



AVIATION SERVICES, LLC - 2551 HELLCAT LANE, SANFORD, FLORIDA 32773

FAA CRS# 6VAR708B **** E.A.S.A. # 145.6440

MPA RUN DATA B737 TEST NO. 10

CUSTOMER:
ENGINE SERIAL NO: 727144
ENGINE SERIAL NO :
WORK ORDER NO: 2213
DATE: 16 SEPT, 2020
POWER SETTING: 23.5k

ACFT REG. NO:
POSITION NO: 1
POSITION NO: 2
REASON: Test 10

ENGINE PERFORMANCE RUN.
B737 AMM 71-00-00

TEST 6

PMC OFF		PMC ON	
Target N2	Recorded	Target N1	Recorded
94.1	94.6	75.7	77.1

Engine Pos.	Engine Model	Engine S/N	MEC P/N	PMC P/N	Tank	Fuel Quantity (kgs)
1	CFM56-3-C1	727144	665038063-215	07482SOCN7157M68P04	No. 1	3,187
2					No. 2	3,290
					CTR	60
					FUEL TYPE: JET-A	Total 6,537

Engine Start Data

ENGINE POS.	Start Lever Adv.		INITIAL FUEL FLOW	LIGHT-UP TIME SEC.	STARTER CUTOUT N2%	MAX EGT	MAX FUEL FLOW	TIME TO IDLE SECONDS	ENGINE OIL			AVM UNITS
	N2%	Motoring Time Sec							QTY	TEMP	PRESSURE	
1	24%	45	300	2	46.0%	685	500	51	80%	48	28	0.8
2												

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	33	30	62.6	62.8	73.3	75.6
2						

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

ENGINE POS.	OAT (°C)	TARGET N1%	Recorded Values						
			N1%	N2%	EGT	FUEL FLOW	OT	OP	VIB
1	33	82.3	82.3	94.6	94.6	2.6	90	96	1
2									

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

ENGINE POS.	OAT (°C)	TARGET N1%	Recorded Values						
			N1%	N2%	EGT	FUEL FLOW	OT	OP	VIB
1	33	87.5	87.5	96.5	794	3.1	95	98	0.9
2									

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

ENGINE POS.	OAT (°C)	TARGET N1%	Recorded Values						
			N1%	N2%	EGT	FUEL FLOW	OT	OP	VIB
1	33	91.8	91.8	98	829	3.6	95	48	0.8
2									

Test No. 5 Takeoff Power Check

ENGINE POS.	OAT (°C)	TARGET N1%	Recorded Values						
			N1%	N2%	EGT	FUEL FLOW	RED LINE	MARGIN	VIB
1	33	98.6	98.6	100.3	822	3.2	930	108	0.8
2							930		

Test 5 Power Assurance Check (80% N1)

ENGINE POS.	OAT (°C)	TARGET N1%	Recorded Values				ADJ EGT FOR N1	MAX EGT	BASE EGT MARGIN	TCC TIMER MARGIN ADJ	EGT MARGIN SEA LEVEL	EGT MARGIN @ MARANA, AZ	EGT MARGIN @ 4,000 FT.
			N1%	N2%	EGT	FOR N1							
1	33	82.3%	82.3%	94.6%	748	748	751	3	N/A				
2									N/A				

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

ENGINE POS.	OAT (°C)	TARGET N1%	Recorded Values				ADJ EGT FOR N1	MAX EGT	BASE EGT MARGIN	TCC TIMER MARGIN ADJ	EGT MARGIN SEA LEVEL	EGT MARGIN @ MARANA, AZ	EGT MARGIN @ 4,000 FT.
			N1%	N2%	EGT	FOR N1							
1	33	87.5%	87.5%	96.5%	794	794	803	9	N/A				
2									N/A				

Test 5 Power Assurance Check (90% N1)

