



# Installation / Owner's Manual for VMAC Accessory A700359 | A700384 12 V — 24 V Booster

**VMACAIR.com**



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| Revision | Revision Details           | Revised by | Checked by |       |       |       | Implemented |
|----------|----------------------------|------------|------------|-------|-------|-------|-------------|
|          |                            |            | Eng.       |       | Tech. | Qual. |             |
|          |                            |            | Mech.      | Elec. |       |       |             |
| A        | Initial release            | BDJ        | JRM        | N/A   | MSP   | TAM   | 22 JUN 2026 |
| B        | ECN 26-052 Included cables | BDJ        | JRM        | N/A   | JGT   | N/A   | 19 AUG 2026 |

## Additional Application Information

- To be installed in service vehicles with 12 V charging systems only.
- VMAC booster cables are required to operate booster.
- A700359 includes x1 3551215 10 foot booster cable.
- A700384 includes x1 3551216 30 foot booster cable.

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## Important Information

The information in this manual is intended for certified VMAC installers who have been trained in installation and service procedures and/or for anyone with mechanical trade certification who has the tools and equipment to properly and safely perform the installation or service. Do not attempt installation or service without the appropriate mechanical training, knowledge and experience.

Follow all safety precautions. Any fabrication for correct fit in modified vehicles must follow industry standard "best practices".

## Notice

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Printed in Canada

# Safety

## Important Safety Notice

The information contained in this manual is based on sound engineering principles, research, extensive field experience and technical information. Information is constantly changing with the addition of new models, assemblies, service techniques and running OEM changes. If a discrepancy is found in this manual, contact VMAC Technical Support prior to initiating or proceeding with installation, service or repair. Current information may clarify the issue. Anyone with knowledge of such discrepancies, who proceeds to perform service and repair, assumes all risks.

Only proven service procedures are recommended. Anyone who departs from the specific instructions provided in this manual must first ensure that their safety and that of others is not being compromised, and that there will be no adverse effects on the operational safety or performance of the equipment.

VMAC will not be held responsible for any liability, consequential damages, injuries, loss or damage to individuals or to equipment as a result of the failure of anyone to properly adhere to the procedures set out in this manual or standard safety practices.

Safety should be the first consideration when performing any service operations. If there are any questions concerning the procedures in this manual, or more information is required, please contact VMAC Technical Support prior to beginning work.

## Safety Messages

This manual contains various warnings, cautions and notices that must be observed to reduce the risk of personal injury during installation, service or repair and the possibility that improper installation, service or repair may damage the equipment or render it unsafe.



*This symbol is used to call attention to instructions concerning personal safety. Watch for this symbol; it points out important safety precautions, it means, "Attention, become alert! Your personal safety is involved". Read the message that follows and be aware of the possibility of personal injury or death. As it is impossible to warn of every conceivable hazard, common sense and industry standard safety practices must be observed.*



*This symbol is used to call attention to instructions on a specific procedure that if not followed may damage or reduce the useful life of the compressor or other equipment.*



*This symbol is used to call attention to additional instructions or special emphasis on a specific procedure.*

# Warranty

## VMAC Standard Warranty (Limited)

For complete warranty information, including both VMAC Standard Warranty (Limited) and VMAC Lifetime Warranty (Limited) requirements, please refer to our current published warranty located at: [www.vmacair.com/warranty](http://www.vmacair.com/warranty)



If you do not have access to a computer, please contact us and we will be happy to send you our warranty.

VMAC's warranty is subject to change without notice.

## VMAC Warranty Claim Process



*VMAC warranty work must be pre-authorized by VMAC. Claims are processed via our dealer network. If you are not a VMAC dealer, please select one to work with via our Dealer Locator:*  
<https://www.vmacair.com/support/find-a-dealer>



- 1) Communicate with VMAC Technical Support at (888) 241-2289 or [tech@vmacair.com](mailto:tech@vmacair.com) to help diagnose/troubleshoot the problem prior to repair. VMAC technical support will require the proof of purchase of the product, or of the service vehicle it was installed in. VMAC will provide direction for repair or replacement of the failed components.
- 2) If requested, failed parts must be returned to VMAC for evaluation.
- 3) Dealers may login to the VMAC website to view the "VMAC Labour Time Guide" (under "Agreements") to see the allowable warranty labour times.
- 4) Warranty invoices must include the Service Ticket number, and a detailed description of the work performed.
- 5) VMAC Warranty does not cover consequential damages, loss of income, overtime charges, mileage, travel time, towing/recovery, cleaning or shop supplies.
- 6) Dealers submit warranty claims on behalf of the Vehicle Owner/End User affected by the defective part(s). The dealer ensures that all warranty credits are refunded back to the Vehicle Owner/End User who made the initial warranty claim.

