

SUPER BOOST•ALL®

Goodall

12/24V

SUPER BOOST•ALL® • 12/24V • 492

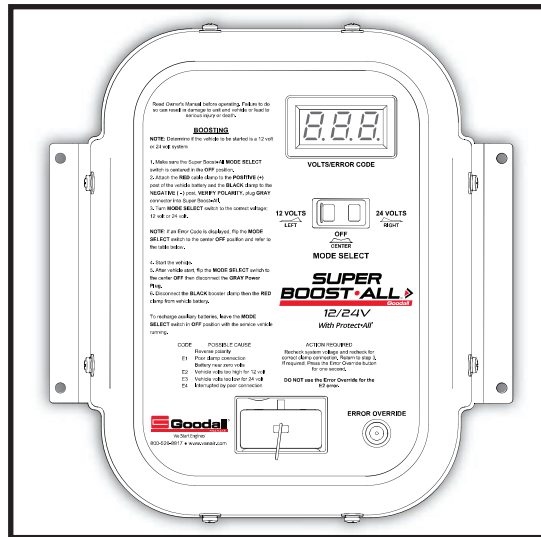
WITH  **PROTECT•ALL®**
Safety Technology

OPERATION MANUAL AND PARTS LIST

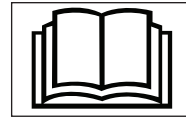
NOTE

This publication contains the latest information available at the time of preparation. Every effort has been made to ensure accuracy.

Vanair® reserves the right to make design change modifications or improvements without prior notification.



IMPORTANT



Read this manual before installing, operating or servicing this equipment. Failure to comply with the operation and maintenance instructions in this manual can result in personal injury, and can void the equipment warranty.



VANAIR®
A Lincoln Electric Company

NOTE

Making unauthorized modifications to the system components **WILL VOID THE WARRANTY!** Always inform Vanair® before beginning any changes to the Super Boost•All® system.

**KEEP THE MANUAL
WITH THE VEHICLE
OR EQUIPMENT**

Vanair®

A Lincoln Electric Company
10896 West 300 North
Michigan City, IN 46360
Toll Free: (800) 526-8817
Telephone: (219) 879-5100

Service (toll free):
(844) VAN-SERV
(844) 826-7378

vanair.com

 **Goodall®**
by VANAIR

We Start Engines®

P/N: 090203_r1

Effective Date:
AUGUST 26, 2025

DEV

©2025 Vanair®
A Lincoln Electric Company
All rights reserved

BOOST-ALL®

SUPER BOOST-ALL®

CAP-START®



GUARANTEE

**ALL WARRANTY OR
RETURNS MUST BE
PRE-AUTHORIZED
PRIOR TO PERFORMING
ANY WARRANTY WORK.**

**(844) VAN - SERV
SERVICE@VANAIR.COM
PARTS@VANAIR.COM**

**10896 W. 300 N.
MICHIGAN CITY, IN 46360**

(800) 526-8817

VANAIR.COM

EFFECTIVE: AUGUST 11, 2020

This limited warranty supersedes all previous Vanair® warranties and is exclusive with no other guarantees or warranties expressed or implied.

LIMITED WARRANTY—Subject to the expressed terms and conditions set forth below, Vanair®, a Lincoln Electric Company ("Vanair"), of Michigan City, Indiana (USA), warrants to the original retail purchaser of new Vanair® equipment that such equipment is free from defects in materials and workmanship when shipped by Vanair®.

For warranty claims received by Vanair® within the applicable warranty periods described below, Vanair® will repair or replace any warranted equipment, parts or components that fail due to defects in material or workmanship or refund the purchase price for the equipment, at Vanair's discretion. Vanair® is not responsible for time or labor to gain access to the machine to perform work. **WARRANTY WILL BE VOID IF GENUINE VANAIR® PARTS AND FLUIDS ARE NOT USED.**

Vanair® must be notified in writing within thirty (30) days of any such defect or failure. All warranty or returns must be pre-authorized in writing prior to performing warranty work. Call Vanair® for process and forms. Vanair® will provide instructions on the warranty claim procedures to be followed.

Warranty will commence upon receipt of the Warranty Registration Card. If the Warranty Registration Card is not received within six (6) months of shipment from Vanair®, the warranty commencement date shall be thirty (30) days from the date of shipment from Vanair®. Records of warranty adherence are the responsibility of the end user.

1. 6 Years Parts – 3 Years Labor
 - Vanair® Super Capacitor™ (VSC™)
2. 2 Years Parts – 1 Year Labor
 - Reciprocating Compressor Air End
3. 1 Years Parts – 1 Year Labor
 - Generators
 - Hydraulic Motors
 - Hydraulic Pumps
4. 1 Year Parts – 1 Year Labor
 - All electronics including, but not limited to:
 - I) I/O Boards
 - II) Modules
 - III) Panel Boxes
 - IV) Instrumentation
 - V) Solenoids
 - Clutches
 - Running Gear/Trailers
 - Compressor/Hydraulic Coolers, including Fan and Radiator Core

This Limited Warranty shall not apply to:

1. Consumable components, such as shaft seals, valves, belts, filters, capacitors, contactors, relays, brushes or parts that fail due to normal wear and use.
2. Items furnished by Vanair®, but manufactured by others, such as engines and trade accessories (these items are covered by the manufacturer's warranty, if any).

3. Equipment that has been modified by any party other than Vanair® or equipment which has not been used and maintained in accordance with Vanair's specifications.
4. Equipment which has been improperly installed and/or improperly operated, based upon Vanair's specifications for the equipment or industry standards.
5. Equipment installed by non-authorized or third party personnel. Vanair® products are intended for purchase and use by commercial/industrial users and persons trained and experienced in the use and maintenance of industrial equipment.

In the event of a warranty claim covered by this Limited Warranty, the exclusive remedies shall be, at Vanair's sole discretion: (i) repair; or (ii) replacement; (iii) where authorized in writing by Vanair® in appropriate cases, the reasonable cost of repair or replacement at an authorized Vanair® service facility ; or (iv) payment of (or credit for) the purchase price (less reasonable depreciation based upon actual use) upon return of the equipment at the warranty claimant's risk and expense. Vanair® will pay standard ground freight for any warranty item shipped to and from Vanair® or (Vanair® designated facility) within the first year of the applicable warranty period. Any additional expedited freight cost is the responsibility of the purchaser.

TO THE GREAT EXTENT PERMITTED BY APPLICABLE LAW, THE REMEDIES PROVIDED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES APPLICABLE TO THE VANAIR® EQUIPMENT. IN NO EVENT SHALL VANAIR® BECOME LIABLE FOR DIRECT, INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFIT OR LOST BUSINESS OPPORTUNITY), WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY. IN NO EVENT SHALL VANAIR® BECOME OBLIGATED TO PAY MORE ON ANY WARRANTY CLAIM THAN THE PURCHASE PRICE ACTUALLY PAID BY THE ORIGINAL RETAIL PURCHASER.

THIS LIMITED WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY OR GUARANTY ARISING BY OPERATION OF LAW. ANY WARRANTY NOT EXPRESSLY PROVIDED HEREIN, IMPLIED WARRANTY, GUARANTY AND ANY REPRESENTATION REGARDING THE PERFORMANCE OF THE EQUIPMENT, AND ANY REMEDY FOR BREACH OF CONTRACT, IN TORT, OR ANY OTHER LEGAL THEORY WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE, OR COURSE OF DEALING ARE EXCLUDED AND DISCLAIMED BY VANAIR®.

Some states in the United States of America do not allow limitations of how long an implied warranty lasts, or the exclusion of incidental, indirect, special or consequential damages, and as such, the above limitations and exclusions may not apply to you. This warranty provides specific legal rights. Other rights may be available to you, but may vary from state to state.

In Canada, legislation in some provinces provides for certain additional warranties or remedies other than as stated herein, and to the extent that they may not be saved, the limitations and exclusions set out forth above may not apply. This Limited Warranty provides specific legal rights, and other rights may be available, but may vary from province to province.



