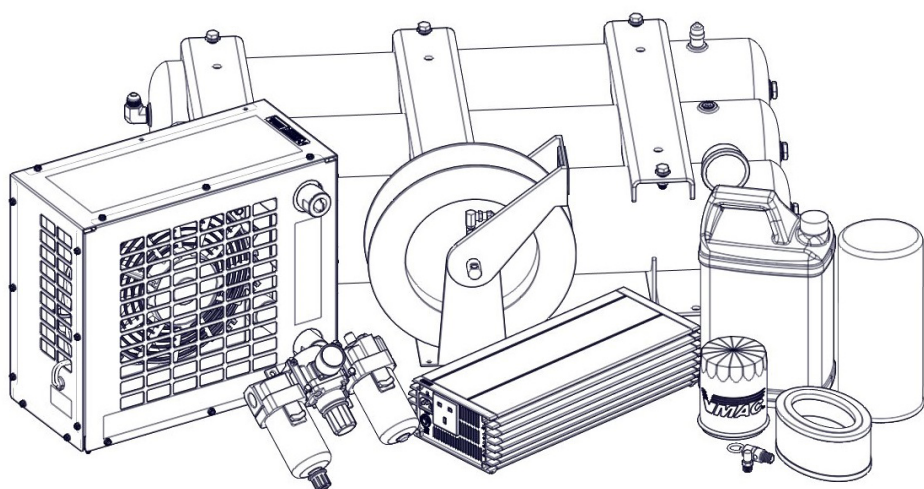




# **VMAC**<sup>®</sup>

## **AIR INNOVATED**<sup>®</sup>



## **Installation Manual for VMAC Accessory**

**A500245 | A520007**  
Air Receiver Tanks

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



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Revision	Revision Details	Revised by	Checked by				Implemented
			Eng.		Tech.	Qual.	
			Mech.	Elec.			
A	Initial release.	MSP	SPT	N/A	MSP	LPH	25 Feb. 2022

## Additional Application Information

For use with VMAC G300003, Gas Driven Air Compressor (G30).

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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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# 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 Lifetime Warranty (Limited)

A VMAC Lifetime Limited Warranty is offered on the base air compressor only and only on UNDERHOOD, Hydraulic Driven, Transmission Mounted, Gas and Diesel Engine Driven Air Compressors, Multifunction Power Systems, and other products as defined by VMAC, provided that (i) the purchaser fully completes and submits a warranty registration form within 3 months of purchase, or 200 hours of operation, whichever occurs first; (ii) services are completed in accordance with the Owner's Manual; (iii) proof of purchase of applicable service kits are made available to VMAC upon request.



The VMAC Lifetime Warranty is applicable to new products shipped on or after 1 October, 2015.

## Warranty Registration

Warranty registration for VMAC systems can be completed online or by filling in the form at the back of each system installation manual. Warranty registration must be completed and sent to VMAC at the time the system is put into service for any subsequent warranty claim to be considered valid.

There are 4 ways the warranty can be registered with VMAC:



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



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



(877) 740-3202



VMAC - Vehicle Mounted Air Compressors  
1333 Kipp Road, Nanaimo, BC, Canada V9X 1R3

# 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/dealer-locator/>**



- 1) Communicate with VMAC Technical Support at 1-888-241-2289 or [tech@vmacair.com](mailto:tech@vmacair.com) to help diagnose/troubleshoot the problem prior to repair. VMAC technical support will require the VMAC System ID, and the hours on the compressor.
- 2) VMAC will provide direction for repair or replacement of the failed components.
- 3) If requested, failed parts must be returned to VMAC for evaluation.
- 4) Dealers may login to the VMAC website to view the "VMAC Labour Time Guide" (under "Agreements") to see the allowable warranty labour times.
- 5) Warranty invoices must include the Service Ticket number, VMAC System ID#, hours on the compressor, and a detailed description of the work performed.
- 6) VMAC Warranty does not cover consequential damages, overtime charges, mileage, travel time, towing/recovery, cleaning or shop supplies.
- 7) 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.



***In order to qualify for Lifetime Warranty (Limited), the completed warranty registration form must be received by VMAC within 3 months of the buyer receiving the Product(s), or 200 hours of operation, whichever occurs first.***

***If the completed warranty registration form has not been received by VMAC within 3 months of the buyer receiving the Product(s), or 200 hours of operation, the "Standard" warranty period will be deemed to commence 30 days from the date of shipment from VMAC.***

***Failure to follow the warranty claim process may result in denial of the warranty claim.***

VMAC Product Warranty Policies & Warranty Registration can be found on the VMAC website (see previous page for URL).

