory

ODA Project - Self explanatory

Document No. - Self explanatory

Rev - Self explanatory

Date - Self explanatory

This document template is to be used as a guide for preparation of an ICA. The detail and utilization will be predicated by the modification complexity and type.

S-TEC¶

One·S-TEC·Way¶
Municipal·Airport¶
Mineral·Wells,·TX¶
76067-9236¶
USA¶
Tel:·940/325-9406¶
Fax:·940/325-3904¶
www.s-tec.com¶
¶

Instructions·for·Continued·Airworthiness¶

¶

for·the¶

¶

[insert·system]¶

¶

installed·in¶

¶

[insert·make·and·model(s)]¶

¶

Report·No:·ST-XXX-ICA-0001¶

¶

Revision:·-¶
[insert·date]¶

¶

REVISION·PAGE¶

¶

REV¤	DESCRIPTION¤	RELEASED·BY¤	DATE¤
-¤	Initial·Release¤	¤	¤
¤	¤	¤	¤

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- 1.2 EFFECTIVITY¶
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- 1.4 APPLICABLE REGULATIONS¶
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2.0 → SYSTEM DESCRIPTION¶
(Including control and operation information)¶
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2.1 → ACRONYMS¶
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3.0 → MAINTENANCE INSTRUCTIONS¶
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3.1 → ANNUAL INSPECTION¶
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→ 3.2 → SPECIAL INSPECTION¶
¶
→ 3.3 → REPAIR¶
¶
¶
4.0 → TROUBLESHOOTING INFORMATION¶
¶
¶
5.0 → REMOVAL AND REPLACEMENT INFORMATION¶
¶
¶
→ 5.1 → GENERAL INSTRUCTIONS (if applicable)¶
¶
¶
→ 5.2 → REMOVAL – xxxxx FLIGHT CONTROL COMPUTER, SERVO, ETC.¶
(for each installation)¶
¶
¶
5.3 → INSTALLATION – xxxxx FLIGHT CONTROL COMPUTER, SERVO, ETC.¶
(for each installation)¶
¶

Report: ST-XXX-ICA-0001 → → Page 4 of 6¶
Revision: ¶

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¶
7.0 → RECOMMENDED·OVERHAUL·PERIODS¶
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→ 12.2→ CONTROL·SYSTEM·BALANCING¶
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¶
13 → REVISION·AND·DISTRIBUTION¶
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¶

Page Break

14 → REFERENCE·INSTALLATION·DRAWINGS¶

¶
¶
¶
¶
¶

Note:··Sections·may·be·inserted·as·necessary·to·address·other·maintenance· or·airworthiness· criteria· for·the· specific·system·installation.¶

ODA Form 301 - Airworthiness Condition Checklist

Instructions

For each item listed as an inspection requirement, perform listed inspection and then initial and date in the block to the right of the inspection requirement. Make any notes necessary in the block provided for each inspection requirement.

Form Example (Reduced size)

S-TEC
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Airworthiness Condition Checklist

PROJECT AIRCRAFT DESCRIPTION	
ODA Project No.:	
Inspection Date: Begin: End:	Aircraft Make: Aircraft Model: Aircraft S/N:

INSPECTOR CERTIFICATION	
Inspection ODA unit member Name & Number:	
I certify that I have inspected this aircraft in accordance with FAA Order 8130.2 and S-TEC has completed the condition inspection described below.	Signature: Date:

PRE-INSPECTION		
Inspection Requirement	**Completed (Initial and Date)**	**Notes**
Ensure that all necessary inspection plates, access doors, fairings, and cowlings are removed or opened.		
Determine the status of the existing 100-hour, annual, or phase inspection.		
Determine that all applicable AD's are complied with and that any pending or recurring AD's are addressed.		

CABIN / COCKPIT GROUP		
Inspection Requirement	**Completed (Initial and Date)**	**Notes**
Generally for loose equipment that might foul the controls.		
Seats and safety belts for poor condition and apparent defects.		
Windows and windshields for deterioration and breakage.		
Instruments for poor condition, mounting, marking, and (where practicable) improper operation.		
Flight and engine controls for improper installation and improper operation.		
All systems for poor general condition, apparent and obvious defects, and insecurity of attachment.		

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ENGINE / NACELLE GROUP		
Inspection Requirement	**Completed (Initial and Date)**	**Notes**
Engine section for visual evidence of excessive oil, fuel, or hydraulic leaks, and sources of such leaks.		
Studs and nuts for obvious defects.		
Engine mount for cracks, looseness of mounting, and looseness of engine to mount.		
Engine controls for defects and improper safetying.		
Lines, hoses and clamps for leaks, improper condition, and looseness.		
Accessories for apparent defects in security of mounting.		
All systems for poor general condition, defects, and insecure attachment.		
Cowling for cracks and defects.		
PROPELLER GROUP		
Inspection Requirement	**Completed (Initial and Date)**	**Notes**
Propeller assembly for cracks, nicks, binds, and oil leakage.		
Bolts for lack of safetying.		
Anti-icing devices for obvious defects.		
Control mechanisms for improper operation and insecure mounting		
AVIONICS GROUP		
Inspection Requirement	**Completed (Initial and Date)**	**Notes**
Radio and electronic equipment for insecure mounting.		
Wiring and conduits for improper routing, insecure mounting and obvious defects.		
Bonding and shielding for poor condition.		
Antennas for poor condition and insecure mounting.		
LANDING GEAR GROUP		
Inspection Requirement	**Completed (Initial and Date)**	**Notes**
Inspect the tires for wear and cuts. Inspect the brake assemblies for security and condition of brake linings and disks.		

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ODA

WING GROUP		
Inspection Requirement	**Completed (Initial and Date)**	**Notes**
Inspect components of the wing and center section assembly for poor general condition, fabric or skin deterioration, distortion, evidence of failure, and insecurity of attachment.		

MISC GROUP		
Inspection Requirement	**Completed (Initial and Date)**	**Notes**
Inspect (where applicable) each installed miscellaneous item that is not otherwise covered by this listing for improper installation and improper operation.		

ODA Form 309 - STC Projects Manufacturing Activity Report

Form Example (Reduced size)

STC Project Manufacturing Activity Report

This ODA Manufacturing Activity Report is a requirement of FAA Order 8100.15 and will be submitted to the FAA Manufacturing District Office on a quarterly basis.

SECTION I - MANAGEMENT

Year:	Report No.:
Quarter: ☐ 1 ☐ 2	Prepared By:
☐ 3 ☐ 4	Title:
Date Prepared:	Unit Member ID:

SECTION II - ACTIVITY

Project 1

Project No.:	Reg. No.:
Aircraft Model:	Serial No.:

Activity Codes – See Section III	Qty Issued	Qty of 8100-1 Completed	Qty of 8130-3 Completed	Qty of 8110-26 Completed	Qty of R & D	Qty of Show Compliance
203						
204						
205						
206						

Project 2

Project No.:	Reg. No.:
Aircraft Model:	Serial No.:

Activity Codes – See Section III	Qty Issued	Qty of 8100-1 Completed	Qty of 8130-3 Completed	Qty of 8110-26 Completed	Qty of R & D	Qty of Show Compliance
203						
204						
205						
206						

Project 3						
Project No.:			Reg. No.:			
Aircraft Model:			Serial No.:			
Activity Codes – See Section III	Qty Issued	Qty of 8100-1 Completed	Qty of 8130-3 Completed	Qty of 8110-26 Completed	Qty of R & D	Qty of Show Compliance
203						
204						
205						
206						

Project 4						
Project No.:			Reg. No.:			
Aircraft Model:			Serial No.:			
Activity Codes – See Section III	Qty Issued	Qty of 8100-1 Completed	Qty of 8130-3 Completed	Qty of 8110-26 Completed	Qty of R & D	Qty of Show Compliance
203						
204						
205						
206						

SECTION III – ACTIVITY CODES
203 – Conformity of STC or STC Amendment (Completion of STIR)
204 – Conformity of RFC Form 8120-10 (Completion of 8100-1)
205 – Issuance of FAA Form 8130-7 Special Airworthiness Certificate
206 – Issuance of FAA Form 8100-2 Standard Airworthiness Certificate

ODA Form 310 – Inspection Unit Member Management Report

INSPECTION UNIT MEMBER MANAGEMENT REPORT

Unit Member Name: *(Last, First, MI)*	Unit Member No.	Date:
Company Name: S-TEC Corp.	Authorized Function(s):	
ODA Administrator's Name: *(Last, First)*		

Check Applicable item:	Annual Review_____	Supervision _____	Training _____	Corrective Action _____	Other _____

