

## C&L Aerospace

**APU Model:** T-62T-40C14

**Aircraft:** ERJ-135

**APU P/N:** 4504113A

**LSV Date for Refurbishment:** June 5, 2018



**\*TSN:** 13133.7    **\*TSLR:** 1.7    **CSN:** 26543    **CSLR:** 3    **LSV Date:** June 5, 2018

### T-62T-40C14 S/N SP-E0314547

#### SUMMARY:

This APU was inducted to Revima APU SAS in June 2018 where it was long term preserved and inspected with an EASA Dual Release. There are no outstanding Airworthiness Directives or Alert Service Bulletins due at this time.

\*Information as of June 2018

#### LIFE LIMITED PARTS:

| ITEM             | P/N     | TSN   | CSN | LIFE LIMIT   | HOURS REMAINING |
|------------------|---------|-------|-----|--------------|-----------------|
| Turbine Wheel    | 4504847 | 408.5 | 749 | 15000        | 14251           |
| Compressor Wheel | 4504253 | 408.5 | 749 | On Condition | N/A             |

#### LRU ACCESSORIES:

| ITEM                            | P/N       | TSN     |
|---------------------------------|-----------|---------|
| Fuel Solenoid Valve             | 4952316-2 | UNK     |
| Servo Control Bleed Air Valve   | 4952829   | UNK     |
| Anti-Surge Valve                | 4950899   | UNK     |
| Low Oil Pressure Switch         | 4952366   | UNK     |
| High Oil Temperature Switch     | 4952459-1 | UNK     |
| Speed Sensor Assy               | 4504185C  | UNK     |
| Secondary Fuel Manifold         | 4951610   | UNK     |
| Primary Fuel Manifold           | 4951609   | UNK     |
| Indicator Pressure Differential | 179349-1  | UNK     |
| Ignitors                        | 4952382   | 0       |
| Engine Control Harness          | 45042308  | UNK     |
| Fuel Control Assy               | 45046168  | UNK     |
| Flow Divider                    | 4951486   | UNK     |
| Fuel Filter                     | 4952505   | 0       |
| Ignition Exciter                | 4950745   | UNK     |
| Data Memory Module              | 4505576   | 13132.6 |
| Air/Oil Cooler                  | 4950929   | UNK     |
| Ignition Cable                  | 4951491   | UNK     |
| Ignition Cable                  | 4950581-1 | UNK     |
| Ambient Pressure                | 4504196A  | 13132.6 |

Original

## PART OR MATERIAL CERTIFICATION FORM

2. Seller's Name:

*Regional One*

3. Reference #

SH56018

4. Organization:

Regional One

Address:

6750 NE 4th Court

Miami, FL 33138

USA

Ph: 1 (305) 759-0670 , Fax: 1 (305) 759-0411

STATUS: ACCREDITED PARTS DISTRIBUTOR

ISO 9001 : 2015 and AS9100D

CERT #: 10074ASR001

FAA AC 00-56B

5A. Seller's Contract #:

S51803

5B. Buyer's PO #:

04 October 2018

| 6. Item                   | 7. Description | 8. Part Number & Mfg            | 9. Eligibility | 10. Qty | 11. Serial/Batch # | 12. Status |
|---------------------------|----------------|---------------------------------|----------------|---------|--------------------|------------|
| 1                         | APU            | 4504113A<br>HAMILTON SUNDSTRAND | EMB145         | 1.00    | SP-E0314547        | SV         |
| Last Operator: EXPRESSJET |                |                                 |                |         |                    |            |
|                           |                | TSN: 13133.7 CSN: 26543         |                |         |                    |            |

13A. Remarks:

ESN/MSN #: 145146

REGIONAL ONE CERTIFIES THAT ALL MATERIAL SUPPLIED AGAINST THIS ORDER TO THE BEST OF OUR KNOWLEDGE BASED ON DOCUMENTS THAT WERE AVAILABLE AT THE TIME OF PURCHASE WERE NOT OBTAINED FROM ANY GOVERNMENT OR MILITARY SOURCES; AND HAVE NOT BEEN SUBJECTED TO EXTREME HEAT OR OTHER FORM OF EXTREME STRESS, E.G. ENGINE FAILURE, FIRE OR ACCIDENT; AND HAVE NOT BEEN IMMERSSED IN SALT WATER OR OTHERWISE EXPOSED TO CORROSIVE AGENTS OUTSIDE NORMAL OPERATION.

13B. Obtained From:

EIIIF CRJ AERO INVESTMENT LLC

13C. Last Certificated Agency / Tracking #:

REVIMA APU SAS 5390298

14. New Parts/Material Verification:

THE FOLLOWING SIGNATURE ATTESTS THAT THE PART(S) OR MATERIAL(S) IDENTIFIED ABOVE WAS (WERE) MANUFACTURED BY A FAA PRODUCTION APPROVAL HOLDER (PAH), OR FAA PRODUCTION ORGANISATION APPROVAL (POA) AS APPLICABLE, OR TO AN INDUSTRY COMMERCIAL STANDARD

18. Used, Repaired, New Surplus or Overhaul Parts Verification::

THE FOLLOWING SIGNATURE ATTESTS THAT THE DOCUMENTATION SPECIFIED ABOVE OR ATTACHED IS ACCURATE WITH REGARD TO THE ITEM(S) DESCRIBED. THIS IS NOT A MAINTENANCE RELEASE. REFER TO ATTACHED DOCUMENTS.

15. Signature:

19. E-Signature:

*Alberto Iglesias*

16. Name:

17. Date:

20. Name:

21. Date:

**Alberto Iglesias**  
**QUALITY INSPECTOR**

10/17/2018

NOTICE: The above signature binds the seller and the SIGNER to the accuracy of the information provided in the FORM. Should the information provided in this Form contain inaccuracies or misrepresentations, the signer and SELLER may be liable for damages and be subject to criminal prosecution under state and federal law.

## CONDITION CODE LEGEND:

FN - FACTORY NEW; NE - NEW / NEW SURPLUS; OH - OVERHAULED; SV - SERVICABLE; D - DISASSEMBLED;  
 RP - REPAIRABLE; AR - AS REMOVED

ROQSM 9.1T REV 2

|  |                               |  |   |  |                                     |   |  |
|--|-------------------------------|--|---|--|-------------------------------------|---|--|
| 1. Approving Competent Authority / Country<br>Autorité Compétente / Pays<br><br><b>DIRECTION GENERALE DE<br/>L'AVIATION CIVILE<br/>FRANCE</b>  |                               | 2. <b>AUTHORISED RELEASE CERTIFICATE</b><br>Certificat Libératoire Autorisé<br><b>EASA FORM 1</b><br>Formulaire 1 de l'EASA  |   |  |                                     | 3. Form Tracking Number<br>N° de repère du Formulaire<br><br><div style="text-align: right;">26641</div> <b>SO: 5390298      1,000</b>      |  |
| 4. Organisation Name and Address :<br>Nom et Adresse de l'Organisme :  |                               | <b>REVIMA APU SAS</b><br><b>1, AVENUE DU LATHAM 47</b><br><b>BP 12 - CAUDEBEC-EN-CAUX - 76490 RIVES-EN-SEINE FRANCE</b><br><b>Tél. 33 (0) 2 35 56 35 00 Fax 33 (0) 2 35 56 35 56</b> |   |  |                                     | 5. Work Order / Contract / Invoice<br>Bon de commande / Contrat / Facture<br><br><b>07288946</b><br><b>R25435</b>                           |  |
| 6. Item<br>Item  | 7. Description<br>Description | 8. Part No.<br>N° de pièce   | 9. Qty<br>Qté   | 10. Serial No.<br>N° série   | 11. Status / Work<br>Etat / Travaux |   |  |
| 1  | APU APS500C14                 | 4504113A   | 1   | SP-E0314547  | REPAIRED                            |   |  |
| 12. Remarks<br>Remarques<br><br><div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">           L1. -TSN: 13133.7 -CSN: 26543 -TSR: 1.7 -CSR: 3<br/>           L2. Unit was REPAIRED IAW EM 40C14-1 R13 dated March 01,2016<br/>           L3. Modification and Work performed refer to log book<br/>           L4. And Shop Finding Report Order 5390298<br/>           This work identified in block 11 and described herein has been accomplished in accordance with 14 CFR part 43 and in respect to that work, the items are approved for return to service under certificate N° Q6EY992X         </div> <div style="width: 45%;">           L5. The preservation is valid until: Dec. 04,2019<br/>           L6. LOG BOOK DELIVERED WITH THE ENGINE.         </div> </div>  |                               |  |   |  |                                     |   |  |
| 13a. Certifies that the items identified above were manufactured in conformity to :<br>Certifie que les éléments identifiés ci-dessus ont été fabriqués conformément aux :<br><br><input type="checkbox"/> approved design data and are in a condition for safe operation<br>données de conception approuvées et sont en état de fonctionner en toute sécurité<br><br><input type="checkbox"/> non-approved design data specified in block 12<br>données de conception non approuvées spécifiées dans la case 12   |                               |  | 14a. <input checked="" type="checkbox"/> Part 145.A.50 Release to Service<br>Approbation pour remise en service<br>Selon Partie 145.A.50<br><br>Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with Part 145 and in respect to that work the items are considered ready for release to service.<br>Certifie que, sauf indication contraire spécifiée en case 12, les travaux identifiés en case 11 et décrits en case 12 ont été réalisés conformément à la partie 145 et qu'au vu de ces travaux, les pièces sont considérées prêtes à la remise en service. |  |                                     |   |  |
| 13b. Authorised Signature<br>Signataire autorisé<br><br><div style="font-size: 2em; text-align: center;">N / A</div>   |                               | 13c. Approval/Authorisation Number<br>Numéro d'agrément/d'autorisation<br><br><div style="font-size: 2em; text-align: center;">N / A</div>   |   | 14b. Authorised Signature<br>Signature autorisée<br><br>   |                                     | 14c. Certificate/Approval Ref. No<br>N° du Certificat/Agrément<br><br><div style="text-align: center; font-weight: bold;">FR.145.0553</div> |  |
| 13d. Name<br>Nom<br><br><div style="font-size: 2em; text-align: center;">N / A</div>   |                               | 13e. Date (dd mmm yyyy)<br>Date (jj mmm aaaa)<br><br><div style="font-size: 2em; text-align: center;">N / A</div>  |   | 14d. Name<br>Nom<br><br><div style="text-align: center; color: blue; font-weight: bold;">APRS # RV 0208</div> <div style="text-align: center; color: blue;">Jean-François JULIEN</div> |                                     | 14e. Date (dd mmm yyyy)<br>Date (jj mmm aaaa)<br><br><div style="text-align: center; color: blue; font-weight: bold;">05 JUN 2018</div>     |  |
| <b>USER/INSTALLER RESPONSIBILITIES / Responsabilités de l'utilisateur/installateur</b><br>This certificate does not automatically constitute authority to install the item(s).<br>Ce document ne constitue pas forcément l'autorisation d'installer l'(es) item(s)<br><br>Where the user/installer performs work in accordance with regulations of an airworthiness authority different than the airworthiness authority specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts items from the airworthiness authority specified in block 1.<br>Quand l'utilisateur/installateur travaille selon les réglementations d'une autorité de navigabilité différente de l'autorité de navigabilité mentionnée dans la case 1, il est essentiel que l'utilisateur/installateur s'assure que son autorité de navigabilité accepte les items libérés par l'autorité de navigabilité mentionnée dans la case 1.<br><br>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.<br>Les indications portées en cases 13a et 14a ne constituent pas une certification de montage. Dans tous les cas le dossier d'entretien de l'aéronef doit contenir une certification d'installation délivrée conformément aux règlements nationaux par l'utilisateur/installateur avant que l'aéronef puisse voler. |                               |  |   |  |                                     |   |  |