ENGINE POS.	OAT (°C)	TARGET N1%	Recorded Values				ADJ EGT FOR N1	MAX EGT	BASE EGT MARGIN	TCC TIMER MARGIN ADJ	EGT MARGIN SEA LEVEL	EGT MARGIN @ MARANA, AZ	EGT MARGIN @ 4,000 FT.
			N1%	N2%	EGT	FOR N1							
1	33	91.8%	91.8%	98.0%	829	829	854	25	N/A				
2									N/A				

TEST 7 - Vibration Survey Accelerate			
Range	N1% Speed	Vib Readings (UNITS)	
		POS 1	POS 2
52.2-56.0	53.0	0.9	
63.8-67.6	65.0	0.9	
71.5-75.4	73.0	1.0	
79.2-82.1	80.0	1.0	
84.1-87.0	85.0	1.0	
90.0-93.7	91.0	0.9	

TEST 7 - Vibration Survey Decelerate			
Range	N1% Speed	Vib Readings (UNITS)	
		POS 1	POS 2
90.0-93.7	91.0	0.9	
84.1-87.0	85.0	0.9	
79.2-82.1	80.0	1.0	
71.5-75.4	73.0	1.0	
63.8-67.6	65.0	0.9	
52.2-56.0	53.0	1.0	

TEST 8			
Accel Target	Static T/O	40% N1 to Target	High Idle to Target
96.3	98.6	4	6.0

N2 ADJ FOR 23.5K / 3C-1	ADJUSTED N2	MAX N2	%N2 MARGIN
0.0%	94.6%	94.8%	0.2%
0.0%	96.5%	97.7%	1.2%
0.0%	98.0%	99.5%	1.5%

** NOTE: 22,000 THRUST LBS CHECK @ SEA LEVEL EGT MARGIN REDUCED 43 DEG C FOR 80% SETTING. FOR 85% - 90% SETTINGS REDUCE 42 DEG C

** NOTE: NO ALTITUDE ADJUSTMENT FOR 2,000 OPERATIONS AND HIGHER.

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(Continued)

Zone	Area
606	Engine

E. Power Plant Depreservation

SUBTASK 71-00-03-032-133-C00

- (1) Remove the waterproof cover, the film, G02455 [CP2160], and desiccant, G02456 [CP2098].

SUBTASK 71-00-03-032-137-C00

- (2) Make sure you remove all of the tape from the inlet and exhaust areas and there is no unwanted material.

SUBTASK 71-00-03-612-134-C00

- (3) Do a check of the oil tank level and fill it up if necessary (TASK 12-13-11-603-056 or TASK 12-13-11-603-054).

- (a) Use 20 quarts (19 liters) of approved engine oil, D00599 [CP2442].

SUBTASK 71-00-03-682-135-C00

WARNING: USE THE POWER PLANT OPERATION (NORMAL) PROCEDURE TO OPERATE THE POWER PLANT. IF YOU DO NOT USE THIS PROCEDURE, YOU CAN CAUSE DAMAGE TO EQUIPMENT OR INJURY TO PERSONS.

- (4) Use the Power Plant Wet-Motor procedure to motor the engine (TASK 71-00-00-802-117-C00).

SUBTASK 71-00-03-862-138-C00

- (5) Use the Power Plant Wet-Motor procedure to do the engine shut-down (TASK 71-00-00-802-117-C00).

SUBTASK 71-00-03-712-136-C00

- (6) Do this task: Test No. 3 - Idle Leak Check, TASK 71-00-00-795-004-C00.

- (a) Operate the engine at low idle for ten minutes minimum before the engine shutdown.