ITEM	SAT	UNSAT	N/A
1. Verify projects were assigned to Unit Member. *(Enter in the Remarks Section how delegation was verified.)*			
2. Verify Unit Member has all current regulations, associated policies, procedures, FAA forms and revisions thereof required in the performance of their duties.			
3. Verify the Unit Member is actually performing the assigned duties in accordance with the pertinent regulation, related policies and procedures.			
4. Review official documents and paperwork initiated by the Unit Member for any discrepancies.			
5. Verify the Unit Member has been allowed sufficient time to study material relating to assigned duties and prepare reports and forms.			
6. Verify that information furnished Unit Member is adequate to assure inspections of units will satisfy FAA conformity requirements.			
7. Verify quality work is being accomplished by the Unit Member			
8. Verify Unit Member holds a continuous position with sufficient authority to enable them to administer pertinent regulations effectively.			
9. Verify the ODA forms issued to the Unit Member are adequately controlled to prevent use by unauthorized personnel.			
10. Verify the Unit Member is knowledgeable in all delegated areas			
11. Discuss issuance of Standard Airworthiness Certificates in accordance with applicable sections of ODA manual.			
12. Discuss issuance of Special Airworthiness Certificate in accordance with applicable sections of ODA Manual.			
13. Discuss issuance of Restricted Airworthiness Certificate in accordance with applicable section of ODA Manual.			
14. Discuss issuance of Special Flight Permits in accordance with ODA Manual			
15. Discuss issuance of Export Certificates and approvals in accordance with applicable sections of ODA Manual.			
16. Discuss Certification Procedures and review documents in accordance with the applicable FAA Advisory Circular's and FAA Orders.			
17. Verify attendance at FAA Standardization Seminar. Date attended: _____			
18. Validate currency of ODA delegation based on unit member qualifications.			
19. Date scheduled for follow-up action. _____			

Sheet 1

ODA Form 310_A Page 1 of 3 ODA Form 310_A

ODA FORM 310

1. On which systems did you perform software conformity inspections?				
2. What issues did you discover and address during these inspections?				
3. What interaction did you have with the manufacturing inspection district office (MIDO)/ certification management offices (CMO) regarding software conformity inspections?				
4. What unique software issues did you face this year and how did you address and resolve them?				
When attending conformity inspection with the Unit Member, check Good, Fair, Poor, or Not Observed	**GOOD**	**FAIR**	**POOR**	**NOT OBSERVED**
1. Ability to prepare for the software conformity inspection.				
2. Ability to evaluate software product identification and revision marking methods.				
3. Ability to evaluate software products under configuration control.				
4. Ability to evaluate software verification and acceptance tests are properly accomplished.				
5. Ability to evaluate software can be correctly loaded into target computer.				
6. Ability to evaluate software transfer verification.				
7. Ability to evaluate software will properly initialize and execute.				
8. Ability to address issues that arise during the software conformity inspection *(for example, unsuccessful software loading)*.				
9. Other, please specify.				
10. Date scheduled for follow-up action. _____				

Sheet 2

ODA FORM 310 Instructions

INSTRUCTIONS FOR COMPLETING THE UNIT MEMBER MANAGEMENT REPORT GENERAL:
A. TYPE *(OR LEGIBLY PRINT)* ALL INFORMATION.
B. THE ODA Administrator WILL COMPLETE THIS FORM.
C. THE ENTRIES FOR THE TOP TWO BLOCKS ARE SELF-EXPANATORY.
D. FOR ITEM BLOCKS, RATE EACH ITEM AND PUT A CHECK IN THE APPROPRIATE BOX.
SAT—If the item is rated satisfactory.
UNSAT–If the item is rated unsatisfactory.
N/A—If the item is rated not applicable.
E. FOR EACH ITEM RATED UNSATISFACTORY, ENTER THE REASON(S) FOR THE RATING IN THE REMARKS SECTION.
F. FOR ITEM BLOCKS, RATE EACH ITEM AND PUT A CHECK IN THE APPROPRIATE BOX.
ITEM NUMBER:
1. Check applicable box and record how the delegation was verified in the remarks section.
2. Self-explanatory. Check applicable box.
3. Self-explanatory. Check applicable box.
4. Self-explanatory. Check applicable box.
5. Check applicable box. Rate per requirements in ODA Manual.
6. Self-explanatory. Check applicable box.
7. Check applicable box. Rate per requirements per this manual
8. Check applicable box. Rate per requirements per this manual
9. Self-explanatory. Check applicable box.
10. Check applicable box. Rate per requirements per this manual
11. Check applicable box. Enter comments in the remarks section.
12. Check applicable box. Enter comments in the remarks section.
13. Check applicable box. Enter comments in the remarks section.
14. Check applicable box. Enter comments in the remarks section.
15. Check applicable box. Enter comments in the remarks section.
16. Check applicable box. Enter comments in the remarks section.
17. Check applicable box. Enter date attended in space provided. Rate Unit Member per requirements
18. Check applicable box. Enter date current designation function was granted.
19. If any above items are unsatisfactory, schedule a date for follow-up action and enter the date in the space provided.

SOFTWARE ITEMS: (APPLICABLE TO SOFTWARE UNIT MEMBERS ONLY)

A. Ask the type of Unit Member (DAR/ODAR or DMIR) questions 1 through 4, and complete the response appropriately. Use a separate sheet of paper as necessary, and attach to this form.
B. Rate each item and put a check in the appropriate box. Items 1 through 9.
C. Use the remarks section or separate plain paper for additional information pertaining to any of the items addressed for software.
D. If any item(s) are rated poor, enter the reason(s) for the rating in the remarks section, and schedule a follow-up. Enter the date in the space provided.

Sheet 3

ODA Form 400 - Flight Test Risk Assessment and Alleviation

Instructions

Project Number - Insert Project Number

Project Description - Insert Project Description

Test Description – Insert Test Description

Date – Insert Date of Flight Test Risk Assessment & Evaluation

Highest Test Risk Category – Check Highest Applicable

Concurrences - Discipline to review and acquire his/her initials

Risk Assessment – Self Explanatory

Test Hazard Analysis Worksheet Format – Self Explanatory

Mitigation of Hazards – Self Explanatory

Form Example (Reduced size)

ODA

Flight Test Risk Assessment & Alleviation

Project No.: _____ Project Description: _____

Test Description: _____

Date: _____

Highest Test Risk Category (check the highest applicable):

☐ LOW ☐ MEDIUM ☐ HIGH

CONCURRENCES

Assessment Attendees:	Concurrence	Initials
ODA administrator _____	☐ Yes ☐ No	
ODA Alt. administrator _____	☐ Yes ☐ No	
Project Manager _____	☐ Yes ☐ No	
Electrical UM _____	☐ Yes ☐ No	
Mechanical UM _____	☐ Yes ☐ No	
Structures UM _____	☐ Yes ☐ No	
Insp./Airworthiness UM _____	☐ Yes ☐ No	
Flight Test UM _____	☐ Yes ☐ No	
Company Test Pilot _____	☐ Yes ☐ No	

Risk Assessment Steps.

(1) Identify the flight test hazards.

(2) Perform a risk assessment per Section A.

(3) For hazards classified as Medium and High, Test Hazard Analysis Worksheets shall be completed and included in the Risk Management Plan section of the Flight Test Plan using the format shown in Section B. Identify mitigation steps per Section C.

(4) Review Test Hazard Worksheets (if required) per the Flight Test Plan.

ODA Form 400 Rev B → Page 1 of 4 → → ODA Form 400_B.doc

ODA

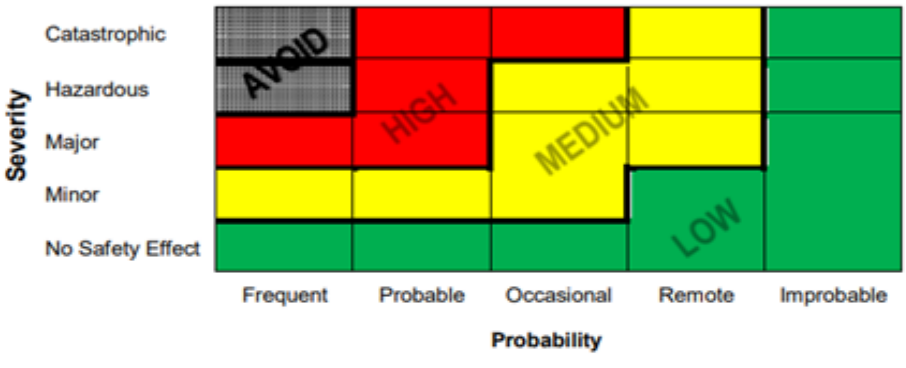
SECTION A: RISK ASSESSMENT

Perform a risk assessment by:

(1) Estimating the probability of each hazard occurring. Defined as improbable, remote, occasional, probable, or frequent.

