

Industrial Engine Ratings Guide

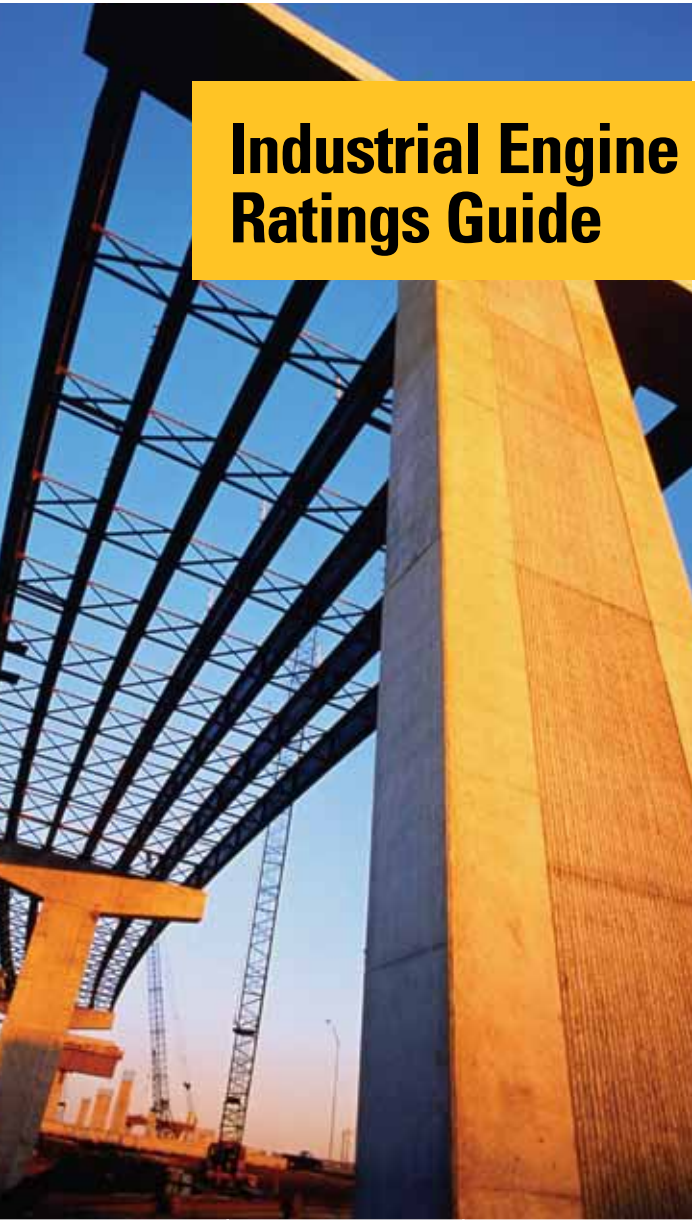


Table of Contents

| | |
|--|----|
| Diesel Engine Rating Definitions | 2 |
| Rating Conditions | 2 |
| ISO 9001:2000 Certification | 2 |
| Rating Power Ranges | 3 |
| EPA & EU Non-Road Emissions Regulations | 3 |
| EPA Stationary Regulations | 3 |
| Engine Listing by Emissions Tiers | 4 |
| Abbreviations | 4 |
| Diesel Engines | |
| C0.5, C0.7 | 5 |
| C1.1, C1.1 Power Unit, C1.5, C1.5 Power Unit | 6 |
| C1.6, C1.7 | 7 |
| C2.2, C2.2 Power Unit, C3.4 | 8 |
| C4.4, C4.4 Power Unit | 9 |
| C4.4 ACERT™, C4.4 ACERT Power Unit | 10 |
| C6.6 ACERT, C6.6 ACERT Power Unit | 11 |
| C7 ACERT, C7 ACERT Power Unit | 12 |
| C7.1 | 13 |
| C9 ACERT, C9 ACERT Power Unit | 14 |
| C11 ACERT, C11 ACERT Power Unit | 15 |
| C13 ACERT, C13 ACERT Power Unit | 16 |
| C15 ACERT, C15 ACERT Power Unit | 17 |
| C18 ACERT, C18 ACERT Power Unit | 18 |
| C27 ACERT, C32 ACERT | 19 |
| 3406C | 20 |
| 3500 | 21 |
| 3500B | 22 |
| 3600 | 23 |
| Fire Pumps | |
| C18 ACERT | 24 |
| 3406C | 25 |
| 3412C Wet Manifold | 25 |
| 3508, 3512, 3516 | 25 |
| Gas Engines | |
| Label and NSPS Regulations | 26 |
| G3300 | 27 |
| G3400 | 28 |
| G3500 | 29 |
| G3600 | 30 |
| Technology | |
| ACERT Technology | 31 |
| ADEM™ A4 ECU | 31 |
| Analog Gauge | 31 |
| Cat® Messenger | 31 |
| Additional Literature | 32 |

Diesel Engine Rating Definitions

Explanation of Ratings A, B, C, D, and E:

For an exact determination of the appropriate rating, contact your local Cat dealer. Engine rating obtained and presented in accordance with ISO3046/1.

IND-A (Continuous)

Continuous heavy-duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling.

IND-B

For service where power and/or speed are cyclic (time at full load not to exceed 80%).

IND-C (Intermittent)

Intermittent service where maximum power and/or speed are cyclic (time at full load not to exceed 50%).

IND-D

For service where maximum power is required for periodic overloads (time at full load not to exceed 10% of the duty cycle).

IND-E

For service where maximum power is required for a short time for initial starting or sudden overload. For emergency service where standard power is unavailable (time at full load not to exceed 5% of the duty cycle).

Rating Conditions

Diesel Engines — up to 6.6 liter

All rating conditions are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in Hg), with a vapor pressure of 1 kPa (.295 in Hg), and 25°C (77°F). Performance measured using fuel to specification EPA 2D 89.330-96 with a density of 0.845-0.850 kg/L @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

Diesel Engines — 7 liter and higher

All rating conditions are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25°C (77°F) temperature. Performance measured using a standard fuel with fuel gravity of 35° API having a lower heating value of 42,780 kJ/kg (18,390 btu/lb) when used at 29°C (84.2°F) with a density of 838.9 g/L.

Gas Engines

Ratings are based on SAE J1349 standard conditions of 100 kPa (29.61 in Hg) and 25°C (77°F). These ratings also apply at ISO3046, DIN6271, and BS5514 standard conditions of 100 kPa (29.61 in Hg) and 27°C (81°F); and API 7B-11C standard conditions of 99 kPa (29.28 in Hg) and 29°C (85°F) also apply.

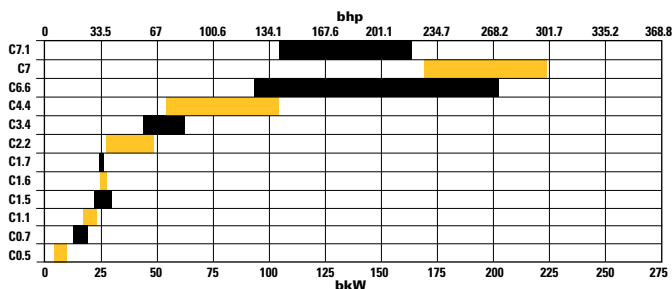
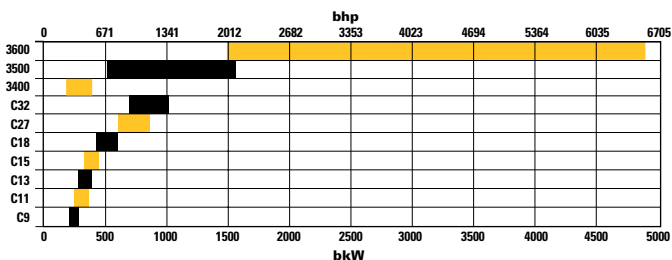
Ratings are based on dry natural gas having an LHV of 35.54 MJ/N·m³ (905 btu/ft³). Variations in altitude, temperature, and gas composition from standard conditions may require a reduction in engine horsepower.

Turbocharged-Aftercooled ratings apply to 1525 m (5000 ft) and 25°C (77°F).

ISO 9001:2000 Certification

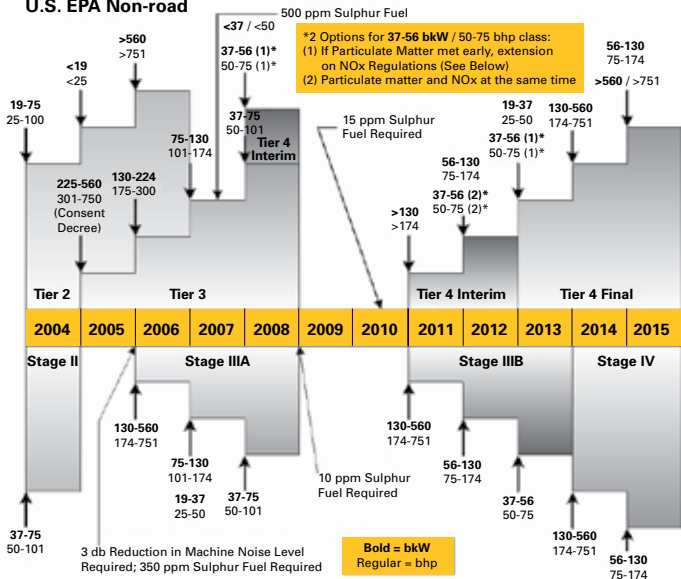
Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities.

Match a Reliable Cat® Engine to Your Application



EPA & EU NON-ROAD EMISSIONS REGULATIONS

U.S. EPA Non-road



European Non-road

EPA Stationary Regulations

For important information related to the New Source Performance Standard (NSPS) for diesel stationary engines, refer to the EPA web site at www.epa.gov.