# 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 warrant 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.

## 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 a VMAC dealer. The dealer will ask for the VMAC serial number, part number, description and quantity. Locate the nearest dealer online at [www.vmacair.com/dealer-locator](http://www.vmacair.com/dealer-locator) or call 1-877-912-6605.





## Special Tools Required

- None.

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.

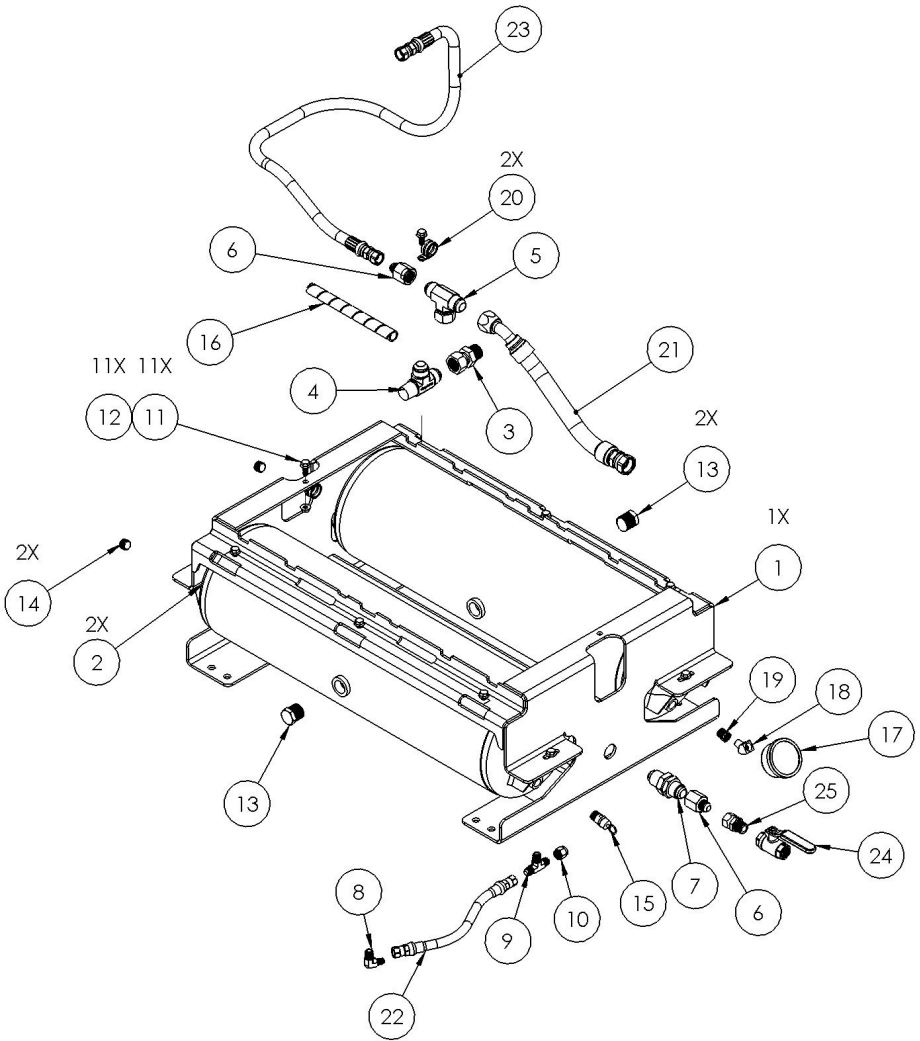
Standard Grade 8 National Coarse Thread								
Size (in)	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
Foot pounds (ft•lb)	9	18	35	55	80	110	170	280
Newton meter (N•m)	12	24	47	74	108	149	230	379

