



MERC-OBA INSTALLATION MANUAL

REV: A (1/28/2021)



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1 How to Use This Manual

1.1 Interactive Manual Using Adobe Reader

It is recommended to open this digital PDF using Adobe Reader® to take advantage of following key features:

- **Hyperlinks** ([blue underlined text](#)) allow access to additional content via internet; click/tap to activate. Hyperlinks also allow users to jump to specific spots in within the document.
 - Includes [Installation Figures](#) and “[Figure xx](#)”
- **Table of Contents** page allows easily navigating this manual; click/tap any section line to go to it
- **Bookmarks** allow quick navigation to any section; click/tap
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-

1.2 Your SKU Number & this Manual

This manual covers installation, testing, and operation of following SKU part numbers

1.2.1 MERC-OBA

NOTE: Illustrations and pictures contained herein may represent only one kit part number. Where critical differences exist between kits, (i.e., different parts, orientation, mounting points, etc.) additional text, or necessary graphics are provided to minimize confusion.

Parts list explicitly state kit differences with **(BOLD TEXT)** inside parenthesis, shown below part number

1.3 Illustration/Photo Details & Orientation

This manual may use digitally created illustrations and/or actual photos of example vehicle. These graphics may not include exact items found on your vehicle (i.e., electrical wiring, fuel lines, body panels, etc.). Illustrations typically will be missing details and are for clarity to show critical mounting locations and orientation on vehicle.



Throughout the manual, yellow arrows with text reading “FRONT” may be present over illustrations and pictures. These arrows specify direction toward the front of the vehicle and provide clarity as to how illustration is viewed.

END OF SECTION



2 Safety First

Read manual thoroughly before starting installation of this kit. Verify that you have all parts listed, and that you clearly understand the installation procedure. Contact Kleinn technical support with any questions.

Installation of this kit requires **moderate mechanical aptitude**; seek professional help if you're not competent using hand tools in tight uncomfortable spaces and around possibly rusted and sharp vehicle parts.

Before starting, obtain proper tools required to perform installation correctly, adequate lighting, eye protection, hearing protection, (for operating train horns) and hand protection to guard against sharp edges and metal burrs which may be present on kit parts and/or vehicle parts.

Throughout this manual the following words may be used; be aware of their meaning and application.

CAUTION: means damage could occur to vehicle or kit parts during or after installation.

WARNING: means injury could occur to you or others, including damage to vehicle or kit parts.

DANGER: means serious injury or death could occur to you or others during installation.

END OF SECTION



3 Application Chart

3.1 Bolt-On Vehicle List

MERC-OBA has been designed to fit Mercedes-Benz Sprinter Vans.

MODEL YEAR	MODEL	DRIVE	ENGINE	BODY	TRIM
2006-2018	Sprinter	Any	Any	Any	Any
2019-2021(+)	Sprinter	Any	Any	Any	Any

NOTE: All vehicles listed may require drilling holes for ground wires, installing switches, and running air hose based on preference of installed switch locations, wire grounding points, and air hose routing.

3.2 Excluded Vehicles

The following vehicles have been found to be **incompatible** with the designed kit:

MODEL YEAR	MODEL	DRIVE	ENGINE	BODY	TRIM
All	Sprinter	Any	Any	Cab Chassis	Any

3.3 Aftermarket Product Compatibility

This kit has been designed to work with the following aftermarket products:

- Side steps

This kit has **not** been designed to work with the following aftermarket products:

- Slide-out side steps
- Any side steps that attach to vehicle frame under rear sliding door. ([example](#))

NOTE: Review this manual in full before unpacking items to verify correct space and mounting locations exist with your aftermarket product(s). *To install this kit alongside your other aftermarket product(s), modification to the included parts, your vehicle, or your aftermarket product(s) may be required.*

END OF SECTION



4 Installation Overview

4.1 Kit Layout & System Location(s)

MERC-OBA consists of the following components, located on vehicle as follows:

ITEM	DESCRIPTION	VEHICLE LOCATION	MOUNTING METHOD	APROX. INSTALL TIME
1	Air Compressor	Under rear passenger door	Included bracket	2 hr
2	Air Tank			





4.2 Install Process Outline

For person(s) with prior experience installing MERC-OBA, a reminder of the install steps is provided below:

UNPACKAGE KIT (SECTION 7)

1. Layout and organize all parts

BENCH ASSEMBLY (SECTION 8)

2. Assemble air fittings to air tank
3. Assemble tank to bracket
4. Assemble compressor to bracket

ON-VEHICLE MECHANICAL ASSEMBLY (SECTION 9)

5. Locate installation location
6. Mount assembly to vehicle
7. Route air hose/quick connect coupler as desired

ON-VEHICLE ELECTRICAL ASSEMBLY (SECTION 10)

8. Install relay & fuse, route wiring
9. Connect all electrical items (pressure switch, air compressor)

FINAL STEPS (SECTION 11)

10. Test system

4.3 Approximate Installation Time

MERC-OBA is a multi-faceted product consisting of mechanical, electrical, and pneumatic components.

For a typical home mechanic, auto enthusiast, or technician installing this kit for first time; a professional installation job with setup and testing of final product, is estimated to take:

- **2 hours**

END OF SECTION



5 List of Tools & Supplies

5.1 Standard Tool List (Required)

1. Basic mechanic's 3/8" drive socket set
 - Inch size sockets (5/16", 9/16", 5/8", 3/4", 7/8")
2. Basic mechanic's combination wrenches (box/open-end)
 - Inch size sockets(5/16", 9/16", 5/8", 3/4", 7/8")
3. Basic mechanic's Allen Wrench set
 - Inch size Allen Wrenches (1/4")
4. Basic mechanic's screwdriver set (Philips, Flat Head)
5. Diagonal cutter/wire cutter pliers
6. Wire strippers
7. Wire terminal crimpers
8. Slip-joint pliers
9. Vise grips or locking pliers
10. Utility knife or utility razor blade

5.2 Special Tool List (Recommended)

1. 10-100 ft-lbs. torque wrench
2. 20-150 in-lbs. torque wrench
3. Multi-meter for 12V DC electrical systems or equivalent
4. 12V DC test Light or equivalent
5. Trim panel tool, for removing wiring and body clips, when needed

5.3 Shop Consumables List (Recommended)

1. Quality electrical tape
2. Di-electric grease for electrical connections
3. Heat shrink tubing for electrical connections
4. Medium-strength thread-locker (i.e., Blue Loctite® PN 242) or equivalent
5. Low-strength thread-locker (i.e., Purple Loctite® PN 222) or equivalent
6. Black/Clear silicone for drilling holes in body
7. Sandpaper or wire brushes for installing ground wires
8. Extra plastic zip ties > 6" long
9. Extra NPT sealant (i.e., Kleinn Air Horn Juice, Teflon tape, etc.)
10. Touch-up paint for frame/chassis/body (i.e., primer or black epoxy)
11. Typical cleanup supplies

END OF SECTION



6 Parts List

6.1 Review Parts List

Unpackage and organize kit across a large work area and verify all parts are included, as listed below. Contact Kleinn support with any questions.

1. Review pre-packaged kit items (K_)
2. Review Air Fittings and Tubing (F_)
3. Review Wiring and Accessories (E_)
4. Review Bolt-On Mounting Brackets (C_)
5. Review Hardware/Fasteners (H_)
6. Review Add-On Accessories (X_)
7. Familiarize yourself with how the parts assemble








6.2 Pre-Packaged Electromechanical Kit Items

NOTE: Items in this section come in their own packages and may include additional items inside package.



ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
K1	1	6450RC	Air compressor kit, with included hardware, leader hose, remote air filter, connectors, and tubing.	
K2	1	6356RT	Air tank, 2-gallon, 7-port	
K3	1	1302L	Quick Connect Coupler Relocation Kit	
K4	1	INF-1	Tire Inflation Kit	



6.3 Air Fittings & Related Items


ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
F1	2	50041	Plug, 1/4NPT, Internal Hex	
F2	2	51414	Comp. Fit. 1/4NPT-1/4	
F3	1	51414L (Included in 1302L)	Comp. Fit. 1/4NPT-1/4 Elbow	
F4	1	51414NPTL	Adpt. 1/4NPT-1/4NPTF Elbow	
F5	1	51214R	Reducer, 1/2NPT-1/4NPT	
F6	1	52175	Safety Valve, 175PSI, 1/4NPT	
F7	1	52835	Drain, 1/4NPT	

6.4 Electrical Components & Related Items




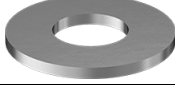


ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
E1	1	2151	PRESSURE SWITCH, 110PSI ON 145PSI OFF	
E2	1	340	RELAY, 12V, SPDT	



6.5 Mounting Brackets & Special Hardware

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
C1	1	MERC-100	BRACKET, TANK & COMPRESSOR MOUNT	

6.6 Hardware, Fasteners, & Soft Parts

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
H1	2		7/16-14 X 4" BOLT	
H2	1		7/16-14 X 3" BOLT	
H3	4		7/16-14 X 1" BOLT	
H4	12		7/16 FLAT WASHER	
H5	7		7/16 LOCK WASHER	
H6	5		7/16-14 HEX NUT	

END OF SECTION



7 Bench Assembly

Complete the following steps off of the vehicle to prepare for final installation.

It is recommended to use a thread locker and a torque wrench when tightening fasteners.

Use the following chart for torque specifications.

Item	Thread Size	Used for	Torque Spec (lb.-ft.)
H1	7/16-14	Bracket Mounting	37
H2	7/16-14		
H3	7/16-14		
-	M5-0.8	Compressor mounting	5



Figure 1: Bench Assembly

7.1 Assemble Air Fittings to Air Tank

1. Gather all necessary air fittings and the air tank; ensure all threads on fittings and inside ports are clean.
2. Apply two small drops of [Kleinn Air Horn Juice](#) to each male pipe thread.
3. Attach air fittings to the air tank, per below illustrations; ensure they are oriented correctly.

[Click here to view fittings list](#)

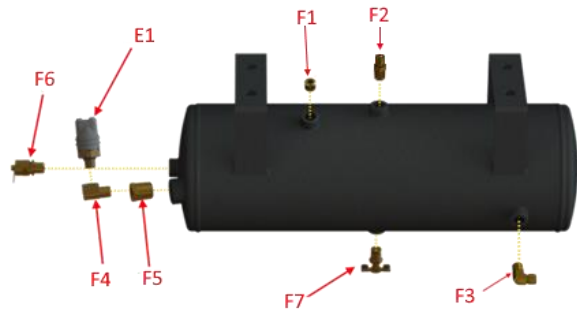


Figure 2: Tank Fitting Installation

4. Hand-tighten each fitting, then further tighten 1/4-1/2 turn using proper sized box-end wrench; adjust as necessary to match fitting orientation, as shown above.

Your kit includes extra fittings. Use as desired. It is also possible to mount the tank 180° from what is shown if it is desired to use both top ports. This will move the outward-facing to face inward. However, this allows both ports between the legs to be used.



7.2 Assemble Air Filter to Air Compressor

1. Remove the compressor from its packaging, included hardware and air filter.
2. Review included directions in the compressor package pertaining to the remote air filter; select location on vehicle where to mount the air filter, or if desired, filter housing may be secured to included brackets using zip ties.

