

# NAVISTAR® ENGINE GROUP



LEGENDARY. LEADER.

# MAXXFORCE® DT

ALWAYS PERFORMING.



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**WITH MAXXFORCE ENGINES, YOU GET PRODUCTS  
AND AN ORGANIZATION BEHIND THEM THAT ARE ALWAYS PERFORMING.**

For more information on MaxxForce® DT engines, visit us at [www.MaxxForce.com](http://www.MaxxForce.com). MaxxForce® Advanced Diesel Power is the signature brand for Navistar engines for a wide array of commercial 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)

# MAXXFORCE® DT ENGINE

## ALWAYS PERFORMING.

The DT has long been known in the industry as “The Legend.” The legend grew from a big idea: bring to the mid-range diesel market traditional big bore features like wet-sleeve design, in-chassis rebuild capability and premium design features. The resulting durability and performance, providing low cost of ownership and high residual value, drove Class 6-7 truck buyers to make this engine the market share leader for decades.

Diesel Power magazine, in naming the DT one of the “Top 10 Diesel Engines – Ever,” summed it up nicely: “Simply put, these are the favorite engines for fleet managers all across America because they run forever, are efficient, make good power for moving freight, and can be rebuilt right in the chassis of the truck... (They) have earned the respect of drivers and operators all over the world.”

Today, the MaxxForce® DT engine has evolved to meet demands for optimum performance and clean diesel operation... while retaining its legendary reliability and durability. These advantages ensure your business will be “Always Performing.”

## RELIABILITY, DURABILITY AND RESALE VALUE.

A rock-solid, time-tested platform makes up the core of the DT's legendary reliability. For the new generation, Navistar engineers carried forward the proven technologies and components like:

- premium plateau-honed cylinder design
- precision-machined wet-sleeve design
- durable roller cam followers

For changes outside the base engine design, the intention was to further improve reliability. Foremost among these changes are dual sequential free-wheel turbochargers and a premium wiring harness, which utilizes a single foam-molded design that locks down wiring and secures connections.

The MaxxForce DT engines features the same precision-machined wet-sleeved design that provides heavy-duty engine durability. Six bolts per cylinder provide head-gasket integrity unmatched by competitive four-bolt designs. Premium valvetrain components and low-friction design further increase engine life.

Adding to the appeal of this engine is its ability to be completely re-built in-chassis. As a result, the engine can be returned to original factory specifications for a lot less than the cost of remanufacturing, which gives them a strong value advantage at resale.

## WIDE VOCATIONAL CAPABILITY.

The MaxxForce DT engine is purpose-built to the needs of International customers. It is compatible with a full range of automatic and manual driveline options and thousands of potential build configurations to serve the broadest range of on-and off-highway applications. Eight different model ratings offer 215-300 hp and 560-860 lb.-ft. of torque. Shift energy management technology allows for higher peak torque when used with select transmissions.

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

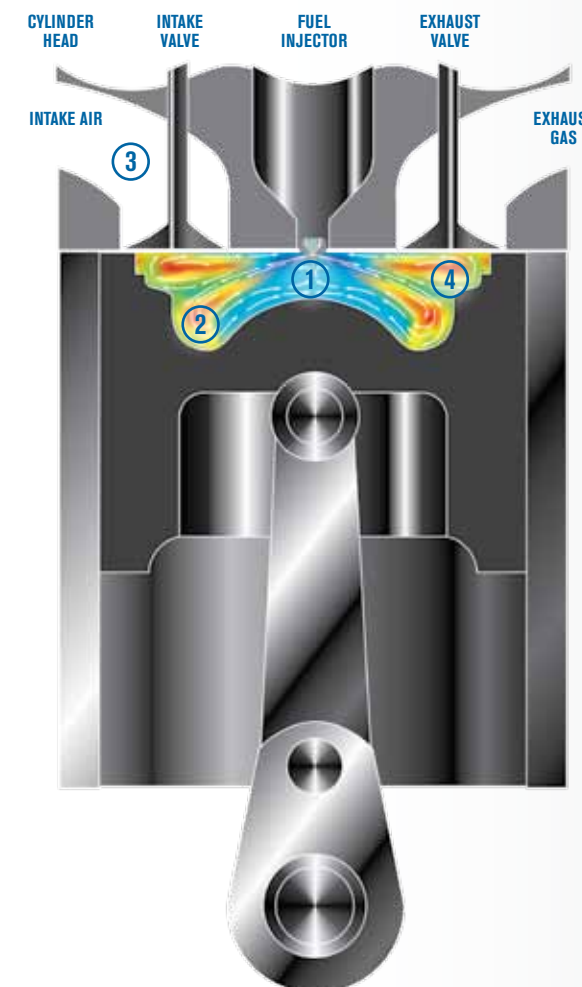
Our redesigned combustion bowl combines with the higher fuel injection pressure to break the fuel up into a finer mist spread more evenly inside the cylinder, resulting in a more complete and cleaner burn. That means more power to the wheels and less soot out the exhaust.

