



CAT® INTEGRATED SOLUTIONS

THE POWER TO HAUL.

570 kW / 765 hp



CATERPILLAR OEM SOLUTIONS

570 kW / 765 hp

CAT® POWER MODULES FOR HAULING APPLICATIONS

For nearly 60 years, Caterpillar OEM Solutions has been providing real-world solutions for the industries we serve — including integrated engine and powertrain systems. We take a collaborative approach, working with third party Original Equipment Manufacturers, to ensure the power we provide is the best match for their hauling solutions.

The Power of Integration

We offer a fully integrated power module for hauling — built with a Cat® engine coupled to a TH43 transmission, connected to a torque converter, hydraulic retarder, transmission shifter, oil tank, and optional oil cooler, paired with software and controls.

Built on Proven Performance

With over 4,000 units in service, Cat TH43 power modules have been working in the 80-100 tonne mining application — averaging 19,000 hours. The highest hour units have accumulated over 60,000 hours.

Integrated for Greater Efficiency

With proven results, we set out to build an additional offering that delivers the same power with increased efficiency — designed with integrated software that automatically selects the right gear, locking and unlocking the torque converter, for the best engine performance and powertrain life.

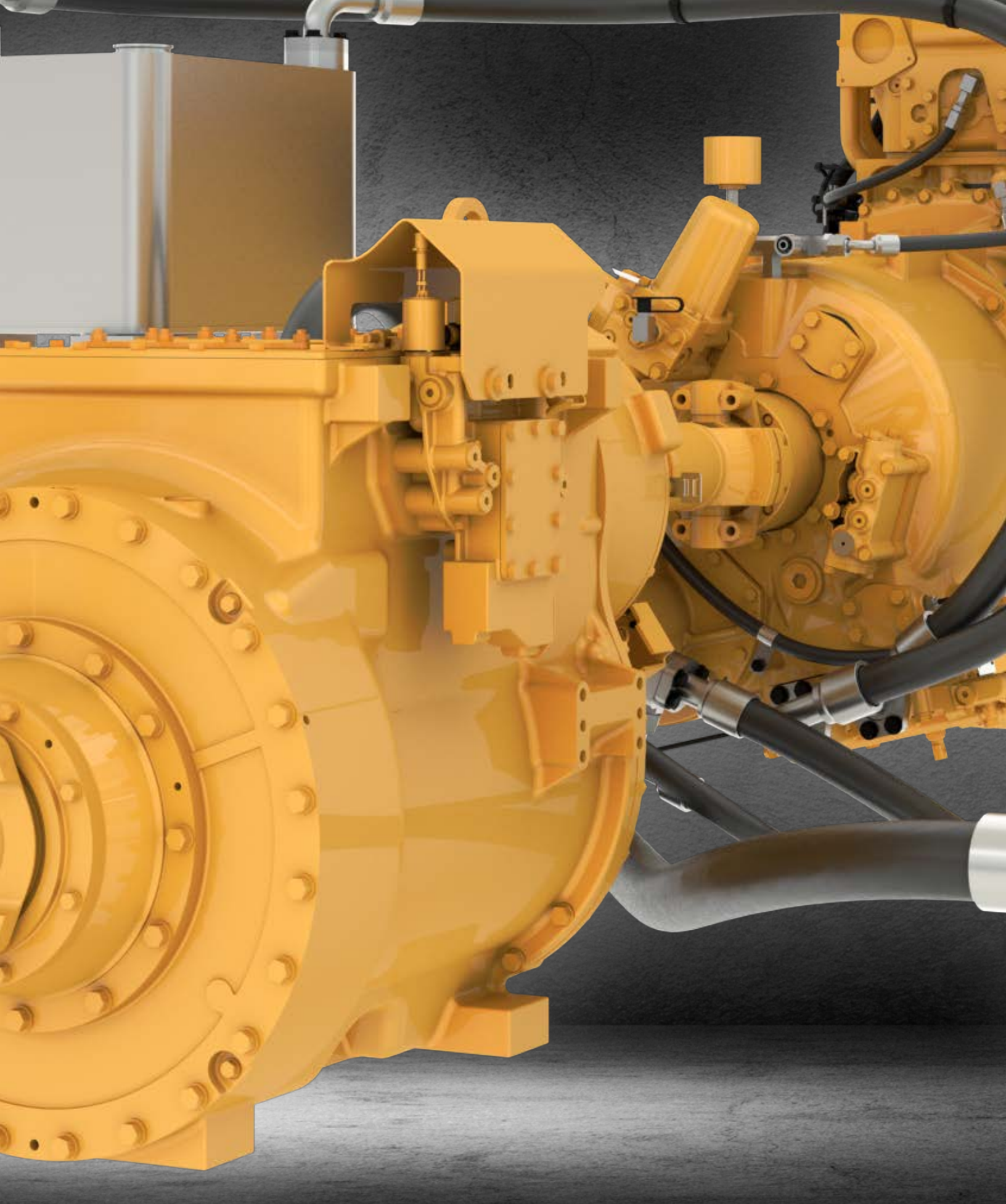
Optimized Performance

The results from an 80-tonne wide body truck performance analysis shows the Cat C18 power module provides:

- » up to 14 kph fully loaded on 8% uphill grades*
- » up to 45 kph fully loaded max speed*
- » up to 28 kph retarding fully loaded on 8% downhill grades*
- » up to 39% maximum gradeability*

***Actual performance depends on application Gross Vehicle Weight (GVW), axle ratios, and tire size.**





CAT POWER MODULE

TH43

OIL TANK

106 liter (28 gallon) remotely mounted oil tank to maintain ground clearance.

TRANSMISSION

High-quality materials, advanced manufacturing techniques, heat-treatment processes, high-performance surface treatments, and special coatings all ensure exceptional life and performance.