VANAIR®
A Lincoln Electric Company

TABLE OF CONTENTS

WARRANTY(BEHIND COVER)

TABLE OF CONTENTS TOC - I

WARRANTY CLAIMS PROCEDURE WARRANTY - I

CLAIMS PROCESS FOR WARRANTED PARTS WARRANTY - I

PROCEDURE WARRANTY - I

Figure W-1: Unit Serial Number Location WARRANTY - I

SECTION 1: ▲ SAFETY 1 - 1

1.1 ▲ GENERAL INFORMATION 1 - 1

1.2 ▲ DANGERS, WARNINGS, CAUTIONS, AND NOTES 1 - 1

1.3 ▲ INTERNATIONAL SAFETY SYMBOL 1 - 1

1.4 ▲ SUMMARY: DANGERS, WARNINGS, CAUTIONS AND NOTES 1 - 1

1.4.1 ▲ DANGERS 1 - 1

1.4.2 ▲ WARNINGS 1 - 2

1.4.3 ▲ CAUTIONS 1 - 2

1.5 ▲ SAFETY DECALS 1 - 3

SECTION 2: SPECIFICATIONS 2 - 1

TABLE 2A: SUPER BOOST•ALL® SPECIFICATIONS 2 - 1

SECTION 3: INSTALLATION 3 - 1

3.1 MACHINE PACKAGE RECEIPT/INSPECTION 3 - 1

3.2 INSTALLATION INSTRUCTIONS 3 - 1

3.3 INSTALLATION MOUNTING LAYOUTS 3 - 1

Figure 3-1: Rear Connection Points 3 - 2

Figure 3-2: Installation Mounting Layout 3 - 3

Continued on next page...

SECTION 4: OPERATION 4 - 1

4.1 GENERAL INFORMATION 4 - 1

4.2 INITIAL START-UP PROCEDURE 4 - 1

4.3 OPERATING INSTRUCTIONS ERROR CODES 4 - 2

TABLE 4A: ERROR CODES..... 4 - 2

SECTION 5: ILLUSTRATED PARTS LIST 5 - 1

5.1 PARTS ORDERING INFORMATION 5 - 1

Figure 5-1: Unit Serial Number Location 5 - 1

5.2 SUPER BOOST-ALL®, 12/24V WITH PROTECT-ALL® - 1 OF 2 5 - 2

5.2 SUPER BOOST-ALL®, 12/24V WITH PROTECT-ALL® - 2 OF 2 5 - 4

5.3 SUPER BOOST-ALL®, 12/24V WITH PROTECT-ALL® - WIRING..... 5 - 6

5.4 SUPER BOOST-ALL® WITH PROTECT-ALL® - WIRING 5 - 7

5.5 DECALS - IDENTIFICATION AND LOCATION 5 - 8

WARRANTY CLAIMS PROCEDURE

CLAIMS PROCESS FOR WARRANTED VANAIR® PARTS

This process must be used by owners of Vanair® equipment in situations where a warranted item needs repair or replacement under the terms of the purchase warranty. Do not return items to Vanair® without prior authorization from the Vanair® Warranty Administrator.

PROCEDURE:

When a customer needs assistance in troubleshooting a system and/or returning parts, follow the steps below.

1. Locate the machine's serial number:

Refer to **Figure W-1**.

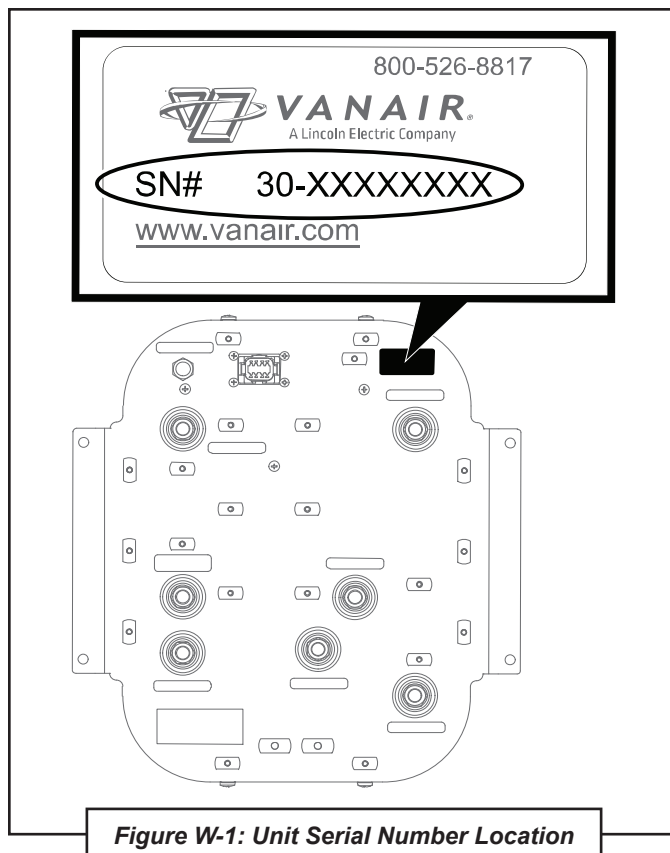


Figure W-1: Unit Serial Number Location

2. Have a list of the symptoms/condition/malfunctions along with any applicable Error Codes:

Note that the above information will also need to be included on the Return Material Authorization Form (per **Step #6**); this form is necessary for warranty processing if the warranty claim is deemed valid by the service case review.

3. Contact the Vanair® Service Department by phone (1-844-VANSERV or 1-219-879-5100) to speak with a Service Technician.

4. Vanair® Service will troubleshoot the problem based on the information provided by the customer, and attempt to return the unit to service as quickly as possible.

5. If the unit cannot be returned to service, and Vanair® determines this matter is a warranty issue, the Service Technician will assign an RMA (Return Material Authorization) number that will provide for the return of the item to Vanair® for analysis and a final determination as to the item's warranty status.

NOTE

The RMA number must be placed on the outside of the package being returned.

6. Warranty Claims are solicited via a Return Material Authorization (RMA) Form. This form can be obtained via download from the web site, or requested directly from the Vanair® Service Department:

Once a current form has been obtained, follow the instructions given on the form to fill in the information needed. This form is used for the purpose of soliciting a warranty case. All of the field information except for the bottom section block fields, which includes Disposition of Goods, Notifications and Additional Notes, will be required.

Customers have 30 days after the RMA number is issued to return the item. If the part is not re-

turned within this period, the RMA is void and any claims will be denied.

NOTE

All labor claims or invoices must be approved by the Vanair® Warranty Administrator prior to starting repair work along with the cost of the repair. All paper work associated with the returned item and warranty repair cost must reference the RMA number issued against the part, and be forwarded to Vanair® within 30 days of the completion of work.

Before sending a warranty part to a customer, Vanair® will need a P.O. or credit card number to cover the cost of the part and shipping. After the part is analyzed and deemed to be covered under warranty, Vanair® will issue credit to the customer. All parts eligible for warranty must have the RMA number on the invoice at the time of purchase.

No items can be returned "freight collect". Freight costs will be addressed at the time the claim is

closed. The customer pays any additional costs for warranty parts delivered through expedited services (i.e., Next Day, Second Day).

IMPORTANT

Vanair® will never accept any invoices for parts returned. Any parts returned via invoice will be returned freight collect. No parts are to be returned freight collect!

Vanair® strives to continuously improve its customer service. Please forward any questions, comments, or suggestions to:

**Service Toll Free: 1-844-VAN-SERV
1-844-826-7378**

Service Direct: 1-219-879-5100, ext. 400

E-mail: service@vanair.com

SECTION 1:

! SAFETY

1.1 ! GENERAL INFORMATION



! IMPORTANT
It is mandatory that all operators read this manual before operating or servicing the Super Boost•All®. Failure to do so could result in death, bodily injury or damage to equipment.

Read this manual before operating or servicing the Super Boost•All®. Failure to do so could result in damage to equipment, bodily injury, or death.

The products provided by Vanair® Manufacturing, Inc., are designed and manufactured for safe operation and maintenance. But it is ultimately the responsibility of the users and maintainers for safe use of this equipment. Part of this responsibility is to read and be familiar with the contents of this manual before operation or performing maintenance actions.

1.2 ! DANGERS, WARNINGS, CAUTIONS, AND NOTES

Specific safety and operation information given throughout the manual may be presented within a separate bordered frame and header for easy and clear identification. Those issues that regard safety measures are also tagged with the international safety symbol (see **Section 1.3**), and should always be taken into consideration before performing an operation. Specific definitions of these bordered instructions are as follows:

! DANGER

Identifies actions or conditions which will cause death, severe injury, equipment damage or destructive malfunctions.

! WARNING

Identifies actions or conditions which may cause death, severe injury, equipment damage or destructive malfunctions.

! CAUTION

Identifies actions or conditions which will or can cause injuries, equipment damage or malfunctions.

IMPORTANT

Crutial information (or existing information) which should be brought to the attention of operators/maintainers affecting safety, operation, maintenance, or warranty requirements.

NOTE

Additional information (or existing information) which should be brought to the attention of operators/maintainers affecting safety, operation, maintenance, or warranty requirements.

1.3 ! INTERNATIONAL SAFETY SYMBOL - ! !

The international warning symbol (shown below) is used on all decals, labels and signs that concern information pertaining to bodily harm. When you see the international warning symbol, pay extremely careful attention, and follow the given instructions or indications to avoid any possible hazard.

