

U.S. DEPARTMENT OF TRANSPORTATION  FEDERAL AVIATION ADMINISTRATION  TYPE CERTIFICATE DATA SHEET E5EA	TCDS NUMBER E5EA  REVISION: 5* DATE: April 30, 2013  Franklin Sp. z.o.o.  MODELS:  FRANKLIN 6AS-335-A 6AS-335-B
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Engines of models described herein conforming with this data sheet (which is part of Type Certificate Number E5EA) 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 Franklin Sp. z.o.o.  
Ul. Chelmińska 208  
86-300 Grudziądz  
Poland

TYPE CERTIFICATE (TC) HOLDER RECORD WSK-PZL-RZESZOW transferred TC E5EA to Franklin Sp. z.o.o.  
on August 17, 2006

I. MODELS	6AS-335-A	6AS-335-B	
TYPE	6HOA Horizontally-Mounted Direct Drive Turbosupercharged		
RATINGS			
Maximum Continuous hp, r.p.m., in. Hg. at: Critical pressure altitude, ft. Sea level pressure altitude	240-3200-40.0-15,000 240-3200-37.5-S.L.	240-3200-42.0-15,000 240-3200-38.0-S.L.	
Takeoff (5 min.) hp, r.p.m., in. Hg. at: Critical pressure altitude, ft. Sea level pressure altitude	260-3200-41.0-10,000 260-3200-41.0-S.L.	260-3200-43.0-10,000 --	
FUEL Minimum grade aviation gasoline	100/130	--	
LUBRICATING OIL (Engine and Turbo)	MIL-L-6082 or MIL-L-22851	--	
OIL GRADE above 40°F ambient air temp. below 40°F ambient air temp.	SAE 50 SAE 30	-- --	
COMPRESSION Bore and stroke, in. Displacement, cu. in. Compression ratio	4.5 x 3.5 335 7.0:1	-- -- --	
WEIGHT (DRY) (lb)	358	--	

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LEGEND: "--" INDICATES "SAME AS PRECEDING MODEL"

"---" INDICATES "DOES NOT APPLY"

NOTICE: ALL PAGES ARE REFORMATTED. SIGNIFICANT CHANGES, IF ANY,  
ARE BLACK-LINED IN THE LEFT MARGIN.

I. MODELS (Continued)	6AS-335-A	6AS-335-B	
CENTER OF GRAVITY (in) (with all accessories)			
Forward from rear face of crankcase	8.5	--	
Above C.L. of crankshaft	5.0	--	
DRIVE SHAFT END	SAE ARP 502, six 1/2 in. bolts on 4 in. circle	--	
CARBURETION	Marvel-Schebler MA-5	Marvel-Schebler MA6	
TURBOSUPERCHARGER	AiResearch TE 0634	--	
IGNITION	Bendix S6RN-21	--	
TIMING, øBTC	30	--	
SPARK PLUGS	Champion RHB32E or RHB32N	--	
OIL SUMP CAPACITY, QT.	8.8	--	
USEABLE OIL, QT. (starting with full tank)			
15ø nose down	6.8	--	
20ø nose up	5.8	--	
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CERTIFICATION BASIS

CAR 13, effective June 15, 1956, as amended by 13-1 to 13-5, inclusive, for 6AS-335-A engine model.

CAR 13, effective June 15, 1956, as amended by 13-1 to 13-6, inclusive, for 6AS-335-B engine model.

<u>Model</u>	<u>Date of Application</u>	<u>Date TC Issued/Revised</u>
6AS-335-A	03/15/63	04/14/64
6AS-335-B	11/30/64	02/23/65
Reissued to PEZETEL		08/01/79
Reissued to WSK "PZL-RZESZOW"		11/05/81
Reissued to WSK "PZL-RZESZOW" SA		12/8/94
Reissued to Franklin Sp. z. o. o.		April 30, 2013

The General Inspectorate of Civil Aviation of Poland originally type certificated this engine. The FAA validated this product under U.S. Type Certificate Number E5EA. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of Poland.

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 eligible for installation on U.S. registered aircraft, each new engine to be exported to the United States with the General Inspectorate of Civil Aviation of Poland or EASA airworthiness approval shall have a Joint Aviation Authorities (JAA) or EASA Form 1, Authorized Release Certificate. The JAA or EASA Form 1 should state that the engine conforms to the type design approved under the U.S. Type Certificate E5EA, is in a condition for safe operation and has undergone a final operational check.

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	390 (bayonet thermocouple)
Cylinder base	315
Oil inlet	235
Carburetor inlet air	225

NOTE 2. Fuel pressure limits:

	<u>Max</u>	<u>Min</u>
Inlet to fuel pump	14 p.s.i.	12 p.s.i.
Oil pressure limits:		
Idle	--	25 p.s.i.
Normal operation	--	55-80 p.s.i.

Exhaust back pressure limit (max.): 45 in. Hg. (measured 9 in. to rear of No. 1 cylinder)

NOTE 3. The following accessory drives are provided:

ACCESSORY	Type of Drive Pad	Rotation Facing Drive Pad	Speed Ratio to Crankshaft	Max. Torque (in. lb.)		Max. Overhang Moment (in-lb.)
				Cont.	Static	
<b>Starter</b>	Special	CC	11.44:1	140	300	90
<b>Generator</b>	Special	CC	1.50:1	25	70	75
<b>Tachometer</b>	AND 10005	CC	0.50:1	2	6	3
<b>Fuel Pump</b>	AND 10000	CC	1.50:1	5	600	7

"CC" - counter clockwise facing engine drive pad

NOTE 4. These engines are approved for helicopter application and operation in a horizontal mount installation.

NOTE 5. These engines are equipped with an AiResearch model TE0634 turbosupercharger, which meets the containment requirements of CAR 13.116 and does not require external protection. Performance data on the above engines are presented in Franklin Curve Numbers PE-4112, 4113 and 4114.

NOTE 6. Power tolerance for production engines is +4%, -3% of the nominal rating.

NOTE 7. The 6AS-335-B differs from the -A in carburetor location and induction system piping..

## NOTE 8.

## SERVICE INFORMATION:

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or, for approvals made before September 28, 2003 by the General Inspectorate of Civil Aviation of Poland. Any such documents including those approved under a delegated authority, are accepted by the FAA and are considered FAA approved.

- Service bulletins,
- Structural repair manuals,
- Vendor manuals,
- Aircraft flight manuals, and
- Overhaul and maintenance manuals.

These approvals pertain to the type design only.

---THE END---