Engine Listing by Emissions Tiers

Tier 4, Stage IIIA

C0.5, C0.7
C1.1, C1.5
C1.6, C1.7
C2.2, C3.4

Tier 3, Stage IIIA

C3.4
C4.4 (T, TA)
C4.4 ACERT™
C6.6 ACERT
C7 ACERT
C9 ACERT
C11 ACERT
C13 ACERT
C15 ACERT
C18 ACERT (A, B, and C ratings)

Stage IIIA

C4.4 (NA)

Tier 2

C18 ACERT (D and E ratings)
C27 ACERT, C32 ACERT

Tier 1

3406C, 3508B, 3512B, 3516B

Non-Certified

3508, 3512, 3516

Abbreviations

| | |
|---------|---|
| NA | Naturally Aspirated |
| T | Turbocharged |
| TA | Turbocharged-Aftercooled |
| TTA | Twin Turbo Aftercooled |
| PC | Precombustion Chamber |
| ATAAC | Air-to-Air Aftercooled |
| bhp | brake horsepower |
| bkW | brake kilowatts |
| LE | Low Emission |
| JWAC | Jacket Water Aftercooled |
| SCAC | Separate Circuit Aftercooled |
| E | Electronic |
| STD | Standard (stoichiometric) engine highest power rating |
| CAT | standard (stoichiometric) engine Catalyst rating |
| ECU | Electronic Control Unit |
| FIE | Fuel Injection Equipment |
| NSPS | New Source Performance Standard |
| SI | Spark Ignited |
| SI NSPS | Spark Ignited New Source Performance Standard |



C0.5

Specifications

| | C0.5 | C0.7 |
|-----------------------------------|----------------------------------|-------------------------------------|
| Bore x Stroke | 67 x 72 mm (2.6 x 2.8 in) | 67 x 72 mm (2.6 x 2.8 in) |
| Displacement | 0.5 liters (31 in ³) | 0.76 liters (46.4 in ³) |
| Ship Weight (NA) | 57 kg (126 lbs) | 71 kg (156.5 lbs) |
| Approximate Dimensions: | | |
| Length | 407 mm (16.00 in) | 480 mm (18.9 in) |
| Width | 371 mm (14.60 in) | 371 mm (14.6 in) |
| Height | 523 mm (20.60 in) | 528 mm (20.8 in) |

C0.5 Ratings In-Line 2

| NA | C Rating (Intermittent) | | |
|----|----------------------------|------|------|
| | bkW | bhp | rpm |
| | 8.2 | 11.0 | 2800 |
| | 8.8 | 11.8 | 3000 |
| | 10.2 | 13.7 | 3600 |

C0.7 Ratings In-Line 3

| NA | C Rating (Intermittent) | | |
|----|----------------------------|------|------|
| | bkW | bhp | rpm |
| | 12.2 | 16.4 | 2800 |
| | 13.2 | 17.7 | 3000 |
| | 15.3 | 20.5 | 3600 |

Benefits

- Increase of horsepower and torque capabilities by 10%
- 500-hour service intervals
- Single-side servicing

Abbreviations used:

NA.....Naturally Aspirated

Unless noted, ratings conform with EPA (U.S.) Tier 4 Interim emission standards.

C1.1



Specifications

| | C1.1 | C1.5 |
|-----------------------------------|----------------------------------|---|
| Bore x Stroke | 77 x 81 mm (3.0 x 3.2 in) | 84 x 90 mm (3.3 x 3.5 in) |
| Displacement | 1.1 liters (69 in ³) | 1.496 liters (91 in ³) |
| Ship Weight (NA) | 87 kg (191 lbs) | 149 kg (328 lbs) (NA) 156.5 kg (345 lbs) (T) |
| Approximate Dimensions: | | |
| Length | 491 mm (19.33 in) | 572 mm (22.50 in) (NA, T) |
| Width | 400 mm (15.7 in) | 453 mm (17.8 in) (NA) 512 mm (20.2 in) (T) |
| Height | 576 mm (22.7 in) | 643 mm (25.30 in) (NA, T) |

C1.1 Ratings In-Line 3

| NA | C Rating (Intermittent) | | |
|----|----------------------------|-------------------|-------|
| | bkW Std/Derate | bhp Std/Derate | rpm |
| | 14.7 / 13.7 | 19.7 / 18.4 | 2200* |
| | 17.3 / 16.1 | 23.2 / 21.6 | 2600* |
| | 18.5 / 16.8 | 24.8 / 22.6 | 2800* |
| | 19.7 / 17.7 | 26.4 / 23.7 | 3000 |
| | 21.0 | 28.2 | 3400 |

C1.1 Power Unit Ratings In-Line 3

| NA | C Rating (Intermittent) | | |
|----|----------------------------|-----|------|
| | bkW | bhp | rpm |
| | 17.9 | 24 | 3000 |

C1.5 Ratings In-Line 3

| NA | C Rating (Intermittent) | | |
|----------|----------------------------|------|------|
| | bkW | bhp | rpm |
| | 20.9 | 28 | 2200 |
| | 22.3 | 29.9 | 2400 |
| | 23.4 | 31.4 | 2600 |
| | 24.4 | 32.7 | 2800 |
| | 25.1 | 33.7 | 3000 |
| T | | | |
| | 23.1 | 31 | 2200 |
| | 25.2 | 33.8 | 2400 |
| | 27.3 | 36.6 | 2600 |
| | 29.4 | 39.4 | 2800 |
| | 30.0 | 40.2 | 3000 |

C1.5 Power Unit Ratings In-Line 3

| NA | C Rating (Intermittent) | | |
|----|----------------------------|------|------|
| | bkW | bhp | rpm |
| | 24.2 | 32.5 | 3000 |

Benefits

- Increase of horsepower and torque capabilities by 10%
- 500-hour service intervals
- Single-side servicing

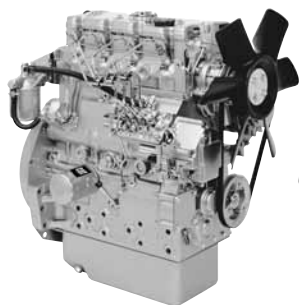
Abbreviations used:

NA.....Naturally Aspirated

T.....Turbocharged

Unless noted, ratings conform with EPA (U.S.) Tier 4 Interim, EU Stage IIIA emission standards.

*Rating conforms with EPA (U.S.) Tier 4 Interim emission standards.



C1.6

Specifications

| | C1.6 | C1.7 |
|-----------------------------------|----------------------------------|------------------------------------|
| Bore x Stroke | 77 x 81 mm (3.0 x 3.2 in) | 84 x 100 mm (3.3 x 3.9 in) |
| Displacement | 1.5 liters (92 in ³) | 1.66 liters (101 in ³) |
| Ship Weight (NA) | 106.8 kg (235.5 lbs) | 160 kg (352.7 lbs) |
| Approximate Dimensions: | | |
| Length | 591 mm (23.30 in) | 564 mm (22.2 in) |
| Width | 420 mm (16.5 in) | 453 mm (17.8 in) |
| Height | 576 mm (22.70 in) | 654 mm (25.7 in) |

C1.6 Ratings In-Line 4

| NA | C Rating (Intermittent) | | |
|----|----------------------------|------|------|
| | bkW | bhp | rpm |
| | 24.6 | 33.0 | 2800 |
| | 26.5 | 35.5 | 3000 |

C1.7 Ratings In-Line 3

| NA | C Rating (Intermittent) | | |
|----|----------------------------|------|------|
| | bkW | bhp | rpm |
| | 23.6 | 31.6 | 2400 |
| | 26.1 | 35.0 | 2600 |

Benefits

- Increase of horsepower and torque capabilities by 10%
- 500-hour service intervals
- Single-side servicing

Abbreviations used:

NA.....Naturally Aspirated

Unless noted, ratings conform with EPA (U.S.) Tier 4 Interim, EU Stage IIIA emission standards.

C3.4



Specifications

| | C2.2 | C3.4 |
|-----------------------------------|-------------------------------------|------------------------------------|
| Bore x Stroke | 84 x 100 mm (3.3 x 3.9 in) | 94 x 120 mm (3.7 x 4.72 in) |
| Displacement | 2.2 liters (135 in ³) | 3.3 liters (201 in ³) |
| Ship Weight (NA) | 184 kg (406 lbs) (NA) | 245 kg (540 lbs) (NA) |
| | 194 kg (427.7 lbs) (T, TA) | 265 kg (584 lbs) (T) |
| Approximate Dimensions: | | |
| Length | 664 mm (26.14 in) (NA) | 781 mm (30.70 in) (NA) |
| | 660 mm (26.0 in) (T, TA) | 784 mm (30.9 in) (T) |
| Width | 459 mm (18.1 in) (NA) | 590 mm (23.2 in) High Turbo |
| | 531 mm (21.0 in) (T, TA) | 649 mm (25.5 in) Low Turbo |
| Height | 725 mm (28.5 in) (NA, T, TA) | 722 mm (28.40 in) (NA) |

C2.2 Ratings In-Line 4

| C Rating (Intermittent) | | | |
|-----------------------------------|-------------------|-------------------|------------|
| | bkW | bhp | rpm |
| NA | Std/Derate | Std/Derate | |
| | 31.0 | 41.6 | 2200 |
| | 34.1 | 45.7 | 2400 |
| | 35.7 / 31.4 | 47.9 / 42.1 | 2600 |
| | 37.3 / 32.8 | 50.0 / 43.9 | 2800 |
| | 38.0 / 34.0 | 51.0 / 45.6 | 3000 |
| T | | | |
| | 40 / 36.3 | 53.3 / 48.7 | 2800 |
| | 43 | 57.7 | 2600 |
| | 44.7 | 60.0 | 2800 |
| | 45.5 | 61.0 | 3000 |
| TA (ATAAC) | | | |
| | 49.3 | 66.1 | 2800 |

C2.2 Power Unit Ratings In-Line 4

| C Rating (Intermittent) | | | |
|-----------------------------------|------------|------------|------------|
| | bkW | bhp | rpm |
| NA | 37 | 49.6 | 3000 |
| T | 41.7 | 55.9 | 2800 |

C3.4 Ratings In-Line 4

| C Rating (Intermittent) | | | |
|-----------------------------------|------------|------------|------------|
| | bkW | bhp | rpm |
| NA | 47 | 63 | 2500 |
| T | 55 | 73.7 | 2500 |
| | 62 | 83 | 2500* |

Benefits

- Increase of horsepower and torque capabilities by 10%
- 500-hour service intervals
- Single-side servicing

Abbreviations used:

ATAAC.....Air-to-Air Aftercooled

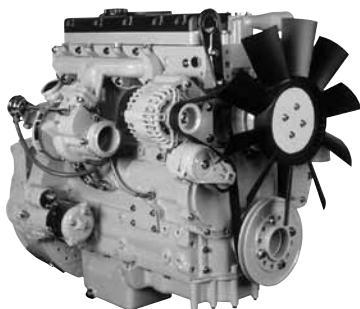
NA.....Naturally Aspirated

T.....Turbocharged

TA.....Turbocharged-Aftercooled

Unless noted, ratings conform with EPA (U.S.) Tier 4 Interim, EU Stage IIIA emission standards.

