

LYCOMING OPERATOR'S MANUAL

SECTION 2 SPECIFICATIONS

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♦ - For information pertaining to engine model (L)IO-360-M1A, refer to Operation and Installation Manual P/N 60297-36.

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SECTION 2

SPECIFICATIONS

O-360-A, -C, -F Series*

FAA Type Certificate	286
Rated horsepower.....	180
Rated speed, RPM.....	2700
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.5:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1-1
Propeller driven rotation (viewed from rear).....	Clockwise

* - O-360-C2D only. Take-off rating 180 HP @ 2900 RPM and 28 in. hg.

O-360-B, -D Series

FAA Type Certificate	286
Rated horsepower.....	168
Rated speed, RPM.....	2700
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	7.2:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

O-360-J2A

FAA Type Certificate	286
Rated horsepower.....	145
Rated speed, RPM.....	2400 thru 2700
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.5:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

**SECTION 2
SPECIFICATIONS**

**LYCOMING OPERATOR'S MANUAL
O-360 AND ASSOCIATED MODELS**

SPECIFICATIONS (CONT.)

HO-360-A, -C

FAA Type Certificate	286
Rated horsepower.....	180
Rated speed, RPM.....	2700
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.5:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

HO-360-B Series

FAA Type Certificate	286
Rated horsepower.....	180
Rated speed, RPM.....	2900
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.5:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

IO-360-L2A*

FAA Type Certificate	1E10
Rated horsepower.....	160
Rated speed, RPM.....	2400
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.5:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

* - This engine has an alternate rating of 180 HP at 2700 RPM.

SPECIFICATIONS (CONT.)

IO-360-B1G6, ♦. -M1B*

FAA Type Certificate	1E10
Rated horsepower.....	180
Rated speed, RPM.....	2700
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.5:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

♦ - For information pertaining to engine model (L)IO-360-M1A, refer to Operation and Installation Manual P/N 60297-36.

* - This engine has an alternate rating of 160 HP at 2400 RPM.

IO-360-A, -C, -D, -J, -K Series

FAA Type Certificate	1E10
Rated horsepower.....	200
Rated speed, RPM.....	2700
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.7:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25**
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

NOTE**

On the following model engines, the magneto spark occurs at 20° BTC. Consult nameplate before timing magnetos.

Models	Serial No.
IO-360-A Series (Except -A1B6D)	L-14436-51 and up
IO-360-C, -D Series (Except -C1C, -C1F, -C1C6, -C1D6)	L-14436-51 and up
IO-360-C1C, -C1F	L-13150-51 and up
IO-360-C1D6	L-14446-51 and up
LIO-360-C1E6	L-1064-67 and up
AIO-360-A1A, -A1B, -B1B	L-220-63 and up
HIO-360-C1A, -C1B	L-14436-51 and up
IO-360-C1C6	All Engines
IO-360-C1G6	All Engines
IO-360-J1AD, -K2A	All Engines

**SECTION 2
SPECIFICATIONS**

**LYCOMING OPERATOR'S MANUAL
O-360 AND ASSOCIATED MODELS**

SPECIFICATIONS (CONT.)

IO-360-B, -E, -F Series*

FAA Type Certificate	1E10
Rated horsepower.....	180
Rated speed, RPM.....	2700
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.5:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

* - IO-360-B1C only is rated at 177 HP.

AIO-360-A, -B Series

FAA Type Certificate	1E10
Rated horsepower.....	200
Rated speed, RPM.....	2700
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.7:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25**
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

** - See Note Page 2-3.

HIO-360-A, -B Series

FAA Type Certificate	1E10
Rated horsepower.....	180*
Rated speed, RPM.....	2900
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio, -A series.....	8.7:1
Compression ratio, -B series.....	8.5:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

* - HIO-360-A has a rating of 180 HP at 26.1 Hg. manifold at standard sea level conditions to 3900 feet standard altitude with 25 in. Hg. manifold pressure.

SPECIFICATIONS (CONT.)

HIO-360-C Series

FAA Type Certificate	1E10
Rated horsepower.....	205
Rated speed, RPM.....	2900
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.7:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25**
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

** - See Note Page 2-3.

HIO-360-D Series

FAA Type Certificate	1E10
Rated horsepower.....	190
Rated speed, RPM.....	3200
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	10.0:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	20
Valve rocker clearance (hydraulic tappets collapsed)	*.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

* - Consult Service Bulletin No. 402 for valve rocker clearance of HIO-360-D1A.

HIO-360-E Series*

FAA Type Certificate	1E10
Rated horsepower.....	190
Rated speed, RPM.....	2900
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.1:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	20
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

* - HIO-360-E has a rating of 205 HP at 2900 RPM and 36.5 in. Hg. manifold pressure when equipped with turbocharger kit SK-28-121000 or equivalent.

