



# Waukesha VHP Series 2 GL to Series Four GSI Conversions

## Upgrade Offering

### Product description

Stay ahead of falling emissions limits, reduce operating costs, increase power output, and improve engine availability with the Waukesha\* VHP\* Series 2 GL to Series Four\* GSI conversion kit. With class-leading NOx, CO, and VOC emissions, upgraded engines can be sited almost anywhere in the world to add capacity to existing sites or as part of new construction. These upgrade packages align well with top-end and bottom-end overhauls, and can be combined with the reUp program for Waukesha gas engines' remanufactured parts.

### Product details

Kit includes:

- **Series 4 cylinder head kit**  
Flex-head valve technology, SPARC system, oil header.
- **Power cylinder upgrade**  
Includes Series 4 cylinder head upgrade, adding pistons and other components.
- **Power Boost**  
A power upgrade option offering up to 200 bhp and other features such as Series 4 cylinder head and piston upgrades.

### Customer benefits

- **Up to 38% higher gas flow** and up to \$290,000 in increased revenue annually<sup>1</sup>

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.

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- **Up to 60% longer time** between top-end overhauls and reduced oil consumption by up to 55%<sup>2</sup>
- **Save up to \$175,000** over the course of two bottom end overhaul intervals (96,000 hours) with reduced lifecycle costs, including up to 60% increased overhaul extension and reduced oil consumption
- **Up to 90% lowered emissions** without lowered performance—site up to 80% more horsepower with a GSI to GL conversion<sup>3</sup>
- **ESM\*2 engine system manager** with emPact control solution maintains emissions in specified range with little to no operator intervention, using only 3% of the tuning time of other systems<sup>4</sup>
- **Wider fuel tolerance** (13% lower WKI w/o derate) and faster response to fuel swings preventing detonation or misfire-inducing shutdowns
- **Wider full torque turndown range available:** 750 rpm minimum for L7044GSI vs. 1000 rpm minimum for L7042GL
- **Improved altitude performance** with no derate up to 8,000 feet at 100°F.

<sup>1</sup> Assumes \$0.25/mmBtu fee, 12 mmscfd for L7044GSI, and that hp scales with flow.

<sup>2</sup> Assumes conversion from Series 2 to L7042GSI S4 or L7042GL to L7042GSI S4.

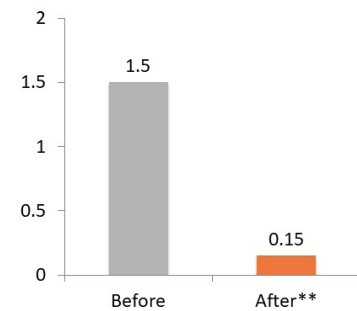
<sup>3</sup> Assumes 0.3g/bhp-hr CO and NOx emissions reduction from 1.5 to 0.15 g/bhp-hr at Title V limited sites.

<sup>4</sup> Assumes 15 minute (if necessary) adjustment period for emPact vs. 8 hours for legacy AFR controls.

### Applicable units

VHP	
	F2895GL
	F3521GL
	L5790GL
	L7042GL
	P9390GL

NOx Emissions (g/bhp-hr)



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