



COMPANY INFORMATION

June 19, 2017

Company Name: ELDEC Corporation, Crane Aerospace & Electronics

Established: 1957 (60 yrs)
Acquired by Crane Co.: 1994

Parent Company: Crane Company

Mailing & Shipping Address

ELDEC Corporation, Crane Aerospace & Electronics
16700 13th Avenue West
Lynnwood, WA 98037-8597

Telephone Number: (425) 743-1313
Facsimile Number: (425) 743-8234
AOG: (425) 743-8100
Internet email: info@craneae.com
Company website: www.craneae.com
NYSE Symbol: CR
Dun & Bradstreet: 00-925-1042
NAICS: 336413
NCAGE Code: 08748 (NATO Code)
Tax: 91-0663532



Quality Systems
Certified by LRQA

Corporate Address

Crane Company
100 First Stamford Place
Stamford, CT 06902

Crane Aerospace & Electronics Net Sales

| | |
|-------|--------|
| 2009: | \$590M |
| 2010: | \$577M |
| 2011: | \$678M |
| 2012: | \$701M |
| 2013: | \$694M |
| 2014: | \$696M |
| 2015: | \$691M |

DESCRIPTION OF BUSINESS

Designs, manufactures, and services high-reliability electronic and electromechanical products for commercial and military aircraft, aerospace, defense, and demanding industrial markets worldwide.

The primary categories for aviation products include proximity sensing systems, engine instrumentation, aircraft electrical power systems including battery management systems, and uninterruptible power systems for primary flight controls, and fuel flow transmitters.



ORGANIZATION STRUCTURE

| | | | |
|--------------------------------|--------------------|--------------|--------------------------------|
| President, Aerospace Group | Brendan Curran | 425-743-8117 | brendan.curran@craneae.com |
| Site Director of Operations | Suzanne Schumacher | 425-743-8257 | suzanne.schumacher@craneae.com |
| VP Finance | Mike Brady | 818-526-2221 | mike.brady@craneae.com |
| VP Sales and Marketing | Gregg Herman | 469-481-2329 | gregg.herman@craneae.com |
| VP of Quality | Dorel Agafitei | 818-526-2682 | dorel.agafitei@craneae.com |
| Manager QA (Acting) | Ashley Smith | 425-870-6538 | ashley.smith@craneae.com |
| Mgr Supply Chain | Julie Mcnutt | 425-743-8421 | julie.mcnutt@craneae.com |
| R&O Value Stream Mgr. | Steve Peterson | 425-743-8403 | steve.peterson@craneae.com |
| R&O Quality Engineer | Donald Denz | 425-743-8149 | donald.denz@craneae.com |
| R&O Supv Cust Serv | Darrell Snyder | 425-743-8147 | darrell.snyder@craneae.com |
| Safety Manager | Barbara Anderson | 425-743-8693 | barbara.anderson@craneae.com |

HEADCOUNT

| | |
|-------------------|-----|
| Company total | 700 |
| Engineering | 196 |
| Mfg. Operations | 377 |
| Administration | 109 |
| Quality Assurance | 18 |

(Included in above count)

| | |
|---------------------|----|
| Sales and Marketing | 49 |
| Management | 75 |
| Supervision | 20 |
| Inspectors | 10 |
| Repair Station | 34 |
| Return to Service | 21 |

Total Plant Area: 200,181 sqft (3 buildings)

The following includes the 23,550 sqft Repair Station

| | |
|-----------------|--------|
| Workshop | 70,000 |
| Office | 70,000 |
| Test Cell | 23,000 |
| Warehouse | 20,000 |
| Clean Room | 2,400 |
| Facilities | 15,181 |
| Calibration Lab | 2,000 |



ELDEC Corporation's Certifications

| Type | Agency/Registrar | Cert Number | Expiration | Last Audit |
|---|------------------|---------------|-------------|-------------|
| FAA-145 | FAA | AG4R049M | NA | 31 May 2016 |
| FAA Operations Specifications (No Limitations): Instrument 2,4; Accessory 2,3 | | | | |
| EASA-145 | EASA | EASA.145.5067 | 1 Aug 2018 | NA |
| CCAR-145 | CAAC | F00100091 | 31 Dec 2017 | 21 Sep 2015 |
| FAA PMA | FAA | PQ0079NM | NA | NA |
| AS9100:2009 Rev C | LRQA | UQA 0108525 | 17 May 2018 | 22 Apr 2016 |
| ISO 9001:2008 | LRQA | UQA 0108525 | 17 May 2018 | 22 Apr 2016 |

