

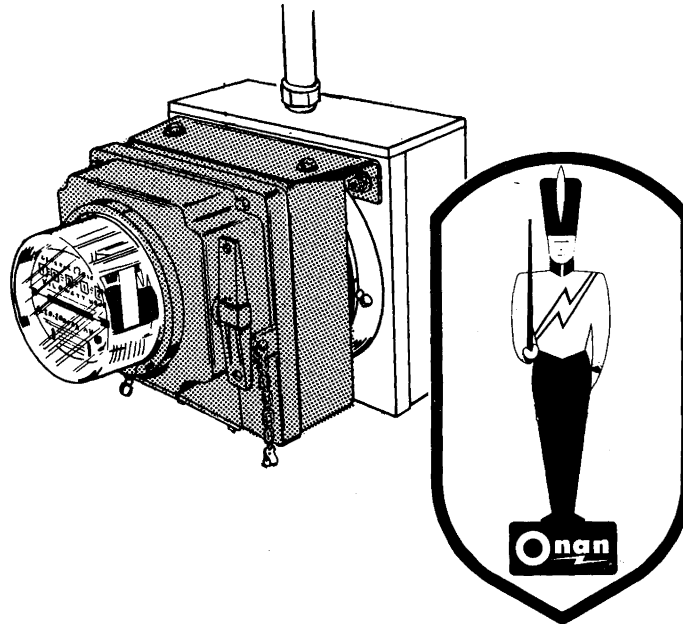
INSTALLATION INSTRUCTIONS

FOR

ET

SERIES

MANUAL TRANSFER SWITCHES



A QUALIFIED ELECTRICIAN, AS REQUIRED BY STATE AND LOCAL CODES, MUST INSTALL THE TRANSFER SWITCH AFTER RECEIVING PERMISSION FROM THE PUBLIC UTILITY.

- 1** Disconnect main power to meter box.

WARNING If main power is not disconnected, meter socket terminals have high voltages which present a serious shock hazard.

- 2** A. Remove the utility seal on the sealing ring or on meter box, whichever applies. Figures 1, 2, and 3 show typical meter boxes.
- B. Remove meter by pulling out, up, and down (not to sides). Meter box in Figure 2 also requires removal of meter box cover.

- 3** Check to make sure meter box is securely fastened to building.

- 4** If there is a fifth meter socket used for metering neutral connection (Figure 4), install an Onan 318-0109 jaw assembly in accordance with supplied instructions.