# General Information

## Optional Equipment Compatibility

While VMAC strives to design systems compatible with optional OEM equipment (such as running boards), it is impractical to develop systems that accommodate every OEM and aftermarket option or add-on. Whenever possible, VMAC endeavors to advise of compatibility issues in the "Additional Application Information" section of the manual. Even when specific optional equipment is determined by VMAC to be incompatible, it does not preclude the vehicle upfitter or end user from modifying the optional equipment to make it compatible with the installed VMAC system. VMAC does not warranty or accept responsibility or liability for the fitment, function or safety of any products modified in any way not expressly outlined in the installation manual.

## Before Starting

Read this manual prior to beginning the installation to ensure familiarity with the components and how they will fit on the vehicle. Identify any variations from the application list such as vehicle model, engines, or optional equipment (e.g., dual alternator, active steering assist, etc.).

Open the package, unpack the components and identify them using the Illustrated Parts List (IPL) included in the Fastener Pack.

## Ordering Parts

To order parts, contact a VMAC dealer. The dealer will ask for the VMAC serial number, part number, description and quantity. Locate the nearest dealer online at <https://www.vmacair.com/support/find-a-dealer> or call (877) 912-6605.



## Special Tools and Parts Required

- (x2) Booster batteries. 8D series with a minimum of 1,500 CCA each suggested.
- (x2) 300 A fuses.
- (x1) 200 A fuse.
- (as required) 2/0 AWG and 2 AWG black cable.
- (as required) 2/0 AWG and 2 AWG red cable.

## Torque Specifications

All fasteners must be torqued to specifications. Use manufacturers' torque values for OEM fasteners.

The torque values supplied in Table 1 are intended for VMAC supplied components, or for use as a guide in the absence of a torque value provided by an OEM.



**Apply Loctite 242 (blue) to all fasteners (except nylon lock nuts) unless otherwise stated.**

Torque values are with Loctite applied unless otherwise specified.

| Standard Grade 8 National Coarse Thread |     |      |     |      |     |      |     |     |
|-----------------------------------------|-----|------|-----|------|-----|------|-----|-----|
| Size (in)                               | 1/4 | 5/16 | 3/8 | 7/16 | 1/2 | 9/16 | 5/8 | 3/4 |
| Foot pounds (ft•lb)                     | 9   | 18   | 35  | 55   | 80  | 110  | 170 | 280 |
| Newton meter (N•m)                      | 12  | 24   | 47  | 74   | 108 | 149  | 230 | 379 |

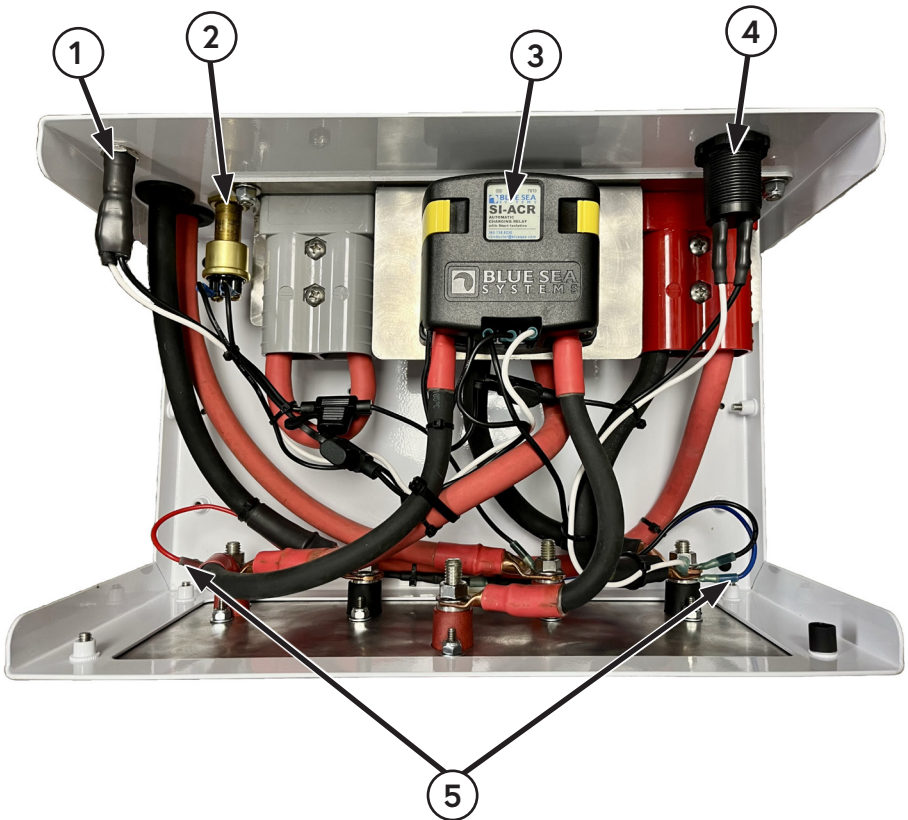
| Standard Grade 8 National Fine Thread |     |      |     |     |     |
|---------------------------------------|-----|------|-----|-----|-----|
| Size (in)                             | 3/8 | 7/16 | 1/2 | 5/8 | 3/4 |
| Foot pounds (ft•lb)                   | 40  | 60   | 90  | 180 | 320 |
| Newton meter (N•m)                    | 54  | 81   | 122 | 244 | 434 |

