



TEST-TECH™ DIESEL FUEL TESTING SERVICES

FUEL TESTING: THE BEST DEFENSE AGAINST COSTLY FUEL-RELATED ENGINE PROBLEMS. TEST YOUR FUEL . . . DON'T GUESS.

Fuel Quality Problems

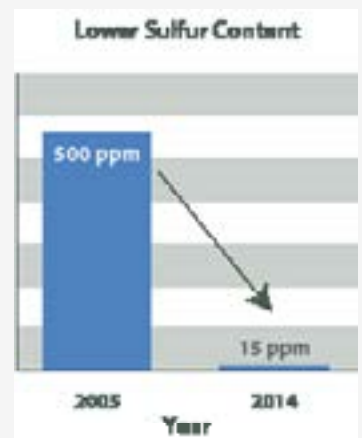
- Degradation, water, sediment, and microbial growth can cause starting failure, reduced mileage and power, and increased engine wear
- Government mandates to lower sulfur and increase biodiesel content are making fuel storage increasingly difficult
- Lube-Tech offers periodic sampling and analysis of your fuel for early detection of harmful contaminants

Power Generators

- Ensure fuel meets ASTM standard (D975) - government mandates to lower sulfur puts generator tanks at increased risk of being out of compliance with fuel standards
- Ensure generators are ready to run at a moment's notice

On/Off-Road Fleets

- Government mandates to increase biodiesel content puts storage tanks at increased risk of microbial, oxidative stability, and equipment filtration problems
- Ensure tanks are ready for the cold season



Lower sulfur decreases microbial protection



Higher biodiesel drastically decreases cold weather performance

FUEL STORAGE PROBLEMS

Degradation, water, sediment, and microbial growth can cause starting failure, reduced mileage and power, and increased engine wear. Test to ensure your fuel is suitable for use. Consider the following key parameters.

Fuel Stability

Stability is a measurement of the level of degradation of fuel. Biodiesel content causes fuels to degrade quicker than previous fuels. As the fuel breaks down it becomes dirty and sludge-like and is more susceptible to microbial growth. Fuel with a low stability can plug filters and cause damage to engines. Fuel with a stability of less than 80% should be replaced.

Water Contamination

Water can enter tanks from a variety of sources. A poorly sealed vent or manhole cover, condensation, or cold weather drop-out can cause water to build up in tanks. Water can create a breeding ground for bacteria. Free water should be removed (pumped out) as soon as it is detected.

Microbial Contamination

The lack of sulfur in Ultra Low Sulfur Diesel makes it more susceptible to form a water fuel interface. Free water gives the bacteria a place to grow and spread. Growing microbes release a gas that can be corrosive to tank walls. Fuel with a microbial presence greater than 1000 RLU should be treated.

Cold Temperature Operation

Cloud point is the temperature at which wax crystals begin to form in your fuel. Cold filter plug point (CFPP) is the temperature at which wax crystals begin to plug fuel filters. Biodiesel is a renewable fuel that is blended into traditional diesel fuel. Biodiesel is manufactured from plant oils, animal fats, and recycled cooking oils. Biodiesel blends are stable within specified operating temperatures but will drop out at cold temperatures. Test fuel in the fall to ensure your tank is only holding a cold weather formulation (properly additized B5).

Want to learn more?

Visit lubetech.com today.

COMPLETE FUEL SOLUTION



Minnesota B10 Mandate:

Effective June 27, 2014, biodiesel content in the state of Minnesota must increase from 5% (B5) to 10% (B10). Thereafter, the B10 mandate will be in effect except for the months of November through March, when the mandate level will temporarily revert to B5 due to concerns about B10's performance in cold weather.

Source: House Research Department of MN House of Representatives, December 2013



- **Quarterly Testing:** recommended for all emergency and critical generators
- **Semi-Annual Testing:** recommended for all above ground and underground tanks, as well as any non-critical generators

TEST PACKAGES POWER GENERATORS ON/OFF-ROAD FLEET

Warm Weather - Spring/Summer	Stability, Water and Microbial	Water and Microbial
Cold Weather - Fall/Winter	Warm Weather Tests + Cloud Point, Cold Filter Plug Point, and Biodiesel	
Diagnostic	Cold Weather Tests + API Gravity, Cetane Index, Color, Distillation, and Flash Point	

Individual Tests Ash, API Gravity, Carbon Residue, Cetane Index, Cold Filter Plug Point, Color, Corrosion, Cloud Point, Distillation, Flash Point, Heat Value, Microbial, Octane, Pour Point, Stability, Sulfur, Viscosity, and Water

APPLICATIONS

- **Emergency & Critical Generators:** Hospitals, data centers, financial institutions, telecom, high rise buildings, school districts, and state agencies
- **Above & Below-Ground Diesel Fuel Tanks:** Transportation, maintenance, construction, and fleet services

OTHER SERVICES

- Used Oil Testing
- Antifreeze/Coolant Testing
- Diesel Exhaust Fluid (DEF) Testing
- Tank Cleaning/Vac Service

FUEL TESTING OPTIONS

	PART NUMBER	DESCRIPTION	METHOD	STABILITY	WATER	MICROBIAL	BIODIESEL	CLOUD POINT	CFPP	CETANE	DISTILLATION	GRAVITY	FLASH POINT	COLOR	POUR POINT	SULFUR	CORROSION	VISCOSITY	ASH	BTU	RESIDUE		
PACKAGES - BEST VALUE -	480-80500-01	Generator Spring / Summer	-	X	X	X																	
	480-80501-01	Generator Fall / Winter	-	X	X	X	X	X	X														
	480-80502-01	Generator Diagnostic	-	X	X	X	X	X	X	X	X	X	X	X									
	480-80503-01	Fleet Spring / Summer	-		X	X																	
	480-80504-01	Fleet Fall / Winter	-		X	X	X	X	X														
	480-80505-01	Fleet Diagnostic	-		X	X	X	X	X	X	X	X	X	X									
INDIVIDUAL TESTS	480-80506-01	Stability	D6468	X																			
	480-80507-01	Water	D6304		X																		
	480-80508-01	Microbial	D7463			X																	
	480-80509-01	Biodiesel	D7371				X																
	480-80510-01	Cloud Point	D2500					X															
	480-80511-01	Cold Filter Plug Point (CFPP)	D6371						X														
	480-80512-01	Cetane Index	D4737							X													
	480-80513-01	Distillation	D86								X												
	480-80514-01	API Gravity	D287									X											
	480-80515-01	Flash Point	D93											X									
	480-80516-01	Color	D1500												X								
	480-80517-01	Pour Point	D97													X							
	480-80518-01	Sulfur	D5453														X						
	480-80519-01	Corrosion	D130															X					
	480-80520-01	Viscosity	D445																X				
	480-80521-01	Ash	D482																	X			
	480-80522-01	Heat Value (BTU)	D240																			X	
	480-80523-01	Carbon Residue	D524																				X
		480-80550-01	Sampling Kit	-																			
		480-80551-01	Sampling Service	-																			