

# ESN 858790

## TECHNICAL DATA



# CFM56-3C1

# ESN 858790

## Summary Information

- Engine Serial Number (ESN): **858790**
- Engine Model: **CFM56-3C1**
- Engine Total Time (ETSN): **30,052**
- Engine Total Cycles (ECSN): **12457**
- Reason for Last Shop Removal: **Damage Observed on HPT Blades**
- Engine Total Time Since Last Shop Visit (TTSLSV): 0
- Engine Total Cycles Since Last Shop Visit (TCSLSV): 0
- Last Operator: **Turpial Airlines**
- Last Installation: **B737-4H6 MSN 27352 ( A/C Reg YV621T )**

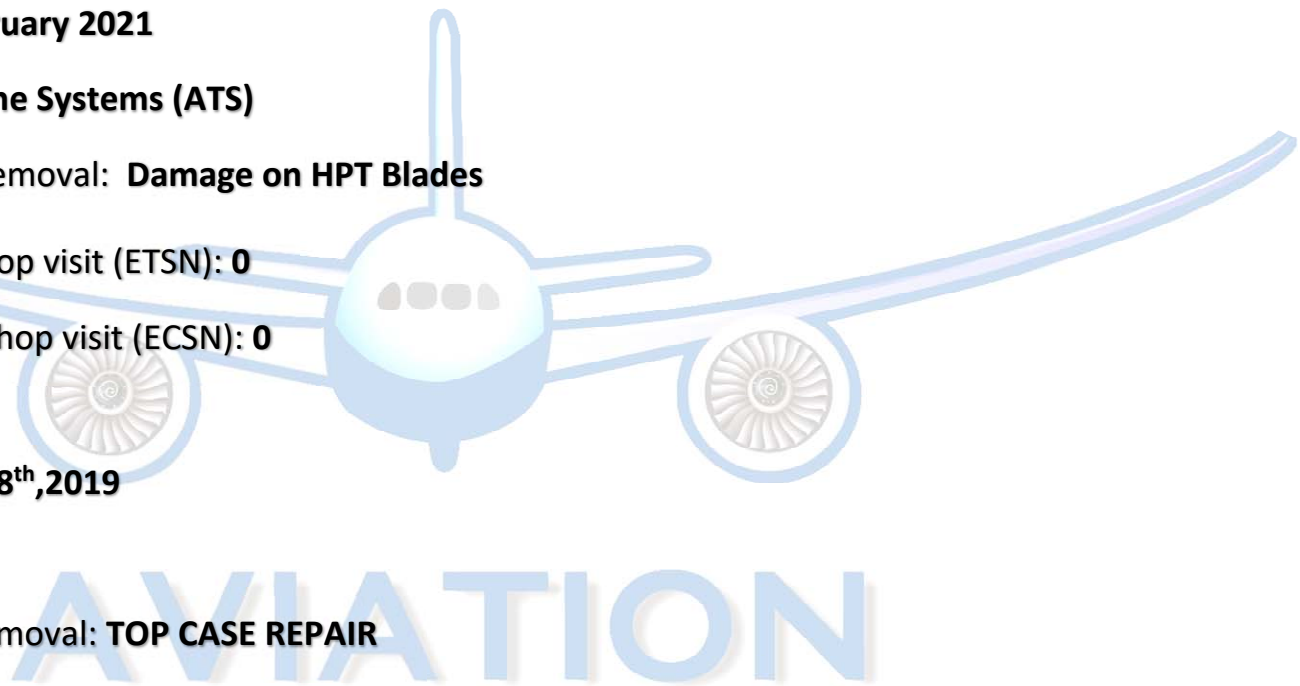
AVIATION

# ESN 858790

## Summary Information

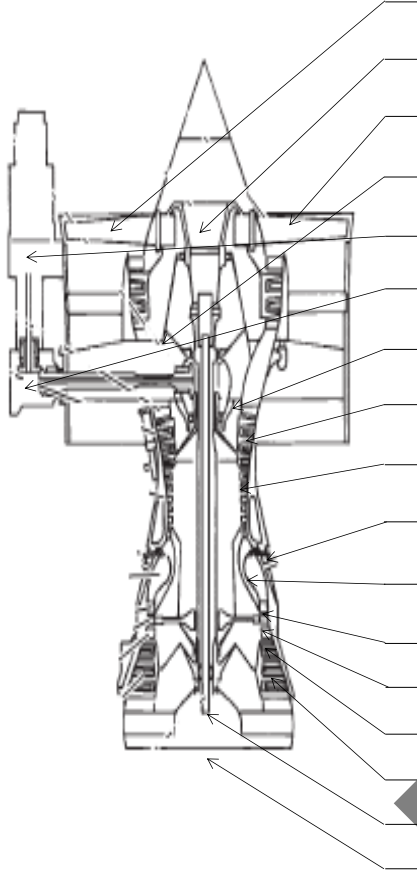
- Date of Shop Visit: **February 2021**
- MRO: **Advanced Turbine Systems (ATS)**
- Reason for Last Shop Removal: **Damage on HPT Blades**
- Engine Total Time at shop visit (ETSN): **0**
- Engine Total Cycles at shop visit (ECSN): **0**

- Date of Shop Visit: **July 8<sup>th</sup>,2019**
- MRO: **FJ Turbine Power**
- Reason for Last Shop Removal: **TOP CASE REPAIR**
- Engine Total Time at shop visit (ETSN): **48,778**
- Engine Total Cycles at shop visit (ECSN): **31,997**



# WORKSCOPE PROPOSAL FOR ENGINES CFM56-3

|                 |                           |
|-----------------|---------------------------|
| ENGINE S/N:     | 858790                    |
| TSN:            | 49345                     |
| CSN:            | 32456                     |
| Removal Reason: | HPT BLADES <u>DAMAGED</u> |
| Work Order:     | TBC                       |
| Customer:       | TAA                       |
| Revision No.:   | 1                         |
| Revision Date:  | 26-Jan-21                 |

|  | MODULE DESCRIPTION     |  |   | ATA REF. | BSI? | REPLACE? | MX LEVEL | PROPOSED WORKSCOPE   |
|--|------------------------|--|---|----------|------|----------|----------|----------------------|
|  | 21X                    | FAN SECTION<br>72-20-00                | FAN AND BOOSTER                         | 72-21-00 | NO   | NO       | MIN      |                      |
|  | 22X                    |  | NO.1 AND NO.2 BEARING SUPPORT ASSEMBLY  | 72-22-00 | NO   | NO       | MIN      |                      |
|  | 23X                    |  | FAN FRAME ASSEMBLY                      | 72-23-00 | NO   | NO       | MIN      |                      |
|  | 61X                    | ACCESSORY DRIVE<br>SECTION<br>72-60-00 | INLET GEARBOX AND NO.3 BEARING ASSEMBLY | 72-61-00 | NO   | NO       | MIN      |                      |
|  | 63X                    |  | ACCESSORY GEARBOX ASSEMBLY              | 72-63-00 | NO   | NO       | MIN      |                      |
|  | 62X                    |  | TRANSFER GEARBOX ASSEMBLY               | 72-62-00 | NO   | NO       | MIN      |                      |
|  | 31X                    | HPC SECTION<br>72-30-00                | COMPRESSOR ROTOR ASSEMBLY               | 72-31-00 | NO   | NO       | REPAIR   | TOP CASE REPAIR      |
|  | 32X                    |  | COMPRESSOR FRONT STATOR ASSEMBLY        | 72-32-00 | NO   | NO       | MIN      |                      |
|  | 33X                    |  | COMPRESSOR REAR STATOR ASSEMBLY         | 72-33-00 | NO   | NO       | MIN      |                      |
|  | 41X                    | COMBUSTION<br>SECTION<br>72-40-00      | COMBUSTION CASE ASSEMBLY                | 72-41-00 | NO   | NO       | MIN      |                      |
|  | 42X                    |  | COMBUSTION CHAMBER ASSEMBLY             | 72-42-00 | NO   | NO       | MIN      |                      |
|  | 51X                    | TURBINE SECTION<br>72-50-00            | HPT NOZZLE ASSEMBLY                     | 72-51-00 | NO   | YES      | REPAIR   | REPAIR AS APPLICABLE |
|  | 52X                    |  | HPT ROTOR ASSEMBLY                      | 72-52-00 | NO   | YES      | REPAIR   | REPAIR AS APPLICABLE |
|  | 53X                    |  | HPT SHROUD/STAGE 1 LPT NOZZLE ASSEMBLY  | 72-53-00 | NO   | YES      | REPAIR   | REPAIR AS APPLICABLE |
|  | 54X                    |  | LPT ROTOR/STATOR ASSEMBLY               | 72-54-00 | NO   | YES      | REPAIR   | REPAIR AS APPLICABLE |
|  | 55X                    |  | LPT SHAFT ASSEMBLY                      | 72-55-00 | NO   | NO       | MIN      |                      |
| 56X  | TURBINE FRAME ASSEMBLY |  | 72-56-00                                | NO       | NO   | MIN      |          |                      |

### SPECIAL INSTRUCTIONS

INCOMING ENGINE PHYSICAL INSPECTION  
 NO LLP REPLACEMENT AT THIS SHOP VISIT  
 FUEL NOZZLE TO FLOW CHECK  
 OUTGOING ENGINE MPA RUN IAW AMM 71-00-00 Test NO. 5  
 POST TEST VIDEO BSI & REPORT  
**AD 2013-26-01** - AGB Handcranking pad cover inspection  
**AD 2017-14-08** - Perform paragraph (f)(3) Repetitive Inspection of Pull Force Check of Stages 1, 3 & 3 of the Compressor VSV Actuation System  
 POST TEST PRESERVATION FOR 365 DAYS.  
 SINGLE RELEASE CERTIFICATE (FAA)



