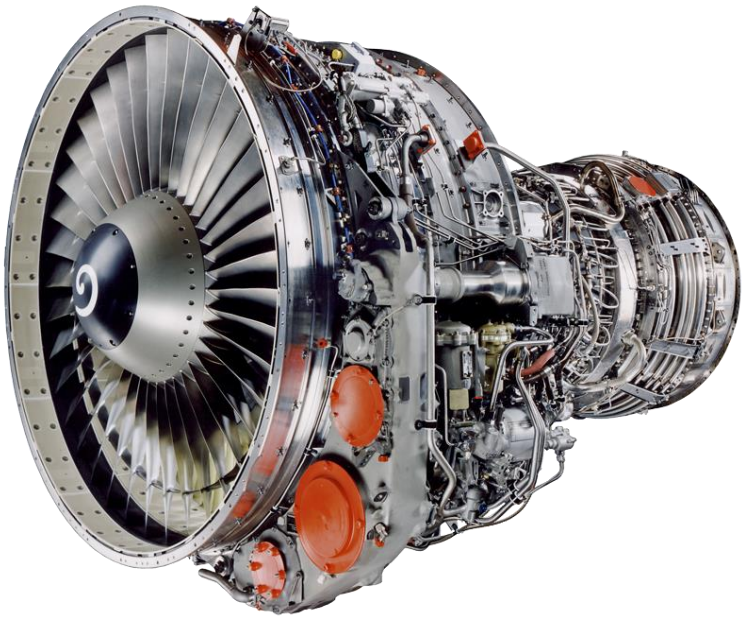
# Engine Pertinent Records Package

## CFM56-3C1

## Engine S/N 725103
## W/O: 5085C



**FAA REPAIR STATION Q6GR293Y, EASA REPAIR STATION EASA.145.6500**

**14080 S.W. 143 Ct Miami, FL 33186, P:(305).254.0034, F: (305).254.0037**

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**FAA REPAIR STATION Q6GR293Y, EASA REPAIR STATION EASA.145.6500**

**14080 S.W. 143 Ct Miami, FL 33186, P:(305).254.0034, F: (305).254.0037**


# FAA FORM 337

**FAA REPAIR STATION Q6GR293Y, EASA REPAIR STATION EASA.145.6500**

**14080 S.W. 143 Ct Miami, FL 33186, P:(305).254.0034, F: (305).254.0037**

U.S. Department of Transporation
Federal Aviation Administration

# MAJOR REPAIR AND ALTERATION
## (Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020
11/30/2007

Electronic Tracking Number

**For FAA Use Only**

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 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. §44701). Failure to report can result in a civil penalty for each such violation (49 U.S.C. §46301(a))

| | | | |
|---|---|---|---|
| **1. Aircraft** | Nationality and Registration Mark | Serial No. | |
| | Make | Model | Series |
| **2. Owner** | Name *(As shown on registration certificate)* | Address *(As shown on registration certificate)*<br>Address _____<br>City _____ State _____<br>Zip _____ Country _____ | |

## 3. For FAA Use Only

| 4. Type | | 5. Unit Identification | | | |
|---|---|---|---|---|---|
| Repair | Alteration | Unit | Make | Model | Serial No. |
| ☐ | ☐ | AIRFRAME | _____ | *(As described in item 1 above)* | _____ |
| ☒ | ☐ | POWERPLANT | CFM INTERNATIONAL | CFM56-3C1 | 725103 |
| ☐ | ☐ | PROPELLER | | | |
| ☐ | ☐ | APPLIANCE | Type<br>Manufacturer | | |

## 6. Conformity Statement

| A. Agency's Name and Address | B. Kind of Agency | | | |
|---|---|---|---|---|
| Name TURBINE ENGINE SOLUTIONS<br>Address 14080 SW 143 COURT<br>City MIAMI State FLORIDA<br>Zip 33186 Country UNTIED STATES OF AMERICA | ☐ | U.S. Certificated Mechanic | ☐ | Manufacturer |
| | ☐ | Foreign Certificated Mechanic | C. Certificate No. | |
| | ☒ | Certificated Repair Station | **Q6GR293Y** | |
| | ☐ | Certificated Maintenance Organization | | |

D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 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.

| Extended range fuel per 14 CFR Part 43 App. B | Signature/Date of Authorized Individual |
|---|---|
| ☐ | Martin Cordero 3/15/2023 |

## 7. Approval for return to Service

Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ Approved ☐ Rejected

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| BY | ☐ | FAA Flt. Standards Inspector | ☐ | Manufacturer | ☐ | Maintenance Organization | ☐ Persons Approved by Canadian Department of Transport |
| | ☐ | FAA Designee | ☒ | Repair Station | ☐ | Inspection Authorization | Other *(Specify)* |

| Certificate or Designation No. | Signature/Date of Authorized Individual |
|---|---|
| Q6GR293Y | Martin Cordero 3/15/2023 |