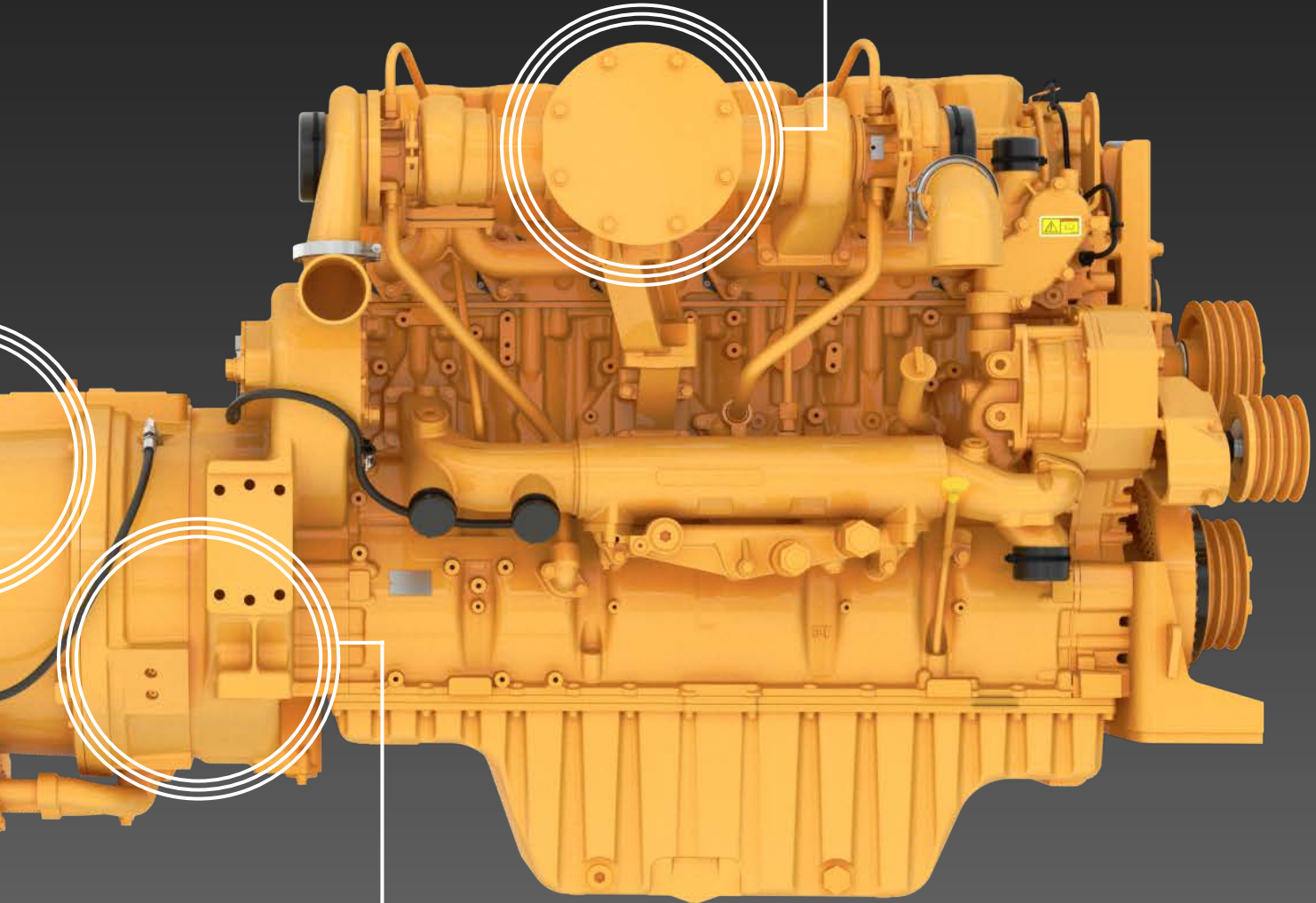
TORQUE CONVERTER

The integrated torque converter provides smooth low speed torque, and the automatic lockup clutch reduces heat loads and increases efficiency at higher speeds.

CAT ENGINE

(570 kW / 765 hp)

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



HYDRAULIC RETARDER

Integrated hydraulic retarder mounted to flywheel housing, with software controls, reduces service brake wear.

Shown with optional Cat drive shaft and oil lines.

DRIVEN BY THE CAT TH43 TRANSMISSION

WITH REMOTELY MOUNTED TORQUE CONVERTER

NUMBER OF GEARS

# Gears (Forward/Reverse)	7F / 1R
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RATINGS

Rated Input Power (ISO 14396:2002)	570 kW	765 hp
Rated Input Torque	3495 N•m	2,578 lb-ft
Rated Input Speed		2,100 rpm
Minimum Input Speed		650 rpm

ROTATION

Rotation Direction	SAE J824 Standard, Counterclockwise
Output Rotation	Rotation is same as engine when viewed from output side of transmission.

MOUNTINGS

Torque Converter Output and Transmission Input	SAE 9C Input Yoke
Transmission output	SAE 10C Output Yoke

ELECTRICAL SYSTEM

Electrical System	24V
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HYDRAULIC RETARDER

Hydraulic Retarder Capacity	Differential Mount
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TORQUE CONVERTER