1.4 ! SUMMARY: DANGERS, WARNINGS, CAUTIONS AND NOTES

These boxed inserts are placed throughout this manual in the sections where they apply. This subsection is a general summary of their contents.

1.4.1 ! DANGERS

- Keep tools or other conductive objects away from live electrical parts.
- Never touch electrical wires or components

while the machine is operating. They can be sources of electrical shock.

- Explosive gases are produced during the boosting and charging process. The smallest spark can ignite these explosive gases. To avoid battery explosion and serious personal injury, follow these important safety precautions when boosting a battery:
- Always wear safety equipment such as goggles, gloves, ear plugs and head protection at all times when operating the unit.
- Keep flames, cigarettes, and other ignition sources away from battery.
- Never lean over the battery during charging, testing, or jump starting.
- Check the battery for low water level or frozen conditions. NEVER JUMP START A FROZEN BATTERY; rupture or explosion could occur, causing serious personal injury.
- Vehicle owner's manual may indicate further precautions which also should be followed when attempting to boost a vehicle.

1.4.2 ⚠ WARNINGS

- **DO NOT** perform any modifications to this equipment without prior factory approval.
- **DO NOT** install this equipment in a confined space that lacks proper ventilation and airflow; breathing and cooling air circulation must not be compromised.
- **DO NOT** operate the unit or any of its systems if there is a known unsafe condition. Disable the equipment by disconnecting it from its power source. Install a lock-out tag to identify the equipment as inoperable to other personnel.
- **DO NOT** operate the unit with any by-pass or other safety systems disconnected or rendered inoperative.
- **DO NOT** operate the equipment while you are under the influence of alcohol or drugs.
- **DO NOT** operate the equipment while you are feeling ill.
- **DO NOT** attempt to service the equipment while it is operating.
- **DO NOT** operate the unit in areas where flammable, toxic, or corrosive fumes, or other damag-

ing substance can be ingested by the unit intake.

- Keep arms, hands, hair and other body parts, and clothing away from fans, drive shafts, and other moving parts.
- **DO NOT** wear jewelry, unbuttoned cuffs, ties, or loose-fitting clothing when you are working near moving/rotating parts.
- **ALWAYS** confine long hair when working near moving/rotating parts.
- **NEVER** operate the equipment while wearing a headset to listen to music or the radio.
- Wear personal protective equipment such as gloves, work shoes, and eye and hearing protection as required for the task at hand.
- **DO NOT** operate the unit with any guards removed or damaged, or other safety devices inoperative.
- **DO NOT** operate the unit in enclosed or confined spaces where ventilation is restricted or closed-off.
- Keep metal tools, and other conductive objects away from live electrical components.
- Before performing maintenance or repair operations on the Super Boost•All®, ensure that all power has been removed and been locked out to prevent accidental application.
- **DO NOT** assume that because the equipment is in a STOPPED condition that power has been removed.
- Install, operate, and maintain this equipment in full compliance with all applicable OSHA, other Federal, state, local codes, standards, and regulations.
- When lifting objects, be aware of proper lifting techniques to avoid injury.
- **ALWAYS** read and follow safety related precautions found on containers of hazardous substances.

1.4.3 ⚠ CAUTIONS

- Check all safety devices for proper operation on a routine basis.
- Battery acid causes severe burns. Avoid contact with skin, eyes, or clothing.
- When unit is not in use, keep all switches turned

OFF.

- Always keep charging cable clamps separate so they do not come in contact with each other. The clamps could short circuit, creating arcing or sparking, which may cause damage.
- Periodically inspect cables for cracking or abrasion; this may cause the copper to become exposed, which could cause sparking or arcing during operation.
- Keep the equipment clean when performing maintenance or service actions. Cover openings to prevent contamination.
- Ensure all connectors, covers, cables and other parts removed for maintenance actions are replaced before applying power to the unit.
- Avoid touching hot surfaces and components.
- Ensure that electrical wiring, terminals, cables, and connectors are kept in serviceable condition through routine inspections and maintenance.

Replace any damaged or worn components.

- **DO NOT** install safety devices and/or replacement parts other than authorized Vanair® replacement parts.

1.5 SAFETY DECALS

Safety decals are placed onto, or located near, system components that can present a hazard to operators or service personnel. Always heed the information noted on the safety decals.

WARNING

DO NOT REMOVE OR COVER ANY SAFETY DECAL. Replace any safety decal that becomes damaged or illegible.

If a decal becomes illegible, destroyed, replace decal - order via information given in **Section 5.5, Decals - Identification and Locations**, and replace to position shown.

BLANK PAGE

SECTION 2: SPECIFICATIONS

TABLE 2A: SUPER BOOST•ALL® SPECIFICATIONS

GENERAL SYSTEM INFORMATION	SPECIFICATION
Power Source:	2 or 4 Auxiliary 12 Volt AGM Batteries 900CCA or Higher
Jump Starting:	12 or 24 Volt
Charging Cables' Leads:	25' 2/0 Ga. [‡]
Clamps:	1000 Amp
Dimensions:	16" W x 9" D x 17" H
Weight:	48 lbs.
INTEGRATED CAPABILITIES	
• Keeps auxiliary batteries at full power and ready for jump starting.	
• Allows for faster jump starting of disabled vehicles or equipment.	
• Provides high idle signal for increasing alternator output and jump starting power.	
HIGH SPEED ELECTRONIC CONTROLLER	
• Prevents powering up when connected in reverse polarity of disabled vehicle or equipment.	
• Auto-senses for correct voltage of disabled vehicle or equipment.	
• Mode lockout for incorrect of disabled vehicle or equipment voltages.	
[‡] for 25 ft cable replacement order cable no. 101619.	

BLANK PAGE

SECTION 3: INSTALLATION

3.1 MACHINE PACKAGE RECEIPT/INSPECTION

Upon receipt of the machine package, inspect the exterior of the shipping crate for signs of shipping/transit damage. Any damage should be reported immediately to the shipping company. Open the lid and inspect the component parts and supports to ensure that there has been no internal movements of assemblies or components which may have caused damage. To install the Super Boost•All® System, refer to the following sections.

To report missing items, incorrect part numbers, or other discrepancies, contact Vanair® at:

Vanair®
A Lincoln Electric Company
10896 West 300 North
Michigan City, IN 46360
Toll Free: (800) 526-8817
Telephone: (219) 879-5100
Service (toll free): (844) VAN-SERV
(844) 826-7378
vanair.com

3.2 INSTALLATION INSTRUCTIONS

NOTE

To avoid unnecessary installation, ALL wire connections must be made before mounting/installing the Super Boost•All® 12/24V unit. Connection points may not be accessible after installation.

