

# 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•m<sup>3</sup> (905 btu/ft<sup>3</sup>). Variations in altitude, temperature, and gas composition from standard conditions may require a reduction in engine horsepower.

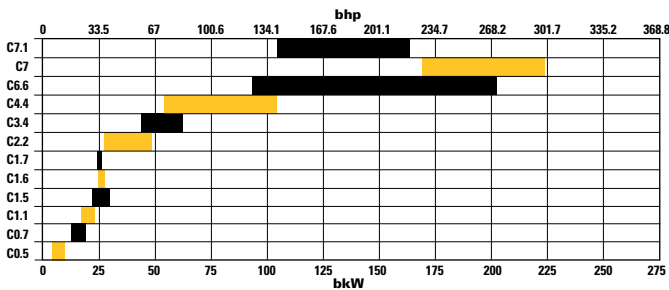
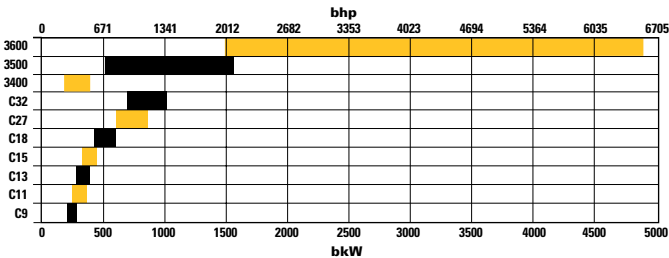
Turbocharged-Aftercooled ratings apply to 1525 m (5000 ft) and 25°C (77°F).

## ISO 9001:2000 Certification

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

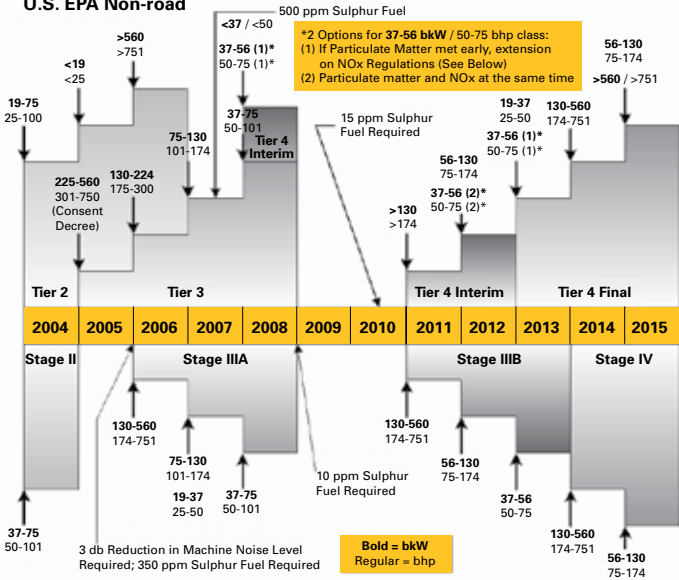
Appendix B, Attachment 3

## 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](http://www.epa.gov).

Appendix B, Attachment 3

## 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

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

### C0.5 Ratings In-Line 2

NA	<b>C Rating</b> (Intermittent)		
	<b>bkW</b>	<b>bhp</b>	<b>rpm</b>
	8.2	11.0	2800
	8.8	11.8	3000
	10.2	13.7	3600

### C0.7 Ratings In-Line 3

NA	<b>C Rating</b> (Intermittent)		
	<b>bkW</b>	<b>bhp</b>	<b>rpm</b>
	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.

