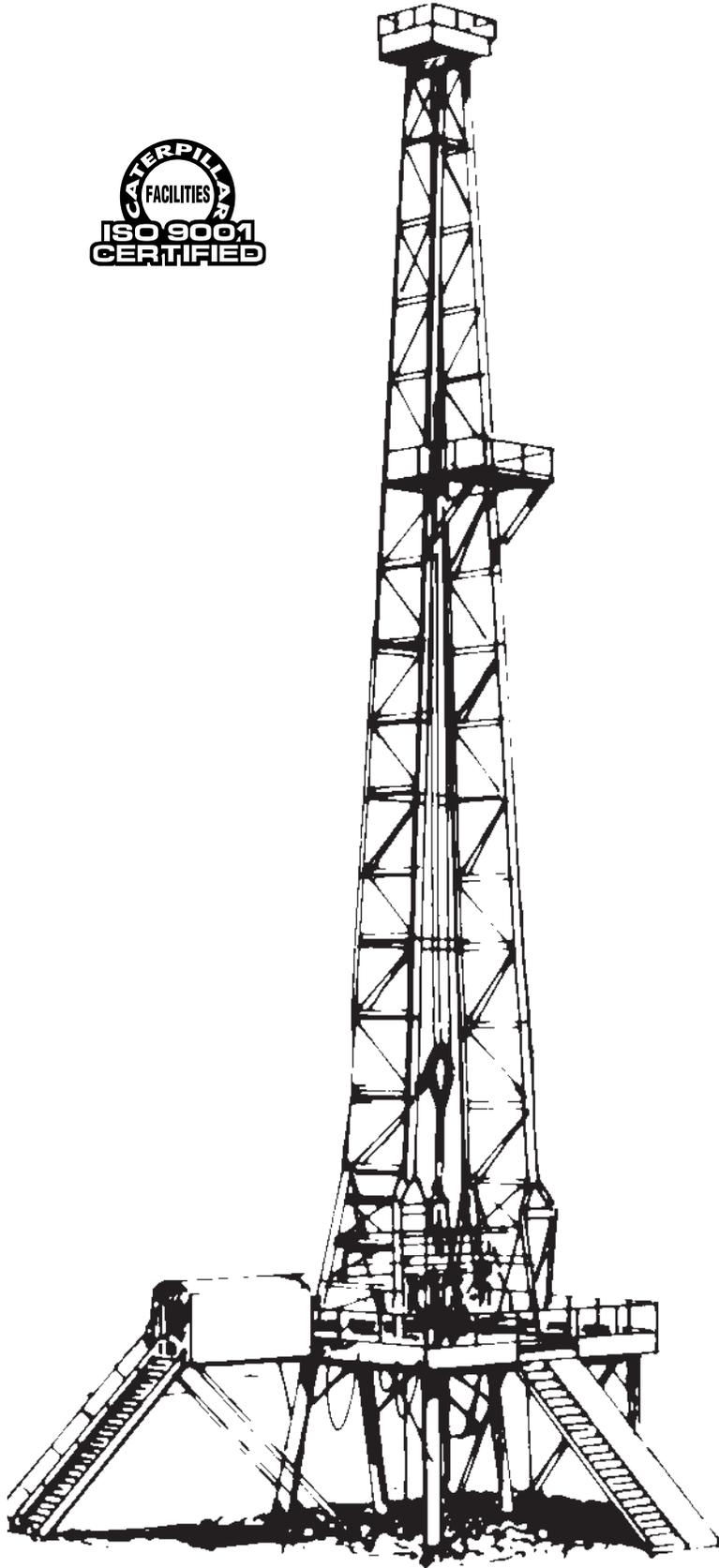





---

**Land Rig SCR            3508**  
**Power Modules        3512**  
**3516**

---



The products briefly described here represent Caterpillar power modules for use as prime rig power on SCR electric drill rigs. These Cat® engines, generators, radiators, and bases are a result of years of experience in the oilfields and an extensive design and testing program aimed at developing oilfield power modules that meet the demands of the drilling contractor.

It is essential to have a properly designed base for diesel electric power modules used on drilling rigs. Misalignment between engine and generator can cause vibration and shorten the life of couplings and bearings. Caterpillar has recognized this fact and designed a base which provides a built-in three-point mounting system. The engine and generator are mounted by Caterpillar on this base and aligned to exacting tolerances at the factory.