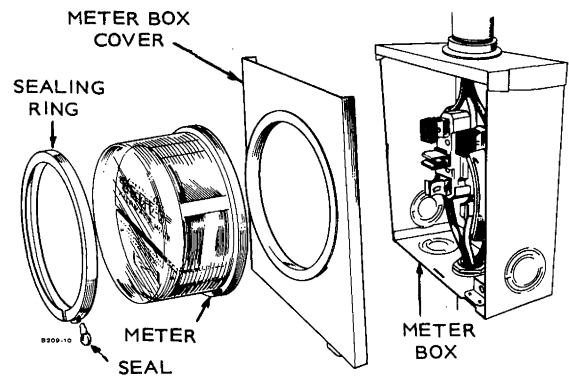


FIGURE 1

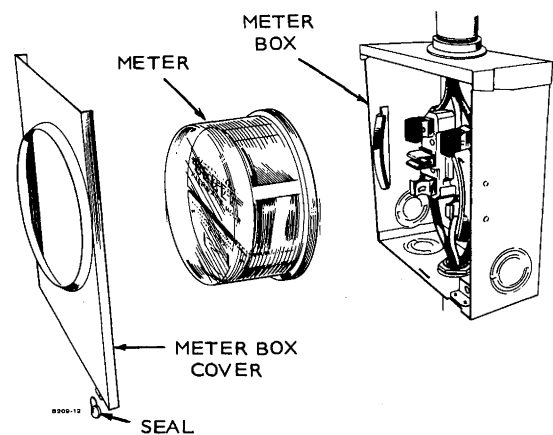


FIGURE 2

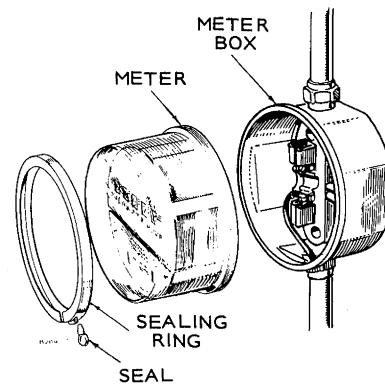


FIGURE 3

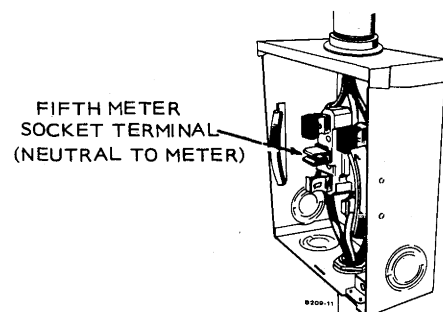


FIGURE 4

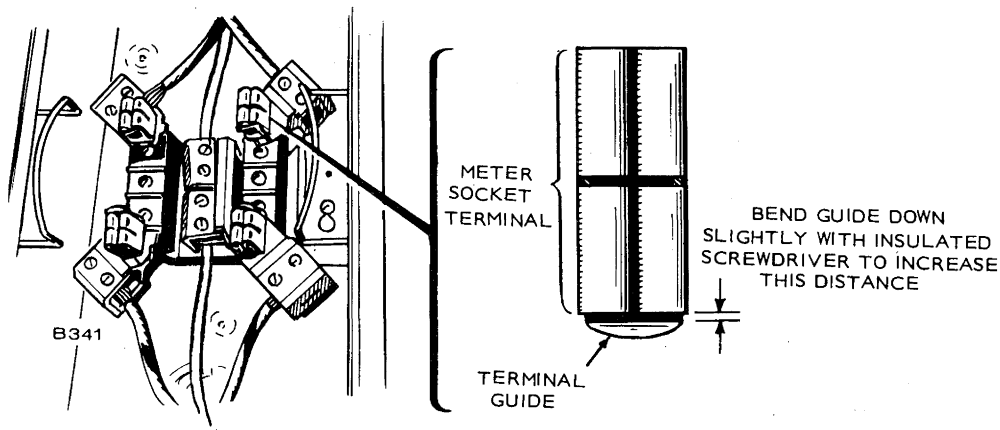


FIGURE 5

5 If the meter socket terminals have meter terminal guides as shown in Figure 5, it may be necessary to bend the top guides down slightly with an insulated screwdriver (use as a wedge) to allow mounting of the transfer switch.

- 6**
- Move transfer switch handle to STANDBY POWER position.
 - Mount the meter and sealing ring on transfer switch.
 - For a round meter box as shown in Figure 3, proceed to Step 8.
 - For a meter box as shown in Figure 2, remove the mounting ring adapter from transfer switch (leave on gasket). See Figure 6. Put meter box cover on transfer switch and remount adapter.
 - Install transfer switch on meter box. Engage all the transfer switch terminal contacts carefully.
 - Slide case mounting bracket against meter box cover and draw reference lines on cover as shown.
 - Remove transfer switch and meter box cover from meter box.
 - Remove the bracket from the transfer switch and lay bracket on meter box cover along lines.
 - Mark two hole locations and drill 5/16-inch (7.9 mm) holes. See Figure 6. Clean away any burrs.

CAUTION

Locate holes properly to ensure tightness against rain, etc., after assembly.

