



Certification basis:

<u>Regulations &amp; Amendments</u>	<u>Model</u>	<u>Date of Application</u>	<u>Date Type Certificate No. 1E11 Issued/Revised</u>
Car 13 Effective June 15, 1956	IGO-540-B1A	July 5, 1960	October 28, 1960
As Amended by 13-1, 13-2	IGO-540-A1A	June 2, 1961	August 22, 1961
13-3	IGO-540-A1B	July 10, 1961	August 22, 1961
	IGO-540-B1B	July 10, 1961	August 22, 1961
13-4	IGO-540-B1C	April 18, 1963	May 20, 1963
	IGO-540-A1C	February 18, 1972	March 14, 1972

Production basis: Production Certificate No. 3

NOTE 1. Maximum permissible temperature:

Cylinder Head <u>(Well type thermocouple)</u> 475°F (500°F for -A1C model)	Cylinder <u>base</u> (NOTE 8)	Oil <u>Inlet</u> 235°F
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NOTE 2. Fuel pressure limits:

	<u>Min.</u>	<u>Max.</u>	<u>Idle (min.)</u>	<u>Injector in Idle cutoff</u>
Inlet to injector (except -A1C model)	20 p.s.i.	26 p.s.i.	—	—
-A1C	25 p.s.i.	40 p.s.i.	12 p.s.i.	55 p.s.i. (max.)
Oil pressure limits: (Normal operation)	65 p.s.i.	85 p.s.i.		
(Idling)	25 p.s.i.			

NOTE 3. The following accessory drives are provided:

Accessory	-A1A, -A1B -B1A, -B1B, -B1C		A1C	Rotation Pacing Drive Pad	Speed Ratio to Crankshaft	Maximum Torque (in. - lb.)		Max. Overhang Moment (in. - lb.)
						Cont.	Static	
Starter	*	*		C	1.000:1	—	12,000	300
Generator	*	—		C	2.600:1	500	2,200	400
Alternator	—	*		C	2.600:1	500	2,200	400
Vacuum Pump	*	*		C	1.083:1	200	800	25
Hydraulic Pump	*	*		C	1.083:1	400	1,650	175
Tachometer	*	*		CC	.500:1	7	50	—
Propeller Governor	*	—		C	.779:1	125	1,200	25
Fuel Pump	*	*		C	1.000:1	25	450	25

\* Standard

\*\* Optional

"C" Clockwise

"CC" Counter Clockwise

NOTE 4. The following spark plugs are approved.

AC SR83P, SR83IR, HSR83P, HSR83IR, HSR86L, HSR87LI, HSR87LP, SR93, HSR93,  
171, 181, 271, 273, 281, 281IR, 283, 291, 293

BG RB39R, RB485S, RB955S

Champion REB36W, RHB36P, RHB36W, REB37N, REB37E, RHB37E, RHB37N, REM38E,  
REM38P, REM38W, RHM38E, RHM38P, RHM38W

Autolite SH26, SH260, PL-300, PL-350

Lodge HS35-4R, RSE23-ER, RSH23-3R, RS35-8R, RSE-35-8R

NOTE 5. This engine incorporates provisions for absorbing propeller thrust in both tractor and pusher type installations.

NOTE 6. These engines incorporate the following additional characteristics:

IGO-540 Models

- A1A Basis model.
- A1B Similar to -A1A except incorporates low tension ignition system.
- A1C Similar to -A1A except for fuel injector, magnetos, fuel pump, and alternator.
- B1A Similar to -A1A except has exhaust ports on the top side of the cylinders and updraft cooling provisions.
- B1B Similar to -B1A except incorporates low tension ignition system.
- B1C Similar to -B1A except does not have servo-bleed in Bendix Injector servo-vent line and requires external servo-fuel restrictor in servo-vent line of aircraft fuel system.

NOTE 7.	<u>IGO-540 Models</u>	<u>Weight (dry lb.)</u>	<u>Fuel Injection</u>	<u>Ignition, dual</u>
	-A1A	506	Bendix RS10ED1	Bendix S6RN-204, S6RN-200
	-A1B	517	Bendix RS10ED1	Bendix S6RN-604, S6RN-600
	-A1C	509	Bendix RSA10DB1	Bendix S6RN-1208, S6RN-1209
	-B1A	500	Bendix RS10ED2	Bendix S6RN-204, S6RN-200
	-B1B	511	Bendix RS10ED2	Bendix S6RN-604, S6RN-600
	-B1C	500	Bendix RS10ED2	Bendix S6RN-204, S6RN-200

NOTE 8. Cylinder base temperature limits are not applicable to engine models which incorporate internal piston cooling oil jets.

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