



# CUMMINS SALES AND SERVICE

The support you need, when you need it





Powerful support, geared up for you

## **SALES AND SERVICE OVERVIEW**

Cummins Sales and Service provides a wide variety of products and services to support and maintain power generation systems. Our support team includes factory-trained service technicians, dedicated professional territory managers, and a team of field engineers specializing in the specific disciplines related to the application and technical support of power generation systems in order to provide you with the ease of mind that your power is protected. We serve market segments from hospitals and healthcare facilities to data centers and wastewater treatment plants, among others.

### **Cummins Sales and Service features**

- 24/7 mobile service with advanced diagnostic capabilities
- Over 1,600 Cummins factory-trained and certified technicians
- Genuine Cummins, Onan, Fleetguard parts inventory
- 100+ years as a premier power provider
- Over 170 locations across North America

# EXTENDED WARRANTY COVERAGE





Peace of mind for the long haul

## EXTENDED WARRANTY COVERAGE

Cummins has been serving customers' needs for maintenance, repairs, rentals and new purchases of electric power solutions for over 100 years. As part of our continued commitment to providing excellent customer support, we are pleased to offer Cummins Power Generation Extended Warranty coverage. This coverage continues protection beyond the standard base warranty and is backed by our professional team of factory-trained and certified technicians.

### Benefits at a glance

- Lower risk of unexpected failure costs beyond factory standard warranty
- 24/7 mobile service with advanced diagnostic capabilities
- Access to Cummins factory-trained and certified technicians
- Extensive fleet of readily available service vehicles
- No deductibles or hidden charges
- Up to 10 years of extended warranty coverage with fixed-price contract
- Fully transferable extended warranty coverage
- Protection against rising parts, labor and travel costs



For a complete list of coverage and limitations, please see applicable warranty statement.

# GENERATOR SERVICE JOB SAFETY ASSESSMENTS





Safety above all else

## GENERATOR SERVICE JOB SAFETY ASSESSMENTS

All Cummins Sales and Service personnel are mandated to conduct an on-site Job Safety Assessment (JSA) in order to protect our customers' best interests, as well as the safety of all personnel working on-site. A JSA fulfills the following:

- Analyze any potential hazards a particular job may pose.
- Determine how to correct hazards or actively control them throughout the job.
- Select and inspect tools and equipment needed to safely complete the job.
- Identify corrective actions that may be necessary for this job or the system.

At Cummins, we take the utmost care not only to ensure that your generator equipment is up and running, but also that no personnel is hurt or damaged on your property. Our factory-certified technicians will always be wearing the proper personal protective equipment and exercise all safety precautions during every service appointment.

---

**Please contact your local Cummins Sales and Service Planned Equipment Maintenance Sales Representative or contact us toll free at 1-800-CUMMINS (1-800-286-6467) should you have any questions about the JSA procedure.**

# PLANNED EQUIPMENT MAINTENANCE





Powerful reliability

## PLANNED EQUIPMENT MAINTENANCE

Planned Equipment Maintenance (PEM) is vital to the reliable operation of any power generation system. Below are a few key advantages of maintaining your generator through a PEM with Cummins Sales and Service.

### Servicing all makes and models

The Cummins Sales and Service network is equipped with comprehensive generator knowledge, so they are able to service all makes and models of generators. All maintenance follows manufacturer guidelines to meet specified maintenance requirements.

### Reliable, expert service

- Factory-trained, certified technicians versed in all generator maintenance requirements
- Use of only the latest software, diagnostic and troubleshooting tools
- Identification of minor issues before they become major problems, effectively minimizing downtime
- Extensive inventory of Genuine Cummins, Onan and Fleetguard parts
- 24/7 emergency service

### Safety begins with us

- Job Safety Assessments (JSA) conducted prior to each job to evaluate potential hazards and ensure availability of all appropriate tools and resources required
- All technicians trained in regulations and safety guidelines and equipped with personal protective equipment

### Special features

- Fully customizable plans based on individual operational needs and factory service recommendations
- Multi-year PEM availability to cut costs and save time through reduced transaction costs, dedicated coordinator monitoring agreement and pricing locked in for up to five years
- Load bank performance testing