**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.)*

| | | | |
|---|---|---|---|
| **WORK ORDER: 5085C** | | | |
| **MODEL: CFM56-3C1** | **ENGINE SERIAL NUMBER: 725103** | Nationality and Registration Mark | Date |
| **ETT: 65,017.0** | **ETC: 41,448** | | |

**SUBJECT ENGINE WAS REMOVED FOR LLP REPLACEMENT; THE FOLLOWING WAS ACCOMPLISHED**:

**I.** **FAN AND BOOSTER MODULE (ATA 72-00-21):** was removed and inspected in-situ.

**II.** **NO.1 AND NO 2 BRG MODULE (ATA 72-00-22):** was removed as a module, partially disassembled, cleaned, inspected, repaired, balanced, and assembled.

**III.** **HPC ROTOR MODULE (ATA 72-00-31):** was removed as a module, disassembled, cleaned, inspected, repaired, balanced, and assembled.

i. Removed and replaced damaged HPC blades on Stg's 3,5,6,7,8 and 9 with overhauled condition units.
ii. Removed and replaced HPC 4-9 Spool with overhauled units.

**IV.** **HPC FRONT STATOR ASSEMBLY (ATA: 72-00-32):** was removed as a module, partially disassembled, cleaned, inspected, repaired, and assembled.

i. Installed overhauled Stage's 1 thru 5 Honeycomb seals.
ii. Match grinded all honeycomb sections.

**V.** **HPC REAR STATOR (ATA: 72-33-00):** was removed as a module, disassembled, cleaned, inspected, repaired, and assembled.

i. Installed overhauled Stage's 6 thru 8 Honeycomb seals.
ii. Match grinded all honeycomb sections.

**VI.** **COMBUSTION ASSY (ATA 72-41, -42):** was removed as a module, disassembled, cleaned, inspected, repaired, and assembled.

i. Installed FWD Inner Nozzle Support in overhauled condition.
ii. Installed overhauled Condition Combustion Chamber.
iii. Installed a set of Bench Checked Fuel Nozzles.
iv. Installed overhauled HPT Inner Stationary Seal

**VII.** **HPT NOZZLE MODULE (ATA 72-00-51):** was removed and replaced with serviceable condition module.

i. Installed HPT Outer Stat. Seal in serviceable condition.

**VIII.** **HPT ROTOR MODULE (ATA 72-00-52):** was removed, cleaned, inspected, assembled, balanced, and installed in serviceable condition.

i. Installed set of serviceable condition HPT blades.
ii. Match grinded to J05 dimensions.

N/A☒ Additional Sheet Are Attached

**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.)*

| | |
|---|---|
| | |

Nationality and Registration Mark Date

**WORK ORDER: 5085C**
**MODEL: CFM56-3C1 ENGINE SERIAL NUMBER: 725103**
**ETT: 65,017.0 ETC: 41,448**

**IX. HPT SHROUD AND STAGE 1 LPT NOZZLE ASSEMBLY (ATA 72-00-53):** Removed, partially disassembled, cleaned, inspected, assembled, and installed in serviceable condition.

i. Removed and replaced Full set of HPT Shrouds with overhauled condition units.
ii. Matched Grind Shrouds to HPT Blades.

**X. LPT ROTOR MODULE (ATA 72-00-54):** was removed, partially disassembled inspected, balanced, and installed in serviceable condition.

i. Removed and replaced Stages 1 thru 4 Disk and blades assemblies and Conical Seal with serviceable condition units.

**VI. LPT SHAFT MODULE (ATA 72-00-55):** was removed and inspected on situ.

**VII. IGB MODULE (ATA 72-00-61):** was removed as a module, partially disassembled, cleaned, inspected, repaired, balanced, and assembled.

**IX. AGB MODULE (ATA 72-00-63):** was removed and replaced with serviceable condition unit (SB 72-1129).

**X. MAIN LINE BEARINGS:** was removed, cleaned, inspected and installed in serviceable condition.

**XI. ACCESSORIES:**

i. Installed 5th STG Bleed Air valve in overhauled condition.
ii. Installed overhauled MEC.
iii. Installed bench checked Fuel Pump.
iv. T-2 Sensor was installed in overhauled condition.
v. CIT Sensor was inspected and tested.
vi. VSV Actuators was inspected and tested.
vii. Fuel Gear Motor was installed in repaired condition.
viii. TCC Valve was installed in overhauled condition.
ix. Flexible Shaft Assemblies were installed in new condition.
x. Master Ball screw Actuator was inspected and tested.
xi. Ball screw Actuator Assemblies was inspected and tested.
xii. T495 thermocouples wiring harness was inspected and tested.

