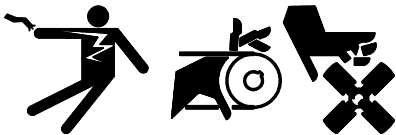


INSTALLATION INSTRUCTIONS

Original Issue Date: **9/96**
 Model: **35COZ/30CFOZ**
 Market: **Marine**
 Subject: **Sound Shield Kit PA-344202**

The sound shield provides for quiet operation of generator sets used in marine applications. When installing the sound shield, follow the general guidelines and observe the safety precautions listed below.

⚠ WARNING



Accidental starting.
Can cause severe injury or death.

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

Disabling generator set. 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 the generator set or connected equipment. The generator set can be started by an automatic transfer switch or remote start/stop switch unless these precautions are followed.

⚠ WARNING

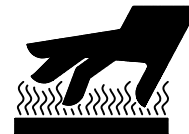


Fire.
Can cause severe injury or death.

Do not smoke or permit flame or spark to occur near fuel or fuel system.

Servicing fuel system. A flash fire can cause severe injury or death. Do not smoke or permit flame or spark to occur near carburetor, fuel line, fuel filter, fuel pump, or other potential sources of spilled fuel or fuel vapors. Catch all fuel in a suitable container when removing fuel line or carburetor.

⚠ WARNING



Hot engine and exhaust system.
Can cause severe injury or death.

Do not work on generator set until it is allowed to cool.

Servicing exhaust system. Hot parts can cause severe injury or death. Do not touch hot engine parts. An engine becomes hot while running and exhaust system components become extremely hot.

⚠ WARNING



Hazardous voltage.



Moving rotor.

Can cause severe injury or death.

Operate generator set only with all guards and electrical enclosures in place.

Grounding generator set. Hazardous voltage can cause severe injury or death. Electrocutation is possible whenever electricity is present. Open main circuit breakers of all power sources before servicing equipment. Configure the installation to electrically ground the generator set and electrical circuits when in use. Never contact electrical leads or appliances when standing in water or on wet ground, as the chance of electrocutation is increased under such conditions.

Installation

1. Place the generator set master switch in the OFF position.
2. Disconnect the generator set engine starting battery, negative (–) lead first.

NOTE

Before installing the sound shield, be sure to disconnect and route the battery leads through the holes provided in the skid.

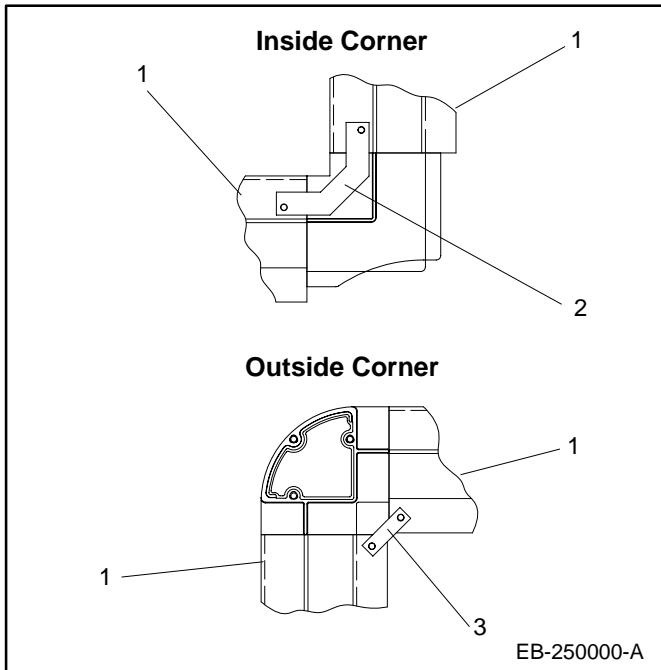
3. Refer to the assembly drawings in Figure 3 and Figure 4 to identify kit components and their relative positions.
4. Remove controller cover and disconnect the following leads:
 - 24-pin connector (P1)
 - 2-pin (F67-F68) voltage adjust connector
 - C0, C1, C2, and C3 current transformers
 - V7, V8, and V9 stator leads
 - V0 from the terminal strip
 - V7 and V8 from the fuse block
 - Leads 5 and 70 (if equipped)
5. Remove the controller. Save the hardware to use when mounting the controller onto the roof of the sound shield.
6. Install foam pieces (344438) (qty. 2), 344468, and 344470) against the side rails of the skid. See Figure 3.
7. Install U-channel (X-6358-8) onto air intake duct subassembly (344624). See Figure 4.
8. Remove the end bracket cover from alternator end of generator set. Position air intake duct subassembly (344624) onto alternator end of generator set and secure with 4 washers (X-25-138) and 4 hex nuts (X-6234-7). See Figure 4.

