

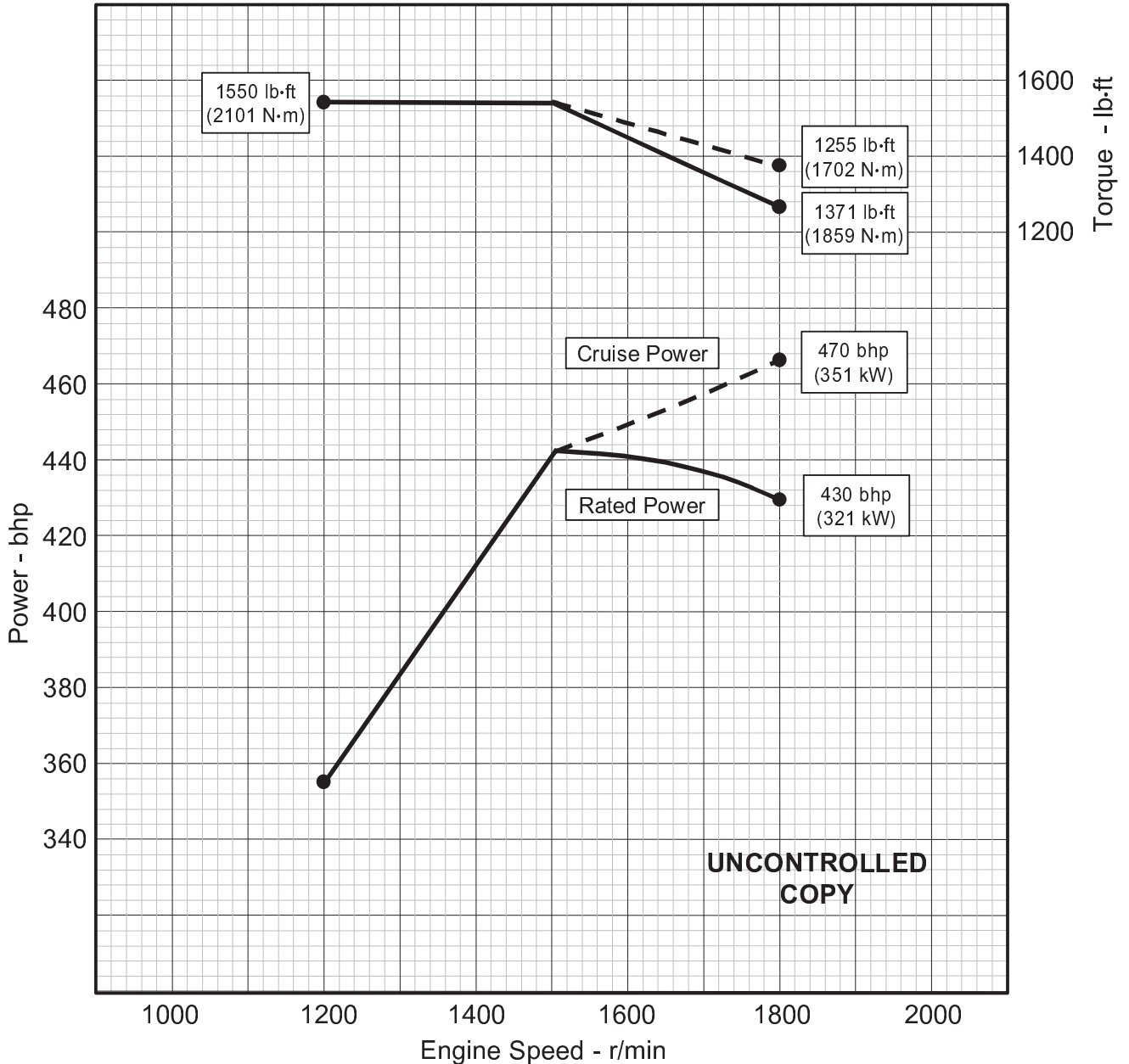


On-highway Power

Model: Series 60® - Truck

Rating: 470 bhp @ 1800 r/min 1550 lb-ft @ 1200 r/min (Cruise)
430 bhp @ 1800 r/min 1550 lb-ft @ 1200 r/min (Rated)