*Rating conforms with EPA (U.S.) Tier 3, EU Stage IIIA emission standards.



C4.4

Specifications

| | |
|------------------------------|-----------------------------------|
| | C4.4 |
| Bore x Stroke | 105 x 127 mm (4.1 x 5.0 in) |
| Displacement | 4.4 liters (269 in ³) |
| Ship Weight | 291 kg (640 lbs) (NA) |
| | 306 kg (674.6 lbs) (T, TA) |

Approximate Dimensions:

| | |
|-------------------------|------------------------------|
| Length | 663 mm (26.1 in) (NA, T, TA) |
| Width | 470 mm (18.5 in) (NA) |
| | 597 mm (23.5 in) (T) |
| | 620 mm (24.4 in) (TA) |
| Height | 810 mm (31.9 in) (NA, T) |
| | 775 mm (30.5 in) (TA) |

C4.4 Ratings In-Line 4

| C Rating (Intermittent) | | | C Rating (Intermittent) | | | C Rating (Intermittent) | | |
|----------------------------|-----|-------|----------------------------|-----------|-------|----------------------------|------------|-------|
| bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| NA | | | T | | | TA (ATAAC) | | |
| 54 | 72 | 2200* | 55.5-74.5 | 74.4-99.9 | 2200- | 68-83 | 91.2-111.3 | 2200- |
| 55.9 | 75 | 2200* | | | 2400 | | | 2400 |

C4.4 Power Unit Ratings In-Line 4

| C Rating (Intermittent) | | | C Rating (Intermittent) | | |
|----------------------------|------|-------|----------------------------|------|------|
| bkW | bhp | rpm | bkW | bhp | rpm |
| NA | | | TA (ATAAC) | | |
| 66 | 88.5 | 2200* | 74 | 99.2 | 2200 |

Features

- Mechanical control
- Identical major hook-up points
- New options including multi-vee belt
- Auxiliary drive capability — SAE A PTO, SAE B PTO

Benefits

- Choice of naturally aspirated, turbocharged, and turbocharged-aftercooled models
- Minimum impact to engine bay installation
- Installation and noise suppression costs reduced
- Maintained fuel economy
- Improved power and torque matching
- Faster diagnostics

Abbreviations used:

| | |
|--|---|
| ATAACAir-to-Air Aftercooled | TTurbocharged |
| NANaturally Aspirated | TATurbocharged-Aftercooled |

Unless noted, ratings conform with EPA (U.S.) Tier 3, EU Stage IIIA emission standards.

*Rating conforms with EU Stage IIIA emission standards only.

C4.4 ACERT



Specification

| C4.4 ACERT | |
|--------------------------------|--|
| Bore x Stroke | 105 x 127 mm (4.1 x 5.0 in) |
| Displacement | 4.4 liters (269 in ³) |
| Ship Weight | 360 kg (793.7 lbs) (T, TA) |
| Approximate Dimensions: | |
| Length | 631 mm (24.8 in) (T, TA) |
| Width | 626 mm (24.65 in) (T, TA) |
| Height | 823.5 mm (32.4 in) (T) 958 mm (37.72 in) (TA) |

C4.4 ACERT Ratings In-Line 4

| | C Rating (Intermittent) | | | C Rating (Intermittent) | | |
|----------|-----------------------------------|------------|------------|-----------------------------------|------------|------------|
| | bkW | bhp | rpm | bkW | bhp | rpm |
| T | 61.5-74.5 | 82.5-99 | 2200 | TA (ATAAC) | | |
| | | | | 74.5-106 | 99.5-142 | 2200 |

C4.4 ACERT Power Unit Ratings

In-Line 4

| | C Rating (Intermittent) | | |
|-------------------|-----------------------------------|------------|------------|
| | bkW | bhp | rpm |
| TA (ATAAC) | 100.2 | 134.4 | 2200 |

Features

- Electronic control
- Identical major hook-up points
- New options including multi-vee belt
- Auxiliary drive capability — SAE A PTO, SAE B PTO

Benefits

- Choice of naturally aspirated, turbocharged, and Turbocharged-Aftercooled models
- Minimum impact to engine bay installation
- Installation and noise suppression costs reduced
- Maintained fuel economy
- Improved power and torque matching
- Faster diagnostics

Abbreviations used:

ATAAC.....Air-to-Air Aftercooled

TA.....Turbocharged-Aftercooled

T.....Turbocharged

Unless noted, ratings conform with EPA (U.S.) Tier 3, EU Stage IIIA emission standards.



C6.6 ACERT

Specifications

| | C6.6 ACERT | C6.6 ACERT Power Unit |
|--------------------------------|---|-------------------------------------|
| Bore x Stroke | 105 x 127 mm (4.1 x 5.0 in) | 105 x 127 mm (4.1 x 5.0 in) |
| Displacement | 6.6 liters (402.8 in ³) | 6.6 liters (402.8 in ³) |
| Ship Weight (TA) . . | 506 kg (1116 lbs) | 709 kg (1563 lbs) |
| Approximate Dimensions: | | |
| Length | 929 mm (36.6 in) | 1708* mm (67.23* in) |
| Width | 668 mm (26.3 in) | 767 mm (30.2 in) |
| Height | 797 mm (31.4 in) | 1144 mm (45.0 in) |

C6.6 ACERT Ratings

In-Line 6

| TA (ATAAC) | C Rating (Intermittent) | |
|------------|----------------------------|--------|
| | bkW | bhp |
| | | rpm |
| 89 | 119.4 | 2200 |
| 95 | 128 | 2200 |
| 116.5 | 156.2 | 2200 |
| 129 | 173.0 | 2500 |
| 129.5 | 173.7 | 2200 |
| 130 | 174.3 | 2500 |
| 136 | 182.4 | 2200 |
| 140 | 187.7 | 2200 |
| 144 | 193.1 | 2200 |
| 146 | 195.8 | 2200 |
| 151 | 202.5 | 1800 |
| 151 | 202.5 | 2200 |
| 158.5 | 212.6 | 2200 |
| 159 | 213.2 | 2200 |
| 168 | 225.3 | 2200 |
| 176.5 | 236.7 | 2200** |
| 186 | 249.4 | 2200 |
| 205 | 274.9 | 2200** |

C6.6 ACERT Power Unit Ratings

In-Line 6

| TA (ATAAC) | C Rating (Intermittent) | |
|------------|----------------------------|------|
| | bkW | bhp |
| | | rpm |
| 129.5 | 173.7 | 2200 |
| 130 | 174.3 | 2500 |
| 151 | 202.5 | 1800 |
| 151 | 202.5 | 2200 |
| 168 | 225.3 | 2200 |

Features

- ADEM™ A4 ECU
- Cat Common Rail Fuel System
- Oil lubricated fuel pump
- 4-valve cross flow cylinder head
- Integrated fuel lift pump
- Auxiliary drive capability — SAE A PTO SAE B PTO

Benefits

- Insulated timing cover, valve cover, and isolated oil pan reduce noise up to 3-5 dBA
- Multi-V belt reduces maintenance and belt wear
- Outstanding cold start capability to -25°F/-32°C using glow plugs
- Either side servicing
- Power Unit options include 12V or 24V alternator, pusher or puller fan, and air compressor.

Abbreviations used:

ATAAC.....Air-to-Air Aftercooled
ECU.....Electronic Control Unit

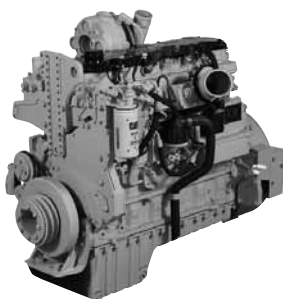
TA.....Turbocharged-Aftercooled

Unless noted, ratings conform with EPA (U.S.) Tier 3, EU Stage IIIA emission standards for ratings up to 130 bkW (175 bhp). Above 130 bkW (175 bhp) ratings available using EPA (U.S.) Flexibility and EU Flexibility, and for other regulated and non-regulated areas.

*Includes fitted air cleaner

**Specific Application

C7 ACERT



Specifications

C7 ACERT

Bore x Stroke 110 x 127 mm (4.33 x 5.0 in)
Displacement 7.2 liters (442 in³)
Ship Weight 588 kg (1296 lbs)

Approximate Dimensions:

Length 1053 mm (41.5 in)
Width 758 mm (29.8 in)
Height 1032 mm (40.6 in)

C7 ACERT Ratings In-Line 6

| B Rating | | | C Rating (Intermittent) | | | D Rating | | |
|-------------------|-----|-------|----------------------------|-----|-------|----------|-----|-------|
| bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| TA (ATAAC) | | | | | | | | |
| 168 | 225 | 1800- | 186 | 250 | 1800- | 224 | 300 | 2100- |
| | | 2200 | | | 2200 | | | 2200 |
| — | — | — | 205 | 275 | 1800- | — | — | — |
| | | | | | 2200 | | | |

C7 ACERT Power Unit Ratings

In-Line 6

| B Rating | | | C Rating (Intermittent) | | | D Rating | | |
|-------------------|-----|-------|----------------------------|-----|-------|----------|-----|-----|
| bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| TA (ATAAC) | | | | | | | | |
| 168 | 225 | 1800- | 186 | 250 | 1800- | — | — | — |
| | | 2200 | | | 2200 | | | |
| — | — | — | 205 | 275 | 1800- | — | — | — |
| | | | | | 2200 | | | |

Features

- ADEM™ A4 ECU
- HEUI™ fuel system
- Enhanced cylinder block
- Mono steel piston
- Side cover breather

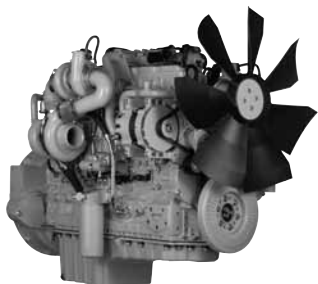
Benefits

- Wastegated turbocharger optimizes airflow
- Cleaner combustion process
- Lightweight block design
- Easy installation in OEM equipment
- Improved joints reduce oil and coolant loss from engine

Abbreviations used:

ATAAC.....Air-to-Air Aftercooled **TA**..... Turbocharged-Aftercooled
ECU.....Electronic Control Unit

Available using EPA (U.S.) Flexibility and EU Flexibility, and for other regulated and non-regulated areas.



