

SERVICE BULLETIN

Original Issue Date: **5/04**

Model: **450-1000 kW (Detroit Diesel Series 2000 Engines) with DDEC**

Market: **Industrial**

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

We have received reports of 450-1000 kW units using DDC Series 2000 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 letter concerning this condition. All units shipped as of November, 2003 from the factory with subbase fuel tanks will have the vent line on the fuel return installed as standard equipment.

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 and maximum fuel flow. 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.

Add a vent line to the fuel return line. Available as Fuel Vent Line Service Kit GM32657-KP1. See Figure 1 for kit components and Figure 2 for fuel tank connection recommendations. The installer must use care in routing the supplemental vent line to prevent low spots which could trap fuel and inhibit venting.

Should the fuel system be opened for repair or service, the fuel system should be primed per the engine operation manual.

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

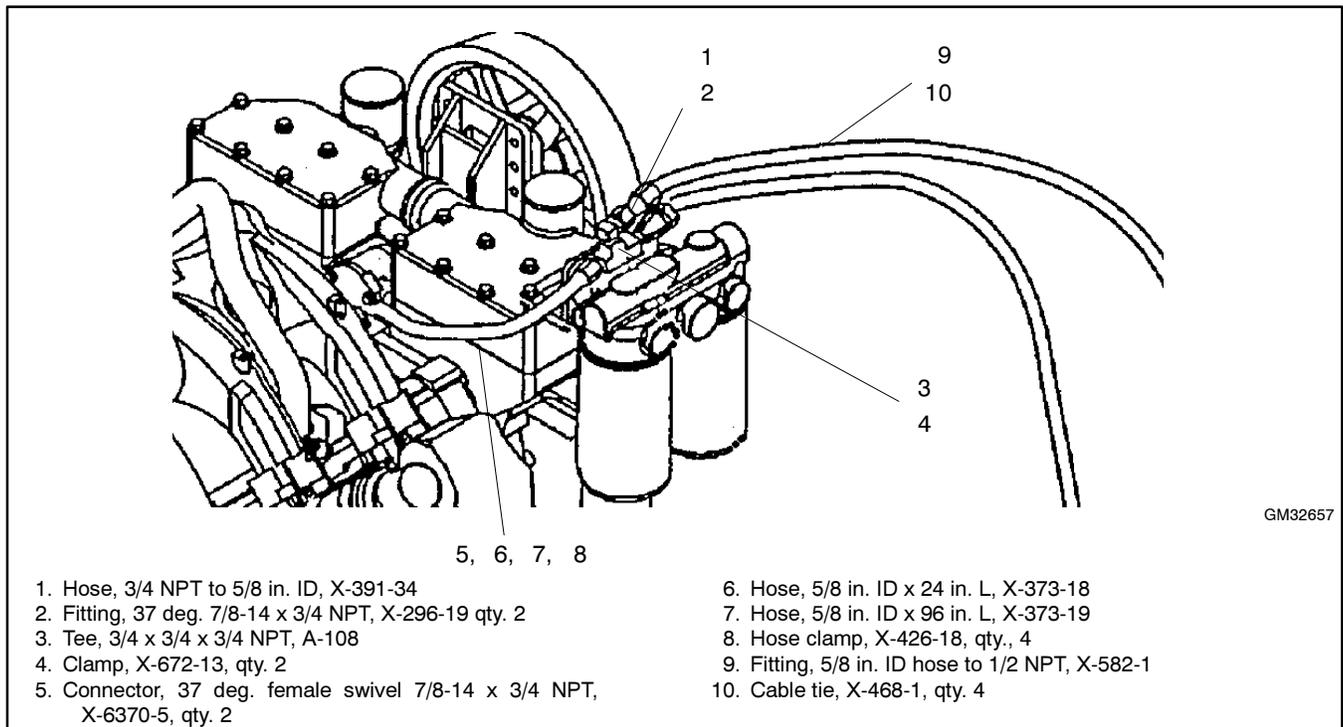


Figure 1 Fuel Vent Line Service Kit GM32657-KP1 Components

| Routing | Service Manager | Sales Manager | Parts Manager | Technician No. 1 | Technician No. 2 | Technician No. 3 | Return This to |
|--------------|-----------------|---------------|---------------|------------------|------------------|------------------|----------------|
| Initial Here | | | | | | | |