## REVIMA APU

1 Avenue du Latham 47  
BP12 Caudebec en Caux  
76490 Rives-En-Seine  
FRANCE

REGIONAL ONE

## APU APS 500 Series

APS 500-C14

TYPE : Embraer Family

|              |
|--------------|
| A/C : N13970 |
|--------------|

S/N : SP-E0314547

P/N : 4504113A

WORK ORDER : R25435

TSN: 13133.7

TSO : N/A

TSI: 1.7

REVIMA ORDER : 5390298

CSN : 26543

CSO : N/A

CSI : 3

[illegible]

**NCW:** Not Complied With.

**CW:** Complied With.

**PCW:** Previously Complied With.

NR: Not Removed.

**NA3:** Not Applicable due to part number.

**NA4:** Not Applicable due to serial number

**NA5:** Not Applicable due to part missing

DATE &amp; VISA

05 JUN 2018

**QUALITY CONTROL**  
Jean-Francois JULIEN

REVISION N° 0

Removed date : 10-Apr-2018

Received date : 7-May-2018

PAGE : 1/1



## STATUS OF INSTALLED LIFE LIMITED PARTS

|                |         |
|----------------|---------|
| Customer R/O   | R25435  |
| Revima APU S/O | 5390298 |

| APU TYPE | APS 500 C14 | P/N | 4504113A | S/N | SP-E0314547 |
|----------|-------------|-----|----------|-----|-------------|
| TSN      | 13133,7     | TSO | N/A      | TSR | 1,7         |
| CSN      | 26543       | CSO | N/A      | CSR | 3           |

| DESCRIPTION      | P/N     | S/N     | TSN   | CSN | Life limit | Cycles remaining | Removed from      |  |
|------------------|---------|---------|-------|-----|------------|------------------|-------------------|--|
| TURBINE WHEEL    | 4504847 | HK177   | 408,5 | 749 | 15000      | 14251            | NOT DISSASSEMBLED |  |
| COMPRESSOR WHEEL | 4504253 | SIF3028 | 408,5 | 749 | N/A        | N/A              | NOT DISSASSEMBLED |  |

|                                 |                 |
|---------------------------------|-----------------|
| Completed by:<br>(Stamp & Sign) | Neveu S, RV6247 |
| Date:                           | June 5, 2018    |



# LRU Inventory

RegionalOne

APU APS500C14

P/N: 4504113A

S/N: SP-E0314547

SO: 5390298

| At receipt |                  |                                 | At departure |                  |          |      |                       |
|------------|------------------|---------------------------------|--------------|------------------|----------|------|-----------------------|
| P/N        | S/N              | Description                     | P/N          | S/N              | TSN      | TSO  | Workscope             |
| 4952316-2  | 2402             | VALVE, SOLENOID-FUEL            | 4952316-2    | 2402             | UNK      | UNK  | SERVICEABILITY REVIEW |
| 4952829    | 2342             | VALVE, BLEED AIR-SERVO CONTROL  | 4952829      | 2342             | UNK      | UNK  | Continuous time       |
| 4950899    | 0904             | VALVE, ANTI-SURGE               | 4950899      | 2476             | UNK      | UNK  | REPAIRED              |
| 4952366    | NOT DISASSEMBLED | SWITCH, LOW OIL PRESSURE        | 4952366      | NOT DISASSEMBLED | UNK      | UNK  | Continuous time       |
| 4952459-1  | 201              | SWITCH, HIGH OIL TEMPERATURE    | 4952459-1    | 201              | UNK      | UNK  | Continuous time       |
| 4504185C   | 0102530          | SPEED SENSOR ASSY, DUAL HALL E  | 4504185C     | 0102530          | UNK      | UNK  | Continuous time       |
| M4951830   | 1UT11408         | NOZZLE ASSY, DUPLEX FUEL        | M4951830     | 1UT11408         | UNK      | UNK  | SERVICEABILITY REVIEW |
| M4951830   | 1NT05648         | NOZZLE ASSY, DUPLEX FUEL        | 4952404      | W3770            | 4301,00  | 0,00 | OVERHAULED            |
| M4951830   | 1RS03378         | NOZZLE ASSY, DUPLEX FUEL        | 4952404      | W4639            | UNK      | 0,00 | OVERHAULED            |
| M4951830   | 1WS05843         | NOZZLE ASSY, DUPLEX FUEL        | 4952404      | W4781            | UNK      | 0,00 | OVERHAULED            |
| M4951830   | 1TT02446         | NOZZLE ASSY, DUPLEX FUEL        | 4952404      | W832             | UNK      | 0,00 | OVERHAULED            |
| M4951830   | 1XR13351         | NOZZLE ASSY, DUPLEX FUEL        | 4952404      | W870             | UNK      | UNK  | REPAIRED              |
| 4951610    | 06483357-01      | MANIFOLD ASSEMBLY-SECONDARY FU  | 4951610      | 06483357-01      | UNK      | UNK  | SERVICEABILITY REVIEW |
| 4951609    | 06199930-01      | MANIFOLD ASSEMBLY-PRIMARY FUEL  | 4951609      | 06199930-01      | UNK      | UNK  | SERVICEABILITY REVIEW |
| 179349-1   | 2522             | INDICATOR PRESSURE DIFFERENTIA  | 179349-1     | 2522             | UNK      | UNK  | Continuous time       |
| 4952382    | N/A              | IGNITOR                         | 4952382      | N/A              | 0,00     | 0,00 | SUPPLIED PART         |
| 4952382    | N/A              | IGNITOR                         | 4952382      | N/A              | 0,00     | 0,00 | SUPPLIED PART         |
| 4504230B   | 1017             | HARNESS ASSY, ENGINE CONTROL    | 4504230B     | 1017             | UNK      | UNK  | Continuous time       |
| 4504616B   | 07-04-81         | FUEL CONTROL ASSEMBLY           | 4504616B     | 07-04-81         | UNK      | UNK  | SERVICEABILITY REVIEW |
| 4951486    | 0744             | FLOW DIVIDER                    | 4951486      | 0744             | UNK      | UNK  | SERVICEABILITY REVIEW |
| 4952505    | C1159            | FILTER ASSEMBLY, FUEL           | 4952505      | C1911            | 0,00     | 0,00 | SUPPLIED PART         |
| 4950745    | J13360056        | EXCITER, IGNITION               | 4950745      | J13360056        | UNK      | UNK  | SERVICEABILITY REVIEW |
| 4505576    | 0671             | DATA MEMORY MODULE ASSEMBLY     | 4505576      | 0671             | 13132,60 | UNK  | Continuous time       |
| 4950929    | 738734-12        | COOLER AIR/OIL                  | 4950929      | 738734-12        | UNK      | UNK  | Continuous time       |
| 4951491    | N/A              | CABLE, IGNITION                 | 4951491      | N/A              | UNK      | UNK  | SERVICEABILITY REVIEW |
| 4950581-1  | N/A              | CABLE IGNITION                  | 4950581-1    | N/A              | UNK      | UNK  | SERVICEABILITY REVIEW |
| 4504196A   | V21-S58935       | AMBIENT PRESSURE(UNAMPLIFIED) & | 4504196A     | V21-S58935       | 13132,60 | UNK  | Continuous time       |

bc19

Date : 04 juin 2018

Engine type : APS500 C14  
 Serial Number : 0314547  
 I.A. Number : 7288946  
 Nucleus S/N :  
 Gearbox S/N :  
 Doc ref : EM 40C14-1 Rev 13 du 01/03/16  
 L.H.V. : 18649

