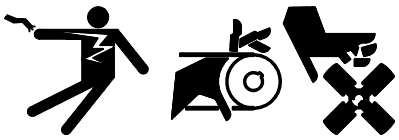
INSTALLATION INSTRUCTIONS

Original Issue Date: **7/95**
Model: **80/100ROZJ**
Market: **Industrial**
Subject: **Anticipatory Alarm Kit PA-222993**

The anticipatory alarm kit provides the switches allowing monitoring of three functions: low water temperature, anticipatory high water temperature, and anticipatory low oil pressure. These switches are used with the microprocessor controller and the remote annunciator options. The low water temperature indicator activates if the optional engine block heater malfunctions and/or the engine coolant temperature is too low. The anticipatory high water temperature indicator activates if the engine coolant approaches shutdown range. The anticipatory low oil pressure indicator activates if the engine oil pressure approaches shutdown range.

⚠ WARNING



Accidental starting.
Can cause severe injury or death.

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

Accidental starting can cause severe injury or death. Turn generator set master 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 any equipment connected to generator set. The generator set can be started by automatic transfer switch or remote start/stop switch unless these precautions are followed.

⚠ WARNING

Hot coolant and steam.
Can cause severe injury or death.

Before removing pressure cap, stop generator set and allow it to cool. Then loosen pressure cap to relieve pressure.

Hot coolant can cause severe injury or death. Allow engine to cool and release pressure from cooling system before opening pressure cap. To release pressure, cover the pressure cap with a thick cloth; then slowly turn it counterclockwise to the first stop. Remove cap after pressure has been completely released and the engine has cooled. Check coolant level at tank if generator set is equipped with a coolant recovery tank.

Installation

1. Place the generator master switch to the OFF position. Disconnect the battery from the generator set, negative (–) lead first.
2. Allow the generator set to cool sufficiently. Remove radiator pressure cap to relive radiator pressure. Drain the coolant into a suitable container.

NOTE

The petcock valve is located on the radiator bottom and/or on the engine block.

NOTE

It is not necessary to completely drain all coolant in order to install the engine temperature switch. Drain just enough coolant to prevent leakage when engine temperature switch is removed.

3. Remove the existing high water temperature switch. See Figure 1 for location. Coat the male threads of the reducer bushing (X-202-28) with pipe sealant and install. Coat the threads of the high water temperature/anticipatory high water temperature dual switch (273759) with pipe sealant and install. Original high water temperature switch will not be reused.
4. Remove the existing pipe plug for the anticipatory low water temperature switch. See Figure 1 for location. Coat the male threads of the reducer bushing (168848) with pipe sealant and install. Coat the threads of the low water temperature switch (290090) with pipe sealant and install. Original pipe plug will not be reused.
5. Remove the existing pipe plug for the anticipatory low oil pressure switch. Coat the threads of the anticipatory low oil pressure switch (271425) with pipe sealant and install. Original pipe plug will not be reused.
6. Connect lead 35a of the engine wiring harness to one terminal of low water temperature switch (290090). Connect the N ground lead of the engine wiring harness from the bell housing ground screw to the other terminal of the switch.
7. The high water temperature/anticipatory high water temperature dual switch (273759) contains four terminals. Two terminals are marked 205 and two are marked 218. See Figure 2. Connect lead 40a of the engine wiring harness to one of the two terminals marked 205. Connect lead 34 of the engine wiring harness to one of the two terminals marked 218. Connect the remaining N ground leads to the remaining two terminals.
8. Connect lead 41a of the engine wiring harness to the push-on terminal of anticipatory low oil pressure switch (271425).

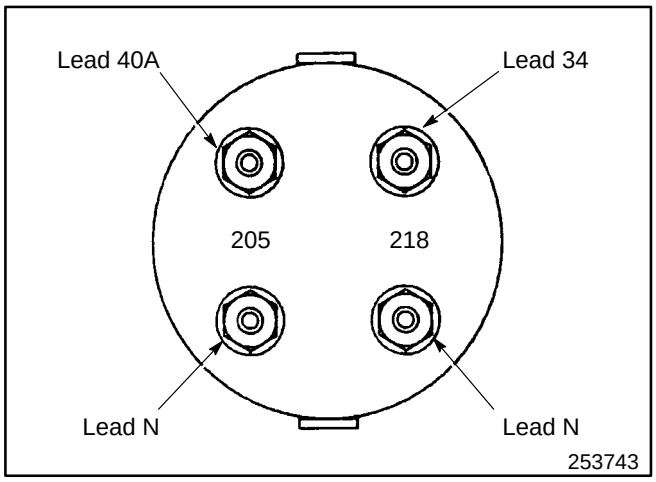


Figure 2. Temperature Switch Lead Connections

9. Close the petcock valve on the bottom of the radiator and/or the engine block. Fill the cooling system to the correct level with fresh coolant. Dispose of all waste materials, (engine oil, fuel, coolant, etc.,) in an environmentally safe and proper manner. Contact your local authority for correct procedures and location.
10. Check that the generator master switch is in the OFF position. Reconnect the battery, negative (–) lead last.
11. Test-run the generator for a few minutes and check for leaks at the switches. Stop generator.

