



RAM AIRCRAFT, LP

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ENGINES • PARTS • PROPELLERS • ACCESSORIES • STC'S

RAM OHE TCM TSIO-520 Engine Overhaul Specifications

RAM OHE TSIO-520 engine - exchange

- Engine dynamic parts and tolerances overhauled within new limits per TCM overhaul manual, or better per RAM specifications
 - Certified crankcase housing used that meets RAM's standards for application and installation of new internal parts or parts overhauled to new limit tolerances - OHE
 - Oil pump - oil passages ported for improved oil system total flow
 - Comply with all AD's
 - Comply with Service Bulletins through category three (3)
 - Applicable steel parts magnaflux inspected
 - All engine counterweights, gears and castings replaced as required.
 - Rod & rocker arm bushings, bearings, seals, valve springs, valve keepers, intake & exhaust valves - new
 - Cylinders - RAM *Nickel New* Cylinder Package - NE
 - Intake valve seats - venturi type (rounded)
 - Intake valve guides - with improved oil control seals
 - Rocker arm boss - strengthened
 - Cylinders - flow and volumetric efficiency assured by RAM vendor specifications
 - Connecting rod cap to rod mating surfaces resurfaced and honed to new limit tolerances
 - All grind areas are steel shot peened
 - Rods are balanced for both total weight and end weight to within one (1) gram maximum weight variance between the heaviest and lightest per set of six rod assemblies
 - Balance: pistons & rings by vendor specs; pins RAM specs. - exchange
 - Reference lines, push rod housing and applicable external steel hardware - cadmium plated
 - External aluminum parts - primed and painted
 - Crankcase - heavy - incorporates RAM's 7th stud cylinder pad to cylinder base hold down/clamp assembly - OHE
 - Camshaft: RAM high efficiency [T210/T206 w/ - M & -R = TCM]
 - Crankshaft to new limit tolerances at std., or .010 under
 - Crankshaft assembly with counterweights, bushings, pins and internal gears installed - balanced to RAM specifications
 - TCM SB97-6 through bolt service bulletin complied with alternate STC compliance. Cylinder pad through bolts - new
 - Nuts, rod bolts and RAM specified locknuts - new
- OHE = Overhauled Exchange
NE = New Exchange - OEM or PMA
New = New Outright - OEM or PMA
New Items = Subject to test time, ferry time and inventory time.

Not Included:

Vacuum pump, tach generator, hoses, exhaust risers and exhaust parts are not included with the RAM OHE engine unless specified by a RAM Work Order Supplement.

Fine Wire Spark Plugs

Made of iridium alloy, these spark plugs produce a more efficient spark for extended plug life and better engine performance. Upgrade from standard massive plugs to fine wire spark plugs. Per engine - new: \$731

Accessory Specifications:

- Applicable where item is included in specific engine sales package.
- Alternator - OHE
[exchange serviceable clutch]
- Starter and starter drive - OHE
- Magnetos - Champion Slick - pressurized 6320 - NE
- Magneto Harness - Champion - new
- Spark plugs - new
- Turbocharger - balance to Mfr.'s specifications - OHE
- Turbo controller and throttle body - OHE
- Overboost relief valve - OHE
- Fuel injection system - OHE
- Intercooler - (as applicable) cleaned and pressure tested - exchange
- Intercooler - (Series VII) improved - larger 140 in³ - NE
- Exhaust risers - customer's risers reconditioned - exchange
- Induction couplings & clamps - new
- Air filter - RAM PMA new
- Oil breather system - inspected and repaired
- Oil cooler - NE
- Oil - new
- Oil filter - new
- Oil pressure relief valve kit & spring - new
- Dry Vacuum pump cooling kit - RAM - new (reuse WB's)
- Metal baffles refurbished & painted per spec. sheet. Gaps sealed.
- Baffle seals - RAM SureStand - red silicone rubber - new
- Specifications applicable to RAM's overhaul of TSIO-520-NB, -LB, -WB, -VB, -EB, -M & -R engines, with necessary adjustments for fuel system, induction system and turbocharger system as applicable
- Subject to Change: Specifications are subject to change due to availability of PMA new or factory new parts; vendor, factory, or RAM overhauled parts; or re-use of low time parts at customer's request. As applicable to RAM's FAA approved DER, DAR, STC and PMA authority, parts or procedure changes will be made at RAM's discretion when in the customer's best interest.

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Exchange Cores - Return Policy:

- Engine, crankshaft, crankcase, exhaust, accessories, propeller, governor, and hardware items are only sold on an exchange basis, based upon the customer's exchange of like type and normal run-out cores as removed from subject aircraft, and serviceable to RAM's overhaul engine specifications.
- Cores should be returned within 30 days of engine shipment, and immediately with a RAM installation.
- Non-serviceable core fees may be due and payable to RAM. Engines or RAM products may be delivered prior to verification of exchanged cores.
- If cores are found non-serviceable, the applicable non core fee will be invoiced with payment due to RAM within 30 days.

RAM TBO Warranty Support Program:

- For the first 12 months or 480 hours, whichever occurs first, the RAM engine and accessories supplied with the RAM OHE engine are covered by a 100% parts and labor warranty.
- Thereafter, the RAM engine only is warranted to TBO on a prorata basis, at RAM's reduced minimum accrual rate of only 30 hours per month.
- RAM warranty may be administered by a full service FBO - based upon Cessna's published labor time schedules as well as RAM's current parts and labor rates.
- RAM's portion of warranty parts freight is limited to transportation taking place within Continental United States, Alaska and Hawaii.

Unfeathering Accumulator:

Due to propensity for older prop unfeathering accumulators to contaminate the engine oil supply, existing unfeathering accumulators will be disabled, unless replaced with newer units.
 OHE: \$875 / each [Core Charge: \$400/each]