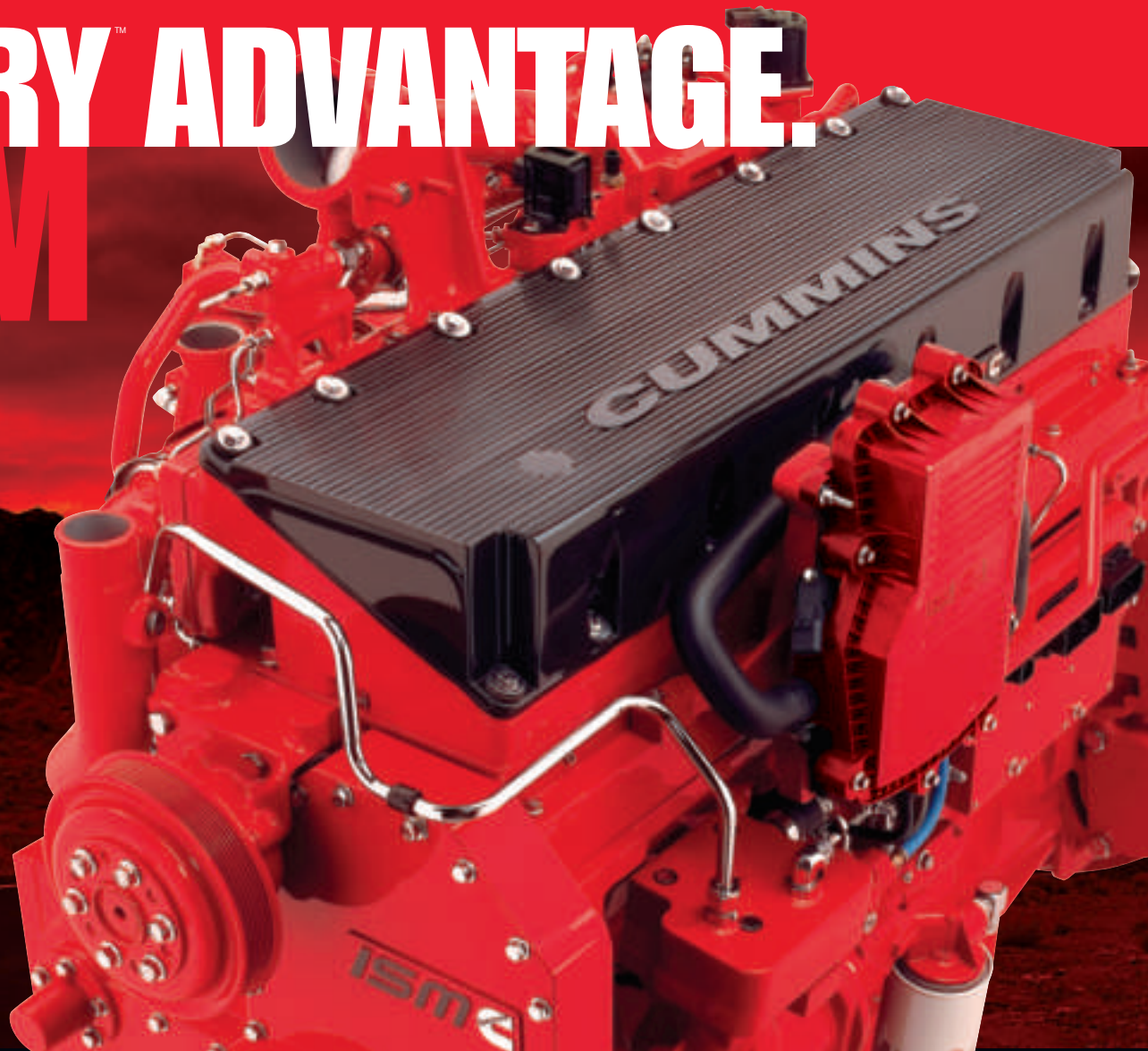




EVERYTM ADVANTAGE.

ISM



FOR LINE-HAUL AND VOCATIONAL APPLICATIONS

FOR LINE-HAUL AND VOCATIONAL APPLICATIONS.



Every Advantage.