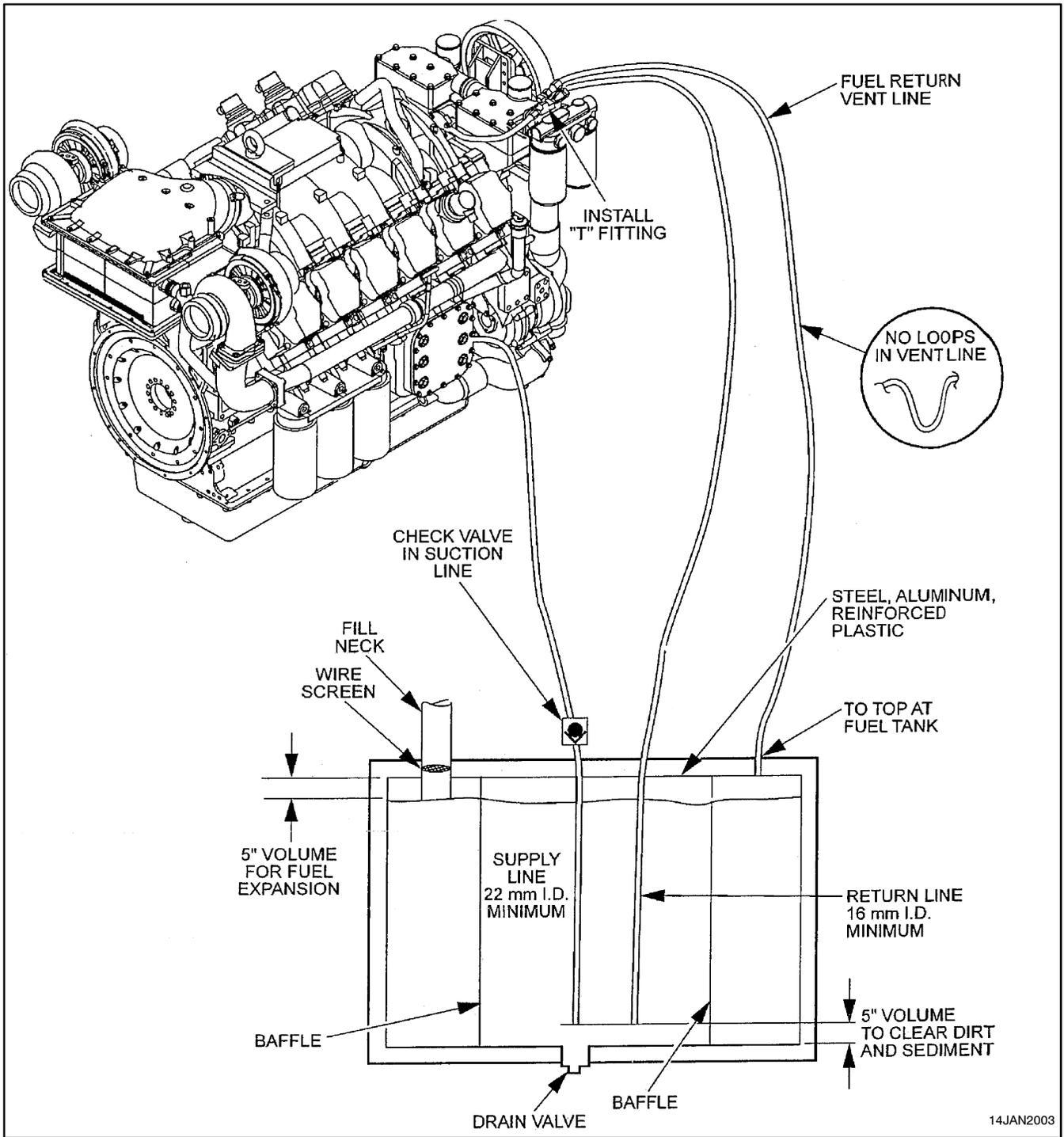


Figure 2 Fuel Tank Connections and Recommendations