INSTALLATION INSTRUCTIONS

Load Bus Bar Kit PA-222966
For 20-60 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.

NOTE

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

Lug Kit	Cable Size	Cables per Lug
274693	3/0-08	1
274694	350MCM-06	1
274695	500MCM-04	1

⚠ WARNING

Hazardous voltage.

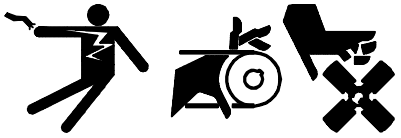
Moving rotor.

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.

⚠ 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.

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 (275458) and left (275457) support brackets to junction box with four 5/16-18 x 0.875-in. hex screws (X-125-31), 0.244 x 0.687 x 0.065-in. plain washers (X-25-85), and 5/16-18 whiz nuts (X-6210-7), as shown in Figure 1.
5. Install two support brackets (222962) to right and left support brackets with eight 5/16-18 x 0.625-in. hex screws (X-125-23), 0.244 x 0.687 x 0.065-in. plain washers (X-25-85), and 5/16-18 whiz nuts (X-6210-7).

6. Install four load bus bars (275459) to support brackets with eight 1/4-20 x 1.00-in. hex screws (X-465-7), 1/4-20 whiz nuts (X-6210-2), and 0.281 x 0.625 x 0.065-in. plain washers (X-25-40).

7. 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 (222962) at the locations shown in Figure1.

8. Attach lead (LN-424-3636) to terminal L0 (neutral) on stator shell. Attach other lead end to bus bar (L0); secure with two 1/4-20 x 1.00-in. hex screws (X-465-7), 1/4-20 whiz nuts (X-6210-2), and four 0.281 x 0.625 x 0.065-in. plain washers (X-25-40).

9. Connect generator leads to load bus bars according to application (see Figure 2) with six 1/4-20 x 1.00-in. hex screws (X-465-7), 1/4-20 whiz nuts (X-6210-2), and 12 0.281 x 0.625 x 0.065-in. plain washers (X-25-40). See Figure 1, Detail A.

10. Bundle generator leads and secure with cable ties (X-468-2).

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

12. Attach lug insulator (275562) to right side cover (as viewed from engine end) with four pop rivets (X-781-11) and 0.191 x 0.500 x 0.030-in. plain washers (X-25-92).

NOTE

Position rivet so that head is outside the junction box as shown in Figure 1, View C-C.