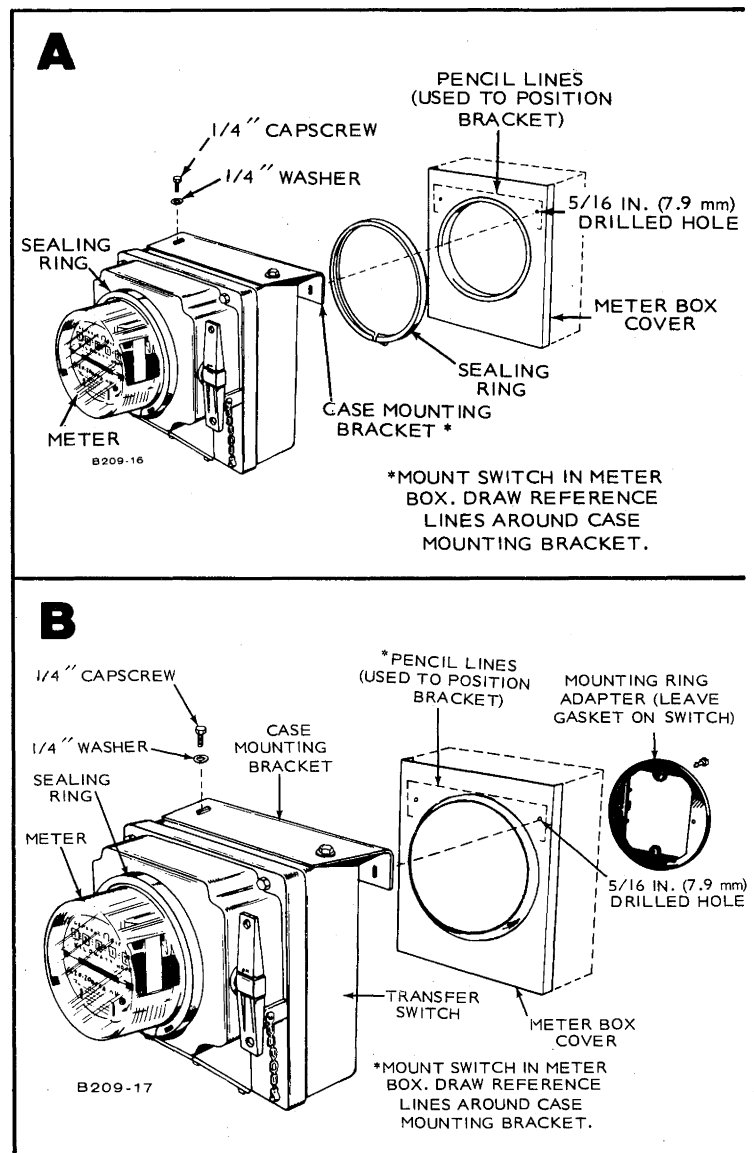


FIGURE 6

- 7** A. Mount the case mounting bracket on meter box cover with hardware as shown in Figure 7.
- B. Mount the meter box cover with mounting bracket on transfer switch.

For meter boxes as shown in Figure 1, also install a sealing ring (Figure 6A).

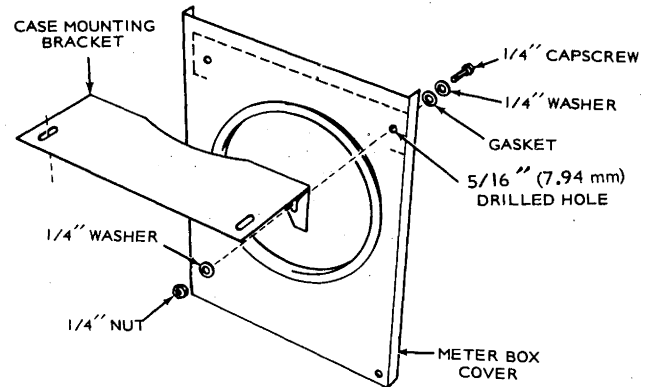


FIGURE 7

- 8** A. Loosen bottom neutral conductor in meter box (Figure 8) and pull neutral wire forward.
- B. Strip about 1-1/2 inches (38 mm) of neutral wire below bottom neutral connector.
- C. Install wire connector (Figure 8). Note spacings.
- D. Reinstall box neutral conductor and tighten.
- E. Hang transfer switch from meter box with a wire hook and connect switch neutral to wire connector (Figure 8).

