1. Approving Civil Aviation Authority/Country:	2.	3. Form Tracking Number:
FAA/United States	**AUTHORIZED RELEASE CERTIFICATE** **FAA Form 8130–3, AIRWORTHINESS APPROVAL TAG**	1085-132
4. Organization Name and Address:		5. Work Order/Contract/Invoice Number:

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
1	Power Plant	CFM56-3B1	1		Inspected

12. Remarks:

This unit was inspected via borescope IAW Boeing 737 AMM Chap. 72-00-00 pb-600.
This CFM56-3B1 engine with ESN: 725711 was mounted in a stand off wing and was found to be serviceable without restrictions per BSI.
Reference BSI report dated 12SEP2019 provided to the customer.
Times and Cycles as Reported by AerSale. Per FAR 43.9 this document constitutes a return to service.
TSN: 74840.5 CSN: 68913

SERVICES INC. CERTIFIES THAT THE WORK SPECIFIED IN BLOCKS 11/12 WAS CARRIED OUT IN ACCORDANCE WITH EASA PART 145, AND WITH RESPECT TO THAT WORK, THE COMPONENT IS CONSIDERED READY FOR RELEASE TO SERVICE UNDER EASA PART 145 APPROVAL NUMBER EASA 145.6444 - EASA PART 145 APPROVAL NUMBER EASA 145.644

13a. Certifies the items identified above were manufactured in conformity to:		14a. ☑ 14 CFR 43.9 Return to Service ☑ Other regulation specified in Block 12	
☐ Approved design data and are in a condition for safe operation. ☐ 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:	14c. Approval/Certificate No.:
			2PBR941B
13d. Name (Typed or Printed):	13e. Date (dd/mmm/yyyy):	14d. Name (Typed or Printed):	14e. Date (dd/mmm/yyyy):
		Don Maddock	12-Sep-2019

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 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.

CUSTOMER:		**LOCATION:**	*Jet Pro- PHX*		
WORK ORDER:	**1085-132**	**DATE:**	**12-SEP-19**	**PERFORMED BY:**	**D. MADDOCK**
ENGINE MODEL:	**CFM56-3B1**	**ENGINE S/N:**		**POSITION:**	**Off**
A/C TYPE:	**B737**	**A/C REG:**	**N/A**	**A/C S/N:**	**N/A**
REASON:	**Acceptance Inspection**				

BORESCOPE INSPECTION REPORT

Summary: SERVICEABLE
This engine was found to be serviceable in regards to BSI only.

General Exterior Inspection Ref. AMM 72-00-00

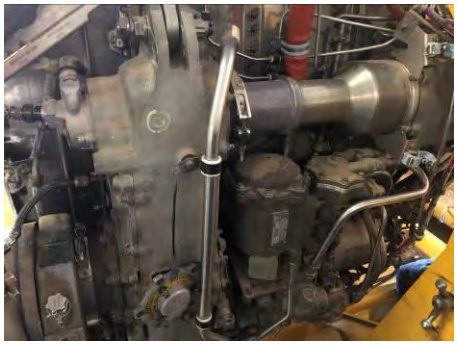
Exterior Inspection
Igniter boxes & leads, PMC and anti-ice ducts and oil tank are visibly secure and no broken mounts. Start valve, hydraulic lines and wire harness are all visibly secure with no broken mounts. Starter duct & FWD anti ice duct are visibly secure.

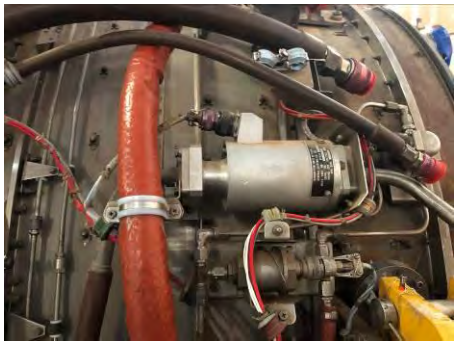
Accessory Drive Gearbox
Starter, CSD, generator, angle gearbox, hydraulic pump, fuel pump and MEC are visibly secure with no evidence of leaks. No visible damage to the plumbing or tubes.

Compressor Cases
No visible damage to the LP compressor bleed valves. No visible bent or broken HP variable stator vanes, Customer service ducts have no visible cracks or evidence of leaking. Fuel nozzles have no visible evidence of leaking. Heat shields for HP turbine cooling manifold have no missing material. 5th stage start valve is not modified.

Exhaust Cases
LP turbine cooling tubes have no dents or visible evidence of cracks or leaks.

Exhaust Cone
No evidence of thermal distress.





ENGINE MODEL: **CFM56-3B1** **ENGINE S/N:** **POSITION:** **OFF**

BORESCOPE INSPECTION REPORT



Suggested Action: *None.*

ENGINE MODEL: **CFM56-3B1** **ENGINE S/N:** **POSITION:** **OFF**

BORESCOPE INSPECTION REPORT

Low Pressure Compressor Ref. AMM 72-00-00

38 LPC 1 Fan
LE of the fan blades are smooth to the touch with blends observed, no recent FOD. No excessive missing material or heavy rubs around the running seal.

Inlet Guide Vanes
No discrepancies noted at this time.

68 LPC 2 Blades
Shop blends are acceptable.

68 LPC 3 Blades
No discrepancies noted at this time.

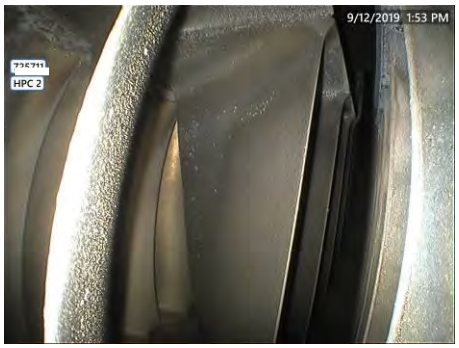
68 LPC 4 Blades
No discrepancies noted at this time.

Suggested Action: *None.*

High Pressure Compressor Ref. AMM 72-00-00

38 HPC 1 Blades
No significant discrepancies noted at this time.

53 HPC 2 Blades
No significant discrepancies noted at this time.



ENGINE MODEL: **CFM56-3B1** **ENGINE S/N:** **POSITION:** **OFF**

BORESCOPE INSPECTION REPORT

60 HPC 3 Blades
One blade has a tip corner missing on the TE .299” high and .140” deep. One other has a radial tip crack less than .300” from the TE and .060” high. Both are acceptable.
Ref. AMM 72-00-00 pgs. 617 & 620 attached.

68 HPC 4 Blades
No significant discrepancies noted at this time.

75 HPC 5 Blades
No significant discrepancies noted at this time.

82 HPC 6 Blades
LE nicks in several blades the largest is .018” in Dim B. Max allowed is .040”
Ref. AMM 72-00-00 pg. 620 attached.

82 HPC 7 Blades
LE nicks in several blades the largest is .012” in the lower 25%. Max allowed is .030”.
Ref. AMM 72-00-00 pg. 618 attached.

ENGINE MODEL: **CFM56-3B1** **ENGINE S/N:** **POSITION:** **OFF**

BORESCOPE INSPECTION REPORT

80 HPC 8 Blades
Round bottom dent in the root of one blade .027” in diameter and less than .003” deep. TE dent in the lower 25% .029” deep Max allowed is .030”. Both are acceptable.
Ref. AMM 72-00-00 pg. 618 attached.

76 HPC 9 Blades
Nick in the LE of one blade .026” deep is acceptable. Max allowed is .030”.
Ref. AMM 72-00-00 pg. 618 attached.

