

Industrial Engine Ratings Guide



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Diesel Engine Rating Definitions

Explanation of Ratings A, B, C, D, and E:

For an exact determination of the appropriate rating, contact your local Cat dealer. Engine rating obtained and presented in accordance with ISO3046/1.

IND-A (Continuous)

Continuous heavy-duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling.

IND-B

For service where power and/or speed are cyclic (time at full load not to exceed 80%).

IND-C (Intermittent)

Intermittent service where maximum power and/or speed are cyclic (time at full load not to exceed 50%).

IND-D

For service where maximum power is required for periodic overloads (time at full load not to exceed 10% of the duty cycle).

IND-E

For service where maximum power is required for a short time for initial starting or sudden overload. For emergency service where standard power is unavailable (time at full load not to exceed 5% of the duty cycle).

Rating Conditions

Diesel Engines — up to 6.6 liter

All rating conditions are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in Hg), with a vapor pressure of 1 kPa (.295 in Hg), and 25°C (77°F). Performance measured using fuel to specification EPA 2D 89.330-96 with a density of 0.845-0.850 kg/L @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

Diesel Engines — 7 liter and higher

All rating conditions are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25°C (77°F) temperature. Performance measured using a standard fuel with fuel gravity of 35° API having a lower heating value of 42,780 kJ/kg (18,390 btu/lb) when used at 29°C (84.2°F) with a density of 838.9 g/L.

Gas Engines

Ratings are based on SAE J1349 standard conditions of 100 kPa (29.61 in Hg) and 25°C (77°F). These ratings also apply at ISO3046, DIN6271, and BS5514 standard conditions of 100 kPa (29.61 in Hg) and 27°C (81°F); and API 7B-11C standard conditions of 99 kPa (29.28 in Hg) and 29°C (85°F) also apply.

Ratings are based on dry natural gas having an LHV of 35.54 MJ/N·m³ (905 btu/ft³). Variations in altitude, temperature, and gas composition from standard conditions may require a reduction in engine horsepower.

Turbocharged-Aftercooled ratings apply to 1525 m (5000 ft) and 25°C (77°F).

ISO 9001:2000 Certification

Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities.