

# PERFORMANCE THAT'S GROUND BREAKING



ALWAYS ON





# WHY CHOOSE CUMMINS

## WHO WE ARE

Cummins Inc. is a global power leader designing, manufacturing, distributing and servicing engines and related technologies including fuel systems, controls, air handling, filtration, emission solutions and electrical power generation systems. With over 100 years of diesel experience, the company is now developing a range of complementary power solutions including electric, hybrid, natural gas and fuel-cell technologies to meet or exceed environmental sustainability requirements. We partner with our customers to find the best power solution for their needs.

## GLOBAL AND LOCAL

We are the ideal global partner with the ability to design, develop and manufacture products on 6 continents. With over 80 manufacturing plants including 18 engine factories, we can make products exactly where customers need them. Common product platforms are built around world, giving our customers consistency of installation, with emissions capability and cost tailored to their regional needs.

Our dedicated global network is the largest in the industry and this gives confidence to manufacturers and end users who know that support is available for their products, all around the world.

## ENGINEERED FOR OUR CUSTOMERS

Cummins remains at the forefront of developing and applying new technologies to meet current and future emissions legislation, with an investment of close to \$1 billion per year. Our product strategy is not only focused on reducing the impact on the environment, but also engineering value for customers through benefits in performance and running costs.





# TRANSFORMING YOUR FUTURE

## ENERGY DIVERSITY

Clean diesel, diesel hybrid, plug-in hybrid,  
natural gas, electric, renewable fuels, fuel cells

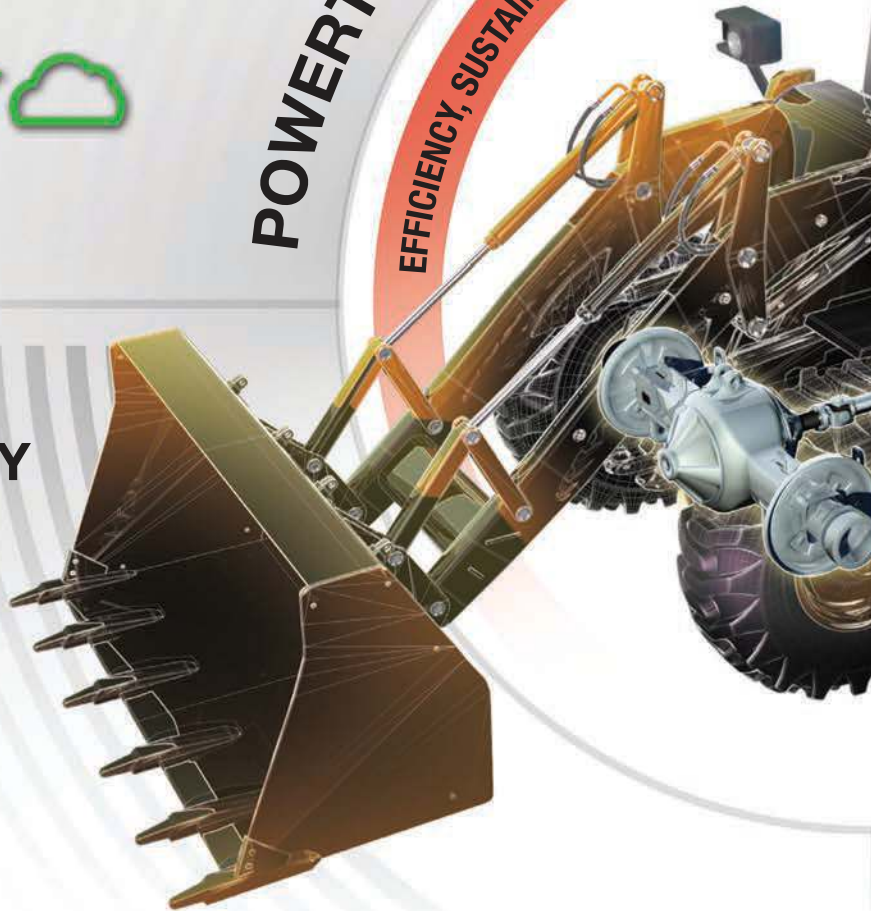


## CONNECTIVITY

Remote monitoring:  
reduced repair costs,  
longer engine life,  
reduced downtime



