

**VMAC**  
VEHICLE MOUNTED AIR COMPRESSORS  
**COMPACT. POWERFUL.**



**Owner / Installation Manual for  
VMAC Accessory  
A800070  
AIR AFTERCOOLER 70 CFM**

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



# Owner / Installation Manual for VMAC Accessory A800070 AIR AFTERCOOLER 70 CFM

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## Additional Application Information

- For use with system up to 70 cfm\*.  
 \*(For systems between 80 cfm and 150 cfm, see VMAC AIR AFTERCOOLER 185 CFM P/N: A800185)

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## Important Information

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

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

## Notice

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VMAC – Vehicle Mounted Air Compressors

Toll Free: 1-888-241-2289

Fax: 1-250-740-3201

# 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 and service techniques. If a discrepancy is noted in this manual, contact VMAC prior to initiating or proceeding with installation, service or repair. Current information may clarify the issue. Any person with knowledge of such discrepancies who performs 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 assure that their safety and that of others is not being compromised and that there will be no adverse effects on performance or the operational safety 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 any person to properly adhere to the procedures set out in this manual or standard safety practices. Safety should be your first consideration in performing service operations. If you have any questions concerning the procedures in this manual or require any more information on details that are not included in this manual, please contact VMAC before beginning repairs.

## 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 your attention to instructions concerning your 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 alert to the possibility of personal injury or death. Be alert; your safety is involved. As it is impossible to warn about every conceivable hazard, let good common sense be your guide.



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

# General Information

## Before You Start

Read this manual before attempting installation so that you can familiarize yourself with the components and how they fit on the vehicle. Identify variations for different engine models and different situations that are listed in the manual. Open the package, unpack the components and identify them.

## Torque Specifications

All fasteners must be torqued to specifications. Use manufacturers' torque values for OEM fasteners. **Apply Loctite 242 (blue) or equivalent on all engine-mounted fasteners.** Torque values are with Loctite applied unless otherwise specified.

STANDARD GRADE 8 NATIONAL COARSE THREAD								
Size	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	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	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

## Hose Information

Depending on other installed equipment, it might be necessary to move the air/oil separation tank from its intended location. The hoses used in VMAC compressor systems have a specific inner liner that is compatible with VMAC compressor oil. Use of hoses other than those supplied or recommended by VMAC may cause compressor damage and may void your warranty. Please contact VMAC for replacement hoses and further information.

## Ordering Parts

To order parts, contact your VMAC dealer. Your dealer will ask for the VMAC serial number, part number, description and quantity. To locate your nearest dealer, call 1-877-912-6605 or online at [www.vmacair.com](http://www.vmacair.com).