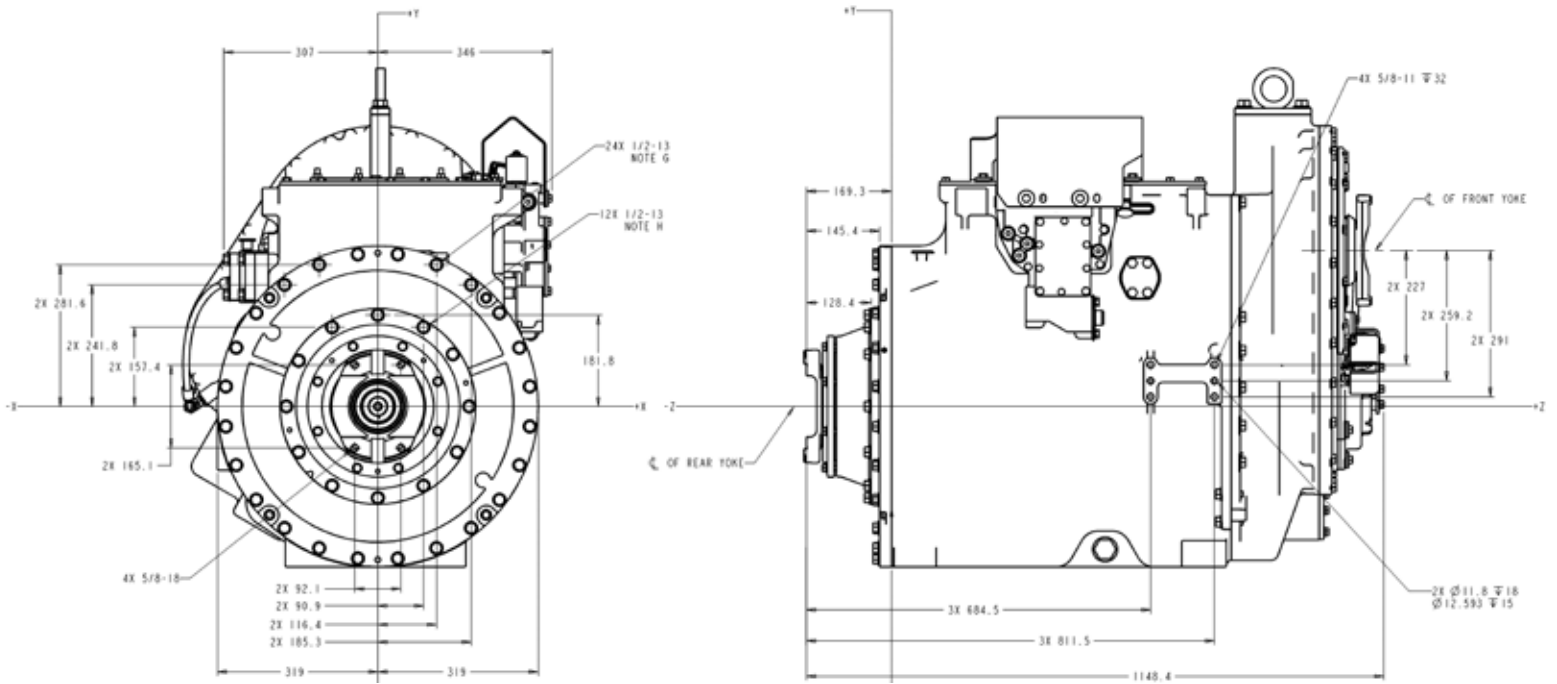
Series	TC45-ELF
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CLUTCHES

Electro-Hydraulic Oil Cooled, Multidisc	
Clutch Modulation Control	Individual Clutch Modulation

INSTALLATION CONNECTIONS

Installation Connections	1 Pump, 2 Cooler Up/Dn Shift, Transmission Output Speed Sensor (TOS), Oil filter pressure, filter pressure switch, transmission upshift and downshift, retarder control solenoid, multiple oil temperatures
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OIL SYSTEM

Oil	Cat Transmission / Drivetrain SAE 30 Transmission Drivetrain Oil-4 (or Equivalent)
Max Oil Temperatures	135°C (275°F) intermittent to oil cooler 100°C (212°F) oil cooler maximum outlet
Hydraulic Fill Capacity	180-210 L (48-55 gal)
Filter Type	10 Micron Paper Cartridge Remote Mounted

GEARS

Transmission Gearing Type	Helical, Straight Spur Planetary	
Forward	1F	4.77
	2F	3.41
	3F	2.52
	4F	1.88
	5F	1.39
	6F	1.03
	7F	0.76
Reverse	1R	3.63

POWERED BY THE CAT C18 ENGINE

The Cat C18 Industrial Diesel Engine meets China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 2, or is non-certified.