## Generator rentals

- Generator rentals available across North America
- Rental units available to meet load demands
- Ideal as backup for planned outage

## Power equipment sales

- Load banks
- Fuel and fuel tanks
- Transformers
- Distribution equipment
- Cables
- Automatic transfer switches

## Generator set sales

- Fully integrated, reliable and efficient power systems
- All major components manufactured by Cummins
- Diesel-powered generator sets from 12kW - 3.5MW
- Low-emission technologies exceeding clean air standards worldwide
- Paralleling systems deliver flexibility for computer applications
- PowerCommand control systems and remote monitoring equipment
- Transfer switches up to 4,000 amps
- Sound-attenuated and weather protective enclosures for optimum protection
- Design-build capabilities
- Turn-key solutions

# WE SERVICE ALL MAKES AND MODELS



## PM1: Inspection

Weekly, monthly, quarterly, semiannual, annual

### Multi-point inspection covering:

- Batteries and charging system
- Genset controls
- Induction and exhaust system
- Lubrication system
- Transfer switch — Requires an arc flash risk assessment (incident energy analysis) per NFPA 70E
- Cooling system
- Fuel system
- Aftertreatment
- General conditions
- System operational measurements
- Pre-departure verifications

## PM2: Full service

Inspection covers all items in PM1 plus:

- Replace engine oil
- Replace coolant filters
- Replace fuel filters
- Replace oil filter(s)
- Drain water separators
- Drain condensate traps

## Optional services

- |  |                                 |
|--|---------------------------------|
| • Air filter replacement               | • Tiered cooling system service |
| • Belts                                | • Switchgear                    |
| • Spark plug                           | • Remote monitoring             |
| • Building load test                   | • Insulation resistance testing |
| • Value adjustment                     | • Battery replacement           |
| • Diesel fire pumps                    | • Fluid sampling and analysis   |
| • Most other diesel operated equipment | • Diesel fuel polishing         |
| • Load bank testing                    | • Infrared thermography         |
|  | • Extended warranty             |



# LOAD BANK PERFORMANCE TESTING





Premium testing for premium performance

## LOAD BANK PERFORMANCE TESTING

Load banks are devices designed to provide electrical loads for testing power sources such as generators and Uninterruptible Power Supplies (UPS). Testing with a load bank exercises a standby power system under load to verify its reliability to perform in an emergency power situation. The load bank removes the risk to the critical facility load from total loss of power and loss of quality of power.

Another important reason to perform load bank testing is to prevent wet-stacking—a common problem that occurs when diesel engines are operated for extended periods with little or no load. Without sufficient load, a diesel engine will not operate at optimum temperature or peak efficiency. An engine experiencing wet stacking will require more maintenance and its performance will be compromised.

To help reduce the effect of wet-stacking, Cummins Sales and Service recommends the periodic use of supplemental resistive load banks to exercise the engine/generator. Applying an increasing load over a period of time until the excess fuel is burned off at or near rated output reduces the effects of wet stacking. Conducting load bank testing in conjunction with periodic maintenance is recommended by the National Fire Protection Association (NFPA).

Consider adding load bank service to your equipment maintenance protocol. Performance testing results are documented and communicated in writing.

# ANNUAL GENERATOR LOAD BANK TEST TEMPLATE

Date: \_\_\_\_\_  
 Customer: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Site Name: \_\_\_\_\_  
 Generator Model: \_\_\_\_\_  
 Generator Serial: \_\_\_\_\_  
 Unit Number: \_\_\_\_\_  
 Unit Hours: \_\_\_\_\_  
 Other: \_\_\_\_\_

Generator Load Test:  
 Pass ☐ Fail ☐

kW: 100  
 Voltage: 480

Standard: Joint Commission EC 02.05.07 - NFPA 110:2016

Sample Date-Time Format: MM/DD/YYYY 8:00:00 AM  
 Actual Start Date-Time: 11/02/12 10:00:00 AM