| Metric Class 10.9   |     |    |     |     |     |     |
|---------------------|-----|----|-----|-----|-----|-----|
| Size (mm)           | M6  | M8 | M10 | M12 | M14 | M16 |
| Foot pounds (ft•lb) | 4.5 | 19 | 41  | 69  | 104 | 174 |
| Newton meter (N•m)  | 6   | 25 | 55  | 93  | 141 | 236 |

Table 1 — Torque Table

# Illustrated Parts List (IPL)

| ITEM # | PART #  | QTY | DESCRIPTION              |
|--------|---------|-----|--------------------------|
| 1      | 3501915 | 1   | LED, RED, 9L-612         |
| 2      | 3501916 | 1   | SWITCH, PUSH BUTTON, 2,2 |
| 3      | 3501914 | 1   | CHARGING RELAY, 12-24V   |
| 4      | 3501913 | 1   | METER, VOLTMETER, 12-24V |
| 5      | 3530905 | 1   | HARNESS, A700359, DIODE  |



# Maintenance and Repair Safety



*It is impossible to warn of all the possible hazards that may result from operating, servicing, or repairing this system.*

*Follow all safety precautions and industry standard "best practices"*



- *Wear all appropriate Personal Protective Equipment and follow all industry standard safety practices.*
- *Prior to performing any service, ensure the vehicle's transmission is in "PARK" with the parking brake applied and the wheels chocked (if applicable).*
- *Never use flammable solvents to clean any components.*
- *Use only genuine VMAC parts to maintain the system. Substituting non VMAC parts may void the warranty and could cause equipment damage, injury, or death.*
- *This information is intended for people with mechanical trade certification who have the tools and equipment to properly and safely perform the service or repair. Do not attempt to service or repair this system without the appropriate mechanical training, knowledge and experience.*

# System Components

## Booster Front and Rear Panels

- Volt meter
- Booster cable port
- "12 VOLT | BOOST/CHARGE" port
- "24 VOLT | BOOST" port
- "CHASSIS BATTERY ISOLATOR" button
- Voltage selector plug
- Isolator status LED
- Booster battery 1 & 2 terminals
- Chassis battery terminals