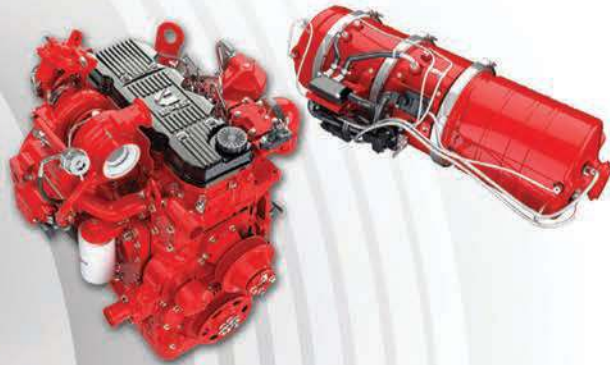
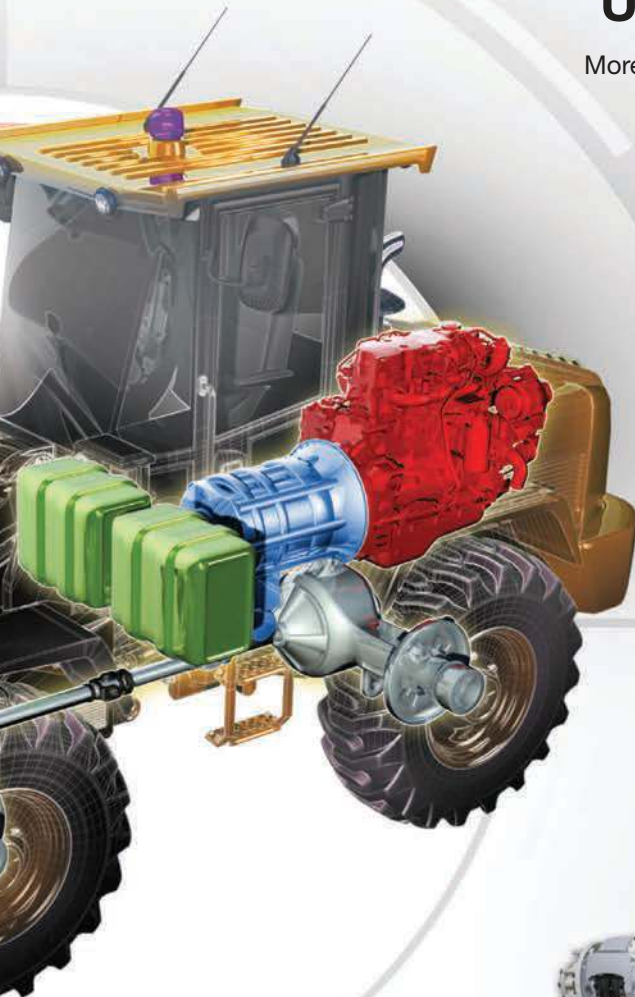
**POWERTRAIN EVOLUTION**  
EFFICIENCY, SUSTAINABILITY, PRODUCTIVITY



As a global power leader, Cummins is demonstrating expertise across multiple product platforms including ultra clean diesel, natural gas, hybrid, full electric and fuel cell technologies as well as through in-house components expertise. All products are designed and manufactured by Cummins and fully integrated for optimal performance and the lowest total cost of ownership.

## ULTRA CLEAN DIESEL

More power, lower running and maintenance costs,  
smaller, simple and reliable



## OPTIMIZATION

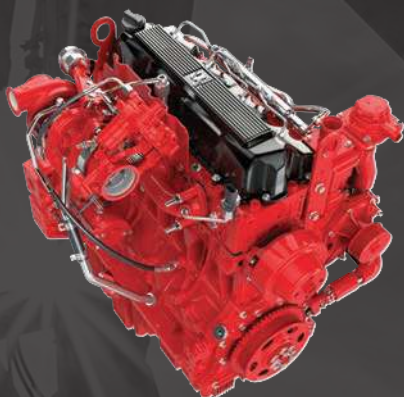
Enhanced transmissions,  
hydraulic systems, cooling,  
accessories and options



Our wide range of products and services are generating your power, moving your equipment as well as managing and maintaining your valuable assets. Cummins power is delivering reliable, efficient operation with optimized uptime for excavators, dump trucks, mobile lighting and more.