If noted spacing cannot be obtained, insulate with electrical tape.

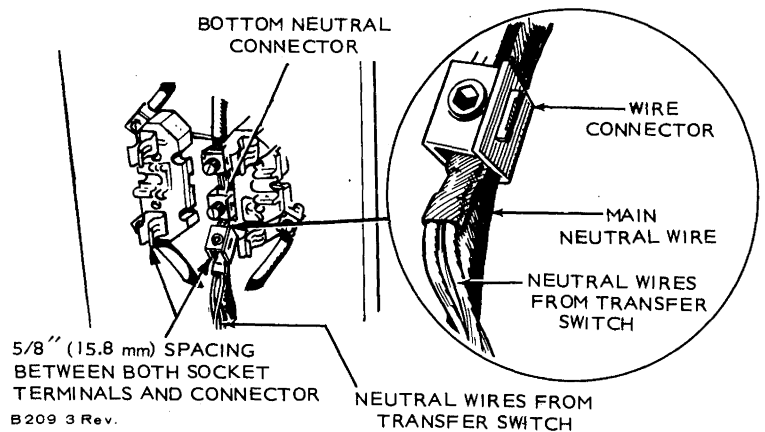


FIGURE 8

- 9** A. Remove wire hook holding transfer switch and mount transfer switch on meter box (Figure 9). Be sure to include a sealing ring for a round meter box (Figure 9A).
- B. For a round meter box, Figure 9A, install the mounting strap around the top conduit of meter box and secure to transfer switch case mounting bracket as shown. Slide mounting bracket as far forward on switch as possible and tighten all cap screws. Proceed to Step 10.
- C. For meter boxes as shown in Figures 1 and 2, secure case mounting bracket to transfer switch with two cap screws and flat washers. Tighten all cap screws. See Figure 9B.

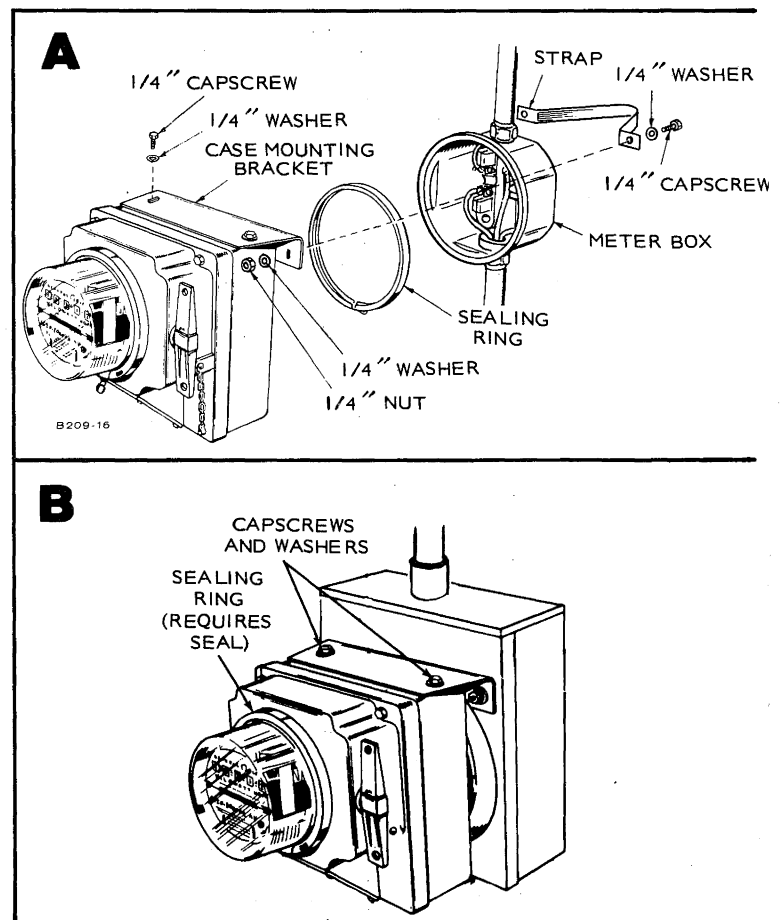
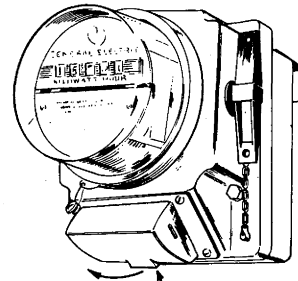