————— END OF TASK —————

TASK 71-00-03-622-046-C00

9. Power Plant (30 to 365 Days - Serviceable and Not serviceable Power Plant) Preservation

(Figure 201)

A. General

- (1) This task provides the instructions on how to preserve the engine from beteen 30 -165 days.
- (2) The tasks are for engines that are installed on-wing.
- (3) Procedures for engines that are removed from the airplane are in the CFMI Engine Shop Manual, Section 72-00-00, Page 1201.
- (4) This task requires a waterproof protective cover and tape that must be acquired locally.
- (5) Do not apply a spray of preservation oil to the inlet, compressor, turbine, or exhaust.
- (6) For power plant that is not serviceable, if you can do the engine motoring procedure, use the procedure for a serviceable engine preservation for 30 to 365 days.

B. References

Reference	Title
12-13-11-603-054	Replenish the Engine Oil (P/B 301)
12-13-11-603-056	Replenish the Engine Oil (P/B 301)

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Reference	Title
12-13-11-603-069	Change the Engine Oil (P/B 301)
24-22-00-862-001	Supply External Power to the Buses (P/B 201)
24-22-00-862-011	Remove External Power from the Buses (P/B 201)
71-00-00-802-074-C00	Power Plant (Normal) Operation (P/B 201)
72-00-00-982-026-C00	N2 Rotor Manual or Drive Motor (P/B 201)
73-11-02-004-001-C00	Fuel Filter Cartridge Removal (P/B 401)
73-11-02-404-013-C00	Fuel Filter Cartridge Installation (P/B 401)
75-32-00-862-001-C00	VBV System Actuation Procedure - External Pressure Source (P/B 201)
75-32-00-982-014-C00	VBV System Actuation Procedure - Manual Movement (P/B 201)
79-21-04-004-001-C00	Scavenge Oil Filter Element Removal (P/B 401)
79-21-04-404-006-C00	Scavenge Oil Filter Element Installation (P/B 401)
79-21-05-002-001-C00	Magnetic Chip Detector (MCD) Removal (P/B 201)
79-21-05-402-015-C00	Magnetic Chip Detector (MCD) Installation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-9853	Cart - Nitrogen Manifold - Fuel Pressure Test - CFM56-3 Engine Part #: 856A1115G07 Supplier: 58828
STD-162	Cart - Oil, Pressurized 50 PSI (345 kPa) max, 10 Gallon (38 Liters) cap
STD-1285	Container - Fuel Resistant, 10 Gallon (38 Liters)
STD-1290	Source - Nitrogen, 0-200 PSIG
STD-3940	Air Source - Regulated, Dry Filtered, 0 to 150 psig
STD-6378	Protective Mat - Rubber, Manufacturers Association, Grade SC43, neoprene sponge, 1 inch thick, approximately 3 x 4 feet with warning streamer attached
STD-8414	Gloves - Heat and/or Abrasion Resistant

D. Consumable Materials

Reference	Description	Specification
D00599 [CP2442]	Oil - Engine (CFMI SB 79-0001)	CFM CP2442
D00623 [CP5066]	Oil - Fuel System, Corrosion Preventive	MIL-PRF-6081, Grade 1010
D00662 [CP5075]	Additive, Corrosion Preventive	
D00664 [CP5067]	Oil - Corrosion Preventive, Lubricative System	MIL-PRF-6085
G02455 [CP2160]	Film, Vapor Barrier, Polyethylene	L-P-512
G02456 [CP2098]	Desiccant - Activated, Bagged, Packaging Use And Static Dehumidification	MIL-D-3464

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E. Location Zones

Zone	Area
506	Engine
606	Engine

F. Power Plant (Serviceable) Preservation

SUBTASK 71-00-03-612-131-C00

CAUTION: DO NOT APPLY A SPRAY OF PRESERVATIVE OIL OR AN EQUIVALENT OIL INTO THE ENGINE INLET, CORE COMPRESSOR OR TURBINE, OR ENGINE EXHAUST. DIRT PARTICLES THAT ATTACH TO THE WET BLADES AND VANES CAN DECREASE ENGINE PERFORMANCE DURING THE SUBSEQUENT ENGINE OPERATION.