POWER RATING

Rated Engine Power (ISO 14396:2002)	570 kW	765 hp
Maximum Torque @ 1,400 rpm	3655 N•m	2,696 lb-ft
Rated Speed		2,000 rpm

EMISSION STANDARDS

China Nonroad Stage III, U.S. EPA Tier 2 equivalent, or non-certified

GENERAL

Engine Configuration	Inline 6, 4-Stroke-Cycle Diesel	
Bore	145 mm	5.7 in
Stroke	183 mm	7.2 in
Displacement	18.1 L	1,104.5 in ³
Aspiration	Twin Turbocharged Aftercooled	
Compression Ratio		16.3:1
Combustion System	Direct Injection	
Rotation (from flywheel end)	Counterclockwise	

ENGINE DIMENSIONS (APPROXIMATE. FINAL DIMENSIONS DEPENDENT ON SELECTED OPTIONS.)

Length	1414 mm	55.7 in
Width	974 mm	38.3 in
Height	1257 mm	49.5 in
Weight – Net Dry (Basic Operating Engine without Optional Attachments)	1673 kg	3,688 lb

ENGINE EMISSION OPTIONS

Additional emission ratings may be available upon request.

Please work with your Caterpillar OEM Solutions Account Manager for options in your region.

STANDARD EQUIPMENT

C18 ENGINE

Air Inlet System

- » Twin Turbocharged Aftercooled
- » Air-to-Air Aftercooled

Alternator

- » Charging alternator 24 volt, 150 amp

Control System

- » Electronic governing, PTO speed control
- » Programmable ratings
- » Automatic altitude compensation
- » Power compensation for fuel temperature
- » Programmable low and high idle and total engine limit
- » Electronic diagnostics and fault logging
- » Engine monitoring system SAE J1939 broadcast and control
- » ADEM™ A4 Electronic Control Unit (ECU)

Cooling System

- » Thermostats and housing, vertical outlet
- » Jacket water pump, centrifugal
- » Water pump, inlet

Exhaust System

- » Exhaust manifold, dry
- » Optional horizontal exhaust outlet

Flywheels and Flywheel Housing

- » SAE No 1 flywheel housing with SAE "C" single PTO drive operates at 1.0 ratio to engine speed at same rotation direction

