

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

EICE
Revision 17
CONTINENTAL

**IO-360-A, -B, -C, -D,
-E, -G, -H, -J, -K,
-AB, AF, -DB,
-GB, -HB, -JB,
-KB, -ES**

January 9, 2015

TYPE CERTIFICATE DATA SHEET NO. EICE

Engines of models described herein conforming with this data sheet (which is part of type certificate no. EICE) 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 and the 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 Continental Motors, Inc.
2039 South Broad Street
Mobile, Alabama 36615

Type Certificate Holder Record Teledyne Continental Motors
Ownership & name change as of April 19, 2011 (Continental Motors, Inc.)

	<u>Model</u>	<u>IO-360-A,-AB</u>	<u>IO-360-B</u>	<u>IO-360-C,-CB,-D,-DB</u> <u>-E,-G,-GB,-H,-HB</u>
	<u>Type</u>	6HOA	- -	- -
Rating, ICAO or ARDC				
Standard atmosphere				
Max. continuous hp., r.p.m. in. Hg. at:				
Critical altitude, ft.		195-2800-26.5-2250		
Sea level pressure altitude		195-2800-26.5	180-2700	210-2800-F.T.
Takeoff hp., 5 min., r.p.m. full throttle at sea level pressure altitude		210-2800	180-2700	210-2800
Fuel (aviation gasoline, minimum grade)		100, 100LL, B95/130 CIS, or RH95/130	80/87	100, 100LL, B95/130 CIS, or RH95/130
Lubricating oil		Lubricating oils qualified under SAE-J1899 or J1966 are considered qualified under CMI Spec MHS-24	- -	- -
Bore and stroke, in.		4.438 X 3.875	- -	- -
Displacement, cu. in.		360	- -	- -
Compression ratio		8.5:1	6.5:1	8:5.1
Weight (dry), lb.		294	299	298-C, -CB, -G, -GB, 294-D, -DB, -E, -H, -HB
C.G. Location (basic engine)				
Fwd. of front face accessory case, in.		7.63	- -	- -
Below crankshaft centerline, in.		1.02	- -	- -
Below crankshaft centerline toward 1-3-5 side, in.		.20	- -	- -
Propeller shaft		ARP-502, Type I flange; 4-7/8 in. OD with six-1/2 in. bolt holes in 4 in. diameter circle	- - - -	- - - -
Fuel injection		CMI Injection system 639230A3 or latest FAA approved version	Eq. No. 6006 or latest FAA approved version	639231A3 or latest FAA approved version
Ignition, dual magnetos		See NOTE 11	- -	- -

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	<u>Model</u>	<u>IO-360-A,-AB</u>	<u>IO-360-B</u>	<u>IO-360-C,-CB,-D,-DB</u> <u>-E,-G,-GB,-H,-HB</u>
Timing, °BTC		20°	- -	- -
Spark plugs		See NOTE 9	- -	- -
Oil sump capacity		10: 7 usable at 25° noseup and nosedown attitude	- -	- - except E which is 8: 5.9 usable 25° noseup and nosedown attitude
Notes:		1,2,3,4,6,7,8,9,13	1,2,3,4,5,6,7,9,13	1,2,3,4,5,6,7,8,9,13

	<u>Model</u>	<u>IO-360-J, -JB</u>	<u>IO-360-K, -KB</u>	<u>IO-360-ES</u>
Rating, ICAO or ARDC	<u>Type</u>	- -	- -	- -
Standard atmosphere				
Max. continuous hp., r.p.m. in. Hg. at:				
Critical altitude, ft.				
Sea level pressure altitude		195-2600	195-2600	210-2800 F.T.
Takeoff hp., 5 min., r.p.m. full throttle at sea level pressure altitude		210-2800	195-2600	210-2800 F.T.
Fuel (aviation gasoline, minimum grade)		- -	- -	- -
Lubricating oil		- -	- -	- -
Bore and stroke, in.		- -	- -	- -
Displacement, cu. in.		- -	- -	- -
Compression ratio		- -	- -	- -
Weight (dry), lb.		294	294	320
C.G. Location (basic engine)				
Fwd. of front face accessory case, in.		- -	- -	7.08
Below crankshaft centerline, in.		- -	- -	.45
Below crankshaft centerline toward 1-3-5 side, in.		- -	- -	-.14
Propeller shaft		- -	- -	- -
Fuel injection		- -	- -	CMI Injection system 639289A95 or latest FAA approved version
Ignition, dual magnetos		- -	- -	- -
Timing, °BTC		- -	- -	24°
Spark plugs		- -	- -	- -
Oil sump capacity		10: 7 usable at 25° noseup and nosedown attitude	- -	8: 5 usable at 26° noseup and 18° nosedown attitude
Notes:		1,2,3,4,5,6,7,8,9, 13	- -	Note 1 applicable except barrel temp, 2,3,4,5,6, 7,8,9, 13