**ACCOMPLISHED TEST NO. 10 ON WING PER 71-00-00 PER BOEING B737 AIRCRAFT MANUAL & ON-WING 365 DAY PRESERVATION PER (AMM) MOST CURRENT REVISION AND FOUND ALL PARAMETERS TO BE WITHIN SERVICEABLE LIMITS. (ENGINE RUN WAS PERFORMED BY XTREME AVIATION LLC FAA CRS # 4XAR847C) POST MPA RUN BORESCOPE INSPECTION WAS COMPLETED BY TURBINE ENGINE SOLUTIONS, INC AND FOUND TO BE WITHIN ACCEPTABLE LIMITS.**

**THE AIRCRAFT ENGINE IDENTIFIED ABOVE WAS REPAIRED AND INSPECTED IN ACCORDANCE WITH CURRENT REGULATIONS OF THE FEDERAL AVIATION AND IS APPROVED FOR RETURN TO SERVICE.**

**PERTINENT DETAILS OF THE REPAIR ARE ON FILE AT THIS REPAIR STATION UNDER WORK ORDER NO. 5085C**

# LIFE LIMITED PARTS SHEET

**FAA REPAIR STATION Q6GR293Y, EASA REPAIR STATION EASA.145.6500**

**14080 S.W. 143 Ct Miami, FL 33186, P:(305).254.0034, F: (305).254.0037**

# Life Limited Parts Time/Cycle Record

**ENG. MODEL:** CFM56-3C1
**ENG. SERIAL NO.:** 725103
**TSN:** 65,017.00
**CSN:** 41,448
**WORK ORDER:** 5085C
**DATE:**

| NOMENCLATURE | PART NO. | SERIAL NO. | TOTAL HOURS | CAT A | CAT B | CAT C | CAT 7B22 | CAT7B22 | CAT7B24 | CAT A LIMIT | CAT B LIMIT | CAT C LIMIT | CAT 2B LIMIT | 7B22 LIMIT | 7B24 LIMIT | TOTAL CYCLES | CR CAT A | CR CAT B | CR CAT C | CR CAT 2B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **FAN ROTOR MODULE** | | | | | | | | | | | | | | | | | | | | |
| BOOSTER SPOOL | 335-009-306-0 | BC835821 | N/A | 0 | 9,920 | 1 | 0 | | | 30,000 | 30,000 | 30,000 | | | | 9,921 | 20,079 | 20,079 | 20,079 | |
| FAN STG. 1 DISK | 335-014-511-0 | DB083696 | N/A | 3,460 | 14,960 | 1 | 0 | | | 30,000 | 24,900 | 20,100 | | | | 18,421 | 8,514 | 7,066 | 5,704 | |
| FWD FAN SHAFT | 335-006-414-0 | DD686292 | N/A | 0 | 9,920 | 1 | 0 | | | 30,000 | 30,000 | 30,000 | | | | 9,921 | 20,079 | 20,079 | 20,079 | |
| **HPC ROTOR MODULE** | | | | | | | | | | | | | | | | | | | | |
| HPC FRONT SHAFT | 1275M37P02 | GWN0H3EP | N/A | 2,328 | 4,430 | 1 | | | | 20,000 | 20,000 | 20,000 | | | | 6,759 | 13,241 | 13,241 | 13,241 | |
| HPC SPOOL 1-2 | 1589M66G02 | GWN08GW8 | N/A | 2,328 | 11,880 | 1 | | | | 20,000 | 20,000 | 20,000 | | | | 14,209 | 5,791 | 5,791 | 5,791 | |
| HPC STG. 3 DISK | 1590M59P01 | XAEL8596 | N/A | 2,328 | 4,430 | 1 | | | | 20,000 | 20,000 | 20,000 | | | | 6,759 | 13,241 | 13,241 | 13,241 | |
| HPC SPOOL 4 - 9 | 1588M89G03 | GWN0F45K | N/A | 0 | 0 | 0 | 0 | 0 | | 20,000 | 20,000 | 15,800 | | 20,000 | 20,000 | 0 | 20,000 | 20,000 | 15,800 | |
| HPC SEAL - CDP | 1319M25P02 | GFF5EDRP | N/A | 2,328 | 4,430 | 0 | | | | 20,000 | 18,000 | 15,000 | 16,800 | | | 6,758 | 12,749 | 11,474 | 9,562 | |
| **HPT ROTOR MODULE** | | | | | | | | | | | | | | | | | | | | |
| HPT FWD SHAFT | 1385M90P04 | XAEJ3293 | N/A | 0 | 9,920 | 1 | | | | 20,000 | 17,300 | 17,000 | | | | 9,921 | 8,530 | 7,378 | 7,251 | |
| HPT FWD AIR SEAL | 1282M72P05 | XAE34160 | N/A | 0 | 11,248 | 1 | | | | 20,000 | 15,800 | 15,100 | | | | 11,249 | 5,760 | 4,550 | 4,349 | |
| HPT DISK | 1475M29P03 | XAEL4202 | N/A | 0 | 3,456 | 1 | | | | 20,000 | 18,500 | 16,600 | | | | 3,457 | 16,262 | 15,042 | 13,497 | |
| HPT REAR SHAFT | 1864M91P02 | TMT2B603 | N/A | 0 | 9,920 | 1 | | | | 20,000 | 20,000 | 20,000 | | | | 9,921 | 10,079 | 10,079 | 10,079 | |
| **LPT MAJOR MODULE** | | | | | | | | | | | | | | | | | | | | |
| LPT STG. 1 DISK | 301-331-126-0 | DE615271 | N/A | 2 | 9,851 | 0 | | | | 25,000 | 25,000 | 25,000 | | | | 9,853 | 15,147 | 15,147 | 15,147 | |
| LPT STG. 2 DISK | 301-331-227-0 | BC863011 | N/A | 2 | 9,851 | 0 | | | | 25,000 | 25,000 | 25,000 | | | | 9,853 | 15,147 | 15,147 | 15,147 | |
| LPT STG. 3 DISK | 301-331-322-0 | PA342791 | N/A | 0 | 3,456 | 1 | | | | 25,000 | 25,000 | 25,000 | | | | 3,457 | 21,543 | 21,543 | 21,543 | |
| LPT STG. 4 DISK | 301-331-429-0 | DE172469 | N/A | 2 | 9,851 | 0 | | | | 25,000 | 25,000 | 25,000 | | | | 9,853 | 15,147 | 15,147 | 15,147 | |
| LPT CONICAL SEAL | 305-056-116-0 | DD687109 | N/A | 2 | 9,851 | 0 | | | | 25,000 | 25,000 | 25,000 | | | | 9,853 | 15,147 | 15,147 | 15,147 | |
| LPT SHAFT | 301-330-067-0 | LA089182 | N/A | 3,460 | 14,960 | 1 | | | | 30,000 | 30,000 | 30,000 | | | | 18,421 | 11,579 | 11,579 | 11,579 | |
| LPT STUB SHAFT | 301-330-626-0 | DB693804 | N/A | 3,460 | 14,960 | 1 | | | | 25,000 | 25,000 | 25,000 | | | | 18,421 | 6,579 | 6,579 | 6,579 | |

