

## 2010 Emissions Solution: Lower Operating Costs, Less Hassle MAXXFORCE® ADVANCED EGR

### FULL COMPLIANCE WITHOUT COMPROMISE.

Navistar's MaxxForce Advanced EGR emissions technology prevents NOx from forming in-cylinder. Four key technologies make it work, so you don't have the taxing work of sourcing urea, filling a urea tank and maintaining additional components. The result is optimal performance and low cost of ownership.

#### 1 ADVANCED FUEL INJECTION TECHNOLOGY

Our next-generation fuel injection systems are capable of delivering fuel into the cylinder multiple times per cycle and at higher pressures. Utilization of post-injections along with the main injection event means combustion can take place over a longer period and be more complete, resulting in reduced NOx emissions – as well as better fuel efficiency.

#### 2 PROPRIETARY COMBUSTION BOWL DESIGN

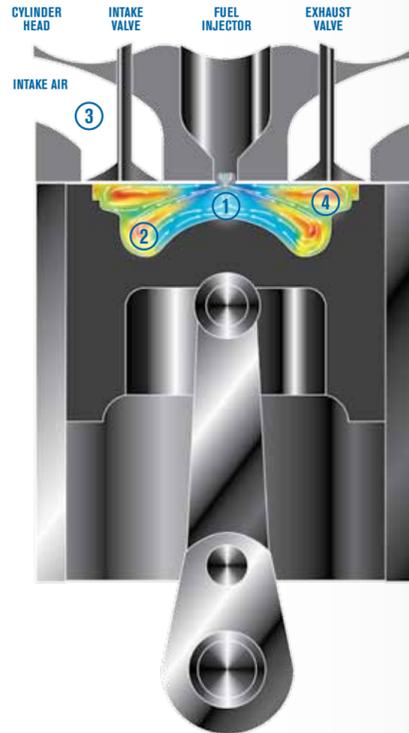
Our redesigned combustion bowl combines with the higher fuel injection pressure to break the fuel up into a finer mist spread more evenly inside the cylinder, resulting in a more complete and cleaner burn. That means more power to the wheels and less soot out the exhaust.

#### 3 ADVANCED AIR MANAGEMENT

Turbo matching and advanced EGR cooling provide improved combustion. The result: a controlled reduction of NOx and particulate matter formation.

#### 4 ELECTRONIC CALIBRATION STRATEGIES

Engine controllers previously utilized pre-programmed look-up tables to determine the fuel-air mixture to burn. Increases in computing power now allow the engine controller to continuously calculate the optimum fuel-air mix to achieve maximum power and efficiency in many different operating conditions.



TO LEARN WHY MAXXFORCE ADVANCED EGR IS THE BEST PATH TO 2010 AND BEYOND, VISIT [WWW.MAXXFORCE.COM/2010](http://WWW.MAXXFORCE.COM/2010).



## MONACO HAS YOUR BACK.

When selecting a MaxxForce® engine for your Monaco motor home, you are covered by North America's largest network of service locations and unmatched parts availability. Search the "Service Locator" at [www.MaxxForce.com](http://www.MaxxForce.com) for service center locations.

**MAXXFORCE**  
ALWAYS PERFORMING.

### WITH NAVISTAR ENGINE GROUP AND MAXXFORCE ENGINES, YOU GET PRODUCTS AND AN ORGANIZATION BEHIND THEM THAT ARE ALWAYS PERFORMING.

For more information on the MaxxForce® 7, visit [MaxxForce.com](http://MaxxForce.com). MaxxForce is the signature brand for Navistar engines for a wide array of vehicle applications. MaxxForce engines are designed, engineered and built to deliver what you expect—power, performance, reliability and durability.

[www.MaxxForce.com](http://www.MaxxForce.com)



  
MONACO RV



FUEL ECONOMY. PERFORMANCE. RELIABILITY.

**MAXXFORCE**® 7

ALWAYS PERFORMING.

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# MAXXFORCE® 7

## ALWAYS PERFORMING.

The MaxxForce® 7 is a significantly upgraded V8 turbodiesel specifically designed to meet the needs of medium-duty motor home customers. These upgrades include:

- high-pressure common-rail fuel system
- dual sequential turbochargers
- compacted graphite iron block

These features deliver a better performing engine with outstanding power, performance, reliability and fuel economy.

