



## Hush Cover Kits 12.5CCO-20CCO and 10.5CCFO-16.5CCFO Marine Generator Sets

KIT NOS.	MODELS
<b>Gear Driven Sea Water Pump Gen. Sets</b>	
PA-249449	12.5CCFO/16CCO 16.5CCFO/20CCO
PA-249450	10.5CCFO/12.5CCO
<b>Belt Driven Sea Water Pump Gen. Sets</b>	
PA-249964	12.5CCFO/16CCO 16.5CCFO/20CCO
PA-249963	10.5CCFO/12.5CCO

### NOTE

Belt driven sea water pump hush cover kits can be used on gear driven sea water pump units.

When planning the installation of the Hush Cover Kit, allow sufficient clearance around the enclosure to remove the covers for servicing of the generator set. Overall dimensions of the enclosure and recommended minimum clearances are shown in Figure 1.

### WARNING

**UNIT STARTS WITHOUT NOTICE!** Prevent unit from accidental starting while servicing. Disconnect battery, remove negative (-) lead first. Reconnect negative (-) lead last.



The base must be firmly attached to stringers. If the base extends beyond the stringers by more than 3 in. (76 mm), the base will require additional support at the edges. See Figure 2 for base and mounting hole dimensions.

### NOTE

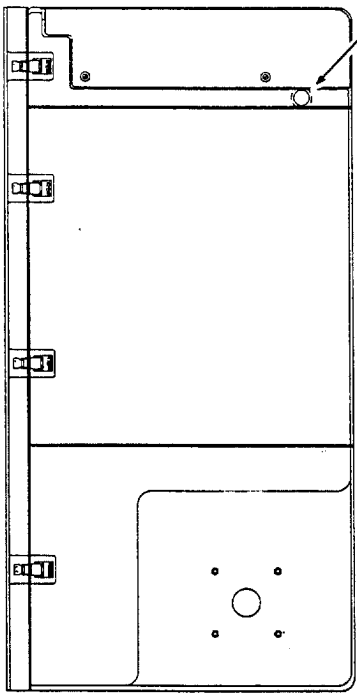
If hush cover kit is being installed on a unit already in service, all external connections must be removed prior to installation. These connections include water inlet, exhaust outlet, fuel line, battery connections, AC load connections, and remote panel connections (if used). Before removing hoses, close all petcocks and valves.

### NOTE

Removal of engine wiring harness requires pin removal tool 241918.

### INSTALLATION

1. Disconnect battery of generator set, negative lead first.
2. Secure base 250686 to craft adhering to the recommended clearances in Figure 1.



**NOTE**  
Dimensions in ( ) are millimeter equivalent.

View A - A

Fuel filter bleed screw access hole plug

Allow 3 in. minimum clearance at top

Controller

Oil and fuel access door

Air Outlet

Air Intake

Generator end

Engine end

28 3/4 (733)

50 1/2 (1283)

1 inch plywood

25 3/4 (654)