# Illustrated Parts List

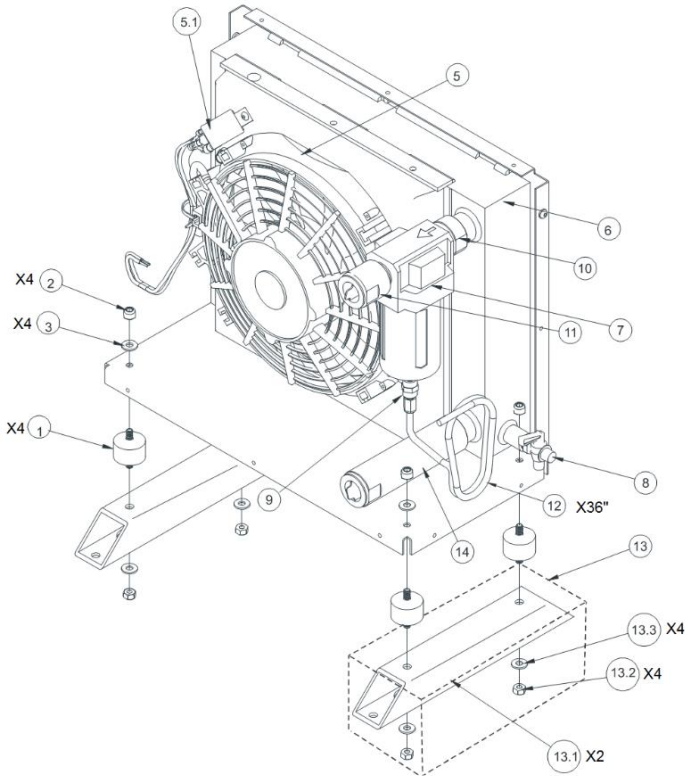


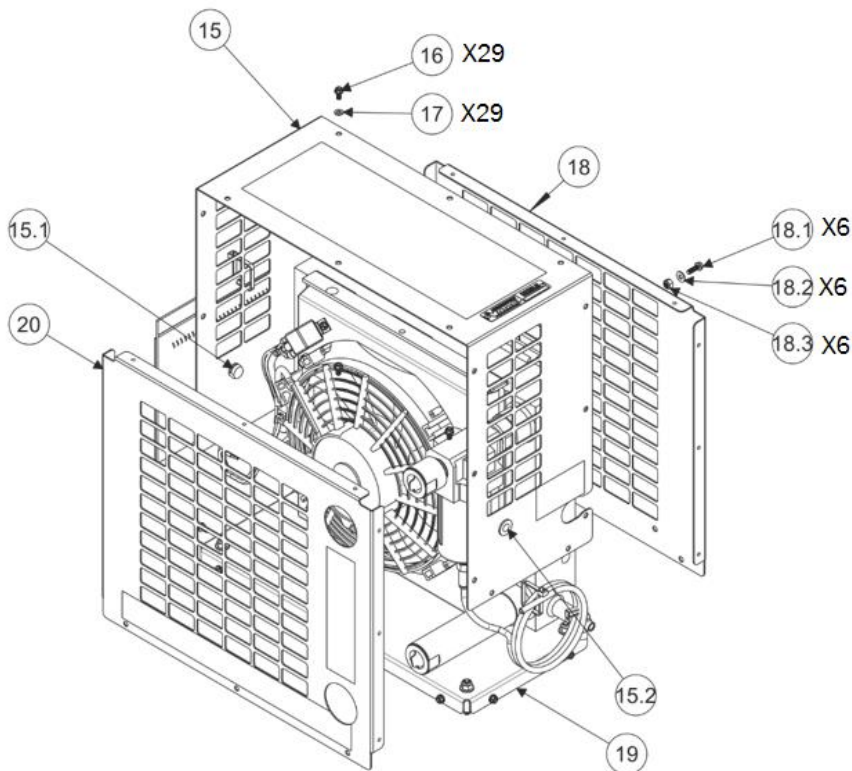
Figure 1

Item	Part #	Qty	Description
1	1500596	4	VIBRATION MOUNT,NAT RUBBER, 1/4-20
2	1550527	4	NUT, NYLOK, S/S, 1/4-20
3	1570499	4	WASHER, FLAT, THICK, SS 1/4
5	3550734	1	FAN ASSEMBLY AND HARNESS A800070
5.1	3500666	1	RELAY
6	3600124	1	COOLER, #16 ORB PORTS
7	3600119	1	FILTER, GENERAL PURPOSE
8	5000168	1	VALVE, MANUAL DRAIN
9	5000212	1	CONNECTOR,BRASS, FNPT-POLY, 1/8-1/4
10	3200351	1	ADAPTOR, 3/4" X 1-5/16" UNF
11	3200331	1	ADAPTOR, 3/4" X 3/4" NPT
12	1700055	36"	HOSE, BRAKE BLACK, 1/4
13	A700143	1	OPTIONAL MOUNT KIT, A800070
13.1	1200495	2	BRACKET, AFTER-COOLER
13.2	1550221	4	NUT, HEX NC PL, 1/4, GR8
13.3	1570038	4	WASHER, FLAT SAE, 1/4
14	3200350	1	ADAPTOR, AFTER-COOLER

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**Figure 2**

Item	Part #	Qty	Description
15	6000458	1	COVER, AIR DRYER
15.1	2200171	1	CLIP, STRAIN RELIEF, 5/8
15.2	5800093	1	GROMMET, RUBBER BUNA, 5/16
16	1500587	29	SCREW, SL, MC IND HEX 10-32 X 3/8-SS
17	1570488	29	WASHER, NYLON, 3/16
18	6000457	1	PANEL, REAR, AIR DRYER
18.1	1500688	6	SCREW,SL,MC IND HEX 10-32 X 5/8-SS
18.2	1570163	6	WASHER, FLAT, 3/16
18.3	1550524	6	NUT, NYLOCK, 10-32
19	6000456	1	TRAY, BASE, AIR DRYER
20	6000455	1	PANEL, FRONT, AIR DRYER



# Operation

## Daily Operation

At the end of each day or shift, shut the compressor system down, vent the air and open the manual drain valve on the side of the cooler to drain the air line. This will also prevent the water in the float bowl from freezing in cold weather which will cause the automatic water drain to fail. Leave the valve open until the compressor is started again.



