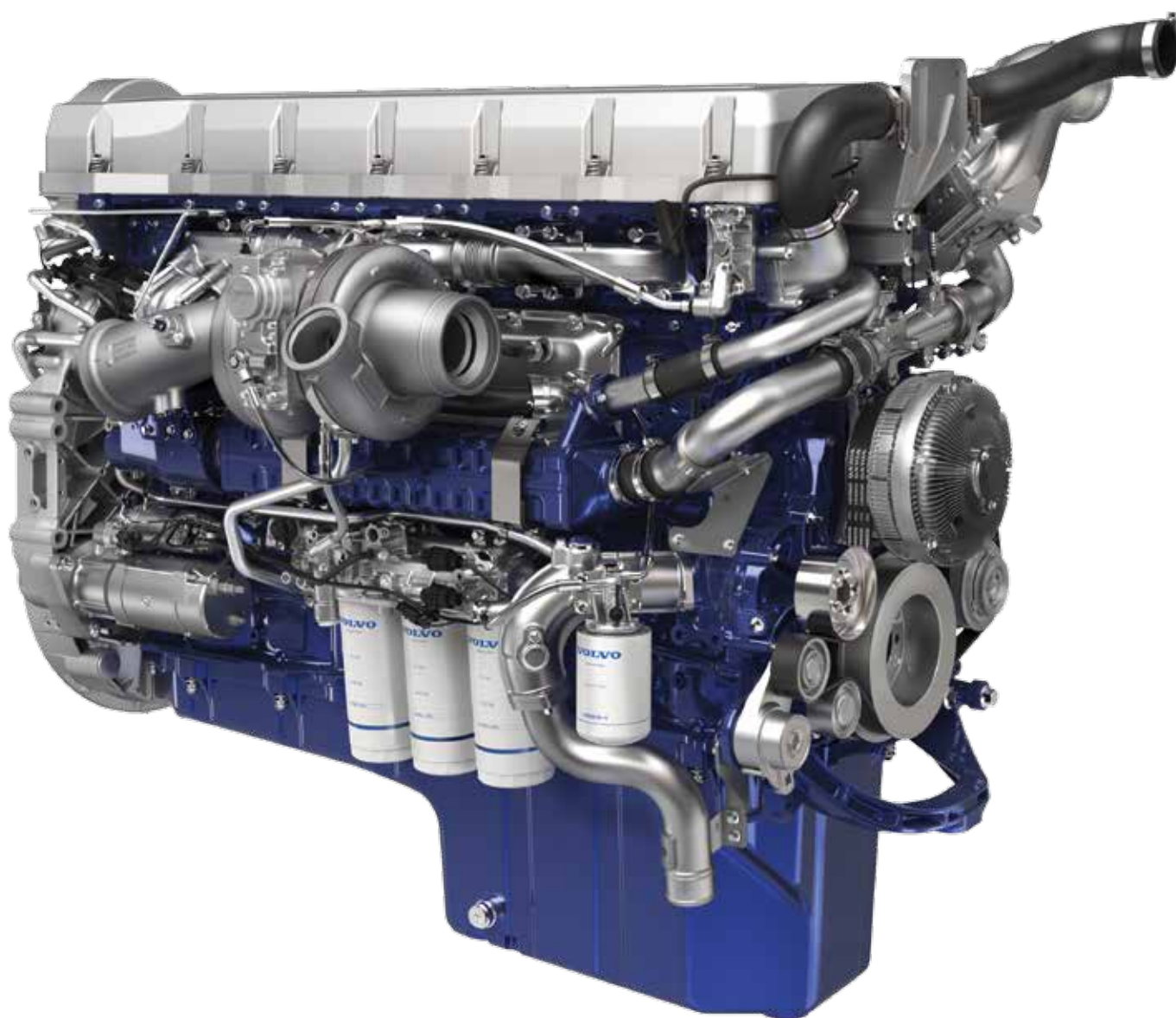




Volvo Trucks. Driving Progress

VOLVO D16 ENGINE FAMILY



All the power your job needs.

