

DEPARTMENT OF COMMERCE  
CIVIL AERONAUTICS ADMINISTRATION

E-216  
Revision 3  
RANGER  
6-440-C2 (Military L-440-1)  
6-440-C3  
6-440-C4  
6-440-C5 (Military L-440-2,3,5,7)  
June 21, 1960

AIRCRAFT ENGINE SPECIFICATION

Engines of models described herein conforming with this specification and approved data on file with the Civil Aeronautics Administration are rated as airworthy for use in certificated aircraft in accordance with pertinent aircraft specifications and the manufacturer's installations, operation, repair and overhaul instructions.

Manufacturer Ranger Aircraft Engines, Division of Fairchild Engine & Airplane Corp.  
Farmingdale, L.I., New York

Model	6-440-	C2 6LIA	C3 --	C4 --	C5 --
<b>Rating</b>					
Max. continuous, hp, rpm, at sea level pressure altitude		175-2450-S.L.	180-2450-S.L.	190-2450-S.L.	200-2450-S.L.
Take-off hp, rpm, at full throttle		175-2450	180-2450	190-2450	200-2450
Fuel (Minimum octane aviation gasoline)		65	73	80	87
Bore and stroke, inches		4.125 x 5.50	--	--	--
Displacement, cubic inches		440	--	--	--
Compression ratio		6.0:1	6.2:1	6.8:1	7.5:1
Weight (dry), lbs.		372	--	--	--
Propeller shaft, SAE No.		20	--	--	--
Carburetion		Stromberg NAR-4B carburetor, setting No. 8036	--	--	Stromberg NAR-4B carburetor, setting No. 8038, or Marvel MA4-5 carburetor, setting No. C-1417
Ignition, dual		Edison-Splitdorf Type RM, SB6RD-1 or -2 magnetos with impulse coupling (retard 45°), or Bendix Type SB6R-8, -10 or SB6RN-8, -10, magnetos			
Spark Plugs		C26, C-27, BG 417, 417S	--	--	--
Ignition timing, °BTC		22	25	--	--
NOTES		1,2,3,4,5	1,2,3,4,5	1,2,3,4,5	1,2,3,4,5
"- -"	indicates "same as preceding model".				
"—"	indicates "does not apply".				
Certification basis		Type Certificate No. 216			
Production basis		Production Certificate No. 6			

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*Reformatted 10/94*

- NOTE 1. Maximum permissible cylinder head, barrel, and oil inlet temperature, 500°F, 300°F, and 200°F. respectively.
- NOTE 2. Eligible with aluminum parts replacing all magnesium parts except crankshaft oil plugs with a weight increase of 14 lbs.
- NOTE 3. The indicated military models are identical to the pertinent commercial model and are characterized as follows:

<u>Military</u>	<u>Commercial</u>	<u>Characteristics</u>
L-440-1	6-440-C2	Stromberg Carburetor - unshielded ignition
L-440-2	6-440-C5	Stromberg Carburetor - shielded ignition
L-440-3	6-440-C5	Marvel Carburetor - unshielded ignition
L-440-5	6-440-C5	Stromberg Carburetor - shielded ignition
L-440-7	6-440-C5	Marvel Carburetor - shielded ignition

These military models are eligible for installation in certificate aircraft; however, a new nameplate should be incorporated which bears the commercial model designation and/or Type Certificate No. 216. The manufacturer will furnish the new nameplate in exchange for the old one.

- NOTE 4. The following accessories are eligible at the indicated weight increases:

<u>Accessory</u>	<u>Model</u>	<u>Weight</u>
Starters	(Hand) Eclipse Type 393, Model 4	12
	(Electric) Eclipse Type 396 or 397, Model Y-150	18
Generators	Ranger (Electric Specialties Co.) NA-1	18
	Champion Aviation Products W-128	9
	Eclipse Type 309	22
Regulators	Delco Remy No. 116254	5
	Eclipse Type 320, Model 1 or 2	4
Fuel Pumps	Romeo RB-4360	2
	Pesco 227-D or DA	2
Hydraulic Pump	Pesco IP-203-RA or IP-204-LC	4
Vacuum Pumps	Pesco 3P-207-D	5
	Eclipse Type B2A, Model 548-3A	4
	Romeo Type B2A, Model R-D-2112	4
Wood Propeller Hub	Warner Part No. 8599	11

- NOTE 5. The following accessory drive provisions are available:

<u>Drive</u>	Direction of Rotation Facing	Drive Ratio	Maximum Torque Inch - Pounds		Maximum Overhang Moment
			<u>Continuous</u>	<u>Static</u>	<u>Inch - Pounds</u>
Starter	Clockwise	1:1	—	7600	85.0
Generator	Clockwise	1.5:1	268	2400	145.0
Fuel Pump	Clockwise	0.5:1	270	1840	2.0
Hydraulic Pump	Clockwise	1.5:1	400	—	12.0
Vacuum Pump	Clockwise	1.5:1	123	517	15.0
Tachometer	Clockwise	0.5:1	—	—	—

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