DC Generator Input Landing Kit

Installation Manual

Kit Specification Number: 10067484, 60177224
For Use with Spec. Nos. 582127000600, 582127000601, 582127000900, 582127000901, 582127000930, and 582127000931 Power Systems

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Technical Support Site

If you encounter any installation or operational issues with your product, check the pertinent section of this manual to see if the issue can be resolved by following outlined procedures.

Visit https://www.vertiv.com/support/ for additional assistance.

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Admonishments Used in this Document

DANGER! Warns of a hazard the reader ***will*** be exposed to that will ***likely*** result in death or serious injury if not avoided. (ANSI, OSHA)

WARNING! Warns of a potential hazard the reader ***may*** be exposed to that ***could*** result in death or serious injury if not avoided. This admonition is not used for situations that pose a risk only to equipment, software, data, or service. (ANSI)

CAUTION! Warns of a potential hazard the reader ***may*** be exposed to that ***could*** result in minor or moderate injury if not avoided. (ANSI, OSHA) This admonition is not used for situations that pose a risk only to equipment, data, or service, even if such use appears to be permitted in some of the applicable standards. (OSHA)

ALERT! Alerts the reader to an action that ***must be avoided*** in order to protect equipment, software, data, or service. (ISO)

ALERT! Alerts the reader to an action that ***must be performed*** in order to prevent equipment damage, software corruption, data loss, or service interruption. (ISO)

FIRE SAFETY! Informs the reader of fire safety information, reminders, precautions, or policies, or of the locations of fire-fighting and fire-safety equipment. (ISO)

SAFETY! Informs the reader of general safety information, reminders, precautions, or policies not related to a particular source of hazard or to fire safety. (ISO, ANSI, OSHA)

Important Safety Instructions

Safety Admonishments Definitions

Definitions of the safety admonishments used in this document are listed under “Admonishments Used in this Document” on page iv.

Safety and Regulatory Statements

Refer to Section 4154 (provided with your customer documentation) for Safety and Regulatory Statements.

Déclarations de Sécurité et de Réglementation

Reportez-vous à la Section 4154 (fourni avec les documents de votre client) pour les déclarations de sécurité et de réglementation.

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1 Vertiv™ DC Generator Input Landing Kit Installation Instructions

1.1 Kit Description

These instructions provide a step-by-step procedure to field install either DC Generator Input Landing kit 10067484 into power system Spec. No. 582127000600, 582127000601, 582127000900, or 582127000901 or to field install DC Generator Input Landing kit 60177224 into power system Spec. No. 582127000930 or 582127000931. Installation of the kit in other equipment should not be attempted.

This kit provides DC generator input landing points on the rectifier output bus of the power system. This allows for connection of an external DC generator input provided through an external 600 A DC generator output breaker.

1.2 Kit Contents

Table 1.1 lists the items furnished as a part of kit P/N 10067484 for use with Lists 600, 601, 900, 901. Before installing the kit, check the items furnished against those listed to ensure that there are no shortages. See also Figure 1.1.

Table 1.2 lists the items furnished as a part of kit P/N 60177224 for use with Lists (930, 931). Before installing the kit, check the items furnished against those listed to ensure that there are no shortages. See also Figure 1.2.

Table 1.1 Kit P/N 10067484 Contents (Lists 600, 601, 900, 901)

P/N	Description	Qty.
10067480	Rear Feed Busbar	2
101331	Grommet Edge Strip	1.85 FT
227640800	1/4-20 X 1-1/4" Bolt	4
214824700	1/4" Belleville Lock Washer	4
214203100	1/4" Flat Washer	4
214112100	3/8" Flat Washer	8
215111300	3/8" Lock Washer	8
228567100	3/8-16 Nut	8
SXK2300238/1	EIB Board Kit	1
10067484IB	Instructions (IM10067484)	1

Table 1.2 Kit P/N 60177224 Contents (Lists 930, 931)

P/N	Description	Qty.
60177219	Angle Adapter Busbar	2
60177668	Insulator, RTN Bus	1
60177918	Insulator, -48VBus	1
534800	Push In Clip	4
227640800	1/4-20 X 1-1/4" Bolt	4
214824700	1/4" Belleville Lock Washer	4
214203100	1/4" Flat Washer	4
214112100	3/8" Flat Washer	8
215111300	3/8" Lock Washer	8
228567100	3/8-16 Nut	8
SXK2300238/1	EIB Board Kit	1
10067484IB	Instructions (IM10067484)	1

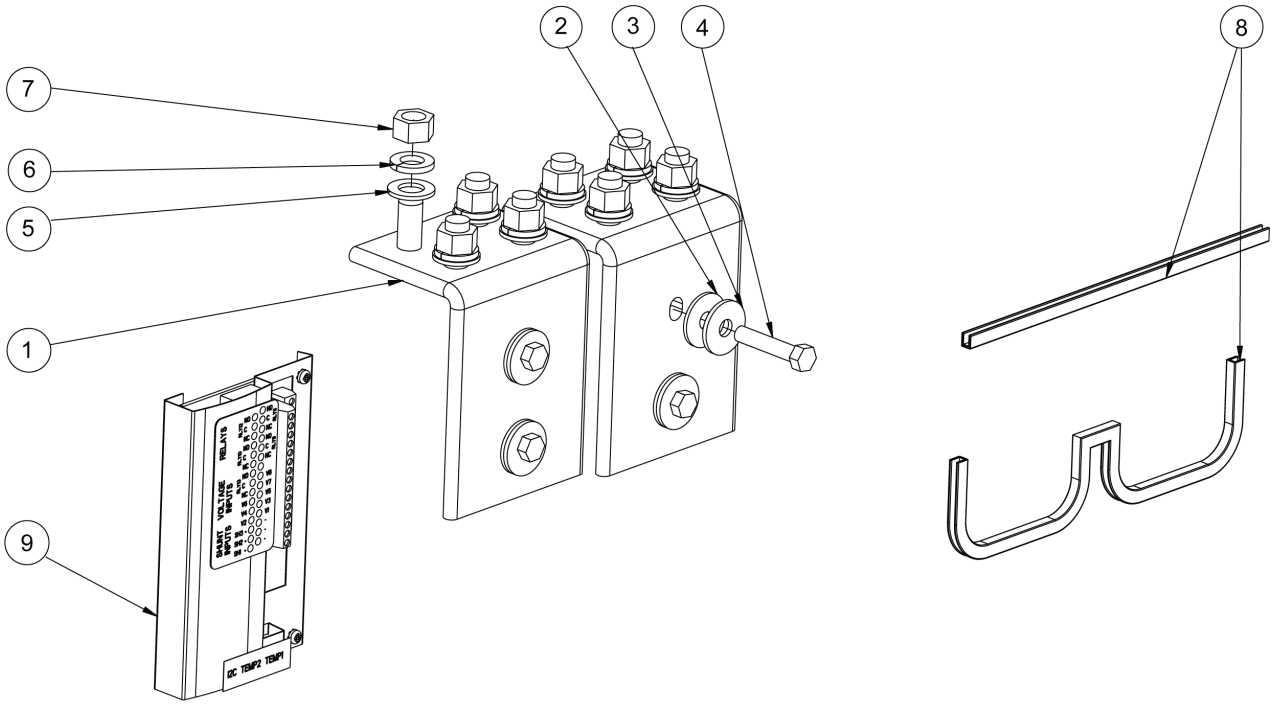
1.3 Tools and Material Required

Table 1.3 lists the items required to install this kit.

