

PRATT & WHITNEY CANADA
MAINTENANCE MANUAL
MANUAL PART NO. 3015442

PART 1 - DESCRIPTION OF ENGINE

SECTION 2 - LEADING PARTICULARS AND SPECIFICATIONS

1. GENERAL

- A. Leading particulars of the PT6A-6, PT6A-6A, PT6A-6B, PT6A-20, PT6A-20A and PT6A-20B engines are as follows: (Refer to Tables 1-2-1 and 1-2-2)

TABLE 1-2-1, Engine Specifications

Rating	ESHP		SHP		Shaft RPM (3)		Jet Thrust (lb.)		JP-4 Fuel Consumption LB/ESHP/HR AT 15°C (59°F)	
	A-6 A-6A A-6B	A-20 A-20A A-20B	A-6 A-6A A-6B	A-20 A-20A A-20B	A-6 A-6A A-6B	A-20 A-20A A-20B	A-6 A-6A A-6B	A-20 A-20A A-20B	A-6 A-6A A-6B	A-20 A-20A A-20B
	A-6 A-6A A-6B	A-20 A-20A A-20B	A-6 A-6A A-6B	A-20 A-20A A-20B	A-6 A-6A A-6B	A-20 A-20A A-20B	A-6 A-6A A-6B	A-20 A-20A A-20B	A-6 A-6A A-6B	A-20 A-20A A-20B
Takeoff	578	579	550 (2)	550 (2)	2200	2200	70	72	0.650	0.649
Max. Cont	525	579	500 (1)	550 (2)	2200	2200	62	72	0.670	0.649
Max. Climb	525	566	500 (1)	538	2200	2200	62	70	0.670	0.653
Max. Cruise	495	522	471	495	2200	2200	60	68	0.680	0.670

(1) Available to 18.3 °C (65°F) Ambient

(2) Available to 21.1 °C (70 °F) ambient

(3) Rotor Speed - Power Turbine 33,000 rpm

NOTE: Maximum Continuous is an emergency rating only.

TABLE 1-2-2, Engine Leading Particulars

LEADING PARTICULARS	
Engine Type	Free Turbine
Type of combustion chamber	Annular
Compression ratio	6.3:1
Propeller shaft rotation (looking FWD)	Clockwise
Propeller shaft configuration (PT6A-6 and -20 Series)	Flanged

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TABLE 1-2-2, Engine Leading Particulars (Cont'd)

LEADING PARTICULARS	
Propeller shaft gear ratio (PT6A-6 and -20 Series)	0.0668:1
Engine diameter Basic at Room Temperature	19.0 in. (482.6 mm)
Engine length Basic at Room Temperature (PT6A-6 and -20 Series)	62.0 in. (1575 mm)
Oil Consumption (maximum) (10 hour period)	0.2 lb/hr (0.091 kg/hr)
Dry weight, (Approximate) (Standard equipment) (PT6A-6 and -20 Series)	275 lb. (125 kg)

2. FRONT AND REAR ACCESSORY DRIVES

A. For leading particulars of the front and rear accessory drives, refer to Table 1-2-3.

TABLE 1-2-3, Accessory Drives - Leading Particulars

Drive Pad	Rotation	Ratio	Max. Torque (in.lb.)	
			Continuous	Static
1 Starter-generator (1)	CW	0.293:1	170	1600
2 Fuel Pump/FCU (1)	CCW	0.167:1	-	-
3 Ng Tach Generator (1)	CCW	0.112:1	7	100
4 Vacuum Air Pump (Optional) (1)	CCW	0.103:1	60	800
5 Optional Accessory Drive (1)	CW	0.321:1	135	800
6 Optional Accessory Drive (1)	CCW	0.203:1	150	800
7 Propeller Governor (2)	CW	0.1273:1	50	850
8 Nf Tach Generator (2)	CW	0.1273:1	7	100
9 Propeller Overspeed Governor (2)	CW	0.1273:1	70	850

NOTE: 1. Rear Accessory Drives (100 % Ng 37500 rpm).

NOTE: 2. Front Accessory Drives (100 % Nf 33000 rpm).

3. FUEL AND LUBRICATION SYSTEMS

A. For specifications of the fuel and lubrication systems, refer to Table 1-2-4.