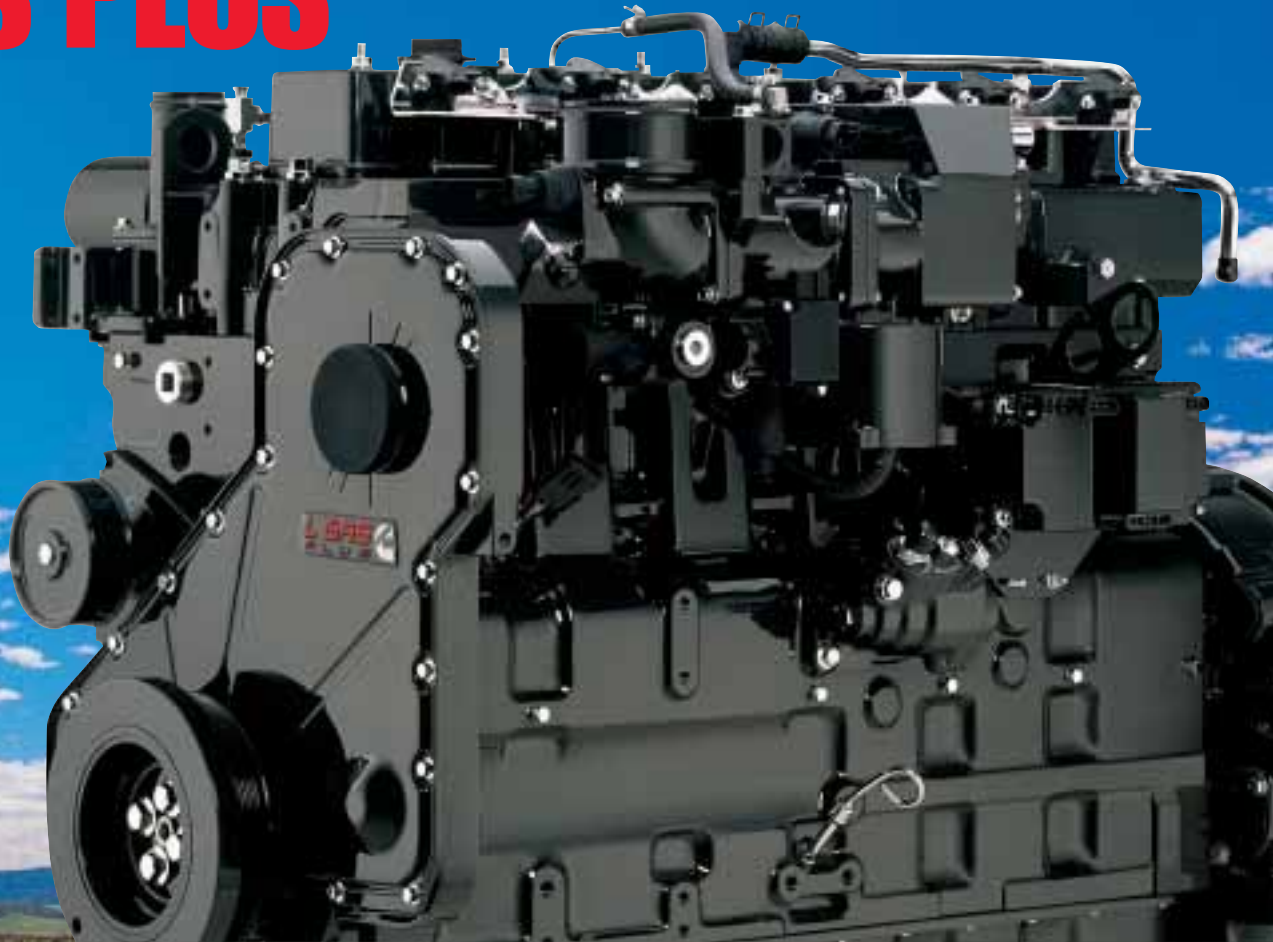




**Westport**

# EVERY™ ALTERNATIVE. L GAS PLUS



**NATURAL GAS ENGINES FOR TRUCK AND BUS**

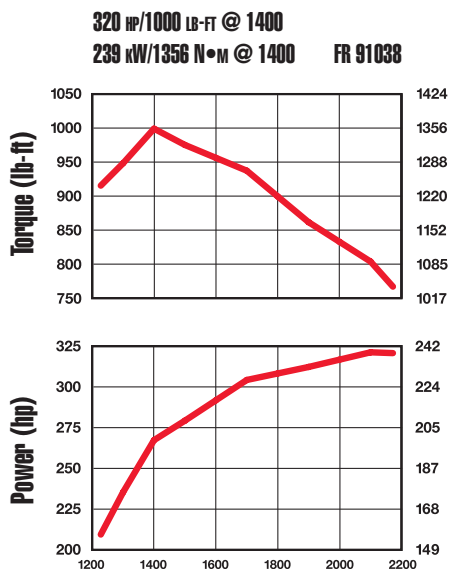
# A CLEAR AND POWERFUL ALTERNATIVE.

## L GAS PLUS

The Cummins Westport L Gas Plus combines all the advantages of clean-burning natural gas engines with “no compromise” power and torque for heavy refuse trucks, dump and medium-duty trucks, heavy transit applications and articulated buses. The L Gas Plus combines high displacement and superior horsepower with variable geometry turbocharging for impressive low-end torque and transient response.

Its proven “Plus” technology features full electronics provided by a state-of-the-art ECM (Electronic Control Module) that controls the fuel system, engine sensors and an advanced Cummins high-energy ignition system – a system designed for better performance and longer service intervals, improved spark plug and coil durability, as well as self-diagnostics.

The L Gas Plus combines these performance advantages with ultra-low emissions – certified to U.S. EPA 2005 standards, U.S. EPA 2005 transit bus standards, CARB optional low NOx+NMHC and low PM (Particulate Matter), and is Euro V/EEV capable – with catalyst.



### Ratings

ENGINE MODEL	ADVERTISED HP (KW) @ RPM	PEAK TORQUE LB-FT (N•M) @ RPM	GOVERNED SPEED
LG-320	320 (239) @ 2300	1000 (1356) @ 1400	2300 RPM

### Specifications

ADVERTISED HORSEPOWER	320 HP	239 kW
PEAK TORQUE	1000 LB-FT	1356 N•M
GOVERNED SPEED	2300 RPM	
CLUTCH ENGAGEMENT TORQUE	425 LB-FT	576 N•M
NUMBER OF CYLINDERS	6	
BORE AND STROKE	4.49 IN X 5.69 IN	114 MM X 144.5 MM
ENGINE DISPLACEMENT	540 CU IN	8.9 L
COMPRESSION RATIO	10:1	
OPERATING CYCLES	4	
OIL SYSTEM CAPACITY	6.3-7.3 U.S. GAL	23.9-27.7 L
COOLANT CAPACITY	11.7 U.S. QT	11.1 L