- (1) Fill the engine oil tank with a minimum of 20 quarts (19 liters) of one of the mixtures that follow (TASK 12-13-11-603-056 or TASK 12-13-11-603-054):
- Engine oil, D00599 [CP2442] and a minimum of 5 percent by volume lubrication system corrosion preventive oil, D00664 [CP5067].
 - Engine oil, D00599 [CP2442] and a minimum of 7 percent by volume corrosion preventive oil additive, D00662 [CP5075].

SUBTASK 71-00-03-432-048-C00

- (2) Install pad covers (N2 Rotor Manual or Drive Motor, TASK 72-00-00-982-026-C00) and gaskets on all accessory drive pads if you remove an accessory unit.

SUBTASK 71-00-03-622-049-C00

- (3) Do the engine fuel system preservation.
- Drain the fuel supply line.
 - Supply the electrical power (TASK 24-22-00-862-001).
 - Remove the DO-NOT-OPERATE tag from the BAT switch.
 - Make sure the applicable start lever is in the CUTOFF position.
 - Make sure the FUEL VALVE CLOSED light on pilots' overhead panel, (P5), is on (dim) to show the valve closed.
 - Open this circuit breaker and attach a DO-NOT-CLOSE tag:
 - P6 Main Power Distribution Panel
 - SHUTOFF VALVE ENG
 - Remove the electrical power (TASK 24-22-00-862-011).
 - Set the BAT switch on the Electrical Meters Battery and Galley Power Module (P5-13) to the OFF position and install a DO-NOT-OPERATE tag.
 - Put an approved container for fuel below the drain plug for the fuel filter.
 - Remove the drain plug for the fuel filter and let the fuel drain.

NOTE: You can loosen the connection for the fuel supply line at the service disconnect panel to help the fuel drain.

You can use a funnel, made from foil or equivalent material, below the fuel supply line connection and a hose that goes to the container to prevent fuel leakage on the fan case.

- (i) Remove the O-ring from the drain plug.

- Discard the O-ring.

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- C. Addy 1658 AD*
- (j) Install a new O-ring, lightly lubricated with petrolatum, on the drain plug.
 - (k) Install the drain plug with the threads lightly lubricated with grease.
 - 1) Tighten the drain plug to 45-55 pound-inches (5.1-6.2 Newton-meters).
 - 2) Safety the drain plug with a lockwire. *TW# 024203 CAL 9/1-11-20QC-44*
 - (l) If you loosened the fuel supply line, tighten the connection for the fuel supply line at the service disconnect panel.
 - (m) Disconnect the fuel supply line at the fuel pump inlet.
 - 1) Remove the bolts and washers that attach the fuel supply line to the fuel pump.
 - 2) Remove the gasket from the inlet flange of the fuel pump.
 - a) Keep the gasket for the installation.
 - 3) Install the cap on the fuel supply line.

CAUTION: DO NOT USE SILICONE BASE OILS IN THE FUEL SYSTEM. SILICONE BASE OILS CAN CAUSE DAMAGE TO THE FUEL SYSTEM.

- QC-44*
- (n) Connect a temporary line from the oil cart, STD-162 to the fuel pump inlet to supply fuel system corrosion preventive oil, D00623 [CP5066] at 50 psi (345 kPa) maximum pressure.
 - (o) Disconnect the PCR line from the port on the top of the main engine control (MEC).
 - (p) Connect a temporary drain line from the PCR port and from the disconnected line to a 10 gallon (38 liters) fuel resistant container, STD-1285.
 - (q) Disconnect the discharge pressure (CDP) line of the compressor from the port on the aft end of the MEC.
 - (r) Connect a fuel pressure test cart, SPL-9853 or 0 to 150 psig dry filtered regulated air source, STD-3940 or nitrogen source, STD-1290 to the CDP port.

NOTE: The air or nitrogen source must be capable of controlled pressure from zero to 150 psi.

