AIRCRAFT ENGINE

ILLUSTRATED PARTS CATALOG

This illustrated parts catalog is provided as a reference for non-production Continental Motors aircraft engines. Part numbers cited in this catalog may have been superseded by a later part number.

1. Locate the figure representing your installed engine specification to determine the part number(s) required.
2. Contact an authorized Continental Motors Parts Distributor or Continental Motors Customer Service to check the part number supersedure history.

This catalog applies only to the engine model specifications listed below. For all other engine models, refer to http://continentalmotors.aero.

C-75 **ALL**	O200A8	O200A17	O200A27	O200A36	O200A45	O200A68
C-85 **ALL**	O200A9	O200A19	O200A28	O200A37	O200A46	O200A77
C-90 **ALL**	O200A10	O200A20	O200A29	O200A38	O200A47	O200A78
O200A1	O200A11	O200A21	O200A30	O200A39	O200A52	O200A79
O200A2	O200A12	O200A22	O200A31	O200A40	O200A54	O200A84
O200A4	O200A13	O200A23	O200A32	O200A41	O200A57	O200A85
O200A5	O200A14	O200A24	O200A33	O200A42	O200A59	O200B1
O200A6	O200A15	O200A25	O200A34	O200A43	O200A62	O200B8
O200A7	O200A16	O200A26	O200A35	O200A44	O200A63	O200B9
						O200C **ALL**

