

# MOVE TO ZERO

Setting new standards for  
performance and reliability  
with near-zero emissions.

**L9N**<sup>TM</sup>

**Cummins** *Westport*

CNG

LNG

RNG



# THE L9N. MOVE TO ZERO.

**Introducing the next  
generation of low-emission  
engine technology.**

**The Cummins Westport L9N natural gas engine  
is the next evolution of the industry-leading ISL G.**

It sets a new standard for performance and reliability while offering near-zero emissions. Leveraging the experience gained from over 80,000 Cummins Westport engines in service, the L9N delivers product improvements and emissions leadership that bus and truck customers can count on.

The L9N is available as a first-fit option from leading bus and truck manufacturers for a variety of applications such as urban transit, vocational and medium-duty truck and tractor, and shuttle and school bus.

**Near-Zero Emissions**

The L9N is certified to the California Air Resources Board (ARB) and Environmental Protection Agency (EPA) Optional Low NOx emissions standard of 0.02 g/bhp-hr — 90% lower than current emissions standards. It also meets the 2017 EPA greenhouse gas (GHG) emission requirements. Cummins Westport natural gas engines have met the 2010 EPA standard for particulate matter (0.01 g/bhp-hr) since 2001.

Natural gas is a low-carbon, domestically abundant fuel source. All Cummins Westport Inc. engines offer customers the choice of using compressed natural gas (CNG), liquefied natural gas (LNG) or renewable natural gas (RNG) as a fuel. RNG is pipeline-quality natural gas produced from the decomposition of organic wastes, which can come from a variety of sources such as dairy farm waste, landfills and urban waste treatment plants. Using RNG to fuel Cummins Westport ultra low emission engines provides additional and significant GHG reductions.

Learn more with the Cummins Westport GHG Emissions calculator at [cwiplaybook.com](https://www.cwiplaybook.com).

**Next Generation Natural Gas Technology**

Cummins Westport natural gas engines feature spark-ignited stoichiometric combustion with cooled exhaust gas recirculation. They use a simple maintenance-free Three-Way Catalyst (TWC) for consistent emissions control. Beginning in 2018, Cummins Westport natural gas engines include a new Engine Control Module (ECM), On-Board Diagnostics (OBD) capability, an enhanced TWC and a closed crankcase ventilation system.



## Maintenance

### L9N Truck < 66,000 lbs (29,937 kg) GCVW

Maintenance Item <sup>^</sup>	Distance	Hours	Months
Oil and Filter*	15,000 mi (24,000 km)	500	6
Fuel Filter	30,000 mi (48,000 km)	1,000	9
Coolant Filter	15,000 mi (24,000 km)	500	6
Closed Crankcase Ventilation Filter	60,000 mi (96,000 km)	2,000	18
Spark Plugs	45,000 mi (72,000 km)	1,500	12
Cooling System Flush	60,000 mi (96,000 km)	2,000	18
Overhead Set Adjustment**	60,000 mi (96,000 km)	2,000	18
Ignition Coil Extension	300,000 mi (480,000 km)	10,000	5 yrs
Air Cleaner / Element	Follow manufacturer's published recommendations		

Consult your Owners or Operation and Maintenance manual for the complete daily and routine maintenance schedule.

<sup>^</sup>Based on a duty cycle of 30 mph / 48 kph average speed. Distance intervals may decrease based on average speed.

\*Requires Natural Gas Engine Oil

\*\*Initial overhead set adjustment at 1,000 hours.

