



Model	<b>O-360-A1A2, A2A2, A3A2</b>	<b>O-360-A4A2, A5A2, A6A2, B1A2, B2A2, B3A2, B4A2, B5A2, B6A2, C1A2, C2A2, C3A2</b>	<b>O-360-C4A2, C5A2, C6A2, D1A2, D2A2, D3A2, D4A2, D5A2, D6A2</b>
Motor Gasoline (R+M/2)	ASTM D4814, Min Octane 91 (no alcohol)	— —	— —
Lubricating Oil	SAE J-1899, See Installation & Operation Manual, SVIOM01	— —	— —
Bore and Stroke – in	5.125 x 4.375	— —	— —
Displacement – cubic in	361	— —	— —
Compression Ratio	8.5:1	— —	— —
Weight (Basic Engine, Dry) – lbs See Installation & Operation Manual, SVIOM01, for detailed model weights	288	291	294
C.G. Location (Basic Engine)	See Installation & Operation Manual, SVIOM01	— —	— —
Principal Dimensions – in (Height x Width x Length)	24.6 x 33.4 x 32.8	— —	— —
Propeller Shaft	Direct, SAE Modified Type 2 per AS127	— —	— —
Fuel System	Precision Airmotive Carburetor MA-4-5 type	— —	— —
Ignition – Two Magnetos	Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —	— —
Timing – °BTC	R: 25°, L: 25°	— —	— —
Spark Plugs	Champion REM40E, Unison UREM40E	— —	— —
Oil Sump Capacity	8 quarts; 6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —	— —

— — indicates "same as preceding model"

Model	<b>O-360-E1A2, E2A2, E3A2</b>	<b>O-360-E4A2, E5A2, E6A2</b>
Type	4HOA	— —
Rating U.S. Standard Atmosphere and ICAO at Sea Level Pressure Altitude Take-Off/Max. Continuous HP Take-Off/Max. Continuous RPM Take-Off/Max. Cont. Manifold Press. – in Hg	180 2700 29.5	— — — — — —
Fuel Aviation Gasoline Motor Gasoline (R+M/2)	ASTM D910, Grade 100, 100LL or 100VLL ASTM D7547 ASTM D4814, Min Octane 91 (no alcohol)	— — — —
Lubricating Oil	SAE J-1899, See Installation & Operation Manual, SVIOM01	— —
Bore and Stroke – in	5.125 x 4.375	— —
Displacement – cubic in	361	— —
Compression Ratio	8.5:1	— —

Model	<b>O-360-E1A2, E2A2, E3A2</b>	<b>O-360-E4A2, E5A2, E6A2</b>
Weight (Basic Engine, Dry) – lbs See Installation & Operation Manual, SVIOM01, for detailed model weights	295	298
C.G. Location (Basic Engine)	See Installation & Operation Manual, SVIOM01	— —
Principal Dimensions – in (Height x Width x Length)	24.6 x 33.4 x 32.8	— —
Propeller Shaft	Direct, SAE Modified Type 2 per AS127	— —
Fuel System	Precision Airmotive Carburetor MA-4-5 type	— —
Ignition – Two Magnetos	Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —
Timing – °BTC	R: 25°, L: 25°	— —
Spark Plugs	Champion REM40E, Unison UREM40E	— —
Oil Sump Capacity	8 quarts; 6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —

— — indicates "same as preceding model"