Suggested Action: *None. LE/TE nicks & dents in all areas, a few with small burrs, <.020” observed on several blades through out HPC are permitted. Mineral deposits are permitted.*

ENGINE MODEL: **CFM56-3B1** **ENGINE S/N:** **POSITION:** **OFF**

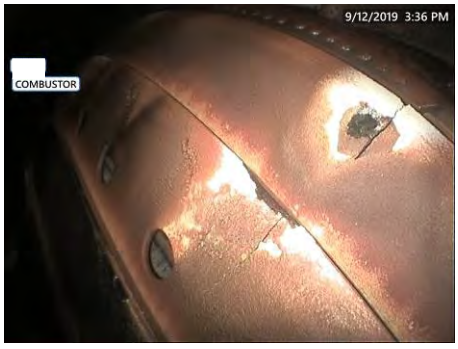
BORESCOPE INSPECTION REPORT

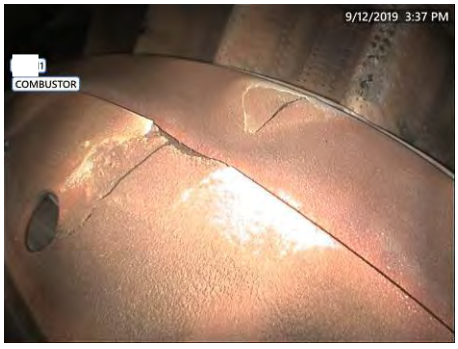
Combustor, HPT NGV's Ref. AMM 72-00-00

Bulkhead
No discrepancies noted at this time.

Fuel Nozzles
Minor deflector edge wear is acceptable.

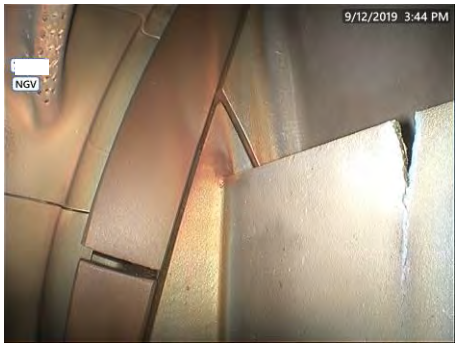
Inner & Outer Liners
Axial cracks less than one panel observed at several locations on the inner liner panels #3 & #4 are permitted. TBC loss is permitted.
Ref. AMM 72-00-00 pg. 634 attached.





HPT NGV's LE
No discrepancies noted at this time.

HPT NGV's TE
Axial crack in the TE of one vane with missing material less than .250" in diameter is permitted.
Ref. AMM 72-00-00 pg. 637 attached.



Suggested Action: *None.*

ENGINE MODEL: **CFM56-3B1** **ENGINE S/N:** **POSITION:** **OFF**

BORESCOPE INSPECTION REPORT

High Pressure Turbine Ref. AMM 72-00-00

Discourager Seal
Surface cracks are acceptable.

HPT Shrouds
Surface rubs are permitted.

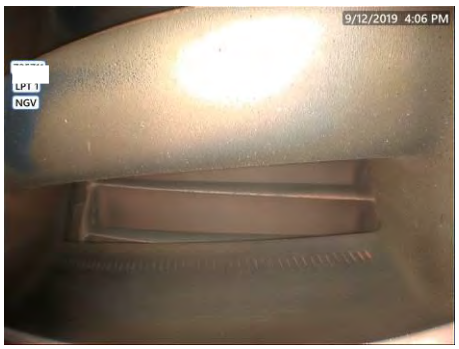
72 HPT Blades LE
No discrepancies noted at this time.

72 HPT Blades TE
No discrepancies noted at this time.
Note: 2 wear notch indicators observed on 2 witness blades at this time.

Suggested Action: *None.*

Low Pressure Turbine Ref. AMM 72-00-00

LPT 1 NGV's
No discrepancies noted at this time.



FAA CRS 2PBR941B

ENGINE MODEL: **CFM56-3B1** **ENGINE S/N:** **POSITION:** **OFF**

BORESCOPE INSPECTION REPORT

174 LPT 1 Blades
Shop blends are acceptable.

162 LPT 2 Blades
Shop blends are acceptable.

157 LPT 3 Blades
Shop blends are acceptable.

160 LPT 4 Blades
No discrepancies noted at this time.

Suggested Action: *None.*

The contents of this report are based on attentive inspection and review. It is exclusive of any damage not detectable without removal and disassembly of the unit. This report is submitted in confidence to the above named client. The external walk around is for cursory purposes only which covers general cleanliness, obvious damage and leaks, a more detailed inspection should be provided by the maintenance facility. Some service bulletins and AD's may be incorporated as routine but specific SB's should be requested with the work order. Although this report is believed to be a true and fair representation of the condition of the engine, the client acknowledges that BOV's liability is limited to the amount of the invoice. The engines inspected may have been prepared for borescope by the facility named above under job site and returned to original condition by the same facility. Maintenance Manual pages attached to this report if any are uncontrolled and are for general reference only. Verify limits with current MM effective for this engine and or aircraft.

SIGNATURE _____ **A&P** 3015305 **DATE** September 12, 2019

a) A maximum service extension of 10 cycles or 25 hours is permitted if the damage is more than 0.25 inch (6.4 mm) in depth but less than 0.30 inch (7.6 mm) in depth.

b) Some conditions can be repaired (TASK 72-00-00-308-015-C00).

2) Missing material and erosion at the leading and trailing edge tip corners.

a) Individual blades with missing material greater than 0.30 x 0.30 inch (7.6 x 7.6 mm) on both leading and trailing edges are not permitted.

b) All number of blades for each stage 1 thru 4, up to 0.30 x 0.30 inch (7.6 x 7.6 mm) if the downstream damage is permitted.

c) For stage 2, a maximum of 4 blades up to 0.40 x 0.40 inch (10.2 x 10.2 mm), and 46 blades up to 0.30 x 0.30 inch (7.6 x 7.6 mm) for total of 50 blades with missing tip corners.

d) For stage 3, a maximum of 5 blades up to 0.40 x 0.40 inch (10.2 x 10.2 mm) and 51 blades up to 0.30 x 0.30 inch (7.6 x 7.6 mm) for a total of total of 56 blades with missing tip corners.

e) For stage 4, maximum of 6 blades up to 0.40 x 0.40 inch (10.2 x 10.2 mm) and 57 blades up to 0.30 x 0.30 inch (7.6 x 7.6 mm) for a total of total of 63 blades with missing tip corners.

f) A maximum service extension of 10 cycles or 25 hours is permitted if the stage 1 damage is more than 0.30 inch (7.6 mm) but less than 0.40 inch (10.2 mm) in depth.

g) A maximum service extension of 10 cycles or 25 hours is permitted if additional stage 2-4 blades have damage, which is more than 0.30 inch (7.6 mm) but less than 0.40 inch (10.2 mm) in depth.

(k) Tears, nicks, dents, missing material and erosion on the leading and trailing edge of stages 5-9 compressor blade found in DIM B.

1) No maximum number of tears, nicks, missing material and erosion if the damage is less than 0.04 inch (1.02 mm) in depth.

a) A maximum service extension of 10 cycles or 25 hours is permitted if the damage is more than 0.04 inch (1.02 mm) but less than 0.08 inch (2.03 mm) in depth.

b) Do the approved repairs (TASK 72-00-00-308-015-C00).

2) No maximum number of dents if the damage is less than 0.04 inch (1.02 mm) maximum depth and 0.06 inch (1.52 mm) deflection from original contour.

a) A maximum service extension of 10 cycles or 25 hours is permitted if the damage is more than 0.04 inch (1.02 mm) but less than 0.08 inch (2.03 mm) in depth, and less than 0.08 inch (2.03 mm) deflection from original contour.

b) Conditions in the maximum service extension limits can be repaired (TASK 72-00-00-308-015-C00).

(l) Tears, nicks, dents, missing material and erosion on the leading and trailing edge of stages 5-9 compressor blade found in DIM A.

1) No maximum number of tears, nicks, and dents if the damage is less than 0.15 inch (3.8 mm) in depth.

a) A maximum service extension of 10 cycles or 25 hours is permitted if the damage is more than 0.15 inch (3.8 mm) but less than 0.20 inch (5.1 mm) in depth.

ENGINE MODEL: **CFM56-3B1** **ENGINE S/N:** **POSITION:** **OFF**

BORESCOPE INSPECTION REPORT

d) Radial tip cracks more than 0.20 in. (5.08 mm) from the leading or trailing edge are not serviceable.