(2) Estimating the severity of the consequences of each hazard, if it occurs. Defined as no safety effect, minor, major, hazardous, or catastrophic.

(3) Defining the risk of each hazard as a function of the probability and severity. Defined as LOW, MEDIUM, HIGH, or AVOID as shown in the below figure.



Contributors to consider when performing risk assessments. The following list contains examples of factors that should be considered in assigning a risk rating to specific test techniques. This is not a comprehensive list, but a beginning list of items to consider.

1. Complexity/workload associated with the flight test technique or maneuver.
2. Altitude and airspeed in relation to terrain and/or aircraft recovery equipment.
3. Configuration (gross weight, center of gravity, etc.).
4. Environment (weather, air traffic control, particular airport conditions, darkness, turbulence, etc.).
5. Aircraft internal environment (smoke, temperature, pressurization level, noise, etc.).
6. Design maturity.
7. Test condition sequencing. (Has proper "buildup" been considered?)
8. Adverse system or software effects.
9. Specific aircraft limitations.
10. Consequence of failure in technique, system, or structure.
11. Intentional failure conditions.
12. Simulator/lab results/historical experiences/predictive studies.
13. ODA and company test pilot proficiency/currency/familiarity with the type of test aircraft.

Highest Category for Individual Tests:

EMI Testing	☐ LOW	☐ MEDIUM	☐ HIGH
Ground Testing	☐ LOW	☐ MEDIUM	☐ HIGH
Flight Testing	☐ LOW	☐ MEDIUM	☐ HIGH
_____ Testing	☐ LOW	☐ MEDIUM	☐ HIGH
_____ Testing	☐ LOW	☐ MEDIUM	☐ HIGH
_____ Testing	☐ LOW	☐ MEDIUM	☐ HIGH

Page Break

¶

SECTION·B:·TEST·HAZARD·ANALYSIS·WORKSHEET·FORMAT¤

Test·Hazard·Analysis·Worksheet

Project·No:¤	ODAPXX-XX¤	Aircraft:¤	S/N:·····R/N:·¤
Applicant:¤	S-TEC¤	Model:¤	¤

Test·Description:···¶
¤
¶
¤

Hazard:¶
¤
¤

Cause:¶
¤
¤

Effect:¶
¤
¤

Mitigating/Minimizing·Procedures¤
¶
¶
¶
¶
¶
¶
¤

Emergency·Procedures:¤
¶
¶
¤

Risk·Level:¤	HIGH:·¤	MEDIUM:·¤	¤

Page Break

S-TEC
ODA

¶
¶

SECTION·C:·MITIGATION·OF·HAZARDS¤
Mitigations·are·actions·to·minimize,·understand,·prepare,·or·respond·to·causes·of·the·hazards.·Mitigations·will·address·reducing·either·the·probability·of·a·hazard·or·cause·occurring,·or·the·severity·of·the·effect,·or·both.·Mitigations·should·be·detailed·and·specific·in·nature.·The·following·items·should·be·considered·when·formulating·mitigations.·This·is·not·a·comprehensive·list.¶
1.·Set·limits·on·test·conditions·(e.g.,·minimum·weather,·altitude,·minimum/maximum·speed,·maximum·angle·of·attack,·minimum·crew·size).·¶
2.·Clearly·define·and·brief·"knock-it-off"·criteria·and·who·will·make·calls.·¶
3.·Review·test·procedure·and·techniques·and·specific·steps·to·reduce·the·risk.¶
4.·Brief·the·recovery·technique.·¶
5.·If·applicable,·brief·that·pilot·will·monitor·control·movement·and·be·prepared·to·stop/counter·the·movement·as·required.¶
6.·If·possible,·use·a·conservative·build-up·of·maneuver·parameters.¶
7.·Brief·predictions·and·expectations·to·prepare·participants.·Update·performance·predictions·with·flight·test·data·when·possible.¶
8.·Provide·special·safety·equipment·and·training·(helmets,·goggles,·masks,·oxygen,·escape·provisions,·parachutes,·fire·extinguishers,·etc.).¶
9.·Use·onboard·instrumentation/data·recorders·to·monitor·the·tests·in·"real·time"·by·either·onboard·personnel·or·ground·monitors.¶
10.·Limit·personnel·on·board·to·the·absolute·minimum·required·to·conduct·the·test·safely.·¶
11.·Schedule·flight·crews·based·on·pilot·qualifications·and·recent·experience·relative·to·the·required·tests·being·conducted.·¶
12.·Request·the·Company·testing,·techniques,·and·results.·On·tests·that·are·highly·dependent·on·pilot·precision·or·technique,·consider·having·the·Company·pilot·conduct·the·initial·tests·or·demonstrate·an·example.¶
13.·Review·weight·and·balance·computations·and·requirements.·While·particularly·important·on·critical·handling·qualities·tests·at·the·extremes·of·the·weight/cg·envelope·and·on·Weight/Altitude/Temperature·(WAT)-limited·performance·tests,·weight·and·balance·should·be·reviewed·for·all·flight·test·events.·¶
14.·Check·the·security·of·any·ballast·installations.¶
15.·For·high·altitude·tests,·all·participating·crewmembers·must·be·briefed·on·oxygen·use/location·and·should·practice·donning·masks·in·the·test·aircraft·prior·to·actually·having·to·use·them.¶
16.·Verify·conformity.·How·long·has·it·been·since·the·conformity·on·the·test·aircraft·configuration·was·last·conducted?·Has·anything·changed·since·the·design·was·reviewed?¶ ¤

¶

ODA Form 401 - Flight Test Pre-flight Briefing Checklist

Instructions

ODA Project Number - Insert ODA Project Number

Date - Insert Date

Flight No. - Insert Flight No.

Test No. - Insert Test No.

Aircraft Make - Insert Make

Aircraft Model - Insert Model

Aircraft Registration - Insert Aircraft Registration

Aircraft Serial No. - Insert Aircraft Serial No.

Purpose or Description of Flight Test - Insert Purpose or Description

Acknowledgements - Discipline to review and acquire his/her signature and date

Checklist Items - Check appropriate items

Form Example (Reduced size)

S-TEC
ODA

Flight Test Pre-Flight Briefing Checklist	
ODA Project No.:	Date:
Flight No.:	Test No.:
Aircraft Make:	Aircraft Model:
Aircraft Registration:	Aircraft Serial No.:
Purpose or Description of the Flight Test:	

PURPOSE
This pre-flight briefing checklist is to be used as a guide and contains the subject matter requirements for the pre-flight brief to be given to all personnel involved in the aircraft ground operations and/or flight tests. The ODA flight test unit member may delete subject matter as appropriate based on the type of operations or test to be conducted by marking the N/A checkbox of the item.

ACKNOWLEDGEMENTS		
Flight Test Pilot:	Date:	Initials:
Flight Test Copilot/Engineer:	Date:	Initials:
Flight Test Crew/Observer:	Date:	Initials:
Chase Pilot:	Date:	Initials:
Chase Copilot/Crew/Observer:	Date:	Initials:
Ground Support Supervisor:	Date:	Initials:
Ground Support Crew:	Date:	Initials:
Project Manager:	Date:	Initials:
Comments:		

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ODA

CHECKLIST ITEMS	
☐ Yes ☐ N/A	TIA is complete and released. Note the TIA number and date in the comments. Comments:
☐ Yes ☐ N/A	Aircraft is conformed to the test type design. Note the conformity statement date in the comments. Comments:
☐ Yes ☐ N/A	Ballast weight as required has been properly configured and secured. Comments:
☐ Yes ☐ N/A	Inoperative aircraft systems have been identified and do not impact the subject test. Note any inoperative systems in the comments. Comments:
☐ Yes ☐ N/A	Airworthiness certificate is onboard the aircraft. Comments:
☐ Yes ☐ N/A	Aircraft registration is onboard the aircraft. Comments:
☐ Yes ☐ N/A	Aircraft Flight Manual is onboard the aircraft. Comments:
☐ Yes ☐ N/A	Aircraft Oxygen system is charged and operationally tested. Comments:
☐ Yes ☐ N/A	Personnel safety equipment as required is onboard the aircraft. Note the safety equipment onboard in the comments. (O2 masks, parachutes, helmets, etc.) Comments:
☐ Yes ☐ N/A	Aircraft is in airworthy operational condition necessary to perform the purpose of the test flight. Comments:
☐ Yes ☐ N/A	Aircraft maintenance records are complete and current. Comments:

