



# ETHIOPIAN AIRLINES MRO, ENGINE MAINTENACE

## Engine CFM56-3C1 ESN 858979 Shop Visit Report



CUSTOMER: LAM-Mozambique  
Airlines LTD.  
ETHIOPIAN AIRLINES MRO, ENGINE MAINTENACE  
PREPARED BY: Adugna B.  
4/29/2018

Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979



Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755

[www.ethiopianairlines.com](http://www.ethiopianairlines.com)

## ENGINE SHOP VISIT REPORT

### Table of Contents

1. Engine General description
2. Engine Authorised Release Certificate
3. Work Scope
4. Engine AD and SB Status Report
5. Pre & Post Shop Visit LLP Report
6. Incoming and outgoing inventory.
7. Engine Test Data Sheet
8. Replaced LLPs BTB document
9. Engine Shop Finding report
10. Replaced/Repaired Parts Certificates

Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979



Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755  
www.ethiopianairlines.com

## ENGINE SHOP VISIT REPORT

### 1. ENGINE GENERAL DESCRIPTION

---

#### Engine Description

---

Prepared by:

| Name       | Section                                | Date        |
|------------|--|-------------|
| Aduagna B. | EMT Tech. Support, Engineering section | 06-Sep-2016 |

Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979



Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755  
www.ethiopianairlines.com

## ENGINE SHOP VISIT REPORT

|                  |                              |
|------------------|------------------------------|
| Engine Model:    | CFM56-3C1                    |
| Part Number:     | CFM56-3C1                    |
| Serial Number:   | 858979                       |
| Work package ID: | TSFN8003TLG5                 |
| Customer:        | LAM-Mozambique Airlines LTD. |

### Time and Cycle

|                  |                |
|------------------|----------------|
| Time Since New:  | 41,150.77 hour |
| Cycle Since New: | 29,964 Cycle   |
| TSLSV:           | 16,073 hour    |
| CSLSV:           | 11,501 Cycle   |

### Removal

|                 |             |
|-----------------|-------------|
| Removal reason: | LLP Expiry  |
| Removal date:   | 10-Feb-2018 |
| Removed from:   | C9-BAP #1   |

### Engine Shop visit General:

The Engine CFM56-3C1 SN 858979 was removed due to LLP expiry. This engine has been removed from A/C 737 tail number C9 BAP. The engine was removed from A/C on 10-Feb-2018 after operating TSN 41,150.77 Hour and CSN 29,964 cycles TSLSV/CSLSV=16,073hrs/11,501cycles. Ethiopian inducted the engine in to its shop dated 14<sup>th</sup> Feb 2018. Per the workscope approved from Customer, the engine was disassembled to replace the defective parts. The inspection findings are included in this shop visit documents.

### Prepared by:

| Name      | Section                                | Date        |
|-----------|--|-------------|
| Aduana B. | EMT Tech. Support, Engineering section | 06-Sep-2016 |

Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979



Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755  
[www.ethiopianairlines.com](http://www.ethiopianairlines.com)

## ENGINE SHOP VISIT REPORT

### 2. ENGINE AUTHORISED RELEASE CERTIFICATE

Prepared by:

| Name      | Section                                | Date        |
|-----------|--|-------------|
| Aduana B. | EMT Tech. Support, Engineering section | 06-Sep-2016 |



|  |                     |   |   |   |   |   |
|--|---------------------|---|---|---|---|---|
| 1. Approving Civil Aviation Authority/ Country:<br>FAA/United States   |                     | 2. <b>AUTHORIZED RELEASE CERTIFICATE</b><br>FAA FORM 8130-3, AIRWORTHINESS APPROVAL TAG |   |   | 3. Form Tracking Number:<br>TSFN8003TLG5                |   |
| 4. Organization Name and Address:<br>ETHIOPIAN MRO<br>BOLE INTERNATIONAL AIRPORT<br>ADDIS ABABA<br>ETHIOPIA  |                     | FAA APPROVED<br>REPAIR STATION<br>Certificate No.: ETIY102F                             |   |   | 5. Work Order/Contract/Invoice Number:<br>RO - 21559818 |   |
| 6. Item:   | 7. Description      | 8. Part Number  | 9. Quantity:  | 10. Serial Number                               | 11. Status/Work:  |   |
| 1  | ENGINE ASSY CFM56-3 | CFM56-3   | 1   | 858979  | REPAIRED  |   |
| 12. Remarks:<br>ENGINE WAS REMOVED FROM C9-BAP # 1 POSITION FOR FAN DISK, BOOSTER SPOOL AND FAN SHAFT REPLACEMENT. ENGINE TESTED [FUNCTIONAL TEST ONLY] AND PRESERVED IAW CFM56-3 ENGINE SHOP MANUAL - SM.5 REV # 75 DATED DEC 15, 2017. FOR ADs AND SBs REFER SHOP VISIT REPORT   |                     |   |   |   |   |   |
| TSN:41150.77<br>CSN:29964  |                     |   |   |   |   |   |
| 13a. Certifies the items identified above were manufactured in conformity to:  |                     |   |   |   |   |   |
| <input type="checkbox"/> Approved design data and are in a condition for safe operation.   |                     |   | 14a. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 12.   |   |   |   |
| <input type="checkbox"/> Non-approved design data specified in Block 12.   |                     |   | Certifies that unless otherwise specified in Block 12 the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service. |   |   |   |
| 13b. Authorized Signature:   |                     | 13c. Approval/ Authorization No.:   |   | 14b. Authorized Signature: <i>Zewdu Tessema</i> |   | 14c. Approval/ Certificate No.:<br>ETIY102F |
| 13d. Name (Type or Print):   |                     | 13e. Date (dd/mmm/yyyy):  |   | 14d. Name (Type or Print):<br>Zewdu Tessema     |   | 14e. Date (dd/mmm/yyyy):<br>10/Apr/2018     |
| <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 aircraft engine/propeller/article.  |                     |   |   |   |   |   |
| Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in Block 1. |                     |   |   |   |   |   |
| Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.  |                     |   |   |   |   |   |

**MNT-1315**

Ethiopian የኤች-ዲቲ  
Maintenance Repair Overhaul

ETH MRO ENGINE MAINTENANCE DIVISION

## PRESERVATION TAG

**CAUTION:**

Fuel system and Oil system preserved for up to 30 TO 365 days as per engine manual chapter EM TASK 72-00-00-500-001- 0

Certified by: G/Kiros ID 18357



Date: 21/02/2018

Engine model/ESN: CFM56-3C1 / 858979

ETH MRO

ETH MRO ENGINE MAINTENANCE DIVISION

## PRESERVATION TAG

**CAUTION:**

Fuel system and Oil system preserved for up to 30 TO 365 days as per engine manual chapter EM TASK 72-00-00-500-001- 0

Certified by: G/Kiros ID 18357



Date: 21/02/2018

Engine model/ESN: CFM56-3C1 / 858979

Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979





Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755  
www.ethiopianairlines.com

## ENGINE SHOP VISIT REPORT

### 3. WORK SCOPE

Prepared by:

| Name      | Section                                | Date        |
|-----------|--|-------------|
| Adugna B. | EMT Tech. Support, Engineering section | 06-Sep-2016 |

|                                  |           |   |             |                 |   |             |   |             |              |
|----------------------------------|-----------|---|-------------|-----------------|---|-------------|---|-------------|--------------|
| Engine /APU Model:<br>CFM56-3C1A |           | <br><b>ENGINE WORKSCOPE</b> |             |                 |   |             | <br>LAM<br>Linhas Aereas de Moçambique |             |              |
| Engine/APU Configuration :       | CFM56-3C1 | SN:   | 858979      | TSN/CSN:        | 41,150.77/29,964                          | TLSV/CSLSV: | 16073/11501   | WO/WPID:    | TSFN8003TLG5 |
| Removed From:                    | C9-BAP #1 | Removal Date:   | 10-Feb-2018 | Removal Reason: | LLP Expiry (Fan shaft, Disk and Booster ) |             |   | Leased/Own: | LAM          |



### 1. ENGINE/ MODULES WORKSCOPE

| Module Description              | Module SN | TSN       | CSN   | TSO | CSO | Initial WS →       | Rev. WS          | Last SV WS | Remarks/Note  |
|---------------------------------|-----------|-----------|-------|-----|-----|--------------------|------------------|------------|---|
| <b>FAN MAJOR MODULE:</b>        |           |           |       |     |     |                    |                  |            |   |
| (21X) Fan and Booster           | 21X58979  | 41,150.77 | 29964 | UNK | UNK | Check inspection → | Full Overhaul    |            | External parts removed for access, including Fan Blades, perform a check per ESM 72-00-00 SP010 Check inspection for overall condition.                   |
| (22X) No. 1 & 2 Bearing Support | 22 X58979 | 41,150.77 | 29964 | UNK | UNK | Check inspection → | Full Overhaul    |            |   |
| (23X) Fan Frame and case        | 23 X58979 | 41,150.77 | 29964 | UNK | UNK | Check inspection   | Check inspection |            |   |
| (61X) IGB & No.3 Bearing        | 61 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            | Check inspection |            |   |
| <b>CORE MAJOR MODULES</b>       |           |           |       |     |     |                    |                  |            |   |
| <b>HPC MAJOR MODULE</b>         |           |           |       |     |     |                    |                  |            |   |
| (31X) HPC Rotor                 | 31 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            | At major module level and on exposed area and for parts removed for access, perform a check per ESM 72-00-00 SP010 Check inspection for overall condition |
| (32X) HPC Front Stator          | 32 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            |   |
| (33X) HPC Rear Stator           | 33 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            |   |
| <b>(41X) COMBUSTION MODULE</b>  |           |           |       |     |     |                    |                  |            |   |
| (41X) Combustor Case            | 41 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            | perform a check per ESM 72-00-00 SP010 Check inspection for overall condition   |
| (42X) Combustion chamber        | 42 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            |   |
| <b>HPT MODULE</b>               |           |           |       |     |     |                    |                  |            |   |
| (51X) HPT Nozzle                | 51 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            | perform a check per ESM 72-00-00 SP010 Check inspection for overall condition   |
| (52X) HPT Rotor                 | 52 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            |   |
| (53X) HPT Shroud & LPT Stg 1NGV | 53 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            |   |
| <b>LPT MAJOR MODULE</b>         |           |           |       |     |     |                    |                  |            |   |
| (54X) LPT Rotor/Stator          | 54 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            | Perform a check per ESM 72-00-00 SP010 Check inspection for overall condition.  |
| (55X) LPT Shaft                 | 55 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            |   |
| (56X) LPT Rear Frame            | 56 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            |   |
| <b>ACCESSORY DRIVE MODULE</b>   |           |           |       |     |     |                    |                  |            |   |
| (62X) Transfer Gearbox          | 62 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            | perform a check per ESM 72-00-00 SP010 Check inspection for overall condition   |
| (63X) Accessory Gearbox         | 63 X58979 | 41,150.77 | 29964 | UNK | UNK | No task            |                  |            |   |

Note1: Engine will be test for functional test only (Leakage and vibration). Performance test is not required.

Note2: Accessory and component workscope is Check Inspection on equipment's removed for access unless specified otherwise and test with engine.

Note3: Parts or modules visually checked per ESM 72-00-00 Special Procedure 010 must be reinstalled on the same engine. No transfer of parts is permitted with a check inspection instruction.

|                                  |           |   |             |                 |   |              |  |             |              |
|----------------------------------|-----------|---|-------------|-----------------|---|--------------|--|-------------|--------------|
| Engine /APU Model:<br>CFM56-3C1A |           | <br><b>ENGINE WORKSCOPE</b> |             |                 |   |              | <br>LMA<br>Limited Airframe Maintenance |             |              |
| Engine/APU Configuration :       | CFM56-3C1 | SN:   | 858979      | TSN/CSN:        | 41,150.77/29,964                          | TSLSV/CSLSV: | 16073/11501  | WO/WPID:    | TSFN8003TLG5 |
| Removed From:                    | C9-BAP #1 | Removal Date:   | 10-Feb-2018 | Removal Reason: | LLP Expiry (Fan shaft, Disk and Booster ) |              |  | Leased/Own: | LAM          |

### 2. LIST OF LIFE LIMITED PARTS TO BE REPLACED

| Description   | Part Number   | Serial Number | Remark or Reason for replacement |
|---------------|---------------|---------------|----------------------------------|
| FAN DISK      | 335-014-511-0 | DA432924      | Low RC (37 Cycle remaining)      |
| BOOSTER SPOOL | 335-009-306-0 | DA739092      | Low RC (37 Cycle remaining)      |
| FAN SHAFT     | 335-006-414-0 | DD704249      | Low RC (37 Cycle remaining)      |

### 3. LIST OF SERVICE BULLETINS TO BE ACCOMPLISHED


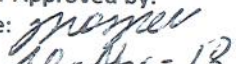
| SB Number | Description | Remark  |
|-----------|-------------|---|
|           |             | NO RECOMMENDED SB BY CUSTOMER TO BE COMPLIED DURING THIS SV |

### 4. LIST OF AD TO BE ACCOMPLISHED AT THIS SHOP VISIT

| AD Number  | Description   | Remark/Note   |
|------------|---|---|
| 2002-13-03 | CRITICAL ROTATING PART INSPECTION   | Check Received parts Certificates for AD compliance |
| 2013-26-01 | INTRODUCTION OF NEW AND REWORK OF OLD AGB STARTER DRIVE PAD                                       |   |
| 2017-14-08 | PERFORM AN INITIAL PILL FORCE CHECK OF THE STAGE 1, 2 & 3 OF THE COMPRESSOR VSV ACTUATING SYSTEM. | Perform this AD at this shop visit.                 |

### 5. REVISION HISTORY

| Revision No: | Date      | Revision Reason |
|--------------|-----------|-----------------|
| 00           | 19-Feb-18 | Initial         |

|  |                                     |                                      |                                  |  |
|--|-------------------------------------|--------------------------------------|----------------------------------|--|
| Shop Engineer: Aduigna B.<br>Signature: <br>Date: 19-Feb-2018 | Sup TES EMT:<br>Signature:<br>Date: | Mgr. TES EMT:<br>Signature:<br>Date: | Dir. EMT:<br>Signature:<br>Date: | Customer Approved by:<br>Signature: <br>Date: 20-Feb-18 |
|--|-------------------------------------|--------------------------------------|----------------------------------|--|

Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979



Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755  
[www.ethiopianairlines.com](http://www.ethiopianairlines.com)

## ENGINE SHOP VISIT REPORT

### 4. ENGINE AD AND SB STATUS REPORT

Prepared by:

| Name      | Section                                | Date        |
|-----------|--|-------------|
| Adugna B. | EMT Tech. Support, Engineering section | 06-Sep-2016 |

|                         |   |  |                      |                       |                                  |
|-------------------------|---|--|----------------------|-----------------------|----------------------------------|
| Engine Model: CFM56-3C1 | <b>AIRWORTHINESS<br/>DIRECTIVE STATUS</b> | <br>Ethiopian<br>የጉልበት ማሽን<br>THE NEW SPIRIT OF AFRICA | TSN: 41,150.77hour   | As of date: 09-Apr-18 | Customer : <b>LAM Mozambique</b> |
| Engine SN: 858979       |   |  | CSN: 29,964cycle     |                       |                                  |
| Issue : 01              |   |  | WO No.: TSFN8003TLG5 |                       |                                  |

| AD Number<br>EASA<br>FAA | Effective Date | AD Description   | Installed Part Number | Installed Serial Number | RP | Status<br>(PCW, NCW<br>CW, NA) | Remarks  | Next Compliance at   |
|--------------------------|----------------|--|-----------------------|-------------------------|----|--------------------------------|--|--|
| 2017-0149R1              | 18-AUG-2017    | VARIABLE STATOR VANE ACTUATING SYSTEM – CHECK  | 1676M88G01            | -                       | X  | CW                             | PULL FORCE CHECKED AS OF DATE 20-MAR-2018.   | REPEAT INSPECTION WITHIN 12 MONTHS   |
| 2017-14-08               |                |  |                       |                         |    |                                |  | CLOSED   |
| US-2016-14-10            | 09-AUG-2016    | REMOVE HPT DISK, PN-880026, SN-GKLBAA9307, GKLBAA9335, GKLBAA9404, GKLBAA9407, OR GKLBAA9409 INSTALLED ON -3 ENGINES               | 1475M29P03            | GWN0K374                |    | NA                             | NA TO PN & SN INSTALLED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.                       | AT EVERY 500 FLIGHT HOURS  |
| 2015-0133                |                |  |                       |                         |    |                                |  | NOT APPLICABLE   |
| 2015-18-04               | 25-JUL-2015    | INSPECTION /REPLACEMENT OF 41 OR 73-TOOTH AGB GEAR SHAFT THOSE IDENTIFIED BY PART NUMBER (P/N) AND S/N IN APPENDIX 1 OR APPENDIX 2 | -                     | -                       | X  | NCW                            | RGB/TGB NOT ACCESSED. AGB/TGB MCD INSPECTED AS PER AD 2015-08-04 PARAGRAPH E (2).            | PERFORM INSPECTION AT ANY REMOVAL & REINSTALLATION OF HAND CRANKING COVER. |
| US-2013-02-02            |                |  |                       |                         |    |                                |  | NOT APPLICABLE   |
| 2012-0209                | 28-JAN-2013    | FORGING ERROR DURING MANUFACTURE OF HPT DISK P/N 880026 WITH S/N GLKBAA9335/9404/9407/9409.  | 1475M29P03            | GWN0K374                |    | NA                             | NOT APPLICABLE AS P/N 880026 IS NOT INSTALLED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018. | OPEN.  |
| 2013-26-01               |                |  |                       |                         |    |                                |  | NOT APPLICABLE   |
| EASA AD2009-0036         | 13-JUL-2010    | TO PREVENT FAILURE OF MULTIPLE FAN BLADES, THIS COULD RESULT IN ANCONTAINED FAILURE OF THE ENGINE AND DAMAGE TO THE AIRPLANE.      | -                     | -                       |    | NA                             | NA TO POST SB 72-0543 FAN BLADES FITTED.   | NOT APPLICABLE   |
| 2010-12-03               |                |  |                       |                         |    |                                |  | NOT APPLICABLE   |
| US-2009-11-02            | 23-JUN-2009    | REMOVE HPC 4-9 SPOOLS BEFORE 8,900 CYCLES SINCE REPAIR.  | 1588M89G03            | GWN0K4H5                |    | NA                             | NA TO SN INSTALLED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.                            | CLOSED   |
| CN-N-2006-26-01(B)       | 03-JAN-2007    | REPLACE FUEL FILTERS FROM WESTERN FILTER AND PTI TECHNOLOGIES WITH A FILTER THAT HAS A P/N NOT LISTED IN THIS AD.                  |                       |                         |    | PCW                            | ACCOMPLISHED ON 30-DEC-2008 PER SOUTH AFRICAN AD STATUS DATED 13-FEB-2018.                   | NOT APPLICABLE   |
| US-2006-26-01            |                |  |                       |                         |    |                                |  | NOT APPLICABLE   |
| F-2004-095               | 24-Jun-2004    | REPLACEMENT OF MAIN FUEL PUMPS EQUIPPED WITH SOLID BRONZE BEARINGS WITH PUMPS EQUIPPED WITH BI-METAL, ALUMINIUM BEARINGS.          | -                     | -                       |    | NA                             | NA TO MFP P/N FITTED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.                          | AT NEXT PIECE PART EXPOSURE OF THOSE PARTS                                 |
| 2004-10-13               |                |  |                       |                         |    |                                |  | AT NEXT PIECE PART EXPOSURE OF THOSE PARTS                                 |
| F-2002-390               | 01-AUG-2002    | CLL ROTATING ENGINE PARTS FAILURE PREVENTION. ESM REVISION, INSPECT THE BELOW AT THE OPPORTUNITY OF PIECE-PARTS EXPOSURE           | -                     | -                       | X  | ON<br>ATTRITION                | ESM- REVISED AND INSPECTION OF PARTS PERFORMED FOR THOSE EXPOSED                             | AT NEXT PIECE PART EXPOSURE OF THOSE PARTS                                 |
| 2002-13-03               |                |  |                       |                         |    |                                |  | AT NEXT PIECE PART EXPOSURE OF THOSE PARTS                                 |




|                         |   |  |                     |                       |                                  |
|-------------------------|---|--|---------------------|-----------------------|----------------------------------|
| Engine Model: CFM56-3C1 | <b>AIRWORTHINESS<br/>DIRECTIVE STATUS</b> | <br>Ethiopian<br>የኢትዮጵያ<br>የአየር ላይንስ<br>THE NEW SPIRIT OF AFRICA | TSN: 41,150.77hour  | As of date: 09-Apr-18 | Customer : <b>LAM Mozambique</b> |
| Engine SN: 858979       |   |  | CSN: 29,964cycle    |                       |                                  |
| Issue : 01              |   |  | WO No.: TSN8003TLG5 |                       |                                  |

| AD Number<br><u>EASA</u><br><u>FAA</u> | Effective Date              | AD Description  |   | Installed Part Number | Installed Serial Number | RP | Status<br>(PCW, NCV, CW, NA) | Remarks   | Next Compliance at     |
|--|-----------------------------|---|---|-----------------------|-------------------------|----|------------------------------|---|------------------------|
|  | PART NAME                   | REFERENCE   | INSPECTION                                    | PN                    | SN                      |    |                              | -   | -                      |
|  | FAN DISK                    | 72-21-03  | FPI, DISK BORE ECI, AND DOVETAIL ECI          | 335-014-511-0         | DC095288                | X  | CW                           | USM INSTALLED FOR SCRAP REPLACEMENT OF LOW RC PART                | AT PIECE-PART EXPOSURE |
|  | FAN SHAFT                   | 72-22-01  | MPI   | 335-006-414-0         | DD437075                | X  | CW                           | USM INSTALLED FOR SCRAP REPLACEMENT OF LOW RC PART                | AT PIECE-PART EXPOSURE |
|  | HPC FRONT SHAFT             | 72-31-07  | FPI   | 1275M37P02            | GWN0JPGR                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | HPCR STAGE 1-2 SPOOL        | 72-31-04  | FPI   | 1589M66G02            | GWN0HJR7                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | HPCR STAGE 3 DISK           | 72-31-05  | FPI   | 1590M59P01            | XAEL8089                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | HPCR STAGE 4-9 SPOOL        | 72-31-06  | FPI   | 1588M89G03            | GWN0K4H5                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | HPCR REAR CDP AIR SEAL      | 72-31-07  | FPI   | 1319M25P02            | GFF5EFWP                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | HPT DISK                    | 72-52-02  | FPI, AND DISK BORE ECI                        | 1475M29P03            | GWN0K379                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | HPT FRONT ROTATING AIR SEAL | 72-52-03  | FPI, FOCUSED FPI OF BOLT HOLES, SEAL BORE ECI | 1282M72P07            | XAEM5024                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | LPT STAGE 1 DISK            | 72-54-03  | FPI   | 301-331-126-0         | PA210614                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | LPT STAGE 2 DISK            | 72-54-03  | FPI   | 301-331-227-0         | PA234823                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | LPT STAGE 3 DISK            | 72-54-03  | FPI   | 301-331-322-0         | DE257628                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | LPT STAGE 4 DISK            | 72-54-03  | FPI   | 301-331-429-0         | DE691404                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | LPT ROTOR SUPPORT           | 72-54-05  | FPI   | 305-056-116-0         | DE171384                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | LPT SHAFT                   | 72-55-01  | MPI   | 301-330-067-0         | PA205746                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
|  | LPT STUB SHAFT              | 72-55-02  | FPI   | 301-330-626-0         | DE047195                | X  | NA                           | NOT DISASSEMBLED TO PIECE PART PN & SN FROM LLP SHEET             | AT PIECE-PART EXPOSURE |
| F-2001-240<br>2001-11-05               | 23-JUN-2001                 | REPLACE NO 4 ROLLER BEARING WITH PN-305-355-717-0, THAT HAS SN LISTED IN TABLE 1 OF THIS AD |   | -                     | -                       |    | NA                           | NA TO PN INSTALLED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018. | NOT APPLICABLE         |



|               |           |   |   |         |               |             |           |                                     |
|---------------|-----------|---|---|---------|---------------|-------------|-----------|-------------------------------------|
| Engine Model: | CFM56-3C1 | <b>AIRWORTHINESS<br/>DIRECTIVE STATUS</b> | <br>የኢትዮጵያ<br>የአየር ላይንስ<br>THE NEW SPIRIT OF AFRICA | TSN:    | 41,150.77hour | As of date: | 09-Apr-18 | Customer :<br><b>LAM Mozambique</b> |
| Engine SN:    | 858979    |   |   | CSN:    | 29,964cycle   |             |           |                                     |
| Issue :       | 01        |   |   | WO No.: | TSFN8003TLG5  |             |           |                                     |

| AD Number<br>EASA<br>FAA   | Effective Date | AD Description   | Installed Part Number | Installed Serial Number | RP | Status<br>(PCW, NCW<br>CW, NA) | Remarks  | Next Compliance at |
|----------------------------|----------------|--|-----------------------|-------------------------|----|--------------------------------|--|--------------------|
| F-2000-018<br>2000-05-22   | 02-MAY-2000    | EDDY CURRENT INSPECTION OF HIGH PRESSURE TURBINE FRONT ROTATING AIR SEAL (FOS)   | 1282M72P07            | XAEM5024                | X  | NA                             | NA TO PN INSTALLED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.                              | NOT APPLICABLE     |
| F-1999-245R1<br>2000-15-01 | 02-OCT-2000    | INSPECTION OF FUEL PUMP FILTER COVER ATTACHMENT PARTS  | -                     | -                       |    | NA                             | NA TO PN INSTALLED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.                              | NOT APPLICABLE     |
| F-1998-198R1<br>98-19-10   | 28-SEP-1998    | REMOVE FROM SERVICE THE STARTER GEAR IN THE AGB OF CONCERNED ENGINES   | CFM56-3C1             | 858979                  |    | NA                             | NA BY CFM SB 72-877 R3 EFFECTIVITY PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.              | NOT APPLICABLE     |
| F-1998-080R1<br>98-07-02   | 27-JUN-1998    | REMOVE FROM SERVICE HPC STAGE 1-2 SPOOL, P/N 1589M66G02 WITH SERIAL NUMBER LISTED IN SB CFM56-3/3B/3C 72-856   | 1589M66G02            | GWN0HJR7                |    | NA                             | NA BY SB 72-856 EFFECTIVELY-PN NOT FITTED PER, SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.      | NOT APPLICABLE     |
| F-1998-096<br>98-10-11     | 03-JUN-1998    | AGB/TGB MCD INSPECTION, AGB STARTER GEARSHAFT, TGB ASSEMBLY, TGB INPUT BEVEL GEAR, AGB INTERMEDIATE GEAR ASSEMBLY.   | CFM56-3C1             | 858979                  |    | NA                             | NA BY CFM SB EFFECTIVELY-PART NUMBER NOT FITTED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018. | NOT APPLICABLE     |
| CN-97-298R4<br>2001-04-06  | 04-APR-2001    | PERFORM ULTRASONIC INSPECTION OF FAN DISK.   | -                     | -                       |    | PCW                            | PREVIOUSLY ACCOMPLISHED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.                         | CLOSED             |
| F-1997-327<br>98-12-32     | 20-JUL-1998    | EDDY CURRENT INSPECT HPTR DISKS, PN-1475M29P01, 1475M29P02, 9514M69P01,9514M69P04, 9514M69P05, 9514M69P06 AND 9514M69P09, WITH SN LISTED IN THE APPLICABLE SERVICE BULLETIN (SB) | 1475M29P03            | GWN0K379                |    | NA                             | NA TO PN INSTALLED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.                              | NOT APPLICABLE     |
| F-1997-010R1<br>96-18-16   | 09-DEC-1996    | MODIFY AND REIDENTIFY LOW PRESSURE TURBINE.  | -                     | -                       |    | NA                             | NA DUE TO SB 72-695 EFFECTIVITY PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.                 | NOT APPLICABLE     |
| F-1989-181R3<br>89-23-06   | 28-JAN-1996    | MAGNETIC CHIP DETECTOR INSPECTION  | -                     | -                       |    | PCW                            | PREVIOUSLY ACCOMPLISHED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.                         | NOT APPLICABLE     |
| F-1994-195<br>97-08-01     | 10-SEP-1994    | LIFE REDUCTION OF FAN DISC PNS 335-014-509-0 AND 335-014-511-0   | 335-014-511-0         | BC664768                |    | NA                             | NA FOR ALL ENGINES OPERATING AT CAT A PER THE SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.       | NOT APPLICABLE     |
| F-1991-030<br>91-02-10     | 16-FEB-1991    | INSTALLATION OF FAN SPLITTER FAIRING AND 12 DOOR VARIABLE BYPASS VALVE.  | -                     | -                       |    | PCW                            | PREVIOUSLY INCORPORATED PER SOUTH AFRICAN AD STATUS DATED 13-FEB-2018.                         | CLOSED             |
| F-1990-031R2<br>90-20-13   | 14-OCT-1990    | MODIFY FAN BLADE ASSY BY INTRODUCTION OF FAN BLADE DAMPERS.  | 1590M21P01            | -                       |    | NA                             | NA BY PN INSTALLED PER THE SOUTH AFRICAN AD REPORT DATED                                       | NOT APPLICABLE     |



|                         |   |   |                      |                       |                                  |
|-------------------------|---|---|----------------------|-----------------------|----------------------------------|
| Engine Model: CFM56-3C1 | <b>AIRWORTHINESS<br/>DIRECTIVE STATUS</b> | <br>Ethiopian<br>የኢትዮጵያ<br>THE NEW SPIRIT OF AFRICA | TSN: 41,150.77hour   | As of date: 09-Apr-18 | Customer : <b>LAM Mozambique</b> |
| Engine SN: 858979       |   |   | CSN: 29,964cycle     |                       |                                  |
| Issue : 01              |   |   | WO No.: TSFN8003TLG5 |                       |                                  |

| AD Number<br>EASA<br>FAA     | Effective Date | AD Description   | Installed Part Number | Installed Serial Number | RP | Status<br>(PCW, NCW<br>CW, NA) | Remarks   | Next Compliance at |
|------------------------------|----------------|--|-----------------------|-------------------------|----|--------------------------------|---|--------------------|
|                              |                |  |                       |                         |    |                                | 13-FEB-2018.  |                    |
| F-1990-031R2<br>96-25-11     | 29-JAN-1997    | INTRODUCTION OF FAN BLADES WITH 37 DEGREES MID-SPAN SHROUDS.     | -                     | -                       |    | NA                             | NA DUE TO SB72-543 PRODUCTION EMBODIED PER THE SOUTH AFRICAN AD REPORT DATED 13-FEB-2018. | NOT APPLICABLE     |
| CN-86-066(B)<br>86-08-05(R1) | 07-JUL-1986    | TO PREVENT ENGINE SHUTDOWN FROM RADIAL DRIVESHAFT DISENGAGEMENT. | 335-300-012-0         | -                       |    | NA                             | NA BY PN INSTALLED PER SOUTH AFRICAN AD REPORT DATED 13-FEB-2018.                         | NOT APPLICABLE     |

Legend of abbreviation

PCW- Previously complied with  
NCW-Not Complied with  
CW- Complied with

NA- Not applicable  
ESN-Engine Serial number  
PN-Part Number

RP-Repetitive  
SU-Superseded  
USM-Used Serviceable material

PN-Part Number  
LSV-Last Shop Visit

Completed By: Aduzna B.

Date: 16-Apr-2018

Checked By: 



Date: 28/05/18

Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979



Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755  
[www.ethiopianairlines.com](http://www.ethiopianairlines.com)

## ENGINE SHOP VISIT REPORT

### 5. PRE & POST SHOP VISIT LLP REPORT

Prepared by:

| Name      | Section                                | Date        |
|-----------|--|-------------|
| Adugna B. | EMT Tech. Support, Engineering section | 06-Sep-2016 |

**CUSTOMER : LAM**

ESN  
 ENG TYPE  
 CURRENT POSITION  
 THRUST RATING

**LIFE LIMITATION PARTS SHEET**

|            |
|------------|
| 858979     |
| CFM56-3C-1 |
| C9-BAP # 1 |
| 20 100     |



|          |           |        |
|----------|-----------|--------|
| DATE     | 13-Feb-18 |        |
| TSN/CSN  | 41 150    | 29 963 |
| TLSV/CLS | 16 072    | 11 500 |

| NOMENCLATURE             | PART NUMBER   | SERIAL NUMBER | CYCLE LIMIT |        |        | CYCLES RUN |       |       | TSN    | CSN    | FACT CYCLES AVAILABLE |        |        |
|--------------------------|---------------|---------------|-------------|--------|--------|------------|-------|-------|--------|--------|-----------------------|--------|--------|
|                          |               |               | 3C1-A       | 3C1-B  | 3C1-C  | 3C1-A      | 3C1-B | 3C1-C |        |        | 3C1-A                 | 3C1-B  | 3C1-C  |
| <b>FAN &amp; BOOSTER</b> |               |               |             |        |        |            |       |       |        |        |                       |        |        |
| Fan Disk                 | 335-014-511-0 | DA432924      | 30 000      | 24 900 | 20 100 | 29 963     | -     | -     | 41 150 | 29 963 | 37                    | 30     | 24     |
| Booster Spool            | 335-009-306-0 | DA739092      | 30 000      | 30 000 | 30 000 | 29 963     | -     | -     | 41 150 | 29 963 | 37                    | 37     | 37     |
| Fan Shaft                | 335-006-414-0 | DD704249      | 30 000      | 30 000 | 30 000 | 29 963     | -     | -     | 41 150 | 29 963 | 37                    | 37     | 37     |
| <b>HPC ROTOR</b>         |               |               |             |        |        |            |       |       |        |        |                       |        |        |
| HPC Rotor Shaft          | 1275M37P02    | GWN0JPGR      | 20 000      | 20 000 | 20 000 | 11 500     | -     | -     | 16 072 | 11 500 | 8 500                 | 8 500  | 8 500  |
| Stage 1-2 Spool          | 1589M66G02    | GWN0HJR7      | 20 000      | 20 000 | 20 000 | 11 500     | -     | -     | 16 072 | 11 500 | 8 500                 | 8 500  | 8 500  |
| Stage 3 Disk             | 1590M59P01    | XAEL8089      | 20 000      | 20 000 | 20 000 | 11 500     | -     | -     | 16 072 | 11 500 | 8 500                 | 8 500  | 8 500  |
| Stage 4-9 Spool          | 1588M89G03    | GWN0K4H5      | 20 000      | 20 000 | 15 800 | 11 500     | -     | -     | 16 072 | 11 500 | 8 500                 | 8 500  | 6 716  |
| CDP Seal                 | 1319M25P02    | GFF5EFWP      | 20 000      | 18 000 | 15 000 | 11 500     | -     | -     | 16 072 | 11 500 | 8 500                 | 7 650  | 6 375  |
| <b>HPT ROTOR</b>         |               |               |             |        |        |            |       |       |        |        |                       |        |        |
| HPT Front Shaft          | 1385M90P04    | XAEJ3507      | 20 000      | 17 300 | 17 000 | 11 500     | -     | -     | 16 072 | 11 500 | 8 500                 | 7 353  | 7 225  |
| HPT Front Air Seal       | 1282M72P07    | XAEM5024      | 20 000      | 15 800 | 15 100 | 11 500     | -     | -     | 16 072 | 11 500 | 8 500                 | 6 716  | 6 418  |
| HPT Disk                 | 1475M29P03    | GWN0K379      | 20 000      | 18 500 | 16 600 | 11 500     | -     | -     | 16 072 | 11 500 | 8 500                 | 7 862  | 7 056  |
| HPT Rear Shaft           | 1864M91P02    | TMT1AH82      | 20 000      | 20 000 | 20 000 | 11 500     | -     | -     | 16 072 | 11 500 | 8 500                 | 8 500  | 8 500  |
| <b>LPT ROTOR</b>         |               |               |             |        |        |            |       |       |        |        |                       |        |        |
| LPT Stage 1 Disk         | 301-331-126-0 | PA210614      | 25 000      | 25 000 | 25 000 | 11 500     | -     | -     | 16 072 | 11 500 | 13 500                | 13 500 | 13 500 |
| LPT Stage 2 Disk         | 301-331-227-0 | PA234823      | 25 000      | 25 000 | 25 000 | 11 500     | -     | -     | 16 072 | 11 500 | 13 500                | 13 500 | 13 500 |
| LPT Stage 3 Disk         | 301-331-322-0 | DE257628      | 25 000      | 25 000 | 25 000 | 11 500     | -     | -     | 16 072 | 11 500 | 13 500                | 13 500 | 13 500 |
| LPT Stage 4 Disk         | 301-331-429-0 | DE691404      | 25 000      | 25 000 | 25 000 | 11 500     | -     | -     | 16 072 | 11 500 | 13 500                | 13 500 | 13 500 |
| LPT Conical Support      | 305-056-116-0 | DE171384      | 25 000      | 25 000 | 25 000 | 11 500     | -     | -     | 16 072 | 11 500 | 13 500                | 13 500 | 13 500 |
| LPT Shaft                | 301-330-067-0 | PA205746      | 30 000      | 30 000 | 30 000 | 11 500     | -     | -     | 16 072 | 11 500 | 18 500                | 18 500 | 18 500 |
| LPT Stub Shaft           | 301-330-626-0 | DE047195      | 25 000      | 25 000 | 25 000 | 11 500     | -     | -     | 16 072 | 11 500 | 13 500                | 13 500 | 13 500 |

The undersigned hereby confirms that the above is an accurate summary of data which is obtained from the Engine Log Book, Jetworx engine records and Chapter 05-11-00 of the CFM56-3 Engine Shop Manual Revision 74 Date 15-Dec-16

|          |       |          |    |    |    |
|----------|-------|----------|----|----|----|
| Fan Disk | 3C1-A | Limiters | 37 |    |    |
| Fan Disk | 3C1-B | Limiters |    | 30 |    |
| Fan Disk | 3C1-C | Limiters |    |    | 24 |

Compiled by: F SMIT

ID Stamp:



Date: 2018-02-13

|                   |        |        |        |
|-------------------|--------|--------|--------|
| ENGINE LIFE LIMIT | 3C1-A  | 3C1-B  | 3C1-C  |
|                   | 30 000 | 29 993 | 29 987 |

LLP Record

CFM56

Date: 4/1/2018

| ENGINE SN | ENGINE TYPE |
|-----------|-------------|
| 858979    | CFM56-3     |

| TSN   | CSN   |
|-------|-------|
| 41150 | 29963 |

| TSLSV | CSLSV |
|-------|-------|
| 0     | 0     |
| A/C   | POS   |

Engine built for 6,375 CYCLES

|                              |  |
|------------------------------|--|
| REMOVED FROM<br>INSTALLED ON |  |
|------------------------------|--|

