



EVERY™ ALTERNATIVE. C GAS PLUS



NATURAL GAS ENGINES FOR TRUCK AND BUS

A CLEAR AND POWERFUL ALTERNATIVE.

C GAS PLUS

The powerful Cummins Westport C Gas Plus has the highest power-to-weight ratio in its class and is offered in many of the world's finest buses and trucks.

Building on the rugged, reliable design of Cummins diesel engines, the Cummins Westport C Gas Plus engine is a six-cylinder Lean-Burn Spark-Ignited (LBSI) natural gas vehicle engine that delivers from 250 to 280 hp with ultra-low emissions. It provides excellent torque, high fuel efficiency and reliable, robust performance, with excellent ratings for both medium-duty and refuse collection truck and urban bus applications. The C Gas Plus is known for easier maintenance and longer service with extreme reliability and durability. Service intervals are similar to base diesel engine.

Since it was introduced in 2001, more than 4,000 of these clean natural gas, six-cylinder, 8.3-liter engines have powered transit fleets, medium-duty trucks and refuse collection vehicles in cities throughout the world. Every day.

Its ECM (Electronic Control Module) allows engine performance to be tailored to fit the vehicle mission with road speed governing and cruise control, as well as an engine protection system and complete self-diagnostics.

Specifications.

The C Gas Plus combines these performance advantages with ultra-low emissions – certified with a catalyst – to U.S. EPA 2005 standards, California Air Resources Board optional low-NOx+NMHC (1.8 g/bhp-hr) certification and low-PM (Particulate Matter) standards. C Gas Plus PM emissions meet the 2010 EPA standards today. For international markets, the C Gas Plus is also certified to Euro III standards.

It features lean-burn spark-ignited combustion. Curves shown represent gross engine performance capabilities obtained and corrected in accordance with Cummins standards. Standard conditions are: 29.36 in. Hg (99.14 kPa) barometric pressure (500 ft [152 m] altitude, 77°F [25°C] inlet air temperature).

Actual performance may vary with different ambient conditions.



Ratings

ENGINE MODEL	ADVERTISED HP (KW) @ RPM	PEAK TORQUE LB-FT (N•M) @ RPM	GOVERNED SPEED
CG-280	280 (209) @ 2400	850 (1152) @ 1400	2400 RPM
CG-275	275 (205) @ 2400	750 (1017) @ 1400	2400 RPM
CG-250	250 (187) @ 2400	750 (1017) @ 1400	2400 RPM
CG-250	250 (187) @ 2400	660 (895) @ 1400	2400 RPM

Specifications

ADVERTISED HORSEPOWER	250-280 HP	187-209 kW
PEAK TORQUE	660-850 LB-FT	895-1152 N•M
GOVERNED SPEED	2400 RPM	
CLUTCH ENGAGEMENT TORQUE	410 LB-FT	556 N•M
NUMBER OF CYLINDERS	6	
BORE AND STROKE	4.49 IN X 5.32 IN	114 MM X 135 MM
ENGINE DISPLACEMENT	505 CU IN	8.3 L
COMPRESSION RATIO	10:1	
OPERATING CYCLES	4	
OIL SYSTEM CAPACITY	6.3 U.S. GAL	23.9 L
COOLANT CAPACITY	10.7 U.S. QT	10.1 L
LENGTH	44.4 IN	1128 MM
WIDTH	32.1 IN	815 MM
HEIGHT	48.1 IN	1222 MM
NET WEIGHT W/STANDARD ACCESSORIES, DRY	1,330 LB	603 KG
EMISSIONS	1.8 NOx+NMHC 0.01 PM (PM LEVEL MEETS 2010 EPA STANDARDS)	– CARB OPTIONAL LOW NOx AND LOW PM – EURO III
FUEL TYPE	CNG/LNG	METHANE NUMBER 65 OR GREATER

For more information, call your local Cummins distributor or Cummins Westport representative, or visit www.cumminswestport.com.

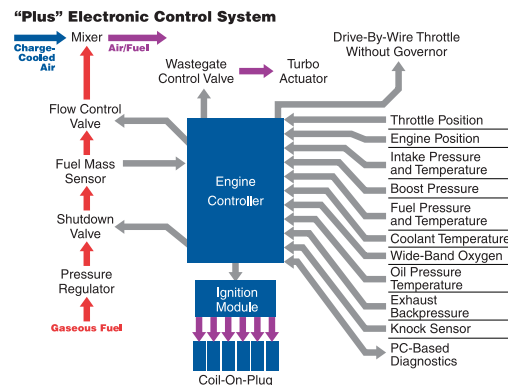
Features And Benefits.

