

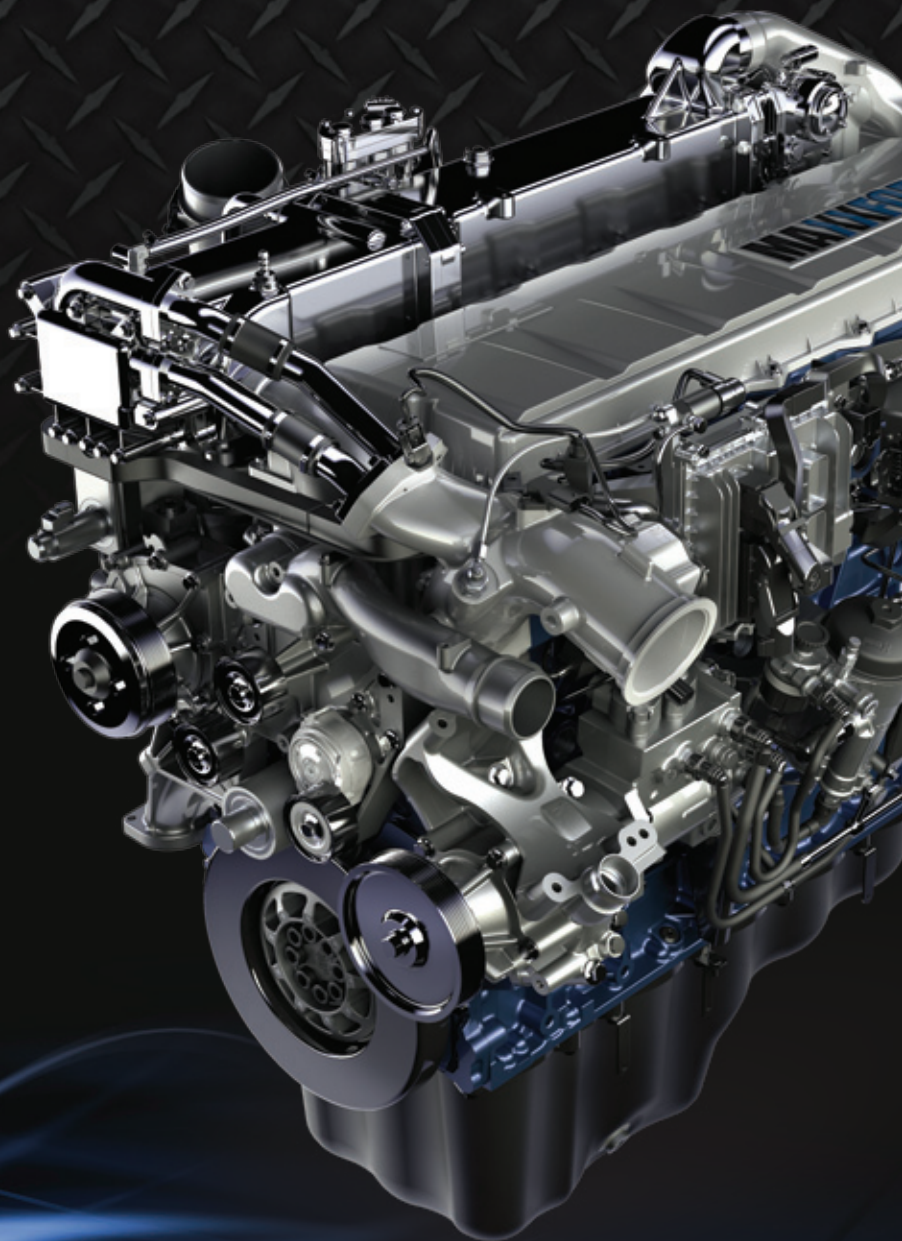
# MAXXFORCE<sup>®</sup> 13

## Reliable Power Under Pressure.

### EPA2010 12.4L

You have to concentrate on the job you're doing, so you don't have time to worry about your engine. Navistar's EPA2010 MaxxForce<sup>®</sup> 13 engine is designed to work reliably, even under pressure.

