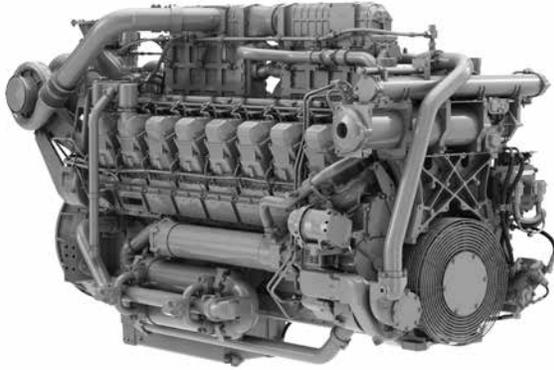




## 3516C (HD) Land Well Service Engine

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



### CAT® ENGINE SPECIFICATIONS

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

Emissions	US EPA Tier 2 Flex, IMO Tier II
Peak Torque at Speed	9148 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
Engine Weight, with oil (approx)*	8516 kg (18,775 lb)
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

\*Weight includes attachments

### 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, 1000-hour change interval

Fuel transfer pump

#### Instrumentation

No standard instrumentation

#### Lube System

Crankcase breathers — top mounted

Oil cooler

Oil filler and dipstick

Oil pump

Oil filter — cartridge-style oil filter, 1000-hour change interval

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

Indicator

Ship loose air cleaners with precleaners

#### Charging System

Charging alternators — 60, 75, 90 amp

#### Control System

Throttle position sensors

#### Cooling System

Coolant level sensors

Torque converter connections

Oil cooler

#### Engine-Mounted Transmission

Integration with engine cooling system allows ease of installation and a tighter overall engine package

#### Exhaust System

Elbows, flanges, exhaust expander

Mufflers

#### Fuel Systems

Flexible fuel lines

Water/fuel separator

#### Lube System

250-hour and 500-hour front sump

#### Power Take-Offs

Front crankshaft adapter

Front 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

#### Transmission Oil Cooler

#### General

Air compressor

Transmission oil cooler



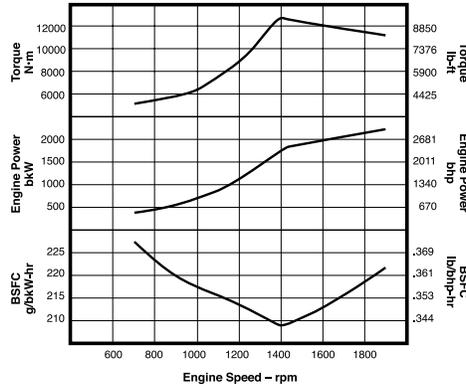
# 3516C (HD) LAND WELL SERVICE ENGINE

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

## PERFORMANCE CURVES

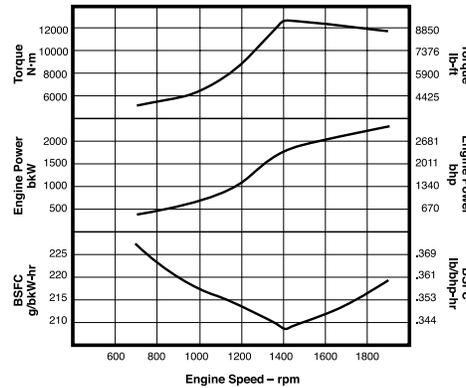
Turbocharged-Aftercooled — Well Service Rating

2237 bkW (3000 bhp) @ 1900 rpm



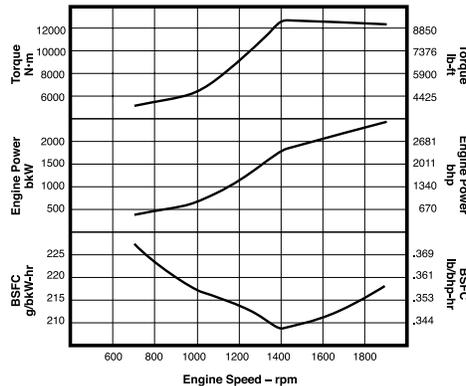
Engine Speed rpm	Engine Power		Rej to JW		Rej to Atmos		Rej to Exh		From 2nd Stage Aft Clr	
	bkW	bhp	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min
1900	2237	3000	1113	63303	145	8223	2369	134716	416	23656

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	1153	65572	150	8535	2455	139586	421	23961

2461 bkW (3300 bhp) @ 1900 rpm



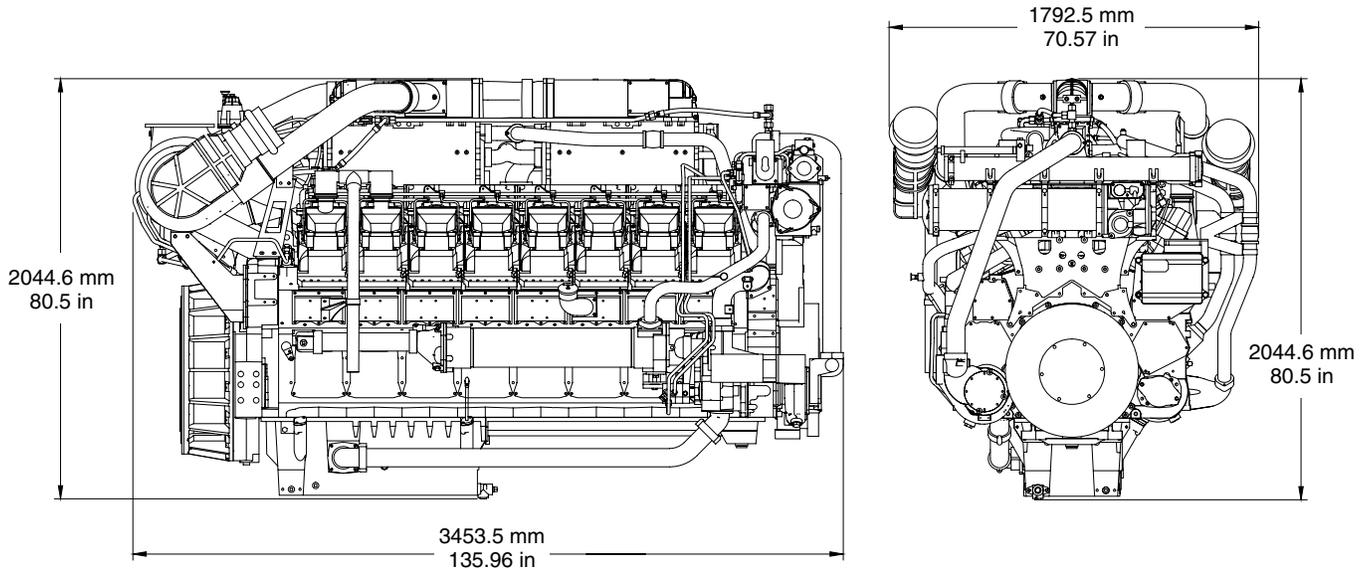
Engine Speed rpm	Engine Power		Rej to JW		Rej to Atmos		Rej to Exh		From 2nd Stage Aft Clr	
	bkW	bhp	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min
1900	2461	3300	1195	67981	156	8878	2526	143635	456	25930



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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

## 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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