	Reading (Start)	Reading (End)	Duration	Required kW (1.0 - pF)	Required Amp's (1.0 - pF)	Generator Voltage			Generator Amperage			Actual kW	% Load	pF	Hz	Oil Press	Oil Temp	Water Temp	Ambient Temp
						A-B	B-C	A-C	Phase A	Phase B	Phase C								
Warm Up	10:00 AM	10:15 AM	15										0.00%						
50% Load Step	10:15 AM	10:30 AM	15	50.00	60.14								0.00%						
	10:30 AM	10:45 AM	15	50.00	60.14								0.00%						
75% Load Step	10:45 AM	11:00 AM	15	75.00	90.21								0.00%						
	11:00 AM	11:15 AM	15	75.00	90.21								0.00%						
	11:15 AM	11:30 AM	15	75.00	90.21								0.00%						
Cooldown	11:30 AM	11:45 AM	15	75.00	90.21								0.00%						
	11:45 AM	12:00 PM	15										0.00%						
Total Run Time			2.00																
			Hours																

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Technician: \_\_\_\_\_

# ANNUAL PLUS 36-MONTH GENERATOR LOAD BANK TEST TEMPLATE

Date: \_\_\_\_\_  
 Customer: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Site Name: \_\_\_\_\_  
 Generator Model: \_\_\_\_\_  
 Generator Serial: \_\_\_\_\_  
 Unit Number: \_\_\_\_\_  
 Unit Hours: \_\_\_\_\_  
 Other: \_\_\_\_\_

Generator Load Test:  
 Pass ☐ Fail ☐

kW: 100  
 Voltage: 480

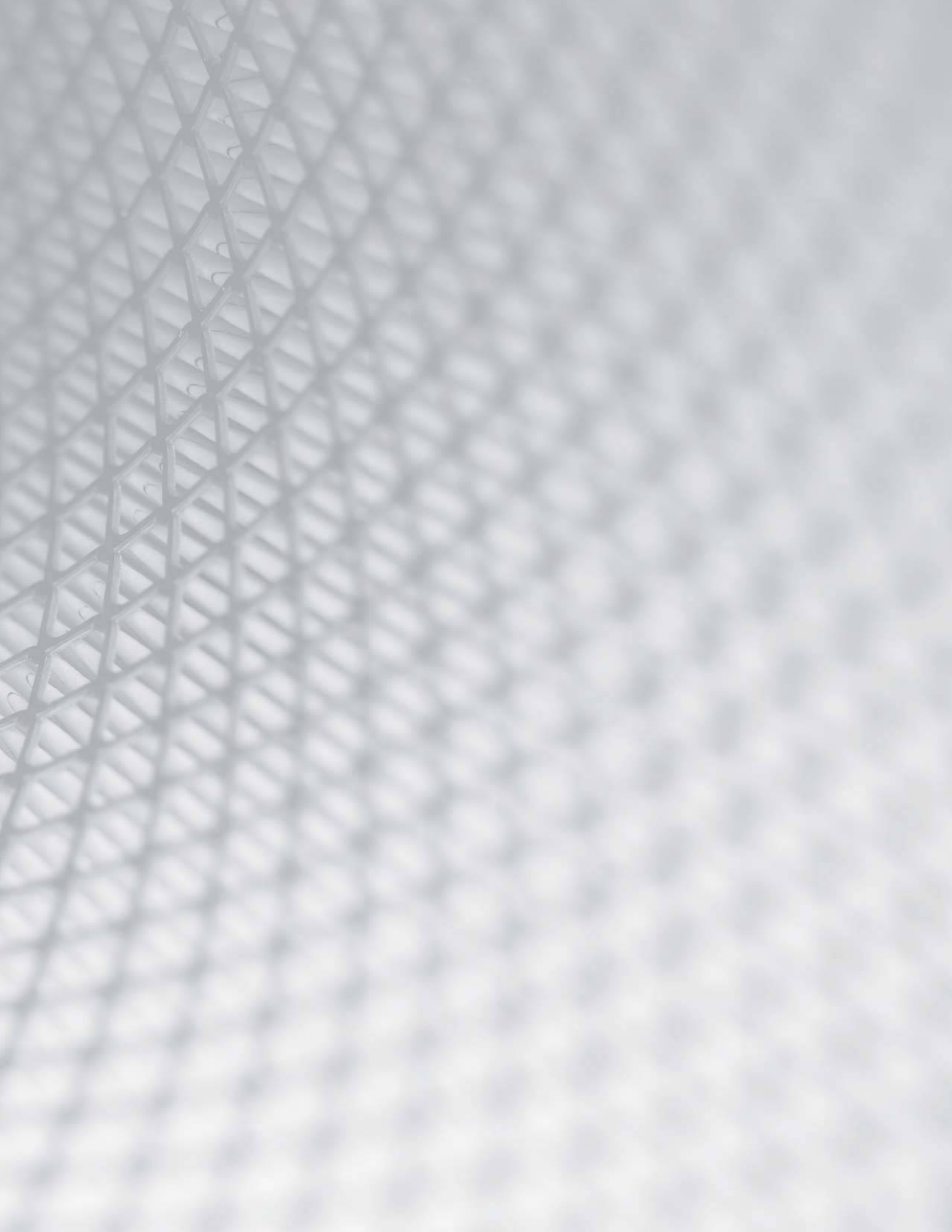
Standard: Joint Commission EC 02.05.07 - NFPA 110:2016

