

INSTALLATION INSTRUCTIONS

Original Issue Date: 9/95
Model: 20-60 kW (Detroit Diesel Powered)
Market: Industrial
Subject: Sound Shield Enclosure Kits PA-324742-SD, 324742-SD, PA-324743-SD, 324743-SD, PA-324744-SD, 324744-SD, PA-327155, 327155, PA-327156, 327156, PA-327157, 327157

Sound shield enclosure provides sound dampening of an operating generator set and applies to the following sound shield enclosure kits.

Model	Kits
20 kW	PA-327155, 327155, PA-324742-SD, 324742-SD
30-40 kW	PA-327156, 327156, PA-324743-SD, 324743-SD
50-60 kW	PA-327157, 327157, PA-324744-SD, 324744-SD

The sound shield enclosure is preassembled at the factory and some final assembly is required at the time of installation. For sound shield enclosure dimensions see Figure 1, Figure 2, and Figure 3.



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

⚠ WARNING



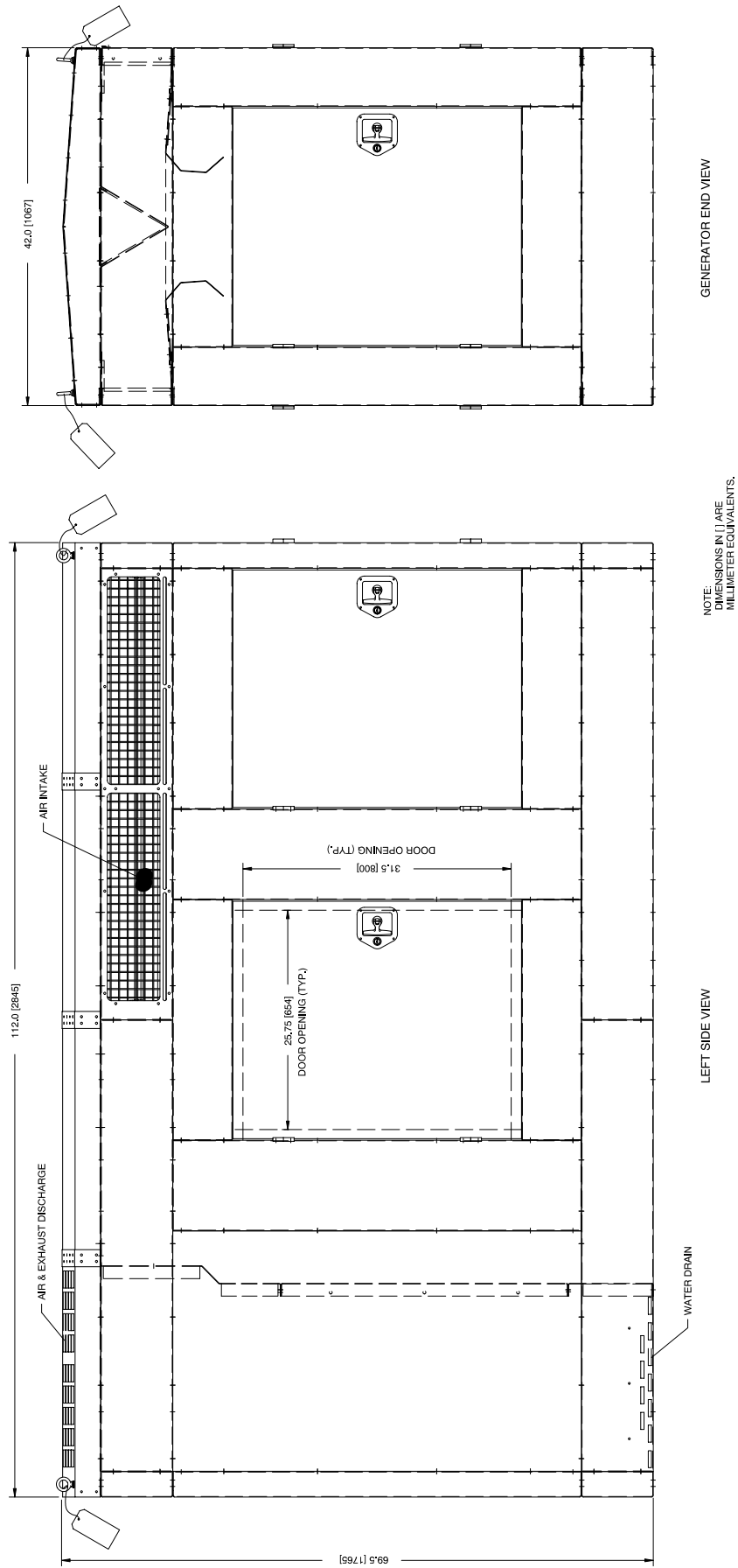
Unbalanced weight.
Improper lift can cause severe injury or death and/or equipment damage.

