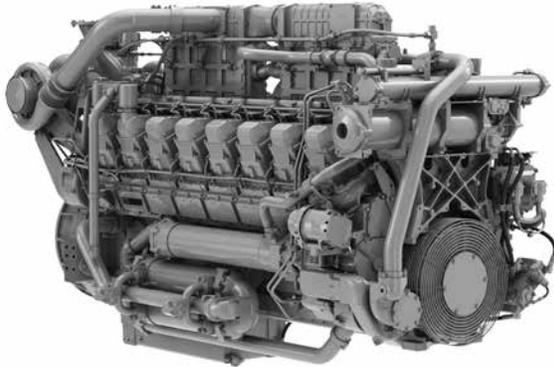




## 3516C (HD) Land Well Service Engine

2237 kW (3000 bhp)  
2349 kW (3150 bhp)  
2461 kW (3300 bhp)  
1900 rpm



### CAT® ENGINE SPECIFICATIONS

#### V-16, 4-Stroke-Cycle-Diesel

Emissions .....	Non-certified
Peak Torque at Speed.....	9350 lb-ft
Bore .....	170 mm (6.7 in)
Stroke .....	215 mm (8.5 in)
Displacement.....	78 L (4764 in <sup>3</sup> )
Aspiration .....	Turbocharged-Aftercooled
Governor and Protection.....	Electronic ADEM™ A3
Capacity for Liquids	
Lube Oil System (refill).....	204 L (53 U.S. gal)
Cooling System .....	352 L (93 U.S. gal)
Oil Change Interval.....	250 hours
Rotation (from flywheel end) .....	Counterclockwise
Flywheel and Flywheel Housing .....	SAE No. 00
Flywheel Teeth .....	183

### FEATURES

#### Engine Design

- Proven reliability and durability
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Torque curve optimized for compatibility with TH55-E70 and TH55-E90 transmissions
- Broad operating speed range with industry leading torque rise

#### Cooling System

Separate Circuit Aftercooler (SCAC)

#### Custom Packaging

For any petroleum application, trust Caterpillar to meet your project needs with custom factory generator sets and mechanical packages. Cat engines, generators, controls, radiators, and transmissions can be custom designed and matched in collaboration with our local dealers to create unique solutions. Custom packages are globally supported and are covered by a one-year warranty after startup.

#### Full Range of Attachments

Large variety of factory-installed engine attachments reduces packaging time

#### Testing

Every engine is full-load tested to ensure proper engine performance

#### Product Support Offered Through Global Cat Dealer Network

- More than 2,200 dealer outlets
- Cat factory-trained dealer technicians service every aspect of your petroleum engine
- Cat parts and labor warranty
- Preventive maintenance agreements available for repair-before-failure options
- S•O•S<sup>SM</sup> program matches your oil and coolant samples against Caterpillar set standards to determine:
  - Internal engine component condition
  - Presence of unwanted fluids
  - Presence of combustion by-products
  - Site-specific oil change interval

#### Over 80 Years of Engine Manufacturing Experience

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable products.

- Cast engine blocks, heads, cylinder liners, front and flywheel housings
- Machine critical components
- Assemble complete engine

#### Engine System Package Option

Engine system package option includes shipped loose air cleaners and mufflers

#### Web Site

For all your petroleum power requirements, visit [www.catoilandgasinfo.com](http://www.catoilandgasinfo.com)



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### STANDARD EQUIPMENT

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#### Control System

Cat® ADEM A3 ECU — LH  
With electronic fuel injector fuel system (24V 10 amp  
DC power required to drive electronic engine control  
module)

#### Cooling System

Separate Circuit SCAC system  
Thermostats and housing, jacket and separate circuit  
water pump, gear-driven centrifugal

#### Exhaust System

Land well service engine  
Exhaust manifold, dry, gas tight  
Two turbochargers with watercooled bearings

#### Flywheel and Flywheel Housings

Flywheel, SAE No. 00, 183 teeth adaptable for TH55

#### Fuel System

Primary fuel filter  
Fuel filter — cartridge-style fuel filter  
Fuel transfer pump

