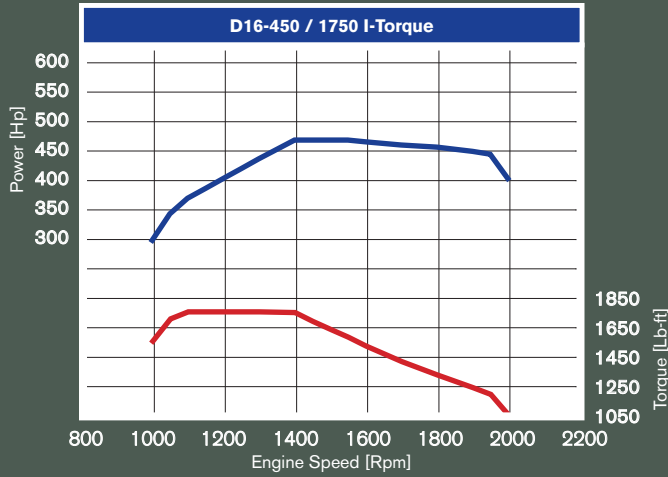




VOLVO D16

450 / 1750 I-Torque



| | | | | | |
|------------------------|-----------|-------------------------------------|-----------|--|------|
| Advertised Power, HP | 450 | Governed rpm | 2000 | Torque in Low Speed Gears >5.0:1, lb-ft | 1650 |
| Peak Power, HP | 465 | Recommended cruise speed range, rpm | 1300-1500 | Torque in Middle Speed Gears, lb-ft | 1650 |
| Peak torque, lb-ft@rpm | 1750@1100 | Start engagement torque, lb-ft@rpm | 1000@800 | Torque in High Speed Gears <2.6:1, lb-ft | 1750 |

SPECIFICATIONS

| | |
|---|---|
| Performance: | Power: 450-600 HP Torque: 1650-2050 lb-ft |
| Base Engine Configuration | 4 cycle / Inline Six |
| 2007 Emissions | Cooled Exhaust Gas Recirculation |
| Aftertreatment | Diesel Particulate Filter with Oxidation Catalyst |
| Aspiration | Sliding Nozzle Variable Geometry Turbocharger |
| Cam / Valve Configuration | SOHC / 4 valves per cylinder |
| Cylinder Head | One Piece Rigid Deck Cylinder Head |
| Injection System | Dual Solenoid Electronic Unit Injectors |
| Electronic Management System | Volvo VECTRO |
| Rating Upratability | Software Only, Throughout Range |
| Displacement, cu. in. (L) | 984 (16.1L) |
| Compression Ratio | 16.0:1 |
| Bore & Stroke, in. (mm) | 5.67 x 6.50 (144 x 165) |
| Cylinder Spacing, in. (mm) | 7.32 (186) |
| Full Dress Dry Weight, lb. (kg) | 3047 (1382) VNL; 3091 (1402) VT |
| Fuel and Lubrication: | |
| Fuel Specification | Ultra Low Sulfur Diesel, 15 ppm |
| Fuel Filters | Primary plus Secondary |
| Total Lube Oil Capacity, qts. (L) | 44 (42) VNL; 55 (52) VT |
| Oil Filtration | Two Full Flow, One Bypass |
| Oil Specification | Volvo VDS-4 |
| Engine Equipment: | |
| Air Compressor, CFM | Twin Cylinder, 31.8 |
| I-VEB Engine Brake | Standard |
| Engine Brake Rating at 2200 rpm | 600 hp @ 2200 rpm |
| Engine Brake Rating at 1500 rpm | 420 hp @ 1500 rpm |
| Engine Brake Weight, lbs (kg) | 25 (12) |
| Fuel Filter with Elec. Water Indication & Drain | Standard |
| Electronic Oil Level Indicator | Standard |
| Preheater, Electrical | Optional |



Volvo Trucks. Driving Success.®





VOLVO D16

450 / 1750 I-Torque

FEATURE

BENEFIT

High Efficiency Cooled Exhaust Gas Recirculation (EGR) to control NOx



Proven over billions of miles for high reliability and long life

Particulate control via Catalyzed Diesel Particulate Filter (DPF) with integrated oxidation catalyst and 'Primarily Passive' regeneration



Reducing active regenerations means greater fuel mileage

Volvo D11, D13, and D16 share common design platform



More thorough component development assures better design and evaluation

Ultra-high 35,000 psi fuel injection pressure



Meeting US'07 emissions with maximum fuel economy

Damper on camshaft
Cam driven from flywheel with rear gear train



Reduced injection system generated torsional vibration and high frequency 'buzz' for longer component life

Sliding nozzle variable geometry turbocharger



Fewer parts in hot stream for long service life

Electronic turbocharger actuator



Faster and more accurate for better fuel consumption

Oil-cooled EGR valve with precise response



Consistent temperature for high reliability and accurate flow

Precision Flow Cooled Exhaust Gas Recirculation with Delta-P pressure sensor for accurate EGR measurement



Together with accurate turbocharger and EGR valve, this closed-loop system is tuned to give just the EGR needed, no more, no less, for optimum fuel consumption

Standard I-VEB - strongest in class engine brake at cruise rpm



Exceptional retardation at the rpm you drive

I-VEB intelligently modulates the engine brake power for "downhill cruise" to maintain a steady vehicle speed



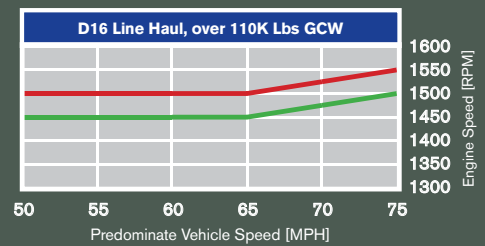
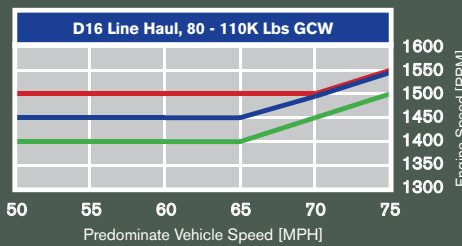
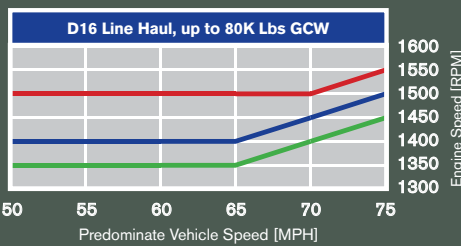
Greater driver satisfaction, improved safety

'Performance Bonus Guide' software helps the driver operate in the most fuel efficient zone



By altering the driver's behavior through incentives, fuel savings can be significant and driver retention can be increased

VOLVO D16 DRIVETRAIN RECOMMENDATIONS



— Maximum Performance
— Maximum Fuel Economy 1650 Lb-ft
— Maximum Fuel Economy 1750-2050 Lb-ft

— Maximum Performance
— Maximum Fuel Economy 1650-1750 Lb-ft
— Maximum Fuel Economy 1850-2050 Lb-ft

— Maximum Performance
— Maximum Fuel Economy 1850-2250 Lb-ft

For example, with 80k lbs GCW, 1850 lb-ft torque, 295/75R22.5 drive tires and 0.73 transmission top gear ratio, a 3.36 axle ratio would come closest to the 1350 rpm at 65 mph recommendation.

For your truck specifications, ask your salesman to help you choose a rear axle ratio which comes closest to that engine speed. A low engine cruise speed also helps to keep DPF regenerations to a minimum. Never specify a truck for a cruise speed above 1600 rpm.

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