NOTE: The air filter tubing is rigid and may be difficult to install over barb fittings. If necessary, use hair dryer, candle, or heat gun at a safe distance to soften the end of the air tubing and place over fitting. Do not bend tubing excessively and cause it to kink. Use even heat if necessary, to bend tubing sharply.



Figure 3: Air Compressor Remote Air Filter and Tubing (shown without Air Compressor)

7.3 Assemble Tank to Bracket (MERC-100)

1. Use [H3](#), [H5](#), [H4](#) (2x), & [H6](#) to attach the tank to bracket [C1](#). (4x) Bolts may face either up or down.

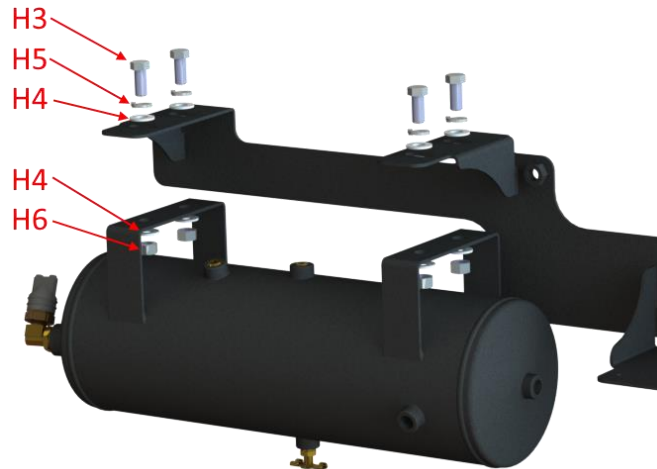


Figure 4: Tank Attachment

It is also possible to mount the tank 180° from what is shown if it is desired to use both top ports. This will move the outward-facing to face inward. However, this allows both ports between the legs to be used.



7.4 Assemble Compressor to Bracket (MERC-100)

1. Apply two small drops of [Kleinn Air Horn Juice](#) to the male thread on the compressor's leader hose.
2. Thread the leader hose into the tank port closest to the compressor.
3. Use the hardware included in the compressor ([K1](#)) packaging to attach the compressor to bracket [C1](#). **Ensure that the excess length on the fasteners is pointing up, as shown.**

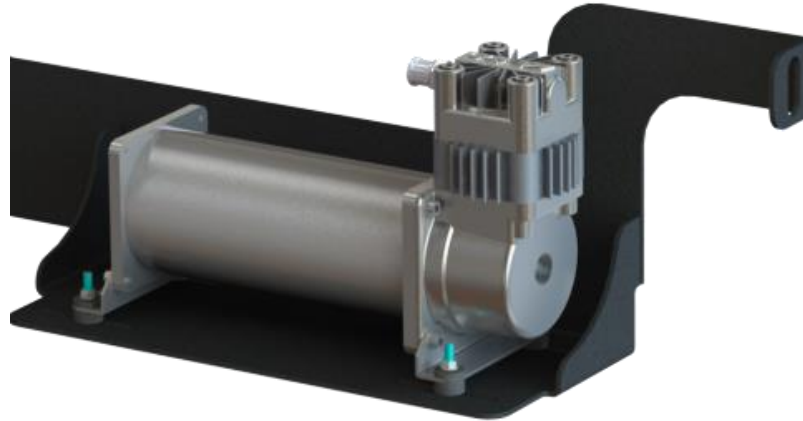


Figure 5: Compressor Attachment

END OF SECTION



8 On-Vehicle Mechanical Assembly

Complete the following steps on-vehicle using a lift, vehicle ramps, or other safe lifting method.

DANGER: Follow all manufacturer's instructions for safely lifting vehicle; reference owner's manual.