**DIVISIÓN DE IPR / IPR Department**  
**ESTATUS DE VIDA LIMITE DEL MOTOR/ Engine life limited parts status.**  
**Este documento cumple y excede los requerimientos exigidos por el INAC y la FAR / This document meets and exceed the requeriments of INAC and FAR)**

| Aircraft Data          |           |
|------------------------|-----------|
| Aircraft type:         | B737-400  |
| MSN:                   | 27352     |
| POS:                   | r/H       |
| Date:                  | 10-Jun-19 |
| Total Aircraft Time:   | 46094,1   |
| Total Aircraft Cycles: | 43691     |
| Aircraft Time Inst:    | 45.527,20 |
| Aircraft Cycles Inst:  | 43.232    |
| DATE INST              | 29-Jul-19 |

| Engine Data          |           |
|----------------------|-----------|
| Enigen Type          | CFM56-3C1 |
| ESN:                 | 858790    |
| Date:                | 10-Jun-19 |
| Total Engine Time:   | 49.345    |
| Total Engine Cycles: | 32.456    |
| TSI:                 | 566,90    |
| CSI:                 | 459       |
| CAT:                 | B         |
| DATE unistall        | 8/3/2020  |

| Last shop Visit              |               |
|------------------------------|---------------|
| Date:                        | 10-jul-19     |
| Total Engine Time for LSV:   | 566,90        |
| Total Engine Cycles for LSV: | 459           |
| Status/Work:                 | Repaired      |
| Accomplished by:             | FJ<br>TURBINE |

| ENGINE S/N: 858790 |                    |               |          |        |       |              |       |       |                  |      |      |                  |       |       |
|--------------------|--------------------|---------------|----------|--------|-------|--------------|-------|-------|------------------|------|------|------------------|-------|-------|
| IIN                | DESCRIPTION        | P/N           | S/N      | TSN    | CSN   | CYCLE LIMITS |       |       | OPERATING CYCLES |      |      | REMAINING CYCLES |       |       |
|                    |                    |               |          |        |       | A            | B     | C     | A                | B    | C    | A                | B     | C     |
| 211                | Booster Spool      | 335-009-306-0 | DC902907 | 30.052 | 12457 | 30000        | 30000 | 30000 | 5610             | 1796 | 5051 | 17543            | 17543 | 17543 |
| 213                | Fan Disk           | 335-014-511-0 | DC778137 | 30.052 | 12457 | 30000        | 24900 | 20100 | 5610             | 1796 | 5051 | 14687            | 12190 | 9840  |
| 221                | Fan Shaft          | 335-006-414-0 | DC903226 | 30.052 | 12547 | 30000        | 30000 | 30000 | 5610             | 1796 | 5051 | 17543            | 17543 | 17543 |
| 312                | HPC Front Shaft    | 1275M37P02    | GWN0AK50 | 20.369 | 12625 | 20000        | 20000 | 20000 | 3253             | 7135 | 2237 | 7375             | 7375  | 7375  |
| 313                | HPC 1-2 Spool      | 1589M66G02    | GWN099MR | 30.052 | 12457 | 20000        | 20000 | 20000 | 5610             | 1796 | 5051 | 7543             | 7543  | 7543  |
| 314                | HPC Stg 3 Disk     | 1590M59P01    | XAEF2832 | 30.052 | 12457 | 20000        | 20000 | 20000 | 5610             | 1796 | 5051 | 7543             | 7543  | 7543  |
| 315                | HPC 4-9 Spool      | 1588M89G03    | GWN098M2 | 30.052 | 12457 | 20000        | 20000 | 15800 | 5610             | 1796 | 5051 | 6200             | 6200  | 4898  |
| 316                | CDP Seal           | 1319M25P02    | GFF5CE23 | 30.052 | 12457 | 20000        | 18000 | 15000 | 5610             | 1796 | 5051 | 5659             | 5093  | 4244  |
| 521                | HPT Front Shaft    | 1385M90P04    | XAE78203 | 30.052 | 12457 | 20000        | 17300 | 17000 | 5610             | 1796 | 5051 | 6371             | 5511  | 5415  |
| 522                | HPT Front Air Seal | 1282M72P05    | GWN08FCE | 30.052 | 12457 | 20000        | 15800 | 15100 | 5610             | 1796 | 5051 | 5426             | 4286  | 4097  |
| 525                | HPT Disk           | 1475M29P03    | GWN096EF | 30.052 | 12457 | 20000        | 18500 | 16600 | 5610             | 1796 | 5051 | 6362             | 5885  | 5281  |
| 526                | HPT Rear Shaft     | 1864M91P02    | TMTTH766 | 30.052 | 12457 | 20000        | 20000 | 20000 | 5610             | 1796 | 5051 | 7543             | 7543  | 7543  |
| 542                | LPT Stg 1 Disk     | 301-331-126-0 | BC407048 | 30.052 | 12457 | 25000        | 25000 | 25000 | 5610             | 1796 | 5051 | 12543            | 12543 | 12543 |
| 543                | LPT Stg 2 Disk     | 301-331-227-0 | BC362236 | 30.052 | 12457 | 25000        | 25000 | 25000 | 5610             | 1796 | 5051 | 12543            | 12543 | 12543 |
| 544                | LPT Stg 3 Disk     | 301-331-322-0 | BC349349 | 30.052 | 12457 | 25000        | 25000 | 25000 | 5610             | 1796 | 5051 | 12543            | 12543 | 12543 |
| 545                | LPT Stg 4 Disk     | 301-331-429-0 | BC359353 | 30.052 | 12457 | 25000        | 25000 | 25000 | 5610             | 1796 | 5051 | 12543            | 12543 | 12543 |
| 546                | Connical Support   | 305-056-116-0 | DC549127 | 30.052 | 12457 | 25000        | 25000 | 25000 | 5610             | 1796 | 5051 | 12543            | 12543 | 12543 |
| 551                | LPT Shaft          | 301-330-067-0 | LA123780 | 30.052 | 12457 | 30000        | 30000 | 30000 | 5610             | 1796 | 5051 | 17543            | 17543 | 17543 |
| 552                | LPT Stub Shaft     | 301-330-626-0 | DC797082 | 30.052 | 12457 | 25000        | 25000 | 25000 | 5610             | 1796 | 5051 | 12543            | 12543 | 12543 |

Revisado por/Revised by    PEDRO RAMIREZ   

Aprobado por/approved by    FELIX RESTANA

**Recipient:** To Whom It May Concern

**Lugar y Fecha:** Valencia, 11/23/2020.

**Non Incident /Non Accident Statement**

Engine Model: CFM56-3C1

Engine Serial Number: 858-790

This letter is to confirm that with regard to the above mentioned CFM56-3C1 bearing manufacture serial number 858-790 Turpial Airlines C.A. confirms that to the best of our knowledge the above mentioned Engine during it's operation with Turpial Airlines C.A. from 09/21/2016 to current day has not been:

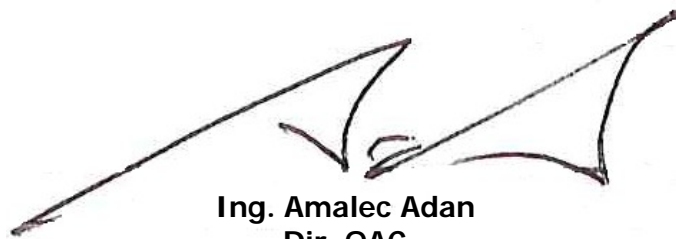
1. Damage during, or identified as the root cause of, any reportable incident or accident as defined by Chapter 1 of ICAO Annex 13; and
2. Subjected to several stress or heat (such as major engine failure, accident, or fire) or submersed in the salt water; and
3. Subjected to Government or Military use unless so operated under an Air Operator Certificate issued for civil air transport.
4. No part has been installed on the aircraft/component which was obtained from any Government, Military or unapproved source or was previously fitted to a non-civil aircraft.

Furthermore, during the time the above mentioned engine was operated by Turpial Airlines C.A. and maintained in accordance with applicable INAC regulations. Also we can confirm that this engine was not altered from its original approved Type Certificate and has not been altered in type design.

**Usage Details:**

| Aircraft Model / Registration / MSN | Pos |                  | Date       | FH        | FC    |
|-------------------------------------|-----|------------------|------------|-----------|-------|
| B737-4H6 / YV621T / 27352           | 2   | <b>start op.</b> | 09/21/2016 | 47.380,00 | 30660 |
|                                     |     | <b>Removal</b>   | 03/8/2020  | 49.345,00 | 32456 |

Sincerely,



**Ing. Amalec Adan**  
Dir. QAC  
Turpial Airlines C.A.

**Volamos en tu dirección**

|   |   |  |
|---|---|--|
| 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><b>800886</b> |
|---|---|--|

|  |   |
|--|---|
| 4. Organization Name and Address:<br><b>F. J. Turbine Power, Inc., 8195 West 20th Avenue, Hialeah, FL 33014 (FAA Approved Repair Station F7JR192Y)</b> | 5. Work Order/Contract/Invoice Number:<br><b>800886 / 858-790</b> |
|--|---|

| 6. Item: | 7. Description: | 8. Part Number: | 9. Quantity | 10. Serial Number: | 11. Status/Work: |
|----------|-----------------|-----------------|-------------|--------------------|------------------|
| 1        | TURBOFAN ENGINE | CFM56-3C-1      | 1           | 858-790            | REPAIRED         |

12. Remarks: INSPECTED AND REPAIRED AS PER CFM56-3, CFMI-SM.5, REV. 76, DATED DECEMBER 2018, MANUFACTURER'S SPECIFICATIONS AND CUSTOMER INSTRUCTIONS.

THE FOLLOWING A.D.'s, ASB's & SB's WERE COMPLIED WITH / VERIFIED THIS SHOP VISIT:

A.D. 2006-26-01 INSTALLED NEW FUEL FILTER P/N ACC462F2038.  
A.D. 2013-26-01 PERFORMED AN INDEPENDENT INSPECTION OF THE INSTALLATION OF THE AGB HANDCRANKING PAD COVER AFTER MAINTENANCE.  
A.D. 2017-14-08 COMPLIED WITH INSPECTION PER SB 72-1169 R2.  
SB 72-1169 R2 COMPLIED WITH PULL CHECK OF VARIABLE STATOR VANE ACTUATION RINGS.


DETAILS OF THIS REPAIR ARE ON FILE UNDER FJTP WO# 800886. FOR MORE DETAILS SEE FAA FORM 337, DISK SHEET (FORM FJT 7020A) AND A.D. SUMMARY (FORM FJT 7019A).

TOTAL TIMES AND CYCLES SUPPLIED BY OPERATOR: TSN : 48,778 CSN: 31,997

ENGINE WAS TESTED PER AMM 71-00-00, TEST NO. 10 AND PRESERVED FROM 1 TO 365 DAYS BY XTREME AVIATION, LLC. CRS #4XAR847C UNDER WO 003466, DATED 08-JUL-2019.

FOR FOREIGN REGISTERED PRODUCTS THIS FORM IS SUBJECT TO ACCEPTANCE BY THE GOVERNING CIVIL AVIATION AUTHORITY.

|  |  |
|--|--|
| 13a. Certifies the Items identified above were manufactured in conformance to:<br><input type="checkbox"/> Approved design data and are in condition for safe operation.<br><input type="checkbox"/> Non-approved design data specified in Block 12. | 14a. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to service. <input 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:    | 13c. Approval/Authorization No.: | 14b. Authorized Signature:<br> | 14c. Approval/Certificate No.:<br><b>F7JR192Y</b> |
| 13d. Name (Typed or Printed): | 13e. Date (dd/mm/yyyy):          | 14d. Name (Typed or Printed):<br><b>Jorge C. Ramirez</b>  | 14e. Date (dd/mm/yyyy):<br><b>10-Jul-2019</b>     |

**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 the national regulations by the user/installer before the aircraft may be flown.