1. Read the manual before using the Super Boost•All®.

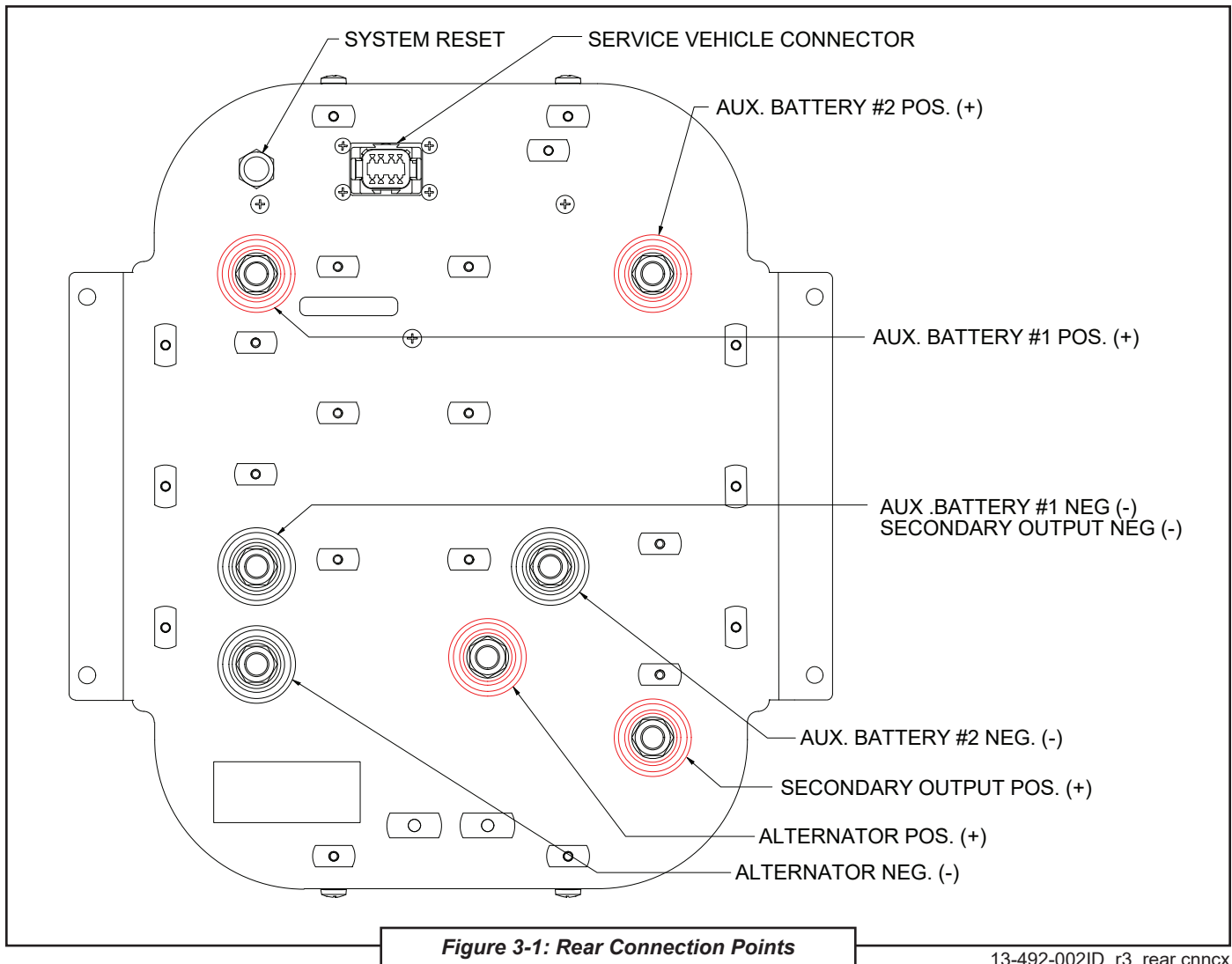
IMPORTANT

The Super Boost•All® is intended to be mounted inside the side pack of a service vehicle. It is not intended to be mounted exposed to the elements. Make sure that there is a minimum of 2 inches of space around the unit when installed.

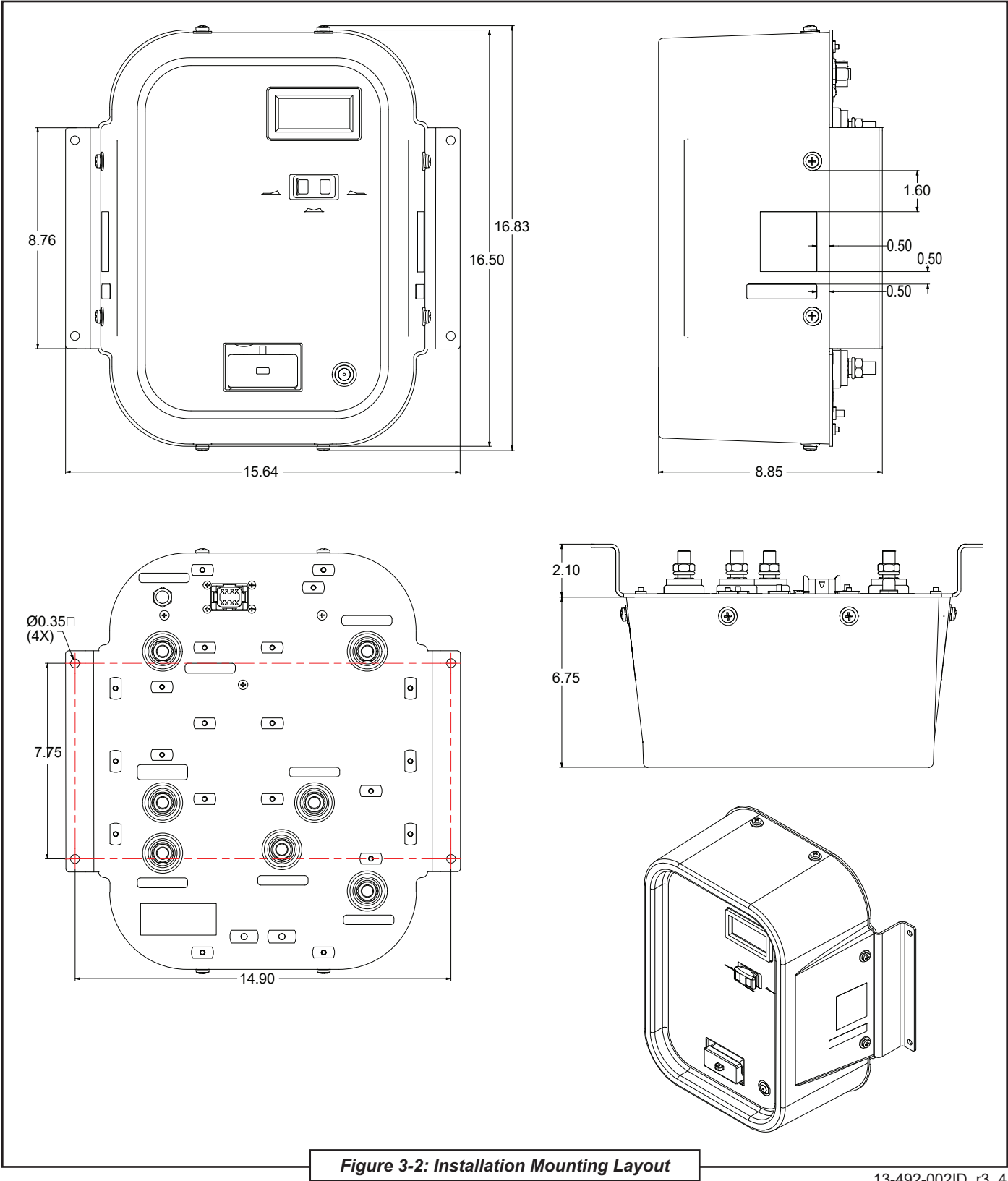
2. Refer to **Figure 3-1** to determine where to connect charging system, and any secondary output systems. Make sure all connections are tight and the protective boots in place before mounting the Super Boost•All®.
3. Use the Mounting Layout guide (dimensions given in **Figure 3-2**) to locate and drill the holes needed to mount the Super Boost•All®. Use the optional 61-758 Mounting Bracket Kit for horizontal surface installation.
4. Connect service vehicle integration harness:
The Super Boost•All® unit comes with a 20 foot long 4-conductor wire to connect to the Super Boost•All® and to the service vehicle.
 - i. Connect the RED wire to a 12 volt positive that is energized when the service vehicle is running with a 1 amp fuse.
 - ii. Connect the BLACK wire to a ground on the service vehicle.
 - iii. Depending on the service vehicle's idle control requirements, connect the WHITE wire for a high idle control 12 volt positive signal or the GREEN wire for a high idle control 12 volt negative signal. Cap off any unused wires to prevent a short from occurring.
 - iv. Attach the connector end of the integration harness to the receptacle located on the back panel of the Super Boost•All® (see **Figure 3-1**).
5. Mount the Super Boost•All® securely to the holes made in Step 3.

3.3 INSTALLATION MOUNTING LAYOUTS

A minimum of two (2) 12 volt batteries are required for operation of the Super Boost•All®. Each battery will connect to separate connections on the back of the Super Boost•All®. Additional batteries may be used to increase the output of the Super Boost•All®; these would connect in paral-



1el. It is recommended that a 250 amp fusible link is installed close to the service vehicle charging system positive connection. Use minimum 2 gauge cable for connecting to the 13-492. See diagram below of typical installation.



13-492-002ID_r3_4

BLANK PAGE

SECTION 4: OPERATION

4.1 GENERAL INFORMATION

The Super Boost•All® Unit has a comprehensive array of controls and indicators for optimum machine performance. Understanding the correct operation of the system will help to distinguish between a properly functioning system, and a system that may be indicating the beginning of a malfunction. The information in the Operation Section will help the operator to recognize and interpret the readings to assure that the system is performing optimally.

- Put on safety goggles and protective clothing.
- Ensure disabled vehicle or equipment is otherwise in good working condition prior to jump starting.
- Repair the disabled vehicle or equipment if needed before attempting to jump start.
- NEVER turn on the Super Boost•All® if the clamps are not connected to a battery.
- NEVER attempt to jump start or charge a bad or frozen battery.
- When Super Boost•All® is not in use, keep all switches turned off.
- Always keep charging cable clamps separated to avoid short circuit, creating arcing or sparking, which may cause damage or personal injury.

IMPORTANT



Before starting the Super Boost•All®, read this section thoroughly and familiarize yourself with the controls and indicators - their purpose, location and use.

IMPORTANT

If start-up and shut-down procedures are not followed, damage to the system and its components may occur.

4.2 INITIAL START-UP PROCEDURE

NOTE

Determine if the disabled vehicle or equipment to be started is a 12 volt or 24 volt system. Refer to disabled vehicle or equipments owners manual if needed.