Certification:
1999 Line Haul



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<p>Power output guaranteed within 5% at SAE J1995 conditions: 77°F (25°C) air inlet temperature; 29.31 in. Hg (99kPa) dry barometer; 100°F (38°F) fuel inlet temperature; .653 specific gravity at 60°F (15°C) Charge air cooler system pressure drop: 16 in. H₂O (4 kPa) Charge air cooler system temperature out: 97°F (36°C) Air intake restriction: 10 in. H₂O (2.5 kPa) Exhaust Back Pressure: 15 in. H₂O (3.7 kPa)</p>	<p><i>Conversion Factors:</i> Power: kW = bhp x 0.746 Torque: N · m = lb · ft x 1.356</p>	<p>6N04M - 7121 Catalytic Device - (not required)</p>
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Certified by: *Paul R. ...*

Curve No. E4-6067-32-637
Rev. / Date: New / 2-05-99
Sheet No. 1 of 2

Performance Curve

On-highway Specification Sheet

General Data

Model.....	6067-MK60
Number of Cylinders	6
Bore and Stroke – in. x in. (mm x mm)	5.12 x 6.30 (130 x 160)
Displacement – in. ³ (L).....	778 (127.7L)
Compression Ratio	16.5:1

Configuration

Turbocharger.....	GT4294 (1.28 A/R)
Camshaft (92J/16E/44N).....	23524292
Charge Air Cooling.....	Air to Air

Physical Data

Size:	
Length – in. (mm)	56.9 (1448)
Width – in. (mm)	36.3 (923)
Height – in. (mm).....	50.4 (1279)
Weight, Dry – lb (kg).....	2610 (1184)
Weight, Wet – lb (kg).....	2732 (1239)
Center of Gravity Distance:	
From R.F.O.B. (x axis) – in. (mm)	22.3 (566)
Above Crankshaft (y axis) – in. (mm).....	8.6 (218)
Right of Crankshaft (z axis) – in. (mm)	-1.4 (-35.6)
Installation Drawing.....	2SA-948

Mechanical Data

Thrust Bearing Load Limit, Continuous – lb (N)	900 (4000)
Thrust Bearing Load Limit, Intermittent – lb (N).....	1800 (8000)
Maximum Static Bending Moment at Rear	
Face of Block – lb-ft (N·m).....	1000 (1356)
Additional Mechanical Data	E4-6040-32-1

Fuel System

Fuel Injector	5236977
Injection Timing Height – mm	81.0
Maximum Fuel Inlet Temperature – °F (°C).....	140 (60)
Fuel Temperature Rise @ Rated – °F (°C).....	70 (40)
Maximum Fuel Pump Suction:	
Clean System – in. Hg (kPa).....	6 (20.3)
Dirty System – in. Hg (kPa).....	12 (41)
Fuel Filter Size, Primary – microns.....	25
Fuel Filter Size, Secondary – microns.....	8
Fuel Spill Restrictive Fitting – in. (mm).....	0.08 (2.0)

	Rated Speed gal/hr (L/hr)	(1500 r/min) gal/hr (L/hr)	(1200 r/min) gal/hr (L/hr)
Fuel Consumption	22.5 (85.3)	20.3 (76.7)	16.0 (60.6)
Spill Flow	64.3 (244)	—	—
Total Flow	86.8 (329)	—	—

Lubrication System

Oil Pressure at Rated Speed – lb/in. ² (kPa)	50 (345)
Oil Pressure at Low Idle – lb/in. ² (kPa)	12 (83)
In Pan Oil Temperature – °F (°C)	235 (113)
Oil Flow – gal/min (L/min)	36 (136)
Oil Pan Capacity, High Limit – qt (L)	32 (30)
Oil Pan Capacity, Low Limit – qt (L)	26 (25)
Total Engine Oil Capacity with Filters – qt (L)	38 (36)
Two Full Flow Filters – microns	30

Electrical System (Engine Only w/out Parasitic Loads)

Recommended Battery Capacity (CCA @ 0°F):	
12 Volt System	1875
Maximum Resistance of Starting Circuit:	
12 Volt System – ohms	0.0012

Certification Information

Certification Approval – Line Haul	1999
(CWC) Certification Word Code	1074

Cooling System

Engine Heat Rejection to Coolant:	
Rated Speed – Btu/min (kW)	7600 (134)
(1500 r/min) – Btu/min (kW)	6250 (110)
(1200 r/min) – Btu/min (kW)	5100 (90)
Idle Speed (600 r/min) – Btu/min (kW)	N/A
Charge Air Cooler Heat Rejection:	
Rated Speed – Btu/min (kW)	4500 (79)
(1500 r/min) – Btu/min (kW)	3600 (63)
(1200 r/min) – Btu/min (kW)	2150 (38)
Engine Radiated Heat:	
Rated Speed – Btu/min (kW)	2900 (51)
(1500 r/min) – Btu/min (kW)	2550 (45)
(1200 r/min) – Btu/min (kW)	1950 (34)