C7.1

Specifications

| | |
|------------------------------|--------------------------------------|
| | C7.1 |
| Bore x Stroke | 105 x 135 mm (4.13 x 5.3 in) |
| Displacement | 7.01 liters (427.7 in ³) |
| Ship Weight | 506 kg (1115 lbs) |

Approximate Dimensions:

| | |
|-------------------------|------------------|
| Length | 929 mm (35.5 in) |
| Width | 668 mm (26.2 in) |
| Height | 797 mm (31.4 in) |

C7.1 Ratings In-Line 6

| | C Rating (Intermittent) | | |
|-----------|----------------------------|-----|------|
| | bkW | bhp | rpm |
| T | 105 | 140 | 2200 |
| TA | 115 | 154 | 2200 |
| | 129 | 172 | 2200 |
| | 137 | 183 | 2200 |
| | 145 | 194 | 2200 |
| | 162 | 220 | 2200 |

Features

- New SAE B PTO
- Developed to be World Fuel Capable, including the use of 20% bio fuel
- Improvements to the manifold, combustion area, and turbocharger geometry
- Increased cylinder displacement
- Mechanical control

Benefits

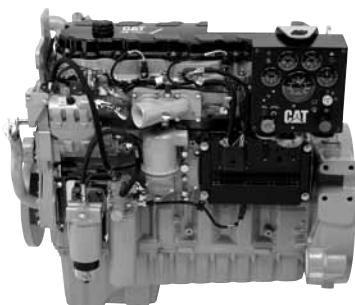
- Built to provide exact power solutions for customers who sell their applications into lesser regulated countries
- Considerable increases in delivered power, torque, and quiet operation
- Platform commonality for easier changeover and lower cost

Abbreviations used:

- T** Turbocharged
- TA** Turbocharged-Aftercooled

Designed to conform with China Stage II emission standards, and other global regulated and non-regulated areas.

C9 ACERT



Specifications

| C9 ACERT | |
|--------------------------------|-----------------------------------|
| Bore x Stroke | 112 x 149 mm (4.41 x 5.87 in) |
| Displacement | 8.8 liters (537 in ³) |
| Ship Weight | 864 kg (1905 lbs) |
| Approximate Dimensions: | |
| Length | 1091 mm (43 in) |
| Width | 827 mm (32.6 in) |
| Height | 1023 mm (40.3 in) |

C9 ACERT Ratings In-Line 6

| A Rating (Continuous) | | | B Rating | | | C Rating (Intermittent) | | | D Rating | | |
|--------------------------|-----|---------------|----------|-----|---------------|----------------------------|-----|---------------|----------|-----|---------------|
| bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| TA (ATAAC) | | | | | | | | | | | |
| 205 | 275 | 1800- 2200 | 223 | 300 | 1800- 2200 | 242 | 325 | 1800- 2200 | 280 | 375 | 1800- 2200 |
| — | — | — | — | — | — | 261 | 350 | 1800- 2200 | — | — | — |

C9 ACERT Power Unit Ratings In-Line 6

| A Rating (Continuous) | | | B Rating | | | C Rating (Intermittent) | | | D Rating | | |
|--------------------------|-----|---------------|----------|-----|---------------|----------------------------|-----|---------------|----------|-----|-----|
| bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| TA (ATAAC) | | | | | | | | | | | |
| 205 | 275 | 1800- 2200 | 223 | 300 | 1800- 2200 | 242 | 325 | 1800- 2200 | — | — | — |
| — | — | — | — | — | — | 261 | 350 | 1800- 2200 | — | — | — |

Features

- ADEM™ A4 ECU
- HEUI™ fuel system
- High efficiency oil filters
- Fractured split connecting rod
- Lightweight cylinder block
- Wastegated turbocharger

Benefits

- Mid-supported wet liner allows better fuel consumption and reduced emissions
- Extended life with induction-hardened internal surface
- Optimized fuel injector control
- New oil filter reconfigured to reduce wear on engine

Abbreviations used:

ATAAC.....Air-to-Air Aftercooled

TA Turbocharged-Aftercooled

ECU.....Electronic Control Unit

Available using EPA (U.S.) Flexibility and EU Flexibility, and for other global regulated and non-regulated areas.



C11 ACERT

Specifications

C11 ACERT

Bore x Stroke 130 x 140 mm (5.12 x 5.51 in)

Displacement 11.1 liters (677 in³)

Ship Weight 930 kg (2050 lbs)

Approximate Dimensions:

Length 1203 mm (47.4 in)

Width 1054 mm (41.5 in)

Height 1186 mm (46.7 in)

C11 ACERT Ratings In-Line 6

| A Rating (Continuous) | | B Rating | | | C Rating (Intermittent) | | | D Rating | | | E Rating | | | |
|--------------------------|-----|----------|-----|-----|----------------------------|-----|-----|----------|-----|-----|----------|-----|-----|-------|
| bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| TA (ATAAC) | | | | | | | | | | | | | | |
| 242 | 325 | 1800- | 261 | 350 | 1800- | 287 | 385 | 1800- | 313 | 420 | 1800- | 336 | 450 | 1800- |
| | | 2100 | | | 2100 | | | 2100 | | | 2100 | | | 2100 |

C11 ACERT Power Unit Ratings In-Line 6

| A Rating (Continuous) | | | B Rating | | | C Rating (Intermittent) | | |
|--------------------------|-----|-------|----------|-----|-------|----------------------------|-----|-------|
| bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| TA (ATAAC) | | | | | | | | |
| 242 | 325 | 1800- | 261 | 350 | 1800- | 287 | 385 | 1800- |
| | | 2100 | | | 2100 | | | 2100 |

Features

- ADEM™ A4 ECU
- MEUI fuel system
- Single-piece cross flow cylinder head
- High pressure fuel system
- Mono steel piston
- Leak-free technology
- Single/dual rear PTO
- Multi-layer steel head gaskets

Benefits

- Gear train is redesigned with increased capacity and decreasing noise volume
- Option of laminated front housing significantly diminishes decibel output
- Oil pan isolation reduces noise volume
- Multi-layered steel hard gasket improves durability
- Steel spacer between two layers of spring steel increases gasket resilience
- Gasket resilience increases engine life by decreasing leakage
- New highly efficient oil filter reduces engine wear and enhances contamination control

Abbreviations used:

ATAAC.....Air-to-Air Aftercooled

TA.....Turbocharged-Aftercooled

ECU.....Electronic Control Unit

Available using EPA (U.S.) Flexibility and EU Flexibility, and for other global regulated and non-regulated areas.

C13 ACERT



Specifications

| | C13 ACERT |
|--------------------------------|------------------------------------|
| Bore x Stroke | 130 x 157 mm (5.1 x 6.2 in) |
| Displacement | 12.5 liters (763 in ³) |
| Ship Weight | 1149 kg (2533 lbs) |
| Approximate Dimensions: | |
| Length | 1203 mm (47.4 in) |
| Width | 1011 mm (39.8 in) |
| Height | 1186 mm (46.7 in) |

C13 ACERT Ratings In-Line 6

| TA (ATAAC) | A Rating (Continuous) | | | B Rating | | | C Rating (Intermittent) | | | D Rating | | | E Rating | | |
|------------|--------------------------|-----|-----------|----------|-----|-----------|----------------------------|-----|-----------|----------|-----|-----------|----------|-----|-----------|
| | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| | 287 | 385 | 1800-2100 | 310 | 415 | 1800-2100 | 328 | 440 | 1800-2100 | 354 | 475 | 1800-2100 | 388 | 520 | 1800-2100 |

C13 ACERT Power Unit Ratings In-Line 6

| TA (ATAAC) | A Rating (Continuous) | | | B Rating | | | C Rating (Intermittent) | | |
|------------|--------------------------|-----------|-----|----------|-----------|-----|----------------------------|-----------|-----|
| | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| 287 | 385 | 1800-2100 | 310 | 415 | 1800-2100 | 328 | 440 | 1800-2100 | |

Features

- ADEM™ A4 ECU
- MEUI fuel system
- Single-piece cross flow cylinder head
- High pressure fuel system
- Mono steel piston
- Leak-free technology
- Single/dual rear PTO
- Multi-layer steel head gaskets

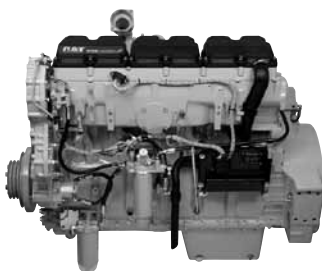
Benefits

- Gear train is redesigned with increased capacity and decreasing noise volume
- Option of laminated front housing significantly diminishes decibel output
- Oil pan isolation reduces noise volume
- Multi-layered steel hard gasket improves durability
- Steel spacer between two layers of spring steel increases gasket resilience
- Gasket resilience increases engine life by decreasing leakage
- New highly efficient oil filter reduces engine wear and enhances contamination control

Abbreviations used:

ATAAC.....Air-to-Air Aftercooled **TA**..... Turbocharged-Aftercooled
ECU.....Electronic Control Unit

Available using EPA (U.S.) Flexibility and EU Flexibility, and for other global regulated and non-regulated areas.