Model	<b>O-360-A1A1, A2A1, A3A1</b>	<b>O-360-A4A1, A5A1, A5A1, B1A1, B2A1, B3A1, B4A1, B5A1, B6A1, C1A1, C2A1, C3A1</b>	<b>O-360-C4A1, C5A1, C6A1, D1A1, D2A1, D3A1, D4A1, D5A1, D6A1</b>
Type	4HOA	— —	— —
Rating U.S. Standard Atmosphere and ICAO at Sea Level Pressure Altitude Take-Off/Max. Continuous HP Take-Off/Max. Continuous RPM Take-Off/Max. Cont. Manifold Press. – in Hg	168 2700 29.5	— — — — — —	— — — — — —
Fuel Aviation Gasoline  Motor Gasoline (R+M/2)	ASTM D910, Grade 100, 100LL or 100VLL ASTM D7547 ASTM D4814, Min Octane 91 (no alcohol)	— — — —	— — — —
Lubricating Oil	SAE J-1899, See Installation & Operation Manual, SVIOM01	— —	— —
Bore and Stroke – in	5.125 x 4.375	— —	— —
Displacement – cubic in	361	— —	— —
Compression Ratio	7.2:1	— —	— —
Weight (Basic Engine, Dry) – lbs See Installation & Operation Manual, SVIOM01, for detailed model weights	288	291	294
C.G. Location (Basic Engine)	See Installation & Operation Manual, SVIOM01	— —	— —
Principal Dimensions – in (Height x Width x Length)	24.6 x 33.4 x 32.8	— —	— —

Model	<b>O-360-A1A1, A2A1, A3A1</b>	<b>O-360-A4A1, A5A1, A5A1, B1A1, B2A1, B3A1, B4A1, B5A1, B6A1, C1A1, C2A1, C3A1</b>	<b>O-360-C4A1, C5A1, C6A1, D1A1, D2A1, D3A1, D4A1, D5A1, D6A1</b>
Propeller Shaft	Direct, SAE Modified Type 2 per AS127	— —	— —
Fuel System	Precision Airmotive Carburetor MA-4-5 type	— —	— —
Ignition – Two Magnetos	Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —	— —
Timing – °BTC	R: 25°, L: 25°	— —	— —
Spark Plugs	Champion REM40E, Unison UREM40E	— —	— —
Oil Sump Capacity	8 quarts; 6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —	— —

— — — indicates "same as preceding model"

Model	<b>O-360-E1A1, E2A1, E3A1</b>	<b>O-360-E4A1, E5A1, E6A1</b>
Type	4HOA	— —
Rating U.S. Standard Atmosphere and ICAO at Sea Level Pressure Altitude Take-Off/Max. Continuous HP Take-Off/Max. Continuous RPM Take-Off/Max. Cont. Manifold Press. – in Hg	168 2700 29.5	— — — — — —
Fuel Aviation Gasoline  Motor Gasoline (R+M/2)	ASTM D910, Grade 100, 100LL or 100VLL ASTM D7547 ASTM D4814, Min Octane 91 (no alcohol)	— —  — —
Lubricating Oil	SAE J-1899, See Installation & Operation Manual, SVIOM01	— —
Bore and Stroke – in	5.125 x 4.375	— —
Displacement – cubic in	361	— —
Compression Ratio	7.2:1	— —
Weight (Basic Engine, Dry) – lbs See Installation & Operation Manual, SVIOM01, for detailed model weights	295	298
C.G. Location (Basic Engine)	See Installation & Operation Manual, SVIOM01	— —
Principal Dimensions – in (Height x Width x Length)	24.6 x 33.4 x 32.8	— —
Propeller Shaft	Direct, SAE Modified Type 2 per AS127	— —
Fuel System	Precision Airmotive Carburetor MA-4-5 type	— —
Ignition – Two Magnetos	Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —
Timing – °BTC	R: 25°, L: 25°	— —

Model	<b>O-360-E1A1, E2A1, E3A1</b>	<b>O-360-E4A1,E5A1, E6A1</b>
Spark Plugs	Champion REM40E, Unison UREM40E	— —
Oil Sump Capacity	8 quarts; 6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —

— — — indicates "same as preceding model"