☐ Yes ☐ N/A	Aircraft weight and balance has been evaluated and confirmed and is appropriate for the purpose of the test. Comments:
☐ Yes ☐ N/A	Fuel loading is appropriate for the duration and safe return of the aircraft. Note the fuel load and estimate duration of the flight in the comments. Comments:
☐ Yes ☐ N/A	Aircraft performance has been evaluated appropriate to the airfield and take-off conditions. Comments:
☐ Yes ☐ N/A	Airfield conditions have been evaluated and are appropriate for the test. Comments:
☐ Yes ☐ N/A	Test performance and flight profile has been coordinated with Chase Pilot and Crew. Comments:
☐ Yes ☐ N/A	Communications has been coordinated with Ground and Chase crew. Note the frequencies to be used in the comments. Comments:
☐ Yes ☐ N/A	Ground crew has been briefed with responsibilities. Comments:
☐ Yes ☐ N/A	Flight test area or flight path has been evaluated as appropriate for the purpose of the test. Note the route or area of test operation in the comments. Comments:
☐ Yes ☐ N/A	Weather conditions and forecast have been evaluated and determined appropriate for the purpose of the test. Comments:
☐ Yes ☐ N/A	Alternate and emergency landing sites have been evaluated and determined acceptable for use. Note any known alternates or emergency sites in the comments. Comments:
☐ Yes ☐ N/A	Test plans and test cards to be conducted have been reviewed. Comments:

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☐ Yes ☐ N/A	The previous Applicant's test reports have been reviewed. Comments:
☐ Yes ☐ N/A	Test predictions and performance has been evaluated and determined in compliance with the Flight Test Risk Assesment. Comments:
☐ Yes ☐ N/A	Procedures for monitoring the tests have been evaluated and determined acceptable. Comments:
☐ Yes ☐ N/A	Instrumentation equipment is in proper operation and calibration necessary for the purpose of the test flight. Comments:
☐ Yes ☐ N/A	Aircraft recovery devices have been verified for proper operation. Note any recovery devices installed on the aircraft. Comments:
☐ Yes ☐ N/A	Emergency procedures for use of recovery devices have been reviewed by the Flight Crew. Comments:
☐ Yes ☐ N/A	Contingencies for emergency, lost communications, etc. have been discussed with all of the Crew. Comments:
☐ Yes ☐ N/A	All Crew members listed above are in physical and mental condition for the test. Comments:
☐ Yes ☐ N/A	Flight Crew duty assignments and procedures have been reviewed. Comments:
☐ Yes ☐ N/A	Post flight debriefing is scheduled. Note the estimated time and location. Comments:
☐ Yes ☐ N/A	Comments:
☐ Yes ☐ N/A	Comments:

ODA Form 403 – Experimental Operating Limitations

Form Example (Reduced size)

S-TEC ODA FORM 403_B

Date:	

To:	MIDO-42	***From:***	ODA Inspection Unit Member
Company:		***Company:***	S-TEC
Phone:		***Phone:***	
Fax:		***Fax:***	
# Pages: *(including this cover page)*			

Comments:

Dear Mr. XXXXXXX,

Per our ODA Procedure Manual it is necessary to obtain approval of the attached Experimental Operating Limitations to be issued for the following aircraft:

- Project No: XXXXXXXXX ODA
- Aircraft Make & Model: _____
- Serial & Registration No: S/N XXX / Reg. NXXXX
- This activity is scheduled to begin on: December 14 or 15, 2007

If you have any questions, feel free to call me.

Sincerely,

If you concur with the attached, please sign and return via FAX to (XXX) XXX-XXXX. This correspondence will serve as approval from the MIDO and will be included in the ODA Master Data or STIR file for this project.

_____ S-TEC ODA Unit Member & Date

_____ MIDO Representative & Date

Attachements:
Proposed Operating Limitations
Program Letter
FAA Form 8130-6

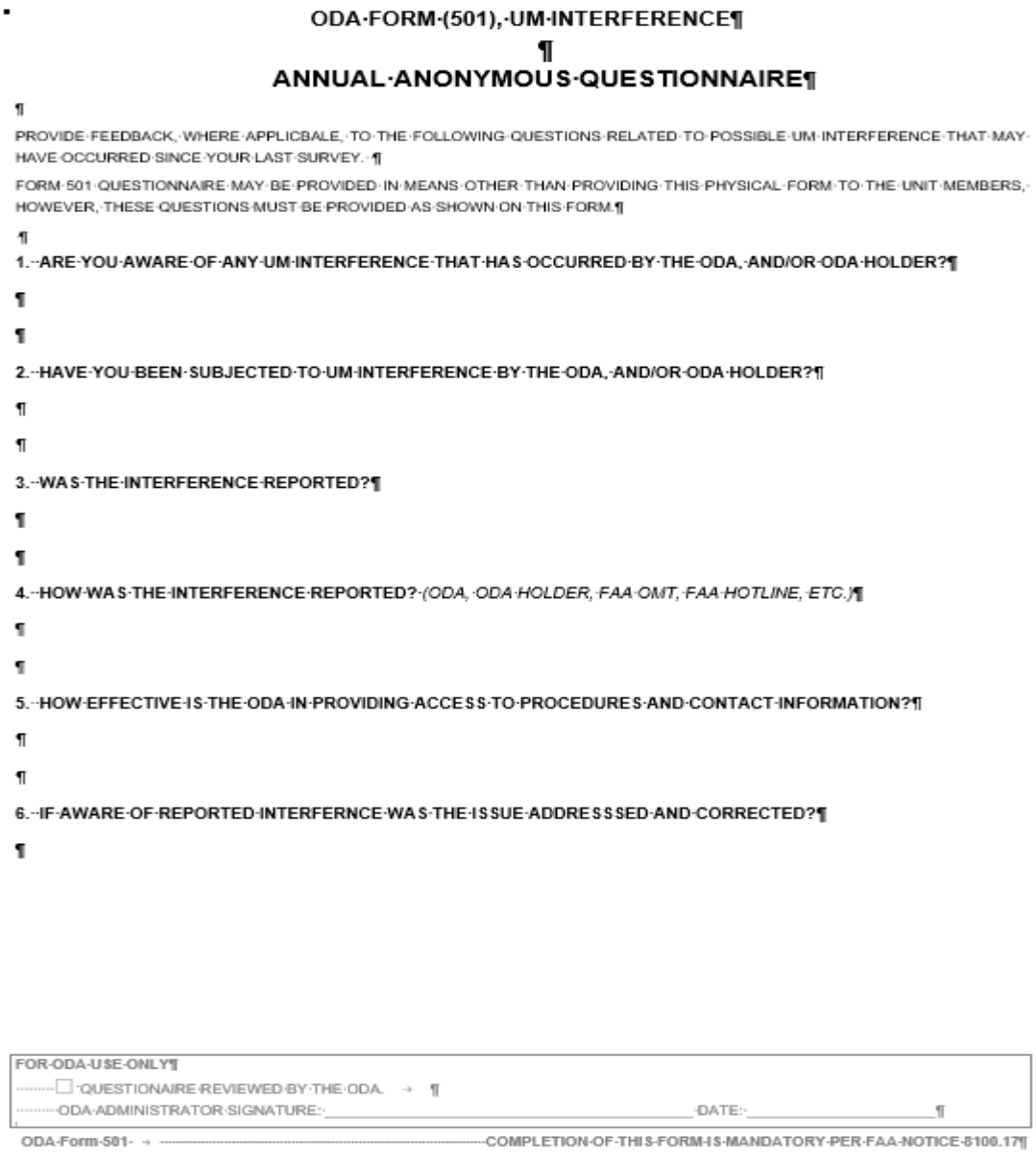
This message is intended only for the use of the individual or entity to which it is addressed, and may contain confidential information exempt from disclosure under applicable law. If you are not the intended recipient hereof, be aware that any disclosure, copying, distribution, or use of the contents of this transmission is prohibited. If you have received this transmission in error, please notify us by telephone immediately so we may arrange to retrieve this transmission.