Table 1.3 Tools and Material Required

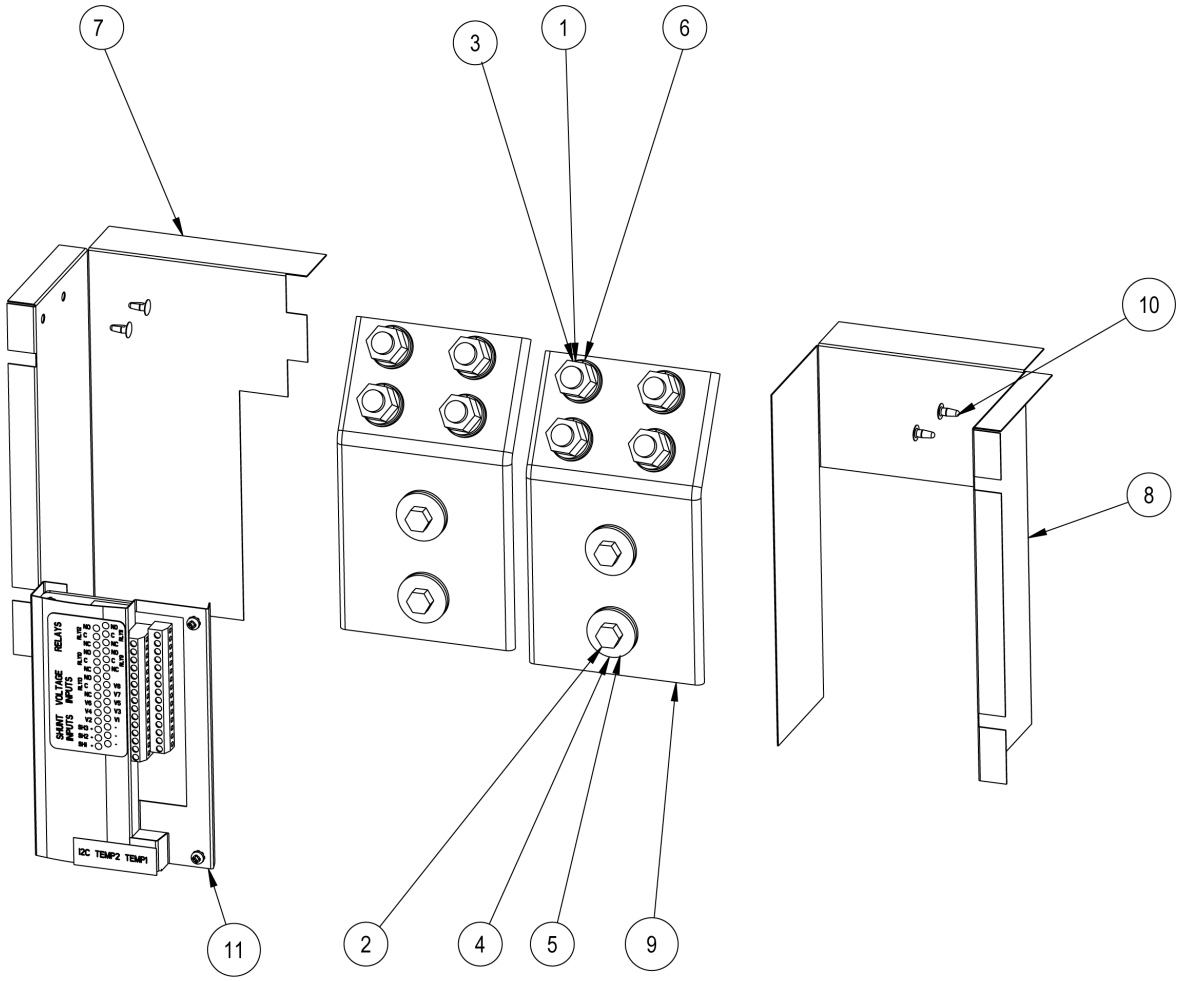
Description
Electrician's Insulated Screwdriver, Phillips, Small
Standard Ratchet and Socket Set
Torque Wrench, 1/2" Drive, Recommended
Electrical Anti-Oxidation Compound

Figure 1.1 Kit P/N 10067484 (Lists 600, 601, 900, 901)



9	SXK2300238/1	BACKPLANE ASSY, EIB BOARD KIT	1
8	101331	STRIP, GROMMET EDGE, FOR 0.055" - 0.069" THK	1.85 FT
7	228567100	NUT, - HEX -, 3/8-16	8
6	215111300	LW, 3/8, .682 OD, .094 THK	8
5	214112100	FW, 3/8, .734 OD, .063 THK	8
4	227640800	HHCS, 1/4-20 X 1-1/4	4
3	214824700	BLW, 1/4, .875 OD, .075 THK	4
2	214203100	FW, 1/4, .875 OD, .063 THK	4
1	10067480	BUS BAR, REAR, FEED	2
INDEX	PART NO.	DESCRIPTION	QTY
PARTS/MATERIAL LIST			

Figure 1.2 Kit P/N 60177224 (Lists 930, 931)



11	SXK2300238/1	BACKPLANE ASSY, EIB BOARD KIT	1
10	534800	CLIP, PUSH IN	4
9	60177219	BUSBAR, ANGLE ADAPTER, 3/8" STUDS X 1" CENTER	2
8	60177668	INSULATOR, DC GEN KIT, RTN BUS	1
7	60177918	INSULATOR, DC GEN KIT, -48V BUS	1
6	214112100	FW, 3/8, .734 OD, .063 THK	8
5	214203100	FW, 1/4, .875 OD, .063 THK	4
4	214824700	BLW, 1/4, .875 OD, .075 THK	4
3	215111300	LW, 3/8, .682 OD, .094 THK	8
2	227640800	HHCS, 1/4-20 X 1-1/4	4
1	228567100	NUT, - HEX -, 3/8-16	8
INDEX	PART NO.	DESCRIPTION	QTY
PARTS/MATERIAL LIST			

1.4 Installation Procedure Kit P/N 10067484

THESE INSTRUCTIONS SHOULD BE READ THROUGH COMPLETELY BEFORE INSTALLING THE KIT.

The following is a step-by-step procedure to install the kit. The procedure has been written for ease of use and to minimize the possibility of contact with potentially hazardous energy. This procedure should be performed in the sequence given, and each step should be completely read and fully understood before performing that step. Observe all "Important Safety Instructions" starting on page v, those presented in the following procedure, and those listed in the power system manual. As each step of the procedure is completed, the box adjacent to the respective step should be checked. This will minimize the possibility of inadvertently skipping any steps. If the step is not required to be performed for your site, also check the box to indicate that it was read.

NOTE! *When performing any step in this procedure which requires removal of existing hardware, retain all hardware for use in subsequent steps, unless otherwise stated.*

Procedure

DANGER! Observe the "Important Safety Instructions" starting on page v and those listed in the power system manual.

DANGER! This system must be isolated from all AC input power and battery power. All AC input power to the system must be turned off and all AC input disconnects must be locked out / tagged out before installing this kit. All battery power to the system must be turned off or disconnected and all battery disconnects must be locked out / tagged out before installing this kit.

NOTE! *Apply electrical anti-oxidizing compound to all busbar mating surfaces.*

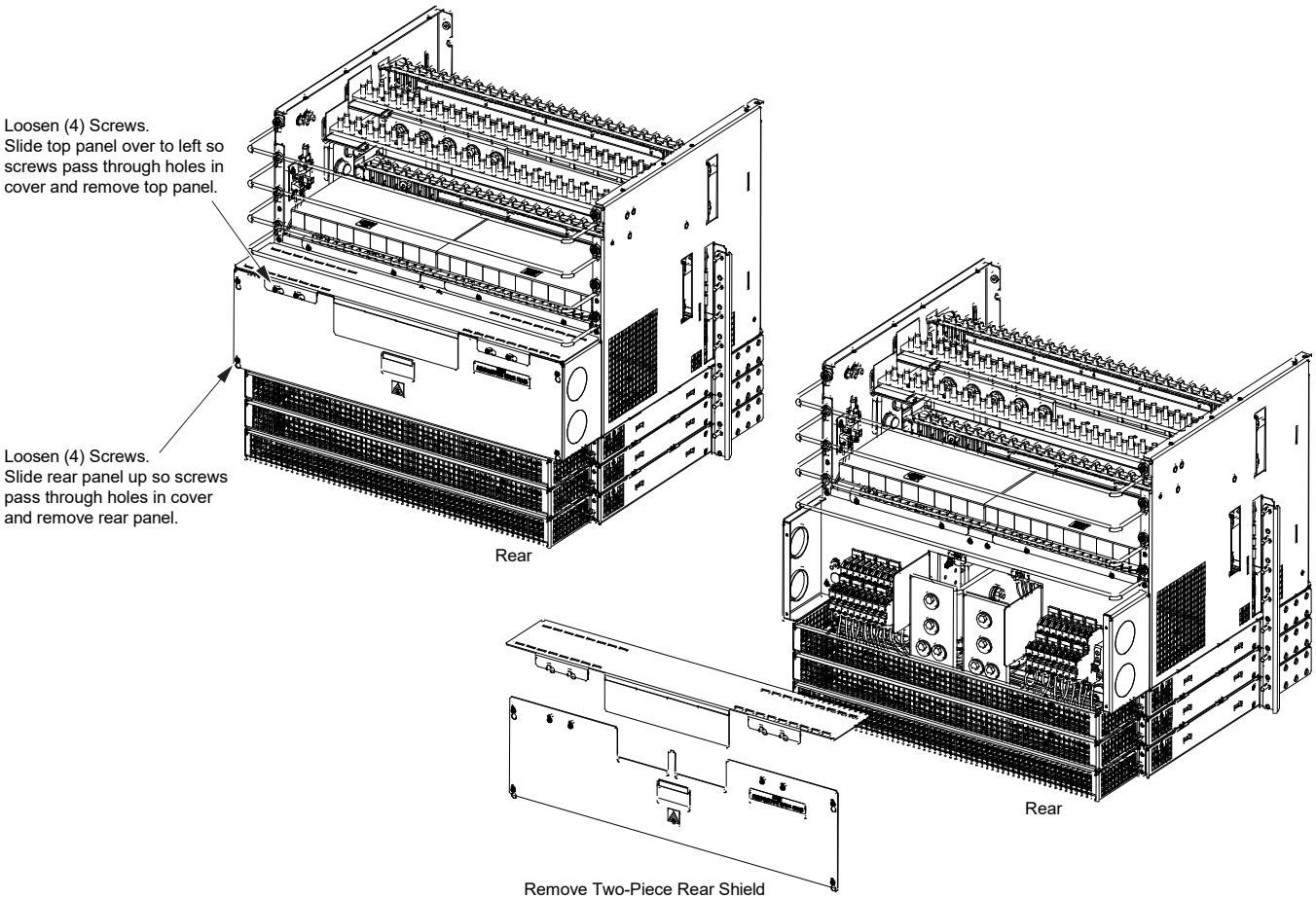
[ ] 1. Performing this procedure may activate external alarms. Do one of the following. If possible, disable these alarms. If these alarms cannot be easily disabled, notify the appropriate personnel to disregard any future alarms associated with this system while the procedure is being performed.

[ ] 2. Shutdown the power system. Turn off all AC input disconnects to remove AC power from the system. Turn off all battery disconnects to remove battery power from the system or disconnect the batteries from the system. Follow local lockout/tagout procedures to ensure AC and battery disconnects remain off during installation.

[ ] 3. If this power system is installed inside an enclosure, open the enclosure's front door.

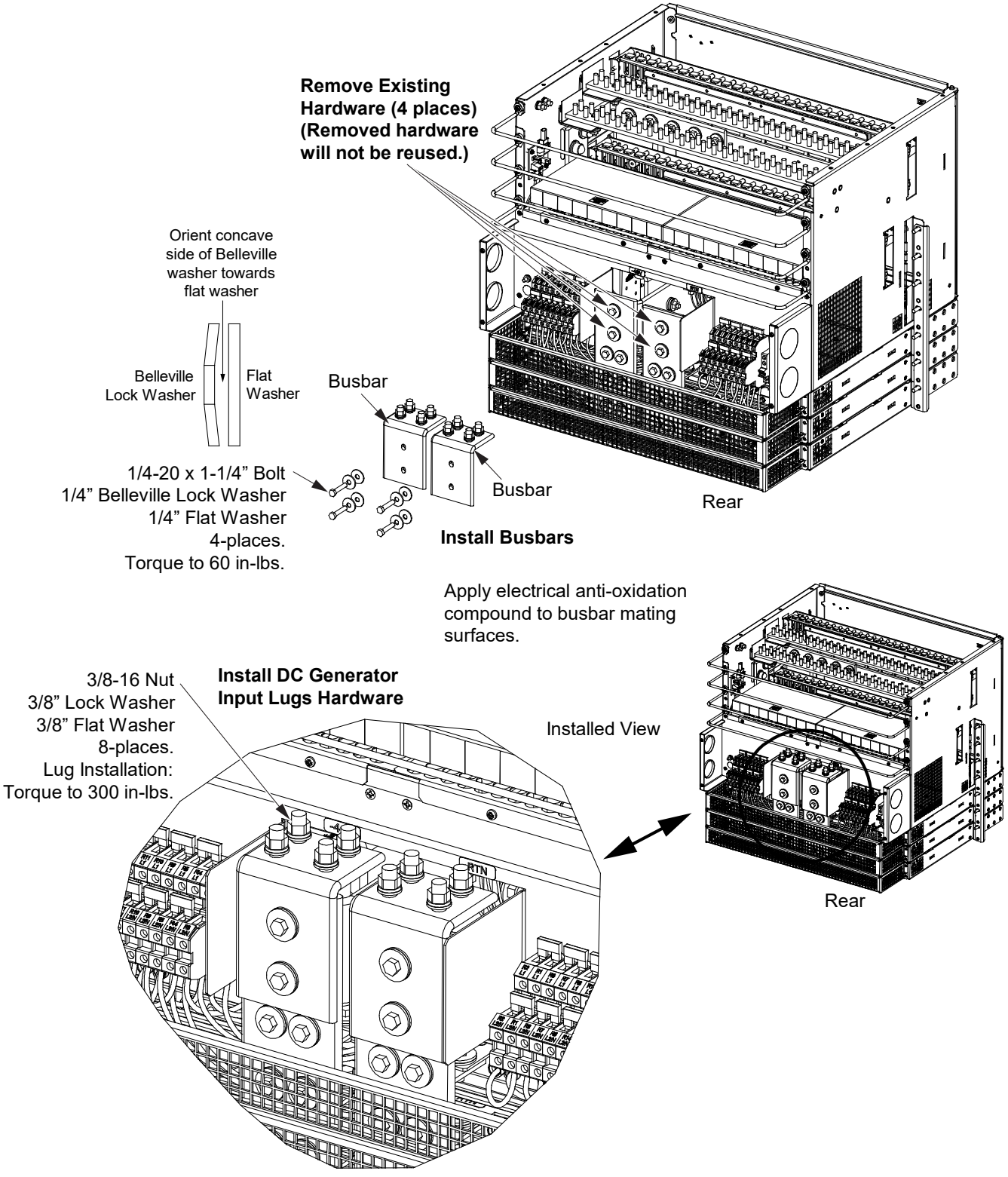
[ ] 4. Refer to Figure 1.3 and remove the two-piece rear AC input cover.

Figure 1.3 Removing Two-Piece Rear AC Input Cover



[ ] 5. Install the kit supplied busbars (and DC generator input lug hardware) onto the power systems rectifier output bus. See Figure 1.4 for assembly and torque values.

Figure 1.4 Installing Kit Busbars and DC Generator Input Lug Hardware

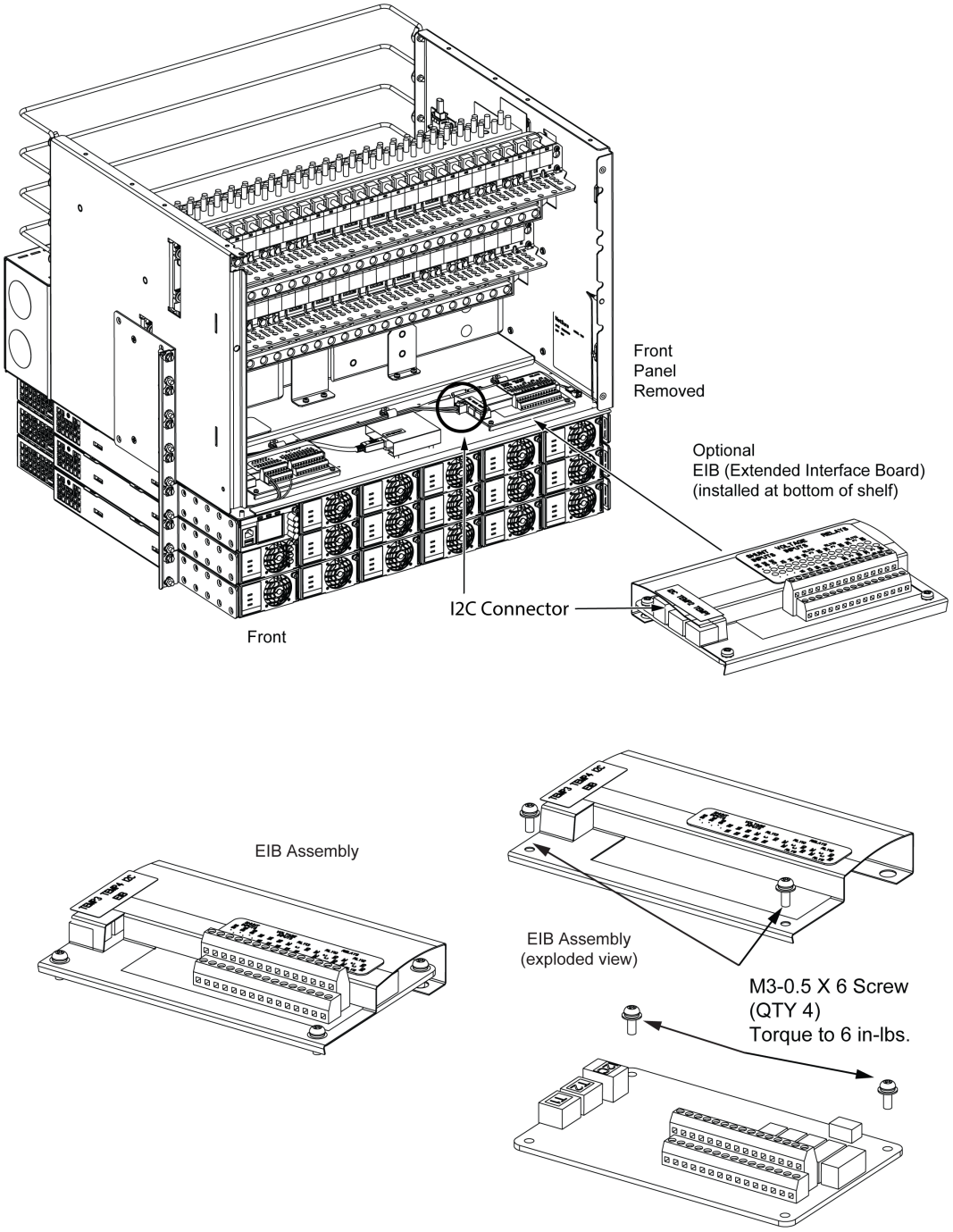


[ ] 6. Install kit-supplied EIB Board. See for assembly and torque value. See also IM582127000900 for more information on installing the EIB board.

[ ] 7. Connect Shunt "+" wire to SH1+ and Shunt "-" wire to SH1- on the EIB Board. Torque to 2.2 in-lbs.

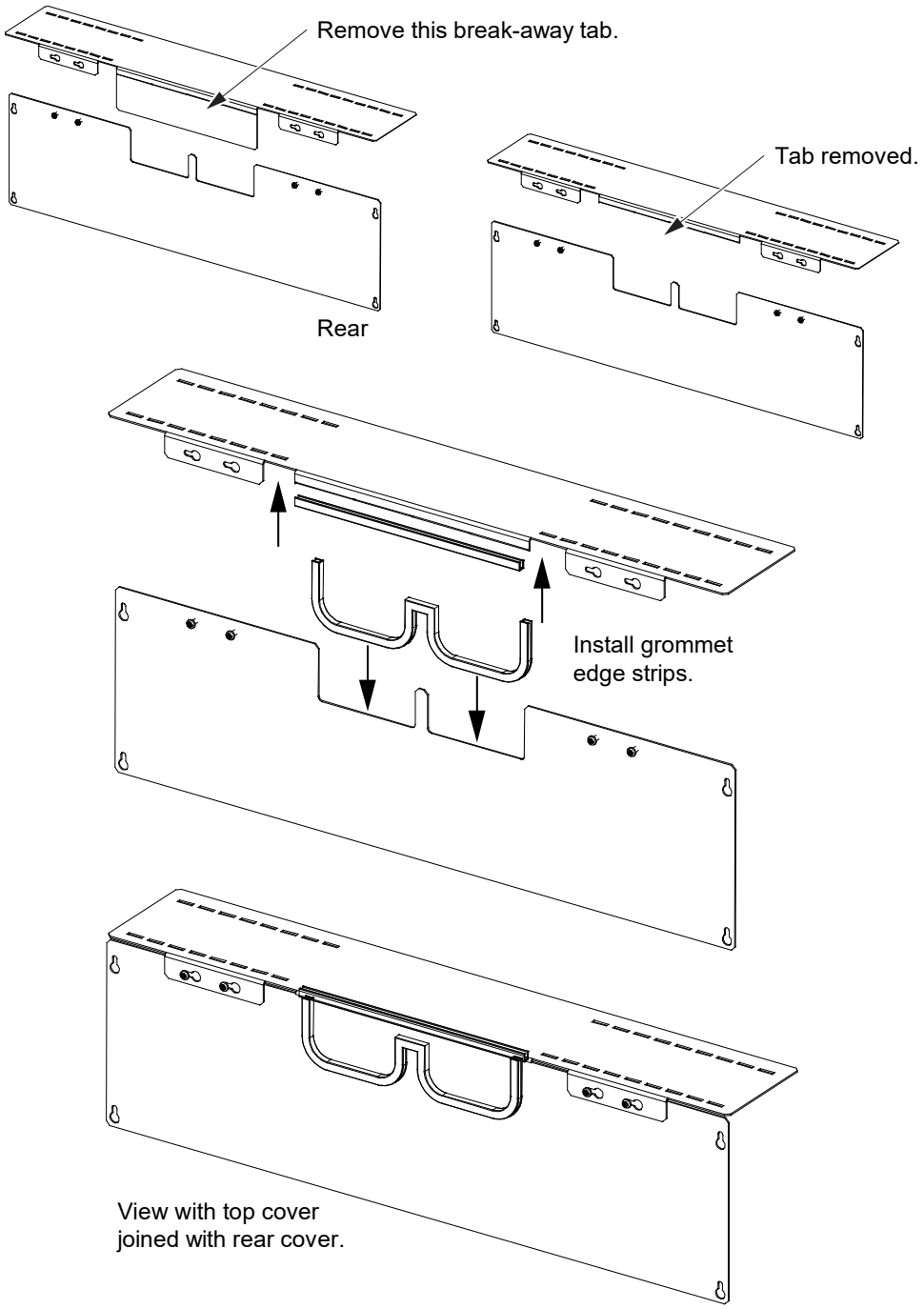
[ ] 8. Plug the I2C connector into the EIB Board.

Figure 1.5 Installing EIB Board



[ ] 9. Refer to Figure 1.6 and modify the two-piece rear AC input cover. Apply the kit supplied grommet edge strips to the top and rear AC input covers as shown in Figure 1.6.

Figure 1.6 Modifying Rear AC Input Cover



[ ] 10. Re-install the rear cover half of the rear AC input cover and secure by tightening the (4) screws.

[ ] 11. Ensure the external DC generator disconnect is open/off. Wire input generator leads to the power system per Figure 1.7. The cables pass through the cutout in the rear AC input cover.

- Landing points for two cables (per polarity) terminated in two-hole lugs (3/8" bolt clearance hole, 1" centers).
- Maximum lug width is 1.25".

[ ] 12. Re-install the top cover half of the rear AC input cover and secure by tightening the (4) screws. Ensure the rear AC input cover is properly insulated from the DC generator leads passing through the cover with the kit supplied grommet edge strips previously installed. Torque to 18 in-lbs.

[ ] 13. Restart the power system. Turn on all AC input disconnects to apply AC power to the system. Turn on all battery disconnects to apply battery power to the system or reconnect the batteries to the system.

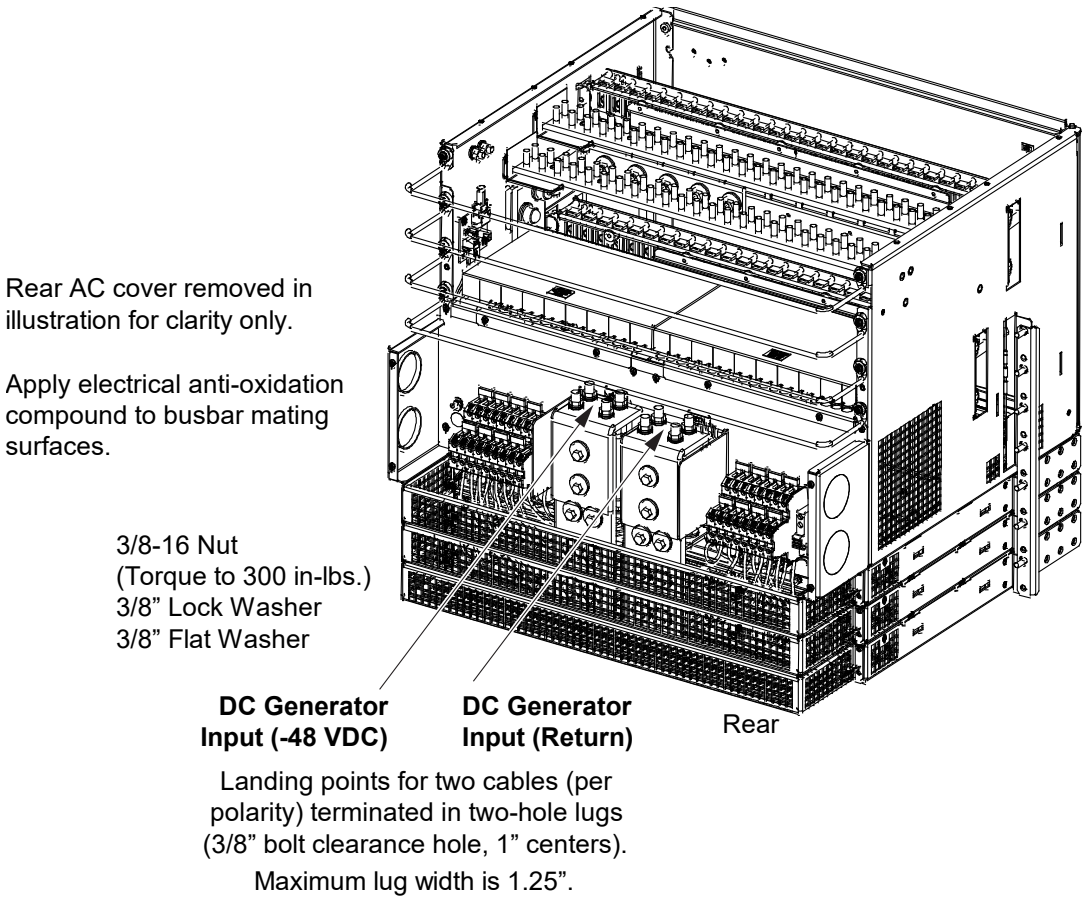
[ ] 14. Close the external DC generator output breaker.

[ ] 15. If this power system is installed inside an enclosure, close the enclosure's front door.

[ ] 16. Enable the external alarms or notify appropriate personnel that this procedure is finished.

[ ] 17. Ensure that there are no local or remote alarms active on the system.

Figure 1.7 Connecting the External DC Generator to the Power System



1.5 Installation Procedure Kit P/N 60177224

THESE INSTRUCTIONS SHOULD BE READ THROUGH COMPLETELY BEFORE INSTALLING THE KIT.

The following is a step-by-step procedure to install the kit. The procedure has been written for ease of use and to minimize the possibility of contact with potentially hazardous energy. This procedure should be performed in the sequence given, and each step should be completely read and fully understood before performing that step. Observe all "Important Safety Instructions" starting on page v, those presented in the following procedure, and those listed in the power system manual. As each step of the procedure is completed, the box adjacent to the respective step should be checked. This will minimize the possibility of inadvertently skipping any steps. If the step is not required to be performed for your site, also check the box to indicate that it was read.

NOTE! *When performing any step in this procedure which requires removal of existing hardware, retain all hardware for use in subsequent steps, unless otherwise stated.*

Procedure

DANGER! Observe the "Important Safety Instructions" starting on page v and those listed in the power system manual.

DANGER! This system must be isolated from all AC input power and battery power. All AC input power to the system must be turned off and all AC input disconnects must be locked out / tagged out before installing this kit. All battery power to the system must be turned off or disconnected and all battery disconnects must be locked out / tagged out before installing this kit.

NOTE! *Apply electrical anti-oxidizing compound to all busbar mating surfaces.*

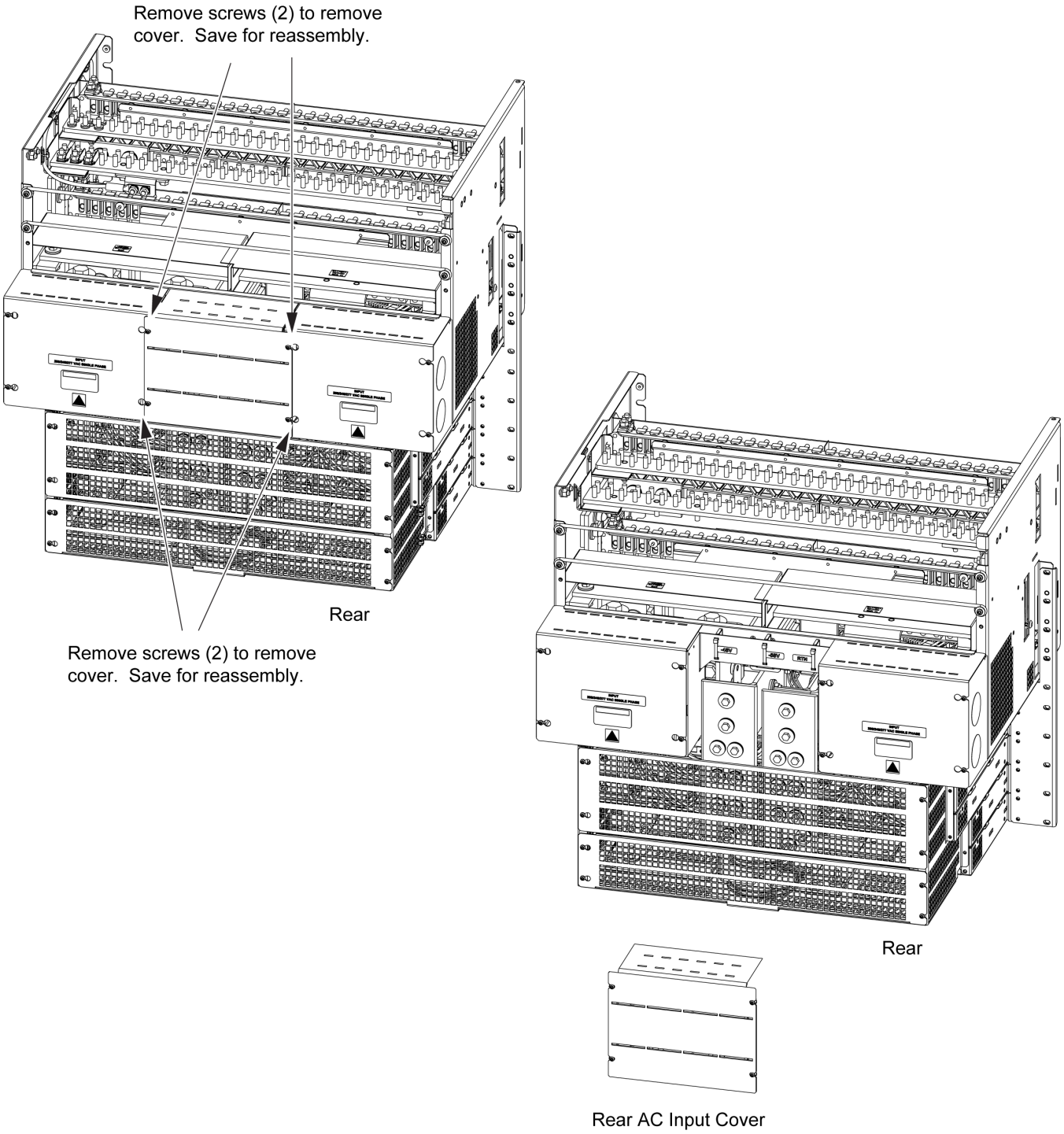
[ ] 1. Performing this procedure may activate external alarms. Do one of the following. If possible, disable these alarms. If these alarms cannot be easily disabled, notify the appropriate personnel to disregard any future alarms associated with this system while the procedure is being performed.

[ ] 2. Shutdown the power system. Turn off all AC input disconnects to remove AC power from the system. Turn off all battery disconnects to remove battery power from the system or disconnect the batteries from the system. Follow local lockout/tagout procedures to ensure AC and battery disconnects remain off during installation.