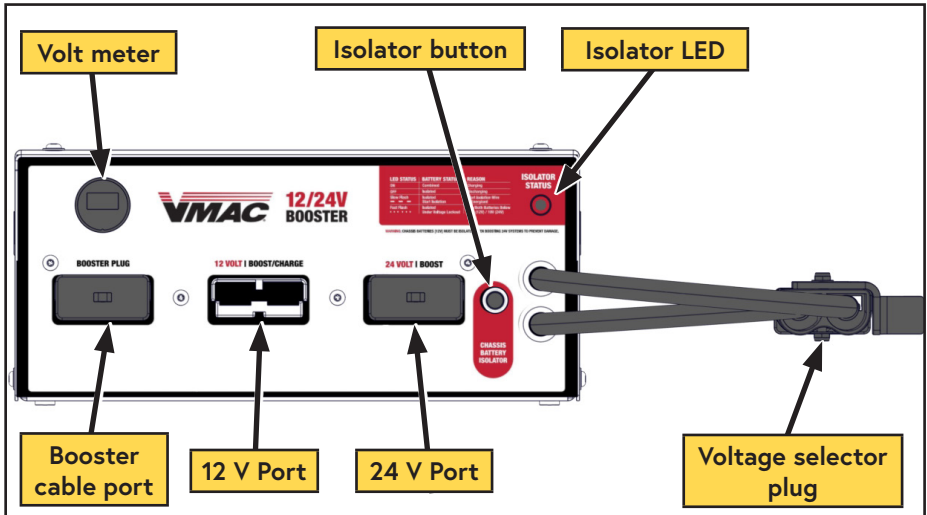


Figure 1 — Front panel

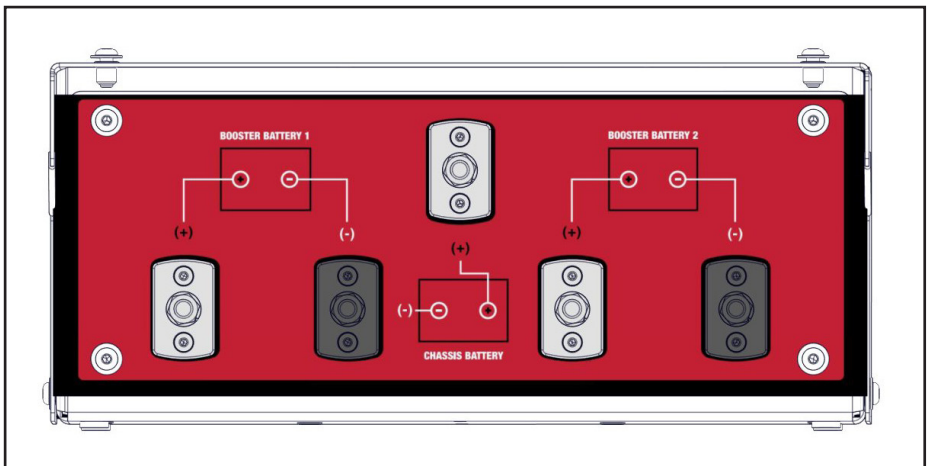


Figure 2 — Rear panel - battery terminals

VMAC - Vehicle Mounted Air Compressors

VMAC Technical Support: 888-241-2289

VMAC Knowledge Base: kb.vmacair.com

# Installation



***De-energize and lock out the vehicle before beginning this installation.***



***Booster batteries must be mounted in a ventilated space to prevent the accumulation of combustible gasses.***

## Installation Requirements and Considerations.

- Ensure the booster batteries are installed as close as possible to the booster. The cable length from the booster to the booster batteries should not exceed 25 feet.
- Ensure the installation location takes into account booster cable length, ensuring the service vehicle can be positioned close enough that the booster cables will reach the discharged batteries or battery boost terminal (CAT) of the disabled equipment.
- Ensure the booster is mounted inside of a weather proof cabinet.

## Mounting the Booster

- ☐ Install the booster batteries.
- ☐ Apply the Boosting Procedures decal where it will be clearly visible when operating the booster.
- ☐ Remove the terminal guard and booster cover (Figure 3).

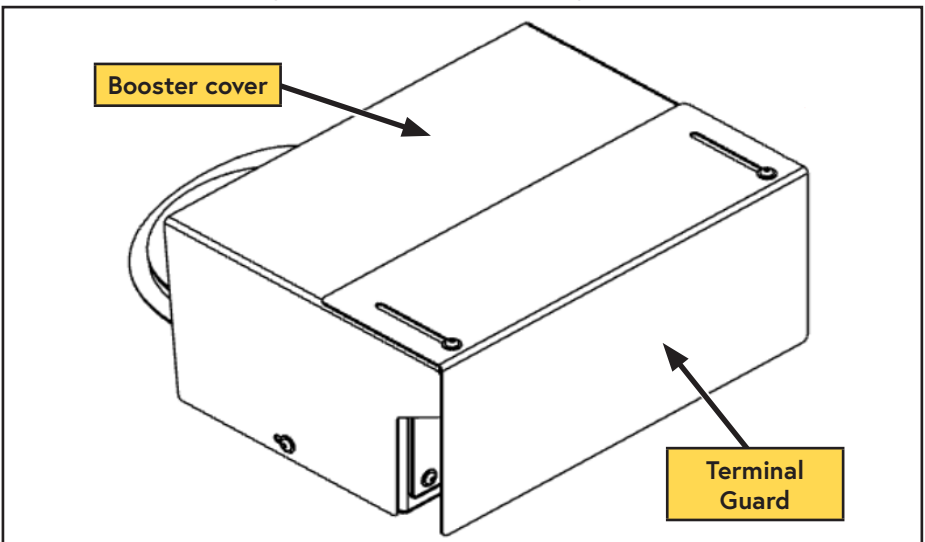


Figure 3 — Remove terminal guard (if installed)



*All dimensions are in inches.*

- ☐ Mark mounting points through the (x4) 1/4 in threaded holes in the bottom of the booster (and fasten the booster to the mounting surface at these 4 points).

