Keep Your Investment Running Strong...
Cat® Gas Compression Engine Upgrade Kits

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KEY CUSTOMER

Decision Factors

FLEET FLEXIBILITY
Customers have more operating flexibility as they move through the upgrade offerings. The combinations of technology allows greater efficiency, increased altitude capability, and improved emissions flexibility. Customers can choose which options are best suited for their diverse applications.

COST
Upgrade options will vary in cost, as a percent of the cost of a new engine, depending on the level of upgrade.

IMPROVED CONTROLS
Integrated controls technology enables improved diagnostic capability and enhanced troubleshooting, engine configuration, and tuning capabilities.

FUEL EFFICIENCY
The combination of technologies enables more precise fuel delivery and complete combustion for higher operating efficiencies and improved fuel economy.

ALTITUDE
Upgrade options allow for increased altitude capabilities.

TURNDOWN
Upgrade options allow for enhanced torque speed turn-down.

EMISSIONS
Upgrade options offer the ability to reach emission levels and compliance for critical areas.
G3512 and G3516 Conversion to ADEM³™ with AFRC and NOx Sensor

Upgrade your G3512 and G3516 engines in the field to the ADEM³ system which integrates engine sensing and monitoring, AFRC (air/fuel ratio control) with NOx sensors, ignition timing, and detonation control in to one comprehensive engine control system.

- Finer Engine Control
- Extended Engine Life
- Improved Diagnostics and Interface
- Expanded Safety and Shutdown Capability
- Remote Monitoring Capability

G3508 Conversion to ADEM³ and AFRC with NOx Sensor
Including Twin to Single Turbocharger/G3508 Conversion to ADEM³ and AFRC with 0₂ Sensor

Upgrade your G3508 engines in the field to the ADEM³ system which integrates engine sensing and monitoring, (AFRC) air/fuel ratio control with NOx sensors, ignition timing, and detonation control in to one comprehensive engine control system. There is also an option to convert the twin turbocharger configuration to a single turbocharger.

- Increased Power
- Improved Turndown
- Improved Altitude Capability
- Simplified Controls

ULTRA LEAN BURN UPGRADE

Upgrade your G3500 engines to Ultra Lean Burn technology. This proven technology utilizes state of the art ADEM³ systems, air/fuel ratio control, and NOx sensors to operate at not-to-exceed 0.5 or 1.0 g/bhp-hr NOx performance.

- 0.5 g NOx Emissions Without Use of 3-way Catalyst
- Lower Lifecycle Cost
- Done in conjunction with Major Overhaul
- Improved Efficiency and Altitude Capability
- Improved Reliability

LOW EMISSION UPGRADE

Upgrade your G3508 and G3516 engines to low emission configuration enabling 0.5 or 1.0 g/bhp-hr NOx performance.

- Applicable for G3508 and G3516 with ADEM³, AFRC and NOx sensor
- Improved Alternate and Speed Turndown Capability
- Increased Horsepower
- Fleet Flexibility

For more information on the performance data of each, please contact your local dealer or review the associated spec sheet.
**WATER COOLED MANIFOLD UPGRADE**

**G3500 Water Cooled Exhaust Manifold Upgrade**
Upgrade your G3500 engine with the new water cooled, dual layered exhaust manifolds similar to G3500J engines.

- Maintains HP
- Lower Lifecycle Costs
- Achieve 0.5 g/bhp-hr NOx emissions
- Provides lower surface temperatures on engine exhaust system
- Radiator cooling capacity must be evaluated

**G3500 ADVISOR PANEL**

**G3500 Advisor Panel / Software Upgrade**
Upgrade your engine with Remote Advisor Panels. The additional software upgrade will allow for enhanced engine setup, troubleshooting, and diagnostics.

- Engine Setup and Troubleshooting Without Cat® Electronic Technician (ET)
- Set Up Engine from Operator Interface Panel
- Complete Fault Code Text (Actual Text, Not Just Numbers)

**G3600 UPGRADES**

**G3600 ADEM3 Upgrade**
Upgrade your G3600 engines in the field to the ADEM3 system which integrates engine sensing and monitoring, air/fuel ratio control, ignition timing, and detonation control into one comprehensive engine control system.

- Significantly Improved Uptime
- Improved Troubleshooting
- Available for All G3600 Models

**G3600 VTC to TPS Turbocharger Upgrade**
Upgrade your existing TPS turbocharger to the VTC turbocharger.

- Upgrade Turbo, Aftercooler, and ECM with Latest Software to get 0.5g NOx
- Compatible with ESS or ADEM3 Engine Controllers (Hydrax System only)
- Reduced Fouling Risk
- Up to double the time between service intervals
- Improved Uptime
- Improved Altitude and Turndown Capability

**G3600 ADEM4 Upgrade**
Upgrade your G3600 to ADEM A4 technology for increased power, better altitude capability, improved fuel tolerance, and lower emissions.

- Greatly expands fuel tolerance range
- Improved emissions tracking during load changes
- Optimized turbocharger trim and two-stage aftercooler design
- Improved piston design with an optimized swirl ratio
- Optimized cam events utilizing the Miller Cycle
- Enhanced engine software with direct NOx control

**G3600 HMI Panel**
Upgrade your G3600 engines with the new HMI panel, the easy to use touchscreen display that performs the functions of the customer version of Cat ET.

- Commonality will allow for similar user experience across products
- Additional features include the ability to remotely reset the engine, log data, and view histograms and snapshot data
- Perform alarm and shutdown resets without having to power cycle the engine when ready to be used
Advantages of Cat® Engine Upgrade

With these options, you can bring your older engine up to the latest technology level to improve operating efficiencies, including lower operating costs, improved fleet flexibility, and increased sustainability.

Greater Return on Investment
By extending the useful lives of existing assets, customers realize greater returns on their initial capital investments.

Lower Owning & Operating Costs
Through higher efficiency, improved capabilities, and the reliability and durability provided by genuine Cat parts, owning and operating costs are lowered.

Increased Engine Uptime
Through improved diagnostic and troubleshooting capabilities in combination with genuine Cat parts, engine up-times are increased.

Enhanced Performance
Customers benefit from higher horsepower, lower emissions, better fuel efficiency, and higher altitude capability.

Environmental Sustainability
Improved fuel efficiency, lower emissions, and extending the useful life of older assets reduces the impact on our environment.

Safety
Upgrades that lower engine surface temperatures increase the safety of the environments in which the engines are located.

Caterpillar Competitive Advantage
Guaranteed for fit and function, Genuine Cat Parts offer the right combination of quality and price for your commercial engine. Coupled with a world class dealer service network, Caterpillar and Cat dealers provide unmatched service and total parts support. Please contact your Cat dealer for details and confirmation of availability. They will help you make an informed decision.

For ordering and pricing contact your Cat dealer.