FAA/EASA Accountable Manager: Suzanne Schumacher

CAAC Accountable Manager: Donald Denz

Recent MRO Audits

| | |
|---------------------------|--------------|
| CASE Audit | 27 JUN 2016 |
| Lockheed Martin Aerospace | 14 SEP 2016 |
| American Airlines | 13 DEC 2016 |
| Republic Airlines | 11 JAN 2017 |
| FAA Seattle MIDO | 7-9 FEB 2017 |
| UTAS | 28 FEB 2017 |
| FAA Seattle FSDO | 12 JUN 2017 |

C.A.S.E.
AIR CARRIER SECTION
POLICIES AND PROCEDURES

REPAIR/OVERHAUL VENDOR
AUDIT CHECKLIST

Audit Date: 19 June 2017 Vendor Allocation #: _____

C.A.S.E. Member #: _____ Auditor: Donald Denz

Vendor Name: ELDEC CORP, Crane Aerospace + Electronics

U.S./Canadian Certificate #: AG4R049M EASA Certificate #: EASA.145.5067
Expiration Dates: NA 1 AUG 2018

Address Line 1: 16700 13th AVENUE WEST

Address Line 2: _____

City: Lynwood State/Province: WA

Country: USA Zip code: 98037

Website: www.craneeae.com

Accountable Manager: Suzanne Schumacher

Personnel Contact:

Name

Title

Donald Denz

Quality Engineer

Steve Peterson

R+O Manager

Phone #: 425-743-1313

E-mail: info@craneeae.com

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

TABLE OF CONTENTS

This Checklist has been divided into three (3) sections to assist the auditor in conducting audits. The Systems portion includes the items typically found during document review to validate the vendor has **established** all the essential quality systems. The Work Process portion includes a review of a typical repair/overhaul processes to validate the systems have been **implemented and are producing** a quality product. The Support Systems portion includes **verification** that samples taken during the Work Process audit are acceptable and that processes which enable the work process are operating as described in the procedures. The Work Process portion of the audit may need to be conducted more than once when the vendor has multiple product lines. Both Sections 2 and 3 may need to be performed more than once when the vendor has multiple locations.

| Section | Subject | Page |
|---------|----------------------------------|------|
| 1. | SYSTEMS AUDIT | |
| | Certifications | 3 |
| | Quality Program | 4 |
| | Training Program | 6 |
| | Technical Data Program | 6 |
| | Shelf Life Program | 7 |
| | Calibration Program | 7 |
| | Internal Audit Program | 8 |
| | Scrap Parts Program | 8 |
| 2. | WORK PROCESS AUDIT | |
| | Shipping/Receiving Inspection | 9 |
| | Maintenance Observation/Sampling | 9 |
| 3. | SUPPORT SYSTEMS AUDIT | |
| | Calibration Control | 12 |
| | Training | 13 |
| | Facilities | 13 |
| | Material Control Process | 15 |
| | Records | 15 |
| | ESD | 16 |

NOTE: This checklist is based on the requirements stated in the C.A.S.E. 1-A standard, chapter 4-2-0 of this manual. The reference numbers enclosed in brackets [] that appear throughout this document refer to the applicable paragraph(s) in the standard.