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



ITEM	QTY	PART #	DESCRIPTION
1	1	1201202	RECEIVER TANKS, G30 12GAL
2	2	A300044	TANK, AIR RECEIVER 6 GAL
3	1	4900109	FTG, STR, #12FJIC-3/4"MNPT
4	1	4900231	TEE, #12MJIC-#12MJIC-3/4"MNPT
5	1	4900194	TEE, #12MJIC-#12FJIC-#12MJIC
6	2	4900232	FTG, STR, #12FJIC-#8MJIC
7	1	4900170	FTG, STR, #12MJIC-#12MJIC, BLKHD
8	1	4900241	FTG, 90, 1/4"MNPT-#6MJIC
9	1	4900242	TEE, #6MJIC-1/4"MNPT-#6MJIC
10	1	4900218	CAP, #6JIC
11	11	1520627	BOLT, HHCS, FL, PL, M8 X 1.25 X 20
12	11	1560515	NUT, M8 X 1.25 FL PL
13	2	5000134	PLUG, HEX HEAD, CORED 3/4
14	2	4300039	PIPE FTG, PLUG SKT HEAD, 3/8
15	1	3600212	VALVE, SAFETY REL, 3/8"NPT, 150PSI
16	1	1700584	SPIRAL WRAP, 1" OD, BLACK
17	1	3600047	GAUGE, BACK MOUNT 200 PSI, 2 1/2
18	1	5000193	ELBOW, BRASS, 45 DEG, 1/4
19	1	5000047	BUSHING, BRASS, 3/8 X 1/4
20	2	2200202	CLAMP, STRAP 7/8
21	1	1710904	HOSE, CRIMPED, 3/4" X 14.25"
22	1	1710903	HOSE, CRIMPED, 3/8" X11.75"
23	1	1750045	HOSE, CRIMPED, 1/2" X 45
24	1	3600159	VALVE, BALL, NPT-NPT, 1/2-1/2
25	1	4900167	FTG, STR, #8FJIC-1/2"MNPT

## VMAC - Vehicle Mounted Air Compressors

VMAC Technical Support: 888-241-2289

VMAC Knowledge Base: kb.vmacair.com

# PTFE Tubing, Loom, and Push-To-Connect Fittings



*When routing hoses, ensure cap plugs are installed so that contaminants do not get in the line. Take care when routing hoses, as a hose failure may damage the compressor and/or cause injury.*



*All hoses, tubes and wires that are installed, rerouted or shifted during the installation must be secured so that they do not contact any hot, sharp or moving parts. Use rubber coated P-clips wherever possible. Follow the routing suggestions in this manual and cover all hoses with plastic loom.*



*Ensure there is sufficient slack in the hose routing to allow for normal engine movement.*

- PTFE tubing should only be cut using proper tubing cutters. Side cutters, utility knives, etc. will deform the tube, preventing a proper seal (or leave sharp edges which cut the internal O-ring).
- When applying loom to the PTFE tube, leave approximately 1 in between the loom and the fitting.
- Ensure the tube is clean, cut at 90° and that there are not sharp edges.
- Lubricate the tube and firmly push it into the fitting so that the tube fully seats in the fitting.
- Slide the collet out, away from the body of the fitting to lock the tubing in place.
- Ensure the tube does not have any "play" to prevent the O-ring from wearing.

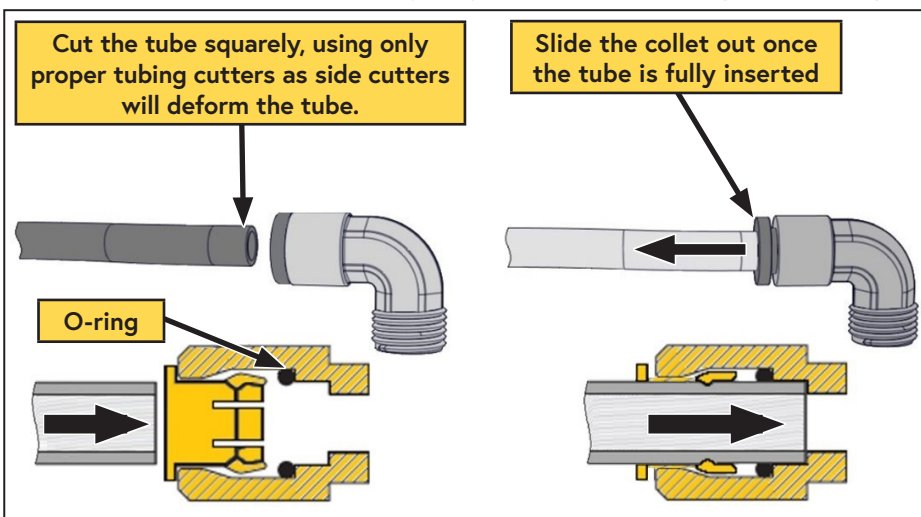


Figure 1 — Push-to-connect fittings

# Maintenance and Repair Safety



*Prior to performing any service, ensure the vehicle is parked on level ground and that the transmission is in "PARK" with the parking brake applied and the wheels chocked (if applicable).*