For reliability, low operating costs and strong performance, Cummins ISM can't be beat.

It has one of the highest power-to-weight ratios in its class. An advanced fuel injection system and the patented Variable Geometry Turbocharger (VG Turbo) result in superior performance over every terrain, in any weather condition. Cummins ISM EPA '07 is expected to have comparable fuel economy to the previous model, so you get added savings every mile.

Plus, every element has been designed and manufactured by Cummins using Six Sigma processes to ensure a consistently superior level of quality in every ISM engine, every time.



Ratings

ENGINE MODEL	ADVERTISED HP (KW)	PEAK TORQUE LB-FT (N•M) @ RPM
ISM 410	410 (306)	1550 (2102) @ 1200
ISM 370	370 (276)	1450 (1966) @ 1200
ISM 370	370 (276)	1350 (1830) @ 1200
ISM 350	350 (261)	1350 (1830) @ 1200
ISM 350	350 (261)	1250 (1695) @ 1200
ISM 330	330 (246)	1350 (1830) @ 1200
ISM 330	330 (246)	1250 (1695) @ 1200
ISM 310	310 (231)	1150 (1559) @ 1200
ISM 280	280 (209)	1150 (1559) @ 1200

SmartTorque Ratings

ISM 350 ST	350 (261)	1350/1450 (1830/1966) @ 1200
ISM 330 ST	330 (246)	1250/1350 (1695/1830) @ 1200

Vocational Ratings

ISM 425V	425 (317)	1550 (2102) @ 1200
ISM 385V	385 (287)	1450 (1966) @ 1200
ISM 385V	385 (287)	1350 (1830) @ 1200
ISM 350V	350 (261)	1450 (1966) @ 1200
ISM 350V	350 (261)	1350 (1830) @ 1200
ISM 320V	320 (239)	1150 (1559) @ 1200

Additional ratings may be available. Check with your local Cummins distributor or dealer.

Specifications

ADVERTISED HORSEPOWER	280-425 HP	209-317 KW
PEAK TORQUE	1150-1550 LB-FT	1559-2102 N•M
GOVERNED SPEED	2100 RPM	
CLUTCH ENGAGEMENT TORQUE	700 LB-FT	949 N•M
NUMBER OF CYLINDERS	6	
OIL SYSTEM CAPACITY	10.2 U.S. GALLONS	38.6 LITERS
SYSTEM WEIGHT	2,268 LB	1,028 KG
ENGINE (DRY)	2,206 LB	1,000 KG
AFTERTREATMENT*	62 LB	28 KG

*Increase over standard muffler.

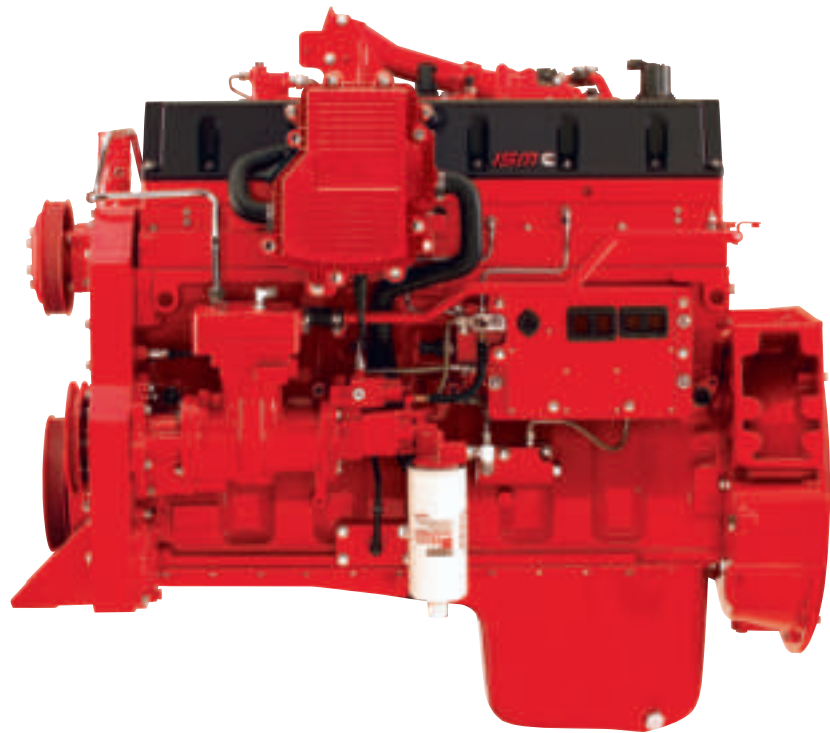
Features And Benefits.