REPÚBLICA BOLIVARIANA DE VENEZUELA  
 MINISTERIO DEL PODER POPULAR PARA EL TRANSPORTE Y OBRAS PÚBLICAS  
 INSTITUTO NACIONAL DE AERONÁUTICA CIVIL  
 GERENCIA GENERAL DE SEGURIDAD AERONÁUTICA

CONTROL DE DIRECTIVAS DE AERONAVEGABILIDAD  
 AERONAVE □ PLANTAS DE MOTOR □ HELICOPTEROS □ DISPOSITIVOS □

FORMA INAC-001

| MATRÍCULA | MARCA | MODELO    | SERIAL | FECHA     |
|-----------|-------|-----------|--------|-----------|
| YV621T    |       | CFM56-3C1 | 858700 | 14-Jan-21 |

| ADJUNTO  | DESCRIPCIÓN   | DOCUMENTO REFERENCIA                                     | METODO DE CUMPLIMIENTO  | FECHA DE CUMPLIMIENTO | RECURRENCIA (Mes., Cíc., DIAS) | CUMPLIMIENTO (Mes., Cíc., DIAS) | PRÓXIMO CUMPLIMIENTO | OBSERVACIONES  |           |
|--|---|--|-------------------------|-----------------------|--------------------------------|---------------------------------|----------------------|--|-----------|
| 86-08-05 R1  | (a) If the oil distributor is loose and spirolock is serviceable, either re-inspect the spirolock for serviceability at intervals not to exceed 125 hours TIS since last inspection or replace the oil distributor until accomplishment of paragraph (a)(2)                                   | CFM SB 72-205 R3   | Replace                 | N/A                   | N/A                            | N/A                             | N/A                  | N/A TO TGB P/N 301-300-010-0   |           |
| 89-12-51   | FAN DISK PN: 335-04511-0 & FAN BLADES PNs: 9527M99P08P09 & 1285M39P01 REMOVAL, OPERATED AT RESTRICTED CFM56-3C-1 THRUST)  | CFM SB 72-473  | Replace                 | N/A                   | N/A                            | N/A                             | N/A                  | SUPERSEDED BY AD 96-25-11  |           |
| 89-17-04   | INSPECT FORWARD SUMP MCD AND REMOVE THE AFFECTED N°3 BEARING PN: 9732M10P12 S/Ns FAFDXXXX OR FAFEXXXX. PN: 9732M10P18, OR 1376M76P12 FROM SERVICE.  | N/A  | Inspection              | N/A                   | N/A                            | N/A                             | N/A                  | SUPERSEDED BY AD 89-23-06 R1   |           |
| 89-23-06 R1  | (a)(1) Inspect the forward sump magnetic chip detector (MCD) in accordance with CFM56-3/-3B/-3C Service Bulletin (SB) No. 72-530, Revision 3, dated November 17, 1995, Thereafter, inspect the forward sump MCD at intervals not to exceed 50 hours TIS since the last inspection (S/I).      | CFM SB 72-530 R3<br>CFM SB 72-466                        | Inspection              | N/A                   | N/A                            | N/A                             | N/A                  | N/A DUE TO P/N 1461M16P04 S/N MDAPR747   |           |
|  | (a)(2) Remove from service No. 3 bearings, P/N 9732M10P18 and 1362M76P02, at the next shop visit  | CFM SB 72-530 R3   | Replace                 | N/A                   | N/A                            | N/A                             | N/A                  |  |           |
| 90-20-13   | (a) Modify the fan module assembly by installing fan blade dampers P/N 335-105-305-0, axial stops P/N 335-105-201-0, and bolts P/N J815P056A.   | CFM SB 72-494 R2<br>CFM SB 72-450 R3<br>CFM SB 72-462 R1 | MOD                     | N/A                   | N/A                            | N/A                             | N/A                  | PCW (CFM SB 72-494 FOUND EMBODIED) N/A DUE TO P/N.   |           |
| 91-02-10   | (a) Install fan splitter fairing, fan stage 1 vane assembly, and new centering shroud.  | CFM SB 72-450 R3<br>CFM SB 72-462 R1                     | MOD                     | N/A                   | N/A                            | N/A                             | N/A                  | FACTORY COMPLIED   |           |
| 91-02-10   | (b) Install the 12 door variable bypass valve (VBV) configuration   | CFM SB 72-494  | MOD                     | N/A                   | N/A                            | N/A                             | N/A                  |  |           |
| 96-18-16   | (f) Reidentify CFM56-3/-3B/-3C LPTR stub shafts, P/N 301-330-618-0, 301-330-619-0, 301-330-623-0, and 301-330-624-0, with S/N listed in Table 2 of CFM56-3/-3B/-3C SB No. 72-695.   | CFM SB 72-695  | Reidentify              | N/A                   | N/A                            | N/A                             | N/A                  | N/A TO P/N STUB SHAFT P/N 301-330625-0   |           |
|  | (g) Reidentify CFM56-3/-3B/-3C LPTR conical supports, P/N 305-056-106-0, 305-056-109-0, 305-056-110-0, and 305-056-111-0, with S/N listed in Table 1 of CFM56-3/-3B/-3C SB No. 72-695   | CFM SB 72-695  | Reidentify              | N/A                   | N/A                            | N/A                             | N/A                  | S/N DC797082 CONICAL SUPPORT P/N 305-056-116-0   |           |
| 96-25-11   | (a) (1) Prior to further flight, remove from service stage 1 fan disk Part Number (P/N) 335-014-511-0 that have operated at unrestricted CFM56-3C-1 thrust levels with fan blade P/N's 9527M99P08, 9527M99P09, 9527M99P10, 9527M99P11, or 1285M39P01 and replace with a serviceable fan disk. | BOEING SB 737-71-1203                                    | Replace                 | N/A                   | N/A                            | N/A                             | N/A                  | SUPERSEDES AD 89-13-51 PREVIOUSLY ACCOMPLISHED   |           |
|  | (a)(2) Prior to further flight, remove from service stage 1 fan blade P/N's 9527M99P08, 9527M99P09, 9527M99P10, 9527M99P11, and 1285M39P01 that have operated at unrestricted CFM56-3C-1 thrust levels and replace with a serviceable fan blade.  | BOEING SB 737-71-1203                                    | Replace                 | N/A                   | N/A                            | N/A                             | N/A                  |  |           |
|  | (b) For CFM56-3C-1 model turbofan engines equipped with fan blade P/N's 9527M99P08, 9527M99P09, 9527M99P10, 9527M99P11, or 1285M39P01   | BOEING SB 737-71-1203                                    | Mod                     | N/A                   | N/A                            | N/A                             | N/A                  |  |           |
| 97-06-01   | (a) Remove the fan disk prior to accumulating a total Category C thrust rating life of 20,100 cycles.   | ENGINE SHOP MANUAL CHAPTER 5                             | Remove                  | 31-ene-11             | CLOSED                         | CLOSED                          | CLOSED               | FAN DISK P/N 335-014-511-0 S/N DC778137 LIMITED BY REMAINING LIFE IN CAT C 14119 Cyclic AS TO JAT TECHNICAL AD STAT DATED 31.10.2011 |           |
| CERTIFICO QUE SE HAN VERIFICADO LOS REGISTROS DE MANTENIMIENTO DE LOS TRABAJOS AQUÍ ASENTADOS. LOS RESPALDOS DE LOS MISMOS ESTAN A DISPOSICIÓN DE LA AUTORIDAD AERONÁUTICA Y DECLARO QUE LA INFORMACIÓN AQUÍ DESCRITA ES VERDADERA Y CORRECTA. |   |  |                         |                       |                                |                                 |                      |  |           |
| Nombre y sello de la Organización<br>VTU-051   |   |  | AMALEC ATAN, CIV/217401 |                       |                                | Control de Calidad              |                      |  | 14/1/2021 |



RIF J-40491921-0





REPÚBLICA BOLIVARIANA DE VENEZUELA  
 MINISTERIO DEL PODER POPULAR PARA EL TRANSPORTE Y OBRAS PÚBLICAS  
 INSTITUTO NACIONAL DE AERONÁUTICA CIVIL  
 GERENCIA GENERAL DE SEGURIDAD AERONÁUTICA

CONTROL DE DIRECTIVAS DE AERONAVEGABILIDAD  
 AEROSUAVE en PLANTAS DE PODER A HELICES en DISPOSITIVOS en

FORMA INAC-39-001

| MATRÍCULA | MARCA | MODELO    | SERIAL | FECHA     |
|-----------|-------|-----------|--------|-----------|
| YV621T    |       | CFM56-3C1 | 858790 | 14-Jan-21 |