Do not use lifting eyes.
Use lifting bars through holes in skid to lift generator set.

Installation

1. Move generator set master switch to the OFF position. Disconnect the generator set engine starting battery, negative (–) lead first.
 2. Mark sound shield enclosure access doors so they can be reinstalled in their original locations. Doors
- and openings are factory aligned for fit and appearance.

 3. Remove sound shield enclosure access doors.



ADV-6019A-

Figure 1. 20-60 kW Sound Shield Enclosure Dimension Drawing

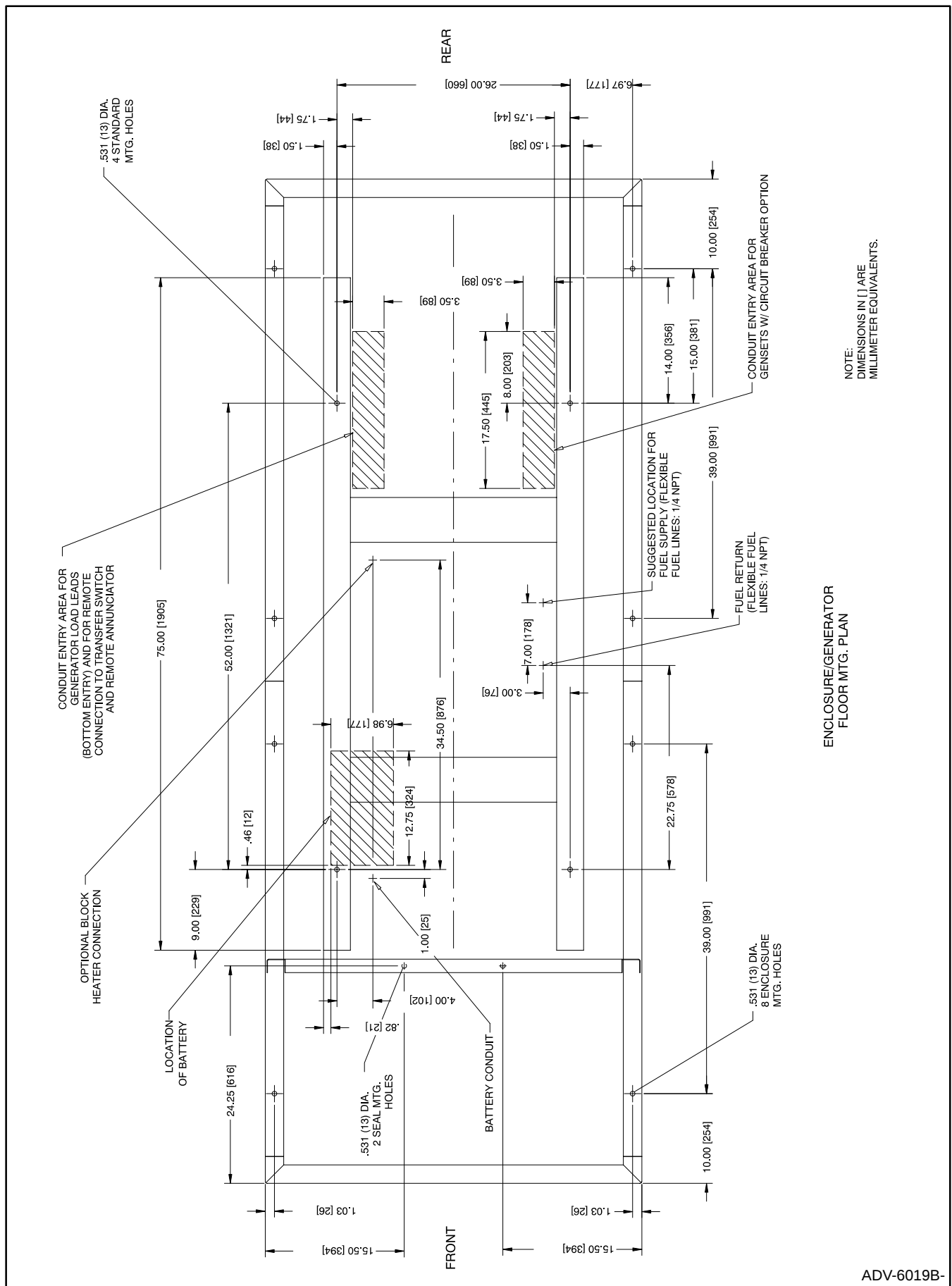


Figure 2. 20 kW Sound Shield Enclosure Dimension Drawing

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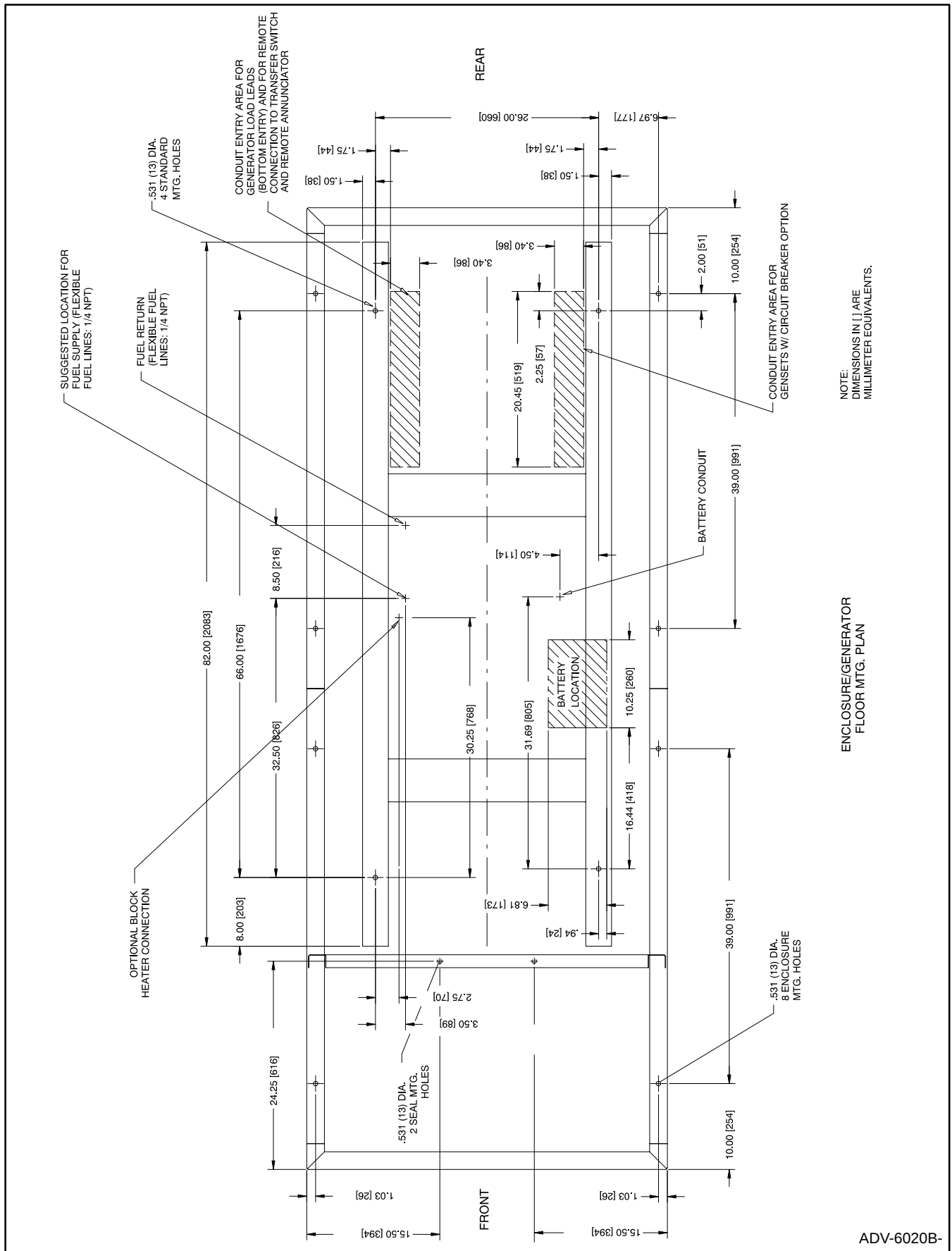