8.1 Locate Installation Location

1. MERC-OBA is installed underneath the rear passenger door. The holes shown below are used to mount the kit:

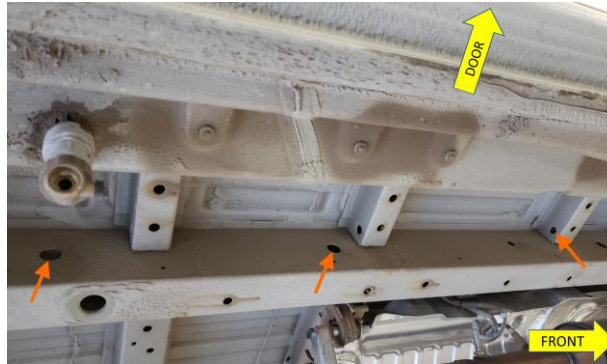


Figure 6: Install Location

8.2 Attach Bracket Assembly to Vehicle Frame

1. Use [H1](#), [H5](#), & [H4](#) to attach the rear end of [C1](#) to the vehicle frame.
2. Use [H2](#), [H5](#), [H4](#) (2x), & [H6](#) to attach the front end of [C1](#) to the vehicle frame.
3. Use [H1](#), [H5](#), & [H4](#) to attach the center of [C1](#) to the vehicle frame.

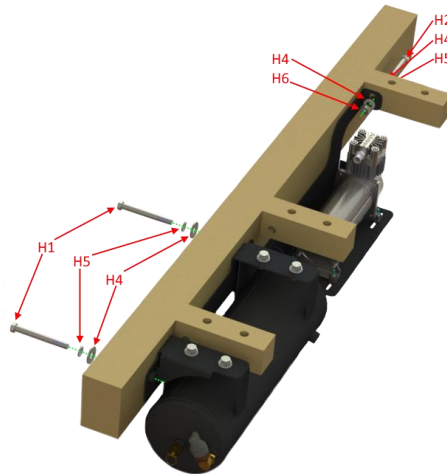


Figure 7: Assembly Installation

8.3 Route Hose

1. The outward facing port is designed to be used with 1302L to mount the quick-connect coupler for easy access. Route the air hose and mount the quick connect coupler as desired.

END OF SECTION



9 On-Vehicle Electrical Installation

CAUTION: Follow all recommended safety precautions for working on vehicle's electrical system; consult vehicle owner's manual for further instruction.