LENGTH	46.0 IN	1168 MM
WIDTH	38.0 IN	966 MM
HEIGHT	46.7 IN	1187 MM
NET WEIGHT W/STANDARD ACCESSORIES, DRY	1,555 LB	705 KG
EMISSIONS	1.4 NOx+NMHC 0.01 PM (PM LEVEL MEETS 2010 EPA STANDARDS)	– CARB OPTIONAL LOW NOx AND LOW PM – EURO V/EEV CAPABLE
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](http://www.cumminswestport.com).

## Features And Benefits.

- Control System/Electronics – Feature full drive-by-wire, enhanced controls and full-authority electronics. The ECM monitors engine sensors, controls fuel and ignition systems, and sets engine parameters.
- Additional Advantages of Full-Authority Electronics:
  - Engine Protection – Regulates rpm to lower the risk of progressive damage if a severe fault code is logged.
  - Electronic Idle Control – Manages idle time to improve fuel economy while helping the environment.
  - Starter Lockout – Provides additional engine/starter protection.
  - Door Interlock – Provides greater passenger security in transit applications.
- Holset Variable Geometry Turbocharger – Provides impressive low-end torque and transient response. Proven in over 150,000 vehicles worldwide.
- 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 – Provides better performance and longer service intervals, improved spark plug and coil durability, plus self-diagnostics.
- Superior Power and Torque – In a similar-size package to our proven C Gas Plus.
- High Power/Low Weight – The L Gas Plus combines a very low installed weight with the highest power-to-weight ratio in its class.
- High-Efficiency Lube Cooler – Lowers oil temperatures for long engine life.
- Coolant Flow – Optimized for reduced cylinder temperatures.
- Cummins Branded Electric Starters and Alternators – Completely covered under engine warranty.