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SPECIFICATIONS (CONT.)

HIO-360-F1AD Series

FAA Type Certificate	1E10
Rated horsepower.....	190
Rated speed, RPM.....	3050
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.0:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	20
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

HIO-360-G1A

FAA Type Certificate	1E10
Rated horsepower.....	180
Rated speed, RPM.....	2700
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	8.5:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	25
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller drive rotation (viewed from rear).....	Clockwise

TIO-360-A Series

FAA Type Certificate	E16EA
Rated horsepower.....	200
Rated speed, RPM.....	2575
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	7.3:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	20
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

TIO-360-C Series

FAA Type Certificate	E16EA
Rated horsepower.....	210
Rated speed, RPM.....	2575
Bore, inches.....	5.125
Stroke, inches.....	4.375
Displacement, cubic inches.....	361.0
Compression ratio	7.3:1
Firing order	1-3-2-4
Spark occurs, degrees BTC.....	20
Valve rocker clearance (hydraulic tappets collapsed) .....	.028-.080
Propeller drive ratio	1:1
Propeller driven rotation (viewed from rear).....	Clockwise

*Accessory Drive	Drive Ratio	**Direction of Rotation
Starter	16.556:1	Counterclockwise
Generator	1.910:1	Clockwise
Generator	2.500:1	Clockwise
Alternator***	3.20:1	Clockwise
Tachometer	0.500:1	Clockwise
Magneto	1.000:1	Clockwise
Vacuum Pump	1.300:1	Counterclockwise
Propeller Governor (Rear Mounted)	0.866:1	Clockwise
Propeller Governor (Front Mounted)	0.895:1	Clockwise
Fuel Pump AN20010	0.866:1	Counterclockwise
Fuel Pump AN20003†	1.000:1	Counterclockwise
Fuel Pump – Plunger Operated Dual Drives	0.500:1	
Vacuum – Hydraulic Pump	1.300:1	Counterclockwise
Vacuum – Prop. Governor	1.300:1	Counterclockwise

* - When applicable.

** - Viewed facing drive pad.

*** - HIO-360-D1A – Alternator drive is 2.50:1.

† - TIO-360-C1A6D, HIO-360-E, -F have clockwise fuel pump drive.

NOTE

Engines with letter “L” in prefix will have opposite rotation to the above.

DETAIL WEIGHTS

1. ENGINE, STANDARD, DRY WEIGHT.

Includes carburetor or fuel injector, magnetos, spark plugs, ignition harness, intercylinder baffles, tachometer drive, starter and generator or alternator drive, starter and generator or alternator with mounting bracket. Turbocharged models include turbocharger, mounting bracket, exhaust manifold, controls, oil lines and baffles.

DETAIL WEIGHTS (CONT.)

Model	Lbs.
<u>O-360 Series</u>	
-C4P*	275
-D2A	282
-B2A, -B2C	284
-C1E, -C2E	285
-A1AD, -A3AD, -C1F, -C2D	288
-A1C, -A1D, -A2D, -A3D, -C2B, -C2C, -J2A	289
-A1A, -A2A, -A3A, -A1LD, -C1A, -C2A	290
-A2F	291
-A1P, -C1G	292
-A1G, -A2G	293
-A1H	294
-A4M, -A4P, -A1F6D, -C4F	295
-A4K, -A4N, -A5AD	296
-A4D, -A1G6D	297
-A4A, -A1F6, -A1H6	298
-A4J, -A1G6, -F1A6	300
-A4G	301
-G1A6	303
* - Weight does not include alternator.	
<u>HO-360 Series</u>	
-A1A	285
-B1A, -B1B, -C1A	288
<u>IO-360 Series</u>	
-L2A	278
-B1C	289
-B1A	295
-B1E	296
-B1D	297
-B1B	299
◆, -M1B	300
-B1F, -B2F	301
-B1G6	305
-B4A	307
-B2F6	308
-K2A	311
-A1D6D, -A3D6D, -C1A	319
-C1B	320
-C1C, -D1A	322
-J1AD	323
◆ - For information pertaining to engine model (L)IO-360-M1A, refer to Operation and Installation Manual P/N 60297-36.	

DETAIL WEIGHTS (CONT.)