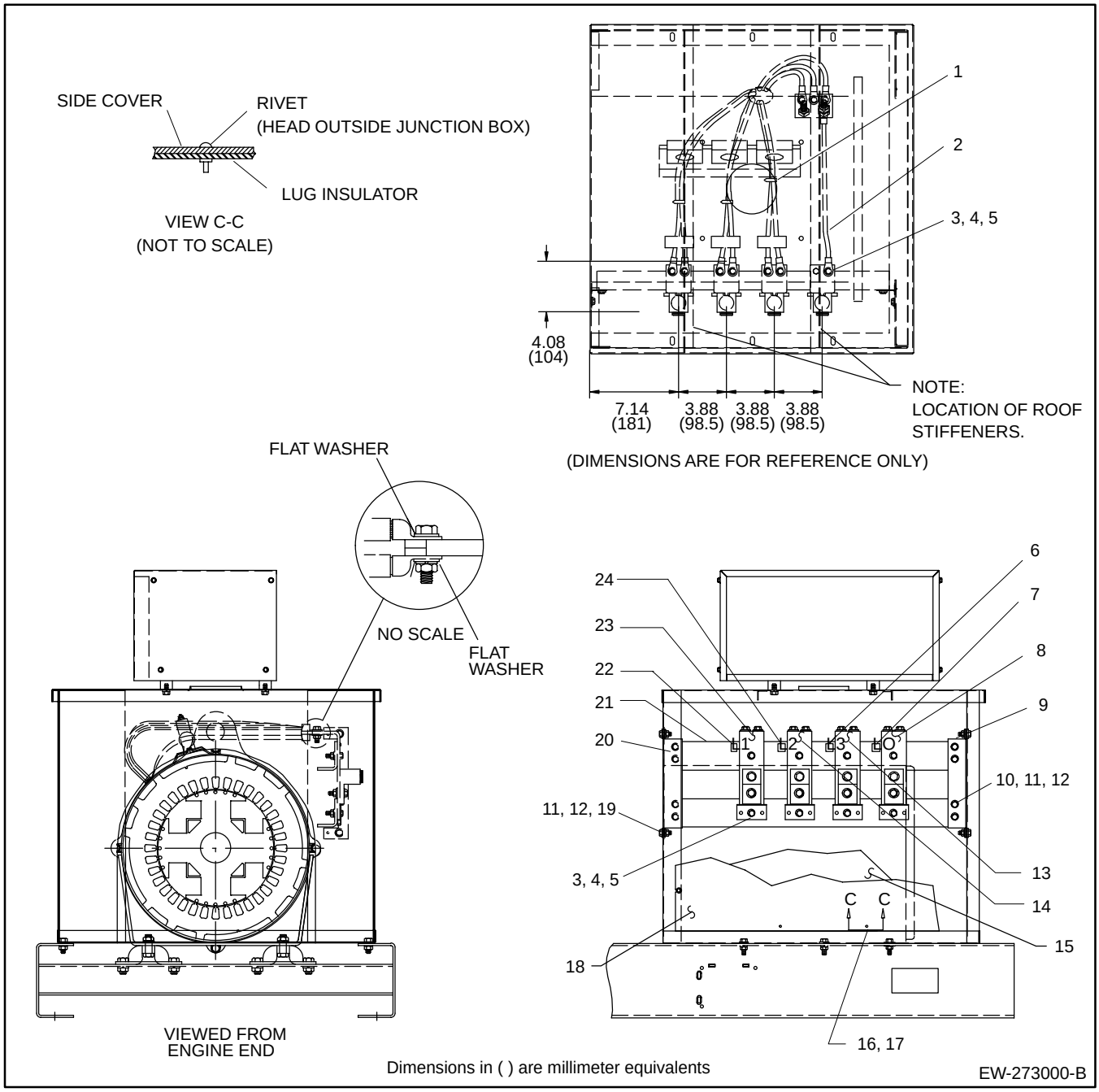
13. Replace junction box access panels.

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

Parts List

Kit: PA-222966

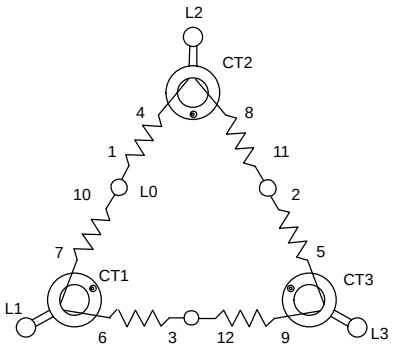
Description	Qty.	Part No.
Lead	1	LN-424-3636
Screw, 5/16-18 x 0.625 in. hex	8	X-125-23
Screw, 5/16-18 x 0.875 in. hex	4	X-125-31
Washer, 0.281 x 0.625 x 0.065 in. plain	24	X-25-40
Washer, 0.244 x 0.687 x 0.065 in. plain	12	X-25-85
Washer, 0.191 x 0.500 x 0.030 in. plain	4	X-25-92
Screw, 1/4-20 x 1.00 in. hex	16	X-465-7
Tie, cable	4	X-468-2
Nut, 1/4-20 whiz	16	X-6210-2
Nut, 5/16-18 whiz	12	X-6210-7
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, support	2	222962
Bracket, left support	1	275457
Bracket, right support	1	275458
Bar, load bus	4	275459
Insulator, lug	1	275562