**In extreme cold temperatures, moisture in the drain lines can freeze within minutes of highway driving, open manual drain immediately after use to prevent blockage.**

## Manual Drain

The VMAC AIR AFTERCOOLER 70 CFM has a manual drain valve to purge water from the 'Air-In' line entering the aftercooler. The manual drain function can be placed in a remote location by removing the drain valve and connecting a hose rated for a minimum of 200 psi between the aftercooler and the relocated drain valve.

# Installation

Locate the VMAC AIR AFTERCOOLER 70 CFM in a suitable location that provides good air flow and easy accessibility (Figure 3). The unit should have at least 8 in of clearance on all sides. Ensure there is sufficient space to remove the front panel, connect the air lines, connect the wiring, and access to the manual drain. The aftercooler must be mounted upright to allow the automatic drain to function as designed.

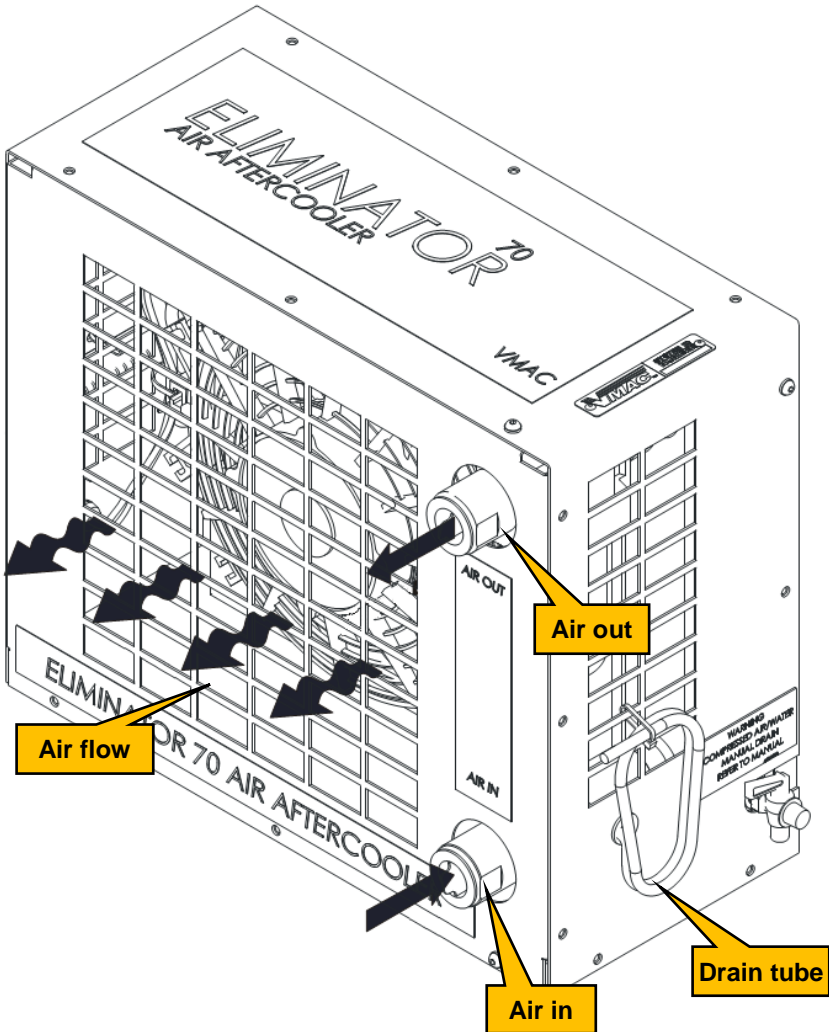
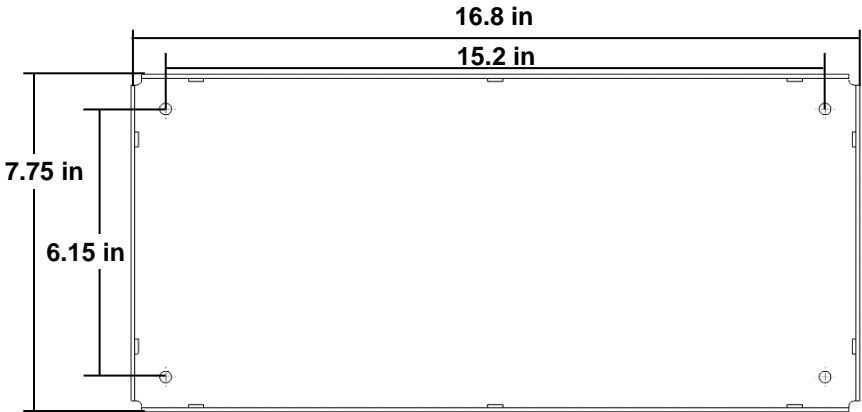


Figure 3 – VMAC AIR AFTERCOOLER 70 CFM

- Place the aftercooler in position and drill the mounting holes (Figure 4).