Fuel System

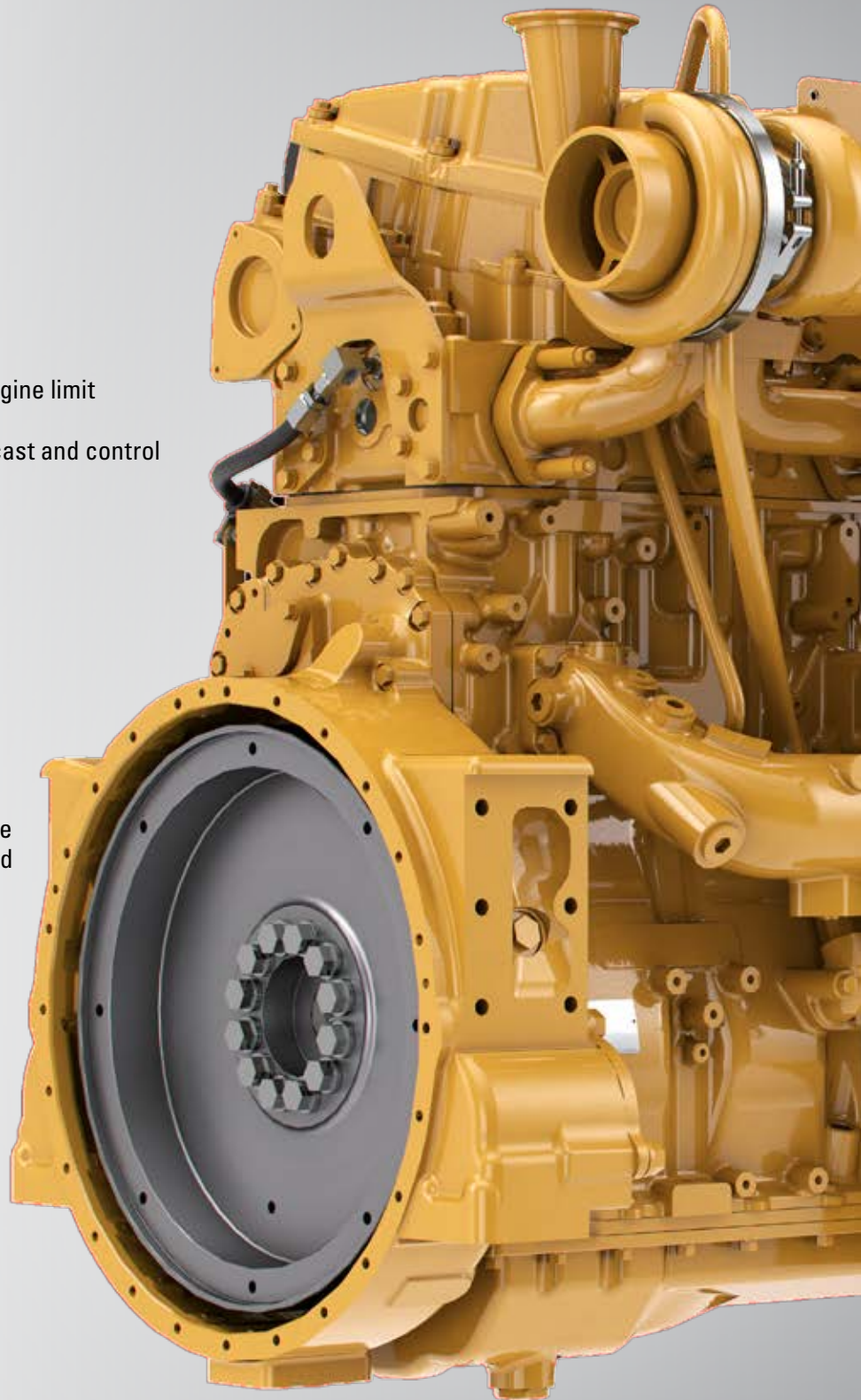
- » MEUI injection
- » Fuel filter, secondary (2 micron)
- » Fuel filter, tertiary (2 micron)
- » Fuel transfer pump
- » Fuel priming pump

Lube System

- » Crankcase breather
- » Oil cooler
- » Oil filler
- » Lube oil filter
- » Center Sump oil pan
- » Oil dipstick
- » Gear driven oil pump

