

## **Engine Listing and Removal Schedule**

#	Aircraft	Engine Model	ESN	Month	Year	Lessor
1	VP-BIU	CFM56-5A5	731895	Mar	2017	VTB
2	VP-BIU	CFM56-5A5	731880	June	2017	VTB

## Engine Workscope

№	Module Designation	Workscope*			Workscope remarks	Rev
		Min	Perf. Rest.	Full		
00	Engine General				Repair.Perform SB RA32073-11 if not previously complied with (PCW).	00
01	Engine Mounts	X			Minimum WS level. Visually inspect FWD Mount and AFT Mount.	00
02	Fan&Booster (21X Module)			X	Full overhaul WS level. Replace Fan Disk, Booster Spool.	00
03	№1and №2 bearing (22X Module)			X	Full overhaul WS level. Replace Fan Shaft.	00
04	Fan Frame Assy (23X Module)	X			Minimum WS level. Visually inspect exposed areas. Repair if necessary. Replace RDS roller bearing with new, replace outer race of Outer Housing with new race (72-23-05, Repair 001) or install new outer housing.	00
05	IGB (61X Module)	X			Visually inspect exposed areas. Do not remove module.	00
06	HPC Rotor (31X Module)		X		Performance WS level. Keep HPC rotor assembled, apply ESM 72-00-31 inspection for the rotor. Route HPC blades for overhaul.	00
07	HPC Stator (32-33X Module)			X	Full overhaul WS level. Replace Inner bushings, shrouds, outer bushings, washers with new. Overhaul shrouds if required. Remove rear stator and inspect exposed areas, repair if necessary. Refurbish honeycomb seals.	00
08	Comb. Case (41X Module)			X	Full overhaul WS level. Fuel nozzles cleaning, repair if necessary. Replace honeycomb with a new or refurbished Seal. Visually inspect inside Fuel Manifolds for presence of coke (carbon). Visually inspect exposed areas.	00
09	Comb.Chamber (42X Module)			X	Full overhaul WS level. Overhaul of combustor, replace TBC. Inspect liners and dome for cracks, burn through and missing material. Repair if necessary.	00
10	HPT Nozzle (51X Module)			X	Full overhaul WS level. Route HPT NGVs for overhaul. Inspect HPT forward Inner Nozzle Support (FINS) repair as necessary.	00
11	HPT Rotor (52X Module)			X	Full overhaul WS level. Replace HPT Front Air Seal, HPT Disk. Inspect HPT blades at module level per 72-00-52 due to low cycles.	00
12	LPT Stg.1 Nos. & HPT Stator (53X Module)		X		Performance WS level. Route HPT Shrouds for overhaul. Inspect exposed areas. Restore J05 Clearance.	00
13	LPT Rotor/Stator (54X Module)			X	Full overhaul WS level. Replace LPT stg 1,2,3,4 disks Inspect exposed areas. Route LPT blades and NGVs for overhaul.	00
14	LPT Shaft (55X Module)			X	Full overhaul WS level. Replace LPT shaft, conical support. Inspect #4 & #5 brg, repair if necessary.	00
15	LPT Frame (56X Module)		X		Repair WS level. Inspect Turbine Frame oil Supply and Scavenge Tubes for occurrence of oil coking per ESM, repair if necessary. Inspect Oil tubes for coking. Apply MPD Task 725000-C6-1.	00
16	TGB (62X Module)	X			Minimum WS level. Inspect exposed areas. Remove for access to RDS parts.	00
17	AGB (63X Module)	X			Minimum WS level. Do not remove module. Inspect exposed areas.	00

\* This workscope is based on CFM56-5A Workscope Planning Guide Revision Sept 2014

### Additional information:

Engine should be inspected externally before induction.