1. Before attempting a jump start make sure the Super Boost•All® MODE SELECT switch is centered in the OFF position.
2. Using the 25 foot charging cable leads attach the RED cable clamp to the POSITIVE (+) post of the vehicle battery and the BLACK clamp to the NEGATIVE (-) post, VERIFY POLARITY, plug the GRAY connector into Super Boost•All®.
3. Place MODE SELECT switch on the Super Boost•All® to the correct voltage; 12 volt or 24 volt.

NOTE

If an Error Code is displayed, place the MODE SELECT switch to the center OFF position and refer to the table below.

4. Start the disabled vehicle or equipment.
5. After the disabled vehicle or equipment is started, place the MODE SELECT switch into the Center OFF position.
6. Disconnect the charging cable from the GRAY power plug on the Super Boost•All®.

NOTE

Place MODE SELECT Switch To Center Position To Recharge Auxiliary Batteries While Engine Is Running.

7. To recharge auxiliary batteries, leave the MODE SELECT switch in OFF position with the service vehicle running.

4.3 OPERATING INSTRUCTIONS ERROR CODES

Refer to **Table 4A** for error code information.

TABLE 4A: ERROR CODES		
CODE	POSSIBLE CAUSE	ACTION REQUIRED
E1	Reverse polarity Poor clamp connection Battery near zero volts	Recheck system voltage and recheck for correct clamp connection. Return to step 3. If required, Press the Error Override button.
E2	Vehicle volts too high for 12 volt	DO NOT use the Error Override for the E2 Error.
E3	Battery volts too low for 24 volt	Check the system voltage and verify it is a 24V system. If required, press the Error Override button.
E4	Interrupted by poor connection	Verify that the clamps are connected. Turn on headlights or other accessory, then try again. If required press the Error Override button.
E5	—	Call the Vanair® Service Department.
NOTE: If any of the Error Code problems persists after performing the steps as directed in the Error Code table above, contact the Vanair® Service Department at: 844-VAN-SERV .		

SECTION 5: ILLUSTRATED PARTS LIST

5.1 PARTS ORDERING INFORMATION

Part orders should be placed through the distributor from whom the unit was purchased. If for any reason parts cannot be obtained in this manner, contact the factory directly at the address or phone numbers below.

When contacting Vanair® please have the unit serial number available to assure prompt assistance. Refer to **Figure 5-1** to location serial number of the unit.

Vanair®
A Lincoln Electric Company
10896 West 300 North
Michigan City, IN 46360
Toll Free: (800) 526-8817
Telephone: (219) 879-5100
Service (toll free): (844) VAN-SERV
(844) 826-7378
vanair.com

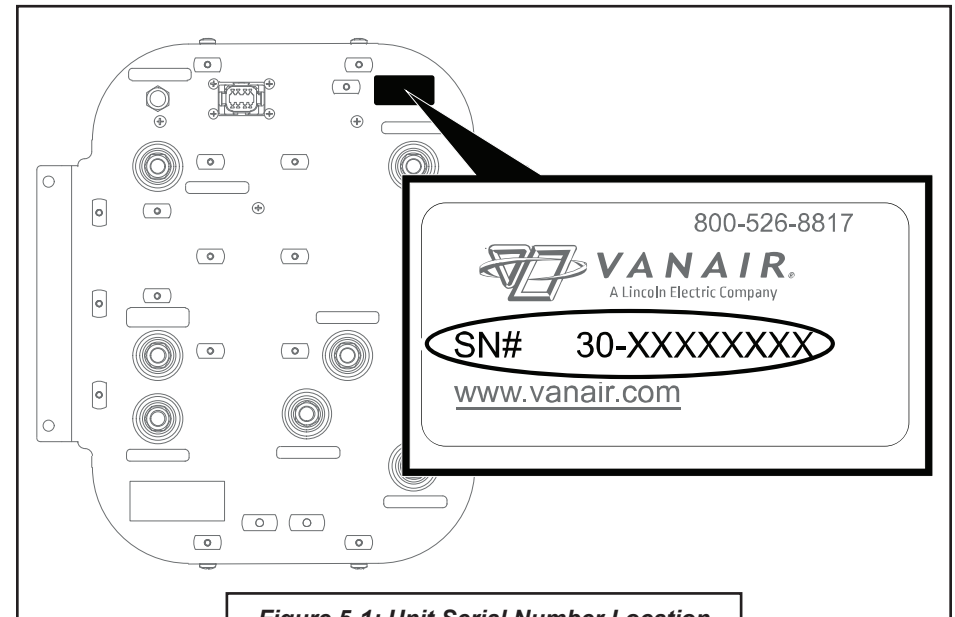
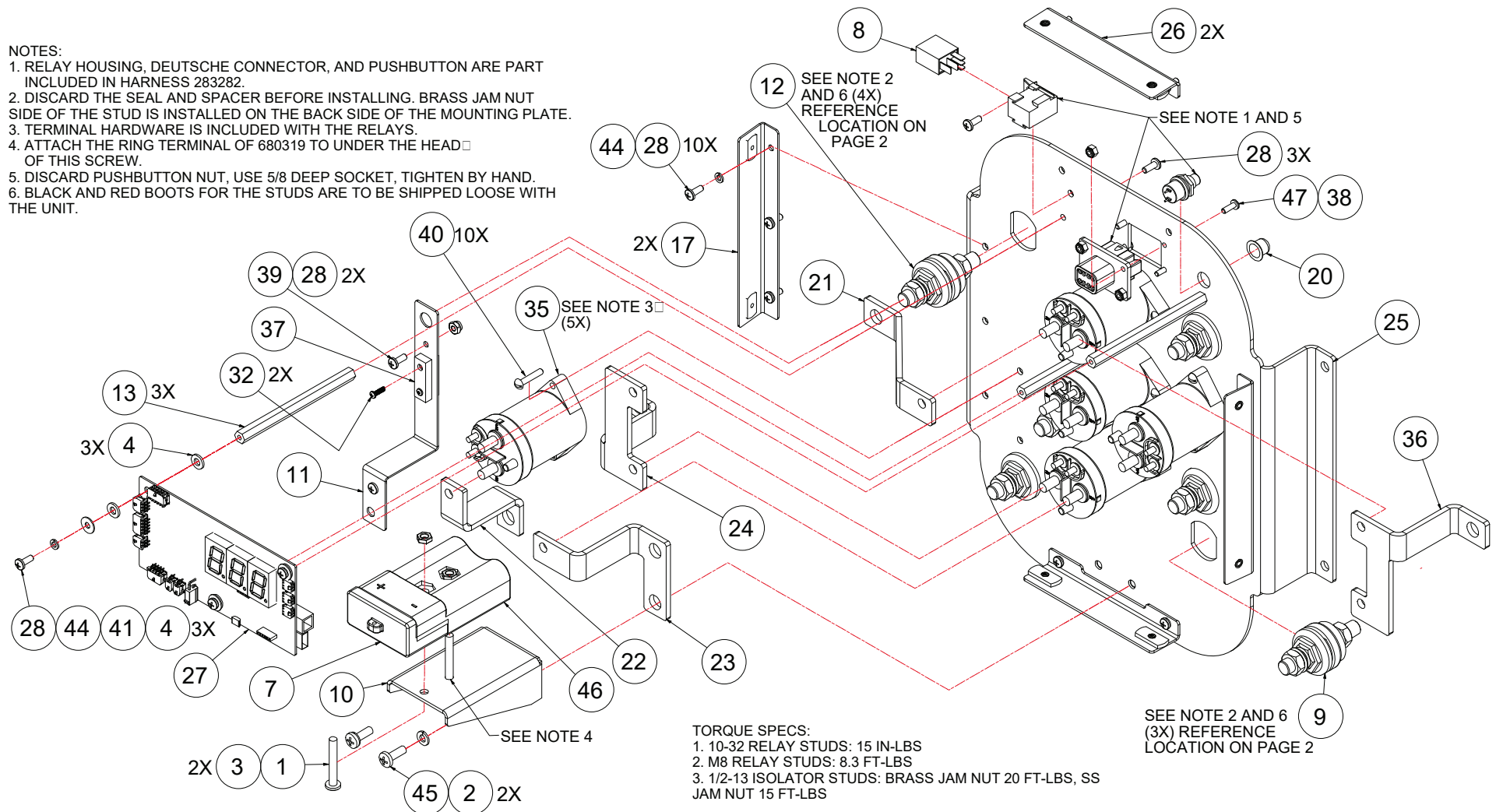


Figure 5-1: Unit Serial Number Location

5.2 SUPER BOOST•ALL®, 12/24V WITH PROTECT•ALL® - 1 OF 2

NOTES:

1. RELAY HOUSING, DEUTSCHE CONNECTOR, AND PUSHBUTTON ARE PART INCLUDED IN HARNESS 283282.
2. DISCARD THE SEAL AND SPACER BEFORE INSTALLING. BRASS JAM NUT SIDE OF THE STUD IS INSTALLED ON THE BACK SIDE OF THE MOUNTING PLATE.
3. TERMINAL HARDWARE IS INCLUDED WITH THE RELAYS.
4. ATTACH THE RING TERMINAL OF 680319 TO UNDER THE HEAD OF THIS SCREW.
5. DISCARD PUSHBUTTON NUT, USE 5/8 DEEP SOCKET, TIGHTEN BY HAND.
6. BLACK AND RED BOOTS FOR THE STUDS ARE TO BE SHIPPED LOOSE WITH THE UNIT.