FIGURE 9

- 10** If transfer switch has circuit breakers and receptacle for a power cable connection as shown in Figure 10, proceed to Step 14. If not, proceed to Step 11.



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COVER LIFTS TO EXPOSE CIRCUIT BREAKERS AND RECEPTACLE

FIGURE 10

- 11** If the transfer switch has liquid-tight, flexible conduit supplied and wires are already connected to the transfer switch, proceed to Step 12. If no conduit is supplied, use the following procedure.

- Remove the access cover from the front of transfer switch by taking out the four #10 screws and tamper seal thumbscrew (middle, top hole of access plate).
- Install an entrance ell in the opening on the left side of transfer switch (Figure 12).
- Connect wires for the generator set to the transfer switch to the respective connectors in the transfer switch (Figure 11).

For #10 and smaller wire, use the #10 screws for connections. For wire sizes #8 through #3, use the connectors. If ratings require larger than #3 wire, use two smaller parallel wires and use two connectors on each transfer switch terminal.

With 120-volt connection shown in Figure 11B, 240-volt loads cannot be operated (such as a 240-volt water heater, stove, motor, etc.). Check nameplate of loads.

- Mount access cover and gasket back on transfer switch. Tamper seal thumbscrew goes in middle, top cover mounting hole.

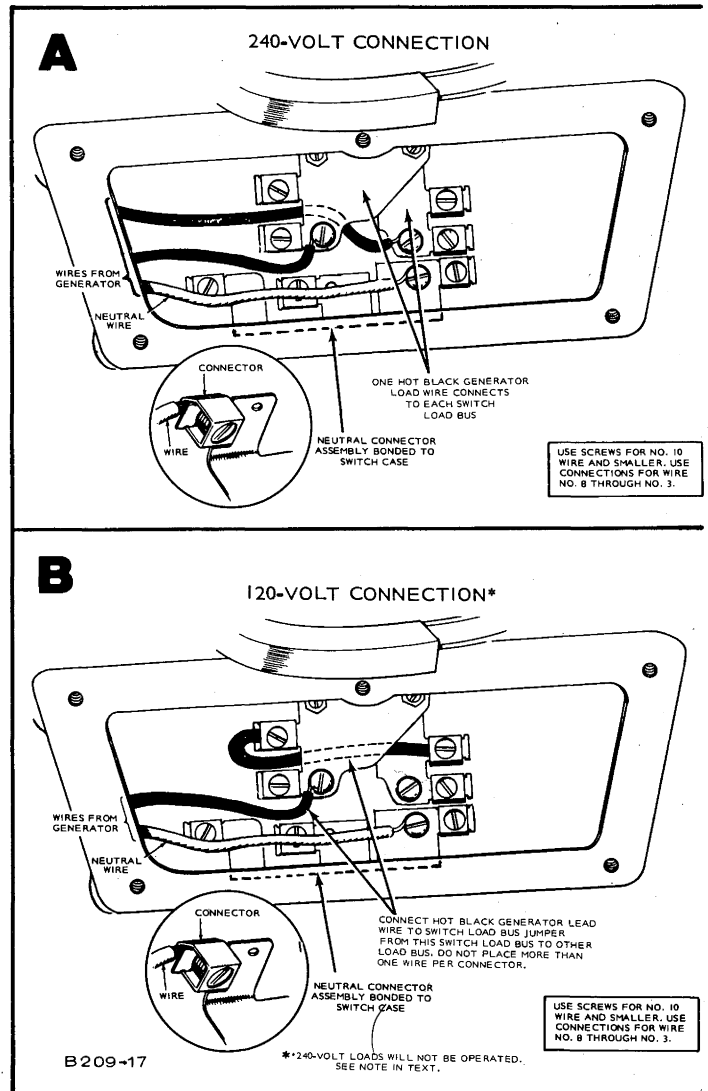