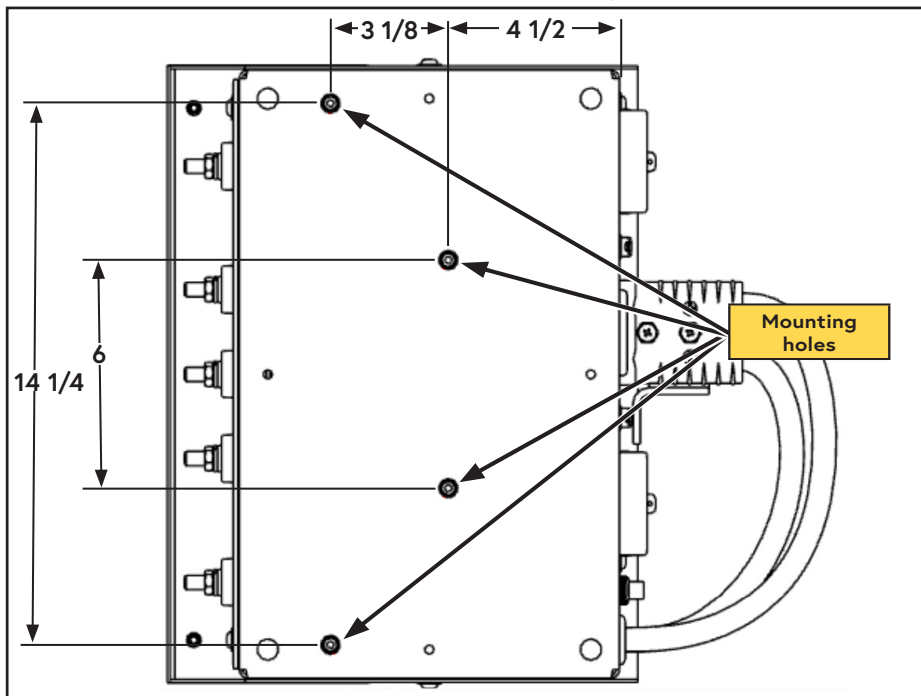


Figure 4 — 1/4 in threaded mounting holes

- ☐ Reinstall the booster cover.

# Booster/Chassis Battery Wiring (Figure 5 - Figure 6)



Not all trucks are equipped with dual chassis batteries.

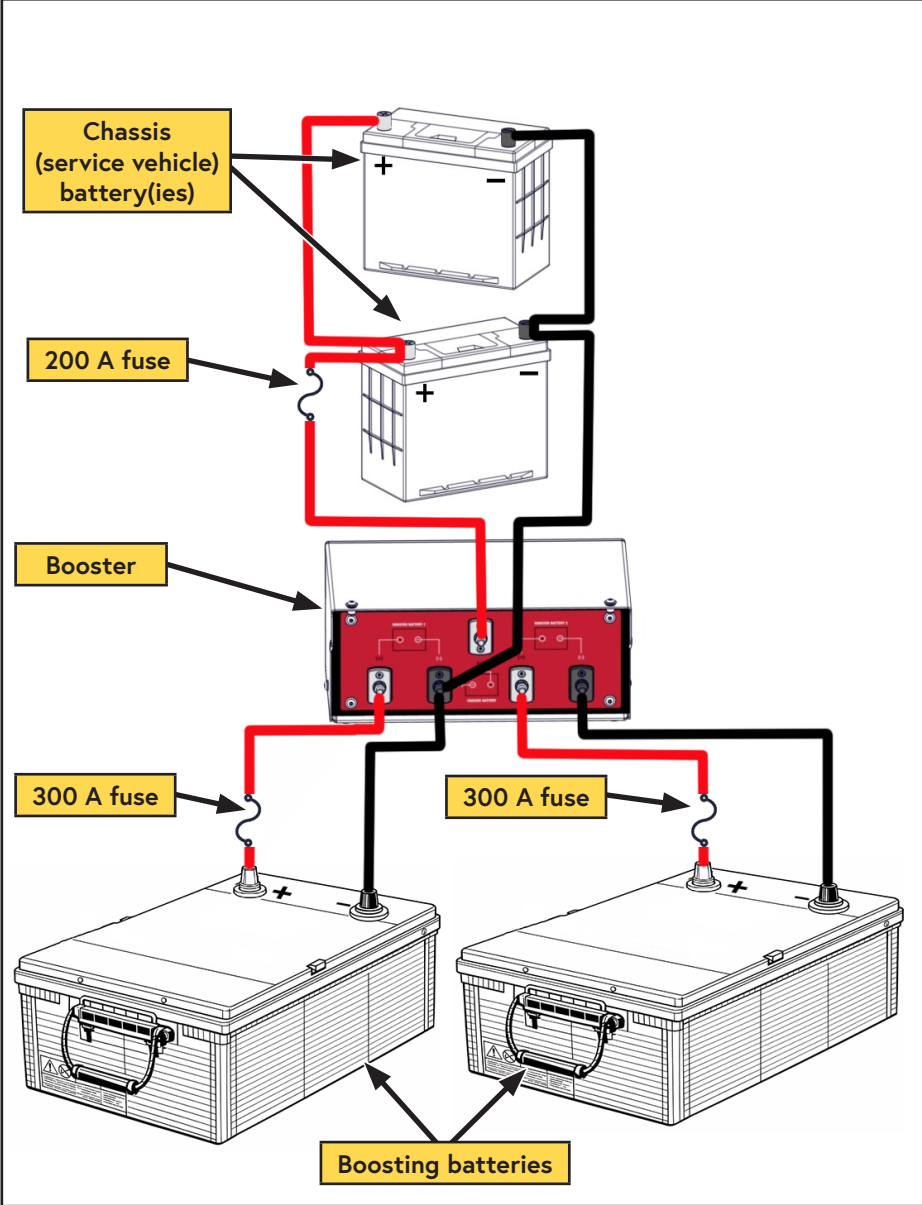


Figure 5 — Battery cable installation.