## POWER.

The 2010 MaxxForce 7 provides big power in an efficient V8 package. Improved fuel and air management systems yield higher peak power for impressive acceleration, grade climbing and towing capability.

## PERFORMANCE.

The industry's most precise high-pressure fuel injection system features electronically-actuated piezo injectors that deliver up to five independent injections per cycle for smooth, full combustion. This results in low NVH and smooth acceleration for exceptional driveability.

## RELIABILITY.

The MaxxForce 7 was designed for maximum reliability and serviceability. More robust components – starting with the high-strength CGI block – and reduced electrical connections mean more uptime and faster service turnarounds. Unaided cold-starting performance down to -20°F assures reliable operation with every turn of the key, using a proven intake air grid heater.

## LOW COST OF OWNERSHIP.

The MaxxForce 7 offers the affordable business solution when viewed with a complete drivetrain and vehicle package. Its advanced fuel and air-management systems provide outstanding fuel economy, especially in city cycle conditions. Combined with exceptional reliability and serviceability, this V8 provides low cost of ownership over its extended service life, with a B50 design life\*\* of 500,000 miles.

## ADVANCED AIR-MANAGEMENT SYSTEM

MaxxForce 7 engines use dual sequential turbochargers to deliver powerful performance for any job. The smaller, primary turbo responds quickly for immediate take-off at low engine speeds, and the larger, secondary turbo provides peak power at higher speeds and on steep grades.



## COMPACTED GRAPHITE IRON BLOCK (CGI)

The MaxxForce 7 features the industry's only Class 4-7 CGI block. This incredibly strong platform handles the highest fuel pressures that deliver the best fuel combustion and reduces vibration and noise.

The MaxxForce 7's compacted graphite iron block brings increased durability and lower noise without added weight, compared to typical gray iron. Because CGI has at least 75% higher tensile strength, 45% higher stiffness and near double the fatigue strength of gray iron, castings don't have to be as thick and heavy in order to achieve the desired structural integrity and durability.

## ADDITIONAL ADVANTAGES:

- A larger displacement fuel pump, combined with higher fuel pressure, optimizes combustion for more efficient power generation.
- All serviceable fuel system components – pump, cooler and filters – are centrally located for ease of service.
- Hard-coated piston pins reduce friction for longer life.
- Solid engine-mounted cast-aluminum EGR cooler improves reliability and serviceability, and a floating-core EGR cooler design guarantees reliable service day-in, day-out.
- Hydraulic roller-cam followers provide a service-free valvetrain, as valve lash adjustment is not required.
- Fractured rod bearing caps ensure positive alignment, extending service life.
- Standard built-in electronic engine protection features automatically guard against adverse operating conditions.

## HIGH-PRESSURE COMMON-RAIL FUEL SYSTEM

A major key to MaxxForce 7 performance is its advanced fuel system, which features extremely efficient piezo injectors and high injection pressure of 1900 bar (approximately 28,000 psi) for precise fuel dosing, injection timing and optimal combustion. The results: better fuel efficiency, in-cylinder reduction of emissions, and one of the quietest running diesel engines in the industry.

\*\*B50 design life is the mileage that 50% of the engine population would exceed without failure requiring removal of the oil pan, cylinder head, front gear train or an in-frame overhaul.

## MAXXFORCE 7 SPECS

Configuration	V-8
Displacement	6.4 L (389 cu. in.)
Power Output	260 hp (194 kW)
Peak Torque	660 lb.-ft. (894 Nm)
Aspiration	Dual Sequential Turbochargers
Combustion System	Direct Injection
Dry Engine Weight	1,225 lbs. (556 kg)
B50 Design Life**	500,000 mi (805,000 km)

## PREVENTIVE MAINTENANCE INTERVALS

Change Engine Oil, Replace Oil Filter:	10,000 miles (16,093 km) / or 1 year
Replace Fuel Filter:	30,000 miles (48,280 km)
Replace Coolant*:	300,000 miles (482,803 km) / 5 years
Valve Lash Adjustment:	Not Required
Crankcase Breather:	60,000 (96,561 km)

\*Add extender @ 150,000 miles (241,400 km) / 2.5 years / 6,000 hours

## MAXXFORCE 7 PERFORMANCE DATA

Horsepower (bhp)	Torque (lb.-ft.)	Gov. Speed (rpm)	Clutch Engagement Torque @ 800 rpm
260 @ 2600	660 @ 1400	2800	350

## 260 HP / 660 lb-ft