Model	<b>IO-360-A1A2, A2A2, A3A2</b>	<b>IO-360-A4A2, A5A2, A6A2, B1A2, B2A2, B3A2, B4A2, B5A2, B6A2, C1A2, C2A2, C3A2</b>	<b>IO-360-C4A2, C5A2, C6A2, D1A2, D2A2, D3A2, D4A2, D5A2, D6A2</b>
Type	4HOA	— —	— —
Rating U.S. Standard Atmosphere and ICAO at Sea Level Pressure Altitude Take-Off/Max. Continuous HP Take-Off/Max. Continuous RPM Take-Off/Max. Cont. Manifold Press. – in Hg	180 2700 29.5	— — — — — —	— — — — — —
Fuel Aviation Gasoline  Motor Gasoline (R+M/2)	ASTM D910, Grade 100, 100LL or 100VLL ASTM D7547 ASTM D4814, Min Octane 91 (no alcohol)	— —  — —	— —  — —
Lubricating Oil	SAE J-1899, See Installation & Operation Manual, SVIOM01	— —	— —
Bore and Stroke – in	5.125 x 4.375	— —	— —
Displacement – cubic in	361	— —	— —
Compression Ratio	8.5:1	— —	— —
Weight (Basic Engine, Dry) – lbs See Installation & Operation Manual, SVIOM01, for detailed model weights	290	293	296
C.G. Location (Basic Engine)	See Installation & Operation Manual, SVIOM01	— —	— —
Principal Dimensions – in (Height x Width x Length)	24.0 x 33.4 x 32.8	— —	— —
Propeller Shaft	Direct, SAE Modified Type 2 per AS127	— —	— —
Fuel System	Precision Airmotive Fuel Injection RSA-5 type	— —	— —
Ignition – Two Magnetos	Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —	— —
Timing – °BTC	R: 25°, L: 25°	— —	— —
Spark Plugs	Champion REM40E, Unison UREM40E	— —	— —
Oil Sump Capacity	8 quarts; 6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —	— —

— — indicates "same as preceding model"

Model	<b>IO-360-E1A2, E2A2, E3A2</b>	<b>IO-360-E4A2, E5A2, E6A2</b>
Type	4HOA	— —
Rating U.S. Standard Atmosphere and ICAO at Sea Level Pressure Altitude Take-Off/Max. Continuous HP Take-Off/Max. Continuous RPM Take-Off/Max. Cont. Manifold Press. – in Hg	180 2700 29.5	— — — — — —
Fuel Aviation Gasoline  Motor Gasoline (R+M/2)	ASTM D910, Grade 100, 100LL or 100VLL ASTM D7547 ASTM D4814, Min Octane 91 (no alcohol)	— —  — —
Lubricating Oil	SAE J-1899, See Installation & Operation Manual, SVIOM01	— —
Bore and Stroke – in	5.125 x 4.375	— —
Displacement – cubic in	361	— —
Compression Ratio	8.5:1	— —
Weight (Basic Engine, Dry) – lbs See Installation & Operation Manual, SVIOM01, for detailed model weights	297	300
C.G. Location (Basic Engine)	See Installation & Operation Manual, SVIOM01	— —
Principal Dimensions – in (Height x Width x Length)	24.0 x 33.4 x 32.8	— —
Propeller Shaft	Direct, SAE Modified Type 2 per AS127	— —
Fuel System	Precision Airmotive Fuel Injection RSA-5 type	— —
Ignition – Two Magnetos	Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —
Timing – °BTC	R: 25°, L: 25°	— —
Spark Plugs	Champion REM40E, Unison UREM40E	— —
Oil Sump Capacity	8 quarts; 6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —

— — indicates "same as preceding model"

Model	<b>IO-360-A1A1, A2A1, A3A1</b>	<b>IO-360-A4A1, A5A1, A6A1, B1A1, B2A1, B3A1, B4A1, B5A1, B6A1, C1A1, C2A1, C3A1</b>	<b>IO-360-C4A1, C5A1, C6A1, D1A1, D2A1, D3A1, D4A1, D5A1, D6A1</b>
Type	4HOA	— —	— —
Rating U.S. Standard Atmosphere and ICAO at Sea Level Pressure Altitude Take-Off/Max. Continuous HP Take-Off/Max. Continuous RPM Take-Off/Max. Cont. Manifold Press. – in Hg	168 2700 29.5	— — — — — —	— — — — — —
Fuel			