When precious seconds count, trust the engine with the highest low end torque in the industry. Trust MaxxForce Engines.



**NAVISTAR<sup>®</sup>**  
ENGINE GROUP

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# MAXXFORCE<sup>®</sup> 13

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### In-Cylinder Emissions Solution: Full Compliance without Compromise

Navistar's MaxxForce<sup>®</sup> In-Cylinder emissions technology prevents NOx from forming in-cylinder. Four key technologies make it work, so you don't have the taxing work of sourcing Diesel Exhaust Fluid (DEF), filling the DEF tank and maintaining additional components. The result is optimal performance and low cost of ownership.

#### 1. Advanced Fuel Injection Technology

Multiple fuel injections per cycle at higher pressures reduces NOx emissions and increases fuel efficiency

#### 2. Proprietary Combustion Bowl Design

Finer fuel mist spread more evenly inside the cylinder means more power to the wheels and less soot out the exhaust

#### 3. Advanced Air Management

Turbo matching and In-Cylinder cooling provide improved combustion leading to a controlled reduction of NOx and particulate matter formation

#### 4. Electronic Calibration Strategies

Increases in computing power calculate the optimum fuel-air mix to achieve maximum power and efficiency

### Excellent Throttle Response

The EPA2010 MaxxForce 13 offers higher low-end torque at a lower RPM. Dual sequential turbos and a High Pressure Common Rail Injection system help deliver peak torque at 1,000 rpm versus typical 1,200 rpm for most competitors. All the power you need, whenever and wherever you need it.

### Maximum Reliability and Durability

The EPA2010 MaxxForce 13 engine is built on a block of compacted graphite iron (CGI), a material far stronger than conventional gray iron. CGI provides superior strength, less fatigue and years and years of reliable service. Fractured rod and main bearing caps, along with separate cooling and lube circuits for the block and head, provide unmatched 1.2 million mile B50 design life.

### Quietly Goes About Your Business

The advanced, ribbed CGI block and High Pressure Common Rail multi-shot injection system combine to produce 30% lower noise inside the cab and much lower vibration for increased operator comfort. It's also startlingly quiet outside, at idle and in action. The smooth, quiet ride of the MaxxForce 13 engine will take you by surprise.

### Minimal Diesel Particulate Filter (DPF) Regenerations

Enhanced Engine Control Module (ECM) calibration and DPF materials align to minimize the amount of stationary regenerations during operation allowing you to do your job, not worry about the engine.



### MaxxForce 13 Specs

Horsepower	410-475
Peak Torque	1450-1700 Lb-Ft
Engine Type	Diesel, 4-Cycle
Configuration	Inline 6-Cylinder
Displacement	12.4L (758 cu. in.)
Bore & Stroke	4.96 in. & 6.54 in. (12.6 cm & 16.6 cm)
Compression Ratio	17:1
Aspiration	Dual Sequential Turbocharger, Intercooler & Aftercooler
Combustion System	Direct Injection
Lubricating System Capacity	42 Quarts (40 L)
Total Engine Weight (Dry)	2,400 lbs. (1,089 kg)
Dimensions	L 59 in. x W 37 in. x H 49 in. (L 150 cm x W 94 cm x H 125 cm)
Valves	4 Valves per Cylinder, Overhead Cam Actuated
Design Life	1,200,000 mi (1,931,000 km)

### Preventive Maintenance Intervals

Change Engine Oil, Replace Oil Filter	25,000 miles (40,234 km) / 12 months / 1,100 hours / 4,200 gallons (15,899 L)
Replace Fuel Filter	25,000 miles (40,234 km) / 12 months / 1,100 hours / 4,200 gallons (15,899 L)
Replace Coolant*	600,000 miles (965,606 km) / 6 years / 12,000 hours

\*Add Extended Life Coolant (ECL) Extender @ 300,000 miles  
(482,803 km) / 3 years / 6,000 hours