



# Waukesha reUp Engine

## VHP L7044GSI & L7042GSI S4 with ESM2

### Upgrade Offering



#### Product description

INNIO's Waukesha\* reUp Engine Program converts and upgrades existing engines to the latest gas compression specification, equivalent to new units. The addition of new technology increases engine performance and reliability. The program provides customers the following options:

- Upgrade a VHP\* fleet engine through the core engine exchange program
- Purchase an upgraded VHP engine outright without core exchange

#### Product details

- Zero hour overhaul engine with new & reUp components
- Each upgraded VHP includes:
  - xCooled heads
  - ESM\*2 control system
  - Air-fuel ratio control (AFR2)
  - Advanced crankcase breather system
  - emPact emission control upgrade (optional)
  - Gas compression specification options (flywheel, alternator, high pressure air/gas starter, front crank pulley, and water connections)
- Upgraded engines are dynamometer tested at full load and come with an updated bill of material

#### Customer benefits

- **Improved Package Economics:** VHP reUp Engines use the latest technology to increase engine horsepower and compressor flow at the lowest capital cost. Upgraded remanufactured engines also have increased service intervals (identical to new) and reduced oil consumption. Increased power and reduced operational expense combine to greatly improve package economics.

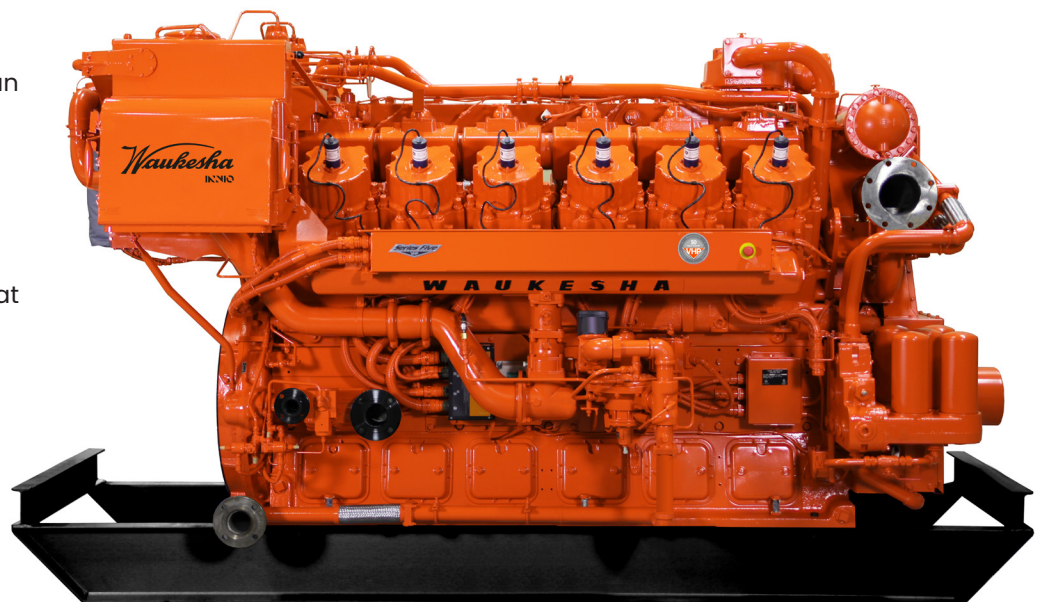
- **Latest Technology:** Each reUp VHP includes the latest parts and control systems to ensure equivalent to new engine performance and reliability. Newly designed power cylinder components allow increased horsepower. ESM2 and AFR2 improve engine fuel flexibility and the speed and load response required in gas compression applications. The emPact system attains low emissions with little to no operator adjustment.
- **Reliability:** VHP reUp Engine components are remanufactured in production environments with supporting quality systems. Engine assembly is completed by trained personnel with the same equipment, processes, and tools used to build new units.
- **Component fallout:** Core credit is determined based on visual inspection of the core engine. **No added fees** are applied if components fall out later in the remanufacturing process.

- **Warranty:** Waukesha Extended Limited Warranty applies – one year from date of service or two years from sale.

#### Units available

	Core Exchange	reUp Engine
VHP	L7044GSI L7042GSI S4 L7042GSI L7042GL L7042G L5794GSI L5794LT L5774LT L5790GSI L5790GL L5790G	L7044GSI <sup>1</sup> L7042GSI S4 <sup>1</sup>

<sup>1</sup> Latest GC specification



## performance data

Intercooler Water Temperature 130°F (54°C)		L7044GSI 1,200 RPM	L7042GSI S4 1,200 RPM
	Power bhp (kWb)	1,680 (1,253)	1480 (1,104)
	BSFC (LHV) Btu/bhp-hr (kJ/kWh)	7,881 (11,149)	8003 (11,322)
	Fuel Consumption Btu/hr x 1,000 (kW)	13,240 (3,881)	11844 (3,472)
emPact Catalyst-Out Emissions	NOx g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.5 (185)	
	CO g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	1.0 (370)	
	NMHC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.18 (67)	
	THC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	1.68 (626)	
Engine-Out Emissions	NOx g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	13.30 (4,922)	14.1 (5,229)
	CO g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	11.20 (4,140)	11.3 (4,173)
	NMHC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.35 (131)	0.34 (126)
	THC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	2.40 (873)	2.3 (843)
Heat Balance	Heat to Jacket Water Btu/hr x 1,000 (kW)	3,849 (1,128)	3,503 (1,027)
	Heat to Lube Oil Btu/hr x 1,000 (kW)	567 (166)	548 (161)
	Heat to Intercooler Btu/hr x 1,000 (kW)	179 (53)	148 (44)
	Heat to Radiation Btu/hr x 1,000 (kW)	724 (212)	697 (204)
	Total Exhaust Heat Btu/hr x 1,000 (kW)	3,900 (1,143)	3,410 (1,000)
Intake/ Exhaust System	Induction Air Flow scfm (Nm <sup>3</sup> /hr)	2,424 (3,651)	2,169 (3,266)
	Exhaust Flow lb/hr (kg/hr)	11,273 (5,113)	10,086 (4,575)
	Exhaust Temperature °F (°C)	1,179 (637)	1156 (625)

All data according to full load and subject to technical development and modification.

emPact catalyst-out emissions valid from 100% - 75% load and 1,200 rpm to 900 rpm and assume proper engine/catalyst maintenance and manual adjustment as necessary

Consult your local Waukesha engine representative for system application assistance. The manufacturer reserves the right to change or modify without notice, the design or equipment specifications as herein set forth without incurring any obligation either with respect to equipment previously sold or in the process of construction except where otherwise specifically guaranteed by the manufacturer.

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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