
SERVICE BULLETIN

Original Issue Date: **5/04**

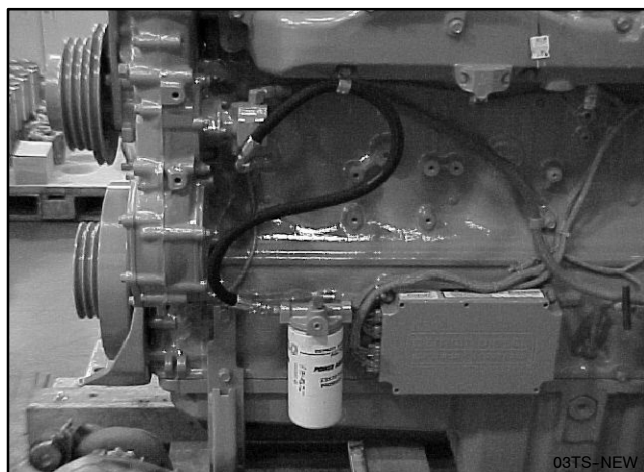
Model: **230-400 kW (Detroit Diesel Series 60 Engines)**

Market: **Industrial**

Subject: **Overcrank Fault Shutdown and Hard Starting Troubleshooting**

We have received reports of 230-400 kW units using DDC Series 60 engines having slow start or hard start conditions. This condition is most prevalent on units equipped with subbase fuel tanks. Testing has concluded that the hard start condition is due to fuel drain back in the engine fuel system. Detroit Diesel has released a bulletin 03 TS-NEW outlining the problem and resolution.

Replace the fuel line from the primary fuel filter to the inlet of the fuel pump with fuel line assembly, Detroit Diesel part number MBHP0340, #8 x 864 mm (34 in.). The new fuel line is longer, which allows positioning the fuel line to a higher level than the top of the fuel pump. See illustration.



Prevent the fuel drain back condition by installing a check valve in the fuel supply line between the primary filter inlet and the fuel tank. Match the check valve size to the fuel supply line size. Locate the check valve as close as practical to the fuel tank to provide maximum positive head pressure on the check valve promoting effective check valve sealing.

Should the fuel system be opened for repair or service, the fuel system should be primed per the engine operation manual. A summary of the deaerating/bleeding procedure follows.

Deaerating/Bleeding Procedure

The following procedure will ensure the fuel pump has an adequate fuel supply to prevent a no start condition.

Follow all safety precautions found in the generator set literature package before servicing the generator set.

- 1.1 Start and run the generator set for 15 minutes with load.
- 1.2 Stop the generator set and allow to cool for at least 5 minutes.
- 1.3 With the generator set master switch in the OFF/RESET position, disconnect the batteries, negative lead first.
- 1.4 Close all fuel valves between the generator set and fuel tank(s).
- 1.5 Remove the primary and secondary filters. If the filters are not completely full of fuel, top each filter off with fuel and reinstall. Check for damage to the filter seals. Replace as needed.
- 1.6 With the generator set master switch in the OFF/RESET position, reconnect the batteries, negative lead last.
- 1.7 Repeat procedure until filters remain full of fuel after shutdown.

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