



RAM AIRCRAFT, LP

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ENGINES • PARTS • PROPELLERS • ACCESSORIES • STC'S

RAM Installed Value Options and Compliance Items

Engine Control Cables

Engine control cables are often marginally functional due to permanent bends, binding, heat induced distortion, crimping and general wear from dirt and grime. RAM offers PMA-new throttle, propeller, and mixture cables at a value savings in the best interest of both customer and RAM. (cowl flap and alternate air cables extra)

Cessna: 310R, T310, 320, 340, 340A, 402B, 402C, 414, and 414A.

Installed - [each] during twin engine R.O.I installation at RAM: **\$1,150**

Installed - [all six] during twin engine R.O.I installation at RAM: **\$5,929**

Heavy-duty Teflon™ Hose Kits - Per Aircraft

Optional Teflon™ hose kits offer additional integrity and strength. They include an integral firesleeve. RAM recommends replacing hydraulic hoses and air conditioner hoses while the engine nacelles and airframe are open for installation access.

Note: Teflon™ Hose Kits are standard on most RAM Series I, IV, VI, VII (R.O.I.) Packages. (Hose kits are per aircraft)

Fuel and Oil		Hydraulics		Air Conditioning	
421C	\$4,762	421C	\$1,178	421C	\$415
421B	\$4,953			421B	\$520
414A	\$3,118	414A	\$1,019	414A	\$550
414A - Series V	\$6,216	414A - Series V	[Included in \$6,216]	414A - Series V	\$542
414A - Series VII	\$3,395	414A - Series VII	\$1,006	414A - Series VII	\$550
414	\$3,435			414	\$632
404 Titan	\$3,485	404	\$732	404	\$480
402C	\$2,455	402C	\$1,019	402C	\$546
402B	\$2,555				
335	\$2,579				
340	\$3,456			340	\$680
340A	\$3,067			340A	\$661
310R	\$1,744				
T310	\$2,711				
T210	\$1,825				
T206	\$1,806				
A36 520/550	\$1,408				
F33A/C 520/550	\$929				
A/B36TC	\$1,920				
Baron E55	\$1,823				
Baron 58 '70 - '83	\$2,132				
Baron 58 '84+	\$2,169				
Baron 58P	\$3,819			Baron 58P	\$524
Baron 58TC	\$3,819			Baron 58TC	\$524

Champion SlickSTART™ for Slick Magnetos

Direct drive engines. Improve engine starting, hot or cold, by unleashing a burst of ignition energy during initial engine crank, up to 340% more power to the plugs during engine start. Installed - Per twin engine airplane. **\$1,670** - new outright

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: \$984

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Vortex Generators - RAM Engineered

At slow speeds, RAM VG's better manage the boundary layer airflow across the wings and tail, allowing for lower stall speeds and reduced Vmc. (For 340/A; 414; 414A; 402C; and 421C) (Standard on many of the RAM (R.O.I) Series Upgrade Packages.) Installed during a RAM (R.O.I.) Engine Installation Package: **\$1,699**

Power-Pac - Spoilers

Power-Pac Spoilers improve descent rate by reducing lift and increasing drag at the touch of a button. They may be deployed at any speed up to Vne yielding faster descent rates without the need for a major and sudden power change - reducing the potential for engine shock-cooling or loss of cabin pressure. Hydraulic actuated, Power-Pac spoilers are fail-safe with auto retract, and they are operational in icing conditions. Deployment is even under all air loads. System weight under 20 lbs. Working pressure is at 950 psi. Time to deploy is 2 to 4 seconds. Electrical requirement is 24 volts DC @ 9.5 Amps. Available for: T310R, 340, 340A, 414, 414A, 402C, 421B, 421C. Notes: (1) T310R must have Micro AeroDynamic VG's installed. (2) 340/A and 421B may not install spoilers if Robertson STOL Kit is installed. Concurrent with a RAM (R.O.I) Engine Installation Package: **\$12,100** **Baron: \$12,100**
Airplane with RSTOL: \$13,400

Preheat - E-Z Heat Engine Heater

Applied directly on the bottom of the oil sump. Two models available: single pad or two-pad. Reduces engine wear. Enhances flow of oil to vital components. Heats 12 quarts of oil from -40°F to +60°F one hour. Uses less than 300 watts. Heats entire engine in about 4 hours. No STC required. Installed during engine build-up with prior notice: Single Pad...**\$169** Two Pads...**\$199**