# PERFORMANCE SERIES TECHNOLOGY FOR GLOBAL CONSTRUCTION



## **F3.8™\***

**Displacement**  
3.8 Liters

**Power**  
75-129 kW / 100-173 hp

**Max. Torque**  
620 Nm Max. Torque

**Emissions Level**  
Stage V / Tier 4 Final

**Product Technologies**  
Single Module™ DPF/SCR  
EGR-free  
Wastegate turbo



## **B4.5™**

**Displacement**  
4.5 Liters

**Power**  
90-149 kW / 120-200 hp

**Max. Torque**  
780 Nm Max. Torque

**Emissions Level**  
Stage V / Tier 4 Final

**Product Technologies**  
Single Module™ DPF/SCR  
EGR-free  
Wastegate turbo



## **B6.7™**

**Displacement**  
6.7 Liters

**Power**  
116-243 kW / 155-326 hp

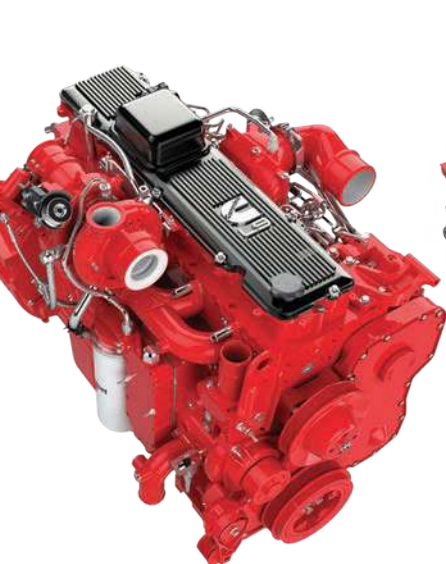
**Max. Torque**  
1375 Nm Max. Torque

**Emissions Level**  
Stage V / Tier 4 Final

**Product Technologies**  
Single Module™ DPF/SCR  
EGR-free  
Variable Geometry turbo

Cummins Performance Series engines do more with less. For operators they deliver higher performance, more machine capability and lower total cost of ownership. For equipment manufacturers, the removal of EGR from the F3.8 to L9 range coupled with Cummins' Single Module™ aftertreatment reduces installation complexity and space claim.

\*Also available at a 55 kW (75 hp) rating, ideally suited for compact equipment requiring high levels of torque.