### L9N Urban Transit Bus and Refuse Truck

Maintenance Item <sup>^</sup>	Distance	Hours	Months
Oil and Filter*	7,500 mi (12,000 km)	500	6
Fuel Filter	15,000 mi (24,000 km)	1,000	9
Coolant Filter	7,500 mi (12,000 km)	500	6
Closed Crankcase Ventilation Filter	30,000 mi (48,000 km)	2,000	18
Spark Plugs	22,500 mi (36,000 km)	1,500	12
Cooling System Flush	30,000 mi (48,000 km)	2,000	18
Overhead Set Adjustment**	30,000 mi (48,000 km)	2,000	18
Ignition Coil Extension	150,000 mi (240,000 km)	10,000	5 yrs
Air Cleaner / Element	Follow manufacturer's published recommendations		

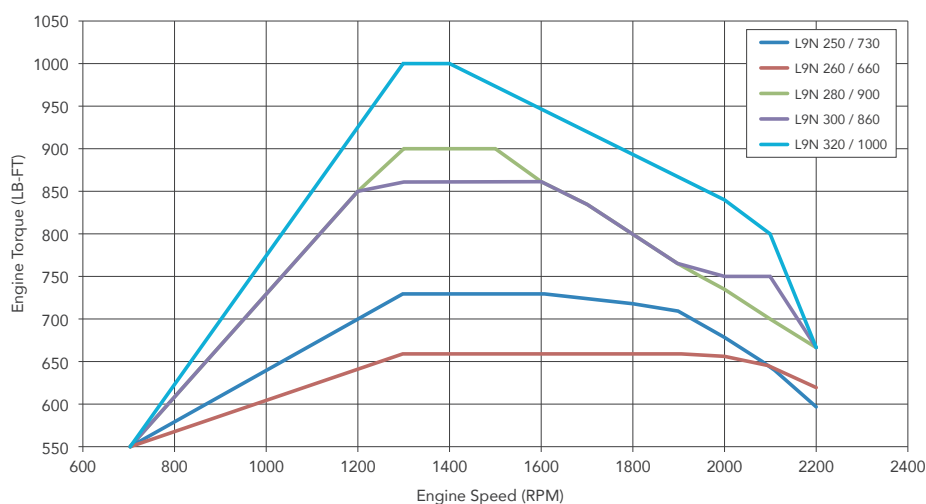
Consult your Owners or Operation and Maintenance manual for the complete daily and routine maintenance schedule.

<sup>^</sup>Based on duty cycle of 15 mph / 24 kph average speed. Distance intervals may decrease based on average speed.

\*Requires Natural Gas Engine Oil

\*\*Initial overhead set adjustment at 1,000 hours.

# Torque Curves



## L9N Ratings

### Truck & Refuse

Engine Model	Advertised hp (kW) @ rpm	Peak Torque lb-ft (N-m) @ rpm	Governed Speed
L9N 250	250 (186) @ 2200	730 (990) @ 1300	2200 rpm
L9N 260	260 (194) @ 2200	660 (895) @ 1300	2200 rpm
L9N 280	280 (209) @ 2000	900 (1220) @ 1300	2200 rpm
L9N 300	300 (224) @ 2100	860 (1166) @ 1300	2200 rpm
L9N 320	320 (239) @ 2000	1000 (1356) @ 1300	2200 rpm

### School & Shuttle Bus

Engine Model	Advertised hp (kW) @ rpm	Peak Torque lb-ft (N-m) @ rpm	Governed Speed
L9N 250	250 (186) @ 2200	730 (990) @ 1300	2200 rpm
L9N 260	260 (194) @ 2200	660 (895) @ 1300	2200 rpm
L9N 280	280 (209) @ 2000	900 (1220) @ 1300	2200 rpm
L9N 300	300 (224) @ 2100	860 (1166) @ 1300	2200 rpm

### Transit Bus

Engine Model	Advertised hp (kW) @ rpm	Peak Torque lb-ft (N-m) @ rpm	Governed Speed
L9N 280	280 (209) @ 2000	900 (1220) @ 1300	2200 rpm
L9N 320	320 (239) @ 2000	1000 (1356) @ 1300	2200 rpm

## Engine Features & Enhancements

### New Engine Control Module (ECM)

The ECM provides full monitoring and control of the engine sensors, and the fuel and ignition systems. Cummins Westport 2018 engines feature a new ECM, Model CM2380, which offers faster processing to support heavy duty OBD requirements (500K baud rate). It is also telematics capable, and provides improved diagnostics and durability.

