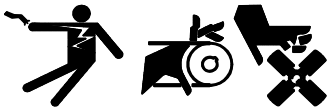
SERVICE BULLETIN

Original Issue Date: **5/98**
Model: **8.5/11RMY (Kohler CH20/CH25 Engines)**
Market: **Industrial**
Subject: **Fuel Metering Valve Adjustment Procedure**

Use the following procedure to field adjust the fuel mixture on 8.5RMY or 11RMY generator sets that are not California Air Resources Board (CARB) or United States Environmental Protection Agency (EPA) certified. Certified generator sets have a fixed fuel metering valve. Correct adjustment of the fuel metering valve provides both reliable cold starting and overall generator set performance. The adjustment procedure requires a digital volt meter (DVM), oxygen sensor (A-345052) for the engine, and a load bank capable of rated kW for the fuel being used. Observe the following safety precautions while performing the procedure.

⚠ WARNING



Accidental starting.
Can cause severe injury or death.

Disconnect battery cables before working on generator set. (Remove negative (–) lead first when disconnecting battery. Reconnect negative (–) lead last when reconnecting battery.)

Disabling generator set. Accidental starting can cause severe injury or death. Before working on the generator set or connected equipment, disable the generator set as follows: 1) Turn the generator set master switch to OFF position. 2) Disconnect power to battery charger. 3) Remove battery cables (remove negative (–) lead first). Reconnect negative (–) lead last when reconnecting battery. Follow these precautions to prevent starting of generator set by an automatic transfer switch or remote start/stop switch.

⚠ WARNING

Hot engine and exhaust system.
Can cause severe injury or death.

Do not work on generator set until it is allowed to cool.

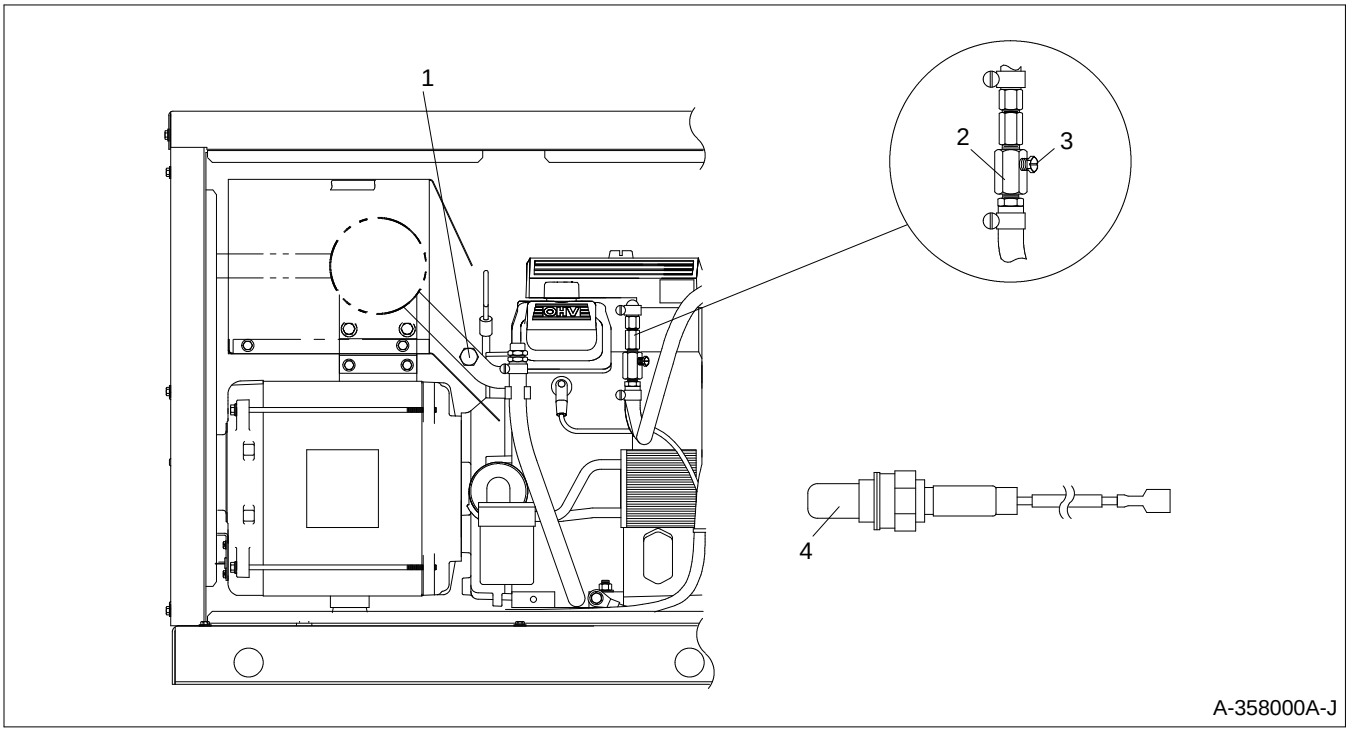
Servicing exhaust system. Hot parts can cause severe injury or death. Do not touch hot engine parts. An engine becomes hot while running and exhaust system components become extremely hot.

1. Place the generator set master switch in the OFF position.
2. Disconnect power to battery charger, if equipped.
3. Disconnect the generator set engine starting battery, negative (–) lead first.
4. Remove oxygen sensor plug from exhaust manifold. See Figure 1 for location.
5. Install oxygen sensor in exhaust manifold where plug was removed.
6. Check that the generator master switch is in the OFF position.
7. Reconnect the generator set engine starting battery, negative (–) lead last.
8. Place the controller master switch in the RUN position to start generator set.
9. Allow generator set to run until the generator set reaches normal operating temperature.

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

10. With the generator set at normal operating temperature apply 90-100% of rated load.
11. Connect one of the DVM leads to the oxygen sensor lead. Connect the other DVM lead to ground and measure the output voltage of the oxygen sensor (potential to ground).

    The output of the oxygen sensor reads high when the mixture is richer and close to zero volts when the mixture is leaner.
12. Adjust the fuel metering valve as required to obtain a 0.5 vdc ± 0.3 output from the oxygen sensor.
13. Remove load and allow generator set to run unloaded to cool for at least 5-10 minutes.
14. Place the generator set master switch in the OFF position.
15. Disconnect the generator set engine starting battery, negative (–) lead first.
16. Allow generator set exhaust system to cool.
17. Disconnect DVM leads from the oxygen sensor.
18. Remove the oxygen sensor from the exhaust manifold.
19. Apply a small amount of antiseize compound to exhaust plug and reinstall plug into exhaust manifold.
20. Check that the generator master switch is in the OFF position.
21. Reconnect the generator set engine starting battery, negative (–) lead last.
22. Reconnect power to battery charger, if equipped.



1. Oxygen sensor plug
2. Fuel metering valve
3. Fuel metering valve adjustment screw
4. Oxygen sensor

Figure 1. Generator Set– Service Side