HOW TO MAXIMIZE PERFORMANCE WITH YOUR
MAXXFORCE® ENGINE

USE THIS INFORMATION TO GET TO KNOW YOUR NEW MAXXFORCE® ENGINE.
Our customers get the best performing diesel with the best performing organizations behind it.

A HIGH EXHAUST SYSTEM TEMPERATURE (HEST)
• Exhaust temperature is high. This is normal and does not indicate the need for engine service. Keep exhaust away from people and flammable areas.

B ENGINE WARNING
• Some condition within the engine, such as pressure or temperature, has reached a warning level, or Diesel Particulate Filter (DPF) is approaching maximum capacity. Engine may require service.

C ENGINE SHUTDOWN
• Some condition within the engine has reached a critical level, and the engine must be shut down.

D MALFUNCTION INDICATOR LIGHT (MIL)
• Indicates a malfunction in the engine or exhaust system requiring service soon.

E DIESEL PARTICULATE FILTER (DPF)
• Indicates heavy soot loading of the DPF. Extended highway driving or a “parked regeneration” can clear the soot. When flashing, a parked regeneration is required very soon. See DPF Regeneration (below) for instructions on how to do a parked regeneration. (Also available on visor or in operator’s manual.)

F WAIT TO START LAMP
• The amber WAIT TO START lamp will illuminate when the inlet air heater is required. When the WAIT TO START lamp begins flashing, turn the ignition switch to START.

G SHIFT INDICATOR LAMP
• If enabled the green Shift Indicator Lamp will illuminate indicating the appropriate time to shift to a higher gear for maximum fuel economy.

DPF REGENERATION
To start a parked regeneration, find a place away from flammable materials, structures or vapors where you can park for 20 to 40 minutes. Set the parking brake, but leave the engine running. For automatic transmissions, put the vehicle in park. For manual transmissions, leave it in neutral. Now push the “parked regeneration” button on the right side of the dash. Also, if your truck has a “regeneration inhibit” switch, make sure that it’s not lit up or on.

You may notice the engine increase in speed. That's normal. As the exhaust gets hotter it will burn the soot in the DPF and clean it out. The DPF light will then go out and you can resume your normal driving.

DPF LIGHT FLASHING
A flashing DPF light means the exhaust filter is just about full and the truck cannot go much farther. Complete a “parked regeneration” as soon as possible.

DPF LIGHT FLASHING WITH BEEPING ALARM
A flashing DPF light with an audible alarm means the exhaust filter is completely full, and the engine power is being somewhat limited to prevent damage. In some trucks, the “engine warn” light will also be displayed. Do a “parked regeneration” immediately to avoid serious damage to the engine or exhaust system.
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DRIVING FOR FUEL ECONOMY
A minor improvement in mileage can save thousands of dollars a year.

BEFORE THE TRIP
Ensure that your tires are properly inflated. Low pressure will increase fuel consumption and can also result in excess heat and premature tire wear.

Check your trailer gap (the distance between the back of the cab and the front of the trailer). Reduce the gap as much as weight distribution allows to reduce drag and improve mileage.

IDLE MANAGEMENT
SHUT THE TRUCK OFF WHEN YOU'RE NOT IN IT.
Idle to control cab temperature only when absolutely necessary.

ON THE ROAD
Driving style and habits make a big difference in your miles per gallon performance. Manage your momentum by avoiding quick starts and hard acceleration. Also avoid hard braking by anticipating traffic.

CRUISE CONTROL
Use cruise control as much as possible on flat roads. In hilly terrain, cruise control may actually burn MORE fuel. Be mindful of speed limits and traffic around you, but if you can get a run off of one hill to help you start up the next, you can use gravity and momentum to your advantage.

PROGRESSIVE SHIFTING
Shift early to keep the engine operating in its most effective RPM range. You can achieve the most efficient operation of the engine when you shift around 1500 RPM or slightly higher when the engine is still in the power band of peak torque after the shift.

ENGINE RPM
For maximum economy, operate your truck in its highest sustainable gear that keeps the engine speed low. Upshift as soon as possible, and stay in that higher gear as long as you can when slowing down. A driver seeking peak fuel economy with a MaxxForce® 11 or MaxxForce® 13 engine will keep the engine RPM in the 1325–1375 RPM range. Other engine manufacturers will suggest the optimum engine speed based on the engine and duty cycle.

PULLING HILLS WITH THE MAXXFORCE 11/13/15
With the MaxxForce 11, 13 and 15, you should NOT downshift as you get to the hill. Doing this will actually HURT the truck’s performance since the increased RPM will take it out of the peak torque range. These engines develop peak torque starting at just 1000 RPM, so start up the grade and don’t downshift until you’ve dropped close to 1000 RPM. You can run up most grades either without shifting at all or dropping just one gear.

MAXXFORCE ELECTRONIC FEATURES
These features may be enabled by your fleet manager with the assistance of a Navistar dealer:

PROGRESSIVE SHIFTING
Progressive shifting limits engine RPM in each gear to require earlier shifts. When activated it will feel like a power loss, but actually it’s just the engine hitting the RPM limit. Once you shift to the next highest gear, you can again accelerate to the next shift point.

GEAR DOWN PROTECTION
Gear down protection works just like progressive shifting, but applies only to the two gears below top gear. In all lower gears and in top gear, the full range is available up to the engine’s governed RPM limit.

VEHICLE SPEED LIMITER OVERRIDE (VSLO)
When enabled, the Vehicle Speed Limiter Override allows the driver to temporarily override the pre-programmed electronic speed limit of the truck when needed, such as in passing situations. Activate when traveling at the maximum governed accelerator or cruise control speed by quickly double-pumping the accelerator pedal:

- Start at 100% throttle
- Release the accelerator all the way up
- Press it all the way down again
- Release it all the way up again
- Press it all the way down once more

You can now run up to the override speed for a limited time (as programmed in the engine).

DRIVER REWARD
This allows a higher governed accelerator or cruise control speed based on driver performance in miles per gallon, idle time or both. Your fleet manager will let you know if this feature is enabled on the engine.

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<tr>
<th>DRIVE</th>
<th>SPEND</th>
<th>IMPROVE FUEL ECONOMY BY</th>
<th>SAVE</th>
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<tr>
<td>6.0 mpg</td>
<td>$3.00/gallon</td>
<td>5%</td>
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DRIVE 60,000 miles per year and save $3,000 by improving fuel economy by 5%.

$3.00/gallon
$60,000
5%
$3,000