2) Up to 25 blades across stages 5 thru 9 can have chord-wise cracks that are no more than 0.20 inch (5.1 mm) from the tip. The cracks can be up to 0.15 inch (3.8 mm) in length. These cracks are permitted.

a) A maximum service extension of 10 cycles or 25 hours is permitted if the damage is more than 0.15 inch (3.8 mm) but less than 0.20 inch (5.1 mm) in length on more than 25 blades but less than 20% in each stage is permitted.

b) Some conditions can be repaired. Do the approved repairs (High Pressure Compressor (HPC) Rotor Blades Blending Repair, TASK 72-00-00-308-015-C00).

(c) Missing or chipped erosion coating found on stages 1 thru 9 compressor blades in all amounts are permitted.

(d) Nicks, dents and scratches in the stage 1 thru 9 airfoil root radius (but does not include the trailing edge root radius of stage 2 and stage 3 compressor blade).

1) There is no limit to the number with these conditions:

a) Elliptical, smooth, round bottom dents having no sharp edges with a maximum diameter of 0.030 (0.76 mm). Dents must not connect or overlap.

b) Any damage with 0.005 inch (0.13 mm) maximum in depth.

2) No scratches that are parallel to the platform are permitted.

(e) Nicks, dents and scratches in the airfoil trailing edge root radius of stage 2 and stage 3 compressor blades.

1) No maximum limit if all nicks, dents and scratches are less than 0.03 inch (0.8 mm) in depth.

2) A maximum service extension of 10 cycles or 25 hours is permitted if the nick, dent or scratch is more than 0.03 inch (0.8 mm) in depth but less than 0.08 inch (2.0 mm) in depth.

3) There is no maximum limit to the amount of wear on the adjacent HPC inner shroud lip.

(f) Wear or scratches in the trailing edge platform of stage 2 and stage 3 compressor blades.

1) No maximum limit if the wear or scratches are less than 0.03 inch (0.8 mm) in depth.

2) A maximum service extension of 10 cycles or 25 hours is permitted if the wear or scratches are more than 0.03 inch (0.8 mm) in depth but less than 0.08 inch (2.0 mm) in depth.

3) There is no maximum limit to the amount of wear on the adjacent HPC inner shroud lip.

(g) Tears, nicks, dents, and missing material on the leading and trailing edge of stages 1 thru 9 compressor blades found in the lower 25% of the airfoil (but not in the root radius).

1) Tears are not permitted.

2) No maximum number of nicks, dents and missing material if the damage is less than 0.03 inch (0.76 mm) in depth.

3) For Stage 5 HPC Blades (2D Aero Blades only): No maximum number of nicks, dents, and missing material if the damage is less than 0.02 inch (0.51 mm) in depth.

ENGINE MODEL: **CFM56-3B1** **ENGINE S/N:** **POSITION:** **OFF**

BORESCOPE INSPECTION REPORT

SUBTASK 72-00-00-986-017-C00

(5) Turn the N2 rotor (TASK 72-00-00-982-026-C00).

SUBTASK 72-00-00-216-018-C00

(6) Examine the rotor blades for these items:

NOTE: Unless otherwise identified, all damage limits for HPC blades are the same for the different blade configurations.

CFM ALL; AIRPLANES WITH CFM56-3-B1 OR CFM56-3B-2 ENGINES (POST CFMI-SB 72-1000 OR CFMI-SB 72-1031) OR CFM56-3C-1 ENGINES

NOTE: The HPC blades have the letter "P" on the blade platform of stages 1 thru 4 and have different permitted limits as shown in this procedure. Also SB 72-1031 is on the engine nameplate if these blades are installed.

CFM ALL

NOTE: The depth of a defect such as a nick is measured along the axis of the damage unless stated differently.

NOTE: If you find damage, you must examine all the remaining HPC stages and the combustion chamber.

(a) Cracks in stages 1 thru 4 are not permitted unless they meet the following conditions:

1) All radial tip cracks within 0.30 inch (7.6 mm) of the leading or trailing edge, up to 0.25 inch (6.4 mm) in length are permitted.

a) A maximum service extension of 10 cycles or 25 hours is permitted if the damage is more than 0.25 inch (6.4 mm) but less than 0.40 inch (10.2 mm) in length.

b) Some conditions can be repaired. Do the approved repairs (High Pressure Compressor (HPC) Rotor Blades Blending Repair, TASK 72-00-00-308-015-C00).

2) All radial tip cracks more than 0.30 inch (7.6 mm) from the leading or trailing edge, up to 0.10 inch (2.5 mm) in length are permitted.

3) All chord-wise cracks up to 0.30 inch (7.6 mm) from the tip, up to 0.20 inch (5.1 mm) in length are permitted.

a) A maximum service extension of 10 cycles or 25 hours is permitted if the damage is more than 0.20 inch (5.1 mm) but less than 0.30 inch (7.6 mm) in length.

b) Some conditions can be repaired. Do the approved repairs (High Pressure Compressor (HPC) Rotor Blades Blending Repair, TASK 72-00-00-308-015-C00).

(b) Cracks in stages 5 thru 9 are not serviceable unless they meet the conditions that follow:

1) Up to 25 blades across stages 5 thru 9 can have radial tip cracks that are no more than 0.20 in. (5.1 mm) from the leading or trailing edge.

a) The cracks can be up to 0.15 in. (3.81 mm) in length and are serviceable.

b) A maximum service extension of 10 cycles or 25 hours is permitted if the damage is more than 0.15 in. (3.81 mm) but less than 0.20 in. (5.08 mm) in length on less than 20% in each stage.

c) If you find damage that is more than the limits, do this task: (High Pressure Compressor (HPC) Rotor Blades Blending Repair, TASK 72-00-00-308-015-C00).

ENGINE MODEL: **CFM56-3B1** **ENGINE S/N:** **POSITION:** **OFF**

BORESCOPE INSPECTION REPORT

(a) Axial cracks on the outer liner

1) Axial cracks that go across 1 panel or less are permitted.

2) Up to 15 cracks that go across 2 panels are permitted if the ends of the cracks terminate at a dilution hole or at the end of a panel.

3) Up to 4 cracks that go across 3 panels are permitted.

4) Cracks that extend across 4 or more panels are not permitted.

NOTE: If you find cracks that extend across more than 3 panels, do a borescope inspection of the cold side of the outer liner.

5) A maximum service extension of 100 cycles is permitted if the damage is in the limits that follow:

NOTE: This step is applicable if you do not do the cold side inspection.

a) No more than 4 cracks go across more than 2 panels.

b) Cracks are not permitted across more than 5 panels in sequence.

c) If you find cracks across more than 3 panels in sequence, examine the cracks with the flexible borescope below.

6) If no more than 3 cracks go across more than 3 panels, use a flexible borescope to make an inspection of the cold side of the outer liner as follows:

a) The cracks must not go through more than 1 of the last 3 cooling ribs (Nos. 4, 5 and 6).

b) Cooling rib No. 1 must not be cracked through.

c) Do this inspection every 750 cycles.

7) A maximum service extension of 25 cycles is permitted if the you obey the limits that follow:

NOTE: This is applicable if you do the cold side inspection.

a) There are no more than 5 cracks across more than 2 panels, but not more than 5 panels.

b) A minimum of one of the cooling ribs Nos. 3, 4, 5 or 6 do not have cracks which go through on the cold side.

c) Cooling rib No. 1 does not have a crack which goes through.

(b) Axial cracks on the inner liner

NOTE: The dome band is counted as a panel.

1) The conditions that follow are permitted:

a) Cracks that go across 1 panel or less are permitted.

b) Up to 15 cracks that go across 2 panels are permitted, if the ends of the cracks terminate at a dilution hole or at the end of a panel.

c) Up to 4 cracks across 3 panels are permitted.

d) If the cracks are longer than 3 panels, do the step given below.

2) If no more than 1 crack goes across 4 panels, do these steps:

a) It is permitted to connect to a burn through hole or material that is gone that is not more than 3 times the diameter of the dilution hole.

b) Also, the cracks cannot be connected to a circumferential crack that is more than 0.50 inch (12.7 mm) in length.