C15 ACERT

Specifications

| | C15 ACERT |
|--------------------------------|---------------------------------------|
| Bore x Stroke | 137.2 x 171.4 mm (5.4 x 6.75 in) |
| Displacement | 15.2 liters (927.56 in ³) |
| Ship Weight | 1469 kg (3239 lbs) |
| Approximate Dimensions: | |
| Length | 1377 mm (54.2 in) |
| Width | 926 mm (36.5 in) |
| Height | 1226 mm (48.3 in) |

C15 ACERT Ratings In-Line 6

| TA (ATAAC) | A Rating (Continuous) | | | B Rating | | | C Rating (Intermittent) | | | D Rating | | | E Rating | | |
|------------|--------------------------|-----|-----------|----------|-----|-----------|----------------------------|-----|-----------|----------|-----|-----------|----------|-----|-----------|
| | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| | 328 | 440 | 1800-2100 | 354 | 475 | 1800-2100 | 403 | 540 | 1800-2100 | 433 | 580 | 1800-2100 | 444 | 595 | 1800-2100 |

C15 ACERT Power Unit Ratings In-Line 6

| TA (ATAAC) | A Rating (Continuous) | | | B Rating | | | C Rating (Intermittent) | | |
|------------|--------------------------|-----|-----------|----------|-----|-----------|----------------------------|-----|-----------|
| | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| | 328 | 440 | 1800-2100 | 354 | 475 | 1800-2100 | 403 | 540 | 1800-2100 |

Features

- ADEM™ A4 ECU
- MEUI fuel system
- Single-piece cross flow cylinder head
- High pressure fuel system
- Mono steel piston
- Leak-free technology
- Single/dual rear PTO
- Multi-layer steel head gaskets

Benefits

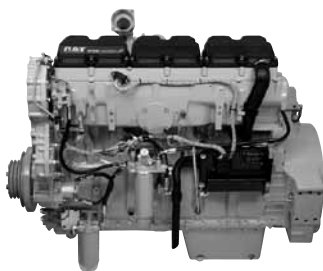
- Gear train is redesigned with increased capacity and decreasing noise volume
- Option of laminated front housing significantly diminishes decibel output
- Multi-layered steel hard gasket improves durability
- Steel spacer between two layers of spring steel increases gasket resilience
- Gasket resilience increases engine life by decreasing leakage
- New highly efficient oil filter reduces engine wear and enhances contamination control

Abbreviations used:

ATAAC.....Air-to-Air Aftercooled **TA**..... Turbocharged-Aftercooled
ECU.....Electronic Control Unit

Available using EPA (U.S.) Flexibility and EU Flexibility, and for other global regulated and non-regulated areas.

C18 ACERT



Specifications

| | C18 ACERT |
|--------------------------------|--|
| Bore x Stroke | 145 x 183 mm (5.71 x 7.2 in) |
| Displacement | 18.1 liters (1104.53 in ³) |
| Ship Weight | 1673 kg (3688 lbs) |

Approximate Dimensions:

| | |
|-------------------------|---------------------------|
| Length | 1388 mm (54.6 in) (T) |
| | 1414.1 mm (55.7 in) (TTA) |
| Width | 921 mm (36.3 in) (TA) |
| | 974.0 mm (38.3 in) (TTA) |
| Height | 1243 mm (48.9 in) (TA) |
| | 1257 mm (49.5 in) (TTA) |

C18 ACERT Ratings In-Line 6

| A Rating (Continuous) | | | B Rating | | | C Rating (Intermittent) | | | D Rating | | | E Rating | | |
|---------------------------------|-----|-----------|-----------------|-----|-----------|-----------------------------------|-----|-----------|-----------------|-----|-----------|-----------------|-----|-----------|
| bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| TA (ATAAC) | | | | | | | | | | | | | | |
| 429 | 575 | 1800-2100 | 447.5 | 600 | 1800-2100 | 470 | 630 | 1800-2100 | — | — | — | — | — | — |
| TTA (ATAAC) | | | | | | | | | | | | | | |
| — | — | — | — | — | — | 522 | 700 | 1800-2100 | 571 | 765 | 1800-2100 | 597 | 800 | 1800-2100 |

C18 ACERT Power Unit Ratings In-Line 6

| A Rating (Continuous) | | | B Rating | | | C Rating (Intermittent) | | |
|---------------------------------|-----|-----------|-----------------|-----|-----------|-----------------------------------|-----|-----------|
| bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| TA (ATAAC) | | | | | | | | |
| 429 | 575 | 1800-2100 | 447.5 | 600 | 1800-2100 | 470 | 630 | 1800-2100 |
| TTA (ATAAC) | | | | | | | | |
| — | — | — | — | — | — | 522 | 700 | 1800-2100 |

Features

- ADEM™ A4 ECU
- MEUI fuel system
- Twin parallel turbocharger on 700 horsepower and above
- Best in power class density
- Monotherm piston
- Unique twin parallel turbo design providing superb response with low fuel consumption
- Fuel efficiency gives savings in operating costs and cleaner air
- MEUI fuel system is highly reliable due to its design and volume of units active in the market

Benefits

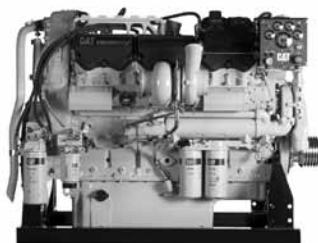
- Narrow rings of monotherm piston and tighter tolerance allows superior control
- New connecting rods allow for better retention and clamping force

Abbreviations used:

ATAAC.....Air-to-Air Aftercooled
ECU.....Electronic Control Unit

TA.....Turbocharged-Aftercooled
TTA.....Twin Turbocharged-Aftercooled

Ratings below 560 bkW (751 bhp) available using EPA (U.S.) Flexibility and EU Flexibility, and for other global regulated and non-regulated areas. Ratings above 560 bkW (751 bhp) available using EPA (U.S.) Flexibility and for other global regulated and non-regulated areas.



C32 ACERT

Specifications

| | C27 ACERT | C32 ACERT |
|--------------------------------|-----------------------------------|-------------------------------------|
| Bore x Stroke | 137.2 x 152.4 mm (5.4 x 6.0 in) | 145.0 x 162 mm (5.71 x 6.38 in) |
| Displacement | 27 liters (1648 in ³) | 32.1 liters (1959 in ³) |
| Ship Weight | 2946 kg (6495 lbs) | 2946 kg (6495 lbs) |
| Approximate Dimensions: | | |
| Length | 1917 mm (75.5 in) | 1917 mm (75.5 in) |
| Width | 1464 mm (57.6 in) | 1479 mm (58.2 in) |
| Height | 1321 mm (52 in) | 1319 mm (51.9 in) |

C27 ACERT Ratings V-12

| A Rating (Continuous) | B Rating | C Rating* (Intermittent) | D Rating | E Rating |
|---------------------------------|-----------------------|------------------------------------|------------------------|------------------------|
| bkW bhp rpm | bkW bhp rpm | bkW bhp rpm | bkW bhp rpm | bkW bhp rpm |
| TA (ATAAC) | | | | |
| 597 800 1800- 2100 | 653 875 1800- 2100 | 708 950 1800- 2100 | 783 1050 1800- 2100 | 858 1150 1800- 2100 |

C32 ACERT Ratings V-12

| A Rating | B Rating | C Rating (Intermittent) | D Rating | E Rating |
|-------------------|-----------------------|-----------------------------------|------------------------|-------------------------|
| bkW bhp rpm | bkW bhp rpm | bkW bhp rpm | bkW bhp rpm | bkW bhp rpm |
| TA (ATAAC) | | | | |
| — — — | 708 950 1800- 2100 | 839 1125 1800- 2100 | 895 1200 1800- 2100 | 1007 1350 1800- 2100 |

Features

- ADEM™ A4 ECU
- MEUI fuel system
- Leverage technology from the 3412E, C15 ACERT, and C18 ACERT
- Rear gear train
- Overhead cams
- Front housing and gear train

Benefits

- Excellent fuel efficiency and power density
- Wide power range from a single installation (from 800-1350 bhp)
- More production from same size package
- Improved cold start capability

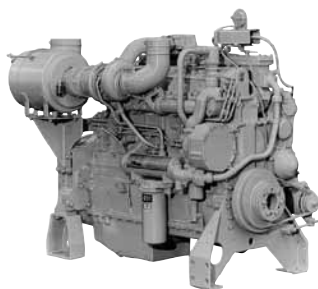
Abbreviations used:

- ATAAC**.....Air-to-Air Aftercooled
- ECU**.....Electronic Control Unit
- TA**.....Turbocharged-Aftercooled

Available using EPA (U.S.) Flexibility, and for other global regulated and non-regulated areas.

*Available in rear turbo configuration. Dimensions will vary.

3406C



Specifications

| | |
|--------------------------------|------------------------------------|
| | 3406C |
| Bore x Stroke | 137.2 x 165.1 mm (5.4 x 6.5 in) |
| Displacement | 14.6 liters (893 in ³) |
| Ship Weight | 1300 kg (2866 lbs) |
| Approximate Dimensions: | |
| Length | 1660 mm (65.35 in) |
| Width | 906 mm (35.67 in) |
| Height | 1335 mm (52.56 in) |

3406C Ratings In-Line 6

| Irrigation Rating | | | C Rating (Intermittent) | | | D Rating | | |
|-------------------|-----|------|----------------------------|-----|------|----------|-----|------|
| bkW | bhp | rpm | bkW | bhp | rpm | bkW | bhp | rpm |
| TA | | | | | | | | |
| 269 | 361 | 1800 | 298 | 400 | 1800 | 347 | 465 | 1800 |
| 306.5 | 411 | 1800 | 328 | 440 | 2000 | — | — | — |
| — | — | — | 343 | 460 | 2000 | — | — | — |

Features

- In-line, six cylinder diesel engine
- Heat-treated crankshaft with high fatigue strength regrounds up to 3 times
- Chrome-plated stems guard against seizure
- Direct injection fuel system
- Durable for heavy-duty applications

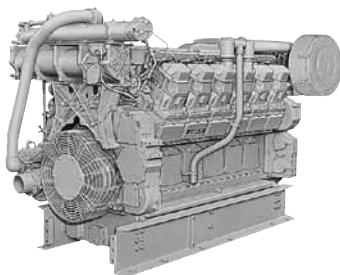
Benefits

- Hard-faced intake and exhaust valves resist wear at high heat
- High strength-to-wear ratio
- Steel spacer between head and block eliminates need for liner counterbores, enhancing strength and fatigue life of the block
- Valves rotate 3 degrees each lift, assuring good seating and uniform temperature distribution

Abbreviations used:

TA.....Turbocharged-Aftercooled

Available for global non-regulated areas.



