
INSTALLATION INSTRUCTIONS

Original Issue Date: 5/99

Model: 450/500 kW (Series 2000)

Market: Industrial

Subject: Prealarm Sender Kits PA-365546 and PA-365546-SD

The prealarm sender kit provides switches to monitor two conditions:

- **Low water temperature.** The low water temperature indicator activates if the optional engine block heater malfunctions and/or the engine coolant drops below a certain temperature.
- **Low oil pressure.** The anticipatory low oil pressure indicator activates if the engine oil pressure approaches shutdown range.

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



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

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

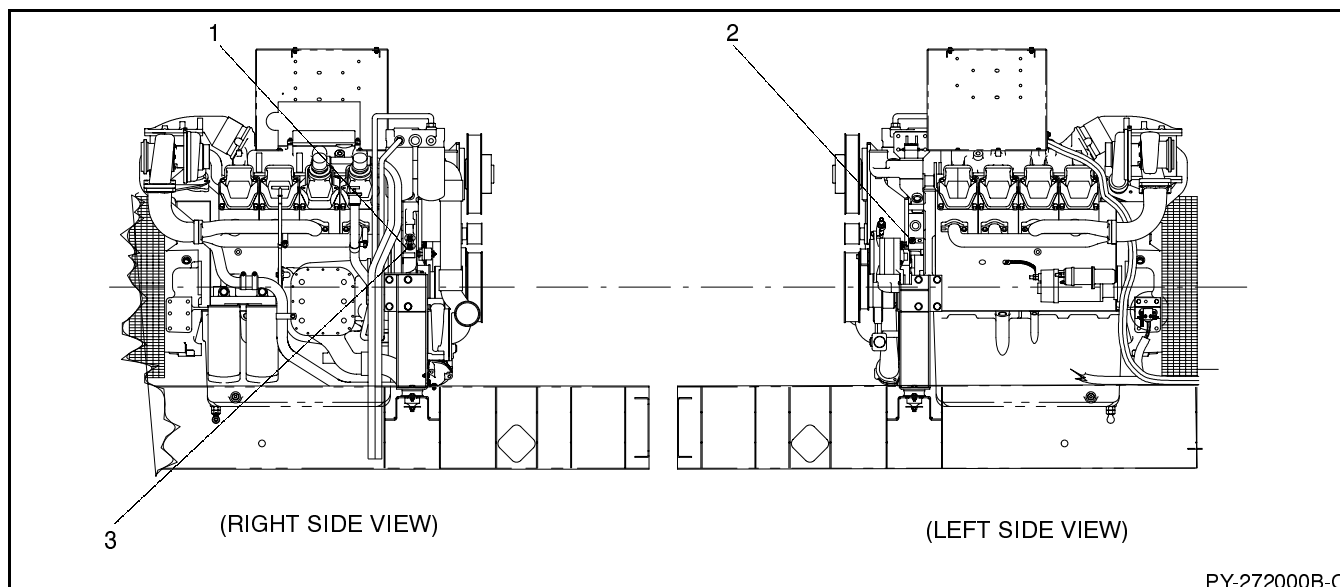
Checking the coolant level. Hot coolant can cause severe injury or death. Allow the engine to cool. Release pressure from the cooling system before opening the pressure cap. To release pressure, cover the pressure cap with a thick cloth and then slowly turn the cap counterclockwise to the first stop.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

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. Allow the generator set to cool. Remove radiator cap to relieve radiator pressure. Drain coolant into a suitable container.

NOTE

Locate the petcock valve on the radiator bottom and/or on the engine block.



1. Low water temperature switch (255264) and O-ring (365615)
3. Adapter bushing (249959)

2. Anticipatory low oil pressure switch (364344) and O-ring (365498)

Figure 1. Prealarm Sender Locations

NOTE

It is not necessary to drain all coolant to install the low water temperature switch. Drain enough coolant so that leakage does not occur when the pipe plug at the engine temperature switch location is removed.

5. Remove the pipe plug in the engine block and discard it. See Figure 1 for location.
6. Coat the threads of the adapter bushing (249959) with pipe sealant and install it where the pipe plug was removed in step 5.
7. Coat the threads of the low water temperature switch (255264) with pipe sealant and install it.
8. Remove and discard the pipe plug for the engine oil galley. See Figure 1 for location.
9. Coat the threads of the low oil pressure switch (364344) with pipe sealant and install.
10. Connect lead 35A (terminal lug) of the engine wiring harness to one terminal of the low water temperature switch (255264). Connect the N ground lead (terminal lug) of the engine wiring harness from the bell housing ground bolt to the other terminal of the low water switch.
11. Connect lead 41A (terminal lug) of the engine wiring harness to the push-on terminal of the low oil pressure switch (364344).

12. Close the petcock valve on the bottom of the radiator and/or the engine block. Fill the cooling system with fresh coolant. Dispose of all waste materials (engine oil, fuel, coolant, etc.) in an environmentally safe manner. Contact local authorities for disposal procedures and location.
13. Check that the generator master switch is in the OFF position.
14. Reconnect the generator set engine starting battery, negative (-) lead last.
15. Reconnect the power to the battery charger, if equipped.
16. Test run the generator set for several minutes and check for leaks at the switches. Stop generator set.

NOTE

Pay special attention to the coolant level. After the coolant has been drained, allow time for complete refill of the engine water jacket. Check coolant level as prescribed in the Prestart Checklist of the Operation Manual.

Prealarm Sender Kit

Parts List		
Kits: PA-365546, PA-365546-SD		
Qty.	Description	Part Numbers
1	O-Ring	365498
1	O-Ring	365615
1	Switch, anticipatory low oil pressure	364344
1	Switch, low water temperature	255264
1	Adapter bushing	249959