## L9™

### Displacement

9 Liters

### Power

206-321 kW / 275-430 hp

### Max. Torque

1846 Nm Max. Torque

### Emissions Level

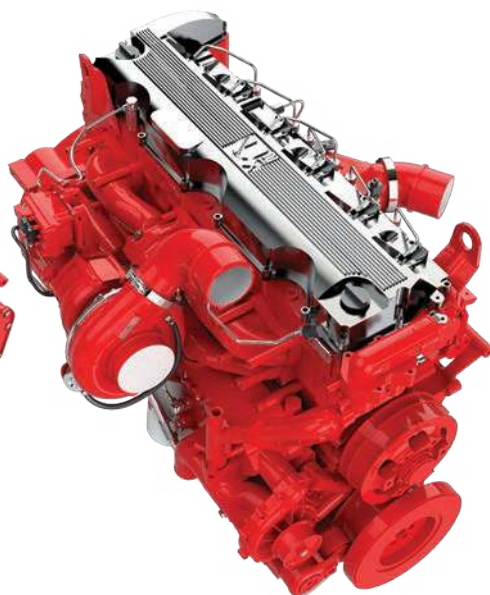
Stage V / Tier 4 Final

### Product Technologies

Single Module™ DPF/SCR

EGR-free

Wastegate turbo



## X12™

### Displacement

12 Liters

### Power

250-382 kW / 335-512 hp

### Max. Torque

2305 Nm Max. Torque

### Emissions Level

Stage V / Tier 4 Final

### Product Technologies

DPF/SCR

EGR-free

Wastegate turbo



## X15™

### Displacement

15 Liters

### Power

336-503 kW / 450-675 hp

### Max. Torque

2779 Nm Max. Torque

### Emissions Level

Stage V / Tier 4 Final

### Product Technologies

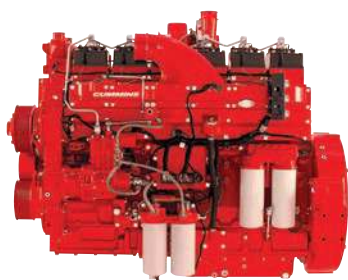
DPF/SCR

Cooled EGR

Variable Geometry turbo

All Performance Series engines are available as Power Units which are more than 60% pre-approved for installation. All Performance Series Power Units include an engine, Single Module™ aftertreatment (F3.8-L9), cooling system, hoses, air cleaner and either mounting feet or base rails.

