INSTALLATION INSTRUCTIONS

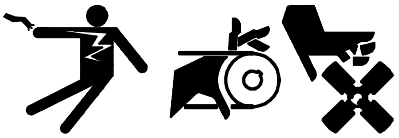
Load Bus Bar Kit PA-222967
For 80-100 kW Standby Generator Sets

The load bus bar kit used in conjunction with bus lug kit allows the generator to be connected to the external load. Use one of the following terminal lug kits; selection will depend on cable size and number of cables to be connected to the bus bars.

Lug Kit	Cable Size	Cables per Lug
274694	350MCM-06	1
274696	350MCM-06	2
274696-SD	350MCM-06	2

Figure 1. Terminal Lug Kits

⚠ 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 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. The generator set can be started by automatic transfer switch or remote start/stop switch unless these precautions are followed.

⚠ WARNING

Hazardous voltage.

Moving rotor.

Can cause severe injury or death.

Do not operate generator set without all guards and electrical enclosures in place.

Hazardous voltage can cause severe injury or death. Perform electrical service only as prescribed in equipment manual. Be sure that generator is properly grounded. Never touch electrical leads or appliances with wet hands, when standing in water, or on wet ground as the chance of electrocution is especially prevalent under such conditions. Wiring should be inspected at the interval recommended in the service schedule—replace leads that are frayed or in poor condition. The function of a generator set is to produce electricity and wherever electricity is present, there is the hazard of electrocution.

NOTE

All electrical connections should be made by a certified electrician or competent electrical technician.

INSTALLATION

1. Move generator master switch to OFF position. Allow generator set to cool.
2. Remove generator set battery cables, negative lead first.
3. Remove junction box access panels.

4. Install right (275455) and left (275454) support brackets to junction box with four 5/16-18 x 0.750-in. hex screws (X-125-3), 0.344 x 0.687 x 0.065-in. plain washers (X-25-85), 5/16-18 whiz nuts (X-6210-7), and pop rivets (X-781-10) as shown in Figure 2.

   NOTE

   Rivet head should be to the inside of the junction box.

5. Install upper (222963) and lower (222964) support brackets to right and left support brackets with eight 5/16-18 x 0.750-in. hex screws (X-125-3), 0.344 x 0.687 x 0.065-in. plain washers (X-25-85), and 5/16-18 whiz nuts (X-6210-7).

6. Install 16 panel insulators (233269) to support brackets with 16, 1/4-20 x 0.500-in. hex screws (X-465-6), and 0.281 x 0.625 x 1.125-in. plain washers (X-25-68).

7. Install four load bus bars (275456) to panel insulators with 16 (four each load bus bar) 1/4-20 x 0.625-in. hex screws (X-465-2), 0.281 x 0.625 x 1.125-in. plain washers (X-25-68), and eight 0.281 x 0.625 x 0.065-in. plain washers (X-25-40).

   NOTE

   Place eight 0.281 x 0.625 x 0.065-in. plain washers (X-25-40) only when mounting lug restrainers.

8. With surface clean and dry, apply identification tabs (201620-83—L1, 201620-84—L2, 201620-94—L0, and 201620-95—L3) to upper support bracket (222963) at the locations shown in Figure 2.

9. Using existing hardware attach two leads (LN-0124-3636) to terminal L0 (neutral) on stator shell. Attach other lead end to bus bar (L0); secure with one 5/16-18 x 1.00-in. hex screw (X-125-5), 5/16-16 whiz nut (X-6210-7), and two 0.344 x 0.687 x 0.065-in. plain washers (X-25-85).

10. Connect generator leads to load bus bars according to application (see Figure 3) with eight 5/16-18 x 1.00-in. hex screws (X-125-5), 5/16-18 whiz nuts (X-6210-7), and 16, 0.344 x 0.687 x 0.065-in. plain washers (X-25-85). See Figure 1, Detail A.

11. Bundle generator leads to load bus bar (L0) and secure with cable tie (X-468-2). Repeat procedure for load bus bar leads L1, L2, and L3.

12. Install lug kit according to instructions provided with kit.

13. Attach lug insulator (275598) to right side cover (as viewed from end) with four pop rivets (X-781-11) and 0.191 x 0.500 x 0.034-in. plain washers (X-25-92).

    NOTE

    Position rivet so that head is outside the junction box as shown in Figure 2, View A-A.