Cooling System (Continued)

Coolant Flow : (Minimum 90% of Rated Required)	
Rated Speed – gal/min (L/min)	96 (363)
(1500 r/min) – gal/min (L/min)	79 (300)
(1200 r/min) – gal/min (L/min)	63 (238)
External Restriction @ 90% Flow – lb/in. ² (kPa)	8.0 (55)
Thermostat:	
Start to Open – °F (°C)	190 (86)
Fully Open – °F (°C)	205 (96)
Minimum Water Pump Inlet Pressure – lb/in. ² (kPa)	0 (0)
Engine Coolant Capacity – qt (L).....	24 (23)
Minimum Pressure Cap – lb/in. ² (kPa).....	9 (62)
Maximum Pressure	
(Exclusive of Pressure Cap) – lb/in. ² (kPa)	21 (145)
Maximum Top Tank Temperature – °F (°C)	214 (101)
Minimum Top Tank Temperature – °F (°C).....	160 (71)
Minimum Fill Rate – gal/min (L/min)	3 (11.4)
Cooling Index (100 °F Ambient w/H ₂ O @ Sea Level):	
Max Air to Water Diff. @ Rated Speed – °F (°C).....	104 (57.8)
Max Air to Water Diff. @ 1200-1500 r/min – °F (°C).....	114 (63.3)
Ram Air Flow – miles/hr (km/hr)	30 (48)
Deaeration Time – Minute	30
Minimum Drawdown Requirement – % of total system	10

Air System

Maximum Ambient to Turbo Compressor Inlet	
Temperature Rise – °F (°C)	30 (16.7)
Maximum Air Intake Restriction:	
Dirty Air Cleaner – in. H ₂ O (kPa).....	20 (5)
Clean Air Cleaner – in. H ₂ O (kPa).....	12 (3)
Engine Air Flow:	
Rated Speed – ft ³ /min (m ³ /min).....	1050 (29.9)
(1500 r/min) – ft ³ /min (m ³ /min).....	915 (25.9)
Turbocharger Compressor Out Temperature	
Rated Speed – °F (°C)	350 (177)
(1500 r/min) – °F (°C)	343 (173)
Manifold Pressure – in. Hg (kPa).....	58 (196)
Recommended Intake Pipe Diameter – in. (mm)	5 (127)
Maximum Charge Air Cooler System Total	
Pressure Drop – in. Hg (kPa)	4.0 (13.5)
Max. Ambient to Intake Manifold Temp. Diff. – °F (°C) ...	50 (28)
Maximum Crankcase Pressure – in. H ₂ O (kPa)	3.0 (0.75)

Exhaust System

Exhaust Flow:	
Rated Speed – ft ³ /min (m ³ /min).....	2410 (68.3)
Speed (1500 r/min) – ft ³ /min (m ³ /min).....	2220 (62.9)
Exhaust Temperature	
Rated Speed – °F (°C)	745 (395)
Speed (1500 r/min) – °F (°C)	815 (434)
Maximum Back Pressure – in. Hg (kPa).....	3.0 (10.1)
Recommended Exhaust Pipe Diameter:	
Single – in. (mm)	5 (127)
Dual – in. (mm)	4 (102)
Max. Exhaust Brake Back Pressure – in. Hg (kPa).....	80 (270)

Performance Data

Friction Power:	
Rated Speed – hp (kW).....	58 (43)
(1500 r/min) – hp (kW)	41 (31)
Altitude Capability – ft (m).....	12000 (3660)
Torque Available at 800 r/min – lb-ft (N·m).....	870 (1175)
Low Idle Speed – r/min	600
High Idle Speed – r/min	1925
Engine Crankcase Vent System	Open

	Engine Speed r/min	Cruise Power bhp (kW)	Cruise Torque lb-ft (N·m)
	1800	470 (351)	1371 (1859)
	1650	457 (341)	1455 (1973)
	1500	443 (330)	1550 (2101)
	1350	398 (297)	1550 (2101)
	1200	354 (264)	1550 (2101)

* Estimated

N/A – Not Available

All values are at rated speed and power at SAE J1995 with standard engine hardware, unless otherwise noted.

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