DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

E-275
Revision 11
Lycoming Engines
GO-480, GO-480-A1A, -B, -B1, -B1A6, -B1B, -B1C, -B1D, -C1B6, -C1D6, -C2C6, -C2D6, -C2E6, -C3A6, -D1A, -E1A6, -F6, -F1A6, -F2A6, -F2D6, -F3A6, -F3B6, -F4A6, -F4B6, -G1A6, -G1B6, -G1D6, -G1H6, -G1J6, -G2D6, -G2F6
IGO-480-A1A6, -A1B6

June 23, 2010

TYPE CERTIFICATE DATA SHEET NO. E-275

Engines of models described herein conforming with this data sheet (which is a part of type certificate No. 275) 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 Civil Air Regulations/Federal Aviation Regulations provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other approved instructions.

Type Certificate Holder	Lycoming Engines An Operating Division of AVCO Corporation Williamsport, Pennsylvania 17701
Type Certificate Holder Record	Avco Lycoming Div., Avco Corporation transferred TC 275 to Lycoming Engines, An Operating Division of AVCO Corporation on June 23, 2010

Model Lycoming	GO-480-A1A	GO-480-B, -B1A6, -B1B, -B1C, -B1D	GO-480-D1A, -E1A6, -F6, -F1A6, -F2A6, -F2D6, -F3A6, -F3B6, -F4A6, -F4B6	GO-480-C1B6, -C1D6, -C2C6, -C2D6, -C2E6, -G1A6, -G1B6, -G1D6, -G1H6, -G1J6, -G2D6, -G2F6, IGO-480-A1A6, -A1B6	GO-480-C3A6
Type	6H0A	- -	- -	- -	- -
Reduction gear ratio	77:120	- -	77:120 (16:25-E1A6)	77:120	16:25
Rating					
Maximum continuous, hp., r.p.m, full throttle, at					
Sea level pressure altitude	260-3000	- -	260-3000 or 265-3100	280-3000 or 285-3100	- - - -
Takeoff (5 min.), hp., r.p.m., full throttle, at:					
Sea level pressure altitude	260-3400	270-3400	275-3400	295-3400	- -
Fuel (Minimum grade aviation gasoline)	80/87	- -	- -	100/130	- -
Lubricating oil (lubricants should conform to the specifications as listed or to subsequent revision thereto.)	Lycoming Spec. No. 301-G*	- -	- -	- -	- -
Bore and stroke. in.	5.125 X 3.875	- -	- -	- -	- -
Displacement, cu. in.	479.7	- -	- -	- -	- -
Compression ratio	7.3:1	- -	- -	8.7:1	- -
Weight (dry)	See NOTE 4	- -	- -	- -	- -
C.G. location (dry)	See NOTE 5	- -	- -	- -	- -

* See latest edition of Lycoming Service Instruction 1014

Model Lycoming (cont'd)	GO-480-A1A	GO-480-B, -B1A6, -B1B, -B1C, -B1D	GO-480-D1A, -E1A6, -F6, -F1A6, -F2A6, -F2D6, -F3A6, -F3B6, -F4A6, -F4B6	GO-480-C1B6, -C1D6, -C2C6, -C2D6, -C2E6, -G1A6, -G1B6, -G1D6, -G1H6, -G1J6, -G2D6, -G2F6, IGO-480-A1A6, -A1B6	GO-480-C3A6
Propeller shaft	See NOTE 4	- -	- -	- -	- -
Crankshaft dampers (Torsional)	See NOTE 6	- -	- -	- -	- -
Carburetion	See NOTE 4	- -	- -	- -	- -
Ignition, dual	See NOTE 4	- -	- -	- -	- -
Ignition timing, °BTC	25	- -	- -	- -	- -
Spark plugs	See NOTE 9	- -	- -	- -	- -
Oil sump capacity, qt.	12	- -	12 except -D1A which has dry sump	12 except GO-480 -C1B6, -G1B6 have dry sump	12
Usable oil, qt.	9.25	- -	- -	- -	- -
NOTES	1,2,3,4,5,6,7,8,9	- -	- -	- -	- -