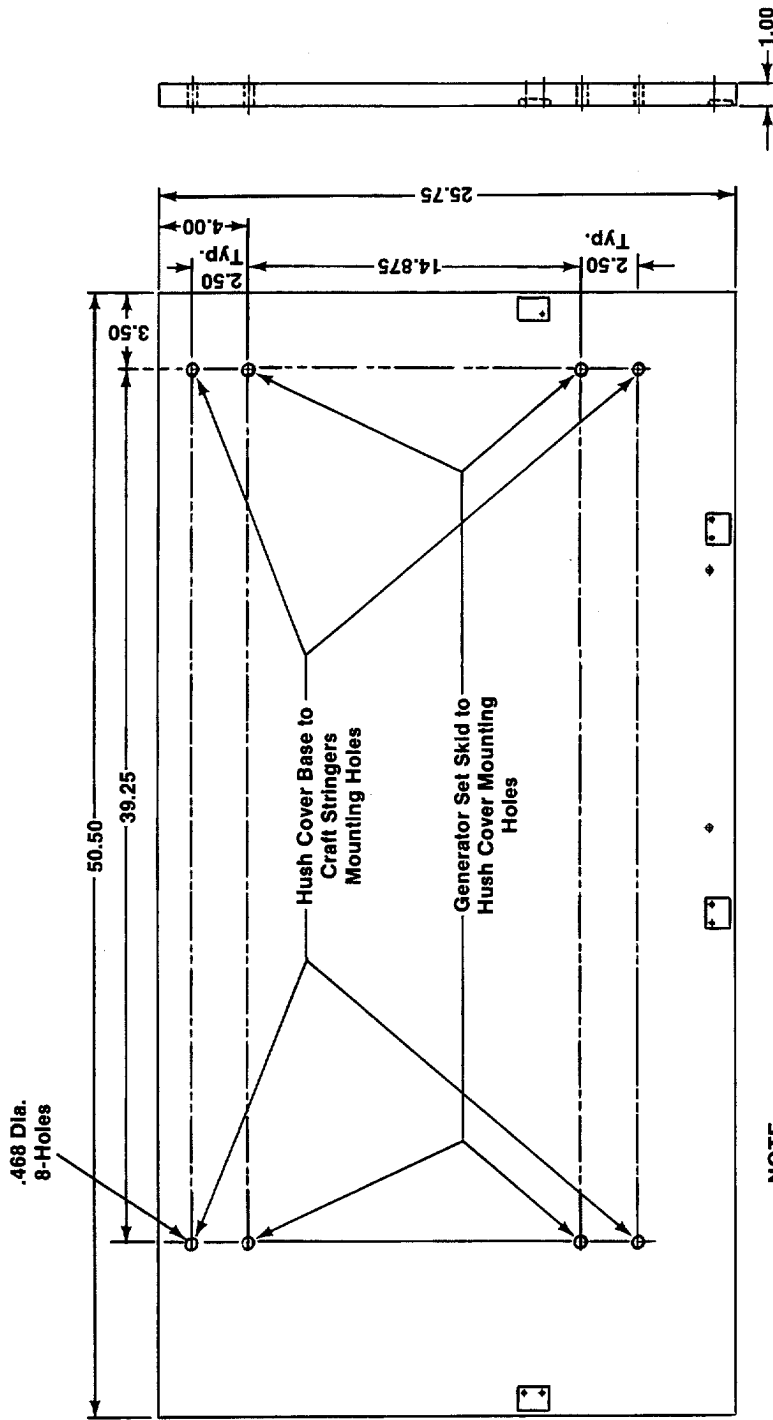
Allow 6 in. minimum clearance on sides

Allow 3 in. minimum clearance on sides

A-249481/  
A-249957  
ADV-5523

Figure 1. Dimensions and Recommended Minimum Clearances

3. Mount generator set to base using four screws X-6238-4 and lock washers X-22-1. See Figure 2. Remove existing generator set belt guard and hardware. This equipment is not required when a hush cover is installed. Belt guard must be reinstalled should hush cover be removed at a later time.
4. Install U-channel X-6047-7 and grommets X-284-2 and 243319 into access panel 249286. Install exhaust pipe 249285 (12.5CCO/10.5CCFO) or 249280 (16CCO/12.5CCFO and 20CCO/16.5CCFO). Mount access panel to base using two screws X-465-8 and lock washer X-20-1. Place access panel foam 249335 around access panel. See Figure 3.
5. Slide two hose clamps X-426-1 over (radiator) hose X-507-3. Connect hose between mixing elbow and access panel elbow. Locate clamps 1/4 in. (6 mm) from ends of hose and tighten.
6. Connect fuel inlet hose 249355 to fuel feed pump inlet fitting and locate hose clamps 1/8 in. (3 mm) from end of hose. Connect fuel return hose 249356 to fitting at fuel filter (or fuel injection pump on early models) and locate hose clamp 1/8 in. (3 mm) from end of hose. Use supplied cable ties X-468-1 to secure hoses together and run under engine to access panel grommets.
7. Separate upper and lower barriers (if shipped assembled). Assemble upper (249278) and lower (249277) barriers around generator set stator assembly using supplied self-tapping screws. See Figure 4.
8. Air intake hose connection See Figure 3.
  - a. **12.5CCO/10.5CCFO models:** slide two hose clamps X-426-6 over air intake hose X-581-2 and connect hose to engine air intake silencer and to lower barrier (249277) flange. Place safety cap over upper barrier (249278) flange. Locate clamps 1/4 in. (6 mm) from ends of hose and tighten.
  - b. **16CCO/12.5CCFO and 20CCO/16.5CCFO models:** slide two hose clamps X-426-6 over air intake hose X-581-12 and connect hose engine air intake silencer and to upper barrier (249278) flange. Place safety cap over lower barrier (249277) flange. Locate 1/4 in. (6 mm) from ends of hose and tighten.
9. Install four vibro mounts 241769 into nuts molded in (right) rear cover 249496.
10. Remove controller cover. Disconnect the generator output leads 1, 2, 3, and 4 from circuit breaker and ground stud. Disconnect the two sets of connectors from brushes and B1/B2. These connectors join at controller circuit board connector P1. Remove green lead from hazard ground stud. Disconnect engine-start leads P and 71 from controller terminal strip. Disconnect shutdown switch leads 13 from controller terminal strip. Disconnect alternator voltage regulator and fuel solenoid leads 70 from controller terminal strip. Disconnect fuel solenoid lead N and ground strap from controller ground stud. Remove remote meter panel sender leads 5 and 7C from controller remote connector using pin removal tool.