| AD# NUMERO | DESCRIPCION   | DOCUMENTO REFERENCIA                                 | METODO DE CUMPLIMIENTO      | FECHA DE CUMPLIMIENTO | RECURRENCIA (Hrs., Cyc, DIAS) | CUMPLIMIENTO (Hrs., Cyc, DIAS) | PROXIMO CUMPLIMIENTO | OBSERVACIONES  |
|------------|---|--|-----------------------------|-----------------------|-------------------------------|--------------------------------|----------------------|--|
| T97-25-51  | TO PREVENT IFSD DUE AN AGB STARTER GEARSHAFT OR TGB INPUT BEVEL GEAR FAILURE.   | CFM SB 72-A861                                       | Replace                     | N/A                   | N/A                           | N/A                            | N/A                  | SUPERSEDED BY AD 98-10-11  |
| 98-07-02   | (b)(1) Remove the HPCR stage 1-2 spool from service at the next engine shop visit after the effective date of this AD.  | CFM SB 72-856  | Replace                     | N/A                   | N/A                           | N/A                            | N/A                  | N/A DUE TO S/N HPC SPOOL STG 1-2 P/N 1589M66G02 S/N GWN099MIR  |
|            | (b)(2) Install No. 3 bearing rear air/oil seal retention bushings   | CFM SB 72-855  | Mod                         | N/A                   | N/A                           | N/A                            | N/A                  |  |
|            | (A) Replace the AGB starter gearshaft with a serviceable part   | CFM SB 72-863  | Replace                     | N/A                   | N/A                           | N/A                            | N/A                  |  |
| 98-10-11   | (B) Replace the TGB assembly with a serviceable part  | CFM SB 72-865  | Replace                     | N/A                   | N/A                           | N/A                            | N/A                  | N/A PER S/N ENGINE   |
|            | (C) Replace the AGB intermediate gear assembly with a serviceable part.   | CFM SB 72-873  | Replace                     | N/A                   | N/A                           | N/A                            | N/A                  |  |
| 98-12-32   | (a) Eddy current inspect for cracks or gouges in HPTTR disks, Part Numbers 1475M29P01, 1475M29P02, 9514M69P01, 9514M69P04, 9514M69P05, 9514M69P06, and 9514M69P09, with Serial Numbers listed in Table 1 of the applicable Service Bulletin (SB). | CFM SB 72-843 R1                                     | Eddy Current                | N/A                   | N/A                           | N/A                            | N/A                  | N/A DUE TO HPT ROTOR DISC P/N 1475M29P03 S/N GWN096EF  |
| 98-19-10   | (a) Replace the suspect starter gearshaft   | CFM SB 72-877 R1                                     | Replace                     | 7-dic-98              | CLOSED                        | CLOSED                         | CLOSED               | PREVIOUSLY ACCOMPLISHED  |
| 99-08-16   | TO PREVENT CRITICAL LIFE LIMITED ROTATING ENGINE PART FAILURE, WHICH COULD RESULT IN UNCONTAINED ENGINE FAILURE AND DAMAGE TO THE AIRPLANE.   | N/A  | N/A                         | N/A                   | N/A                           | N/A                            | N/A                  | SUPERSEDED BY AD 2000-12-01  |
| 2000-05-22 | TO DETECT CRACKS IN THE BOLT HOLES OD HPT FRONT ROTATING AIR SEALS P/N: 1282M72P03.   | CFM SB 72-922  | N/A                         | N/A                   | N/A                           | N/A                            | N/A                  | N/A DUE TO P/N 1282M72P05 S/N GWN08FCE   |
| 2000-12-01 | TO PREVENT CRITICAL LIFE LIMITED ROTATING ENGINE PART FAILURE, WHICH COULD RESULT IN UNCONTAINED ENGINE FAILURE AND DAMAGE TO THE AIRPLANE.   | CFM SB 73-126R1<br>CFM SB 73-125R1<br>CFM SB 73-A129 | N/A                         | N/A                   | N/A                           | N/A                            | N/A                  | SUPERSEDED BY AD 2002-13-03  |
| 2000-15-01 | (a) Perform initial and repetitive visual inspections of the fuel pump filter cover helicoil inserts and bolts for damage   | CFM SB 73-126 R1                                     | V.I                         | 3-feb-00              | CLOSED                        | CLOSED                         | CLOSED               | ACCOMPLISHED BY E.O. 7311-01061  |
| 2000-15-01 | (b) Remove and replace the fuel pump with a newly manufactured or reworked fuel pump that incorporates a D-bolt filter cover attachment   | CFM SB 73-129  | Replace                     | 17-ene-05             | CLOSED                        | CLOSED                         | CLOSED               | PREVIOUSLY PERFORMED MFP PN708600-5 S/N 17871 INSTALLED.   |
| 2001-04-06 | (b) perform a one-time fan disk dovetail wear measurement   | CFM SB 72-854-R2                                     | LOCAL ULTRASONIC INSPECTION | 9-feb-05              | CLOSED                        | CLOSED                         | CLOSED               | N/A NEW FAN DISC P/N 335-014-531-0 S/N DC778137 INSTALLED BY E.O 2001-04-06RS SV 09.02.2005.                                 |
| 2001-11-05 | (b) For engines that have a suspect No. 4 bearing that has a SN listed in Table 1 of this AD, replace the No. 4 bearing w   | CFM SB 72-A0965                                      | N/A                         | N/A                   | N/A                           | N/A                            | N/A                  | N/A DUE TO BEARING # 4P/N 305-355-720-0 S/N DC150417-R   |
| 2002-12-01 | (a) Revise the ESM  | (SUPERSEDED)   | (SUPERSEDED)                | (SUPERSEDED)          | (SUPERSEDED)                  | (SUPERSEDED)                   | (SUPERSEDED)         | SUPERSEDED BY AD 2002-13-03  |
| 2002-13-03 | (a) Revise the ESM  | N/A  | DOCUMENT REVISION           | N/A                   | N/A                           | N/A                            | N/A                  | SUPERSEDES AD 2000-12-01 PERFORM BY E.O 2002-13-03 R7  |
| 2002-13-03 | (a)(1) Perform Inspection of LLP IAW Instructions provide in the Applicable EM Sections.  | N/A  | NDI                         | 29-sept-11            | AT NEXT SHOP VISIT            | AT NEXT SHOP VISIT             | AT NEXT SHOP VISIT   | PERFORM INSPECTIONS OF THE FOLLOWING PARTS AT EACH PIECE-PART OPPORTUNITY IAW INSPECTIONS/CHECK SECTION INSTRUCTIONS A TABLE |

CERTIFICO QUE SE HAN VERIFICADO LOS REGISTROS DE MANTENIMIENTO DE LOS TRABAJOS AQUÍ ASENTADOS. LOS RESPALDOS DE LOS MISMOS ESTAN A DISPOSICION DE LA AUTORIDAD AERONAUTICA Y DECLARO QUE LA INFORMACION AQUÍ DESCRITA ES VERDADERA Y CORRECTA.

Nombre y sello de la Organización

VTU-051

AMALEC ADAN, CV: 217401

Control de Calidad

14/1/2021



RIF J-40491921-0



REPÚBLICA BOLIVARIANA DE VENEZUELA  
 MINISTERIO DEL PODER POPULAR PARA TRANSPORTE Y OBRAS PÚBLICAS  
 INSTITUTO NACIONAL DE AERONÁUTICA CIVIL  
 GERENCIA GENERAL DE SEGURIDAD AERONÁUTICA

CONTROL DE DIRECTIVAS DE AERONAVEGACIÓN  
 AERONAVE: PLANTAS DE PODER & HELICES & DISPOSITIVOS

FORMA INAC-35-001

| MATRÍCULA | MARCA | MODELO    | SERIAL | FECHA     |
|-----------|-------|-----------|--------|-----------|
| YV621T    |       | CFM56-3C1 | 858790 | 14-Jun-21 |

| AD NUMERO  | DESCRIPCION  | DOCUMENTO REFERENCIA                                 | METODO DE CUMPLIMIENTO    | FECHA DE CUMPLIMIENTO | RECURRENCIA<br>(Frs., Cyc, DIAS) | CUMPLIMIENTO<br>(Frs., Cyc, DIAS) | PROXIMO CUMPLIMIENTO          | OBSERVACIONES  |
|------------|--|--|---------------------------|-----------------------|----------------------------------|-----------------------------------|-------------------------------|--|
| 2002-13-03 | (e) Revise the maintenance program to add the inspection of the life-limited parts.  | N/A  | DOCUMENT REVISION         | N/A                   | N/A                              | N/A                               | N/A                           | SUPERSEDES AD 2000-12-01 PERFORM BY E.O 2002-13-03 R7  |
| 2004-10-13 | (b) For CFM56-3 series engines, do the following:<br>(1) Remove main fuel pumps P/N 301-779-002-0.<br>(2) For all CFM56-3 series engines that have incorporated SB (CFM56-3) 73-A129, remove from service main fuel pumps P/N 301-779-006-0.<br>(3) For all CFM56-3 series engines that have incorporated SB (CFM56-3) 73-087, remove from service main fuel pumps P/N 301-778-801-0, P/N 301-778-802-0, P/N 301-778-804-0, and P/N 301-778-805-0.<br>(4) Install a serviceable main fuel pump. Information on converting removed pumps into serviceable pumps can be found in SB (CFM56-3) 73-0120, Revision 5, dated | CFM SB 73-A129<br>CFM SB 73-120                      | Replace                   | 17-ene-05             | CLOSED                           | CLOSED                            | CLOSED                        | ACCOMPLISHED BY E.O 2004-10-13 R8<br>P/N 708600-5<br>S/N 17871   |
| 2006-26-01 | (g) replace fuel filter, Western Filter P/Ns WF337661 or WF337017 and PTI Technologies P/Ns 7595983-101 or 7588133, with a filter that has a P/N not listed in this AD.  | CFM SB 73-141  | Replace                   | 13-nov-07             | CLOSED                           | CLOSED                            | CLOSED                        | REPLACING THE FUEL WESTERN FILTERS P/N WF337661 OR WF337017 AND PTI TECHNOLOGIES P/N 7595983-01 OR 7588133 PERFORMED DURING C-CHECK BY LAL-PN 21946 INSTALLED BY EO 2006-26-01 R6<br>MIN 2006-26-01 R01<br>N/A DUE TO S/N HPC 4-9 SPOOL P/N 1588M69C03<br>S/N GW1029M7   |
| 2009-11-02 | (f) Remove HPC 4-9 spools from service that have a P/N and S/N listed in Table 1 of this AD  | N/A  | N/A                       | N/A                   | N/A                              | N/A                               | N/A                           | N/A DUE TO SB EFFECTIVITY  |
| 2010-12-03 | (i) perform an on-wing or inshop inspection of the fan blade and damper for wear   | CFM SB 72-1067                                       | N/A                       | N/A                   | N/A                              | N/A                               | N/A                           | ACCOMPLISHED BY 2010-12-03 R4<br>N/A BY HPT DISK P/N AND S/N   |
| 2013-02-02 | (e)(2) remove the HPT disk from service on or before accumulating 8,000 CSN.   | Pratt & Whitney Corp. Special Instruction No. 6F-12, | (superseded)              | (superseded)          | (superseded)                     | (superseded)                      | (superseded)                  | INSTALLED VERIFIED BY E.O 2013-02-02 R0.   |
| 2013-26-01 | (f)(1) Perform an Independent Inspection to verify re-installation of the AGB handcranking pad cover after any maintenance that involves the removal and re-installation of the AGB handcranking cover, or<br>(2) Insert an Independent Inspection as a required inspection item in the removal/continuation/alternation/maintenance program for the aircraft<br>(g) as an optional terminating action to the inspection requirement of par (f) of this AD, install an AGB that is not listed in para (c) of this AD that incorporates the oil dynamic seal assembly.  | N/A<br><br>CFM SB 72-1129                            | Inspection<br><br>Replace | 1-ago-16<br><br>N/A   | At next Shop Visit<br><br>N/A    | At next Shop Visit<br><br>N/A     | At next Shop Visit<br><br>N/A | AGB P/N 335-300-110-0<br>INSTALLED PERFORMED IAW MUSS#01153.<br>E.O 136060.<br>OIL DYNAMIC SEAL ASSEMBLY AD APPLIES TO CFM56-3 SERIES TURBOFAN ENGINES EQUIPPED WITH AGB P/Ns: 335-300-103-0; 335-300-105-0; 335-300-106-0; 335-300-107-0; 335-300-108-0; 335-300-109-0. or 335-300-110-0.<br>accomplished by E.O 2013-26-01 R0. |

CERTIFICO QUE SE HAN VERIFICADO LOS REGISTROS DE MANTENIMIENTO DE LOS TRABAJOS AQUÍ ASENTADOS. LOS RESPALDOS DE LOS MISMOS ESTÁN A DISPOSICIÓN DE LA AUTORIDAD AERONÁUTICA Y DECLARO QUE LA INFORMACIÓN AQUÍ DESCRITA ES VERDADERA Y CORRECTA.