[ ] 3. If this power system is installed inside an enclosure, open the enclosure's front door.

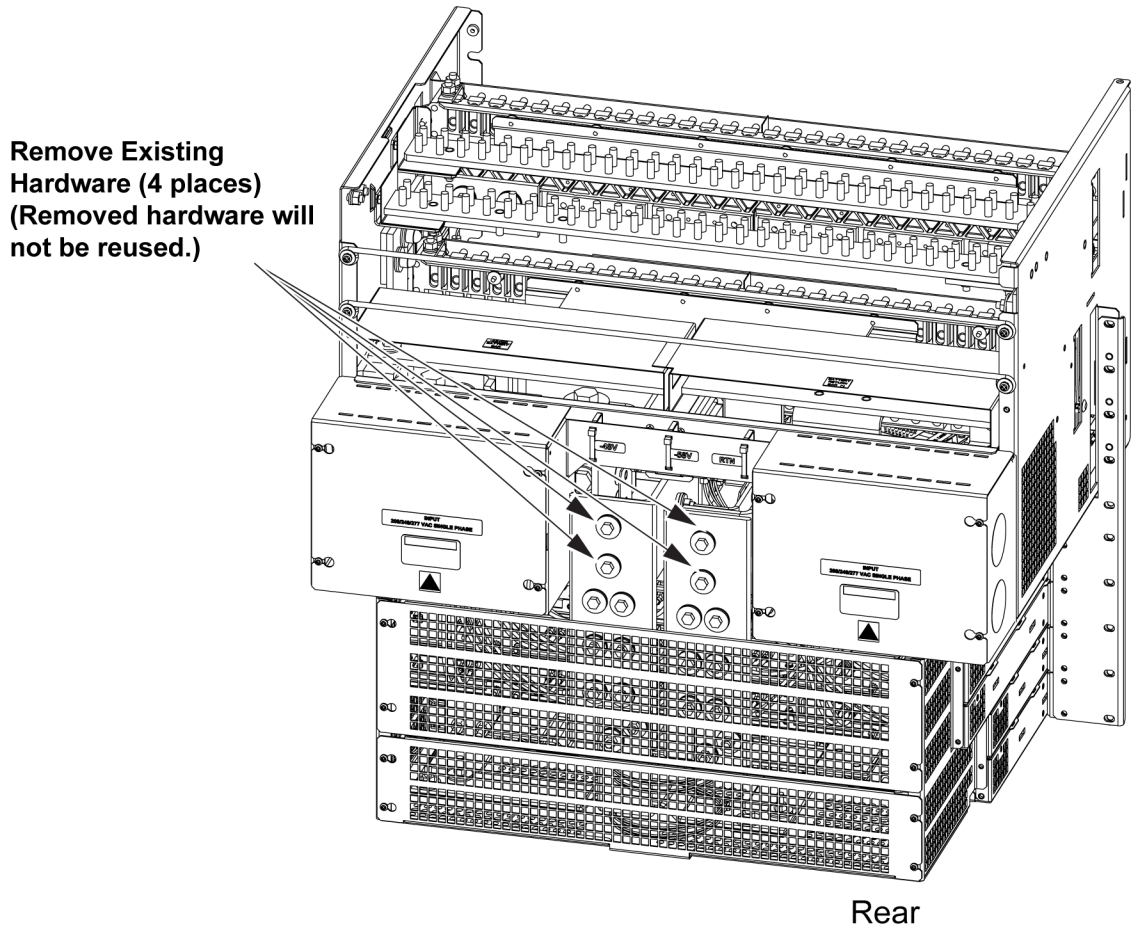
[ ] 4. Refer to Figure 1.8 and remove the rear AC input cover.

Figure 1.8 Removing Rear AC Input Cover



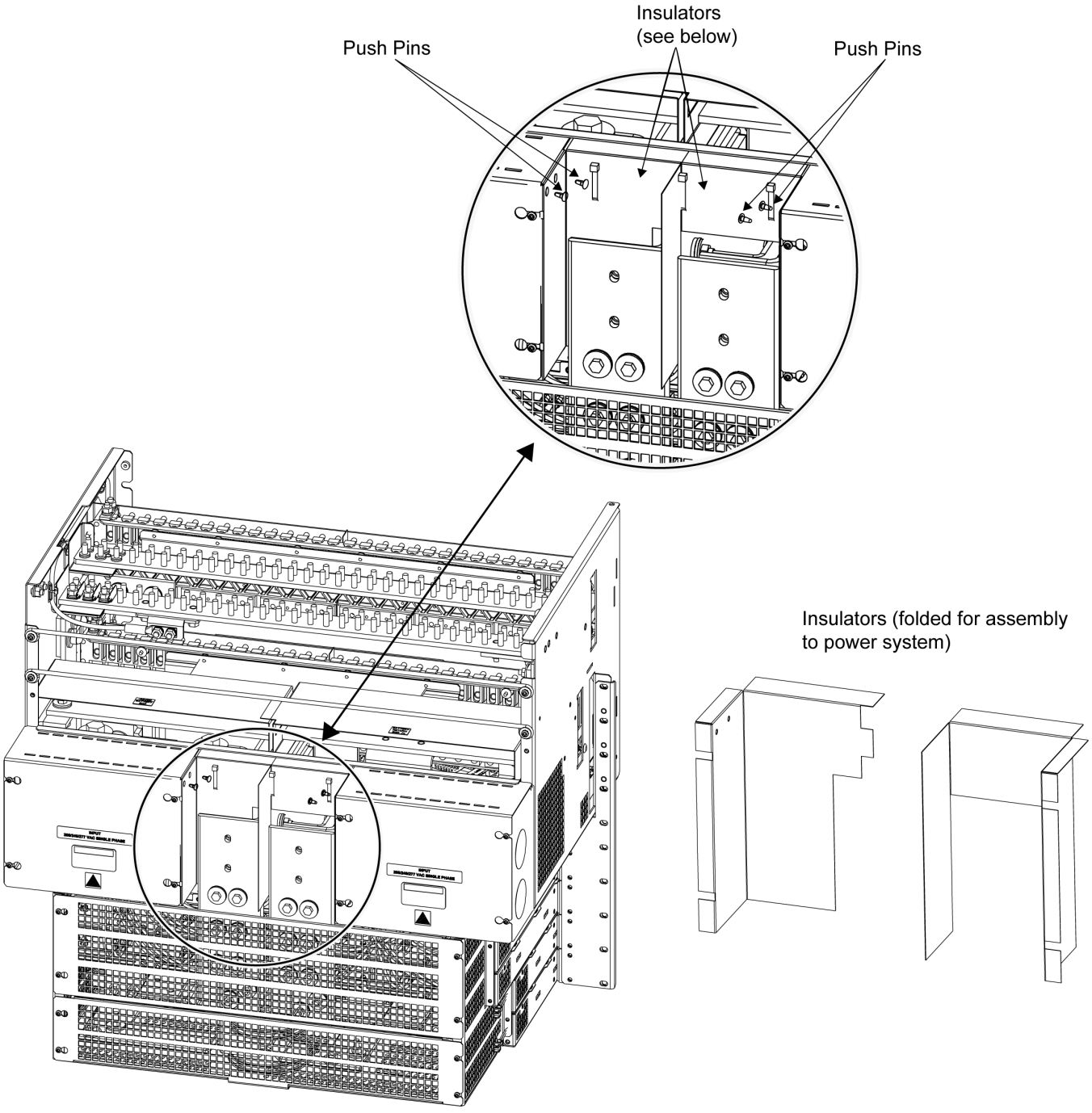
[ ] 5. Remove existing hardware from the top of the power system's rectifier output bus. Removed hardware will not be reused. See Figure 1.9.

