

CRANKSHAFT REPAIRS

Crankshafts receive a thorough inspection upon arrival. A serial number is permanently etched onto the part. Crankshafts are then disassembled, cleaned, and Magnetic Particle inspected. If no cracks or metallurgical flaws are found, a detailed dimensional evaluation and visual inspection is performed. Crankshafts found within repair limits will be repaired on a custom shop order to your specification. If bearing journals are reground the crankshaft must be renitrided to restore wear surface hardness and increase fatigue strength. A second Magnetic Particle inspection is done and the propeller flange is cadmium plated for corrosion protection. Precision digital dynamic balancing is available which improves longevity and results in a smoother running engine. Counterweight assembly onto the crankshaft is available. An 8130 maintenance release is issued and the unit is custom foam packaged for shipping.

Prop Strike Inspection (MPI & Dimension & Advise)

4cylinder	151.00
6cylinder	201.00
8cylinder	313.00

Premium Polish Service – MPI, Dim, Cad Plate Flange & Certify

4cylinder	395.00
6cylinder	465.00
8cylinder	625.00

Grind Journals - Single Set (**Rods or Mains**) to Manufacturer's Limits (Renitride, Cad Plate, Micro Polish, and Certify)

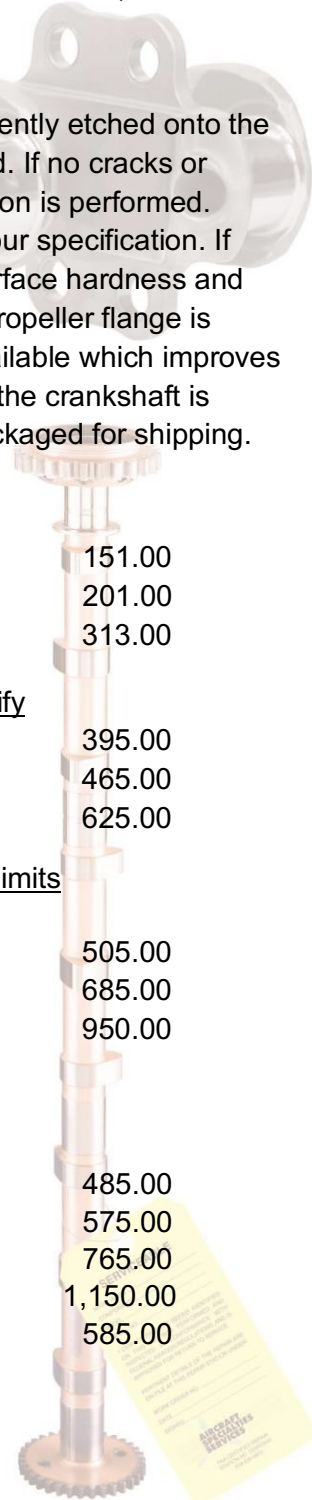
4cylinder	505.00
6cylinder	685.00
8cylinder	950.00

Grind Journals (**Rods and Mains**) to Manufacturer's Limits (Renitride, Cad Plate, Micro Polish, and Certify)

4cylinder – Less Nitride (A65, A75, C85 - M10)	485.00
4cylinder	575.00
6cylinder	765.00
8cylinder	1,150.00
Small Continental - M20 STC* (A65, A75, C85, O200)	585.00

* Price includes STC authorization. STC paperwork separately is \$225.

Aircraft Specialties Services, Inc.
2860 N Sheridan Road
Tulsa, Oklahoma 74115
Phone: (918) 836-6872
1 (800) 826-9252
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CRANKSHAFT REPAIRS (cont.)

Continental Service Bulletins and Repairs

Ultrasonic Inspect IAW AD 87-23-08	95.00
Included with Grind or Polish	
Ultrasonic Inspection Only	150.00
MPI and Ultrasonic Inspection	195.00
Propeller flange repair	225.00

Lycoming Service Bulletins and Repairs

Machine Gear Mount Counter Bore Dia. Oversize P005, P010, P015	260.00
Chrome Repair Gear Mount Counter-Bore Back to Standard	995.00
Machine Gear Pilot Mounting Face	115.00
Repair Corrosion in Front Main I.D. Bore <i>(Per S.B505/ 530, or S.I. 1511 or IAW Overhaul Manual)</i>	295.00
Grind Front Main I.D. Bore <i>(ASI Repair 0014)</i>	350.00
Propeller Flange Repair	225.00
Replace Sludge Tubes	(each) 7.50