Nombre y sello de la Organización: VFL-651  
 Control de Calidad: AMALPC ADMIN. CIV: 217801  
 Fecha: 14/1/2021



RIF J-40491921-0



REPÚBLICA BOLIVARIANA DE VENEZUELA  
 MINISTERIO DEL PODER POPULAR PARA TRANSPORTE Y OBRAS PÚBLICAS  
 INSTITUTO NACIONAL DE AERONÁUTICA CIVIL  
 GERENCIA GENERAL DE SEGURIDAD AERONÁUTICA

CONTROL DE DIRECTIVAS DE AERONAVEGABILIDAD  
 AERONAVE - PLANTAS DE PODER A HELICES - DISPOSITIVOS

FORMA INAC-39-001

| MATRÍCULA   |   | MARCA  | MODELO                 | SERIAL                | FECHA                            |                                   |                      |  |
|---|---|--|------------------------|-----------------------|----------------------------------|-----------------------------------|----------------------|--|
| YV621T  |   |  | CFM56-3C1              | 858790                | 14-Jun-21                        |                                   |                      |  |
| AD NUMERO   | DESCRIPCION   | DOCUMENTO REFERENCIA                                 | METODO DE CUMPLIMIENTO | FECHA DE CUMPLIMIENTO | RECURRENCIA<br>(Frs., Cyc, DIAS) | CUMPLIMIENTO<br>(Frs., Cyc, DIAS) | PRÓXIMO CUMPLIMIENTO | OBSERVACIONES  |
| 2015-18-04  | (g) do not install an affected gearshaft into an AGB.   | N/A  | N/A                    | N/A                   | N/A                              | N/A                               |                      | Not installed (JAW CFM Final Answer - AD 2015-01-33 Dated 2015 July 17th)  |
| 2016-14-10  | (e)(2) remove the high-pressure turbine (HPT) disk, part number (P/N) 880026, serial number (S/N) GKLBA9307, GKLBA9335, GKLBA9404, GKLBA9407, or GKLBA9409, installed HPT disk from service on or before accumulative 8,000 CSN.  | Pratt & Whitney Corp. Special Instruction No. 6F-12. | N/A                    | N/A                   | N/A                              | N/A                               | N/A                  | N/A PER PART NUMBER INSTALLED  |
| 2017-14-08  | (f) (1) Inspect the affected engines to determine if the compressor front stator case is marked with "RP031" adjacent to the part number. If the case is marked with "RP031," no further action is required. If the case is not marked with "RP031," follow the remaining steps in paragraph (f) of this AD.  | SB 72-1169 R2  | N/A                    | N/A                   | N/A                              | N/A                               | N/A                  | F. J. Turbine Power, Inc., Work Order/Contract/Invoice Number: 800686 / 858-790 COMPLIED WITH PULL CHECK OF VARIABLE STATOR VANE ACTUATION RINGS |
|   | (f) (2) Perform an initial pull force check of stage 1, stage 2, and stage 3 of the compressor variable stator vane (VSV) actuation system.<br>(i) If any stage requires more than 100 lb force to move the actuation ring, ream the VSV bores and apply anti-corrosion coating to stages 1, 2, and 3, prior to further flight, or replace with an HPC stator case that is eligible for installation and passes the VSV pull force check with measurements of 75 lb or less.<br>(ii) If any stage requires more than 75 lb, but less than or equal to 100 lb force to move the actuation ring, repeat the inspection within 3 months since last inspection.<br>a<br>(iii) If all stages require 75 lb force or less to move the actuation rings, repeat |  | N/A                    | 12 Meses              | 10-Jul-19                        |                                   |                      |  |
| CERTIFICADO QUE SE HAN VERIFICADO LOS REGISTROS DE MANTENIMIENTO DE LOS TRABAJOS AQUÍ ASENTADOS. LOS RESPALDOS DE LOS MISMOS ESTAN A DISPOSICION DE LA AUTORIDAD AERONAUTICA Y DECLARO QUE LA INFORMACION AQUÍ DESCRITA ES VERDADERA Y CORRECTA.<br>Nombre y sello de la Organización: VTU-051 <span style="float: right;">Control de Calidad</span> <span style="float: right;">14/1/2021</span> |   |  |                        |                       |                                  |                                   |                      |  |

AMALEC ADAM CIV: 247404




RIF J-40491921-0

**GE CELMA****SERVICE BULLETINS STATUS****CFM56-3C1**

| CUSTOMER                 |        | MODEL                  | ESN    | TSN   | CSN    | OS         | OUTGOING DATE |
|--------------------------|--------|------------------------|--------|-------|--------|------------|---------------|
| I.L.F.C.                 |        | CFM56-3C1              | 858790 | 19294 | 19999  | 2004194012 | FEB 09, 2005  |
| SERVICE BULLETINS NUMBER | REV NO | SERVICE BULLETIN TITLE |        |       | MODULE | STATUS     | REMARKS       |

|         |   |   |          |      |  |
|---------|---|---|----------|------|--|
| 72-450  | 3 | Introduction of a New Splitter Fairing  | 21X58790 | PCW  |  |
| 72-494  | 4 | Introduction of Fan Blades Dampers  | 21X58790 | PCW  |  |
| 72-543  | 8 | Introduction of Fan Blades with 37-Degrees Midspan Shrouds  | 21X58790 | PCW  |  |
| 72-579  | 5 | Replacement of the Conical Spinner by an Elliptical Spinner   | 21X58790 | PCW  |  |
| 72-595  | 5 | Immersion Ultrasonic/Eddy Current Inspection of Fan Disk  | 21X58790 | N/A4 |  |
| 72-854  | 2 | One time wear and Ultrasonic local inspection of Fan Disk slot pressure faces   | 21X58790 | NCW4 |  |
| 72-A916 | 3 | Introduction of Dampers on All Engines and Fan Blades 37-Degrees Midspan Shroud Angles for all Engines Operated at 22.Klbs Thrust Ratings and Above | 21X58790 | PCW  |  |
| 72-972  | 0 | Replacement of Spinner Front Cone Bolts   | 21X58790 | CW   |  |
| 72-1004 | 1 | One-Time On-Wing or In-Shop Inspection of the Booster Spool Forward Flange for Wear   | 21X58790 | N/A3 |  |
| 72-855  | 2 | Introduction of New No. 3 Bearing Rear Stationary Air/Oil Seal Retention Bushing  | 23X58790 | N/A3 |  |
| 72-881  | 4 | No. 3 Bearing Aft Stationary Air/Oil Seal Modification  | 23X58790 | N/A3 |  |
| 72-920  | 0 | Introduction of a New No. 3 Bearing Aft Stationary Air/Oil Seal   | 23X58790 | CW   |  |
| 72-979  | 0 | Replacement of the RTV Sealing on N1 Speed Sensor Tube Sleeve by a New O-Ring   | 23X58790 | CW   |  |
| 72-1018 | 0 | Introduction of Dampers on the Accessory Gearbox Axial Link Ends  | 23X58790 | CW   |  |
| 72-530  | 3 | No. 3 Bearing Improvement Program   | 61X58790 | N/A3 |  |
| 72-856  | 0 | Removal From Service - HPC Stage 1 and 2 Spools that Contacted the No. 3 Bearing Rear Stationary Air/Oil Seal                                       | 31X58790 | N/A4 |  |
| 72-964  | 0 | Introduction of New High Pressure Compressor Rotor Spool  | 31X58790 | CW   |  |
| 72-879  | 1 | One Time In-Shop Midflange Inspection   | 41X58790 | N/A4 |  |
| 72-904  | 2 | Combustion Chamber Assembly (72-42-00) - Combustion Dome Swirler Support Elimination  | 42X58790 | CW   |  |
| 72-915  | 1 | Introduction of Rework Inner and Outer Liner to Increase Thermal Barrier Coating  | 42X58790 | CW   |  |
| 72-919  | 0 | Introduction of New Outer Cowl With Increased Durability  | 42X58790 | CW   |  |
| 72-883  | 1 | High Pressure Turbine Nozzle (72-51-00) - HPT Nozzle Rework   | 51X58790 | CW   |  |
| 72-921  | 0 | Stator Segment Rework to Permit Coating of Platinum Aluminate   | 51X58790 | N/A3 |  |
| 72-932  | 0 | HPT Nozzle Innerband, Outerband and Airfoil Rework  | 51X58790 | CW   |  |

27-Set-00

| LEGEND  |   | DATE              | TECHNICAL DOCUMENTATION CONTROL  |
|---|---|-------------------|--|
| CW: COMPLIED WITH<br>CWP: COMPLIED WITH - PARTIALLY<br>N/A1: NOT APPLICABLE DUE TO ENGINE MODEL<br>N/A2: NOT APPLICABLE DUE TO ENGINE SN<br>N/A3: NOT APPLICABLE DUE TO PART SN<br>N/A4: NOT APPLICABLE DUE TO PART SN<br>N/A5: NOT APPLICABLE DUE TO MANUFACTURER INFORMATION<br>N/A6: NOT APPLICABLE DUE TO ANOTHER BULLETIN<br>N/A7: NOT APPLICABLE TO THIS LEVEL OF WORK ORDER<br>N/A8: NOT APPLICABLE DUE TO PART SCRAP/ORG/ARENTINE<br>NCW1: NOT COMPLIED WITH DUE TO PIECE PART NOT EXPOSURE | NCW2: NOT COMPLIED WITH DUE TO EXTERNAL PART NOT INSTALLED<br>NCW3: NOT COMPLIED WITH DUE TO CREDIT LIMIT (CYCLE/HOUR/DATE)<br>NCW4: NOT COMPLIED WITH DUE TO NEW PART INSTALLED (CYCLE/HOUR/DATE)<br>NCW5: NOT COMPLIED WITH (CUSTOMER AUTHORIZATION)<br>NCW6: ON ATTRITION REPAIR - NOT COMPLIED WITH DUE TO PART NOT REPAIRED<br>NCW7: ON ATTRITION REPLACEMENT - NOT COMPLIED WITH DUE TO PART SERVICEABLE<br>NCW8: ON ATTRITION INSPECTION - NOT COMPLIED WITH DUE TO AREA OR PART NOT EXPOSURE<br>NCW9: NOT COMPLIED WITH DUE TO VENDOR CODE<br>NCW10: NOT COMPLIED WITH DUE TO OTHER POSTERIOR SB<br>PCW: PREVIOUS COMPLIED WITH<br>DES: DESINCORPORATED | February 09, 2005 | D048  |