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

YES NO N/A

SECTION 1 SYSTEM AUDIT

Certifications

- | | | | | | |
|-----|--|---|--|--|---|
| 1. | Obtain and review a copy of the current FAA Air Agency or Transport Canada AMO certificate, Operations Specifications (if applicable), and EASA/Canadian approval documents (if applicable). Are they accurate? [2A] | ✓ | | | |
| 2. | If the repair station has “Limited Ratings,” does the vendor have a capabilities listing that satisfies the standard? [2B] <i>NO limitations.</i> | | | | ✓ |
| 3. | Has the vendor designated an employee as the “Accountable Manager”? [5A] NOTE: Managers for FAA and EASA could be different. | ✓ | | | |
| 4. | Does the vendor employ a minimum of two (2) persons? [5B] | ✓ | | | |
| 5. | Does the roster (Do the rosters) identify all management, supervisory and inspection personnel? [5C] | ✓ | | | |
| 6. | Does the roster (Do the rosters) identify all personnel authorized for return-to-service? [5C] | ✓ | | | |
| 7. | Does the repair station have an employment summary for all personnel listed on the repair station roster(s)? [5D] | ✓ | | | |
| 8. | Do the vendor’s supervisory personnel satisfy the requirements of this standard? [5E] | ✓ | | | |
| 9. | Do the vendor’s inspection personnel satisfy the requirements of this standard? [5F] | ✓ | | | |
| 10. | Do the vendor’s return-to-service personnel satisfy the requirements of this standard? [5G] | ✓ | | | |
| 11. | Does the vendor have an FAA approved anti-drug and alcohol misuse prevention program (A449 and/or Registration)? [2C, D] | ✓ | | | |

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|--|------------|-----------|------------|
| Quality Program | | | |
| 12. Does the vendor have an FAA/NAA accepted Repair Station (or equivalent) Manual and does it meet the requirements of the 1-A standard? [3D] | ✓ | | |
| 13. Does the vendor have an FAA/NAA accepted Quality Control (or equivalent) Manual and does it meet the requirements of the 1-A standard? [3C] | ✓ | | |
| 14. Does the Quality Control Manual include references, where applicable, to manufacturer's inspection standards? [3C] 6447-000 | ✓ | | |
| 15. Does the Quality Control Manual include samples of and instructions for completing maintenance and inspection forms, or reference a separate forms manual? [3C] 0952-001 | ✓ | | |
| 16. Does the vendor maintain a list of contracted/sub-contracted maintenance functions and agencies which includes type of certificate and rating(s), if any, held by each agency? [3H] | | | ✓ |
| 17. Does the vendor ensure that contractor/sub-contractor quality meets air carrier specifications and legal requirements? [3I] | | | ✓ |
| 18. Does the vendor have a contract allowing the FAA to inspect non-certificated contractor/sub-contractors? [3I] | | | ✓ |
| 19. Does the vendor have a process to ensure that their U.S. based contracted/sub-contracted maintenance/preventive maintenance providers, at all tiers (certificated and non-certificated), have an FAA approved anti-drug and alcohol misuse prevention program (A449 and/or Registration). [2D] | | | ✓ |
| 20. Does the vendor have a procedure for reporting defects, or unairworthy conditions and suspected unapproved parts to the air carrier and the FAA/NAA? [3J] 74-014 | ✓ | | |

NOTE: EASA reporting time could be different and also requires notification be sent to the aircraft manufacturer.

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|---|------------|-----------|------------|
| 21. Is there proper separation of maintenance and inspection responsibilities for vendors that perform required inspections (RII)? [4A] | | | ✓ |
| 22. Does the vendor have an acceptable receiving inspection system which includes verification of identifying data? [4B] 0952-010 | ✓ | | |
| 23. Does the vendor have an acceptable system for controlling stamps for both inspection and production personnel? [4C] 0970-002 0415-001 | ✓ | | |
| 24. Does the vendor have a work turnover procedure? [13E] 0952-001 | ✓ | | |
| 25. Does the vendor have a duty time limitation requirement? [13A] 0970-002 | ✓ | | |
| 26. Does the vendor have controls in place to prevent foreign object damage to (or contamination of) all aviation products in any area where articles are stored or worked (e.g. fuel controls, hydraulic units, instruments, electronic components, structural components, etc.), including such from smoking, eating, or drinking? [13G] 60.50.1B | ✓ | | |
| 27. Is the security system adequate to ensure safety and security of air carrier's parts and aircraft? [11B] 0970-002 | ✓ | | |
| 28. Does the vendor identify specific individuals, by title, as responsible for the following programs: | | | |
| A. Technical Data? [5H] | ✓ | | |
| B. Shelf Life? [5I] | ✓ | | |
| C. Calibrated tooling? [5J] | ✓ | | |
| D. Scrap Parts? [5K] | ✓ | | |
| 29. Is there a back-up person identified by title for all the above programs? [5L] | ✓ | | |
| 30. Does the vendor identify specific individual primarily responsible for the internal audit program? [5M] | ✓ | | |