Common/ Other Repairs

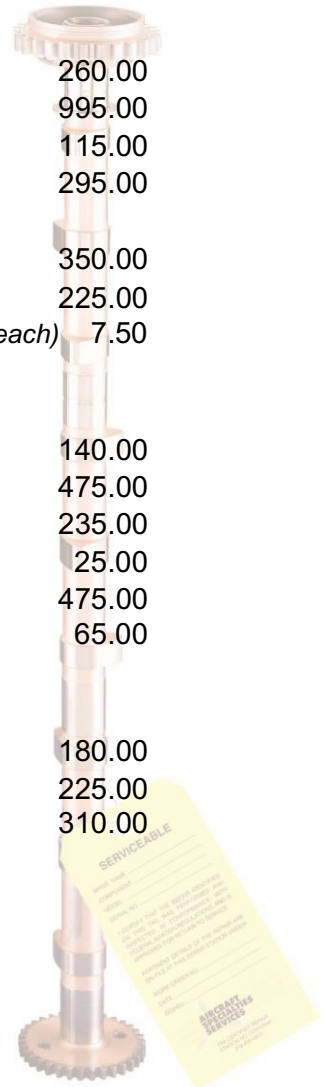
Cad Plate & Bake Crankshaft Flange <i>(All)</i>	140.00
Chrome Repair Propeller Pilot <i>(Lycoming or Continental)</i>	475.00
Oil Seal Repair <i>(Lycoming or Continental)</i>	235.00
Replace Dowel <i>(Lycoming or Continental)</i>	25.00
Chrome Repair Rear Gear Mount <i>(Franklin)</i>	475.00
Non- Repairable Clean/Inspect Fee <i>(all Crankshafts)</i>	65.00

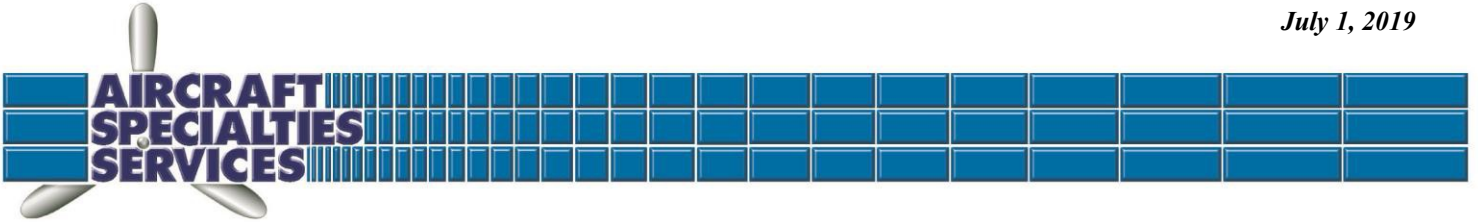
Crankshaft Dynamic Balance

4 Cylinder	180.00
6 Cylinder	225.00
8 Cylinder	310.00

Notes: Price shown is with overhaul. If stand-alone add \$75.
Balance with counterweights included, add \$30.

All prices above are labor and service, parts extra.





CRANKSHAFT REPAIRS (cont.)

Lycoming Crankshaft Gears

Inspect and/or modify for Compliance with S.B. 475C	90.00
Chrome Customer's Gear Oversize to fit Pilot Counter Bore. (Repair 07-09-08)	210.00

Counterweights

Continental (most)	Re-bush	45.00
Lycoming (all)	Re-bush	98.00
Continental GTSIO-520 – Repair for Re-use		155.00
Replace Counterweight Bushings in Crankshaft	Per Blade	35.00
Assemble Counterweights on Crankshaft		65.00
Case Harden Continental Counterweight to Comply with S.B. 00-3		
Tuffride Requirement and Install Bushing		165.00
Continental GO-300 Counterweights		RFQ

Propeller Shaft

Continental Propeller Shaft – Polish Journals and Cad Plate	345.00
Continental Propeller Shaft – Grind Journals and Cad Plate	510.00
Continental Propeller Shaft Drive Gear – Polish Journals	240.00
Continental Propeller Shaft Drive Gear – Grind Journals	410.00
Overhaul and Repair IAW S.I. 1108C (Lyc. Only)	RFQ
A-65 / C-85 Prop Hub (MPI inspect, cad plate)	135.00
Inspection Fee, Non- Repairable	25.00

TAPPET BODIES

Tappet bodies undergo a complete remanufacturing process. Tappets are degreased and ultrasonically cleaned. The spherical radius is precision ground. Then each unit is heat-treated and Magnaflux inspected. Hydraulic unit flow rates are gauged and matched sets are created to insure a smooth running engine. Sets are issued either an EASA or FAA 8130 maintenance release for return to service.

