

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION TYPE CERTIFICATE DATA SHEET E45NE	TCDS NUMBER E45NE REVISION: Original* DATE: DECEMBER 16, 1993 PRATT & WHITNEY CANADA, INC MODELS: JT15D-5D
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Engines of models described herein conforming with this data sheet (which is part of Type Certificate Number E45NE) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Federal Aviation Regulations, provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other approved instructions.

TYPE CERTIFICATE (TC) HOLDER: Pratt & Whitney Canada, Inc.
 1000 Marie-Victorin
 Longueuil, Quebec
 Canada J4G 1A1

MODELS I.
 TYPE

JT15D-5D				
Twin spool with single stage integrally bladed fan, one axial compressor stage and one centrifugal compressor stage, three stage turbine, annular reverse-flow combustor and full length annular bypass duct.				
THRUST RATING, POUNDS (See NOTE 1) Maximum continuous at sea level Takeoff (5 min.) at sea level	3,045 3,045			
ENGINE SPEED LIMITATIONS, RPM (See NOTE 4 and also refer to Installation Manual for transients) Max steady state low rotor (N1) Max steady state high rotor (N2)	16,860 31,777			

INTERTURBINE TEMPERATURE

MODELS:

Takeoff (5 min.)
 Maximum continuous
 Starting
 Transient (2 sec.)

(Also see Installation Manual)

$\phi F/\phi C$				
JT15D-5D				
1328/720				
1292/700				
1022/550				
1364/740				

OIL INLET TEMPERATURE

MODELS:

Maximum
 Minimum
 Transient maximum (15 min.)

$\phi F/\phi C$				
JT15D-5D				
250/121				
-40/-40				
275/135				

MAXIMUM ACCESSORY TEMP.

The engine compartment shall be ventilated as necessary to keep the air temperature surrounding accessory components from exceeding the limits defined in the applicable Installation Manual.

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REV.								

LEGEND: "- ." INDICATES "SAME AS PRECEDING MODEL"
 "---" NOT APPLICABLE

ACCESSORY DRIVES	The following apply to the accessory drives, which are provided by the engine and included in the basic engine weight:					
	DRIVE	ROTATION	SPEED RATIO TO TURBINE SHAFT	MAXIMUM TORQUE (in. - lb.)		MAXIMUM OVERHANG (in.-lb.)
				CONTINUOUS	STATIC	
	DRIVEN BY HIGH ROTOR					
	High rotor tachometer	CW	.1282:1	7	50	10
Hydraulic pump	CW	.1282:1	225	1600	125	
Starter generator	CW	.3640:1	210	1600	180	
DRIVEN BY LOW ROTOR						
Low rotor tachometer	CCW	.2642:1	7	50	0	
*CW - Clockwise; CCW - Counterclockwise						
Total accessory power limit is 22.5 hp. at 52% N2, increasing linearly to 30 hp. at 97% N2. Refer to Installation Manual for restrictions above 20,000 ft. altitude. Also see NOTE 3.						

IGNITION	MODELS JT15D
	-5D
Exciter Lucas	PWC P/N 3118172-01
Igniter plug Unison	PWC P/N 3117464-01

PRINCIPAL DIMENSIONS Refer to Installation Drawing in approved Installation Manual.

C. G. LOCATION Refer to Installation Drawing in approved Installation Manual.

CERTIFICATION BASIS	
Models JT15D-5D	FAR 21.29, FAR 33, Amendments 1 through 14 inclusive, effective September 10, 1990, and FAR 34 effective September 10, 1990.

MODEL	TYPE CERTIFICATE NUMBER E45NE		
	APPLIED FOR	ISSUED/REVISED	DELETED
JT15D-5D	12/10/93	12/16/93	

IMPORT REQUIREMENTS: To be considered eligible for installation on United States (U.S.) registered aircraft, each engine to be exported to the U.S. shall be accompanied by a certificate of airworthiness for export or by a certifying statement, endorsed by the exporting cognizant civil airworthiness authority and containing the following language:

- (1) This engine conforms to its Type Certificate Number E45NE and is in a condition for safe operation.
- (2) This engine has been subjected by the manufacturer to a final operational check and is in a proper state of airworthiness.

Reference FAR Section 21.500, which provides for the airworthiness acceptance of aircraft engines manufactured outside of the U.S. and for which a U.S. type certificate has been issued. Additional guidance is contained in FAA Advisory Circular 21-23, "Airworthiness Certification of Civil Aircraft, Engines, Propellers, and Related Products Imported into the United States."

NOTES

- NOTE 1. The engine ratings are based on static sea level conditions:
Compressor inlet air (dry) 80°F, at takeoff and 59°F at max. continuous).
29.92 in. Hg.
No accessory loads or air bleed.
Engine intake and exhaust as described in the Department of Transport, Canada, approved Installation Manual.
- NOTE 2. Emergency operation on gasoline (MIL-G-5572, all grades) is limited to a total of 50 hours in any engine overhaul period.
- NOTE 3. The starter/generator pad may be overloaded in emergency to a torque of 340 in.-lb. for periods up to 5 minutes, subject to total accessory power not exceeding 40 hp.
- NOTE 4. Minimum permissible flight idle N2 is 17035 RPM (52%).
- NOTE 5. Certain engine parts are life limited. For JT15D-5D engines, these life limits are listed in P&WC Engine Service Bulletin Number 7002.
- NOTE 6. Permissible overhaul and inspection intervals are listed in P&WC Engine Service Bulletin Number 7003.
- NOTE 7. P&WC Engine Service Bulletin Number 7001 lists approved oil brands.
- NOTE 8. Prior to issue of the DOT-approved Maintenance Manual, JT15D-5D engines must be maintained in accordance with temporary instructions issued by Pratt & Whitney personnel. Overhauls are not permitted until issuance of the DOT-approved Overhaul Manual. Engines may be returned to Pratt & Whitney Canada for re-manufacture to new production standard.
- NOTE 9. Service bulletins, structural repair manuals, vendor manuals, aircraft flight manuals, and overhaul and maintenance manuals, which contain a statement that the document is Transport Canada-approved, are accepted by the FAA and are considered FAA-approved unless otherwise noted. These approvals pertain to the type design only.

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