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

| | YES | NO | N/A |
|--|-------------------------------------|--------------------------|--------------------------|
| C. Verify that air carrier specifications were incorporated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| D. Obtain approval for deviating, if necessary, from air carrier specifications? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| E. Have adequate checks, inspections, and tests to ensure work was performed to air carrier specifications? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| F. Procedures to ensure the work documents returned from a subcontractor (at any tier) are adequate to support a major/minor determination? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 40. Does the vendor have a documented system to ensure technical data is current? [6B] | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 41. Does the vendor have records of manual revisions? [6B] | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 42. Does the vendor have a system to control working copies of manuals to ensure they are revised with the masters? [6C] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 43. Are there established approved procedures controlling revisions in manuals deviating from OEM specifications (e.g. EO, EA, Air Carrier Data, etc.)? [6A] <i>0970-007</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 44. If the vendor has ODA authority, does it have a system for receiving air carrier approval prior to use of the data? [6F] | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 45. Does the vendor have an approved ODA manual and roster? [6F] | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Shelf Life Program | | | |
| 46. Does the vendor have a documented shelf life program? [7A] <i>0612-010</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 47. Does the program list parts and materials that have shelf life limits? [7A] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 48. Is there an adequate system to assure that no item will be issued or used past its expiration date? [7C, D] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Calibration Program | | | |
| 49. Does the vendor have a documented calibration program? [8B] <i>Based on ANSI/NCSL Z 540 0480-001</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|---|-------------------------------------|--------------------------|-------------------------------------|
| 50. Does the program identify the calibration frequencies, limitations, and applicable tolerances or specifications? [8B] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 51. Does the calibration program require test and inspection equipment/tools to be traceable to a standard acceptable to the FAA/NAA (e.g., The National Institute of Standards and Technology (NIST))? [8C] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 52. Does the calibration program require records to be kept for a minimum of two (2) years or two (2) calibration cycles (whichever is greater)? [8H] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 53. Is there a system to identify each tool in the program, its calibration frequency, and its calibration due date? [8D, I] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 54. Does the vendor have a procedure for identifying, controlling, and/or preventing out-of-service, non-calibrated, for reference only, and due-for-calibration tools and equipment from being used? [8E, I] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 55. Does the vendor have a procedure to control the calibration of personal tools? [8F] | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Internal Audit Program

| | | | |
|--|-------------------------------------|--------------------------|--------------------------|
| 56. Does the vendor have an internal audit and surveillance function/schedule and are personnel performing internal audits trained? [3E] 74-003 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 57. Does the internal audit function ensure compliance with air carrier specifications? [3E] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 58. Does the internal audit program assure appropriate corrective actions to prevent reoccurrence and follow-up for effectiveness? [3F] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 59. Does the vendor maintain for internal audit reports for at least 36 months and are the results communicated to the Accountable Manager? [3E] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Scrap Parts Program

| | | | |
|--|-------------------------------------|--------------------------|--------------------------|
| 60. Does the vendor have a documented procedure for controlling scrapped parts? [15A] 74-012 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|-------------------------------------|--------------------------|--------------------------|

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

YES NO N/A

61. Does the scrap program assure that scrapped parts are either returned to the air carrier or mutilated beyond repair? [15A]

62. Does the scrap program require a record of scrapped life-limited parts to be maintained for a minimum of two (2) years? [15B]

63. Does the record include the P/N, S/N and date of the scrapped part? [15B]

SECTION 2 WORK PROCESS AUDIT

Receiving/Shipping Inspection

1. Does the vendor comply with its receiving process? [4B]

2. Does the vendor verify that the identifying data (P/N, S/N, nomenclature, mod. No.) on the documentation and the data plate match? [4B]

3. Does the vendor ensure incoming parts and materials comply with specifications including certification documentation and traceability? [4B]