SPECIFICATIONS	
Base Engine Configuration	4 cycle / Inline Six
Emissions	SCR Selective Catalytic Reduction
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 Injection
Fuel Injection Pressure, psi (bar)	35,000 (2,400)
Electronic Management System	Volvo VECTRO
Rating Uprateability	Software Only, Throughout Range
Displacement, cu. in. (L)	984 (16.1)
Compression Ratio	16.0:1
Bore & Stroke, in. (mm)	5.67 x 6.5 (144 x 165)
Cylinder Spacing, in. (mm)	7.32 (186)
Full Dress Dry Weight, lb. (kg)	3134 (1422)
Fuel and Lubrication:	
Fuel Specification	Ultra Low Sulfur Diesel, 15 ppm
Fuel Filters	Primary plus Secondary
Total Lube Oil Capacity, qts. (L)	44 (42)
Oil Filtration	Two Full Flow, One Bypass
Oil Drain Interval, Normal Service, miles (km)	50,000 (80,467)
Oil Specification	Volvo VDS-4, SAE 10W-30
FLOCS Oil Drain Kit	Optional
Engine Equipment:	
Air Compressor, CFM	Two Cylinder, 31.8
Retarder	I-VEB Volvo Engine Brake
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)
PTO Port for Live Rear PTO Pump or Shaft	Standard
Preheater, Electrical	Optional

Just like the entire Volvo engine family, the D16 is designed to produce the power needed for your specific application, the fuel economy crucial to your bottom line, and the reliability your customers demand. Volvo achieves these goals by starting with a foundation of proven, mature engine architecture, and then leveraging innovative hardware and technology to optimize performance, productivity and efficiency. Thoughtful features are expertly integrated to deliver the solution for your needs.

D16 drivetrain recommendations

It is critical to specify the truck properly to achieve maximum fuel economy and performance.

Ask your salesman to help you choose a rear axle ratio appropriate for your expected cruising speed and gross combination weight.

Volvo 2017 engines have been designed to achieve maximum fuel economy by cruising at low engine rpm. In D16 heavy haul specifications, the target is 1375 rpm at 65 mph.

For example, with 80K lbs GCW, 1850 lbs-ft torque, 295/75R22.5 drive tires and .74 top gear ratio, the 3.36:1 axle ratio would come closest to the 1375 rpm at 65 mph recommendation.

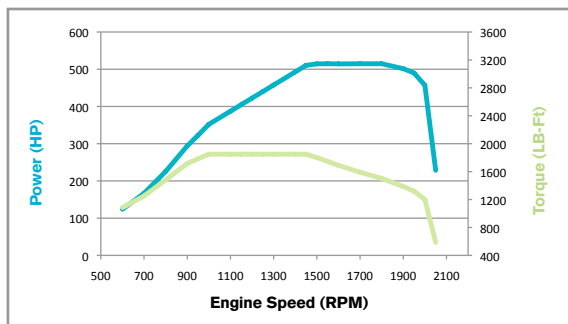
With 0.78 ratio transmission, you should use a 3.21:1 ratio for the same rpm at 65.

Never specify a Volvo D16 engine for a cruise speed above 1500 rpm.



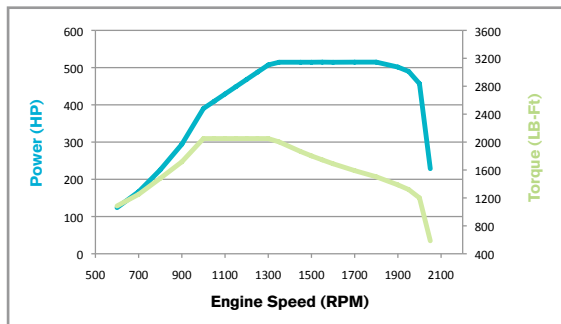
Specifications

Volvo D16 500V/1850



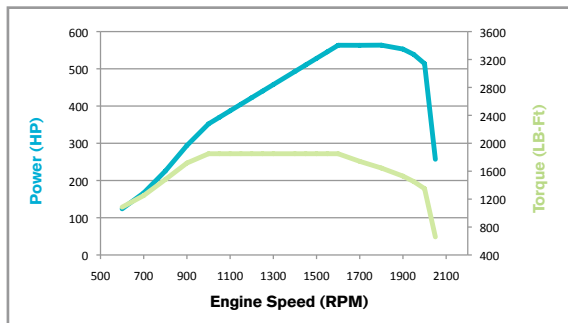
Advertised Power, HP	500
Peak Torque, lb-ft@rpm	1850@1000
Governed rpm	2100
Recommended cruise speed range, rpm	1250-1500
Start engagement torque, lb-ft@rpm	750@800