NOTE: Do not apply pressure to the CDP port at this time.
 - (s) Install a cap on the CDP line.
 - (t) Apply and hold an oil pressure of 50 psi (345 kPa) maximum to the fuel pump inlet.

WARNING: USE THE POWER PLANT OPERATIONAL PROCEDURE TO OPERATE THE POWER PLANT. IF YOU DO NOT USE THIS PROCEDURE, YOU CAN CAUSE DAMAGE TO THE EQUIPMENT OR INJURY TO PERSONS.

DO NOT APPLY BOOST PUMP PRESSURE TO THE FUEL PUMP INLET DURING THE DRY MOTOR PROCEDURE. FUEL LEAKAGE CAN OCCUR AND CAUSE DAMAGE TO THE EQUIPMENT OR INJURY TO PERSONS.

- (u) Use the Power Plant Dry-Motor procedure to motor the engine at the maximum motor speed (20 percent of N2 minimum) for two minutes (TASK 71-00-00-802-074-C00).
 - 1) Do not apply boost pump pressure to the fuel pump inlet.

NOTE: Because the engine fuel supply line was disconnected and capped, fuel boost pump pressure can cause the cap on the supply line to come off and fuel to spill on the engine.
- (v) Use the Power Plant Dry-Motor procedure to do the engine shutdown (TASK 71-00-00-802-074-C00).

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- (w) Remove the pressure from the oil supply line to the fuel pump inlet.
- (x) If the fan rotor did not turn during the engine motor procedure, make sure the engine is fully stopped and manually turn the fan rotor two full turns as follows:
- 1) Install two protective mats, STD-6378 in the inlet on the full lower half of inlet cowl.

WARNING: YOU MUST HAVE COMMUNICATION BETWEEN THE PERSONS IN FLIGHT COMPARTMENT AND PERSONS THAT MANUALLY TURN THE FAN ROTOR AT ALL TIMES. ACCIDENTAL OPERATION OF THE ENGINE OR ENGINE SYSTEMS CAN CAUSE INJURY TO PERSONS NEAR THE ENGINE.

THE ENGINE MUST BE FULLY STOPPED BEFORE YOU TRY TO GO INTO THE INLET TO MANUALLY TURN THE FAN ROTOR. IF THE ENGINE IS NOT FULLY STOPPED, INJURY CAN OCCUR.

WARNING: DO NOT TRY TO MANUALLY TURN THE FAN ROTOR WITHOUT GOOD GLOVES.

MAKE SURE YOU ARE ON A SAFE SURFACE WHILE YOU TURN THE FAN.

BE VERY CAREFUL WHILE YOU TURN THE FAN TO PREVENT INJURY.

- 2) Use heat and/or abrasion resistant gloves, STD-8414 and manually turn the fan two full turns in the direction of operation (counterclockwise viewed from front).
 - 3) Remove the protective mats, STD-6378 from the inlet cowl.
- (y) Remove the drain line from the PCR port and disconnected PCR line.
- (z) Connect the PCR line to the PCR port.
- 1) Tighten the coupling nut to 65-75 pound-inches (7.3-8.5 Newton-meters).
- (aa) Apply and hold an oil pressure of 50 psi (345 kPa) maximum to the fuel pump inlet.
- (ab) Apply and hold a pressure of 150 psi (1035 kPa) at the CDP port.

WARNING: USE THE POWER PLANT OPERATIONAL PROCEDURE TO OPERATE THE POWER PLANT. IF YOU DO NOT USE THIS PROCEDURE, YOU CAN CAUSE DAMAGE TO THE EQUIPMENT OR INJURY TO PERSONS.

DO NOT APPLY BOOST PUMP PRESSURE TO THE FUEL PUMP INLET DURING THE DRY MOTOR PROCEDURE. FUEL LEAKAGE CAN OCCUR AND CAUSE DAMAGE TO THE EQUIPMENT OR INJURY TO PERSONS.