FIGURE 11

- 12** A. Connect a reducer bushing to the entrance ell (Figure 12) for a 30-ampere transfer switch.
- B. Feed the wires from the entrance ell through liquid-tight, flexible conduit, and connect the conduit to the entrance ell.
- C. Connect the other end of the flexible conduit to an approved junction box (for generator set connections). See Figure 12.
- D. Mount the junction box to the flexible conduit and secure the flexible conduit and junction box as shown.

Flexible conduit allows transfer switch removal for meter box inspection, etc.

CAUTION Protect the standby system with suitably-rated, protective devices as required by codes.

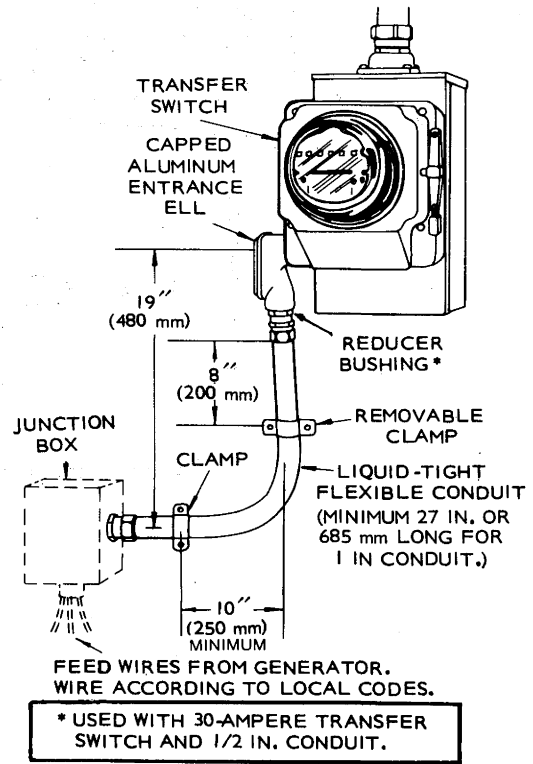


FIGURE 12

- 13** Connect the generator feed wires to the transfer switch leads in the junction box (wire according to local electrical codes).

120/240-Volt Connection: Connect each hot generator output lead to a black wire from the transfer switch and the generator neutral to the white wire from the transfer switch. See Figure 13A.

120-Volt Connection: Connect the black wire(s) from the transfer switch in the junction box to the hot, 120-volt generator output lead(s). Then connect the generator neutral to the white neutral wire from the transfer switch. See Figure 13B.

With 120-volt connection shown in Figure 13B, 240-volt loads cannot be operated (such as a 240-volt water heater, stove, motor, etc.). Check nameplate of loads.