Appendix B, Attachment 3  
6-634

**C1.1**



## Specifications

	<b>C1.1</b>	<b>C1.5</b>
<b>Bore x Stroke</b> . . .	77 x 81 mm (3.0 x 3.2 in) . . . . .	84 x 90 mm (3.3 x 3.5 in)
<b>Displacement</b> . . .	1.1 liters (69 in³) . . . . .	1.496 liters (91 in³)
<b>Ship Weight (NA)</b> .	87 kg (191 lbs) . . . . .	149 kg (328 lbs) <b>(NA)</b> 156.5 kg (345 lbs) <b>(T)</b>
<b>Approximate Dimensions:</b>		
<b>Length</b> . . . . .	491 mm (19.33 in) . . . . .	572 mm (22.50 in) <b>(NA, T)</b>
<b>Width</b> . . . . .	400 mm (15.7 in) . . . . .	453 mm (17.8 in) <b>(NA)</b> 512 mm (20.2 in) <b>(T)</b>
<b>Height</b> . . . . .	576 mm (22.7 in) . . . . .	643 mm (25.30 in) <b>(NA, T)</b>

## C1.1 Ratings In-Line 3

<b>C Rating</b> (Intermittent)			
	<b>bkW</b>	<b>bhp</b>	<b>rpm</b>
<b>NA</b>	<b>Std/Derate</b>	<b>Std/Derate</b>	
	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

<b>C Rating</b> (Intermittent)			
<b>NA</b>	<b>bkW</b>	<b>bhp</b>	<b>rpm</b>
	17.9	24	3000

## C1.5 Ratings In-Line 3

<b>C Rating</b> (Intermittent)			
	<b>bkW</b>	<b>bhp</b>	<b>rpm</b>
<b>NA</b>			
	20.9	28	2200
	22.3	29.9	2400
	23.4	31.4	2600
	24.4	32.7	2800
	25.1	33.7	3000
<b>T</b>			
	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

<b>C Rating</b> (Intermittent)			
<b>NA</b>	<b>bkW</b>	<b>bhp</b>	<b>rpm</b>
	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

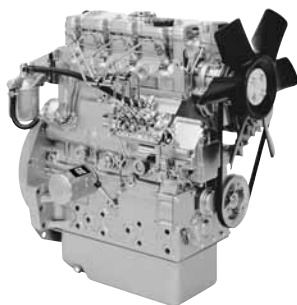
**T**.....Turbocharged

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.

Appendix B, Attachment 3

7-634



**C1.6**

## Specifications

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

Appendix B, Attachment 3



**C3.4**



## Specifications

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

## C2.2 Ratings In-Line 4

<b>C Rating</b> (Intermittent)			
<b>NA</b>	<b>bkW</b> Std/Derate	<b>bhp</b> Std/Derate	<b>rpm</b>
	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
<b>T</b>			
	40 / 36.3	53.3 / 48.7	2800
	43	57.7	2600
	44.7	60.0	2800
	45.5	61.0	3000
<b>TA (ATAAC)</b>			
	49.3	66.1	2800

## C2.2 Power Unit Ratings In-Line 4

<b>C Rating</b> (Intermittent)			
<b>NA</b>	<b>bkW</b>	<b>bhp</b>	<b>rpm</b>
	37	49.6	3000
<b>T</b>			
	41.7	55.9	2800

## C3.4 Ratings In-Line 4

<b>C Rating</b> (Intermittent)			
<b>NA</b>	<b>bkW</b>	<b>bhp</b>	<b>rpm</b>
	47	63	2500
<b>T</b>			
	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

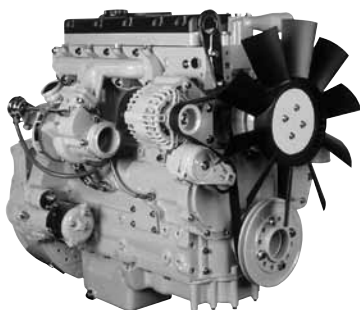
**T**.....Turbocharged

**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.

Appendix B, Attachment 3  
C-634



C4.4

## Specifications

### C4.4

<b>Bore x Stroke</b> . . . .	105 x 127 mm (4.1 x 5.0 in)
<b>Displacement</b> . . . .	4.4 liters (269 in <sup>3</sup> )
<b>Ship Weight</b> . . . . .	291 kg (640 lbs) (NA)
	306 kg (674.6 lbs) (T, TA)

