



Service Letter

SL: 30003
Date: 7 March 2011
Product: Generators
Subject: Generators Maintenance Schedule

This letter replaces Service Letter #30003 dated 18 November 2010.

Updated maintenance schedule for generators.

MODEL	SERIAL NUMBER
G20 to G500	All S/N

Due to the amount of questions received about generators maintenance, Doosan Infracore is releasing the Service Letter to clarify the maintenance schedule.

General

In addition to periodic inspections, many of the components in this unit require periodic servicing to provide maximum output and performance. Servicing may consist of pre-operation and post-operation procedures to be performed by the operating or maintenance personnel.

The primary function of preventive maintenance is to prevent failure and consequently, the need for repair. Preventive maintenance is the easiest and the least expensive type of maintenance. Maintaining your unit and keeping it clean at all times will facilitate servicing.

Hoses

Each month it is recommended that the intake hoses from the air filter and all flexible hoses used for water and fuel are inspected for the following:

Figure 1



All rubber hose joints and the screw type hose clamps must be tight and the hoses must not show any signs of wear, abrasion or deterioration [Figure 1].

Figure 2



All flexible hoses must be free of wear, deterioration and vibration abrasion. Routing clamps must be secure and properly mounted [Figure 2].

Fuel / Water Separator

Figure 3

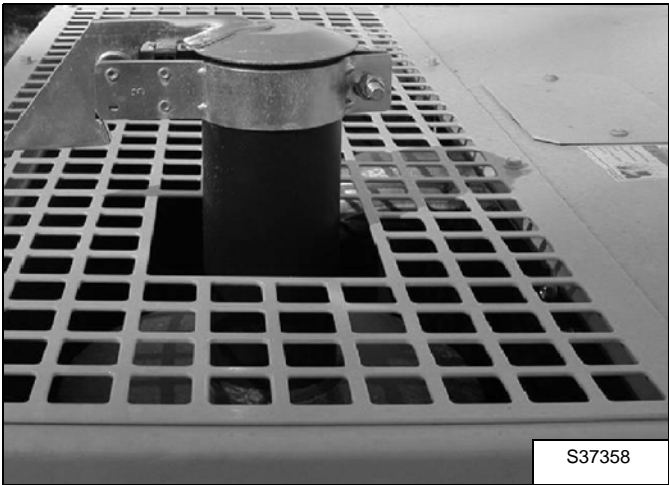


Daily check for water in the fuel / water separator unit. Some engines have a translucent bowl for visual indication, and others have a drain valve below the primary element [Figure 3].

Every six months or 500 hours, or less if fuel is of poor quality or contaminated, replace the bowl element(s).

Air Vents

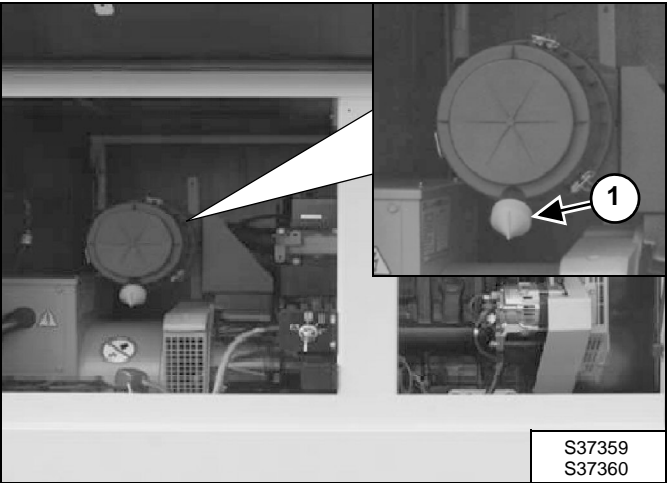
Figure 4



Daily clean the air vents of any obstruction or debris [Figure 4].

Air Cleaner

Figure 5



Proper maintenance of the air cleaner provides maximum protection against airborne dust. Squeeze the rubber valve (Item 1) [Figure 5] (precleaner dirt dump) periodically to ensure that it is not clogged.

Scheduled Maintenance

The maintenance schedule is based on normal operation of the unit. In the event unusual environmental operating conditions exist, the schedule should be adjusted accordingly. The oil change intervals given in this Service Letter are only valid if the appropriate oil is used and the fuel quality is at the required quality level or better. Any failure in following the above requirements will result in an oil change interval reduction.

G10 To G40

1. Break-in, 100 hours:
- Change the oil and engine oil filter after the first 100 hours of operation of a new or rebuilt engine.
 - These diesel engines must be used with heavy duty lubricating oil in compliance with the requirements of the standards API CC, DEF2101D, Mil-I-2104C or Mil-L-46152A/B for L.E. + S.L. + S.Q. engines and API CD for S.S. engines. Straight oils are not suitable, neither are oils of less detergency than specified.