"- -" indicates "same as preceding model"
"—" indicates "does not apply"

Certification basis:

Regulations and Amendments	Model	Date of Application	Date Type Certificate No. E-275 Issued/Revised
CAR 13 Effective March 5, 1952	GO-480	October 8, 1953	April 21, 1954
As Amended By 13-1	GO-480-B	March 16, 1954	April 21, 1954
13-2	GO-480-F6	June 17, 1954	September 17, 1954
	GO-480-B1	August 31, 1954	October 4, 1954
	Redesignations:		
	GO-480- to GO-480-A1A		October 29, 1954
	GO-480-B1 to GO-480-B1B		October 29, 1954
	GO-480-E1A6	October 21, 1954	December 9, 1954
	GO-480-D1A	November 24, 1954	December 30, 1954
	GO-480-B1C	January 11, 1955	February 8, 1955
	GO-480-C2C6	June 8, 1955	August 26, 1955
	GO-480-C3A6	July 25, 1955	November 29, 1955
	GO-480-C1B6	August 5, 1955	August 26, 1955
	GO-480-C1D6, -C2D6	February 7, 1956	February 28, 1956
	GO-480-F1A6	March 5, 1956	April 5, 1956
	GO-480-B1A6	May 7, 1956	May 10, 1956
CAR 13 Effective June 15, 1956	GO-480-B1D	June 29, 1956	July 5, 1956
	GO-480-C2E6	October 15, 1956	October 19, 1956
	GO-480-F2A6	November 19, 1956	November 23, 1956
	GO-480-F3A6, -F3B6	December 31, 1956	February 25, 1957
	GO-480-F4A6, -F4B6	February 4, 1957	February 25, 1957
	GO-480-G1B6, -G2D6	July 2, 1957	August 15, 1957
As Amended by 13-1	GO-480-G1A6, G1D6	March 19, 1958	April 1, 1958
13-2 and 13-3	GO-480-G2F6	July 11, 1960	August 25, 1960
13-4	GO-480-G1H6	January 18, 1963	January 24, 1963
	GO-480-F2D6	August 17, 1964	September 16, 1964
FAR 33, 33-1, 33-2	GO-480-G1J6	January 6, 1967	January 23, 1967
	IGO-480-A1A6	August 27, 1968	September 9, 1968
	IGO-480-A1B6	May 25, 1973	June 6, 1973

Production basis: Production Certificate No. 3

NOTE 1. Maximum permissible temperatures are as follows:

Cylinder head	475°F (Well-type thermo.), 500°F for IGO-480-A1B6
Cylinder barrel *	325°F (350°F for -C1B6, -C1D6, -C2C6, -C2D6, -C2E6, -C3A6, -F3A6, -F3B6, -G1A6, -G1B6, -G1D6, -G1J6, -G1H6, -G2D6, and -G2F6)
Oil inlet	225°F (235°F for -F2D6, G series and IGO-480 series only)

* This parameter dispensed with where pistons internally oil squirt cooled. See NOTE 4.

NOTE 2. Fuel pressure limits:

(above carburetor entrance pressure)		Maximum	Minimum	Idle	Maximum with Injector in Idle cut off
GO-480	at inlet to carburetor	15 p.s.i.	9 p.s.i.		
IGO-480-A1A6	at inlet to injector	45 p.s.i.	16 p.s.i.		
IGO-480-A1B6	at inlet to injectors	45 p.s.i.	16 p.s.i.	12 p.s.i.	—
	at inlet to fuel pump	45 p.s.i.	-4 p.s.i.	—	55 p.s.i.

Oil pressure limits:

Normal Operations	85 p.s.i.	65 p.s.i.	25 p.s.i.	

