Keep Your Investment Running Strong...

Cat® Gas Compression Engine Upgrade Kits

G3500 GAS ENGINE UPGRADERS
- Low Emission
- ADEM3™
- EIS
- Ultra Lean Burn (ULB)
- Advisor Panel
- Advisor Panel Software

G3600 GAS ENGINE UPGRADERS
- Water Cooled Manifold
- Axial to Radial (VTC to TPS) Turbocharger
- ADEM3

G3500 GAS ENGINE
- G3600 GAS ENGINE

Cat® G3500 GAS ENGINE UPGRADES
- G3600 GAS ENGINE UPGRADES
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 turndown.

**EMISSIONS**
Upgrade options offer the ability to reach emission levels and compliance for critical areas.
**G3508**

<table>
<thead>
<tr>
<th>Ambient Temp</th>
<th>ULB @ 1.0g</th>
<th>ULB @ 0.5g</th>
<th>Upgrade @ 1.0g</th>
<th>Upgrade @ 0.5g</th>
<th>EIS</th>
<th>ADEM® w/NOx</th>
<th>ULB @ 1.0g</th>
<th>ULB @ 0.5g</th>
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<td>100°F (38°C)</td>
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**Target turnaround from order to ship is 30 calendar days. Contact the direct ship customer service group at 800-566-7782 option 4, and then option 3 to inquire updated ESDs.**

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**G3512**

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**G3516J**

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**G3520J**

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ADEM3 UPGRADE

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 into 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 O₂ 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 into 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
- Improved NOx Emissions
- Improved Reliability
- Simplified Controls

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® ET
- Set Up Engine from Operator Interface Panel
- Complete Fault Code Text (Actual Text, Not Just Numbers)

ULTRA LEAN BURN UPGRADE

G3500B Ultra Lean Burn (ULB) 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 levels with higher altitude capability throughout the total speed range.

- G3508, G3512, G3516
- Lower Operating Costs
- Higher ROI
- Increased Horsepower
- Fleet Flexibility
- Lower Lifecycle Cost
- Done in conjunction with Major Overhaul
- Improved Efficiency and Altitude Capability
- 0.5g NOx Emissions Without Use of 3-way Catalyst
LOW EMISSION UPGRADE

G3508 and G3516 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
- 0.5 g/bhp-hr or 1.0 g/bhp-hr NOx Emissions
- Improved Altitude and Speed Turndown Capability
- Horsepower rating remains the same
- Components: Turbocharger(s) (including oil and water lines), 2-Stage Aftercooler, Air Cleaner(s), Water lines, Oil Cooler
- Radiator Cooling Capacity must be evaluated
- G3508 must have Single Turbocharger – Upgrade Kit is available

WATER COOLED MANIFOLD UPGRADE

G3516B and G3520B Water Cooled Exhaust Manifold Upgrade
Upgrade your G3516B or G3520B 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

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 in to one comprehensive engine control system.

- Significantly Improved Uptime
- Improved Troubleshooting
- Available for All G3600 Models
- Improved Reliability Compared to Engine Supervisory System (ESS)

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
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.

The Cat 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.