
INSTALLATION INSTRUCTIONS

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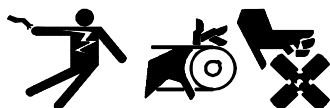
Model: 230-400 kW Diesel (Series 60)

Market: Industrial

Subject: Fuel/Water Separator Kits PA-343596 and PA-343596-SD

Use these instructions to install the fuel/water separator kit. The kit removes water and sediment from the fuel system. Observe the following safety precautions while installing the kit:

WARNING

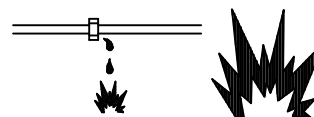


Accidental starting.
Can cause severe injury or death.

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

Disabling the 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) Move the generator set master switch to the OFF position. (2) Disconnect the power to the battery charger. (3) Remove the battery cables, negative (-) lead first. Reconnect the negative (-) lead last when reconnecting the battery. Follow these precautions to prevent starting of the generator set by an automatic transfer switch, remote start/stop switch, or engine start command from a remote computer.

WARNING



Explosive fuel vapors.
Can cause severe injury or death.

Use extreme care when handling, storing, and using fuels.

The fuel system. Explosive fuel vapors can cause severe injury or death. Vaporized fuels are highly explosive. Use extreme care when handling and storing fuels. Store fuels in a well-ventilated area away from spark-producing equipment and out of the reach of children. Never add fuel to the tank while the engine is running because spilled fuel may ignite on contact with hot parts or from sparks. Do not smoke or permit flames or sparks to occur near sources of spilled fuel or fuel vapors. Keep the fuel lines and connections tight and in good condition. Do not replace flexible fuel lines with rigid lines. Use flexible sections to avoid fuel line breakage caused by vibration. Do not operate the generator set in the presence of fuel leaks, fuel accumulation, or sparks. Repair fuel systems before resuming generator set operation.

Draining the fuel system. Explosive fuel vapors can cause severe injury or death. Spilled fuel can cause an explosion. Use a container to catch fuel when draining the fuel system. Wipe up spilled fuel after draining the system.

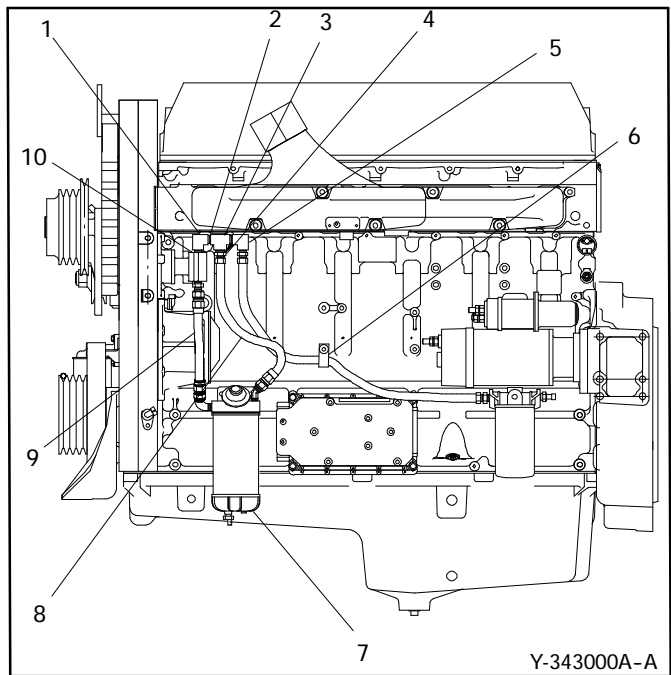
Installation

1. Place the generator set master switch in the OFF position.
2. Disconnect the power to the battery charger, if equipped.
3. Disconnect the generator set engine starting battery(ies), negative (-) lead first.
4. Refer to Figure 1 for installation of the fuel/water separator kit. Refer to the Parts List for a description of components.
5. Disconnect existing fuel lines. Remove the fuel line from the top of the existing fuel filter. See Figure 1, #9. Then remove the top of the other fuel line to the elbow, near Figure 1, #10.
6. Remove the existing fuel filter assembly from its location at bottom left of Figure 1, but retain the fittings and hardware.

NOTE

Apply pipe sealant to all NPT fittings— especially those included with the fuel/water separator kit.

7. Install the new fuel/water separator (A-343594) at the same location as the previous filter, using hardware retained from the previous filter. See Figure 1, #7.
8. Connect existing fuel line to the outlet of the fuel/water separator.
9. Disconnect existing fitting from elbow near Figure 1, #5 and save for use in the next step.
10. Assemble 3/8" pipe-to-elbow, pipe-to-tee-to-elbow connection with new hardware as shown in Figure 1, #1 through #5.
11. Reconnect the existing fuel line to the right-hand elbow of the new multiple connection from the previous step.
12. Use existing clamps and hardware to resecure the fuel line. See Figure 1, #6.
13. Again applying pipe sealant to all NPT fittings, connect the half-union connector (X-296-10) to the bottom of the tee (1/2") in the multiple connection.
14. Attach the new fuel line (343603) between the half-union connector (X-296-10) at the bottom of the tee (1/2") and the fuel/water separator inlet.
15. Bleed air from the fuel system according to the engine manufacturer's instructions. If air is trapped in the fuel system, the engine will be difficult to start and/or engine operation will be erratic.



1. New elbow pipe fitting (X-215-25)
2. New brass pipe, 1" (X-204-12)
3. New brass tee fitting (X-203-14)
4. Half-union connector (X-296-10)
5. Existing fitting and fuel line
6. Existing clamp and hardware
7. New fuel/water separator assembly (A-343594)
8. New flexible fuel line (A-343603)
9. Existing fuel line and fittings
10. New brass pipe, 1" (X-204-12)

Figure 1. Fuel/Water Separator Assembly Installation

Fuel/Water Separator Kit

Parts List		
Kits: PA-343596 and PA-343596-SD		
Qty.	Description	Part Numbers
1	Fitting, tee, 3/8" x 3/8" x 1/2" pipe	X-203-14
1	Filter assembly, fuel/water separator	A-343594
2	Pipe, brass 1"	X-204-12
1	Connector, half-union, 5/8-18, 1/2" NPTF	X-296-10
1	Fitting, elbow pipe, 3/8" x 15/16"	X-215-25
1	Line, flexible fuel	A-343603