2) Missing material or burned through
   a) Missing material is permitted if for each vane if it is not more than 0.80 inch (20.3 mm) radially.
      NOTE: The dimension 0.80 inch (20.3 mm) is the equivalent to 1/2 of the airfoil height.
      <1> Make sure the missing material does not extend aft of the cooling hole row no. 5 and 13.
   b) A maximum service extension of 25 cycles is permitted if the missing material is not more than 1.2 inches (30.0 mm) radially.
      NOTE: The dimension 1.2 inches (30.0 mm) is the equivalent to 3/4 of the airfoil height.
      <1> Make sure the missing material does not extend aft of the cooling hole row No. 4 and 14.
3) Material with burns is permitted.

(b) Concave and convex surfaces of the NGV airfoil of the HPT
1) Cracks are permitted.
2) Missing material or burned through
   a) It is permitted to have one area for each airfoil if the diameter is not more than 0.25 inch (6.4 mm).
   b) A maximum service extension of 25 cycles is permitted if the diameter is not more than 0.50 inch (12.7 mm).
3) Material with burns is permitted.

(c) The trailing edge of the airfoil on the NGV's.
1) Axial cracks are permitted.
2) Areas with buckled or bowled material are permitted.
3) Missing material or burned through
   a) Missing material is permitted if the maximum area for each airfoil is 1.0 sq. inch (6.5 sq. cm), and the maximum area for the engine is 4.0 sq. inch (25.8 sq. cm)
   b) If the missing material or burn through exceeds the above limits, a maximum service extension of 25 cycles is permitted.

(d) All airfoil surfaces on the NGV's
1) Areas with craze cracks are permitted.
   NOTE: Craze cracks have many surface cracks with no width or depth that you can see.
2) Areas with nicks, marks, scratches and dents are permitted.
3) Areas with metal splatter are permitted.
4) Areas where the layer of Codep is missing are permitted.

(e) Inner and outer platforms of the NGV's, but not inner platform Area A:
1) Cracks are permitted.
2) Cracks in the braze joints of the airfoil-to-platform surfaces are permitted.
3) Material with burns is permitted.

ENGINE MODEL:	**CFM56-3B1**
SERIAL NUMBER:	
TOTAL TIME SINCE NEW:	**74,840.5**
TOTAL CYCLES SINCE NEW:	**68,193**
TIME SINCE LAST REPAIR:	**9,278.5**
CYCLES SINCE LAST REPAIR:	**7,162**
TIME SINCE PERFORMANCE RESTORATION:	**25,350.5**
CYCLES SINCE PERFORMANCE RESTORATION:	**19,234**
TIME SINCE LAST HEAVY MAINTENANCE:	**25,350.5**
CYCLES SINCE LAST HEAVY MAINTENANCE:	**19,234**

IIN	Description	Part Number	Serial Number	Total Hours	Total Cycles	Total Cycles Category				Life limit (cycles) Category				Remaining cycles Category			
						3B1	3B2	3C1	2C1	3B1	3B2	3C1	2C1	3B1	3B2	3C1	2C1
213	FAN DISK	335-014-511-0	DD436517	25350	19234	19234	0	0	0	30000	24900	20100	0	10766	8935	7213	
211	BOOSTER SPOOL	335-009-306-0	BC706607	25350	19234	19234	0	0	0	30000	30000	30000	0	10766	10766	10766	
221	FAN SHAFT	335-006-414-0	DD437378	25350	19234	19234	0	0	0	30000	30000	30000	0	10766	10766	10766	
312	HPC FRONT SHAFT	1275M37P02	GWN0E6T4	25350	19234	19234	0	0	0	20000	20000	20000	20000	766	766	766	766
313	HPC STAGE 1/2 SPOOL	1589M66G02	GWN0E7GG	25350	19234	19234	0	0	0	20000	20000	20000	20000	766	766	766	766
314	HPC STAGE 3 DISK	1590M59P01	XAEH4806	25350	19234	19234	0	0	0	20000	20000	20000	20000	766	766	766	766
315	HPC STAGE 4/9 SPOOL	1588M89G03	GWN0DMR2	25350	19234	19234	0	0	0	20000	20000	15800	18400	766	766	605	704
316	HPC REAR AIR SEAL	1319M25P02	GFF5DFMJ	25350	19234	19234	0	0	0	20000	18000	15000	16800	766	689	574	643
521	HPT FRONT SHAFT	1385M90P04	XAEJ3104	25350	19234	19234	0	0	0	20000	17300	17000	20000	766	662	651	766
522	HPT FRONT AIR SEAL	1282M72P05	XAE34934	25350	19234	19234	0	0	0	20000	15800	15100	13100	766	605	578	501
525	HPT ROTOR DISK	1475M29P03	GWN0E598	25350	19234	19234	0	0	0	20000	18500	16600	0	766	708	635	
526	HPT REAR SHAFT	1864M91P02	TMT2B373	25350	19234	19234	0	0	0	20000	20000	20000	6000	766	766	766	229
542	LPT STAGE 1 DISK	301-331-126-0	BC694633	25350	19234	19234	0	0	0	25000	25000	25000	20000	5766	5766	5766	4612
543	LPT STAGE 2 DISK	301-331-227-0	BC790034	25350	19234	19234	0	0	0	25000	25000	25000	20000	5766	5766	5766	4612
544	LPT STAGE 3 DISK	301-331-322-0	BC878224	25350	19234	19234	0	0	0	25000	25000	25000	20000	5766	5766	5766	4612
545	LPT STAGE 4 DISK	301-331-429-0	DD686312	25350	19234	19234	0	0	0	25000	25000	25000	20000	5766	5766	5766	4612
546	LPT CONICAL SUPPORT	305-056-116-0	DD334233	25350	19234	19234	0	0	0	25000	25000	25000	20000	5766	5766	5766	4612
551	LPT SHAFT	301-330-066-0	DC383998	25350	19234	19234	0	0	0	30000	30000	30000	20000	10766	10766	10766	7177
552	LPT STUB SHAFT	301-330-626-0	BC680649	25350	19234	19234	0	0	0	25000	25000	25000	20000	5766	5766	5766	4612

NOTE: THE INFORMATION DEPICTED ABOVE WAS EXTRACTED FROM TECHNICAL RECORDS PROVIDED BY PREVIOUS OPERATORS

Limiter			
3B1	3B2	3C1	2C1
766	605	574	N/A

Prepared by: Claudia Hernandez
Manager Technical Records

Reviewed by: Jerry Bermudez
Director Technical Records

28-Nov-2018
Date

Non-Incident Statement

Date: 11-8-2017

RE: AC MSN: 27707
REG No:
N632SW ESN
1: 723260

ESN 2:

APU SN:

P100691

To Whom It May Concern:

This is to certify that the above referenced aircraft, equipped with the above referenced engines was operated on the route from Victorville, California (VCV) to Goodyear, Arizona (GYR) under agreement with AerSale and to the best of our knowledge said aircraft and engines were not involved in an accident, incident, did not incur any structural damage of any type, and were not subjected to extreme heat, fire or stress.