## AUXILIARY POWER UNIT TEST CELL RECORD SHEET

=====

|                      | Units  | No Load | Bleed air load | Shaft load | Shaft & bleed air load | -----   |
|----------------------|--------|---------|----------------|------------|------------------------|---------|
| P1 pressure          | psi    | 14.692  | 14.692         | 14.707     | 14.692                 | 0.000   |
| Temperature T1       | oF     | 65.6    | 66.9           | 68.1       | 66.2                   | 0.0     |
| Bleed air flow       | lb/min | -----   | 85.36          | 0.00       | 70.81                  | 0.00    |
| Cor. bleed air flow  | lb/min | -----   | 84.93          | 0.00       | 23.15                  | 0.00    |
| Load pressure        | psi    | -----   | 56.58          | 21.08      | 59.49                  | 0.00    |
| PCD                  | psi    | -----   | 56.580         | 21.088     | 59.495                 | 0.000   |
| PCD corrected        | psi    | -----   | 56.74          | -----      | 59.48                  | 0.00    |
| Bleed air temp.      | oF     | -----   | 449.6          | 248.7      | 448.5                  | 0.0     |
| Cor. load air temp.  | oF     | -----   | 449.6          | -----      | 448.3                  | 0.0     |
| Engine EGT 1         | oF     | 604.0   | 1311.9         | 652.2      | 1142.7                 | 0.0     |
| Engine EGT 2         | oF     | 582.0   | 1242.6         | 622.9      | 1077.9                 | 0.0     |
| Tail pipe EGT        | oF     | 591.8   | 1275.6         | 640.7      | 1112.7                 | 0.0     |
| Cor. tail pipe EGT   | oF     | -----   | -----          | -----      | 1128.9                 | 0.0     |
| Turbine vibration    | G      | 3.77    | 5.58           | 4.38       | 4.23                   | 0.00    |
| Accessory vibration  | G      | 1.60    | 1.79           | 0.92       | 1.07                   | 0.00    |
| Tail pipe pressure   | psi    | 14.57   | 14.62          | 14.59      | 14.62                  | 0.00    |
| Oil pressure         | psi    | 68.67   | 68.57          | 68.48      | 68.80                  | 0.00    |
| Oil temperature      | oF     | 195.2   | 211.2          | 185.7      | 208.2                  | 0.0     |
| Gearbox air pressure | psi    | 0.52    | 0.55           | 0.53       | 0.55                   | 0.00    |
| Fuel temperature     | oF     | 68.3    | 67.8           | 68.1       | 68.1                   | 0.0     |
| Fuel pressure        | psi    | 21.13   | 20.63          | 21.03      | 20.81                  | 0.00    |
| Cor. shaft load      | kW     | 0.0     | 0.1            | 19.5       | 10.5                   | 0.0     |
| Fuel flow            | lb/h   | 95.2    | 186.4          | 106.8      | 170.3                  | 0.0     |
| Corrected fuel flow  | lb/h   | 95.2    | 186.4          | 106.8      | 169.7                  | 0.0     |
| N1 speed             | rpm    | 63464   | 63451          | 63458      | 63458                  | 0       |
| Hourmeter            | hours  | 13132.0 | -----          | -----      | -----                  | 13133.7 |
| Event counter        | cycles | 26540   | -----          | -----      | -----                  | 26543   |
| Start time           | sec.   | 20.0    | -----          | -----      | -----                  | -----   |
| Cool down time       | sec.   | -----   | -----          | -----      | -----                  | 25.0    |

## Operating limits

|                      |        |       |       |       |        |       |
|----------------------|--------|-------|-------|-------|--------|-------|
| Min. air flow        | lb/min | ----- | 81.7  | ----- | -----  | ----- |
| Max. E.G.T corrected | oF     | ----- | ----- | ----- | 1195.7 | ----- |
| Min. PCD             | psi    | ----- | 51.37 | ----- | 56.48  | ----- |
| Max cor. load temp.  | oF     | ----- | 471.6 | ----- | 471.9  | ----- |
| Max cor. fuel flow   | lb/h   | ----- | ----- | ----- | 184.0  | ----- |

Technician


 RV 6045

Control


 RV 0204

|   |                        |  |              |   |  |  |  |
|---|------------------------|--|--------------|---|--|--|--|
| 1. Approving Civil Aviation Authority/Country:<br><br>FAA/United States   |                        | <b>AUTHORIZED RELEASE CERTIFICATE</b><br><br>FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG |              |   |  | 3. Form Tracking Number:<br><br>UN326281 67580 |  |
| 4. Organization Name and Address:<br>STANDARD AERO (ALLIANCE) INC. 1029 ROSS DRIVE MARYVILLE, TN 37801  |                        |  |              |   | 5. Work Order/ Contract/ Invoice Number:<br>7519453/RO-044245-2014 |  |  |
| 6. Item:  | 7. Description:        | 8. Part Number:  | 9. Quantity: | 10. Serial Number:  | 11. Status/Work:   |  |  |
| 0001  | T-62T-40C14 / 500R APU | 4504113A   | 1 EACH       | SP-E0314547   | REPAIRED   |  |  |
| 12. Remarks:<br>Customer Reported Times since new: 13,670.70 Hours and 22,217.00 Cycles. Data Memory Module (DMM) 4505576, S/N: 0671 Reading: 12,725.2 Hours, 25,794 Cycles<br><br>Inspected, repaired and tested in accordance with Hamilton Sundstrand Standard Practices Manual HSPS 490001, Revision 4, dated 25 Aug 2014, Engine Manual 40C14-1, Revision 11, dated 15 Oct 2014, Hamilton Sundstrand Action Items as applicable, and Cleaning, Inspection and Repair Manual 40C14-2, Revision 8, dated 13 Nov 2013. Service Bulletins embodied at this time: None.<br>The fuel filter, oil filter and igniters were replaced. The air / oil cooler was externally cleaned. This Auxiliary Power Unit is in compliance with AD Note 2004-24-03.<br>Condition Report and Work Order Summary is held on file under TCN UN326281.<br>NOTE: Engine must be completely depreserved and lubrication system serviced upon engine installation.<br><br>"Standard Aero (Alliance) Inc. Certifies that the work specified in Blocks 11 / 12 was carried out in accordance with EASA part 145 and, with respect to that work, the component is considered ready for release to service under EASA Part 145 Approval Number EASA 145.4894." |                        |  |              |   |  |  |  |
| 13a. Certifies the items identified above were manufactured in conformity to:<br><br><input type="checkbox"/> Approved design data and are in a condition for safe operation.<br><br><input type="checkbox"/> Non-approved design data specified in Block 12.   |                        |  |              | 14a. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input checked="" type="checkbox"/> Other regulation specified in Block 12<br><br>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/Autorization No.:  |              | 14b. Authorized Signature:  |  | 14c. Approved/Certificate No.:                 |  |
|   |                        |  |              |    |  | AE0R215N                                       |  |
| 13d. Name (Typed or Printed):   |                        | 13e. Date: (dd/mm/yyyy):   |              | 14d. Name (Typed or Printed):   |  | 14e. Date: (dd/mm/yyyy):                       |  |
|   |                        |  |              | Brian Handley   |  | 19/Jan/2015                                    |  |
| <b>User/Installer Responsibilities</b><br><br>It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article..<br><br>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.<br><br>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.   |                        |  |              |   |  |  |  |





P/N 4504113A  
S/N: SP-E0314547  
Manual: Doc 40C14-1 Rev. 8/5/15/2011

APS600R (T-62T-40C14)  
ACCEPTANCE TEST DATA SHEET

TCN: UN326281  
Shop Order Number: PK46Q  
FADEC Part No: 4504205F  
FADEC Serial No: 0182  
FADEC S/W Ver: 01.05

Test Date: 1/16/2015  
Automatic Start Time: 20.0  
Time since major rework: 0  
Number of Starts: 5  
Total Test Run Time (>60 min): 1.0 HRS