#### Instrumentation

No standard instrumentation

#### Lube System

Crankcase breather — top mounted  
Oil cooler  
Oil filler and dipstick  
Oil pump  
Oil filter — cartridge-style oil filter  
Rear sump oil pan — 250-hour change interval  
Oil pan drain valve — 1" NPT female connection  
Fumes disposal  
Scavenger pump

#### Mounting System

Trunion front support

#### Protection System

ADEM A3 ECU system to provide customer  
programmable engine deration strategies to protect  
against adverse operating conditions  
Emergency stop logic inputs provided at 40-pin customer  
interface connection  
Oil pressure monitor

#### General

Paint — Cat yellow  
Vibration damper and guard  
Lifting eyes

### OPTIONAL ATTACHMENTS

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#### Air Inlet System

Optional heavy-duty air cleaners (dual element/service  
indicator)  
Two rear-mounted turbochargers

#### Charging System

Charging alternators

#### Control System

Local speed throttle control  
Throttle position sensors  
Governor conversion

#### Cooling System

Coolant level sensors  
Torque converter connections

#### Transmission Oil Cooler

Engine-mounted cooling system allows ease of  
installation and tighter overall engine package

#### Exhaust System

Elbows, flange, exhaust adapters  
Mufflers

#### Fuel Systems

Flexible fuel lines  
Water/fuel separator

#### Lube System

250-hour and 500-hour front sump

#### Power Take-Offs

Front crankshaft adapter  
Flywheel stub shaft  
Front housing  
LH lower  
LH upper accessory drives

#### Starting System

LH air starter  
LH dual hydraulic starter  
Ether starting aids  
Manual engine barring device

#### General

Air compressor



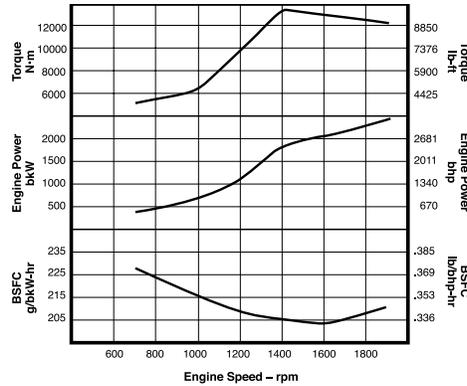
# 3516C (HD) LAND WELL SERVICE ENGINE

2237 bkW (3000 bhp), 2349 bkW (3150 bhp), 2461 bkW (3300 bhp)

## PERFORMANCE CURVES

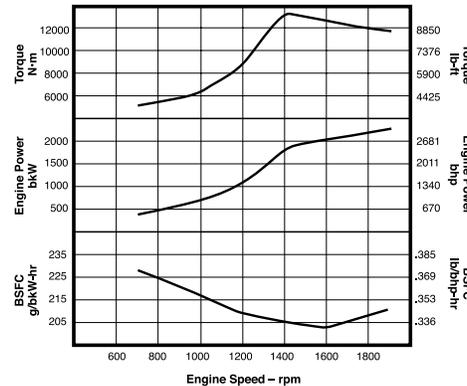
Turbocharged-Aftercooled — Well Service Rating

2237 bkW (3000 bhp) @ 1900 rpm



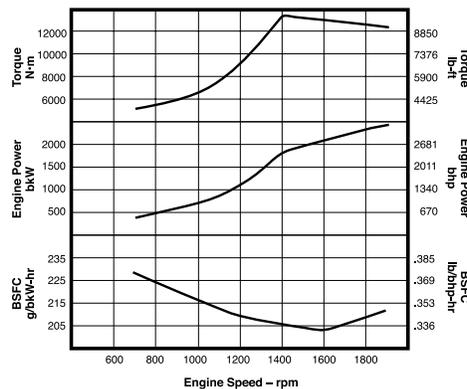
Engine Speed rpm	Engine Power		Rej to JW		Rej to Atmos		Rej to Exh		From 2nd Stage Aft Clr	
	bkW	bhp	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min
1900	2237	3000	1065	60554	137	7796	2123	120756	387	22013

2349 bkW (3150 bhp) @ 1900 rpm



Engine Speed rpm	Engine Power		Rej to JW		Rej to Atmos		Rej to Exh		From 2nd Stage Aft Clr	
	bkW	bhp	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min
1900	2349	3150	1116	63473	141	8041	2241	127449	401	22795