### Approximate Dimensions:

<b>Length</b> . . . . .	663 mm (26.1 in) (NA, T, TA)
<b>Width</b> . . . . .	470 mm (18.5 in) (NA)
	597 mm (23.5 in) (T)
	620 mm (24.4 in) (TA)
<b>Height</b> . . . . .	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:

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

**NA**.....Naturally Aspirated

**T**.....Turbocharged

**TA**.....Turbocharged-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.

Appendix B, Attachment 3  
10-634

## C4.4 ACERT



### Specification

#### C4.4 ACERT

<b>Bore x Stroke</b> . . . .	105 x 127 mm (4.1 x 5.0 in)
<b>Displacement</b> . . . .	4.4 liters (269 in <sup>3</sup> )
<b>Ship Weight</b> . . . . .	360 kg (793.7 lbs) (T, TA)

#### Approximate Dimensions:

<b>Length</b> . . . . .	631 mm (24.8 in) (T, TA)
<b>Width</b> . . . . .	626 mm (24.65 in) (T, TA)
<b>Height</b> . . . . .	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
<b>T</b>			<b>TA (ATAAC)</b>		
61.5-74.5	82.5-99	2200	74.5-106	99.5-142	2200

### C4.4 ACERT Power Unit Ratings

#### In-Line 4

		C Rating (Intermittent)	
bkW	bhp	rpm	
<b>TA (ATAAC)</b>			
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  
**T**.....Turbocharged

**TA**.....Turbocharged-Aftercooled

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

Appendix B, Attachment 5  
 11-634



**C6.6 ACERT**

## Specifications

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

## C6.6 ACERT Ratings

In-Line 6

bkW TA (ATAAC)	C Rating (Intermittent)	
	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

bkW TA (ATAAC)	C Rating (Intermittent)	
	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

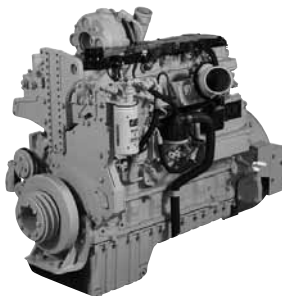
Unless noted, ratings conform with EPA (U.S.) Tier 3, EU Stage IIIA emission standards for ratings up to 130 bkW (175 bhp). Above 130 bkW (175 bhp) ratings available using EPA (U.S.) Flexibility and EU Flexibility, and for other regulated and non-regulated areas.

\*Includes fitted air cleaner

\*\*Specific Application

Appendix B, Attachment 3

## C7 ACERT



## Specifications

### C7 ACERT

<b>Bore x Stroke</b> . . .	110 x 127 mm (4.33 x 5.0 in)
<b>Displacement</b> . . .	7.2 liters (442 in <sup>3</sup> )
<b>Ship Weight</b> . . . . .	588 kg (1296 lbs)

### Approximate Dimensions:

<b>Length</b> . . . . .	1053 mm (41.5 in)
<b>Width</b> . . . . .	758 mm (29.8 in)
<b>Height</b> . . . . .	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:

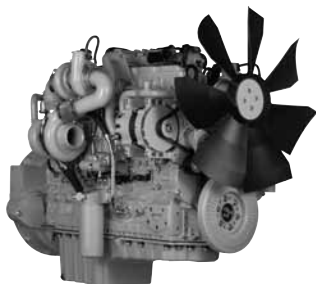
ATAAC.....Air-to-Air Aftercooled  
ECU.....Electronic Control Unit