The ISM meets the latest emissions requirements and delivers dependable, powerful performance with proven technology. It also has a lower cost of operation than other engines in its class. Standard features include:

- Fully Integrated Electronic Controls – A single ECM (Electronic Control Module) controls the engine and aftertreatment. Also coordinates interaction with the transmission, ABS, engine brake, cooling fan and more.
- Variable Geometry Turbocharger – Enhanced response and control with electric actuation for infinite adjustment, providing exact boost at any rpm. Sliding-nozzle design increases reliability, durability.
- Cooled Exhaust Gas Recirculation – Lowers combustion temperatures for reduced emissions and optimized mpg.



- Cummins Particulate Filter – Fully integrated for uncompromising performance, reliability. Cummins design allows regeneration even in adverse operating conditions. Reduces particulate matter more than 90%.
- Crankcase Ventilation System – Electronically managed for optimum efficiency. Does not add parasitic load or complexity to the engine. Coalescing filter is easily serviced, only needing replacement every 2 years or 150,000 miles (240,000 km).
- High-Pressure Fuel Injection System – For cleaner, more complete combustion.
- SmartTorque Ratings – Deliver up to 100 lb-ft of extra torque in the top two gears for better fuel economy, fewer shifts and less driver fatigue.



Key Electronic Features.

- Load-Based Speed Control (LBSC) – Improves both fuel economy and driver satisfaction by balancing performance while reducing noise.
- Gear-Down Protection (GDP) – Improves fuel economy by encouraging the driver to operate in the top two gears.
- Idle Control – Electronic features control idle speed, idle time, engine shutdown and PTO utilization.
- Road Speed Governor and Cruise Control – Settings optimize both fuel economy and performance.

Designed For Dependability. Every Day Of Every Year.

- Self-tensioning belt drive system drives both fan and alternator for reduced maintenance and increased belt life.
- Mid-stop cylinder liner minimizes oil consumption and increases durability.
- Articulated piston design featuring forged-steel crown and aluminum skirt allows for higher top ring position, optimizing fuel efficiency.

PowerSpec.

PowerSpec is a downloadable software program that offers valuable information on vehicle gearing at no additional cost.

Log on to www.powerspec.cummins.com to:

- Access Cummins electronic engine feature and parameter descriptions and recommendations.
- Select and program feature and parameter settings.
- View gearing recommendations for specific engines and applications.
- Read and reset trip information and fault codes.

ISM Maintenance Intervals.

DUTY*	LIGHT	NORMAL	SEVERE
OIL AND FILTER**	35,000 MI 56,500 KM	25,000 MI 40,000 KM	15,000 MI 24,000 KM
FUEL FILTER	15,000 MI 24,000 KM	15,000 MI 24,000 KM	15,000 MI 24,000 KM
COOLANT FILTER†	50,000 MI 80,000 KM	50,000 MI 80,000 KM	50,000 MI 80,000 KM
VALVE ADJUSTMENT	120,000 MI 192,000 KM	120,000 MI 192,000 KM	120,000 MI 192,000 KM
COALESCING FILTER	150,000 MI 240,000 KM	150,000 MI 240,000 KM	150,000 MI 240,000 KM
PARTICULATE FILTER CLEANING	200,000-400,000 MI (320,000-640,000 KM)		

*Light = > 7.0 mpg; Normal = 6.0 to 7.0 mpg; Severe = < 6.0 mpg

**Intervals using CJ-4 oil.

†With appropriate filter.

Recommended oil and oil filter change intervals for vocational applications are 15,000 miles (24,000 km), 400 hours or six months.

The Cummins Particulate Filter is designed to last the life of your engine. Regeneration is fully automated, with no driver action needed.



Gearing Recommendations.