Sample Date-Time Format: MM/DD/YYYY 8:00:00 AM  
 Actual Start Date-Time: 10/31/12 1:00:00 PM

	Reading - Start	Reading - End	Duration	Required kW (1.0 - pF)	Required Amp's (1.0 - pF)	Generator Voltage			Generator Amperage			Actual kW	% Load	pF	Hz	Oil Press	Oil Temp	Water Temp	Ambient Temp
						A-B	B-C	A-C	Phase A	Phase B	Phase C								
Warm Up	1:00 PM	1:15 PM	15										0.00%						
30% Load Step	1:15 PM	1:30 PM	15	30.00	36.09								0.00%						
	1:30 PM	1:45 PM	15	30.00	36.09								0.00%						
	1:45 PM	2:00 PM	15	30.00	36.09								0.00%						
	2:00 PM	2:15 PM	15	30.00	36.09								0.00%						
	2:15 PM	2:30 PM	15	30.00	36.09								0.00%						
	2:30 PM	2:45 PM	15	30.00	36.09								0.00%						
	2:45 PM	3:00 PM	15	30.00	36.09								0.00%						
	3:00 PM	3:15 PM	15	30.00	36.09								0.00%						
	3:15 PM	3:30 PM	15	30.00	36.09								0.00%						
	3:30 PM	3:45 PM	15	30.00	36.09								0.00%						
75% Load Step	3:45 PM	4:00 PM	15	30.00	36.09								0.00%						
	4:00 PM	4:15 PM	15	30.00	36.09								0.00%						
	4:15 PM	4:30 PM	15	75.00	90.21								0.00%						
	4:30 PM	4:45 PM	15	75.00	90.21								0.00%						
Cooldown	4:45 PM	5:00 PM	15	75.00	90.21								0.00%						
	5:00 PM	5:15 PM	15	75.00	90.21								0.00%						
Cooldown	5:15 PM	5:30 PM	15										0.00%						
	5:30 PM	5:45 PM	15										0.00%						
Total Run Time			4.50																
			Hours																

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Technician: \_\_\_\_\_



# TRANSFER SWITCH INSPECTION





Reliability when you need it most

## TRANSFER SWITCH INSPECTION

A well-planned maintenance program is vital to the reliable operation of an emergency power system. Transfer switch maintenance is an essential part of this program. Maintaining reliability and ensuring operation of the switch during a power interruption is imperative for a mission critical facility.

### Minor service includes:

- Cabinet exterior cleaning
- Visual inspection of cabinet seals and signs of moisture entry
- Visual inspection of control boards and mechanism for signs of carbon tracking or deterioration
- Visual inspection for any signs of overheating
- Verification of main clock, date and exerciser settings
- Operation of the transfer switch with and without electrical load\*

### Major service includes:

- Cabinet exterior cleaning
- Cabinet interior cleaning
- Examination of busswork, controls and mechanism for signs of carbon tracking, overheating or deterioration
- Examination of linkage to verify free operation
- Inspection of control wiring and power cables
- Inspection and tightening of any loose connections
- Control board battery replacement
- Verification of open transition interlock bar operation (if applicable)
- Electrical measurements on both normal and emergency power sources
- Verification of main clock, date and exerciser settings
- Verification of transfer time delays
- Operation of the transfer switch with and without electrical load\*



\*Must obtain approval prior to operating unit with load. An arc flash risk assessment (incident energy analysis) is required per NFPA 70E.