ODA Form 501 – Annual Anonymous Questionnaire

Instructions

Form is Self Explanatory

Form Example (Reduced size)



ODA·FORM·(501),·UM·INTERFERENCE¶

¶

ANNUAL·ANONYMOUS·QUESTIONNAIRE¶

¶

PROVIDE·FEEDBACK,·WHERE·APPLICBALE,·TO·THE·FOLLOWING·QUESTIONS·RELATED·TO·POSSIBLE·UM·INTERFERENCE·THAT·MAY·HAVE·OCCURRED·SINCE·YOUR·LAST·SURVEY.·¶

FORM·501·QUESTIONNAIRE·MAY·BE·PROVIDED·IN·MEANS·OTHER·THAN·PROVIDING·THIS·PHYSICAL·FORM·TO·THE·UNIT·MEMBERS,·HOWEVER,·THESE·QUESTIONS·MUST·BE·PROVIDED·AS·SHOWN·ON·THIS·FORM.¶

¶

1.··ARE·YOU·AWARE·OF·ANY·UM·INTERFERENCE·THAT·HAS·OCCURRED·BY·THE·ODA,·AND/OR·ODA·HOLDER?¶

¶

¶

2.··HAVE·YOU·BEEN·SUBJECTED·TO·UM·INTERFERENCE·BY·THE·ODA,·AND/OR·ODA·HOLDER?¶

¶

¶

3.··WAS·THE·INTERFERENCE·REPORTED?¶

¶

¶

4.··HOW·WAS·THE·INTERFERENCE·REPORTED?·*(ODA,·ODA·HOLDER,·FAA·OMT,·FAA·HOTLINE,·ETC.)*¶

¶

¶

5.··HOW·EFFECTIVE·IS·THE·ODA·IN·PROVIDING·ACCESS·TO·PROCEDURES·AND·CONTACT·INFORMATION?¶

¶

¶

6.··IF·AWARE·OF·REPORTED·INTERFERNCE·WAS·THE·ISSUE·ADDRESSSED·AND·CORRECTED?¶

¶

FOR·ODA·USE·ONLY¶

·····☐·QUESTIONNAIRE·REVIEWED·BY·THE·ODA.··→··¶

·····ODA·ADMINISTRATOR·SIGNATURE:·_____·DATE:·_____¶

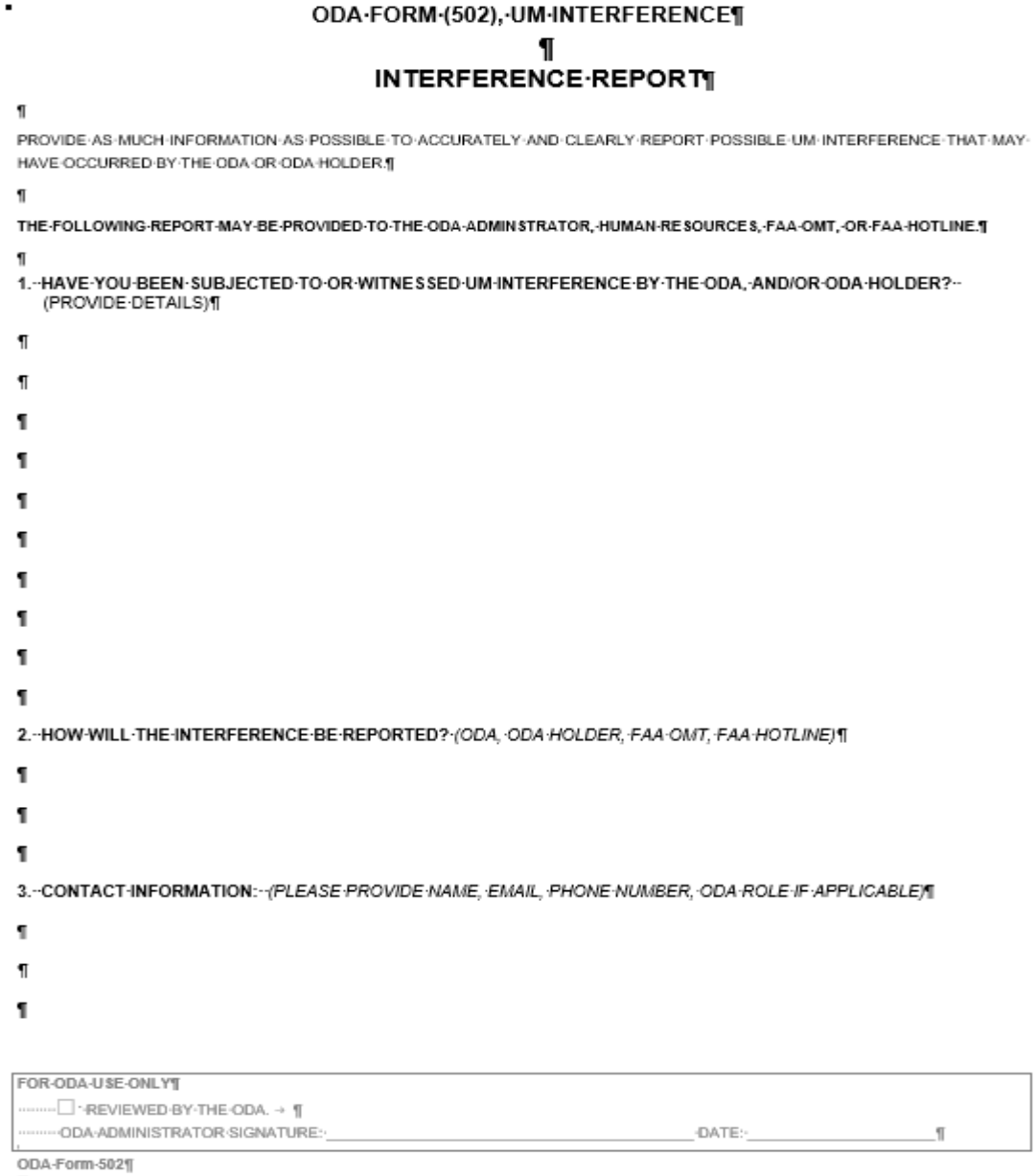
ODA·Form·501·→ ·····COMPLETION·OF·THIS·FORM·IS·MANDATORY·PER·FAA·NOTICE·8100.17¶

ODA Form 502 – Interference Report

Instructions

Form is Self Explanatory

Form Example (Reduced size)



ODA·FORM·(502),·UM·INTERFERENCE¶
¶
INTERFERENCE·REPORT¶

¶

PROVIDE·AS·MUCH·INFORMATION·AS·POSSIBLE·TO·ACCURATELY·AND·CLEARLY·REPORT·POSSIBLE·UM·INTERFERENCE·THAT·MAY·HAVE·OCCURRED·BY·THE·ODA·OR·ODA·HOLDER.¶

