

Shown with  
Optional Equipment

### CATERPILLAR® ENGINE SPECIFICATIONS

In-line 6-Cylinder, 4-Stroke-Cycle Diesel

Bore — in (mm)	5.12 (130)
Stroke — in (mm)	5.51 (140)
Displacement — cu in (L)	677 (11.1)
Aspiration	Series Turbocharged
Compression Ratio	17:1
Rotation (from flywheel end)	Counterclockwise
Cooling System <sup>1</sup> — gal (L)	3.04 (11.5)
Lube Oil System (refill) — gal (L)	10.5 (40)
Weight, Net Dry (approx) — lb (kg)	
with standard equipment	2270 (1030)

<sup>1</sup> Engine only. Capacity will vary with radiator size and use of cab heater.

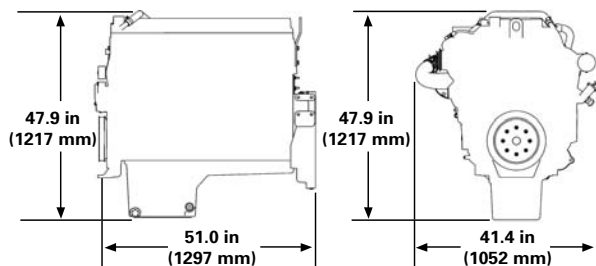
### STANDARD EQUIPMENT

Cooling: gear-driven water pump, oil cooler  
Crankcase breather  
Diesel Oxidation Catalyst (required)  
Electronic Control Module (ECM)  
Electronic Data Link, SAE/ATA, SAE/J1939  
Electronically Controlled Unit Injection Fuel System  
Fuel: spin-on secondary filter, transfer pump  
Gear-driven water pump  
Governor: full-range, electronically controlled  
Hydraulic steering pump drive, SAE A  
Lifting eyes  
Lubrication: gear-driven pump, front or rear sump pan, full flow spin-on filter, oil filler, oil level gauge (dipstick)  
Pad mount air conditioner compressor  
Pad mount alternator  
SAE No. 1 Flywheel Housing  
Series-turbochargers  
Vibration damper

### ACCESSORY EQUIPMENT

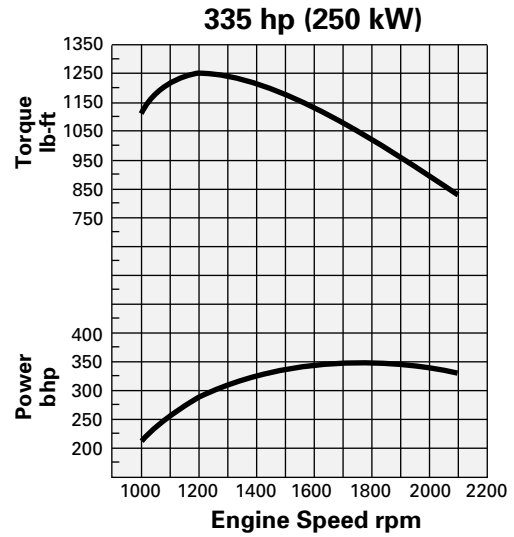
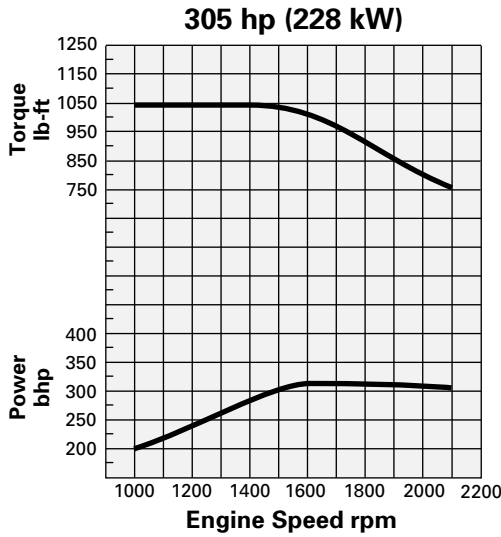
Air compressor: gear driven, 15.7 or 31.4 cfm  
Air inlet elbow  
Air inlet shut off  
Alternator (12 Volt-115 Amp)  
Automatic Transmission adapter  
Cat® Compression Brake, 12V or 24V  
Dry charge coolant conditioner  
Exhaust couplings  
Fan drive mounting bracket  
Flywheel  
Front engine support  
Front PTO adapter  
Fuel priming pump  
Lubricating oil filter, bypass spin on  
Optional secondary auxiliary oil filter  
Optional turbocharger mounting locations  
Rear PTO (RPTO)  
Starting motor: 12V or 24V  
Turbocharger compressor outlet elbow

