



## RAM AIRCRAFT, LP

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**ENGINES • PARTS • PROPELLERS • ACCESSORIES • STC'S**

### Cessna 421B

#### RAM Overhaul & Improvement Package ( R.O.I. )

##### Two Engines - OHE CMI GTSIO-520-H

- Horsepower - 375 hp
  - TBO - 1600 hrs.
  - Cylinders - NE  
[ RAM Nickel New Cylinder Package ]
  - Crankcase - heavy style case - OHE  
[ with 7th studs ] [ Like core required ]
  - Crankshaft - OHE
  - Camshaft - NE
  - Propeller shaft, quill shaft,  
and reduction gear - OHE
  - Alternator - exchange
  - Starter and starter drive - OHE
  - CMI/Bendix Magnetos - OHE  
[ non pressurized ]
  - Spark plugs - new
  - Magneto harness - Champion - new
  - Fuel injection system - OHE
  - Turbocharger - OHE
  - Turbo controller - OHE
  - Overboost relief valve - OHE
  - Intercooler - exchange  
[ inspect and repair ]
  - Induction couplings - 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
  - Precision balance - exchange  
[ crankshaft and rod sets ]
  - Core Return Policy - See:  
RAM OHE CMI 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
- Induction duct - scoop to air box - new
- Induction duct - throttle body to intercooler - new
- Exhaust slip-joints - PMA - new
- Air / oil separator - inspected and repaired - exchange
- Coupler - turbo to throttle body - new
- Primary fuel and oil hose kits - heavy duty - Teflon™ - new

##### RAM Overhauled Engine TBO Warranty

100% Engine, propeller, and accessories for the 1st year, or 500-hrs, whichever occurs first. Thereafter, the engine only is warranted on a prorata basis to TBO at RAM's reduced minimum accrual rate of only 30 hours per month, thus extending coverage over four years. For complete details go to [www.ramaircraft.com/ramtbowarranty](http://www.ramaircraft.com/ramtbowarranty)

## Upgrade Kit - Included - 421B

- Propellers - Select a 421B Package: ...Option 1 ...or, Option 2 ...or, Option 3
- Governors - McCauley MC-1 - exchange
- Right propeller control cable - [ when applicable ] - new
- Propeller Synchrophaser - RAM RPS2000 - [ DER approved ] - new
- Shadin Digiflo-L Electronic Fuel Management System  
[ without RAM connecting the avionics interface ] - new
- EGT gauge range marked - new [ with probes - new ] [ Leads as required. ]
- 3-in-1 engine gauges - check calibration and range mark
- RAM STC - Cruise climb @ 35" MP / 1950 rpm MP - check calibration and range mark

## 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. OHE: \$875 / each
- Applicable RAM R.O.I. Installation Parts and Upgrade Kit are installed.
- Engines installed and set up, involving multiple flights and fuel.
- Aircraft washed. Interior cleaned prior to delivery and customer acceptance.
- Remove, clean, and reinstall the air/oil separators on all 421C and late model 421B (after serial number 500).

## Prop Option

- New Hartzell C3D-050 propellers - [ with new spinners, bulkheads and de-ice ] - NE  
Hartzell has greatly improved the accuracy of manufacturing, reducing blade-to-blade weight and aerodynamics variability and ensuring blades that are free from even the most miniscule surface flaws. The end results for pilots and passengers is smoother running propellers.  
[ no additional charge ]

## Cessna 421B

### Three Complete RAM ( R.O.I. ) Packages

Installed at RAM - exchange

- RAM OHE CMI GTSIO-520-H engines
- Installation Parts - Included
- Installation and Set-up
- Governors - McCauley MC-1 - exchange
- Propellers - Select an option by propeller: 1, 2 or 3
- **RAM ( R.O.I. ) Option 1.....\$134,204**  
Reuse Customer's Propellers [ To reuse, propellers must be airworthy. ]
- **RAM ( R.O.I. ) Option 2.....\$144,294**  
Overhaul Customer's Propellers  
[ Overhaul is a condition item ] [ Additional charges apply if OH exceeds \$4,500/each. ]
- **RAM ( R.O.I. ) Option 3.....\$149,852**  
Hartzell - New Propellers - NE  
[ with new spinners, bulkheads & De-ice boots ] [ reuse slip ring ]  
OR  
McCauley C516 - New Propellers - NE [ add additional \$8,905 ]  
[ without spinners, bulkheads ] [ includes De-ice boots - new ] [ reuse slip ring ]