**NOTE**

1 inch equals 25.4 mm.

Figure 2. Base and Mounting Hole Dimensions

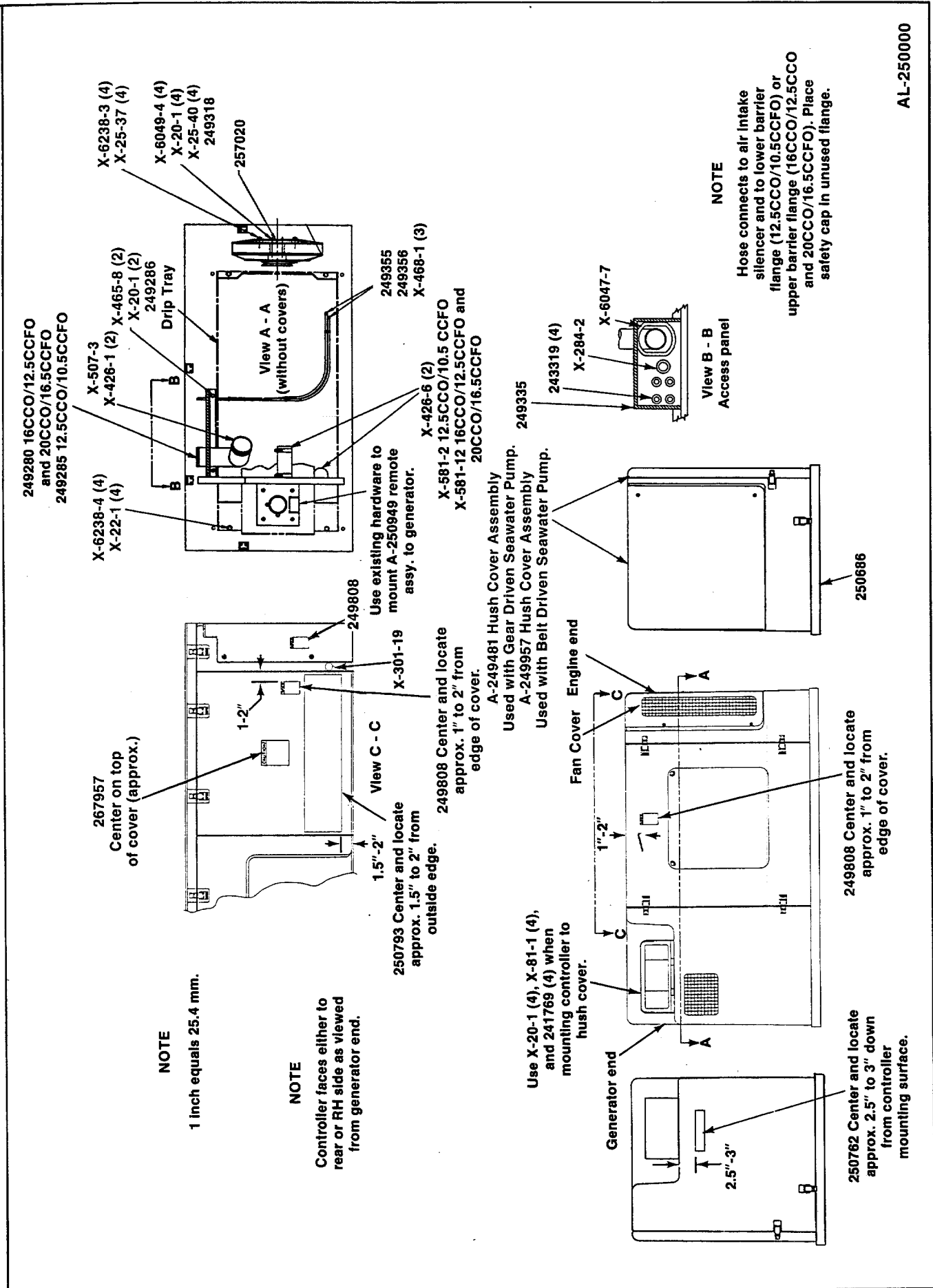
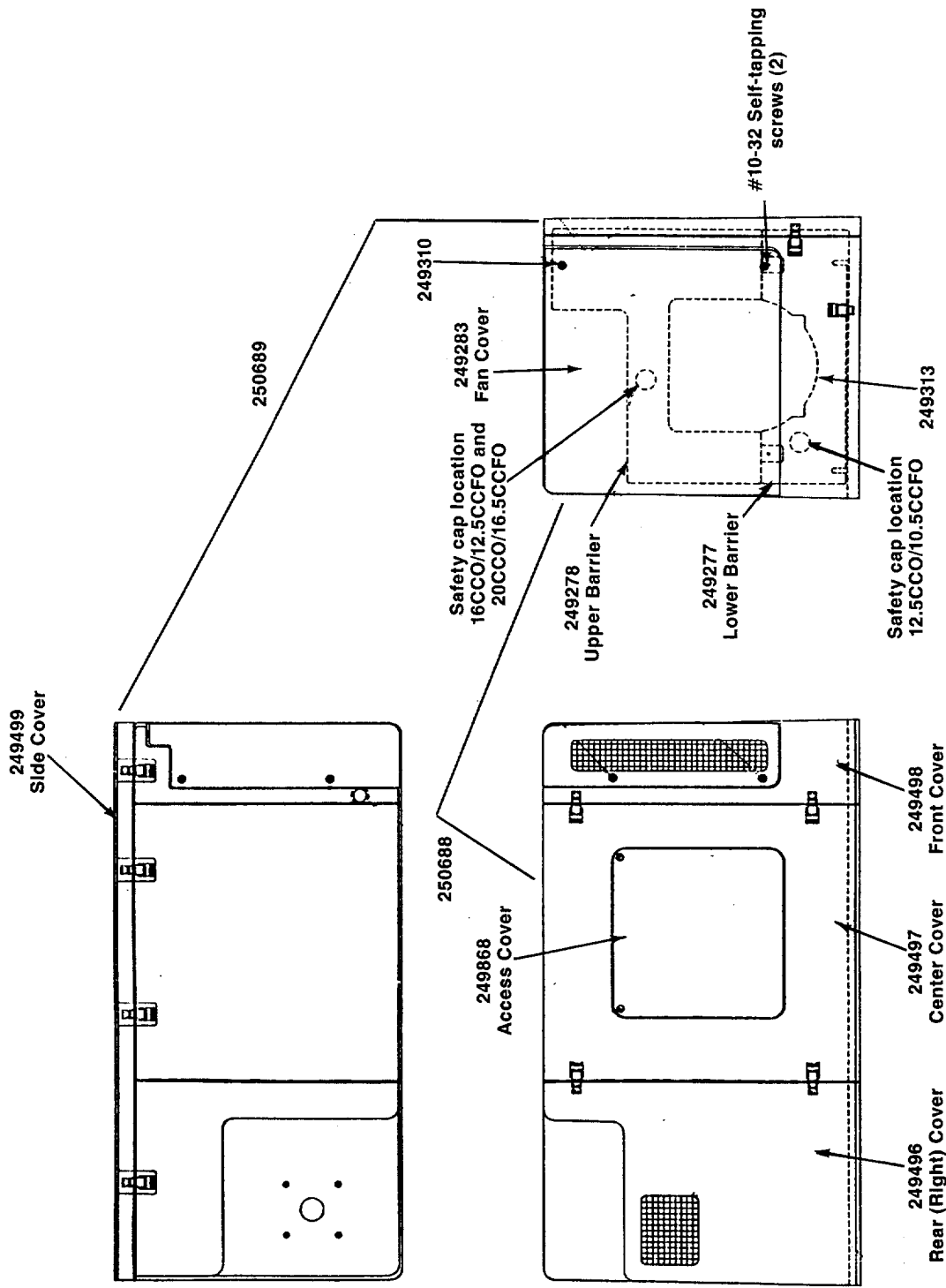


