

Move to Zero

2018 Natural Gas Engine



Performance and efficiency matches the current ISL G engine

Improves air quality and lowers noise pollution

More cost effective compared to electric powered vehicles

Lowest emission
Transit and Medium
Duty Truck engine
in North America





Reduced Emissions from Trucks and Buses

- Reduces smog forming NOx emissions by 90% vs. EPA NOx Standard
 - NOx emissions from TEN L9N powered vehicles = emissions from ONE 2010 certified vehicle
 - Clean technology for Clean Air Act Ozone Nonattainment areas
- Reduces Greenhouse Gas emissions
- Will be certified to the US Environmental Protection Agency (EPA) and California Air Resources Board (ARB) Optional Low NOx Emissions standards of 0.02 g/bhp-hr.

NOx Emissions Reduction Impact



NOx emissions from ONE bus with a 2010 certified engine

NOx emissions from TEN buses with the L9N engine

Cost Effective Emissions Reduction

- Over 70,000 (6.7 to 12 litre) engines in service worldwide with Cummins Westport stoichiometric cooled Exhaust Gas Recirculation technology
- Lowest cost Move to Zero option
 - Minimal cost impact vs current natural gas product
 - No infrastructure changes for current NG fleets
 - Conventional vehicle range between fuel stops
 - Vehicles cost significantly less than electric
- Available for many applications:
 - Transit and shuttle buses, school buses, and refuse, vocational, and conventional trucks.
- Reduce emissions today, and provide immediate urban air quality benefits
 - New vehicles or repowers of existing natural gas vehicles
- Visit the Natural Gas Playbook for a step by step guide to evaluating natural gas for your fleet - cwiplaybook.com



cumminswestport.com

Renewable Fuel

- Capable of operating on 100%
 Renewable Natural Gas (RNG)
 - Recycled methane naturally produced from composting or landfills
- Significant greenhouse gas reduction
- Meets California 2023/2031 NOx and petroleum reduction goals now
- Reduce GHG Emissions with natural gas: Use our emissions tool to calculate your fleet's potential emissions reductions – visit http://cwiplaybook.com/assess/

The Natural Choice

- Cleanest Internal Combustion technology
- Available today for buses and trucks
- Lowest incremental vehicle cost to diesel
 - More vehicles per \$
- Fueling infrastructure in place and growing
- Natural gas is the lowest carbon fuel available, with abundant supply and stable pricing