Figure 3. 30-60 kW Sound Shield Enclosure Dimension Drawing

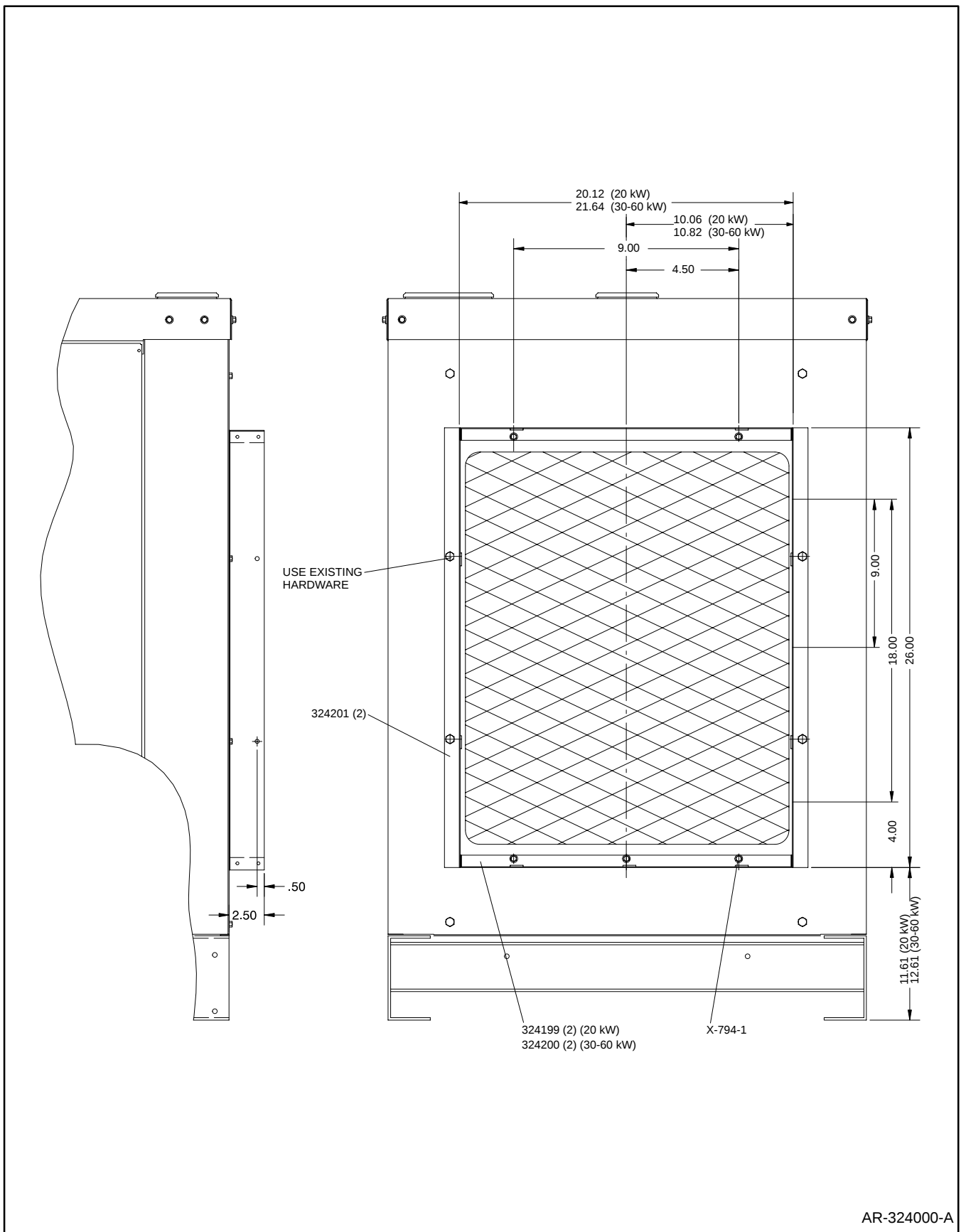


Figure 4. Radiator Duct Flange Mounting

4. Remove screws attaching the sound shield enclosure to the shipping pallet.
5. Remove drill screws attaching radiator duct flange to radiator shroud, if installed. See Figure 4. Do not remove bolts attaching radiator duct flange to the sound shield enclosure.
6. Remove any shipped-loose components, packing material, and literature from inside the sound shield enclosure. If exhaust piping is preassembled, be sure that exhaust system is disconnected at generator set exhaust manifold.
7. Check weight of sound shield enclosure and choose lifting equipment capable of handling the weight. Use applicable sound shield enclosure spec sheet for weights. Place sound shield enclosure on a solid flat surface until installed over generator set.