A major factor in optimizing performance and fuel economy is vehicle gearing. Follow these simple recommendations to ensure gearing is properly selected:

On-Highway 80,000 lb (36,287 kg) Or Less:

- For maximum fuel economy or for vehicles intending to cruise greater than 65 mph, gear for an engine speed of 1500 rpm at the 65-mph checkpoint (1600 rpm for the ISM 410).
- In operations where fuel economy is not a concern or cruise speeds are typically below 65 mph, gear for an engine speed of 1600 rpm at the 65-mph checkpoint.
- Gearing combinations that produce an engine speed less than 1500 rpm at the vehicle's intended cruise speed should be avoided.

The formula for determining engine speed (rpm) at the 65-mph checkpoint for a selected gearing combination is:

$$\text{rpm} = \frac{(65 \text{ mph}) (\text{top gear ratio}) (\text{axle ratio}) (\text{tire revs/mile})}{60}$$

Vocational Trucks:

The ISM vocational ratings are governed at 2100 rpm to deliver optimal performance with a wide variety of automatic and automated manual transmissions. Follow these simple recommendations to ensure gearing is properly specified:

- Select a gearing combination that will result in an engine speed between 1700-2000 rpm at the vehicle's intended cruise speed (mph).
- The gearing combination selected should deliver the minimum startability (shown below) when launching the vehicle in the lowest gear of the transmission.

Tractor/Trailer Combination: 20%

Straight Truck: 28%

The formula for determining engine speed (rpm) at the 65-mph checkpoint for a selected gearing combination is:

$$\text{rpm} = \frac{(65 \text{ mph}) (\text{top gear ratio}) (\text{axle ratio}) (\text{tire revs/mile})}{60}$$

Log on to www.powerspec.cummins.com for more line-haul and vocational gearing recommendations.

Options That Save Money. Every Mile.

- Cummins C Brake™ by Jacobs® turns your energy-producing engine into an energy-absorbing air compressor, slowing your vehicle down considerably. Service brakes last longer and tire life is extended.
- Refrigerant compressor mounting options are available and come standard with automatic belt tensioners.
- WABCO air compressors come standard on Cummins engines, with models available in both 18.7 and 30.4 cfm (Twin).
- Water-in-fuel sensor alerts driver to contamination that could cause performance and durability problems.
- Rear Engine Power Take-Off (REPTO) is available for vehicles that need an engine to do double-duty.
- ICON™ idle control unit turns engine on/off automatically, decreasing idle times and fuel consumption while maintaining engine oil temperature and battery voltage. An in-cab thermostat is available for ICON, controlling engine operation as needed to maintain driver comfort.



QuickServe® Online.

The right information is priceless. Things change so rapidly today, you can't

afford to take a chance on outdated information. Paper manuals and CD-ROMs can't always keep pace with ever-changing parts and service information. You need the most current information – continuously updated – every minute of every day. The Internet is the answer. QuickServe Online is your complete reference for Cummins parts and service information on the Internet. For more information, contact your local Cummins distributor or log on to quickserve.cummins.com.

Warranty Coverage.

Cummins base engine coverage* is 2 years/250,000 miles (402,336 km) with major components coverage for 5 years/500,000 miles (804,672 km) and injector coverage for 2 years/125,000 miles (201,168 km).

*Covers defects in materials or factory workmanship.

Extended Coverage.

A variety of extended coverage plans are available for ISM engines in every application. Contact your local Cummins dealer or distributor for details.



Every Question. Answered.

- Service Network – Cummins engines are backed by nearly 3,500 authorized Cummins parts and service outlets in North America.
- Customer Assistance Center – Call the Cummins specialists for technical assistance and service locations at 1-800-DIESELS (1-800-343-7357).
- Cummins E-Mail – For online assistance with Cummins-related questions, click on the Contact Us link in the header at everytime.cummins.com.
- Cummins Web Site – For product literature or additional information, log on to everytime.cummins.com.
- Cummins Online Registration – Register all your Cummins engines quickly and easily at everytime.cummins.com to ensure quality parts and service for your engine.



Cummins is a pioneer in product improvement. Thus specifications may change without notice. Illustrations may include optional equipment.



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