OIL VISCOSITY	AMBIENT TEMPERATURE RANGE
SAE 30	-5 °C to 40 °C (23 °F to 104 °F)
SAE 5W-20	-30 °C to -5 °C (-22 °F to 23 °F)
SAE 10W-30	-25 °C to 40 °C (-13 °F to 104 °F)
SAE 15W-40	-20 °C to 50 °C (-4 °F to 122 °F)

2. 250 hours or 3 months:

Figure 6

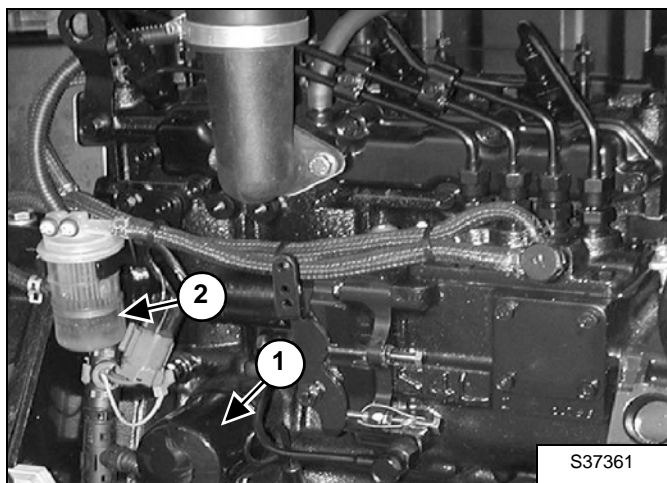
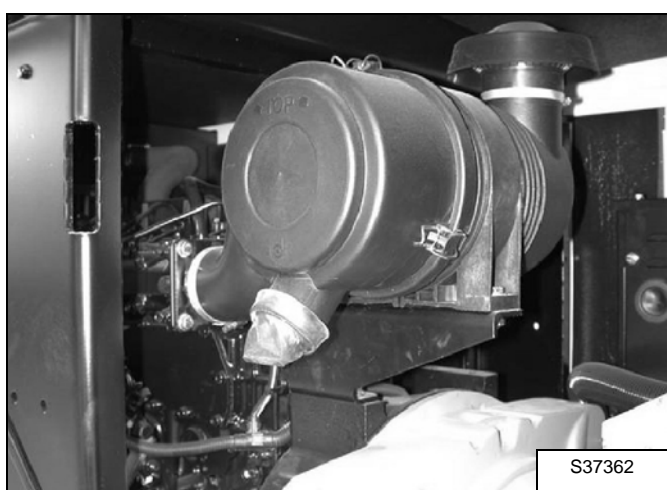


Figure 7



- Change the engine oil and engine oil filter (Item 1) [Figure 6].
- Change the fuel filter element (Item 2) [Figure 6].
- Change the air filter element [Figure 7].

3. 1000 hours or 1 year:

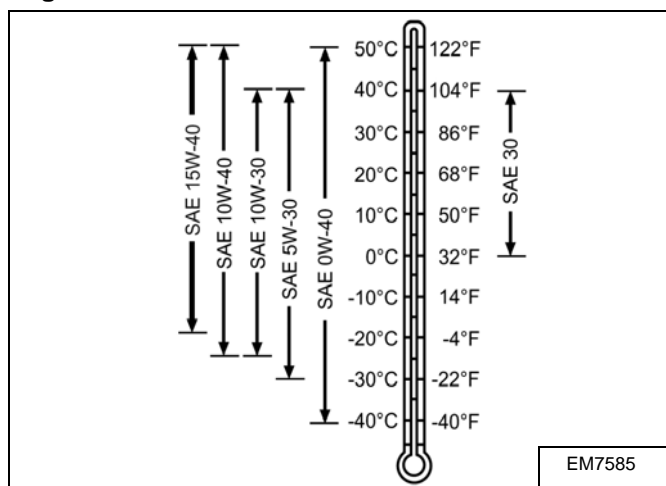
- Check the starter and charge alternator.
- Clean the radiator.
- Have the injection pump checked by a certified engine dealer.
- Clean the generator set.
- Retighten the nuts and bolts.

G60 To G200

1. Break-in, 100 hours:

- Change the oil and engine oil filter after the first 100 hours of operation of a new or rebuilt engine.
- Use oil viscosity based on the expected ambient temperature range during the period between oil changes.
- The following oil is preferred:
 - Oils meeting ACEA Specification E4/E5.
 - Other oils may be used if they meet one or more of the following:
 - API Service Classification CI-4
 - API Service Classification CH-4
 - ACEA Specification E3

Figure 8



Multi-viscosity diesel engine oils are preferred [Figure 8].