*The above data was obtained from engine records supplied by the previous owners, repair agencies and operators of the engine.*
*Notes: * Denotes replaced disks at this shop visit.*

Form: TESI 1039C

Approved by:

8-Feb-2023
Date


# NON-INCIDENT

**FAA REPAIR STATION Q6GR293Y, EASA REPAIR STATION EASA.145.6500**

**14080 S.W. 143 Ct Miami, FL 33186, P:(305).254.0034, F: (305).254.0037**

December 06, 2018

## STATEMENT OF NON-INCIDENT / ACCIDENT

**Subject:** Boeing 737-400 Aircraft MSN 23991
CFM56-3B2 Engine S/N 725105
CFM56-3B2 Engine S/N 725103
GTCP85-129H APU S/N P-100049
Nose Landing Gear S/N CPT2671ETM
Left Main Landing Gear S/N XC93327
Right Main Landing Gear S/N XC92276

**To:** Whom it may concern

This letter certifies that the subject aircraft, engines, landing gears, APU and associated components were operated by NewGen Airways for 6378 hours and 36 minutes and 2561 cycles, as detailed below, for the purpose of relocation ferry flights from Bangkok, Thailand to Tainan Airport, Taiwan.

During the relocation ferry flights detailed below, the Aircraft and installed Engines, Landing Gears, APU and associated components were not involved in any incident or accident, nor were they subjected to any severe stress or heat or salt water immersion, or otherwise exposed to corrosive agents outside normal operations, and were not operated by or acquired from any military or governmental organization.

Relocation Ferry Flights

| DATE | ROUTE | HOURS | CYCLES | THRUST | LOG PAGE |
|---|---|---|---|---|---|
| 04-Dec-18 | DMK-TNN | 3:07 | 1 | CAT C | 013306 |
| | | | | | |
| | | | | | |
| | | | | | |
| | **TOTALS:** | **3:07** | **1** | | |

| **Final Status after ferry:** | **TSN** | **CSN** |
|---|---|---|
| Aircraft MSN 23991 | 68254:10 | 43870 |
| Engine S/N 725105 | 63472:00 | 41318 |
| Engine S/N 725103 | 65017:07 | 41448 |

I certify that the information above is true and correct to the best of my knowledge.

Mr. Pichest Issara
Quality Assurance Engineering Manager
Technical Department
NewGen Airways.
Thailand.

222 Room 2337 Floor 2 Donmueang International Airport, Terminal 1, Viphavadeerangsit Road, Don Mueang Bangkok 10210
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