# CUMMINS CLEAN DIESEL TECHNOLOGY FOR QUARRYING AND MINING



## QSK19

### Displacement

19 Liters

### Power

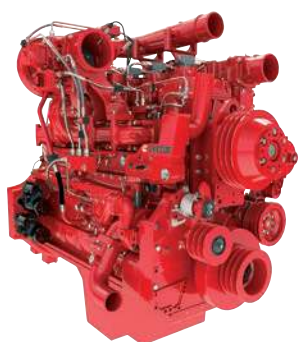
567 kW / 760 hp

### Max. Torque

3007 Nm / 2218 lb-ft

### Emissions Level

Stage V / Tier 4 Final



## QSK23

### Displacement

23 Liters

### Power

567-783 kW / 760-1050 hp

### Max. Torque

3928 Nm / 2897 lb-ft

### Emissions Level

Stage V / Tier 4 Final



## QST30

### Displacement

30 Liters

### Power

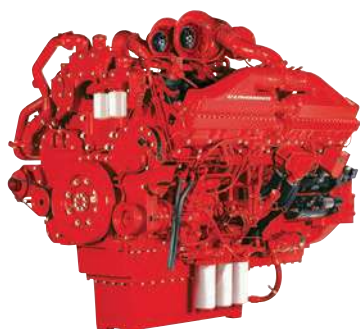
708-895 kW / 950-1200 hp

### Max. Torque

6612 Nm / 4877 lb-ft

### Emissions Level

Stage V / Tier 4 Final



## QSK38

### Displacement

38 Liters

### Power

810-1193 kW / 1086-1600 hp

### Max. Torque

6242 Nm / 4604 lb-ft

### Emissions Level

Stage V / Tier 4 Final



## QSK50

**Displacement**  
50 Liters

**Power**  
1119-1491 kW / 1500-2000 hp

**Max. Torque**  
9600 Nm / 7081 lb-ft

**Emissions Level**  
Stage V / Tier 4 Final



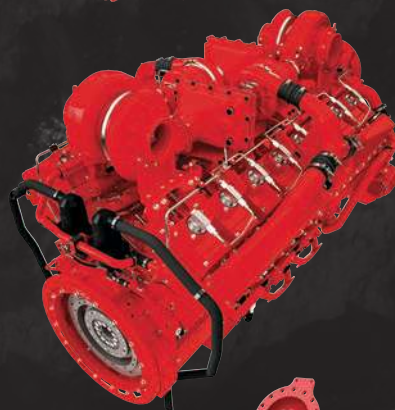
## QSK60

**Displacement**  
60 Liters

**Power**  
1398-2125 kW / 1875-2850 hp

**Max. Torque**  
11218 Nm / 8274 lb-ft

**Emissions Level**  
Stage V / Tier 4 Final



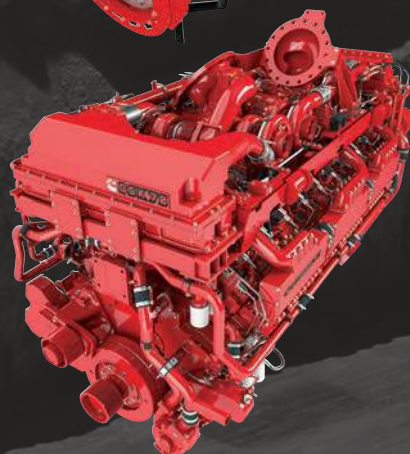
## QSK78

**Displacement**  
78 Liters

**Power**  
2610 kW / 3500 hp

**Max. Torque**  
14077 Nm / 10383 lb-ft

**Emissions Level**  
Stage V\* / Tier 4 Final  
\* certification available on request



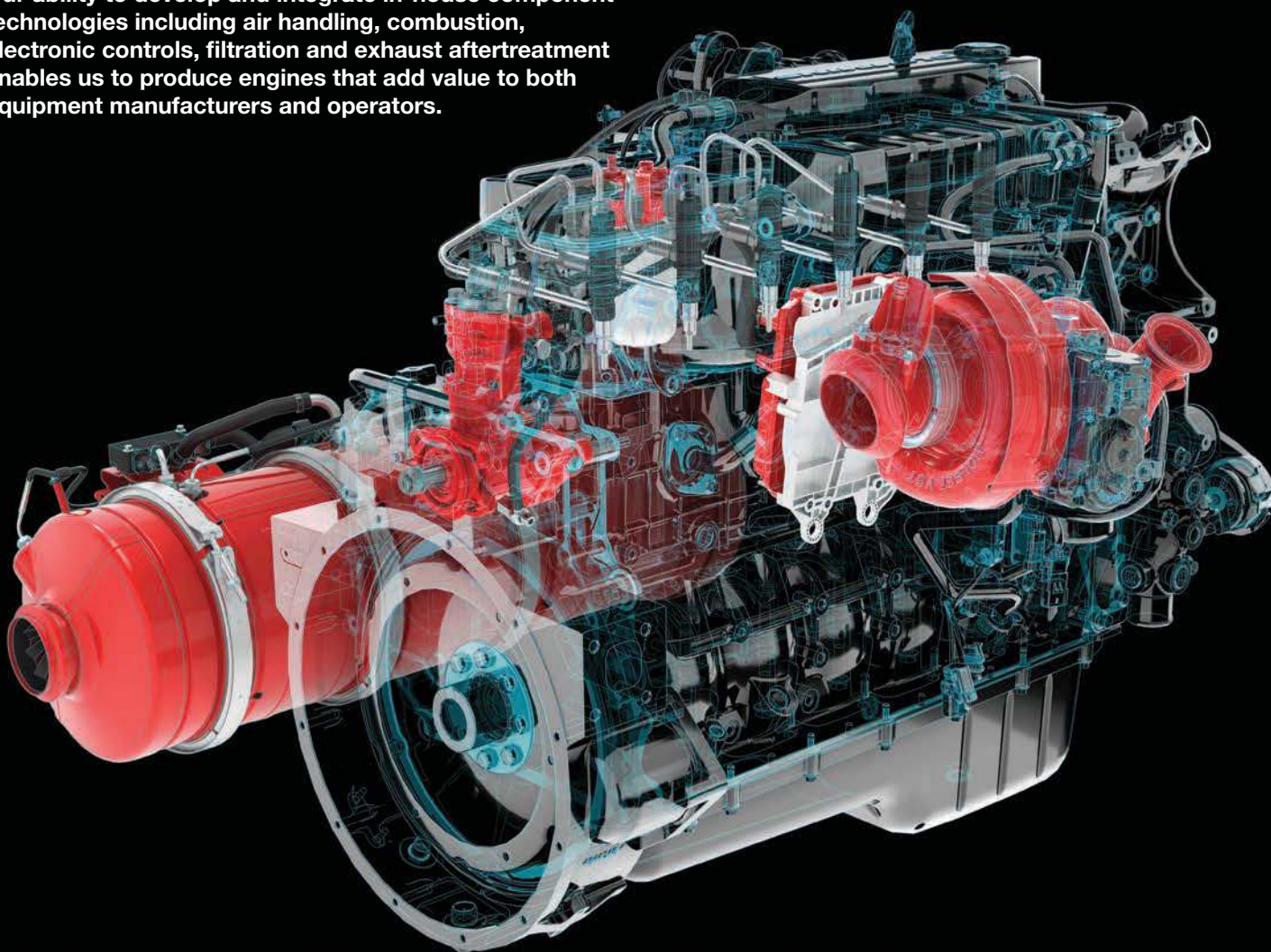
As market leader in the design, manufacture and service of engines for mining and quarrying applications, Cummins has a century of product expertise. In fact, more than 28,000 Cummins engines are active in mining operations around the globe in everything from excavators, drills and haul trucks to generators and underground mining equipment. These installations demonstrate our commitment to providing the highest uptime in the industry and reducing total cost of productivity and ownership for end users worldwide.