Volvo D16 500V/2050 XE-High Torque



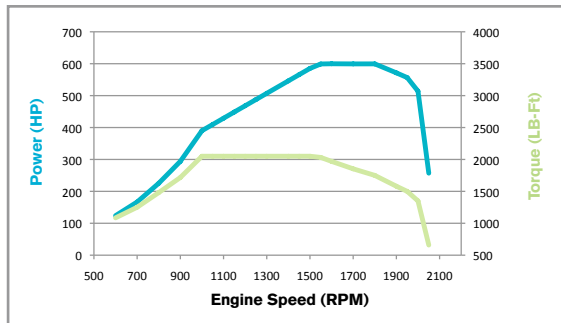
Advertised Power, HP	500
Peak Torque, lb-ft@rpm	2050@1000
Governed rpm	2100
Recommended cruise speed range, rpm	1250-1500
Start engagement torque, lb-ft@rpm	750@800

Volvo D16 550V/1850



Advertised Power, HP	550
Peak Torque, lb-ft@rpm	1850@1000
Governed rpm	2100
Recommended cruise speed range, rpm	1250-1500
Start engagement torque, lb-ft@rpm	750@800

Volvo D16 600V/2050



Advertised Power, HP	600
Peak Torque, lb-ft@rpm	2050@1000
Governed rpm	2100
Recommended cruise speed range, rpm	1250-1500
Start engagement torque, lb-ft@rpm	750@800



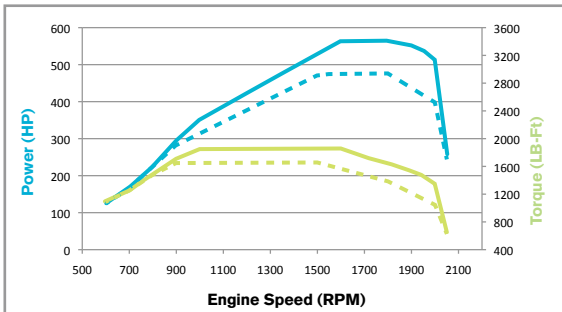
Specifications

FEATURE	BENEFIT
Variable Geometry Turbocharger (VGT)	Supercharges I-VEB system for high retarding horsepower at low rpm, where engine braking is needed most.
Ultra-high 35,000 psi fuel injection pressure	Finer fuel atomization for cleaner burn, reduced emissions and better fuel economy.
Precision-Flow Cooled Exhaust Gas Recirculation	Tuned to give just the EGR flow needed, no more, no less, for optimum fuel consumption.
Oil-Cooled dual-port EGR valve	Consistent temperature; balanced pressure design with reduced opening force for high reliability and stick resistance.
Volvo engine family shares common architecture	Thorough component development assures more refined design.
Rigid deck cylinder head	Six headbolts per cylinder arrangement delivers uniform clamping force for long life.
Camshaft damper	Reduces injection system torsional vibration and high frequency buzz, for longer component life.
Smart fan clutch	Increases fuel efficiency by only running the fan when extra cooling is necessary, varying fan speed based on cooling needs.
Intelligently modulated I-VEB engine brake	Maintains steady vehicle speed during descent for greater driving comfort, improved safety.
Available I-VEB engine brake	Exceptional retarding, optimized for the rpm you drive.
Performance Bonus Guide driver coaching software	Increased fuel savings and driver retention by altering driver behavior through incentives.



Eco-Torque Specifications

Volvo D16 550V/1750-2050 Eco Torque Performance



Advertised Power, HP	550
Peak Torque, lb-ft@rpm	1850@1000
Governed rpm	2100
Recommended cruise speed range, rpm	1250-1500
Start engagement torque, lb-ft@rpm	750@800



TORQUE MANAGEMENT			
Package	Gear	Torque Curve	Torque Switching Gears
Eco-Torque Performance	1-10	High	Top 2
	11-12	High or Low	
Eco-Torque Economy	1-8	High	Top 4
	9-12	High or Low	
XE - High Torque	1-12	High	None
XE - Economy	1-7	Low	8, 9, 10, 11
	8-11	High or Low	
	12	High	
XE - Adaptive Gearing	1-7	High	Top 5
	8-12	High or Low	

VOLVO

Volvo Trucks

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Some vehicles shown with optional equipment.

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