Hoist the sound shield enclosure, including the silencer, at each eye bolt on top of the sound shield enclosure. Lift slowly to prevent damage to generator set and/or sound shield enclosure. The unit may require balancing to achieve vertical removal because the silencer is mounted to the sound shield enclosure. Use load levelers as necessary to balance the load. If exhaust system is preassembled, use care that loose exhaust system does not damage engine and/or sound shield enclosure.
8. Consult applicable generator set spec sheet for generator set weight. Lift generator set and place it on the mounting base using lifting equipment capable of handling the weight. Mount generator set to mounting base. Remove lifting equipment from generator set.
9. Raise sound shield enclosure and place it over generator set. Observe each corner for adequate clearance while carefully lowering sound shield enclosure. Check that exhaust system is correctly aligned if unit has preassembled exhaust piping. Remove hoist equipment from sound shield enclosure.

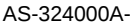
10. Align radiator duct flange to radiator shroud. Attach radiator duct flange to radiator shroud using four drill screws (X-794-1). Predrill mounting holes if an impact wrench is not available. See Figure 4.
11. Secure sound shield enclosure to mounting base. See Figure 2 for hole locations.

NOTE

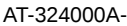
The exhaust system may be partially preassembled on some units.

12. Starting at exhaust muffler install exhaust pipe (276961 and 222657), and exhaust pipe (327166, 327167, or 327168). At each connection install exhaust clamps (286283). Install exhaust clamp (X-722-5 or X-722-2) at exhaust manifold outlet. Do not yet final tighten exhaust clamps. See Figure 5, Figure 6, Figure 7, or Figure 8.

With each section installed and exhaust pipe centered in exhaust port of sound shield enclosure, final tighten all exhaust clamps.
13. Install fiberglass exhaust wrap (19000 09400) over exhaust piping starting at exhaust manifold. Overlap exhaust wrap about 1/3 to 1/2 of the material width. Use hose clamp (X-426-5) to secure the beginning of the exhaust wrap. The end of exhaust wrap must stop at or beyond point where exhaust pipe goes through the hole in the sound shield enclosure. Secure the end of exhaust wrap with second hose clamp (X-426-5).
14. Finalize generator set installation. Install battery rack and cables. Connect fuel supply and return line to generator set. Make all AC connections and replace junction box panels. Connect all remote electrical wiring (remote emergency stop, remote annunciator, etc.).
15. Install all sound shield enclosure access doors in their original locations. If required, readjust doors for fit and appearance. Check that all hardware has been tightened. With generator set master switch in the OFF position, reconnect engine starting battery, negative (–) lead last.



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Parts List				
KITS: PA-327155, 327155, PA-324742-SD, 324742-SD			Unique Parts	
Qty.	Description	Common Parts	PA-324742-SD 324742-SD	PA-327155 327155
8	Washer, plain 1.0 in. (25.40 mm) O.D.	X-25-124		
8	Washer, plain 1.25 in. (31.75 mm) O.D.	X-25-38		
10	Spacer	X-400-193		
2	Clamp, hose 2 17/32	X-426-1		
2	Tie, cable	X-468-7		
12	Nut, retainer	X-6204-5		
3	Decal			X-6276-8
1	Decal		X-6301-1	
2	Decal		X-6301-2	
1	Clamp, U	X-722-5		
8	Rivet, pop 1/8 in. (3 mm) aluminum/steel	X-781-11		
50	Rivet, pop 1/8 in. (3 mm) stainless	X-781-13		
182	Rivet, pop 1/8 in. (3 mm) aluminum/stainless	X-781-15		
10	Screw, drill hex.	X-794-1		
25	Foam, seal tape (ft.)	19000 08100		
15	Insulation, fiberglass (ft.)	19000 09400		
53	Foam, PVC seal tape (ft.)	19010 08118		
1	Pipe, exhaust	222657		
4	Bracket, battery charger		324745	222666
1	Strap		324746	222670
1	Support, foam wedge		324747	222671
2	Strap, foam wedge		324812	222718
4	Tag, instruction	222887		
12	Washer, fiber	222889		
8	Washer, fiber	222890		
4	Bolt, eye	222891		
2	Louver, air intake		324748	222902
2	Baffle		324770	222903
1	Channel, air intake		324749	222904
2	Support, screen		324751	222905
1	Channel, air intake		324750	222906
2	Louver, air intake		324752	222907
2	Mount, controller	241769		
1	Cap, rain	253191		
1	Muffler, exhaust	276842		
5	Support, roof		324753	276888
2	Panel, roof		324754	276889
1	Panel, end roof		324755	276890
1	Panel, end roof		324756	276891
4	Support, corner		324757	276892
12	Support, door		324758	276893
5	Door		324759	276894
4	Support, side door		324760	276895
2	Panel, side		324761	276896
1	Door, front		324762	276897
4	Channel, solid		324763	276898
1	Channel, drain		324764	276900
4	Channel, end		324766	276901
12	Gusset, corner		324767	276902
2	Support, screen		324768	276906
2	Support, baffle		324771	276908
3	Strip, roof panel		324772	276909
1	Channel, drain		324765	276912
1	Support, muffler		324773	276913