| MARYVILLE, TENNESSEE - APU TEST FACILITY |                   |            |              |          |              |          |              |          |               |          |               |          |                   |          |                 |          |
|--|-------------------|------------|--------------|----------|--------------|----------|--------------|----------|---------------|----------|---------------|----------|-------------------|----------|-----------------|----------|
| Test Data                                |                   | Units      | Run 1        |          | Run 2        |          | Run 3        |          | Run 4a        |          | Run 4b        |          | Run 5a            |          | Run 5b          |          |
|  |                   |            | No Load      |          | Shaft Load   |          | Bleed Load   |          | Combined Load |          | Combined Load |          | anti-surge closed |          | anti-surge open |          |
|  |                   |            | Required     | Record   | Required     | Record   | Required     | Record   | Required      | Record   | Required      | Record   | Required          | Record   | Required        | Record   |
| Time/Date                                |                   | -          | 1/16/15 8:08 |          | 1/16/15 8:11 |          | 1/16/15 8:16 |          | 1/16/15 8:29  |          | 1/16/15 8:32  |          | 1/16/15 9:27      |          | 1/16/15 9:28    |          |
| Barometric Pressure                      |                   | in Hg      |              | 29.24    |              | 29.24    |              | 29.24    |               | 29.25    |               | 29.25    |                   | 29.26    |                 | 29.26    |
| Test Cell Ambient Pressure               |                   | PSIA       |              | 14.36    |              | 14.36    |              | 14.36    |               | 14.37    |               | 14.37    |                   | 14.37    |                 | 14.37    |
| Test Cell Ambient Temperature            |                   | ° F        |              | 34.30    |              | 34.48    |              | 37.70    |               | 40.71    |               | 40.62    |                   | 38.44    |                 | 38.58    |
| Fuel Inlet Pressure                      |                   | PSIG       | 5 - 40 psig  | 32.18    | 5 - 40 psig  | 32.19    | 5 - 40 psig  | 31.17    | 5 - 40 psig   | 31.58    | 5 - 40 psig   | 32.27    | 5 - 40 psig       | 32.11    | 5 - 40 psig     | 31.97    |
| Fuel Inlet Temperature                   |                   | ° F        |              | 49.39    |              | 49.14    |              | 50.62    |               | 51.09    |               | 50.58    |                   | 51.40    |                 | 51.94    |
| Air Inlet Plenum Temperature (Average)   |                   | ° F        |              | 39.02    |              | 38.19    |              | 40.97    |               | 43.60    |               | 43.29    |                   | 45.07    |                 | 41.45    |
| Engine Oil Pressure                      |                   | PSIG       | 30 - 80 psig | 72.13    | 30 - 80 psig | 71.05    | 30 - 80 psig | 70.47    | 30 - 80 psig  | 69.80    | 30 - 80 psig  | 69.89    | 30 - 80 psig      | 71.70    | 30 - 80 psig    | 71.26    |
| Engine Oil Temperature                   |                   | ° F        | Max 270° F   | 160.43   | Max 270° F   | 183.98   | Max 270° F   | 196.87   | Max 270° F    | 206.37   | Max 270° F    | 204.63   | Max 270° F        | 173.59   | Max 270° F      | 181.48   |
| Gearbox Vent Pressure                    |                   | in Hg      |              | 2.25     |              | 2.62     |              | 2.56     |               | 1.57     |               | 2.45     |                   | 1.97     |                 | 2.63     |
| Exhaust Gas Static Pressure              |                   | in H2O     |              | 0.00     |              | 0.00     |              | 0.00     |               | 0.00     |               | 0.00     |                   | 0.00     |                 | 0.00     |
| Unit Exhaust Gas Temperature             | # 1               | ° F        |              | 546.69   |              | 590.44   |              | 1301.98  |               | 1085.81  |               | 583.42   |                   | 599.04   |                 | 677.96   |
|  | #2                | ° F        |              | 530.39   |              | 562.85   |              | 1245.92  |               | 1043.44  |               | 561.71   |                   | 571.81   |                 | 636.86   |
|  | Average           | ° F        |              | 538.54   |              | 576.65   |              | 1273.95  |               | 1064.62  |               | 572.56   |                   | 585.43   |                 | 657.41   |
|  | Delta #1 & #2     | ° F        |              | 16.30    | Max 150 °F   | 27.58    | Max 150 °F   | 56.06    | Max 150 °F    | 42.36    | Max 150 °F    | 21.70    |                   | 27.22    |                 | 41.10    |
|  | Delta Unit & T/C  | ° F        |              | 0.97     | Max 50 °F    | 2.25     | Max 50 °F    | 1.45     | Max 50 °F     | 3.52     | Max 50 °F     | 1.54     |                   | 1.99     |                 | 17.76    |
| T/C Exhaust Gas Temperature (Average)    | Actual            | ° F        | Max 1350° F  | 537.58   | Max 1350° F  | 574.40   | Max 1350° F  | 1275.40  | Max 1350° F   | 1061.11  | Max 1350° F   | 571.03   | Max 1350° F       | 583.44   | Max 1350° F     | 639.65   |
|  | Corrected         | ° F        |              |          |              |          |              | 1337.88  |               | 1107.64  |               | 603.22   |                   | 612.22   |                 | 678.16   |
| Anti-Surge Valve Test (Delta EGT)        |                   | ° F        |              |          |              |          |              |          |               |          |               |          |                   |          |                 | 56.22    |
| Compressor Static Discharge Pressure     | Actual            | PSIA       |              | 71.91    |              | 72.00    |              | 57.43    |               | 60.66    |               | 71.05    |                   | 71.18    |                 | 68.81    |
|  | Corrected         | PSIA       |              | 73.58    |              | 73.67    |              | 58.76    |               | 62.05    |               | 72.67    |                   | 72.79    |                 | 70.36    |
| Orifice Inlet Static Pressure            |                   | PSIA       |              |          |              |          |              | 55.44    |               | 60.41    |               | 73.16    |                   |          |                 |          |
| Orifice Exit Temperature                 |                   | ° F        |              |          |              |          |              | 279.09   |               | 369.76   |               | 352.00   |                   |          |                 |          |
| Orifice Delta Pressure                   |                   | in H2O     |              |          |              |          |              | 88.07    |               | 54.91    |               | -0.05    |                   |          |                 |          |
| Bleed Airflow                            | Actual            | LB/MIN     |              |          |              |          |              | 95.17    |               | 74.76    |               | 0.24     |                   |          |                 |          |
|  | Corrected (inlet) | LB/MIN     |              |          |              |          |              | 97.36    |               | 76.47    |               | 0.24     |                   |          |                 |          |
|  | Corrected (bleed) | LB/MIN     |              |          |              |          |              | 32.09    | 23 +/- 1      | 23.43    |               | 0.06     |                   |          |                 |          |
| Bleed Total Pressure                     | Actual            | PSIA       |              |          |              |          |              | 56.81    |               | 61.26    |               | 73.17    |                   |          |                 |          |
|  | Corrected         | PSIA       |              |          |              |          |              | 58.12    |               | 62.67    |               | 74.84    |                   |          |                 |          |
| Bleed Total Temperature                  | Actual            | ° F        |              |          |              |          |              | 421.59   |               | 426.03   |               | 412.79   |                   |          |                 |          |
|  | Corrected         | ° F        |              |          |              |          |              | 453.32   |               | 453.12   |               | 440.03   |                   |          |                 |          |
| Fuel Flow                                | Actual            | LB/HR      |              | 103.09   |              | 111.39   |              | 197.55   |               | 176.34   |               | 107.63   |                   | 110.50   |                 | 124.75   |
|  | Corrected         | LB/HR      |              | 105.48   |              | 113.98   |              | 202.12   |               | 180.38   |               | 110.09   |                   | 113.00   |                 | 127.56   |
| Shaft Power                              | Actual            | Hp         |              | 2.13     |              | 24.77    |              | 0.15     |               | 12.96    |               | 13.39    |                   | 24.78    |                 | 24.58    |
|  | Corrected         | Hp         |              | 2.17     | 25 +/- 2     | 25.34    |              | 0.15     | 13 +/- 2      | 13.26    | 13 +/- 2      | 13.69    | 25 +/- 2          | 25.34    | 25 +/- 2        | 25.14    |
| Engine Speed                             | Actual            | RPM        |              | 63435.03 |              | 63435.75 |              | 63437.13 |               | 63434.89 |               | 63435.60 |                   | 63436.05 |                 | 63422.69 |
|  | Percent           | %          |              | 100.0%   | 100.04       | 100.04   |              | 100.04   |               | 100.04   |               | 100.04   |                   | 100.04   |                 | 100.02   |
| Unit Vibration                           | Gearbox           | g's (peak) | 10 MAX       | 0.75     | 10 MAX       | 0.99     | 10 MAX       | 1.07     | 10 MAX        | 0.89     | 10 MAX        | 1.19     | 10 MAX            | 1.20     | 10 MAX          | 1.17     |
|  | Turbine           | g's (peak) | 10 MAX       | 2.60     | 10 MAX       | 3.04     | 10 MAX       | 1.87     | 10 MAX        | 2.16     | 10 MAX        | 2.25     | 10 MAX            | 2.26     | 10 MAX          | 2.20     |

Run 3a On/Off Load Transients (5x): Accept: ☒ X Reject: ☐

Leak Check: Accept: ☒ X Reject: ☐

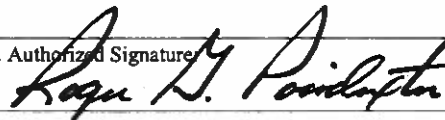
Oil Filter Replaced: YES

Mag Plug Inspected: Accept: ☒ X Reject: ☐

Test Completed By: \_\_\_\_\_



| ATP PASS LIMITS |          |          |        |          |         |
|-----------------|----------|----------|--------|----------|---------|
|                 |          | Run 3    |        | Run 4    |         |
|                 |          | Required | Actual | Required | Actual  |
| T6 *            | max ° F  | ---      | ---    | 1087.48  | 1049.52 |
| Wf **           | max pph  | ---      | ---    | 190.09   | 178.91  |
| Wb **           | min ppm  | 91.24    | 97.36  | ---      | ---     |
| Pb **           | min psia | 53.09    | 58.14  | 59.30    | 62.95   |
| Tb              | max ° F  | 445.91   | 421.57 | 448.30   | 425.79  |

|   |                        |  |                 |  |                          |  |  |  |
|---|------------------------|--|-----------------|--|--------------------------|--|--|--|
| 1. Approving<br>National Aviation<br>Authority/Country:<br><br>FAA/United States  |                        | <b>AUTHORIZED RELEASE CERTIFICATE</b><br><br>FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG |                 |  |                          |  | 3. Form Tracking Number:<br><br>UN319727 32169 |  |
| 4. Organization Name and Address:<br>STANDARD AERO (ALLIANCE) INC. 1029 ROSS DRIVE MARYVILLE, TN 37801  |                        |  |                 |  |                          | 5. Work Order/ Contract/ Invoice Number:<br>5820527 / RO0726110001 |  |  |
| 6. Item:  | 7. Description:        | 8. Part Number:  | 9. Eligibility: | 10. Quantity:  | 11. Serial/Batch Number: | 12. Status/Work:   |  |  |
| 0001  | T-62T-40C14 / 500R APU | 4504113A   | N/A             | 1 EACH   | SP-E0314547              | REPAIRED   |  |  |
| 13. Remarks:<br>Customer Reported Times since new: 11,432:99 Hours and 21,150.24 Cycles. Data Memory Module (DMM) 4505576, S/N: 0671 Reading: 8,590.0 Hours, 17,213 Cycles<br><br>Inspected, repaired and tested in accordance with Hamilton Sundstrand Standard Practices Manual HSPS 490001, Revision 2, dated 15 Dec 2009, Engine Manual 40C14-1, Revision 8, dated 15 May 2011, Hamilton Sundstrand Action Items as applicable, and Cleaning, Inspection and Repair Manual 40C14-2, Revision 6, dated 15 June 2011, other FAA acceptable data, and all applicable Federal Aviation Administration Regulations. Condition Report and Work Order Summary is submitted electronically and is incorporated by reference. Service Bulletins embodied at this time: 4504112-49-22 R3 Option 2 / -29 / -30 / -32 / -36. The fuel filter, oil filter and igniters were replaced. The air / oil cooler was externally cleaned. This Auxiliary Power Unit is in compliance with AD Note 2004-24-03.<br><br>"Standard Aero (Alliance) Inc. Certifies that the work specified in Blocks 12 / 13 was carried out in accordance with EASA part 145 and, with respect to that work, the component is considered ready for release to service under EASA Part 145 Approval Number EASA.145.4894." |                        |  |                 |  |                          |  |  |  |
| 14. Certifies the items identified above were manufactured in conformity to:<br><br><input type="checkbox"/> Approved design data and are in a condition for safe operation.<br><input type="checkbox"/> Non-approved design data specified in Block 13.  |                        |  |                 | 19. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 13<br><br>Certifies that unless otherwise specified in Block 13, the work identified in Block 12 and described in Block 13 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. |                          |  |  |  |
| 15. Authorized Signature:   |                        | 16. Approval/Autorization No.:   |                 | 20. Authorized Signature:<br>   |                          | 21. Approved/Certificate No.:<br>AE0R215N                          |  |  |
| 17. Name (Typed or Printed):  |                        | 18. Date: (m/d/y):   |                 | 22. Name (Typed or Printed):<br>Roger G. Poindexter  |                          | 23. Date: (m/d/y):<br>Sep/28/2011                                  |  |  |
| <b>User/Installer Responsibilities</b><br><br>It is important to understand that the existence of this Document alone does not automatically constitute authority to install the part/component/assembly.<br><br>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 parts/components/assemblies from the airworthiness authority of the country specified in Block 1.<br><br>Statements in Blocks 14 and 19 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.   |                        |  |                 |  |                          |  |  |  |