Figure 1.9 Removing Existing Hardware



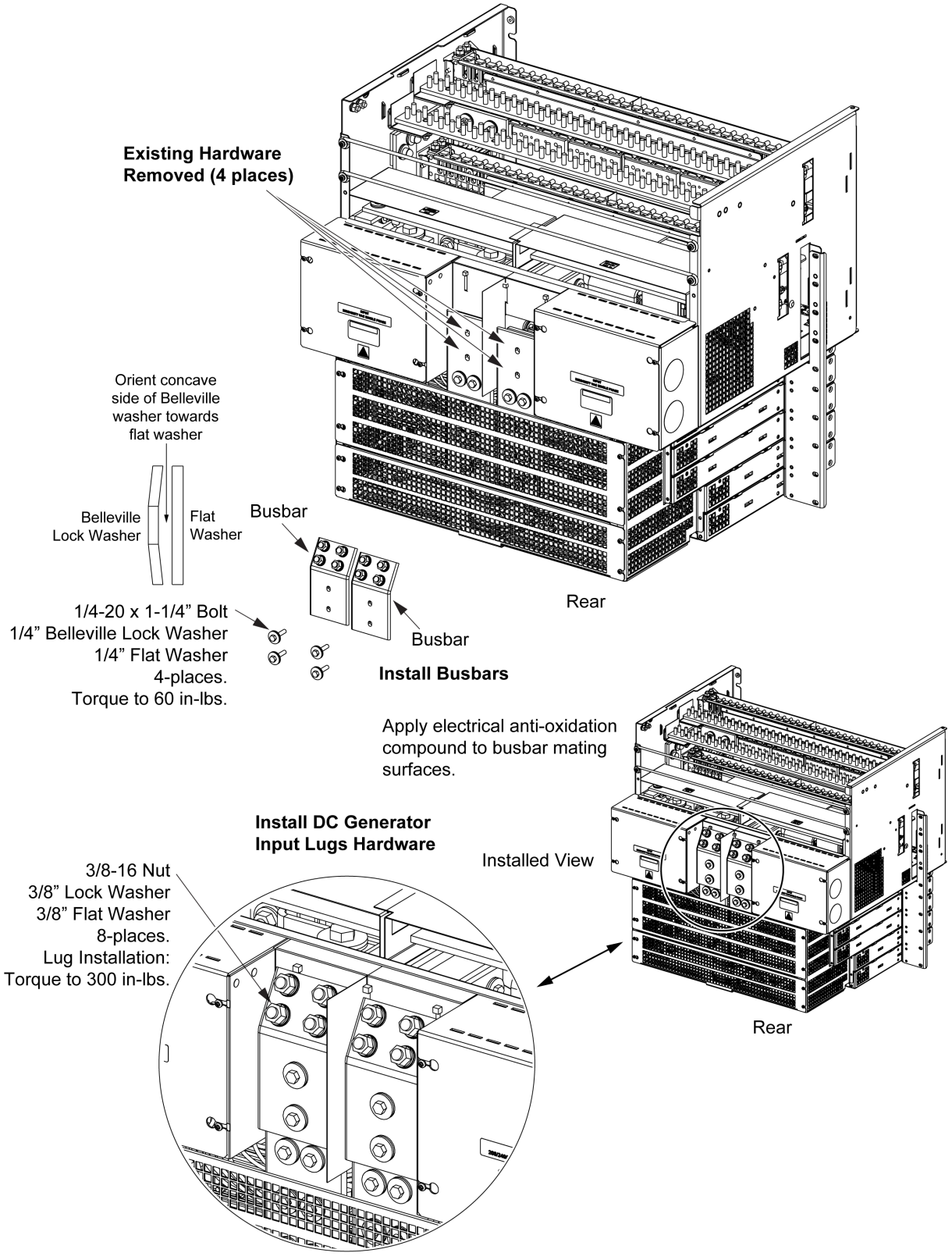
[ ] 6. Fold the kit-supplied insulators and assemble to the power system. Secure insulators to the frame with the supplied push pins. See Figure 1.10.

Figure 1.10 Installing Insulators



[ ] 7. Install the kit-supplied busbars (and DC generator input lug hardware) onto the power system's rectifier output bus. See Figure 1.11 for assembly and torque values.

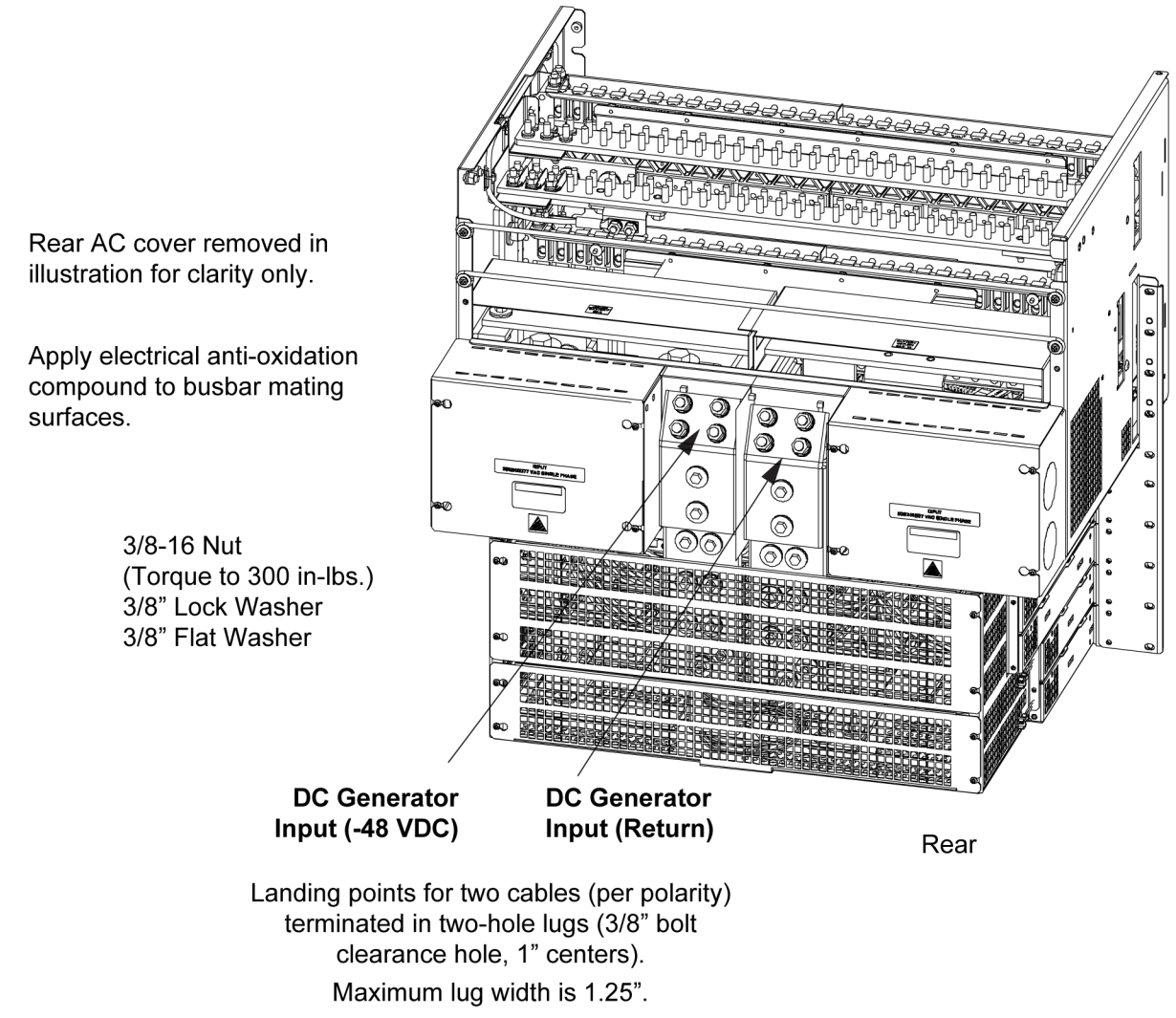
Figure 1.11 Installing Kit Busbars and DC Generator Input Lug Hardware



[ ] 8. Ensure the external DC generator disconnect is open/off. Wire input generator leads (not provided) to the power system per Figure 1.12. The cables will pass through the gap between the top and bottom of the rear AC input cover (see Figure 1.14).

- Landing points for two cables (per polarity) terminated in two-hole lugs (3/8" bolt clearance hole, 1" centers).
- Maximum lug width is 1.25".
- Torque is 300 in-lbs.