Model	Lbs.
<u>IO-360 Series (Cont.)</u>	
-A1A, -A2A, -C1F, -C1G6	324
-A1C, -A2A, -A1D	325
-A1B, -A2B.....	326
-C1D6.....	328
-C1C6.....	329
-A1B6D, -A3B6D, -J1A6D	330
-A1B6, -A3B6.....	333
-A1D6	335
-C1E6.....	337
<u>AIO-360 Series</u>	
-A1A, -A2A	331
-A1B, -A2B, -B1B	332
<u>HIO-360 Series</u>	
-G1A	283
-B1A, -B1B	290
-A1A	311
-A1B.....	312
-D1A, -E1AD, -E1BD.....	321
-C1A.....	322
-C1B.....	323
-F1AD	324
<u>TIO-360 Series</u>	
-C1A6D.....	379
-A1A, -A1B.....	386
-A3B6.....	407

DIMENSIONS, INCHES

MODEL	HEIGHT	WIDTH	LENGTH
<u>O-360 Series</u>			
-A1A, -A1P, -A2A	24.59	33.37	29.56
-A1C	19.68	33.37	30.67
-A1D, -A2D	24.59	33.37	29.81
-A1F, -A2F	24.59	33.37	30.70
-A1F6	24.59	33.37	30.70
-A1G, -A2G	19.22	33.37	31.82
-A1H, -A2H	19.22	33.37	31.82

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DIMENSIONS, INCHES (CONT.)

MODEL	HEIGHT	WIDTH	LENGTH
<u>O-360 Series (Cont.)</u>			
-A1H6	19.33	33.38	31.81
-A3A, -A4A, -A4M, -A4P	24.59	33.37	29.56
-A3D, -A4D, -A2E	24.59	33.37	29.81
-A4G, -A4J, -A4K	19.22	33.37	31.82
-A1G6, -A1G6D, -C1F, -C4F	19.22	33.37	31.82
-A4N	24.59	33.37	29.05
-A1AD, -A3AD, -A5AD	24.59	33.37	31.33
-A1A5D, -A1F6D, -A1LD	24.59	33.37	31.33
-B1A, -B2A, -B2C	24.68	33.37	29.56
-B1B, -B2B	24.68	33.37	29.81
-C1A, -C2A	24.72	33.37	29.56
-C1C, -C2C, -C4P	24.59	33.37	29.81
-C1E, -C2E	24.59	33.37	29.05
-C2B, -C2D	19.68	33.37	30.67
-C1G, -D1A, -D2A	24.59	33.37	29.56
-D2B	24.59	33.37	29.81
-J2A	22.99	32.24	29.81
-F1A6	19.96	33.38	31.81
-G1A6	19.96	33.37	31.83
<u>HO-360 Series</u>			
-A1A	24.59	33.37	29.81
-B1A, -B1B	19.68	33.37	30.67
-C1A	19.22	33.37	31.82
<u>IO-360 Series</u>			
-A1A, -A2A, -A1D	19.35	34.25	29.81
-A1B, -A2B	19.35	34.25	30.70
-A1B6, -A3B6	19.35	34.25	30.70
-A1C, -A2C	19.35	34.25	29.30
-A1D6	19.35	34.25	30.70
-A1B6D, -A3B6D, -J1AD	19.35	34.25	31.33
-A1D6D, -A3D6D	19.35	34.25	31.33
-B1A	22.47	33.37	32.81
-B1B, -B1D, -L2A	24.84	33.37	29.81
-B1C	20.70	33.37	30.68
-B1E	20.70	33.37	32.09
-B1F, -B2F, -B2F6	24.84	33.37	30.70
-B4A	24.84	33.37	29.56
-C1A, -C1B	19.48	34.25	31.14
-C1C, -C1C6	19.48	34.25	33.65
-C1E6, -C1F	19.48	34.25	33.65

DIMENSIONS, INCHES (CONT.)

MODEL	HEIGHT	WIDTH	LENGTH
<u>IO-360 Series (Cont.)</u>			
-D1A, -C1D6, -C1G6	19.48	34.25	31.14
-E1A, -F1A, -B1G6	20.70	33.37	32.09
-K2A	19.35	34.25	29.81
◆, -M1B	20.26	33.38	32.75
<u>AIO-360 Series</u>			
-A1A, -A2A	20.76	34.25	30.08
-A1B, -A2B	20.76	34.25	30.08
-B1B	20.76	34.25	30.08
<u>HIO-360 Series</u>			
-A1A, -A1B	19.48	35.25	33.65
-B1A	19.38	33.37	32.09
-B1B	19.38	33.37	30.68
-C1A, -C1B	19.48	34.25	31.14
-D1A	19.48	35.25	35.28
-G1A	19.68	33.37	31.81
-E1AD, -A1BD, -F1AD	19.97	34.25	31.36
<u>TIO-360 Series</u>			
-A1A	21.43	34.25	45.41
-A1B, -A3B6	19.92	34.25	45.41
-C1A6D	21.65	19.09	35.82

◆ - For information pertaining to engine model (L)IO-360-M1A, refer to Operation and Installation Manual P/N 60297-36.

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