### **INSTALLATION INSTRUCTIONS**

Original Issue Date: 7/93

Model: 6-15 kW (Yanmar-Powered Models)

Market: Industrial

Subject: Oil Drain Kit PA-225232

Use the oil drain kit to drain the engine oil when placement of a drain pan beneath the engine is not possible or desirable. A flexible hose connected between a drain valve installed in the oil pan and a fitting on the skid rail allows the engine oil to be drained from the service side of the generator set.

Install this kit during the next scheduled oil change. Observe the following safety precautions while installing the kit.



Accidental starting.
Can cause severe injury or death.

Disconnect battery cables before working on generator set (disconnect negative lead first and reconnect it last).

Disabling generator set. Accidental starting can cause severe injury or death. Turn generator set master switch and switchgear engine control switch to OFF position, disconnect power to battery charger, and remove battery cables (remove negative lead first and reconnect it last) to disable generator set before working on the generator set or connected equipment. The generator set can be started by automatic transfer switch or remote start/stop switch unless these precautions are followed.

## Installation

- Place generator set master switch in the OFF position.
- 2. Disconnect generator set engine starting battery(ies), negative (–) lead first. Disconnect power to battery charger, if equipped.
- 3. Allow engine to cool. Remove drain plug and drain engine oil into suitable container.

#### **NOTE**

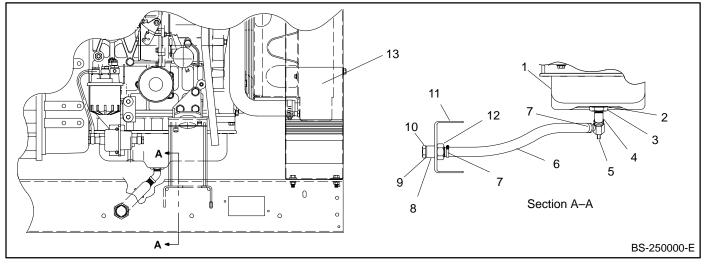
Dispose of used engine oil in an environmentally safe manner. Take used engine oil to a suitable collection facility in your area. DO NOT POUR USED OIL ON THE GROUND, DOWN SEWERS, OR INTO STREAMS OR OTHER BODIES OF WATER.

4. Place 0.859 in. ID plain washer (X-25-145) on adapter (249959) and install in place of drain plug. See Figure 1.

#### **NOTE**

Use thread sealant on all threaded connections to prevent leakage.

- 5. Install 45° elbow (X-274-6) in adapter.
- 6. Install oil drain valve (278788) on elbow.
- 7. Connect 13.5 in. (343 mm) hose (X-577-38) to oil drain valve. Secure hose to oil drain valve with hose clamp (X-426-10). Locate clamp 0.25 inch (6.3 mm) from hose end and tighten clamp.
- 8. Install hose adapter (273729) in existing hole in skid rail and secure with 1-14 hex jam nut (X-80-1). See Figure 1.
- 9. Connect hose to hose adapter and secure with hose clamp (X-426-10). Locate clamp 0.25 inch (6.3 mm) from hose end and tighten clamp.
- 10. Place nylon washer (276552) on drain plug (241062) and install in hose adapter.
- 11. Verify that oil drain valve is closed and the drain plug is tight. See Figure 2.
- 12. Fill engine with oil specified in operation manual.
- 13. Check that the generator set master switch is in the OFF position.
- 14. Reconnect generator set engine starting battery, negative (–) lead last. Reconnect power to battery charger, if equipped.
- 15. Wipe up any spilled oil with rags. Dispose of rags in a proper container.



- 1. Oil pan
- Plain washer
   Adapter
- 4. Street elbow
- 5. Oil drain valve
- 6. Hose (trim for best fit)
- 7. Hose clamp

- 8. Hose adapter
- Nylon washer
   Drain plug
- 11. Skid rail
- 12. Hex nut
- 13. Radiator (front)

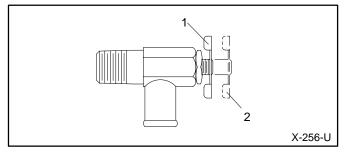
Figure 1. Oil Drain Kit

### Oil Drain Kit

Parts List		
Kit: PA-225232		
Qty.	Description	Part Number
1	Washer, plain, 0.859 x 1.185 x 0.063 in.	X-25-145
1	Nut, hex jam, 1-14	X-80-1
1	Elbow, street, 3/8 NPT	X-274-6
2	Clamp, hose, 0.50 to 1.00 in. x 0.31 in.	X-426-10
1	Hose, 0.625 in. ID x 20 in.	X-577-38
1	Light, red	228693
1	Plug, drain	241062
1	Adapter	249959
1	Adapter, hose	273729
1	Washer, nylon	276552
1	Valve, oil drain	278788

# **Drain Valve Operation**

Turn knob counterclockwise to open drain valve. See Figure 2. Return valve to closed position before adding engine oil.



- 1. Closed position
- 2. Open position

Figure 2. Drain Valve Operation

TT-955 2/97 2