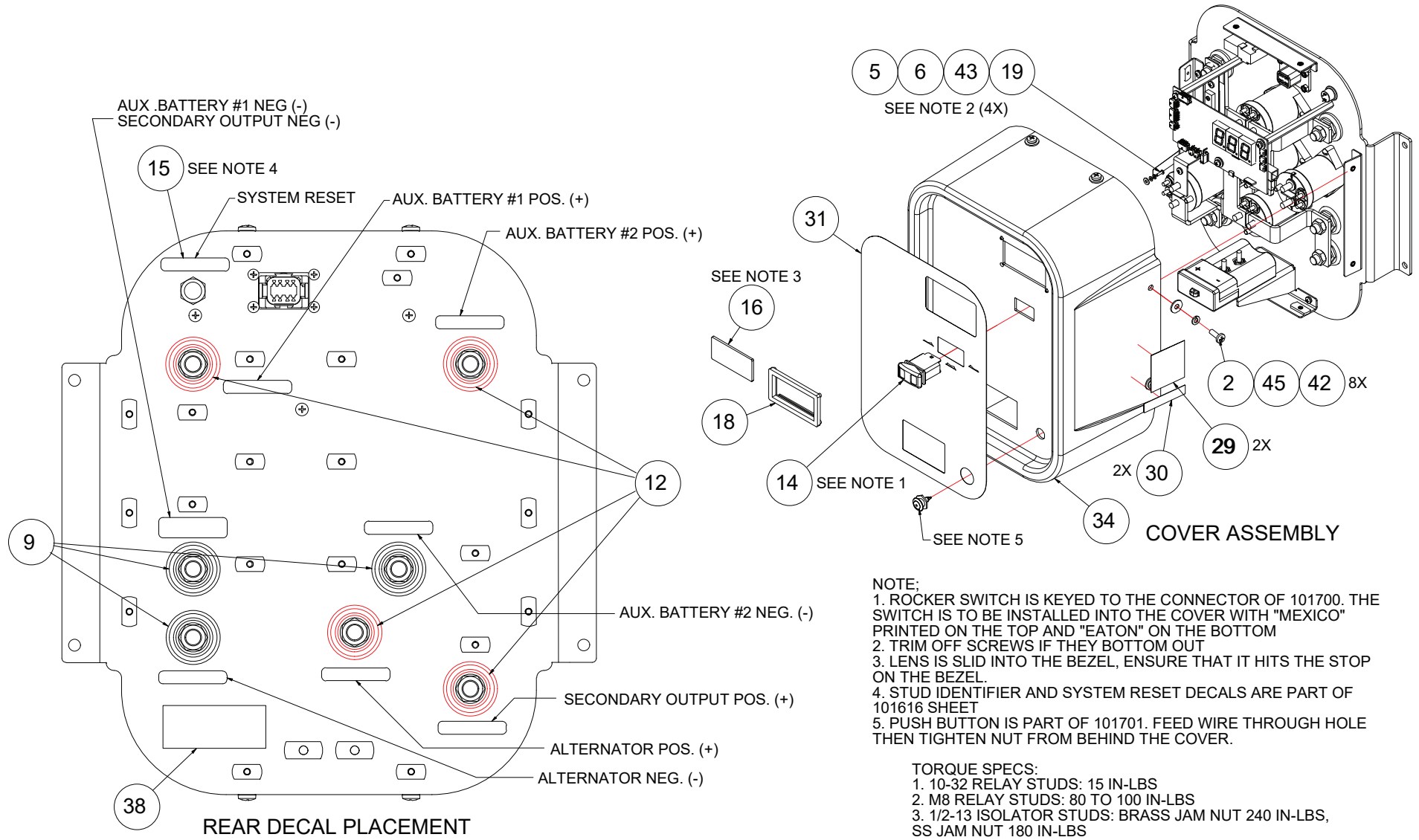


5.2 SUPER BOOST•ALL®, 12/24V WITH PROTECT•ALL® - 1 OF 2

ITEM	DESCRIPTION	PART NUMBER	QTY	ITEM	DESCRIPTION	PART NUMBER	QTY
1	SCREW, 1/4-20 X 1.75 PPHMS	650-199	2	27	BOARD, 492 CONTROLLER	101801	1
2	SCREW, 1/4-20 X 3/4" PHIL-PHMS ZINC	650-206	10	28	SCREW, PAN HD # 10-32 X 1/2	268445	19
3	NUT, 1/4-20 WITH 1/2"OD	650-317	2	29	DECAL, WARNING ELECTRIC TAMPER	271510	2
4	WASHER, 1/4"IDX1/2"ODX.0625	650-412	6	30	DECAL, WARN QUALIFIED PERSONEL	271535	2
5	WASHER, #6 FLAT	650-414	4	31	DECAL, OPERATING INSTRUCTIONS 492	279010	1
6	WASHER, #4	650-441	4	32	SCREW, MACHINE PHILLIPS PAN HEAD M3-0.5 X 16mm	279042-016	2
7	CAP, WEATHER LG RIGID/12GA RING	680-319	1	33	DECAL, WARN-CANCER,REPRO,HARM	279065	1
8	RELAY, CAPACITOR STARTER	810-843	1	34	COVER, 492 WITHOUT RECESS	279242	1
9	STUD, ISOLATED 1/8-1/4" PANEL	880-698	3	35	RELAY, 500 AMP 12V COIL w/STUDS N.O.	280203	5
10	BRACKET, ANDERSON CONNECTOR	101429	1	36	BUS BAR, 2 RELAYS, 1 STUD	282855	1
11	SHUNT, COPPER 76 uOHMS	101525	1	37	SENSOR, HALL EFFECT	284377	1
12	STUD, WITH BOOT RED	101576	4	38	NUT, 8-32 NYLOCK	825501-070	4
13	STANDOFF, 5" 3/8" HEX X #10	101577	3	39	NUT, HEX LOCKING #10-32	825702-083	2
14	SWITCH, ROCKER ON-OFF-ON	101595	1	40	SCREW, MACHINE 10-32 X 1.0	831702-100	10
15	LABEL, SET REAR CONNECTIONS	101616	1	41	WASHER, FLAT #10	838202-045	3
16	LENS, RED ACRYLIC	101656	1	42	WASHER, FLAT 1/4	838204-071	8
17	BRACKET, COVER MOUNTING SSBA	101667	2	43	WASHER, LOCK #6	838500-031	4
18	BEZEL, LENS ABS PLASTIC	101710	1	44	WASHER, LOCK #10	838502-047	13
19	SCREW, 4-40 X 3/8 PPHMS ZINC	101716	4	45	WASHER, LOCK 1/4	838504-062	10
20	BOOT, GRAY PUSHBUTTON	101732	1	46	HOUSING, CONNECTOR, 350 AMP, GRAY	EL52049	1
21	BUS BAR, ANGLED	101775	1	47	SCREW, PHILLIPS PAN HEAD 8-32 X1/2	FI273801	4
22	BUS BAR, MAIN OUTPUT KILOVAC	101776	1	NS	CABLE, ASSY 2/0 25' 800A CLAMP	101619	1
23	BUS BAR, 2 STUDS, 1 RELAY	101777	1	NS	WIRE, ASSY PLUG SERVICE VEHICLE	101795	1
24	BUS BAR, 2 RELAYS, 1 STUD	101778	1	NS	TERMINAL, 2 GAUGE 1/2"	820-201	2
25	BACK PLATE, 492 KILOVAC	101779	1	NS	TERMINAL, 4/0 X 1/2 RING HD	820-777	4
26	BRACKET, 492 COVER TOP/BOTTOM	101780	2				

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.