NOTE

If the part to be bolted to the unit is covered with a plastic protective film, remove the film before bolting the part to the unit. If the part is inserted into the frame (for example, the door subassemblies), remove the protective film after installation.

9. Construct one subassembly of outside connectors (344137) (qty. 2), sound shield rail (344130), inside connector (344138), sound shield rail (344156), and rail subassembly (344643). See Figure 3 and Figure 4.
10. Construct one subassembly of outside connectors (344137) (qty. 2), sound shield rail (344130), inside connector (344138), sound shield rail (344156), and rail subassembly (344644). See Figure 3 and Figure 4.
11. Construct one subassembly of outside connector (344137) and rail subassembly (344645). See Figure 3 and Figure 4.
12. Construct one subassembly of outside connector (344137) and rail subassembly (344646). See Figure 3 and Figure 4.
13. Follow the instructions below to construct a frame for the sound shield. Slide the pins on the outside and inside connectors into the extruded sound shield rails. See Figure 3 and Figure 4 for rail and connector positions. Install the 4 subassemblies constructed above and the following components:
 - Rail subassembly (344643), see Figure 3. Position the threaded inserts in the bottom holes of the corner rails and secure with 2 washers (X-25-139) and 2 hex cap screws (X-125-48).
 - Rail subassembly (344644), see Figure 3. Position the threaded inserts in the bottom holes of the corner rails and secure with 2 washers (X-25-139) and 2 hex cap screws (X-125-48).
 - Sound shield rail (344133) (qty. 3), see Figure 4.
 - Rail subassembly (344645), see Figure 3. Position the threaded inserts in the bottom holes of the corner rails and secure with 2 washers (X-25-139) and 2 hex cap screws (X-125-48).
 - Rail subassembly (344646), see Figure 3. Position the threaded inserts in the bottom holes of the corner rails and secure with 2 washers (X-25-139) and 2 hex cap screws (X-125-48).
 - Sound shield rail (344136) (qty. 2), see Figure 4.

14. Install corner rail brackets (344636) (qty. 2) and corner rail brackets (344635) (qty. 18) as shown in Figure 1. Use 2 pop rivets (X-781-12) to secure.