Date of Flight Operation: 11-03-2017
Purpose: Ferry Flight
Cycles Operated: One (1) Cycles
Route: VCV - GYR
Engine Type: 3B1
Engine Thrust Rating: 20,000 Lbs. of continuous static thrust at takeoff
Flight Time: 0.85 (0:51 minutes)

The licensed pilots who operated the aircraft and performed the flight are as follows:

FAA ATP Lic. # 3155032

Signature

Name DONALD PRATT

Title: CAPTAIN

ENGINE RUN RISK

Form No.: MX-0064
Date: 1/17//2017

PLANE I.D. N6325W LOCATION: GYR DATE: 3/1/18

REASON FOR THIS TEST: MPA

AIRPORT FREQ'S: ATIS – 118.35 TWR – 120.1 UNNI – 122.95

RUN – UP TECHNICIAN NO 1: S. Willcox

RUN – UP TECHNICIAN NO 2: M Lechner

ENGINE TYPE: CFM56-3 / ENGINE S.N.:	ENG 1	ENG 2	ENG 3	ENG 4
		723261		
MAX LIMITS PER MM N1: N2: MAX START E.G.T.:	725	725		
STARTING – PCT N-2 – LIGHT OFF:	25	25		
FUEL FLOW AT LIGHT OFF:	.1	.1		
TIME FROM FUEL ON TO GROUND IDLE (sec.):	40	45		
PEAK E.G.T.:	640	653		
GROUND IDLE: N1:	21.8	22.2		
E.G.T.:	497	504		
IDLE N2:	61.0	61.0		
PEAK F.F.:	.81	.81		
N1:	29.3	30.7		
N2:	70.7	71.1		

OAT DEG: ____ °C 80 °F

BAROMETRIC PRESSURE: 29.92

N2 TARGET: ____

\+ ____ - ____

FLIGHT IDLE TARGET: ____

\+ -

OIL PRESS NO. 1 70 NO. 2 29 NO.3 ____ NO.4 ____

OIL TEMP NO. 1 60 NO. 2 50 NO. 3 ____ NO. 4 ____

GEN VOLTS NO. 1 115 NO. 2 115 NO. 3 ____ NO. 4 ____

FREQs NO. 1 405 NO. 2 407 NO. 3 ____ NO. 4 ____

HYDRAULIC PRESS: 3000 ABLE TO FEATHER: YES: ☑ NO: ☐

ENGINE RUN RISK

Form No.: MX-0064
Date: 1/17//2017

POWER MANAGEMENT CONTROL (P.M.C.)	ENG 1	ENG 2	ENG 3	ENG 4
P.M.C. TARGET:				
P.M.C. ON:				
P.M.C. OFF:				

MAXIMUM E.G.T. CHECK N1 +/- N2 +/-

MAXIMUM E.G.T. VALUE:				
TARGET N1:				
ACTUAL N1:				
E.G.T.:				

POWER ASSURANCE TEST AND / OR TAKE OFF POWER

OAT DEG: _____ °C 86 °F

BAROMETRIC PRESSURE: 29.92

MAXIMUM ALLOWABLE E.G.T.: _____

MAX ALLOWABLE N2: _____

TARGET N1:	85.0	85.0		
ACTUAL N1:	84.9	85.1		
TARGET E.P.R.:				
E.G.T.:	758	751		
N2:	94.1	94.4		
F.F.:	6.52	6.44		

INTER-COMPRESSOR BLEED TEST

OAT DEG: _____ °C _____ °F

TARGET N1:				
BLEEDS CLOSED N1:				
BLEEDS OPEN N1:				

(Cross out or N/A any test or block that does not apply to your run-up)

NOTES

THIS INFORMATION IS ACCURATE AND COMPLETE TO THE BEST OF OUR KNOWLEDGE AND IS OBTAINED FROM SWA APPROVED RECORDS SYSTEMS.
FAA 121 AIR CARRIER SWAA 304A.

Angie Miller, Manager Aircraft Records, S — Date 11/7/17

[redacted] AIRCRAFT RECORDS

CFM56-3 ENGINE DISK REFERENCE SHEET

SERIAL NUMBER

PREPARED BY: R. SMITH

DATE PREPARED: 11/2/2017

	INSTALLED		AS OF				
Aircraft	632 / 1	Date	11/2/2017	Engine Total Hours	74839:36	Engine Total Cycles	68192
Aircraft Total Time	62877:09	Aircraft Total Time	66184:39	Time Since LEVEL 3	74839:36	Cycles Since LEVEL 3	68192
Aircraft Total Cycles	49784	Aircraft Total Cycles	52107	Time Since LEVEL 2	25349:22	Cycles Since LEVEL 2	19233
				Time Since Installation	3307:30	Cycles Since Installation	2323

Item	Part Name	Part No.	Serial No.	Hour Limit	Total Time	Hours. Remaining	Cycle Limit	Total Cycles	Cycles Remaining
1	Fan Disk	335-014-511-0	DD436517	N/A	N/A	N/A	30,000	19233	10,767
2	Booster Spool	335-009-306-0	BC706607	N/A	N/A	N/A	30,000	19233	10,767
3	Fan Shaft	335-006-414-0	DD437378	N/A	N/A	N/A	30,000	19233	10,767
	Compressor Rotor Module S/N:								
4	HPC Front Shaft	1275M37P02	GWN0E6T4	N/A	N/A	N/A	20,000	19233	767
5	Stage 1-2 Spool	1589M66G02	GWN0E7GG	N/A	N/A	N/A	20,000	19233	767
6	Stage 3 Disk	1590M59P01	XAEH4806	N/A	N/A	N/A	20,000	19233	767
7	Stage 4-9 Spool	1588M89G03	GWN0DMR2	N/A	N/A	N/A	20,000	19233	767
8	Compressor Rear (CDP) Air Seal	1319M25P02	GFF5DFMJ	N/A	N/A	N/A	20,000	19233	767
	HPT Rotor Module S/N:								
9	Front Shaft	1385M90P04	XAEJ3104	N/A	N/A	N/A	20,000	19233	767
10	Front Air Seal	1282M72P05	XAE34934	N/A	N/A	N/A	20,000	19233	767
11	Disk	1475M29P03	GWN0E598	N/A	N/A	N/A	20,000	19233	767
12	Rear Shaft	1864M91P02	TMT2B373	N/A	N/A	N/A	20,000	19233	767
	LPT Rotor Module S/N:								
13	Stage 1 Disk	301-331-126-0	BC694633	N/A	N/A	N/A	25,000	19233	5,767
14	Stage 2 Disk	301-331-227-0	BC790034	N/A	N/A	N/A	25,000	19233	5,767
15	Stage 3 Disk	301-331-322-0	BC878224	N/A	N/A	N/A	25,000	19233	5,767
16	Stage 4 Disk	301-331-429-0	DD686312	N/A	N/A	N/A	25,000	19233	5,767
17	LPT Shaft	301-330-066-0	DC383998	N/A	N/A	N/A	30,000	19233	10,767
18	LPT Stub Shaft	301-330-626-0	BC680649	N/A	N/A	N/A	25,000	19233	5,767
19	Conical Support	305-056-116-0	DD334233	N/A	N/A	N/A	25,000	19233	5,767

November 1, 2017

To Whom It May Concern,

Airlines represents the engine referenced below was last operated by Airlines. It was not involved in any accident, incident, major failure or fire. The engine was not subjected to extreme stress or heat, nor was the engine immersed in salt water or otherwise exposed to corrosive agents outside normal operations during its entire service life at Airlines. The engine was not obtained from nor operated by any military or governmental organization. Airlines further represents the engine was operated exclusively at 20K (CFM56-3B1) thrust rating during its entire service life at Airlines.

The Engine was operated and maintained in accordance with the Airlines Continuous Airworthiness Maintenance Program.

The referenced engine does not have any PMA parts installed with the possible exception of the following: Acoustical Panel (P/N RMI-335-011-904-0, RMI-335-01-307-0) and Oil Filter (P/N QA37320, QA03748)
No non-OEM approved repairs were performed on the Engine.

The oil and lubrication fluid used during the entire operation was Exxon 2380 and Mobile Jet II.