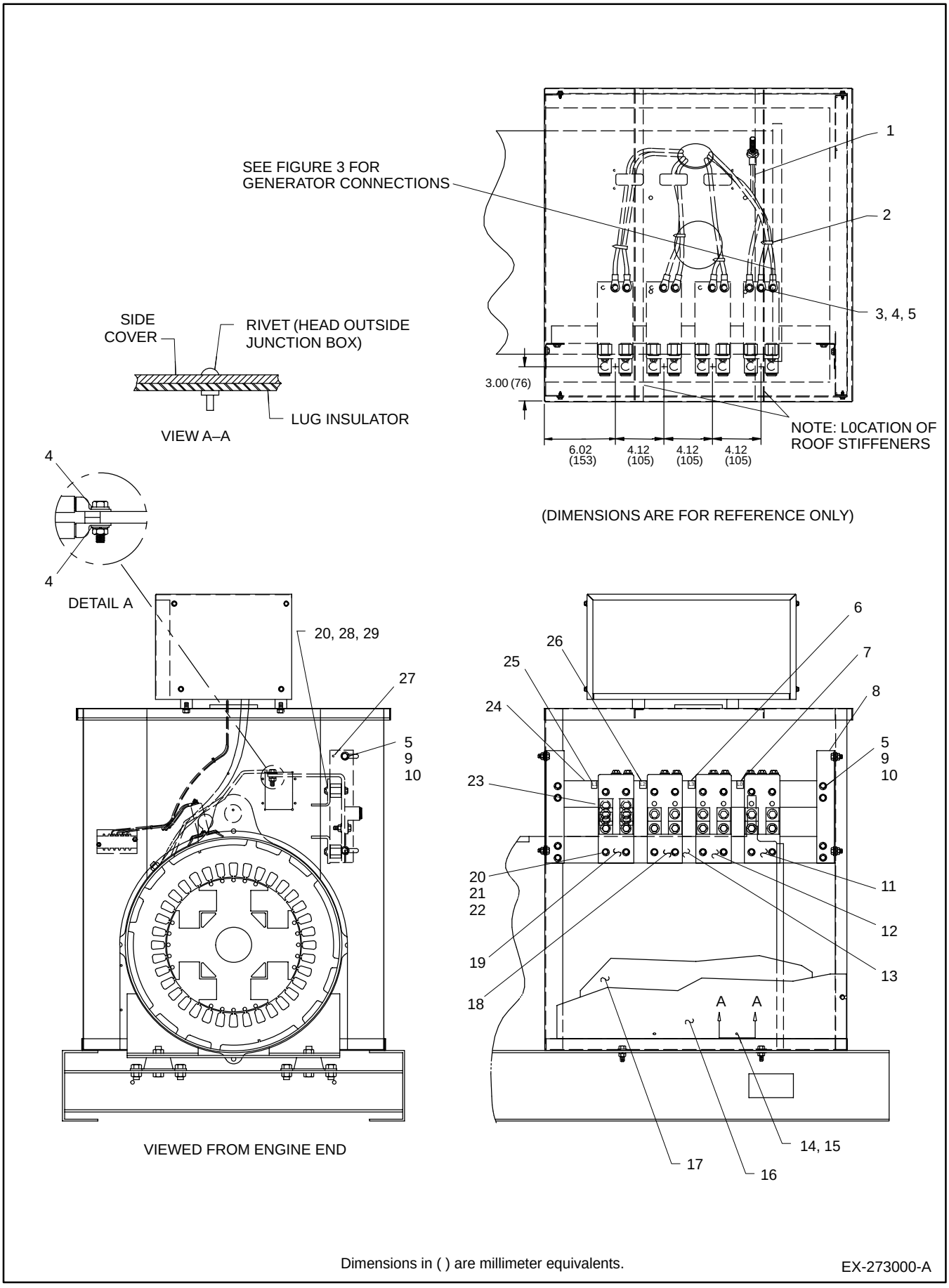
14. Replace junction box access panels.

15. Reconnect generator set battery cables, negative lead last.

16. Move generator set master switch to normal operating position.

LEGEND—Figure 2

1. Lead (LN-124-3636) qty. 2
2. Cable Tie (X-468-2) qty. 4
3. Hex Screw (X-125-5) qty. 9
4. Plain Washer (X-25-85) qty. 18
5. Whiz Nut (X-6210-7) qty. 21
6. Identification Tab—L3 (201620-95)
7. Identification Tab—L0 (201620-94)
8. Right Support Bracket (275455)
9. Hex Screw (X-125-3) qty. 12
10. Plain Washer (X-25-85) qty. 12
11. Load Bus Bar—L0 (275456)
12. Load Bus Bar—L3 (275456)
13. Lower Support Bracket (222964)
14. Pop Rivet (X-781-11) qty. 4
15. Plain Washer (X-25-92) qty. 4
16. Side Cover
17. Lug Insulator (275598)
18. Load Bus Bar—L2 (275456)
19. Load Bus Bar—L1 (275456)
20. Plain Washer (X-25-68) qty. 32
21. Plain Washer (X-25-40) qty. 8
22. Hex Screw (X-465-2) qty. 16
23. Left Support Bracket (275454)
24. Upper Support Bracket (222963)
25. Identification Tab—L1 (201620-83)
26. Identification Tab—L2 (201620-84)
27. Pop Rivet (X-781-10) qty. 4
28. Hex Screw (X-465-6) qty. 16
29. Panel Insulator (233269) qty. 16

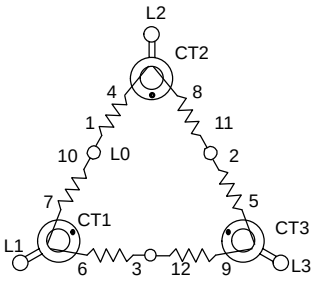


Dimensions in ( ) are millimeter equivalents.