3512

Specifications

| | | |
|--------------------------------|-------------------------------------|-------------------------------------|
| | 3508 | 3512 |
| Bore x Stroke | 170 x 190 mm (6.7 x 7.5 in) | 170 x 190 mm (6.7 x 7.5 in) |
| Displacement | 34.5 liters (2105 in ³) | 51.8 liters (3158 in ³) |
| Ship Weight | 4309 kg (9500 lbs) | 6078 kg (13 400 lbs) |
| Approximate Dimensions: | | |
| Length | 2136 mm (84 in) | 2676 mm (105 in) |
| Width | 1703 mm (67 in) | 1703 mm (67 in) |
| Height | 1720 mm (68 in) | 1720 mm (68 in) |

| | |
|--------------------------------|-----------------------------------|
| | 3516 |
| Bore x Stroke | 170 x 190 mm (6.7 x 7.5 in) |
| Displacement | 69 liters (4210 in ³) |
| Ship Weight | 7484 kg (16 499 lbs) |
| Approximate Dimensions: | |
| Length | 3366 mm (133 in) |
| Width | 1703 mm (67 in) |
| Height | 1718 mm (68 in) |

3508 Ratings V-8

| | A Rating (Continuous) | | | C Rating (Intermittent) | | |
|-----------|--------------------------|-----|------|----------------------------|------|------|
| | bkW | bhp | rpm | bkW | bhp | rpm |
| TA | | | | | | |
| | 507 | 680 | 1200 | 612 | 820 | 1300 |
| | 578 | 775 | 1800 | 634 | 850 | 1800 |
| | 638 | 855 | 1800 | 746 | 1000 | 1800 |

3512 Ratings V-12

| | A Rating (Continuous) | | | C Rating (Intermittent) | | |
|-----------|--------------------------|------|------|----------------------------|------|------|
| | bkW | bhp | rpm | bkW | bhp | rpm |
| TA | | | | | | |
| | 761 | 1020 | 1200 | 858 | 1150 | 1300 |
| | 877 | 1175 | 1800 | 1007 | 1350 | 1800 |
| | 955 | 1280 | 1800 | 1119 | 1500 | 1800 |

3516 Ratings V-16

| | A Rating (Continuous) | | | C Rating (Intermittent) | | |
|-----------|--------------------------|------|------|----------------------------|------|------|
| | bkW | bhp | rpm | bkW | bhp | rpm |
| TA | | | | | | |
| | 1011 | 1355 | 1200 | 1242 | 1665 | 1300 |
| | 1156 | 1550 | 1800 | 1268 | 1700 | 1800 |
| | 1275 | 1710 | 1800 | 1492 | 2000 | 1800 |

Features

- Built with common parts — intake and exhaust valves, valve seat inserts, and valve springs are all identical
- Scroll-type unit injectors for consistent, precise fuel delivery to each cylinder
- High-pressure fuel lines eliminated
- Advanced electronic control systems

Benefits

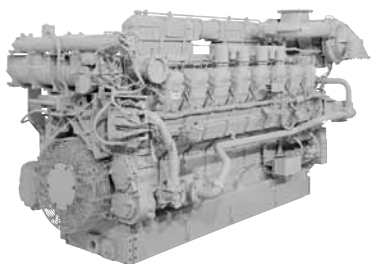
- Service efficiency reduces operating costs
- Superior fuel economy
- Repower savings/higher production with less fuel consumption

Abbreviations used:

TA.....Turbocharged-Aftercooled

Available for global non-regulated areas.

3516B



Specifications

| | 3508B | 3512B |
|--------------------------------|---|-------------------------------------|
| Bore x Stroke | 170 x 190 mm (6.7 x 7.5 in) | 170 x 190 mm (6.7 x 7.5 in) |
| Displacement | 34.5 liters (2105 in ³) | 51.8 liters (3158 in ³) |
| Ship Weight | 4309 kg (9500 lbs) | 6078 kg (13 400 lbs) |
| Approximate Dimensions: | | |
| Length | 2462 mm (97 in) | 3067 mm (120.8 in) |
| Width | 1703 mm (67 in) | 1785 mm (70.3 in) |
| Height | 1720 mm (68 in) | 1806 mm (71.1 in) |

| | 3512C | 3516B |
|--------------------------------|---|-----------------------------------|
| Bore x Stroke | 170 x 190 mm (6.7 x 7.5 in) | 170 x 190 mm (6.7 x 7.5 in) |
| Displacement | 51.8 liters (3158 in ³) | 69 liters (4210 in ³) |
| Ship Weight | 6078 kg (13 400 lbs) | 7484 kg (16 500 lbs) |
| Approximate Dimensions: | | |
| Length | 3067 mm (120.8 in) | 3008 mm (119 in) |
| Width | 1785 mm (70.3 in) | 1443 mm (57 in) |
| Height | 1806 mm (71.1 in) | 1980 mm (78 in) |

Mobile Equipment Ratings

3508B Ratings V-8

| | A Rating (Continuous) | | | C Rating (Intermittent) | | |
|------------------|---------------------------------|------|------|-----------------------------------|------|------|
| | bkW | bhp | rpm | bkW | bhp | rpm |
| TA (SCAC) | 746 | 1000 | 1800 | 820 | 1100 | 1800 |

3512B Ratings V-12

| | A Rating (Continuous) | | | C Rating (Intermittent) | | |
|------------------|---------------------------------|------|------|-----------------------------------|------|------|
| | bkW | bhp | rpm | bkW | bhp | rpm |
| TA (SCAC) | 1119 | 1500 | 1800 | 1231 | 1650 | 1800 |

3512C Ratings* V-12

| | A Rating (Continuous) | | |
|-------------------|---------------------------------|------|------|
| | bkW | bhp | rpm |
| TA (ATAAC) | 1120 | 1500 | 1800 |

3516B Ratings V-16

| | A Rating (Continuous) | | | C Rating (Intermittent) | | |
|------------------|---------------------------------|------|------|-----------------------------------|------|------|
| | bkW | bhp | rpm | bkW | bhp | rpm |
| TA (SCAC) | 1492 | 2000 | 1800 | 1566 | 2100 | 1800 |

Features

- Built with common parts — intake and exhaust valves, valve seat inserts, and valve springs are all identical
- Scroll-type unit injectors for consistent, precise fuel delivery to each cylinder
- High-pressure fuel lines eliminated
- Advanced electronic control systems

Benefits

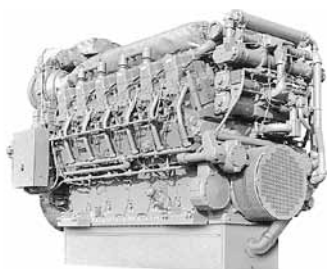
- Service efficiency reduces operating costs
- Superior fuel economy
- Repower savings/higher production with less fuel consumption

Abbreviations used:

SCAC Separate Circuit Aftercooled **ATAAC** Air-to-Air Aftercooled
TA Turbocharged-Aftercooled

Available for global regulated and non-regulated areas.

*Available using EPA (U.S.) Flexibility and for other global regulated and non-regulated areas.



3612

Specifications

| | 3606 | 3608 |
|--------------------------------|--------------------------------------|--------------------------------------|
| Bore x Stroke | 280 x 300 mm (11 x 11.8 in) | 280 x 300 mm (11 x 11.8 in) |
| Displacement | 110.8 liters (6764 in ³) | 147.8 liters (9018 in ³) |
| Ship Weight | 15 680 kg (34 500 lbs) | 19 000 kg (41 800 lbs) |
| Approximate Dimensions: | | |
| Length | 3988 mm (157 in) | 4828 mm (190 in) |
| Width | 1748 mm (69 in) | 1748 mm (69 in) |
| Height | 2626 mm (103 in) | 2626 mm (103 in) |

| | 3612 | 3616 |
|--------------------------------|--|--|
| Bore x Stroke | 280 x 300 mm (11 x 11.8 in) | 280 x 300 mm (11 x 11.8 in) |
| Displacement | 221.7 liters (13 527 in ³) | 295.6 liters (18 036 in ³) |
| Ship Weight | 25 140 kg (55 300 lbs) | 29 950 kg (65 900 lbs) |
| Approximate Dimensions: | | |
| Length | 4562 mm (180 in) | 5482 mm (216 in) |
| Width | 1704 mm (67 in) | 1704 mm (67 in) |
| Height | 3231 mm (127 in) | 3231 mm (127 in) |

3606 Ratings In-Line 6

| TA | Distillate A Rating (Continuous) | | |
|----|--|------|------|
| | bkW | bhp | rpm |
| | 1490 | 1998 | 750 |
| | 1560 | 2092 | 800 |
| | 1730 | 2319 | 900 |
| | 1850 | 2481 | 1000 |

3608 Ratings In-Line 8

| TA | Distillate A Rating (Continuous) | | |
|----|--|------|------|
| | bkW | bhp | rpm |
| | 1980 | 2655 | 750 |
| | 2080 | 2787 | 800 |
| | 2300 | 3080 | 900 |
| | 2460 | 3300 | 1000 |

3612 Ratings V-12

| TA | Distillate A Rating (Continuous) | | |
|----|--|------|------|
| | bkW | bhp | rpm |
| | 2980 | 3996 | 750 |
| | 3120 | 4184 | 800 |
| | 3460 | 4640 | 900 |
| | 3700 | 4962 | 1000 |

3616 Ratings V-16

| TA | Distillate A Rating (Continuous) | | |
|----|--|------|------|
| | bkW | bhp | rpm |
| | 3960 | 5310 | 750 |
| | 4160 | 5579 | 800 |
| | 4600 | 6169 | 900 |
| | 4920 | 6598 | 1000 |

Features

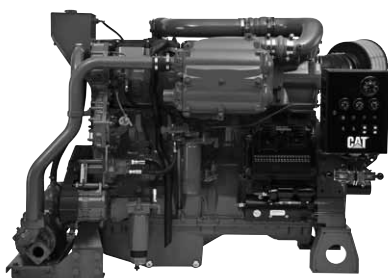
- All 900 and 1000 ratings are IMO certified with 32°C cooling water to aftercooler

Abbreviations used:

TA.....Turbocharged-Aftercooled

Available for global non-regulated areas.