TA.....Turbocharged-Aftercooled

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

Appendix B, Attachment 3

12-634

**C7.1**

## Specifications

	<b>C7.1</b>
<b>Bore x Stroke</b> . . . .	105 x 135 mm (4.13 x 5.3 in)
<b>Displacement</b> . . . .	7.01 liters (427.7 in <sup>3</sup> )
<b>Ship Weight</b> . . . . .	506 kg (1115 lbs)

### Approximate Dimensions:

<b>Length</b> . . . . .	929 mm (35.5 in)
<b>Width</b> . . . . .	668 mm (26.2 in)
<b>Height</b> . . . . .	797 mm (31.4 in)

## C7.1 Ratings In-Line 6

	<b>C Rating</b> (Intermittent)		
	<b>bkW</b>	<b>bhp</b>	<b>rpm</b>
<b>T</b>			
	105	140	2200
<b>TA</b>			
	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

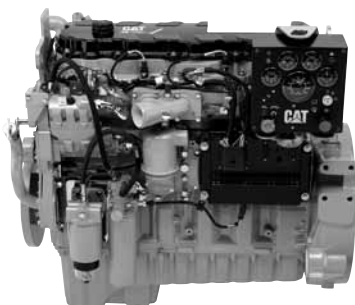
**TA** .....Turbocharged-Aftercooled

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

Appendix B, Attachment 3

14-634

## C9 ACERT



## Specifications

### C9 ACERT

<b>Bore x Stroke</b> . . . .	112 x 149 mm (4.41 x 5.87 in)
<b>Displacement</b> . . . .	8.8 liters (537 in³)
<b>Ship Weight</b> . . . . .	864 kg (1905 lbs)

### Approximate Dimensions:

<b>Length</b> . . . . .	1091 mm (43 in)
<b>Width</b> . . . . .	827 mm (32.6 in)
<b>Height</b> . . . . .	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  
**ECU**.....Electronic Control Unit

**TA**..... Turbocharged-Aftercooled

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

Appendix B, Attachment 3

15-634



**C11 ACERT**

## Specifications

### C11 ACERT

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

**Displacement** . . . 11.1 liters (677 in<sup>3</sup>)

**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	1800-2100	261	350	1800-2100	287	385	1800-2100	313	420	1800-2100	336	450	1800-2100

## 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	1800-2100	261	350	1800-2100	287	385	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  
**ECU** . . . . . Electronic Control Unit

**TA** . . . . . Turbocharged-Aftercooled

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

Appendix B, Attachment 3



## C13 ACERT



## Specifications

### C13 ACERT

**Bore x Stroke** . . . 130 x 157 mm (5.1 x 6.2 in)

**Displacement** . . . 12.5 liters (763 in<sup>3</sup>)

**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

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)														
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

A Rating (Continuous)			B Rating			C Rating (Intermittent)		
bkW	bhp	rpm	bkW	bhp	rpm	bkW	bhp	rpm
TA (ATAAC)								
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

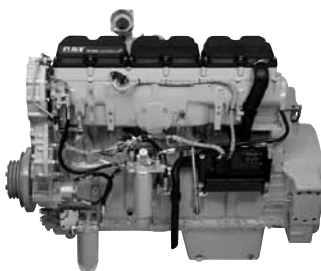
**ECU** . . . . . Electronic Control Unit

**TA** . . . . . Turbocharged-Aftercooled

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

Appendix B, Attachment 3

17-634



**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 in³)

**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

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)														
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

A Rating (Continuous)			B Rating			C Rating (Intermittent)		
bkW	bhp	rpm	bkW	bhp	rpm	bkW	bhp	rpm
TA (ATAAC)								
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

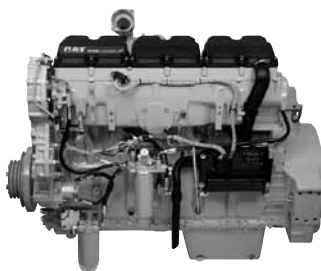
**ECU**.....Electronic Control Unit

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

Appendix B, Attachment 3

10-634

## 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 <sup>3</sup> )
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
- New connecting rods allow for better retention and clamping force

### Benefits

- Narrow rings of monotherm piston and tighter tolerance allows superior control

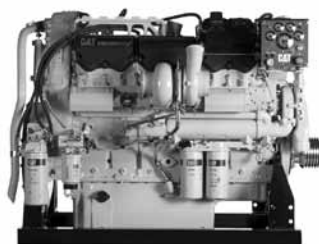
#### Abbreviations used:

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.