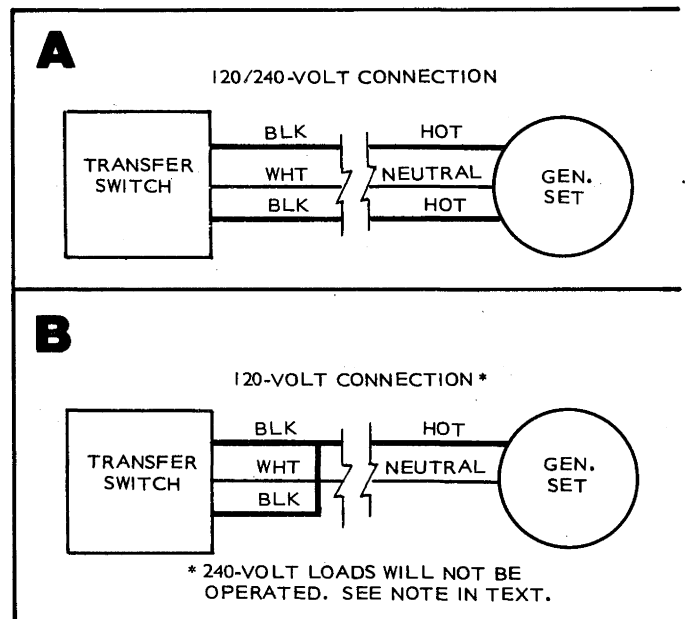


FIGURE 13

- 14** Have a public utility representative install two seals. If the installation has two sealing rings, install one seal on each ring. If the installation has one ring, install one seal on the ring and the other seal on the meter box.

Install the front seal so it goes through both the sealing ring and the hole in the tamper seal thumbscrew. Figure 14 shows a typical seal installation.

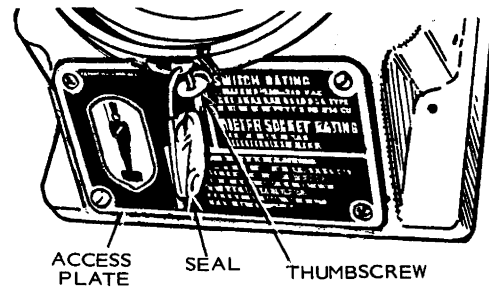
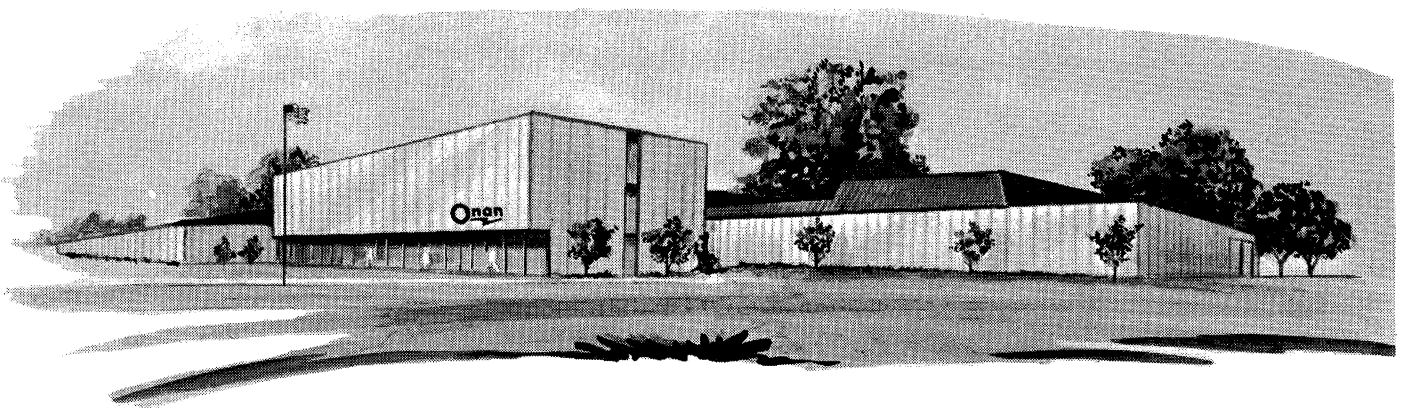


FIGURE 14

- 15**
- A. Turn the transfer switch handle to PUBLIC UTILITY position and restore normal service power.
 - B. Operate the switch and generator set together a few times for test. Return switch to PUBLIC UTILITY position when finished.
 - C. Install a padlock (which will resist rusting and freezing) through the transfer switch handle and safety chain.

Demonstrate operation of transfer switch and generator set to owner.



ONAN 1400 73RD AVENUE N.E. • MINNEAPOLIS, MINNESOTA 55432
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