4. Does the vendor incorporate air carrier specifications into their work processes? [13F]

5. Does the vendor only perform work for which it is authorized on its Operations Specifications? [2A, B]

6. Are components returned in an appropriate shipping container or as specified by the air carrier? [14A]

Maintenance Observation/Sampling

7. Is maintenance properly performed and documented for: [1D, 3A-B]
A. Preliminary inspection?

B. Functional test?

C. Hidden damage inspection?

D. Unit disassembly per instructions?

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|--|-------------------------------------|--------------------------|--------------------------|
| E. Unit cleaning per instructions? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| F. Parts inspection/checking per instructions? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G. Parts repairing per instructions? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| H. Properly taking and recording fits and clearances? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I. Unit reassembly per instructions? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| J. Unit functional testing per instructions? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| K. Final Return to Service inspection? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Does the vendor have appropriate tools and test equipment (including equivalent non-OEM) to perform the work? [13B(2)] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Are the tools and test equipment in serviceable condition? [8D, E] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Are calibrated tools and equipment labels showing within calibration and are they legible? [13B] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Is the appropriate technical data being utilized (e.g. current CMM, AMM, SRM, etc.)? [6A, B] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| A. Is technical data stored in a manner that will protect it from dirt and damage? [6D] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B. Are adequate viewing devices in good condition and available for viewing the technical data? [6E] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. If the technician is observed deviating from OEM technical data (e.g. alternate tooling/procedures, Process Specs., DER repairs, per an ODA, etc.), have those deviations been approved by the air carrier? [6F] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Is the unit/aircraft protected from FOD? [13G] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Are air carriers' parts properly identified throughout the maintenance actions and in storage? [13D] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|--|-------------------------------------|--------------------------|-------------------------------------|
| 15. Does each shelf life item have the shelf life expiration limit displayed? [7B] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Were items sampled for shelf life within limits? [7C, D] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Are fluid dispensing cans and servicing units properly identified? [13H] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Is the vendor following their work turnover procedure? [13E] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. Are all required licenses and repairman certificates available for review? [2A] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Does the vendor properly execute air carriers' required inspections (RII)? [4A] | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 21. Do Personnel properly interpret maintenance requirements and obtain approval to deviate from specified customer maintenance data? [5N] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Do Personnel notify supervisor/lead mechanic of mistakes requiring rectification to meet required customer specified maintenance data? [5N] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. Do Personnel inform and await instructions from their supervisor/lead mechanic in any case where it is impossible to complete the specialized maintenance in accordance with the customer specified maintenance data? [5N] <i>0952-001</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. Do final inspection personnel ensure that adequate checks, tests, and inspections are performed to air carrier specifications? [13F] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. Do personnel follow the return to service procedures? [3B, 5G] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Are the vendor's work records complete, in order, and legible? [13I] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. Do the work package records contain: [13I] | | | |
| A. The description of the work performed, reference to data and revision level? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B. The date of completion of the work performed? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

C.A.S.E.
AIR CARRIER SECTION
POLICIES AND PROCEDURES

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|--|-------------------------------------|--------------------------|-------------------------------------|
| C. The name of the person performing the work? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| D. The name of the person inspecting the work? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| E. The signature, certificate number of the person returning the article to service? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| F. Are all test and inspection records in work package? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. Does the vendor's return-to-service document meet air carrier and FAA/NAA requirements? [13I(5)] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. Does the vendor maintain certification on sub-contractor work? [3I] | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 30. Were Major repairs/alterations properly documented? [13I] | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 31. Were ADs properly evaluated, accomplished, and documented? [13F] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