1. Cable Tie (X-468-2) qty. 4
2. Lead (LN-424-3636)
3. Hex Screw (X-465-7) qty. 16
4. Whiz Nut (X-6210-2) qty. 16
5. Plain Washer (X-25-40) qty. 24
6. Identification Tab (L3) (201620-95)
7. Identification Tab (LO) (201620-94)
8. Load Bus Bar (LO) (275459)
9. Right Support Bracket (275458)
10. Hex Screw (X-125-23) qty. 8
11. Whiz Nut (X-6210-7) qty. 12
12. Plain Washer (X-25-85) qty. 12
13. Load Bus Bar (L3) (275459)
14. Load Bus Bar (L2) (275459)
15. Lug Insulator (275562)
16. Plain Washer (X-25-92) qty. 4
17. Pop Rivet (X-781-11) qty. 4
18. Side Cover
19. Hex Screw (X-125-31) qty. 4
20. Left Support Bracket (275457)
21. Support Bracket (222962) qty. 2
22. Identification Tab (L1) (201620-83)
23. Load Bus Bar (L1) (275459)
24. Identification Tab (L2) (201620-84)

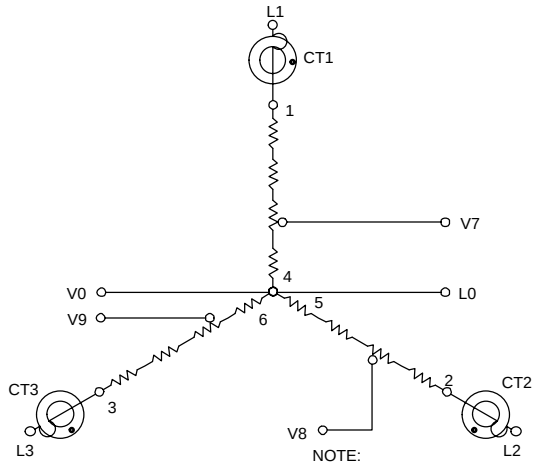
Figure 1. Load Bus Bar—Installation

60 HZ—120/240 V—3 PHASE, 4 WIRE DELTA
50 HZ—110/220 V—3 PHASE, 4 WIRE DELTA



TB2 UP V7 LO METER SCALE LAMP JUMPER

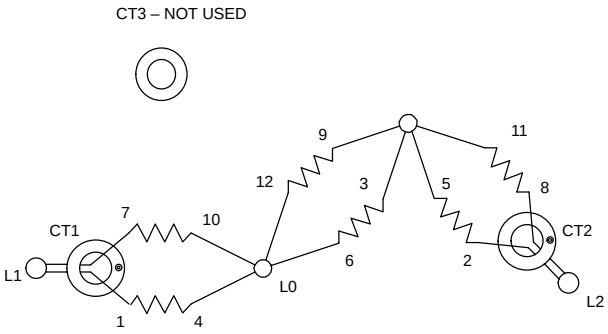
6 LEAD STATOR—600 VOLT



TB2 UP V7 LO METER SCALE LAMP JUMPER

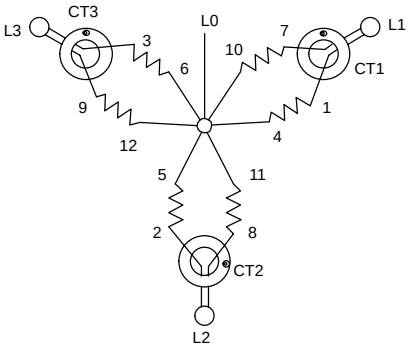
NOTE:
TWO TURNS THROUGH
CURRENT TRANSFORMER

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



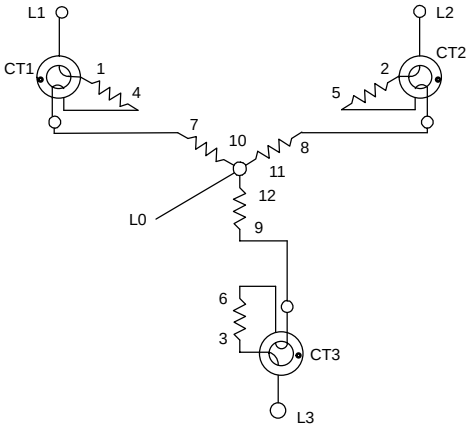
TB2 UP V7 LO METER SCALE LAMP JUMPER

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

EW-273000-B

Figure 2. Generator Connections