1. Rail
2. Corner rail bracket (344636)
3. Corner rail bracket (344635)

Figure 1. Corner Rail Bracket Installation

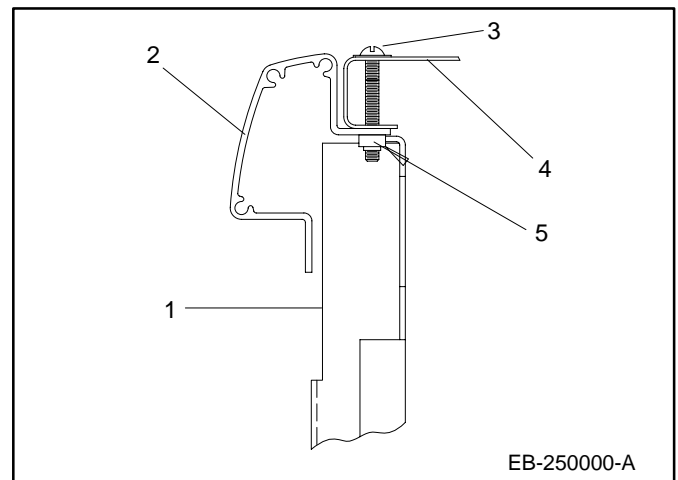
NOTE

15. Install rear door assembly (344622). See Figure 4. Use 2 hex cap screws (X-465-24) and 2 washers (X-25-142) to secure. See Figure 3.
16. Attach radiator hose (X-6014-87) to exhaust outlet. Use hose clamp (291537) to secure. See Figure 3.
17. Attach exhaust elbow (344488) to other end of radiator hose. Use hose clamp (291537) to secure. See Figure 3.
18. Use 2 clamps (X-426-8) and hose adapter (X-751-3) to install seawater inlet hose (344149) to the seawater inlet on the engine. See Figure 3. (Heat exchanger-cooled specs only.)
19. Remove existing air cleaner. Save one clamp. Install new air cleaner assembly (A-344385). Use air intake hose (344382), hose clamp (250081), hose clamp (X-426-2), and the clamp saved from the air cleaner removal. See Figure 4.
20. Insert controller leads through hole in roof subassembly (344608). Mount controller to roof subassembly using the hardware saved from the controller removal.

NOTE

Position the roof subassembly (344608) with the orientation hole in the lower flange at the rear of the generator.

21. Install 2 ft. foam piece (19010 08118) next to the rear door assembly (344622) so the foam piece will be between the rear door assembly and the (controller) roof subassembly that will be installed in step 23. See Figure 4.
22. Install right support (344629) and left support (344602). See Figure 3 for location. Use 2 screws (X-125-48) and 2 nuts (X-6234-2) in each support to secure to the side rails.
23. Install the (controller) roof subassembly (344608) with 4 fiber washers (222889) and 4 screws (X-73-33). See Figure 4.
24. Position a speed clip (297596) under the roof subassembly (on the rail) at each screw location and tighten the screws. See Figure 2.