5.2 SUPER BOOST•ALL®, 12/24V WITH PROTECT•ALL® - 2 OF 2



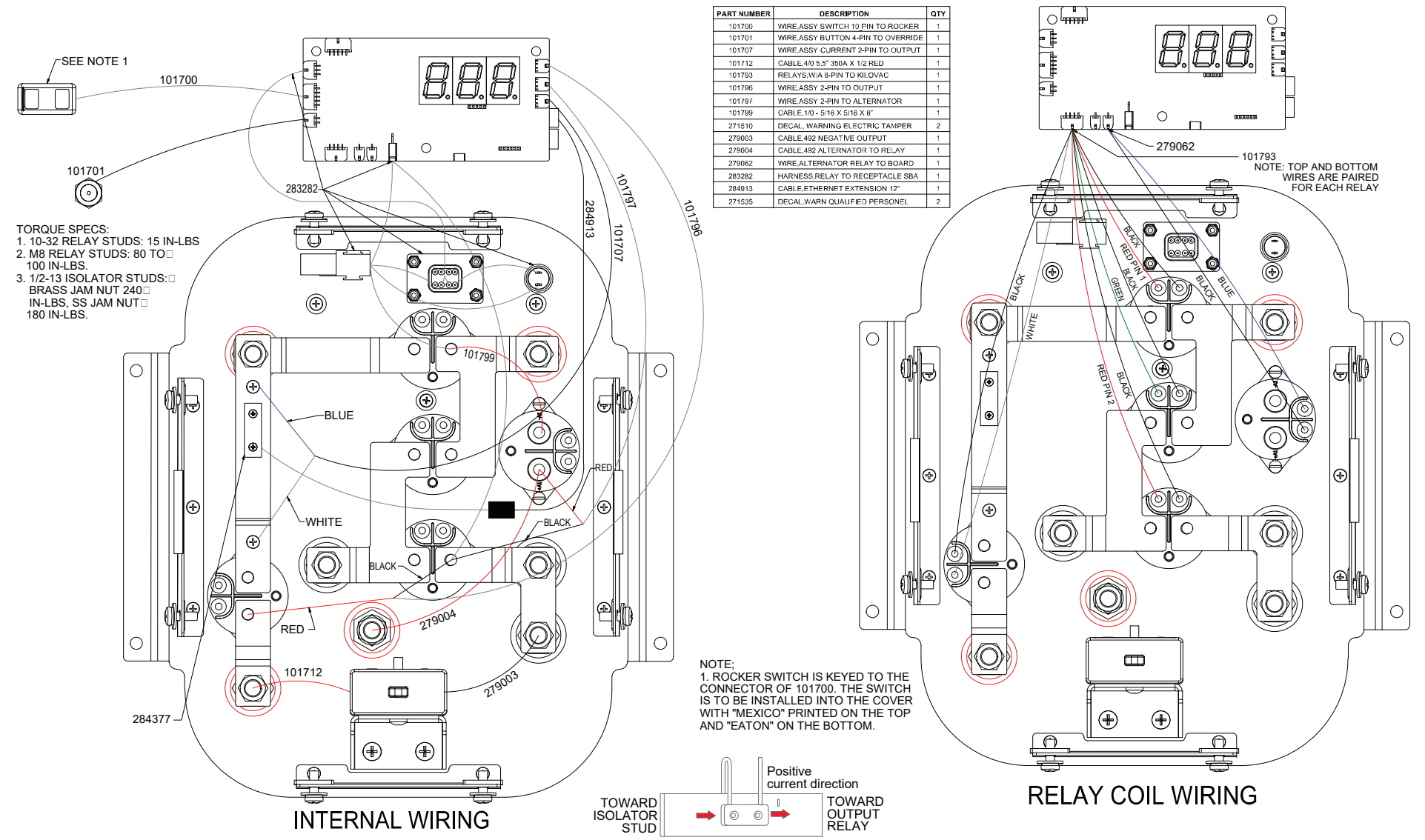
13-492-002ID_r3_2

5.2 SUPER BOOST•ALL®, 12/24V WITH PROTECT•ALL® - 2 OF 2

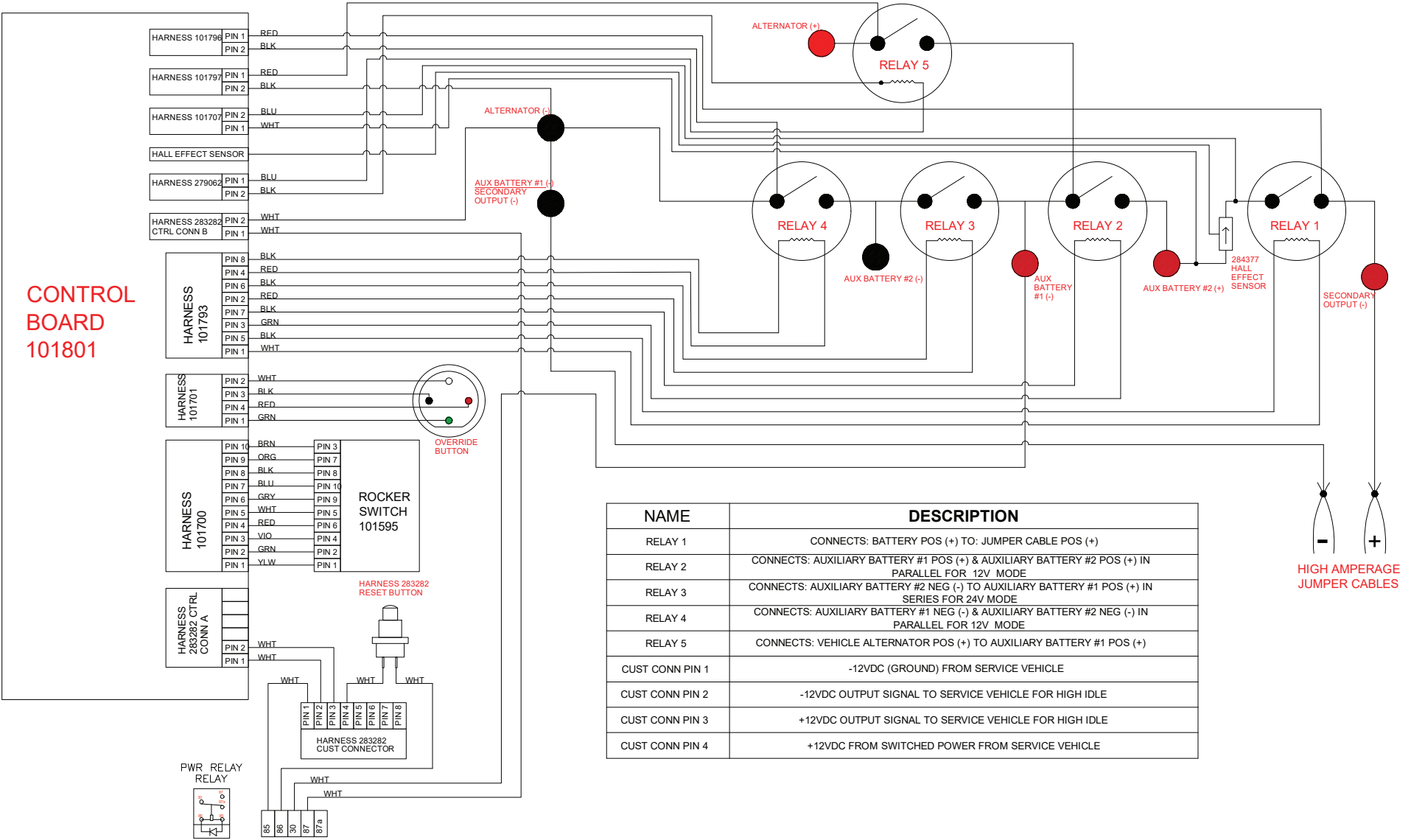
ITEM	DESCRIPTION	PART NUMBER	QTY	ITEM	DESCRIPTION	PART NUMBER	QTY
1	SCREW, 1/4-20 X 1.75 PPHMS	650-199	2	27	BOARD, 492 CONTROLLER	101801	1
2	SCREW, 1/4-20 X 3/4" PHIL-PHMS ZINC	650-206	10	28	SCREW, PAN HD # 10-32 X 1/2	268445	19
3	NUT, 1/4-20 WITH 1/2"OD	650-317	2	29	DECAL, WARNING ELECTRIC TAMPER	271510	2
4	WASHER, 1/4"IDX1/2"ODX.0625	650-412	6	30	DECAL,WARN QUALIFIED PERSONNEL	271535	2
5	WASHER, #6 FLAT	650-414	4	31	DECAL, OPERATING INSTRUCTIONS 492	279010	1
6	WASHER, #4	650-441	4	32	SCREW, MACHINE PHILLIPS PAN HEAD M3-0.5 X 16mm	279042-016	2
7	CAP, WEATHER LG RIGID/12GA RING	680-319	1	33	DECAL, WARN-CANCER,REPRO,HARM	279065	1
8	RELAY, CAPACITOR STARTER	810-843	1	34	COVER, 492 WITHOUT RECESS	279242	1
9	STUD, ISOLATED 1/8-1/4" PANEL	880-698	3	35	RELAY, 500 AMP 12V COIL w/STUDS N.O.	280203	5
10	BRACKET, ANDERSON CONNECTOR	101429	1	36	BUS BAR, 2 RELAYS, 1 STUD	282855	1
11	SHUNT, COPPER 76 uOHMS	101525	1	37	SENSOR, HALL EFFECT	284377	1
12	STUD, WITH BOOT RED	101576	4	38	NUT, 8-32 NYLOCK	825501-070	4
13	STANDOFF, 5" 3/8" HEX X #10	101577	3	39	NUT, HEX LOCKING #10-32	825702-083	2
14	SWITCH, ROCKER ON-OFF-ON	101595	1	40	SCREW, MACHINE 10-32 X 1.0	831702-100	10
15	LABEL, SET REAR CONNECTIONS	101616	1	41	WASHER, FLAT #10	838202-045	3
16	LENS, RED ACRYLIC	101656	1	42	WASHER, FLAT 1/4	838204-071	8
17	BRACKET, COVER MOUNTING SSBA	101667	2	43	WASHER, LOCK #6	838500-031	4
18	BEZEL, LENS ABS PLASTIC	101710	1	44	WASHER, LOCK #10	838502-047	13
19	SCREW, 4-40 X 3/8 PPHMS ZINC	101716	4	45	WASHER, LOCK 1/4	838504-062	10
20	BOOT, GRAY PUSHBUTTON	101732	1	46	HOUSING, CONNECTOR, 350 AMP, GRAY	EL52049	1
21	BUS BAR, ANGLED	101775	1	47	SCREW, PHILLIPS PAN HEAD 8-32 X 1/2	FI273801	4
22	BUS BAR, MAIN OUTPUT KILOVAC	101776	1	NS	CABLE, ASSY 2/0 25' 800A CLAMP	101619	1
23	BUS BAR, 2 STUDS, 1 RELAY	101777	1	NS	WIRE, ASSY PLUG SERVICE VEHICLE	101795	1
24	BUS BAR, 2 RELAYS, 1 STUD	101778	1	NS	TERMINAL, 2 GAUGE 1/2"	820-201	2
25	BACK PLATE, 492 KILOVAC	101779	1	NS	TERMINAL, 4/0 X 1/2 RING HD	820-777	4
26	BRACKET, 492 COVER TOP/BOTTOM	101780	2				