9.1 Relay & Fuse Diagram for Air Horn System

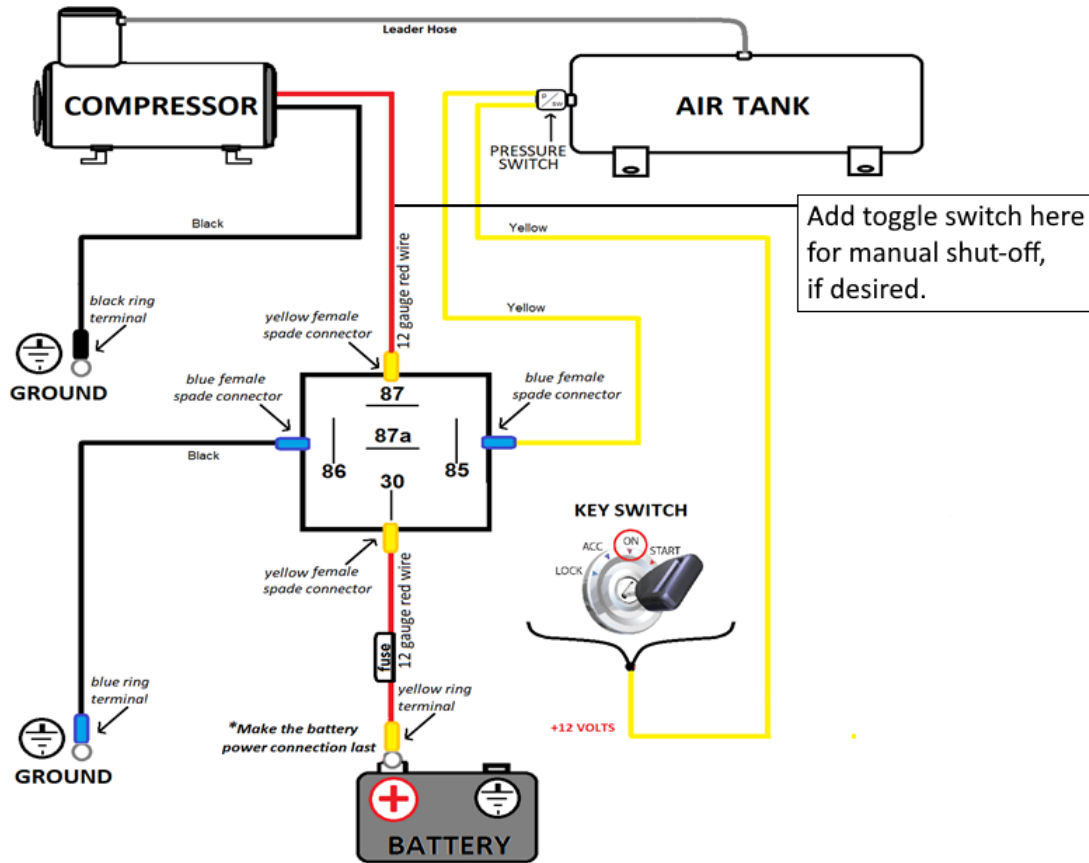


Figure 8: Suggested Ignition Relay Diagram for Air System



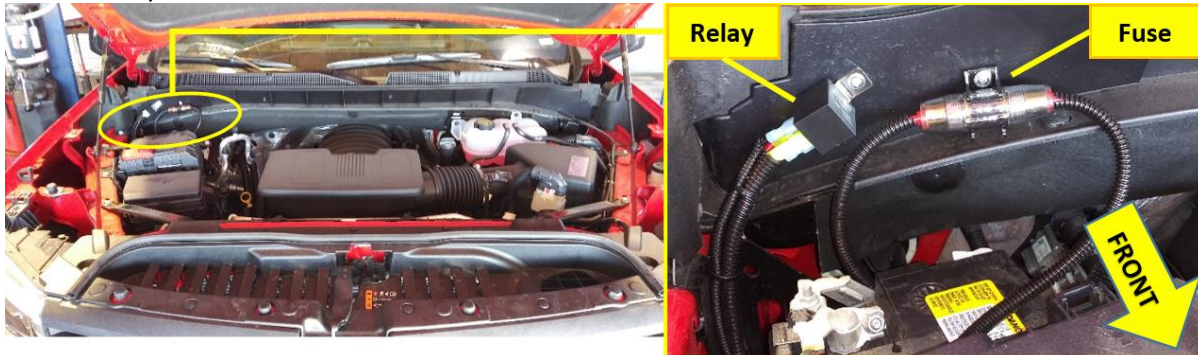


9.2 Disconnect Vehicle Battery(s)

1. Consult owner's manual.

9.3 Connect Wires to Fuse & Relay

1. Find a suitable location for supplied fuse and relay. Shown below is an example location under the hood, next to the battery, mounted on the firewall. Use supplied self-tapping screws, as necessary.



(example image)

2. Install the supplied fuse holder on one end of power wire by cutting the loop in fuse holder and connecting supplied Ring terminal to one end and butt connector on the other end.
3. **CAUTION:** Do not install 30-amp fuse until all electrical connections are final.

9.4 Connect Pressure Switch

1. Route wiring, as desired, to the air tank and connect to the pressure switch, per wiring diagram.
NOTE: Either pressure switch wire can be connected to relay or ignition; they are identical.

9.5 Connect Air Compressor

1. Route wiring, as desired, to the air compressor and connect, per wiring diagram.

9.6 Secure Wiring to Vehicle

1. Insert all wiring into included wire loom and ensure loom is away from all sharp edges, hot/moving vehicle parts, (i.e., exhaust, engine, radiator) and fasten securely to vehicle using supplied zip ties or equivalent.