¶

THE·FOLLOWING·REPORT·MAY·BE·PROVIDED·TO·THE·ODA·ADMINISTRATOR,·HUMAN·RESOURCES,·FAA·OMT,·OR·FAA·HOTLINE.¶

¶

1.··HAVE·YOU·BEEN·SUBJECTED·TO·OR·WITNESSED·UM·INTERFERENCE·BY·THE·ODA,·AND/OR·ODA·HOLDER?··(PROVIDE·DETAILS)¶

¶

¶

¶

¶

¶

¶

¶

¶

¶

¶

2.··HOW·WILL·THE·INTERFERENCE·BE·REPORTED?·(ODA,·ODA·HOLDER,·FAA·OMT,·FAA·HOTLINE)¶

¶

¶

¶

3.··CONTACT·INFORMATION:··(PLEASE·PROVIDE·NAME,·EMAIL,·PHONE·NUMBER,·ODA·ROLE·IF·APPLICABLE)¶

¶

¶

¶

FOR·ODA·USE·ONLY¶

☐ ··REVIEWED·BY·THE·ODA. → ¶

ODA·ADMINISTRATOR·SIGNATURE:·_____·DATE:·_____¶

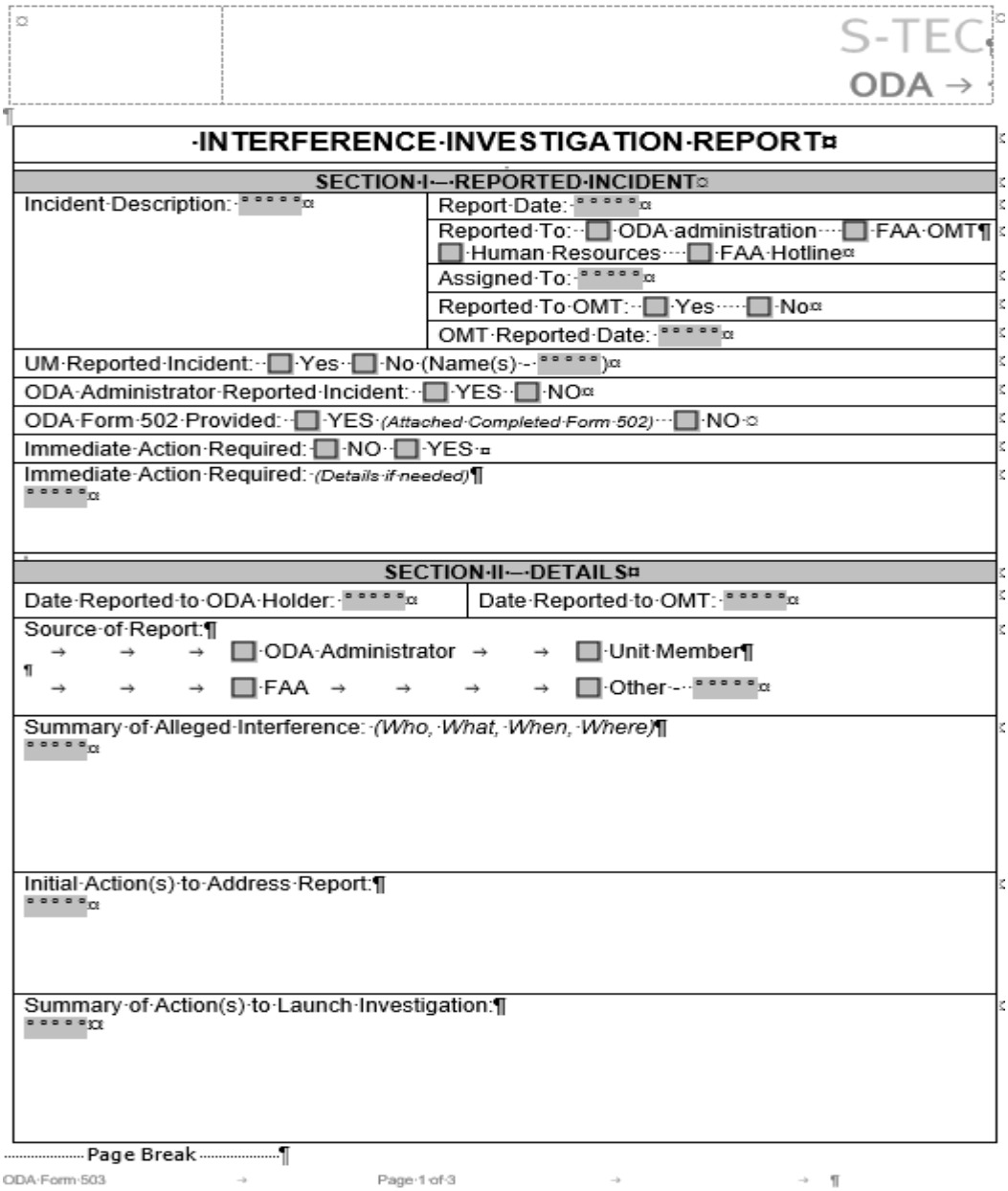
ODA·Form·502¶

ODA Form 503 – Interference Investigation Report

Instructions

Form is Self Explanatory

Form Example (Reduced size)



S-TEC
ODA →

·INTERFERENCE·INVESTIGATION·REPORT¤

SECTION·I·—·REPORTED·INCIDENT¤	
Incident·Description:·°°°°°¤	Report·Date:·°°°°°¤
	Reported·To:··☐·ODA·administration····☐·FAA·OMT¶ ☐·Human·Resources····☐·FAA·Hotline¤
	Assigned·To:·°°°°°¤
	Reported·To·OMT:··☐·Yes·····☐·No¤
	OMT·Reported·Date:·°°°°°¤
UM·Reported·Incident:··☐·Yes··☐·No·(Name(s)·-·°°°°°)¤	
ODA·Administrator·Reported·Incident:··☐·YES··☐·NO¤	
ODA·Form·502·Provided:··☐·YES·*(Attached·Completed·Form·502)*···☐·NO·¤	
Immediate·Action·Required:·☐·NO··☐·YES·¤	
Immediate·Action·Required:·*(Details·if·needed)*¶ °°°°°¤	

SECTION·II·—·DETAILS¤	
Date·Reported·to·ODA·Holder:·°°°°°¤	Date·Reported·to·OMT:·°°°°°¤
Source·of·Report:¶ → → → ☐·ODA·Administrator → → ☐·Unit·Member¶ ¶ → → → ☐·FAA → → → → ☐·Other·-···°°°°°¤	
Summary·of·Alleged·Interference:·*(Who,·What,·When,·Where)*¶ °°°°°¤	
Initial·Action(s)·to·Address·Report:¶ °°°°°¤	
Summary·of·Action(s)·to·Launch·Investigation:¶ °°°°°¤	

Page Break ¶

ODA·Form·503 → Page·1·of·3 → → ¶

SECTION III – CORRECTIVE ACTION	
Plan Prepared By:	Date:
Was ODA Form 502 Provided: ☐ NO ☐ YES Root Cause Analysis:	
Did Interference Occur: ☐ YES ☐ NO **(If No, proceed to Section IV)** If (Yes) was Interference systemic: ☐ NO ☐ YES	
Will incident require update(s) to ODA Procedures: ☐ NO ☐ YES If (Yes) provide details:	
Immediate & Long-Term Actions:	
Proposed Schedule for Actions:	
Are Action Verifiable: ☐ NO ☐ YES If (Yes) provide details:	
Estimated Completion Date:	
Plan Acceptance By:	Acceptance Date:

Page Break

SECTION IV – FINAL RESULTS	
Investigation Results Prepared By: [redacted]	Date: [redacted]
Were all ODA Form 502 Provided: ☐ NO ☐ YES	
Incident Summary: [redacted]	
Final Root Cause Determination: [redacted]	
Did Interference Occur: ☐ NO ☐ YES If (Yes) was Interference determined to be systemic: ☐ NO ☐ YES	
Will incident require update(s) to ODA Procedures: ☐ NO ☐ YES If (Yes) provide details: [redacted]	
Will incident require update(s) to Training: ☐ NO ☐ YES If (Yes) provide details: [redacted]	
Final Summary of all Corrective Actions: [redacted]	
Completion Date: [redacted]	
Submitted to OMT: ☐ YES ☐ No	OMT Submittal Date: [redacted]

APPENDIX F

Project Specific Certification Plan

The ODA STC Project Certification Plan will contain the following information at a minimum.

1. Description of the type design change will be provided in the PSCP.
2. Copy of FAA Form 8110-12, Application for STC.
3. The airworthiness requirements including amendment levels that are considered to be applicable will be provided in the CCL.
4. A compliance checklist showing proposed methods of compliance (laboratory testing, ground testing, flight testing, analysis, similarity, and so on) and the responsible staff member for each of the regulations will be provided in the CCL.

NOTE: The ODA administrator may substitute equally authorized and qualified unit members for those named without subsequent notification to the OMT.

5. Identification of where and how the type design data and compliance substantiation data will be documented will be provided in the PSCP.
6. State if any novel or unusual features are involved will be provided in the PSCP.
7. State if ground and/or flight-testing is required will be provided in the PSCP.
8. The proposed Airworthiness Certificate Category for Flight Testing will be provided in the PSCP.
9. A proposed schedule of major events/milestones will be provided in the PSCP.
10. State which Manuals (Maintenance, Wiring Diagram, Illustrated Parts Catalog, and so on) are planned to be issued or revised will be provided in the PSCP.
11. State if a Flight Manual Supplement is required or will be revised will be provided in the PSCP.
12. State how equipment is qualified. (For example, DO-160D, PMA, TSO, DO-178B and software level, and so on) will be provided in the PSCP.
13. If activities will not be accomplished at the ODA facility, provide information on the facility where the activity will be accomplished will be provided in the PSCP.
14. Proposed compliance methods will be provided in the PSCP, to demonstrate the operational aspects of:
    a. Testing to determine operational suitability and compliance with the operational regulatory requirements.
    b. Recommended aircraft maintenance manual and maintenance program changes for acceptable compliance with ICA requirements, if required.
    c. Proposed master minimum equipment lists, if required; Proposed Flight Crews Operating Manual Procedures, if required.
    d. Proposed flight crew training requirements, if required.
    e. Emergency Evacuation demonstrations, if necessary.

APPENDIX G

ODA MAJOR vs. MINOR CHANGE DETERMINATION

1.0 STC Configuration Control Board (CCB) Determination of Design Changes.

A. Once a design change is proposed, the ODA administrator will convene an CCB including the ODA administrator, engineering Unit Members, inspection / certification Unit Members, and from S-TEC an manufacturing representative, quality representative, product support representative, customer service representative, data management representative, and repair service representative.

B. This CCB will be required for proposed new aircraft modifications and changes to existing aircraft modifications (STCs).

C. The CCB will evaluate the proposed change based on the following parameters and determine if the change is major or minor.

2.0 Supplemental Type Certificates General

A. Aircraft modifications can be subdivided into minor and major alterations (Ref FAR part 21.93 (a), 21.95, and 21.97 (a) (b)).