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.

5.3 SUPER BOOST•ALL®, 12/24V WITH PROTECT•ALL® - WIRING



5.4 SUPER BOOST•ALL® WITH PROTECT•ALL® - WIRING



5.5 DECALS - IDENTIFICATION AND LOCATION

Read Owner's Manual before operating. Failure to do so can result in damage to unit and vehicle or lead to serious injury or death.

BOOSTING

NOTE: Determine if the vehicle to be started is a 12-volt or 24-volt system.

1. Make sure the Super Boost•All MODE SELECT switch is centered in the OFF position.

2. Attach the RED cable clamp to the POSITIVE (+) post of the vehicle battery and the BLACK clamp to the NEGATIVE (-) post. VERIFY POLARITY, plug GRAY connector into Super Boost•All.

3. Turn MODE SELECT switch to the correct voltage: 12 volt or 24 volt.

NOTE: If an Error Code is displayed, flip the MODE SELECT switch to the center OFF position and refer to the table below.

4. Start the vehicle.

5. After vehicle start, flip the MODE SELECT switch to the center OFF then disconnect the GRAY Power Plug.

6. Disconnect the BLACK booster clamp then the RED clamp from vehicle battery.

To recharge auxiliary batteries, leave the MODE SELECT switch in OFF position with the service vehicle running.

CODE	POSSIBLE CAUSE	ACTION REQUIRED
E1	Poor clamp connection	Reverse polarity
E2	Battery near zero volts	Recheck system voltage and recheck for correct clamp connection. Return to step 3. If required, Press the Error Override button for one second.
E3	Vehicle volts too high for 12 volt	
E4	Vehicle volts too low for 24 volt	
	Interrupted by poor connection	DO NOT use the Error Override for the E2 error.

Goodall
We Start Engines
800-526-8817 • www.vanair.com

VOLTS/ERROR CODE

12 VOLTS LEFT 24 VOLTS RIGHT

MODE SELECT

OFF CENTER

SUPER BOOST•ALL
12/24V With Protect•All

ERROR OVERRIDE

ITEM	DESCRIPTION	PART NUMBER	QTY
1	DECAL, OPERATING INSTRUCTIONS 492	279010	1
2	DECAL, WARNING ELECTRIC TAMPER	271510	2
3	DECAL, WARN QUALIFIED PERSONNEL	271535	2
4	LABEL, SET REAR CONNECTIONS	101616	1
5	PLATE, SERIAL NUMBER	I	1
6	DECAL, WARN-CANCER, REPRO, HARM	279065	1

^I If serial plate is damaged, contact the Vanair® Service Department for replacement.

PLEASE NOTE: WHEN ORDERING PARTS, INDICATE MACHINE SERIAL NUMBER.

WARNING

DO NOT REMOVE OR COVER ANY SAFETY DECAL. Replace any safety decal that becomes damaged or illegible.

A SYSTEM RESET

B AUX. BATTERY #1 POS. (+)

C AUX. BATTERY #2 POS. (+)

D AUX. BATTERY #1 NEG. (-)
SECONDARY OUTPUT NEG. (-)

E AUX. BATTERY #2 NEG. (-)

F ALTERNATOR NEG. (-)

G ALTERNATOR POS. (+)

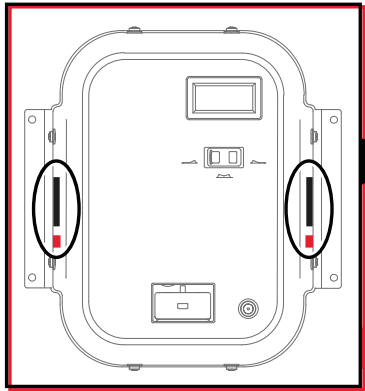
H SECONDARY OUTPUT POS. (+)

800-526-8817

VANAIR
A Lincoln Electric Company

SN# 30-XXXXXXXX

www.vanair.com



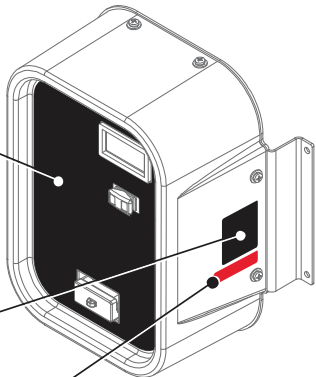
WARNING

DO NOT TAMPER with any electrical harness in this machine.

Tampering with any electrical system harness may cause harm, damage the system, and/or void the warranty. For electrical assistance, consult the Vanair Service Department.

271510_rX

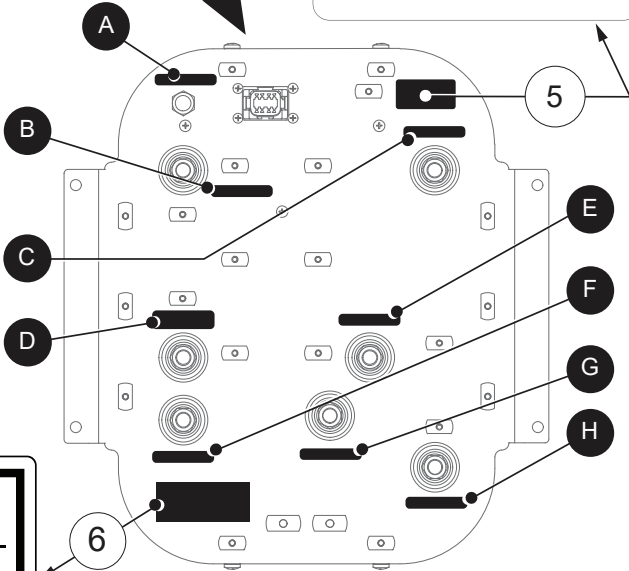
WARNING: EQUIPMENT MAY ONLY BE SERVICED BY QUALIFIED PERSONNEL



WARNING

Cancer and Reproductive Harm-
www.P65Warnings.ca.gov

279065_rX



BLANK PAGE



VANAIR®

A Lincoln Electric Company



We Start Engines™

Vanair®

A Lincoln Electric Company

**10896 West 300 North
Michigan City, IN 46360**

**Telephone Toll Free:
(800) 526-8817**

**Service (toll free):
(844) VAN-SERV
(844) 826-7378**

**Telephone: (219) 879-5100
vanair.com**

Printed in the U.S.A.

Specifications subject to change
without prior notice

13-492-002

AUGUST 26, 2025