Figure 1.12 Connecting the External DC Generator to the Power System

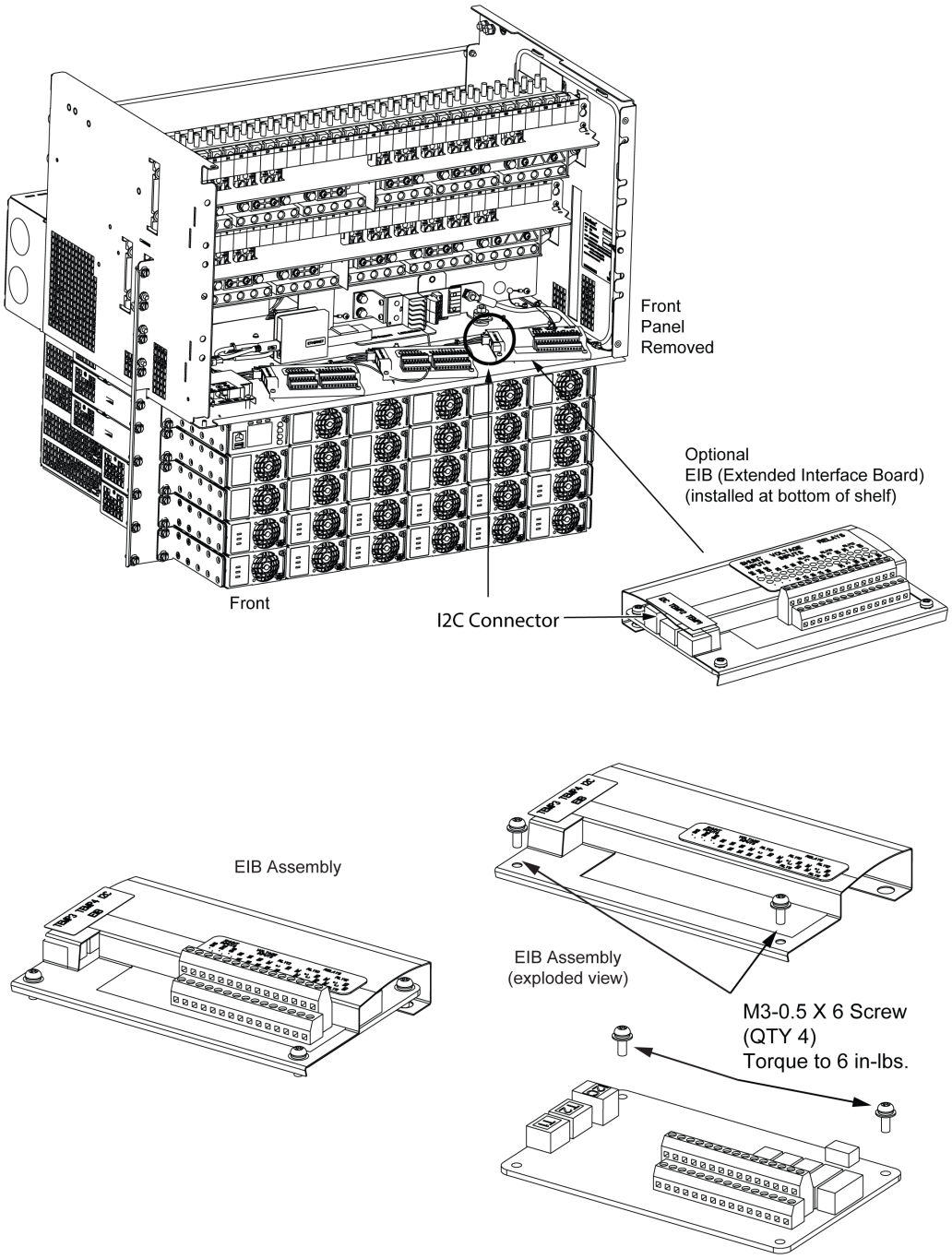


[ ] 9. Install kit-supplied EIB Board. See Figure 1.13 for assembly and torque value. See also IM582127000900 for more information on installing the EIB board.

[ ] 10. Connect Shunt "+" wire to SH1+ and Shunt "-" wire to SH1- on the EIB Board. Torque to 2.2 in-lbs.

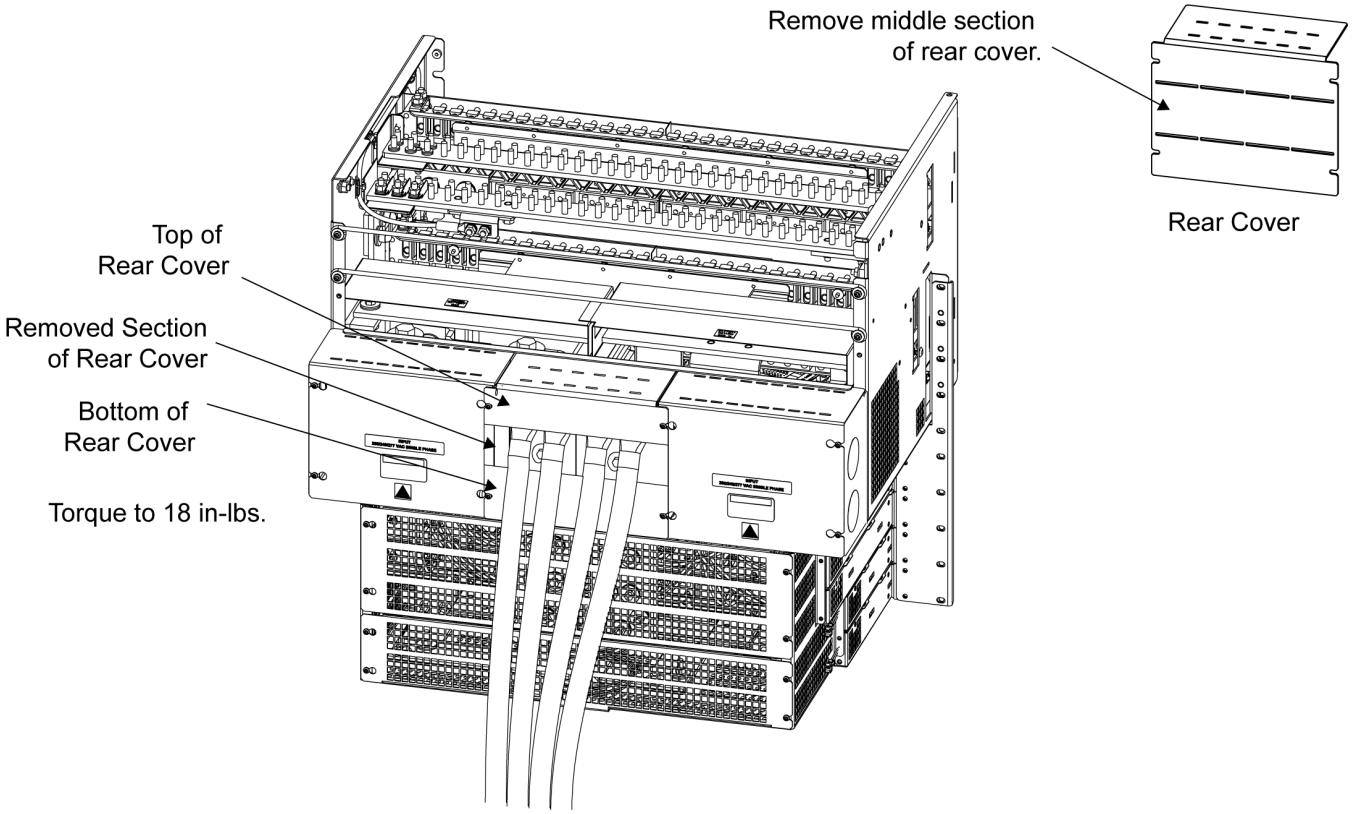
[ ] 11. Plug the I2C connector into the EIB Board.

Figure 1.13 Installing EIB Board



[ ] 12. Remove middle section of the rear cover and use the previously saved hardware to reinstall the top and bottom pieces of the cover to the frame. See Figure 1.14. Ensure the rear AC input cover is properly insulated from the DC generator leads passing through the removed section of the cover.

Figure 1.14 Installing Rear Cover



[ ] 13. Restart the power system. Turn on all AC input disconnects to apply AC power to the system. Turn on all battery disconnects to apply battery power to the system or reconnect the batteries to the system.

[ ] 14. Close the external DC generator output breaker.

[ ] 15. If this power system is installed inside an enclosure, close the enclosure's front door.

[ ] 16. Enable the external alarms or notify appropriate personnel that this procedure is finished.

[ ] 17. Ensure that there are no local or remote alarms active on the system.

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