

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION TYPE CERTIFICATE DATA SHEET 1E2	TCDS NUMBER 1E2 REVISION: 7 [*] DATE: DECEMBER 8, 1994 WYTWORNIA SPRZETU KOMUNIKACYJNEGO "PZL-RZESZOW" - SPOLKA AKCYJNA MODELS: FRANKLIN 6VS-335-A, -B 6VS-335-A1, -B1 6V-335-A1A, -A1B
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Engines of models described herein conforming with this data sheet (which is part of Type Certificate Number 1E2) 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 Wytwornia Sprzetu Komunikacyjnego (WSK) "PZL-RZESZOW" - Spolka Akcyjna (SA)
 ul. Hetmanska 120
 35-078 Rzeszow
 Poland

I. MODELS	6VS-335-A, -B	6VS-335-A1, -B1	6VS-335-A1A, -A1B
TYPE	60A Vertically-Mounted Direct Drive		
RATINGS			
Maximum Continuous hp, r.p.m., in. Hg. at: Sea level pressure altitude	225-3200-35.0	225-3200-34.0	200-3100-S.L.
Power Available 15,000 ft. altitude	225-3200	--	---
Takeoff hp, r.p.m., in. Hg. at: Sea level pressure altitude	240-3200-36.5	240-3200-36.0	200-3100-S.L.
FUEL			
Minimum grade aviation gasoline	100/130	--	80/87
LUBRICATING OIL			
Engine	MIL-L-6082 GR1100	--	--
Turbo	MIL-L-6082 GR1100	--	---
COMPRESSION			
Bore and stroke, in.	4.5 x 3.5	--	--
Displacement, cu. in.	335	--	--
Compression ratio	7.0:1	--	--

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LEGEND: "--" INDICATES "SAME AS PRECEDING MODEL"
 "---" INDICATES "DOES NOT APPLY"

I. MODELS (Continued)	6VS-335-A, -B	6VS-335-A1, -B1	6V-335-A1A, -A1B
WEIGHT (DRY) (lb)	346.4	--	320.5
CENTER OF GRAVITY (in) (with all accessories) Above rear face of crankcase	6.8	--	4.6
From crankshaft C.L. toward carburetor side	2.0	--	1.2
DRIVE SHAFT END	Integral flange, eight 5/16 in. threaded holes on 3-5/16 in. circle	--	--
CARBURETION	Marvel-Schebler MA-6	--	Marvel Schebler MA4-5
IGNITION	Scintilla S6RN-23	--	--
TIMING, \emptyset BTC	30	--	--
SPARK PLUGS	See NOTE 8	--	--
OIL SUMP CAPACITY, QT.	See NOTE 6	--	--
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CERTIFICATION BASIS

CAR 13, effective June 15, 1956, as amended by 33-1 and 33-2, for Models 6VS-335-A, -B and 6V-335-A1A, -A1B.

CAR 13, effective June 15, 1956, as amended by 33-1 to 33-6, inclusive, for models 6VS-335-A1, -B1.

Type Certificate 1E2 issued/revised:

<u>Model</u>	<u>Date of Application</u>	<u>Date TC Issued/Revised</u>
6VS-335-A, -B	11/19/56	05/11/59
6V-335-A1A, -A1B	04/06/59	05/11/59
6VS-335-A1, -B1	09/18/64 (letter)	05/28/65
Reissued to PEZETEL		08/01/79
Reissued to WSK "PZL-RZESZOW"		11/05/81
Reissued to WSK "PZL-RZESZOW" SA		12/8/94

PRODUCTION BASIS

1. Production Certificate No. 9 for U.S. production. There will be no further production of engines or replacement parts under this production certificate.
2. FAR 21.500 for production of engines or replacement parts under this type certificate by WSK "PZL-RZESZOW" SA under control of the Republic of Poland General Inspectorate of Civil Aviation (GICA).

Parts produced under either production basis are eligible to be used interchangeably.

IMPORT REQUIREMENTS

To be considered for installation on United States registered aircraft, each engine (or propeller) to be exported to the United States shall be accompanied by a certificate of airworthiness for export, or certifying statement endorsed by the exporting cognizant civil airworthiness authority, which contains the following language:

- (1) This engine (or propeller) conforms to its United States type design (Type Certificate Number 1E2) and is in a condition for safe operation.
- (2) This engine (or propeller) 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 or propellers manufactured outside of the United States for which a United States 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. Maximum permissible temperatures (øF):

Cylinder head (well type thermocouple)	390	
Cylinder base		315
Oil inlet		235
Carburetor inlet air	225	

NOTE 2. Carburetor fuel pressure limits:

6VS-335-A, -B; -A1, -B1:		12-14 p.s.i.
6V-335-A1A, -A1B:		2-9 p.s.i.

Lubricating oil pressure limits:

Idle		25 p.s.i.
Normal operation		40-65 p.s.i.

NOTE 3. The following accessory drives are provided:

ACCESSORY	Rotation Facing Drive Pad**	Speed Ratio to Crankshaft*	Max. Torque (in. lb.)		Maximum Overhang in. lb.
			Cont.	Static	
Starter	CC	11.444:1	1401	300	90
Generator	CC	1.500:1	2		
Tachometer	CC	0.500:1		35	55
Fuel Pump***	CC	1.500:1	2	6	3
			5		
				600	7

* Speed - Times crankshaft r.p.m.

** "CC" - counter clockwise facing engine drive pad

*** Maximum torque permissible on either or both right angle drives are the same as listed for fuel pump.

NOTE 4. The above engines incorporate the following detailed characteristics:

<u>Model</u>	<u>Characteristics</u>
6V-335-A1A	Basic model
6V-335-A1B	Same as 6V-335-A1A, except for slight difference in carburetor location.
6VS-335-A	Same as 6V-335-A1A, except increased rating by use of turbo supercharger.
6VS-335-B	Same as 6VS-335-A, except for slight difference in carburetor location, similar to 6V-335-A1B.
6VS-335-A1, -B1	Same as 6VS-335-A, -B models, except incorporates improved turbo supercharger, AiResearch model TE-0634.

NOTE 5. The above engines have been specifically approved for helicopter installation.

NOTE 6. Oil sump capacity is 10 qt. maximum. On Bell installation the dip stick is marked for 8 qt. capacity. On Hiller installation it is marked for 10 qt.

NOTE 7. Maximum exhaust back pressure for models 6VS-335-A, -B and 6VS-335-A1, -B1: 40 in. Hg. absolute.

NOTE 8. The following spark plugs are approved on these engines:

<u>Models</u>	<u>AC</u>	<u>171</u>
6VS-335-A, -B & 6VS-335-A1, -B1	Champion REA-29N, REA-32N, REB-29N, REB-32N, REB-37N, REB-87N, REB-36W, RHB-33E, RHB-38E, RHB-32N, RHB-37N, RHB-87N, RHB-36P, RHB-36W	
6V-335-A1A, -A1B	AC	171 Champion REA-87N, REB-87N, REB-36W, RHB-87N, RHB-36P, RHB-36W

NOTE 9. The 240 hp. and 3200 r.p.m. takeoff rating is applicable to all 6VS-335-A and -B engines without modification. Nameplates may be restamped since original nameplates were marked 225 hp.

NOTE 10. Service Bulletins, structural repair manuals, vendor manuals, aircraft flight manuals, and overhaul and maintenance manuals, which contain a statement that the document is Republic of Poland General Inspectorate of Civil Aviation (GICA) approved, are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only.

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