\*The "Major service" also requires electrical disconnect and lock-out of the emergency and utility power from the transfer switch.

# COVERAGE OPTIONS





# COVERAGE OPTIONS

Application	Models	Factory Standard Base Warranty	Extended Warranty Offerings	Level of Coverage		
				Parts	Parts + Labor	Parts + Labor + Travel
Commercial Standby	All Commercial Generator Models	2 years/400 hours: Parts, Labor & Travel	3 years/900 hours	X	X	X
			4 years/1200 hours	X	X	X
			5 years/1500 hours	X	X	X
			6 years/1800 hours	X	X	X
			7 years/2100 hours	X	X	X
			8 years/2400 hours	X	X	X
			9 years/2700 hours	X	X	X
			10 years/3000 hours	X	X	X
Commercial Prime	All Commercial Generator Models	1 year/unlimited hours: Parts, Labor & Travel	2 years/4000 hours			X
			3 years/6000 hours			X
			4 years/8000 hours			X
			5 years/10000 hours			X
ATS	GTEC, LT, LC, RSS, RST, OTEC	1 year: Parts, Labor & Travel	2 years/unlimited hours	X		X
			5 years/unlimited hours	X		X
	OT, OTPC, BTPC, OHPC, CHPC	Years 6-10: Main Contacts Only Years 0-2: Parts, Labor & Travel Years 3-5: Parts Only	10 years/unlimited hours	X		X
Recreational Vehicle (RV)	KV, KY, KVD ,KYD, HGJAA, HGJAB, HGJAC, HDKAH, HDKAJ, HDKAK, HDKCA, HDKCB, HDZAA	Years 0-2: Parts & Labor	5 years/3000 hours		X	
Commercial Mobile	HGJAD, HGJAE, HDKAG, HDKAL, HDKAW, HDKAT, HDKAU, HDKAV, HDKBB, HDKBC, HDJCC, HDKCD	2 years/2000 hours: Parts & Labor	3 years/2000 hours		X	
Residential Standby	GGFE, GGHE, GGHF, GGHG, GGHH, GHAB, GGMA, GGMB, GGMC, GNAC, GRCA, GSAA	2 years/2000 hours: Parts, Labor & Travel	5 years/2000 hours	X		X
	GSBA, GSBB	5 years/2000 hours Years 0-2: Parts, Labor & Travel Years 3-5: Parts Only	5 years/2000 hours			X

# GENERATOR FLUID ANALYSIS PROGRAM





See what's happening inside your engine

## GENERATOR FLUID ANALYSIS PROGRAM

Cummins' Fluid Analysis Program is a maintenance tool that provides a picture of both the fluid condition and the internal condition of a component or system without disassembly. Imagine being able to see exactly what's happening inside an engine, a gearbox or hydraulic system.

### High quality fluid testing

You can be confident you're testing with a laboratory that knows your equipment better than anyone. Cummins Sales and Service partners with an independent testing laboratory that is ISO 17025 A2LA accredited—the highest level of quality attainable by a testing laboratory backed by the most stringent accrediting body in the industry. This means that your Fluid Analysis Program is supported by a documented quality system you can depend on to deliver superior testing, analytical oversight and customer service.

### Tracking samples

Samples should be taken at regularly scheduled intervals and from the same sampling point each time. Although the equipment manufacturer's recommendations provide a good starting point for developing planned maintenance practices, sampling intervals can easily vary. A major consideration for determining sampling frequency is how critical a piece of equipment is to your operation. Environmental factors are also important, such as hot, dirty operating conditions, short trips with heavy loads and excessive idle times.

### Fluid test packages

Fluid analysis test packages can be ordered through Cummins Sales and Service or as part of your Planned Equipment Maintenance agreement. Tests in either program provide advanced diagnostics, maintenance, and testing designed to evaluate lubricant condition, component wear, and contamination. Both provide a test report by an independent laboratory for each sample submitted.