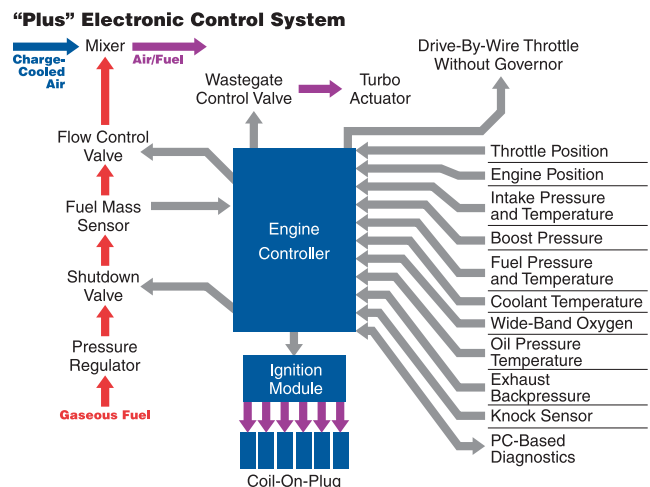
## Specifications.

The L Gas Plus is a six-cylinder natural gas engine with ultra-low emissions and low NOx, that is cleaner than diesel. 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.

## Proven “Plus” Technology Maximizes The Equation.

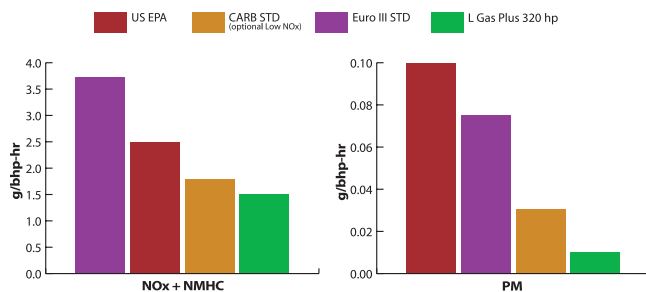
Building on the rugged design of Cummins diesel engines and the “Plus” technology of the reliable Cummins Westport C Gas Plus, the L Gas Plus features a highly efficient ECM to control its fuel system, engine sensors and high-energy ignition system. Includes state-of-the-art data links and the ability to interface with Cummins INSITE™ and QuickCheck diagnostic service tools for fast troubleshooting. 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.

The L Gas Plus features a proven block that is shared with the rugged Cummins ISL diesel engine, adding improved coolant flow and targeted piston cooling for greater reliability and durability. Life-to-rebuild and rebuildability are the same as diesel.



## 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. L Gas Plus NOx emission levels are 40% lower, and particulate matter emissions are 90% lower than current EPA standards. City fleets worldwide put Cummins Westport L Gas Plus natural gas engines to work – every day.



## A More Cost-Efficient Way To Meet The 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.

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.



## On/Off-Highway Applications And Gearing Recommendations.

The L Gas Plus engine is an excellent choice for 46,000- to 66,000-lb GCW/GVV short-haul applications and regional-haul trucks, articulated buses and on/off-highway applications such as larger refuse and dump trucks. To best understand the differences among various gearing combinations, consult your local Cummins distributor or Cummins Westport representative and request a Vehicle Mission Simulation™ (VMS).

## Warranty. Every Coverage.

### Base Engine Warranty for Bus and Coach Use –

2 years, unlimited miles/kilometers.

**For Truck Use** – 2 years or 250,000 miles (402,336 km), whichever comes first.

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

**Major Components** – 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.



## Extended Coverage Plans.

For bus and coach customers: 5-year/200,000-mile (321,869 km) and 6-year/300,000-mile (482,804 km) extended coverage plans for L Gas Plus engines, excluding maintenance items.

Vocational truck users can also cover major repair costs for L Gas Plus engines for all internal components and major engine systems with the 5-year/150,000-mile (241,402 km) Vocational Plan.

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



## 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 at any authorized Cummins facility. Cummins global network includes 550 company-owned and independent distributor facilities with more than 5,500 parts and service locations in 160 countries. Cummins distributors provide training, maintenance schedules, warranty information and 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



**EXPLORE EVERY ALTERNATIVE.**

For more information, please contact:



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