Parts List (continued)				
KITS: PA-327155, 327155, PA-324742-SD, 324742-SD			Unique Parts	
Qty.	Description	Common Parts	PA-324742-SD 324742-SD	PA-327155 327155
2	Stiffener, muffler support		324774	276914
10	Brace, door		324775	276915
2	Screen	276917		
5	Latch, key locking	276918		
2	Clamp, muffler	276921		
1	Pipe, exhaust	276961		
1	Support, exhaust	276966		
1	Pipe, exhaust	276967		
5	Clamp, exhaust pipe	286283		
40	Screw, flat head machine	295098		
10	Hinge, split	297601		
2	Frame, air duct	324199		
2	Frame, air duct	324201		
1	Seal, top		324776	327158
1	Seal bottom		324777	327159
2	Seal, side		324778	327160
1	Pipe, flex exhaust	327166		
1	Kit, acoustic foam	336363		

Parts List				
KITS: PA-327156, 327156, PA-324743-SD, 324743-SD			Unique Parts	
Qty.	Description	Common Parts	PA-324743-SD 324743-SD	PA-327156 327156
8	Washer, plain	X-25-124		
8	Washer, plain	X-25-38		
10	Spacer	X-400-193		
2	Clamp, hose 2 17/32	X-426-1		
2	Tie, cable	X-468-7		
12	Nut, retainer	X-6204-5		
3	Decal			X-6276-8
1	Decal		X-6301-1	
2	Decal		X-6301-2	
1	Clamp, U	X-722-5		
8	Rivet, pop 1/8 in. (3 mm) aluminum/steel	X-781-11		
50	Rivet, pop 1/8 in. (3 mm) stainless	X-781-13		
182	Rivet, pop 1/8 in. (3 mm) aluminum/stainless	X-781-15		
10	Screw, drill hex.	X-794-1		
25	Foam, seal tape (ft.)	19000 08100		
15	Insulation, fiberglass (ft.)	19000 09400		
53	Foam, PVC seal tape (ft.)	19010 08118		
1	Pipe, exhaust	222657		
4	Bracket, battery charger		324745	222666
1	Strap		324746	222670
1	Support, foam wedge		324747	222671
2	Strap, foam wedge		324812	222718
4	Tag, instruction	222887		
12	Washer, fiber	222889		
8	Washer, fiber	222890		
4	Bolt, eye	222891		
2	Louver, air intake		324748	222902
2	Baffle		324770	222903
1	Channel, air intake		324749	222904
2	Support, screen		324751	222905
1	Channel, air intake		324750	222906
2	Louver, air intake		324752	222907
2	Mount, controller	241769		
1	Cap, rain	251191		
1	Muffler, exhaust	327165		
5	Support, roof		324753	276888
2	Panel, roof		324754	276889
1	Panel, end roof		324755	276890
1	Panel, end roof		324756	276891
4	Support, corner		324757	276892
12	Support, door		324758	276893
5	Door		324759	276894
4	Support, side door		324760	276895
2	Panel, side		324761	276896
1	Door, front		324762	276897
4	Channel, solid		324763	276898
1	Channel, drain		324764	276900
4	Channel, end		324766	276901
12	Gusset, corner		324767	276902
2	Support, screen		324768	276906
2	Support, baffle		324771	276908
3	Strip, roof panel		324772	276909
1	Channel, drain		324765	276912
1	Support, muffler		324773	276913
2	Stiffener, muffler support		324774	276914
10	Brace, door		324775	276915