- Air/Fuel Regulation – Cummins closed-loop electronic control system is based on Cummins CM556 ECM that sets engine operating parameters and maintains efficient operation using sensors to monitor and control various engine parameters, exhaust backpressure, intake manifold temperature, fuel inlet pressure, knock detection, air-fuel ratio and fuel mass flow. Electronically controlled wastegated turbocharger.
- Air Intake System – Charge air cooling is utilized to reduce emissions by lowering intake manifold air temperatures.
- Accessory Belt Drive System – Self-tensioning serpentine polyvee belt accessory drive system for water pump, engine-mounted fan hub and most alternators. Gear-driven air compressor with provision for gear-driven hydraulic pump.
- Catalyst – Required for all models. Engine is certified to U.S. EPA 2005 standards, U.S. EPA 2005 transit bus standards, and California Air Resources Board optional low-NOx certification at 1.8 g/bhp-hr and Euro III.
- Control System/Electronics – Feature full drive-by-wire, enhanced controls and full-authority electronics. The ECM monitors engine sensors, controls fuel and ignition systems, sets engine parameters and provides state-of-the-art data links and the ability to interface with Cummins INSITE™ and QuickCheck diagnostic service tools.
- Crankshaft – Eight counterweight, fully balanced, high-tensile-strength steel forging with induction-hardened fillets and journals for outstanding durability.
- Cylinder Block – Full-skirted block increases rigidity and strength. The design provides superior durability, as well as superior piston ring and bearing life.
- Fuel Tolerance – Designed for compressed (CNG) or liquefied (LNG) natural gas vehicles. Its wide fuel tolerance – down to methane number 65 – increases uptime worldwide.
- High-Energy Ignition System – ECM-controlled for better performance and longer service intervals, improved spark plug and coil durability, plus self-diagnostics. Multiple Spark Discharge (MSD) for smooth idle and spark plug life. Coil-on-plug technology for reliable performance.
- Oil Filter – The combination full-flow and bypass Fleetguard® oil filter improves filtration while minimizing oil filter replacement and disposal costs.

- Pistons – For extended piston and ring life, a Ni-Resist insert is cast into the aluminum piston and carries the top piston ring.
- REPTO – Cummins Rear Engine Power Take-Off eliminates the need for extended vehicle frames and bumpers while delivering maximum payload and continuous live power when and where it's needed.

Proven "Plus" Technology Maximizes The Equation.

The "Plus" technology of the C Gas Plus features a highly efficient ECM to control its fuel system, engine sensors and high-energy ignition system. Additional "Plus" technology benefits include full drive-by-wire, programmable engine parameters, multi-speed PTO, cruise control, road speed governing, idle speed control and shutdown, accelerator interlock, engine protection system and more. It also features state-of-the-art data links and the ability to interface with Cummins INSITE and QuickCheck diagnostic service tools for fast troubleshooting. Life-to-rebuild is the same as a diesel engine.



Cummins Westport – Meeting Every Demand For Power.

Cummins Westport is the industry leader in producing high-quality, economical natural gas engines to meet the global demand for clean power. Cummins Westport engines are the proven reliable power in over 15,000 vehicles worldwide. C Gas Plus NOx emissions levels are 30% lower and particulate matter emissions are 90% lower than current EPA standards. City fleets worldwide put Cummins Westport C Gas Plus natural gas engines to work – every day.

Warranty. Every Coverage.

Cummins Westport C Gas Plus urban transit bus and coach engines come with a standard 2-year/unlimited-mileage warranty with full parts and labor on all warrantable failures.* For truck use, the C Gas Plus comes with 2-year/250,000-mile (402,336 km) coverage. See your local Cummins distributor or Cummins Westport representative for additional warranty information.

Emissions Warranty – 5 years or 100,000 miles (160,935 km), whichever comes first.

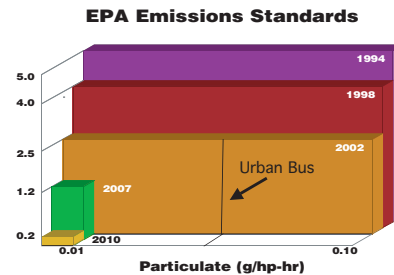
*Warrantable failures are those due to defects in materials or workmanship.

Extended Coverage Plans.

A 6-year/300,000-mile (482,804 km) Major Components Protection Plan, designed specifically around the needs of our natural gas engine customers, may be purchased during the engine's first year in service, is transferable at no charge and features no deductible.