C18 ACERT Fire Pump Engine



Specifications

| | C18 ACERT |
|--------------------------------|--|
| Bore x Stroke | 145 x 183 mm (5.71 x 7.2 in) |
| Displacement | 18.1 liters (1104.53 in ³) |
| Ship Weight | 1953 kg (4306 lbs) |
| Approximate Dimensions: | |
| Length | 1889 mm (74.4 in) |
| Width | 1081.7 mm (42.6 in) |
| Height | 1379.6 mm (54.3 in) |

C18 ACERT Ratings In-Line 6

| 1500 rpm | | 1750 rpm | | 1900 rpm | | 2100 rpm | |
|--------------------------|-----|----------|-----|----------|-----|----------|-----|
| bkW | bhp | bkW | bhp | bkW | bhp | bkW | bhp |
| Tier 2 | | | | | | | |
| — | — | 597 | 800 | 597 | 800 | 597 | 800 |
| Tier 3 | | | | | | | |
| — | — | 522 | 700 | 522 | 700 | 522 | 700 |
| — | — | 447 | 600 | 447 | 600 | 447 | 600 |
| Non-EPA Certified | | | | | | | |
| 522 | 700 | — | — | — | — | — | — |

Features

- ADEM A4 ECU — two redundant units per NFPA 20
- MEUI fuel system
- Compact design
- Twin parallel turbochargers with watercooled center sections
- Monotherm piston

Benefits

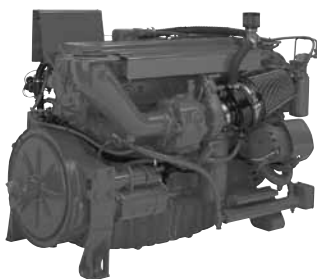
- Narrow rings of monotherm piston and tighter tolerance allows superior control
- Watercooled center sections of turbocharger increase reliability during hot shutdowns
- One compact design fits 600-800 hp range

Abbreviations used:

ECU.....Electronic Control Unit

All ratings are FM approved and UL listed.

Ratings below 560 kW (751 hp) conform with current EPA (U.S.) Tier 3 emission standards for stationary emergency fire pump engines. Ratings above 560 kW (751 hp) conform with current EPA (U.S.) Tier 2 emission standards for stationary emergency fire pump engines.



**Fire Pump
Engine**

3406C Ratings In-Line 6

| 1750 rpm | | 2100 rpm | | 2300 rpm | |
|-----------|-----|----------|-----|----------|-----|
| bkW | bhp | bkW | bhp | bkW | bhp |
| TA | | | | | |
| 313 | 420 | 321 | 430 | 339 | 455 |
| 343 | 460 | 359 | 482 | — | — |

3412C* Ratings V-12

| 1750 rpm | | 1900 rpm | | 2100 rpm | |
|-----------|-----|----------|-----|----------|-----|
| bkW | bhp | bkW | bhp | bkW | bhp |
| T | | | | | |
| 401 | 538 | — | — | 427 | 573 |
| TA | | | | | |
| 476 | 638 | 551 | 739 | 551 | 739 |

3512 Ratings V-12

| 1460 rpm | | 1750 rpm | |
|-----------|------|----------|------|
| bkW | bhp | bkW | bhp |
| TA | | | |
| 1067 | 1430 | 1193 | 1600 |

3508 Ratings V-8

| 1460 rpm | | 1750 rpm | |
|-----------|-----|----------|------|
| bkW | bhp | bkW | bhp |
| TA | | | |
| 709 | 950 | 794 | 1065 |

3516 Ratings V-16

| 1460 rpm | | 1750 rpm | |
|-----------|------|----------|------|
| bkW | bhp | bkW | bhp |
| TA | | | |
| 1417 | 1900 | 1480 | 1985 |

Abbreviations used:

TTurbocharged

*Watercooled turbocharger and manifolds
Available for global non-regulated areas.

TATurbocharged-Aftercooled

Label and NSPS Regulations for Gas Engines

Stationary Use Only Label

- Effective January 2004, the U.S. EPA Non-road Mobile SI rule restricts the use of SI gas engines within the United States. Cat gas engines are not certified for mobile applications within the U.S. and are to be used in stationary use only applications that must be installed a minimum of twelve consecutive months at a location.

U.S. EPA SI Stationary NSPS Regulations

- Effective July 2007, the U.S. EPA will enforce the new Spark Ignited New Source Performance Standard (SI NSPS) for stationary engines rated equal to or above 500 bhp.
- Effective January 1, 2008, this standard will be required for engines rated below 500 bhp.

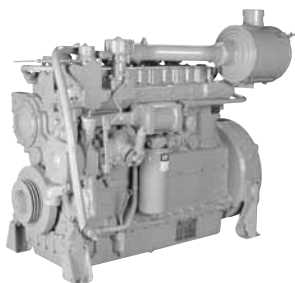
U.S. EPA SI Stationary NSPS Non-air Fuel Ratio Site Compliant Capable

- The as-shipped non-air fuel ratio-controlled engine is capable of site-compliance by the customer and will require customer-specified and -supplied 3-way catalyst and air-fuel ratio control.
- This designation is used to describe rich burn catalyst emission ratings intended for use with 3-way catalysts.
- It is the customer's responsibility to coordinate and complete site emissions testing to demonstrate compliance to the NSPS.

The above regulations apply to the gas engines on pages 27-30.

Abbreviations

| | |
|---------------|---|
| NSPS..... | New Source Performance Standard |
| SI | Spark Ignited |
| SI NSPS | Spark Ignited New Source Performance Standard |



G3306

Specifications

| | G3304 (TA) | G3306 (T) |
|--------------------------------|-----------------------------------|------------------------------------|
| Bore x Stroke | 121 x 152 mm (4.75 x 6.0 in) | 121 x 152 mm (4.75 x 6.0 in) |
| Displacement | 7.0 liters (425 in ³) | 10.5 liters (638 in ³) |
| Ship Weight | 739 kg (1630 lbs) | 948 kg (2090 lbs) |
| Approximate Dimensions: | | |
| Length | 1158 mm (46 in) | 1505 mm (59 in) |
| Width | 744 mm (29 in) | 1208 mm (48 in) |
| Height | 1270 mm (50 in) | 978 mm (39 in) |

G3304 Ratings

| Engine — Continuous | 1800 rpm | |
|---------------------|----------|-----|
| | bkW | bhp |
| G3304 NA | 71 | 95 |

G3306 Ratings

| Engine — Continuous | 1800 rpm | |
|------------------------------|----------|-----|
| | bkW | bhp |
| G3306 NA* | 108 | 145 |
| G3306 T** | 111 | 150 |
| G3306 TA^{2*} | 151 | 203 |
| G3306 TA¹ | 157 | 211 |
| G3306 TA^{1*} | 164 | 220 |

¹32°C/90°F Water to Aftercooler

²54°C/130°F Water to Aftercooler

Gas Engine Features

- ADEM™ A3 ECU
- Over five decades of experience leveraging Caterpillar quality engineering and manufacturing of gas and diesel powered engines
- Fuel flexibility
- Open-chamber design

Gas Engine Benefits

- Natural, field, landfill, and propane gas can all be burned efficiently
- Conforms with latest worldwide emission standards
- Caterpillar engineered design expertise has been applied
- Open-chamber design keeps the air-fuel mixture lean and increases power while minimizing NOx
- Naturally aspirated, turbocharged, and aftercooled options allow you to match emissions and dependability requirements to your specific needs

Abbreviations used:

ECU.....Electronic Control Unit

NA.....Naturally Aspirated

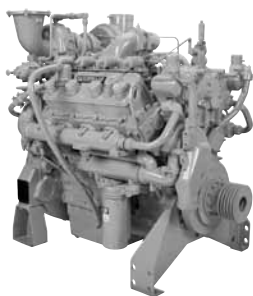
TA.....Turbocharged-Aftercooled

Ratings listed are for 25°C (77°F) ambient temperature, 500 ft. altitude, and pipeline quality gas.