#### 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).

# TECHNOLOGIES DELIVERING PRODUCT EXCELLENCE.

## ADVANCED HIGH-PRESSURE FUEL SYSTEM

The electro-hydraulic high-pressure fuel system features high-efficiency injector nozzles and advanced electronic control strategies for fuel economy gains. The results: Better fuel efficiency, in-cylinder reduction of emissions, and one of the quietest running engines in the industry.



## ADDITIONAL ADVANTAGES:

- Significantly larger main bearings than most competitors results in heavy-duty durability.
- Single-box 32-bit ECM has fewer connection points for added reliability and easier serviceability.
- The crankcase features six head bolts per cylinder, which provides even clamping for head-gasket life that competitive four-bolt designs can't match.
- Crankcase ladder reinforcement on selected models provides added strength and rigidity, maintaining perfect alignment of crankshaft under heavy loads, all while reducing engine noise.
- Maintenance-free closed crankcase ventilation system features a centrifugal oil mist separator, which means there are no filters to change.
- Precision-machined wet sleeves result in even cylinder cooling and unmatched structural integrity.
- Premium foam-molded wiring harness secures wiring and connections for increased reliability and durability.
- B50 design life\*\* of 550,000 miles.



## PREMIUM VALVETRAIN

- Roller-cam followers provide increased durability, longer valve and camshaft life, and slow valve lash growth compared with competitive flat tappets.
- Replaceable valve seats and guides allow for easy cylinder head rebuild.
- Four valves per cylinder provide better breathing, performance and lower emissions.



## IMPROVED AIR-MANAGEMENT SYSTEM

- A dual sequential free-wheel turbocharger system and upgraded cooling system provide outstanding boost and response for every application.
- 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.
- Dual-path EGR cooling provides optimized cooled EGR in a robust cast-aluminum housing, and a floating-core design allows long-term system performance.

# MAXXFORCE® DT ENGINE

## MAXXFORCE DT SPECS

Engine Type	7.6L (466 cu. in.)
Configuration	Inline 6-Cylinder
Displacement	466 cu. in. (7.6 L)
Bore & Stroke	4.49 in. & 4.68 in. (11.7 cm & 11.9 cm)
Compression Ratio	16.4:1
Aspiration	Dual Sequential Turbochargers   <230 hp Aftercooler only   >245 hp Intercooler and Aftercooler
Combustion System	Direct Injection
Engine Lubrication	30 Quarts (28 L)
Total Engine Weight (Dry)	1,425 lbs. (646 kg)
Dimensions	<230 hp L 45 in. x W 42 in. x H 43 in. (L 114 cm x W 107 cm x 109 cm)   >245 hp L 45 in. x W 42 in. x H 47 in. (L 114 cm x W 107 cm x 119 cm)
Valves	4 Valves per Cylinder
B50 Design Life**	550,000 mi (885,000 km)

\*\*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.

## PREVENTIVE MAINTENANCE INTERVALS

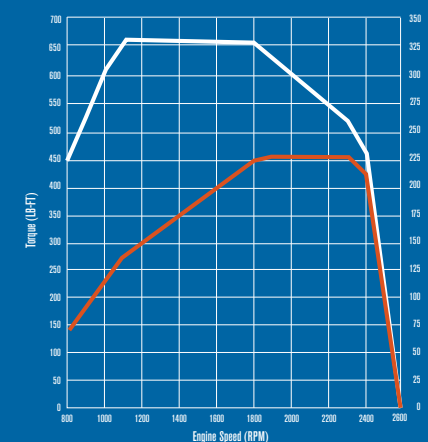
Change Engine Oil, Replace Oil Filter:	Up to 15,000 miles (24,140 km) / 6 months / 550 hours / 2,100 gallons (7,949 L)
Replace Fuel Filter:	30,000 miles (48,280 km) / 12 months/ 1,100 hours / 4,200 gallons (15,899 L)
Replace Coolant*:	300,000 miles (482,803 km) / 5 years / 12,000 hours

\*Add Extended Life Coolant (ECL) Extender @ 150,000 miles (241,400 km) / 30 months / 6,000 hours

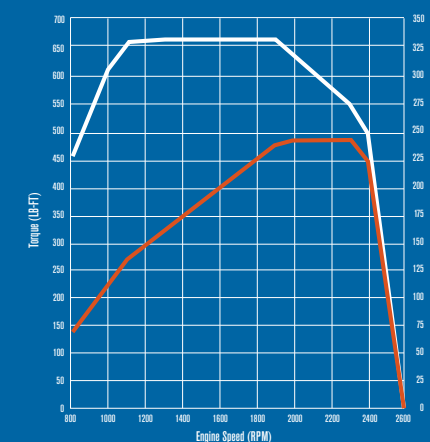
## MAXXFORCE® DT PERFORMANCE DATA

Horsepower (bhp @ 2200 rpm)	Torque Peak (lb-ft @ 1300 rpm)	Gov. Speed (rpm)	Clutch-Engagement Torque (lb-ft @ 800 rpm)
215	560	2400	450
230	620	2400	450
230	660	2400	450
245	660	2400	450
260	660	2400	450
270	860	2400	450
285	860	2400	450
300	860	2400	450