**ESN 858979**

| ITEM No.               | STAGE                       | P/N           | S/N        | CYCLE LIMIT FOR: |       |       | TSN   | CSN   | OPERATED CYCLES UNDER: |       |       | LIFE REMAINING CYCLES FOR: |       |       |
|------------------------|-----------------------------|---------------|------------|------------------|-------|-------|-------|-------|------------------------|-------|-------|----------------------------|-------|-------|
|                        |                             |               |            | CAT A            | CAT B | CAT C |       |       | CAT A                  | CAT B | CAT C | CAT A                      | CAT B | CAT C |
| <b>FAN ROTOR PARTS</b> |                             |               |            |                  |       |       |       |       |                        |       |       |                            |       |       |
| 1                      | FAN DISK                    | 335-014-511-0 | DC095288   | 30000            | 24900 | 20100 | 17061 | 10200 | 10200                  |       |       | 19800                      | 16434 | 13266 |
| 2                      | BOOSTER SPOOL               | 335-009-306-0 | DC093846-0 | 30000            | 30000 | 30000 | 10977 | 8764  | 8764                   |       |       | 21236                      | 21236 | 21236 |
| 3                      | FAN SHAFT                   | 335-006-414-0 | DD437075   | 30000            | 30000 | 30000 | 11466 | 9693  |                        | 9693  |       | 20307                      | 20307 | 20307 |
| <b>HPC MODULE</b>      |                             |               |            |                  |       |       |       |       |                        |       |       |                            |       |       |
| 4                      | HPC ROTOR FORWARD SHAFT     | 1275M37P02    | GWN0JPGR   | 20000            | 20000 | 20000 | 16072 | 11500 | 11500                  |       |       | 8500                       | 8500  | 8500  |
| 5                      | HPC ROTOR SPOOL STG 1&2     | 1589M66G02    | GWN0HJR7   | 20000            | 20000 | 20000 | 16072 | 11500 | 11500                  |       |       | 8500                       | 8500  | 8500  |
| 6                      | HPC ROTOR DISK STG 3        | 1590M59P01    | XAEL8089   | 20000            | 20000 | 20000 | 16072 | 11500 | 11500                  |       |       | 8500                       | 8500  | 8500  |
| 7                      | HPC ROTOR SPOOL STG 4-9     | 1588M89G03    | GWN0K4H5   | 20000            | 20000 | 15800 | 16072 | 11500 | 11500                  |       |       | 8500                       | 8500  | 6715  |
| 8                      | CDP ROTATING REAR AIR SEAL  | 1319M25P02    | GFF5EFWP   | 20000            | 18000 | 15000 | 16072 | 11500 | 11500                  |       |       | 8500                       | 7650  | 6375  |
| <b>HPT MODULE</b>      |                             |               |            |                  |       |       |       |       |                        |       |       |                            |       |       |
| 9                      | HPT ROTOR FRONT SHAFT       | 1385M90P04    | XAEJ3507   | 20000            | 17300 | 17000 | 16072 | 11500 | 11500                  |       |       | 8500                       | 7353  | 7225  |
| 10                     | HPT FRONT ROTATING AIR SEAL | 1282M72P07    | XAEM5024   | 20000            | 15800 | 15100 | 16072 | 11500 | 11500                  |       |       | 8500                       | 6715  | 6418  |
| 11                     | HPT ROTOR DISK              | 1475M29P03    | GWN0K379   | 20000            | 18500 | 16600 | 16072 | 11500 | 11500                  |       |       | 8500                       | 7863  | 7055  |
| 12                     | HPT REAR SHAFT              | 1864M91P02    | TMT1AH82   | 20000            | 20000 | 20000 | 16072 | 11500 | 11500                  |       |       | 8500                       | 8500  | 8500  |
| <b>LPT MODULE</b>      |                             |               |            |                  |       |       |       |       |                        |       |       |                            |       |       |
| 13                     | LPT ROTOR DISK STG. 1       | 301-331-126-0 | PA210614   | 25000            | 25000 | 25000 | 16072 | 11500 | 11500                  |       |       | 13500                      | 13500 | 13500 |
| 14                     | LPT ROTOR DISK STG. 2       | 301-331-227-0 | PA234823   | 25000            | 25000 | 25000 | 16072 | 11500 | 11500                  |       |       | 13500                      | 13500 | 13500 |
| 15                     | LPT ROTOR DISK STG. 3       | 301-331-322-0 | DE257628   | 25000            | 25000 | 25000 | 16072 | 11500 | 11500                  |       |       | 13500                      | 13500 | 13500 |
| 16                     | LPT ROTOR DISK STG. 4       | 301-331-429-0 | DE691404   | 25000            | 25000 | 25000 | 16072 | 11500 | 11500                  |       |       | 13500                      | 13500 | 13500 |
| 17                     | LPT SHAFT                   | 301-330-067-0 | PA205746   | 30000            | 30000 | 30000 | 16072 | 11500 | 11500                  |       |       | 18500                      | 18500 | 18500 |
| 18                     | LPT STUB SHAFT              | 301-330-626-0 | DE047195   | 25000            | 25000 | 25000 | 16072 | 11500 | 11500                  |       |       | 13500                      | 13500 | 13500 |
| 19                     | CONICAL SUPPORT             | 305-056-116-0 | DE171384   | 25000            | 25000 | 25000 | 16072 | 11500 | 11500                  |       |       | 13500                      | 13500 | 13500 |

LLP CHANGE @

36,338

TC

NOTE:

| LIMITS          | USAGE       |
|-----------------|-------------|
| CAT A=20000 LBS | CAT A 11500 |
| CAT B=15800 LBS | CAT B 11500 |
| CAT C=20000 LBS | CAT C 11500 |

| LIMITER | A RATING | 8500 |
|---------|----------|------|
|         | B RATING | 6715 |
|         | C RATING | 6375 |

Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979



Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755  
[www.ethiopianairlines.com](http://www.ethiopianairlines.com)

## ENGINE SHOP VISIT REPORT

### 6. Incoming and outgoing inventory.

Prepared by:

| Name      | Section                                | Date        |
|-----------|--|-------------|
| Adugna B. | EMT Tech. Support, Engineering section | 06-Sep-2016 |



|              |                  |
|--------------|------------------|
| Engine model | CFM56-3C1        |
| ESN          | 858979(Customer) |
| Rep. Station | ETH              |

|                                   |
|-----------------------------------|
| <b>CONTROLS &amp; ACCESSORIES</b> |
| CFM56-7                           |

|         |                  |
|---------|------------------|
| WO/WP   | TSFN8003YSKV     |
| TSN/CSN | 41,150.77/29,964 |
| DATE    | 14-May-2018      |

| DESCRIPTION | Actual MFG P/N | SN<br>(Inventory<br>Incoming) | SN<br>(Inventory<br>Outgoing) | TSN | CSN | TSO | CSO | Remark |
|-------------|----------------|-------------------------------|-------------------------------|-----|-----|-----|-----|--------|
|-------------|----------------|-------------------------------|-------------------------------|-----|-----|-----|-----|--------|

Please record actual PN and SN. If engine is inducted to shop from aircraft record SN on the incoming column. Record on outgoing, if engine has been received from FR or just been repaired.

| DESCRIPTION                                   | Actual MFG P/N    | SN<br>(Inventory<br>Incoming) | SN<br>(Inventory<br>Outgoing) | TSN     | CSN     | TSO     | CSO     | Remark                  |
|---|-------------------|-------------------------------|-------------------------------|---------|---------|---------|---------|-------------------------|
| <b>ATA 73 Engine Fuel and Control</b>         |                   |                               |                               |         |         |         |         |                         |
| Main Fuel Pump                                | 301-779-007-0     | 13885                         | 13885                         | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| Servo Fuel Heater                             | 301-776-501-0     | FHS15405                      | FHS15405                      | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| Fuel Nozzles                                  | N317M47G01        | N/V                           | N/V                           | -       | -       |         |         | Not Removed Form Engine |
| Main Engine Control (MEC)                     | 665038063-215     | WY97462                       | WY97462                       | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| PMC Control Assembly                          | 157AN68004        | LMDB7089                      | LMDB7089                      | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| CIT Sensor                                    | N/V               | N/V                           | N/V                           | -       | -       |         |         | Not Removed Form Engine |
| Downstream Fuel Filter (DSFF)                 | CA00914D          | YY020239-G                    | YY020239-G                    | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| T12 Sensor                                    | N/A               | N/A                           | N/A                           | -       | -       |         |         |                         |
| Control Parameter Wiring Harness              | N/V               | N/V                           | N/V                           | -       | -       |         |         | Not Removed Form Engine |
| Alternator Electrical Lead Assembly (HARNESS) | N/V               | N/V                           | N/V                           | -       | -       |         |         | Not Removed Form Engine |
| Fan Inlet Temperature (T2) Sensor             | N/V               | N/V                           | N/V                           | -       | -       |         |         | Not Removed Form Engine |
| <b>ATA 74 Ignition</b>                        |                   |                               |                               |         |         |         |         |                         |
| Ignition Exciter LH                           | 10-631045-11      | BPCT444                       | BPCT444                       | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| Ignition Exciter RH                           | 10-631045-1       | 3586F                         | 3586F                         | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| Ignition Lead LH                              | 59501-9043185-14C | 99312                         | 99312                         | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| Ignition Lead RH                              | 59501-9043185-15C | N/V                           | N/V                           | -       | -       |         |         | Not Removed Form Engine |
| Igniter Plug                                  | N/V               | N/V                           | N/V                           | -       | -       |         |         | Not Removed Form Engine |
| <b>ATA 75 Air System</b>                      |                   |                               |                               |         |         |         |         |                         |
| Turbine Clearance Control Timer               | 7119M71G01        | N/V                           | N/V                           | -       | -       |         |         | Not Removed Form Engine |
| Solenoid Valve Timer                          | N/V               | N/V                           | N/V                           | -       | -       |         |         | Not Removed Form Engine |

| Incoming     |             | Outgoing     |              |
|--------------|-------------|--------------|--------------|
| Recorded by: | G/Kiros     | Recorded by: | Delil Nesru. |
| ID:          | 18357       | ID:          | 24796        |
| Date:        | 16-Feb-2018 | Date:        | 05-Apr-2018  |

|                            |  |
|----------------------------|--|
| Approved by [for customer] |  |
| Name:                      |  |
| Signature:                 |  |
| Date:                      |  |



|              |                  |
|--------------|------------------|
| Engine model | CFM56-3C1        |
| ESN          | 858979(Customer) |
| Rep. Station | ETH              |

|                        |
|------------------------|
| CONTROLS & ACCESSORIES |
| CFM56-7                |

|         |                  |
|---------|------------------|
| WO/WP   | TSFN8003YSKV     |
| TSN/CSN | 41,150.77/29,964 |
| DATE    | 14-May-2018      |

| DESCREPTION | Actual MFG P/N | SN<br>(Inventory<br>Incoming) | SN<br>(Inventory<br>Outgoing) | TSN | CSN | TSO | CSO | Remark |
|-------------|----------------|-------------------------------|-------------------------------|-----|-----|-----|-----|--------|
|-------------|----------------|-------------------------------|-------------------------------|-----|-----|-----|-----|--------|

Please record actual PN and SN. If engine is inducted to shop from aircraft record SN on the incoming column. Record on outgoing, if engine has been received from FR or just been repaired.

|   |               |            |            |         |         |         |         |                         |
|---|---------------|------------|------------|---------|---------|---------|---------|-------------------------|
| Turbine Clearance Control Valve               | 7061M31G05    | WCPD857E   | WCPD857E   | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| Start Bleed Valve                             | 3289M630      | 6132       | 6132       | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| VBV Feedback Cable                            | 301-777-301-0 | CCC1063P6  | CCC1063P6  | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| VSV Feedback Cable                            | 9339M12P03    | CCCCG227   | CCCCG227   | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| VSV Actuator LH                               | 1211175-011   | C8461      | C8461      | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| VSV Actuator RH                               | N/V           | N/V        | N/V        | -       | -       |         |         | Not Removed Form Engine |
| VBV Flexible Shaft                            | N/V           | N/V        | N/V        | -       | -       |         |         | Not Removed Form Engine |
| VBV Stop Mechanism                            | N/V           | N/V        | N/V        | -       | -       |         |         | Not Removed Form Engine |
| VBV Doors (with Master)                       | N/V           | N/V        | N/V        | -       | -       |         |         | Not Removed Form Engine |
| VBV Gear Motor                                | 301-776-7040  | 15604      | 15604      | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| <b>ATA 76 Engine Indication</b>               |               |            |            |         |         |         |         |                         |
| N1 Speed Sensor                               | 320-001-0     | 14874      | 14874      | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| Rotor/Generator Stator<br>Alternating current | 997M82P03     | N/V        | N/V        | -       | -       |         |         | Not Removed Form Engine |
| T495 thermocouple wiring<br>harness           | 301-779-603-0 | 19590R     | 19590R     | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| EGT Trim Box                                  | 301-784-201-0 | 15774      | 15774      | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| No. 1 Bearing Vibration Sensor                | N/V           | N/V        | N/V        | -       | -       |         |         | Not Removed Form Engine |
| TRF Vibration Sensor                          | 001-08-102-6  | 23055      | 23055      | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| <b>ATA 79 Oil System</b>                      |               |            |            |         |         |         |         |                         |
| Oil Tank                                      | 335-261-203-0 | 5353       | 5353       | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| Oil Cap                                       | 335-760-905-0 | VAB18247-9 | VAB18247-9 | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| Lubrication Unit                              | 335-251-005-0 | 3475       | 3475       | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| Oil/Fuel Heat Exchanger                       | 69202-300-8   | 12372      | 12372      | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |
| Oil Scavenge Filter Assembly                  | QA06961       | RG7-3916   | RG7-3916   | Unknown | Unknown | Unknown | Unknown | Not Removed Form Engine |

| Incoming             |             | Outgoing                  |             |
|----------------------|-------------|---------------------------|-------------|
| Recorded by: G/Kiros |             | Recorded by: Delil Nesru. |             |
| ID:                  | 18357       | ID:                       | 24796       |
| Date:                | 16-Feb-2018 | Date:                     | 05-Apr-2018 |

|                            |  |
|----------------------------|--|
| Approved by [for customer] |  |
| Name:                      |  |
| Signature:                 |  |
| Date:                      |  |



|              |                  |
|--------------|------------------|
| Engine model | CFM56-3C1        |
| ESN          | 858979(Customer) |
| Rep. Station | ETH              |

|  |
|--|
| <h2>CONTROLS &amp; ACCESSORIES</h2> <p>CFM56-7</p> |
|--|

|         |                  |
|---------|------------------|
| WO/WP   | TSFN8003YSKV     |
| TSN/CSN | 41,150.77/29,964 |
| DATE    | 14-May-2018      |

| DESCRIPTION | Actual MFG P/N | SN<br>(Inventory<br>Incoming) | SN<br>(Inventory<br>Outgoing) | TSN | CSN | TSO | CSO | Remark |
|-------------|----------------|-------------------------------|-------------------------------|-----|-----|-----|-----|--------|
|-------------|----------------|-------------------------------|-------------------------------|-----|-----|-----|-----|--------|

Please record actual PN and SN. If engine is inducted to shop from aircraft record SN on the incoming column. Record on outgoing, if engine has been received from FR or just been repaired.

**Fuel Nozzles SN**

|          |           |          |          |          |          |           |           |          |          |
|----------|-----------|----------|----------|----------|----------|-----------|-----------|----------|----------|
| PHC9K7A4 | PSD3V245  | PCY0712A | PSD0026  | PHC7C783 | PHGN5758 | PHC654606 | PHCA15770 | PSD00483 | PCY54225 |
| PHC11G45 | PHCC18101 | PHC01A41 | PCY54285 | PCY54195 | PCY54215 | PCY542305 | PCY5228M  | N/V      | N/V      |

**Legend:** N/V –Not Visible, Min.-Minimum Workscope, Full-Full Workscope, VI-Visual Inspection=Visual Check, OC-On Condition, TSN-Time Since New, CSN-Cycle Since New, TSO-Time Since Overhaul, CSO- Cycle Since Overhaul

**Note** - Please, advise MFG P/N and SN information if it is left unfilled or if it is different from actual.

| Incoming     |             | Outgoing     |              |
|--------------|-------------|--------------|--------------|
| Recorded by: | G/Kiros     | Recorded by: | Delil Nesru. |
| ID:          | 18357       | ID:          | 24796        |
| Date:        | 16-Feb-2018 | Date:        | 05-Apr-2018  |

|                            |  |
|----------------------------|--|
| Approved by [for customer] |  |
| Name:                      |  |
| Signature:                 |  |
| Date:                      |  |

Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979



Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755

[www.ethiopianairlines.com](http://www.ethiopianairlines.com)

## ENGINE SHOP VISIT REPORT

### 7. ENGINE TEST DATA SHEET

Prepared by:

| Name      | Section                                | Date        |
|-----------|--|-------------|
| Adugna B. | EMT Tech. Support, Engineering section | 06-Sep-2016 |

Standard Day

Hot Day

NTK Rated:

at Max Cont

FnK  
LBS

EGTK  
DegC

N2K  
RPM

WFK  
PPH

EGTK  
DegC

N2K  
RPM

4804

Max

22768

830

14266

865

14487

NIR

4817

Data

21319

897

13894

9339

934

14109

Delta

-13

Min

21684

0

13864

Margin

-365

-42

372

-69

378

N1 Targets (RPM)



Takeoff

5015

N1

4889



MaxCont

4876

Delta N1

-85



4000 NTK

4009

Store Data

CIT

23.1

DegC

MOPC

52.5

PSID

SFCK3

0

Lbs

EPR

3.940

EPRK3

3.924

CFM56-3C1

SN:858979

Engine Start

28/03/18

04:29:30 PM

### Start Timers

|                    |                 |             |
|--------------------|-----------------|-------------|
| FuelOn to Lightoff | <b>3.1</b> Sec  |             |
| StarterOn to Idle  | <b>57.4</b> Sec | Limit       |
| Start to Idle Corr | <b>57.4</b>     | <b>58.9</b> |
| Starter On Time    | <b>37.3</b> Sec |             |

### Observed Data

|            |              |      |
|------------|--------------|------|
| CIT        | <b>22.8</b>  | DegC |
| SAT        | <b>19.7</b>  | DegC |
| Stored Air | <b>123.7</b> | PSIG |
| SAP        | <b>32.3</b>  | PSIG |
| Max SAP    | <b>62.4</b>  | PSIG |

### Captured Start Data

|                 |              |      |
|-----------------|--------------|------|
| N2 at FuelOn    | <b>3691</b>  | RPM  |
| Wf at Lightoff  | <b>397</b>   | PPH  |
| MOP Obs at Idle | <b>33.2</b>  | PSIG |
| EGT at Idle     | <b>604.3</b> | DegC |
| Peak Wf         | <b>862</b>   | PPH  |
| Peak EGT        | <b>604.8</b> | DegC |

### EGT Start Overtemps

|          |                   |                                      |
|----------|-------------------|--------------------------------------|
| Limit    | <b>725.0</b> DegC |                                      |
| Peak     | <b>0.0</b> DegC   | <input type="button" value="Clear"/> |
| Duration | <b>0.0</b> Sec    |                                      |

### Idle Limits

|        |  |                                   |     |
|--------|--|-----------------------------------|-----|
|        | <input checked="" type="checkbox"/> Min Idle | <input type="checkbox"/> App Idle |     |
| Obs N1 | <b>1248</b>                                  | *****                             | RPM |
| Max N2 | <b>9116</b>                                  | <b>10729</b>                      | RPM |
| Obs N2 | <b>9187</b>                                  | *****                             | RPM |
| Min N2 | <b>8822</b>                                  | <b>10523</b>                      | RPM |

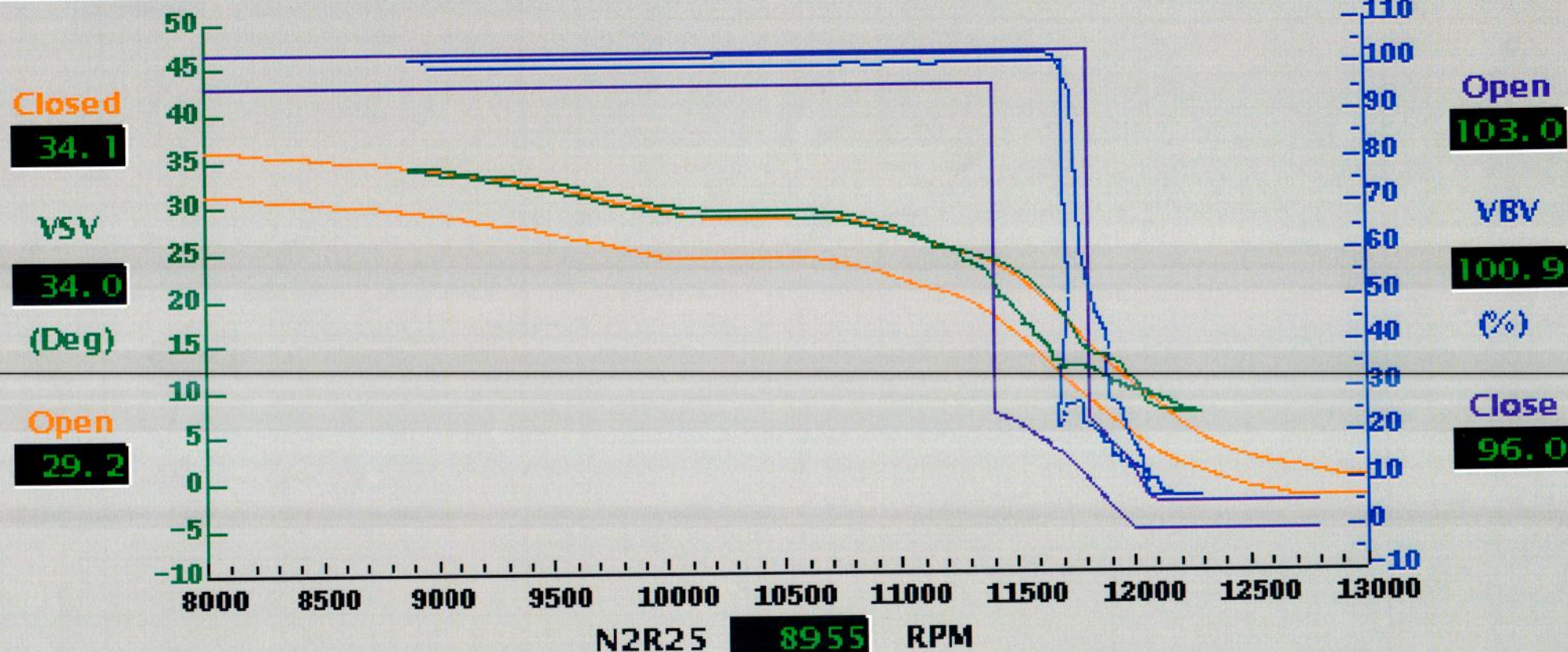
CFM56-3C1

SN:858979

VSV VBV Trim

28/03/18

04:37:19 PM



Capture Deltas

| N1 Targets               |        | VSV Deltas  |            | VBV Deltas |              |
|--------------------------|--------|-------------|------------|------------|--------------|
|                          |        | Close (Max) | Open (Min) | Open (Max) | Closed (min) |
| <input type="checkbox"/> | (A) TO | 5013        | *****      | *****      | *****        |
| <input type="checkbox"/> | (B) MC | 4873        | *****      | *****      | *****        |
| <input type="checkbox"/> | (C) 75 | 3759        | *****      | *****      | *****        |
| <input type="checkbox"/> | (D) 50 | 2506        | *****      | *****      | *****        |
| <input type="checkbox"/> | (E) 25 | 1253        | *****      | *****      | *****        |

(for active N1 Target)

Refresh

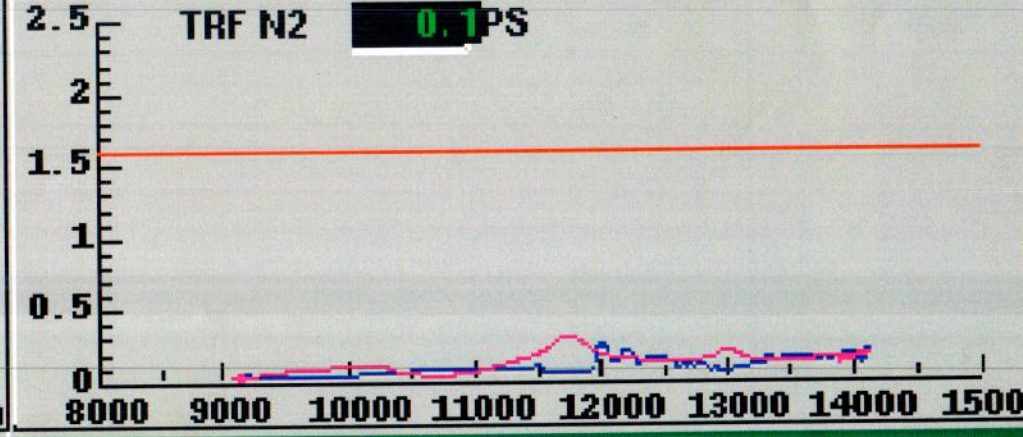
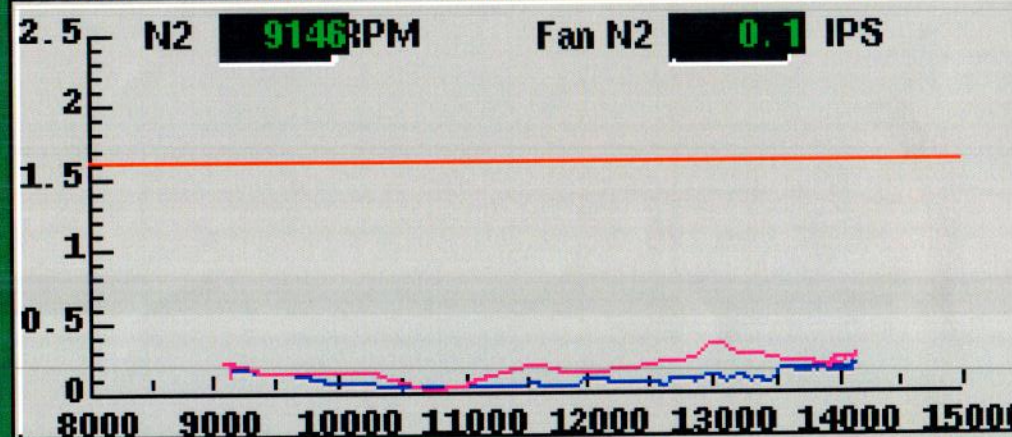
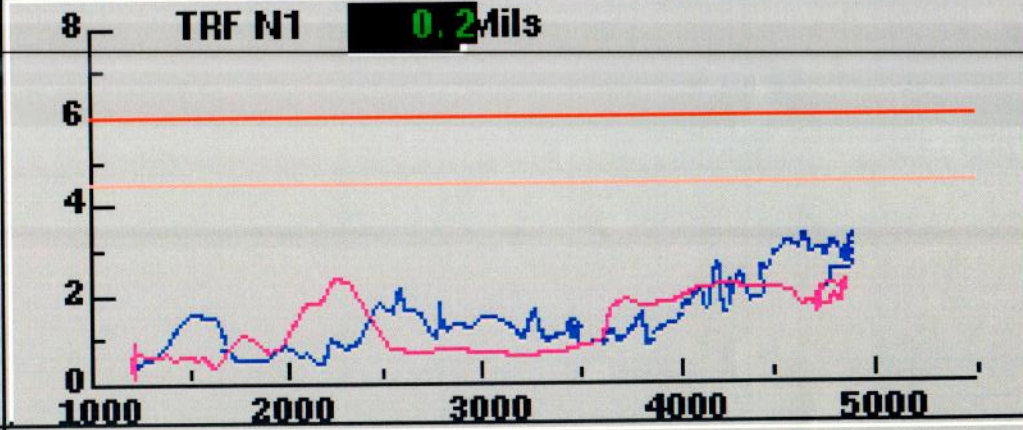
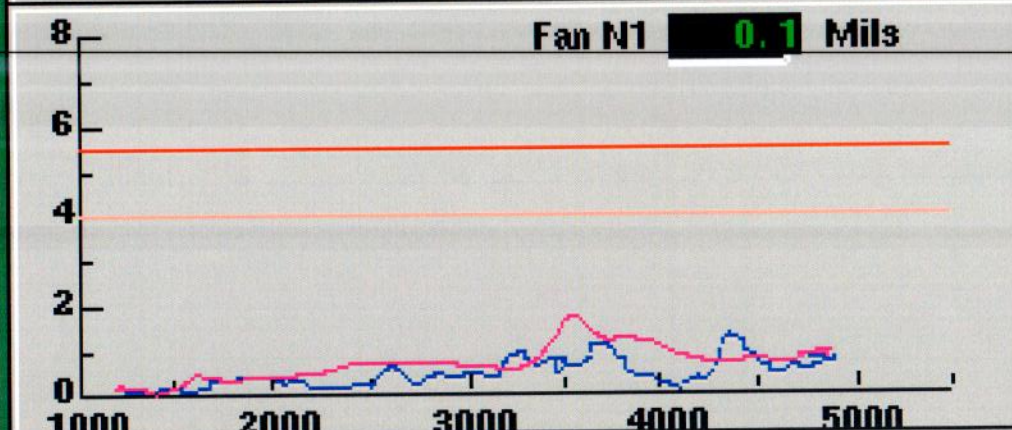
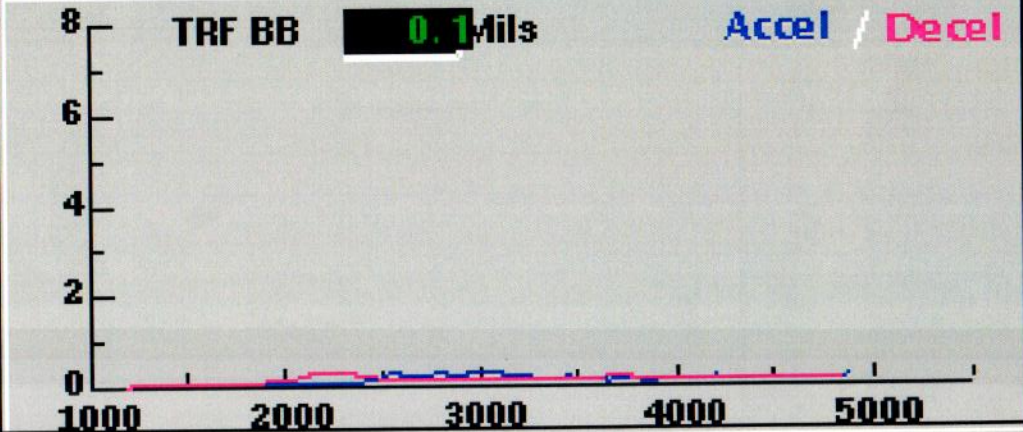
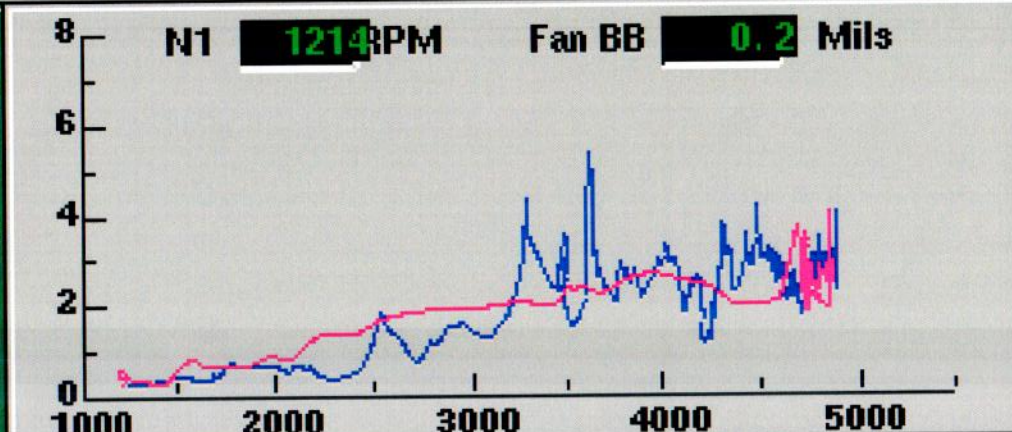
Hard Copy Plot

CFM56-3C1

SN:858979

Vibration Survey

28/03/18 04:40:34 PM



Refresh

Accel

SSR Disarmed

Decel

Hard Copy Plot

|       |
|-------|
| Accel |
|-------|

|     |      | N1<br>Tracked |      | N2<br>Tracked |     |
|-----|------|---------------|------|---------------|-----|
| FAN | Peak | 1.30          | Mils | 0.19          | IPS |
|     | N1   | 4356          | RPM  | 4637          | RPM |
|     | N2   | 13557         | RPM  | 13859         | RPM |
| TRF | Peak | 3.32          | Mils | 0.26          | IPS |
|     | N1   | 4651          | RPM  | 2550          | RPM |
|     | N2   | 13862         | RPM  | 12010         | RPM |

|       |
|-------|
| Decel |
|-------|

|     |      | N1<br>Tracked |      | N2<br>Tracked |     |
|-----|------|---------------|------|---------------|-----|
| FAN | Peak | 1.71          | Mils | 0.34          | IPS |
|     | N1   | 3542          | RPM  | 3693          | RPM |
|     | N2   | 12928         | RPM  | 13061         | RPM |
| TRF | Peak | 2.53          | Mils | 0.32          | IPS |
|     | N1   | 2269          | RPM  | 2210          | RPM |
|     | N2   | 11843         | RPM  | 11766         | RPM |

|                       |
|-----------------------|
| Start Auto Vib Survey |
|-----------------------|

|             |
|-------------|
| Clear Peaks |
|-------------|

Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979



Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755  
www.ethiopianairlines.com

## ENGINE SHOP VISIT REPORT

### 8. REPLACED LLPS BTB DOCUMENT

Prepared by:

| Name      | Section                                | Date        |
|-----------|--|-------------|
| Adugna B. | EMT Tech. Support, Engineering section | 06-Sep-2016 |

|                                  |  |  |  |  |  |
|----------------------------------|--|--|--|--|--|
| 1 国家 Country<br><b>P.R.CHINA</b> |  | 2 中国民用航空总局 CAAC <input type="checkbox"/> 符合性 Conformity <input checked="" type="checkbox"/> 适航性 Airworthiness<br>批准放行证书/适航批准标签<br><b>AUTHORIZED RELEASE CERTIFICATE / AIRWORTHINESS APPROVAL TAG</b> |  | 3 证书编号 Certificate Ref. No.<br><b>A038894C</b> |  |
|----------------------------------|--|--|--|--|--|

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| 4 单位 Organization<br>General Electric Engine Services LLC., dba<br>GE - Aviation<br>199 Container Place<br>Cincinnati, OH 45246-1708 |  |  |  | 5 工作单/合同单/发票<br>Work Order/Contract/Invoice<br><b>R30300</b> |  |
|--|--|--|--|--|--|

| 6 序号<br>Item | 7 内物<br>Description | 8 件号<br>Part No. | 9 适用性<br>Eligibility | 10 数量<br>Qty | 11 系列号/批号<br>Serial/Batch No. | 12 产品状态<br>Status/Work |
|--------------|---------------------|------------------|----------------------|--------------|-------------------------------|------------------------|
| 1.           | FAN DISK            | 335-014-511-0    | CFM56-3              | 1            | DC095288                      | OVERHAULED             |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| 13 备注 Remarks  |  | Customer Name<br>THIRD STAR AVIATION, LLC. |  | Additional Information :   |  |
| GE Customer Nbr<br><b>94034</b>  |  |  |  | AD 2001-04-06 CW on 3-27-2013, performed dovetail wear measurement (ultrasonic inspection N/R) per SB 72-0854. No further actions required           |  |
| "The above part(s) was(were) inspected and overhauled/repaired and encompass the requirements of all the following engine manual(s)" |  |  |  | AD 2002-13-03 CW on 3-26-2013, performed full FPI, disk bore and dovetail ECI per ESM Inspection. Re-inspection required at next piece part exposure |  |
| Manual Section(s)<br><b>CFMI-TPSM5 72-21-03 Rev.70 ( DEC/15/2012 CFM56 - 3 )</b>   |  |  |  |  |  |
| Repair Number(s)<br><b>001 002 012 015</b>   |  |  |  |  |  |
| Service Bulletin(s)<br><b>72-0854 Rev.5 CW</b>   |  |  |  |  |  |
| Nonconformance Records<br><b>None</b>  |  |  |  | ESN <b>727298</b>  |  |
| S/B Legend Complied With (CW), Previously Complied With (PCW), Not Complied With (NCW), Not Applicable(N/A)                          |  |  |  | FAA 8130-3 tracking number <b>A038894</b> also issued  |  |
| TSN <b>17061</b>   |  | CSN <b>10200</b>                           |  |  |  |
| TSO <b>0</b>   |  | CSO <b>0</b>                               |  |  |  |

14 新产品 New Parts

兹声明上述产品除第 13 项的其他规定以外,已按照上述国家适航条例进行制造/检查,并且该产品(出口产品)符合经批准的型号设计资料并进口国提出的专用要求。

Certifies that the Part(s) identified above except as otherwise specified in block 13 was(were) manufactured/inspected in accordance with the airworthiness regulations of the stated country and/or in the case of parts to be supported with the approved design data and with the notified special requirements of the importing country.

15 使用过的产品 Used Parts

兹声明上述产品除第 13 项的其他规定以外,已按照上述国家适航条例和进口国通知的特殊要求进行工作,该产品处于安全可用状态可以批准放行使用。

Certifies that the work specified above except as specified in block 13 was carried out in accordance with the airworthiness regulations of the stated country and the notified special requirements of the importing country and in respect to that work, the part(s) is(are) in condition for safe operation and considered ready for release to service.(over)

|  |                                |
|--|--------------------------------|
| 16 批准人签名<br>Signature<br><i>Tatjana D. Casteel</i> | 18 批准日期<br>Date<br>11/APR/2013 |
| 17 批准人姓名(打印的)<br>Name<br><b>Tatjana Casteel</b>    |                                |

19 中国民航总局授权  
Issued by or on behalf of the CAAC

**F00100397**

**批准放行证书/适航批准标签 AUTHORIZED RELEASE CERTIFICATE/AIRWORTHINESS APPROVAL TAG**

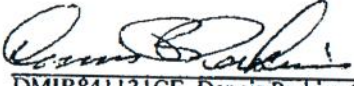

**使用者/安装者职责 USER INSTALLER RESPONSIBILITIES**


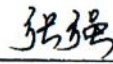
1) 必须明确,本文件并不批准零件组件除非可以追溯到相关产品上。 It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.

2) 当使用者/安装者使用的是所有国家适航当局的规定,而不是本表第 1 项中所指国家适航当局的规定时,使用者/安装者必须保证所在国家的适航当局能接受其所指国家适航当局批准出口的事件/组件/零件。 Where that his/her Airworthiness Authority accepts parts/components/assemblies from the Airworthiness Authority of the country specified in block 1 it is essential that the user/installer ensure

3) 表中第 14 项、第 15 项的陈述,并不说明本表是安装批准。在所有情况下,航空器使用前,航空器使用者/安装者应把按本国适航条例颁发的安装批准放入维修记录中。 Statements 14 and 15 do not constitute installation certification. In all cases the aircraft maintenance record must contain an installation certification issued in accordance with the national regulation by the user/installer before the aircraft may be flown.