#### FUEL TEST PACKAGE

Fuel analysis can identify potential causes for fuel filter plugging, smoking, loss of power, poor injector performance, malfunctioning throttle position sensors and sticking valves. Testing also confirms a diesel fuel's sulfur content, biodiesel content and compliance with manufacturer specifications and standards for cleanliness that could affect equipment warranty requirements.

#### OIL TEST PACKAGE

Oil is the lifeblood of machines and equipment. Routine testing and analysis can show you how the condition of a particular lubricant can affect performance and ultimately your assets' reliability.

#### COOLANT TEST PACKAGE

Taking samples at regular intervals under typical operating conditions can detect and prevent imbalances between the water, glycol and various additives that coolants contain.

## Recommendations

Once the sample has been tested, a data analyst's job is to explain, and, if necessary, recommend actions for rectifying significant changes in the lubricant or the unit's condition. Reviewing comments before looking at the actual test results will provide a road map to the report's most important information. Any actions that need to be taken are listed in order of severity. Justifications for recommending those actions immediately follow. Additionally, all severity code three or four reports are reviewed by a Customer Care Advisor. You will be contacted to determine if repairs are desired.



## FLUID SAMPLING OPTIONS

### Engine oil analysis

- Elemental metals by ICP (24)
- Fuel dilution percentage
- Fuel soot percentage
- Water percentage estimate
- Viscosity at 100C
- Base numbers

### Engine coolant analysis

- Elemental metals analysis by ICP (24)
- Nitrite
- pH waters
- SCA number
- Antifreeze percentage (ethylene of propylene glycol)
- Specific conductance
- Freeze point
- Total hardness
- Boil point
- Visuals (color, oil, fuel, foam, magnetic precipitate, non-magnetic precipitate and odor)

### Diesel fuel analysis (standard)

- Elemental metals by ICP (24)
- Pour point
- Water and sediment
- Bacteria
- Thermal stability

### Diesel Fuel Analysis (ASTM)

- Flash point (closed cup)
- Water and sediment
- Kinematic viscosity
- Ash
- Sulfur
- Copper corrosion
- Cetane index (includes distillation and API gravity)
- Aromaticity
- Pour point
- Cold filter plug point
- Carbon residue
- Distillation
- Lubricity



**Additional fluid testing and packages are available. Please contact your Planned Equipment Maintenance Sales Representative to customize a specific plan to fit your application.**



# DIESEL FUEL POLISHING





The power of prevention

## DIESEL FUEL POLISHING

### What is diesel fuel polishing?

The process of removing contamination from diesel fuel to ensure it remains within published specifications. (ASTM D975-06B – X.2)

#### Fuel polishing removes:

- Water
- Sediment
- Particulates
- Sludge
- Microbial growth



### Why is fuel polishing important?

- All diesel fuel tanks naturally accumulate water, solids and sludge resulting from condensation, oxidation and fuel degradation.
- Shelf life of diesel fuel is six to 12 months, depending upon storage conditions.
- Contaminated diesel fuel can plug fuel filters and cause engine fuel system performance problems or damage.
- To adhere to tighter tolerances in today's high-performance fuel systems.
- To increase equipment uptime (fuel polishing can be completed without taking the unit offline).
- It is a cost-effective alternative to replacing contaminated fuel.

### Contaminants in diesel fuel can cause:

- Premature plugging of fuel filters
- Loss of power, inability to run at full load
- Excessive emissions and exhaust smoke
- Carbon and soot deposits
- Injector failures
- Fuel pump failures
- Unavailable, down equipment
- Costly repairs

Please contact one of our experienced representatives to customize a diesel fuel maintenance program based on your operational needs and the recommendations for the equipment to be maintained.

## **REQUEST SERVICE**

[salesandservice.cummins.com](http://salesandservice.cummins.com)

**1-800-CUMMINS™** (1-800-286-6467)



## REQUEST SERVICE

[salesandservice.cummins.com](https://salesandservice.cummins.com)

1-800-CUMMINS™ (1-800-286-6467)



Cummins Inc.  
Box 3005  
Columbus, IN 47202-3005  
U.S.A.

1-800-CUMMINS™ (1-800-286-6467)  
[cummins.com](https://cummins.com)

Bulletin 5300186 Printed in U.S.A. 8/20  
©2020 Cummins Inc.