**GE CELMA****SERVICE BULLETINS STATUS****CFM56-3C1**

| CUSTOMER                 |        | MODEL                  | ESN    | TSN   | CSN    | OS         | OUTGOING DATE |
|--------------------------|--------|------------------------|--------|-------|--------|------------|---------------|
| I.L.F.C.                 |        | CFM56-3C1              | 858790 | 19294 | 19999  | 2004194012 | FEB 09, 2005  |
| SERVICE BULLETINS NUMBER | REV NO | SERVICE BULLETIN TITLE |        |       | MODULE | STATUS     | REMARKS       |

|         |   |  |          |      |  |
|---------|---|--|----------|------|--|
| 72-843  | 1 | One Time Accelerated Eddy Current Inspection of the Disk Rim Bolt Holes                    | 52X58790 | N/A3 |  |
| 72-922  | 0 | One Time Accelerated Eddy Current Inspection of the Front Rotating Air Seal Boltholes      | 52X58790 | N/A3 |  |
| 72-848  | 5 | Application of Vapor Phase Aluminization on Uncoated LPT STG 1 Nozzle Segments             | 53X58790 | CW   |  |
| 72-695  | 1 | Reidentification of LPT Conical Supports and LPT Stub Shafts                               | 54X58790 | N/A3 |  |
| 72-695  | 1 | Reidentification of LPT Conical Supports and LPT Stub Shafts                               | 55X58790 | N/A3 |  |
| 72-908  | 0 | Return to CFM1 of No.4 Roller Bearing 335-352-301-0 Stored as Spares                       | 55X58790 | N/A6 |  |
| 72-A965 | 0 | Reduced Interval for Aft Sump Magnetic Chip Detector                                       | 55X58790 | N/A3 |  |
| 72-A966 | 0 | Replacement of N° 4 Roller Bearing 305-355-717-0 in a defective batch                      | 55X58790 | N/A3 |  |
| 72-975  | 1 | Introduction of New N. 4 Roller Bearings with New Outer Race Material                      | 55X58790 | CW   |  |
| 72-988  | 1 | Replacement of Outer Race by a New Outer Race Material for No. 4 Roller Bearings in Field  | 55X58790 | N/A3 |  |
| 72-918  | 1 | Introduction of a Reworked Inner Liner and Outer Liner to Increase Thermal Barrier Coating | 56X58790 | CW   |  |
| 72-205  | 5 | Inspection of Spirolock and Oil Distributor Installed on Transfer Gearbox                  | 62X58790 | N/A3 |  |
| 72-A861 | 3 | Reduced Interval for Magnetic Chip Detector Inspection                                     | 62X58790 | N/A2 |  |
| 72-865  | 0 | Transfer Gearbox Assy Replacement  | 62X58790 | N/A2 |  |
| 72-867  | 0 | Replacement of Bevel Gears in Shop   | 62X58790 | N/A2 |  |
| 72-A861 | 3 | Reduced Interval of Magnetic Chip Detector Inspection                                      | 63X58791 | N/A2 |  |
| 72-863  | 1 | Starter Gearshaft Replacement for CFM56-3/3B/3B IPC  | 63X58791 | N/A2 |  |
| 72-873  | 1 | Gearshaft Assy (73X44) Equipped Replacement  | 63X58791 | N/A2 |  |
| 72-877  | 3 | Starter Gearshaft Replacement  | 63X58791 | N/A2 |  |
| 72-979  | 0 | Replacement of the RTV Sealing on N1 Speed Sensor Tube Sleeve by a New O-Ring              | EXT PART | CW   |  |
| 73-120  | 4 | Main Fuel Pump - Conversion from Bronze Bearings to Aluminium/Bronze Bearings              | COMP     | PCW  |  |
| 73-123  | 0 | Main Fuel Pump - Spare Parts Release   | COMP     | CW   |  |
| 73-126  | 1 | Inspection of Fuel Filter Cover Attachment Parts   | COMP     | N/A3 |  |
| 73-A129 | 0 | Introduction of a New Fuel Pump with New Filter Cover Attachment                           | COMP     | PCW  |  |
| 73-130  | 1 | Main Engine Control - Introduction of Nitronic Pins  | COMP     | CW   |  |

27-Set-00

| LEGEND   |   | DATE              | TECHNICAL DOCUMENTATION CONTROL   |
|--|---|-------------------|---|
| CW: COMPLIED WITH<br>CWP: COMPLIED WITH - PARTIALLY<br>N/A1: NOT APPLICABLE DUE TO ENGINE MODEL<br>N/A2: NOT APPLICABLE DUE TO ENGINE SN<br>N/A3: NOT APPLICABLE DUE TO PART PN<br>N/A4: NOT APPLICABLE DUE TO PART SN<br>N/A5: NOT APPLICABLE DUE TO MANUFACTURER INFORMATION<br>N/A6: NOT APPLICABLE DUE TO ANOTHER BULLETIN<br>N/A7: NOT APPLICABLE TO THIS LEVEL OF WORK ORDER<br>N/A8: NOT APPLICABLE DUE TO PART SCRAPORQUARENTINE<br>NCW1: NOT COMPLIED WITH DUE TO PIECE PART NOT EXPOSURE | NCW2: NOT COMPLIED WITH DUE TO EXTERNAL PART NOT INSTALLED<br>NCW3: NOT COMPLIED WITH DUE TO CREDIT LIMIT (CYCLE/HOUR/DATE)<br>NCW4: NOT COMPLIED WITH DUE TO NEW PART INSTALLED (CYCLE/HOUR/DATE)<br>NCW5: NOT COMPLIED WITH (CUSTOMER AUTHORIZATION)<br>NCW6: ON ATTRITION REPAIR - NOT COMPLIED WITH DUE TO PART NOT REPAIRED<br>NCW7: ON ATTRITION REPLACEMENT - NOT COMPLIED WITH DUE TO PART SERVICEABLE<br>NCW8: ON ATTRITION INSPECTION - NOT COMPLIED WITH DUE TO AREA OR PART NOT EXPOSURE<br>NCW9: NOT COMPLIED WITH DUE TO VENDOR CODE<br>NCW10: NOT COMPLIED WITH DUE TO OTHER POSTERIOR SB<br>PCW: PREVIOUS COMPLIED WITH<br>DES: DESINCORPORATED | February 09, 2005 | <div style="border: 1px solid black; padding: 5px; display: inline-block;">D048</div> |

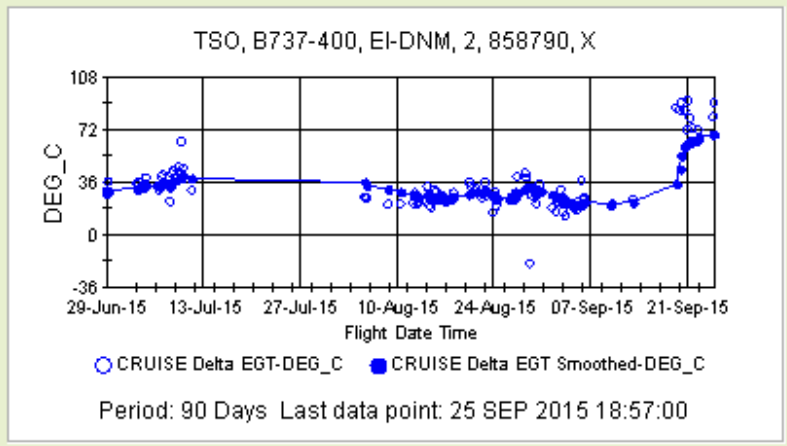
**GE CELMA****SERVICE BULLETINS STATUS****CFM56-3C1**

| CUSTOMER                 | MODEL     | ESN                    | TSN   | CSN   | OS         | OUTGOING DATE |         |
|--------------------------|-----------|------------------------|-------|-------|------------|---------------|---------|
| I.L.F.C.                 | CFM56-3C1 | 858790                 | 19294 | 19999 | 2004194012 | FEB 09, 2005  |         |
| SERVICE BULLETINS NUMBER | REV NO    | SERVICE BULLETIN TITLE |       |       | MODULE     | STATUS        | REMARKS |

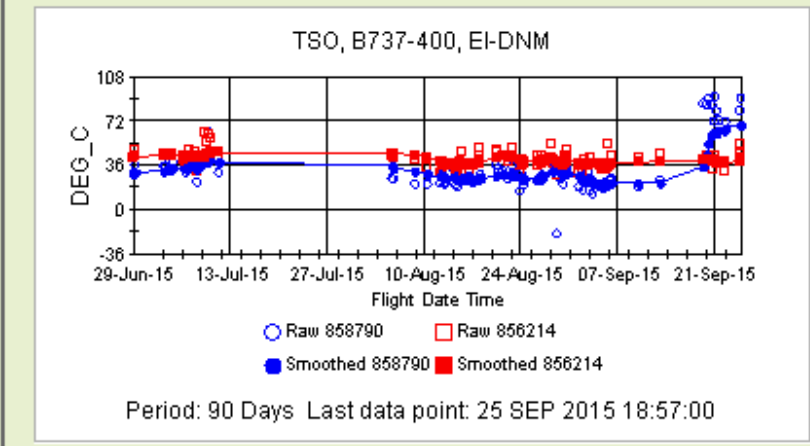
|         |   |  |          |      |  |
|---------|---|--|----------|------|--|
| 73-132  | 0 | Main Fuel Pump - Introduction of a New Bearing Seal                              | COMP     | CW   |  |
| 73-A135 | 0 | Main Engine Control - Replacement of N2 Governor Plungers                        | COMP     | N/A4 |  |
| 73-136  | 0 | Main Engine Control - Improvements to CDP Needle Bearing Design                  | COMP     | CW   |  |
| 73-137  | 0 | Introduction of a New Filter Packing O-rings in the Fuel Filter                  | COMP     | CW   |  |
| 73-141  | 0 | Introduction of a New Filter Element   | COMP     | CW   |  |
| 75-040  | 0 | Rework or Replacement of Master Ballscrew  | COMP     | CW   |  |
| 75-048  | 0 | Introduction of Turbine Clearance Control Valve 7061M31G05                       | COMP     | CW   |  |
| 75-049  | 0 | Rework the Stop Mechanism 3282556-2 to PN 3282556-21                             | COMP     | CW   |  |
| 79-073  | 0 | Introduction of New Gasket Seal Between the Heat Exchanger and Servo Fuel Heater | EXT PART | CW   |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |
|         |   |  |          |      |  |

