



Cat® 3412C Industrial Diesel Fire Pump Engines, with ratings: 476-551 kW (638-739 hp) @ 1750-2100 rpm, are non-certified and are available for global non-regulated areas. They are not FM Approved and not 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. The Cat line of fire engine pumps covers a wide range of installations.

Specifications

Power Rating		
Maximum Power	551 kW	739 HP
Minimum Power	476 kW	638 HP
Rated Speed	1750-2100 rpm	

Emission Standards	
Emissions	Non-Certified. Available for global non-regulated areas. Not FM Approved, Not UL Listed

General		
Engine Configuration	V-12, 4-Stroke-Cycle Diesel	
Bore	137 mm	5.4 in
Stroke	152 mm	6 in
Displacement	27 l	1648 in ³
Aspiration	Turbocharged Aftercooled (TA)	
Compression Ratio	14.5:1	
Rotation from Flywheel End	Counterclockwise	

Engine Dimensions - Approximate		
Weight - Net Dry - Basic Operating Engine Without Optional Attachments	2579 kg	5686 lb
Length - Approximate	2000 mm	78.7 in
Height	1413 mm	55.6 in

Benefits and Features

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.

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

- Air cleaner, regular duty with service indicators
- Turbocharged

Cooling System

- Thermostats and housing
- Jacket water pump, centrifugal
- Heat exchanger installed
- Expansion tank

Control System

- Charging alternator 24 volt, 35 amp
- Governor control
- Hydra-mechanical governor

Exhaust System

- Exhaust manifold
- Exhaust elbow, dry. 203 mm (8 in) on all Turbocharged engines and Turbocharged Aftercooled with wet exhaust. 152 mm (6 in) on Turbocharged Aftercooled with dry manifolds.

Flywheels & Flywheel Housings

- SAE No. 0 flywheel
- SAE No. 0 flywheel housing
- SAE standard rotation

Fuel System

- Fuel filter
- Fuel transfer pump
- Primary fuel filter
- Fuel priming pump

Instrumentation

- Instrument panel, LH
- Engine oil pressure gauge
- Fuel pressure gauge

- Water temperature gauge
- Tachometer

Lube System

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

Mounting System

- Supports

Power Take Off

- Power take-off (PTO) 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)

Starting System

- 24 volt, LH electric starting motor
- Jacket water heater (6 kW, 240-480 volt)

General

- Paint: Firepump Red
- Vibration damper and guard
- Lifting eyes

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3412C

551 bkW (739 bhp) @ 1900 rpm

Rating Type: STANDBY

Emissions: Non-certified Emission Standards

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	551	739	512	29117	78	4430	415	23601	49	2758
90	496	665	458	26046	74	4231	373	21212	38	2133
80	441	591	409	23259	71	4015	339	19279	28	1575
75	413	554	385	21887	69	3897	323	18369	23	1318
70	386	517	361	20530	66	3770	307	17459	19	1069
60	331	443	314	17857	61	3486	275	15639	10	591
50	276	369	268	15241	56	3168	245	13933	3	182
40	220	296	223	12698	49	2815	217	12366	-3	-153
30	165	222	180	10236	43	2417	191	10862	-7	-409
25	138	185	159	9040	39	2195	178	10121	-9	-506
20	110	148	138	7848	34	1956	164	9327	-10	-574
10	55	74	96	5468	26	1463	135	7683	-12	-682

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: TM8815-03

Engine Arrangement: 7W8648

Feature Code: 412DF00

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