*It is impossible to warn of all the possible hazards that may result from operating, servicing, or repairing this system.  
Wear all appropriate Personal Protective Equipment and follow all industry standard safety practices.*



*Confirm that the system is depressurized and has cooled prior to performing any service work.*



*Never use flammable solvents to clean any components. If a flammable solvent has been used, rinse the component thoroughly with water and dry it before reinstalling it to prevent the possibility of explosion.*



*Use only genuine VMAC parts to maintain the system.  
Genuine VMAC parts are designed to work with the high pressure and heat generated by the compressor. Substituting genuine 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.  
Follow all safety precautions and industry standard "best practices".*

## Safety Check List

- Open the ball valve or connect an air tool to the system to ensure all the stored air is released.
- Gently pull up on the ring on the pressure relief valve (located on the WHASP Tank) to confirm the system is depressurized.



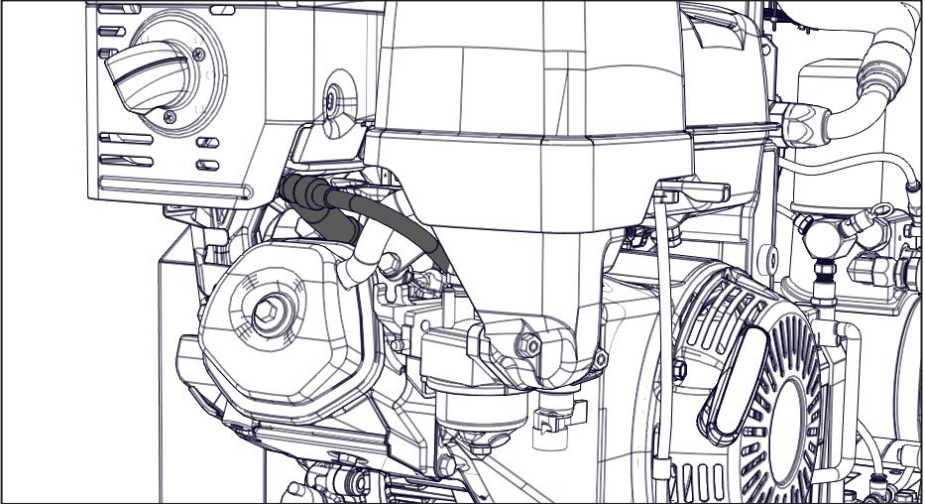
*Do not use the pressure relief valve as a means of depressurizing the compressor system. Doing so will prematurely wear the internal spring or the seat, preventing the valve from maintaining normal system pressure.*

# Installation



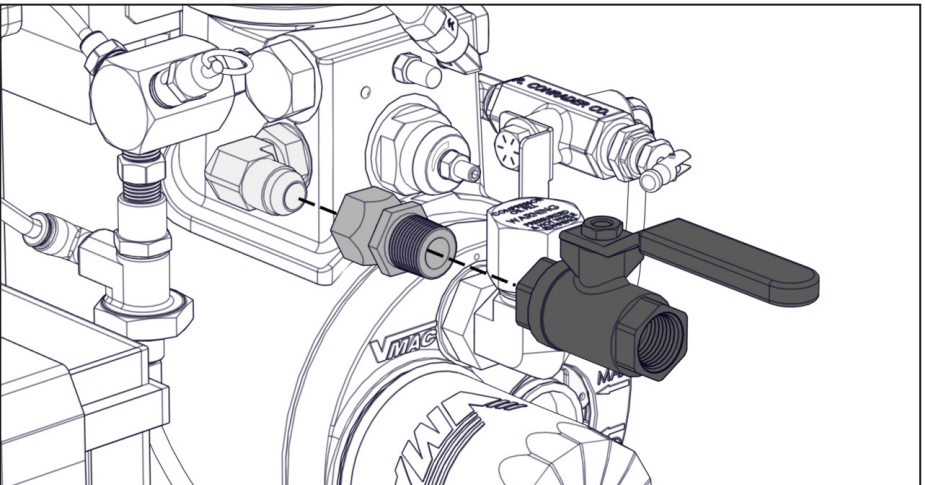
**Apply Loctite 242 (blue) to all fasteners (except nylon lock nuts) unless otherwise stated.**

- Ensure the system is cool, and the ignition key switch is in the "OFF" position.
- Disconnect the negative battery cable.
- Disconnect the spark plug wire (Figure 2).