3.0 Supplemental Type Certificates (STC) are required for most major alterations to existing Type Certificates (TC). Before applying for an STC, the S-TEC ODA must determine if the alteration or modification is major or minor (STC's are not required for minor alterations). The ODA engineering staff will make the determination in accordance with this guide and the ODA administrator must concur by signature with this determination prior to proceeding with a project.

A. "Major Alteration" means an alteration to the listed aircraft, aircraft engine, or propeller specifications;

1. That might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or

2. That is not done according to accepted practices or cannot be done by elementary operations. All other changes are "major changes" (except as provided in paragraph 21.93 (b)).

B. Knowing what the word "appreciably" means as used in the foregoing definition of a major alteration should help S-TEC ODA make the decision as to a major or minor alteration.

1. "Appreciable" means: Enough to be perceived or estimated or noticed

C. In determining whether a particular alteration will appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness, an evaluation of the existing aircraft systems shall be performed in accordance with the original Type Certificate Data Sheet (TCDS), any added STC, Field Approval, or other change and the proposed system changes.

D. In making the major vs. minor determination all existing systems (Ref paragraph 4.0) and later modifications to the aircraft will be shown to be compatible.

4.0 Initial Major vs. Minor Alteration Determination

A. In accordance with this appendix G, S-TEC ODA will evaluate all proposed design changes during a scheduled Configuration Change Board (CCB) meeting (which includes certification, engineering, manufacturing, quality, product support, customer service, data management, and repair service personnel) and will evaluate each proposed change relative to current FAA rules and applicable guidance materials to allow the CCB to make a determination of major or minor.

The ODA CCB will also consider:

i. Scope of Proposed Design Change
ii. Any Service Difficulties, Non-Compliances and Non-Conformance
iii. System Human Factors impact
iv. Operational or Performance Aspects impact
v. Any impact on flight characteristics
vi. Installation Limitations, including changes to environmental categories
vii. Possible Quality Manual Revisions
viii. Any Airworthiness Directives
ix. STC Record Changes, number of outstanding ECO's (Maximum of 5 allowed but typically none accumulate as noted)
x. Cumulative effect of previous changes via ECO
xi. Possible changes to tests and Test Plans
xii. Impact to Environmental Requirements Compliance
xiii. Software Change Impact Analysis results (Ref Order 8110.49 Chap 11)
xiv. Possible impact on type design product (aircraft)
xv. Increase or decrease in weight and impact to aircraft CG

xvi. Structural strength impact to aircraft structure surrounding / involved in system installation

xvii. Regarding changes to existing designs, If the “part” still meets “Fit- Form-Function” and is “backward” compatible

B. Major Design Change Determination

1. As stated above, a change is considered major if it results in an appreciable effect on the aircraft approval basis, or if the change falls within the major change criteria of 14 CFR 21.93.

2. Further, for a major change a data package significantly different from the one used with the previously approved installation would need to be developed and approved / submitted to show the “changed” aircraft complies with the original STC product approval basis. This would include assigning required part numbers changes for a “new” part as applicable.

3. Testing conducted to substantiate a change does not automatically classify the change as major, as testing can also be used to substantiate minor changes. More important is the relative quantity of tests that must be run to verify performance and functionality.

5.0 Typical Major Design Changes requiring an STC.

Major design changes are typically limited to changes that affect the user or the aircrafts overall functionality. Examples include changes to:

a. Operator interface or operation

b. Flight “function” changes or new in-flight capabilities which might impact system safety

c. Electrical components involving a complete ~~redesign~~ of or addition of “later” technology to circuits or circuit cards

d. New configurations for structural parts where the part is no longer “interchangeable”

e. Software for control of required functions

f. Some examples of major alterations typical to S-TEC are:

6. New installations of autopilot systems

7. New installations of SV Electronic Flight Instrument Systems (EFIS) systems

8. New installations of Air Data Attitude Heading Reference Systems (ADAHRS)

9. Any other new installation of Avionics systems affecting aircraft operation.

10. There are additional guidelines in FAR 43, Appendix A

NOTE: If there are any questions whether the alteration or modification is major or minor, then S-TEC ODA will contact the ACOB (AIR-7J0).

6.0 Minor Design Changes (Not requiring an STC)

When the CCB determines the design change to be “Minor”, the change will be evaluated per this guidance for design aspects but also will consider the following:

A. S-TEC ODA recognizes that minor changes have to be substantiated regardless of the significance of the design change. All design changes will be completely and properly substantiated to the regulatory requirements.

B. S-TEC ODA also recognizes a series of minor changes can have a cumulative effect and that a series of design changes considered individually may not vary much from the previous change, but if considered in total they may constitute a major design change when compared to the original approval. The cumulative effect of multiple minor design changes will be evaluated. Previous relevant design changes of the product can cause a perceived “Minor” change to become a “Major” design change. When assessing the design change, either singularly or collectively, the cumulative effect of all previous relevant design changes must be considered.

C. These design changes may have been incorporated through earlier changes in the type certificate, supplemental type certificate on areas related to the current proposed change and the associated areas, systems, components, equipment, or appliances. The collective result may be a product considerably different from the latest updated certification basis for the product or model.

D. All existing systems and later modifications to the aircraft will be evaluated for proposed system impact on both installation and operational, continued airworthiness aspects.

E. Also, a time may come when, after a series of minor design changes, the original data is not applicable to the aircraft undergoing the most recent change or is not “backward” compatible. At that point S-TEC ODA will process a major change.

F. As noted, S-TEC ODA will not “accumulate” ECO’s, each ECO will cause a drawing change and the drawing change will be approved via appropriate ODA engineering unit members.

G. Minor design changes are typically limited to changes that affect the system such as:

2. System maintenance functions
3. Pre-flight, self-test functions
4. Form and fit in a small way (Does not affect interchangeability)

H. Upon determination of minor change:

3. ECO will be generated detailing the change(s)
4. ECO will define all data requiring change(s)
5. ECO will include a “minor change” designation and will include requirement for minor change data submittal to FAA per approved Process and Procedures
6. ECO will be routed
7. ECO will be returned to Engineering for incorporation
8. Drawings are revised and DER, AR approval is obtained as applicable
9. Drawings are released to documentation control
10. STC data file is updated

7.0 These lists cover many changes that occur frequently to aircraft but they do not cover every possible change to an aircraft. Also, there are many changes that fall into the “undetermined” category and these will be evaluated on a “case-by-case” basis. Questions regarding the classification of these items will be brought to the ACOB for discussion and resolution.

8.0 Note: Because of the “intended function” aspects of STEC products, relatively benign changes under the STC approval can have major consequence once installed in the aircraft. For example, although a small design change in the display parameters may have little or no effect on the aircrafts ability to perform it’s intended function, its installation and interface to critical systems could create a hazardous condition to airplane or rotorcraft operation. S-TEC will evaluate all intended functions and human factors aspects to ensure compliance.

APPENDIX H

MEMORANDUM DOCUMENTING SUPPLEMENT TYPE CERTIFICATE TECHNICAL DATA RETENTION PROCEDURES

Memorandum Documenting Supplement Type Certificate
Technical Data Retention Procedures

Between

S-TEC Corporation
And

The Federal Aviation Administration
Southwest Region
Aircraft Certification Division

I. Introduction

This document outlines the procedures that S-TEC Corporation ODA-700096-SW and the Federal Aviation Administration (FAA) (hereinafter also collectively referred to as "parties" in the plural or "party" in the singular) will use in maintaining the written technical data supporting any S-TEC supplemental type certificates. S-TEC specifically acknowledges and understands that these procedures in no way change, alter, or modify in any manner whatsoever S-TEC's requirement to comply with all FAA statutes and regulations, including, but not limited to, Title 14, Code of Federal Regulations (14 CFR) section 21.49, that allows the FAA at any time, for any reason, upon request to examine the "type certificate" as that term is defined in 14 CFR section 21.41 and that includes the "type design" as defined in 14 CFR section 21.31.

II. Purpose of the Agreement

A. To establish a formalized process for the orderly and efficient identification, submission, maintenance, and return of descriptive and compliance or substantiating data submitted by S-TEC in support of a supplemental type certificate (STC). Descriptive data defines the design of the modification, and compliance data substantiates that the design meets the

applicable regulations, reference AC 21-40A, Guide for Obtaining a Supplemental Type Certificate, Chap. 5, Para. 5-1b.

B. Both parties recognize that S-TEC has a proprietary interest in its aircraft design and that the drawings, specifications, descriptions, and other technical data S-TEC submits to the FAA may be confidential and constitute trade secrets under the Federal Trade Secrets Act (FTSA) and the Freedom of Information Act (FOIA), Title 5, United States Code, section 552. Accordingly, the FAA will disclose records submitted by S-TEC only in accordance with applicable law, including the FTSA, FOIA, and the applicable Department of Transportation Regulations (49 CFR part 7).