P/N 4504113A  
S/N: SP-E0314547  
Manual: Doc 40C14-1 Rev. 8,5/15/2011

APS500R (T-62T-40C14)  
ACCEPTANCE TEST DATA SHEET

TCN: UN319727  
Shop Order Number: MT6DCN  
FADEC Part No: 4504205F  
FADEC Serial No: 0182  
FADEC S/W Ver: 01.05

Test Date: 9/27/2011  
Automatic Start Time: 20.6  
Time since major rework: 0  
Number of Starts: 4  
Total Test Run Time (>60 min): 1 Hr

MARYVILLE, TENNESSEE - APU TEST FACILITY

| Test Data                              |                   | Units      | Run 1         |          | Run 2         |          | Run 3         |          | Run 4a        |          | Run 4b        |          | Run 5a            |          | Run 5b          |          |
|--|-------------------|------------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|-------------------|----------|-----------------|----------|
|  |                   |            | No Load       |          | Shaft Load    |          | Bleed Load    |          | Combined Load |          | Combined Load |          | anti-surge closed |          | anti-surge open |          |
|  |                   |            | Required      | Record   | Required      | Record   | Required      | Record   | Required      | Record   | Required      | Record   | Required          | Record   | Required        | Record   |
| Time/Date                              |                   | -          | 9/27/11 18:36 |          | 9/27/11 18:38 |          | 9/27/11 19:45 |          | 9/27/11 20:05 |          | 9/27/11 20:07 |          | 9/27/11 20:08     |          | 9/27/11 20:09   |          |
| Barometric Pressure                    |                   | in Hg      |               | 28.88    |               | 28.88    |               | 28.89    |               | 28.89    |               | 28.89    |                   | 28.90    |                 | 28.89    |
| Test Cell Ambient Pressure             |                   | PSIA       |               | 14.19    |               | 14.19    |               | 14.19    |               | 14.19    |               | 14.19    |                   | 14.19    |                 | 14.19    |
| Test Cell Ambient Temperature          |                   | * F        |               | 74.18    |               | 73.72    |               | 71.82    |               | 74.60    |               | 74.12    |                   | 73.44    |                 | 72.07    |
| Fuel Inlet Pressure                    |                   | PSIG       | 5 - 40 psig   | 29.25    | 5 - 40 psig   | 29.23    | 5 - 40 psig   | 26.15    | 5 - 40 psig   | 29.58    | 5 - 40 psig   | 30.11    | 5 - 40 psig       | 30.14    | 5 - 40 psig     | 29.95    |
| Fuel Inlet Temperature                 |                   | * F        |               | 78.22    |               | 77.82    |               | 75.56    |               | 76.90    |               | 76.38    |                   | 76.62    |                 | 76.36    |
| Air Inlet Plenum Temperature (Average) |                   | * F        |               | 73.56    |               | 73.60    |               | 70.40    |               | 70.77    |               | 71.21    |                   | 70.52    |                 | 69.78    |
| Engine Oil Pressure                    |                   | PSIG       | 30 - 80 psig  | 68.48    | 30 - 80 psig  | 68.37    | 30 - 80 psig  | 70.53    | 30 - 80 psig  | 68.54    | 30 - 80 psig  | 68.27    | 30 - 80 psig      | 68.09    | 30 - 80 psig    | 68.12    |
| Engine Oil Temperature                 |                   | * F        | Max 270° F    | 203.05   | Max 270° F    | 209.39   | Max 270° F    | 147.95   | Max 270° F    | 197.85   | Max 270° F    | 206.03   | Max 270° F        | 210.41   | Max 270° F      | 214.73   |
| Gearbox Vent Pressure                  |                   | in Hg      |               | -0.11    |               | -0.32    |               | -0.34    |               | -0.11    |               | -0.88    |                   | -0.39    |                 | -0.74    |
| Exhaust Gas Static Pressure            |                   | in H2O     |               | -6.09    |               | -6.34    |               | -4.01    |               | -3.86    |               | -5.99    |                   | -5.90    |                 | -10.46   |
| Unit Exhaust Gas Temperature           | # 1               | * F        |               | 598.46   |               | 639.06   |               | 1271.68  |               | 1079.47  |               | 622.02   |                   | 635.42   |                 | 716.41   |
|  | #2                | * F        |               | 586.86   |               | 619.86   |               | 1265.68  |               | 1082.57  |               | 608.34   |                   | 623.14   |                 | 694.26   |
|  | Average           | * F        |               | 592.66   |               | 629.46   |               | 1268.68  |               | 1081.02  |               | 615.18   |                   | 629.28   |                 | 705.34   |
|  | Delta #1 & #2     | * F        |               | 11.60    | Max 150 °F    | 19.20    | Max 150 °F    | 6.00     | Max 150 °F    | 3.10     | Max 150 °F    | 13.68    |                   | 12.28    |                 | 22.15    |
|  | Delta Unit & T/C  | * F        |               | 4.10     | Max 50 °F     | 1.74     | Max 50 °F     | 5.03     | Max 50 °F     | 3.51     | Max 50 °F     | 2.21     |                   | 3.78     |                 | 17.79    |
| T/C Exhaust Gas Temperature (Average)  | Actual            | * F        | Max 1350° F   | 588.55   | Max 1350° F   | 627.72   | Max 1350° F   | 1273.71  | Max 1350° F   | 1077.51  | Max 1350° F   | 612.97   | Max 1350° F       | 625.50   | Max 1350° F     | 687.55   |
|  | Corrected         | * F        |               |          |               |          |               | 1236.41  |               | 1043.38  |               | 588.29   |                   | 601.91   |                 | 664.18   |
| Anti-Surge Valve Test (Delta EGT)      |                   | * F        |               |          |               |          |               |          |               |          |               |          |                   |          |                 | 62.05    |
| Compressor Static Discharge Pressure   | Actual            | PSIA       |               | 64.06    |               | 64.37    |               | 53.52    |               | 56.36    |               | 64.75    |                   | 64.36    |                 | 62.18    |
|  | Corrected         | PSIA       |               | 66.36    |               | 66.69    |               | 55.42    |               | 58.36    |               | 67.05    |                   | 66.63    |                 | 64.39    |
| Orifice Inlet Static Pressure          |                   | PSIA       |               |          |               |          |               | 53.10    |               | 57.08    |               | 67.80    |                   |          |                 |          |
| Orifice Exit Temperature               |                   | * F        |               |          |               |          |               | 267.22   |               | 369.42   |               | 364.32   |                   |          |                 |          |
| Orifice Delta Pressure                 |                   | in H2O     |               |          |               |          |               | 72.53    |               | 47.74    |               | -0.03    |                   |          |                 |          |
| Bleed Airflow                          | Actual            | LB/MIN     |               |          |               |          |               | 85.49    |               | 67.57    |               | 0.74     |                   |          |                 |          |
|  | Corrected (inlet) | LB/MIN     |               |          |               |          |               | 88.53    |               | 69.97    |               | 0.76     |                   |          |                 |          |
|  | Corrected (bleed) | LB/MIN     |               |          |               |          |               | 30.74    | 23 +/- 1      | 22.81    |               | 0.21     |                   |          |                 |          |
| Bleed Total Pressure                   | Actual            | PSIA       |               |          |               |          |               | 54.10    |               | 57.72    |               | 67.72    |                   |          |                 |          |
|  | Corrected         | PSIA       |               |          |               |          |               | 56.06    |               | 59.77    |               | 70.14    |                   |          |                 |          |
| Bleed Total Temperature                | Actual            | * F        |               |          |               |          |               | 448.79   |               | 451.87   |               | 434.13   |                   |          |                 |          |
|  | Corrected         | * F        |               |          |               |          |               | 429.24   |               | 431.63   |               | 413.56   |                   |          |                 |          |
| Fuel Flow                              | Actual            | LB/HR      |               | 93.73    |               | 102.33   |               | 183.63   |               | 163.55   |               | 99.49    |                   | 103.56   |                 | 117.32   |
|  | Corrected         | LB/HR      |               | 97.10    |               | 106.01   |               | 190.14   |               | 169.36   |               | 103.02   |                   | 107.23   |                 | 121.49   |
| Shaft Power                            | Actual            | Hp         |               | 0.29     |               | 23.88    |               | 1.04     |               | 13.31    |               | 13.45    |                   | 23.58    |                 | 23.62    |
|  | Corrected         | Hp         |               | 0.30     | 25 +/- 2      | 24.74    |               | 1.08     | 13 +/- 2      | 13.78    | 13 +/- 2      | 13.92    | 25 +/- 2          | 24.42    | 25 +/- 2        | 24.46    |
| Engine Speed                           | Actual            | RPM        |               | 63432.82 |               | 63413.21 |               | 63419.75 |               | 63430.42 |               | 63434.55 |                   | 63434.61 |                 | 63417.55 |
|  | Percent           | %          | 100.0%        | 100.03   |               | 100.00   |               | 100.01   |               | 100.03   |               | 100.04   |                   | 100.04   |                 | 100.01   |
| Unit Vibration                         | Gearbox           | g's (peak) | 10 MAX        | 1.75     | 10 MAX        | 1.94     | 10 MAX        | 1.28     | 10 MAX        | 4.23     | 10 MAX        | 1.99     | 10 MAX            | 1.52     | 10 MAX          | 2.76     |
|  | Turbine           | g's (peak) | 10 MAX        | 1.38     | 10 MAX        | 0.93     | 10 MAX        | 1.33     | 10 MAX        | 0.94     | 10 MAX        | 0.93     | 10 MAX            | 0.94     | 10 MAX          | 0.82     |

Run 3a On/Off Load Transients (5x): Accept: X Reject:       

Leak Check: Accept: X Reject:       

Oil Filter Replaced: YES

Mag Plug Inspected: Accept: X Reject:       

