

November Edition of Natural Gas Engine Tech Talk

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Tip of the Month:

Draining On-board Fuel Filters Daily, How to Avoid Fuel Compressor Oil Contamination

Often overlooked, draining the low-pressure fuel filter each day will help you avoid low power complaints and expensive fuel system cleaning and repair costs. When refueling your on-board natural gas fuel system, you should expect a minimal amount of compressor oil to enter your fuel system.

The B6.7N, ISL G, L9N, and ISX12G engines fuel system all use a heated wire flow sensor to monitor fuel flow; when this sensor gets contaminated, it misreads fuel flow, resulting in poor engine performance. **(Note: The ISX12N does not have this type of flow sensor, therefore is not part of this reminder)**

As a best practice, I recommend capturing and inspecting any contaminates exiting the filters during the filter drain with a shop towel, paper towel, or even a plastic container with a lid, such as a water bottle. If excessive compressor oil is found present, report the issue to your maintenance department and refueling site operator.

If you are having a technical issue with your natural gas engines or you have a question about your natural gas engines, send me an email at jason.p.bauer@cummins.com or give me a call at (812) 447-0516.

New This Month:

Cummins Natural Gas Engine Operating RPM Sweet Spot, by Engine Platform

Engine Platform	<u>Gearing Recommendations</u>				<u>Operating Recommendations</u>		<u>Sweet Spot</u>
	On Highway		On/Off Road City/Urban		Minimum Full Load Downshift	Minimum Part Load* Downshift	
	Min	Max	Min	Max			
B6.7 N, ISB6.7 G	1700	2400	2000	2400	1600	1300	1700 - 1900
L9N, ISL G	1500	2000	1800	2000	1400	1200	1500 - 1700
ISX12N, ISX12 G	1400	1700	1500	1800	1300	1100	1400 - 1450

**Note: Part load is defined as 50% throttle.*

Technical Resources:

Jason Bauer's Maintenance Tip Videos – Click Links Below

[Maintenance Intervals](#)

[Natural Gas Engine Oil](#)

[Ignition Coil Maintenance](#)

[Fuel Filter Maintenance](#)

[Spark Plug Maintenance](#)

[Tips for Success](#)

Minimum methane number requirement for Cummins Natural Gas Engines:

C Gas Plus, B Gas Plus, and L Gas Plus	65
ISL G, ISX12 G, ISB6.7 G, and all 2018 engines	75

GHG Emissions Calculator:

<https://www.cumminswestport.com/greenhouse-gas-calculator>

Fuel Quality Calculator:

<https://www.cumminswestport.com/fuel-quality-calculator>

Recommended Maximum GVW for Best Performance & Efficiency:

B6.7N	33,000lbs
L9N	66,000lbs
ISX12N	80,000lbs

ISB6.7 G & B6.7N Maintenance Intervals	
	Hours
Oil & Filter* - CES 20092	750
Conventional Coolant Replacement	1,500
Hybrid Coolant Replacement	4,000
OAT Coolant Replacement	6,000
Spark Plugs	750
Fuel Filter	1,000
Valve Adjustment	1,500
Crankcase Breather	2,000
Ignition Coil Extension	5,000

ISL G & L9N Maintenance Intervals	
	Hours
Oil & Filter* - CES 20092	1,000
Standard Coolant Filter	500
Extended Service Interval Filter	4,000
Conventional Coolant Replacement	1,500
Hybrid Coolant Replacement	4,000
OAT Coolant Replacement	6,000
Fuel Filter	1,000
Valve Adjustment	1,000 / 2,000
Spark Plugs	1,500
Crankcase Breather Filter - L9N	2,000
Standard Coolant	2,000
Ignition Coil Extension	10,000

ISX12 G & ISX12 N Maintenance Intervals	
	Hours
Oil & Filter* - CES 20092	1,000
Spark Plugs	1,000
Standard Coolant Filter	500
Extended Service Interval Filter	4,000
Conventional Coolant Replacement	1,500
Hybrid Coolant Replacement	4,000
OAT Coolant Replacement	6,000
Valve Adjustment	1,000 / 3,000
Ignition Coil Extension	10,000
Crankcase Breather Filter - ISX12N	10,000

ISB6.7 G & B6.7N Maintenance Part Numbers		
Component	Cummins Part #	Fleetguard Part #
Oil Filter	4367100	LF14000NN
Fuel Filter	3607140	NG5900
Crankcase Filter	5288839	
Spark Plug Kit**	4376564	
Ignition Coil Extension	5402163	

**Kit includes spark plug and pregreased boot

ISL G & L9N Maintenance Part Numbers		
Component	Cummins Part #	Fleetguard Part #
Oil Filter	4367100	LF14000NN
Fuel Filter	3607140	NG5900
Crankcase Filter*	5288839	
Spark Plug Kit**	5473009	
Ignition Coil Extension	5265337	

* If Equipped

**Kit includes spark plug and pregreased boot

ISX12 G & ISX12 N Maintenance Part Numbers		
Component	Cummins Part #	Fleetguard Part #
Oil Filter	4367100	LF14000NN
Fuel Filter*	3607140	NG5900
Crankcase Filter*	4389517	CV53009
Spark Plug Kit**	4309391	
Ignition Coil Extension	4387015	

*If Equipped

**Kit includes spark plug and pregreased boot

CES 20092 Oil Provider Recommendations

For the latest list of recommended oil providers click [here](#).