- (ac) Use the Power Plant Dry-Motor procedure to motor the engine to the maximum motor speed (approximately 24-28 percent of N₂) (TASK 71-00-00-802-074-C00).
- 1) Do not apply boost pump pressure to the fuel pump inlet.
- NOTE:** Because the engine fuel supply line was disconnected and capped, fuel boost pump pressure can cause the cap on the supply line to come off and fuel to spill on the engine.
- (ad) When the engine is at maximum motor speed, put the applicable engine start lever in the IDLE position for 10 seconds.
- (ae) Put the start lever back to the CUTOFF position and continue to motor the engine for 2 minutes.
- (af) Use the Power Plant Dry-Motor procedure to do the engine shutdown (TASK 71-00-00-802-074-C00).

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Tool
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- C. Adams 16587 AP*
- (ag) Remove the pressure from the oil supply line to the fuel pump inlet.
 - (ah) Remove the oil supply line.
 - (ai) Connect the fuel supply line to the fuel pump inlet.
 - 1) Remove the cap from the fuel supply line.
 - 2) Lightly lubricate the gasket with petrolatum and install it on the inlet port of the fuel pump.
 - 3) Lightly lubricate the bolts (4 locations) for the fuel line flange with grease.
 - 4) Put the fuel line flange on the fuel pump flange, and install the bolts and washers (4 locations).
 - a) Tighten the bolts.
 - (aj) Remove the pressure from the CDP port (incorrect PS3 source).
 - (ak) Remove the cap from the CDP line.
 - (al) Connect the CDP line to the MEC port.
 - 1) Tighten the coupling nut to 135-150 pound-inches (15.3- 17.0 Newton -meters).

SUBTASK 71-00-03-412-124-C00

- (4) Close the VBV doors if they are open (TASK 75-32-00-862-001-C00 or TASK 75-32-00-982-014-C00).

SUBTASK 71-00-03-432-125-C00

- (5) Put the vapor barrier film, G02455 [CP2160] on the VBV bleed grills.

SUBTASK 71-00-03-432-126-C00

- (6) Install caps on all disconnected lines and electrical connections.

SUBTASK 71-00-03-432-127-C00

- (7) Seal the inlet and exhaust openings with the vapor barrier film, G02455 [CP2160].
 - (a) Attach the vapor barrier film, G02455 [CP2160] with tape.

SUBTASK 71-00-03-432-050-C00

- (8) Put the desiccant, G02456 [CP2098] on each side of the engine, but do not let it touch the engine hardware.

NOTE: You must replace the desiccant at regular intervals depending on the weather conditions. Install the desiccant such that it gives sufficient protection to the engine and also lets access for replacement without damage to the engine protective cover.

SUBTASK 71-00-03-432-051-C00

- (9) Install a waterproof cover on the full power plant.
 - (a) Tightly attach the waterproof cover to the engine.

SUBTASK 71-00-03-932-052-C00

- (10) Attach a tag to the power plant to show that you did the fuel system and oil system preservation with preservation oil.
 - (a) Include the date of the preservation procedure.

SUBTASK 71-00-03-862-053-C00

- (11) Remove the DO-NOT-CLOSE tag and close this circuit breaker:
 - (a) P6 Main Power Distribution Panel
 - 1) SHUTOFF VALVE ENG

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Engine Installation / Removal History

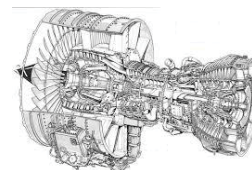


Engine P/N: **CFM56-3C1**
 Engine S/N: **727-144**

As date of: **19-11-2015**

Description	Date	TSN	TSI	CSN	CSI	AIRCRAFT	POSITION	A/C TAIL	NOTE(S)
As received	16-07-2016	48990	48990	32795	32795	737-300			
Install	16-07-2016	48990	48990	32795	32795	737-300	1	CC-ADZ	Instalación en Perú
Remove	09-03-2017	50678	1688	33259	464	737-300	1	CC-ADZ	Avión deja de operar
Install	13-08-2017	50678	1688	33259	464	737-300	1	CC-ASQ	Reemplaza a ESN 858-987 por ciclos rem. en CC-ASQ.
Remove	02-12-2017	51794	2804	33734	939	737-300	1	CC-ASQ	Removido por alta EGT
Install	03-12-2017	51794	2804	33734	939	737-300	0	N/A	Motor preservado
Remove		51794	0	33734	0	737-300	0	N/A	Motor preservado