Engine Model Type: CFM56-3B1
Engine Serial Number:
Time Since New (TSN): 74,839:36
Cycles Since New (CSN): 68,192
Time Since Overhaul (TSO): 25,349:22
Cycles Since Overhaul (CSO): 19,233

Sincerely,

Mgr. Regulatory Compliance
Technical Operations
& Engineering

CC: Sr. Manager Fleet Transactions

SA-M 361
REV: 03/13/97
DCA 4775

COMPONENT SERVICE RECORD CFM56-3

New: ☐ From: 510,30OCT90

Fwd Hrs: 0:00 Fwd Cyc: 0

Order: 0 0720018

Installation						Removal								
Date	Eng S/N	A/C	Pos	A/C Time	A/C Cyc	Date	A/C Time	A/C Cyc	Hrs Inst	Cyc Inst	TSN	CSN	Reason Remd	Hrs Rem:	Cyc Rem:
10/30/90		510	1	0:00	0	1/8/95	13853:44	14305	13853:44	14305	13853:44	14305	FLAME OUT; AFT TURBI		
4/22/95		669	1	19696:17	15018	3/28/98	29336:42	23878	9640:25	8860	23494:09	23165	HIGH EGT		
5/23/98		525	2	19773:52	19931	11/1/01	31096:24	31034	11322:32	11103	34816:41	34268	DISK LIFE		
1/7/02		528	1	31587:12	31415	11/14/06	46260:45	46106	14673:33	14691	49490:14	48959	TRENDING HIGH EGT		
2/13/07		331	1	62432:50	57587	11/2/11	75625:10	67503	13192:20	9916	62682:34	58875	OVERTEMP		
4/28/12		323	2	79562:42	70996	5/16/13	82441:39	73152	2878:57	2156	65561:31	61031	COMPANY CONV/LEASE R		
10/7/13				0:00	0	10/7/13	0:00	0	0:00	0	65561:31	61031	DOR AND DISCREPANCIE		
10/21/13		510	1	70047:01	65975	8/28/14	71989:17	68014	1942:16	2039	67503:47	63070	RETIREMENT AIRCRAFT.		
9/12/14				0:00	0	9/12/14	0:00	0	0:00	0	67503:47	63070	RECEIVED AS IS UNSER		
9/17/14		386	2	65070:26	53357	1/14/16	69098:45	56156	4028:19	2799	71532:06	65869	GARLOCK SEAL STILL L		
8/5/16		632	1	62877:09	49784	11/1/17	66184:39	52107	3307:30	2323	74839:36	68192	A/C SALE 632		

Serial Number: Part Number: 330A1000X Hour Control: Cycle Control: 0

Name: ENGINE PWR - B1 **Wizard Generated Engine Disk History Card Information**

THIS INFORMATION IS ACCURATE AND COMPLETE TO THE BEST OF OUR KNOWLEDGE AND IS OBTAINED FROM SWA APPROVED RECORDS SYSTEMS.
FAA 121 AIR CARRIER SWAA 304A.

TOBY PAGE, MANAGER
SOUTHWEST AIRLINES

NOV 0 1 2017
DATE

1. Approving National Aviation Authority/Country:	2.	3. Form Tracking Number:
FAA / United States	**AUTHORIZED RELEASE CERTIFICATE** FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG	230862/2006

4. Organization Name and Address:

GE CELMA

356 Alice Hervê St - Bingen - 25669-900 - Petrópolis - RJ - Brasil
Phone: 55-24-2233-4000 Fax: 55-24-2237-3684 FAA: EM4Y159M

5. Work Order / Contract / Invoice Number

WO: 2006230862

6. Item:	7. Description:	8. Part Number:	9. Eligibility: *	10. Quantity:	11. Serial/Batch Number:	12. Status/Work:
01	ENGINE – CFM56-3B1	9325M80G01	B737-300	01	---	REPAIRED

13. Remarks:

HSN: 49490 CSN: 48959

Engine was disassembled, inspected and repaired as required in accordance with CFMI CFM56-3 Engine Shop Manual (CFMI-TP.SM.5 Revision 61), Southwest Airlines Engine Work Specifications Manual CFM56-3 Revision #05-1, Dated 05/06/05, and Southwest Airlines Engine Accessory Specifications Manual CFM56-3, Revision #06-1, Dated 01/23/06. For more details see attached FAA337.

14. 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 13.

19. ■ 14 FAR 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 describe 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: E2572	21. Approval/Certificate No.: EM4Y159M
17. Name (Typed or Printed):	18. Date:	22. Name (Typed or Printed): Fausto Cesare Andrea Vigino (Reg. 2572)	23. Date (m/d/y): January 08, 2007

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 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.

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

GE CELMA

LIFE LIMITED PARTS REPORT — ON LOG — CFM56-3

CUSTOMER	ENGINE MODEL	E S N	HSSV	HSN	CSSV	CSN
SOUTHWEST	CFM56-3B1		0	49490	0	48959

WO: 2006230862 **OUTGOING DATE: JAN 08, 2007**

IIN	NOMENCLATURE	PART NUMBER	SERIAL NUMBER	PTT	PTC A	PTC B	PTC C	LLC A	LLC B	LLC C	LRC A	LRC B	LRC C	REMARKS
211	BOOSTER SPOOL	335-009-306-0	BC706607	0	0	0	0	30000	30000	30000	30,000	30,000	30,000	
213	FAN DISK	335-014-511-0	DD436517	0	0	0	0	30000	24900	20100	30,000	24,900	20,100	
221	FAN SHAFT	335-006-414-0	DD437378	0	0	0	0	30000	30000	30000	30,000	30,000	30,000	
312	HPC FRNT SHAFT	1275M37P02	GWN0E6T4	0	0	0	0	20000	20000	20000	20,000	20,000	20,000	
313	HPC ST 1-2 SPOOL	1589M66G02	GWN0E7GG	0	0	0	0	20000	20000	20000	20,000	20,000	20,000	
314	HPC ST 3 DISK	1590M59P01	XAEH4806	0	0	0	0	20000	20000	20000	20,000	20,000	20,000	
315	HPC ST 4-9 SPOOL	1588M89G03	GWN0DMR2	0	0	0	0	20000	20000	15800	20,000	20,000	15,800	
316	REAR AIR SEAL	1319M25P02	GFF5DFMJ	0	0	0	0	20000	18000	15000	20,000	18,000	15,000	
521	HPT FRNT SHAFT	1385M90P04	XAEJ3104	0	0	0	0	20000	17300	17000	20,000	17,300	17,000	
522	FRONT AIR SEAL	1282M72P05	XAE34934	0	0	0	0	20000	15800	15100	20,000	15,800	15,100	
525	HPT DISK	1475M29P03	GWN0E598	0	0	0	0	20000	18500	16600	20,000	18,500	16,600	
526	HPT REAR SHAFT	1864M91P02	TMT2B373	0	0	0	0	20000	20000	20000	20,000	20,000	20,000	
542	LPT ST 1 DISK	301-331-126-0	BC694633	0	0	0	0	25000	25000	25000	25,000	25,000	25,000	
543	LPT ST 2 DISK	301-331-227-0	BC790034	0	0	0	0	25000	25000	25000	25,000	25,000	25,000	
544	LPT ST 3 DISK	301-331-322-0	BC878224	0	0	0	0	25000	25000	25000	25,000	25,000	25,000	
545	LPT ST 4 DISK	301-331-429-0	DD686312	0	0	0	0	25000	25000	25000	25,000	25,000	25,000	
546	LPT CONIC SUPP	305-056-116-0	DD334233	0	0	0	0	25000	25000	25000	25,000	25,000	25,000	
551	LPT SHAFT	301-330-066-0	DC383998	0	0	0	0	30000	30000	30000	30,000	30,000	30,000	
552	LPT STUB SHAFT	301-330-626-0	BC680649	0	0	0	0	25000	25000	25000	25,000	25,000	25,000	

LEGEND PART

PTC A = PART TOTAL CYCLES B1 — PTC B = PART TOTAL CYCLES B2 — PTC C = PART TOTAL CYCLES C1
LLC A = LIFE LIMIT CYCLES B1 — LLC B = LIFE LIMIT CYCLES B2 — LLC C = LIFE LIMIT CYCLES C1
LRC A = LIFE REMAINING CYCLES B1 — LRC B = LIFE REMAINING CYLES B2 — LRC C = LIFE REMAINING CYCLES C1
PTT = PART TOTAL TIME

LEGEND ENGINE

HSSV / CSSV = HOURS / CYCLES SINCE SHOP VISIT
HSN / CSN = HOURS / CYCLES SINCE NEW

SIGNATURE: 0048

US Department of Transportation

Federal Aviation Administration

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 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).

1. Aircraft	Make	Model
	Serial No.	Nationally and Registration Mark
2. Owner	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	CFM International	**CFM56-3B1**		X	
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency		C. Certificate No.
GE CELMA **356 Alice Hervê St - Bingen - 25669-900** **Petrópolis - RJ - Brasil**		U.S. Certificated Mechanic	**EM4Y159M** Powerplant Class: Limited Accessories Class: 1, 2 & 3
		Foreign Certificated Mechanic	
	X	Certificated Repair Station	
		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 here in is true and correct to the best of my knowledge.