Appendix B, Attachment 3



**C32 ACERT**

## Specifications

	C27 ACERT	C32 ACERT
<b>Bore x Stroke</b> . . .	137.2 x 152.4 mm (5.4 x 6.0 in) . . .	145.0 x 162 mm (5.71 x 6.38 in)
<b>Displacement</b> . . .	27 liters (1648 in <sup>3</sup> ) . . . . .	32.1 liters (1959 in <sup>3</sup> )
<b>Ship Weight</b> . . . . .	2946 kg (6495 lbs) . . . . .	2946 kg (6495 lbs)
<b>Approximate Dimensions:</b>		
<b>Length</b> . . . . .	1917 mm (75.5 in) . . . . .	1917 mm (75.5 in)
<b>Width</b> . . . . .	1464 mm (57.6 in) . . . . .	1479 mm (58.2 in)
<b>Height</b> . . . . .	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

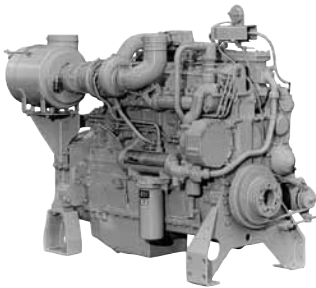
### Abbreviations used:

**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.  
 Appendix B, Attachment 3

3406C



Specifications

	3406C
Bore x Stroke . . . .	137.2 x 165.1 mm (5.4 x 6.5 in)
Displacement . . . .	14.6 liters (893 in³)
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

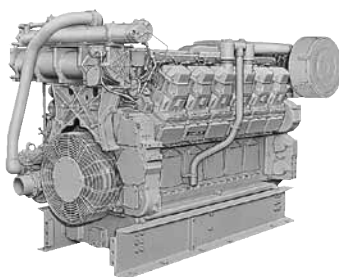
- In-line, six cylinder diesel engine
- Heat-treated crankshaft with high fatigue strength regrounds up to 3 times
- Chrome-plated stems guard against seizure
- Direct injection fuel system
- Durable for heavy-duty applications

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. Appendix B, Attachment 3



3512

## Specifications

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

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

## 3508 Ratings V-8

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

## 3512 Ratings V-12

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

## 3516 Ratings V-16

	<b>A Rating</b> (Continuous)			<b>C Rating</b> (Intermittent)		
	bkW	bhp	rpm	bkW	bhp	rpm
<b>TA</b>						
	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

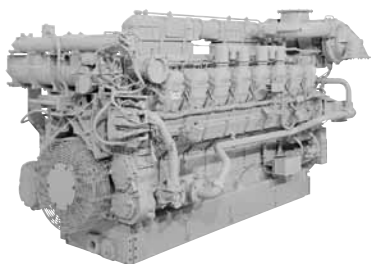
- Service efficiency reduces operating costs
- Superior fuel economy
- Repower savings/higher production with less fuel consumption

### Abbreviations used:

**TA**.....Turbocharged-Aftercooled

Available for global non-regulated areas. Appendix B, Attachment 3

**3516B**



## Specifications

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

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

## Mobile Equipment Ratings

### 3508B Ratings V-8

<b>A Rating</b> (Continuous)			<b>C Rating</b> (Intermittent)		
bkW	bhp	rpm	bkW	bhp	rpm
<b>TA (SCAC)</b>					
746	1000	1800	820	1100	1800