FOR REFERENCE ONLY

PART NO. X30011
CHANGE 2

AUGUST 2011

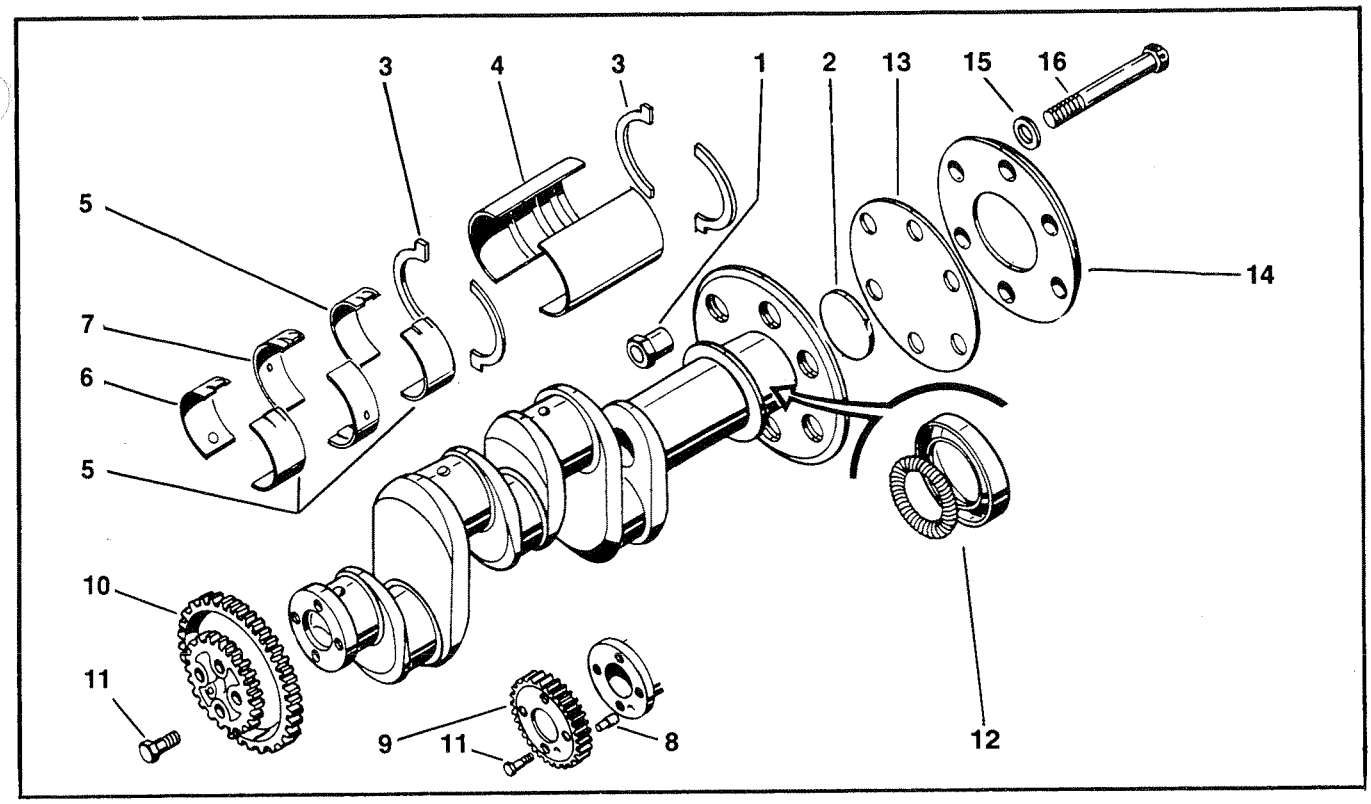

FIGURE 5. CRANKSHAFT ASSEMBLY - FLANGED.

FIG. INDEX	PART NUMBER	1 2 3 4 5 DESCRIPTION	C75	C85	C90	O200A	O200B
5-	530199A1	④ Crankshaft Assembly	1	1			
	530182	Crankshaft Assembly			1	1	
	531434	Crankshaft Assembly				1	1
- 1	24769	. Bushing, Prop Bolt	6	6	6	6	6
- 2	24770	. Plug, Hubbard	1	1			
- 3	633141	Washer, Thrust	4	4	4	4	4
- 4	530058	† ① Bearing, Front	2	2	2	2	2
- 5	633398	† ① Bearing, Main Cylinder 1 & 3	2	2	2	2	2
- 6	643233	† ① Bearing, Main Cylinder 2 & 4	2	2	2	2	2
- 7	639640	† Bearing, Connecting Rod	8	8	8	8	8
- 8	630651	† Dowel	1	1	1	1	1
- 9	630641	② Gear, Crankshaft	1	1	1	1	1
-10	35016	③ Gear, Cluster, Crankshaft	1	1	1	1	1
		ATTACHING PARTS					
-11	21346	② Screw	4	4	4	4	4
-11	22532	③ Screw	4	4	4	4	4
		* * * *					
-12	530019	Seal Assembly, Oil	1	1	1	1	1
-13	530956	. Spring	1	1	1	1	1
-14	35956	Plate, Moisture Impervious	1	1	1		
-15	3991	Flange, Propeller Hub	1	1	1		
-16	401507	Washer	6	6	6		
-17	24768	Bolt	6	6	6		

NOTES:
- See Section VI for complete bearing kits.
- ② Used on -8 Models only.
- ③ Used on -12, -14, -16 & O-200 Models.
- ④ For Models with the letter "F" stamped after the Model number (Example: C75-8"F").

