

	BRAZILIAN AIR FORCE AERONAUTICAL AND WARFARE MATERIEL DIRECTORATE SÃO PAULO MAINTENANCE DEPOT
	TECHNICAL SPECIFICATIONS n° 004/TMOT/2024
DATE: May 13 th , 2024	

I. PURPOSE

This Technical Specification (TS) has the purpose to present the collection of necessary and sufficient elements, with an adequate level of accuracy, to define the exchange by Fleet Enhancement Program – FEP of 01 (one) PRATT & WHITNEY PT6A-68C engine. This engine is applied in A-29 SUPER TUCANO aircraft, belonging to the fleet of Brazilian Air Force.

II. OBJECT

The exchange by Fleet Enhancement Program – FEP of 01 (one) PRATT & WHITNEY PT6A-68C engine, Serial Number PCE-RS0008, by a NEW PT6A-68C engine respecting the requirements described on this document.

Some information about the engine currently in the Brazilian Air Force fleet are listed at the table below:

MODEL	PN	SN	TSN	TSO	CYCLES
PT6A-68C	3055973-01	PCE-RS0008	4067:00	NEW	3047 CY

III. REASONS FOR REMOVAL

The engine PT6A-68C SN PCE-RS0008 was removed from the aircraft because of the following reasons:

- DEBRYS; and
- HIGH T5.

I. ENGINE DATA

1. Life Limited Parts – Service Life Data

The following table shows the number of accumulated cycles (AC Cycles) since new the rotary components of the engine have completed.

COMPONENT	PN	SN	LFC LIMIT	AC CYCLES
Shaft, Compressor Rotor	3123394-01	78A387	24000	19116
Rotor, Compressor (First-Stage)	3042701	39E749	24000	19116
Rotor, Compressor (Second-Stage)	3040942	86B318	24000	19116
Rotor, Compressor (Third-	3040933	TXA1D4750	24000	20772

Stage)				
Rotor, Compressor (Fourth-Stage)	3040944	TXA1D4922	24000	20772
Impeller, Centrifugal	3059405-01	TXA1D4577	24000	19965
Disk, Compressor Turbine	3058528-01	A001E47X	6000	2702
Disk, Power Turbine (First-Stage)	3056485-01	A001F6MR	15000	11867
Disk, Power Turbine (Second-Stage)	3123253-01	A001ELP8	15000	11853

Soft Time Accessories Data and Disposition

ACCESSORY	PN	SN	TSN	TSO
Fuel Metering Unit (FMU)	3056808-02	14081843	4728:10	NOVO
Propeller Interface Unit (PIU)	3056810-01	13764621	1837:15	NOVO
Fuel Pump	3056787-04	0169	3984:00	NOVO
Permanent Magnet Alternator (PMA)	3071980-02	EC01A001A663	3078:40	NOVO
Compressor Bleed Valve Assembly (BOV)	3057571-01	AHX000867	3341:00	NOVO
Torque Probe	3077796-02	00198CHA30380	1428:40	NOVO
Data Collection Unit (DCU)	3075868-01	13-013315	1955:45	NOVO
Ignition Exciter	3043937-06	142684	1482:45	NOVO
Power Management Unit (PMU)	3056931-03	08068275	4469:25	NOVO
Ng Speed Sensor	3043376-01	CH750	4457:45	NOVO
Thermocouple and Wiring Harness Assembly, T1	3123311-01	EM61740	4067:00	NOVO
Wiring Harness, Thermocouple	3043825-01	NRA001107	4067:00	NOVO
Wiring Harness, Rear	3057517-02	EF00088	4067:00	NOVO
Wiring Harness, Front	3123313-02	EMA120655	4067:00	NOVO

II. ESTIMATED COST

According to market estimates, the maximum purchase price for the exchange by Fleet Enhancement Program – FEP is US\$2,114,000.00 (two million one hundred and fourteen thousand dollars).

III. TECHINICAL REQUIREMENTS

The engine and all its accessories must be at NEW. It Means that they must have accumulated no more operating hours than those necessary to accomplish their manufacture testing process. The engine and accessories shall not have been used by any previous operator.

The engine must be in airworthiness condition and up to date with respect to the Service Bulletins issued by the manufacturer. At delivery, it must has already undergone

the actions to comply with all the applicable Service Bulletins issued so far.

IV. DELIVERY

The engine shall be delivered at the Brazilian Aeronautical Commission in Washington (CABW) warehouse, which address will later be informed, with all caps and covers as per the engine Maintenance Manual, and mounted in the approved P&WC shipping container. The engine must be at a preserved condition considering that it might be stored for over 91 days, in accordance with the requirements of the Maintenance Manual.

V. TECHNICAL WARRANTY

The engine shall be subjected to the technical warranty which is either 12 (twelve) months of operation or 1000 (one thousand) operation hours, whichever occurs first.



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COMANDO DA AERONÁUTICA

CONTROLE DE ASSINATURAS ELETRÔNICAS DO DOCUMENTO

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