**Figure 4 – Mounting dimensions**

- Fasten the rubber mount feet securely. If using the optional VMAC mounting brackets (P/N: A700143), install the aftercooler unit onto the brackets and fasten securely.
- Route the black nylon water drain tube to a suitable drain location.
- Connect the supply line from the air source to the “Air In” fitting. Support the fitting on the aftercooler with a wrench when tightening. The recommended hose size is #12 hose.
- Connect the tool delivery line to the “Air Out” fitting. Support the fitting on the aftercooler with a wrench when tightening. The recommended hose size is #12 hose.
- Connect the red wire from the aftercooler to a key switched 12 V source through a 20 A fuse using the recommended wire size (Table 2).

Wire Length	Recommended Wire Gauge (AWG)
< 5 ft	14 AWG
5 ft to 8 ft	12 AWG
> 8 ft	10 AWG

**Table 2 – Recommended wire size**

- Connect the green wire to a good body ground using the recommended wire size (Table 2).



**To confirm a good ground, use an ohm meter to measure the resistance to ground. Resistance should be less than 1 Ω.**

### Connecting to VMAC UNDERHOOD 30 / 70 Systems

- Solder and seal the white wire from the aftercooler to the white clutch wire coming from the VMAC UNDERHOOD 30 or UNDERHOOD 70 compressor (Figure 5).

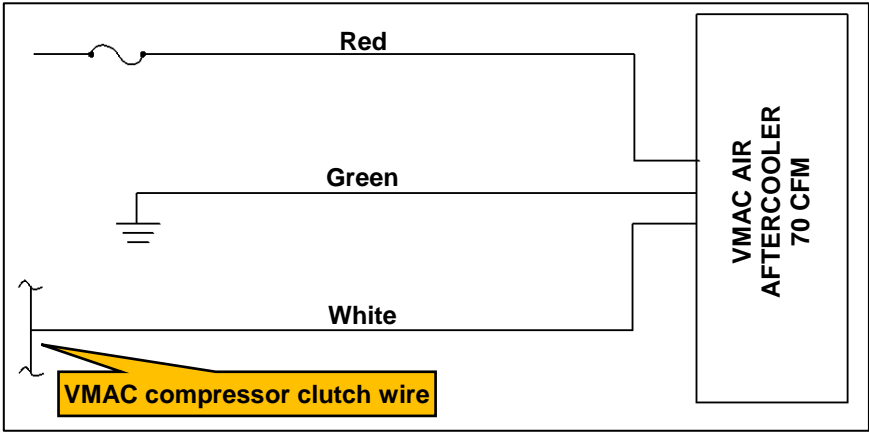


Figure 5 – Aftercooler wiring to VMAC underhood systems

### Connecting to 40 cfm / 60 cfm Hydraulic Systems

- Solder and seal the white wire from the aftercooler to the red wire coming from the VMAC 40 CFM / 60 CFM HYDRAULIC AIR COMPRESSOR (Figure 6).