Approval Signature



VIDEO BORESCOPE REPORT FOR CFM56 SERIES ENGINE

CLIENT: **WORK ORDER #** HT120-10011 **INSPECTION:** Accomplish full gas path boroscope to include 360 degree inspection of combustion chamber, HPT 1 NGV, LPT 1 NGV.

Engine S/N: 727144 **Position:** #1 **Eng Model:** CFM56-3C1
Engine TSN: 51,806.20 **Engine CSN:** 33,737
A/C Reg: N228AW **A/C Model:** B737-33A **A/C S/N:** 25032
ACFT TAT: 58,497.30 **ACFT TAC:** 35,722 **Manual REV.** 82 / Sep 25/2015



Exterior Inspection

No apparent damage or leakage observed to the cases or installed QEC's

Compressor Case

No observed cracking, distortion or evidences of overtemp noted at this time.



Accessory Drive Gearbox

No apparent damage or leakage to the gearbox or installed accessories noted at this time



Exhaust Cases

No damage or defects noted to the turbine cooling tubes, no broken lugs and no leaks noted at this time.

Exhaust Cone

No damage or defects noted at this time.



Work Order: HT120-10011 **Engine S/N:** 727144 **Engine Mode** CFM56-3C1

LOW PRESSURE COMPRESSOR

Low Pressure Stage:

Comments

LPC FAN N1 No significant discrepancies at this time.

Reference

AMM 72-31-02 / TASK
72-31-02-226-001-C00

Serviceable

Yes



Comments

LPC Stage 2 No significant discrepancies at this time.

Reference

AMM 72-00-00 / TASK
72-00-00-216-008-C00

Serviceable

Yes



Comments

LPC Stage 3 No significant discrepancies at this time.

Reference

AMM 72-00-00 / TASK
72-00-00-216-008-C00

Serviceable

Yes



Comments

LPC Stage 4 No significant discrepancies at this time.

Reference

AMM 72-00-00 / TASK
72-00-00-216-008-C00

Serviceable

Yes



Work Order: HT120-10011 **Engine S/N:** 727144 **Engine Mode** CFM56-3C1

HIGH PRESSURE COMPRESSOR

High Pressure Compressor Blades: **Comments**

HPC Stage 1 No significant discrepancies at this time.

Reference

AMM 72-00-00 / TASK
72-00-00-216-049-C00

Serviceable

Yes



Comments

HPC Stage 2 No significant discrepancies at this time.

Reference

AMM 72-00-00 / TASK
72-00-00-216-049-C00

Serviceable

Yes



Comments

HPC Stage 3 No significant discrepancies at this time.

Reference

AMM 72-00-00 / TASK
72-00-00-216-049-C00

Serviceable

Yes



Comments

HPC Stage 4 No significant discrepancies at this time.

Reference

AMM 72-00-00 / TASK
72-00-00-216-049-C00

Serviceable

Yes



Work Order: HT120-10011 **Engine S/N:** 727144 **Engine Mode** CFM56-3C1

LOW PRESSURE TURBINE

Low Pressure Blades:

Comments

LPT 1 Blades No significant discrepancies at this time.