Date	Signature of Authorized Individual
January 08, 2007	**Fausto Cesare Andrea Vigino (Reg. 2572)** E2572

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 Flt. Standards Inspector		Manufacturer		Inspection Authorization	Other *(Specify)*
		FAA Designee	X	Repair Station		Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
January 08, 2007	**EM4Y159M**	**Fausto Cesare Andrea Vigino (Reg. 2572)** E2572

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 MODEL: CFM56-3B1 S/N: HSN: 49490 CSN: 48959

Engine was disassembled, inspected and repaired as required in accordance with CFMI CFM56-3 Engine Shop Manual (CFMI-TP.SM.05 Revision 61), Southwest Airlines Engine Work Specifications Manual CFM56-3 Revision #05-1, Dated 05/06/05, and Southwest Airlines Engine Accessory Specifications Manual CFM56-3, Revision #06-1, Dated 01/23/06.

Nomenclature	S/N	Work Accomplished:	Service Bulletins Accomplished:
Fan Booster	21X25711	Level 3	72-972R0
N1/N2 BRG SUPP	22X25711	Level 3	72-623R1 and 72-683R0
Fan Frame	23X25711	Level 2	72-917R0, 72-978R0, 72-979R1 and 72-1018R0
Inlet gearbox	61XUB0-356	Level 3	None
Hpc Rotor	31X22394	Level 3	72-1000R1
Hpc Fwd Stator	32X25711	Level 2	72-1000R1, 72-1021R0, CESM 004 and CESM 028
Hpc Rear Stator	33X25711	Level 3	72-1000R1
Combustor Case	41X5711U	Level 3	72-942R0
Combustion Chmb.	**GGM95NE6**	**NEW MODULE**	None
Hpt Nozzle	51X57448	Level 3	72-1000R1 end 72-1044R0
Hpt Rotor	52X22394	Level 3	72-990R0, 72-1000R1 and 72-1016R0
Hpt Shroud	53X22394	Level 2	72-443R2, 72-1000R1 and 72-1049R0
Lpt Rotor/Stator	54X22394	Level 3	72-670R2
Lpt Shaft	55X22394	Level 3	72-975R1, 72-985R1 and CESM 007
Lpt Frame	56X22394	Level 2	72-597R0 and 72-1046R0
Tgb	VB5004	Level 3	None
Agb	WB3902	Level 3	72-611R2
Engine	725711		72-318R1, 72-478R0, 72-505R1, 72-979R1, 72-1000R1, 72-1020R0, 75-018R0 and WN-78-11-23

Airworthiness Directives Complied With At This Shop Visit:

2006-26-01.

CDR's/DR's Incorporated At This Shop Visit:

CDR's nº 349/06 and 350/06 and DR's nº 12-06-0331 and 12-06-0347 (Attached on Documentation Pack).

This Engine is limited to operate no more than 20000 cycles (Thrust Rating Category A) and 15800 cycles (Thrust Rating Category B) due to HPT Front Air Seal P/N 1282M72P05 S/N XAE34934 and 15000 cycles (Thrust Rating Category C) due to HPC Rear Air Seal P/N 1319M25P02 S/N GFF5DFMJ.

Details are on file at this facility under W/O: 2006230862

Date: JAN 08, 2007

Southwest Airlines Airworthiness Directives Status

Engine Serial Number:		Time Since New:	49490 Hours 48959 Cycles	Revision No: 00
Engine Type:	CFM56-3B1			
Customer Order No:	0720003-20R	Regulatory Agency:	FAA	
Shop Order Number:	2006230862	Authorized Signature:	Fausto Cesare Andrea Vigino	Release Date: JAN 08, 2007

CW=COMPLIED WITH AT THIS SHOP VISIT
PCW=PREVIOUSLY COMPLIED WITH-RECEIVED WITH UPGRADED CONFIGURTION
NA1=NOT APPLICABLE DUE TO ENGINE MODEL
NA2=N/A DUE TO ENGINE S/N
NA3=N/A DUE TO PART NUMBER
NA4=N/A DUE TO PART S/N
NCW=NOT COMPLIED WITH
PART=PARTIAL COMPLIANCE ACCOMPLISHED

AD NUMBER RELEVANT SBs	Description	Applicable Series	Module Applicability	Recurring Inspection * Delete as Applicable	Specific Method of Compliance	Remarks
86-08-05R1	Inspection of Spiral Lock & Oil Distributor for Looseness of TGB	CFM56-3/3B	TGB	Re-occurring 375 Hours	SB 72-205R5	NA3 TGB Installed: PN 335-300-012-0
89-17-04	Fwd Sump Chip Detector Inspection and/or No. 3 Bearing Replacement by SN	Superseded by AD 89-23-06				
89-23-06R1	Fwd Sump Chip Detector Inspection and/or No. 3 Bearing Replacement by SN	All CFM56-3	No. 3 Brg	See AD and/or SB	SB 72-530R3	PCW No. 3 Bearing installed PN 1461M14P04 SN FCAL8878
90-15-14	Replacement of Walter Kidde Fire Warning Loops	All CFM56-3	Engine	Within 18 Mo. Or Alternate Method	Boeing SB 737-26-1055R2 (COA - Verify Router 90W-3-33 Complete for Alternate Means)	PCW
90-20-13	Installation of Fan Blade Dampers and Axial Stops	CFM56-3B2/3C1	Engine Fan Rotor	One Time by Dec 14, 1990	SB 72-494R2	NA1 Engine Model –3-B1

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91-02-10	Installation of Splitter Fairing and 12 Door VBV System	All CFM56-3	Engine Fan Rotor	One Time by Mar 11, 1991	SB 72-450	72-450R3: PCW
93-05-05	Intro of VBV System Modification	All CFM56-3	Engine Fan Rotor Fan Frame	48 Months or by Apr 29, 1997	Boeing SB 737-77-1031 SB 72-450 SB 72-462 SB 72-579 SB 72-580 **Supersedes AD 88-13-51**	PCW (Partial) 72-450R3: PCW 72-462 (Cancelled) 72-579R5: PCW 72-580R6: PCW BOEING SB 737-77-1031 PARTIALLY COMPLIED, ONCE IT COVERS AICRAFT MODIFICATIONS
96-18-16	Reidentification of LPT Conical Support and LPT Stub Shaft	All CFM56-3	LPT Conical Support LPT Stub Shaft	One Time at Next Exposure	SB 72-695	NA3 Conical Support Installed: PN 305-056-116-0 Stub Shaft Installed: PN 301-330-626-0
96-25-11	Fan Disk and Fan Blades replacement and introduction of Fan Blades with 37-Degree Midspan shrouds.	CFM56-3B2/3C1	Fan Disk Fan Blades	One Time	SB 72-543	NA1 Engine Model –3-B1
97-08-01	Fan Disk LLP Reduction	All CFM56-3	Fan Disk	One Time By Jun 23, 1997	AD and Engine Manual Section 05-11-01 Verify Fan Disk PN 335-014-509-0 / 511-0 If operated at Cat C thrust be removed or re-calculated per Shop Manual and Customer LLP Documentation	NA1 Fan Disk has never operated at the category C thrust rating