**Figure 2 — Spark plug wire**

- Remove the ball valve and NPT adaptor from the WHASP Tank (Figure 3).



**Figure 3 — Remove ball valve**  
(Shroud removed for clarity)

### G300003 Mounting

- This accessory kit includes (x6) M8 x 1.25 x 20 bolts with (x6) M8 flange nuts to mount G300003 to the A500245 / A520007 (Figure 4).

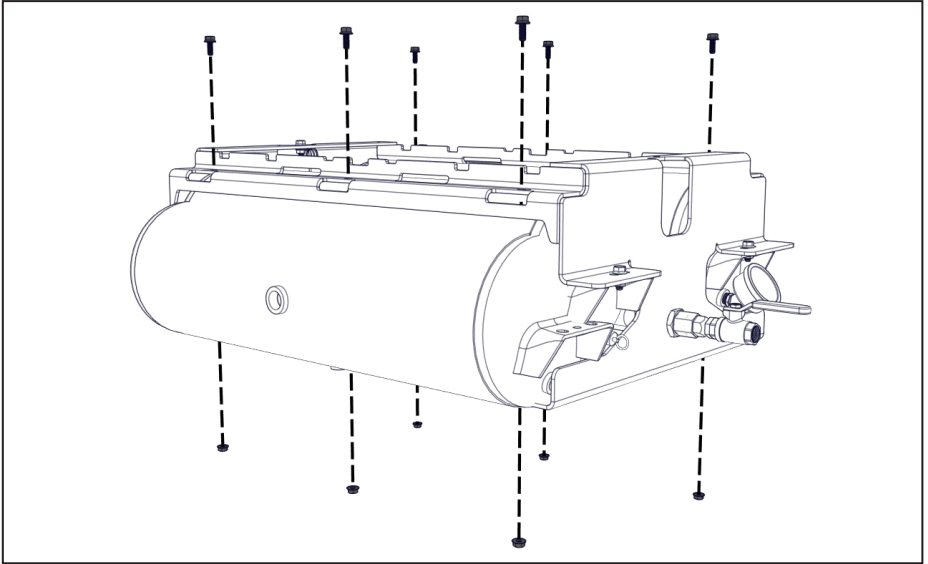


Figure 4 — Mounting fasteners (G300003 only)

- The G300003 base plate has (x6) holes that will be used for mounting to the A500245 / A520007 (Figure 5).