NOTE 3. The following accessory drive provisions are available:

Engine Model / Accessory Drive	A1A, B	C1B6, D1A, G1B6	B1C, E1A6	B1B, B1D, C2C6, C3A6, C1D6, C2D6, F Series G1D6, G2D6, G2F6	C2E6	Speed Ratio to Crankshaft	Rotation Facing Drive Pad	Maximum Torque in. -lb. Cont	Maximum Torque in. -lb. Static	Maximum Overhang Moment in. - lb.
Tachometer	—	—	—	—	—	.500:1	CC	7	50	—
Starter	—	*	—	—	—	1.000:1	C	—	12,000	300
Starter	*	—	*	*	*	1.000:1	C	—	3,000	80
Generator	—	*	—	—	—	2.600:1	C	500	2,200	400
Generator	—	—	—	*	*	1.250:1	C	175	1,800	200
Generator	—	—	—	—	—	1.250:1	C	175	500	200
Generator	*	—	—	—	—	2.577:1	C	90	900	200
Generator	—	—	*	—	*	2.569:1	C	90	900	200
Alternator	—	—	—	—	—	2.577:1	C	90	900	200
Fuel Pump	*	—	*	*	*	1.000:1	C	50	450	10
Fuel Pump	—	*	—	—	—	.803:1	CC	25	450	25
Tachometer	*	—	*	—	—	.500:1	C	7	50	5
Tachometer	—	*	—	*	*	.500:1	CC	7	50	5
Vacuum Pump	*	—	*	*	*	1.333:1	C	100	800	25
Vacuum Pump	—	*	—	—	—	1.219:1	C	200	800	25
Hydraulic Pump	(B1A6)	—	*	—	*	1.250:1	C	100	800	25
Hydraulic Pump	—	*	—	—	—	1.083:1	C	400	1,650	175
Propeller Governor	*	*	*	*	*	.801:1	C	125	825	25
Dual Drive Generator	—	—	—	—	—	2.569:1	C	90	900	200
Hydraulic Pump	—	—	—	—	—	1.250:1	C	100	800	25
Tachometer	—	—	—	—	—	.500:1	CC	7	50	—

"C" - Clockwise
"CC" - Counter-Clockwise
* Standard ** Optional

Engine Model

Accessory Drive	F2D6	G1A6 G1J6	G1H6	IGO-480 A1A6	IGO-480 A1B6	Speed Ratio to Crankshaft	Rotation Facing Drive Pad	Maximum Torque in. -lb. Cont	Maximum Torque in. -lb. Static	Maximum Overhang Moment in. - lb.
Tachometer	**	—	**	—	—	.500:1	CC	7	50	—
Starter	—	—	—	—	—	1.000:1	C	—	12,000	300
Starter	*	*	*	*	*	1.000:1	C	—	3,000	80
Generator	—	—	—	—	—	2.600:1	C	500	2,200	400
Generator	—	—	—	—	—	1.250:1	C	175	1,800	200
Generator	*	—	—	—	—	1.250:1	C	175	500	200
Generator	—	*	—	*	—	2.577:1	C	90	900	200
Generator	—	—	—	—	—	2.569:1	C	90	900	200
Alternator	—	—	—	—	*	2.577:1	C	90	900	200
Fuel Pump	*	*	*	*	*	1.000:1	C	50	450	10
Fuel Pump	—	—	—	—	—	.803:1	CC	25	450	25
Tachometer	*	*	*	*	*	.500:1	C	7	50	5
Tachometer	—	**	—	—	—	.500:1	CC	7	50	5
Vacuum Pump	*	*	*	*	*	1.333:1	C	100	800	25
Vacuum Pump	—	—	—	—	—	1.219:1	C	200	800	25
Hydraulic Pump	—	—	—	—	—	1.250:1	C	100	800	25
Hydraulic Pump	—	—	—	—	—	1.083:1	C	400	1,650	175
Propeller Governor	*	*	*	*	*	.801:1	C	125	825	25
Dual Drive Generator	—	—	*	—	—	2.569:1	C	90	900	200
Hydraulic Pump	—	—	*	—	—	1.250:1	C	100	800	25
Tachometer	—	—	—	**	**	.500:1	CC	7	50	—