Figure 3. Hush Cover Assembly Drawing



A-249481/  
A-249957

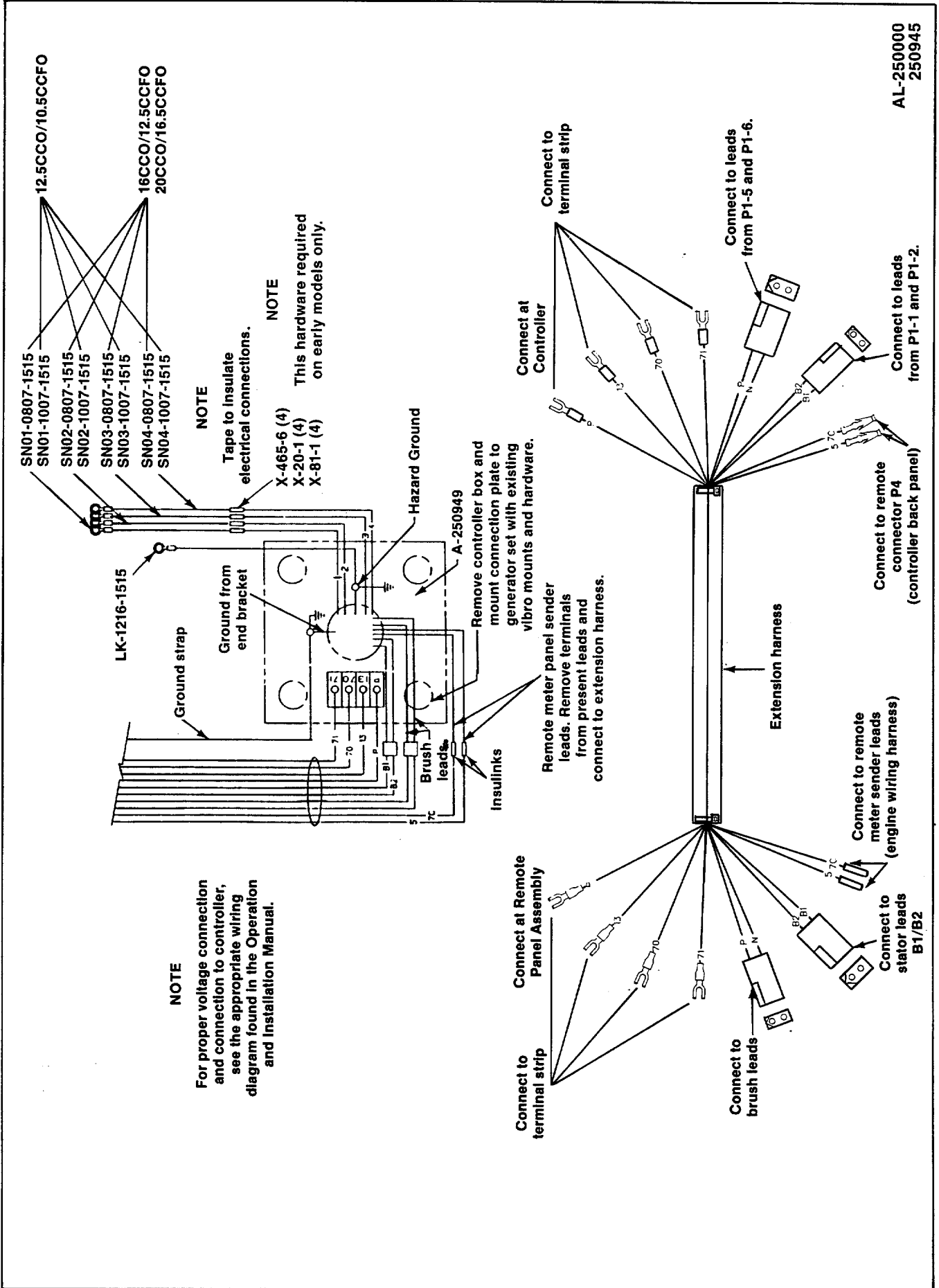
Figure 4. Installing Barriers and Housing Covers