Recondition Lycoming & Continental (Mushroom Type)	38.00
Recondition Lycoming (Hyperbolic)	38.00
Recondition Lycoming P/N LW16812 (H2AD, Alternate Warranty applies.)	95.00
Recondition Continental Straight Bore Lifter (Barrel Type)	45.00
Recondition Hydraulic Units, Clean, Inspect, Flow Check	27.50
Flow Match Only (new parts only)	10.00
Refurbish Pushrod Sockets (if included)	4.25

All prices above are labor and service, parts extra



CAMSHAFTS

A complete receiving inspection is performed on each camshaft. The camshaft is degreased, cleaned, magnetic particle and dimensionally inspected. Repairs are performed, including regrinding lobes to the original profile and taper. The surface finish is restored by Parkerizing where required. Final inspection of the camshaft includes dimensional checks and a second Magnetic Particle inspection. An FAA 8130 maintenance release is issued for return to service, and the unit is custom packaged for shipping.

Prop Strike Inspect (MPI, Restore Surface Finish & Cert.)

4 Cylinder Camshaft	115.00
6 Cylinder Camshaft	140.00
8 Cylinder Camshaft	209.00

Grind Lobes & Certify

4 Cylinder Camshaft (<i>Lycoming / Continental</i>)	185.00
6 Cylinder Camshaft (<i>Lycoming / Continental</i>)	210.00
8 Cylinder Camshaft (<i>Lycoming</i>)	349.00
4 Cylinder Camshaft (<i>Franklin</i>)	295.00
6 Cylinder Camshaft (<i>Franklin</i>)	315.00

Miscellaneous Repairs

Repair Propeller Governor Gear Mount Area (<i>Continental</i>)	255.00
Chrome Repair Main Journals (<i>Continental P/N 4546, 24231 and 40584</i>)	425.00
Machine Second Key Slot (<i>Continental Governor Gear Mount Area</i>)	105.00
Apply Manganese Phosphate Coating	65.00
Inspection Fee, Non-repairable	25.00

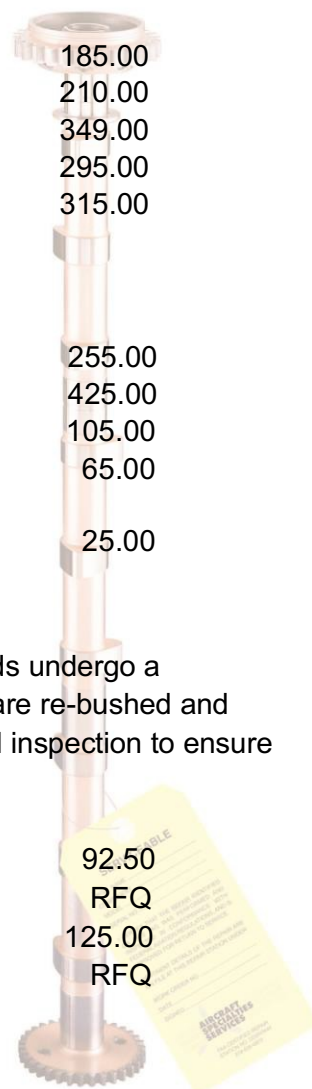
CONNECTING RODS / ROCKER ARMS

Each piece is degreased, cleaned and magnetic particle inspected. Connecting rods undergo a dimensional inspection, alignment check, as well as a twist and bore check. They are re-bushed and precision bored to new dimensional limits and alignment. Each part receives a final inspection to ensure it is like-new and an FAA 8130 maintenance release is issued for return to service.

Connecting Rods

Complete Repair/Recondition	92.50
Exchange	RFQ
Lycoming Tongue & Groove (LW10646, 13422, 19332)	125.00
Exchange Tongue & Groove (LW10646, 13422, 77450, 19332)	RFQ

All prices above are labor and service, parts extra.





CONNECTING RODS / ROCKER ARMS

Connecting Rods (cont.)