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T97-25-51	TGB and AGB Gear Replacement	Superseded by AD 98-10-11				
98-07-02	Replacement of HPC Stg 1-2 Spool and No. 3 Bearing Aft Air/Oil Seal and Installation of Retention Bushing	All CFM56-3	Engine Fan Frame Mod HPC Stg 1-2 Spl	One Time	SB 72-856R0	NA4 HPCR Stg 1-2 Spool Installed: SN GWN0E7GG
98-10-11	TGB and AGB Gear Replacement	All CFM56-3	TGB / AGB	One Time	SB 72-A861R3 SB 72-863R1 SB 72-865 SB 72-866 SB 72-867 SB 72-869 SB 72-873R1 **Supersedes AD T97-25-51**	NA4 TGB Installed: SN VB5004 N/A4 AGB Installed: SN WB3902
98-12-32	Eddy Current Inspection of HPT Disk Rim Bolt Holes	All CFM56-3	HPT Disk	One Time	SB 72-843R1	NA3 HPT Disk Installed: PN 1475M29P03
98-19-10	Replacement of Starter Gearshaft in the AGB	All CFM56-3	AGB	One Time	SB 72-877R1	N/A4 AGB Installed: SN WB3902
99-08-16	Mandatory Fan Disk and HPT Disk NDT Inspection	Superseded By AD 2000-12-01				
99-08-16	Mandatory Fan Disk and HPT Disk NDT Inspection	Superseded By AD 2000-12-01				
2000-05-22	Eddy Current Inspection of HPT Front Rotating Air Seal Bolt Holes	All CFM56-3	HPT Front Rot Air Seal	One Time	72-922R0	NA3 HPT Front Air Seal Installed: PN 1282M72P05

Engine Serial Number:		Time Since New:	49490 Hours 48959 Cycles	Revision No: 00
Engine Type:	CFM56-3B1			
Customer Order No:	0720003-20R	Regulatory Agency:	FAA	
Shop Order Number:	2006230862	Authorized Signature:	Fausto Cesare Andrea Vigino	Release Date: JAN 08, 2007

2000-12-01	Mandatory LCF NDT Inspections	Superseded By AD 2002-13-03				
2000-15-01	Initial and Repetitive Visual Inspections of MFP Filter Cover Helicoil Inserts and Bolts for Damage, and, if Necessary, Repair/or Replacement	All CFM56-3	MFP	See AD and SB	SB 73-126R1 (Insp) or SB 73-A129 (Replmnt) (Ref ARGO Tech SB 708600-73-110)	73-A129R0: PCW (Terminating Action)
2001-04-06	Discontinued Use of Certain Lubricants and One Time Fan Disk Dovetail Wear Measurement and if Necessary, Ultrasonic Inspection for Cracks	All CFM56-3	Fan Disk	See AD and SB	SB 72-854R5	NCW Due to new part installed
2001-11-05	Replacement of Certain No. 4 Bearings and Increased Frequency of Inspections for Magnetic Particles Until Suspect Bearing is Replaced	All CFM56-3	No. 4 Brg	Replace Suspect Within 2000 Hours TIS But No Later Than Dec 31, 2001	SB 72-A965 SB 72-A966	NA3 No. 4 Roller Bearing Installed: PN 335-352-303-0
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	Fan Disk	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-21-03 100% FPI ECI Disk Bore ECI Dovetail **Supersedes AD 2000-12-01**	NCW Due to new part installed

Engine Serial Number:		Time Since New:	49490 Hours	48959 Cycles	Revision No: 00
Engine Type:	CFM56-3B1				
Customer Order No:	0720003-20R	Regulatory Agency:	FAA	E2572	
Shop Order Number:	2006230862	Authorized Signature:	Fausto Cesare Andrea Vigino		Release Date: JAN 08, 2007

2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	Fan Shaft	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-22-01 100% MPI **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	HPC Stg 1-2 Spool	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-31-04 100% FPI **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	HPC Stg 3 Disk	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-31-05 100% FPI **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	HPC Stg 4-9 Spool	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-31-06 100% FPI **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	HPC Front Shaft	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-31-07 100% FPI **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	HPC Rear (CDP) Air Seal	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-31-08 100% FPI **Supersedes AD 2000-12-01**	NCW Due to new part installed

Engine Serial Number:		Time Since New:	49490 Hours	48959 Cycles	Revision No: 00
Engine Type:	CFM56-3B1				
Customer Order No:	0720003-20R	Regulatory Agency:	FAA		
Shop Order Number:	2006230862	Authorized Signature:	Fausto Cesare Andrea Vigino		Release Date: JAN 08, 2007

2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	HPT Disk	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-52-02 100% FPI ECI Disk Bore ECI Rim Bolt Holes **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	HPT Front Rotating Air Seal	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-52-03 100% FPI ECI Seal Bore ECI Bolt Holes **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	LPT Stg 1 Disk	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-54-03 100% FPI **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	LPT Stg 2 Disk	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-54-03 100% FPI **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	LPT Stg 3 Disk	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-54-03 100% FPI **Supersedes AD 2000-12-01**	NCW Due to new part installed

Engine Serial Number:	[illegible]	Time Since New:	49490 Hours	48959 Cycles	Revision No: 00
Engine Type:	CFM56-3B1				
Customer Order No:	0720003-20R	Regulatory Agency:	FAA		
Shop Order Number:	2006230862	Authorized Signature:	Fausto Cesare Andrea Vigino		Release Date: JAN 08, 2007

2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	LPT Stg 4 Disk	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-54-03 100% FPI **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	LPT Conical Support	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-54-05 100% FPI **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	LPT Shaft	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-55-01 100% MPI **Supersedes AD 2000-12-01**	NCW Due to new part installed
2002-13-03	Mandatory LCF NDT Inspections	All CFM56-3	LPT Stub Shaft	At each Piece Part Opportunity after 100 Cycles	Engine Manual Section 72-55-02 100% FPI **Supersedes AD 2000-12-01**	NCW Due to new part installed
2004-10-13	Replacement of bronze gear-stage bearings and installing Main Fuel Pumps with bi-metal, aluminum/bronze bearings	All CFM56-3	MFP	Next Engine Shop Visit or MFP removal	SB 73-120R5	PCW
2006-26-01	To prevent the loss of engine thrust that could result in loss of control during takeoff or landing	All CFM56-3	MFP	See AD	Replace Fuel Filter at next Filter change or 4000 flight hours, whichever occurs first	CW

GE Rio

Customer:	[redacted]	Engine Serial Number:	[redacted]
Reason for Removal:	Trending High EGT	Shop Order Number:	2006000231
Date Received:	23-nov-06	Engine Model:	CFM56-3B1

Test Report

Date Tested:	8-jan-07	Test Type:	Outgoing

Steady State Performance Results

Condition	N1k	N2k (rpm)			FNk (lbs)		EGTk (°F)	
	Ref	Min	Actual	Max	Min	Actual	Actual	Max
Min. Idle (obs)	-	8763	8876	9058	-	819	857	-
Approach Idle (obs)	-	10151	10287	10354	-	1521	789	-
Max. Con. (std)	4599	#N/A	13648	#N/A	18730	19167	1333	1507
Take Off (std)	4700	#N/A	13744	#N/A	19935	20395	1370	1548
Max. Con. (Hot)	-	-	13849	14365	-	-	1391	1582
Take Off (Hot)	-	-	14063	14643	-	-	1463	1643

	EGT Margin (Hot Day) (°C)	Fuel Flow (pph)	N2 Margin (%)	Thrust Margin (%)
Max. Con.	106.2	7233.6	3.595	2.333
Take Off	100.3	7748.7	3.964	2.307

Transient Performance Results

Time to Light:	=	2.7	seconds	Limit:	=	10 seconds
Accel Time	=	5.0	seconds	Limit:	=	7 seconds
Calculated TSFC @ MC:	=	0.375				
Calculated TSFC @ TO:	=	0.380				

Vibration	Vibration Peak			N1 at Peak			N2 at Peak		
	Accel	Decel	Units	Accel	Decel	Units	Accel	Decel	Units
No.1 Brg Broad Band									
No.1 Brg N1 Tracked	0.85	1.25	mils	4632	3425	rpm	13816	12876	rpm
No.1 Brg N2 Tracked									
TRF Brg Broad Band									
TRF Brg N1 Tracked	1.07	1.55	mils	4742	4353	rpm	13908	13585	rpm
TRF Brg N2 Tracked									

Trim Balance: Yes P06# 20, 26; P05 # 29 & P02 # 30

Oil Consumption: 0.110 QPH

Total Test Time: 2 hours 8 mins.

Engine Preserved: Yes
On 08-jan-07
For 365 Days

Engine Accepted: Yes

Reason for Reject:

Originator: Edison Silva - 001

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