|   |  |                   |  |
|---|--|-------------------|--|
| <b>LEGEND</b>   |  | <b>DATE</b>       | <b>TECHNICAL DOCUMENTATION CONTROL</b>   |
| CW: COMPLIED WITH<br>CWP: COMPLIED WITH - PARTIALLY<br>N/A1: NOT APPLICABLE DUE TO ENGINE MODEL<br>N/A2: NOT APPLICABLE DUE TO ENGINE SN<br>N/A3: NOT APPLICABLE DUE TO PART SN<br>N/A4: NOT APPLICABLE DUE TO PART SN<br>N/A5: NOT APPLICABLE DUE TO MANUFACTURER INFORMATION<br>N/A6: NOT APPLICABLE DUE TO ANOTHER BULLETIN<br>N/A7: NOT APPLICABLE TO THIS LEVEL OF WORK ORDER<br>N/A8: NOT APPLICABLE DUE TO PART SCRAP/QUARANTINE<br>NCW1: NOT COMPLIED WITH DUE TO PIECE PART NOT EXPOSURE | NCW2: NOT COMPLIED WITH DUE TO EXTERNAL PART NOT INSTALLED<br>NCW3: NOT COMPLIED WITH DUE TO CREDIT LIMIT (CYCLE/HOUR/DATE)<br>NCW4: NOT COMPLIED WITH DUE TO NEW PART INSTALLED (CYCLE/HOUR/DATE)<br>NCW5: NOT COMPLIED WITH (CUSTOMER AUTHORIZATION)<br>NCW6: ON ATTRITION REPAIR - NOT COMPLIED WITH DUE TO PART NOT REPAIRED<br>NCW7: ON ATTRITION REPLACEMENT - NOT COMPLIED WITH DUE TO PART SERVICEABLE<br>NCW8: ON ATTRITION INSPECTION - NOT COMPLIED WITH DUE TO AREA OR PART NOT EXPOSURE<br>NCW9: NOT COMPLIED WITH DUE TO VENDOR CODE<br>NCW10: NOT COMPLIED WITH DUE TO OTHER POSTERIOR SB<br>PCW: PREVIOUS COMPLIED WITH<br>DES: DEINCORPORATED | February 09, 2005 | 27-Set-00<br><br><div style="border: 1px solid black; padding: 5px; display: inline-block;">D048</div> |

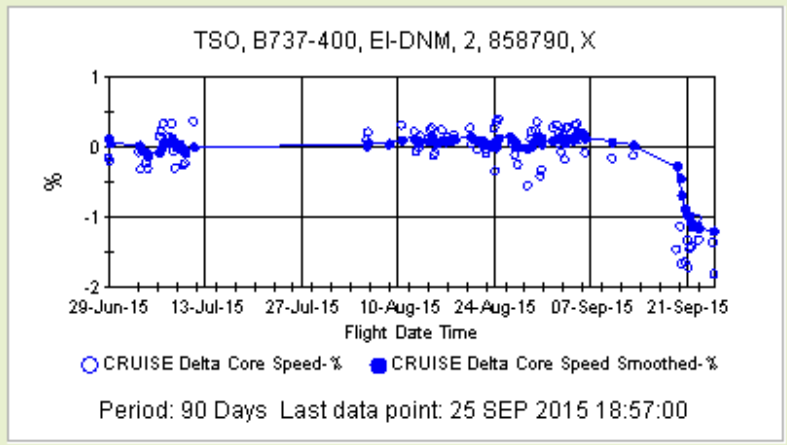
[Delta EGT-DEG\_C, Delta EGT Smoothed-DEG\_C] - 858790



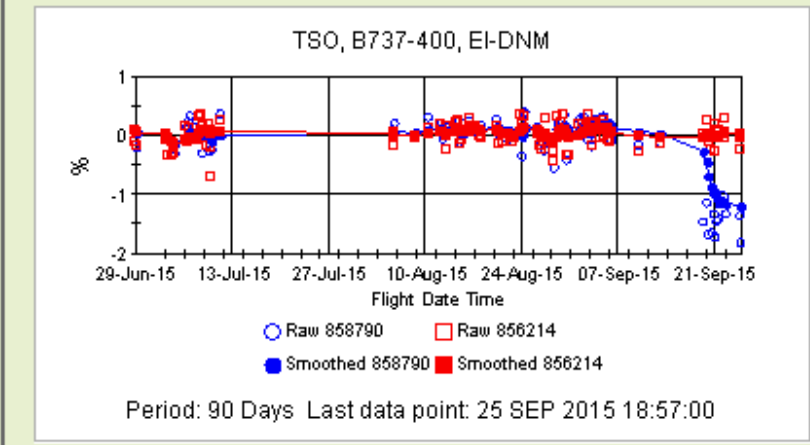
[Delta EGT-DEG\_C, Delta EGT Smoothed-DEG\_C] - ALL Engines



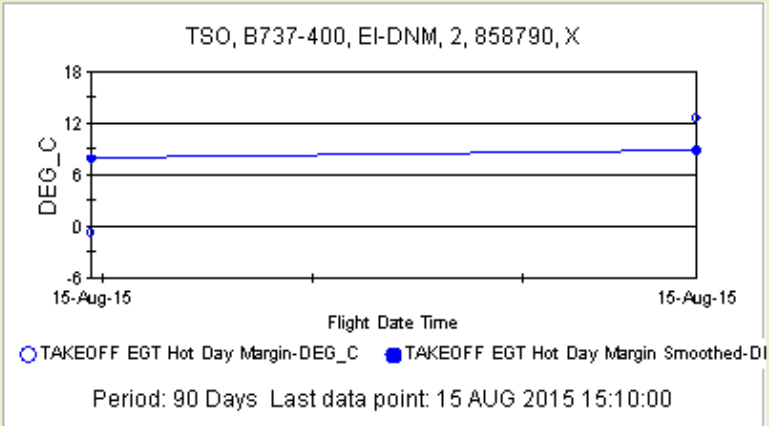
[Delta Core Speed-%, Delta Core Speed Smoothed-%] - 858790



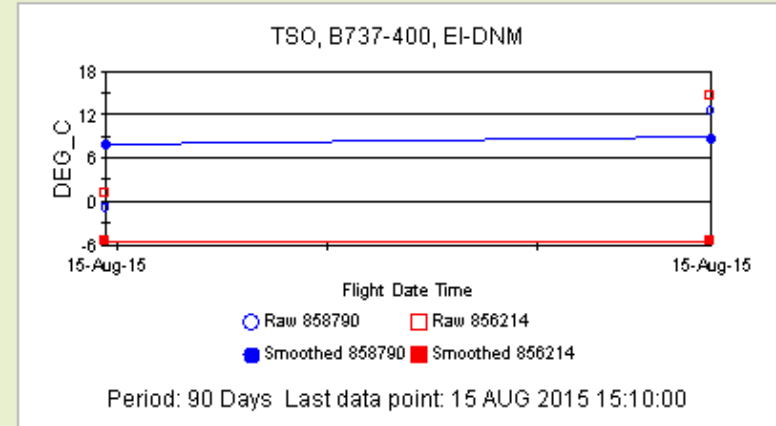
[Delta Core Speed-%, Delta Core Speed Smoothed-%] - ALL Engines



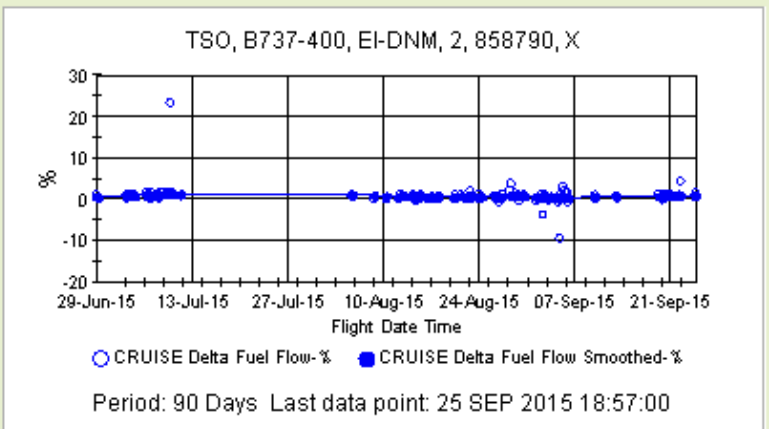
[EGT Hot Day Margin-DEG\_C, EGT Hot Day Margin Smoothed-DEG\_C] - 858790



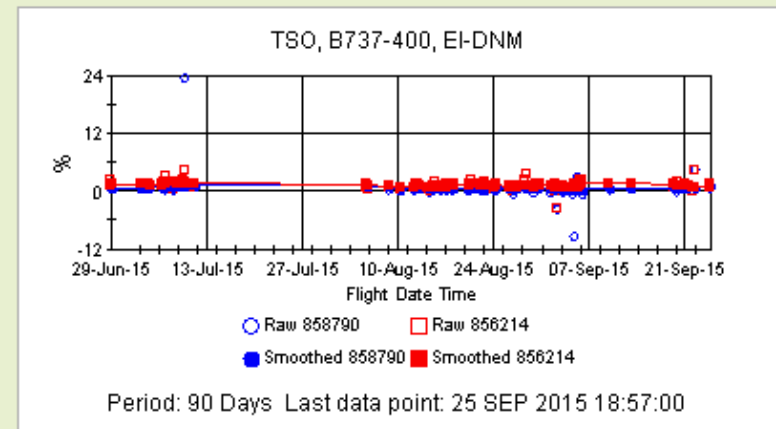
[EGT Hot Day Margin-DEG\_C, EGT Hot Day Margin Smoothed-DEG\_C] - ALL Engines



[Delta Fuel Flow-%, Delta Fuel Flow Smoothed-%] - 858790



[Delta Fuel Flow-%, Delta Fuel Flow Smoothed-%] - ALL Engines





# XTREME AVIATION LLC.

## FAA Repair Station 4XAR847C

### MPA RUN DATA (CFM 56) B737 TEST NO. 10

|                    |            |                |        |
|--------------------|------------|----------------|--------|
| CUSTOMER:          | FJ TURBINE | ACFT REG. NO.: | N359SW |
| ENGINE MODEL:      | CFM56-3C-1 | WORK ORDER:    | 003466 |
| ENGINE SERIAL NO.: | 858790     | WORK ORDER:    | N/A    |
| DATE:              | 7/6/19     | REASON:        | MPA    |
| POWER SETTING:     | 23.5K      |                |        |
| THRUST RATING:     | 23.5K      |                |        |

COMMENTS:

N/A

| Engine Pos.       | Engine Model | Engine S/N | MEC P/N  | PMC P/N    | Tank | Fuel Quantity (lbs) |
|-------------------|--------------|------------|----------|------------|------|---------------------|
| 1                 | CFM56-3C-1   | 858790     | 8063-215 | 7157M68P04 | NO 2 |                     |
| FUEL TYPE - JET A |              |            |          |            | CTR  |                     |
|                   |              |            |          |            |      | Total 0             |