SECTION 3 SUPPORT SYSTEMS AUDIT

Calibration Control

| | | | |
|--|-------------------------------------|--------------------------|--------------------------|
| 1. Does the vendor comply with its calibrated tool program? [8B, 13B] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Did the sample checks of the calibrated tooling indicate that the tooling is within calibration limits [8A-G] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Do calibration records for tools and test equipment available for use: [8G] | | | |
| A. Show date calibrated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B. Show calibration due date? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| C. Identify the person that performed calibration or check? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| D. Contain a calibration certificate for each item calibrated by an outside agency? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| E. Record details of adjustments and repairs? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|---|-------------------------------------|--------------------------|-------------------------------------|
| F. Show the P/N, S/N, and calibration due date of the standard used to perform the calibration? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Where tooling/test equipment is used, does the vendor: [13C(1)] | | | |
| A. Have an operating manual and maintenance manual for the equipment? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B. Perform maintenance and servicing per the manual? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| C. Maintain maintenance and servicing records for two years? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| D. Where applicable, list the equipment in their calibration program? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Where a vendor uses non-OEM specified tooling/test equipment, is it properly substantiated as equivalent? [13C(2)] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Training | | | |
| 6. Are RII inspectors properly trained and certified? [5F] | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Did the sampled names indicate the mechanics, inspectors, receiving inspectors, return to service personnel, auditors and supervisors were properly trained, authorized and certificated, if required, for the work they perform? [5D - F, 9A&D, and 13B] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Are the training records retained for a minimum of two (2) years after the employee leaves the company? [9C] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Do records indicate the vendor provides initial and recurrent training to personnel? [9E] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Facilities | | | |
| 10. If the vendor deals in non-aircraft parts, materials and/or maintenance activities, are they adequately segregated from the aircraft functions? [10A] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|---|-------------------------------------|--------------------------|-------------------------------------|
| 11. Does the vendor have: [10B(2)] | | | |
| A. Sufficient work space and areas for the proper segregation and protection of articles? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B. Segregated work areas enabling environmentally hazardous or sensitive operations such as painting, cleaning, welding, avionics work, and machining to be done properly and in a manner that does not adversely affect other maintenance? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| C. Suitable racks, hoists, trays, stands, and other segregation means for the storage and protection of all articles? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| D. Space sufficient to segregate articles and materials stocked for installation from those undergoing maintenance, preventive maintenance, or alterations? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| E. Ventilation, lighting, and control of temperature, humidity, and other climatic conditions sufficient to ensure personnel perform maintenance, preventive maintenance, or alterations to the standards required by the part? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| F. Areas for receiving and for shipping air carriers' units with adequate space, lighting, shelving, security and fire protection to accommodate air carriers' units in a manner that will preclude damage, loss, and theft? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G. Adequate and appropriate storage area to safely store air carriers' reusable shipping containers and to protect them from environmental damage? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. If the vendor performs maintenance, preventive maintenance, or alterations on articles outside of its housing, does it provide suitable facilities that are acceptable to the FAA/NAA and its air carriers? [10C] | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 13. Do facilities outside of the vendor's housing meet the requirements of this standard so that the work can be done in accordance with the requirements of 14 CFR 43? [10C] | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|---|-------------------------------------|--------------------------|--------------------------|
| 14. Does the vendor have adequate safety procedures in place and are the operations conducted in a safe manner and environment? [11A-G] <i>0040-012</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Material Control Process | | | |
| 15. Are parts and materials correctly identified and properly stored? [12A, B] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Does the vendor have a quarantine area for rejected parts and materials awaiting disposition? [12C] <i>0952-001</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Does the vendor comply with its scrapped parts procedure to ensure they are either returned to the air carrier or mutilated beyond repair? [15A] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Are parts and material properly protected from damage and deterioration? [12D] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. Are flammable, toxic or volatile materials properly identified and stored? [12E] <i>0065-001</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Are sensitive parts and equipment (oxygen parts, o-rings, electrostatic sensitive devices, temperature/humidity controlled item, etc.) properly packaged, identified and stored to protect from damage and contamination? [12F] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. Are high pressure bottles correctly labeled, properly stored and secured? [12G] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Does the vendor maintain traceability certification on all parts and raw materials? [12H, I] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Records | | | |
| 23. Does the vendor's record keeping system and retention time meet 14 CFR requirements? [13J] | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