- ☐ Using 2/0 AWG black cable, connect the "BOOSTER BATTERY 1" negative terminal to the boosting battery 1 negative lug.
- ☐ Using 2/0 AWG black cable, connect the "BOOSTER BATTERY 2" negative terminal to the boosting battery 2 negative lug.
- ☐ Using 2 AWG black cable, connect the "BOOSTER BATTERY 1" (also labeled "CHASSIS BATTERY -") negative terminal to the closest chassis (service vehicle) battery negative lug.
- ☐ Using 2/0 AWG red cable, connect the "BOOSTER BATTERY 1" positive terminal to the boosting battery 1 positive lug, through a 300 A fuse.
- ☐ Using 2/0 AWG red cable, connect the "BOOSTER BATTERY 2" positive terminal to the boosting battery 2 positive lug, through a 300 A fuse.
- ☐ Using 2 AWG red cable, connect the "CHASSIS BATTERY" positive terminal to the closest chassis (service vehicle) battery positive lug, through a 200 A fuse.
- ☐ Reinstall the terminal guard.

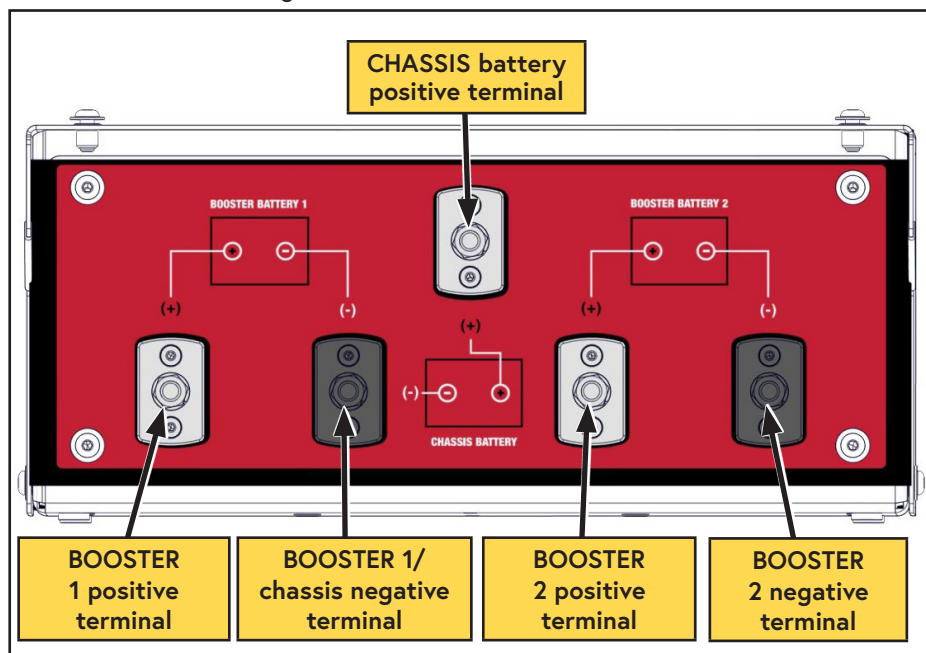


Figure 6 — Terminals, rear panel

# Voltmeter Operation and Voltage Readings



*The voltmeter requires a minimum of 8 Vdc to operate.*

The battery booster is equipped with a voltmeter (Figure 7). The reading depends on the position of the grey voltage selector plug and whether the booster cables are connected.

Understanding these operating states allows the operator to accurately verify the condition of the service vehicle battery(ies), booster batteries, and the disabled equipment battery(ies).

## Disabled Equipment Battery Voltage

Displayed when the following conditions are met:

- The grey voltage selector plug is NOT plugged into the 12 V or 24 V receptacle.
- The booster cable is plugged into the booster and connected to the battery(ies) of the disabled equipment.

## Booster Battery Voltage

Displayed when:

- The grey voltage selector plug is connected to either the 12 V or 24 V receptacle.

## Service Vehicle Chassis Battery and Charging System Voltage

Displayed when the following conditions are met:

- The grey voltage selector plug is plugged into the 12 V Charge/Boost receptacle.
- The service vehicle engine is running.
- The service vehicle charging system is actively charging the booster batteries and the disabled equipment battery(ies).



*The system requires 30 seconds of charging voltage above 13 V at the chassis battery before the isolator opens, at which point the Isolator Status LED illuminates and the voltmeter displays the chassis battery and charging system voltage.*

# Boosting Procedure



*Working near lead acid batteries is dangerous. Batteries may generate sulphuric acid and hydrogen gas during regular operation. Lead acid batteries may explode if exposed to a spark.*

***Never** attempt to jump start a frozen battery.*

***Always** follow safety precautions when jump starting or charging a battery, including the use of appropriate Personal Protective Equipment*



*Prior to boosting, ensure that all lights, radios, and other electrical accessories in the vehicle to be boosted are switched off.*

- ☐ Unplug the grey voltage selector plug from the booster. The volt meter will read 0 V (Figure 7).