III. Submission of Data

A. By means of a formal transmittal data package, S-TEC will submit to the FAA all descriptive and compliance data required determining and substantiating compliance with the Federal Aviation Regulations. Each formal data package will contain a cover sheet. All data that S-TEC considers proprietary will be submitted as attachments to the cover sheet. S-TEC may use the "Statement of Compliance with Airworthiness Standards", FAA Form 8100-9 as the cover sheet so long as there is an audit trail between that form and its attachments. The cover sheet for each transmittal data package must contain:

(1) the title of the data, (Including STC number, project number, etc.)
(2) specific identification of the data submitted (e.g., date or revision level),
(3) a brief description of the data,
(4) the unit or employee to receive the data, and
(5) the airworthiness requirement(s) with which the data are intended to show compliance.

B. The FAA will store all formal transmittal document cover sheets in a special publicly available file.

C. When a supplemental type certificate (STC) is issued, the formally submitted descriptive data for that STC will, at FAA's discretion, be retained, or returned to S-TEC on the condition that S-TEC must make available to the FAA, in identical form, all returned records:

(1) upon request,
(2) in the event these procedures are terminated, or either party will not agree to reasonable changes to these procedures,
(3) if S-TEC is about to cease business, or
(4) when the specific STC is surrendered, suspended, revoked, or terminated.

IV. Retention of Data

A. It must be recognized that type design records, including all substantiating data, are permanent government records and must not be destroyed. For each of its STCs, S-TEC must maintain all records in paper format. File folders for STCs must be labeled with file code and retention, in accordance with FAA IR-04-01A, Aircraft Certification Service Records Management Requirements Manual (see example 1, Appendix 1). File cabinets containing STC files must be labeled in accordance with FAA Order 1350.14, Records Management., figure 5-14 (see example 2, Appendix 1). S-TEC agrees to maintain the capability to identify the data described in paragraph III.A. of these procedures. .

B. S-TEC also agrees to provide reasonable entry to its facilities to allow FAA employees direct and unencumbered access to any STC data files maintained by S-TEC. Files to be located at S-TEC Corporation, One S-TEC Way, Mineral Wells Municipal Airport, Mineral Wells, TX 76067. S-TEC specifically acknowledges that access must be provided to the FAA, upon request, and without the FAA providing any justification for the requested access and regardless of the reason for the requested access to the data.

C. S-TEC acknowledges that S-TEC's failure to maintain the integrity of the data in accordance with the Federal Aviation Regulations or these procedures, e.g. loss of drawings, reports, or other data, may result in termination of these procedures and, if otherwise appropriate, legal enforcement action.

D. S-TEC also ensures that the storage facility used for housing STC records meets the requirements of 36 CFR, Subpart B, Chapter XII, Part 1234.10 through 1234.14, Facility Standards for Records, at http://www.archives.gov/about/regulations/part-1234.html. If S-TEC storage facility does not meet the requirements of the above subpart, a commercial storage facility may be used. At least 45 days prior to storing STC records at a commercial records storage facility, S-TEC agrees that it will provide the FAA and the National Archives and Records Administration (NARA) with documentation that the facility complies with the standards of 36 CFR, Part 1234, Facility Standards for Records (see 36 CFR 1234.30(e) for further information).

V. FAA Order for Data Retention

A. FAA Order 8110.4, Appendix 10, Data Retention, Figures 1, 2 and 3 provides that the FAA will retain certain data and that the STC holder will retain certain data. The following specifies the custodian for each STC record.

B. The following Project Records WILL be retained by FAA for your Organization Delegation Authorization and the FAA:

- Project Notification Letter which includes:
  - Original STC application (8110-12), including all incorporated preliminary data/drawings
  - Conformity Inspection Plan
  - Certification Program Plan
- Certification Program Notification (CPN)
- Copy of supplemental TC (8110-2) with signature

C. <u>The following Type Design/Substantiating Data - Records WILL be retained by S-TEC for the FAA</u>

- S-TEC files, these files include DAS and ODA files labeled ST-001 through ST-1000 and on. Aircraft Evaluation Group (AED) correspondence
- Airworthiness approval tags (8130-3) issued for conformity
- Application for Airworthiness Certificate (8130-6)
- Approval letter for Airworthiness Limitations Section
- Approval of referenced Master Data List
- Certification Plan
- Certification Program Plan
- Completed compliance checklist
- Original Conformity Inspection Record (8100-1)
- Copy of STC application (8110-12) including all incorporated preliminary data/drawings and cover letter
- Equivalent Level of Safety findings
- Exemptions
- FAA approval of test and analysis reports
- Findings of compliance (Original 8110-3's or 8100-9's) and approval letters
- Flight manual approval page
- Minutes of Type Certification Board (TCB) meetings (preliminary/interim/pre-flight/final)
- Original of all accepted manuals (ICA, engine or propeller installation)
- Original of approved manuals (Flight manual), and all revisions
- Project Notification response letter from the FAA
- Requests for Conformity (8120-10) and Original Statements of Conformity (8130-9)
- Service Bulletins (includes alerts, service letters, all operator letters etc)
- Special Airworthiness Certificate and Operating Limitations
- Special conditions
- Supplemental TC (8110-2) with original signature
- TC data sheet, may not be applicable for STC projects

- Test and analysis reports
- Test plans (final approved version, and all approved revisions)
- Type design data, drawings, processes, materials specifications, operations limitations
- Original Type Inspection Authorization form (8110-1)
- Original Type Inspection Report (8110-[ ]) and Supplemental Type Inspection Reports (8110-26)

D. The following Working Papers may be retained by the FAA as "Corporate Memory":

- Operational project data (e.g. milestones)
- Correspondence not documenting an FAA action or position
- Personal notes from technical meetings
- Issue papers
- Schedules
- Downloaded data or drawings from manufacturer's electronic data base
- Photocopies of submitted data

E. The following working papers will be retained by S-TEC:

- Operational project data (e.g. milestones)
- Correspondence not documenting an FAA action or position
- Personal notes from technical meetings
- Schedules
- Downloaded data or drawings from manufacturer's electronic data base
- Photocopies of submitted data
- S-TEC ODA Procedure Manual ODAA07P0915 (all revisions)
- S-TEC ODA Unit Member Listing ODAA07U1109 (all revisions)
- ODA Unit member files (including historical records)
- FAA and ODA self audit files, including a list of all CAR's
- S-TEC Supplemental Type Certificate Directory document # 8707 Subpart A and B
- List of STC Projects Completed, by year
- List of Service Difficulty Records
- All other records required by the approved ODA procedures manual

VI. Applicability

These procedures are applicable to records already furnished to the FAA by S-TEC as well as those records that may be submitted in the future.

VII. Term

These procedures will remain in effect until terminated or changed in writing by mutual agreement of each party after reasonable notice.

VIII. Termination

Either party may terminate these procedures at will after reasonable notice.

ACCEPTED AND AGREED TO THIS _____ DAY OF _____, 2010.

S-TEC Corporation

By: Paul Stoelting
General Manager

Aircraft Certification Service
Federal Aviation Administration
Southwest Region

By:
J R Holton, Manager, Airplane Certification Office

By:
Gwendolynee O'Connell, Manager Technical & Administrative Support Staff

Example 1

At a minimum the files labels should have the following information, your organization can add additional information for your purposes.

8110.1.a(1) Type Certificate (Repairs and Alterations) PERMANENT. Cut off when approved. Transfer to FRC when no longer needed on-site. Transfer to NARA 100 years after cutoff.	← Major repairs and alterations (MRA)
8110.1.a(1) Supplemental Type Certificate PERMANENT. Cut off when approved. Transfer to FRC when no longer needed on-site. Transfer to NARA 100 years after cutoff.	← Supplemental type certificates (STC)
8150.2 TEMPORARY. Cut off when cancelled, surrendered, withdrawn, or otherwise terminated. Destroy 100 years after cut off or when no longer needed for agency business, whichever is later.	← Technical standard orders (TSO)
8110.1.a(1) Type Certificate Records PERMANENT. Cut off when approved. Transfer to FRC when no longer needed on-site. Transfer to NARA 100 years after cutoff.	← Type Certificates (TC)
Company _____ PMA File Disposition: 8110.3.a - Temporary, Cut off when canceled, surrendered, withdrawn, or otherwise terminated. Transfer to FRC when no longer needed on-site. Destroy 10 years after cutoff.	↔ Parts manufacturer authority (PMA)
Project No. _____ Part No. _____	

Example 2