### On-Board Diagnostics (OBD)

The OBD system continuously monitors the engine and after-treatment system. It gives the vehicle owner or repair technician electronic access to the status of various vehicle subsystems for diagnostic purposes. A Malfunction Indicator Lamp (MIL) is connected to the OBD system and is located on the vehicle's instrument panel. If the OBD system detects a malfunction related to the emissions control system, the MIL will come on and alert the operator. The engine will continue to operate normally until a diagnosis is made.

### Closed Crankcase Ventilation (CCV) system

A CCV system reduces engine emissions by capturing crankcase emissions and rerouting these gases back to the engine. This results in more complete combustion and lower emissions.

### Enhanced Three-Way Catalyst (TWC)

TWCs are effective, simple, passive devices. They provide consistent emissions control performance, are maintenance-free and can be mounted vertically or horizontally on the vehicle. Cummins Westport engines don't require active aftertreatment such as a diesel particulate filter or selective catalytic reduction.

### High-Energy Ignition System

New ignition control module – provides better performance and improved spark plug and coil durability, plus self-diagnostics.

### Control System

Full drive-by-wire ECM provides full monitoring and control of engine sensors, fuel system and ignition system. Full interface capability to Cummins INSITE™ and diagnostic service tools.

### Electronic Features

- Road-speed governing
- Accelerator interlock
- SAE J1587/J1939
- Power Take-Off (PTO) control
- Cruise control
- Engine protection system

### Wastegate Turbocharger

Water-cooled bearing housing for durability. Electronic control for precise air handling.

## Specifications

NOx Emission	0.02 g / bhp-hr. (90% below EPA)
Maximum Horsepower	320 HP   239 kW
Peak Torque	1,000 LB-FT   1,356 Nm
Governed Speed	2200 RPM
Type	4-cycle, spark-ignited, in-line 6-cylinder, turbocharged, CAC
Engine Displacement	540 CU IN   8.9 LITERS
Number of Cylinders	6
Operating Cycles	4
Net Weight (dry)	1,625 lb   737 KG
Fuel Type	CNG / LNG / RNG
Aftertreatment	Three-Way Catalyst

### Base Warranty

Cummins Westport engines feature the same factory base warranty coverage as Cummins diesel engines. For transit and shuttle bus engines, a standard 2-year, unlimited-miles/kilometers warranty with full parts and labor coverage on warrantable failures\* applies. For school bus engines, standard coverage is 5 years/100,000 miles (160,934 km), whichever comes first. For truck customers, full engine coverage is provided for 2 years/250,000 miles (402,336 km), whichever comes first. Major components coverage is also available – contact your local Cummins distributor or Cummins Westport representative for details.

\*Covers defects in Cummins materials or factory workmanship

### Extended Coverage

Cummins Westport Inc. also offers a variety of extended coverage plans to meet every customer's need. For full extended coverage plan details, contact your local Cummins distributor or Cummins Westport representative.

### Better Customer Care

Cummins Westport-powered vehicles are supported by the Cummins service network, the largest and most capable in North America. Cummins-authorized technicians are fully trained on Cummins Westport natural gas engines, with ready access to Cummins parts and warranty support. For questions regarding your Cummins Westport engine or for assistance in finding a repair facility in the United States or Canada, call Cummins Care at 1-800-CUMMINS™ (1-800-286-6467).



### Cummins Westport – The Natural Choice

Cummins Westport designs, engineers and markets 6- to 12-liter spark-ignited natural gas engines for commercial transportation applications such as trucks and buses. Our natural gas engines are manufactured by Cummins, and are available from leading truck and bus manufacturers.

### Natural Gas Playbook

To learn more about how to incorporate natural gas engines into your fleet, visit our Natural Gas Playbook website. We'll guide you through what you need to know to ensure a successful implementation and operation of your natural gas engines.

[cwiplaybook.com](http://cwiplaybook.com)