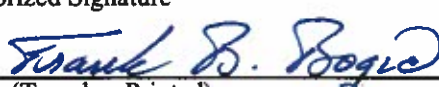
Operator:                     

Engineer:                     

ATP PASS LIMITS

|       |          | Run 3    |        | Run 4    |         |
|-------|----------|----------|--------|----------|---------|
|       |          | Required | Actual | Required | Actual  |
| T6 *  | max * F  | —        | —      | 1144.61  | 1089.99 |
| Wf ** | max pph  | —        | —      | 182.90   | 170.80  |
| Wb ** | min ppm  | 80.20    | 87.91  | —        | —       |
| Pb ** | min psia | 51.12    | 56.30  | 55.96    | 59.72   |
| Tb    | max * F  | 475.97   | 448.97 | 476.61   | 451.94  |



|  |                         |  |                  |  |   |  |  |
|--|-------------------------|--|------------------|--|---|--|--|
| 1. Approving National Aviation Authority/Country:<br><br><b>FAA/UNITED STATES</b>  |                         | <b>2. AUTHORIZED RELEASE CERTIFICATE</b><br><br><b>FAA FORM 8130-3, AIRWORTHINESS APPROVAL TAG</b>   |                  |  |   | 3. Form Tracking Number:<br><br><b>1054430 SD 13.000</b>                 |  |
| 4. Organization Name and Address: <b>Hamilton Sundstrand Power Systems<br/>Division of Hamilton Sundstrand Corporation<br/>4400 Ruffin Road PO Box 85757<br/>San Diego, CA 92186-5757</b>  |                         |  |                  |  |   | 5. Work Order/Contract/Invoice Number:<br><br><b>1054430 SD 92056297</b> |  |
| 6. Item:   | 7. Description:         | 8. Part Number:  | 9. Eligibility:* | 10. Quantity   | 11. Serial Batch Number:  | 12. Status/Work:   |  |
| 1  | OUTLINE, ENGINE T-40C14 | 4504113A   | TSO Article N/A  | 1  | <div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">S</div><br><b>SPEO 314547</b> | NEW  |  |
| 13. Remarks:<br><b>EXPORT DESTINATION: BRAZIL</b>  |                         |  |                  |  |   |  |  |
| 14. Certifies the items identified above were manufactured in conformity to:<br><br><input checked="" type="checkbox"/> Approved design data and are in condition for safe operation.<br><br><input type="checkbox"/> Non-Approved design data specified in Block 13.  |                         |  |                  | 19.<br><br><input type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 13<br><br><small>Certifies that unless otherwise specified in Block 13, the work identified in Block 12 and described in Block 13 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.</small> |   |  |  |
| 15. Authorized Signature<br>  |                         | 16. Approval/Authorization No.:<br><b>ODAR F-602272-NM</b>   |                  | 20. Authorized Signature:  |   | 21. Approval/Certificate Number:   |  |
| 17. Name (Typed or Printed):<br><b>FRANK B. BOGIC</b>  |                         | 18. Date(m/d/y):<br><b>05/20/03</b><br><div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 20px; display: flex; align-items: center; justify-content: center; margin-top: 5px;">             22 FBR           </div> |                  | 22. Name (Typed or Printed):   |   | 23. Date(m/d/y):   |  |
| <b>User/Installer Responsibilities</b>   |                         |  |                  |  |   |  |  |
| It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.<br><br>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 parts/components/assemblies from the airworthiness authority of the country specified in Block 1.<br><br>Statements in Blocks 14 and 19 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. |                         |  |                  |  |   |  |  |



# Hamilton Sundstrand

A United Technologies Company

Date May 19, 2003

Time 10:21:59 AM

Page 1 of 5

| Engine        | T-62T-40C14    | Test       | T40C14   | Serial Number | 0314547               | Assembly Number | 4504114A |
|---------------|----------------|------------|----------|---------------|-----------------------|-----------------|----------|
| Test Run Type | PRODUCTION ATP | Operator   | P. Bendt | Q.C Inspector | < <sup>FT</sup> 156 > | MAY 19 20       |          |
| Revision      | 11             | Work Order | 01681734 | Test Document | ESR 1158              | Rev             | A        |

| PARAGRAPH | 3.6       | 3.9.2     | 3.9.2     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| SECTION   | MTR       | A thru D  | G         | Run No.1  | Run No.2  | Run No. 3 | Run No.4  | Run No.5A | Run No.5B | MTR       |
| DATAPOINT | M1        | D         | G         | 1         | 2         | 3         | 4         | 5A        | 5B        | M2        |
| DATE      | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/19/2003 |
| TIME      | 20:01     | 20:08     | 20:22     | 20:58     | 21:03     | 21:10     | 21:22     | 21:25     | 21:26     | 09:06     |
| TEST CELL | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         |

| Parameter   | Units   | <i>Italics denotes SET Parameter</i> |          |          |          |          |          |          |          |  |
|-------------|---------|--------------------------------------|----------|----------|----------|----------|----------|----------|----------|--|
| 1 TIME.RUN  | Min     | 0.00                                 | 10.00    | 5.00     | 5.00     | 5.00     | 5.00     | 3.00     | 0.08     |  |
| 2 P.BARO    | In.Hg   | 29.47                                | 29.48    | 29.49    | 29.49    | 29.49    | 29.49    | 29.49    | 29.49    |  |
| 3 ET.100%   | Sec     | 20.71                                | 21.21    | 18.45    | 0.00     | 0.00     | 0.00     | 0.00     | 0.00     |  |
| 4 MAX.EGT   | Deg.F   | 79.20                                | 767.20   | 865.50   | 0.00     | 0.00     | 0.00     | 0.00     | 0.00     |  |
| 5 N.ENG     | RPM     | 19290.00                             | 63399.00 | 63411.00 | 63424.00 | 63411.00 | 63424.00 | 63424.00 | 63424.00 |  |
| 6 N.ASSY    | RPM     | 1504.00                              | 4943.00  | 4944.00  | 4944.00  | 4945.00  | 4946.00  | 4945.00  | 4945.00  |  |
| 7 N.DYN.AX  | RPM     | 3760.00                              | 12358.00 | 12360.00 | 12360.00 | 12362.00 | 12365.00 | 12362.00 | 12362.00 |  |
| 8 F.DYN.AX  | Lbs     | 0.01                                 | -0.02    | -0.01    | 0.01     | 0.01     | 0.01     | 0.00     | 0.00     |  |
| 9 CHP.AX    | CHP     |                                      |          | -0.01    | 25.53    | -0.03    | 13.63    | 25.54    | 25.42    |  |
| 10 VOLT.SG  | Vac     |                                      |          | 28.60    | 27.60    | 28.60    | 28.10    |          |          |  |
| 11 AMP.SG   | Amps.ac |                                      |          | -0.20    | 476.00   | -0.60    | 249.50   |          |          |  |
| 12 PFUEL.IN | Psig    | 26.71                                | 25.73    | 25.69    | 25.31    | 24.87    | 24.90    | 25.60    | 25.42    |  |
| 13 T.GB.OIL | Deg.F   | 72.80                                | 215.10   | 201.00   | 221.40   | 226.70   | 225.10   | 227.30   | 228.40   |  |
| 14 PENG.OIL | Psig    | 30.78                                | 70.72    | 70.90    | 70.47    | 70.50    | 70.70    | 70.48    | 70.49    |  |
| 15 PGB.VENT | In.H2O  | 0.27                                 | 0.93     | 0.98     | 0.94     | 0.94     | 0.95     | 0.98     | 0.96     |  |
| 16 RVD.ENG  | Gs      | 0.09                                 | 6.19     | 5.83     | 5.50     | 5.38     | 3.37     | 5.45     | 5.23     |  |
| 17 RVD.GB   | Gs      | 0.60                                 | 1.12     | 1.00     | 1.59     | 1.06     | 1.17     | 1.52     | 1.65     |  |
| 18 CW.FUEL  | PPH     | -0.30                                | 109.20   | 95.50    | 105.30   | 185.80   | 167.80   | 104.20   | 116.40   |  |
| 19 WF.COR4  | PPH     |                                      |          |          |          |          | 170.10   |          |          |  |
| 20 WF.MAX4  | PPH     |                                      |          |          |          |          | 174.80   |          |          |  |
| 21 P.EXDUCT | In.H2O  |                                      | -13.38   | -10.45   | -9.35    | -7.57    | -7.73    | -9.43    |          |  |
| 22 C.PEXDCT | In.H2O  |                                      | -13.58   | -10.60   | -9.49    | -7.68    | -7.84    | -9.57    | -11.78   |  |
| 23 T.AMB    | Deg.F   | 73.00                                | 70.50    | 71.40    | 72.70    | 72.70    | 73.00    | 73.50    | 73.40    |  |
| 24 T1/AVG   | Deg.F   | 73.50                                | 73.00    | 73.00    | 75.00    | 74.60    | 75.60    | 77.10    | 77.00    |  |
| 25 ETC/1    | Deg.F   | 86.50                                | 663.60   | 600.90   | 640.40   | 1268.70  | 1078.90  | 643.00   | 700.40   |  |
| 26 ETC/2    | Deg.F   | 86.80                                | 697.90   | 619.20   | 677.70   | 1296.70  | 1136.40  | 681.80   | 744.70   |  |
| 27 TEX/AVG  | Deg.F   | 79.20                                | 660.10   | 593.10   | 640.10   | 1275.70  | 1095.30  | 641.00   | 702.80   |  |
| 28 EGT.COR4 | Deg.F   |                                      |          |          |          |          | 1113.50  |          |          |  |
| 29 ALW.EGT  | Deg.F   |                                      |          |          |          |          | 1126.40  |          |          |  |
| 30 PCD      | Psig    |                                      |          | 54.81    | 54.52    | 42.56    | 45.51    | 54.21    | 52.74    |  |
| 31 C.PCD    | Psia    |                                      |          | 69.29    |          | 57.04    |          |          |          |  |
| 32 TBLEED   | Deg.F   |                                      |          |          |          | 393.20   | 399.80   |          |          |  |
| 33 P.BAIR/1 | Psia    |                                      |          |          |          | 50.34    | 56.00    |          |          |  |
| 34 PBAIRDIF | In.H2O  |                                      |          |          |          | 62.66    | 36.73    |          |          |  |
| 35 W.AIRBLD | PPM     |                                      |          | 8.70     | 5.79     | 86.30    | 69.92    |          |          |  |
| 36 WBC      | PPM     |                                      |          |          |          |          | 23.01    |          |          |  |
| 37 WB.COR3  | PPM     |                                      |          |          |          | 84.90    |          |          |          |  |
| 38 WB.MIN3  | PPM     |                                      |          |          |          | 81.98    |          |          |          |  |