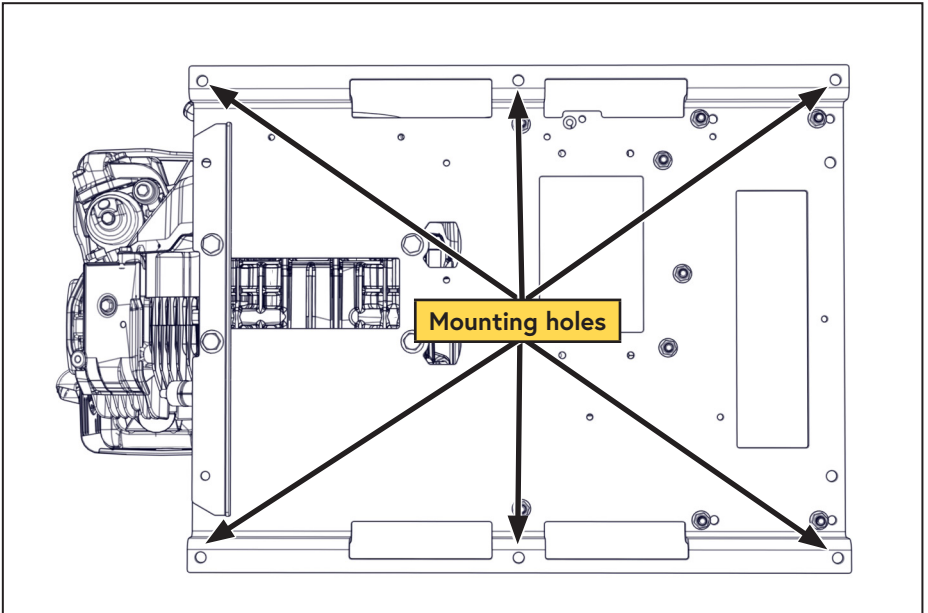
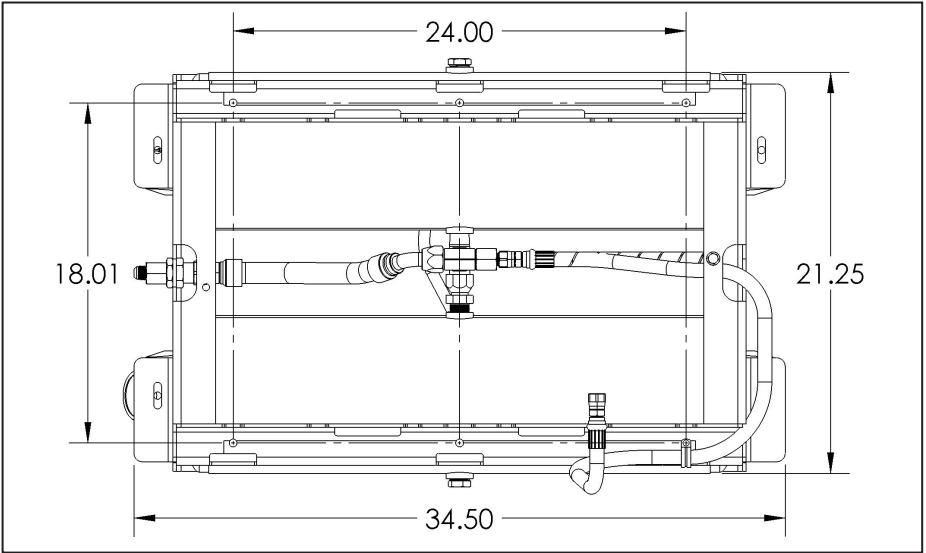


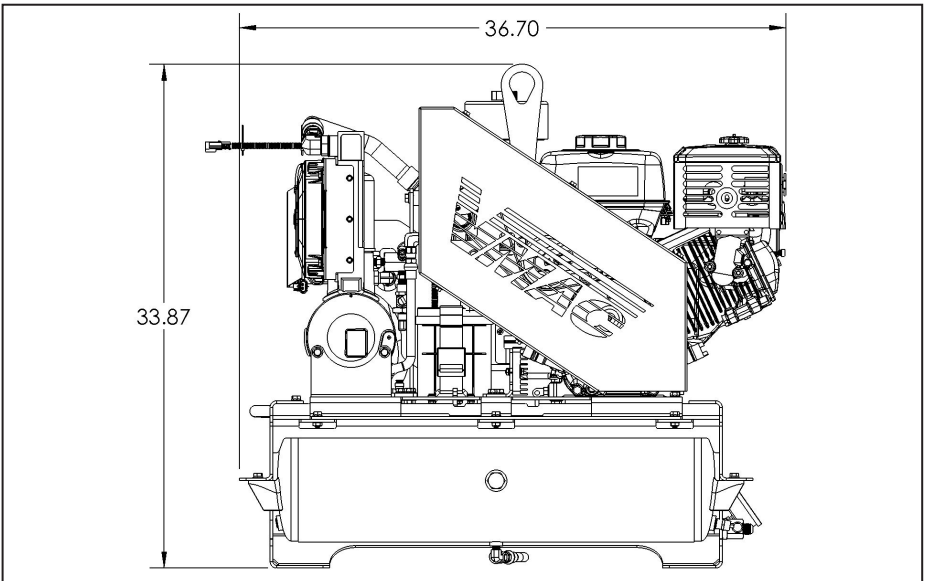
Figure 5 — Base plate mounting holes (G300003 only)

- There are (x4) 1/2 in holes in the A500245 / A520007 tank cradle base for mounting the G30 and air receiver tank assembly in its intended location (Figure 6).



**Figure 6 — Tank fastener and external dimensions**  
(Dimensions in inches)

- Locate a suitable mounting position for the G30 and receiver tank package. Place the unit and check clearances to any other objects (Figure 7).