2. As required but no later than 500 hours:

Figure 9



- Change the fuel filter element (Item 1) [Figure 9].

Figure 10



- Change the air filter element [Figure 10].

3. 1000 hours or 1 year:

- Same as 500 hours maintenance.
- Change the engine oil and engine oil filter.
- Change the fuel filter element.
- Change the air filter element.

4. 2000 hours or 2 years:

- Flush and refill cooling system.
- Test thermostats.
- Check and adjust valve clearance.

G250 To G500

1. Break-in, 100 hours:

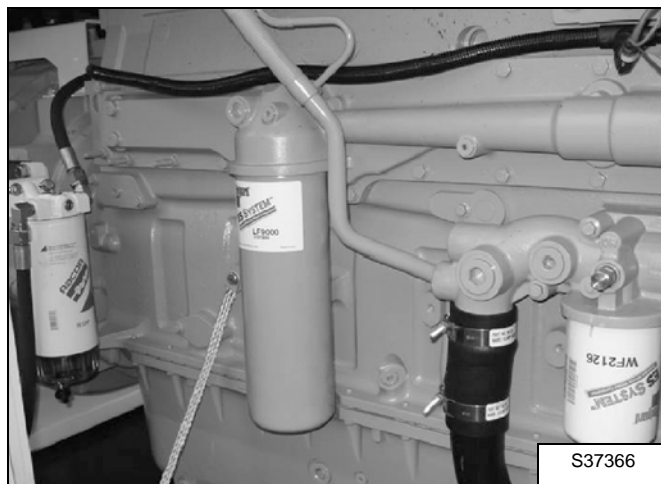
- No break-in maintenance for these models.

2. As required but no later than 500 hours:

- Change the fuel filter element.
- Change the air filter element.

3. 500 hours or 6 months:

Figure 11



- Change the engine oil and engine oil filter.
- Change the fuel filter element.
- Check the cooling system.
- Replace the coolant filter.
- Check the batteries.
- Check the battery cables and connections.

Engine oil requirements:

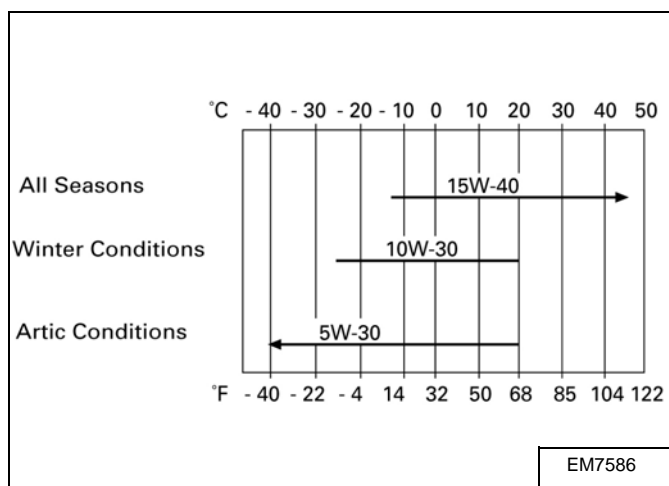
A sulfated ash limit of 1,85 percent has been placed on all engine lubricating oils recommended for use in Cummins engines.

Higher ash oils can cause valve and/or piston damage and lead to excessive oil consumption.

The use of quality engine lubricating oils, combined with appropriate oil drain and filter change intervals, is a critical factor in maintaining engine performance and durability.

Cummins Inc. recommends the use of high-quality SAE 15W-40 heavy-duty engine oil, such as Valvoline Premium Blue, which meets performance specifications as listed below.

Figure 12



CUMMINS ENGINEERING STANDARD CLASSIFICATION (CES)	AMERICAN PETROLEUM INSTITUTE CLASSIFICATION (API)	INTERNATIONAL CLASSIFICATIONS	COMMENTS
	API CD API CE API CG-4/SH	ACEA E-1	OBSOLETE. DO NOT USE.
CES-20075	API CF-4/SG	ACEA E-2 ACEA E-3 JAMA DH-1	Minimum acceptable oil classification for midrange engines.
CES-20071 CES-20076	API CH-4/SJ API CH-4	Global DHD-1	Acceptable oil classification for midrange engines.
CES-20072 CES-20077	API CH-4	ACEA E-5 Global DHD-1	Similar in performance to CES-20071 but validated under European test standards. Excellent oil for midrange engines.
CES-20078	API CI-4/SK API CI-4		Excellent oil for midrange engines.

4. 1000 hours or 1 year:

- Drive belts - check.
- Fan hub belt driven - check.
- Cooling fan belt tensioner - check.

5. 2000 hours or 2 year:

- Flush and refill cooling system.