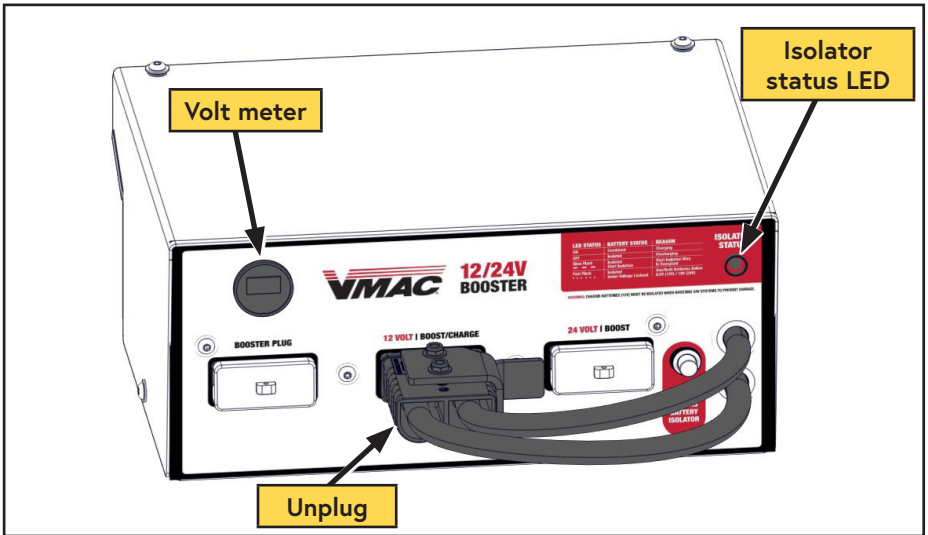


Figure 7 — Unplug the voltage selector

## Using Standard Booster Cables with Clamps:

- ☐ Connect the booster cable clamps to the discharged battery\*.
  - ☐ \*Red clamp to the positive (+) battery terminal.
  - ☐ \*Black clamp to the negative (-) battery terminal or a clean, solid ground.

## Using Booster Cables with CAT Connector:

- ☐ Connect the CAT booster cable to the booster terminal on the CAT equipment.

## All Systems

- ☐ Insert the red booster cable connector into the "BOOSTER PLUG" port in the front panel of the booster and verify that the voltmeter displays the discharged battery's voltage.

- ☐ Determine the voltage of the vehicle to be boosted: 12 V or 24 V.

## 12 V Boosting.



***For 12-volt boosting, ensure the service truck is running to maintain charge levels and prevent excessive booster battery discharge.***

- ☐ Insert the grey voltage selector plug into the "12 VOLT | BOOST/CHARGE" outlet.
- ☐ Start the disabled 12 V equipment.
- ☐ If the 12 V equipment does not start, leave all cables connected and allow the service vehicle to run to recharge the batteries, then attempt starting again.



***The charging function for disabled equipment is available for 12-volt systems only.***

## 24 V Boosting



***To prevent damage to the 12 V booster batteries, the chassis battery isolator button must be depressed when boosting 24 V equipment***

- ☐ Insert the grey voltage selector plug into the "24 VOLT | BOOST" outlet.
- ☐ Start the disabled 24 V equipment.
- ☐ If the 24 V equipment does not start, and the booster batteries require recharging to continue\*:
  - ☐ \*Disconnect the grey voltage selector plug from the "24 VOLT | BOOST" port
  - ☐ \*Disconnect the red booster cable connector from the "BOOSTER PLUG" port.
  - ☐ \*Plug the grey voltage selector plug into the "12 VOLT | BOOST/CHARGE" port.
  - ☐ \*Allow the service vehicle to recharge the booster batteries.



***To prevent damage to the 12 V booster batteries, disconnect the grey voltage selector plug from "12 VOLT | BOOST/CHARGE" port before connecting booster cables to the disabled 24 V equipment.***

- ☐ \*When booster battery charging is complete, disconnect the grey voltage selector plug from the "12 VOLT | BOOST/CHARGE" port.
- ☐ \*Reconnect the red booster cable connector to the "BOOSTER PLUG" port.
- ☐ \*Reconnect the grey voltage selector plug into the "24 VOLT | BOOST" port
- ☐ \*Attempt starting the disabled equipment again.

## All Equipment

- ☐ After the equipment starts, disconnect the red booster cable plug from the "BOOSTER PLUG" port. Then remove the clamps or booster connector from the equipment.
- ☐ Store the booster cables after disconnection.
- ☐ Insert the grey voltage selector plug into the 12 V outlet to allow the service truck alternator to maintain the charge in the booster batteries.