For bus and coach customers: 5-year/200,000-mile (321,869 km) and 5-year/300,000-mile (482,804 km) extended coverage plans for C Gas Plus engines, excluding maintenance items, may be purchased in the first 6 months of service. Vocational truck users can also cover major repair costs for C Gas Plus engines for all internal components and major engine systems with the purchase of a 5-year/150,000-mile (241,402 km) Vocational Plan.

For additional details, please contact your local Cummins distributor or Cummins Westport representative.



A More Cost-Efficient Way To Meet Every Emissions Challenge.

To meet the new 2007 and 2010 standards set by the EPA and other regulatory bodies targeting NOx, HC and particulate emissions, diesel engine manufacturers will apply advanced technologies, which can increase capital and operating costs. But Cummins Westport is well ahead of the EPA schedule. Cummins Westport natural gas products use technology today that will enable our customers to meet 2010 emissions standards in 2007 with only simple, passive aftertreatment.



Customer Support. Every Place You Need It.

The total solution Cummins Westport has created combines fuel availability, government programs and funding, plus additional resources to make natural gas power a viable

alternative. Local service, as well as parts availability for Cummins Westport products, is available worldwide through Cummins global network of 550 company-owned and independent distributor facilities with more than 5,500 parts and service locations in 160 countries. Cummins distributors provide maintenance schedules, warranty information and product-training support worldwide.

Contact the Customer Assistance Center –

(1-800-343-7357). Cummins specialists provide technical assistance, service locator and product literature 24 hours/day, 365 days/year.

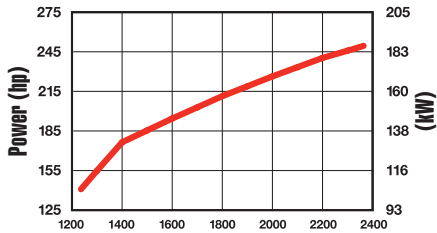
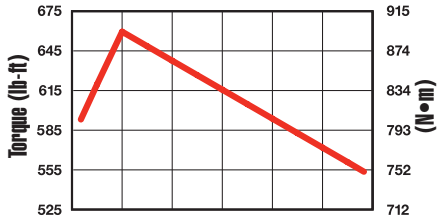
Europe: (44) 1327 886-464

Australia/New Zealand: 1-800-351-004

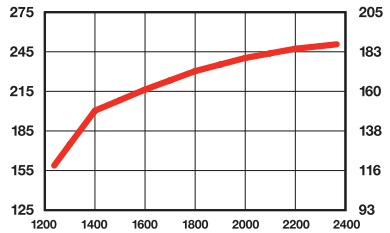
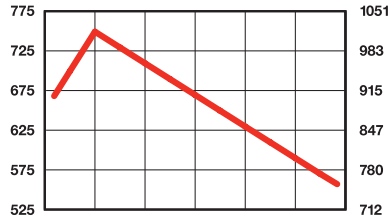
Asia: 1-800-810-5252

C GAS PLUS TORQUE AND POWER CURVES.

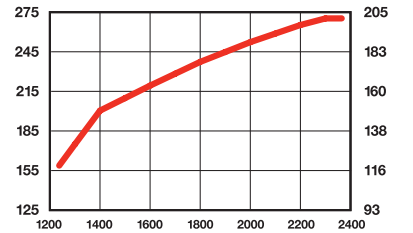
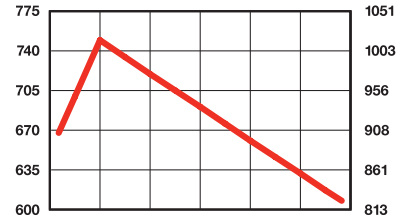
250 HP/660 LB-FT @ 1400
187 kW/895 N•M @ 1400 **FR 90944**



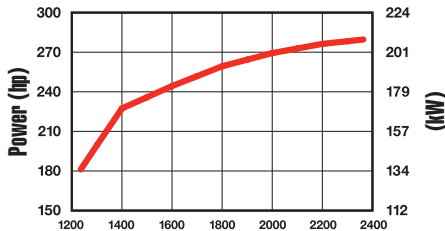
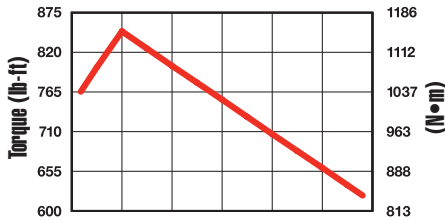
250 HP/750 LB-FT @ 1400
187 kW/1017 N•M @ 1400 **FR 90943**



275 HP/750 LB-FT @ 1400
205 kW/1017 N•M @ 1400 **FR 90946**



280 HP/850 LB-FT @ 1400
209 kW/1152 N•M @ 1400 **FR 90948**





EXPLORE EVERY ALTERNATIVE.

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