



AT27 to 275GL+ with ESM2 Conversion

Upgrade Offering

Product description

Increase your power, improve reliability and disturbance tolerance, reduce emissions and simplify your controls with the Waukesha* AT27+ to 275GL+ with ESM2 Upgrade kit. This Upgrade will greatly advance the control capability of the engine and incorporates various reliability improvements made over the life of the engine to transform your user experience.

Product details

Upgrade Contents:

- ESM2 single control panel module & front wiring harness replacement
- 12"/305mm remote mounted HMI with harness
- IPMD2 ignition module and quick connect ignition coils
- Smart Thermocouple Modules (STU) for managing exhaust & main bearing temperatures
- New high temperature harnessing for actuators, sensors near exhaust
- Air handling control actuators
- Power distribution box
- Cylinder head prechambers
- Turbochargers, Turbo Connections, Intercoolers, Exhaust Manifolds, Air Inlet Connections
- Oil cooler, spin on oil filter manifold, centrifugal oil filter
- Thermostat housing and water pump overhaul
- Gas Regulator, Carburetor, Fuel Manifold

- Flywheel
- Governor
- Dual starters

Customer benefits

- **ESM2 Controls with NOx AFR & IPMD2**
 - Controls upgrade and consolidation
 - All thermocouples and controls are managed out of a single, high capacity control module
 - Adjusts air/fuel ratio based on output from NOx AFR & NOx Sensor to maintain 0.5 g/bhp-hr NOx.
 - Trican sensor measuring humidity, temperature, pressure at air inlet to improve engine performance.
 - Ease of access to wiring harnesses
 - Single control panel via off engine HMI – Provides easy-to-read engine operating parameters. No laptop needed. Data trending, Fault trees, Troubleshooting, manuals all available throughout the HMI.
- **Lower Prechamber Volume (2% → 1%)**
 - Improved prechamber geometry
 - Provides stable operation at 0.5 g/bhp-hr NOx
- **Improved Turbocharger Match**
 - Allows for leaner air/fuel ratio which provides lower fuel consumption and emission levels with increased power.
- **Improved oil filtration, easier maintenance, improved packaging**
- **Reliability, uptime, availability**
 - Hardware improvements – Wastegates, Ignition system, fuel system
 - Improved disturbance tolerance – No more wastegate learning

- Improved startup – automatic lean out after starting
- New soft e-stop to minimize fuel in the engine at shutdown

Performance

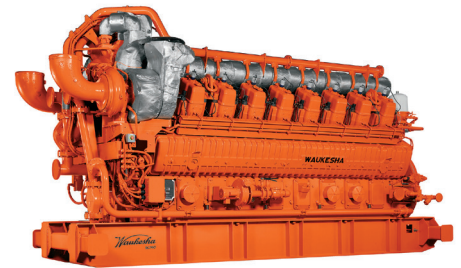
- Increased horsepower
- Improved air handling, both steady state and transient
- Improved efficiency

Customer impact

- Increased engine power and availability
- NOx emissions read directly from exhaust stream; no calculations required
- Reduction in unplanned shutdowns
- Lower gas consumption means lower costs
- Ease of access for lube oil maintenance
- Quick connect coils/thermocouples

Applicable units

ATGL	12V-AT27GL 16V-AT27GL
------	--------------------------



INNIO* is a leading solutions provider of gas engines, power equipment, a digital platform and related services for power generation and gas compression at or near the point of use. With our Jenbacher* and Waukesha* product brands, INNIO pushes beyond the possible and looks boldly toward tomorrow. Our diverse portfolio of reliable, economical and sustainable industrial gas engines generates 200 kW to 10 MW of power for numerous industries globally. We can provide life cycle support to the more than 48,000 delivered gas engines worldwide. And, backed by our service network in more than 100 countries, INNIO connects with you locally for rapid response to your service needs. Headquartered in Jenbach, Austria, the business also has primary operations in Welland, Ontario, Canada, and Waukesha, Wisconsin, US.

Find your local support online: www.innio.com/en/company/providers

IWK-219036-EN

*Indicates a trademark

© Copyright 2021 INNIO Waukesha Gas Engines Inc. Information provided is subject to change without notice. All values are design or typical values when measured under laboratory conditions.