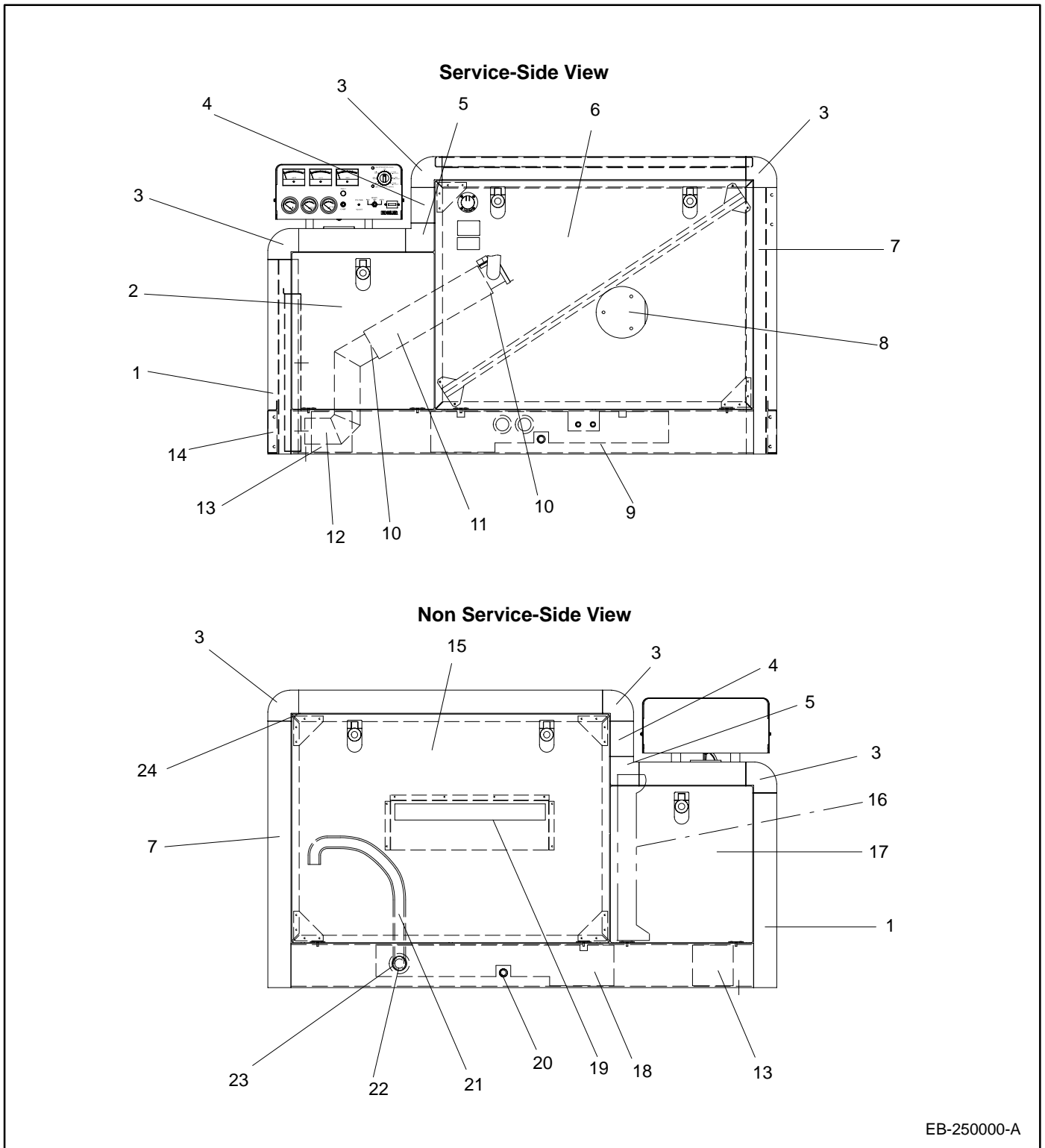


1. Sound shield support
2. Sound shield rail
3. Screw
4. Roof
5. Speed clip (297596)

Figure 2. Speed Clip Position

25. Reconnect the controller leads.
26. Position a speed clip (297596) under the roof subassembly (on the rail) at each screw location and tighten the screws. See Figure 2.
27. Install roof subassembly (344618) with 6 fiber washers (222889) and 6 screws (X-73-33). See Figure 4.
28. Install adhesive foam (344476) on front skid enclosure (344124) and install front skid enclosure on engine end of generator set with 4 screws (X-125-48) and 4 washers (X-25-139). See Figure 4.