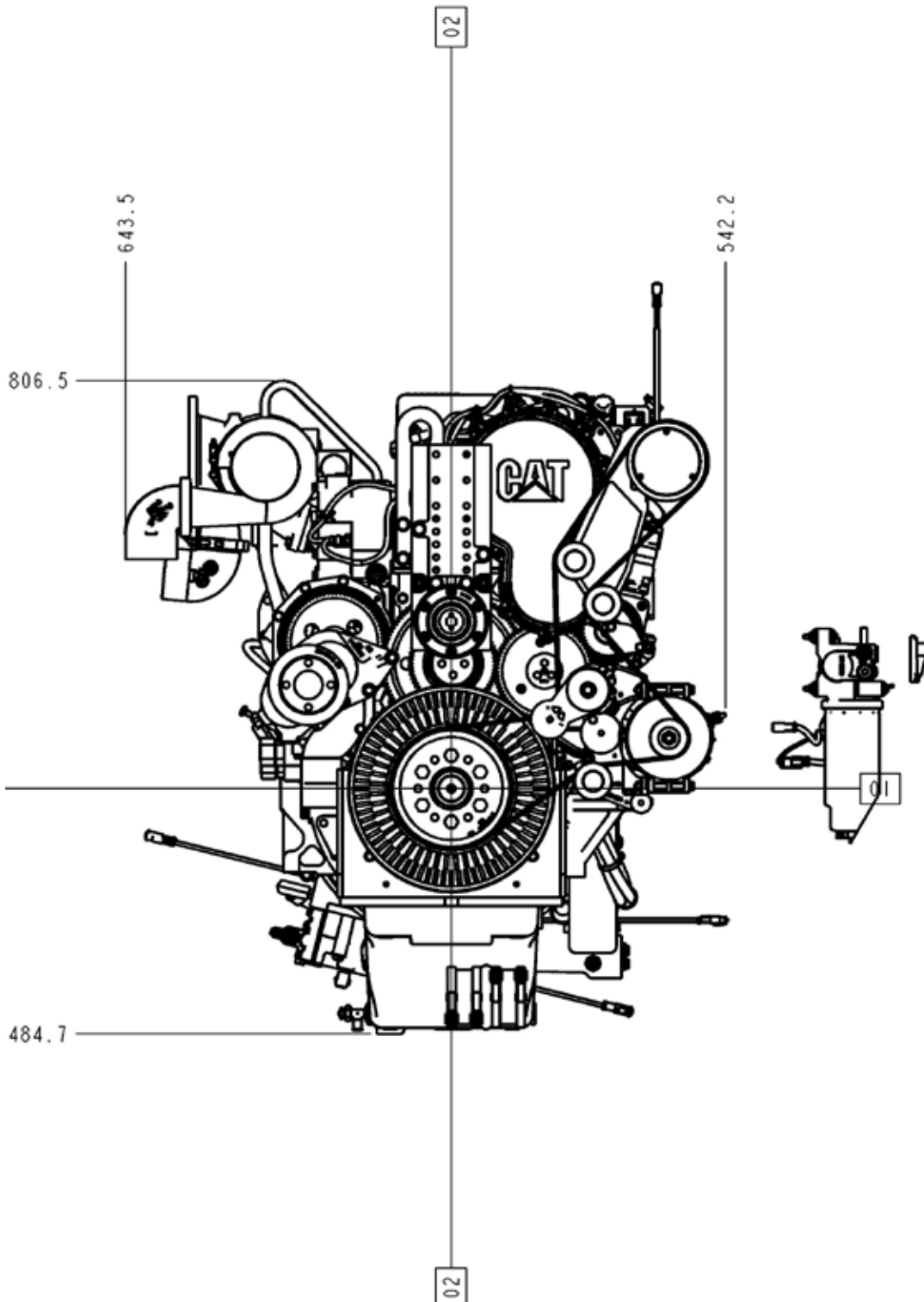
General

- » Vibration damper
- » Lifting eyes
- » Cold start capability to -20° C (-4° F)
- » Paint: Caterpillar yellow, with optional colors available at request