### DIMENSIONS



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**PERFORMANCE CURVES**

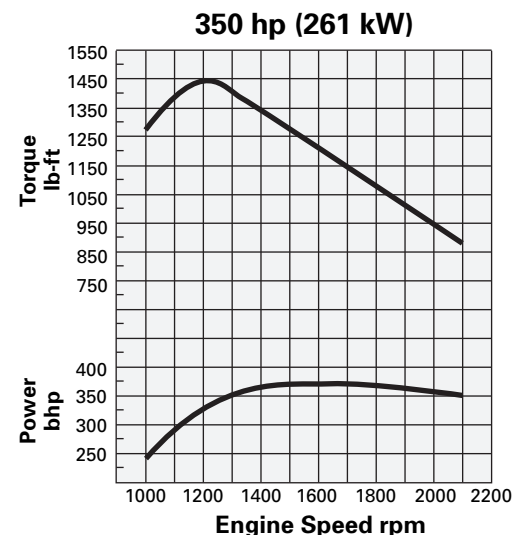
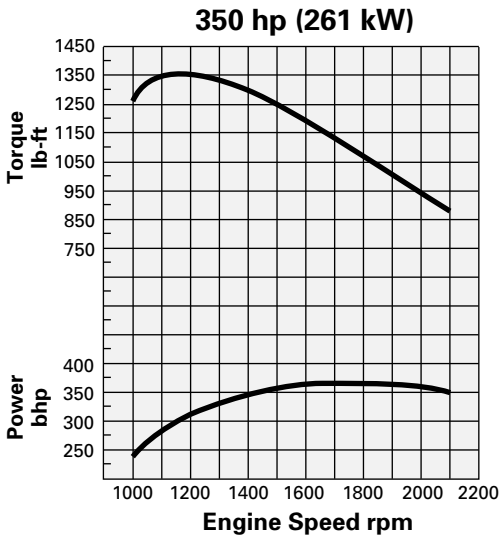


**PERFORMANCE DATA**

Operating Range (rpm) ..... 1200–2100  
**Governed Speed — rpm** ..... **2100**  
 Advertised hp (kW) ..... 305 (228)  
 Max hp (kW) ..... 315 (235)  
**Peak Torque — lb-ft (N·m)** ..... **1050 (1424)**  
 Peak Torque — rpm ..... 1200  
 Torque rise (%) ..... 38  
 Altitude Capability — ft (m) ..... 10,000 (3048)

Operating Range (rpm) ..... 1200–2100  
**Governed Speed — rpm** ..... **2100**  
 Advertised hp (kW) ..... 335 (250)  
 Max hp (kW) ..... 350 (261)  
**Peak Torque — lb-ft (N·m)** ..... **1250 (1695)**  
 Peak Torque — rpm ..... 1200  
 Torque rise (%) ..... 49  
 Altitude Capability — ft (m) ..... 10,000 (3048)

**PERFORMANCE CURVES**

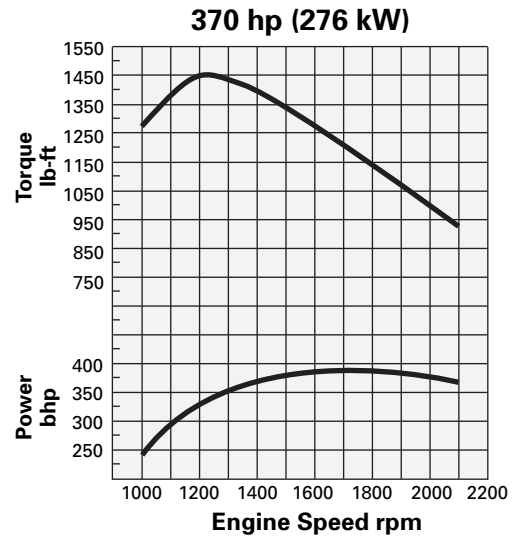
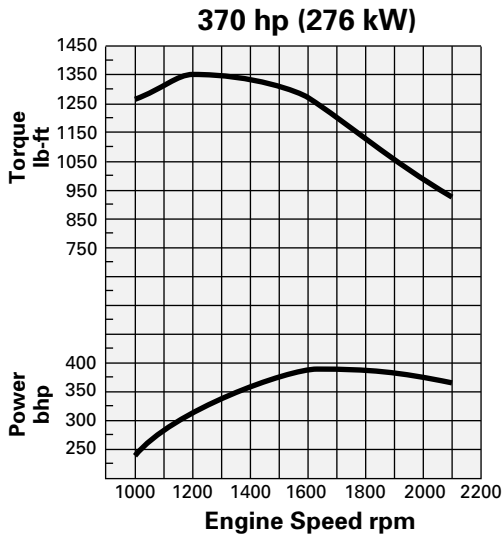


**PERFORMANCE DATA**

Operating Range (rpm) ..... 1200–2100  
**Governed Speed — rpm** ..... **2100**  
 Advertised hp (kW) ..... 350 (261)  
 Max hp (kW) ..... 365 (271)  
**Peak Torque — lb-ft (N·m)** ..... **1350 (1830)**  
 Peak Torque — rpm ..... 1200  
 Torque rise (%) ..... 54  
 Altitude Capability — ft (m) ..... 10,000 (3048)