Reference

AMM 72-00-00 / TASK
72-00-00-216-045-C00

Serviceable

Yes



Comments

LPT 1 NGV Axial crack found on 2 ea vane L/E. G.(1)(b)1 Axial cracks are permitted if they are less than 1/3 of the chord length, 0.66 inch. **Within AMM Limits.**

Reference

AMM 72-00-00 /
SUBTASK 72-00-00-211-
006-C00

Serviceable

Yes



Comments

LPT 2 Blades No significant discrepancies at this time.

Reference

AMM 72-00-00 / TASK
72-00-00-216-045-C00

Serviceable

Yes



Comments

LPT 3 BLADES No significant discrepancies at this time.

Reference

AMM 72-00-00 / TASK
72-00-00-216-045-C00

Serviceable

Yes



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- 1) Nicks, marks, scratches and dents on the concave and convex surfaces are permitted
- (4) Examine the inner and outer platforms of the 1st-stage LPT NGV's for these conditions:
 - (a) Cracks:
 - 1) Two cracks per segment are permitted with this condition:
 - a) Cracks are less than 0.5 inch (12.7 mm) in length
 - 2) A maximum service extension of 3 cycles is permitted if the cracks are less than 1.0 inch (25.4 mm) length.

G. Alternate procedure. Full set LPT 1st-Stage NGV's Inspection with the Flexible Borescope

SUBTASK 72-00-00-211-006-C00

- (1) Examine the leading edge of the 1st-stage LPT NGV's for these conditions:
 - (a) V-notch
 - 1) V-notch on the leading edge are permitted if they are less than 0.08 inch (2 mm)
 - 2) If V-notch is more than 0.08 inch (2 mm), refer to perforations limits.
 - (b) Axial cracks (with or without V-notch)
 - 1) Axial cracks are permitted if they are less than 1/3 of the chord length, 0.66 inch (16.7 mm)
 - 2) One crack per nozzle segment is permitted with these conditions:
 - a) Cracks are more than 1/3 of the chord length, 0.66 inch (16.7 mm) but less than 4/5 of the chord length, 1.57 inch (40.0 mm) in length
 - b) Cracks are less than 0.004 inch (0.1 mm) in width in the segment AB. Refer to Figure 613.

NOTE: Segment AB corresponds to the main cooling cavity and is determined as follows: from 0.32 inch (8 mm) to 1.22 inch (31 mm) from the leading edge.
 - 3) A maximum service extension of 100 cycles is permitted if there is one crack which is more than 4/5 of the chord length, 1.57 inch (40.0 mm) in length or more than 0.004 inch (0.1 mm) in width.
 - (c) Radial cracks in the leading edge confined to the forward cooling cavity (Dim A)
 - 1) Five radial cracks per set of nozzles (28 parts) are permitted with these conditions:
 - a) Crack is less than 1.0 inch (25.4 mm) in length
 - 2) A maximum service extension of 100 cycles is permitted with these conditions:
 - a) If there are six cracks which are less than 1.0 inch (25.4 mm) in length.
 - 3) A maximum service extension of 100 cycles is permitted with these conditions:
 - a) If there is one crack which is more than 1.0 inch (25.4 mm) in length.
 - (d) Burn-through/perforations
 - 1) Burn-through/perforations are permitted with these conditions:
 - a) Burn-through/perforations are located in the first cooling cavity
 - b) Burn-through/perforations are not more than 0.4 x 0.275 inches (10 x 7 mm)
 - c) There is no more than 5 perforations per set of nozzles (28 parts)
 - 2) Burn-through/perforations located in the second cavity are not permitted.

EFFECTIVITY
VIV ALL

72-00-00

D6-390F5

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- 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.

- 4) Missing material or burned through

- a) Missing material is permitted if the diameter is not more than 0.20 inch (5.08 mm) for each segment, and 1.0 inch (25.4 mm) for the engine.

- b) For damage that exceeds the above limit, a maximum service extension of 25 cycles is permitted if the area is not more than 0.5 inch (12.7 mm) in diameter for each segment.

- 5) Nicks, marks, scratches and dents on the surface of the platform