**Engine Start Data (EGT not to exceed 725 degrees)**

| ENGINE POSITION | Start Lever Adv. |                    | INITIAL FUEL FLOW | LIGHT-UP TIME SEC. | STARTER CUTOFF N2% | MAX EGT °C | MAX FUEL FLOW | TIME TO IDLE SEC | ENGINE OIL |      |          | AVM UNITS |
|-----------------|------------------|--------------------|-------------------|--------------------|--------------------|------------|---------------|------------------|------------|------|----------|-----------|
|                 | N2%              | Motoring Time Sec. |                   |                    |                    |            |               |                  | QTY        | TEMP | PRESSURE |           |
| 1               | 25.0%            | 25                 | 0.1               | 2                  | 46.0%              | 620        | 0.98          | 65               | 5          | 50   | 30       | 0.5       |

**Test No. 4 - IDLE SPEED**

Low Idle limit: +3.0 / -1.0 N2%

High Idle limit: +3.0 / -7 N2%

| ENGINE POS. | OAT (°C) | BARO | Low Idle (N2 %) |          |  | High Idle (N2 %) |          |  |
|-------------|----------|------|-----------------|----------|--|------------------|----------|--|
|             |          |      | Target          | Recorded |  | Target           | Recorded |  |
| 1           | 29       | 30   | 62.1            | 62.8     |  | 72.7             | 73.4     |  |

**Test No. 5 Power Assurance Check (80% N1)**

| ENGINE POS. | OAT (°C) | BARO | TARGET N1% | Recorded Values |      |     |           |     |    |      |
|-------------|----------|------|------------|-----------------|------|-----|-----------|-----|----|------|
|             |          |      |            | N1%             | N2%  | EGT | FUEL FLOW | OT  | OP | Vibe |
| 1           | 27       | 30   | 81.5%      | 81.5            | 94.9 | 733 | 5.77      | 115 | 50 | 1    |

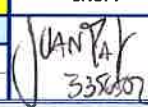
**Test No. 5 Power Assurance Check (85% N1)**

| ENGINE POS. | OAT (°C) | BARO | TARGET N1% | Recorded Values |      |     |           |     |    |      |
|-------------|----------|------|------------|-----------------|------|-----|-----------|-----|----|------|
|             |          |      |            | N1%             | N2%  | EGT | FUEL FLOW | OT  | OP | Vibe |
| 1           | 27       | 30   | 86.6%      | 86.6            | 96.6 | 778 | 6.78      | 115 | 50 | 1.2  |

**Test No. 5 Power Assurance Check (90% N1)**

| ENGINE POS. | OAT (°C) | BARO | TARGET N1% | Recorded Values |      |     |           |     |    |      |
|-------------|----------|------|------------|-----------------|------|-----|-----------|-----|----|------|
|             |          |      |            | N1%             | N2%  | EGT | FUEL FLOW | OT  | OP | Vibe |
| 1           | 27       | 30   | 91.7%      | 91.7            | 98.6 | 819 | 7.95      | 120 | 55 | 1.2  |

**Test No. 5 Takeoff Power Check**

| ENGINE POS. | OAT (°C) | TARGET N1% | Recorded Values |       |     |           |          |        | INSP.  |
|-------------|----------|------------|-----------------|-------|-----|-----------|----------|--------|--|
|             |          |            | N1%             | N2%   | EGT | FUEL FLOW | RED LINE | MARGIN |  |
| 1           | 26       | 98.0%      | 98              | 101.4 | 894 | 9.97      | 930      | 36     |  |

**Test #5 Power Assurance Check (80% N1)**

| ENGINE POS. | OAT (°C) | TARGET N1% | Recorded Values |      |     | ADJ EGT FOR N1 | MAX EGT 23.5K | BASE EGT MARGIN | TCC TIMER MARGIN ADJ | TCC TIMER OFF OR ON Y/N | THRUST RATING | N2 adj for | adjusted N2 | MAX N2 | %N2 Margin |
|-------------|----------|------------|-----------------|------|-----|----------------|---------------|-----------------|----------------------|-------------------------|---------------|------------|-------------|--------|------------|
|             |          |            | N1%             | N2%  | EGT |                |               |                 |                      |                         |               |            |             |        |            |
| 1           | 27       | 81.5%      | 81.5            | 94.9 | 733 | 0              | 733           | 0               | 0                    | OFF                     | 23.5K         | 0          | 94.9        | 95.00  | 0.10       |

**Test #5 Power Assurance Check (85% N1)**

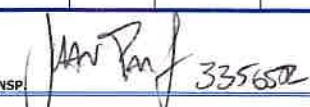
| ENGINE POS. | OAT (°C) | TARGET N1% | Recorded Values |      |     | ADJ EGT FOR N1 | MAX EGT 23.5K | BASE EGT MARGIN | TCC TIMER MARGIN ADJ | TCC TIMER OFF OR ON Y/N | THRUST RATING | N2 adj for | adjusted N2 | MAX N2 | %N2 Margin |
|-------------|----------|------------|-----------------|------|-----|----------------|---------------|-----------------|----------------------|-------------------------|---------------|------------|-------------|--------|------------|
|             |          |            | N1%             | N2%  | EGT |                |               |                 |                      |                         |               |            |             |        |            |
| 1           | 27       | 86.6%      | 86.6            | 96.6 | 778 | 0              | 783           | 5               | 0                    | OFF                     | 23.5K         | 0          | 96.6        | 96.90  | 0.30       |

**Test #5 Power Assurance Check (90% N1)**

| ENGINE POS. | OAT (°C) | TARGET N1% | Recorded Values |      |     | ADJ EGT FOR N1 | MAX EGT 23.5K | BASE EGT MARGIN | TCC TIMER MARGIN ADJ | TCC TIMER OFF OR ON Y/N | THRUST RATING | N2 adj for | adjusted N2 | MAX N2 | %N2 Margin |
|-------------|----------|------------|-----------------|------|-----|----------------|---------------|-----------------|----------------------|-------------------------|---------------|------------|-------------|--------|------------|
|             |          |            | N1%             | N2%  | EGT |                |               |                 |                      |                         |               |            |             |        |            |
| 1           | 27       | 91.7%      | 91.7            | 98.6 | 819 | 0              | 844           | 25              | 0                    | OFF                     | 23.5K         | 0          | 98.6        | 99.10  | 0.50       |

\*\* NOTE: ENGINES WITH THE HPTCC TIMER, Adjust the EGT and N2 margins for these effects: HPTCC Timer On engines operated at 22,000 pounds thrust or less, increase the EGT margin by 17C.

\*\* NOTE: 1) If the N1 target is more than the N1 record, there is a positive (+) difference.  
 2) If the N1 target is less than the N1 record, there is a negative (-) difference.

INSP: 

# XTREME AVIATION LLC.

## FAA Repair Station 4XAR847C

### TEST NO. 6 - MEC TRIM

| ENG POS | OAT | BARO | WIND             |                     | PMC OFF (%N2) |          | PMC ON (%N1) |          |
|---------|-----|------|------------------|---------------------|---------------|----------|--------------|----------|
|         |     |      | VELOCITY (KNOTS) | DIRECTION (DEGREES) | TARGET        | RECORDED | TARGET       | RECORDED |
| 1       | 29  | 30   | 0                | 0                   | 93.5          | 93.7     | 75.1         | 74       |
| 2       |     |      |                  |                     |               |          |              |          |

### TEST NO. 7 - VIBRATION SURVEY

| ENG POS | OAT | BARO | STATIC T.O. TARGET (%N1) | SELECTOR SWITCH POSITION |
|---------|-----|------|--------------------------|--------------------------|
| 1       | 26  | 30   | 98                       | ON                       |

| ACCEL |      |                           | DECEL |      |                           |
|-------|------|---------------------------|-------|------|---------------------------|
| %N1   | %N2  | VIBRATION READING (UNITS) | %N1   | %N2  | VIBRATION READING (UNITS) |
| 52.2  | 85.9 | 0.6                       | 92.3  | 98.6 | 1.1                       |
| 65.3  | 89.7 | 0.8                       | 85.6  | 96.1 | 1.1                       |
| 73.3  | 92.2 | 1.8                       | 80.9  | 94.5 | 1.1                       |
| 80.2  | 94.6 | 1                         | 73    | 92.2 | 2                         |
| 85.5  | 96.4 | 1.1                       | 65.5  | 89.9 | 0.9                       |
| 90.9  | 99   | 1.2                       | 53.3  | 86.2 | 0.9                       |

|     |     | VIBRATION READING (UNITS) |        |        |        |         |     |     |     | MEAN VIBRATION READING (UNITS) | SOURCE |     |     |     |
|-----|-----|---------------------------|--------|--------|--------|---------|-----|-----|-----|--------------------------------|--------|-----|-----|-----|
| %N1 | %N2 | SEC                       | 30 SEC | 60 SEC | 90 SEC | 120 SEC | SEC | SEC | SEC |                                | FAN    | LPT | HPT | HPC |
|     |     |                           |        |        |        |         |     |     |     |                                |        |     |     |     |
|     |     |                           |        |        |        |         |     |     |     |                                |        |     |     |     |
|     |     |                           |        |        |        |         |     |     |     |                                |        |     |     |     |
|     |     |                           |        |        |        |         |     |     |     |                                |        |     |     |     |
|     |     |                           |        |        |        |         |     |     |     |                                |        |     |     |     |
|     |     |                           |        |        |        |         |     |     |     |                                |        |     |     |     |
|     |     |                           |        |        |        |         |     |     |     |                                |        |     |     |     |
|     |     |                           |        |        |        |         |     |     |     |                                |        |     |     |     |
|     |     |                           |        |        |        |         |     |     |     |                                |        |     |     |     |

### TEST NO. 8 - ACCEL/DECEL CHECK

| ENG POS | OAT | BARO | TARGET VALUES (%N1) |                    | ACCEL TIME (SEC)  |   |  |
|---------|-----|------|---------------------|--------------------|---|---|--|
|         |     |      | STATIC T.O.         | ACCEL CHECK TARGET | LOW IDLE TO 40% N1 (Differential Limit of 4 Sec. Between Engines) | 40% N1 TO ACCEL CHECK TARGET (Differential Limit of 2 Sec. Between Engines) | HIGH IDEL TO ACCEL CHECK TARGET (7.4 Sec. Max) |
| 1       | 26  | 30   | 98                  | 95.9               | 4   | 2   | 6.8  |

REMARKS, DISCREPANCIES:

N/A

INSP.

Juan P. / 3356502