11. Remove four controller mounting nuts and lock washers from vibro mounts. Remove leads from hole in bottom of controller box when removing controller from generator.
12. Mount remote panel assembly A-250949 to controller vibro mounts using original four lock washers and nuts. Run leads through hole before mounting.
13. Connect generator leads to remote panel assembly, see Figure 5. Connect leads 71, 70, 13, and P to terminal strip. Install connectors from brushes and B1/B2. Connect generator ground strap and fuel solenoid lead N to remote panel assembly ground stud. Connect generator green lead and lead LK-1216-1515 to remote panel assembly hazard ground stud.
14. Connect stator leads 1, 2, 3, and 4 to leads SN01-1007-1515, SN02-1007-1515, SN03-1007-1515, and SN04-1007-1515 (12.5CCO/10.5CCFO) or leads SN01-0807-1515, SN02-0807-1515, SN03-0807-1515, SN04-0807-1515 (16CCO/12.5CCFO and 20CCO/16.5CCFO) respectively using four screws X-465-6, lock washers X-20-1, and nuts X-81-1. Hardware in kit is required on early models only. Tape to insulate each of these electrical connections.
15. Remove pin terminals from leads 5 and 7C. Strip ends and connect to extension harness leads using insulinks.
16. Mount controller to vibro mounts on rear (right) cover 249496 using four lock washers X-20-1 and nuts X-81-1. See Figure 3.

## NOTE

Controller faces to rear or right-hand side as viewed from the generator end.

17. Run remote panel assembly leads through hole in bottom of controller and position rear (right) cover 249496 on base. See Figure 4.
18. See appropriate wiring diagram found in the Operation and Installation Manual for proper wiring of generator set. Connect alternator voltage regulator and fuel solenoid leads 70 to controller terminal strip. Connect remote panel assembly ground strap, lead P2-8, and lead P1-3 to controller ground stud. Connect shutdown switch leads 13 to controller terminal strip. Connect engine-start leads P and 71 to controller terminal strip. Connect green lead to hazard ground stud. Install connectors from brushes and B1/B2 to connectors from circuit board connector P1. Reconnect generator output leads 1, 2, 3, and 4 to circuit breaker and ground stud. Connect remote meter panel sender leads 5 and 7C to controller remote connector P4-2 and P4-3 respectively. See Figure 5.
19. Remove fan cover 249283 by removing six screws from front cover 249498 (gear driven sea water pump models) or 249953 (belt driven sea water pump models). Install front cover 249498 to base using spring latches. Install fan adapter 249318 using four screws X-6049-4, lock washers X-20-1, and plain washers X-25-40. Mount fan 257020 to fan adapter using four screws X-6238-3 and plain washers X-25-37. Reinstall fan cover using six screws. See Figure 3.



AL-250000  
250945

Figure 5. Controller Electrical Connections

### NOTE

Use Loctite® Removable Threadlocker 242 (blue) or equivalent on fan screws X-6238-3. Do not overtighten screws as to distort plastic fan.

20. Make all other external connections to generator set using access panel. These include water inlet, exhaust outlet, fuel lines, AC load connections, and remote switch connections (if used). Connect battery cables to generator set and through access panel, but not to battery at this time. Install controller cover using four screws.
21. Install side cover 249499 to front cover and rear (right) cover using spring latches. See Figure 4. Place center cover 249497 in position and secure using spring latches. Check that access cover 249868 is secure. Install button plug X-301-19 into top of front cover.
22. With surfaces clean and dry, mount "Kohler" logo 250793, "Kohler" decal 250762, and three warning decals 249808 to panels of hush cover. See Figure 3.
23. Open all petcocks and valves. Reconnect battery, negative lead last.

