



The Cat® 3406C Industrial Diesel Fire Pump Engine is offered in ratings ranging from 218-359 bkW (292-482 bhp) @ 1750-2300 rpm. These ratings are non-certified and available for global non-regulated areas. They are FM Approved and UL Listed. Additional 3406C ratings with or without radiators are available, but not FM approved or UL listed. Starting on demand is a must for a fire pump engine - always. Cat® fire pump engines have a reputation for reliable starts and long efficient service.

Specifications

Power Rating		
Minimum Power	218 bkW	292 bhp
Maximum Power	359 bkW	482 bhp
Rated Speed	1750-2300 rpm	

Emission Standards	
Emissions	Non-Certified. Available for global non-regulated areas. FM Approved, UL Listed

General	
Engine Configuration	Inline 6, 4-Stroke-Cycle Diesel
Bore	137.2 mm (5.4 in)
Stroke	165.1 mm (6.5 in)
Displacement	14.6 L (893 in ³)
Aspiration	Turbocharged Aftercooled
Compression Ratio	14.5:1
Rotation (from flywheel end)	Counterclockwise
Cooling System Capacity	32.2 L (34 qt)
Lube System (refill)	34.1 L (36 qt)

Benefits And Features

Emissions

Non-certified for U.S. EPA stationary emergency fire engines. Available for global non-regulated areas. FM Approved. UL Listed. Additional 3406C ratings with or without radiators are available, but not FM approved or UL listed.

Reliable, Quiet and Durable Power

World-class manufacturing capability and processes coupled with proven core engine designs assure reliability, quiet operation, and many hours of productive life.

Quality

Every Cat engine is manufactured to stringent quality standards in order to assure customer satisfaction.

World-class Product Support Offered Through Global Cat Dealer Network

- Scheduled maintenance, including SOSSM sample
- Customer Support Agreements (CSA)
- Caterpillar Extended Service Coverage (ESC)
- Superior dealer service network
- Extended dealer service network through the Cat Industrial Service Distributor (ISD) program

Standard Equipment

Air Inlet System

- Dry or watercooled manifold and turbocharger

Charging System

- Charging Alternator, 24 volt, 35 amp

Control System

- Hydra-mechanical governor

Cooling System

- Thermostats and housing
- Jacket water pump, gear driven, centrifugal
- Heat exchanger
- Expansion tank
- FM Required Raw Water Cooling Loops: 1.5" iron, horizontal or vertical, 1.5" 316 stainless steel, horizontal or vertical
- Optional Radiator, not UL listed or FM approved

Exhaust System

- Exhaust manifold, dry
- Exhaust elbow, dry, 152 mm (6 in), 4 bolt flange

Flywheels and Flywheel Housing

- SAE No. 1 flywheel
- SAE No. 1 flywheel housing
- SAE standard rotation

Fuel System

- Fuel filter, LH
- Fuel transfer pump
- Primary fuel filter / water separator

Instrumentation

- Instrument panel, LH
- Engine oil pressure gauge
- Fuel pressure gauge
- Water temperature gauge
- Service meter

Lube System

- Crankcase breather
- Oil cooler
- Lube oil filter
- Oil filler in valve cover and dipstick, both RH
- Rear sump oil pan
- Oil filler in valve cover
- Dipstick

Mounting System

- Supports

Power Take-Offs

- Flywheel stub shaft

Protection System

- Stop-Start System, automatic (compatible with NFPA 20 requirements, able to be energized from either of two battery sources and capable of manual starter actuation)



General

- Vibration damper and guard
- Lifting eyes
- Paint - fire pump red, optional radiator painted black

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**3406C
321 kW (430 bhp) @ 2100 rpm**

Rating Type: FIRE PUMP

Emissions: Non-certified



Image shown may not reflect actual configuration

3406C

321 kW (430 bhp) @ 2100 rpm

	Metric	English
Engine Data		
Engine Power	321 kW	430 bhp
Engine Speed	2100 rpm	
Max Altitude without Derate @ 50° C	1500 m	N/A
BMEP	1252 kPa	182 psi
BSFC @ 100% load	222 g/bkW-hr	.37 lb/bhp-hr
BSFC @ 75% load	N/A	N/A
BSFC @ 50% load	N/A	N/A
BSFC @ 25% load	N/A	N/A
Air Flow Rate (@ 25° C, 101.3 kPa)	32.9 m³/min	1161 ft³/min
Inlet Manifold Pressure @ Rated	186 kPa	54.9 psi
Inlet Manifold Temperature @ Rated	978 ° C	N/A
Jacket Water Temperature	N/A	N/A
Exhaust Stack Temperature	372 ° C	701 ° F
Exhaust Flow Rate (@ Stack Temp 101.3 kPa)	71.0 m³/min	2507 ft³/min
Engine Coolant Capacity	N/A	N/A



3406C
 321 bkW (430 bhp) @ 2100 rpm

Rating Type: FIRE PUMP

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Heat Rejection Data

Percent Load	Engine Power		Rejection to Jacket Water		Rejection to Atmosphere		Rejection to Exhaust		Rejection to After Cooler	
	bkW	bhp	kW	Btu/min	kW	Btu/min	kW	Btu/min	kW	Btu/min
100	321	430	298	16947	44	2491	241	13705	53	3031
93	300	402	278	15810	43	2423	225	12796	46	2633
84	270	362	249	14160	41	2326	204	11601	37	2110
75	240	322	222	12625	39	2201	185	10521	29	1638
65	210	282	196	11146	36	2059	166	9440	21	1206
56	180	241	170	9668	34	1905	148	8417	14	808
47	150	201	144	8189	30	1723	131	7450	8	455
37	120	161	120	6824	27	1524	116	6597	3	176
28	90	121	98	5573	23	1314	103	5858	-1	-40
19	60	80	76	4322	19	1075	91	5175	-4	-199
9	30	40	55	3128	14	819	80	4550	-6	-318

RATING DEFINITIONS AND CONDITIONS

Conditions - Engine performance is corrected to inlet air standard conditions of 99 kPa (29.31 in Hg) and 25°C (77°F). These values correspond to the standard atmospheric pressure and temperature in accordance with SAE J1349. Also included is a correction to standard fuel gravity of 35 degrees API having a lower heating value of 42,780 kJ/kg (18,390 BTU/lb) when used at 29°C (84.2°F) where the density is 839.9 g/L (7.002 lb/gal).

The corrected performance values shown for Cat engines will approximate the values obtained when the observed performance data is corrected to SAE J1349, ISO 3046-2 & 8665 & 2288 & 9249 & 1585, EEC 80/1269 and DIN70020 standard reference conditions.

Engines are equipped with standard accessories; lube oil, fuel pump and jacket water pump. The power required to drive auxiliaries must be deducted from the gross output to arrive at the net power available for the external (flywheel) load. Typical auxiliaries include cooling fans, air compressors, and charging alternators.

Performance Number: TM8149-00

Engine Arrangement: 4595707

Feature Code: 406DF62

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