"C" - Clockwise
"CC" - Counter-Clockwise
* Standard
** Optional

NOTE 4. The above models incorporate additional characteristics as follows:

Models	Wt. Dry, lbs.	Carburetor*	Ignition-dual+	
GO-480, & B1				Designations changed to GO-480-A1A and -B1B respectively.
GO-480-A1A	432	PS-7BD	S6LN-20, -21 (S6LN-50, -51)	Basic model - six-cyl., horizontally-opposed, air cooled reduction gear drive with SAE 20 spline propeller shaft.
GO-480-B	432	PS-5BD	S6LN-20, S6LN-21	Same as -A1A except for (1.63 venturi) carburetor and different magnetos.
GO-480-B1A6	432	PS-5BD	S6LN-20, S6LN-21	Same as -B except has one 6th and five 3rd order counterweights.
GO-480-B1B	438	PS-5BD	S6LN-50, S6LN-51	Same as -B excepting magnetos and has 1.250:1 generator drive.
GO-480-B1C	435	PS-5BD	S6LN-20, S6LN-21	Same as -B except has dual generator and vacuum pump drive.
GO-480-B1D	432	PS-5BD	S6LN-20, S6LN-21	Same as -B1B excepting magnetos.

+TCM formerly Bendix
*PAC formerly Bendix

Models	Wt. Dry, lbs.	Carburetor*	Ignition-dual+	
GO-480-C1B6	464	PS-5BD	S6LN-20, S6RN-21	Same as -A1A except has high compression ratio, pwr. increase, dry sump, crosswise accessories and different carburetor.
GO-480-C1D6	438	PS-5BD	S6LN-20, S6LN-21	Same as -B1D except has high compression ratio and 1.75 venturi carburetor.
GO-480-C2C6	448	PS-5BD	S6LN-50, S6LN-51	Similar to -C1B6 has high compression ratio, pwr. increase, wet sump, flanged type propeller shaft, 4-7/8" OD with 4" dia. bolt circle.
GO-480-C2D6	442	PS-5BD	S6LN-20, S6LN-21	Same as -C2C6 except for magnetos.
GO-480-C2E6	437	PS-5BD	S6LN-20, S6LN-21	Same as -C2D6 except has provisions for high speed generator drive.
GO-480-C3A6	432	PS-7BD	S6LN-20, -21 (S6LN-50, -51)	Same as -A1A except has high compression ratio, pwr. increase, wet sump and integral type reduction gear.
GO-480-D1A	454	PS-5BD	S6LN-20, S6RN-21	Same as -B except has dry sump, crosswise accessories and increased ratings (1.75 venturi).
GO-480-E1A6	458	PS-5BD	S6LN-20, S6LN-21	Same as -B1C except has integral type reduction gear and increased rating.
GO-480-F6	442	PS-5BD	S6LN-50, S6LN-51	Similar to -B1B except has flange type propeller shaft 4-7/8", OD with 4" dia. bolt circle and increased ratings (1.75 venturi).
GO-480-F1A6	436	PS-5BD	S6LN-20, S6LN-21	Same as -F6 except for magnetos.
GO-480-F2A6	436	PS-5BD	S6LN-20, S6LN-21	Same as -F1A6 except has 20 spline propeller shaft with single acting oil supply system.
GO-480-F2D6	439	PS-5BD	S6LN-20, S6LN-21	Similar to -G1D6 except has cylinder head assemblies incorporating Ni-Resist valve guides, inconel exhaust valves and provisions for long reach spark plugs and 7.3:1 compression pistons. Has 1.75 in. venturi and 20 spline propeller shaft.
GO-480-F3A6	441	PS-5BD	S6LN-20, S6LN-21	Same as -C2D6 except has low compression ratio and reduced ratings.
GO-480-F3B6	447	PS-5BD	S6LN-50, S6LN-51	Same as -C2C6 except has low compression ratio and reduced ratings.
GO-480-F4A6	436	PS-5BD	S6LN-20, S6LN-21	Same as -F1A6 except has provisions for single propeller oil supply.
GO-480-F4B6	442	PS-5BD	S6LN-50, S6LN-51	Same as -F6 except has provisions for single propeller oil supply.