ROUTER # X74809  
Shop Order # 99745J

|  |                 |   |                 |  |                               |   |  |
|--|-----------------|---|-----------------|--|-------------------------------|---|--|
| 1. Approving National Aviation Authority/Country:<br><b>FAA/United States</b>  |                 | 2. <b>AUTHORIZED RELEASE CERTIFICATE</b><br>FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG |                 |  |                               | 3. Form Tracking Number:<br><b>04-C36538</b>            |  |
| 4. Organization Name and Address:<br><b>FAA-PC108</b>  |                 | <b>cfm international</b><br>NEUMANN WAY<br>CINCINNATI, OHIO 45215                       |                 |  |                               | 5. Work Order/Contract/Invoice Number:<br><b>C36538</b> |  |
| 6. Item:   | 7. Description: | 8. Part Number:   | 9. Eligibility: | 10. Quantity:  | 11. Serial/Batch Number:      | 12. Status/Work:  |  |
| 1  | DISK            | 301-331-126-0   | CFM56           | 1  | BC226433                      | NEW   |  |
| 2  | DISK            | 301-331-322-0   | CFM56           | 1  | <del>BB387424</del> BB664238* | NEW   |  |
| 3  | DISK            | 335-014-511-0   | CFM56           | 1  | DC095288                      | NEW   |  |
| * ITEM 2: Serial Number BB387424 recorded in error, the correct serial number is BB664238.   |                 |   |                 |  |                               |   |  |
| <br>DMIR841131CE Dennis Perkins 6/7/04  |                 |   |                 |  |                               |   |  |
| 13. Remarks: <b>EXPORT --PEOPLES REPUBLIC OF CHINA</b>   |                 |   |                 |  |                               |   |  |
| 14. Certifies the items identified above were manufactured in conformity to:   |                 |   |                 | 19. <input type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 13   |                               |   |  |
| <input checked="" 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.  |                 |   |                 | Certified 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/Authorization No.:   |                 | 20. Authorized Signature:  |                               | 21. Approval/Certificate No.:                           |  |
|   |                 | DMIR841131CE  |                 | Not Applicable   |                               | Not Applicable  |  |
| 17. Name (Typed or Printed):   |                 | 18. Date (m/d/y):   |                 | 22. Name (Typed or Printed):   |                               | 23. Date (m/d/y):                                       |  |
| PERKINS, DENNIS R  |                 | 04/21/04  |                 | Not Applicable   |                               | Not Applicable  |  |
| <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. 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. Statements in block 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. |                 |   |                 |  |                               |   |  |

|   |  |  |  |   |  |  |  |
|---|--|--|--|---|--|--|--|
| 1. Approving National Aviation Authority/Country:<br>FAA/United States  |  | <b>AUTHORIZED RELEASE CERTIFICATE</b><br>FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG |  |   |  | 3. Form Tracking Number:<br>20040041   |  |
| 4. Organization Name and Address:<br> MTU Maintenance<br>MTU Maintenance Zhuhai Co. Ltd.<br>1 Tianke Road, Free Trade Zone<br>519030, Zhuhai, P.R.China  |  |  |  | Repair Station<br>Certificate No.:<br>ZUUY862X  |  | Phone No. +86 (0)756 8687806-114<br>Fax No.: +86 (0)756 8687901<br>Site: MUCMUXH |  |
| 5. Work Order/Contract/Invoice Number:<br>51.005.400<br>HMB240302639  |  | 6. Item:   |  | 7. Description:   |  | 8. Part Number:  |  |
|   |  | 1  |  | Fan Engine  |  | CFM56-3C1  |  |
|   |  |  |  |   |  | 9. Eligibility: *  |  |
|   |  |  |  |   |  | N/A  |  |
|   |  |  |  |   |  | 10. Quantity:  |  |
|   |  |  |  |   |  | 1  |  |
|   |  |  |  |   |  | 11. Serial/Batch Number:   |  |
|   |  |  |  |   |  | 727298   |  |
|   |  |  |  |   |  | 12. Status/Work:   |  |
|   |  |  |  |   |  | REPAIRED   |  |
| 13. Remarks:<br>Engine was removed due to performance deterioration and planning.<br>Engine disassembled, inspected, repaired and reassembled i.a.w. CFM56-3 ESM/CD-ESM E-the Power of Flight Rev.56 dated May 15, 2003, CZ workscope for 727298 dated Mar.16, 2004, WPG dated Jun. 2000 and all other relevant CFMI and MTU documents.<br>Engine satisfactorily tested per ESM 72-00-00 Engine Test 002 and 003. For details of this testrun, please see Summary of Performance.<br>For details of incoming inspection findings, refer to Incoming Inspection Reports. For work performed on piece parts and modules, please refer to Module Shop Visit Reports.<br>For incorporated ADs, SBs, Technical Orders, see Recorded Modification Sheet. Work performed on accessories, see the separate Accessory List.<br>Engine is time limited by HPC SHAFT P/N:1275M37P02 S/N:GWN02ECJ with 13243(@3B1) HCR.<br>See also AAC-085 No.20040033, AAC-038 No.20040038 and FAA 337 No.20040032 dated Jun.24, 2004.<br>TSN: 31061 CSN: 23166 |  |  |  |   |  |  |  |
| Customer: China Southern Airlines   |  |  |  |   |  |  |  |
| 14. Certifies the items identified above were manufactured in conformity to:<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>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/Authorization No.:  |  | 20. Authorized Signature:    |  | 21. Approval/Certificate No.: ZUUY862X   |  |
| 17. Name (Typed or Printed):  |  | 18. Date (m/d/y):  |  | 22. Name (Typed or Printed):<br>Zhang Qiang   |  | 23. Date (m/d/y):<br>6/24/2004   |  |
| <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.   |  |  |  |   |  |  |  |



## CFM56-3 Life Limited Parts List

ENGINE S/N: 727298

TSN: 31061 CSN: 23166

CUST.: CZ

W.O.: 51.005.400

| IIN | DESCRIPTION          | P/N           | S/N      | TSN   | CSN   | CYCLE LIMITS |        |        | OPERATING CYCLES |   |   | REMAINING CYCLES |        |        | REMARKS |
|-----|----------------------|---------------|----------|-------|-------|--------------|--------|--------|------------------|---|---|------------------|--------|--------|---------|
|     |                      |               |          |       |       | A            | B      | C      | A                | B | C | A                | B      | C      |         |
| 211 | BOOSTER SPOOL        | 335-009-306-0 | DC095194 | 0     | 0     | 30 000       | 30 000 | 30 000 | 0                | 0 | 0 | 30 000           | 30 000 | 30 000 |         |
| 213 | FAN DISK             | 335-014-511-0 | DC095288 | 0     | 0     | 30 000       | 24 900 | 20 100 | 0                | 0 | 0 | 30 000           | 24 900 | 20 100 | new     |
| 221 | FAN SHAFT ASSY       | 335-006-414-0 | DC549111 | 0     | 0     | 30 000       | 30 000 | 30 000 | 0                | 0 | 0 | 30 000           | 30 000 | 30 000 | new     |
| 312 | HPC SHAFT            | 1275M37P02    | GWN02HCJ | 9 461 | 6 757 | 20 000       | 20 000 | 20 000 | 6 757            | 0 | 0 |                  |        |        |         |
| 313 | HPC SPOOL STG 1 & 2  | 1589M66G02    | GWN02A6G | 9 461 | 6 757 | 20 000       | 20 000 | 20 000 | 6 757            | 0 | 0 | 13 243           | 13 243 | 13 243 | same    |
| 314 | HPC DISK STG 3       | 1590M59P01    | GWN02CTP | 9 461 | 6 757 | 20 000       | 20 000 | 20 000 | 6 757            | 0 | 0 | 13 243           | 13 243 | 13 243 | same    |
| 315 | HPC SPOOL STG 4-9    | 1590M29G01    | GWN02F83 | 9 461 | 6 757 | 20 000       | 20 000 | 15 800 | 6 757            | 0 | 0 | 13 243           | 13 243 | 13 243 | same    |
| 316 | ROTG REAR AIR SEAL   | 1319M25P02    | GFF59CP4 | 9 461 | 6 757 | 20 000       | 18 000 | 15 000 | 6 757            | 0 | 0 | 13 243           | 13 243 | 10 462 | same    |
| 521 | HPT FRONT SHAFT      | 1385M90P04    | XAE35453 | 9 461 | 6 757 | 20 000       | 17 300 | 17 000 | 6 757            | 0 | 0 | 13 243           | 11 455 | 11 257 | same    |
| 522 | HPT FRONT AIR SEAL   | 1282M72P05    | GWN01ELY | 9 461 | 6 757 | 20 000       | 15 800 | 15 100 | 6 757            | 0 | 0 | 13 243           | 10 462 | 9 998  | same    |
| 525 | HPT DISK             | 1475M29P02    | GWN029DK | 9 461 | 6 757 | 20 000       | 18 500 | 16 600 | 6 757            | 0 | 0 | 13 243           | 12 250 | 10 992 | same    |
| 526 | HPT REAR SHAFT       | 1864M91P02    | TMTTH570 | 0     | 0     | 20 000       | 20 000 | 20 000 | 0                | 0 | 0 | 20 000           | 20 000 | 20 000 | new     |
| 542 | LPT DISK STG 1       | 301-331-126-0 | BC226433 | 0     | 0     | 25 000       | 25 000 | 25 000 | 0                | 0 | 0 | 25 000           | 25 000 | 25 000 | new     |
| 543 | LPT DISK STG 2       | 301-331-227-0 | BB647637 | 0     | 0     | 25 000       | 25 000 | 25 000 | 0                | 0 | 0 | 25 000           | 25 000 | 25 000 | new     |
| 544 | LPT DISK STG 3       | 301-331-322-0 | BB664238 | 0     | 0     | 25 000       | 25 000 | 25 000 | 0                | 0 | 0 | 25 000           | 25 000 | 25 000 | new     |
| 545 | LPT DISK STG 4       | 301-331-429-0 | BC232981 | 0     | 0     | 25 000       | 25 000 | 25 000 | 0                | 0 | 0 | 25 000           | 25 000 | 25 000 | new     |
| 546 | LPT ROTOR SUPP STG 3 | 305-056-116-0 | BB528693 | 0     | 0     | 25 000       | 25 000 | 25 000 | 0                | 0 | 0 | 25 000           | 25 000 | 25 000 | new     |
| 551 | LPT SHAFT            | 301-330-067-0 | LA117473 | 0     | 0     | 30 000       | 30 000 | 30 000 | 0                | 0 | 0 | 30 000           | 30 000 | 30 000 | new     |
| 552 | LPT STUB SHAFT       | 301-330-626-0 | DC340652 | 0     | 0     | 25 000       | 25 000 | 25 000 | 0                | 0 | 0 | 25 000           | 25 000 | 25 000 | new     |

REMARKS: This issue changed HPC SHAFT S/N law customer's information. This LLP list replaces LLP list dated Jun.24, 2004.

Prepare By: Luo Zhiming

Check By: Zhang Qiang

DATE: Feb. 18, 2005



### NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

#### 8. Description of Work Accomplished

*(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)*

Engine disassembled, inspected, repaired and reassembled i.a.w. CFM56-3 ESM/CD-ESM E-the Power of Flight Rev.56 (May 15, 2003), CZ workscope for 727298 (Mar.16, 2004), WPG ( Jun. 2000) and all other relevant CFMI and MTU documents.

After assembly the engine was satisfactorily tested per ESM 72-00-00 Test 002 and 003.

For details see Summary of Performance .

TSN: 31061 CSN: 23166

Engine is time limited by HPC SHAFT P/N:1275M37P02 S/N:GWN02ECJ with 13243(@3B1) HCR.

SB 72-0494A : PE, SB 72-0854 : NA, SB 73-0134 : PF, SB 72-0879 : NA, SB 72-0648 : PE,

SB 72-0889 : PE, SB 72-0543A : PE, SB 73-0135 : PE .

For all ADs, SBs and TO's incorporated see Recorded Modification Sheet.

Work levels performed, please see Engine Shop Visit Report, page 1.

All details are filed under MTU SZ W.O. 51.005.400 .

Engine delivered with Open Item List and Accessory List .

See also AAC-038 No.20040038, AAC-085 No.20040033 and FAA 8130-3 No.20040041 dated Jun.24, 2004.

Additional Sheets Are Attached



## MAJOR REPAIR AND ALTERATION

(Airframe, Powerplant, Propeller, or Appliance)

Form Approved  
OMB No. 2120-0020

**For FAA Use Only**  
Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

|                    |   |  |
|--------------------|---|--|
| <b>1. Aircraft</b> | Make  | Model  |
|                    | Serial No.                                  | Nationality and Registration Mark              |
| <b>2. Owner</b>    | Name (As shown on registration certificate) | Address (As shown on registration certificate) |

**3. For FAA Use Only**

**4. Unit Identification**

**5. Type**

| Unit       | Make                                       | Model     | Serial No. | Repair | Alteration |
|------------|--|-----------|------------|--------|------------|
| AIRFRAME   | ----- (As described in Item 1 above) ----- |           |            |        |            |
| POWERPLANT | CFMI                                       | CFM56-3C1 | 727298     | X      |            |
| PROPELLER  |  |           |            |        |            |
| APPLIANCE  | Type                                       |           |            |        |            |
|            | Manufacturer                               |           |            |        |            |

**6. Conformity Statement**

|  |   |  |
|--|---|--|
| <b>A. Agency's Name and Address</b>  | <b>B. Kind of Agency</b>  | <b>C. Certificate No.</b>  |
| MTU Maintenance Zhuhai Co. Ltd.<br>1 Tianke Road, Free Trade Zone<br>519030, Zhuhai, P.R.China | <input type="checkbox"/> U.S. Certificated Mechanic             | ZUUY862X<br>Limited Powerplant<br>Limited Specialized<br>Service |
|  | <input type="checkbox"/> Foreign Certificated Mechanic          |  |
|  | <input checked="" type="checkbox"/> Certificated Repair Station |  |
|  | <input type="checkbox"/> Manufacturer                           |  |

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

|                     |   |
|---------------------|---|
| Date<br>24 Jun 2004 | Signature of Authorized Individual<br>Zhang Qiang |
|---------------------|---|

**7. Approval for Return to Service**

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is  APPROVED  REJECTED

|    |                              |   |                |   |                 |
|----|------------------------------|---|----------------|---|-----------------|
| BY | FAA Fit. Standards Inspector |   | Manufacturer   | Inspection Authorization                                | Other (Specify) |
|    | FAA Designee                 | X | Repair Station | Person Approved by Transport Canada Airworthiness Group |                 |

|  |  |   |
|--|--|---|
| Date of Approval or Rejection<br>24 Jun 2004 | Certificate or Designation No.<br>ZUUY862X | Signature of Authorized Individual<br>Zhang Qiang |
|--|--|---|


PART NAME Disk Assy Fan Stg 1  
 PART NUMBER 335-014-511-0  
 SERIAL NUMBER DC095288-1  
 P. O. No. \_\_\_\_\_ W. O. No. 800654  
 ENGINE SERIAL NUMBER 727298  
 COMMENTS Qty 1  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 COMPLETED BY F/D  
 DATE 11-29-12

**F. J. Turbine Power, Inc.**

FAA Approved Repair Station F7JR192Y  
 8195 W. 20th Avenue • Hialeah, Florida 33014

Form Q 007 5/11/99

Component Label  
 WO# 800654  
 Task# CFM-72-21-00  
 Desc: DISK ASSY-FAN RTR STG 1  
 P/N : 335-014-511-0  
 Ctl#: MY0M708A S/N:DC095288-1  
 Qty : 1  
 Date: 11/29/2012  
 FJ TURBINE POWI  
 FAA 7JR192Y



Original

# PART OR MATERIAL CERTIFICATION FORM

ATA SPECIFICATION 106

2. Seller's Name:

**Jet International Co., LLC.**

3. Reference #

**69043**

4. Organization:

Jet International Co., LLC.

Phone#: +1-847-657-8666

Address:

1811 Elmdale Avenue  
Glenview, IL 60026  
United States of America  
Ph: +1-847-657-8666, Fax: +1-847-657-9197  
sales@jetinternational.com

Fax#: +1-847-657-9197

SITA/Wire Code:

Status:

5A. Seller's Contract #: 201805214

5B. Buyer's PO #: P201800137 Buyer: LAM - LINHAS AEREAS DE

| 6. Item   | 7. Description                           | 8. Manufacturer & Part Number | 9. App Code | 10. Qty | 11. Serial/Batch # | 12. Status |
|---|--|-------------------------------|-------------|---------|--------------------|------------|
| 3   | DISK<br><br>ESN: 727298<br>Form: A038894 | 335-014-511-0                 | CFM56-3     | 1       | SN: DC095288       | OH         |
| <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><b>Time Life Info:</b><br/>TSN: 17061 CSN: 10200</p> </div> |  |                               |             |         |                    |            |

13A. Remarks: The above referenced part(s) or material was/were not obtained from any U.S. Government or military source and was/were not subject to severe stress or heat or immersed in salt water (as in a major engine failure, accident, incident, or fire), nor was the part(s) or material itself subjected to severe heat or stress (as in a warehouse fire, etc.) while in the seller's possession.

13B. Traceable To:  
**CHINA SOUTHERN AIRLINES**

13C. Last Certificated Agency:  
**GE AVIATION**

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 TO AN INDUSTRY COMMERCIAL STANDARD.

18. Used, Repaired or Overhaul Parts Verification:  
THE FOLLOWING SIGNATURE ATTESTS THAT THE DOCUMENTATION SPECIFIED ABOVE OR ATTACHED IS ACCURATE WITH REGARD TO THE ITEM(S) DESCRIBED.

15. Signature

19. Signature 

16. Name 17. Date 2/8/2018

20. Name **ANDREW POKRAJAC** 21. Date 2/8/2018 

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.



**Jet International Co., LLC.**  
 1811 Elmdale Avenue  
 Glenview, IL 60026  
 United States of America  
 Ph: +1-847-657-8666, Fax: +1-847-657-9197  
 sales@jetinternational.com

**Packing Slip Original**

**Invoice #: 201805214**  
 Invoice Date: 2/8/2018  
 Time: 12:09:34 PM  
 Page: 1 of 1

**To:**  
 LAM - LINHAS AEREAS DE MOZAMBIQUE  
 DASG - DIRECCAO DE APROVISIONAMENTO  
 E SERVICOS GERAIS  
 GABINETE ADUANEIRO  
 MAPUTO INTERNATIONAL AIRPORT  
 MOZAMBIQUE  
 Ph: 258 21468761 E. 344 Fax: 258 21465801

**Ship To:**  
 ETHIOPIAN AIRLINES  
 Materials Management Division  
 Bole Int'l Airport  
 PH 251 115178247  
 ADDIS ABABA  
 ETHIOPIA

Sales Order: 69043      Terms: NET 30      Ship Via: DHL PRIORITY      Ship Via Acc: 953845345  
 Order Date: 2/1/2018      # of Items: 2      # of Boxes: 2      Weight: 270  
 Print Date: 2/8/2018      Buyer: ULISSES DE A      Ship Log #: 1      Ship Order:  
 Customer #: 24582      VAT #:      Cust VAT #:      Ship Date: 2/8/2018  
    FOB: EXW      AWB: 1705125936      Shipment:

**Cust. PO#: P201800137**

| Item | Part Number/Description  | Shipped | BackOrd | CD | Unit Price | UOM | Total Amt |
|------|--|---------|---------|----|------------|-----|-----------|
| 3    | 335-014-511-0 DISK<br>Form Tracking #: A038894<br>Serial #: DC095288<br>Loc/Whse: INSPECTT | 1       | 0       | OH |            | EA  |           |
| 4    | 335-014-511-0 DISK<br>Form Tracking #: 16032<br>Serial #: BC664768<br>Loc/Whse: INSPECTT   | 1       | 0       | SV |            | EA  |           |

IT IS YOUR RESPONSIBILITY TO OBTAIN A VALID EXPORT LICENSE FOR THIS MATERIAL FROM THE DEPARTMENT OF STATE OR THE DEPARTMENT OF COMMERCE IF SO REQUIRED UNDER THE APPLICABLE U.S. GOVERNMENT EXPORT CONTROL REGULATION. THE ABOVE MATERIAL IS NOT TO BE SHIPPED TO ANY COUNTRY THAT HAS AN EMBARGO PLACED ON IT BY THE U.S. GOVERNMENT. WARRANTY POLICY: THE WARRANTY ON THIS PRODUCT IS LIMITED TO THE WARRANTY, IF ANY, THAT IS OFFERED BY THE REPAIR SHOP THAT LAST SERVICED THE PRODUCT. JET INTERNATIONAL, AND THE SELLER JOINTLY REFERRED TO AS THE "SELLER," MAKE NO REPRESENTATION OR WARRANTIES CONCERNING THE MATERIALS SOLD HEREUNDER, EXCEPT AS PROVIDED HEREIN. THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, AND BUYER AGREES THAT SUCH MATERIALS ARE PURCHASED "AS IS, WHERE IS". THIS TRANSACTION IS SUBJECT TO THE TERMS AND CONDITIONS STATED ON FORM JIC-001.

WIRE PAYMENTS (ADD A USD \$25 WIRE FEE FOR INTL WIRES) TO:  
 MB FINANCIAL BANK, 800 W MADISON ST, CHICAGO, IL 60607, USA  
 ABA (ROUTING) NUMBER: 071001737  
 SWIFT CODE: MBFIUS44  
 ACCOUNT NUMBER: 1149923  
 CONTACT: MR. KIP READ TEL: 847-418-3209 EMAIL: kread@mbfinancial.com

\*\*\* PLEASE VERIFY YOUR ELECTRONIC PAYMENTS AGREE WITH THE INSTRUCTIONS ABOVE. PLEASE SEND PAYMENTS BY MAIL TO OUR PHYSICAL ADDRESS:

JET INTERNATIONAL COMPANY, L.L.C., ATTN: ACCOUNTS RECEIVABLE, 1811 ELMDALE AVENUE, GLENVIEW, ILLINOIS, 60026-1355, USA

INDEMNIFICATION AFTER RECEIPT OF THE MATERIAL: BUYER WILL ASSUME ALL LIABILITY OF ANY NATURE ARISING OUT OF THE USE, POSSESSION, OR RESALE OF SAID MATERIALS, AND AGREES TO INDEMNIFY, PROTECT, DEFEND AND HOLD HARMLESS SELLERS, THEIR OFFICERS, AND EMPLOYEES WITH RESPECT TO ANY CLAIM, SUIT, ACTION OR JUDGEMENT OF ANY KIND ARISING OUT OF SUCH USE, POSSESSION OR RESALE. THE SUBJECT MATERIAL IS BEING SHIPPED ON CONSIGNMENT BASIS ONLY. TITLE SHALL NOT PASS TO THE BUYER UNTIL CASH PAYMENT IS RECEIVED.

RETURNS: NO MATERIAL IS TO BE RETURNED WITHOUT PRIOR WRITTEN CONSENT AND IN ACCORDANCE WITH INSTRUCTIONS FURNISHED BY JET INTERNATIONAL. ALL CLAIMS FOR SHORTAGES, ERRORS IN ORDER OR DEFECTIVE MATERIAL MUST BE MADE IN WRITING WITHIN 10 DAYS AFTER RECEIPT OF GOODS. ITEMS IN REPAIRABLE CONDITION ARE

Special Instructions:





**Altus Global Aviation LLC**  
 111 Erick Street, Suite 127  
 Crystal Lake, IL 60014  
 USA  
 Ph: 1 (815) 356-0485, Fax: 1 (815) 356-0835  
 liz@altus.aero

**Packing Slip**

**Invoice #: I859**  
 Invoice Date: 2/6/2018  
 Time: 6:18:40 PM  
 Page: 1

**To:**  
 Jet International Company, L.L.C  
 1811 Elmdale Avenue  
 Glenview, IL 60026-1355

**Ship To:**  
 Jet International Company, L.L.C  
 1811 Elmdale Avenue  
 Glenview, IL 60026-1355

|                              |                            |                             |                             |
|------------------------------|----------------------------|-----------------------------|-----------------------------|
| <b>Cust. PO#:</b> 2018090153 | <b>Terms:</b> NET 30       | <b>Ship Via:</b> UPS GROUND | <b>Ship Via Acc:</b> 654298 |
| <b>Order Date:</b> 2/5/2018  | <b># of Items:</b> 1       | <b># of Boxes:</b>          | <b>Weight:</b>              |
| <b>Prepared By:</b>          | <b>Sales Order:</b> S10766 | <b>Ship Log #:</b> 1        | <b>Ship Order:</b>          |
| <b>Customer #:</b> 9         | <b>VAT #:</b>              | <b>Cust VAT #:</b>          | <b>Ship Date:</b> 2/6/2018  |
| <b>Buyer:</b> Paul Bottum    | <b>FOB:</b>                | <b>AWB:</b>                 | <b>Shipment:</b>            |
| <b>WO #:</b>                 |                            |                             |                             |

| Item | Part Number/Description   | Shipped | BackOrd | CD | Unit Price | UOM | Total Amt |
|------|---|---------|---------|----|------------|-----|-----------|
| 1    | <b>335-014-511-0 Disk, Fan</b><br>Serial #: DC095288<br>Loc/Whse: CL<br>part traced to ESN 727298<br>CR = 19,800 at Cat. A, 16,434 at Cat. B, 13,266 at Cat. C<br>tag GE Aviation 4/11/2013 tri-release | 1       | 0       | OH |            | EA  |           |

1) Altus Global Aviation LLC will accept returns of parts (including material) sold hereunder if they are received by Altus within 30 days of the invoice date in the condition originally shipped to Customer, unused and with all records, provided Customer has first received and RMA number and marked the number on the return shipment. Returns are subject to a restocking charge of 25% of the invoice price. Parts purchased in "guaranteed repairable" condition are subject to the same return procedures except that the time period is 45 days and no restocking charge is applicable.

2) Customer bears risk in loss in shipping and Customer must make claims against the carrier for shortages or damage to the shipment. Parts are sold with whatever assignable warranties that exist on the part from the manufacturer and repair facility. ALTUS DISCLAIMS ALL OTHER WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. NEITHER PARTY IS RESPONSIBLE TO THE OTHER FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES.

3) This agreement shall be governed by the laws of Illinois.

4) Terms of payment to Altus are cash at the time stated on an invoice to Customer. On sums remaining unpaid after the due date, Customer shall pay Altus a one time late fee of 5% and the sum shall bear interest at 18% until unpaid. Time is of the essence in the performance of this agreement.

5) By accepting the parts, I have read and accept all of the terms and conditions outlined above and agree that they are applicable to this transaction without oral or written amendment and they supersede all terms and conditions in prior negotiations, Customer's purchase order or the equivalent, or in any other documents.

International Wiring Instructions  
 Bank: US Bank  
 Swift Code: USBKUS44IMT  
 Address: 350 Commonwealth Drive, Crystal Lake, IL 60014  
 ABA Routing Number: 071904779  
 Account Number: 157616173751

*Elizabeth Franz*

**Authorized Signature:** Elizabeth Franz

1)

**PART OR MATERIAL CERTIFICATION FORM**

ATA

Specification 106

• 2) Seller's Name: Altus Global Aviation LLC

3) Reference: A038894

4) Organisation: Altus Global Aviation LLC

Tel No. (815) 356-0485

Address: 111 Erick Street, Suite 127  
Crystal Lake, IL 60014  
USA

Fax No. (815) 356-0835

SITA/Wire Code:

Status:

5a) Seller's Contract: 1859

5b) Buyers Contract: 2018090153

| 6) Item | 7) Description | 8a) Manufacturer | 8b) Mfg Part No. | 9) Eligibility | 10) Qty | 11) Serial Batch | 12) Status |
|---------|----------------|------------------|------------------|----------------|---------|------------------|------------|
| 1       | Fan Disk       | CFMI             | 335-014-511-0    | CFM56-3        | 1       | DC095288         | OH         |

13a) Remark

\*\* NOTE: The Seller/Provider understands and acknowledges that in entering into the purchase order and in undertaking the work set forth therein, Altus materially relies on the foregoing information and certifications and itself makes no representation regarding the history, pedigree or integrity of the parts or material described above. Failure to provide accurate information or certification shall void any applicable Altus warranty.

13b) Obtained from : Third Star Aviation LLC, PO# P100455, Aerolineas Argentinas ESN 727298

13c) Last Certified Agency : GE Aviation, April 11, 2013

14) New Parts/Material Verification

The Seller/Provider certifies that the material supplied against the above purchase order was manufactured by a FAA Production Approval Holder and not by a PMA source, or, where applicable, to an industry or commercial standard.

18) Used Repaired or Overhauled Parts Verification

The Seller/Provider certifies that the material supplied against the above purchase order: 1) was not obtained from any U.S. or foreign Government or military sources; 2) has not been subject to extreme heat or other form of extreme stress, e.g., engine failure, fire, accident; 3) are not PMA parts; and 4) to its knowledge, has not been immersed in salt water or otherwise exposed to corrosive agents outside normal operation.

15) Signature

19) Signature



16) Name

17) Date

20) Name: Susan Soden

21) Date: February 7, 2018

# Material Certificate of Conformance

1. Third Star Aviation, LLC

2. Reference MAY 11, 2017

3. 13839 SW 139 Court  
Miami FL, 33186

4. Phone #: (305) 255-3828  
Email: tonyk@thirdstaraviation.com  
SITA/Wire Code:  
Status: AS REMOVED

5A. Buyers Purchase order # P100455

5B. Seller's Contract #: 10344

| 6. Item | 7. Description | 8. Manufacturer & Part # | 9. Eligibility | 10. Qty | 11. Serial/Batch # | 12. Status |
|---------|----------------|--------------------------|----------------|---------|--------------------|------------|
| 1       | CFM56-3C1      | CFM56-3C1                | TBD            | 1       | 727298             | As Removed |

13A. Remarks:

The Seller/Provider certifies that the material supplied against the above purchase order: 1) was not obtained from any Government or military sources; 2) has not been subject to extreme heat or other form of extreme stress, e.g., engine failure, fire, accident; 3) is/is not PMA parts; and 4) to its knowledge, has not been immersed in salt water or otherwise exposed to corrosive agents outside normal operation

13B. Traceable to: AEROLINEAS ARGENTINA  
AIRLINES ESN: 727298  
129 Operator - FOERIGN - Air carrier

13C. Last Certificated Agency:  
N/A

~~14. New Parts/Material Certification:~~

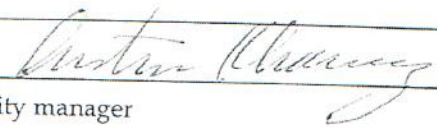
~~The Seller/Provider certifies that the material supplied against the above purchase order was manufactured by a FAA Production Approval Holder and not by a PMA source, or, where applicable, to an industry or commercial standard.~~

18. Used, Repaired or Overhauled Parts Certification:

The following signature attests that the documentation Specified above or attached is accurate with regard to the item(s) described.

15. Signature

19. Signature



16. Title

20. Title: Quality manager

17. Name

18. Date

21. Name Anton Khoury

22. Date: 05/11/17

THIRD STAR AVIATION LLC  
13839 SW 139 Court  
Miami Fl 33186

May 10, 2017

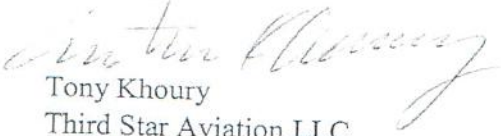
Liz Franz  
Altus Global Aviation LLC  
111 Erick Street, Suite # 127  
Crystal Lake, IL 60014

To: Altus Global Aviation LLC

This letter certifies that the following engine serial numbers were not operated by Third Star Aviation LLC while in their possession. Furthermore, all the engine parts from the engines listed below were stored in a secured location.

1. ESN 727298
2. ESN 727297
3. ESN 856254
4. ESN 723159
5. ESN 725556
6. ESN 722150
7. ESN 726491
8. ESN 725122
9. ESN 727110
10. ESN 727132
11. ESN 725366

Sincerely,

  
Tony Khoury  
Third Star Aviation LLC

Third Star Aviation, LLC

INVOICE# 10344

13839 S.W. 139 Court  
 MIAMI, FLORIDA 33186  
 Phone: 305 255-3828  
 Fax: 305-255-3848  
 E-mail: tonyk@thirdstaraviation.com

PACKING SLIP #10344  
 DATE: MAY 11, 2017

Bill To:  
 ALTUS GLOBAL AVIATION LLC  
 111 Erick Street, Suite 127  
 Crystal Lake, IL 60014  
 TAX ID 20-1597571  
 815 356 0485 FAX 815 356 0835

Ship To:  
 ALTUS GLOBAL AVIATION LLC  
 111 Erick Street, Suite 127  
 Crystal Lake, IL 60014  
 TAX ID 20-1597571  
 815 356 0485 FAX 815 356 0835

| SALESPERSON | SALES ORDER # | PPURCHASE ORDER # | SHIPPED VIA | F.O.B. Point | TERMS   |
|-------------|---------------|-------------------|-------------|--------------|---------|
| TONY        |               | P100455           | Delivered   | Miami        | COD W/T |

| QTY   | P/N     | DESCRIPTION | S/N       | COND | Unit price          | TOTAL |
|---|---------|-------------|-----------|------|---------------------|-------|
| 11  | CFM56-3 | CFM56-3     | See Below | AR   |                     |       |
|   |         |             |           |      |                     |       |
|   |         |             |           |      |                     |       |
|   |         |             |           |      |                     |       |
| CFM56-3B1 ESN 723159 and 722150 and 726491            |         |             |           |      | SUBTOTAL            |       |
| CFM56-3B2 ESN 725556 and 727110 and 727132 and 725366 |         |             |           |      | SALES TAX           |       |
| CFM56-3C1 ESN 727298 and 727297 and 856254 and 725122 |         |             |           |      | SHIPPING & HANDLING |       |
|   |         |             |           |      | OTHER               |       |
|   |         |             |           |      | TOTAL               |       |

Thank you for your business

LEGAJO DE MOTOR EN TALLER

Shop Engine Record

CFM56-3

ENGINE MODEL: CFM56-3C1

ENGINE SERIAL N° 727298

AIRCRAFT: N/A

ENGINE POSITION: SHOP

THRUST RATING

Cat. (A) = 20,000 Pounds  
Cat. (B) = 22,000 Pounds  
Cat. (C) = 23,500 Pounds

|        |            |
|--------|------------|
| Hours  | TSN: 48122 |
| Cycles | CSN: 33366 |

INFORME SITUACION DE PARTES CON VIDA LIMITADA DEL MOTOR  
ENGINE LIFE LIMITED PARTS STATUS REPORT

| Module | I.I.N.          | Stage                            | Part Number   | Serial Number | TOTAL |       | CYCLES OPERATED |          |          | CYCLES LIMIT |          |             | CYCLES REMAINING |          |          |      |
|--------|-----------------|----------------------------------|---------------|---------------|-------|-------|-----------------|----------|----------|--------------|----------|-------------|------------------|----------|----------|------|
|        |                 |                                  |               |               | Hrs   | Cls   | Cat. (A)        | Cat. (B) | Cat. (C) | Cat. (A)     | Cat. (B) | Cat. (C)    | Cat. (A)         | Cat. (B) | Cat. (C) |      |
| LPC    | 21X             | FAN & BOOSTER MODULE             | 335-041-108-0 | 21X27298      |       |       |                 |          |          |              |          |             |                  |          |          |      |
|        | 211             | BOOSTER SPOOL ASSY               | 335-009-306-0 | DC095194      | 17061 | 10200 | 10200           | 0        | 0        | 30000        | 30000    | 30000       | 19800            | 19800    | 19800    |      |
|        | 213             | FAN DISK                         | 335-014-511-0 | DC095288      | 17061 | 10200 | 10200           | 0        | 0        | 30000        | 24900    | 20100       | 19800            | 16434    | 13266    |      |
|        | 22X             | N°1 & N°2 BEARING SUPPDRT MDDULE | 335-041-201-0 | 22X27298      |       |       |                 |          |          |              |          |             |                  |          |          |      |
|        | 221             | FAN SHAFT                        | 335-006-414-0 | DC549111      | 17061 | 10200 | 10200           | 0        | 0        | 30000        | 30000    | 30000       | 19800            | 19800    | 19800    |      |
| HPC    | 31X             | HPC ROTOR MODULE                 | 9995M23G11    | 31X27298      |       |       |                 |          |          |              |          |             |                  |          |          |      |
|        | 312             | FORWARD SHAFT                    | 1275M37P02    | GWN02HCJ      | 26523 | 16957 | 16957           | 0        | 0        | 20000        | 20000    | 20000       | 3043             | 3043     | 3043     |      |
|        | 313             | STAGE1-2 SPDOL                   | 1589M06G02    | GWN02A8G      | 26523 | 16957 | 16957           | 0        | 0        | 20000        | 20000    | 20000       | 3043             | 3043     | 3043     |      |
|        | 314             | STAGE 3 DISK                     | 1590M59P01    | GWN02CTP      | 26523 | 16957 | 16957           | 0        | 0        | 20000        | 20000    | 20000       | 3043             | 3043     | 3043     |      |
|        | 315             | STAGE 4-8 SPDOL                  | 1590M29G01    | GWN02F63      | 26523 | 16957 | 16957           | 0        | 0        | 20000        | 20000    | 20000       | 3043             | 3043     | 3043     |      |
|        | 316             | REAR ROTATING AIR SEAL           | 1319M25P02    | GFF59CPA      | 26523 | 16957 | 16957           | 0        | 0        | 20000        | 20000    | 15800       | 3043             | 3043     | 2404     |      |
| HPT    | 52X             | HPT ROTOR MODULE                 | 9995M22G06    | 52X27298      |       |       |                 |          |          |              |          |             |                  |          |          |      |
|        | 521             | FRONT SHAFT                      | 1365M90P04    | XAE35453      | 26523 | 16957 | 16957           | 0        | 0        | 20000        | 17300    | 17000       | 3043             | 2632     | 2587     |      |
|        | 522             | FRONT ROTATING AIR SEAL          | 1282M72P05    | GWN01ELY      | 26523 | 16957 | 16957           | 0        | 0        | 20000        | 15900    | 15100       | 3043             | 2404     | 2297     |      |
|        | 525             | HPT ROTOR DISK                   | 1475M29P02    | GWN0290K      | 26523 | 16957 | 16957           | 0        | 0        | 20000        | 18500    | 16600       | 3043             | 2815     | 2526     |      |
|        | 526             | REAR SHAFT                       | 1864M91P02    | TMTT570       | 17061 | 10200 | 10200           | 0        | 0        | 20000        | 20000    | 20000       | 9600             | 9600     | 9600     |      |
| LPT    | 54X             | LPT ROTOR MODULE                 | 301-412-003-0 | 54X27298      |       |       |                 |          |          |              |          |             |                  |          |          |      |
|        | 542             | STAGE 1 DISK                     | 301-331-128-0 | BC226433      | 17061 | 10200 | 10200           | 0        | 0        | 25000        | 25000    | 25000       | 14800            | 14800    | 14800    |      |
|        | 543             | STAGE 2 DISK                     | 301-331-227-0 | BB647637      | 17061 | 10200 | 10200           | 0        | 0        | 25000        | 25000    | 25000       | 14800            | 14800    | 14800    |      |
|        | 544             | STAGE 3 DISK                     | 301-331-322-0 | BB664236      | 17061 | 10200 | 10200           | 0        | 0        | 25000        | 25000    | 25000       | 14800            | 14800    | 14800    |      |
|        | 545             | STAGE 4 DISK                     | 301-331-429-0 | BC232881      | 17061 | 10200 | 10200           | 0        | 0        | 25000        | 25000    | 25000       | 14800            | 14800    | 14800    |      |
|        | 546             | CONICAL SUPPORT                  | 305-050-118-0 | BB528693      | 17061 | 10200 | 10200           | 0        | 0        | 25000        | 25000    | 25000       | 14800            | 14800    | 14800    |      |
|        | 55X             | LPT SHAFT MODULE                 | 301-316-159-0 | 55X27298      |       |       |                 |          |          |              |          |             |                  |          |          |      |
|        | 551             | LPT SHAFT                        | 301-330-067-0 | LA117473      | 17061 | 10200 | 10200           | 0        | 0        | 30000        | 30000    | 30000       | 19800            | 19800    | 19800    |      |
|        | 552             | LPT STUB SHAFT                   | 301-330-026-0 | DC340652      | 17061 | 10200 | 10200           | 0        | 0        | 25000        | 25000    | 25000       | 14800            | 14800    | 14800    |      |
|        | Engine limiters |                                  |               |               |       |       |                 |          |          |              |          | FIRST LIMIT |                  |          | 3043     | 2404 |

Villalba Walter D.  
Planning and Control  
Power Plant Unit

PREPARED BY

REMARKS: The thrust rating in Aerolíneas Argentinas of this engine is 20,000 pounds, operate in Cat. "A".