**No matter what you're mining, or where your equipment runs, Cummins engines provide exceptional dependability, reliability and productivity – even in the most challenging environments.**



# IN-HOUSE COMPONENTS EXPERTISE

Our ability to develop and integrate in-house component technologies including air handling, combustion, electronic controls, filtration and exhaust aftertreatment enables us to produce engines that add value to both equipment manufacturers and operators.



## Aftertreatment technologies

### Single Module™ aftertreatment

- Combines DOC, DPF and SCR to facilitate the removal of EGR, and is up to 40% smaller and 20% lighter than previous systems.
- Modularity allows for ease of part replacement and reduced downtime.
- Offers easier system integration and flexible installation options.
- Advanced catalyst technologies offer improved NOx conversion efficiency and ash-loading capacity.
- Enhanced thermal efficiency and reduced aftertreatment warm up.

### Flex Module™ aftertreatment

- Innovative packaging design saves installation space to fit the requirements of OEM configuration.
- Modular accessible design of product provides convenience of maintenance for customer.
- Advanced catalyst technologies facilitate DPF's larger ash capacity.
- Advanced control strategy and urea dosing system provide higher NOx conversion efficiency.



## **Turbocharging technologies**

### **Holset® Series HE400VG:**

Cummins continues to evolve the Holset VGT™ to meet future emission challenges, including EPA, CARB 24, and Euro 7 emissions requirements.

Our latest R&D investment has facilitated a 5% efficiency improvement and includes new developments to the rotor system, compressor stage and turbine stage, alongside a range of aerodynamic packages to tailor performance and meet demands on applications up to 15L.

### **Holset® Series HE600WG:**

- Increased overall turbocharger efficiency by over 4 points compared to current product HE600.
- High pressure ratio compressor stage, aerodynamically tailored for off highway application.
- New compressor stage offers +3 points higher efficiency compared to current product HE600.
- New compressor stage offers increased flow range enabling customers using HE800 to switch to more compact and less expensive HE600
  - » helps meet downsizing requirements
  - » offers improved transient response and space claim benefits.
- New turbine housing offering higher durability (optimized thermal stress to improve fatigue life).

## **Fuel systems**

**Common rail with EDV** – stop-start functionality. Capable of nominal operating pressure up to 2600 bar and sized for 4.5-15L engines.

**CRFI-C Series** – fuel injector showcasing electromagnetic and mechanical valve enhancements, as well as next generation controls integration to achieve state of the art performance.

**OLP3c** – a compact design fuel pump with up to 2600 bar pressure rating and Active Inlet Metering (AIM) for superior transient rail pressure response.

## **Electronics and diagnostics**

**CM2850** – complete engine control module for high levels of performance in all conditions.

## **Filtration technologies**

**Industrial Pro** – the Fleetguard FH239 series is an extra rugged fuel housing specifically designed for off-road equipment. It combines EleMax™ filter technology and multi-layered NanoNet® media.