SECTION IV
REPAIR PARTS SETS AND MATERIALS

PART NO.	DESCRIPTION	SIZE	MODEL
646539A1	Gasket Set - Complete Overhaul	—	-12 Models, O-200
646538A1	Gasket Set - Complete Overhaul	—	-8 Models
646559A1	Gasket Set - Single Cylinder, Top Overhaul	—	ALL
530058A4	Bearing Set (C75, C85, C90 with Dowel on Thrust Washer)	Standard	C75, C85, C90
530058A4M010	Bearing Set	.010" Undersize	C75, C85, C90
530058A5	Bearing Set (C75, C85, C90 with Dowels Installed in Front Bearing Boss	Standard	C75, C85, C90
530058A5M010	Bearing Set	.010" Undersize	C75, C85, C90
530058A6	Bearing and Thrust Washer Set (Main) O-200 with 633141 Thrust Washer	Standard	O-200
530058A6M010	Bearing and Thrust Washer Set	.010" Undersize	O-200
627246A2	Bearing Set (Main) with Flanged Thrust Bearing	Standard	O-200
627246A2M010	Bearing Set	.010" Undersize	O-200
638109A1	Ring Set - Complete Piston	Standard	ALL
638109A1P005	Ring Set	.005" Oversize	ALL
638109A1P010	Ring Set	.010" Oversize	ALL
638109A1P015	Ring Set	.015" Oversize	ALL
639721	* Ring Set	Standard	ALL
626531-1	Enamel - Gold	1 Quart	ALL
626531-2	Enamel - Gold	1 Gallon	ALL
535011S	Lockwire - 0.032 In. Dia. Steel	Order by 1 lb. Roll	ALL
641543	Silk Thread	1 Spool (260 yd.)	ALL
642188	Gasket Sealant	1.5 oz. Tube	ALL
646940	F/I Sealant	1.69 oz.	ALL
646941	Adhesive/Sealant	1.69 oz.	ALL
646942	Gasket Maker	1.69 oz.	ALL
646943	Anti-Seize Lubricant	1/4 lb.	ALL
646944	Primer	6 oz. (Aerosol Can)	ALL

NOTE: *For chrome plate cylinders.

C75
C85
C90
O-200

CONTINENTAL® AIRCRAFT ENGINE

OVERHAUL MANUAL

FAA APPROVED

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SECTION XV
ASSEMBLY OF SUBASSEMBLIES

15-1. GENERAL PROCEDURE

15-2. CLEANING AND LUBRICATION

Immediately before assembling the parts of any subassembly they should be sprayed with clean solvent to remove corrosion-preventive oil and grit. The parts should be dried with a blast of dry compressed air. All bare steel surfaces, bushings and bearings must be coated generously with a mixture of one part corrosion-preventive compound, of a type which will not adversely affect the lubrication system, and three parts of engine lubricating oil, if the engine will not be tested immediately, or the surfaces may be coated with clean engine lubricating oil if the test is to be performed at once.

15-3. NEW PARTS REQUIRED

All lockwire, palnuts, lockwashers, elastic stop nuts, gaskets and rubber connectors used in assembling the engine must be new parts. If any of these parts are removed after initial assembly it must be discarded and another new part installed. Sets of gaskets and rubber connectors, piston ring sets and main bearing and thrust washer sets for the various models are listed in the Parts Catalog. New sets of these parts for the model to be assembled should be procured in advance. All other new parts required for replacement of those discarded should be on hand.

15-4. DETAILED PROCEDURE

15-5. CRANKCASE COVER ASSEMBLY

Assemble parts in the following manner:

a. Inspect the cover casting for any nicks or damage incurred in handling, for thorough cleanliness, condition of enamel or coating, freedom of machined surfaces and interior from enamel and any other irregularity.

b. Install the pump impellers in their chambers, with the tachometer drive shaft end to the rear. Install the pump cover, and make sure that it fits perfectly on the chamber surface. No gasket paste may be used in this joint. Place plain washers and bolts or slotted nuts on the pump studs and tighten to specified torque. Install lockwire to connect the studs or bolts in pairs. The lockwire must lie flat against the sides of bolts or nuts and must not pass over their tops.

NOTE

If the slots of any slotted engine nut or castle nut will not align with the stud hole when the nut is tightened to minimum specified torque, continue tightening until either the slot and hole align or the maximum allowable torque is reached, whichever occurs first. If alignment of the slots cannot be obtained within torque limits, substitute another serviceable nut.

c. Test the oil pump impellers for free rotation. If any binding occurs, disassemble the pump for further inspection.

d. Insert the oil pressure relief valve plunger in its guide; place the spring in the plunger; place a new copper-asbestos gasket on the cap, and screw the cap into the cover boss over the spring. Tighten the cap securely.