  
GABRIEL MESTRES  
Jefe Programación y Control  
APPROVED BY

LEGAJO DE MOTOR EN TALLER

Shop Engine Record

CFM56-3

ENGINE MODEL: CFM56-3C1

ENGINE SERIAL N° 727298

THRUST RAITING

Cat. (A) = 20,000 Pounds  
Cat. (B) = 22,000 Pounds  
Cat. (C) = 23,500 Pounds

AIRCRAFT: LV-BEO

ENGINE POSITION: 1

|        |             |
|--------|-------------|
| Hours  | TSN : 36021 |
| Cycles | CSN : 27094 |

INFORME SITUACION DE PARTES CON VIDA LIMITADA DEL MOTOR / ENGINE LIFE LIMITED PARTS STATUS REPORT

| Module | I.I.N.          | Stage                            | Part Number   | Serial Number | TOTAL |       | CYCLES OPERATED |          |          | CYCLES LIMIT |          |          | CYCLES REMAINING |          |          |      |      |
|--------|-----------------|----------------------------------|---------------|---------------|-------|-------|-----------------|----------|----------|--------------|----------|----------|------------------|----------|----------|------|------|
|        |                 |                                  |               |               | Hs    | Cls   | Cat. (A)        | Cat. (B) | Cat. (C) | Cat. (A)     | Cat. (B) | Cat. (C) | Cat. (A)         | Cat. (B) | Cat. (C) |      |      |
| LPC    | 21X             | FAN & BOOSTER MODULE             | 335-041-108-0 | 21X27298      |       |       |                 |          |          |              |          |          |                  |          |          |      |      |
|        | 211             | BOOSTER SPOOL ASSY               | 335-009-308-0 | DC095194      | 4960  | 3928  | 3928            | 0        | 0        | 30000        | 30000    | 30000    | 26072            | 26072    | 26072    |      |      |
|        | 213             | FAN DISK                         | 335-014-511-0 | DC095288      | 4960  | 3928  | 3928            | 0        | 0        | 30000        | 24900    | 20100    | 26072            | 21640    | 17468    |      |      |
|        | 22X             | N°1 & N°2 BEARING SUPPORT MODULE | 335-041-201-0 | 22X27298      |       |       |                 |          |          |              |          |          |                  |          |          |      |      |
|        | 221             | FAN SHAFT                        | 335-006-414-0 | DC549111      | 4960  | 3928  | 3928            | 0        | 0        | 30000        | 30000    | 30000    | 26072            | 26072    | 26072    |      |      |
| HPC    | 31X             | HPC ROTOR MODULE                 | 9995M23G11    | 31X27298      |       |       |                 |          |          |              |          |          |                  |          |          |      |      |
|        | 312             | FORDWARD SHAFT                   | 1275M37P02    | GWN02HCJ      | 14422 | 10685 | 10685           | 0        | 0        | 20000        | 20000    | 20000    | 9315             | 9315     | 9315     |      |      |
|        | 313             | STAGE1-2 SPOOL                   | 1589M66G02    | GWN02A6G      | 14422 | 10685 | 10685           | 0        | 0        | 20000        | 20000    | 20000    | 9315             | 9315     | 9315     |      |      |
|        | 314             | STAGE 3 DISK                     | 1590M59P01    | GWN02CTP      | 14422 | 10685 | 10685           | 0        | 0        | 20000        | 20000    | 20000    | 9315             | 9315     | 9315     |      |      |
|        | 315             | STAGE 4-5 SPOOL                  | 1590M29G01    | GWN02F83      | 14422 | 10685 | 10685           | 0        | 0        | 20000        | 20000    | 15800    | 9315             | 9315     | 7359     |      |      |
|        | 316             | REAR ROTATING AIR SEAL           | 1319M25P02    | GFF59CP4      | 14422 | 10685 | 10685           | 0        | 0        | 20000        | 18000    | 15000    | 9315             | 8384     | 6986     |      |      |
| HPT    | 52X             | HPT ROTOR MODULE                 | 9995M22G06    | 52X27298      |       |       |                 |          |          |              |          |          |                  |          |          |      |      |
|        | 521             | FRONT SHAFT                      | 1385M90P04    | XAE35453      | 14422 | 10685 | 10685           | 0        | 0        | 20000        | 17300    | 17000    | 9315             | 8057     | 7918     |      |      |
|        | 522             | FRONT ROTATING AIR SEAL          | 1282M72P05    | GWN01ELY      | 14422 | 10685 | 10685           | 0        | 0        | 20000        | 15800    | 15100    | 9315             | 7359     | 7033     |      |      |
|        | 525             | HPT ROTOR DISK                   | 1475M29P02    | GWN029DK      | 14422 | 10685 | 10685           | 0        | 0        | 20000        | 18500    | 16800    | 9315             | 8616     | 7731     |      |      |
|        | 526             | REAR SHAFT                       | 1864M91P02    | TMTTH570      | 4960  | 3928  | 3928            | 0        | 0        | 20000        | 20000    | 20000    | 16072            | 16072    | 16072    |      |      |
| LPT    | 54X             | LPT ROTOR MODULE                 | 301-412-083-0 | 54X27298      |       |       |                 |          |          |              |          |          |                  |          |          |      |      |
|        | 542             | STAGE 1 DISK                     | 301-331-126-0 | BC226433      | 4960  | 3928  | 3928            | 0        | 0        | 25000        | 25000    | 25000    | 21072            | 21072    | 21072    |      |      |
|        | 543             | STAGE 2 DISK                     | 301-331-227-0 | BB847837      | 4960  | 3928  | 3928            | 0        | 0        | 25000        | 25000    | 25000    | 21072            | 21072    | 21072    |      |      |
|        | 544             | STAGE 3 DISK                     | 301-331-322-0 | BB864238      | 4960  | 3928  | 3928            | 0        | 0        | 25000        | 25000    | 25000    | 21072            | 21072    | 21072    |      |      |
|        | 545             | STAGE 4 DISK                     | 301-331-429-0 | BC232881      | 4960  | 3928  | 3928            | 0        | 0        | 25000        | 25000    | 25000    | 21072            | 21072    | 21072    |      |      |
|        | 546             | CONICAL SUPPORT                  | 305-056-116-0 | BB528893      | 4960  | 3928  | 3928            | 0        | 0        | 25000        | 25000    | 25000    | 21072            | 21072    | 21072    |      |      |
|        | 55X             | LPT SHAFT MODULE                 | 301-316-159-0 | 55X27298      |       |       |                 |          |          |              |          |          |                  |          |          |      |      |
|        | 551             | LPT SHAFT                        | 301-330-087-0 | LA117473      | 4960  | 3928  | 3928            | 0        | 0        | 30000        | 30000    | 30000    | 26072            | 26072    | 26072    |      |      |
|        | 552             | LPT STUB SHAFT                   | 301-330-626-0 | DC340852      | 4960  | 3928  | 3928            | 0        | 0        | 25000        | 25000    | 25000    | 21072            | 21072    | 21072    |      |      |
|        | Engine limiters |                                  |               |               |       |       |                 |          |          |              |          |          | FIRST LIMIT      |          |          | 9315 | 7359 |

Villalba Walter D.  
Planning and Control  
Power Plant Unit

PREPARED BY

REMARKS : The thrust rating in Aerolíneas Argentinas of this engine is 20,000 pounds, operate in Cat. "A".

  
GABRIEL MESTRES  
Jefe Programación y Control  
APPROVED BY

Exhibit A

BILL OF SALE

AERO CAPITAL SOLUTIONS, INC, a Texas corporation, having its principal place business at 1703 West Fifth Street, Suite 800, Austin, Texas 78703 ("Seller"), in consideration of the sum of Ten Dollars (\$10.00) and other valuable consideration in hand paid by THIRD STAR AVIATION, LLC, a Florida limited liability company, and having its principal place of business at 13839 SW 139 Court, Miami, FL 33186 ("Purchaser"), the receipt and sufficiency of which is hereby acknowledged by Seller, has granted, exchanged, sold, conveyed, transferred and delivered, and does by these presents hereby grant, exchange, sell, convey, transfer, deliver and set over unto Purchaser, the following described property, with all rights and privileges of ownership thereto (the "Engines" and "Records"):

(i) all equipment, accessories and parts belonging to, installed in or appurtenant to the two (2) used CFM International model CFM56-3C1 aircraft engines bearing the manufacturer's engine serial numbers 727297 and 727298, in "as is, where is" condition in full QEC configuration, but excluding the nose cowls, the thrust reversers and the Engine Shipping Stands; and

(ii) all Records relating to the Engines in Seller's possession that will be delivered to Purchaser by Seller at closing.

TO HAVE AND TO HOLD the same unto Purchaser, its successors and assigns forever. The undersigned covenants and agrees with Purchaser to warrant and defend the title to the Engines hereby sold to Purchaser, its successors and assigns, against the lawful claims of all persons whomsoever, and further warrants that the Engines are free from any and all liens, claims, or encumbrances whatsoever.

Except as set forth above, THE ENGINES ARE SOLD TO PURCHASER "AS-IS, WHERE-IS" AND "WITH ALL FAULTS". SELLER MAKES NO EXPRESS OR IMPLIED WARRANTY INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE, AND NO REPRESENTATION OR AFFIRMATION OF FACT IS MADE, WITH RESPECT TO THE ENGINES. IN NO EVENT SHALL SELLER BE LIABLE TO PURCHASER FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES SUSTAINED BY PURCHASER AS A RESULT OF THE SALE OF THE ENGINES TO PURCHASER.

IN WITNESS WHEREOF, this Bill of Sale has been executed on behalf of Seller by its authorized representative on October 23, 2012.

Seller:  
AERO CAPITAL SOLUTIONS, INC.

By: J. Barany  
Name: Jason Barany  
Its: President

BILL OF SALE FOR AIRCRAFT AND ENGINES

BY THIS BILL OF SALE

Wells Fargo Bank Northwest, National Association, not in its individual capacity but solely as owner trustee ("Seller") for US\$10 and other good and valuable consideration, receipt and adequacy of which is hereby acknowledged, hereby SELLS, CONVEYS, TRANSFERS AND ASSIGNS WITH FULL TITLE GUARANTEE in "AS IS WHERE IS" condition to Aero Capital Solutions, Inc. ("Buyer"), its successors and assigns, all its right, title and interest in (1) the aircraft, (2) the engines and (3) the ancillary equipment, described below, such aircraft, engines and equipment being hereinafter together described as the "Aircraft":

(1) Aircraft

| Manufacturer | Model of Aircraft | Manufacturer's Serial Number |
|--------------|-------------------|------------------------------|
| Boeing       | 737-500           | 24899                        |

(2) Engines

| Manufacturer           | Model of Engine | Engine Serial Numbers |
|------------------------|-----------------|-----------------------|
| CFM International S.A. | CFM56-3C1       | 727298 and 727297     |

(3) Ancillary equipment

The Aircraft Documents and the Parts (each as defined in the Sale Agreement).

TO HAVE AND TO HOLD the Aircraft unto the Buyer, its successors and assigns, for its and their own use forever.

The Seller hereby warrants to the Buyer and its successors and assigns that it is the lawful owner of the Aircraft; that it has the right to sell the Aircraft and that its title to the Aircraft is free and clear of all Security Interests (as defined in the Sale Agreement); and that the Seller shall forever defend such title to the Aircraft and indemnify the Buyer and its successors and assigns against the claims of any person, firm or corporation whomsoever.

This Bill of Sale is executed and delivered pursuant to the terms of an Aircraft Sale Agreement between the Seller and the Buyer dated January 6, 2012 (the "Sale Agreement").

The Aircraft is sold on an "AS IS WHERE IS" basis and without recourse or warranty being given by the Seller other than the aforesaid warranties.

This Bill of Sale shall be governed by and construed in accordance with, the laws of the State of New York.

[Signature page follows]

IN WITNESS whereof the Seller has caused this instrument to be executed and delivered for the purpose herein above shown by its duly authorised representative on October 23, 2012.

SELLER:

WELLS FARGO BANK NORTHWEST,  
NATIONAL ASSOCIATION, not in its  
individual capacity but solely as owner trustee

By: 

Name: David Wall  
Assistant Vice President

Title: \_\_\_\_\_

Delivered at 20:55 GMT on: October 23, 2012.

Location of Aircraft at delivery: Tucson, Arizona

**BILL OF SALE**

BY THIS BILL OF SALE VGS Investments One Limited (the "Seller") does hereby sell, grant and transfer to Wells Fargo Bank Northwest, National Association, not in its individual capacity but solely as trustee under that certain Trust Agreement dated January 6, 2012, with Seller, as trustor (as amended, supplemented, and modified to date) (the "Trustee"), all its rights, title and interest in and to the Aircraft specified below to the Trustee for Ten U.S. Dollars (US\$10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by Seller:

One (1) Boeing model 737-500 aircraft and its two (2) CFM56-3C1 engines with the following identification (the "Aircraft"):

| Manufacturer's Serial Number | Engine Serial Numbers |
|------------------------------|-----------------------|
| 25176                        | 727298 and 727146     |

and the Aircraft is sold "AS IS, WHERE IS" AND "WITH ALL FAULTS" and free and clear of any liens, claims, or encumbrances whatsoever.

IN WITNESS WHEREOF the Seller has caused this Bill of Sale to be duly executed at 14:47 hours Central U.S. Time on January 6, 2012 and delivered to the Trustee.

SIGNED by  
for and on behalf of  
VGS INVESTMENTS ONE LIMITED

} 

August 27<sup>th</sup>, 2012

**ENGINE PMA STATEMENT**

To:

Whom it may concern

Product:

| DESCRIPTION | MANUFACTURER P/N° | S/N    | 1 <sup>st</sup> OPERATION DATE |
|-------------|-------------------|--------|--------------------------------|
| ENGINE      | CFM56-3C1         | 727298 | JUNE 2006                      |

Dear Sr.:

I hereby certify, based on our record keeping system that, during its operation with Aerolíneas Argentinas S.A., no PMA articles were installed on the above identified engine.

This statement is true and correct to the best of my knowledge.

Yours sincerely,

  
Ing. Agr. Eduardo E. López  
Planning and Engineering Manager

August 31<sup>st</sup>, 2012

**ENGINE NON-INCIDENT CERTIFICATION**

To:

Whom it may concern.

Product:

| DESCRIPTION | MANUFACTURER P/N° | ESN    | 1 <sup>st</sup> OPERATION DATE | OPERATION STATUS AS OF TODAY |           |
|-------------|-------------------|--------|--------------------------------|------------------------------|-----------|
|             |                   |        |                                | HOURS                        | CYCLES    |
| ENGINE      | CFM56-3C1         | 727298 | June 02 <sup>nd</sup> , 2006   | 48,122:11                    | 33,366:00 |

Dear Sr.:

I hereby certify, based on our record keeping system that, during its operation with Aerolíneas Argentinas S.A., the above identified engine (as well as its parts and components) has not been subject to any military or government operation, exposed to severe stress or heat, immersed in salty water, corrosive agents or involved in any incident or accident (as defined by the Chapter 1 "Definitions" of the ICAO Annex 13 and the CFR 49 Part 830.2).

In addition, such engine does not have and has never had any PMA/NON-TCH Repaired Parts installed (no repairs outside of the OEM manuals).

This statement is true and correct to the best of my knowledge.

Yours sincerely,



Ing. Aer. LEONEL G. GIRALDEZ  
Gerente de Aseguramiento de Calidad

Agustín Elizondo  
Jefe de Unidad Ingeniería de Calidad  
Aerolíneas Argentinas S.A.



Yours sincerely,

This statement is true and correct to the best of my knowledge.

I hereby certify, based on our record-keeping system that, during its operation with Aerolíneas Argentinas S.A., the above identified engine (as well as its parts and components) has not been subject to any military or government operation, exposed to severe stress or heat, immersed in salty water, corrosive agents or involved in any incident or accident (as defined by the Chapter 1 "Definitions" of the ICAO Annex 13 and the CFR 49 Part 830.2).

Dear Sr:

| DESCRIPTION | MANUFACTURER P/N <sup>o</sup> | ESN    | 1 <sup>st</sup> OPERATION DATE | OPERATION STATUS AS OF TODAY |
|-------------|-------------------------------|--------|--------------------------------|------------------------------|
| ENGINE      | CFM56-3C1                     | 727298 | June 02 <sup>nd</sup> , 2006   | 33,366                       |
|             |                               |        |                                | HOURS                        |
|             |                               |        |                                | CYCLES                       |

Product:

Whom it may concern,

To:

**ENGINE NON-INCIDENT CERTIFICATION**

August 15<sup>th</sup>, 2012

**Aerolíneas  
Argentinas**

**CERTIFICATE OF ACCEPTANCE MSN 25176**

This Certificate of Acceptance is delivered, on the date set out below by Aerolineas Argentinas S.A. ("Lessee"), to GECAS Sverige Aircraft Leasing Worldwide AB ("Lessor"), pursuant to the Aircraft Lease Agreement dated as of February 11, 2005 between Lessor and Lessee (the "Lease"). The capitalized terms used in this Certificate shall have the meaning given to such terms in the Lease unless otherwise indicated.

**DETAILS OF ACCEPTANCE**

Lessee hereby confirms to Lessor that Lessee has at 1300 hours, local time, on this 26<sup>th</sup> day of May, 2006, at Baiyun Airport, Guangzhou China, technically accepted the following, in accordance with the provisions of the Lease:

a. B737-500 Aircraft, Manufacturer's Serial Number: MSN25176

b. Two CFM56-3C1 Engines:

| Engine Number | Engine Serial Number | Total Hours | Total Cycles |
|---------------|----------------------|-------------|--------------|
| one           | 727298               | 36020:32    | 27094        |
| two           | 727146               | 34920:13    | 26572        |

d. Fuel Status: 5,400 Kilos; and

e. LOPA, Emergency Equipment Drawing and Loose Equipment Checklist: in accordance with the list signed by Lessor and Lessee and attached hereto.

f. Damage Chart: As attached hereto.

g. Aircraft Documents and Records: in accordance with the list signed by Lessor and Lessee and attached hereto.

**2. HOURS AND CYCLES DATA (as of Delivery Date)**

a. Airframe:

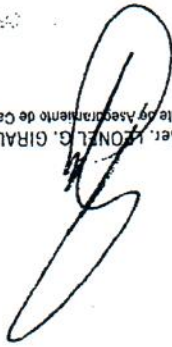
|  |               |
|--|---------------|
| Time Since New   | 38397:58      |
| Cycles Since New   | 28815         |
| C Check Interval   | 4000 hrs      |
| Time Since Last C Check                                  | 0             |
| Date of Accomplishment of Last Airframe Structural Check | 25 April 2006 |
| Number of Hours Since Last Airframe Structural Check     | 0             |
| Number of Cycles Since Last Airframe Structural Check    | 0             |

Y35  


C.F.E.

Compañía de Aviación  
 Aerolíneas Argentinas S.A.  
 Gerente de Asesoramiento de Calidad

Ing. Aer. LEONEL G. GIRALDEZ  
 Gerente de Asesoramiento de Calidad



Yours sincerely,

This statement is true and correct to the best of my knowledge.

I hereby certify that during their operation with Aerolíneas Argentinas S.A, the above identified lease engines installed into the above identified aircraft, has been maintained in accordance with approved engines / airplane on-wing maintenance documents (Boeing Maintenance Planning Document (MPD) through Aerolíneas Argentinas Doc 1D-290) and approved engines off-wing maintenance documents (such as CFMl Workscope Planning Guide (WPG) and Engine Shop Manual (ESM), through Aerolíneas Argentinas Doc 1D-289).

Dear Sr.:

| DESCRIPTION | MODEL     | S/N    | 1 <sup>st</sup> OPERATION DATE | OPERATION STATUS AS OF TODAY |           |
|-------------|-----------|--------|--------------------------------|------------------------------|-----------|
|             |           |        |                                | HOURS                        | CYCLES    |
| ENGINE      | CFM56-3C1 | 727298 | JANUARY, 2006                  | 48,122:11                    | 33,366    |
| ENGINE      | CFM56-3C1 | 727297 | JANUARY, 2006                  | 41,533:53                    | 29,997    |
| AIRCRAFT    | B-737-5YD | 24899  | JANUARY, 2006                  | 53,229:27                    | 38,354:00 |

Product:

To whom it may concern

To:

**AIRCRAFT & ENGINE MP COMPLIANCE STATEMENT**

August 31<sup>st</sup>, 2012



435

C.E.E.

CERTIFICATE OF ACCEPTANCE MSN 25176

b. Landing Gear Overhaul:

|                            |             |              |              |
|----------------------------|-------------|--------------|--------------|
| Landing Gear               | Nose        | Left         | Right        |
| Serial Number              | T3378P2168  | MC05341P2678 | MC04270P2168 |
| Cycles Since New           | 29259       | 29259        | 29259        |
| Cycles Since Last Overhaul | 10572       | 10572        | 10572        |
| Overhaul Interval (Cycles) | 22800       | 22800        | 22800        |
| Overhaul Interval (Years)  | 10 Years    | 10 Years     | 10 Years     |
| Date of Last Overhaul      | 13 May 2001 | 13 May 2001  | 17 May 2001  |

c. Engines

|  |                |
|--|----------------|
| ESN 727298                               | ESN 727146     |
| Time Since New (Hours)                   | 36020:32       |
| Cycles Since New (Cycles)                | 27094          |
| Time Since Last Refurbishment (Hours)    | 4959:20        |
| Cycles Since Last Refurbishment (Cycles) | 3928           |
| ESN 727298                               | ESN 727146     |
| Hours                                    | /              |
| Cycles                                   | 9315           |
| Restriction                              | FRONT SHAFT    |
|  | LPT STUB SHAFT |
|  | 5007           |

Time Remaining to First Restriction (CAT A Thrust Rating)

Average Cycles in Life Limited Parts - See attached Disk Sheet

d. Auxiliary Power Unit:

|  |              |
|--|--------------|
| Serial Number                            | P-100350     |
| Time Since New (Hours)                   | 22517        |
| Time Since Last Heavy Shop Visit (Hours) | 1            |
| Date of Last Heavy Shop Visit            | 15-Mar-2006  |
| HSI Interval                             | ON CONDITION |
| Time Since HSI                           | 1            |

ACCEPTANCE:


Lessee hereby confirms that the Aircraft, Engines, Parts and Aircraft Documents and Records are technically acceptable to it, satisfy all of the Delivery Condition Requirements and are in the condition for delivery and acceptance as required under the Lease, with the list of exceptions noted in Appendix A.

[remainder of page intentionally left blank]


435  


By: Yof de sof  
Name: Yof de sof  
Title: Attorney - In - fact.


WITNESSES:

By:   
Name: STEWART LATHAM  
Title: Attorney-In-Fact

LESSOR: GECAS SVERIGE AIRCRAFT LEASING WORLDWIDE AB

By:   
Name: CRISTIAN CUBA  
Title: ATTORNEY - IN - FACT

WITNESSES:

By:   
Name: CARLOS E. ESCOBAR  
Title: ATTORNEY - IN - FACT

LESSEE: AEROLINEAS ARGENTINAS S.A.

IN WITNESS WHEREOF, Lessee and Lessor have, by their duly authorized representative, executed this Certificate of Acceptance on the date in paragraph 1 above.

CERTIFICATE OF ACCEPTANCE MSN 25176

*[Handwritten signature]*

| Position   | Serial No.   | Total Flight Hours/Flight Cycles | Flight Hours/Flight Cycles since last overhaul | Flight Hours/Flight Cycles to next sched. Removal |
|------------|--------------|----------------------------------|--|---|
| Nose       | T3378P2168   | 50,909 FH<br>36,085 FC           | 15 FH<br>5 FC                                  | N/A FH<br>20,995 FC                               |
| Right Main | MC02470P2168 | 50,909 FH<br>36,085 FC           | 15 FH<br>5 FC                                  | N/A FH<br>20,995 FC                               |
| Left Main  | MC03843P1960 | 50,298 FH<br>37,554 FC           | 15 FH<br>5 FC                                  | N/A FH<br>20,995 FC                               |

(d) Landing Gears:

| MSN     | Total Flight Hours | Flight Hours/Flight Cycles remaining until next HSI inspection | Flight Hours/Flight Cycles remaining on turbine and compressor life limited parts |
|---------|--------------------|--|---|
| P100550 | 25,438             | N/A  | N/A   |

(c) APU:

| MSN           | Flight Hours | Flight Cycles |
|---------------|--------------|---------------|
| MSN: BB230495 | N/A          | 5,309         |
| MSN: GWN02HCJ | N/A          | 3,043         |

Time Remaining to next life limited part removal

| Position | Serial No. | Total Flight Hours | Flight Hours since last shop visit | Flight Hours/Flight Cycles since last Engine Performance Restoration Visit |
|----------|------------|--------------------|------------------------------------|--|
| 1        | 727297     | 41,534             | 29,997                             | 15 FH<br>41,534 F/H<br>29,997 F/C  |
| 2        | 727298     | 48,122             | 33,366                             | 5 FC<br>17,061 FH<br>10,200 FC   |

(b) Engines:

RETURN ACCEPTANCE CERTIFICATE

Date October 19, 2012

1. Lessor and Lessee are parties to (i) that certain Aircraft Lease Common Terms Agreement dated February 11, 2005 (as amended, novated, modified, supplemented and /or assigned from time to time) (the "CTA") and (ii) that certain Aircraft Lease Agreement dated February 11, 2005 (as amended, novated, modified, supplemented and/or assigned from time to time) (the "ALA"), relating to that certain Boeing 737-500 aircraft bearing manufacturer's serial number 24899 and Argentina Registration LV-BDD, together with two (2) CFM56-3C1 engines (the CTA and the Aircraft Lease Agreement collectively hereinafter referred to as the "Lease").

2. Lessor has this <sup>19<sup>th</sup></sup> day of ~~October~~ received from Lessee possession of:

(a) one (1) Boeing 737-500 Aircraft, bearing manufacturer's serial number 24899, registration mark LV-BDD together with one (2) engine bearing manufacturer's serial numbers 727297 and 727298 all Parts attached thereto and thereon; and

(b) all Aircraft Documents as listed in the Document Receipt attached hereto.

3. The Airframe, Engines and Parts had the following Flight Hours/Flight Cycles at return:

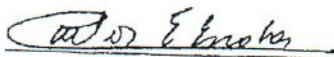
(a) Airframe:

| Total hours | Total landings | Flight Hours/<br>Flight Cycles<br>since last "C"<br>Check | Flight Hours/<br>Flight Cycles<br>since last "A"<br>Check |
|-------------|----------------|---|---|
| 53,229      | 38,354         | 2,607 F/H<br>1,846 F/C                                    | 203 F/H<br>142 F/C  |


CERTIFICATE OF ACCEPTANCE MSN 25176

IN WITNESS WHEREOF, Lessee and Lessor have, by their duly authorized representative, executed this Certificate of Acceptance on the date in paragraph 1 above.


LESSEE: AEROLINEAS ARGENTINAS S.A.

By:   
Name: CARLOS E. ESCOBAR  
Title: ATTORNEY-IN-FACT

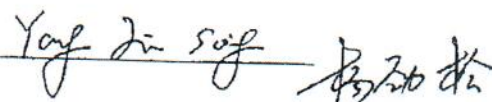
WITNESSES:

By:   
Name: CRISTIAN CUBA  
Title: ATTORNEY-IN-FACT

LESSOR: GECAS SVERIGE AIRCRAFT LEASING WORLDWIDE AB

By:   
Name: STEWART LANHAM  
Title: Attorney-In-Fact

WITNESSES:

By:   
Name: Yang Jun Song  
Title: Attorney-in-fact.

C.E.E

  
435



## CHINA SOUTHERN AIR

Sep 20<sup>th</sup> 2012

To whom it may concern:

CFM56-3C1 ESN 727298

This letter confirms that to the best of our knowledge, during the period of operation (November 91 to April 2006) by China Southern Air, the above engine was not involved in any accident or major incident, was not immersed in salt water, was not exposed to any corrosive agents outside of normal operations, and was not obtained from or operated by any governmental or military organization.

The letter further confirms that to the best of our knowledge, the above engine has been maintained under an approved maintenance program, and that all installed components are FAA 8130-3 or EASA 1 (or equivalent) certified, and that there were no PMA parts fitted to this engine or its accessories other than those found in the manufacturer's illustrated parts catalogue.

Status at completion of operations by China Southern Air:

TSN: 36020:32 Hours, CSN: 27094 Cycles

Signature: 钟凌辉

Name: Zhong Lin Hui

Title: QA Director



## CHINA SOUTHERN AIRLINES

September 3<sup>rd</sup>, 2013

Subject: CFM56-3C1 ESN 727298

Reference: Non Incident Statement issued by China Southern Airlines dated on September 20, 2012 for the subject ESN

To Whom It May Concern,


In addition to the referenced Non Incident Statement, we hereby confirm that to the best of our knowledge, during the period of operation by China Southern Airlines, the above engine does not have and has never had any PMA/Non-TCH LLP's installed to the LLP's (no repairs outside of the OEM manuals).

Signature: 曹学园

Name (Print): \_\_\_\_\_

Title: Deputy Director  
EMC, CSN.

## CFM56-3 LIFE LIMITED PARTS STATUS

| A/C MODEL: B737-500<br>AC REG NO.: B-2547<br>A/C MSN: 25176 |                          | ENG MODEL: CFM56-3C-1<br>ENGINE S/N.: 727298<br>POSITION: LEFT |               |                          | ENG TSN: 36020:32<br>ENG CSN: 27094<br>DATE AS OF: APR 19, 2006 |         |         |                     |         |         | <br>中国南方航空公司<br>CHINA SOUTHERN AIRLINES |                  |         |         |          |
|---|--------------------------|--|---------------|--------------------------|---|---------|---------|---------------------|---------|---------|--|------------------|---------|---------|----------|
| IIN   | DESCRIPTION              | PART NUMBER  | SERIAL NUMBER | DATE INSTALLED ON ENGINE | LIFE LIMIT  |         |         | CURRENT USED CYCLES |         |         | TOTAL CYCLES   | REMAINING CYCLES |         |         | COMMENTS |
|   |                          |  |               |                          | CAT "A"   | CAT "B" | CAT "C" | CAT "A"             | CAT "B" | CAT "C" |  | CAT "A"          | CAT "B" | CAT "C" |          |
| 211   | BOOSTER SPOOL            | 335-009-306-0  | DC095194      | 2004-6-24                | 30000   | 30000   | 30000   | 3928                | 0       | 0       | 3928   | 26072            | 26072   | 26072   |          |
| 213   | FAN DISK                 | 335-014-511-0  | DC095288      | 2004-6-24                | 30000   | 24900   | 20100   | 3928                | 0       | 0       | 3928   | 26072            | 21640   | 17468   |          |
| 221   | FAN SHAFT                | 335-006-414-0  | DC549111      | 2004-6-24                | 30000   | 30000   | 30000   | 3928                | 0       | 0       | 3928   | 26072            | 26072   | 26072   |          |
| 312   | FRONT SHAFT              | 1275M37P02   | GWN02HCJ      | 2000-11-17               | 20000   | 20000   | 20000   | 10685               | 0       | 0       | 10685  | 9315             | 9315    | 9315    |          |
| 313   | STAGE 1-2 SPOOL          | 1589M66G02   | GWN02A6G      | 2000-11-17               | 20000   | 20000   | 20000   | 10685               | 0       | 0       | 10685  | 9315             | 9315    | 9315    |          |
| 314   | STAGE 3 DISK             | 1590M59P01   | GWN02CTP      | 2000-11-17               | 20000   | 20000   | 20000   | 10685               | 0       | 0       | 10685  | 9315             | 9315    | 9315    |          |
| 315   | STAGE 4-9 SPOOL          | 1590M29G01   | GWN02F83      | 2000-11-17               | 20000   | 20000   | 15800   | 10685               | 0       | 0       | 10685  | 9315             | 9315    | 9315    |          |
| 316   | COMPRESSOR REAR AIR SEAL | 1319M25P02   | GFF59CP4      | 2000-11-17               | 20000   | 18000   | 15000   | 10685               | 0       | 0       | 10685  | 9315             | 9315    | 7359    |          |
| 521   | FRONT SHAFT              | 1385M90P04   | XAE35453      | 2000-11-17               | 20000   | 17300   | 17000   | 10685               | 0       | 0       | 10685  | 9315             | 8384    | 6986    |          |
| 522   | FRONT AIR SEAL           | 1282M72P05   | GWN01ELY      | 2000-11-17               | 20000   | 15800   | 15100   | 10685               | 0       | 0       | 10685  | 9315             | 7359    | 7033    |          |
| 525   | DISK HPT-ROTOR           | 1475M29P02   | GWN029DK      | 2000-11-17               | 20000   | 18500   | 16600   | 10685               | 0       | 0       | 10685  | 9315             | 8816    | 7731    |          |
| 526   | REAR SHAFT               | 1864M91P02   | TMTTH570      | 2004-6-24                | 20000   | 20000   | 20000   | 3928                | 0       | 0       | 3928   | 16072            | 16072   | 16072   |          |
| 542   | STAGE 1 DISK             | 301-331-126-0  | BC226433      | 2004-6-24                | 25000   | 25000   | 25000   | 3928                | 0       | 0       | 3928   | 21072            | 21072   | 21072   |          |
| 543   | STAGE 2 DISK             | 301-331-227-0  | BB647637      | 2004-6-24                | 25000   | 25000   | 25000   | 3928                | 0       | 0       | 3928   | 21072            | 21072   | 21072   |          |
| 544   | STAGE 3 DISK             | 301-331-322-0  | BB664238      | 2004-6-24                | 25000   | 25000   | 25000   | 3928                | 0       | 0       | 3928   | 21072            | 21072   | 21072   |          |
| 545   | STAGE 4 DISK             | 301-331-429-0  | BC232881      | 2004-6-24                | 25000   | 25000   | 25000   | 3928                | 0       | 0       | 3928   | 21072            | 21072   | 21072   |          |
| 546   | CONICAL SUPPORT          | 305-056-116-0  | BB528693      | 2004-6-24                | 25000   | 25000   | 25000   | 3928                | 0       | 0       | 3928   | 21072            | 21072   | 21072   |          |
| 551   | LPT SHAFT                | 301-330-067-0  | LA117473      | 2004-6-24                | 30000   | 30000   | 30000   | 3928                | 0       | 0       | 3928   | 26072            | 26072   | 26072   |          |
| 552   | LPT STUB SHAFT           | 301-330-626-0  | DC340652      | 2004-6-24                | 25000   | 25000   | 25000   | 3928                | 0       | 0       | 3928   | 21072            | 21072   | 21072   |          |

SIGNATURE BY: 钟凌辉  
TITLE: QA Director

DATE: 20-09-2012

|  |                |   |         |  |                 |  |  |
|--|----------------|---|---------|--|-----------------|--|--|
| 1. Approving Competent Authority/Country<br><br><b>LBA / Germany</b>   |                | <b>AUTHORISED RELEASE CERTIFICATE<br/>EASA FORM 1</b> |         |  |                 | 2. Form Tracking Number<br><br>15949   |  |
| 4. Organisation Name and Address<br><br> <b>Lufthansa Technik</b>   |                |   |         |  |                 | 5. Work Order/Contract/Invoice<br><br>50013902   |  |
| Lufthansa Technik AG<br>Weg beim Jäger 193<br>22335 Hamburg<br>Germany   |                |   |         |  |                 |  |  |
| 6. Item  | 7. Description | 8. Part No.   | 9. Qty. | 10. Serial No.   | 11. Status/Work |  |  |
| 001  | Fan Shaft      | 335-006-414-0   | 1       | DD437075   | OVERHAULED      |  |  |
| 12. Remarks: Life Details: TSN: 11466 CSN: 9693 TSO: 0 CSO: 0<br>Inspected and Repaired iaw CFMI Engine Shop Manual CFMI-TP-SM 5 Rev.69 Chapter 72-22-01.<br>and FAA 14 CFR 43.13(a), 43.13(b) and/or 43.13(c).<br>FAA-AD 2002-13-03 complied with.<br>SB:72-497 R3 n/a to s/n.<br>Work completed on 26th.March 2014.<br>Note: Life Details quoted are based on last operator supplied data. |                |   |         |  |                 |  |  |
|  |                |   |         |  |                 | Return to Service in Accordance with 14 CFR part 43<br>The 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<br><br>FAA Certificate No. DLAY225D |  |
| Details of work accomplished above are maintained on file at LTAI under Sales Order No: SGR 4900465973   |                |   |         |  |                 |  |  |
| <b>"Work performed by Lufthansa Technik Airmotive Ireland, Dublin Ireland, a Lufthansa Technik Group Company"</b>  |                |   |         |  |                 | <input type="checkbox"/> Further details of work performed are attached either in a Workshop Report or in other applicable documents   |  |
| 13a. Certifies that 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 <input type="checkbox"/> non-approved design data specified in block 12  |                |   |         | 14a. <input checked="" type="checkbox"/> Part-145.A.50 Release 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 Part-145 and in respect to that work the items are considered ready for release to service. |                 |  |  |
| 13b. Authorised Signature  |                | 13c. Approval / Authorisation Number                  |         | 14b. Authorised Signature<br>LH2113   |                 | 14c. Certificate / Approval Ref. Number<br><b>DE.145.0001</b>  |  |
| 13d. Name  |                | 13e. Date (dd mmm yyyy)                               |         | 14d. Name<br>Leo Hogan    |                 | 14e. Date (dd mmm yyyy)<br>21 May 2014   |  |

EASA FORM 1 - Issue 2

## USER/INSTALLER RESPONSIBILITIES

Note: This certificate does not automatically constitute authority to install the item(s).

Where the user/installer performs work in accordance with regulations of an airworthiness authority different from 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.

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.

# PART OR MATERIAL CERTIFICATION FORM

ATA Specification 106

3. Reference #:

**Inv No.:073335**

2. Seller Name: **BROWARD AVIATION SERVICES, INC.**  
 4. Organization: **5445 N.W. 24TH ST. UNIT 1**  
 Address: **MARGATE, FL 33063**

5A. Seller's Contract #:

**073335**

5B. Buyer's Contract #:

**P7557**

| 6. Item | 7. Description | 8. Manufacturer & Part Number | 9. Eligibility | 10. Quantity | 11. Serial/Batch Number | 12. Status |
|---------|----------------|-------------------------------|----------------|--------------|-------------------------|------------|
| 1       | FAN SHAFT      | 335-006-414-0                 |                | 1            | DD437075                | OH         |

13A. Remarks: TO THE BEST OF OUR KNOWLEDGE, THIS ITEM WAS NOT OBTAINED FROM ANY U.S. GOVERNMENT OR MILITARY SOURCE AND HAS NOT BEEN SUBJECT TO EXTREME HEAT OR STRESS (AS IN MAJOR ENGINE FAILURE, ACCIDENT OR FIRE)/ALL APPLICABLE DOCUMENTATION IS ON FILE.

TRACE TO SNECMA

13B. Obtained From: **RCM DASH 3**

13C. Last Certificated Agency: **LUFTHANSA TECH**

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 to an industry or commercial standards.

18. Used, Repaired or Overhauled Parts Verification:

The following signature attests that the documentation specified above or attached is accurate with regard to the item(s) described.

15. Signature:

19. Signature:

16. Name (type or printed):

17. Date:

20. Name (typed or printed):

21. Date:

**Feb01-2018**

## 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 the SELLER may be liable for damages and be subject to criminal prosecution under state and federal law.

