



RAM AIRCRAFT, LP

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ENGINES • PARTS • PROPELLERS • ACCESSORIES • STC'S

Cessna 414

RAM Overhaul & Improvement Package (R.O.I.) - Series VII

Two Engines - TCM TSIO-520-NB

- Horsepower - 335 hp
- TBO - 1600 hrs.
- Cylinders - NE
[RAM *Nickel New* Cylinder Package]
- Crankcase - heavy style case - OHE
[with 7th studs on cylinder bases]
- Crankshaft - OHE
- Camshaft - RAM high efficiency
- Alternator - OHE
[reuse serviceable clutch]
- Starter and starter drive - OHE
- Magnetos - Champion Slick 6320 - NE
[pressurized]
- Spark plugs - new
- Magneto harness - Champion - new
[parallel type]
- Fuel injection system - OHE
- Turbocharger - OHE
[TA81 larger 17 in³ compressor]
- Turbo controller - OHE
- Overboost relief valve - OHE
- Intercooler - Improved - NE
[larger 140 in³ to RAM specifications]
- Induction couplings - RAM - new
- Induction flex elbows - RAM - new
- Air filter - RAM - new
- Metal baffles - exchange
[refurbished and painted]
- Baffle Seals - new
[RAM *SureStand* red silicone rubber]
- Cooling shroud - RAM - new
[for dry vacuum pump]
- Oil cooler - NE
- Air / oil separator - exchange
[inspected and repaired]
- Breather, rod and cap - OHE
[Stainless Steel]
- Precision balance - exchange
[crankshaft and rod sets]
- Core Return Policy - See:
[RAM OHE TCM TSIO-520 Engine Overhaul Specifications.](#)
- Also see:
[RAM Value Options & Compliance Items.](#)

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.

Installation Parts - Included

- Wastegates and actuators - RAM - OHE
- Engine shock mounts - new
- Exhaust slip-joints - PMA - new
- Primary fuel & oil and AC hose kits - heavy duty - *Teflon*TM - new

Compliance Item

- Note: Cessna 414-0001 through 414-0802
[Cessna SK414-8E is required.] [See RAM Value Options & Compliance Items.]

Upgrade Kit - Included - RAM VII

- Hartzell *ScimitarPlus* Propellers - NE [New technology FC7693 Blended Airfoil Blades]
- New 1-piece D-7267-2P polished spinner and new bulkhead - NE
[Includes new de-ice boots.] [The slip ring is refurbished - exchange]
- McCauley MC-1 Governors - exchange
- Propeller Electronic Synchrophaser Control Box - RAM RPS2000 - new
- RAM VII - 12% larger Inconel Turbo Wye - new
[With Inconel elbow from wye to wastegate with clamp and stainless
[steel wastegate overboard pipe - new]
- RAM VII - Upgrade - Intercooler Scoop - RAM Low profile - new
- RAM VII - Upgrade - Magneto harness - new [# 1 fires all top plugs, # 2 fires all bottom plugs]
- RAM VII - Upgrade - Larger Intercooler 140 in³ - to RAM specs - exchange
- RAM VII - Upgrade - Airesearch TA81 turbocharger - OHE
[with larger 17in³ compressor and stainless steel turbine housing]
- RAM VII - Upgrade - air exit ramp - wastegate area - RAM - new
- RAM Vortex Generators - RAM engineered - parallel flow - new
- Cessna 414-0001 thru 414-0655
Install improved cooling engine cowling nose bowls - New exchange
Paint new engine cowling nose bowls to match the nose bowls removed.
[414-0801 thru 414-0965 -The Cessna factory delivered with improved cooling larger nose bowls.]
- Shadin Digiflo-L Electronic Fuel Management - new
[without RAM connecting the avionics interface]
- EGT gauge range marked - new [with probes - new] [Leads as required.]
- Tach, MP and 3-in-1 engine gauges - check calibration and range mark
- Serviceable (non-TAS) airspeed indicators - remarked
[If TAS indicator is currently installed, consult your RAM representative.]
- Gross Weight Increase STC and Flight Manual Supplement
[+ 395 lbs. Useful load] [GW 6,350 lbs. up to 6,765 lbs.] [Ramp Wt. to 6,800 lbs.]
- New McCauley C-515 *Sabre Tip* propellers [In lieu of new Hartzell props] [with new de-ice boots] [without spinners & bulkheads] - NE: Add additional \$6,060 to package cost.

Installation and Set-up

- Each aircraft receives a detailed preflight and flight inspection to ensure airworthiness and to document performance of instruments, flight controls, landing gear, accessories, lights, and avionics.
- Discrepancies are brought to customer's attention. Unairworthy items must be repaired at customer's expense during RAM proceedings in order for RAM to set up, fly, and deliver the finished product.
- Old engines are removed. Engine beds are cleaned. Mount structures are inspected and corrosion treated. Four hours labor per engine is standard.
- Due to its tendency to contaminate the engine oil supply, if installed, the propeller unfeathering accumulators will be disabled unless optionally replaced with a newer unit. Prop Unfeathering Accumulator: \$875 / each - OHE
- Applicable RAM R.O.I. Installation Parts and Upgrade Kit are installed.
- Engines installed and set up, involving multiple flights and fuel.
- Aircraft washed and interior cleaned prior to delivery and customer acceptance.

Cessna 414 - Series VII

RAM Overhaul & Improvement Installation (R.O.I.)

- **Complete Package: \$141,155** - S/N 414-0001 to 414-0655 - w / installed larger nose bowls
 - **Complete Package: \$137,555** - S/N 414-0801 to 414-0965 - have original larger nose bowls
- Installed at RAM - exchange**

- **RAM OHE TCM TSIO-520-NB - 335 hp engines**
- **Installation Parts - Included**
- **Installation and Set-up**
- **Upgrade kit - Series VII**