EX-273000-A

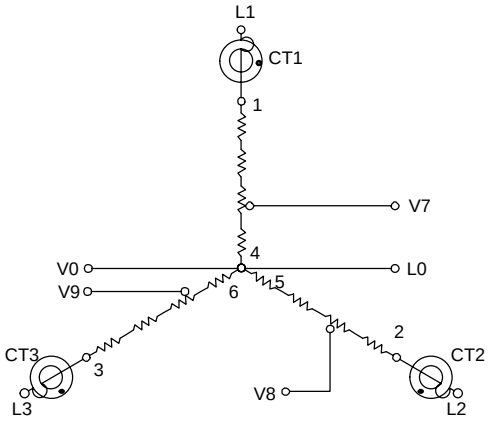
Figure 2. Load Bus Bar Kit Installation

60 HZ—120/240 V—1 PHASE 4 WIRE DELTA
50 HZ—110/220 V—1 PHASE 4 WIRE DELTA



TB2 UP V7 LO METER SCALE LAMP JUMPER

6 LEAD STATOR
600 VOLT



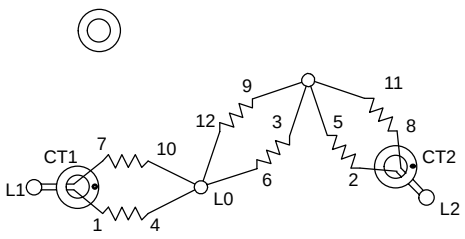
TB2 UP V7 LO METER SCALE LAMP JUMPER

NOTE: TWO TURNS THROUGH CURRENT TRANSFORMER

60 HZ—120/240 V—1 PHASE 3 WIRE
50 HZ—110/220 V—1 PHASE 3 WIRE

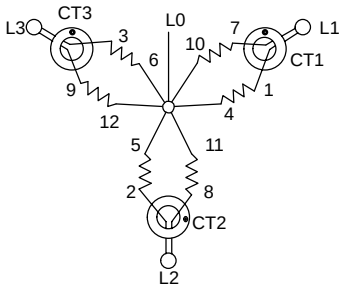
USED ON GENERATORS 20 kW–100 kW ONLY

CT3—NOT USED



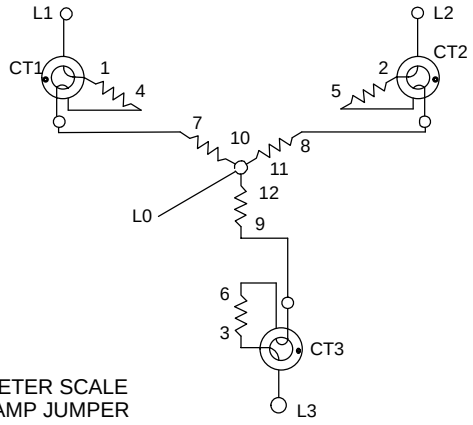
TB2 UP V7 LO METER SCALE LAMP JUMPER

60 HZ—120/208 V OR 139/240 V—3 PHASE 4 WIRE L0W WYE
50 HZ—120/208 V OR 110/190 V—3 PHASE 4 WIRE L0W WYE



TB2 UP V7 LO METER SCALE LAMP JUMPER

60 HZ—277/480 V—3 PHASE 4 WIRE HIGH WYE
50 HZ—220/380 V—3 PHASE 4 WIRE HIGH WYE



TB2 UP V7 LO METER SCALE LAMP JUMPER

NOTE: CURRENT TRANSFORMER DOT OR “HI” TOWARD GENERATOR

EX-273000-A

Figure 3. Generator Connections

Parts List

Kit: PA-222967

Description	Qty.	Part No.
Lead	2	LN-124-3636
Screw, 5/16-18 x 0.750 in. hex	12	X-125-3
Screw, 5/16-18 x 1.00 in. hex	9	X-125-5
Washer, 0.281 x 0.625 x 0.065 in. plain	8	X-25-40
Washer, 0.281 x 0.625 x 1.125 in. plain	32	X-25-68
Washer, 0.344 x 0.687 x 0.065 in. plain	30	X-25-85
Washer, 0.191 x 0.500 x 0.034 in. plain	4	X-25-92
Screw, 1/4-20 x 0.625 in. hex	16	X-465-2
Screw, 1/4-20 x 0.500 in. hex	16	X-465-6
Tie, cable	4	X-468-2
Nut, 5/16-18 whiz	21	X-6210-7
Rivet, pop	4	X-781-10
Rivet, pop	4	X-781-11
Tab, identification—L1	1	201620-83
Tab, identification—L2	1	201620-84
Tab, identification—L0	1	201620-94
Tab, identification—L3	1	201620-95
Bracket, upper support	1	222963
Bracket, lower support	1	222964
Insulator, panel	16	233269
Bracket, support (left)	1	275454
Bracket, support (right)	1	275455
Bar, load bus	4	275456
Insulator, lug	1	275598