Revised August 15, 1995



# BROWARD AVIATION SERVICES, INC.

5445 N.W. 24TH ST. UNIT 1  
MARGATE, FL 33063  
TELEPHONE: 954-979-1103 FAX: 954-979-1104

**Broward Aviation Services, Inc.**

## PACKING SLIP



**No. 073335**

PAGE No. : 1  
SHIP DATE : Feb01-2018  
ACCT No.. : DAVENPORT

SHIP TO: DAVENPORT AVIATION, INC.  
757 ADENA DRIVE  
COLUMBUS, OH 43212  
USA  
Attn: PURCHASING DEPT

**CUSTOMER: DAVENPORT AVIATION, INC.**

|               |                  |                        |
|---------------|------------------|------------------------|
| P.O.#: P7557  | SHIP VIA...: TBD | SHIPPED ON: Feb01-2018 |
| S.O.#: 70400  | ACCT#.....: TBD  | No. OF PKGES:          |
|               | MASTER AWB:      | WEIGHT [LB ]:          |
| TERMS: NET 30 | HOUSE AWB:       | SHIPMENT No.:          |

| Item | P/N & Description   | COND: | SHIPPED | B. ORDER | WEIGHT | PKGES |
|------|---|-------|---------|----------|--------|-------|
| 1    | 335-006-414-0<br>FAN SHAFT<br>SERIAL #: DD437075<br>TRACE TO: SNECMA<br>FAA PART: OEM | OH    | 1 EA    | 0        |        |       |

ALL RETURNED ORDERS ARE SUBJECT TO A 25% RESTOCKING CHARGE

PKGES

# MRO Repair Order

## USE OEM PARTS ONLY






CFM56-3:58828 - 3000000 - 724893

PART NO: 335-006-414-0:F030  
 SER NO: DD437075  
 SALES ORDER: 610000071 / 001000  
 PART DESC: FAN SHAFT ASSY  
 REP REF.: 72-22-01  
 DEFECT: 120 SGR To Stores

ORDER NO: 50013902  
  
 NOT-003000018201

CLP: 116,000 USD  
 ORDER QTY: 1 EA  
 STATUS: REL GMPS MANC PRC SETC  
 ENG S/N: 724893  
 CUSTOMER: 3000000 Customer Internal Sales Order

BL 2430 AUTH: BL 2430

| OP. NO.                               | OPERATION DESCRIPTION<br>MANUAL/SB REFERENCE  | WORK<br>CENTRE | DONE BY  | AUTH     | TURN<br>NUMBER  |
|---------------------------------------|---|----------------|----------|----------|---|
| PER ESM P/N CFMI.TP.SM 5 REVISION 69. |   |                |          |          |   |
| 0010<br>ZI01                          | FAN SHAFT TSN 11466 CSN 9693  | 56LMI          | BL 2430  | BL 2430  | 0000093349<br>  |
| 0022<br>ZI01                          | NDT INSPECT 70-33-11.<br>PER 72-22-01 INSP.3.B.<br>NCF.....<br>CRACKED ACCEPTABLE.....<br>CRACKED REPAIRABLE.....<br>CRACKED NOT REPAIRABLE.....<br>FINDINGS..... | NDTM           | JW1 2525 | JW1 2525 | 0000093556<br> |
| 0024<br>ZI01                          | INSPECT SHAFT FOR RETURN TO STORES.<br>PER 72-22-01 INSPECTION.   | TI             | JR 2897  | JR 2897  | 0000093557<br> |
| 0150<br>ZI01                          | APPLY PROTECTIVE OIL<br>PER 72-22-01 STORAGE 001.<br>TASK 72-22-01-500-001.   | CLNS           | MH 3009  | AM2 2560 | 0000093362<br> |
| 0170<br>ZI01                          | RETURN PART TO STORES.<br>PER AFW.  | SRIN           | LH 2113  | LH 2113  | 0000093558<br> |

→ Ref op# 0042-0052

AD 2002-13-03 / EICKM004 Part C3  
 LH 2113



CREATED BY: U252430  
 LAST CHANGE BY: U252430  
 NOT-003000018201

CREATED: 2012-Oct-19 11:15:15 AM  
 LAST CHANGE: 2012-Oct-19 11:19:22 AM

# EASA Form 1 - Check Sheet

Description FAW SWIFT ASSEMBLY PN 335-006-414-0 SN DD437075

|  | YES                                 | NO                                  | N/A                      |
|--|-------------------------------------|-------------------------------------|--------------------------|
| Is certified part number on Capability List?   | <input checked="" type="checkbox"/> |                                     |                          |
| Quote ATA for P/N from the Capability List.  | 72-22-01                            |                                     |                          |
| What level is P/N on Capability List. i.e. Inspected / Tested / Overhauled.  | O/H                                 |                                     |                          |
| Is part AD affected?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                          |
| Is certified evidence of AD accomplishment provided? i.e. Workspec / Repair Card                                       | <input checked="" type="checkbox"/> |                                     | <input type="checkbox"/> |
| Are TT & TC certified through Life Sheet or IHRC?  | <input checked="" type="checkbox"/> |                                     | <input type="checkbox"/> |
| Is NDT signed off and stamped with relevant documentation attached?  | <input checked="" type="checkbox"/> |                                     | <input type="checkbox"/> |
| Is documented evidence of the ESN, from which the part was removed, provided?  | <input checked="" type="checkbox"/> |                                     |                          |
| Quote engine operator code as available from AFW or Repair card.   | CTAT                                |                                     |                          |
| Manual and Revision number under which the maintenance was performed is identified on the AFW or relevant Repair Card. | <input checked="" type="checkbox"/> |                                     |                          |
| Have company revisions been carried out?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                          |
| Note: If the answer to the previous question is NO, the following questions are Not Applicable (N/A).                  |                                     |                                     |                          |
| Is the maintenance performed through the company revision, within the current ESM?                                     | <input type="checkbox"/>            | <input type="checkbox"/>            | N/A                      |
| If the maintenance performed is not within the current ESM, provide EDR number   |                                     |                                     | N/A                      |

**NOTE: Where applicable, provide certified accomplishment of any maintenance performed through EI/EO**

Note: This form is used when returning a part to stock and the part requires EASA Certification

# MRO Repair Order

## USE OEM PARTS ONLY

CFM56-3:58828 - 3000000 - 724893

PART NO: 335-006-414-0:F030  
 SER NO: DD437075  
 SALES ORDER: 610000071 / 001000  
 PART DESC: FAN SHAFT ASSY  
 REP REF.: 72-22-01  
 DEFECT: 120 SGR To Stores

ORDER NO: 50013902



NOT-003000018201

CLP: 116,000 USD  
 ORDER QTY: 1 EA  
 STATUS: REL GMPS MANC PRC SETC  
 ENG S/N: 724893  
 CUSTOMER: 3000000 Customer Internal Sales Order

BL 2430 AUTH: BL 2430

| OP. NO. | OPERATION DESCRIPTION<br>MANUAL/SB REFERENCE | WORK CENTRE | DONE BY | AUTH | TURN NUMBER |
|---------|--|-------------|---------|------|-------------|
|---------|--|-------------|---------|------|-------------|

FINAL INSPECT

LH 2113 LH 2113

CONDITION (delete as appropriate): Overhauled / Modified / Repaired / Inspected

EASA PART-145.A.50 RELEASE TO SERVICE  
 Certifies that the work identified above was accomplished in accordance with Part-145 and in respect to that work the items are considered ready for release to service.  
 EASA Certificate Ref. No. DE.145.0001.

RETURN TO SERVICE IN ACCORDANCE WITH FAR 43.9  
 This civil aeronautical product has been maintained, altered or modified (as appropriate) in accordance with U.S. Federal Aviation Regulations under FAA certificate No. DLAY225D.

SIGNED: [Signature] AUTHORITY: [Signature] DATE: 26<sup>th</sup> MAR 2014

|  |                   |                  |           |
|--|-------------------|------------------|-----------|
| LUFTHANSA TECHNIK<br>AIRMOTIVE IRELAND |                   | Return to Stores |           |
| Name Capital                           | Signed            | Stamp            |           |
| Leo Hogan                              | [Signature]       | LH 2113          |           |
| Date                                   | Reason for Return |                  |           |
| 26 MAR 2014                            | SURPLUS           |                  |           |
| Equipment No.                          | Qty               |                  | Batch     |
| 003000018201                           | 1                 |                  | EX 724893 |
| Part No.                               |                   |                  |           |
| 335-006-414-0                          |                   |                  |           |



CREATED BY: U252430  
 LAST CHANGE BY: U252430  
 NOT-003000018201

CREATED: 2012-Oct-19 11:15:15 AM  
 LAST CHANGE: 2012-Oct-19 11:19:22 AM

Printed: 2012-Oct-19 / 10:26 by: U252430

Form No. QA018

Responsible Department: Quality

Lufthansa Technik Airmotive Ireland Ltd

**Sales Order No.** 610000071  
**Engine Serial No.** 724893

**#1 & #2 BEARING SUPPORT  
 CFM56-3 MODIFICATION RECORD SHEET**

| SB No                   | DESCRIPTION   | DISASSY/INSPECT  |            |
|-------------------------|---|------------------|------------|
|                         |   | STATUS           | SIGN       |
| 72-497                  | R6 Accident involved hardware<br>(Fan Shaft Only)   | N/A<br>To<br>S/N | JR<br>2897 |
| 72-623                  | R2 New oil separator duct<br>(Ref. Company Revision 56-025)                                   | _____            | _____      |
| 72-683                  | R0 Kevlar loop clamps   | _____            | _____      |
| EI CFM- 004<br>Part C 3 | Iss Fan Shaft NDT per 72-22-01<br>(Required when fan shaft removed)<br>(AD 2002-13-03 Refers) | N/A<br>To<br>I/I | JR<br>2897 |

AD CARRIED OUT  
 ON CARD # 50013902

LH  
2113

**SB STATUS CODE: (REF. EIN NO. 67)**

**AT DISASSEMBLY/INSPECTION:**

- F/E - Found Embodied
- F/N/E - Found Not Embodied
- N/A - Not Applicable (give reason)
- I/House - Routed to another workcentre (Disassy only)
- N/Recd - Part not received at this workcentre
- NOTE: (R) Indicates repetitive or inspection type SB's

**AT ASSEMBLY:**

- E - Embodied
- N/E - Not Embodied (give reason)
- N/A - Not Applicable (give reason)

**ENGINE SB STATUS AT DISASSEMBLY/INSPECTION**

It is hereby certified that the SB status of relevant parts on engine disassembly / inspection (delete as appropriate) is as indicated above, and any parts that required embodiment of SB's called, have been routed accordingly.

**SIGNED:** \_\_\_\_\_ **AUTHORITY:** \_\_\_\_\_ **DATE:** \_\_\_\_\_



Lufthansa

Deutsche Lufthansa Aktiengesellschaft  
Postfach 63 03 00, 22313 Hamburg

Ihre Zeichen  
Your Ref.

Unsere Zeichen / Datum  
Our Ref. / Date

Telefon / Telefax  
Telephone / Telefax

He / 07. June 2013

RE: MAKE: CFM  
MODEL: CFM56-3-B1  
SERIAL #: 724893

To whom it may concern :

I certify the above engine is a civil engine and to the best of our knowledge, the engine

(a) was not obtained or operated by any government or military source

(b) has not been subject to extreme heat or stress outside normal operation as from an accident or fire

(c) has not been immersed in salt water or exposed to other corrosive agents outside normal operation.

Engine TTH 44225  
Engine TTC 39619

Regards

Thomas Henschke  
Project Manager  
Lufthansa Passage Airline  
Engine / APU  
Engineering & Maintenance  
Technical Operations  
Dept. HAM OB/M-T  
Weg beim Jäger 193 - 22335 Hamburg  
Phone. +49(0)40/5070 64303  
Fax +49(0)40/5070 64895  
Mailto: thomas.henschke@dlh.de

Gesellschaftsrechtliche Angaben, Anschrift  
und weitere Informationen auf der Rückseite.  
For corporate details, address and further  
information please turn over.

## AUTHORISATION FOR WORK

**#1 & #2 Bearing Support Module- 72-22-00**  
**ESM P/N CFMI-TP.SM5 Revision 69**

|                           |                     |               |            |                        |           |
|---------------------------|---------------------|---------------|------------|------------------------|-----------|
| <b>Engine S/N:</b>        | 724893              | <b>Model:</b> | CFM56-3-B1 | <b>Customer:</b>       | ZINT      |
|                           |                     |               |            | <b>Customer No.</b>    | 3000000   |
| <b>TSN:</b>               | 44225               | <b>CSN:</b>   | 39619      | <b>Module S/N:</b>     | 22X24893  |
| <b>TSLSV:</b>             | 11466               | <b>CSLSV:</b> | 9693       | <b>Sales Order No:</b> | 610000071 |
| <b>Reason For Removal</b> | DLH Fleet Phase Out |               |            |                        |           |

**WORKSCOPE:** Heavy Maintenance (OH)

**Model/Rating Outgoing :** N/A

|                                    |   |
|------------------------------------|---|
| <b>PMA Parts Accepted - [ NO ]</b> | <b>DER Repairs Accepted - [Case by case basis ]</b> |
| <b>Engine Project Manager</b>      | <b>Dave Walsh</b>                                   |

### 1. ADDITIONAL WORK:

**Note 1:** For each part listed, ensure correct p/n is used for SAP Transactions.

**Note 2:** For each part listed below, verify correct s/n on SAP.

**Note 3:** Refer to IQM procedure - IQM # 256260 for processing of parts from breakdown engines.

**Parts (for IHR) are to be 2 tagged and routed for cleaning and returned to engine bay for generation of repair cards for inspection.**

On completion, route parts to LA stock.

| Typical PN    | Qty | Description            | Module | Disposal                               |
|---------------|-----|------------------------|--------|--|
| 305-364-002-0 | 1   | NO.1 BEARING           | 22X    | RCV for inspection and repair          |
| 305-365-702-0 | 1   | NO.2 BEARING           | 22X    |  |
| 335-006-414-0 | 1   | SHAFT ASSY FAN         | 22X    | RCV for inspection and repair          |
| 335-003-304-0 | 1   | SUPPORT ASSY NO 1 BRNG | 22X    | Inspect in-house to serviceable limits |
| 335-010-104-0 | 1   | SUPPORT ASSY           | 22X    | Inspect in-house to serviceable limits |
| 301-293-011-0 | 1   | HOUSING                | 22X    | Scrap (Raise Scrap alert)              |
| 305-396-303-0 | 1   | Ring                   | 22X    | Inspect in-house to serviceable limits |
| 301-298-208-0 | 1   | Seal                   | 22X    | Inspect in-house to serviceable limits |
| 301-544-406-0 | 1   | Tube                   | 22X    | Inspect in-house to serviceable limits |
| 305-047-508-0 | 1   | Manifold               | 22X    | Inspect in-house to serviceable limits |
| 335-010-801-0 | 1   | Tube                   | 22X    | Inspect in-house to serviceable limits |
| 335-008-602-0 | 3   | Tube Post 72-405       | 22X    | Inspect in-house to serviceable limits |
| 335-010-601-0 | 1   | Tube                   | 22X    | Inspect in-house to serviceable limits |
| 335-010-402-0 | 1   | Tube                   | 22X    | Inspect in-house to serviceable limits |
| 305-367-104-0 | 2   | Duct                   | 22X    | Dump (No scrap alert required)         |
| 305-439-402-0 | 1   | SEAL                   | 22X    | <b>RCV for inspection and repair</b>   |
| 301-297-810-0 | 1   | Sleeve                 | 22X    | Inspect in-house to serviceable limits |
| 301-436-804-0 | 1   | Nut                    | 22X    | Inspect in-house to serviceable limits |
| 301-298-006-0 | 1   | Nut                    | 22X    | Dump (No scrap alert required)         |
| 301-537-905-0 | 1   | Nut                    | 22X    | Inspect in-house to serviceable limits |
| 301-475-207-0 | 1   | Baffle                 | 22X    | Inspect in-house to serviceable limits |
| 301-298-110-0 | 1   | Ring                   | 22X    | Inspect in-house to serviceable limits |

**Raised By:** Finnian Dawson

**Date:** 27th Sept 2012

**Time:** 16:00 hrs

## AUTHORISATION FOR WORK

**#1 & #2 Bearing Support Module- 72-22-00**  
**ESM P/N CFMI-TP.SM5 Revision 69**

|                    |        |               |            |                     |         |
|--------------------|--------|---------------|------------|---------------------|---------|
| <b>Engine S/N:</b> | 724893 | <b>Model:</b> | CFM56-3-B1 | <b>Customer:</b>    | ZINT    |
|                    |        |               |            | <b>Customer No.</b> | 3000000 |

|              |       |               |       |                        |           |
|--------------|-------|---------------|-------|------------------------|-----------|
| <b>TSN:</b>  | 44225 | <b>CSN:</b>   | 39619 | <b>Module S/N:</b>     | 22X24893  |
| <b>TLSV:</b> | 11466 | <b>CSLSV:</b> | 9693  | <b>Sales Order No:</b> | 610000071 |

|                           |                     |
|---------------------------|---------------------|
| <b>Reason For Removal</b> | DLH Fleet Phase Out |
|---------------------------|---------------------|

**WORKSCOPE:** Heavy Maintenance (OH)

**Model/Rating Outgoing :** N/A

| PMA Parts Accepted - [ NO ] |   |                |     | DER Repairs Accepted - [Case by case basis ] |  |
|-----------------------------|---|----------------|-----|--|--|
| Engine Project Manager      |   |                |     | Dave Walsh                                   |  |
| 301-298-408-0               | 1 | Washer         | 22X | Dump (No scrap alert required)               |  |
| 301-544-203-0               | 1 | Washer         | 22X | Dump (No scrap alert required)               |  |
| 305-398-901-0               | 1 | Washer         | 22X | Dump (No scrap alert required)               |  |
| 301-297-909-0               | 1 | Ring           | 22X | Dump (No scrap alert required)               |  |
| 301-537-803-0               | 1 | Washer         | 22X | Dump (No scrap alert required)               |  |
| 301-348-410-0               | 1 | Sleeve         | 22X | Dump (No scrap alert required)               |  |
| 301-540-104-0               | 1 | Oil Nozzle     | 22X | Dump (No scrap alert required)               |  |
| 305-047-401-0               | 1 | Coupling Tube  | 22X | Dump (No scrap alert required)               |  |
| 301-475-904-6               | 1 | Spacer         | 22X | Dump (No scrap alert required)               |  |
| 301-540-202-0               | 1 | Oil Nozzle Nut | 22X | Dump (No scrap alert required)               |  |
| J205P1100                   | 3 | Retaining Ring | 22X | Dump (No scrap alert required)               |  |
|                             | 2 |                |     | Dump (No scrap alert required)               |  |
| 336-066-301-0               | 4 | Spacers        | 22X | Dump (No scrap alert required)               |  |
|                             | 2 |                |     | Dump (No scrap alert required)               |  |
| J646P10A                    | 4 | Bolts          | 22X | Dump (No scrap alert required)               |  |
|                             | 2 |                |     | Dump (No scrap alert required)               |  |
| J646P10A                    | 4 | Bolt           | 22X | Dump (No scrap alert required)               |  |

2. **DISASSEMBLY REQUIRED:** YES  
**DISASSEMBLY LEVEL:** Partial [ ] Complete [X]  
 W.S. 5222-50
  
3. **CLEANING, INSPECTION, REPAIR AND ASSEMBLY.**  
 W.S. -
  
4. **CHECK/EMBODY AD's, SB's And LAI E.I.'s . AS PER:**  
 W.S.NO: 5632-02 ISSUE: 01
  
5. **ALL WORK TO BE DOCUMENTED ON ATTACHED WORK PACKAGE**
  
6. **ON COMPLETION, INSTALL ON ENGINE S/N: N/A**

**Reason For Revision :**

Iss 2 – Amend disposal for Stationary Air/Oil Seal from inspect in-house to RCV.

|                                  |                             |                        |
|----------------------------------|-----------------------------|------------------------|
| <b>Raised By: Finnian Dawson</b> | <b>Date: 27th Sept 2012</b> | <b>Time: 16:00 hrs</b> |
|----------------------------------|-----------------------------|------------------------|

A.F.W. NO.: 02

Maintenance Due List (complementary maintenance) - ESN:724893, 39619 FC, 44225:07 FH, 17-SEP-2012

Maintenance Due List

| Part Position | Part Number   | Serial Number | Designation              | Maint. Order No. | Code    | Type          | Next Due in/on |        |          | Estimated Due | Reference                | Document Title                               |
|---------------|---------------|---------------|--------------------------|------------------|---------|---------------|----------------|--------|----------|---------------|--------------------------|--|
|               |               |               |                          |                  |         |               | Hours          | Cycles | Others   |               |                          |  |
| 312           | 1275M37P02    | GWN0336A      | HPC FRONT SHAFT          | 197050           | offwing | DIS - Discard |                |        | 73 FC    |               |                          |  |
| 522           | 1282M72P05    | GWN03CH4      | HPT FRT. ROTATING A/SEAL | 197056           | offwing | DIS - Discard |                |        | 73 FC    |               | 05-11-00-1275M37P02-1    | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 316           | 1319M25P02    | GFF59GLP      | CDP SEAL                 | 197046           | offwing | DIS - Discard |                |        | 73 FC    |               | 05-11-00-1282M72P05-1    | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 521           | 1385M90P04    | XAE35991      | HPT FORWARD SHAFT        | 197057           | offwing | DIS - Discard |                |        | 73 FC    |               | 05-11-00-1319M25P02-1    | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 525           | 1475M29P02    | GWN038RP      | HPT DISK                 | 197062           | offwing | DIS - Discard |                |        | 73 FC    |               | 05-11-00-1385M90P04-1    | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 313           | 1589M66G02    | GWN0362N      | HPC 1-2 SPOOL            | 197060           | offwing | DIS - Discard |                |        | 73 FC    |               | 05-11-00-1475M29P02-1    | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 315           | 1590M29G01    | GWN029DA      | HPC 4-9 SPOOL            | 197059           | offwing | DIS - Discard |                |        | 73 FC    |               | 05-11-00-1589M66G02-1    | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 314           | 1590M59P01    | GWN035T0      | HPC STG 3 DISC           | 197047           | offwing | DIS - Discard |                |        | 73 FC    |               | 05-11-00-1590M29G01-1    | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 551           | 301-330-067-0 | LA145137      | LPT SHAFT                | 197051           | offwing | DIS - Discard |                |        | 20307 FC |               | 05-11-00-1590M59P01-1    | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 552           | 301-330-626-0 | BA153488      | LPT STUB SHAFT           | 197049           | offwing | DIS - Discard |                |        | 5073 FC  |               | 05-11-00-301-330-067-0-1 | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 542           | 301-331-126-0 | BB563345      | LPT STG 1 DISC           | 197061           | offwing | DIS - Discard |                |        | 5073 FC  |               | 05-11-00-301-330-626-0-1 | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 543           | 301-331-227-0 | BB566485      | LPT STG 2 DISC           | 197044           | offwing | DIS - Discard |                |        | 5073 FC  |               | 05-11-00-301-331-126-0-1 | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 544           | 301-331-322-0 | BB459081      | LPT STG 3 DISC           | 197055           | offwing | DIS - Discard |                |        | 5073 FC  |               | 05-11-00-301-331-227-0-1 | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 545           | 301-331-429-0 | DB468327      | LPT STG 4 DISC           | 197045           | offwing | DIS - Discard |                |        | 5073 FC  |               | 05-11-00-301-331-322-0-1 | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 546           | 305-056-116-0 | BB494983      | CONICAL SUPPORT          | 197053           | offwing | DIS - Discard |                |        | 5073 FC  |               | 05-11-00-301-331-429-0-1 | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 221           | 335-006-414-0 | DD437075      | FAN SHAFT                | 197058           | offwing | DIS - Discard |                |        | 20307 FC |               | 05-11-00-305-056-116-0-1 | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 211           | 335-009-306-0 | DD436394      | BOOSTER SPOOL            | 197054           | offwing | DIS - Discard |                |        | 20307 FC |               | 05-11-00-335-006-414-0-1 | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 213           | 335-014-511-0 | DD436502      | FAN DISC                 | 197052           | offwing | DIS - Discard |                |        | 20307 FC |               | 05-11-00-335-009-306-0-1 | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
| 526           | 9514M71P07    | TMTMS951      | HPT AFT SHAFT            | 197048           | offwing | DIS - Discard |                |        | 5073 FC  |               | 05-11-00-335-014-511-0-1 | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |
|               |               |               |                          |                  |         |               |                |        |          |               | 05-11-00-9514M71P07-1    | ISD - 4 - LTAI_SourceDocument_CFM56-3_Limits |

| PN          | SN       | Designation     | Configuration                          |  |  | Hours                  | Cycles | Others | Hours               | Cycles | Others   |
|-------------|----------|-----------------|--|--|--|------------------------|--------|--------|---------------------|--------|----------|
| 305-056-116 | BB494983 | CONICAL SUPPORT |  |  |  | 22411:07               | FH     |        | 19927               | FC     |          |
|             |          |                 | Configuration                          |  |  | Time per Configuration |        |        | Limit per Config    |        |          |
|             |          |                 |  |  |  | Hours                  | Cycles | Hours  | Cycles              | Hours  | Cycles   |
|             |          |                 | COMMERCIAL, CFM56-3-B1, Cat. A, 724893 |  |  | 0:00                   | FH     |        | 0                   | FC     |          |
|             |          |                 | CFM56-3-B1, Cat. A                     |  |  | 11466:07               | FH     |        | 9693                | FC     | 25000 FC |
|             |          |                 | CFM56-3-B1                             |  |  | 10945:00               | FH     |        | 10234               | FC     | 25000 FC |
|             |          |                 |  |  |  | Part Total Counters    |        |        | Remaining Life Time |        |          |
|             |          |                 |  |  |  | Hours                  | Cycles | Others | Hours               | Cycles | Others   |
|             |          |                 | Configuration                          |  |  | 11466:07               | FH     |        | 9693                | FC     | 20307 FC |
|             |          |                 |  |  |  | Time per Configuration |        |        | Limit per Config    |        |          |
|             |          |                 |  |  |  | Hours                  | Cycles | Hours  | Cycles              | Hours  | Cycles   |
|             |          |                 | COMMERCIAL, CFM56-3-B1, Cat. A, 724893 |  |  | 0:00                   | FH     |        | 0                   | FC     | 30000 FC |
|             |          |                 | CFM56-3-B1, Cat. A                     |  |  | 11466:07               | FH     |        | 9693                | FC     | 30000 FC |
|             |          |                 | CFM56-3-B1                             |  |  | 0:00                   | FH     |        | 0                   | FC     | 30000 FC |
|             |          |                 |  |  |  | Part Total Counters    |        |        | Remaining Life Time |        |          |
|             |          |                 |  |  |  | Hours                  | Cycles | Others | Hours               | Cycles | Others   |
|             |          |                 | Configuration                          |  |  | 11466:07               | FH     |        | 9693                | FC     | 20307 FC |
|             |          |                 |  |  |  | Time per Configuration |        |        | Limit per Config    |        |          |
|             |          |                 |  |  |  | Hours                  | Cycles | Hours  | Cycles              | Hours  | Cycles   |
|             |          |                 | COMMERCIAL, CFM56-3-B1, Cat. A, 724893 |  |  | 0:00                   | FH     |        | 0                   | FC     | 30000 FC |
|             |          |                 | CFM56-3-B1, Cat. A                     |  |  | 11466:07               | FH     |        | 9693                | FC     | 30000 FC |
|             |          |                 | CFM56-3-B1                             |  |  | 0:00                   | FH     |        | 0                   | FC     | 30000 FC |
|             |          |                 |  |  |  | Part Total Counters    |        |        | Remaining Life Time |        |          |
|             |          |                 |  |  |  | Hours                  | Cycles | Others | Hours               | Cycles | Others   |
|             |          |                 | Configuration                          |  |  | 0:00                   | FH     |        | 0                   | FC     |          |
|             |          |                 |  |  |  | Time per Configuration |        |        | Limit per Config    |        |          |
|             |          |                 |  |  |  | Hours                  | Cycles | Hours  | Cycles              | Hours  | Cycles   |
|             |          |                 | COMMERCIAL, CFM56-3-B1, Cat. A, 724893 |  |  | 0:00                   | FH     |        | 0                   | FC     | 30000 FC |
|             |          |                 | CFM56-3-B1, Cat. A                     |  |  | 11466:07               | FH     |        | 9693                | FC     | 30000 FC |
|             |          |                 | CFM56-3-B1                             |  |  | 0:00                   | FH     |        | 0                   | FC     | 30000 FC |
|             |          |                 |  |  |  | Part Total Counters    |        |        | Remaining Life Time |        |          |
|             |          |                 |  |  |  | Hours                  | Cycles | Others | Hours               | Cycles | Others   |



**Lufthansa Technik**  
Airmotive Ireland

EASA Part 145 Maintenance Org. DE.145.0001  
FAA Repair Station No. DLAY 225D

## Life Limited Part History Data

Engine Type: **CFM56** Part Description: **SHAFT, FAN**  
Module Type: **LPC** IIN: **221** Part No.: **335-006-414-0** Serial No.: **DD437075**

| Engine S/N | Version/<br>Thrust Rating | ENGINE          |       |        |            |       |        | PART            |        |                  |        |            |        |
|------------|---------------------------|-----------------|-------|--------|------------|-------|--------|-----------------|--------|------------------|--------|------------|--------|
|            |                           | AT INSTALLATION |       |        | AT REMOVAL |       |        | AT INSTALLATION |        | ADDITIONAL USAGE |        | TOTAL TIME |        |
|            |                           | DATE            | HOURS | CYCLES | DATE       | HOURS | CYCLES | HOURS           | CYCLES | HOURS            | CYCLES | HOURS      | CYCLES |
| 724893     | -3B1<br>(CAT A)           | Nov 06          | 32759 | 29926  | Jun 12     | 42225 | 39619  | 0               | 0      | 11466            | 9693   | 11466      | 9693   |


Last record at LTAI: Removed from ESN 724893 with engine TTH 42225.07 TTC 39619 and part TTH 11466.07 TTC 9693

The above documentation is true and accurate to the best of our knowledge based on information provided to LTAI.  
The history of the specified part has been checked in accordance with the Engine Manual Chapter 5 limits at entry into LTAI responsibility.  
The part was not operated in military application and no incidents or accidents have been reported.

**LTAI BPD**

Lufthansa Technik Airmotive Ireland  
Business Product Development Unit

Breandán Curtin  
Name

  
Signature

Date: 17-Oct-13

|        |         |            |              |               |         |     |          |                          |
|--------|---------|------------|--------------|---------------|---------|-----|----------|--------------------------|
| ENGTPE | VERSION | OWN ENGSN  | TTH-ENG-TTC  | RLTH-MIN-RLTC | RLTDMIN | EV  | EV-BEGIN |                          |
| CFM56  | -3B1    | DLH 724893 | 032759 29926 | 9766          |         | 001 | 02.08.06 |                          |
|        |         |            |              |               |         |     |          | TYPE TTH-ACT-TTC DATEACT |

| POS  | PN                | SN          | RC     | HRS-TSO-CYC  | RLTH-MIN-RLTC | RLTDMIN | TYPE | RLTH-ACT-RLTC | DATEACT |
|------|-------------------|-------------|--------|--------------|---------------|---------|------|---------------|---------|
|      |                   | DESIGNATION | ACTION |              |               |         |      |               |         |
| 0001 | CFM56-3MODUL01    | 24893       | OV     | 000000 00000 |               |         |      |               |         |
| 0002 | CFM56-3MODUL02S   | 24893       | VC     | 032759 29926 |               |         |      |               |         |
| 0003 | CFM56-3MODUL02BU  | 24893       | OV     | 000000 00000 |               |         |      |               |         |
| 0004 | CFM56-3MODUL02IGB | 24893       | VC     | 032759 29926 |               |         |      |               |         |
| 0005 | CFM56-3MODUL03R   | 24893       | VC     | 010945 10234 |               |         |      |               |         |
| 0006 | CFM56-3MODUL03S   | 24893       | VC     | 010945 10234 |               |         |      |               |         |
| 0007 | CFM56-3MODUL04    | 24893       | VC     | 010945 10234 |               |         |      |               |         |
| 0008 | CFM56-3MODUL05    | 24893       | VC     | 010945 10234 |               |         |      |               |         |
| 0009 | CFM56-3MODUL06    | 24893       | VC     | 010945 10234 |               |         |      |               |         |
| 0010 | CFM56-3MODUL07    | 24893       | VC     | 010945 10234 |               |         |      |               |         |
| 0011 | CFM56-3MODUL08    | 24893       | VC     | 010945 10234 |               |         |      |               |         |
| 0012 | CFM56-3MODUL09    | 24893       | RE     | 010945 10234 |               |         |      |               |         |
| 0013 | CFM56-3MODUL09BU  | 24893       | OV     | 000000 00000 |               |         |      |               |         |
| 0014 | CFM56-3MODUL09TF  | 24893       | RE     | 032759 29926 |               |         |      |               |         |
| 0015 | CFM56-3MODUL10AGB | 24893       | RE     | 032759 29926 |               |         |      |               |         |
| 0016 | CFM56-3MODUL10TGB | 24505       | RE     | 029371 32345 |               |         |      |               |         |

CHAPTER 05 TIME LIMITS I.A.  
EM REVISION 060 DATE 15.12.2005

APPROVED BY Lufthansa Technik AG

DATE 01.12.06 DEPARTMENT MLR NAME



WP 314  
Krautrich  
28.771G

ENGTPE VERSION ENGSN OWN TTH-ENG-TTC EV  
 CFM56 -3B1 724893 DLH 032759 29926 001

PN SN DESIGNATION OWN CONF DATCONC RC HRS-TSO-CYC HRS-TSA-CYC HRS-TSI-CYC  
 CFM56-3MODULO2BU 24893 BEARING UNIT DLH KOMPL 19.10.06 OV 000000 00000 000000 00000 000000 00000  
 VERSION TTH TTC RLTH RLTC RLTDMIN RLTH-TNE-RLTC RLTH-TBO-RLTC DATEFFE  
 -3B1 032759 29926 30000 02.08.06

DESIGNATION ACTION TYPE TTH-ACT-TTC DATEACT

| POS  | PN            | ACTION KEY | SN       | DESIGNATION           | DESIGNATION ACTION | TTH         | TTC   | RLTH-TNE-RLTC | US      | REMARKS-PART   |
|------|---------------|------------|----------|-----------------------|--------------------|-------------|-------|---------------|---------|----------------|
|      |               |            |          |                       |                    | TTH-ACT-TTC | TTC   | RLTH-ACT-RLTC | DATEACT | REMARKS-ACTION |
| 0221 | 335-006-414-0 |            | DD437075 | SHAFT, FAN            |                    | 000000      | 00000 | 30000         |         |                |
| 0223 | 305-364-002-0 |            | RR15420  | BRG. BALL NO.1        |                    | 032759      | 29926 |               |         |                |
| 0226 | 305-365-702-0 |            | RR15478  | BRG. RLR NO.2         |                    | 032759      | 29926 |               |         |                |
| 0228 | 335-003-304-0 |            | RR02402  | SUPPORT, NO.1 BEARING |                    | 032759      | 29926 |               |         |                |
| 0229 | 335-010-104-0 |            | RR03150  | SUPPORT, NO.2 BEARING |                    | 032759      | 29926 |               |         |                |

CHAPTER 05 TIME LIMITS I.A.  
 EM REVISION 060 DATE 15.12.2005

## LLP information sheet

Description: FAN SHAFT

Part Number: 335-006-414-0

Serial Number: DD437075

Ex ESN: 724893

**SGR 4900465973**

Back to Birth Attached:

Yes  or No

Certification Attached:

Yes  or No



**Material Document / Item:** 4900465973 / 0001  
**Description:** ref robbie heff



**Tracking Notification:** 3000018201

Reference

**Transfer Order / Item:** 0000116773 / 0001  
**Engine Sernr. :** 724893  
**WBS-Element:** E.0610000071  
**Decription:** CFM56-3 Engine  
**Workorder:** 50013902      **Workcenter:** 56LMI  
**Operation:** 0010      **FAN SHAFT TSN 11466 CSN 9693**  
**Required by:**  
**Reservation:**

Part Information

**Material:** 335-006-414-0:F0301  
**Quantity:** 1  
**Ext. Price:** 45,238.17  
**Serial No.:** DD437075.  
**Description:** FAN SHAFT  
**Batch:** 0000100475



**Unit:** EA      **Unit Price:** 45,238.17  
**Curr:** USD  
**Val. Type:** 0000100475

Life Limited Part: YES

**SHELF LIFE REQUIRED**

**Storage Location:**  
**Source Bin:**  
**Receiving Material:**

Warehouse Information

**Cost Center :**  
**Rec. Storage Location:** 1124  
**Dest. Bin:**  
**Rec. Batch:**

| Serial number   | Condition             | Qty passed  | Qty rejected | Quality notif no. |                |      |         |             |  |  |                 |                       |  |            |               |             |         |  |  |
|---|-----------------------|-------------|--------------|-------------------|----------------|------|---------|-------------|--|--|-----------------|-----------------------|--|------------|---------------|-------------|---------|--|--|
| <table border="1"> <thead> <tr> <th>Name/Signature</th> <th>Date</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>Inspection:</td> <td></td> <td></td> </tr> <tr> <td>Storage Bin(s):</td> <td>No Storage bins found</td> <td></td> </tr> <tr> <td>Raised by:</td> <td>Thomas Molloy</td> <td>2014-May-21</td> </tr> <tr> <td>Stores:</td> <td></td> <td></td> </tr> </tbody> </table> |                       |             |              |                   | Name/Signature | Date | Remarks | Inspection: |  |  | Storage Bin(s): | No Storage bins found |  | Raised by: | Thomas Molloy | 2014-May-21 | Stores: |  |  |
| Name/Signature  | Date                  | Remarks     |              |                   |                |      |         |             |  |  |                 |                       |  |            |               |             |         |  |  |
| Inspection:   |                       |             |              |                   |                |      |         |             |  |  |                 |                       |  |            |               |             |         |  |  |
| Storage Bin(s):   | No Storage bins found |             |              |                   |                |      |         |             |  |  |                 |                       |  |            |               |             |         |  |  |
| Raised by:  | Thomas Molloy         | 2014-May-21 |              |                   |                |      |         |             |  |  |                 |                       |  |            |               |             |         |  |  |
| Stores:   |                       |             |              |                   |                |      |         |             |  |  |                 |                       |  |            |               |             |         |  |  |


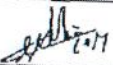
REPORT: AICOR63A

Lufthansa Technik Airmotive Ireland  
LIFE-LIMITED PARTS RECORD CONTROLLED SHEET

DATE RUN: 11/10/2006 PAGE 1

ENGINE S/N : 724893 Eng Despatch  
 TYPE : CFM56 DASH = 3B1  
 WORK-ORD-REF : 56-3B1-LH-724893V02 ISSUE 1  
 TSN: 32759 TSLSV:  
 CSN: 29926 CSLSV:  
 CUSTOMER = Lufthansa Technik  
 0 OPERATOR = LHT  
 0 DATE VALID = 11/10/2006

| IIN   | DESCRIPTION        | MODULE    | PART NUMBER   | SERIAL NUMBER | TOTAL TIME | TOTAL CYCLES | ---TIME LIMIT--- |        | ---REMAINING--- |        |
|-------|--------------------|-----------|---------------|---------------|------------|--------------|------------------|--------|-----------------|--------|
|       |                    |           |               |               |            |              | HOUR             | CYCLES | HOUR            | CYCLES |
| 211   | SPOOL BOOSTER      | 1.24893   | 335-009-306-0 | DD436394      | 0          | 0            | O/C              | 30000  | O/C             | 30000  |
| 213   | DISC FAN STG 1     | 1.24893   | 335-014-511-0 | DD436502      | 0          | 0            | O/C              | 30000  | O/C             | 30000  |
| → 221 | SHAFT FAN          | 2BU.24893 | 335-006-414-0 | DD437075      | 0          | 0            | O/C              | 30000  | O/C             | 30000  |
| 312   | SHAFT FWD HPC      | 3R.24893  | 1275M37P02    | GWN0336A      | 10945      | 10234        | O/C              | 20000  | O/C             | 9766   |
| 313   | SPOOL STG 1-2      | 3R.24893  | 1589M66G02    | GWN0362N      | 10945      | 10234        | O/C              | 20000  | O/C             | 9766   |
| 314   | DISC STG 3 HPC     | 3R.24893  | 1590M59P01    | GWN035T0      | 10945      | 10234        | O/C              | 20000  | O/C             | 9766   |
| 315   | SPOOL STG 4-9      | 3R.24893  | 1590M29G01    | GWN029DA      | 10945      | 10234        | O/C              | 20000  | O/C             | 9766   |
| 316   | CDP SEAL           | 3R.24893  | 1319M25P02    | GFF59GLP      | 10945      | 10234        | O/C              | 20000  | O/C             | 9766   |
| 521   | HPT FRONT SHAFT    | 7.24893   | 1385M90P04    | XAE35991      | 10945      | 10234        | O/C              | 20000  | O/C             | 9766   |
| 522   | FRONT AIR SEAL HPT | 7.24893   | 1282M72P05    | GWN03CH4      | 10945      | 10234        | O/C              | 20000  | O/C             | 9766   |
| 525   | HPT DISC           | 7.24893   | 1475M29P02    | GWN038RP      | 10945      | 10234        | O/C              | 20000  | O/C             | 9766   |
| 526   | SHAFT REAR HPT     | 7.24893   | 9514N71P07    | TMTMS951      | 10945      | 10234        | O/C              | 20000  | O/C             | 9766   |
| 542   | LPT STG 1 DISC     | 9.24893   | 301-331-126-0 | BB563345      | 10945      | 10234        | O/C              | 25000  | O/C             | 14766  |
| 543   | LPT STG 2 DISC     | 9.24893   | 301-331-227-0 | BB566485      | 10945      | 10234        | O/C              | 25000  | O/C             | 14766  |
| 544   | LPT STG 3 DISC     | 9.24893   | 301-331-322-0 | BE459081      | 10945      | 10234        | O/C              | 25000  | O/C             | 14766  |

|  |                 |   |   |                          |                      |                                    |   |  |
|--|-----------------|---|---|--------------------------|----------------------|------------------------------------|---|--|
| 1. Approving Competent Authority / Country<br><b>DIRECTION GENERALE DE L'AVIATION CIVILE FRANCE</b>  |                 | 2. <b>AUTHORISED RELEASE CERTIFICATE<br/>EASA FORM 1</b>  |   |                          |                      |                                    | 3. Form Tracking Number<br>71697 / 1          |  |
| 4. Approved Organisation Name and Address<br> <b>Snecma</b><br>SAFRAN Group   |                 | Release Place Name and Address<br><b>Snecma 2, boulevard Martial Valin 75724 PARIS CEDEX 15</b><br>Snecma Services - Site de Villaroche - Rond-point René Havaud - Réau - 77550 MOISSY CRAMAYEL |   |                          |                      |                                    | 5. Work Order/Contract Invoice<br>45083202303 |  |
| 6. Item  | 7. Description  | 8. Part No  | 9. Eligibility*   | 10. Qty                  | 11. Serial/ Batch No | 12. Status / Work                  |   |  |
| 1  | SHAFT, ASSY FAN | 335-006-414-0   | CFM56   | 1                        | DD437075             | MANUFACTURED                       |   |  |
| 13. Remarks<br>Box number 44936550<br><small>This document has been issued according to an electronic signature procedure. Additional checksum characters (last dash and letter or number) to serial number are used for Snecma needs only and they are not recorded on this document.</small> |                 |   |   |                          |                      |                                    |   |  |
| 14. Certifies that the items identified above were manufactured in conformity to :   |                 |   | 19 <input type="checkbox"/> Part-145.A.50 Release to Service <input type="checkbox"/> Other regulation specified in Block 13  |                          |                      |                                    |   |  |
| <input checked="" type="checkbox"/> approved design data and are in condition for safe operation<br><input type="checkbox"/> non-approved design data specified in block 13  |                 |   | Certifies that unless otherwise specified in block 13 the work identified in block 12 and described in block 13 was accomplished in accordance with Part-145 and in respect to that work the items are considered ready for release to service. |                          |                      |                                    |   |  |
| 15. Authorised Signature<br>  |                 | 16. Approval / Authorisation Number<br>FR.21G.0007  |   | 20. Authorised Signature |                      | 21. Certificate / Approval Ref. No |   |  |
| 17. Name<br>MAJKOWSKI Jean-Claude  |                 | 18. Date (dd month yyyy)<br>20 September 2006   |   | 22. Name                 |                      | 23. Date (dd month yyyy)           |   |  |

\*Installer must cross-check eligibility with applicable technical data.