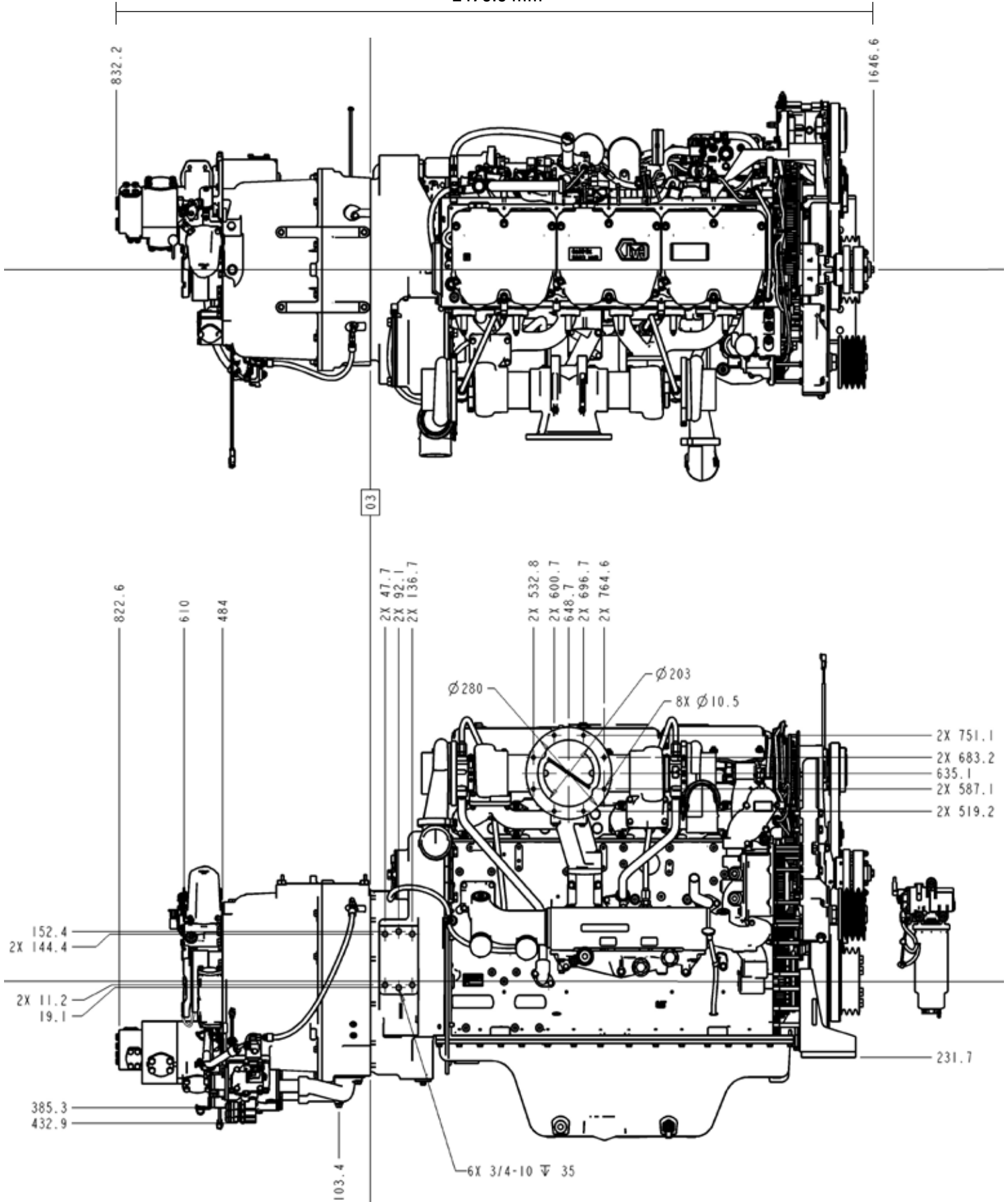


POWER MODULE DIMENSIONS

Cat C18 engine, TH43 transmission, and TC45 torque converter.



2478.8 mm





SERVICE & SUPPORT

WE'RE PREPARED WITH EVERYTHING YOU NEED.

By supporting your engine and operations, the Cat dealer network protects your relationship with your customers.

- » Caterpillar Limited Warranty
- » Common service tooling and parts stock coverage
- » Parts availability
- » Extended Service Contracts
- » Customer Value Agreements
- » Reman options and Cat® Certified Rebuild programs



REBUILD AND REMAN OPTIONS FOR POWER MODULES.

The Cat Certified Rebuild program has certified more than 25,000 rebuilds around the world.

Cat Reman parts are made through a remanufacturing process that reduces greenhouse gas emissions, consumes fewer resources, and sends less waste to the landfill.

- » 45-85% cost of new parts* compared to the manufacture of new
- » 80-90% less new materials used, by weight¹
- » Same-as-new, Caterpillar Limited Warranty²

*Cost savings based on return of core; core conditions apply.

¹ Represents U.S. environmental impacts comparing "gate-to-gate" remanufacturing and manufacturing processes for engines and components. Based on 2018 external study of Cat engines, alternators and turbochargers. Does not include impacts elsewhere in our value chain.

² Warranty can vary by model and application; limitations apply. For complete details about the applicable Caterpillar Limited Warranty, contact an authorized Cat dealer.



CAT POWER MODULES FOR HAULING

PROVEN POWER — FOR THE LONG HAUL.

570 kW / 765 hp

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For more information, contact your OEM Solutions Account Manager or email oem_solutions@cat.com

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