**Fleetguard Hydraulic Filters** – filter elements are available in a variety of media and micron rating efficiencies. Filters can be selected for petroleum- and water-base fluid compatibility.

**FleetguardFIT™** – through intelligent sensing and data analytics, award-winning FleetguardFIT provides real-time status updates of Fleetguard filters in your equipment so maintenance can be based on real-world conditions.

**Air Filtration** – Air filtration offers broad coverage for cabin and engine air intake systems. Using the highest quality components and manufacturer processes to ensure consistent protection in all environments. Cummins proprietary media can be customized for specialized environments and applications.

**NanoNet® Fuel Filtration** – designed to deliver fuel to your engine that meets the fuel injection equipment (FIE) manufacturer's suggested ISO 12/9/6 cleanliness level. The product is proven with millions of miles and hundreds of thousands of hours of testing in the field and can extend service intervals, maintain high efficiency, reduce downtime and maintenance cost.

**NanoNet® Lube Filtration** – improves oil flow ability both at cold and hot operating temperatures resulting in better overall fuel economy, as well as captures contaminants that can damage the engine. The LF14000NN holds between 11-24% more contaminant than the will-fit filters made by others.

**Fleetguard Coolant** – ES Compleat™ OAT (Organic Acid Technology) is a Life-of-the-Engine organic additive fully formulated extended life Ethylene Glycol (EG) antifreeze/coolant. It provides superior diesel engine protection against freezing, boil-over, cavitation, liner pitting, erosion, corrosion, elastomer gasket degradation, and scaling.

# DIGITAL SOLUTIONS FOR MAXIMUM AVAILABILITY





## MONITORING

### Connected Diagnostics™

Make informed decisions on when to really stop equipment and when to continue working by understanding the suggested root cause of fault alerts and knowing how long you have before an issue is likely to escalate. Wirelessly connect engines to Cummins using telematics for continuous monitoring and diagnosis using alert notifications sent via a convenient mobile app, email or web portal.

## REPORTING

### Connected Advisor™

Keep projects on schedule by planning service stops more productively, using streamlined engine reports which include daily and monthly summaries of engine health, required field actions and active campaigns. You'll know exactly what's wrong and how to resolve it using our integrated and detailed expert recommendations that automatically accompany each report.

## CALIBRATING

### Connected Software Updates™

Cummins powered equipment can remain on a jobsite while beneficial performance or fuel efficiency enhancements are applied at a fraction of the cost using integrated telematics systems and wireless, over-the-air connectivity services. This enables operators to scale software deployment efforts with ease and calibrate engine control modules remotely with minimal downtime.

## SERVICING

### Cummins Guidanz®

Guidanz technology integrates and streamlines every aspect of the Cummins service experience, accelerating the diagnostic and repair process. The Guidanz mobile app, when paired with the new Bluetooth®-enabled INLINE™ mini datalink adapter, displays Cummins fault codes and other key engine information anywhere you need it. Its Immediate Assessment feature enables you to determine root cause of a fault, review estimated repair times and identify the most likely repair parts for easier service scheduling. You can provide this information to your nearest certified service provider ensuring you receive the right support and streamlining the repair process.



# GLOBAL PARTS AND SERVICE NETWORK





In today's connected world, look no further than Cummins. Wherever your Cummins powered equipment operates, you have access to the largest number of certified service and support locations of any engine manufacturer.

#### **Cummins distribution network**

- More than 8,000 distributor and authorized dealer locations in over 190 countries
- Local Cummins-certified technicians ready to complete your in-shop or field service needs and deliver high-quality repairs and rebuilds quickly by using the best tools with the most advanced technology
- Engineers trained in powering applications and identifying options to improve product performance
- Complete range of Cummins products and Genuine Cummins new and ReCon® parts
- Three global parts distribution centers equipped to handle the most complex business processes
- 24/7 customer support

**We are the experts with advanced technology to make your life easier while providing a seamless support experience.**

**Contact us:**

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Bulletin 5676449 Produced in U.K. 2/21  
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