Model	<b>IO-360-A1A1, A2A1, A3A1</b>	<b>IO-360-A4A1, A5A1, A6A1, B1A1, B2A1, B3A1, B4A1, B5A1, B6A1, C1A1, C2A1, C3A1</b>	<b>IO-360-C4A1, C5A1, C6A1, D1A1, D2A1, D3A1, D4A1, D5A1, D6A1</b>
Aviation Gasoline	ASTM D910, Grade 100, 100LL or 100VLL ASTM D7547	— —	— —
Motor Gasoline (R+M/2)	ASTM D4814, Min Octane 91 (no alcohol)	— —	— —
Lubricating Oil	SAE J-1899, See Installation & Operation Manual, SVIOM01	— —	— —
Bore and Stroke – in	5.125 x 4.375	— —	— —
Displacement – cubic in	361	— —	— —
Compression Ratio	7.2:1	— —	— —
Weight (Basic Engine, Dry) – lbs See Installation & Operation Manual, SVIOM01, for detailed model weights	290	293	296
C.G. Location (Basic Engine)	See Installation & Operation Manual, SVIOM01	— —	— —
Principal Dimensions – in (Height x Width x Length)	24.0 x 33.4 x 32.8	— —	— —
Propeller Shaft	Direct, SAE Modified Type 2 per AS127	— —	— —
Fuel System	Precision Airmotive Fuel Injection RSA-5 type	— —	— —
Ignition – Two Magnetos	Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —	— —
Timing – °BTC	R: 25°, L: 25°	— —	— —
Spark Plugs	Champion REM40E, Unison UREM40E	— —	— —
Oil Sump Capacity	8 quarts; 6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —	— —

— — indicates "same as preceding model"

Model	<b>IO-360-E1A1, E2A1, E3A1</b>	<b>IO-360-E4A1, E5A1, E6A1</b>
Type	4HOA	— —
Rating U.S. Standard Atmosphere and ICAO at Sea Level Pressure Altitude		
Take-Off/Max. Continuous HP	168	— —
Take-Off/Max. Continuous RPM	2700	— —
Take-Off/Max. Cont. Manifold Press. – in Hg	29.5	— —
Fuel Aviation Gasoline	ASTM D910, Grade 100, 100LL or 100VLL ASTM D7547	— —
Motor Gasoline (R+M/2)	ASTM D4814, Min Octane 91 (no alcohol)	— —
Lubricating Oil	SAE J-1899, See Installation & Operation Manual, SVIOM01	— —
Bore and Stroke – in	5.125 x 4.375	— —

Model	IO-360-E1A1, E2A1, E3A1	IO-360-E4A1, E5A1, E6A1
Displacement – cubic in	361	— —
Compression Ratio	7.2:1	— —
Weight (Basic Engine, Dry) – lbs See Installation & Operation Manual, SVIOM01, for detailed model weights	297	300
C.G. Location (Basic Engine)	See Installation & Operation Manual, SVIOM01	— —
Principal Dimensions – in (Height x Width x Length)	24.0 x 33.4 x 32.8	— —
Propeller Shaft	Direct, SAE Modified Type 2 per AS127	— —
Fuel System	Precision Airmotive Fuel Injection RSA-5 type	— —
Ignition – Two Magnetos	Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —
Timing – °BTC	R: 25°, L: 25°	— —
Spark Plugs	Champion REM40E, Unison UREM40E	— —
Oil Sump Capacity	8 quarts; 6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —

— — — indicates "same as preceding model"

CERTIFICATION BASIS: FAR 33 Through Amendment 20, effective 12/13/2000  
PRODUCTION BASIS: Production Certificate 14SW