2461 bkW (3300 bhp) @ 1900 rpm



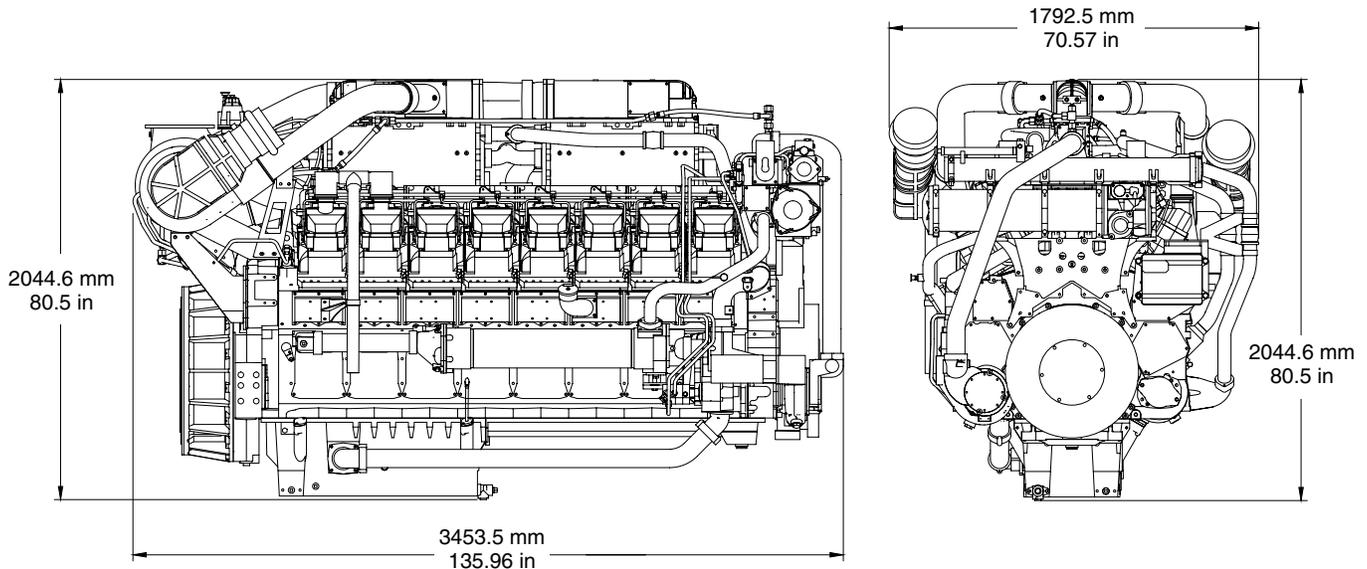
Engine Speed rpm	Engine Power		Rej to JW		Rej to Atmos		Rej to Exh		From 2nd Stage Aft Clr	
	bkW	bhp	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min
1900	2461	3300	1170	66542	145	8259	2374	135023	415	23598



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## DIMENSIONS



Module Dimensions		
<b>Length</b>	3453.5 mm	135.96 in
<b>Width</b>	1792.5 mm	70.57 in
<b>Height</b>	2044.6 mm	80.5 in
<b>Weight*</b>	8300 kg	18,300 lb

\*Weight is dry and includes all components in an engine standard configuration.

## RATING DEFINITIONS AND CONDITIONS

### Frac Rating

Continuous operation at varying load and speed with duration of idle between applied loads. Typical load factor 40-50%

**Engine Performance** is corrected to inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25°C (77°F) temperature. These values correspond to the standard atmospheric pressure and temperature as shown in SAE J1995.

Performance measured using a standard fuel with fuel gravity of 35 degrees API having a lower heating value of 42 780 kJ/kg (18,390 BTU/lb) when used at 29°C (84.2°F) where the density is 838.9 g/L (7.001 lb/U.S. gal).

The corrected performance values shown for Cat engines will approximate the values obtained when the observed performance data is corrected to SAE J1995, ISO 3046-2, ISO 8665, ISO 2288, ISO 9249, ISO 1585, EEC 80/1269, and DIN 70020 standard reference conditions.

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