C.A.S.E.
AIR CARRIER SECTION
POLICIES AND PROCEDURES

YES NO N/A

Electrostatic Sensitive Device (ESD) Program

24. The vendor, which works on or handles ESD components, shall have a documented ESD Program in place. [17] *0612-022*

- | | | |
|----|---|---|
| A. | Are shop floor grids grounded if installed? | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| B. | Are all ESDs only handled using grounding wrist or heel straps and conductive desk mats? | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| C. | Are devices contained in ESD conductive packaging sealed with conductive tape? | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| D. | Are ESDs prevented from being stored on shelving covered with carpet, foam, vinyl or any other material that can store or produce an electrical charge? | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| E. | Are appropriate warnings and caution signs and decals placed in areas where ESDs are handled? | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| F. | Are wrist/heel straps, and grounding mats tested for conductivity at regular intervals or prior to use, and such test results are recorded? | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| G. | Are maintenance personnel trained on ESD handling? | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

MAG-US CHECKLIST

NOTE: This supplement to the C.A.S.E. 1-A standard is based on the guidance material for the United States (U.S.)/European Union (E.U.) requirements stated in the Maintenance Annex Guide (MAG) enacted on May 1, 2011. The reference numbers enclosed in parentheses () that appear throughout this document refer to the applicable paragraph(s) in Section A. V. 1.1.1 (b) of the current MAG.

Audit Date: 19 June 2017 Vendor Allocation #: _____

C.A.S.E. Member #: _____ Auditor: Donald Denz

Vendor Name: ELDEC Corp, Crane Aerospace + Electronics

YES NO N/A

1. General Information

A. Refer to MAG-US Supplement.

2. Special Conditions in accordance with the MAG

A. Does the vendor hold a current FAA certificate? (2A) | _____ | _____

B. Does the vendor hold a current EASA certificate? (2B) | _____ | _____

NOTE: Obtain a copy of the FAA and EASA certificates.

C. Has the vendor provided a supplement to its Repair Station Manual which has been accepted by the FAA on behalf of EASA? (2C) | _____ | _____

1) Are revisions to the supplement also accepted? | _____ | _____

2) Does the supplement include:

a) A statement by the Accountable Manager of the repair station which commits the repair station to compliance with the MAG and these special conditions? | _____ | _____

b) Detailed procedures for the operation of an independent Quality Assurance System (QAS), including oversight of all multiple facilities within the territory of the United States and line stations located within and outside of the United States (except those located in the EU Member States) under the oversight of the FAA. | _____ | _____

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

| | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|---|-------------------------------------|--------------------------|-------------------------------------|
| c) Procedures for the release or approval for return to service that meet the requirements of EASA Part 145 for aircraft and the use of FAA form 8130-3 for aircraft components and any other information required by the owner or operator as appropriate? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) For airframe/aircraft rated facilities, procedures ensure that the Certificate of Airworthiness and the Airworthiness Review Certificate are valid prior to the issue of a release to service document? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| NOTE: For aircraft heavy maintenance vendors only. | | | |
| e) Procedures to ensure that repairs/modifications, as defined by EASA requirements, are accomplished in accordance with EASA approved data? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) A procedure for the repair station to ensure that the FAA-approved initial and recurrent training program and any revision thereto include human factors training? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Procedures for reporting unairworthy conditions on civil aeronautical products to the EASA, aircraft design organization, and the air carrier or operator? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| h) Procedures which ensure completeness of, and compliance with, the air carrier or operator work order or contract including issued EASA Airworthiness Directives and other issued mandatory instructions? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i) Procedures to ensure that contractors meet the terms of these implementation procedures (i.e. using an EASA Part 145 approved organization or, if using an organization that does not have EASA Part 145 approval, the repair station returning the product to service is responsible for ensuring its airworthiness)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) Procedures to permit work away from the fixed location on a recurring basis, where applicable? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

C.A.S.E.

AIR CARRIER SECTION

POLICIES AND PROCEDURES

k) Procedures to ensure appropriate covered hangars are available for base maintenance?

| | | |
|--|--|-------------------------------------|
| | | <input checked="" type="checkbox"/> |
|--|--|-------------------------------------|

3. **Additional C.A.S.E. Requirements**

A. Does the vendor maintain records of maintenance, preventive maintenance, and servicing, if any is required, for a minimum of three (3) years?

| | | |
|-------------------------------------|--|--|
| <input checked="" type="checkbox"/> | | |
|-------------------------------------|--|--|

ELDEC only repairs components.
ELDEC does not use Contract Maintenance.

C.A.S.E.
AIR CARRIER SECTION
POLICIES AND PROCEDURES

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