### USER/INSTALLER RESPONSIBILITIES

- Note : 1. It is important to understand that the existence of the document alone does not automatically constitute authority to install the part/component/assembly.
2. Where the user/installer works in accordance with the national regulations of an Airworthiness Authority different from the Airworthiness Authority 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 specified in block 1.
3. Statements 14 and 19 do not constitute installation certification. In all cases the aircraft maintenance record shall contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

G.P.N. # 22209601

2nd Oct 06.

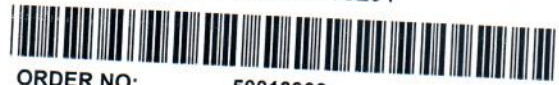
# MRO Repair Order

## USE OEM PARTS ONLY

CFM56-3:58828 - 3000000 - 724893

PART NO: 335-006-414-0:F0301  
 PART DESC: FAN SHAFT ASSY  
 SERIAL NO: DD437075  
 ORDER QTY: 1 EA  
 CLP: 123,500.00 USD  
 DEFECT: 120 SGR To Stores  
 REP REF: 72-22-01

NOT-003000018201



ORDER NO: 50013902  
 STATUS: REL PCNF PRT GMPS MANC PRC SETC  
 SALES ORDER: 610000071 / 001000  
 CUSTOMER: 3000000 - Customer Internal Sales Order  
 ENGINE SER NO: 724893  
 ENGINE VERSION: CFM56-3-B1  
 FMU TYPE:

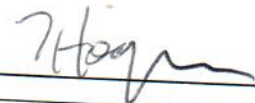
JR 2897 AUTH: JR 2897

| NO.                                   | OPERATION DESCRIPTION<br>MANUAL/SB REFERENCE | WORK CENTRE | DONE BY | AUTH    | TURN NUMBER |
|---------------------------------------|--|-------------|---------|---------|-------------|
| PER ESM P/N CFMI.TP.SM 5 REVISION 70. |  |             |         |         |             |
| 0042                                  | Crimp Nut Marked.                            | MREP        | RO 2621 | RO 2621 | 0000197544  |
| ZI01                                  | Inspection.001.4.C.(3) Repair Method:        |             |         |         |             |
| 0044                                  | Inspect Crimped Nut.                         | MCIN        | KC 2343 | KC 2343 | 0000197546  |
| ZI01                                  | Inspection.001.4.C.(3) Repair Method:        |             |         |         |             |
| 0052                                  | Touch-Up Paint.                              | PNTS        | TD 2760 | DH 2316 | 0000197545  |
| ZI01                                  | Inspection.001.4.B.(1) Repair Method:        |             |         |         |             |
|                                       | Ref: OP# 0150                                |             |         |         |             |
|                                       | FINAL INSPECT                                |             |         |         |             |
|                                       |  |             | LH 2113 | LH 2113 | LH 2113     |

CONDITION (delete as appropriate): Overhauled / Modified / Repaired / Inspected

EASA PART-145.A.50 RELEASE TO SERVICE  
 Certifies that the work identified above was accomplished in accordance with Part-145 and in respect to that work the items are considered ready for release to service.  
 EASA Certificate Ref. No. DE.145.0001.

RETURN TO SERVICE IN ACCORDANCE WITH FAR 43.9  
 This civil aeronautical product has been maintained, altered or modified (as appropriate) in accordance with U.S. Federal Aviation Regulations under FAA certificate No. DLAY225D.

SIGNED:  AUTHORITY: LH 2113 DATE: 26th MAR 2014



CREATED BY: U252430  
 LAST CHANGE BY: U252897  
 NOT-003000018201  
 CREATED: 2012-Oct-19 11:15:15 AM  
 LAST CHANGE: 2013-Sep-03 11:36:01 AM

**Sales Order No.** 610000071  
**Engine Serial No.** 724893

#1 & #2 BEARING SUPPORT  
 CFM56-3 MODIFICATION RECORD SHEET

| SB No.                | DESCRIPTION  | DISASSY/INSPECT      |         |
|-----------------------|--|----------------------|---------|
|                       |  | STATUS               | SIGN    |
|                       | <i>S/N: DD437075</i>   |                      |         |
| 72-497 R6             | Accident involved hardware<br>(Fan Shaft Only)   | <i>N/A to SIM.</i>   | JC 2209 |
| 72-623 R2             | New oil separator duct<br>(Ref. Company Revision 56-025)   | <i>F/E</i>           | JC 2209 |
| 72-683 R0             | Kevlar loop clamps   | <i>N/Recd</i>        | JC 2209 |
| EI CFM-004<br>PartC 3 | Iss Fan Shaft NDT per 72-22-01<br>(Required when fan shaft removed)<br><b>(AD 2002-13-03 Refers)</b> | <i>N/A to Jissy.</i> | JC 2209 |

**SB STATUS CODE (REF.EIN NO.67)**

**AT DISASSEMBLY/INSPECTION:**

F/E - Found Embodied  
 F/N/E - Found Not Embodied  
 N/A - Not Applicable (give reason)  
 I/House - Routed to another workcentre (Disassy only)  
 N/Recd - Part not received at this workcentre  
 NOTE: (R) Indicates repetitive or inspection type SB's

**AT ASSEMBLY:**

E - Embodied  
 N/E - Not Embodied (give reason)  
 N/A - Not Applicable (give reason)

**ENGINE SB STATUS AT DISASSEMBLY/INSPECTION**

It is hereby certified that the SB status of relevant parts on engine disassembly / inspection (delete as appropriate) is as indicated above, and any parts that required embodiment of SB's called, have been routed accordingly.

SIGNED: \_\_\_\_\_

*[Signature]*

AUTHORITY: \_\_\_\_\_

JC 2209

DATE: \_\_\_\_\_

*27<sup>th</sup> SEPT 2012*

## CONSIGNMENT AGREEMENT

This Consignment Agreement (this "**Agreement**") is dated as of January 25, 2016, between RCM Dash 3 Holdco LLC, a Delaware limited liability company ("**Consignor**") and Broward Aviation Services Inc., a Florida corporation ("**Consignee**").

### BACKGROUND

Consignor is the owner of certain aircraft, airframe, and engine parts specified on Schedule A, as amended from time to time by mutual consent (the "**Parts**"). Except as otherwise expressly specified on Schedule A, each Part and any element currently attached to, installed on, or incorporated, associated or delivered hereunder to Consignee therewith and all records in Consignor's possession related thereto shall be subject to this Agreement and referred to as the "**Consigned Goods**."

Consignee is in the business of marketing aircraft engine parts, components, and material substantially similar to the Consigned Goods, and Consignor would like to engage Consignee to market for sale, and to store, manage and repair the Consigned Goods in accordance with the terms and conditions of this Agreement.

### AGREEMENT

#### **Section A.** Engagement; Sales.

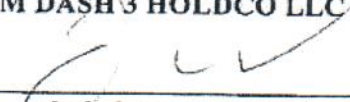
1. Sales. Consignor hereby engages Consignee to receive, inspect, warehouse, maintain in inventory, repair as necessary, market and sell the Consigned Goods in accordance with the terms and conditions of this Agreement. Consignee hereby accepts such engagement and agrees to use its commercially reasonable efforts in its performance hereunder, including the sale of the Consigned Goods. All Consigned Goods sold by Consignee under this Agreement shall be referred to as "**Sold Goods**" and the parties acquiring Sold Goods shall be referred to as "**Customers**." Notwithstanding anything else in this Agreement to the contrary, in no event shall Consignee sell any CFM56 Module owned by Consignor without Consignor's consent.

2. Delivery. Consignee will take possession of the First Inspection Parts (as defined herein) at the facility of Aerothrust Holdings, LLC (the "**Delivery Location**"), or such other location as may be mutually agreed in writing between Consignor and Consignee, on January 25, 2016 (the "**First Delivery Date**"), or such other date as may be mutually agreed in writing between Consignor and Consignee. Consignee hereby acknowledges receipt of all First Inspection Parts at the Delivery Location on the First Delivery Date. The parties agree that Consignee's obligation to provide insurance with respect to the Consigned Goods as contemplated hereunder, including Section A.3 and Section E.2, begins on January 25, 2016. Consignee will take possession of all other Consigned Goods that are not First Inspection Parts (the "**Other Parts**") at Consignee's Facility on the first day when such Other Parts arrive at Consignee's Facility (the "**Second Delivery Date**", and together with the First Delivery Date, the "**Delivery Date**"). Consignee hereby (i) agrees to provide Consignor with written notice on the day when the Second Delivery Date occurs; and (ii) acknowledges receipt of the Other Parts at the Consignee's Facility on the Second Delivery Date.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement effective as of the date first appearing above.

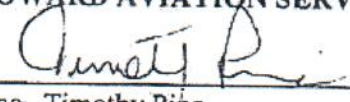
**Consignor:**

**RCM DASH 3 HOLDCO LLC**

By   
Name Josh Green  
Title Director

**Consignee:**

**BROWARD AVIATION SERVICES, INC.**

By   
Name Timothy Rihe  
Title Vice President

**RCM DASH 3 HOLDCO LLC**

(Raven Asset-Based Opportunity Fund I LP.)

Lufthansa Technik Airmotive  
Ireland Inventory Consigned To  
**Broward Aviation Services, Inc.**

March 1, 2016

| PN            | DESCRIPTION      | QTY | COND |
|---------------|------------------|-----|------|
| 335-003-806-0 | SPLITTER FAIRING | 1   | SV   |
| 335-003-806-0 | SPLITTER FAIRING | 1   | SV   |
| 335-003-806-0 | SPLITTER FAIRING | 1   | SV   |
| 335-003-806-0 | SPLITTER FAIRING | 1   | SV   |
| 335-003-822-0 | FAIRING          | 1   | OH   |
| 335-003-822-0 | FAIRING          | 1   | OH   |
| 335-003-822-0 | FAIRING          | 1   | SV   |
| 335-003-822-0 | FAIRING          | 1   | SV   |
| 335-003-822-0 | FAIRING          | 1   | SV   |
| 335-003-822-0 | FAIRING          | 1   | SV   |
| 335-003-905-0 | FLANGE           | 1   | OH   |
| 335-003-905-0 | FLANGE           | 1   | OH   |
| 335-003-905-0 | FLANGE           | 1   | OH   |
| 335-003-905-0 | FLANGE           | 1   | OH   |
| 335-003-905-0 | FLANGE           | 1   | OH   |
| 335-003-905-0 | FLANGE           | 2   | OH   |
| 335-003-905-0 | FLANGE           | 1   | SV   |
| 335-003-905-0 | FLANGE           | 1   | SV   |
| 335-003-905-0 | FLANGE           | 1   | SV   |
| 335-003-905-0 | FLANGE           | 1   | SV   |
| 335-003-905-0 | FLANGE           | 1   | SV   |
| 335-003-905-0 | FLANGE           | 1   | SV   |
| 335-003-905-0 | FLANGE           | 1   | SV   |
| 335-006-405-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-405-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-4140  | FAN SHAFT        | 1   | OH   |
| 335-006-414-0 | FAN SHAFT        | 1   | OH   |
| 335-006-414-0 | FAN SHAFT        | 1   | OH   |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-0 | FAN SHAFT        | 1   | UNK  |
| 335-006-414-1 | FAN SHAFT        | 1   | UNK  |
| 335-006-512-0 | B.2 STATOR       | 1   | SV   |
| 335-006-513-0 | B.2 STATOR       | 1   | OH   |

DELAWARE  
CERTIFICATE OF FORMATION  
OF  
RCM DASH 3 HOLDCO LLC

ARTICLE 1.  
NAME

The name of the limited liability company is RCM Dash 3 Holdco LLC (the "Company").

ARTICLE 2.  
REGISTERED AGENT

The address of the registered office of the Company in the State of Delaware is 2711 Centerville Road, Suite 400, Wilmington, Delaware 19808 in the County of New Castle. The name of the registered agent of the Company is Corporation Service Company.

IN WITNESS WHEREOF, this Certificate has been executed as of this 13<sup>th</sup> day of May, 2014 by the undersigned who affirms that, to the best of his knowledge and belief, the facts stated herein are true.

Raven Asset Based Opportunity Fund I LP  
Managing Member

  
\_\_\_\_\_  
Joshua Green, Authorized Person

**BILL OF SALE**

**[CFM56 Material]**

Pursuant to agreement among Lufthansa Technik Airmotive Ireland Limited ("Seller") and Raven Asset-Based Opportunity Fund I LP ("Purchaser"), Seller does hereby sell and convey to Purchaser, the following property:

CFM56 and other miscellaneous inventory (the "Material"), including all available data, documents, and records pertaining thereto, to have and to hold said property to its own use forever as more particularly described in the attached material listings.

Seller hereby warrants that there is hereby conveyed to Purchaser good legal and beneficial title to said property, free and clear of any liens, claims or encumbrances created by or through Seller.

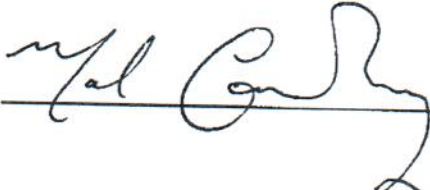
THIS MATERIAL IS CONVEYED BY SELLER TO PURCHASER "AS IS," "WHERE IS," WITH ALL FAULTS. EXCEPT FOR THE WARRANTY OF TITLE HEREIN, SELLER HAS NOT MADE OR WILL BE DEEMED TO HAVE MADE AND EXPRESSLY DISCLAIMS, ANY REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, AS TO THE MARKETABILITY, COMPLIANCE WITH SPECIFICATIONS, AIRWORTHINESS, VALUE, CONDITION, DESIGN, QUALITY, DURABILITY, OPERATION, MERCHANTABILITY OR FITNESS FOR USE OF THE MATERIAL OR ANY PART THEREOF OR FITNESS THEREOF FOR ANY PARTICULAR PURPOSE, OR ARISING OUT OF CUSTOM, USAGE OR TRADE, AS TO THE ABSENCE OF LATENT OR OTHER DEFECTS, WHETHER OR NOT DISCOVERABLE, AS TO THE ABSENCE OF ANY INFRINGEMENT OF ANY PATENT, TRADEMARK OR COPYRIGHT, AS TO THE ABSENCE OF OBLIGATIONS WITH RESPECT TO THE MATERIAL OR ANY PART THEREOF BASED ON STRICT LIABILITY IN TORT, OR ANY OTHER REPRESENTATION OR WARRANTY WHATSOEVER, EXPRESSED OR IMPLIED, IT BEING UNDERSTOOD THAT SUCH PERSONS WILL NOT HAVE RESPONSIBILITY OR LIABILITY WITH RESPECT TO ANY OF THE FOREGOING MATTERS AND THAT ALL RISKS OF ANY NATURE INCIDENT THERETO ARE TO BE BORNE BY PURCHASER.

This Bill of Sale shall be governed by the laws of Ireland.

IN WITNESS WHEREOF, the undersigned has caused this instrument to be executed by its duly authorized officer as of this 19<sup>th</sup> day of June 2014.

for Lufthansa Technik Airmotive Ireland Limited

By:

  
\_\_\_\_\_

Printed Name: Mal Cowley

Title: Head of Production Support

MC  
1106





# Lufthansa Technik

## Airmotive Ireland

Lufthansa Technik Airmotive Ireland Ltd.  
 Naas Road, Rathcoole, Co. Dublin, Ireland.  
 Telephone / Telefon +353 1 401 1111  
 Fax Telefax +353 1 401 1300  
 Website www.ltai.ie

### MATERIAL CERTIFICATION

LEP for attached list LAI 14940 Page 1 to 198.

Customer Purchase Order No 630001015

Material Cert No: LAI14940

| Item No.  | Description | Part No. | Qty      | Serial/Batch No | Status.                |
|-----------|-------------|----------|----------|-----------------|------------------------|
| Per list. | Per list    | Per list | Per list | Per list        | Per list<br>See Note 1 |

**Note 1** Column SLoc indicates the item status 1121 = New

- 1122 = Used Inspected.
- 1123 = Uses Repaired.
- 1124 = Used Overhauled.
- 1125 = Uses Repaired Deviated. (DER)
- 1126 = Used Overhauled Deviated. (DER).

- a) All material supplied against the above Purchase Order was from the stock of Lufthansa Technik Airmotive Ireland Limited.
- b) All NEW material was to the best of our knowledge, manufactured by the Original Equipment Manufacturer or one of their licensees and was not obtained from any Government or Military source.
- c) All used material to the best of our knowledge, has not been subject to severe stress or heat, as in a major failure, accident or fire and was not obtained from any Government or Military source.

  
 QUALITY MANAGER

DATE: 19<sup>th</sup> JUNE 2014

Directors:  
 B. Krüger-Sprengel (German) (Chairman)  
 W. Mörig (German) (Managing)  
 S. Schmuck (German) (Technical)  
 K. Wachholz (German) F. R. Brennan

Registered in Ireland / Registriert in Irland  
 Reg. No. / Reg. Nr. 45195 Dublin



| Line No | Material            | Description           | Sloc | Serial No | Total stock | Engine Type | GRN/SGR Ref  |
|---------|---------------------|-----------------------|------|-----------|-------------|-------------|--|
| 2033    | 335-009-306-0:F0301 | BOOSTER SPOOL         | 1121 |           | 1           | CFM         | DD436394   |
| 2034    | 335-009-306-0:F0301 | BOOSTER SPOOL         | 1124 |           | 1           | CFM         | DD436492   |
| 2035    | 335-006-414-0:F0301 | FAN SHAFT             | 1124 |           | 1           | CFM         | DD437075   |
| 2036    | 335-006-414-0:F0301 | FAN SHAFT             | 1121 |           | 1           | CFM         | DD688070   |
| 2037    | 335-014-511-0:F0301 | FAN DISC              | 1121 |           | 1           | CFM         | DE615536   |
| 2038    | 301-331-322-0:F0301 | LPT STG 3 DISC        | 1121 |           | 1           | CFM         | DE661583   |
| 2039    | 335-009-306-0:F0301 | BOOSTER SPOOL         | 1121 |           | 1           | CFM         | DE690609   |
| 2040    | 335-006-414-0       | FAN SHAFT             | 1121 | DE995961  | 1           | CFM56-3     | DE995961   |
| 2041    | 9514M71P07          | HPT AFT SHAFT         | 1121 |           | 1           | CFM         | DED23835   |
| 2042    | 9514M71P07          | HPT AFT SHAFT         | 1121 | DED23835  | 1           | CFM56-3     | DED23835   |
| 2043    | 1864M91P02:07482    | HPT AFT SHAFT         | 1121 |           | 1           | CFM         | DED83011   |
| 2044    | MIL-I-003190        | SLEEVING              | 1121 |           | 1           | CFM56-3     | E 199530   |
| 2045    | AS12843:U1653       | CLIP V                | 1121 |           | 53          | CFM         | E178005  |
| 2046    | 649-393-153-0       | PACKING               | 1121 |           | 1           | CFM56-3     | E179957  |
| 2047    | S8154-76C003:59364  | WASHER                | 1121 |           | 305         | CFM         | G 10020901, G 14446501, G T 0023216, G 14400001, G 9847801, G 14094701 |
| 2048    | S8154-76C003:59364  | WASHER                | 1121 |           | 305         | CFM         | G 10020901, G 14446501, G T 0023216, G 14400001, G 9847801, G 14094701 |
| 2049    | 335-080-401-0:F0301 | SPACER                | 1121 |           | 10          | CFM         | G 040211   |
| 2050    | 332A1024-5:81205    | TUBE ASSY V           | 1121 |           | 1           | CFM         | G 10311501   |
| 2051    | S8154-376C062:7X000 | WASHER @              | 1121 |           | 95          | CFM         | G 10322801   |
| 2052    | 1317M63P02:07482    | MANIFOLD -STG.5 BLEED | 1121 |           | 2           | CFM         | G 10325101, S 242245501  |
| 2053    | 332A1034-16:81205   | TUBE                  | 1121 |           | 2           | CFM         | G 10345201   |
| 2054    | AS137-08-0094:78570 | Bracket               | 1122 |           | 2           | CFM         | G 10399401, G 1940301  |
| 2055    | 332A1907-13:81205   | BRACKET               | 1121 |           | 4           | CFM         | G 10563001, G 10731101, G 9548401, S 10495501                          |
| 2056    | 332A1907-13:81205   | BRACKET               | 1121 |           | 4           | CFM         | G 10563001, G 10731101, G 9548401, S 10495501                          |
| 2057    | 332A1324-29:81205   | bracket               | 1121 |           | 3           | CFM         | G 10563401, G 8893801, G 9166001                                       |
| 2058    | 332A1903-71:81205   | TRAY ASSY             | 1121 |           | 1           | CFM         | G 10563501   |
| 2059    | 332A1024-8:81205    | TUBE                  | 1121 |           |             | CFM         | G 10568101   |
| 2060    | 332A1070-34:81205   | tube                  | 1121 |           | 5           | CFM         | G 10568201, G 5868701, G 10729201                                      |
| 2061    | 332A1070-38:81205   | tube                  | 1121 |           | 1           | CFM         | G 10569001   |

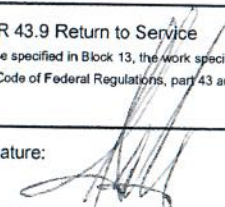
|   |  |   |
|---|--|---|
| 1. Approving Authority<br>FAA / UNITED STATES | <h2 style="margin: 0;">AUTHORISED RELEASE CERTIFICATE</h2> <h3 style="margin: 0;">FAA FORM 8130-3, AIRWORTHINESS APPROVAL TAG</h3> | 3. Form Tracking Number.<br><br><b>491846</b> |
|---|--|---|

|  |  |   |
|--|--|---|
| 4. Organization Name and Address<br><br>FAA Repair station certificate no : DM5Y810M | CHROMALLOY HOLLAND B.V.<br>SIRIUSSTRAAT 55, 5015 BT TILBURG<br>THE NETHERLANDS<br>TELEPHONE (+31)-13-5328400<br>FAX (+31)-13-5432833<br>SITA SPLTECR<br>COMM.REGISTER TILBURG NR. 18030901 | Page 1 of 1<br>5. Work Order/Contract/Invoice Number:<br><b>984/1</b><br><br>CH Joborder : CMS 249510 / 1 |
|--|--|---|

| 6. Item: | 7. Description: | 8. Part Number: | 9. Eligibility:* | 10. Quantity: | 11. Serial/Batch Number: | 12. Status / Work: |
|----------|-----------------|-----------------|------------------|---------------|--------------------------|--------------------|
| 1.       | Booster spool   | 335-009-306-0   | N/A              | 1             | DC093846-0               | OVERHAULED         |

13. Remarks: Maintenance documents used to define the status/work: overhauled to Chromalloy Gas Turbine LLC Repair Station Overhaul Procedure No. 3.8.1 and maintenance performed:  
 CFM International CFM56-3 Engine Manual CFMI-TP.SM.5 Rev. 69. Dated 15 Dec 2011  
 SM 72-21-04 Insp All Inspection  
 SM 72-21-04 Rep 001 Replacement of hi-lok fasteners and/or sealing flange  
 C.S.N.: 08764 / T.S.N.: 10977 / Part from ESN 722169.

Chromalloy Holland B.V. certifies that the work specified in blocks 12 and 13 was performed in accordance with EASA Implementation Rule Part 145 approval, and in respect to that work the aircraft component is considered ready for release to service under EASA approval number: NL.145.1148

|  |                                   |  |   |
|--|-----------------------------------|--|---|
| 14. Certifies that the items identified above were manufactured in conformity to:<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 12 |                                   | 19. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 13<br><small>Certifies that unless otherwise specified in Block 13, the work specified 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</small> |   |
| 15. Authorized Signature:  | 16. Approval / Authorization No.: | 20. Authorized Signature:<br>   | 21. Approval/Certificate No:<br><b>DM5Y810M</b> |
| 17. Name (Typed or Printed):   | 18. Date(m/d/y):                  | 22. Name (Typed or Printed):<br>Pala, S. (R124)  | 23. Date(m/d/y):<br>Feb-15-2012                 |

**USER / INSTALLER RESPONSIBILITIES**

It is important to understand that the existence of the Document alone does not automatically constitute authority to install the part/component/assembly.

Where the user/installer works 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.

Statements in Blocks 14 and 19 do not constitute installation certification. In all cases the aircraft maintenance records must contain an installation certification issued in accordance with the national regulation by the user/installer before the aircraft may be flown.

|                            |   |  |
|----------------------------|---|--|
| 1 国家 Country<br>P.R. CHINA | 2. 中国民用航空总局 CAAC <input type="checkbox"/> 符合性 Conformity <input checked="" type="checkbox"/> 适航性 Airworthiness<br><b>批准放行证书/适航批准标签</b><br>AUTHORIZED RELEASE CERTIFICATE / AIRWORTHINESS APPROVAL TAG | 3 证书编号<br>Certificate Ref. No.<br>491846 |
|----------------------------|---|--|

|   |  |
|---|--|
| 4 单位 Organization<br>CHROMALLOY HOLLAND B.V.<br>SIRIUSSTRAAT 55, 5015BT, TILBURG<br>THE NETHERLANDS | 5 工作单/合同单/货单<br>Work Order / Contract / Invoice<br>984/1<br><br>CH Joborder : CMS 249510 / 1 |
|---|--|

| 6 序号<br>Item | 7 内容<br>Description | 8 件号<br>Part No. | 9 适用性<br>Eligibility | 10 数量<br>Qty | 11 系列号/批号<br>Serial/Batch No. | 12 产品状态<br>Status/Work |
|--------------|---------------------|------------------|----------------------|--------------|-------------------------------|------------------------|
| 1.           | Booster spool       | 335-009-306-0    | CFM56-3              | 1            | DC093846-0                    | OVERHAULED             |


13 备注 Remarks: Maintenance documents used to define the status/work: overhauled to Chromalloy Gas Turbine LLC Repair Station Overhaul Procedure No. 3.8.1 and maintenance performed: CFM International CFM56-3 Engine Manual CFMI-TP.SM.5 Rev. 69. Dated 15 Dec 2011

|             |      |     |   |
|-------------|------|-----|---|
| SM 72-21-04 | Insp | All | Inspection  |
| SM 72-21-04 | Rep  | 001 | Replacement of hi-lok fasteners and/or sealing flange |

C.S.N.: 08764 / T.S.N.: 10977 / Part from ESN 722169.

~~14 新产品 New Parts  
兹声明上述产品除第 13 项的其它规定以外, 已按照上述国家适航条例进行制造/检查, 并且该产品 (出口产品) 符合经批准的型号设计资料和进口国提出的专用要求。  
Certifies that the Part(s) identified above except as otherwise specified in block 13 was (where) manufactured/inspected in accordance with the airworthiness regulations of the stated country and for in the case of parts to be exported with the approved design data and with the notified special requirements of the importing country.~~

15 使用过的产品 Used Parts  
兹声明上述产品除第 13 项的其它规定以外, 已按照上述国家适航条例和进口国通知殊要求进行了工作, 该产品处于安全可用状态可以批准放行使用。  
Certifies tat the work specified above except as specified in block 13 was carried out in accordance with the airworthiness regulations of the stated country and the notified special requirements of the importing country and in respect to that work, the part(s) is (are) in condition of safe operation and considered ready for release to service. (over)

|  |                                |
|--|--------------------------------|
| 16 批准人签名<br>Signature<br> | 18 批准日期<br>Date<br>15-Feb-2012 |
| 17 批准人姓名 (打印的)<br>Name (Printed)<br>Pala, S. (R124)  |                                |

19 中国民航总局授权  
Issued by or on behalf of the CAAC  
  
APPROVAL NUMBER: F03100201

## 批准放行证书/适航批准标签

AUTHORIZED RELEASE CERTIFICATE/AIRWORTHINESS APPROVAL TAG

## 使用者/安装者职责

USER/INSTALLER RESPONSIBILITIES

- (1) 必须明确：本文件并不批准零件/组件/部件可以装到有关产品上。
- (2) 当使用者/安装者使用的是所在国适航当局的条例，而不是本表第1项中所指国家适航当局的条例时，使用者/安装者必须保证所在国的适航当局能接受所指国家适航当局批准出口的零件/组件/部件。
- (3) 表中第14项、第15项的陈述，并不说明本表是安装批准。在所有情况下，航空器使用前，航空器使用者/安装者应把按本国适航条例颁发的安装批准放入维修记录中。

- (1) It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.
- (2) Where the user/installer works 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 ensure that his/her Airworthiness Authority accepts parts/components/assemblies from the Airworthiness Authority of the country specified in block 1.
- (3) Statements 14 and 15 do not constitute installation certification. In all cases the aircraft maintenance record must contain an installation certification issued in accordance with the national regulation by the user/installer before the aircraft may be flown.

ANY MATERIAL RETURNED WITHOUT PRIOR AUTHORIZATION (RMA) WILL BE SUBJECT TO A 15% RESTOCKING FEE. NO MATERIAL WILL BE ACCEPTED AFTER 30 DAYS UNLESS FOR WARRANTY REPAIR CONSIDERATIONS!

Original

SHIPPING INFORMATION

WEIGHT: 0  
PIECES: 0  
REQ DATE: 02/05/2018  
CARRIER:  
AIRWAY BILL:  
SHIPPED BY:

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE MAY BE REGULATED BY THE DEPARTMENT OF STATE, COMMERCE, OR ANY OTHER FEDERAL AGENCY. IT IS THE SOLE RESPONSIBILITY OF THE ABOVE REFERENCED CUSTOMER TO ADHERE TO ALL FEDERAL REGULATIONS AND OBTAIN AN EXPORT LICENSE IF REQUIRED. DIVERSION OF THIS SHIPMENT CONTRARY TO UNITED STATES LAW IS PROHIBITED.


| LN | PARTNO        | SERIAL   | CN | KEYWORD | UM | QTY |
|----|---------------|----------|----|---------|----|-----|
| 1  | 335-009-306-0 | DC093846 | O  | SPOOL   | EA | 1   |

CUST # 002477  
DOC TYPE: OUTRIGHT ORDER  
CUST CONTACT: JASON FORTUNE  
SALES REP: William Braun  
ORDER # 0153195  
ORER DATE: 02/02/2018

**Bill To**

AEROTECHNIC (PTY) LTD  
50 RIEBEEK STREET  
UNIT 4, 3RD FLOOR  
8001, CAPE TOWN  
CAPE TOWN SOUTH AFRICA  
8001

Kellstrom Aerospace  
Kellstrom Commercial Aerospace, Inc., dba Kellstrom Aerospace  
450 Medinah Road, Roselle, IL 60172 USA.



**Ship To**

AEROTECHNIC LTD  
23 WELLINGTON STREET  
RHODEFIELD  
KEMPTON PARK  
JOHANNESBURG GAUTENG 1619  
ZAF

**Packing Slip**

SHIPPING NUMBER: 0153195002  
SHIP DATE: 02/05/2018  
CUSTOMER REF NO: PO-JNB028371  
PAYMENT TERMS: NET 30 DAYS

**PART OR MATERIAL CERTIFICATION FORM**

2. **Seller's Name:**



3. **Reference No.**

O153195 -002 -001

4. **Organization** **Kellstrom Commercial Aerospace, Inc**

**Address:**

dba Kellstrom Aerospace  
450 Medinah Road  
Roselle, IL 60172 USA

**Phone#:**

Ph 847-233-5800

**FAX#:**

Fx 847-233-5900

**Status:**

Accredited Parts Distributor  
ISO 9001 and AS9120 Certified  
FAA AC00-56 Accredited

5A. **Contract No. (Seller)**

O153195

5B. **Contract No. (Buyer)**

PO-JNB028371

| 6. Item | 7. Description | 8. PartNo./ Manufacturer | 9. Eligibility | 10. Qty. | 11. Serial / Batch No | 12. Status/Work |
|---------|----------------|--------------------------|----------------|----------|-----------------------|-----------------|
| 1       | SPOOL          | 335-009-306-0<br>SNECMA  | VARIOUS        | 1        | DC093846              | OVERHAULED      |

13A. **Remarks**

"BASED ON THE INFORMATION PROVIDED BY THE SUPPLIER LISTED IN BLOCK #13B, THE ABOVE REFERENCED MATERIAL WAS NOT OBTAINED FROM ANY GOVERNMENT OR MILITARY SOURCE AND WAS NOT SUBJECTED TO SEVERE STRESS OR HEAT (AS IN A MAJOR ENGINE FAILURE OR FIRE) OR IMMERSSED IN SALT WATER."

TRACED TO: MERPATI

ESN 722169

TSN: 10,977

CSN: 8,764

5. **Obtained From:**

CHROMALLOY MAT. SOLUTIONS, LLC  
REF KELLSTROM PO#: KBEG146651

13C. **Last Cert. Agency:**

CHROMALLOY

491846

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 to an industry or commercial standard.

18. **Used, Repaired, Overhauled or New Surplus Parts Verification:**

The following signature attests that the documentation specified above or attached is accurate with regard to the item(s) described.

15. **Signature**

19. **Signature**

16. **Name**

17. **Date**

20. **Name**

21. **Date**

Dave Artus

02/05/18

# Chromalloy Material Solutions

391 Industrial Park  
San Antonio, TX 78226  
USA

## Packing Slip

Original

Invoice #: 2199

Invoice Date 4/30/2012

Time: 1:58:30 PM

Page: 1

**To:**

**KELLSTROM INDUSTRIES**  
3701 S. FLAMINGO ROAD  
MIRAMAR, FL 33027  
United States of America  
ATTN: EMILIO DELGADO  
Ph: (954) 538-2143

**Ship To:**

**KELLSTROM INDUSTRIES**  
3701 S. FLAMINGO ROAD  
MIRAMAR, FL 33027  
United States of America

Cust. PO#:KBEG146651

Terms:NET 30

Ship Via: FED EX GROUND

Ship Via Acc 229132768

Order Date:4/27/2012

# of Items:4

# of Boxes:

Weight:

Prepared By:

Sales Order:101287

Ship Log # 1

Ship Order:

Customer #:K11

VAT #:

Cust VAT #:

Ship Date:4/30/2012

Buyer:EMILIO DELGADO

FOB: SHIPPING POINT

AWB: 793510606819, 6933

Shipment:

WO #:

| Item | Part Number/Description   | Shipped | BackOrd | CD |  |  | Unit Price | UOM | Total Amt |
|------|---|---------|---------|----|--|--|------------|-----|-----------|
| 1    | 335-009-306-0 Spool Booster<br>Serial #: DC093846-0<br>Loc/Whse: SBIN (D-1-E) >MS NEWNAN  | 1       | 0       | OH |  |  |            | -   |           |
| 3    | 335-006-414-0 Shaft Fan Assy<br>Serial #: DC329321-W<br>Loc/Whse:SBIN (D-1-EE) >MS NEWNAN | 1       | 0       | OH |  |  |            | -   |           |
| 8    | 305-056-116-0 Conical Support<br>Serial #: DA703636<br>Loc/Whse: SBIN (D-1-G) >MS NEWNAN  | 1       | 0       | OH |  |  |            | -   |           |
| 9    | 301-330-067-0 Shaft LPT<br>Serial #: LA094156<br>Loc/Whse: SBIN (D-1-F) >MS NEWNAN        | 1       | 0       | OH |  |  |            | -   |           |

All Returns Must have a valid RMA # issued by CMS. This RMA # must be written on the outside of the box in LARGE BOLD LETTERING with a copy of the RMA paperwork inside the box.

Shipping:

Return Shipments under 70lbs. Via FedEx Saver and over 70lbs. Via FedEx Freight our account #

**MAIL CHECK TO:**

Chromalloy Gas Turbine LLC  
C/O: Chromalloy Engine Services  
P.O. Box 844760  
Dallas, TX 75284-4760

WIRE PAYMENTS:(add \$25 wire fee to payment)

Bank of America

Chromalloy Material Solutions certifies that all material supplied against this order, to the best of our knowledge and based upon the 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, such as catastrophic engine failure, fire or accident, and have not been immersed in salt water of otherwise exposed to corrosive agents outside normal operation.

**Special Instructions:**

# Chromalloy Material Solutions

391 Industrial Park  
 San Antonio, TX 78226  
 USA

## Packing Slip

Original

**Invoice #: 2199**

Invoice Date 4/30/2012

Time: 1:58:31 PM

Page: 2

**To:**  
**KELLSTROM INDUSTRIES**  
 3701 S. FLAMINGO ROAD  
 MIRAMAR, FL 33027  
 United States of America  
**ATTN: EMILIO DELGADO**  
 Ph: (954) 538-2143

**Ship To:**  
**KELLSTROM INDUSTRIES**  
 3701 S. FLAMINGO ROAD  
 MIRAMAR, FL 33027  
 United States of America

|                              |                            |                                |                               |
|------------------------------|----------------------------|--------------------------------|-------------------------------|
| <b>Cust. PO#:</b> KBEG146651 | <b>Terms:</b> NET 30       | <b>Ship Via:</b> FED EX GROUND | <b>Ship Via Acc</b> 229132768 |
| <b>Order Date:</b> 4/27/2012 | <b># of Items:</b> 4       | <b># of Boxes:</b>             | <b>Weight:</b>                |
| <b>Prepared By:</b>          | <b>Sales Order:</b> 101287 | <b>Ship Log #:</b> 1           | <b>Ship Order:</b>            |
| <b>Customer #:</b> K11       | <b>VAT #:</b>              | <b>Cust VAT #:</b>             | <b>Ship Date:</b> 4/30/2012   |
| <b>Buyer:</b> EMILIO DELGADO | <b>FOB:</b> SHIPPING POINT | <b>AWB:</b> 793510606819, 6933 | <b>Shipment:</b>              |
| <b>WO #:</b>                 |                            |                                |                               |

| Item | Part Number/Description | Shipped | BackOrd | CD | Unit Price | UOM | Total Amt |
|------|-------------------------|---------|---------|----|------------|-----|-----------|
|------|-------------------------|---------|---------|----|------------|-----|-----------|

New York, NY 10001  
 WIRE ABA# 026 009 593.  
 SWIFT: BOFAUS3N  
 Credit: Chromalloy Gas Turbine LLC  
 Account# 483 034 663 331

Chromalloy Material Solutions certifies that all material supplied against this order, to the best of our knowledge and based upon the 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, such as catastrophic engine failure, fire or accident, and have not been immersed in salt water or otherwise exposed to corrosive agents outside normal operation.

**Special Instructions:**

Original

## PART OR MATERIAL CERTIFICATION FORM

ATA SPECIFICATION 106

2. Seller's Name:

Chromalloy Material Solutions

3. Reference #:

101287

4. Organization:

Chromalloy Material Solutions

Phone#:

Fax#:

SITA/Wire Code:

Status:

Address:

391 Industrial Park  
San Antonio, TX 78226  
USA

5A. Seller's Contract 2199

5B. Buyer's PO #: KBEG146651

| 6.Item | 7. Description | 8. Manufacturer & Part Number | 9.App Code | 10.Qty | 11.Serial/Batch | 12.Cond |
|--------|----------------|-------------------------------|------------|--------|-----------------|---------|
| 1      | Spool Booster  | 335-009-306-0<br>GE-CFMI      | CFM56-3    | 1      | DC093846-0      | OH      |

13A. Remarks

Chromalloy Material Solutions certifies that all material supplied against this order, to the best of our knowledge and based upon the 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, such as catastrophic engine failure, fire or accident, and have not been immersed in salt water or otherwise exposed to corrosive agents outside normal operation.

13B. Obtained From:

Chromalloy Holland B.V.

13C. Last Certificated Agency:

CHROMALLOY HOLLAND B.V.

