

# VHP® Series Five L7044GSI S5

With **ESM® 2** and **emPact Emission Control System**

1,900 BHP (1,417 kWb) @ 1,200 RPM



## Technical Data

Cylinders	V12
Piston displacement	7,040 cu. in. (115 L)
Compression ratio	9.7:1
Bore & stroke	9.375" x 8.5" (238 x 216mm)
Jacket water system capacity	100 gal. (379 L)
Lube oil capacity	190 gal. (719 L)
Starting system	125 - 150 psi air/gas 24V electric

Dimensions l x w x h inch (mm)
147 (3,734) x 85 (2,159) x 97.83 (2,485)

Weights lb (kg)
24,250 (11,000)

AFR3/P2P not available with code 2021D

INNIO's Waukesha® VHP® Series Five rich-burn engines combine innovative technology with the proven track record of the VHP platform, resulting in a family of engines that delivers improved fuel flexibility, reduced fuel consumption, lower life-cycle costs, and extended service intervals.

The 7044GSI S5 shares core features and benefits with the other VHP Series Five engines, creating a product line with common controls, operation, and service parts to support streamlined fleet management.

Reliability enhancements on the 7044GSI S5 engine include:

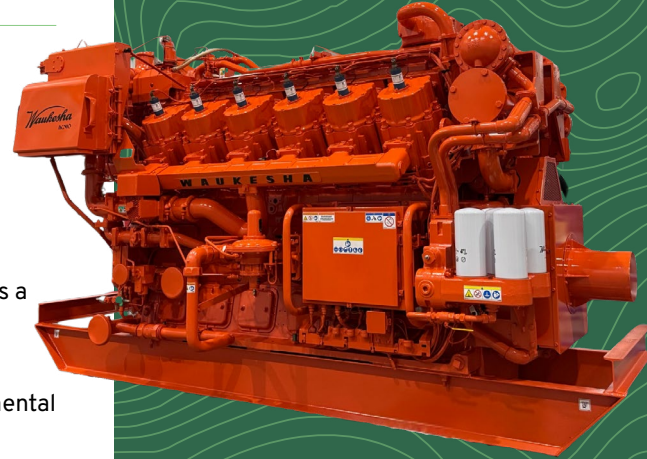
- **Point-to-Point (P2P) harnessing** system featuring modular, technician friendly construction and robust connectors, designed to improve durability and simplify service.
- **Control Module Cabinet (CMC)**, an IP65 enclosure containing all sensitive electronics including the ESM® 2, ignition module, and power distribution. The CMC provides easier access to the main

harnessing connections, and features a single point grounding strategy, simplifying engine installation and enhancing protection from environmental elements.

- **Air-Fuel Ratio 3 (AFR3) control**, which automatically adapts to changes in fuel composition and ambient conditions, supporting consistent emissions performance and reducing the need for manual adjustments.

### ESM®2 and emPact

All Series Five engines are equipped with ESM®2, Waukesha's next-generation engine controller, which features a full-color customer interface panel. This interface allows users to monitor engine parameters, trend data, access manuals, and follow step-by-step troubleshooting guidance, supporting efficient operation and service. Waukesha's emPact Emission Control System is available to help reduce emissions. emPact is designed to integrate the Series Five engine, air-fuel ratio control, and the Waukesha-supplied three-way (NSCR) catalyst, supporting emissions compliance as engine speed, load, fuel, and ambient conditions vary.



Engine ships "ready to connect" with SkidIQ full skid monitoring system. SkidIQ is a cloud-based digital solution that integrates real-time engine analytics and compressor monitoring technology. The result is a unified platform that reduces operating expenses and emissions while enhancing uptime.

A POWERFUL FUTURE

Waukesha

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## Performance Data

Intercooler Water Temperature 130°F (54°C)		1200 RPM	1000 RPM
	Power bhp (kWb)	1,900 (1,417)	1,583 (1,180)
	BSFC (LHV) Btu/bhp-hr (kJ/kWh)	7,155 (10,122)	7,026 (9,940)
	Fuel Consumption Btu/hr x 1000 (kW)	13,594 (3,984)	11,122 (3,258)
Engine-Out Emissions	NOx g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	11.3 (4,802)	10.9 (4,714)
	CO g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	9.0 (3,820)	8.9 (3,840)
	NMHC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.048 (20)	0.058 (25)
	THC g/bhp-hr (mg/Nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.5 (205)	0.6 (253)
	Formaldehyde g/bhp-hr (mg/nm <sup>3</sup> @ 5% O <sub>2</sub> )	0.05 (21)	
Heat Balance	Heat to Jacket Water Btu/hr x 1000 (kW)	3,717 (1,089)	3,076 (902)
	Heat to Lube Oil Btu/hr x 1000 (kW)	487 (143)	386 (113)
	Heat to Intercooler Btu/hr x 1000 (kW)	675 (198)	460 (135)
	Heat to Radiation Btu/hr x 1000 (kW)	565 (165)	532 (156)
	Total Exhaust Heat Btu/hr x 1000 (kW)	3,579 (1,049)	2,854 (837)
Intake/Exhaust System	Induction Air Flow scfm (Nm <sup>3</sup> /hr)	2,544 (3,831)	2,081 (3,136)
	Exhaust Flow lb/hr (kg/hr)	11,828 (5,365)	9,677 (4,390)
	Exhaust Temperature °F (°C)	1,098 (592)	1,070 (577)

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

Data based on commercial quality natural gas, 100 °F ambient temperature and 850 ft elevation. Contact your local Waukesha representative for site specific technical data. Fuel consumption and BSFC data based on fuel LHV with a tolerance per ISO 3046/1 of -0/+5%. Heat balance and intake/exhaust data is nominal.

Consult your local Waukesha 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](http://www.waukeshaengine.com) or follow Waukesha engines on [LinkedIn](https://www.linkedin.com/company/waukesha).

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