		O-360	IO-360
NOTE 1.	<u>Maximum Permissible Temperatures</u>		
	Oil at Engine Inlet	245° F	— —
	Cylinder Head Temperature	500° F	— —
NOTE 2.	<u>Fuel Pressure Limits</u>		
	Inlet to Pump, Min.	+0.5 psig	-2 psig
	Max.	+8 psig	+35 psig
NOTE 3.	<u>Oil Pressure Limits into Engine</u>		
	Normal	55-95 psig	— —
	Idle	20 psig	— —
	Max (Cold Oil)	115 psig	— —

— — indicates "same as preceding model"

NOTE 4. The following accessory drive or mounting provisions are available:

Accessory	Direction of Rotation*	Drive Ratio to Crankshaft	Max. Torque (in-lbs)		Max. Overhang Moment (in-lbs)
			Continuous	Static	
Tachometer	CW	0.5:1	7	50	5
Starter	CCW	16.56:1	N/A	450	150
Alternator (not supplied)	CW	3.25:1	60	120	175
Propeller Governor, Rear**	CW	0.866:1	125	825	40
Propeller Governor, Front**	CW	0.895:1	125	825	40
Fuel Pump	Reciprocating	0.5:1	N/A	N/A	10
Accessory Drive***	CCW	1.3:1	70	450	25

- \* "CW" – Clockwise; and "CCW" – Counterclockwise (Viewing Drive Pad)
- \*\* This is an AND20010 drive pad and only applicable to models with provisions to control propeller pitch and shall be supplied with a cover.
- \*\*\* This is an AND20000 drive pad and shall be supplied with a cover.

NOTE 5. See the chart at the end of the TCDS for the Engine Model Designation codes.

NOTE 6. Experience has shown that there is a higher probability of vapor locking on aircraft, especially on those equipped with fuel injected reciprocating engines when operating with high volatility fuels such as motor gasoline. Aircraft fuel system designs for the powerplant installation of these engines may need to incorporate special design features or enhanced cooling to accommodate operation with high volatility fuels such as motor gasoline. The aircraft fuel system hot weather testing requirements of FAR 23.961 must be successfully accomplished for each aircraft powerplant installation design of these engines (both carbureted and fuel injected) to obtain approval for operation with motor gasoline, reference AC 23.1521-1B.

Model Designation Code:

EXAMPLE: IO-360-A1A2

Fuel System:

- O- Carbureted
- IO- Fuel Injected

Cylinder Type (Engine Displacement):

360- Parallel Valve Cylinder, 361 cubic inch displacement

Crankshaft and Propeller Type:

- A- Thin Wall Front Main Bearing Journal Crankshaft, Fixed Pitch Propeller
- B- Thin Wall Front Main Bearing Journal Crankshaft, Constant Speed Propeller
- C- Heavy Wall Front Main Bearing Journal Crankshaft, Fixed Pitch Propeller
- D- Heavy Wall Front Main Bearing Journal Crankshaft, Constant Speed Propeller
- E- Solid Front Main Bearing Journal Crankshaft, Fixed Pitch Propeller

Crankcase and Engine Mount Type:

- 1- Number 1 Dynafocal engine mount with Rear Propeller Governor
- 2- Number 2 Dynafocal engine mount with Rear Propeller Governor
- 3- Conical engine mount with Rear Propeller Governor
- 4- Number 1 Dynafocal engine mount with Front Propeller Governor
- 5- Number 2 Dynafocal engine mount with Front Propeller Governor
- 6- Conical engine mount with Front Propeller Governor

0. Note: Crankcase types 1, 2 and 3 incorporate a rear propeller governor pad and crankcase types 4, 5 and 6 incorporate a front propeller governor pad for constant speed propeller models. Engine crankcase types 4, 5, and 6 also include provisions for a front bed type engine mount.

Accessory Package (Sump/Induction System):

- A- Wet Sump, Updraft Induction

Power Rating (Compression Ratio):

- 1- 7.2:1 CR, 168 bhp
- 2- 8.5:1 CR, 180 bhp

...END...