Modify Per S.I. 1183	30.00
Modify Per S.I. 1359	50.00
IO-520 Exchange Wide for Narrow, <i>(Includes workup less bushing)</i>	160.00
Balance a Set of 4	57.00
Balance a Set of 6	95.00
Balance a Set of 8	135.00

Rocker Arms

Complete Repair/Recondition Lycoming Style	49.00
Complete Repair/Recondition Continental Style	49.00
Clean and Dimensional Inspection Only	22.00
Drill Oil Supply Hole in Continental Old Style	22.00
Modify To Accept One Piece Bushing <i>(Complies with S.B. M93-7)</i>	RFQ

TACH SHAFTS

Tachometer shafts are cleaned and Magnaflux inspected. The shaft is then ground and hard chromed for improved wear. The shafts are then finish ground to new limits, Magnafluxed and a maintenance release is issued for return to service.

<u>PART #</u>	<u>PIN #</u>	<u>APPLICATION</u>	<u>CORE</u>	<u>OVH</u>
71643	STD-1199	IO-720 Only	75.00	140.00
75708	78368	O-235 <i>(Most)</i>	25.00	45.00
76155	78368	IO-540 <i>(Most) (Direct Drive)</i>	35.00	95.00
76121	78368	IO, AIO, LIO, AEIO-320 O, LO, IO, HO, LIO, TIO, AEIO, TO-360	35.00	65.00
76121	LW-18667	O-320-A, O-320-E	35.00	65.00
68757	STD-1199	O-320-A & E, O-340	85.00	140.00
60930	45530	VO-360, IVO-360-A1A, O-235-C, O-290-D, D2, D2C	25.00	80.00
LW15032	STD-2169	O-320-H, O, LO-360-E1A6D	25.00	65.00

All prices above are labor and service, parts extra.

CONTINENTAL STARTER ADAPTERS

Starter adapter overhaul includes all recommended inspections, Alodine housings and external hardware is gold cadmium plated. Assembly includes new seals, gaskets and bearings. Shaft gears are reground, Magnafluxed and fitted with our custom designed heavy duty clutch spring. Certain models may be available for exchange. Call to check stock if you require immediate shipment.

Engine Series

O300/ O346
O360/IO360/TSIO360
O470/IO470
IO520/TSIO520
IO550/TSIO550

Price Range

1161.00
1161.00 - 1537.00
1108.00
1108.00 – 2221.00
1108.00 – 2221.00

Please visit our website for specific adapter part numbers and application.

Repair Scavenge Pump Housing (*bore & install bushing*)

220.00

Price will vary based on core condition. The price above includes normally replaced parts. Some models may not qualify for flat rate pricing. See website for details of additional charges.

CONTINENTAL SHAFT GEAR / WORM GEAR

Each Shaft Gear/ Worm Gear is cleaned, visually inspected and magnetic particle inspected as required. The shaft gear clutch area is repaired by grinding to the appropriate next undersize. PMA clutch springs are available to match the final size. Each unit is issued a maintenance release for return to service.

Machine Old Style Shaft Gear (*M15, M30 or M40 Undersize*)

95.00

Machine New Style Shaft Gear (*M15 Undersize*)

170.00

Machine Old Style Worm Gear (*M15, M30 or M40 Undersize*)

75.00

Machine New Style Worm Gear (*M15 Undersize*)

110.00



INSPECT MISCELLANEOUS STEEL PIECES

(Items not priced elsewhere such as gears, pushrods, shafts, etc.)

(Per lot, maximum lot size 42 pieces)

Magnetic Particle Inspect Per ASTM 1444

4 Cylinder Engine	145.00
6 Cylinder Engine	185.00
8 Cylinder Engine	240.00
Geared Engine	275.00

ALL OTHER SHOP WORK

Our full service aerospace machine shop is available for custom projects on a quoted basis. We can accommodate contract or subcontract work under our FAR Part 145 repair station, PMA manufacturing authority or COTS projects for military or other specialized clients requiring detailed quality assurance.

Capabilities:

- Specialized OD/ID Grinding
- Spherical Radius Grinding
- Phosphate coating
- Heat Treating - Nitriding
- Magnetic Particle Inspection
- Material Testing
- Manufacturing
- Vibratory Finishing

- CNC Grinding
- Centerless Grinding
- Steam Annealing
- Ultrasonic Inspection
- Failure Analysis
- Conformity Inspection
- Turning/Milling Operations
- Precision Dynamic Balancing

Shop Labor Rate

Per-Hour

115.00

Prices listed above are "per item" and do not include parts, except where noted. All prices USD. Five day turnaround is normally available upon request for all items above except crankshafts requiring re-nitriding. Certain items may be issued a Dual Release (FAA/EASA). Prices are subject to change without notice.