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[illegible][illegible]



# Hamilton Sundstrand

A United Technologies Company

Date May 19, 2003

Time 10:22:01 AM

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|               |                |            |          |               |   |                 |          |
|---------------|----------------|------------|----------|---------------|---|-----------------|----------|
| Engine        | T-62T-40C14    | Test       | T40C14   | Serial Number | 0314547   | Assembly Number | 4504114A |
| Test Run Type | PRODUCTION ATP | Operator   | P. Bendt | Q.C Inspector | <div> <div>FT</div> <div>156</div> </div> MAY 19 2003 |                 |          |
| Revision      | 11             | Work Order | 01681734 | Test Document | ESR 1158  | Rev             | A        |

| PARAGRAPH | 3.6       | 3.9.2     | 3.9.2     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| SECTION   | MTR       | A thru D  | G         | Run No.1  | Run No.2  | Run No. 3 | Run No.4  | Run No.5A | Run No.5B | MTR       |           |
| DATAPOINT | M1        | D         | G         | 1         | 2         | 3         | 4         | 5A        | 5B        | M2        |           |
| DATE      | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/19/2003 |
| TIME      | 20:01     | 20:08     | 20:22     | 20:58     | 21:03     | 21:10     | 21:22     | 21:25     | 21:26     | 09:06     |           |
| TEST CELL | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         |

## Fuel Type

JET-A ASTM D-1655

## Operator Input

Oil Type MIL-L-23699  
FADEC Serial Number 0003  
Generator Serial Number Y10433

## Test Information

## Accumulate Parameters

|            |                    | Seconds    | Hours | Min | Sec |
|------------|--------------------|------------|-------|-----|-----|
|            | RUN TIME THIS TEST | 7200       | 2     | 0   | 0   |
| TOTAL FUEL | 234.20 LBS         | TOTAL TIME | 7200  | 2   | 0   |

## Parameter Definition

- 1 TIME.RUN Time, This Run
- 2 P.BARO Corrected Barometric Pressure
- 3 ET.100% Start Time, Cranking to Rated Speed
- 4 MAX.EGT Maximum Exhaust Gas Temperature During Start Up (TEX/AVG)
- 5 N.ENG Engine Speed
- 6 N.ASSY Engine Speed Sensor Frequency
- 7 N.DYN.AX Axial Dynamometer Speed
- 8 F.DYN.AX Axial Dynamometer Load
- 9 CHP.AX Corrected Axial Horsepower
- 10 VOLT.SG Voltage, DC
- 11 AMP.SG Amperage, DC
- 12 PFUEL.IN Regulated Fuel Boost Pressure
- 13 T.GB.OIL Gear Box Sump Oil Temperature
- 14 PENG.OIL Engine Oil Pressure, Pump Discharge
- 15 PGB.VENT Gear Box Vent Pressure
- 16 RVD.ENG Engine Vibration at Rotor Frequency
- 17 RVD.GB Gear Box Vibration
- 18 CW.FUEL Corrected Mass Fuel Flow (corrected for barometric pressure only)
- 19 WF.COR4 Corrected Mass Fuel Flow (corrected for barometric press. and temp.)
- 20 WF.MAX4 Maximum Allowable Fuel Flow



# Hamilton Sundstrand

A United Technologies Company

Date May 19, 2003

Time 10:22:01 AM

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|               |                |            |          |               |          |                 |                        |
|---------------|----------------|------------|----------|---------------|----------|-----------------|------------------------|
| Engine        | T-62T-40C14    | Test       | T40C14   | Serial Number | 0314547  | Assembly Number | 4504114A               |
| Test Run Type | PRODUCTION ATP |            | Operator | P. Bendt      |          | Q.C Inspector   | < FT 156 > MAY 19 2003 |
| Revision      | 11             | Work Order | 01681734 | Test Document | ESR 1158 |                 | Rev A                  |

|           |  |           |           |           |           |           |           |           |           |           |           |
|-----------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| PARAGRAPH |  | 3.6       | 3.9.2     | 3.9.2     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     |
| SECTION   |  | MTR       | A thru D  | G         | Run No.1  | Run No.2  | Run No. 3 | Run No.4  | Run No.5A | Run No.5B | MTR       |
| DATAPOINT |  | M1        | D         | G         | 1         | 2         | 3         | 4         | 5A        | 5B        | M2        |
| DATE      |  | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/19/2003 |
| TIME      |  | 20:01     | 20:08     | 20:22     | 20:58     | 21:03     | 21:10     | 21:22     | 21:25     | 21:26     | 09:06     |
| TEST CELL |  | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         |

|    |          |   |
|----|----------|---|
| 21 | P.EXDUCT | Exhaust Duct Pressure   |
| 22 | C.PEXDCT | Corrected Exhaust Duct Pressure   |
| 23 | T.AMB    | Ambient Cell Air Temperature  |
| 24 | T1/AVG   | Compressor Inlet Temperature (average)  |
| 25 | ETC/1    | Engine Thermocouple No.1  |
| 26 | ETC/2    | Engine Thermocouple No.2  |
| 27 | TEX/AVG  | Exhaust Gas Temperature (rake average)  |
| 28 | EGT.COR4 | Corrected Exhaust Gas Temperature (Corrected for Set Point Variation)         |
| 29 | ALW.EGT  | Maximum Allowable Exhaust Gas Temperature (TEX/AVG)                           |
| 30 | PCD      | Compressor Discharge Pressure   |
| 31 | C.PCD    | Corrected Compressor Discharge Pressure                                       |
| 32 | TBLEED   | ASME Orifice Run, Air Temperature   |
| 33 | P.BAIR/1 | ASME Orifice Run, Air Pressure [P.BAIR + (P.BARO/2.036)]                      |
| 34 | PBAIRDIF | ASME Orifice Run, Air Static Delta P  |
| 35 | W.AIRBLD | ASME Orifice Run, Air Flow PPM (corrected for barometric pressure only)       |
| 36 | WBC      | ASME Orifice Run, Air Flow.   |
| 37 | WB.COR3  | Corrected Bleed Air Flow (Corrected for Set Point Variation)                  |
| 38 | WB.MIN3  | Minimum Bleed Air Flow  |
| 39 | P.EXIT   | Bleed Air Exit Pressure.  |
| 40 | PB.COR3  | Corrected Bleed Press. (Corrected for Exhaust Press. and Set Point Variation) |
| 41 | PB.MIN3  | Minimum Bleed Air Pressure  |
| 42 | PB.COR4  | Corrected Bleed Air Exit Pressure.  |
| 43 | PB.MIN4  | Minimum Bleed Air Pressure  |
| 44 | T.EXIT   | Bleed Air Exit Temperature.   |
| 45 | TB.COR3  | Corrected Bleed Air Exit Temperature.   |
| 46 | TB.MAX3  | Maximum Bleed Air Temperature   |
| 47 | TB.COR4  | Corrected Bleed Air Exit Temperature.   |
| 48 | TB.MAX4  | Maximum Bleed Air Temperature   |
| 49 | T.ASV    | Anti-Surge Valve Exhaust Temperature  |
| 50 | TEX/1    | Exhaust Gas Temperature (Individual Rake Probe)                               |
| 51 | TEX/2    | Exhaust Gas Temperature (Individual Rake Probe)                               |
| 52 | TEX/3    | Exhaust Gas Temperature (Individual Rake Probe)                               |
| 53 | TEX/4    | Exhaust Gas Temperature (Individual Rake Probe)                               |
| 54 | TEX/5    | Exhaust Gas Temperature (Individual Rake Probe)                               |
| 55 | TEX/6    | Exhaust Gas Temperature (Individual Rake Probe)                               |
| 57 | HR.MTR/1 | Hour Meter Reading Set in Manually Before Test                                |
| 58 | EVENT/1  | Event Counter Reading Set in Manually Before Test                             |
| 59 | HR.MTR/2 | Hour Meter Reading Set in Manually and Record After Test                      |





# Hamilton Sundstrand

A United Technologies Company

Date May 19, 2003

Time 10:22:01 AM

Page 5 of 5

|               |                |            |          |               |               |                 |                      |
|---------------|----------------|------------|----------|---------------|---------------|-----------------|----------------------|
| Engine        | T-62T-40C14    | Test       | T40C14   | Serial Number | 0314547       | Assembly Number | 4504114A             |
| Test Run Type | PRODUCTION ATP |            | Operator | P. Bendt      |               | Q.C Inspector   | < FT 156 > MAY 19 20 |
| Revision      | 11             | Work Order | 01681734 |               | Test Document | ESR 1158        |                      |
| Rev           |                |            |          |               |               |                 | A                    |

| PARAGRAPH | 3.6       | 3.9.2     | 3.9.2     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4     | 3.9.4 |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| SECTION   | MTR       | A thru D  | G         | Run No.1  | Run No.2  | Run No. 3 | Run No.4  | Run No.5A | Run No.5B | MTR       |       |
| DATAPOINT | M1        | D         | G         | 1         | 2         | 3         | 4         | 5A        | 5B        | M2        |       |
| DATE      | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/18/2003 | 5/19/2003 |       |
| TIME      | 20:01     | 20:08     | 20:22     | 20:58     | 21:03     | 21:10     | 21:22     | 21:25     | 21:26     | 09:06     |       |
| TEST CELL | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 1     |

60 EVENT/2

Event Counter Reading Set in Manually and Record After Test

## COMPONENT/PART IDENTIFICATION TAG

Kingman Airline Services, INC.  
9900 Flightline Dr.  
Kingman , AZ 86401

COMPONENT/PART APU

Work Package: 180764

REMOVED FROM A/C SN N13970

REMOVED FROM-ENG SN

POSITION REMOVED TSN-13132

CSN-26540

|                       |                       |
|-----------------------|-----------------------|
| PERFORM A VISUAL INSP | MECH <u>C80816</u>    |
|                       | DATE <u>10 APR 18</u> |

REASON FOR REMOVAL

Customer  
request

PART NUMBER 4504113A

SERIAL NUMBER SP-E0314547

KASI M-006

CRS#K9GR490Y

## EIF CRJ Aero Investment, LLC

May 4, 2018

Via E-mail

Attn: Hank Gibson, President, and Joseph Schwantes, General Counsel  
Regional One, Inc.  
6750 NE 4<sup>th</sup> Court  
Miami, FL 33138

### Re: Assets Subject to Management Agreement

Messrs. Gibson and Schwantes,

As you each know, Regional One, Inc. ("R1") and EIF CRJ Aero Investment, LLC ("EIF CRJ") are parties to that certain Management Agreement, dated August 28, 2017, pursuant to which R1 provides certain management services described in Exhibit A therein with respect to aircraft, aircraft engines and aircraft parts owned by EIF CRJ (the "Management Agreement").