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 TO AN INDUSTRY COMMERCIAL STANDARD.

18. Used, Repaired or Overhaul Parts Verification:

THE FOLLOWING SIGNATURE ATTESTS THAT THE DOCUMENTATION SPECIFIED ABOVE OR ATTACHED IS ACCURATE WITH REGARD TO THE ITEM(S) DESCRIBED.

15. Signature:

19. Signature:



16. Name:

17. Date: 4/30/2012

20. Name:

21. Date 4/30/2012



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.

# INVENTORY CONSIGNMENT AGREEMENT

This INVENTORY CONSIGNMENT AGREEMENT (the "Agreement") is made and entered into this 31st day of October, 2011 (the "Effective Date"), by and between **Brickell Asset Management X, LLC**, a limited liability company organized under the laws of the State of Florida (hereinafter called "Consignor"), and **Chromalloy Material Solutions, LLC**, a limited liability company organized under the laws of the State of Delaware (hereinafter called "Consignee").

WHEREAS, Consignee will take possession of one (1) CFM International CFM56-3B2 aircraft engine, manufacturer's serial number 722169 and engine records in possession of the Consignor.


WHEREAS, Consignor desires to consign such material to Consignee for sale in the surplus market, therefore;

In consideration of the mutual agreements, covenants and promises hereinafter contained, the parties hereto agree as follows:

## SECTION 1 MATERIAL TO BE CONIGNED.

- 1.1 Consignor hereby agrees to consign to Consignee one (1) CFM International CFM56-3B2 aircraft engine, manufacturer's serial number 722169 as more specifically described in Exhibit B attached hereto for sale by Consignee (the "Material"), and Consignor hereby grants to Consignee the exclusive right to disassemble, market and sell such Material.

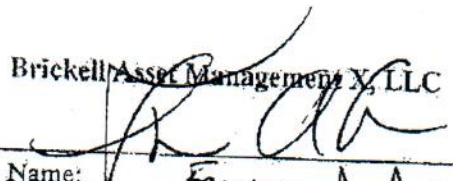
## SECTION 2 DELIVERY OF MATERIAL AND HISTORICAL INFORMATION.

- 2.1 Consignor will deliver the engine to Consignee at Consignee's facility in San Antonio, Texas. Consignee shall acknowledge its acceptance of the delivery of the engine on consignment pursuant to this Agreement (the "Delivery") by executing and delivering to the Consignor the Material Delivery Receipt in the form of Exhibit A attached hereto. Consignee will then have control of the Material along with all relevant records and documents required to sell the Material in the surplus market.
- 2.2 The Material being accepted by Consignee under this Agreement is hereby acknowledged by both parties to be only that Material specified in Exhibit B attached hereto.
- 

IN WITNESS WHEREOF, the parties have caused this Inventory Consignment Agreement to be executed by their respective officers or agents thereunto duly authorized.

**CONSIGNOR:**

Brickell Asset Management X, LLC

  
Name: FRANCIS A. AWANWA

Title: Managing Member

**CONSIGNEE:**

Chromalloy Material Solutions, LLC

  
Name: TODD C. JENSEN

Title: V.P. - MATERIAL SOLUTIONS

**WARRANTY BILL OF SALE (MSN 722169)**

For and in consideration of the sum of Ten Dollars (\$10.00) and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Cjct, Inc. ("Seller"), owner of the full legal and beneficial title of the following:

One (1) CFM56-3B2 engine, bearing manufacturer's serial number 722169, together with all maintenance records associated therewith that are in the possession of Seller (collectively, "Engine")

Seller does hereby sell, grant, transfer and deliver full legal and beneficial title, title rights and interest in and to the Engine unto Brickell Asset Management X, LLC ("Buyer"), and its successors and assigns, to have and to hold the Engine forever.


Seller hereby warrants to Buyer, its successors and assigns, that is hereby conveyed to Buyer on the date hereof, good and marketable title, free and clear of any and all liens, claims and encumbrances of any nature whatsoever.

IN WITNESS WHEREOF, Seller has caused this Warranty Bill of Sale to be executed by its respective officer this 21 day of October 2011.

By:

Name:

Title:

  
\_\_\_\_\_  
JEREMY G. TURNER  
ASSIST SEC

AIRCRAFT LEASE AGREEMENT

Dated as of July 9, 2007

BETWEEN

CJET, INC.

as Lessor

and

PT (PESERO) MERPATI NUSANTARA AIRLINES  
as Lessee

Concerning:

One (1) used Boeing 737-301 Aircraft bearing Manufacturer's Serial Number 23931 and  
US registration number N586US

THIS AIRCRAFT LEASE AGREEMENT (THIS "LEASE") HAS BEEN EXECUTED IN SEVERAL COUNTERPARTS. TO THE EXTENT, IF ANY, THAT THIS LEASE CONSTITUTES CHATTEL PAPER (AS SUCH TERM IS DEFINED IN THE UNIFORM COMMERCIAL CODE AS IN EFFECT IN ANY APPLICABLE JURISDICTION), NO SECURITY INTEREST HEREIN MAY BE CREATED THROUGH THE TRANSFER OR POSSESSION OF ANY COUNTERPART HEREOF OTHER THAN THE ORIGINAL COUNTERPART. THE COUNTERPART TO BE DEEMED THE ORIGINAL COUNTERPART SHALL BE THE COUNTERPART THAT CONTAINS THE RECEIPT THEREFOR EXECUTED BY THE LENDER ON THE SIGNATURE PAGE THEREOF.

[DUPLICATE  
THIS IS NOT THE "ORIGINAL" COUNTERPART.]

WASH14904854.1

IN WITNESS WHEREOF, Lessor and Lessee have each caused this Lease to be duly executed by their authorized officers of the date first above written.

CHRYSLER INC. Lessor

As to:

PT. PENERBANG MERDEKA NUSANTARA AIRLINES, as

Lessee

By:

LICIASI NINGRAN

As to:

PRESIDENT DIRECTOR

"Aircraft Records" shall mean copies of all historical maintenance and other records delivered with the Aircraft for work accomplished prior to the Delivery Date and current maintenance and other records for work accomplished subsequent to the Delivery Date including, but not limited to, documents, manuals, data, overhaul records, life limited part traceability to "zero time since new", logbooks, Aircraft and Engine delivery documents, serviceable parts tags, FAA forms, modification records, inspection records, and all other documentation pertaining to the Aircraft, Engines and Parts.

"Aircraft Documents" shall mean the terms identified in Appendix II B. to the Lease Supplement and delivered to Lessee on the Delivery Date and such other items, which may be acquired or prepared by Lessee relating to its use, operation and maintenance of the Aircraft during the Term of this Lease, including the Aircraft Records, all of which shall be maintained in the English language. Lessee acknowledges that it is in possession of all the Aircraft Documents identified in Appendix II B.

"Aircraft" shall mean the Airframe, the Engines and, where applicable, shall also include the Aircraft Documents and all Capital Improvements, which may be made to, installed on or incorporated into the Aircraft, including, but not limited to, those required pursuant to any Airworthiness Directive.

"Agreed Value" shall mean \$US1,050,000.

Unless the context requires otherwise, the following terms shall have the following meanings for all purposes of this Lease and such meanings shall be equally applicable to both the singular and the plural forms of the terms defined:

DEFINITIONS

I.

NOW, THEREFORE, in consideration of the mutual covenants herein set forth, Lessor and Lessee hereby agree as follows:

WHEREAS, Lessee desires to lease from Lessor and Lessor is willing to lease to Lessee said aircraft upon the terms and conditions set forth in this Lease;

and  
WHEREAS, Lessor owns the Boeing 737-301 aircraft more particularly described below;

W I T N E S S E T H

THIS AIRCRAFT LEASE AGREEMENT, dated as of the 9th day of July, 2007 (this "Lease"), between CJBT, INC., a Delaware corporation ("Lessor") and PT (PESERO) MERPATI NUSANTARA AIRLINES, an Indonesian corporation ("Lessee").

AIRCRAFT LEASE AGREEMENT



**NON-INCIDENT STATEMENT (MSN 722169)**

Date: October 10, 2011

RE: One (1) CFM56-3B2 engine, bearing manufacturer's serial number 722169 (the "Engine").

Dear Sir / Madam:

PT. Merpati Nusantara, as operator of the above-referenced Engine, hereby certifies that the Engine has not been subjected to extreme stress or heat; has not been involved in an accident, incident or fire which resulted in the operator or the manufacturer deeming the Engine as unacceptable for continued usage in service; and has not been utilized in a military application; does not contain parts obtained from a military or unapproved source and has not been immersed in salt water or exposed to any other corrosive agent.

The Engine was last operated on March 12, 2009. The Engine total times and cycles since new are as follows:

TSN: 52203.12;

CSN: 33693.

Sincerely,

PT. Merpati Nusantara

By 

Name: Wilmar Manurung

Title : SVP. Maintenance & Engineering Quality Assurance

**BILL OF SALE (23931)**

For and in consideration of the sum of Ten United States Dollars (US\$10) and other valuable consideration, the receipt and sufficiency of which is hereby conclusively acknowledged, **WELLS FARGO BANK NORTHWEST, NATIONAL ASSOCIATION**, a national banking association organized and validly existing under the laws of the United States of America with its principal place of business at 299 South Main Street, 12th Floor, Salt Lake City, MAC: U1228-120, Utah 84111, not in its individual capacity but solely as owner trustee (together with its successors and assigns, the "**Seller**"), owner of full legal and beneficial title to the aircraft and engines described below, together with all appliances, components, parts, instruments, appurtenances, accessories, furnishings and other equipment of whatever nature incorporated or installed thereon as of the date hereof and all Aircraft Documentation relating thereto (hereinafter referred to, collectively, as the "**Aircraft**");

|                 | <u>Manufacturer</u>     | <u>Model &amp; Configuration</u> | <u>Manufacturer's Serial No.</u> |
|-----------------|-------------------------|----------------------------------|----------------------------------|
| <u>Airframe</u> | The Boeing Company      | 737-301                          | 23931                            |
| <u>Engines</u>  | CFM International, Inc. | CFM56-3B2                        | 723187                           |
|                 | CFM International, Inc. | CFM56-3B2                        | 722169                           |

does hereby sell, grant, transfer and deliver all its right, title and interest in and to the Aircraft unto **CJET, INC.**, a Delaware corporation with its principal place of business at 5718 Westheimer Road, Suite 1700, Houston, Texas 77057 (the "**Purchaser**"), to have and to hold the Aircraft forever.

Seller hereby represents and warrants that it has, and on the date hereof transfers to Purchaser, good and marketable title to the Aircraft, free and clear of all Liens, and Seller does hereby agree that it will warrant and defend such title against all claims and demands whatsoever. The representations and warranties of Seller contained in Section 9 of the below-described Purchase Agreement are true and accurate on and as of the date hereof.

This Bill of Sale is being delivered pursuant to that certain Purchase Agreement (23931) dated as of December \_\_, 2006 (the "**Purchase Agreement**") between Seller and Purchaser. Capitalized terms used but not defined herein shall bear the meanings assigned such terms in the Purchase Agreement.

This Bill of Sale is deemed to be delivered in, and shall be governed by and construed in accordance with the laws of, the State of New York, without regard to principles of conflict of laws (other than Sections 5-1401 and 5-1402 of the New York General Obligations Law).

[Remainder of Page Intentionally Left Blank]

[Warranty Bill of Sale (23931)]

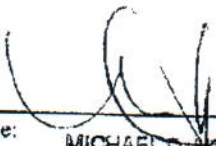
IN WITNESS WHEREOF, Seller has caused this Bill of Sale to be duly executed as of this \_\_\_ day of December, 2006.

WELLS FARGO BANK NORTHWEST,  
NATIONAL ASSOCIATION, not in its  
individually capacity but solely as owner  
trustee, as Seller

By: \_\_\_\_\_

Name:

Title:

  
MICHAEL D. HOGGAN  
VICE PRESIDENT



**POWERPLANT LIFE LIMITED COMPONENT**

**ENGINE TYPE: CFM56-3B2  
SERIAL NUMBER: 722169  
LAST OPERATOR:Merpati**

| <b>DESCRIPTION</b> | <b>PART NUMBER</b> | <b>SERIAL NUMBER</b> |
|--------------------|--------------------|----------------------|
| Booster Spool      | 335-009-306-0      | DC093846             |

**TOTAL HOURS**

10,977

**TOTAL CYCLES**

8,764

**CYCLES REMAINING BY CATEGORY**

|              |               |
|--------------|---------------|
| <b>CAT A</b> | <b>21,236</b> |
| <b>CAT B</b> | <b>21,236</b> |
| <b>CAT C</b> | <b>21,236</b> |

THE SUPPORTING DOCUMENTATION FOR THIS LIFE LIMITED COMPONENT IS ATTACHED.  
HISTORY OF COMPONENT IS BASED ON RECORDS SUPPLIED BY LAST  
OPERATOR/OWNER.

PREPARED BY: \_\_\_\_\_

  
Jessica Garrido

Date: \_\_\_\_\_

April 20, 2012

# CHROMALLOY

## LIFE LIMITED PART SUMMARY

**DESCRIPTION:** BOOSTER SPOOL

**PART NUMBER:** 335-009-306-0

**SERIAL NUMBER:** DC093846

**TOTAL TIME:** 10,977

**TOTAL CYCLES:** 8,764

**CR CAT A:** 21,236

**CR CAT B:** 21,236

**CR CAT C:** 21,236

### ADDITIONAL INFORMATION

**ENGINE REMOVED FROM:** 722169  
**ENGINE TYPE:** CFM56-3  
**LAST OPERATOR:** MERPATI

THE DATA PROVIDED HEREIN IS BASED ON DOCUMENTATION PROVIDED TO  
CHROMALLOY BY THE PREVIOUS OWNERS AND OPERATORS

# CHROMALLOY

IMARY

|               |               |              |        |
|---------------|---------------|--------------|--------|
|               | BOOSTER SPOOL | TOTAL TIME   | 10,977 |
| PART NUMBER   | 335-009-306-0 | TOTAL CYCLES | 8,764  |
|               |               | CR CAT A:    | 21,236 |
| SERIAL NUMBER | DC093846      | CR CAT B:    | 21,236 |
|               |               | CR CAT C:    | 21,236 |

|                 |          | PART TIME AT<br>INSTALLATION | 0       | PART CYCLES AT<br>INSTALLATION | 0      |                      |       |
|-----------------|----------|------------------------------|---------|--------------------------------|--------|----------------------|-------|
| DATE INSTALLED: | 08/05/02 | ENGINE MODEL:                | CFM56-3 | TPT AT INSTALLATION:           | 0      | TPC AT INSTALLATION: | 0     |
| DATE REMOVED:   | 03/13/09 | ENGINE SERIAL NUMBER:        | 722169  | TPT AT REMOVAL:                | 10,977 | TPC AT REMOVAL:      | 8,764 |
|                 |          | USAGE:                       |         |                                | 10,977 |                      | 8,764 |

THE DATA PROVIDED HEREIN IS BASED ON DOCUMENTATION PROVIDED TO CHROMALLOY BY THE PREVIOUS OWNERS AND OPERATORS.



x

Chromalloy Material Solutions  
Component Control Asset Manager  
Date: November 7, 2011

# INVENTORY CONSIGNMENT AGREEMENT

This INVENTORY CONSIGNMENT AGREEMENT (the "Agreement") is made and entered into this 31st day of October, 2011 (the "Effective Date"), by and between **Brickell Asset Management X, LLC**, a limited liability company organized under the laws of the State of Florida (hereinafter called "**Consignor**"), and **Chromalloy Material Solutions, LLC**, a limited liability company organized under the laws of the State of Delaware (hereinafter called "**Consignee**").

WHEREAS, Consignee will take possession of one (1) CFM International CFM56-3B2 aircraft engine, manufacturer's serial number 722169 and engine records in possession of the Consignor.


WHEREAS, Consignor desires to consign such material to Consignee for sale in the surplus market, therefore;

In consideration of the mutual agreements, covenants and promises hereinafter contained, the parties hereto agree as follows:

## **SECTION 1 MATERIAL TO BE CONSIGNED.**

- 1.1 Consignor hereby agrees to consign to Consignee one (1) CFM International CFM56-3B2 aircraft engine, manufacturer's serial number 722169 as more specifically described in Exhibit B attached hereto for sale by Consignee (the "Material"), and Consignor hereby grants to Consignee the exclusive right to disassemble, market and sell such Material.


## **SECTION 2 DELIVERY OF MATERIAL AND HISTORICAL INFORMATION.**

- 2.1 Consignor will deliver the engine to Consignee at Consignee's facility in San Antonio, Texas. Consignee shall acknowledge its acceptance of the delivery of the engine on consignment pursuant to this Agreement (the "Delivery") by executing and delivering to the Consignor the Material Delivery Receipt in the form of Exhibit A attached hereto. Consignee will then have control of the Material along with all relevant records and documents required to sell the Material in the surplus market.
- 2.2 The Material being accepted by Consignee under this Agreement is hereby acknowledged by both parties to be only that Material specified in Exhibit B attached hereto.
- 

IN WITNESS WHEREOF, the parties have caused this Inventory Consignment Agreement to be executed by their respective officers or agents thereunto duly authorized.

CONSIGNOR:

Brickell Asset Management X, LLC

  
Name: FRANCIS A. AWANIA

Title: Managing Member

CONSIGNEE:

Chromalloy Material Solutions, LLC

  
Name: TODD C. JENSEN

Title: V.P. - MATERIAL SOLUTIONS

**WARRANTY BILL OF SALE (MSN 722169)**

For and in consideration of the sum of Ten Dollars (\$10.00) and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Cjet, Inc. ("Seller"), owner of the full legal and beneficial title of the following:

One (1) CFM56-3B2 engine, bearing manufacturer's serial number 722169, together with all maintenance records associated therewith that are in the possession of Seller (collectively, "Engine")

Seller does hereby sell, grant, transfer and deliver full legal and beneficial title, title rights and interest in and to the Engine unto Brickell Asset Management X, LLC ("Buyer"), and its successors and assigns, to have and to hold the Engine forever.

Seller hereby warrants to Buyer, its successors and assigns, that is hereby conveyed to Buyer on the date hereof, good and marketable title, free and clear of any and all liens, claims and encumbrances of any nature whatsoever.

IN WITNESS WHEREOF, Seller has caused this Warranty Bill of Sale to be executed by its respective officer this 31 day of October 2011.

By: 

Name:

Jeremy G. Turner

Title:

ASSIST SEC

AIRCRAFT LEASE AGREEMENT

Dated as of July 9, 2007

BETWEEN

CJET, INC.

as Lessor

and

PT (PESERO) MERPATI NUSANTARA AIRLINES

as Lessee

Concerning:

One (1) used Boeing 737-301 Aircraft bearing Manufacturer's Serial Number 23931 and  
US registration number N586US

THIS AIRCRAFT LEASE AGREEMENT (THIS "LEASE") HAS BEEN EXECUTED IN SEVERAL COUNTERPARTS. TO THE EXTENT, IF ANY, THAT THIS LEASE CONSTITUTES CHATTEL PAPER (AS SUCH TERM IS DEFINED IN THE UNIFORM COMMERCIAL CODE AS IN EFFECT IN ANY APPLICABLE JURISDICTION), NO SECURITY INTEREST HEREIN MAY BE CREATED THROUGH THE TRANSFER OR POSSESSION OF ANY COUNTERPART HEREOF OTHER THAN THE ORIGINAL COUNTERPART. THE COUNTERPART TO BE DEEMED THE ORIGINAL COUNTERPART SHALL BE THE COUNTERPART THAT CONTAINS THE RECEIPT THEREFOR EXECUTED BY THE LENDER ON THE SIGNATURE PAGE THEREOF.

[DUPLICATE  
THIS IS NOT THE "ORIGINAL" COUNTERPART.]

WASH14904354 I

AIRCRAFT LEASE AGREEMENT

THIS AIRCRAFT LEASE AGREEMENT, dated as of the 9th day of July, 2007 (this "Lease"), between CJET, INC., a Delaware corporation ("Lessor") and PT (PESERO) MERPATI NUSANTARA AIRLINES, an Indonesian corporation ("Lessee").

WITNESSETH

WHEREAS, Lessor owns the Boeing 737-301 aircraft more particularly described below;  
and

WHEREAS, Lessee desires to lease from Lessor and Lessor is willing to lease to Lessee said aircraft upon the terms and conditions set forth in this Lease;

NOW, THEREFORE, in consideration of the mutual covenants herein set forth, Lessor and Lessee hereby agree as follows:

1.

DEFINITIONS

Unless the context requires otherwise, the following terms shall have the following meanings for all purposes of this Lease and such meanings shall be equally applicable to both the singular and the plural forms of the terms defined:

"Agreed Value" shall mean \$US10,500,000.

"Aircraft" shall mean the Airframe, the Engines and, where applicable, shall also include the Aircraft Documents and all Capital Improvements, which may be made to, installed on or incorporated into the Aircraft, including, but not limited to, those required pursuant to any Airworthiness Directive.

"Aircraft Documents" shall mean the items identified in Appendix II B. to the Lease Supplement and delivered to Lessee on the Delivery Date and such other items, which may be acquired or prepared by Lessee relating to its use, operation and maintenance of the Aircraft during the Term of this Lease, including the Aircraft Records, all of which shall be maintained in the English language. Lessee acknowledges that it is in possession of all the Aircraft Documents identified in Appendix II B.

"Aircraft Records" shall mean copies of all historical maintenance and other records delivered with the Aircraft for work accomplished prior to the Delivery Date and current maintenance and other records for work accomplished subsequent to the Delivery Date including, but not limited to, documents, manuals, data, overhaul records, life limited part traceability to "zero time since new", logbooks, Aircraft and Engine delivery documents, serviceable parts tags, FAA forms, modification records, inspection records, and all other documentation pertaining to the Aircraft, Engines and Parts.

IN WITNESS WHEREOF, Lessor and Lessee have each caused this Lease to be duly executed by their authorized officers as of the date first above written.

CIET, INC., as Lessor

By: 

As to: PRESIDENT

PT (PESERO) MERPATI NUSANTARA AIRLINES, as

Lessee

By: 

HOTASI NABABAN

As to: PRESIDENT DIRECTOR

**BILL OF SALE (23931)**

For and in consideration of the sum of Ten United States Dollars (US\$10) and other valuable consideration, the receipt and sufficiency of which is hereby conclusively acknowledged, **WELLS FARGO BANK NORTHWEST, NATIONAL ASSOCIATION**, a national banking association organized and validly existing under the laws of the United States of America with its principal place of business at 299 South Main Street, 12th Floor, Salt Lake City, MAC: UI228-120, Utah 84111, not in its individual capacity but solely as owner trustee (together with its successors and assigns, the "**Seller**"), owner of full legal and beneficial title to the aircraft and engines described below, together with all appliances, components, parts, instruments, appurtenances, accessories, furnishings and other equipment of whatever nature incorporated or installed thereon as of the date hereof and all Aircraft Documentation relating thereto (hereinafter referred to, collectively, as the "**Aircraft**"):

|                 | <u>Manufacturer</u>     | <u>Model &amp; Configuration</u> | <u>Manufacturer's Serial No.</u> |
|-----------------|-------------------------|----------------------------------|----------------------------------|
| <u>Airframe</u> | The Boeing Company      | 737-301                          | 23931                            |
| <u>Engines</u>  | CFM International, Inc. | CFM56-3B2                        | 723187                           |
|                 | CFM International, Inc. | CFM56-3B2                        | 722169                           |

does hereby sell, grant, transfer and deliver all its right, title and interest in and to the Aircraft unto **CJET, INC.**, a Delaware corporation with its principal place of business at 5718 Westheimer Road, Suite 1700, Houston, Texas 77057 (the "**Purchaser**"), to have and to hold the Aircraft forever.

Seller hereby represents and warrants that it has, and on the date hereof transfers to Purchaser, good and marketable title to the Aircraft, free and clear of all Liens, and Seller does hereby agree that it will warrant and defend such title against all claims and demands whatsoever. The representations and warranties of Seller contained in Section 9 of the below-described Purchase Agreement are true and accurate on and as of the date hereof.

This Bill of Sale is being delivered pursuant to that certain Purchase Agreement (23931) dated as of December \_\_, 2006 (the "**Purchase Agreement**") between Seller and Purchaser. Capitalized terms used but not defined herein shall bear the meanings assigned such terms in the Purchase Agreement.


This Bill of Sale is deemed to be delivered in, and shall be governed by and construed in accordance with the laws of, the State of New York, without regard to principles of conflict of laws (other than Sections 5-1401 and 5-1402 of the New York General Obligations Law).

[Remainder of Page Intentionally Left Blank]

[Warranty Bill of Sale (23931)]

**IN WITNESS WHEREOF**, Seller has caused this Bill of Sale to be duly executed as of this \_\_\_ day of December, 2006.

**WELLS FARGO BANK NORTHWEST,  
NATIONAL ASSOCIATION**, not in its  
individually capacity but solely as owner  
trustee, as Seller

By:   
Name: MICHAEL D. HOGGAN  
Title: VICE PRESIDENT



**NON-INCIDENT STATEMENT (MSN 722169)**

Date: October 10, 2011

RE: One (1) CFM56-3B2 engine, bearing manufacturer's serial number 722169 (the "Engine").

Dear Sir / Madam:

PT. Merpati Nusantara, as operator of the above-referenced Engine, hereby certifies that the Engine has not been subjected to extreme stress or heat; has not been involved in an accident, incident or fire which resulted in the operator or the manufacturer deeming the Engine as unacceptable for continued usage in service; and has not been utilized in a military application; does not contain parts obtained from a military or unapproved source and has not been immersed in salt water or exposed to any other corrosive agent.

The Engine was last operated on March 12, 2009. The Engine total times and cycles since new are as follows:

TSN: 52203.12;

CSN: 33693.

Sincerely,

PT. Merpati Nusantara

By

Name: Wilmar Manurung

Title : SVP. Maintenance & Engineering Quality Assurance

APPENDIX I  
TO  
LEASE SUPPLEMENT

A. AIRCRAFT SPECIFICATIONS

One used Boeing 737-301 aircraft bearing manufacturer's serial number 23931 and US Registration number N586US in passenger configuration equipped with two (2) CFM56-3B2 engines bearing manufacturer's serial numbers 722169 and 723187.

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| AIRCRAFT TYPE                       | Boeing 737-301                    |
| SERIAL NUMBER                       | 23931                             |
| COUNTRY OF REGISTRATION             | United States                     |
| REGISTRATION NUMBER                 | N586US                            |
| LINE NUMBER                         | 1552                              |
| DATE OF MANUFACTURE                 | 1988                              |
| ENGINE TYPE                         | General Electric CFM56-3B2        |
| <b>OPERATING WEIGHTS</b>            |                                   |
| MAX TAKE OFF WEIGHT                 | 138,500 lbs.                      |
| MAX ZERO FUEL WEIGHT                | 106,500 lbs.                      |
| MAX LANDING WEIGHT                  | 114,000 lbs.                      |
| FUEL CAPACITY<br>(Aux Tank removed) | 5,311 U.S. gal (35,578 lbs)       |
| <b>INTERIOR CONFIGURATION</b>       |                                   |
| SEATS                               | [126] 12 first class, 114 economy |

|                        |                      |
|------------------------|----------------------|
| GALLEYS                | [4] 2 forward, 2 aft |
| LAVATORIES             | [3] 1 forward, 2 aft |
| CURRENT OPERATOR/OWNER | CJET, INC.           |

## TECHNICAL DATA

### AIRFRAME

|  |  |
|--|--|
| DATA IS EFFECTIVE AS OF:   | November 30, 2006  |
| TOTAL HOURS  | 53,462   |
| TOTAL CYCLES   | 32,144   |
| <b>CURRENT MAINTENANCE PROGRAM</b>   |  |
| B737-300-400-500 MSG-3 MPD   | Future specific check intervals to be determined by next operator.   |
| CORROSION PREVENTION AND CONTROL PROGRAM   | The CPCP is current and in compliance and is no longer a stand alone program with all tasks now incorporated into the MSG-3 MPD. |
| <b>AAR BRIDGING CHECK</b>  |  |
| Bridged US Airways MPD to Boeing MSG-3 MPD by performing all applicable MPD Tasks. | All MPD tasks zero timed this check. See MSG-3 forecast for next task inspection due times.                                      |

## LANDING GEAR

| ALL DATA IS EFFECTIVE AS OF: November 30, 2006 |  |  |  |  |
|--|--|--|--|--|
| POSITION                                       | Left   |  | Nose   | Right  |
| SERIAL NUMBER                                  | XC90955                                      |  | XC90767                                      | XC90839                                      |
| OVERHAUL INTERVAL<br>(MSG-3 MPD)               | 21,000 cycles<br>or 10 years<br>(120 months) |  | 21,000 cycles<br>or 10 years<br>(120 months) | 21,000 cycles<br>or 10 years<br>(120 months) |
| CYCLES/CALENDAR TIME<br>SINCE OVERHAUL         | 7,956 cycles<br>71 months                    |  | 7,956 cycles<br>71 months                    | 7,956 cycles<br>69 months                    |
| CYCLES/CALENDAR TIME<br>REMAINING              | 13,044 cycles<br>49 months                   |  | 13,044 cycles<br>49 months                   | 13,044 cycles<br>51 months                   |
| PERCENT REMAINING                              | 62% cycles<br>42% cal. time                  |  | 62% cycles<br>42% cal. time                  | 62% cycles<br>43% cal. time                  |

## ENGINES

TYPE: CFM 56-3B2

| ALL DATA IS EFFECTIVE AS OF: November 30, 2006 |                             |  |  |                     |
|--|-----------------------------|--|--|---------------------|
| CURRENTLY INSTALLED                            | # 1                         |  |  | # 2                 |
| SERIAL NUMBER                                  | 722169                      |  |  | 723187              |
| TOTAL TIME                                     | 47,338                      |  |  | 46,768              |
| TOTAL CYCLES                                   | 29,897                      |  |  | 29,735              |
| TIME/CYCLES SINCE<br>RESTORATION               | 6,112 hours<br>4,968 cycles |  |  | 0 hours<br>0 cycles |
| CYCLES TO FIRST LIFE LIMITER                   | 3,807                       |  |  | 6,349               |
| LIMIT ITEM                                     | LPT Stub Shaft              |  |  | Stg 1-2 Spool       |

**ENGINE DISK LIFE  
CAT A**

| Item                | ENGINE S/N 722169 |                      | ENGINE S/N 723187 |                      |
|---------------------|-------------------|----------------------|-------------------|----------------------|
|                     | Cycle Life Limit  | Cycle Life Remaining | Cycle Life Limit  | Cycle Life Remaining |
| Booster Spool       | 30,000            | 25,032               | 30,000            | 22,883               |
| Stg 1 Fan Disk      | 30,000            | 25,032               | 30,000            | 22,417               |
| Fan Shaft           | 30,000            | 25,032               | 30,000            | 22,883               |
| HPC Fwd Rotor Shaft | 20,000            | 4,510                | 20,000            | 6,390                |
| 1-2 Spool           | 20,000            | 15,032               | 20,000            | 6,349                |
| HPC Stg 3 Disk      | 20,000            | 4,181                | 20,000            | 6,771                |
| 4-9 Spool           | 20,000            | 15,032               | 20,000            | 12,883               |
| CDP Seal            | 20,000            | 15,032               | 20,000            | 20,000               |
| Fwd Shaft           | 20,000            | 6,600                | 20,000            | 20,000               |
| Fwd Air Seal        | 20,000            | 6,062                | 20,000            | 20,000               |
| HPT Disk            | 20,000            | 6,968                | 20,000            | 20,000               |
| Rear Shaft          | 25,000            | 11,140               | 25,000            | 9,146                |
| Stg 1 LPT Disk      | 25,000            | 20,032               | 25,000            | 11,349               |
| Stg 2 LPT Disk      | 25,000            | 20,032               | 25,000            | 11,349               |
| Stg 3 LPT Disk      | 25,000            | 13,382               | 25,000            | 11,754               |
| Stg 4 LPT Disk      | 25,000            | 20,032               | 25,000            | 11,349               |
| Conical Support     | 25,000            | 13,382               | 25,000            | 6,798                |
| LPT Shaft           | 30,000            | 25,032               | 30,000            | 22,883               |
| Stub Shaft          | 25,000            | 3,807                | 25,000            | 11,349               |
| Total               | 455,000           | 275,352              | 455,000           | 276,553              |
| Percent Remaining   |                   | 61%                  |                   | 61%                  |

## AUXILIARY POWER UNIT (APU)

|                        |              |
|------------------------|--------------|
| MODEL NUMBER           | GTCP85-129C  |
| SERIAL NUMBER          | 34752C       |
| TIME SINCE RESTORATION | 0 hours      |
| TIME SINCE NEW         | 74,450 hours |
| IS APU 'ON CONDITION'? | YES          |

### AIRFRAME HISTORY OF MAJOR ACCIDENT/INCIDENT: YES\_\_ NO XX

NOTE: There was no history of accidents or incidents involving the aircraft or engines in the records provided by US Airways.

PROPER DOCUMENTATION PROVIDED: Yes



PT. MERPATI INSANTARA AIRLINES

|                               |                                     |                          |
|-------------------------------|-------------------------------------|--------------------------|
| Type / Model : CFM 56-3B2     | Date of Installation : delivery     | As of Date : 13-Mar-2009 |
| Serial Number : 722169        | Date of Removal : 13 Mar 2009       | Engine TSN : 52203.12    |
| Eng Utilization : Cat. A      | TSR : 10977.12                      | Engine CSN : 33693       |
| A/C Reg / MSN : PK-MDJ 123931 | Reason of Removal : LLP TIME EXPIRY | CSR : 8764               |
| Position : LH                 |                                     |                          |
| Owner : Jet Lease             |                                     |                          |

**LIFE LIMIT PART RECORD**

| DESCRIPTION       | PART NUMBER   | SERIAL NUMBER | TSN   | CSN   | TOTAL CYCLE USED |   |   | LIFE LIMIT CYCLE |       |       | REMAINING CYCLES |       |       |  |  |  |  |
|-------------------|---------------|---------------|-------|-------|------------------|---|---|------------------|-------|-------|------------------|-------|-------|--|--|--|--|
|                   |               |               |       |       | A                | B | C | A                | B     | C     | A                | B     | C     |  |  |  |  |
| FAN ROTOR         |               |               |       |       |                  |   |   |                  |       |       |                  |       |       |  |  |  |  |
| FAN DISK          | 335-014-511-0 | B5667424      | 10977 | 8764  | 0                | 0 | 0 | 30000            | 24900 | 20100 | 21236            | 17626 | 14226 |  |  |  |  |
| BOOSTER SPOOL     | 335-009-300-0 | DC003846      | 10977 | 8764  | 0                | 0 | 0 | 30000            | 30000 | 30000 | 21236            | 21236 | 21236 |  |  |  |  |
| FAN SHAFT         | 335-006-414-0 | DC329321      | 10977 | 8764  | 0                | 0 | 0 | 30000            | 30000 | 30000 | 21236            | 21236 | 21236 |  |  |  |  |
| HPC ROTOR         |               |               |       |       |                  |   |   |                  |       |       |                  |       |       |  |  |  |  |
| FRONT COMP SHAFT  | 1275M37P02    | GWN61800      | 22791 | 19286 | 0                | 0 | 0 | 20000            | 20000 | 20000 | 714              | 714   | 714   |  |  |  |  |
| SPOOL STG 1-2     | 1595M66G02    | GWN058GH      | 10977 | 8764  | 0                | 0 | 0 | 20000            | 20000 | 20000 | 11236            | 11236 | 11236 |  |  |  |  |
| STG 3 DISK        | 1650M59P11    | GWNBW306      | 22791 | 19615 | 0                | 0 | 0 | 20000            | 20000 | 20000 | 385              | 385   | 385   |  |  |  |  |
| SPOOL STG 4-9     | 1588M69G03    | QWNC5A18      | 10977 | 8764  | 0                | 0 | 0 | 20000            | 20000 | 15900 | 11236            | 1736  | 8676  |  |  |  |  |
| RLAR CDP AIR SEAL | 1319M25P02    | GFF544JL      | 10977 | 8764  | 0                | 0 | 0 | 20000            | 18000 | 15300 | 11236            | 10112 | 8427  |  |  |  |  |
| HPT ROTOR         |               |               |       |       |                  |   |   |                  |       |       |                  |       |       |  |  |  |  |
| FRONT SHAFT HPT   | 1385N60P04    | GWNGS532      | 22544 | 16431 | 4902             | 0 | 0 | 20000            | 17300 | 17300 | 2804             | 2425  | 2393  |  |  |  |  |
| FRONT AIR SEAL    | 1282M72P05    | GWNGS359      | 22544 | 16431 | 4902             | 0 | 0 | 20000            | 15800 | 15100 | 2266             | 730   | 171   |  |  |  |  |
| TURBINE D SK      | 1475M29P02    | GWNGK781      | 22644 | 16431 | 4902             | 0 | 0 | 20000            | 18500 | 16600 | 3172             | 2934  | 2632  |  |  |  |  |
| REAR SHAFT HPT    | 5514M71P07    | TMTKA280      | 22644 | 16431 | 4902             | 0 | 0 | 25000            | 20000 | 15800 | 7344             | 5975  | 4641  |  |  |  |  |
| LPT ROTOR         |               |               |       |       |                  |   |   |                  |       |       |                  |       |       |  |  |  |  |
| STAGE 1 DISK      | 301-331-126-0 | BE707351      | 10977 | 8764  | 0                | 0 | 0 | 25000            | 25000 | 25000 | 16236            | 16236 | 16236 |  |  |  |  |
| STAGE 2 DISK      | 301-331-227-0 | BE707438      | 10977 | 8764  | 0                | 0 | 0 | 25000            | 25000 | 25000 | 16236            | 16236 | 16236 |  |  |  |  |
| STAGE 3 DISK      | 301-331-322-0 | BA821431      | 20794 | 15414 | 4171             | 0 | 0 | 25000            | 25000 | 25000 | 9566             | 9566  | 9566  |  |  |  |  |
| STAGE 4 DISK      | 301-331-428-0 | DC058070      | 10977 | 8764  | 0                | 0 | 0 | 25000            | 25000 | 25000 | 16236            | 16236 | 16236 |  |  |  |  |
| CONICAL SUPPORT   | 305-056-116-0 | DA703636      | 20794 | 15414 | 4171             | 0 | 0 | 25000            | 25000 | 25000 | 9566             | 9566  | 9566  |  |  |  |  |
| LPT SHAFT         | 301-330-067-0 | LAC94166      | 10977 | 8764  | 0                | 0 | 0 | 30000            | 30000 | 30000 | 21236            | 21236 | 21236 |  |  |  |  |
| LPT STUB SHAFT    | 301-330-026-0 | DA852637      | 29160 | 24989 | 0                | 0 | 0 | 25000            | 25000 | 25000 | 11               | 11    | 11    |  |  |  |  |

|                         |               |                |
|-------------------------|---------------|----------------|
| Date Issued : 15-Mar-09 | Prepared by : | Checked by :   |
|                         | Refmaningain  | Khusni Khuluk  |
|                         |               | Limitter       |
|                         |               | LPT STUB SHAFT |

remaining life calculation refer to ESM CFM Chapter 5

**AAR AIRCRAFT SALES & LEASING**  
**LIFE-LIMITED PARTS PROFILE**

REPORT DATE: 21-Nov-06  
 HOURS/CYCLES UPDATED: 10-Nov-00

ENGINE TYPE: CFM56-3B2  
 SERIAL NUMBER: 722169

|       |         |
|-------|---------|
| TSN:  | 47338.9 |
| GSN:  | 20697   |
| TSCR: | 6112.0  |
| CSCR: | 4968    |
| TSR:  | 6112.9  |
| CSR:  | 4968    |

| PART NUMBER        | SERIAL NUMBER | TOTAL TIME | TOTAL CYCLES |       |       | TIME LIMIT | CYCLE LIMIT |       |       | TIME REMAIN | CYCLES REMAINING |       |       |
|--------------------|---------------|------------|--------------|-------|-------|------------|-------------|-------|-------|-------------|------------------|-------|-------|
|                    |               |            | CAT A        | CAT B | CAT C |            | CAT A       | CAT B | CAT C |             | CAT A            | CAT B | CAT C |
| <b>FAN ROTOR</b>   |               |            |              |       |       |            |             |       |       |             |                  |       |       |
| FAN DISK           | 89687424      | 6113.2     | 4968         | 0     | 0     | N/A        | 24300       | 20100 | N/A   | 26632       | 20777            | 16771 |       |
| BOOSTER SPOOL      | DC090948      | 6113.2     | 4968         | 0     | 0     | N/A        | 30000       | 30000 | N/A   | 25032       | 25032            | 25032 |       |
| FAN SHAFT          | DC326321      | 6113.2     | 4968         | 0     | 0     | N/A        | 30000       | 30000 | N/A   | 25032       | 25032            | 25032 |       |
| <b>HPC ROTOR</b>   |               |            |              |       |       |            |             |       |       |             |                  |       |       |
| FRONT SHAFT        | GWNR6700      | 17827.2    | 15480        | 0     | 0     | N/A        | 20000       | 20000 | N/A   | 4510        | 4510             | 4510  |       |
| STG 1-2 SPOOL      | GWNO50GH      | 6113.2     | 4968         | 0     | 0     | N/A        | 20000       | 20000 | N/A   | 15032       | 15032            | 15032 |       |
| STG 3 DISK         | GWNBW306      | 17827.2    | 15418        | 0     | 0     | N/A        | 20000       | 20000 | N/A   | 4181        | 4181             | 4181  |       |
| STG 4 SPOOL        | GWNO5A18      | 6113.2     | 4968         | 0     | 0     | N/A        | 20000       | 15000 | N/A   | 15032       | 14875            | 14875 |       |
| COMPL REAR AIRSEAL | GFF5AAJL      | 6113.2     | 4968         | 0     | 0     | N/A        | 16000       | 15000 | N/A   | 15032       | 13526            | 11274 |       |
| <b>HPT ROTOR</b>   |               |            |              |       |       |            |             |       |       |             |                  |       |       |
| FRONT SHAFT        | GWNGS632      | 17780.2    | 7733         | 4802  | 0     | N/A        | 17310       | 17000 | N/A   | 6600        | 5703             | 5810  |       |
| FRONT AIRSEAL      | GWNGS358      | 17780.2    | 7733         | 4802  | 0     | N/A        | 15800       | 15100 | N/A   | 6062        | 4768             | 4577  |       |
| DISK               | GWNGK781      | 17780.2    | 7733         | 4802  | 0     | N/A        | 16500       | 16500 | N/A   | 6866        | 6446             | 6783  |       |
| REAR SHAFT         | TMTKA280      | 17780.2    | 7733         | 4802  | 0     | N/A        | 20000       | 15800 | N/A   | 11440       | 6912             | 7040  |       |
| <b>LPT ROTOR</b>   |               |            |              |       |       |            |             |       |       |             |                  |       |       |
| STG 1 DISK         | BB707391      | 6113.2     | 4968         | 0     | 0     | N/A        | 25000       | 25000 | N/A   | 20032       | 20032            | 20032 |       |
| STG 2 DISK         | BB707438      | 6113.2     | 4968         | 0     | 0     | N/A        | 25000       | 25000 | N/A   | 20032       | 20032            | 20032 |       |
| STG 3 DISK         | BA821431      | 15930.2    | 7447         | 4171  | 0     | N/A        | 25000       | 25000 | N/A   | 13362       | 13362            | 13362 |       |
| STG 4 DISK         | DC058070      | 6113.2     | 4968         | 0     | 0     | N/A        | 25000       | 25000 | N/A   | 20032       | 20032            | 20032 |       |
| LPT SHAFT          | LA084166      | 6113.2     | 4968         | 0     | 0     | N/A        | 30000       | 30000 | N/A   | 25032       | 25032            | 25032 |       |
| LPT STUB SHAFT     | DAG62337      | 24786.2    | 21193        | 0     | 0     | N/A        | 25000       | 25000 | N/A   | 3867        | 3867             | 3867  |       |
| CONICAL SUPPORT    | 305-056-116-0 | 16930.2    | 7447         | 4171  | 0     | N/A        | 25000       | 25000 | N/A   | 13362       | 13362            | 13362 |       |

CAT A, CAT B, AND CAT C ARE DEFINED IN THE SHOP MANUAL, SECTION 05-11-00

THE ABOVE DATA HAS BEEN COMPILED FROM ENGINE RECORDS SUPPLIED BY THE PROPOSOR. OWNER, REPAIR AGENCIES AND OPERATORS OF THE ENGINE. ANY REPRESENTATIONS AND WARRANTIES WITH RESPECT TO THIS ENGINE WILL BE EXPRESSED IN A DEFINITIVE WRITTEN AGREEMENT.

Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979



Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755  
www.ethiopianairlines.com

## ENGINE SHOP VISIT REPORT

### 9. ENGINE SHOP FINDING REPORT

Prepared by:

| Name      | Section                                | Date        |
|-----------|--|-------------|
| Adugna B. | EMT Tech. Support, Engineering section | 06-Sep-2016 |



# ETHIOPIAN AIRLINES MRO, ENGINE MAINTENANCE

CFM56-3C-1, ESN 858979

Shop Finding Report



**CUSTOMER: LAM MOZAMBIQUE AIRLINES**

ETHIOPIAN AIRLINES MRO, ENGINE MAINTENANCE

PREPARED BY: ADUGNA BIKILA

4/17/2018

Customer: Alfa Airlines

TSN: 41,150.77

CSN: 29,964

Removal Reason: LLP replacement of Fan disk, Booster Spool and Fan Shaft for lower RC.



Ethiopian Airlines, MRO

Tel + 251 011 517 591

P.O.BOX 1755

[www.ethiopianairlines.com](http://www.ethiopianairlines.com)

**CFM56-3C-1**

**SHOP FINDING REPORT**

**ESN-858979**

**TEAR DOWN FINDINGS**

| Item No | Part name                          | Part number   | Qty | Finding                                     |
|---------|------------------------------------|---------------|-----|---|
| 1       | Fan disk                           | 335-014-511-0 | 1   | Lower remaining Cycle                       |
| 2       | Booster Spool                      | 335-009-306-0 | 1   | Lower remaining Cycle                       |
| 3       | Fan Shaft                          | 335-006-414-0 | 1   | Lower remaining Cycle                       |
| 4       | Booster Blades stage 2-4           | various       | 68  | Missing of lubricant coating at blade roots |
| 5       | Booster blades' interstage spacers | Various       | 136 | Coating loss                                |
| 6       | Booster vane assy stages 1-4       | Various       | -   | Pitting and corrosion                       |

NOTE: This shop finding report contains only major findings found during disassembly and table inspection of parts inspected in ETH shop. Engine is disassembled to the level of the defined workscope and the above bench inspection findings are limited to the workscope.

**Prepared by**

| Name           | Section                                | Date      |
|----------------|--|-----------|
| A dugna Bikila | EMT Tech. Support, Engineering section | 19-Dec-14 |

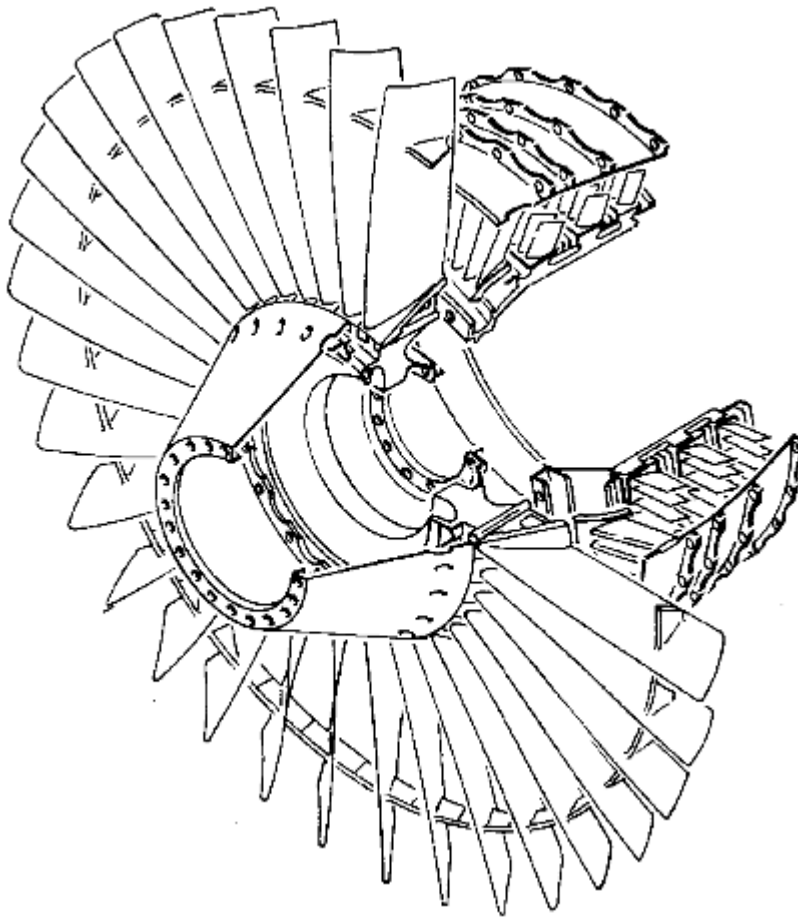


## Disassembly Findings

### 72-21. Fan and Booster Module

#### Summary:

The module was inspected in accordance with 72-00-21 and disassembled in accordance with 72-21-00 to remove the Fan Disk and Booster spool for replacement due to lower remaining cycle. Lubricant coating loss observed on blade roots of 68ea booster blades stages 2-4. Coating loss on 136ea booster blade interstage spacer observed. Pitting and corrosion found on Stages 1-4 booster vane Assy.



#### Prepared by

| Name           | Section                                | Date      |
|----------------|--|-----------|
| A dugna Bikila | EMT Tech. Support, Engineering section | 19-Dec-14 |

Customer: Alfa Airlines

TSN: 41,150.77

CSN: 29,964

Removal Reason: LLP replacement of Fan disk, Booster Spool and Fan Shaft for lower RC.



Ethiopian Airlines, MRO

Tel + 251 011 517 591

P.O.BOX 1755

[www.ethiopianairlines.com](http://www.ethiopianairlines.com)

CFM56-3C-1

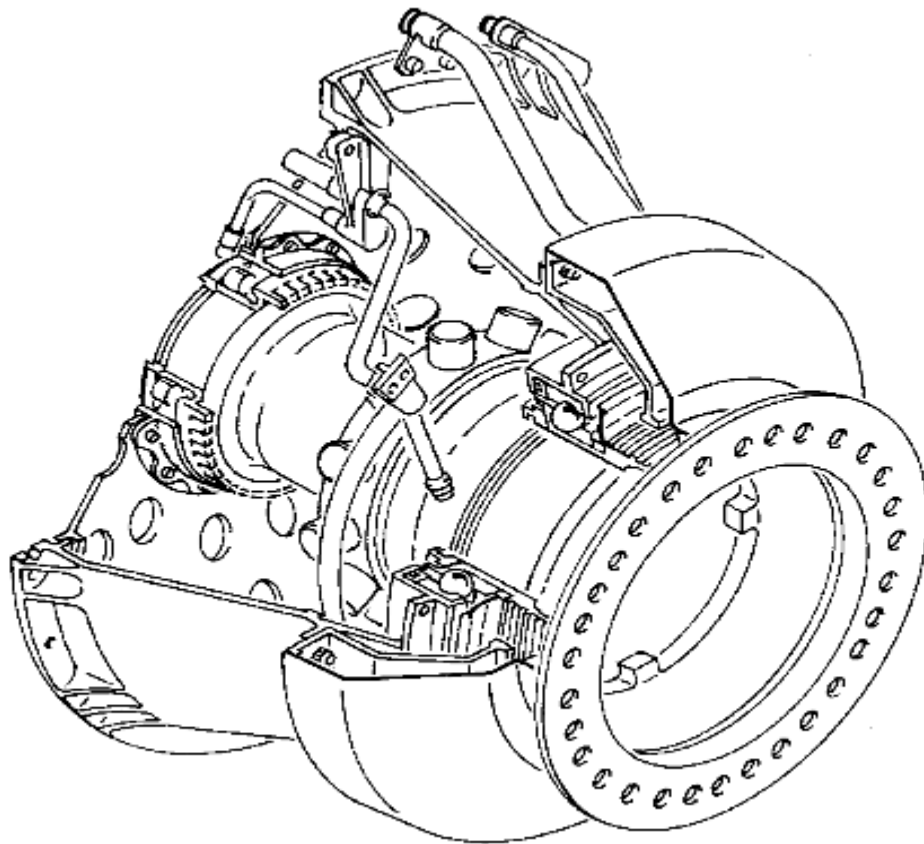
SHOP FINDING REPORT

ESN-858979

## 72-22. No. 1 No. 2 Bearing Support Assy

Summary:

The module was inspected in accordance with 72-00-22 and disassembled in accordance with 72-21-00 to remove the Fan shaft for replacement due to lower remaining cycle. No. 1 No. 2 bearings are outsourced for repair and both are exchanged with used serviceable part to save Turn Around Time (TAT.)



### Prepared by

| Name           | Section                                | Date      |
|----------------|--|-----------|
| A dugna Bikila | EMT Tech. Support, Engineering section | 19-Dec-14 |

# Detailed Borescope Report

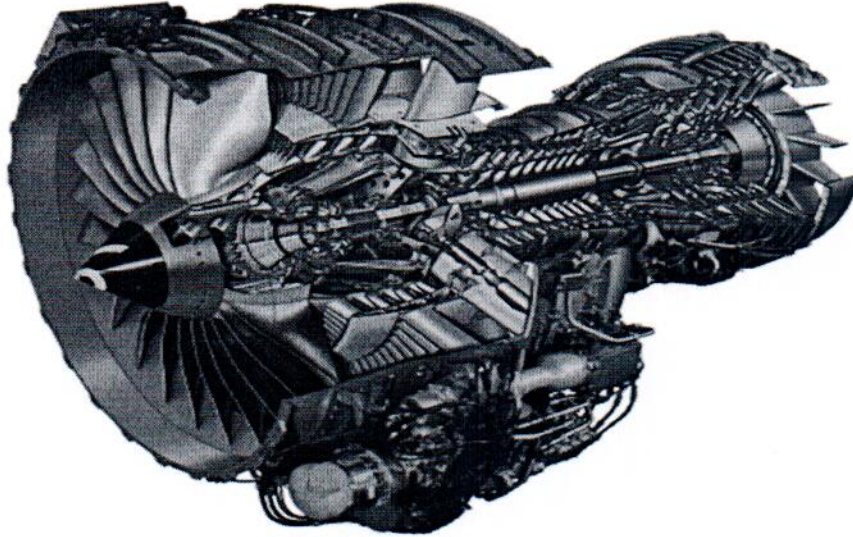
Productivity through inspection solutions



*Handwritten signature in blue ink.*

**Inspection Details:**

**CFM56-3 ENGINE BORESCOPE INSPECTION REPORT**



|                         |                           |
|-------------------------|---------------------------|
| <b>Menu Directed</b>    | CFM56-3                   |
| <b>Serial Number</b>    | 858979                    |
| <b>CUSTOMER</b>         | LAM                       |
| <b>INSPECTOR NAME</b>   | ZEWDUT/MULUGETA B/TSEGA B |
| <b>INSPECTION PLACE</b> | AA                        |
| <b>TSN</b>              | 41150                     |
| <b>CSN</b>              | 29963                     |
| <b>Date</b>             | 01-APRIL-2018             |
| <b>Time</b>             | 8:00                      |


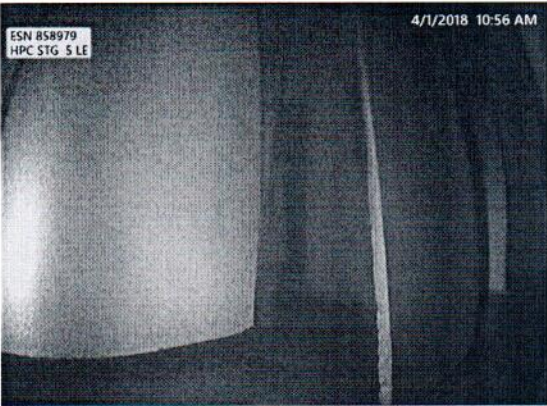



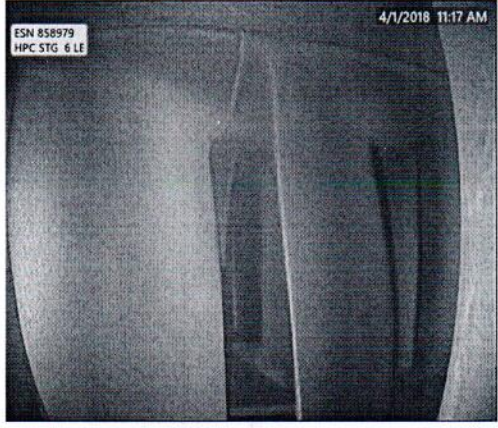

**GENERAL INSPECTION RESULT:**  
*SERVICEABLE*

## BOOSTER BLADES

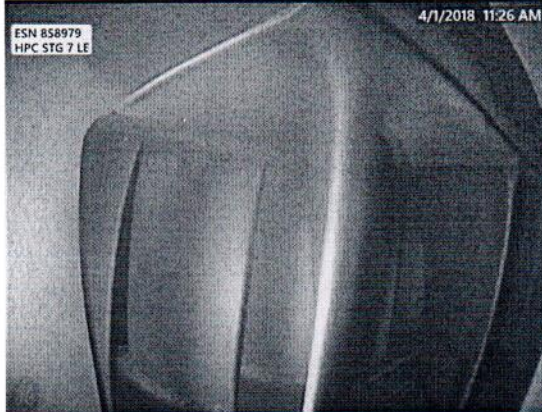
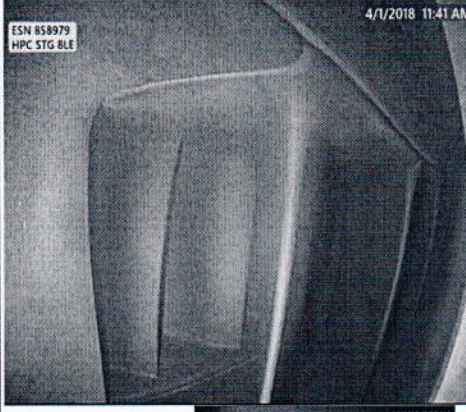


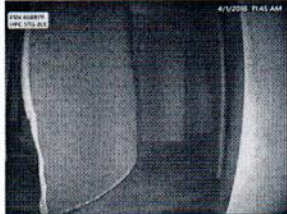
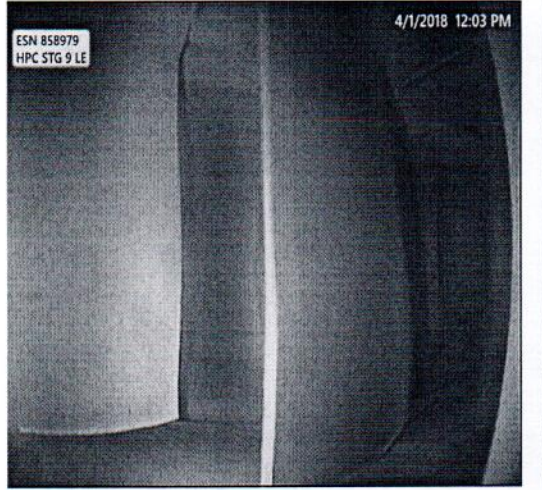
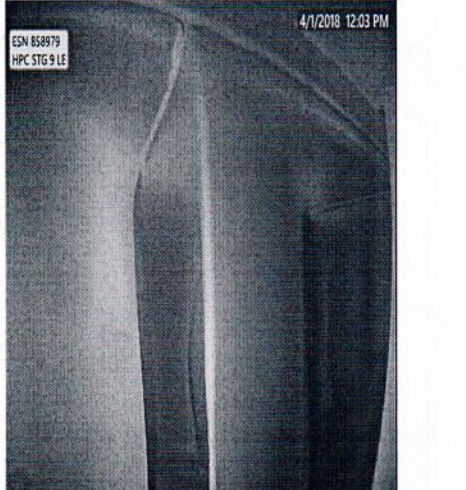
|  |  | REMARK  |
|--|--|---|
|  |  | <p>BOOSTER STAGE BLADES INSPECTED AS PER TASK 72-00-00-216-008-C00 AND FOUND SERVICEABLE.</p> |
|  |  |   |

# HPC BLADES

|  |  | REMARK   |
|--|--|--|
| <p>ESN 858979<br/>HPC STG 1 LE<br/>4/1/2018 8:43 AM</p>  | <p>ESN 858979<br/>HPC STG 1 TE<br/>4/1/2018 9:02 AM</p>  | <p>HPC BLADES<br/>BORESCOPE<br/>INSPECTION<br/>DONE AS PER<br/>TASK 72-00-00-<br/>216-049-C00<br/>AND REMARK<br/>ON STAGE 5<br/>BLADES TE<br/>TIP AREA<br/>MATERIAL<br/>MISSING , 7C<br/>1EA BLADE LE<br/>DENT</p> |
| <p>ESN 858979<br/>HPC STG 2 LE<br/>4/1/2018 9:13 AM</p>  | <p>ESN 858979<br/>HPC STG 3 LE<br/>4/1/2018 10:28 AM</p> | <p>HPC BLADES<br/>BORESCOPE<br/>INSPECTION<br/>DONE AS PER<br/>TASK 72-00-00-<br/>216-049-C00<br/>AND REMARK<br/>ON STAGE 5<br/>BLADES TE<br/>TIP AREA<br/>MATERIAL<br/>MISSING , 7C<br/>1EA BLADE LE<br/>DENT</p> |
| <p>ESN 858979<br/>HPC STG 2 TE<br/>4/1/2018 10:23 AM</p> | <p>ESN 858979<br/>HPC STG 3 TE<br/>4/1/2018 10:40 AM</p> |  |


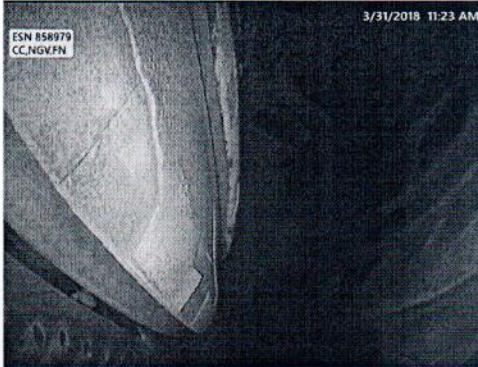
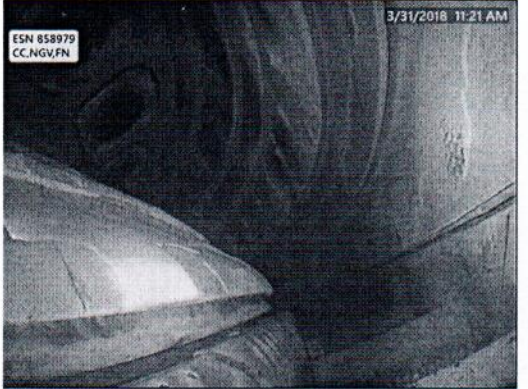
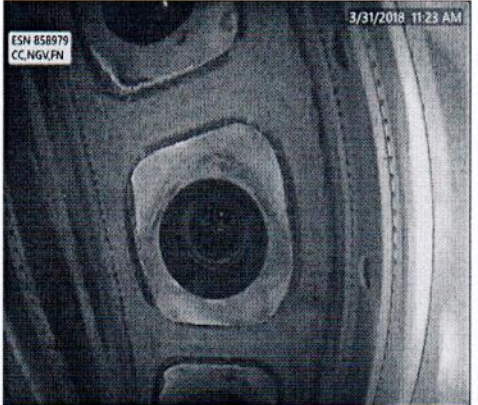


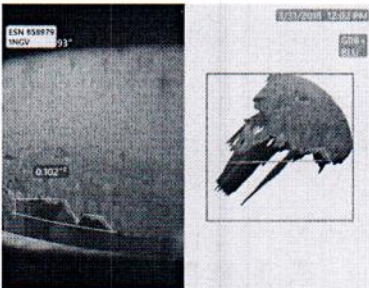

|  |  | AP &<br>REMARK   |
|--|--|--|
|  <p>ESN 858979<br/>HPC STG 4 LE<br/>4/1/2018 10:46 AM</p>   |  <p>ESN 858979<br/>HPC STG 5 LE<br/>4/1/2018 10:56 AM</p>  | <p>HPC<br/>BLADES<br/>BORESCOPE<br/>INSPECTION<br/>DONE AS<br/>PER TASK<br/>72-00-00-216-<br/>049-C00<br/>AND<br/>REMARK<br/>ON STAGE 5<br/>BLADES TE<br/>TIP AREA<br/>MATERIAL<br/>MISSING , 7C<br/>1EA BLADE LE<br/>DENT</p> |
|  <p>ESN 858979<br/>HPC STG 4 TE<br/>4/1/2018 10:50 AM</p>  |  <p>ESN 858979<br/>HPC STG 5 TE<br/>4/1/2018 11:06 AM</p>  <p>ESN 858979<br/>HPC STG 5 TE<br/>4/1/2018 11:07 AM</p> |  |
|  <p>ESN 858979<br/>HPC STG 6 LE<br/>4/1/2018 11:17 AM</p> |  <p>ESN 858979<br/>HPC STG 6 TE<br/>4/1/2018 11:19 AM</p>  |  |



| POSITION:-  | QTY   | AP & REMARK   |
|---|---|---|
|    |   | <p>HPC BLADES<br/>BORESCOPE<br/>INSPECTION<br/>DONE AS PER<br/>TASK 72-00-<br/>00-216-049-C00<br/>AND REMARK<br/>ON STAGE 5<br/>BLADES TE<br/>TIP AREA<br/>MATERIAL<br/>MISSING</p> |
|   | <br> |   |
| <p>1 EA 8C BLADE LE SEEMS<br/>BORO BLENDED</p>                                      |   |   |
|  |   | <p>HPC BLADES<br/>BORESCOPE<br/>INSPECTION<br/>DONE AS PER<br/>TASK 72-00-00-<br/>216-049-C00<br/>AND REMARK<br/>ON STAGE 5<br/>BLADES TE TIP<br/>AREA MATERIAL<br/>MISSING</p>     |

PREPARED BY: ENGINE MAINTENANCE INSPECTION

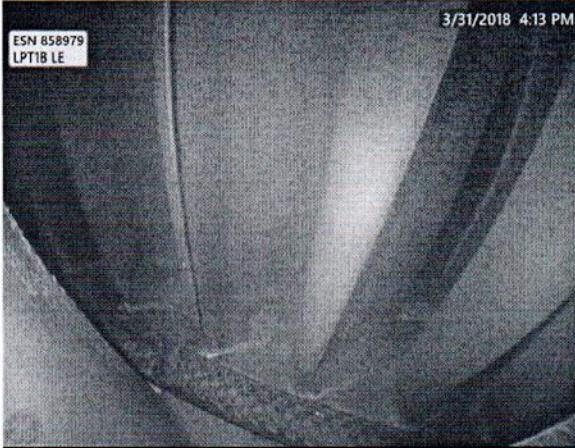


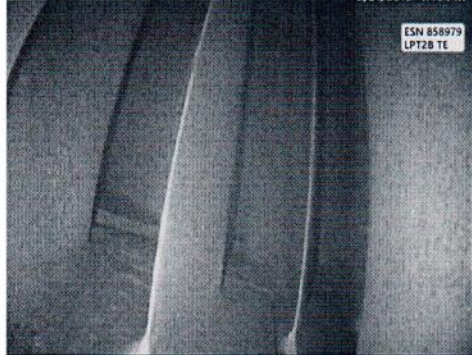

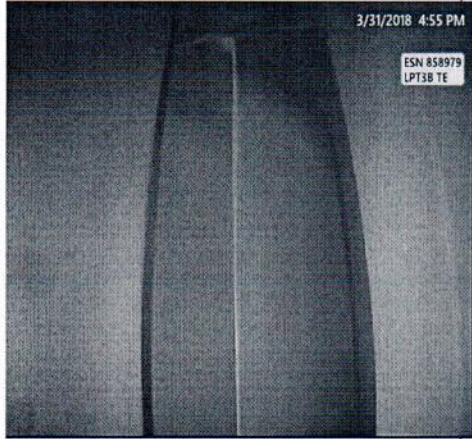


| POSITION:-  | QTY  | REMARK   |
|---|--|--|
|    |    | <p>CC BSI DONE<br/>IAW TASK 72-00-00-216-023-C00 AND<br/>CRACK ON<br/>ONE LOUVER<br/>AND MISSING<br/>TBC NOTED</p> |
|   |   |  |
|  |  |  |
|  |  |  |
| POSITION:-  | QTY  | REMARK   |

PREPARED BY: ENGINE MAINTENANCE INSPECTION






|  |   |   |
|--|---|---|
|  |   |   |
| <p>HPTN BSI DONE AND TE ROOT AREA CRACK NOTED AND SERVICEABLE AS PER TASK 72-00-00-216-023-C00</p> | <p>HPT SHROUD MINIR BURN AND SERVICEABLE AS PER TASK 72-00-00-216-026-C00</p> |   |
|  |   | <p>HPTR BSI DONE IAW TASK 72-00-00-216-026-C00 AND FOUND SERVICEABLE. TIP RADIAL CRACK SERVICEABLE AS PER THE AMM</p> |
|  |   |   |

| POSITION:-   | QTY   | REMARK  |
|--|---|---|
|  <p>ESN 858979<br/>LPT1B LE<br/>3/31/2018 4:13 PM</p>   |  <p>ESN 858979<br/>LPT2B LE<br/>3/31/2018 4:37 PM</p>   | <p>LPTR BSI<br/>DONE IAW<br/>TASK 72-00-<br/>00-216-045-<br/>C00 AND<br/>FOUND<br/>SERVICEABL<br/>E</p> |
|  <p>ESN 858979<br/>LPT1B TE<br/>3/31/2018 4:24 PM</p>  |  <p>ESN 858979<br/>LPT2B TE<br/>3/31/2018 4:40 PM</p>  |   |
|  <p>ESN 858979<br/>LPT3B LE<br/>3/31/2018 4:48 PM</p> |  <p>ESN 858979<br/>LPT3B TE<br/>3/31/2018 4:55 PM</p> | <p>LPTR BSI<br/>DONE IAW<br/>TASK 72-00-<br/>00-216-045-<br/>C00 AND<br/>FOUND<br/>SERVICEABL<br/>E</p> |

PREPARED BY: ENGINE MAINTENANCE INSPECTION



| POSITION:-   | QTY  | REMARK   |
|--|--|--|
|   |  | <p>LPT NOZZLE<br/>STAGE 1<br/>INSPECTED ,<br/>AXIAL<br/>CRACK<br/>FOUND LESS<br/>THAN 1/3 OF<br/>CHORD<br/>WIDTH AND<br/>FOUND<br/>SERVICEABL<br/>E AS PER<br/>TASK 72-00-<br/>00-206-074-<br/>C00</p> |
|  | <p>STAGE 2 LPTN</p>  |  |

PREPARED BY: Zewdu Tessema

DATE: 04/April/2018



Customer: LAM-Mozambique Airlines LTD.  
TSN: 41,150.77Hrs  
CSN: 29,964cycles  
Removal Reason: LLP Expiry  
CFM56-3C1, ESN-858979



Ethiopian Airlines, MRO  
Tel + 251 011 517 591  
P.O.BOX 1755  
www.ethiopianairlines.com

## ENGINE SHOP VISIT REPORT

### 10. REPLACED/REPAIRED PARTS CERTIFICATES

Prepared by:

| Name      | Section                                | Date        |
|-----------|--|-------------|
| Adugna B. | EMT Tech. Support, Engineering section | 06-Sep-2016 |

ing Civil Aviation  
ority/Country:  
FAA/UNITED STATES

2.

# AUTHORIZED RELEASE CERTIFICATE

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

3. Form Tracking Number:

260757-17

4. Organization Name and Address:

Repair Station# GPYR474X

**Triumph Accessory Services - Grand Prairie**

**1038 Santerre Drive, Grand Prairie, TX 75050-1937, 972/623-9300**

5. Work Order/Contract/Invoice Number:

260757 / RO46711

| 6.Item: | 7. Description: | 8. Part Number: | 9. Quantity: | 10.Serial Number: | 11.Status/Work: |
|---------|-----------------|-----------------|--------------|-------------------|-----------------|
| 1       | BEARING         | 305-364-002-0   | 1            | MA030808          | INSPECTED       |

12.Remarks:CLEANED AND INSPECTED BEARING IAW CFMI-TP.SM.10 CFM56-7B ESM  
72-09-01 REV. 55 DATED JAN 15, 2017.  
PRESERVATION METHOD: CP5071  
TSN: UNK CSN: UNK ESN: 874554

Certifies that the work specified in block 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 145.5893

13a. Certifies the items identified above were manufactured in conformity to:  
 Approved design data and are in condition for safe operation.  
 Non-approved design data specified in Block 12.

14a.  14 CFR 43.9 Return to Service  Other regulation specified in Block 12

Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

13b. Authorized Signature:

13c. Approval/Authorization No.:

14b.. Authorized Signature:

14c. Approval/Certificate No.:

13d. Name (Typed or Printed)

13e. Date (dd/mmm/yyyy):

14d. Name: (Typed or Printed)

14e. Date (dd/mmm/yyyy):

Tri Hoang

13 APR 2017

### User/Installer Responsibilities

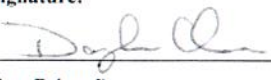
It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article. Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country specified in block 1. Statements in block 13a and 14a do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with national regulations by the user/installer before the aircraft may be flown.

FAA Form 8130-3 (02-14)

FAA authorized authority per Op Specs A025 for electronic signatures IAW AC 120-78.

NSN: 0052-00-012-9005

2

|   |                 |   |   |  |   |                                |
|---|-----------------|---|---|--|---|--------------------------------|
| 1. Approving Civil Aviation Authority/Country:<br><b>FAA/United States</b>  |                 | 2. <b>AUTHORIZED RELEASE CERTIFICATE</b><br>FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG |   |  | 3. Form Tracking Number:<br><b>160429-01-57</b>         |                                |
| 4. Organization Name and Address:<br><b>AeroBearings, 1005 N. Commercial Blvd, Arlington, TX 76001</b><br><b>FAA Certificate No. 8AZR921B</b>   |                 |   |   |  | 5. Work Order/Contract/Invoice Number:<br><b>107080</b> |                                |
| 6. Item:  | 7. Description: | 8. Part Number:   | 9. Quantity:  | 10. Serial Number:   | 11. Status/Work:  |                                |
| <b>1</b>  | <b>BEARING</b>  | <b>305-366-203-0</b>  | <b>1</b>  | <b>RR11853</b>   | <b>OVERHAULED</b>                                       |                                |
| <p>12. Remarks:<br/> Work performed IAW CFMI CFM56-3 ESM, CFMI-TP-SM.5, Bearing Inspection Section 72-09-01. Rev. 73.<br/> Work performed met the overhaul requirements IAW Part 14 CFR § 43.2. Long-term preservation performed IAW the OEM manual on the date this certificate was prepared.<br/> Removed from ESN: 725838</p> <p>The Repair Station referenced in Block 4 certifies that the work specified in Blocks 11 and 12 was carried out in accordance with EASA Part 145 and in respect to that work the component is considered ready for release to service under EASA Part 145 Approval Number: "EASA 145.6393"<br/> <b>Notice:</b> An Airworthiness Directive may apply to the article (s) described hereon. The installer is responsible for ensuring complete compliance with any applicable Airworthiness Directives.</p>   |                 |   |   |  |   |                                |
| 13a. Certifies the items identified above were manufactured in conformity to:<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.   |                 |   | 14a. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input checked="" type="checkbox"/> Other regulation specified in Block 12<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:  |                 | 13e. Approval/Authorization No.:  |   | 14b. Authorized Signature:   |   | 14c. Approval/Certificate No.: |
|   |                 |   |   |  |   | <b>8AZR921B</b>                |
| 13d. Name (Typed or Printed):   |                 | 13e. Date (m/d/y):  |   | 14d. Name (Typed or Printed):  |   | 14e. Date (dd/mm/yyyy):        |
|   |                 |   |   | <b>Douglas Cler</b>  |   | <b>23JUN2016</b>               |
| <b>User/Installer Responsibilities</b>  |                 |   |   |  |   |                                |
| <p>It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.</p> <p>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.</p> <p>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> |                 |   |   |  |   |                                |

9

# AUTHORIZED RELEASE CERTIFICATE

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

3. Form Tracking No.

ARCAC527325

4. Organization Name and Address



**STANDARDAERO**  
 11550 MOSTELLER RD.  
 CINCINNATI, OHIO, USA 45241    Repair Station # T3LR667N

5. Work Order/Contract/Invoice Number

AC123719

| 6. Item | 7. Description          | 8. Part Number | 9. Eligibility* | 10. Quantity | 11. Serial/Batch Number | 12. Status/Work |
|---------|-------------------------|----------------|-----------------|--------------|-------------------------|-----------------|
| 1       | STATIONARY AIR/OIL SEAL | 305-439-402-0  | N/A             | 1            | MA054801                | OVERHAULED      |

13. Remarks ATA 72-22-11      Manual Ref. CFMI-TP.SM.5 Rev:69 15-DEC-2011

Customer: TES AVIATION GROUP  
 Customer PO: 11956  
 Repair Number(s): 002, 005  
 Service Bulletin(s): N/A  
 Non Conformance Record(s): N/A  
 Removed From ESN: 721513  
 TSN - UNK    CSN - UNK  
 TSO - 0.0    CSO - 0

STANDARDAERO 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.145.4939.

|  |  |
|--|--|
| <p>14. Certifies the items identified above were manufactured in conformity to</p> <p><input type="checkbox"/> Approved design data and are in a condition for safe operation.</p> <p><input type="checkbox"/> Non-approved design data specified in Block 13.</p> | <p>19. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service      <input checked="" type="checkbox"/> Other registration specified in Block 13</p> <p>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.</p> |
|--|--|

|   |  |  |   |
|---|--|--|---|
| 15. Authorized Signature<br><p style="text-align: center;">N/A</p>    | 16. Approval/Authorization No.<br><p style="text-align: center;">N/A</p> | 20. Authorized Signature<br><p style="text-align: center;"><i>Patsy G. Rauch</i></p> | 21. Certificate Number<br><p style="text-align: center;">T3LR667N</p> |
| 17. Name (Typed or Printed)<br><p style="text-align: center;">N/A</p> | 18. Date (m/d/y)<br><p style="text-align: center;">N/A</p>               | 22. Name (Typed or Printed)<br><p style="text-align: center;">PATSY RAUCH</p>        | 23. Date (m/d/y)<br><p style="text-align: center;">Feb-09-2012</p>    |

### User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.

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.

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.

National Aviation  
Country  
AA/United States

2.

# AUTHORIZED RELEASE CERTIFICATE

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

3. Form Tracking No.

ARCAD710646

4. Organization Name and Address



STANDARD AERO  
11550 MOSTELLER RD.  
CINCINNATI, OHIO, USA 45241 Repair Station # T3LR667N

5. Work Order/Contract/Invoice Number

AD186651

| 6. Item | 7. Description | 8. Part Number | 9. Eligibility* | 10. Quantity | 11. Serial/Batch Number | 12. Status/Work |
|---------|----------------|----------------|-----------------|--------------|-------------------------|-----------------|
| 1       | RETAINING NUT  | 301-298-006-0  | N/A             | 1            | RA15848                 | OVERHAULED      |

13. Remarks

ATA 72-22-13

Manual Ref. CFMI-TP.SM.7 Rev:58 15-FEB-2013

Customer: AJ WALTER AVIATION LTD  
Customer PO: ER11009  
Repair Number(s): 001  
Service Bulletin(s): N/A  
Non Conformance Record(s): N/A  
Removed From ESN: 731705  
TSN - UNK CSN - UNK TSO - 0.0 CSO - 0.0

Additional Comments: N/A

STANDARD AERO 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.145.4939.

14. Certifies the items identified above were manufactured in conformity to

- Approved design data and are in a condition for safe operation.  
 Non-approved design data specified in Block 13.

19.

14 CFR 43.9 Return to Service

Other regulation specified in Block 13

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

N/A

16. Approval/Authorization No.

N/A

20. Authorized Signature

21. Certificate Number

T3LR667N

17. Name (Typed or Printed)

N/A

18. Date (m/d/y)

N/A

22. Name (Typed or Printed)

MARK ASELAGE

23. Date (m/d/y)

Oct-09-2013



## User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.

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.

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.