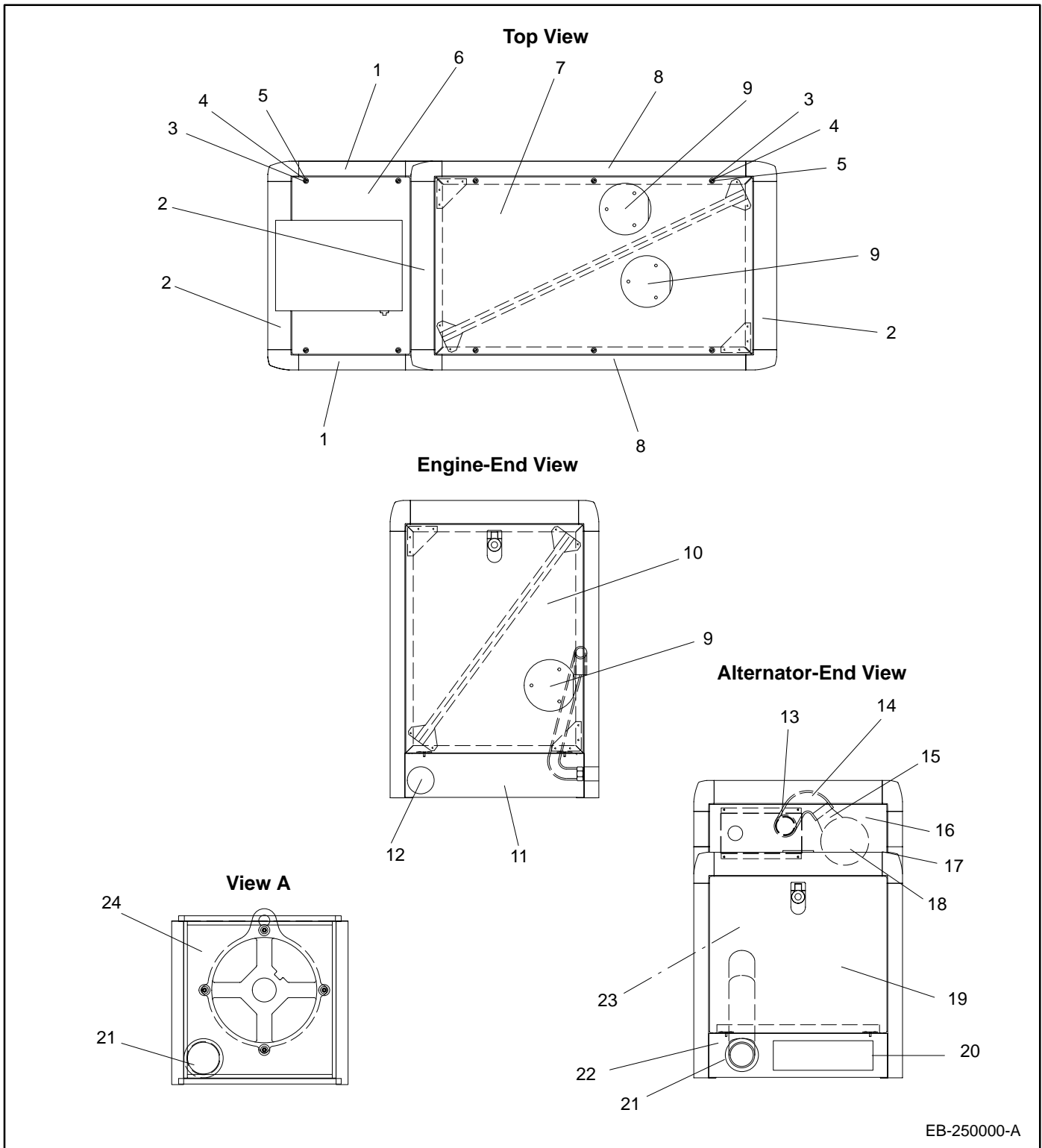
29. Insert button plug (X-301-38) onto front skid enclosure. See Figure 4.
30. Install rear skid enclosure (344116) on alternator end of generator set with 4 screws (X-465-24) and 4 washers (X-25-142). Install U-channel (X-6358-7) onto rear skid enclosure. Guide exhaust elbow through hole in rear skid enclosure. See Figure 4.
31. Insert pipe plug (X-75-3) into skid. See Figure 3 for location.
32. Align pins to holes in skid and install door subassemblies (344619 and 344647) under each side of the (controller) roof subassembly. See Figure 3.
33. Install U-channel (X-6358-9) onto door subassembly (344613). See Figure 3.
34. Align pins to holes in skid and install door subassembly (344613). See Figure 3.
35. Align pins to holes in skid and install door subassembly (344617). See Figure 3.
36. Align pins to holes in skid and install door subassembly (344611). See Figure 4.
37. Align pins to holes in skid and install door subassembly (344616). See Figure 4.
38. Install 4 access panels (344612). See Figure 3 and Figure 4.
39. Check that the generator set master switch is in the OFF position.
40. Reconnect the generator set engine starting battery, negative (–) lead last.



EB-250000-A

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| <ul style="list-style-type: none"> 1. Rail subassembly (344643/344644) 2. Alternator door subassembly (344647) 3. Outside connector (344137) 4. Sound shield rail (344130) 5. Inside connector (344138) 6. Door subassembly (344617) 7. Rail subassembly (344645/344646) 8. Access panel subassembly (344612) 9. Foam (344468) 10. Hose clamps (291537) 11. Radiator hose (X-6014-87) 12. Exhaust elbow (344488) | <ul style="list-style-type: none"> 13. Foam (344438) 14. Threaded insert location 15. Door subassembly (344613) 16. Sound shield support (344629/344602) location (2) 17. Alternator inlet hose (344619) 18. Foam (344470) 19. U-Channel (X-6358-9) 20. Pipe plug (X-75-3) 21. Seawater inlet hose (344149) 22. Hose clamp (X-426-8) 23. Hose adapter (X-751-3) 24. Location of corner rail bracket installed in step 14 |
|--|--|