Vacuum Pumps - Tempest - PMA New

Typically a condition change item, new Tempest dry vacuum pumps include factory warranty. Tempest AA442CW - new - each - exchange: **\$1,535**

New Crankcase and New Crankshaft - Options

RAM can often purchase new crankcases and new crankshafts at a significant savings due to our production level and purchasing volume. RAM is willing to pass along such savings. We encourage you to ask us about the current pricing upgrade fee to optionally install a new crankcase or new crankshaft while your RAM OHE engine is being assembled.

New Exhaust System

New Exhaust System - exchange: Cessna 310R, 340, 340A, 414, 414A, 402B, 402C, and 421B. Sold complete on an exchange basis. Replace turbo wye, exhaust risers, exhaust elbows, elbow from the wye to wastegate, slip joints, turbocharger overboard exhaust tailpipe, wastegate overboard pipe, and exhaust clamps. Both Inconel and/or Stainless Steel parts used per customer's agreement and market availability at time of installation. Ask a RAM Sales Representative to review the current status of new exhaust parts and prices. **Call**

Beech Baron 58P/TC - New Exhaust

Beech Baron 58P/TC - New Exhaust - ROI exchange Complete PMA New Exhaust System, from risers to overboard pipe, including clamps. Price installed at RAM when purchased with a RAM OHE engine per engine - exchange: **\$7,063**

New Cleveland Brakes - Replace or Upgrade

Replace original equipment 3 puck brakes with new Cleveland 4 puck system, including new discs and wheels. Known to enhance braking performance on later models, four puck brakes reduce braking time and distance, improve brake reliability, and improve braking smoothness. This is an upgrade for 3 puck 340/A and 414 models; a replacement new for 414A and 421C. Cleveland - 4 puck, new discs and new wheels per airplane pair - outright - installed: **\$5,716**

Pressurized Magnetos - Cessna 421 (GTSIO-520-H & -L engines)

Pressurized Magnetos: CMG/Bendix OHE S6LN1251-right, and CMG/Bendix OHE S6LN1255-left. These pressurized magnetos hold up to 3.1 PSI pressurization differential within the magneto to help reduce internal arcing caused by the thinner atmosphere at altitude. Available for GTSIO-520-H & -L. Upgrade fee to pressurized magnetos, add / per engine: **\$420**
Note: (-N engines, additional requirements and fees are involved, you are welcome to ask for details.)

Seventh Seat - Cessna 340/A

RAM engineered, this 7th Seat installation kit & STC allows for installing a seat belt on the aft baggage shelf, thus enabling a person to safely sit in that area. There is no seat provided; typically such 7th seat passenger brings along a seat cushion similar to one used for sporting events. The RAM 7th seat kit includes reinforcement webs for beefing up the area below the shelf, hard points, hardware, drawings, placards, a seat belt assembly, and STC. Seat belt color/choice is available in gray or black. Installed during R.O.I.: **\$1,112**

Induction Air Scoops - Cessna 414A

Following the recommendations of Cessna Service Letter ME80-32, applicable to 414A-0001 to -0524, an external air scoop should be installed to collect additional induction air vs. the limited amount being collected by the original flush style NACA scoop. RAM's standard paint is Matterhorn white. Series IV - 325 hp customers need to purchase these scoops if Cessna kit is not installed - Optional. (Not needed on Series VII having RAM scoops.)
Installed and painted - per airplane: **Call for pricing and availability**

New Larger Nose Bowls for early Cessna 414's and 340's. New Nose Bowl Replacements for later Cessna 414's, 340A's, 310's, 320's and 402's.

Improve Engine Cooling Install larger nose bowls on engine cowlings of early model of Cessna 414's, 340's, 310's, 320's and 402's or upgrade your old worn out ones. New nose bowls are painted to match the nose bowls removed. [up to three colors painted]
Cessna 340 -0001 thru 340-0555 new - exchange / airplane / during RAM engine installation: \$6,670

Replacement Sets Aircraft with larger nose bowls can repair them by installing new sets.
Cessna 414 - 0601 and Up - new - exchange / airplane / during RAM engine installation: \$6,670
Cessna 340A - new - exchange / airplane / during RAM engine installation: \$6,670

Zero Fuel Weight Kit (ZFW KIT)

Zero fuel weight kit installation is required for all Cessna 414A winglet airplanes. ZFW Kit installed at the time of engine and winglet installation at RAM. Add \$3,860

Replacement Scoops for RAM Series Cessna 340/340A/414 Airplanes

When replacing engine beams on a Cessna 340, 340A, or 414, it is common to need to replace one or both scoops. If the scoop needs to be replaced during beam work, add: \$5,705 per side.