Each of R1 and EIF CRJ acknowledge and agree that the aircraft (including all engines, parts and components installed on such aircraft) and the spare engines (including all parts installed on such engines) listed on Annex A attached hereto are owned by EIF CRJ as of the date hereof and are subject to the Management Agreement; provided that each of the aircrafts and engines listed on Annex A that is noted with an \*has been sold, but any parts or components that were removed prior to sale remain owned by EIF CRJ and are the subject of the Management Agreement.

Very Truly Yours,

EIF CRJ Aero Investment, LLC

By: EIF Management USA, Inc., its  
manager

By:   
Steven Stennett, VP

ACKNOWLEDGED AND AGREED, as of May 4, 2018

Regional One, Inc.

By:   
Joseph Schwantes, General Counsel

Annex A

| <u>Aircraft Type:</u> | <u>Serial Number</u> |
|-----------------------|----------------------|
| CRJ200                | 7453                 |
| CRJ200                | 7494                 |
| CRJ200                | 7596                 |
| CRJ200                | 7647                 |
| CRJ200                | 7625                 |
| CRJ200                | 7629                 |
| CRJ200                | 7478                 |
| CRJ200                | 7767*                |
| CRJ200                | 7834*                |
| CRJ200                | 8050                 |
| CRJ200                | 8059                 |
| CRJ200                | 8062                 |
| EMB 145               | 145380               |
| EMB 145               | 145241               |
| EMB 145               | 145768               |
| EMB 145               | 145161               |
| EMB 145               | 145146               |
| EMB 145               | 145141               |
| EMB 145               | 145307*              |
| EMB 145               | 145318*              |

| <u>Engine Type</u> | <u>Serial Number</u> |
|--------------------|----------------------|
| CFM56-5C4          | 741485*              |
| CFM56-5C4          | 741523*              |
| CFM56-5C4          | 741600*              |
| CFM56-5C4          | 741788*              |

## **WARRANTY BILL OF SALE**

**Flight Lease Holdings, LLC** (“**Seller**”), is the owner of the full legal and beneficial title to one used regional jet aircraft, manufactured by Embraer, model type ERJ 145 aircraft with manufacturer’s serial number 145146 (the “**Airframe**”), without engines, but with all equipment, auxiliary power unit (APU), appliances, parts, items of avionics, instruments, appurtenances, components and accessories, furnishings and any/all other property installed on or attached to the Airframe on the date hereof (the “**Equipment**”) and all maintenance records, manuals, complete and continuous logbooks, life limited component logbooks, serviceable tags, diagrams, drawings and data relating to the Aircraft, its Airframe and Equipment (“**Aircraft Documents**”). The Airframe, the Equipment and the Aircraft Documents are collectively hereinafter referred to as the “**Aircraft**”.

**Whereas**, Seller and Purchaser (as defined below) have entered into that certain Aircraft Purchase Agreement, dated March 28, 2018 (the “**Purchase Agreement**”), pursuant to which Seller agreed to sell and Purchaser agreed purchase, among other things, the Aircraft.

**Now therefore**, for and in consideration of good and valuable consideration, including the mutual promises and agreements set forth in the Purchase Agreement, the receipt and sufficiency of which is hereby acknowledged:

1. Seller does hereby grant, convey, transfer, assign, bargain and sell, deliver and set over, all right, title and interest in and to the Aircraft unto **EIIF CRJ Aero Investment, LLC** (“**Purchaser**”) and its successors and assigns.
2. Seller hereby warrants to Purchaser that, immediately prior to the delivery of this Warranty Bill of Sale, Seller is the owner of the full legal and beneficial title to and has good and lawful right to sell the Aircraft, and that there is hereby conveyed to Purchaser and its successors and assigns on the date hereof, good and marketable title to the Aircraft free and clear of all liens, claims, demands, charges and encumbrances of any kind whatsoever and including, without limitation, any security interests, mortgages, trusts, Uniform Commercial Code financing statements, dues, transfer restrictions, statutory rights in rem, hypothecations, title retentions, attachments, rights of possession or detention, security interests of record with the FAA or otherwise, or any encumbrances arising out of any Eurocontrol Charges and including any rights of others (including those resulting from any and all taxes except for any inchoate liens for taxes not yet due and payable), and that Seller will warrant and defend such title forever against all claims and demands whatsoever.
3. SELLER IS TRANSFERRING THE AIRCRAFT TO PURCHASER, AND PURCHASER IS ACQUIRING THE AIRCRAFT FROM SELLER, IN AN AS-IS CONDITION AND WITHOUT ANY WARRANTY OR REPRESENTATION OF ANY KIND, WHETHER EXPRESS OR IMPLIED, EXCEPT AS EXPRESSLY SET FORTH IN THE PURCHASE AGREEMENT OR THIS WARRANTY BILL OF SALE. SELLER EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, REPRESENTATIONS, OBLIGATIONS OR LIABILITIES, WHETHER EXPRESS OR IMPLIED, WHETHER ARISING BY LAW, IN CONTRACT OR IN TORT, OR OTHERWISE, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OR REPRESENTATION AS TO


AIRWORTHINESS, CONDITION, FITNESS FOR USE FOR A PARTICULAR PURPOSE, THE DESIGN, VALUE, OPERATION OR MERCHANTABILITY THEREOF, THE QUALITY OF MATERIAL OR WORKMANSHIP, THE ABSENCE OF LATENT OR OTHER DEFECTS, THE ABSENCE OF AN INFRINGEMENT OF ANY PATENT, TRADEMARK, OR COPYRIGHT, OR AS TO ANY OTHER MATTER WHATSOEVER.

4. Nothing in this Warranty Bill of Sale, express or implied, is intended to or shall be construed to modify, expand, or limit in any way the terms of the Purchase Agreement. To the extent that any provision of this Warranty Bill of Sale conflicts or is inconsistent with the terms of the Purchase Agreement, the Purchase Agreement shall govern.

\*\*\*\*SIGNATURE ON NEXT PAGE\*\*\*\*

**SIGNATURE PAGE**

**Flight Lease Holdings, LLC**

  
\_\_\_\_\_  
Signature

\_\_\_\_\_  
Geoffrey D. Alexander  
Name Printed

\_\_\_\_\_  
Manager  
Title

\_\_\_\_\_  
March 30, 2018





EMB-145-LR / MSN 145146 / N13970

9/22/2015

**Aircraft Accident-Incident Statement**

To whom it may concern:

This statement declares Embraer EMB-145-LR, N13970, MSN 145146 while operating for ExpressJet has not been involved in an incident or accident, major failure, or fire, nor has the Airframe, APU, Engine and Landing Gear or the parts installed, been immersed in salt water or exposed to corrosive agents outside of normal operation, or been subjected to extreme stress or heat nor been obtained from any Government, Military or Unapproved Source. Nor any part installed while operating for ExpressJet has been subjected to, or has been removed from an Airframe, APU, Engine and Landing Gear Engine that has been involved in an incident or accident, major failure or fire, or has been subjected to extreme stress or heat nor had been obtained from any Government, Military or Unapproved Source to the best of ExpressJet's knowledge.

|                          |                  |                            |
|--------------------------|------------------|----------------------------|
| Airframe: EMB-145-LR     | MSN: 145146      | TSN: 38,884.15 CSN: 29,662 |
| APU: 40C14               | MSN: SP-E0314547 | TSN: 11,944.97 CSN: 21,991 |
| Engine #1: AE3007A1P     | MSN: CAE311172   | TSN: 34,222.09 CSN: 27,134 |
| Engine #2: AE3007A1P     | MSN: CAE311177   | TSN: 34,654.99 CSN: 28,087 |
| Left MLG: 2309-3002-505  | MSN: 052         | TSN: 39,166.89 CSN: 29,842 |
| Nose LG: 1170C0000-08    | MSN: 00526       | TSN: 23,846.82 CSN: 19,955 |
| Right MLG: 2309-3002-512 | MSN: 116         | TSN: 36,866.08 CSN: 28,152 |

Joe Michelson  
General Manager - Quality  
ExpressJet Airlines



EMB-145-LR / MSN 145146 / N13970

9/22/2015

**40C14/ APU SN: SP-E0314547 Accident-Incident  
Statement**

To whom it may concern:

This statement declares that Sundstrand model 40C14 bearing APU Serial Number SP-E0314547 while operating for ExpressJet has not been involved in an incident or accident, major failure, or fire, nor has the engine or the parts installed, been immersed in salt water or exposed to corrosive agents outside of normal operation, or been subjected to extreme stress or heat nor been obtained from any Government, Military or Unapproved Source. Nor any part installed while operating for ExpressJet has been subjected to, or has been removed from and Engine that has been involved in an incident or accident, major failure or fire, or has been subjected to extreme stress or heat nor had been obtained from any Government, Military or Unapproved Source to the best of ExpressJet's knowledge.

APU Model: 40C14: APU SN: SP-E0314547

TSN: 11,944.97

CSN: 21,991

 Digitally signed  
by Joseph R  
Michelson  
Date: 2015.09.28  
12:53:04 -05'00'

Joe Michelson  
General Manager - Quality  
ExpressJet Airlines