*Ag rating also available

**Ag rating only

G3408



Specifications

| | G3406 (TA) | G3408 (TA) | G3412 (TA) |
|--------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|
| Bore x Stroke ... | 137 x 165 mm (5.4 x 6.5 in) | 137 x 152 mm (5.4 x 6.0 in) | 137 x 152 mm (5.4 x 6.0 in) |
| Displacement ... | 14 liters (893 in ³) | 18 liters (1099 in ³) .. | 27 liters (1649 in ³) |
| Ship Weight | 1362 kg (3000 lbs) ... | 1680 kg (3700 lbs) .. | 2143 kg (4720 lbs) |
| Approximate Dimensions: | | | |
| Length | 1993 mm (79 in)..... | 1594 mm (63 in) | 2049 mm (81 in) |
| Width | 1265 mm (50 in)..... | 1471 mm (58 in) | 1603 mm (63 in) |
| Height | 1433 mm (56 in)..... | 1509 mm (59 in) | 1734 mm (68 in) |

G3406 Ratings

| | 1400 rpm | | 1800 rpm | |
|-------------------------------|----------|-----|----------|-----|
| | bkW | bhp | bkW | bhp |
| Engine — Continuous | | | | |
| G3406 NA | 131 | 175 | 160 | 215 |
| G3406 TA^{2,4} | — | — | 206 | 276 |
| G3406 TA | — | — | 242 | 325 |

G3408 Ratings

| | 1500 rpm | | 1800 rpm | |
|-------------------------------|----------|-----|----------|-----|
| | bkW | bhp | bkW | bhp |
| Engine — Continuous | | | | |
| G3408 NA | — | — | 190 | 255 |
| G3408 TA² | — | — | 298 | 400 |
| G3408 TA^{2,4} | 248 | 332 | — | — |
| G3408 TA^{2,3} | — | — | 317 | 425 |

G3412 Ratings

| | 1500 rpm | | 1800 rpm | |
|--------------------------------|----------|-----|----------|-----|
| | bkW | bhp | bkW | bhp |
| Engine — Continuous | | | | |
| G3412 NA | — | — | 272 | 365 |
| G3412 TA^{2,4} | 373 | 500 | — | — |
| G3412C TA^{2,3} | — | — | 475 | 637 |

¹32°C/90°F Water to Aftercooler

²54°C/130°F Water to Aftercooler

³Low Emissions

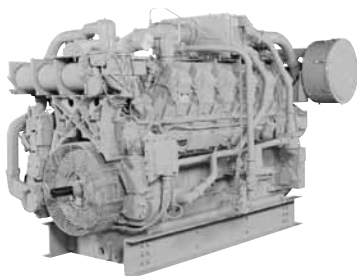
⁴Catalyst Rating

Ratings listed are for 25°C (77°F) ambient temperature, 500 ft. altitude, and pipeline quality gas.

Abbreviations used:

NA.....Naturally Aspirated

TA.....Turbocharged-Aftercooled



G3512

Specifications

| | G3508 (TA) | G3512 (T) |
|--------------------------------|---|-------------------------------------|
| Bore x Stroke | 170 x 190 mm (6.7 x 7.5 in) | 170 x 190 mm (6.7 x 7.5 in) |
| Displacement | 34.5 liters (2105 in ³) | 51.8 liters (3158 in ³) |
| Ship Weight | 5425 kg (11 950 lbs) | 6560 kg (14 450 lbs) |
| Approximate Dimensions: | | |
| Length | 2247 mm (89 in) | 2788 mm (110 in) |
| Width | 1733 mm (68 in) | 1703 mm (67 in) |
| Height | 1867 mm (74 in) | 1863 mm (73 in) |

| | G3516 (TA) | G3520B (TA) |
|--------------------------------|---|-------------------------------------|
| Bore x Stroke | 170 x 190 mm (6.7 x 7.5 in) | 170 x 190 mm (6.7 x 7.5 in) |
| Displacement | 69.0 liters (4211 in ³) | 86.3 liters (5263 in ³) |
| Ship Weight | 7931 kg (17 470 lbs) | 9875 kg (21 770 lbs) |
| Approximate Dimensions: | | |
| Length | 3327 mm (131 in) | 3849 mm (152 in) |
| Width | 1703 mm (67 in) | 1718 mm (68 in) |
| Height | 1859 mm (73 in) | 2398 mm (94 in) |

G3508 Ratings

| | 1200 rpm | | 1400 rpm | |
|-------------------------------|----------|-----|----------|-----|
| | bkW | bhp | bkW | bhp |
| Engine — Continuous | | | | |
| G3508 TA³ | 391 | 524 | — | — |
| G3508 TA^{1,4} | — | — | 500 | 670 |

G3516 Ratings

| | 1200 rpm | | 1400 rpm | |
|---------------------------------|----------|------|----------|------|
| | bkW | bhp | bkW | bhp |
| Engine — Continuous | | | | |
| G3516 NA | 492 | 660 | — | — |
| G3516³ | 783 | 1050 | — | — |
| G3516 TA^{3,4,5} | 858 | 1150 | 1000 | 1340 |

G3512 Ratings

| | 1200 rpm | | 1400 rpm | |
|---------------------------------|----------|-----|----------|------|
| | bkW | bhp | bkW | bhp |
| Engine — Continuous | | | | |
| G3512 TA³ | 589 | 790 | — | — |
| G3512 TA^{3,4,5} | 642 | 860 | 749 | 1005 |

G3520B Ratings

| | 1200 rpm | | 1400 rpm | |
|---------------------|----------|------|----------|------|
| | bkW | bhp | bkW | bhp |
| Engine — Continuous | | | | |
| G3520B TA | 1103 | 1480 | 1286 | 1725 |

- ¹32°C/90°F Water to Aftercooler
- ²43°C/110°F Water to Aftercooler
- ³54°C/130°F Water to Aftercooler
- ⁴Low Emissions
- ⁵Air Fuel Ratio

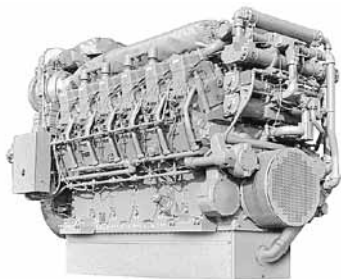
Ratings listed are for 25°C (77°F) ambient temperature, 500 ft. altitude, and pipeline quality gas.

Abbreviations used:

ECU Electronic Control Unit
NA Naturally Aspirated

TA Turbocharged-Aftercooled

G3612



Specifications

| | G3606 (TA) | G3608 (TA) |
|--------------------------------|--|--|
| Bore x Stroke | 300 x 300 mm (11.8 x 11.8 in) | 300 x 300 mm (11.8 x 11.8 in) |
| Displacement | 127.2 liters (37 762 in ³) | 169.6 liters (10 350 in ³) |
| Ship Weight | 15 640 kg (34 560 lbs) | 19 000 kg (41 888 lbs) |
| Approximate Dimensions: | | |
| Length | 4638 mm (183 in) | 5465 mm (215 in) |
| Width | 1744 mm (69 in) | 1868 mm (74 in) |
| Height | 2921 mm (115 in) | 2922 mm (115 in) |

| | G3612 (TA) | G3616 (TA) |
|--------------------------------|--|--|
| Bore x Stroke | 300 x 300 mm (11.8 x 11.8 in) | 300 x 300 mm (11.8 x 11.8 in) |
| Displacement | 254.4 liters (15 528 in ³) | 339.2 liters (20 698 in ³) |
| Ship Weight | 25 084 kg (55 300 lbs) | 29 892 kg (65 900 lbs) |
| Approximate Dimensions: | | |
| Length | 4735 mm (186 in) | 5661 mm (223 in) |
| Width | 2380 mm (94 in) | 2380 mm (94 in) |
| Height | 3220 mm (127 in) | 3208 mm (126 in) |

G3606 Ratings

| | 1000 rpm | |
|-------------------------------|----------|------|
| | bkW | bhp |
| Engine — Continuous | | |
| G3606 TA^{2,3} | 1324 | 1775 |

G3608 Ratings

| | 1000 rpm | |
|-------------------------------|----------|------|
| | bkW | bhp |
| Engine — Continuous | | |
| G3608 TA^{2,3} | 1767 | 2370 |

G3612 Ratings

| | 1000 rpm | |
|-------------------------------|----------|------|
| | bkW | bhp |
| Engine — Continuous | | |
| G3612 TA^{2,3} | 2647 | 3550 |

G3616 Ratings

| | 1000 rpm | |
|-------------------------------|----------|------|
| | bkW | bhp |
| Engine — Continuous | | |
| G3616 TA^{2,3} | 3531 | 4735 |

G12CM34 Ratings

| | 750 rpm | |
|----------------------------|---------|------|
| | bkW | bhp |
| Engine — Continuous | | |
| G12CM34³ | 4575 | 6135 |
| G12CM34³ | 6100 | 8180 |

¹32°C/90°F Water to Aftercooler
²54°C/130°F Water to Aftercooler
³Low Emissions

Features

- Over 5 decades experience leveraging Caterpillar quality engineering and manufacturing of gas and diesel powered engines
- Fuel flexibility
- State-of-the-art electronically controlled pre-chamber design

Benefits

- Natural, field, landfill, and propane gas can all be burned efficiently
- Conforms with latest worldwide emission standards
- Caterpillar engineered design expertise has been applied
- Electronically controlled pre-chamber design allows you to obtain NOx levels as low as 0.5 gr/bhp-hr

Abbreviations used:

TA.....Turbocharged-Aftercooled

ACERT™ Technology

- A series of evolutionary, incremental improvements resulting in breakthrough engine technology
- Built on proven Cat systems and components
- Minimizes emissions through better control of the combustion process



ADEM™ A4 ECU

- Electronic engine control unit
- Precise fuel control
- Smarter controller
- Password protected
- Customized engine speed
- Controls idle levels
- Precise injection timing



Analog Gauge

- 12V and 24V systems
- Liquid Crystal Display: engine hours/diagnostic codes
- 2 LED indicators
- 2- or 3-inch diameter dial
- Thread nut mount installed
- Integral 6-pin Deutsch connector
- Displays engine speed, fuel rate, load percent, pressures, and temperatures



Cat® Messenger

- Electronic display unit
- Full graphic LCD screen
- Engine status and diagnostic display in one
- Four easy scroll buttons
- Monitors engine problems
- Alerts driver of corrective action
- Schedules engine for service
- Provides diagnostic information, SAE standard codes, and brief text explanation



For additional information visit www.catelectronics.com

Additional Literature

| | |
|--|----------|
| Cat C4.4, C4.4 ACERT, and C6.6 ACERT Engines Superior Performance and Beyond..... | LEDH6529 |
| Industrial Engine Attachments Guide | LEDH6161 |
| Industrial Power Systems Fueled by Innovation..... | LEDH4624 |
| Irrigation Engine Ratings Guide | LEDH5378 |

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Materials and specifications are subject to change without notice. Rating ranges listed include the lowest and highest available for a specific engine or family of engines. Load factor and time at rated load and speed will determine the best engine/rating match.

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