Operating Range (rpm) ..... 1200–2100  
**Governed Speed — rpm** ..... **2100**  
 Advertised hp (kW) ..... 350 (261)  
 Max hp @ (kW) ..... 369 (275)  
**Peak Torque — lb-ft (N·m)** ..... **1450 (1966)**  
 Peak Torque — rpm ..... 1200  
 Torque rise (%) ..... 66  
 Altitude Capability — ft (m) ..... 10,000 (3048)

### PERFORMANCE CURVES



### PERFORMANCE DATA

Operating Range (rpm) . . . . . 1200–2100  
**Governed Speed — rpm . . . . . 2100**  
 Advertised hp (kW) . . . . . 370 (276)  
 Max hp @ (kW) . . . . . 385 (287)  
**Peak Torque — lb-ft (N·m) . . . . . 1350 (1830)**  
 Peak Torque — rpm . . . . . 1200  
 Torque rise (%) . . . . . 46  
 Altitude Capability — ft (m) . . . . . 10,000 (3048)

Operating Range (rpm) . . . . . 1200–2100  
**Governed Speed — rpm . . . . . 2100**  
 Advertised hp (kW) . . . . . 370 (276)  
 Max hp @ (kW) . . . . . 385 (287)  
**Peak Torque — lb-ft (N·m) . . . . . 1450 (1966)**  
 Peak Torque — rpm . . . . . 1200  
 Torque rise (%) . . . . . 57  
 Altitude Capability — ft (m) . . . . . 10,000 (3048)



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## GEARING CONSIDERATIONS

The C11 On-Highway Diesel Engine offers a wide operating range and high torque rise, which promotes the use of transmissions with fewer gears. Even with this built-in feature, heavy/specialty haulers must remember their trucks should be geared to achieve the appropriate compromise between startability and desired road speed. The general principal drivers should follow is that of the “gear fast, run slow” strategy to achieve optimal performance.

For the best balance of performance and fuel economy, spec axle ratios and tire sizes according to the following:

- **60,000 lb GCW or less**  
1450 rpm @ 65 mph (105 km/h)

Maximum recommended engine speed at cruise is **1500 rpm**.

The minimum startability requirements are 10% for pick-up and delivery, 14% for linehaul, 20% for on/off highway, and 25% for off-highway. At peak torque rpm in top gear, the recommended gradeability is 1.8% (1.5% minimum). At cruise speed in top gear, 1.0% is the ideal gradeability.

To optimize your truck’s performance characteristics, a computerized spec’ing tool called Design Pro is offered by your Caterpillar dealer. It calculates effects of various driveline variables on engine operation such as transmissions, axles, and tires. This analysis allows you to verify that your truck’s driveline specifications are best suited to your application.

## RATING DEFINITIONS AND CONDITIONS

**Performance** is based on SAE J1995 standard conditions of 29.61 in. Hg (100 kPa) and 77° F (25° C).

The curves shown are for a standard engine without fan, but equipped with air compressor and fuel, lubricating oil, and water pumps.



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## ELECTRONIC FEATURES

- **Real time clock with date and time stamping of critical events**
- **Electronic self-diagnostics**
- **Electronically tabulated total fuel consumption, hours, idle time, and miles**
- **Battery backup**
- **Quick stop recorder**
- **Compatible with Caterpillar Electronic Technician (ET)**
- **Cold weather startup strategy and electronic idle control functions**
- **ECM storage of operational, maintenance, diagnostic codes and diagnostic data**
- **J1939 compatible**
- **Customer selectable, re-programmable operational parameters:**
  - Adjustable low idle rpm
  - Automated Transmission compatibility
  - Cooling fan control
  - Cruise control with exclusive Soft Cruise
  - Customer password protection
  - Engine Monitoring System — warning, derate, or shutdown
  - Enhanced theft deterrent and secure idle (Cat Messenger or Pocket Tec required)
  - Fleet Information Software capability
  - Idle shutdown timer & override
  - Maintenance monitor [miles (km) or hours]
  - OEM parameter lockout
  - Progressive shifting and gear down protection
  - Vehicle speed [mph (km/h)] limiting and protection
- **Programmable Power Take-Off (PTO) functions:**
  - Adjustable maximum engine rpm speed
  - Adjustable minimum engine rpm speed
  - Adjustable ramp rate up or down between PTO set speed(s)
  - Adjustable rpm “bump” intervals
  - Adjustable speed control [mph (km/h)] of vehicle while in PTO mode
  - Kick-out vehicle speed limit
  - Limit engine torque to driven equipment
  - Multi-speed PTO set speed capability
  - Selectable PTO configuration for “in cab” or station of remote operation