**Figure 7 — External dimensions (mounted)**  
(Dimensions in inches)



- Drill (x4) 1/2 in holes in the surface that the unit will be mounted to and secure the A500245 / A520007 using (x4) 3/8 in bolts, washers, and locknuts (or Loctite 242) (*Fasteners for mounting the A500245 / A520007 are not supplied*) (Figure 6 on page 14).



*The G30 is heavy, take all precautions when lifting to prevent injury.*



*The powder coated mating surfaces of the air receiver tank and G30 are very slippery. VMAC suggests keeping the G30 safely supported until all of the fasteners are installed.*

- Mount the G30 on top of the air receiver tank package.
- Torque the fasteners to specification.
- Connect the straight fitting on the 1/2 in hose to the fitting on the WHASP Tank (Figure 8).

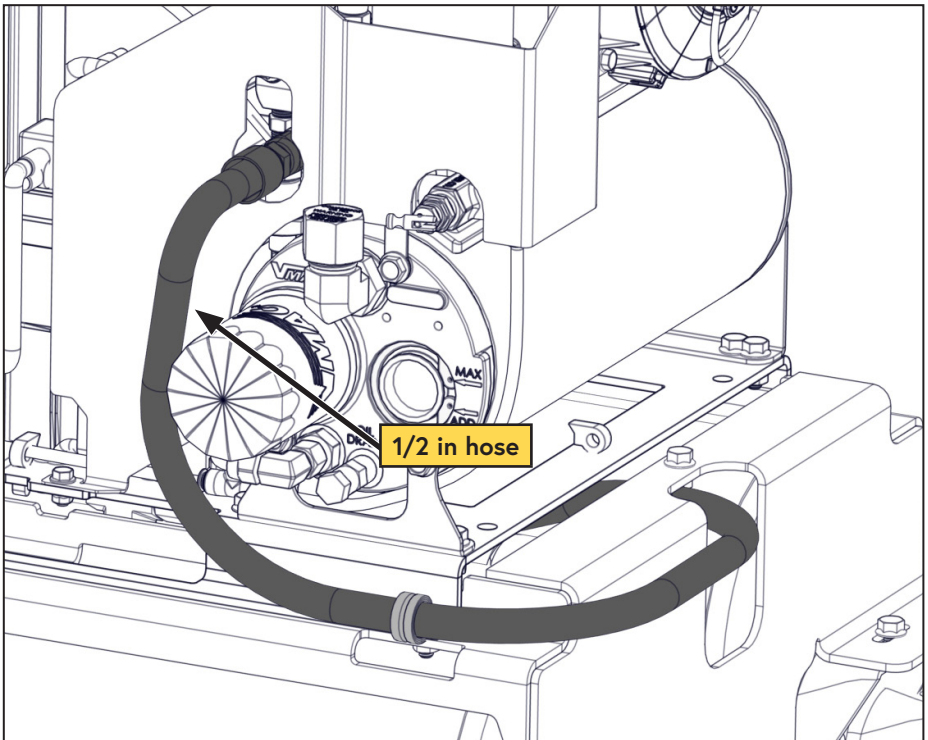
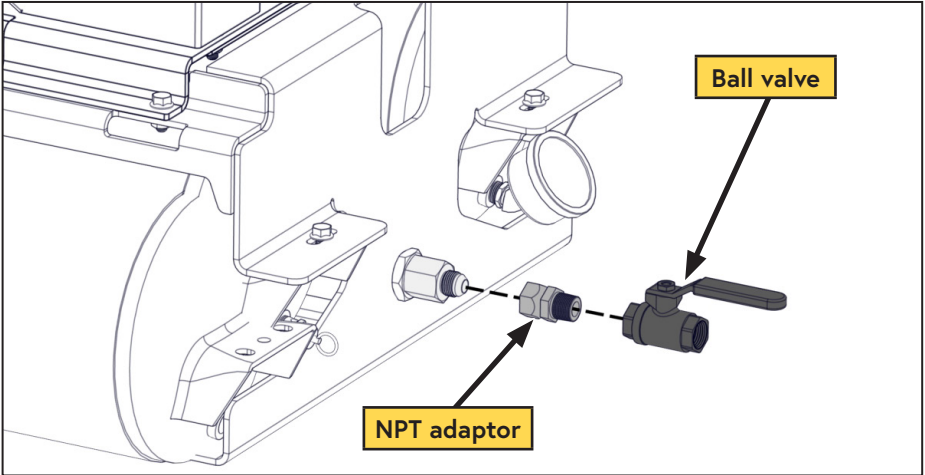