### 3512B Ratings V-12

<b>A Rating</b> (Continuous)			<b>C Rating</b> (Intermittent)		
bkW	bhp	rpm	bkW	bhp	rpm
<b>TA (SCAC)</b>					
1119	1500	1800	1231	1650	1800

### 3512C Ratings\* V-12

<b>A Rating</b> (Continuous)		
bkW	bhp	rpm
<b>TA (ATAAC)</b>		
1120	1500	1800

### 3516B Ratings V-16

<b>A Rating</b> (Continuous)			<b>C Rating</b> (Intermittent)		
bkW	bhp	rpm	bkW	bhp	rpm
<b>TA (SCAC)</b>					
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:

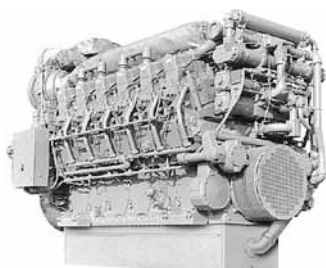
**SCAC** . . . . . Separate Circuit Aftercooled  
**TA** . . . . . Turbocharged-Aftercooled

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

Available for global regulated and non-regulated areas.

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

Appendix B, Attachment 3



**3612**

## Specifications

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

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

## 3606 Ratings In-Line 6

	Distillate A Rating (Continuous)		
	bkW	bhp	rpm
<b>TA</b>			
	1490	1998	750
	1560	2092	800
	1730	2319	900
	1850	2481	1000

## 3608 Ratings In-Line 8

	Distillate A Rating (Continuous)		
	bkW	bhp	rpm
<b>TA</b>			
	1980	2655	750
	2080	2787	800
	2300	3080	900
	2460	3300	1000

## 3612 Ratings V-12

	Distillate A Rating (Continuous)		
	bkW	bhp	rpm
<b>TA</b>			
	2980	3996	750
	3120	4184	800
	3460	4640	900
	3700	4962	1000

## 3616 Ratings V-16

	Distillate A Rating (Continuous)		
	bkW	bhp	rpm
<b>TA</b>			
	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

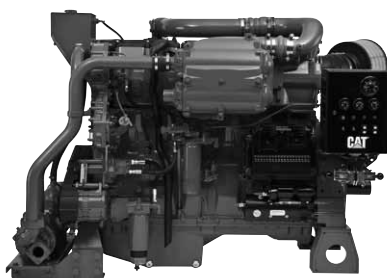
### Abbreviations used:

**TA**.....Turbocharged-Aftercooled

Available for global non-regulated areas. Appendix B, Attachment 3



## C18 ACERT Fire Pump Engine



### Specifications

	C18 ACERT
<b>Bore x Stroke</b> . . . .	145 x 183 mm (5.71 x 7.2 in)
<b>Displacement</b> . . . .	18.1 liters (1104.53 in <sup>3</sup> )
<b>Ship Weight</b> . . . . .	1953 kg (4306 lbs)

#### Approximate Dimensions:

<b>Length</b> . . . . .	1889 mm (74.4 in)
<b>Width</b> . . . . .	1081.7 mm (42.6 in)
<b>Height</b> . . . . .	1379.6 mm (54.3 in)

### C18 ACERT Ratings In-Line 6

1500 rpm bkW bhp	1750 rpm bkW bhp	1900 rpm bkW bhp	2100 rpm bkW bhp
<b>Tier 2</b>			
— —	597 800	597 800	597 800
<b>Tier 3</b>			
— —	522 700	522 700	522 700
— —	447 600	447 600	447 600
<b>Non-EPA Certified</b>			
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:

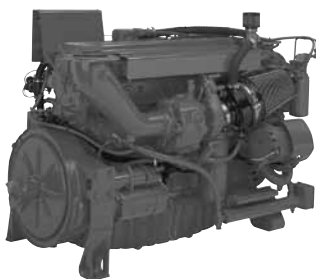
**ECU** .....Electronic Control Unit

All ratings are FM approved and UL listed.