## Parts Listing

Description	Qty.	PA-249449/ PA-249964	Common Parts	PA-249450/ PA-249963
Washer, 1/4 lock	14		X-20-1	
Washer, 3/8 lock	4		X-22-1	
Washer, 13/32 x 13/16 x 1/16 plain	4		X-25-37	
Washer, 9/32 x 5/8 x 1/16 plain	4		X-25-40	
Nut, 1/4-20	4	X-81-1		
	8			X-81-1
Grommet, 1-5/8	1		X-284-2	
Plug, 1 in. button	1		X-301-19	
Clamp, 3-3/4 in.	2		X-426-1	
Clamp, 3-7/8 in.	2		X-426-6	
Screw, 1/4-20 x 1/2" Grade 5	4		X-465-6	
Screw, 1/4-20 x 1-1/4" Grade 5	2		X-465-8	
Tie, cable	3		X-468-1	
Hose, radiator 3" I.D. x 4 in.	1		X-507-3	
Hose, air intake 2" I.D. x 5 in.	1	X-581-12		
Hose, air intake 2" I.D. x 23 in.	1			X-581-2
U-channel	1		X-6047-7	
Screw, M6-1 x 70	4		X-6049-4	
Screw, 3/8-16 x 7/8"	4		X-6238-3	
Screw, 3/8-16 x 1-1/4"	4		X-6238-4	
Mount, vibro	4		241769	
Grommet, 3/4 x 1-1/16 x 1/8 in.	4		243319	
Pipe, exhaust	1	249280		249285
Panel, access	1		249286	
Adapter, fan	1		249318	
Foam, access panel	1		249335	
Hose assembly, overflow fuel	1		249355	
Connector, hose	1		X-380-5	
Hose, fuel 5/16" I.D. x 65"	1		X-6242-1	
Clamp, hose 5/8"	2		X-426-9	
Hose assembly, overflow fuel	1		249356	
Connector, hose	1		X-380-5	
Hose, fuel 5/16" I.D. x 80"	1		X-6242-2	
Clamp, hose 5/8"	2		X-426-9	
Decal, warning	3		249808	
Base	1		250686	
Cover assembly, hush	1	(PA-249449)	A-249481	(PA-249450)
		(PA-249964)	A-249957	(PA-249963)
Barrier, lower	1		249277	
Barrier, upper	1		249278	
Cover, fan	1		249283	
Cover, rear (right)	1		249496	
Cover, center	1		249497	
Cover, front	1	(PA-249449)	249498	(PA-249450)
		(PA-249964)	249953	(PA-249963)
Cover, side	1		249499	
Cover, access	1		249868	
Decal, warning	1		267957	

## Parts Listing (cont'd.)

Description	Qty.	PA-249449	Common Parts	PA-249450
Logo, Kohler	1		250762	
Decal, Kohler	1		250793	
Fan, generator	1		257020	
Lead, 12 ga. x 16 in. (green)	1		LK-1216-1515	
Lead, #1	1	SN01-0807-1515		SN01-1007-1515
Lead, #2	1	SN02-0807-1515		SN02-1007-1515
Lead, #3	1	SN03-0807-1515		SN03-1007-1515
Lead, #4	1	SN04-0807-1515		SN04-1007-1515
Panel assembly, remote	1		A-250949	
Washer, #8 lock	2		X-18-2	
Washer, 1/4 in. lock	2		X-22-11	
Washer, 1/4 in. int./ext. tooth lock	4		X-22-12	
Washer, 17/64 x 5/8 x 1/16	1		X-25-53	
Screw, 8-32 x 3/4" slotted pan hd	2		X-51-11	
Grommet, nylon	1		X-6033-4	
Nut, 8-32	2		X-72-4	
Nut, 1/4-20	3		X-81-1	
Nut, 1/4-20 (green)	1		X-81-8	
Lead, ground (strap)	1		230857	
Harness, extension	1		250945	
Marker, strip	1		250946	
Cover, terminal block	1		250947	
Plate, connection	1		250948	
Block, terminal	1		266118	
Screw, 1/4-20 x 1" Grade 5	2		267491	

NOTE: Assemblies include items which are indented.