# Diagnostics and Troubleshooting



***Read the "Maintenance and Repair Safety" section prior to performing any work on the system (on page 8).  
Wear appropriate Personal Protective Equipment and follow all industry standard safety practices.***



***For the following tests, isolate the system from all downstream (customer supplied) equipment.***



***If the Booster is still within the warranty period, see the warranty claim process (page 4) prior to commencing with any diagnostics or repairs.  
If you are unsure whether the unit is still covered under warranty, contact VMAC Technical Support.***

Problem diagnosis should follow sound, recognized practices. Quick and accurate diagnosis of problems should involve the following:

- Follow industry standard safety practices.
- Accurately identify the problem by operating the system (provided it is safe to do so).
- Determining the possible causes for the problem by understanding how the system operates.
- Isolating the potential causes by accurate testing using correct and recognized procedures.
- Performing proper repairs using the correct procedures and the recommended replacement parts.
- Performing proper post repair testing to ensure that the repairs were effective.
- Electrical testing should be performed according to the processes described in the troubleshooting charts and in conjunction with any documentation provided by VMAC.

# Isolator Status LED Flash Codes

| LED Status         | Condition                                                                                           |
|--------------------|-----------------------------------------------------------------------------------------------------|
| Illuminated steady | The charging system is charging the booster batteries and the disabled 12 V equipment if connected. |
| LED Status         | Condition                                                                                           |
| Flashing slowly    | 24 V Boost is selected and the 12 V chassis battery(ies) is isolated.                               |
| LED Status         | Condition                                                                                           |
| Flashing quickly   | The booster is disconnected from the chassis battery(ies).                                          |
|                    | Chassis battery voltage is low.                                                                     |
|                    | Booster battery voltages are low.                                                                   |

## Symptoms



*The following diagnostic tables are not exhaustive, they are intended to provide basic troubleshooting steps to resolve common errors. If the information provided in these tables does not resolve the issue, contact the VMAC Technical Support team at:*

**Toll free: (888) 241-2289**

**Email: [tech@vmacair.com](mailto:tech@vmacair.com)**

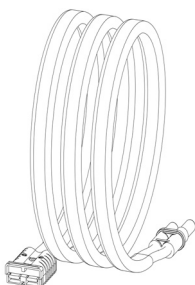
| Symptom                 | Possible Cause                                   | Corrective Action                                                    |
|-------------------------|--------------------------------------------------|----------------------------------------------------------------------|
| LED does not illuminate | Grey selection plug is not fully plugged in.     | Insert the grey selector plug into the appropriate boost receptacle. |
|                         | Blown LED fuse.                                  | Replace fuse.                                                        |
|                         | Blown isolator fuse.                             | Replace fuse.                                                        |
|                         | Poor connection between isolator and Status LED. | Check and correct connections.                                       |
|                         | Failed Isolator Status LED.                      | Replace LED.                                                         |
|                         | Faulty isolator.                                 | Replace isolator.                                                    |

| Symptom         | Possible Cause                                | Corrective Action         |
|-----------------|-----------------------------------------------|---------------------------|
| No boost output | Low booster battery voltage (fast LED flash). | Recharge boost batteries. |
|                 | Blown 300 A fuse(s).                          | Replace fuse(s).          |

| Symptom                    | Possible Cause                       | Corrective Action |
|----------------------------|--------------------------------------|-------------------|
| Charge feature not working | Blown 200 A fuse at chassis battery. | Replace fuse.     |

## Accessory Products from VMAC

### 7 Foot Booster Cable with CAT Boost Port Connector

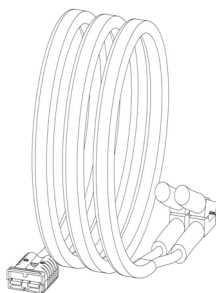


**Part number: 3551214**

7 foot battery booster/jump start cables set (2.1 m)  
for CAT machinery equipped with battery booster  
receptacle.

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### 10 Foot Booster Cables with Clamps

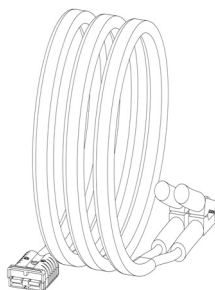


**Part number: 3551215**

10 foot battery booster/jump start cables set (3 m).

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### 30 Foot Booster Cables with Clamps



**Part number: 3551216**

30 foot battery booster/jump start cable set (9.1 m).

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[illegible]



Manufactured by



888-241-2289



877-740-3202



[www.vmacair.com](http://www.vmacair.com)



[tech@vmacair.com](mailto:tech@vmacair.com)



[warranty@vmacair.com](mailto:warranty@vmacair.com)



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1333 Kipp Road, Nanaimo, B.C., V9X 1R3 Canada