

Quick Reference Guide

**WAIT TO START LAMP**

-Illuminates solid **YELLOW** with key on when inlet air heater is required for cold starting. When the Wait to Start lamp begins flashing, start the engine.

**DIESEL PARTICULATE FILTER (DPF)**

-Illuminates **YELLOW** with heavy soot loading of the DPF and a regeneration is needed. See reverse side for additional details.

**HIGH EXHAUST SYSTEM TEMPERATURE (HEST)**

-Illuminates **YELLOW** when exhaust temperature is high from a DPF regeneration and vehicle is at low speed. This is normal and does not indicate a need for service. When illuminated, keep exhaust away from people and flammable areas.

**DIESEL EXHAUST FLUID (DEF) LAMP**

- Illuminates **YELLOW** when the DEF fluid level is low. See reverse side for additional details.

**MAINTENANCE LAMP**

-Illuminates **YELLOW** in conjunction with other warning lights or general text and warning messages when routine maintenance is due. It may be accompanied by an audible alarm to indicate an alert condition to the operator.

**RED STOP LAMP (RSL)**

-Illuminates **RED** and an alarm will sound when a serious problem has occurred. The lamp is used in conjunction with other warning lights or general text and warning messages to indicate a STOP alert. **To prevent engine damage, shut down engine as soon as it is safe to do so.**

**MALFUNCTION INDICATOR LAMP (MIL)**

- Illuminates **YELLOW** when the Heavy-Duty On-Board Diagnostics (HD-OBD) system detects a malfunction related to the emissions control system. The illuminated MIL indicates the vehicle needs to be serviced at the first convenient opportunity. Lamp may remain active after repair until system operation confirms repair.

**AMBER WARNING LAMP (AWL)**

-Illuminates **YELLOW** under certain high load and / or high ambient temperature conditions. It is safe to drive the vehicle. However, if the lamp continues to illuminate, contact an authorized service provider to have the problem corrected at the first opportunity.

**ANTILOCK BRAKE MALFUNCTION**

-Illuminates **AMBER** if there is a malfunction in the system. Service vehicle immediately.

**IDLE SHUTDOWN**

-This is a fuel saving feature which automatically shuts the engine down after a programmed time at idle. When the engine is ready to shutdown the dash light will begin to flash for thirty seconds.

**ENGINE BRAKE**

-Illuminates **GREEN** when the engine brake is active.

*** OBD SELF HEALING**

Environment Protection Agency (EPA) 2017 heavy duty on-highway engines are equipped with On-Board Diagnostics (OBD). The OBD system monitors and reports malfunctions that impact the emissions control devices. If the OBD system detects such a malfunction, the OBD system illuminates a Malfunction Indicator Lamp (MIL). The truck may continue to be operated normally when the MIL lamp is illuminated. After three drive cycles, the MIL lamp may extinguish if the fault is no longer detected. However if after three drive cycles if the lamp is still illuminated, the truck needs to be scheduled in for service.

**** DRIVE CYCLE**

Engine is started with coolant temperature below 140°F and is operated over 170°F

***** DPF REGENERATION**

The exhaust DPF system processes engine exhaust to meet tailpipe emission requirements. The DPF system traps particulate matter (soot). The trapped particulate matter is then converted to ash when the exhaust gas temperature is high enough, either by passive regeneration or by active regeneration, when the fuel doser injects fuel into the exhaust. See reverse side for details on DPF soot load status and performing a regeneration.

****** DPF LIGHT FLASHING WITH BEEPING ALARM**

A flashing DPF light with an audible alarm indicates the DPF is completely full and engine power may be limited to prevent damage. It is recommended a parked regeneration is performed as soon as possible to avoid damage to the engine or exhaust system.



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2018 CUMMINS L9 SERVICE INTERVALS







NOTE: Maintenance must be performed at the interval that occurs first (Miles/Hours/Months)

- Engine Oil and Filter - Fuel Filters	Vehicles Average Speed	Miles	Hours	Months
	Below 5 mph Average	1500	500	6
5 to 10 mph Average	4000	500	6	
10 to 15 mph Average	6000	500	6	
15 to 20 mph Average	8500	500	6	
20 to 25 mph Average	10,500	500	6	
25 to 30 mph Average	12,000	500	6	
30 to 40 mph Average	15,000	500	6	
Higher than 40 mph Average	20,000	500	12	

Coalescing Filter (Crankcase Filter)	60,000	2,000	48
Standard Coolant Change	30,000	1,000	12
Overhead Valve Adjustment	150,000	5,000	48
DEF Filter	200,000	6,500	
DPF Filter Cleaning *	200,000	6,500	

* DPF Filter Cleaning interval may be reduced due to high idle time or where the vehicle is used in severe service applications

DPF INDICATOR CHART








INDICATOR	 Solid	 Flashing	  Flashing Alarm Solid	  Flashing Alarm Solid
LEVEL	1	2	3	4
FILTER STATE	•Exhaust filter regeneration is required	•Exhaust filter is almost full	•Exhaust filter is full	•Exhaust filter is overfull
ENGINE PERFORMANCE	•Engine performance is normal	•Engine performance will soon be limited	•Engine performance is limited	•Engine will SHUTDOWN in 30 seconds
DRIVER SHOULD	•Drive on highway at highway speeds OR start Parked Regeneration to prevent loss of engine power.	•Drive on highway at highway speeds OR start Parked Regeneration to prevent loss of engine power.	•Pull vehicle safely off roadway and start Parked Regeneration to prevent engine stopping.	•Pull vehicle safely off roadway, turn on flashers, place warning devices, and STOP ENGINE. DO NOT use Parked Regeneration. Call for service.

*See Operator's Manual for further details.

WARNING

- Failure to follow these instructions may result in a severe loss of engine power, vehicle speed, and may cause an accident or fire resulting in property damage, personal injury, or death.
- Failure to increase engine load by driving on highway at highway speeds OR to start Parked Regeneration when Exhaust Filter Indicator is ON will cause the engine to lose power.
- When performing Parked Regeneration on exhaust filter, make certain vehicle is safely off roadway away from any flammable materials.

DIESEL EXHAUST FLUID LAMP

INDICATOR	 Solid	 Flashing	  Solid Flashing	   Solid Flashing Solid
DEF TANK LEVEL	10%	5%	2.5%	DEF Tank at 0% AND { Engine has been shutdown OR Idled for 1 Hour OR Vehicle has been refueled }
ENGINE PERFORMANCE	Normal	Normal	Torque Derate of 25%	Torque Derate of 40% Speed Limited to 5MPH

DISCLAIMER: This is a quick reference guide provided by Southland International Trucks, Inc. Information contained in this quick reference guide are excerpts from manufacturers owners manuals and have been abbreviated. Must refer to manufacturers manuals for complete details.