e. Inspect the new oil seal in the tachometer drive housing. The seal lip must be outward. If the engine is a -8 model, place a new copper-asbestos gasket on the housing. Insert a strip of fiber in the tachometer drive shaft slot to fill the entire space and to protect the housing seal lip. Screw the housing into the left hand tapped hole over the tachometer drive shaft, being careful not to reverse the seal lip, and tighten the housing securely. Remove the fiber strip. If the engine is -12, -14, -16 or O-200 model the housing should be installed later.

f. If the engine is a -12, -14, -16 or O-200 model prepare the oil screen housing gasket by

working into its surfaces a small amount of non-hardening gasket paste. Place the gasket on the crankcase cover pad. Place a new copper-asbestos gasket on the oil screen, and screw the screen into its housing loosely. Place the housing and screen on the crankcase cover gasket, and attach it temporarily with a plain nut. If the engine is a -8 model tighten the oil screen in its crankcase cover housing.

15-6. CRANKCASE

Install the following parts on the castings:

a. Spread a light film of Led Plate No. 250 on the two front oil gallery plugs, and screw them into the crankcase holes. Tighten both plugs securely.

b. If no fuel pump is to be installed work a small amount of a non-hardening gasket paste into both surfaces of the pump pad gasket, and place the gasket and cover on the pad. Install two lockwashers and two plain washers and plain hex nuts. Tighten the nuts to specified torque.

c. If the engine is a -12, -14, -16 or O-200 model, and if no oil cooler is to be installed, treat the cover pad gasket with non-hardening gasket paste, and place the gasket and cover on the small pad behind No. 2 cylinder pad. Attach the cover with two plain washers, two lockwashers and plain hex nuts.

d. Spread a film of Led Plate No. 250 on the breather elbow thread, screw the elbow into the crankcase 1, 3 side boss ahead of No. 3 cylinder pad. Tighten the elbow enough to prevent loosening. Position elbow 15 degrees rearward from its downward position on O-200 engines.

Check the main bearing seats in both crankcase halves for nicks, and make sure that they are dry and clean. Place a new main bearing insert in each seat with the tang in the case notch and the ends projecting very slightly and equally above the parting surface. The flanged front main bearing inserts are used only on the O-200. Make sure that the set of inserts installed is the correct type for the crankcase being assembled and of correct size for the standard or reground crankshaft to be installed. If there's an oil gallery for the starter clutch adapter, make sure the bearing shell has a hole and is properly installed.

15-7. CRANKSHAFT AND CONNECTING RODS

For maximum ease of working, the crankshaft, if a tapered type, should be held in a fixture, as illustrated in Figure 30. A fixture may be constructed for holding flange type shafts in the same position. Assemble parts as follows:

a. If the shaft is a tapered type, screw the front oil plug into the front bore thread. For this purpose, a special type of screwdriver should be made to exactly fit the plug slot. The driver must have a wrench square or hex on its stem. Tighten the plug enough to hold oil, being careful not to damage the slot.

b. Install the crankshaft in the holding fixture, and secure it.

c. Lay out the four sets of connecting rods, caps and bolts in numerical order, according to the cylinder numbers stamped on their bolt bosses.

d. Insert two bolts in each rod bearing cap with the head flats against the cap shoulders.

e. Obtain a set of new bearing inserts of the correct size for the crankshaft. Place an insert in each rod and cap. The inserts must seat fully, and their ends must project very slightly and equally above the parting surface.

f. Coat the crankpins and bearings with engine oil. Install each rod and cap on the proper crankpin, according to cylinder numbers, and be sure that the numbers on rod and cap bolt bosses will be on top when the crankshaft and rod assembly is installed. Run on the slotted nuts as each rod is installed, in turn, and tighten to specified torque, and secure each with a cotter pin. Torque nuts to low limit. If cotter pin will not enter increase torque gradually up to high limit only. If cotter pin will not enter in this range replace nut and