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

Appendix B, Attachment 3

25-634



**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:

T ..... Turbocharged

TA ..... Turbocharged-Aftercooled

\*Watercooled turbocharger and manifolds

Available for global non-regulated areas

Appendix B, Attachment 3

26-634

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.

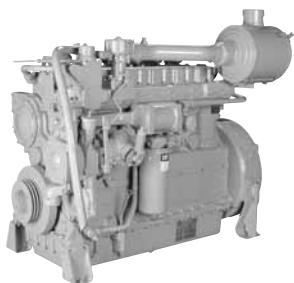
U.S. EPA SI Stationary NSPS Non-air Fuel Ratio Site Compliant Capable

- 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

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

## G3304 Ratings

	1800 rpm	
	<b>bkW</b>	<b>bhp</b>
Engine — Continuous		
<b>G3304 NA</b>	71	95

## G3306 Ratings

	1800 rpm	
	<b>bkW</b>	<b>bhp</b>
Engine — Continuous		
<b>G3306 NA*</b>	108	145
<b>G3306 T**</b>	111	150
<b>G3306 TA<sup>2*</sup></b>	151	203
<b>G3306 TA<sup>1</sup></b>	157	211
<b>G3306 TA<sup>1*</sup></b>	164	220

<sup>1</sup>32°C/90°F Water to Aftercooler

<sup>2</sup>54°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

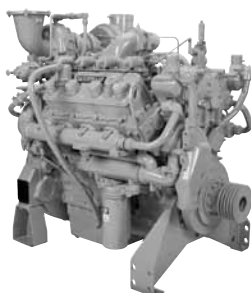
Ratings listed are for 25°C (77°F) ambient temperature, 500 ft. altitude, and pipeline quality gas.

\*Ag rating also available

\*\*Ag rating only

Appendix B, Attachment 3

**G3408**



## Specifications

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

## G3406 Ratings

	<b>1400 rpm</b>		<b>1800 rpm</b>	
	<b>bkW</b>	<b>bhp</b>	<b>bkW</b>	<b>bhp</b>
Engine — Continuous				
<b>G3406 NA</b>	131	175	160	215
<b>G3406 TA<sup>2,4</sup></b>	—	—	206	276
<b>G3406 TA</b>	—	—	242	325

## G3408 Ratings

	<b>1500 rpm</b>		<b>1800 rpm</b>	
	<b>bkW</b>	<b>bhp</b>	<b>bkW</b>	<b>bhp</b>
Engine — Continuous				
<b>G3408 NA</b>	—	—	190	255
<b>G3408 TA<sup>2</sup></b>	—	—	298	400
<b>G3408 TA<sup>2,4</sup></b>	248	332	—	—
<b>G3408 TA<sup>2,3</sup></b>	—	—	317	425

## G3412 Ratings

	<b>1500 rpm</b>		<b>1800 rpm</b>	
	<b>bkW</b>	<b>bhp</b>	<b>bkW</b>	<b>bhp</b>
Engine — Continuous				
<b>G3412 NA</b>	—	—	272	365
<b>G3412 TA<sup>2,4</sup></b>	373	500	—	—
<b>G3412C TA<sup>2,3</sup></b>	—	—	475	637

<sup>1</sup>32°C/90°F Water to Aftercooler

<sup>2</sup>54°C/130°F Water to Aftercooler

<sup>3</sup>Low Emissions

<sup>4</sup>Catalyst Rating

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

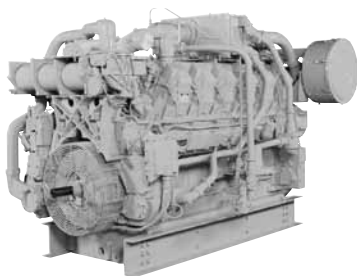
### Abbreviations used:

**NA** . . . . . Naturally Aspirated

**TA** . . . . . Turbocharged Aftercooled

Appendix B, Attachment C

2013 G3400



**G3512**

## Specifications

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

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

## G3508 Ratings

	<b>1200 rpm</b>		<b>1400 rpm</b>	
	<b>bkW</b>	<b>bhp</b>	<b>bkW</b>	<b>bhp</b>
Engine — Continuous				
<b>G3508 TA<sup>3</sup></b>	391	524	—	—
<b>G3508 TA<sup>1,4</sup></b>	—	—	500	670

## G3516 Ratings

	<b>1200 rpm</b>		<b>1400 rpm</b>	
	<b>bkW</b>	<b>bhp</b>	<b>bkW</b>	<b>bhp</b>
Engine — Continuous				
<b>G3516 NA</b>	492	660	—	—
<b>G3516<sup>3</sup></b>	783	1050	—	—
<b>G3516 TA<sup>3,4,5</sup></b>	858	1150	1000	1340

## G3512 Ratings

	<b>1200 rpm</b>		<b>1400 rpm</b>	
	<b>bkW</b>	<b>bhp</b>	<b>bkW</b>	<b>bhp</b>
Engine — Continuous				
<b>G3512 TA<sup>3</sup></b>	589	790	—	—
<b>G3512 TA<sup>3,4,5</sup></b>	642	860	749	1005

## G3520B Ratings

	<b>1200 rpm</b>		<b>1400 rpm</b>	
	<b>bkW</b>	<b>bhp</b>	<b>bkW</b>	<b>bhp</b>
Engine — Continuous				
<b>G3520B TA</b>	1103	1480	1286	1725

<sup>1</sup>32°C/90°F Water to Aftercooler

<sup>2</sup>43°C/110°F Water to Aftercooler

<sup>3</sup>54°C/130°F Water to Aftercooler

<sup>4</sup>Low Emissions

<sup>5</sup>Air Fuel Ratio

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

### Abbreviations used:

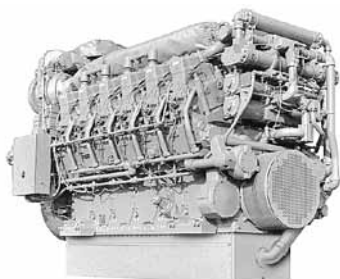
**ECU** . . . . . Electronic Control Unit

**NA** . . . . . Naturally Aspirated

**TA** . . . . . Turbocharged-Aftercooled

Appendix B, Attachment 3

**G3612**



## Specifications

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

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

## G3606 Ratings

	1000 rpm	
	<b>bkW</b>	<b>bhp</b>
Engine — Continuous		
<b>G3606 TA<sup>2,3</sup></b>	1324	1775

## G3608 Ratings

	1000 rpm	
	<b>bkW</b>	<b>bhp</b>
Engine — Continuous		
<b>G3608 TA<sup>2,3</sup></b>	1767	2370

## G3612 Ratings

	1000 rpm	
	<b>bkW</b>	<b>bhp</b>
Engine — Continuous		
<b>G3612 TA<sup>2,3</sup></b>	2647	3550

## G3616 Ratings

	1000 rpm	
	<b>bkW</b>	<b>bhp</b>
Engine — Continuous		
<b>G3616 TA<sup>2,3</sup></b>	3531	4735

## G12CM34 Ratings

	750 rpm	
	<b>bkW</b>	<b>bhp</b>
Engine — Continuous		
<b>G12CM34<sup>3</sup></b>	4575	6135
<b>G12CM34<sup>3</sup></b>	6100	8180

<sup>1</sup>32°C/90°F Water to Aftercooler

<sup>2</sup>54°C/130°F Water to Aftercooler

<sup>3</sup>Low 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

Appendix B, Attachment 3

31-634

## **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](http://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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Appendix B, Attachment 3