+TCM formerly Bendix
*PAC formerly Bendix

Models	Wt. Dry, lbs.	Carburetor*	Ignition-dual+	
GO-480-G1A6	446	PS-5BD	S6LN-20, S6LN-21	Same as -C1D6 except accessory section similar to -B1A6 with high speed generator drive and piston cooling oil jets.
GO-480-G1B6	464	PS-5BD	S6LN-20, S6RN-21	Same as -C1B6 except incorporates piston cooling oil jets.
GO-480-G1D6	444	PS-5BD	S6LN-20, S6LN-21	Same as -C1D6 except incorporates piston cooling oil jets.
GO-480-G1H6	442	PS-5BD	S6LN-20, S6LN-21	Similar to -G1D6 except has dual hydraulic pump high speed angle generator drive.
GO-480-G1J6	448	PS-5BD	S6LN-1209, S6LN-1227	Same as -G1A6 for incorporation of TCM+ 1200 series magnetos.
GO-480-G2D6	442	PS-5BD	S6LN-20, S6LN-21	Same as -C2D6 except incorporates piston cooling jets.
GO-480-G2F6	442	PS-5BD	S6LN-204, S6LN-200	Same as -G2D6 excepting TCM+ 200 series magnetos.
IGO-480-A1A6	455	RSA-5AD1 (Fuel injector)	S6LN-1209, S6LN-1227	Same as GO-480-G1J6 except incorporates PAC* fuel injector.
IGO-480-A1B6	457	RSA-5AD1 (Fuel injector)	S6LN-30, S6LN-21	Same as IGO-480-A1A6 except magnetos are equipped with an alternator.

+TCM formerly Bendix
*PAC formerly Bendix

NOTE 5. Center of Gravity Location (dry)

	GO-480 Models						
	-A1A, -B1D, -G1A6, -G1J6	-B, -B1A6	-B1B	-B1C	-C1B6, -D1A, -G1B6	-C3A6, -E1A6	-F6, -C2C6, -F4B6, -F3B6
From front face of thrust nut (in.)	19.43	19.37	19.58	19.56	20.33	20.21	21.02
From propeller shaft C.L. (in.)	.50 below .05 left	.27 below .16 right	.47 below .05 left	.18 below .18 right	.39 above .24 left	.73 below .08 left	.50 below .05 left

	GO-480 Models						
	-F2A6, -F1A6, -F4A6	-C1D6	-G1H6	-C2D6, -F3A6, -C2E6, -G2D6, -G2F6	-F2D6, -G1D6	IGO-480 -A1A6	Models -A1B6
From front face of thrust nut (in.)	20.87	19.37	19.86	20.87	19.38	19.34	19.93
From propeller shaft C.L. (in.)	.50 below .05 left	.49 below .05 right	.41 below .03 left	.53 below .05 right	.49 above .05 left	.46 below .04 left	.03 below .16 left

NOTE 6. The figure "6" in the model designation indicates that the engine incorporates five 3rd order and one 6th order torsional dampers. Engines not so designated have six 3rd order torsional vibration dampers.

NOTE 7. These engines incorporate provisions for absorbing propeller thrust in both tractor and pusher type installations.

NOTE 8. Engine Models GO-480-F1A6 or -F6 can be converted to Models GO-480-F4A6 or -F4B6 respectively, by field conversion using Lycoming Kit No. 71619.

NOTE 9. Spark plugs: See latest revision of Lycoming Service Instruction No. 1042 for approved equipment.

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