

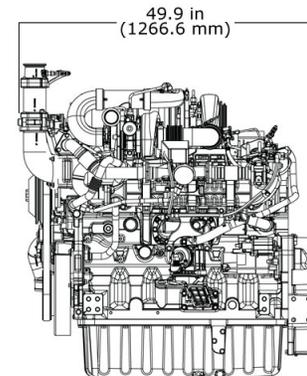
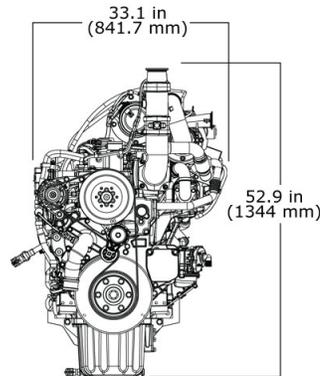
PowerTech PSX 6090HFC95 Diesel Engine

Industrial Engine Specifications



6090HFC95 shown

Engine dimensions



Certifications

CARB
EPA Interim Tier 4
EU Stage III B

General data

Model	6090HFC95
Number of cylinders	6
Displacement - L (cu in)	9.0 (549)
Bore and Stroke-- mm (in)	118.4 x 136 (4.66 x 5.35)
Compression Ratio	16.0 : 1
Engine Type	In-line, 4-cycle

Aspiration	Turbocharged and air-to-air aftercooled
Length - mm (in)	1266.6 (49.9)
Width - mm (in)	841.7 (33.1)
Height-- mm (in)	1344.0 (52.9)
Weight, dry-- kg (lb)	1096.8 (2418)

Intermittent BHP is the power rating for variable speed and load applications where full power is required intermittently.

Heavy duty - see application ratings/definitions, engine performance curves.

Continuous BHP is the power rating for applications operating under a constant load and speed for long periods of time.

Power output is within + or - 5% at standard SAE J 1995 and ISO 3046.

Exhaust filter

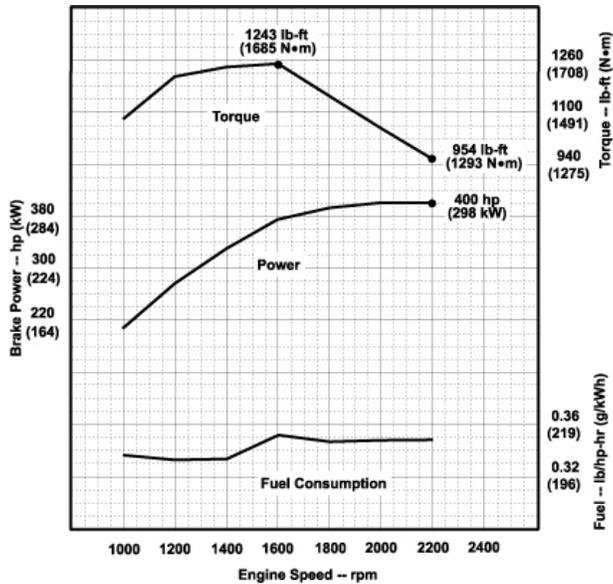
Exhaust filters are coupled with the engine to meet emissions regulations.

Exhaust filter dimensions

Size	7
Diameter - mm (in)	379 (14.9)
Length - mm (in)	837.8 (33.0)
Weight - kg (lb)	65.1 (143.5)



Performance curve



Performance data

Intermittent rated speed	298 kW (400 hp) @ 2200 rpm
Peak power	299 kW (401 hp) @ 2100 rpm
Power bulge %	0% @ 2000 rpm
Peak torque	1685 N.m (1243 ft-lb) @ 1600 rpm
Torque rise %	30% @ 1600 rpm

Features and benefits

Series turbochargers

- Fresh air is first drawn into the low-pressure turbocharger (fixed geometry) and compressed to a higher pressure. The compressed air is then drawn into the high-pressure turbocharger (VGT), where the air is further compressed. The high-pressure air is then routed through a charge air cooler and into the engine's intake manifold.
- By splitting the work between two turbochargers, both can operate at peak efficiency and at slower rotating speeds - lowering stress on turbocharger components and improving reliability. Series turbocharging delivers more boost pressure than single turbocharger configurations which results in higher power density, improved low-speed torque, and improved high altitude operation.

Cooled exhaust gas recirculation (EGR)

- EGR cools and mixes measured amounts of cooled exhaust gas with incoming fresh air to lower peak combustion temperatures, thereby reducing NOx.

Exhaust filters

- These engines utilize a catalyzed exhaust filter that contains a diesel oxidation catalyst (DOC) and a diesel particulate filter (DPF). The DOC reacts with exhaust gases to reduce carbon monoxide, hydrocarbons, and some particulate matter (PM). The downstream DPF traps and holds the remaining PM. Trapped particles are oxidized within the DPF through a continuous cleaning process called passive regeneration.
- Passive regeneration occurs during normal operating conditions when heat from the exhaust stream and catalysts within the exhaust filter trigger the oxidation of the trapped PM. If passive regeneration cannot be achieved due to low temperature, load, or speed, then PM is removed using active regeneration - an automatic cleaning process controlled by the exhaust temperature management system.

High-pressure common-rail (HPCR) and engine control unit (ECU)

- The HPCR fuel system provides variable common-rail pressure, multiple injections, and higher injection pressures up to 1,975 bar (29,000 psi). It also controls fuel injection timing and provides precise control for the start, duration, and end of injection.

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4-valve cylinder head

- The 4-valve cylinder head provides excellent airflow resulting in greater low-speed torque and better transient response time by utilizing a U-flow design.

Air-to-air aftercooled

- This is the most efficient method of cooling intake air to help reduce engine emissions while maintaining low-speed torque, transient response time, and peak torque. It enables an engine to meet emissions regulations with better fuel economy and the lowest installed costs.

Compact size

- Lower installed cost
- Mounting points are the same as previous engine models

Engine performance

- Multiple rated speeds to further reduce noise and improve fuel economy
- Higher level of peak torque
- Transient response time equal to or better than Tier 3/Stage III A
- Low-speed torque equal to or better than Tier 3/Stage III A

John Deere electronic engine controls

- Faster engine control unit (ECU) manages both the engine and the exhaust filter
- Full authority electronic controls
- Four times the memory, twice the RAM and double the processing speed
- The input/output capability has increased 40%

Additional Features

- Gear-driven auxiliary drives, 500-hour oil change, self-adjusting poly-vee fan drive, single-piece low-friction piston, directed top-liner cooling, low-pressure fuel system with electrical transfer pump and "auto-prime" feature, and optional rear PTO

All values at rated speed and power with standard options unless otherwise noted. Specifications and design subject to change without notice.