Figure 8 — Connect the discharge hose



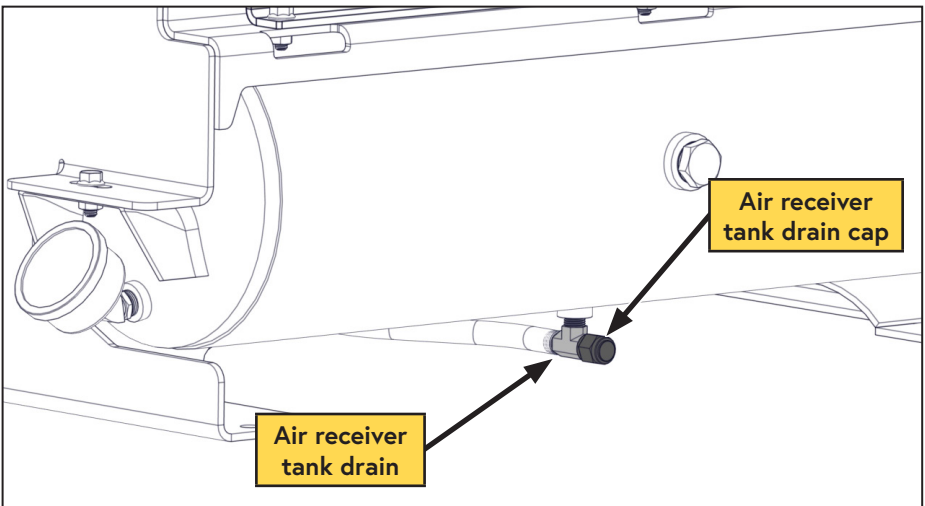
*The G30 has a built in minimum pressure check valve. Use of an additional check valve is not required and may cause erratic performance.*

- Install the NPT adaptor removed from the WHASP Tank onto the air receiver tank package. Alternatively, connect the downstream equipment (such as a hose reel) (Figure 9).



**Figure 9 — Install NPT adaptor and ball valve**

- If installing the ball valve removed from the G30, apply Loctite 567 (thread sealant) to the male threads on the NPT adaptor and install the ball valve onto it (Figure 9).
- A cap has been installed on the air receiver tank drain. Remove the cap and install a hose extension and drain petcock or ball valve (not supplied) (Figure 10).



**Figure 10 — Air receiver tank drain**

- Ensure the drain hose is routed away from any hot, sharp or moving objects and so that it will not be snagged or damaged by other equipment.
- Reconnect the negative battery cable.
- Reconnect the spark plug wire.

## System Testing

- Install the VMAC Air Test Tool (A700052) onto the system.
- Ensure the ball valve is closed.
- Start the G30 and allow it to reach normal operating temperature and build to full system pressure.
- Shut down the G30. The WHASP Tank should vent normally out of the blowdown muffler but the pressure in the air receiver tanks should be maintained. This can be confirmed via the pressure gauge on the air receiver tanks.



***Never open the air receiver tank drain while the receiver tanks are pressurized.***

- Drain the air from the air receiver tanks.
- Confirm that the air stored in the air receiver tanks evacuates completely.
- Drain the accumulated water from the receiver tanks.

If the system does not operate normally\*:

- \*Ensure the air receiver tank drain valve is closed.
- \*Ensure the hose is connected correctly and there are no air leaks.
- If the problem persists, isolate the G30 and air receiver tanks from all downstream equipment and test for leaks.

# Completing the Installation



*The air receiver tanks should be drained a minimum of once per day to evacuate the moisture from the tank. This will help to prevent corrosion from forming in the tanks.*



*Do not start the Gas Engine Driven 30 CFM Air Compressor with the ball valve wide open and with no tool attached as this will cause compressor oil to carry over into the airstream.*

- When compressed air is no longer needed, shut down the G30 as normal.
- Open the ball valve on the receiver tank package (or connect a tool to the system) to evacuate the stored air.



*Never open the air receiver tank drain while the receiver tanks are pressurized.*

- Once the air has been evacuated from the receiver tanks, open the drain on the receiver tank.
- Once all of the water has drained, close the receiver tank drain.







Manufactured by



888-241-2289



tech@vmacair.com



877-740-3202



warranty@vmacair.com



www.vmacair.com



kb.vmacair.com



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