Crankcase and Crankshaft

- Older style light crankcase must be upgraded to heavy style crankcase. Call For Current Pricing [New crankcases are optionally available. Prices vary during the year, but typically are available at RAM's purchase savings, which offers you a significant value.]
- **Crankshaft Upgrade:** RAM only uses large diameter VAR crankshafts. If the exchanged core crankshaft is not a large diameter VAR crankshaft additional upgrade charges apply. Ask your RAM Sales Consultant for current prices.

Wing Rib Improvement Kit SK414-8E • Cessna 340/A & 414 - Series VI & VII

Applicable to: 340-0001 - 340A-0002 and 414-0001 - 414-0802.

Cessna Service Bulletin ME76-2 requires installation of Wing Rib Improvement Kit SK414-8E.

When installing a RAM 335 hp Series VI or VII engine upgrade package, useful load is increased +415 lbs. The STC requires that kit SK414-8E be installed on the aircraft.

To install, per airplane: \$8,833

Propeller Unfeathering Accumulators

Older prop unfeathering accumulators can significantly contaminate the engine oil supply. Older accumulators will be disabled during the RAM engine installation unless newer units installed.

(Core Charge \$400) Per engine - OHE - each: **\$875**

Cessna 402C and Cessna 414A Cessna SK414 -19B Engine Beam Service Kit

- Cessna AD97-26-16 is applicable to all Cessna 402C and 414A aircraft, the only exceptions being the last six 414As manufactured which included the changes at the factory, 414A-1207 thru 414A-1212. Different Service Kits are applicable to SK414-19B depending on individual airplanes by serial number and their current level of compliance with SK414-17. RAM can advise.
- All RAM Series VII Cessna 414A upgrades must have the Cessna AD 97-26-16 in full compliance before installing RAM engineered stainless steel straps. Installing Cessna SK414-19B:
 - Cessna 414A0001 thru 414A0646 Without SK 414-17 Beam Kit
 - Cessna 414A0001 thru 414A0646 With SK 414-17 Beam Kit
 - Cessna 414A0647 thru 414A1212 Install SK414-19 Beam Kit
 - Cessna 402C0001 thru 402C0468 Without SK414-17 Beam Kit
 - Cessna 402C0001 thru 402C0468 With SK 414-17 Beam Kit
 - Cessna 402C0469 thru 402C0808 Install SK414-19 Beam Kit

RAM must request a current quote of price and availability from Cessna due to constant changes at Cessna.

RAM is glad to e-mail its PDF "*Cessna SK414A-19 Engine Beam Kit Information*"

Auxiliary Fuel Pump Wiring Modification Cessna MEB88-3 Revision 2

Applicable to and recommended for all twin Cessna airplanes. Required for all 414A airplanes to be upgraded to RAM Aircraft Series VII. This improvement upgrades the auxiliary fuel pump switch in Cessna 310, 320, 335, 340, 340A, 401, 402, 411, 414, 414A, and 421 airplanes. Cost for installation (parts and labor) at RAM Aircraft in Waco, TX in conjunction with two engine installation projects are:

Installed Per Airplane	
310, 320, and 335 (SK310-104B1)	\$1,810
340-0001 thru 340-0555 (SK310-104B2)	\$1,810
340A-0001 thru 340A-0469 (SK310-104B2) (SK340-18B / if not installed)	\$1,810 / \$1,283
340A-0470 thru 340A-4817 (SK310-104B2)	\$1,810
402 / 404 (SK421-138D1)	\$2,067
414 (SK421-138D2) / (add SK414-11A / if not installed)	\$2,067 / \$1,283
414A (SK421-138D1)	\$2,067
421B (SK421-138D1) / (SK421-82B / if not installed)	\$2,067 / \$1,283
421C (SK421-138D1)	\$2,067

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