Oleg Pechulis

Engine Group

Engineering Department

Oleg Kashtanov

Head of Engineering Department

**SCRAP RATES FOR SHOP VISIT**

Engine Model: CFM56-5A5

ESN 731895

FAN BLADES	0%
FAN OGV DOUBLED	15%
BOOSTER BLADES	0%
BOOSTER VANES	0%
HPC BLADES*	50%
HPC VANES*	30%
HPC VANE SEGMENTS*	10%
HPT NGV	5%
HPT BLADES	10%
HPT SHROUDS	20%
LPT STG 1 NGV	9%
LPT STG 1-4 BLADES*	5%
LPT STG 2-4 NGVs*	5%

**REMARKS:**

\*From the total quantity in a whole set of HPC blades, HPC vanes, HPC segments, LPT blades, LPT Nozzle Guide Vanes installed in modules HPC and LPT

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01	Engine Mounts	X			Minimum WS level. Visually inspect FWD Mount and AFT Mount.	00
02	Fan&Booster (21X Module)			X	Full overhaul WS level. Replace Fan Disk.	00
03	Nº1and Nº2 bearing (22X Module)			X	Full overhaul WS level. Replace Fan Shaft.	00
04	Fan Frame Assy (23X Module)	X			Minimum WS level. Visually inspect exposed areas. Repair if necessary. Replace RDS roller bearing with new, replace outer race of Outer Housing with new race (72-23-05, Repair 001) or install new outer housing.	00
05	IGB (61X Module)	X			Visually inspect exposed areas. Do not remove module.	00
06	HPC Rotor (31X Module)			X	Full overhaul WS level. Replace HPC 1-2 Spool, Stage 3 Disk. Route HPC blades for overhaul.	00
07	HPC Stator (32-33X Module)			X	Full overhaul WS level. Replace Inner bushings, shrouds, outer bushings, washers with new. Overhaul shrouds if required. Remove rear stator and inspect exposed areas, repair if necessary. Refurbish honeycomb seals.	00
08	Comb. Case (41X Module)			X	Full overhaul WS level. Fuel nozzles cleaning, repair if necessary. Replace honeycomb with a new or refurbished Seal. Visually inspect inside Fuel Manifolds for presence of coke (carbon). Visually inspect exposed areas.	00
09	Comb.Chamber (42X Module)			X	Full overhaul WS level. Overhaul of combustor, replace TBC. Inspect liners and dome for cracks, burn through and missing material. Repair if necessary.	00
10	HPT Nozzle (51X Module)			X	Full overhaul WS level. Route HPT NGVs for overhaul. Inspect HPT forward Inner Nozzle Support (FINS) repair as necessary.	00
11	HPT Rotor (52X Module)			X	Full overhaul WS level. Replace HPT Front Air Seal, HPT Disk. Inspect HPT blades at module level per 72-00-52 due to low cycles.	00
12	LPT Stg.1 Nos. & HPT Stator (53X Module)			X	Full overhaul WS level. Route HPT Shrouds for overhaul. Replace DER LPT stage 1 NGVs with OEM repaired parts. Restore J05 Clearance.	00
13	LPT Rotor/Stator (54X Module)			X	Full overhaul WS level. Replace LPT stg 1,2,3,4 disks Inspect exposed areas. Route LPT blades and NGVs for overhaul.	00
14	LPT Shaft (55X Module)			X	Full overhaul WS level. Replace LPT shaft, conical support. Inspect #4 & #5 brg, repair if necessary.	00
15	LPT Frame (56X Module)		X		Repair WS level. Inspect Turbine Frame oil Supply and Scavenge Tubes for occurrence of oil coking per ESM, repair if necessary. Inspect Oil tubes for coking. Apply MPD Task 725000-C6-1.	00
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17	AGB (63X Module)	X			Minimum WS level. Do not remove module. Inspect exposed areas.	00

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ESN 731880

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BOOSTER BLADES	0%
BOOSTER VANES	0%
HPC BLADES*	50%
HPC VANES*	30%
HPC VANE SEGMENTS*	10%
HPT NGV	5%
HPT BLADES	10%
HPT SHROUDS	20%
LPT STG 1 NGV	75%
LPT STG 1-4 BLADES*	5%
LPT STG 2-4 NGVs*	5%

**REMARKS:**

\*From the total quantity in a whole set of HPC blades, HPC vanes, HPC segments, LPT blades, LPT Nozzle Guide Vanes installed in modules HPC and LPT