The entire power module is manufactured and assembled by Caterpillar, providing single source responsibility.

**SPECIFICATIONS**

---

**CAT® 3508, 3512, 3516**

Bore — mm (in) .....	170 (6.7)
Stroke — mm (in).....	190 (7.5)
Displacement — L (cu in)	
3508.....	34.5 (2105)
3512.....	51.8 (3158)
3516 .....	69 (4210)
Low idle — rpm .....	450
Rotation .....	Counterclockwise

**TYPICAL EQUIPMENT**


---

**Air and exhaust**

air cleaner service indicator; air cleaners, single stage; dry exhaust manifolds; dry flexible fittings

**Base arrangement**

oilfield subbase — 18 in. beam, 7 ft. 10 in. wide, 25 ft. 9 in., 30 ft. 9 in., or 40 ft. 9 in. long engine and generator three-point mounted into oilfield base, oil drain extension, tailboarding provisions

**Cooling**

jacket water pump, water connections

**Fuel**

flexible fuel lines, fuel filter, priming and transfer pumps

**Generator**

SR4, two-bearing, 600 volt, 60 Hz, 3 phase, 10 wire, wye connected, brushless (does not include voltage regulator); space heater and temperature detectors

**Lubrication**

oil cooler, filter, pan

**Premium instrument panel**

exhaust stack temperature, fuel pressure, lubricating oil pressure, oil filter differential pressure, tachometer, water temperature, service meter

**Protection devices**

alarm switch group — oil pressure, water temperature; hydra-mechanical shutoffs — low oil pressure, water temperature, overspeed, air inlet shutoff and monitoring gauge, air actuated remote shutoffs

**Radiator**

blower or suction fan, mounted on base

**Starting and control**

air-driven prelube pump (3516), air silencer and vapor arrestor, air starting motor, EG6PC governor actuator, manual shutoff control

**Miscellaneous**

crankcase breather, SAE standard heavy duty dual tachometer drive (half engine speed), vibration damper, floor-type mounting rails, SAE #00 flywheel and housing, SAE standard rotation

**OPTIONAL EQUIPMENT**


---

**Air and exhaust**

air cleaners, heavy-duty; exhaust manifold, air shielded, watercooled; turbocharger, watercooled

**Cooling**

jacket water heaters

**Miscellaneous**

torsional analyses, base modification for customer supplied vertical discharge radiator

**Additional instrumentation**

air cleaner restriction (2), intake manifold temperature, lubricating oil temperature, fuel filter differential

**RATINGS (without fan)**


---

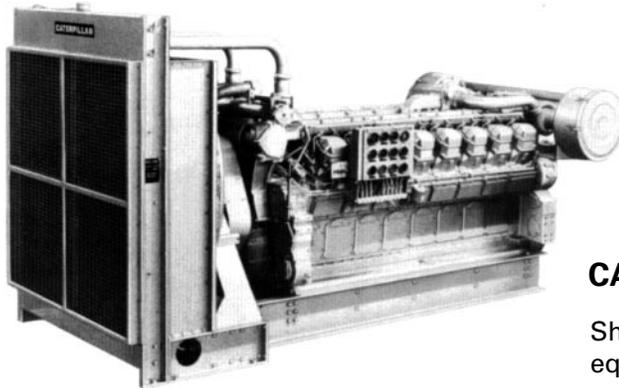
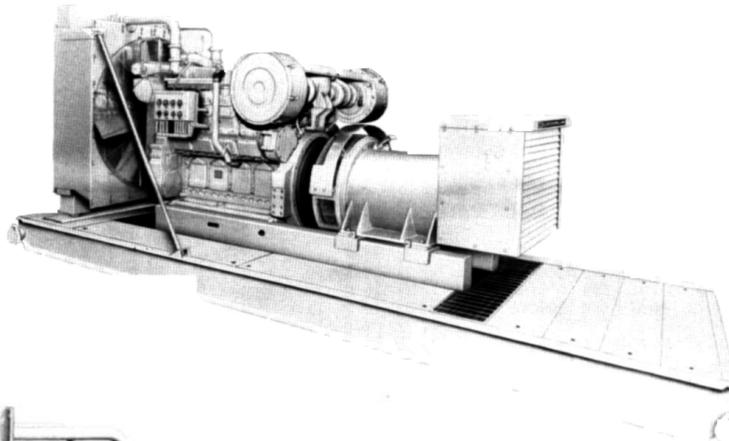
**Pumping and Drilling  
Diesel Electric Drive  
(Non-Certified Emissions Capability)**