Figure 3. Sound Shield



EB-250000-A

- 1. Sound shield rail (344156)
- 2. Sound shield rail (344133)
- 3. Fiber washer (222889) (4)
- 4. Speed clip (297596) (4)
- 5. Screw (X-73-33) (4)
- 6. Roof subassembly (344608)
- 7. Roof subassembly (344618)
- 8. Sound shield rail (344136)
- 9. Access panel subassembly (344612)
- 10. Door subassembly (344616)
- 11. Front skid enclosure (344124) and adhesive foam (344476)
- 12. Button plug (X-301-38)
- 13. Hose clamp (X-426-2)
- 14. Air intake hose (344382)
- 15. Hose clamp (250081)
- 16. Door subassembly (344622)
- 17. 2 ft. piece of foam (19010 08118)
- 18. Air cleaner assembly (A-344385)
- 19. Door subassembly (344611)
- 20. U-channel (X-6358-7)
- 21. U-channel (X-6358-8)
- 22. Rear skid enclosure (344116)
- 23. See View A
- 24. Air intake duct subassembly (344624)

Figure 4. Sound Shield

Sound Shield

Parts List		
PA-344202		
Qty.	Description	Parts
1	Cleaner assembly, air	A-344385
16	Screw, hex cap 5/16-18 x .750	X-125-48
4	Washer, plain I.D.=.406	X-25-138
12	Washer, plain I.D.=.344	X-25-139
6	Washer, stainless steel I.D.=.281	X-25-142
1	Plug, button	X-301-38
1	Clamp, hose 2.31 to 3.25	X-426-2
2	Clamp, hose .81 to 1.75	X-426-8
6	Screw, hex cap 1/4-20 x .625	X-465-24
1	Hose, radiator	X-6014-87
4	Nut, hex 5/16-18	X-6234-2
4	Nut, hex 3/8-16	X-6234-7
1	Channel, U	X-6358-7
1	Channel, U	X-6358-8
1	Channel, U	X-6358-9
10	Screw, phm 1/2-20 x 2.000	X-73-33
1	Plug, pipe	X-75-3
1	Adapter, hose I.D.=1 1/4	X-751-3
40	Rivet, pop Dia.=.125	X-781-12
2 ft.	Foam	19010 08118
10	Washer, fiber	222889
1	Clamp, hose 2.06 to 3.00	250081
2	Clamp, hose 3.75 to 4.06	291537
10	Clip, speed	297596
1	Enclosure, rear skid	344116
1	Enclosure, front skid	344124
2	Rail, sound shield	344130
3	Rail, sound shield	344133
2	Rail, sound shield	344136

Parts List		
PA-344202		
Qty.	Description	Parts
6	Connector, outside	344137
2	Connector, inside	344138
1	Hose, seawater inlet	344149
2	Rail, sound shield	344156
1	Hose, air intake	344382
2	Insulation, acoustic foam	344438
1	Insulation, acoustic foam	344468
1	Insulation, acoustic foam	344470
1	Insulation, acoustic foam	344476
1	Elbow, exhaust	344488
1	Support, sound shield	344602
1	Roof, subassembly	344608
1	Door, subassembly	344611
4	Panel, subassembly	344612
1	Door, subassembly (left)	344613
1	Door, subassembly (front)	344616
1	Door, subassembly (right)	344617
1	Roof, subassembly	344618
1	Door, subassembly	344619
1	Door, subassembly (rear)	344622
1	Duct, subassembly	344624
1	Support, sound shield	344629
18	Bracket, corner rail	344635
2	Bracket, corner rail	344636
1	Rail, subassembly	344643
1	Rail, subassembly	344644
1	Rail, subassembly	344645
1	Rail, subassembly	344646
1	Door, subassembly	344647