"- -" indicates "same as previous model"

"—" indicates "does not apply"

	<u>Model</u>	<u>IO-360-AF</u>
	<u>Type</u>	- -
Rating, ICAO or ARDC		
Standard atmosphere		
Max. continuous hp., r.p.m. in. Hg. at:		
Critical altitude, ft.		
Sea level pressure altitude		195-2800
Takeoff hp., 5 min., r.p.m. full throttle at sea level pressure altitude		—
Fuel (aviation gasoline, minimum grade)		ASTM D7547 (UL 91), ASTM7592 (UL94), ASTM D910 (91), (100), (100VLL), (100LL), B95/130 CIS, or RH95/130
1Lubricating oil		- -
Bore and stroke, in.		- -
Displacement, cu. in.		- -
Compression ratio		7.5:1
Weight (dry), lb.		335
C.G. Location (basic engine)		
Fwd. of front face accessory case, in.		17.87
Below crankshaft centerline, in.		-0.67
Below crankshaft centerline toward 1-3-5 side, in.		-0.08
Propeller shaft		- -
Fuel injection		CMI Injection system 639289A183 or latest FAA approved version
Ignition, dual magnetos		- -
Timing, °BTC		- -
Spark plugs		- -
Oil sump capacity		- -
Notes:		Note 1 applicable except barrel temp, 2, 3, 4 except vacuum pump N/A, 5,7,8,9

"- -" indicates "same as previous model"

"—" indicates "does not apply"

Certification basis	CAR 13, effective June 15, 1956, as amended by 13-1 thru 13-3. Type Certificate No. E1CE issued May 15, 1962, for Model IO-360-A, -B dated September 9, 1963; -C and -D added July 24, 1964; -L added September 30, 1966; -G and -H added September 8, 1972; -J added December 20, 1974; -K added April 6, 1976; -DB, -GB, -JB, -KB added March 13, 1978; -AB, -CB and -HB added April 10, 1979, -ES FAR 33 through Amendment 12 added October 18, 1990. -AF FAR 33 through Amendment 33 added September 20, 2014.
Production basis	Production Certificate No. 508

NOTE 1. Maximum permissible temperature:
 Cylinder head bayonet, thermocouple 460°F
 Cylinder barrel 310°F
 Oil inlet -A, -AB, -B 225°F
 -C, -D, -E, -G, -H, -J, -K, -DB, -GB, -JB,
 -KB, AF, -CB, -HB, -ES 240°F

NOTE 2. Fuel pressure limits:
 Inlet to injection pump, min. - minus 2 p.s.i.
 max. - plus 8 p.s.i.
 Outlet to vapor return line - plus 3.5 p.s.i.

NOTE 3. Oil pressure limits:
 2-4-6 side - normal 30 to 60 p.s.i.
 - idle 10 p.s.i.

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

	Original Accessory	Direction of Rotation*	Speed Ratio to Crankshaft	Max. Torque (in.-lb.)		Maximum Overhang Moment (in.-lb.)
				Continuous	Static	
**	Propeller governor	C	1:1	29	825	50
	Tachometer (Mech. optional)	CC	1.239	7	50	25
***	Vacuum pump Optional	CC	1.545:1	100	800	50
****	(1-3-5 side)	C	1.316:1	27	800	8.3
*****	(2-4-6 side)	CC	1.316:1	27	800	8.3
	Generator	CC	2.035:1	60	600	50
	Oil Cooler					65

Starter: CMI P/N 627841 (Delco-Remy P/N 1108234) eligible.

*C - Clockwise viewing drive pad; CC - Counterclockwise.