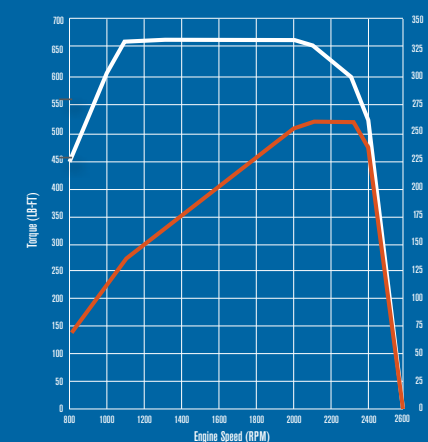
230 HP / 660 lb-ft



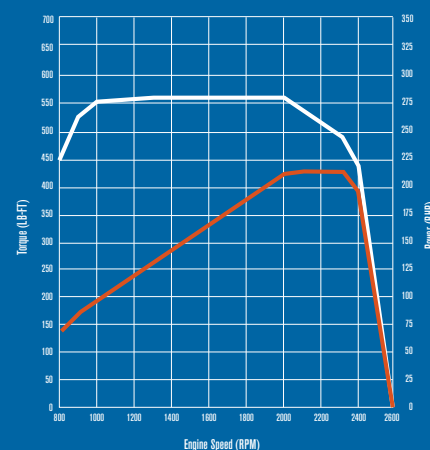
245 HP / 660 lb-ft



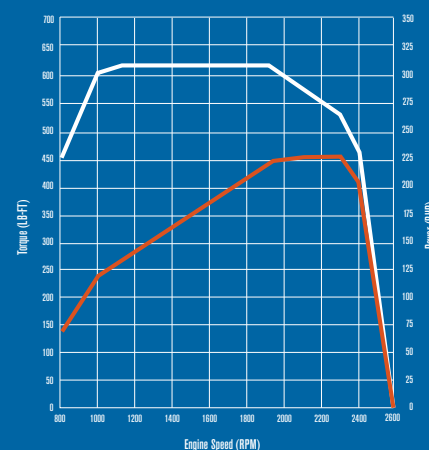
260 HP / 660 lb-ft



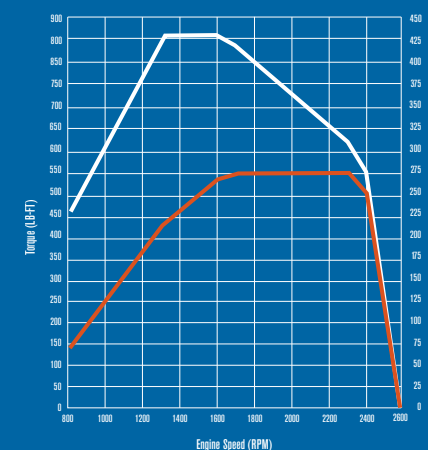
215 HP / 560 lb-ft



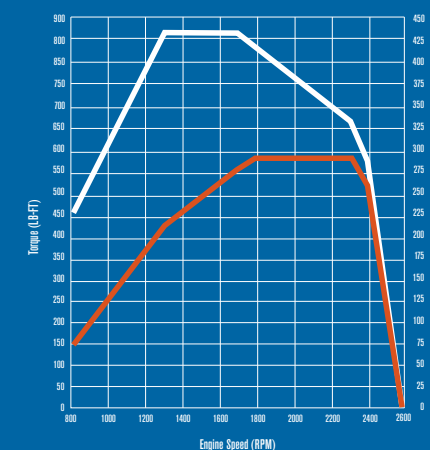
230 HP / 620 lb-ft



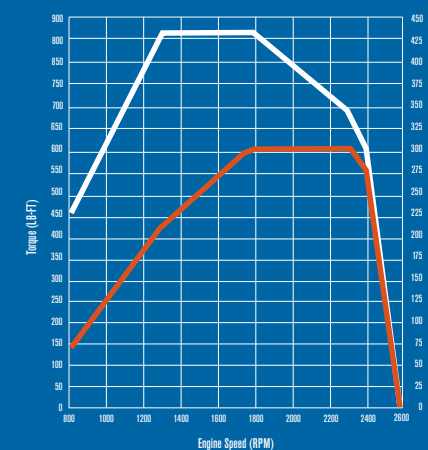
270 HP / 860 lb-ft



285 HP / 860 lb-ft



300 HP / 860 lb-ft



TORQUE

POWER