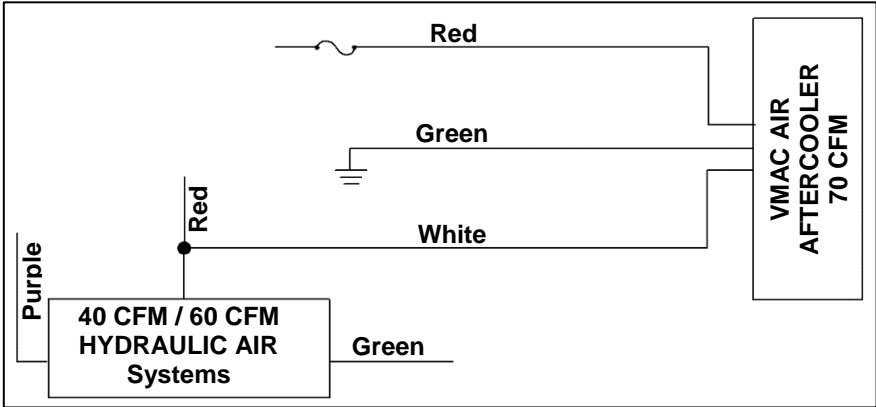
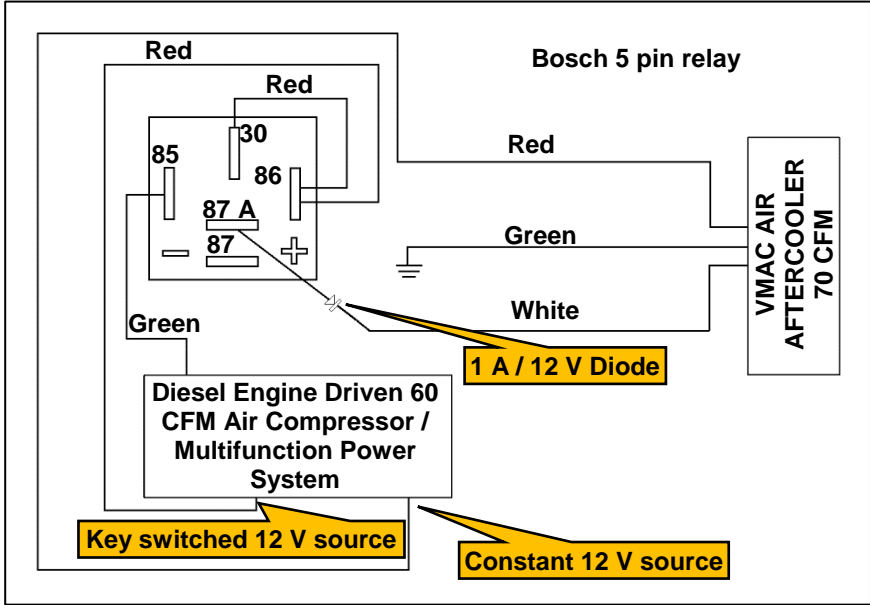


Figure 6 – Aftercooler wiring to VMAC hydraulic systems

- If the VMAC AIR AFTERCOOLER 70 CFM will not be used with VMAC UNDERHOOD or HYDRAULIC compressor systems, connect the white wire from the aftercooler to the power source through an on/off switch using 18 AWG wire.

**Connecting to Diesel Engine Driven Air Compressors or Multifunction Power Systems**

- If the aftercooler is being used with a Diesel Engine Driven 60 CFM Air Compressor or Multifunction Power System, connect the wiring as shown below. Ensure the diode is covered with heat shrink tubing and terminal 87 is covered with a terminated connector (Figure 7).



**Figure 7 – Aftercooler wiring to VMAC diesel driven systems**

# Testing Operation

- If the vehicle is equipped with a VMAC UNDERHOOD Air compressor system (30 cfm / 70 cfm), place the manual transmission in “NEUTRAL” or the automatic transmission in “PARK” and fully apply the park brake.
- Start and run the engine until it has reached normal operating temperature and engine speed has reduced to base idle.
- Ensure all compressor air system outlets are closed.
- Turn the VMAC display/control box switch to “ON” (or “ON” if using an “ON/OFF” switch).
- Verify that the fan on the aftercooler is running and that air is blowing out of the grill on the front of the unit.
- The unit has an automatic drain function that will drain the water when it reaches a predetermined level. There is no operational test for this function, ensure the system vents water during operation.

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# Warranty Registration

This form must be **fully** completed and returned to VMAC at the time of installation. Warranty may be void if this form is not received by VMAC within **30 days** of installation.



VMAC's Warranty policy and registration can be viewed online at: [www.vmacair.com/warranty](http://www.vmacair.com/warranty)

## VMAC Dealer Information

Company Name: \_\_\_\_\_

City: \_\_\_\_\_ State / Province: \_\_\_\_\_

## Installer Information

Company Name: \_\_\_\_\_

City: \_\_\_\_\_ State / Province: \_\_\_\_\_

Installation Date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
Day Month Year

## Owner Information

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State / Province: \_\_\_\_\_

Zip/Postal: \_\_\_\_\_ Phone #: (\_\_\_\_) \_\_\_\_ - \_\_\_\_

Email Address: \_\_\_\_\_

## Vehicle Information

Year: \_\_\_\_\_ Make: \_\_\_\_\_

Vehicle Identification Number: \_\_\_\_\_

Unit #: \_\_\_\_\_

## Product Information

Accessory Identification Number: A \_\_\_\_\_

## Submitted by

Name: \_\_\_\_\_ Contact: \_\_\_\_\_



Manufactured by



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**FX 250-740-3201**

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