Model	Engine			SR4 Generator
	kW*	(hp)*	rpm	kV•A**
3508	485	(650)	1200	825
	641	(860)	1200	1200
	545	(730)	1500	—
	675	(905)	1500	—
3512	709	(950)	1200	1200
	985	(1321)	1200	1500
	1070	(1435)	1200	1750
	1030	(1381)	1500	1500
3516	1176	(1576)	1200	1500
	1346	(1804)	1200	2000
	1089	(1460)	1500	—
	1357	(1820)	1500	—

\* Mechanical kW, no overload capability

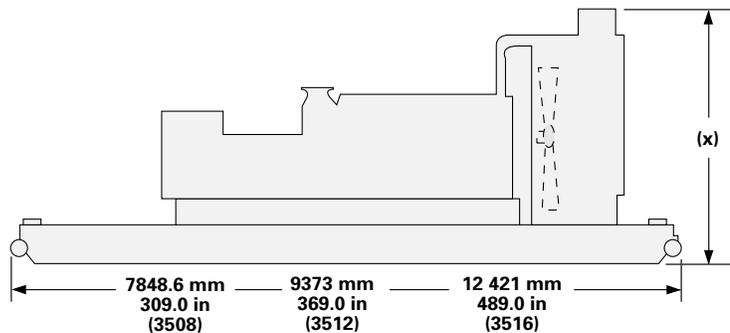
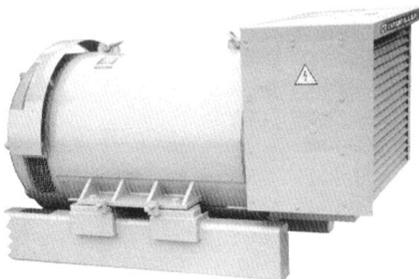
\*\* Generators oversized to meet low power factor requirements

**CAT® 3508**



**CAT® 3516**

Shown with accessory equipment.



### Caterpillar® SR4 Generator

- Designed, tested, and sized for SCR drill rig service
- 80° C over 40° C ambient temperature rise
- Form wound stator and rotor
- Class H insulated, using vacuum pressure impregnated (VPI) temperature-resistant materials
- Resistance temperature detectors (10 ohm copper) and generator space heater are standard
- Terminal box and copper bus bars for easy, dependable connections
- Two-bearing generators
- Optional air filter and bearing RTDs

### Land Rig Base

- Built-in three-point mounting between inner and outer base maintains alignment of engine-generator on uneven surface and during rig moves.
- Caterpillar radiators mounted to sub-base or extra five-foot setback available for vertical discharge type radiators.
- Height (x) varies from 2573 mm (101.0 in) to 2964 mm (116.7 in), depending upon engine and radiator selected.

## **CATERPILLAR PARTS AND SERVICE**

---

You will find Caterpillar parts and service outlets in major oil producing areas worldwide. With the most comprehensive parts distribution system in the industry, most engine parts orders can be filled immediately over a dealer's counter. As a backup, dealers can quickly convey their parts needs to the nearest location in a network of Caterpillar parts facilities around the world. The dealer places an order with the Caterpillar parts depot and a computerized inventory control system helps fill that order, printing shipping instructions for any part in the system — wherever it might be.

While many oilfield contractors maintain a service department adept at handling repairs, they have the assurance that Caterpillar engine dependability is backed by a force of factory qualified dealer servicemen worldwide — men who are specially trained to keep Cat® engines operating at peak efficiency. For all engine repairs, from minor work to a major overhaul or rebuild, expert attention is as near as your phone or radio. Work is fast and accurate. Downtime is minimized.

*Ask about installation and start-up procedures offered by Caterpillar.*

## **RATING DEFINITIONS AND CONDITIONS**

---

**Ratings** are based on SAE J1995 standard conditions of 100 kPa (29.61 in Hg) and 25° C (77° F). These ratings also apply at DIN6270 standard conditions of 97.8 kPa (28.97 in Hg), and 20° C (68° F).

**Electric drive:** The horsepower and speed capability of the engine which can be used to power mud pumps, rotary table, and drawworks on an electric drive drill rig.