Parts List (continued)				
KITS: PA-327156, 327156, PA-324743-SD, 324743-SD			Unique Parts	
Qty.	Description	Common Parts	PA-324743-SD 324743-SD	PA-327156 327156
2	Screen	276917		
5	Latch, key locking	276918		
2	Clamp, muffler	276921		
1	Pipe, exhaust	276961		
1	Support, exhaust	327186		
1	Pipe, exhaust	276967		
5	Clamp, exhaust pipe	286283		
40	Screw, flat head machine	295098		
10	Hinge, split	297601		
2	Frame, air duct	324200		
2	Frame, air duct	324201		
1	Seal, top		324780	327162
1	Seal bottom		324779	327161
2	Seal, side		324847	336361
1	Pipe, flex exhaust	327167		
1	Kit, acoustic foam	336363		

Parts List				
KITS: PA-327157, 327157, PA-324744-SD, 324744-SD			Unique Parts	
Qty.	Description	Common Parts	PA-324744-SD 324744-SD	PA-327157 327157
8	Washer, plain	X-25-124		
8	Washer, plain	X-25-38		
10	Spacer	X-400-193		
2	Clamp, hose 2 17/32	X-426-1		
2	Tie, cable	X-468-7		
12	Nut, retainer	X-6204-5		
3	Decal			X-6276-8
1	Decal		X-6301-1	
2	Decal		X-6301-2	
1	Clamp, U	X-722-5		
8	Rivet, pop 1/8 in. (3 mm) aluminum/steel	X-781-11		
50	Rivet, pop 1/8 in. (3 mm) stainless	X-781-13		
182	Rivet, pop 1/8 in. (3 mm) aluminum/stainless	X-781-15		
10	Screw, drill hex.	X-794-1		
25	Foam, seal tape (ft.)	19000 08100		
15	Insulation, fiberglass (ft.)	19000 09400		
53	Foam, PVC seal tape (ft.)	19010 08118		
1	Pipe, exhaust	222657		
4	Bracket, battery charger		324745	222666
1	Strap		324746	222670
1	Support, foam wedge		324747	222671
2	Strap, foam wedge		324812	222718
4	Tag, instruction	222887		
12	Washer, fiber	222889		
8	Washer, fiber	222890		
4	Bolt, eye	222891		
2	Louver, air intake		324748	222902
2	Baffle		324769	276907
1	Channel, air intake		324749	222904
2	Support, screen		324751	222905
1	Channel, air intake		324750	222906
2	Louver, air intake		324752	222907
2	Mount, controller	241769		
1	Cap, rain	253191		
1	Muffler, exhaust	327165		
5	Support, roof		324753	276888
2	Panel, roof		324754	276889
1	Panel, end roof		324755	276890
1	Panel, end roof		324756	276891
4	Support, corner		324757	276892
12	Support, door		324758	276893
5	Door		324759	276894
4	Support, side door		324760	276895
2	Panel, side		324761	276896
1	Door, front		324762	276897
4	Channel, solid		324763	276898
1	Channel, drain		324764	276900
4	Channel, end		324766	276901
12	Gusset, corner		324767	276902
2	Support, screen		324768	276906
2	Support, baffle		324771	276908
3	Strip, roof panel		324772	276909
1	Channel, drain		324765	276912
1	Support, muffler		324773	276913
2	Stiffener, muffler support		324774	276914
10	Brace, door		324775	276915

Parts List				
KITS: PA-327157, 327157, PA-324744-SD, 324744-SD			Unique Parts	
Qty.	Description	Common Parts	PA-324744-SD 324744-SD	PA-327157 327157
2	Screen	276917		
5	Latch, key locking	276918		
2	Clamp, muffler	276921		
1	Pipe, exhaust	276961		
1	Support, exhaust	327186		
1	Pipe, exhaust	276967		
5	Clamp, exhaust pipe	286283		
40	Screw, flat head machine	295098		
10	Hinge, split	297601		
2	Frame, air duct	324200		
2	Frame, air duct	324201		
1	Seal, top		324780	327162
1	Seal bottom		324779	327161
2	Seal, side		324847	336361
1	Pipe, flex exhaust	327168		
1	Kit, acoustic foam	336363		