**Modified AND 20010 pad.

***AND 20000 pad modified for speed, -A, -AB, -B, -D, -DB, -E, H, -HB, -J, -JB, -K, -KB, -ES only; -AF not applicable.

****AND 20000 pad - Modified (no oil provision; accessory clearances limited) -C, -CB, -G, and -GB only.

*****AND 20000 pad - Modified -C, -CB, -G, and -GB only.

NOTE 5. The Model IO-360-D is similar to IO-360-A except for rating and oil cooled pistons.
 The Model IO-360-B is similar to IO-360-A except for reduced compression ratio and rated power.
 The Model IO-360-C is similar to IO-360-D except for accessory drive provisions.
 The Model IO-360-E is similar to IO-360-D except for oil sump and suction tube.
 The Model IO-360-G is similar to IO-360-C except for crankshaft counterweight tuning.
 The Model IO-360-H is similar to IO-360-D except for crankshaft counterweight tuning.
 The Model IO-360-J is similar to IO-360-H except for rating.
 The Model IO-360-K is similar to IO-360-H except for rating.
 The Model IO-360-DB is similar to the IO-360-D except for modified crankshaft.
 The Model IO-360-GB is similar to the IO-360-G except for modified crankshaft.
 The Model IO-360-JB is similar to the IO-360-J except for modified crankshaft.
 The Model IO-360-KB is similar to the IO-360-K except for modified crankshaft.
 The Model IO-360-AB is similar to the IO-360-A except for modified crankshaft.
 The Model IO-360-CB is similar to the IO-360-C except for modified crankshaft.
 The Model IO-360-HB is similar to the IO-360-H except for modified crankshaft.
 The Model IO-360-ES is similar to the IO-360-HB except for the modified spider induction system.
 The Model IO-360-AF is similar to the IO-360-ES except for starter and alternator, and eligible fuel.

NOTE 6. These engines are eligible for installation of Eq. No. 6001 oil filter adapter.

NOTE 7. Models IO-360-A, -B, -C, -D and -E incorporate crankshaft with two 6th order dampers.
 Models IO-360-AB, -AF, -CB, -DB, -ES, -HB, -G, -GB, -H, -J, -JB, -K, and -KB incorporate crankshaft with one 6th and one 4 1/2 order damper.

NOTE 8. The IO-360-A, -AB, -C, -CB, -D, -DB, -G, -GB, -H, -HB, -J, -JB, -K, -KB, -ES are eligible for pusher and tractor operation and are approved for installation of propellers or propeller-fan combination having

inertias up to 20.in-lb sec². and overhang moments up to 490 in.-lb. The maximum overhung weight and moment arm are 70 lb. and 8 in. respectively.

NOTE 9. The following spark plugs and/or those listed in CMI Service Information Letter SIL03-2 are approved on this engine:

<u>Engine Models</u>	<u>Spark Plugs</u>	
IO-360-A, -AB, -AF,-C, -CB, -D, -E -G, -H, -HB, -J, -K, -DB, -GB, -JB, -KB, -ES	AC	SR86, HSR86
	Auto Lite	SH26, SH260
	Champion	REM38E, REM38P, RMM38E, RHM38P
	Smiths Industries	RSE-23-3R, RSH-23-3R
	Tempest Aviation	UREM38E, URHM38E, URHM38S
IO-360-B	AC	SR83IR, SR83P, HSR83P, S88, HS88, HSR83IR, S88D, SR88, SR88D, HSR88
	Auto Lite	SH15, SH15R, SH20A, SH200A
	Champion	RHM38E, REM38P, RHM38P, REM40E, RHM40E, EM42E
	Red Seal	SJ190, SE230, SJ230, SE270
	Smiths Industries	RSE-23-3R, RSH-23-3R
	Tempest Aviation	UREM38E, URHM38E, URHM38S

NOTE 10. Those engines which are designated with a suffix letter "B" (i.e., IO-360-DB) are interchangeable with those engines of the same model letter without the suffix letter (i.e., IO-360-D).

Those engines which are designated without the suffix letter (i.e., IO-360-D) are non-interchangeable with those engines which are designated with the suffix letter "B" (i.e., IO-360-DB).

NOTE 11. The following magnetos with the appropriate harness are eligible on these engines at the indicated weight change.

Magneto Model	Weight Change
Two CMI/TCM/Bendix S6LN-25	None
Two CMI/TCM S6LSC-25	None
One CMI/TCM S6LSC-25T (R) and One CMI/TCM S6LSC-25 (L)	None
Two Slick 6214	-1.4 lb.
Two Slick 6314	-1.4 lb.

NOTE 12. Engine model numbers may include a suffix to define minor specification changes and/or accessory packages. Example: IO-360-A(10).

NOTE 13. Installed engine weight shall vary, depending upon the accessories selected by the installer. See engine installation manual for calculation factors.

...END...