

Waukesha® reUp® Engine

VHP® L7044GSI S5 & L7042GSI S5 with ESM® 2

Upgrade Offering

Product Description

INNIO's Waukesha® reUp® Engines 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

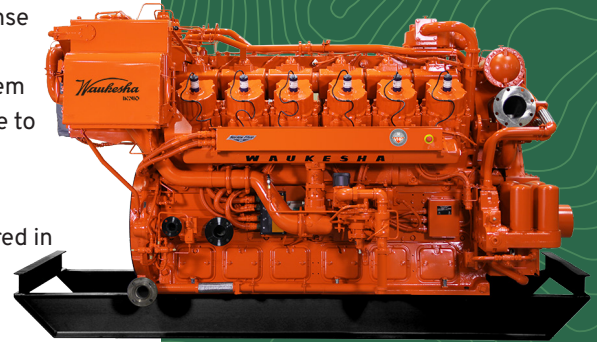
Product Details

- 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. ESM 2 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 pre-teardown 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

VHP	Core Exchange	reUp Engine
	L7044GSI L7042GSI S4 L7042GSI L7042GL L7042G L5794GSI L5794LT L5774LT L5790GSI L5790GL L5790G	L7044GSI S5 ¹ L7042GSI S5 ¹

¹ Latest GC specification



VHP L7044GSI S5 & L7042GSI S5

Performance Data

Intercooler Water Temperature 130°F (54°C)		L7044GSI S5 1,200 RPM	L7042GSI S5 1,200 RPM
	Power bhp (kWb)	1,900 (1,416)	1,500 (1,119)
	BSFC (LHV) Btu/bhp-hr (kJ/kWh)	7,063 (9,993)	7,209 (10,199)
	Fuel Consumption Btu/hr x 1,000 (kW)	13,385 (3,923)	10,810 (3,168)
Engine-Out Emissions	NOx g/bhp-hr (mg/Nm ³ @ 5% O ₂)	10.9 (4,680)	11.6 (4,875)
	CO g/bhp-hr (mg/Nm ³ @ 5% O ₂)	9.2 (3,950)	9.2 (3,867)
	NMHC g/bhp-hr (mg/Nm ³ @ 5% O ₂)	0.11 (48)	0.15 (63)
	THC g/bhp-hr (mg/Nm ³ @ 5% O ₂)	0.4 (172)	0.6 (252)
	Formaldehyde g/bhp-hr (mg/nm ³ @ 5% O ₂)	0.05 (19)	
Heat Balance	Heat to Jacket Water Btu/hr x 1,000 (kW)	3,512 (1,029)	2,971 (871)
	Heat to Lube Oil Btu/hr x 1,000 (kW)	518 (152)	502 (147)
	Heat to Intercooler Btu/hr x 1,000 (kW)	517 (152)	315 (92)
	Heat to Radiation Btu/hr x 1,000 (kW)	731 (214)	607 (178)
	Total Exhaust Heat Btu/hr x 1,000 (kW)	3,612 (1,059)	2,863 (839)
Intake/Exhaust System	Induction Air Flow scfm (Nm ³ /hr)	2,391 (3,601)	1,929 (2,905)
	Exhaust Flow lb/hr (kg/hr)	11,622 (5,272)	9,378 (4,254)
	Exhaust Temperature °F (°C)	1,108 (598)	1,087 (586)

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.

Waukesha – an INNIO brand - INNIO's Waukesha engines are at the forefront of the energy transition, providing reliable and compliant energy solutions for distributed gas compression and power generation applications. The brand's rich and lean-burn engines, ranging from 335 hp to 5,000 hp, set an industry standard for low emissions, high reliability, and fuel flexibility.

Waukesha products are continuously upgraded to help operators stay emission-compliant without sacrificing operational excellence. These upgrades include new and remanufactured engines and parts, as well as conversion and modification kits, all of which are backed by OEM warranty and more than 115 years of engine expertise. Additionally, our Waukesha digital solutions include a collaborative solution with Detection Technologies for gas compression applications and INNIO's myPlant platform for power generation applications. Both solutions provide customers with enhanced monitoring and optimization capabilities, resulting in improved performance and reduced downtime.

We connect locally with our customers to enable a rapid response to their service needs, providing enhanced support through our broad network of distributors and solution providers with parts, services, and digital offerings.

Waukesha engines are engineered in Waukesha, Wisconsin, U.S., and manufactured in Welland, Ontario, Canada. To learn more about the company's products and services, please visit INNIO's website at www.waukeshaengine.com or follow Waukesha engines on [LinkedIn](https://www.linkedin.com/company/waukeshaengine).

IWK-224034-EN

© Copyright 2024 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. INNIO, Waukesha, VHP, Series Four, reUp and ESM are trademarks or registered trademarks of the INNIO Group, or one of its subsidiaries, in the United States and in other countries. All other trademarks and company names are property of their respective owners.