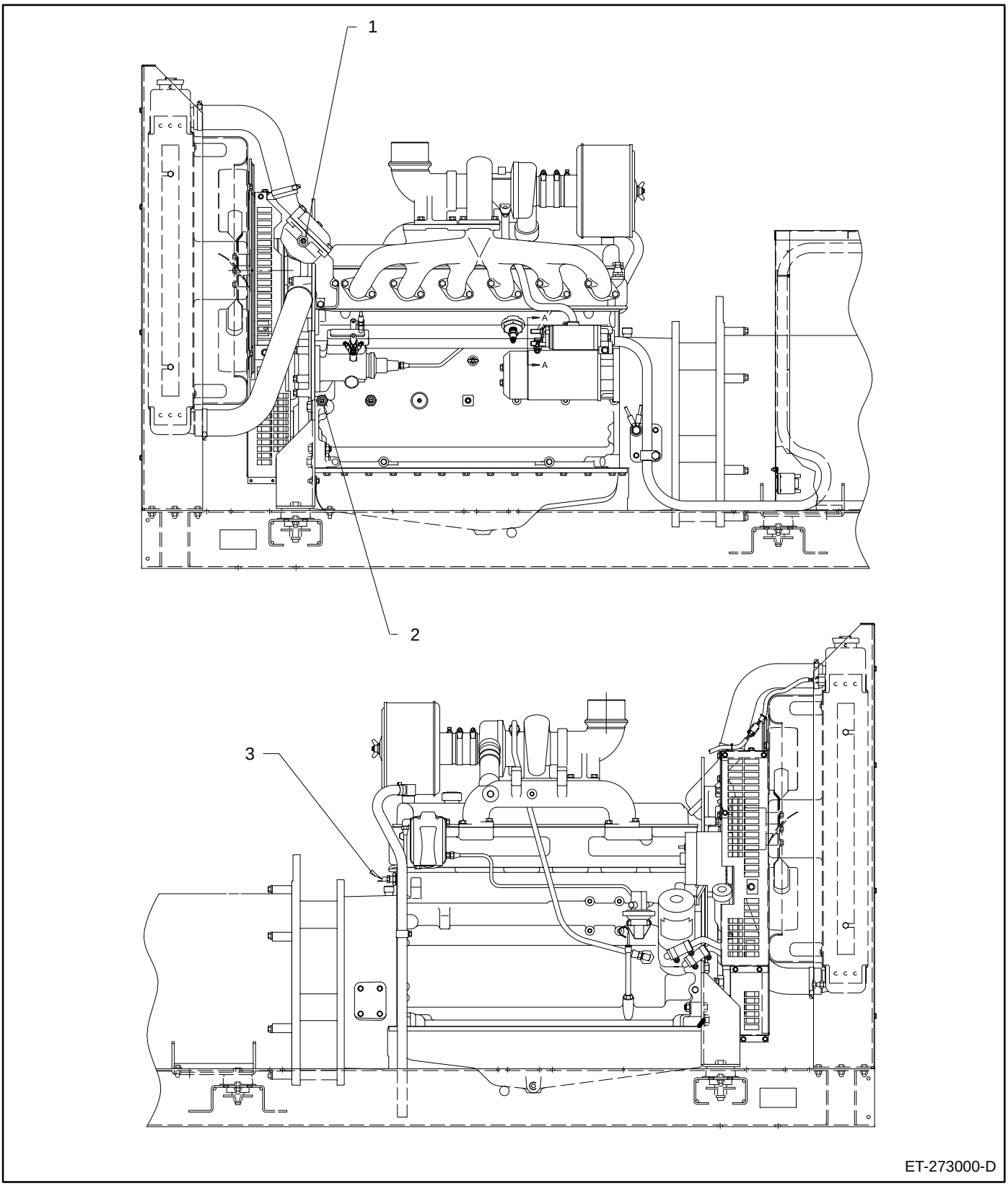
NOTE

Pay special attention to the coolant level. After the coolant has been drained, some time is required before complete refill of the engine water jacket takes place.

Parts List

Kit: PA-222993

Qty.	Description	Part Numbers
1	Switch, anticipatory low oil pressure	271425
1	Switch, high water temperature/anticipatory high water temperature dual	273759
1	Switch, low water temperature	290090
1	Bushing, reducer 3/8 NPT x 1/2 NPT	X-202-28
1	Bushing, reducer 1/2 NPT x 1 NPT	168848



1. High water temperature/anticipatory high water temperature dual switch (273759
   Reducer bushing (X-202-28)
2. Anticipatory low oil pressure switch (271425)
3. Low water temperature switch (290090)
   Reducer bushing (168848)

Figure 1. Plug Removal and Switch Installation Locations