END OF SECTION

10 Final Steps & Testing

10.1 Reconnect Vehicle Battery(s)

CAUTION: Before connecting the vehicle battery(s), verify all wiring is properly connected and no shorts exists. Use of Multi-meter, or test light is recommended to check continuity of all connections.

10.2 Test Air Compressor

1. Turn the vehicle ignition to the *ON* position and allow the compressor to fill the air tank. Initial fill may take approximately 1.5-3 minutes. The air compressor should shut off automatically once full pressure is achieved.
2. If the compressor runs excessively, (i.e., 5 minutes or more) disconnect electrical power to the air compressor and listen for air leaks in system. Repair any problems and retest. Contact Kleinn technical support if problems persist.
3. Inspect all air line connections (i.e., air tank fittings, quick connect fittings, air horn fittings, etc.) for leaks by using a soap and water solution sprayed directly onto fittings.
4. System must be pressurized, or at least the air compressor must be running.
5. If an air leak is found:
6. Safely release air pressure from system (i.e., slowly open drain valve).
7. Disassemble leaky connection, re-seal and reinstall fittings as needed.

10.3 Test Quick Connect Coupler

1. Allow the air compressor to refill the tank, if needed.
2. Attach the supplied INF-1 inflator kit to the quick connect coupler and verify adequate air pressure is available
3. Test fill tires on vehicle, bicycle, etc.
4. Test air blow gun
5. Test air impact gun



11 General Operation

11.1 Compressor Operation

WARNING: NEVER operate the air compressor above its MAXIMUM PRESSURE RATING (see label on body). Operation exceeding maximum pressure will damage the compressor and potentially cause air system failure.

1. Kleinn's oil-less compressor is equipped with an automatic thermal overload protection circuit designed to protect the air compressor from overheating and causing permanent damage.
2. Automatic thermal overload protector will reset after 30 minutes.
3. To prevent discharge of the vehicle's battery, and for best performance, keep the vehicle's engine running while using the air compressor for any prolonged use (i.e., filling tires, using air tools, etc.).

END OF SECTION

12 Routine Maintenance

Perform following maintenance at least once during recommended intervals:

1. Yearly, or every 12,000 miles, verify all mounting fasteners are properly torqued. Applying witness marks across fasteners and mounting parts is good practice to quickly ensure fasteners have not moved.
2. Yearly, or every 12,000 miles, **inspect OE wiring, tubing, cables, etc.** where kit parts may touch to **verify no abrasion or rubbing.**
3. Yearly, or every 12,000 miles, remove all road grime and mud from the mounting brackets and

kit parts using clean water from a garden hose. Pay special attention to corners where dirt may collect. Touch up all paint chips using automotive grade enamel in either spray or brush form.

NOTE: Do this more frequently if traveling regularly off-road, or in winter climates with road salts. High-pressure washers may damage part finishes and must be used with care.

4. Yearly, or every 12,000 miles, check electrical connections, wires, and air fittings for abrasion, corrosion, or other damage. Replace damaged components.

NOTE: if system runs continuously or turns on unexpectedly, leaks or a poor electrical connection may be present.

5. Monthly, or every 10 hours of compressor run time, drain moisture from the air tank using the drain valve installed at the bottom of the tank.

WARNING: Failure to regularly drain the air tank may result in corrosion inside the tank and possible failure in the tank or air tubing, causing injury.

6. Yearly, or every 12,000 miles, clean or replace the air compressor air filter element. Replacement frequency depends on operating frequency and conditions of environment (i.e., daily use requires more frequent changes). Order replacement filters at Kleinn.com.

NOTE: NEVER lubricate or add liquids to the compressor.

END OF SECTION



13 Warranty Information

Thank you for purchasing MERC-OBA. Shall you experience any unexpected problems during installation, or have problems with any part at any time please contact Kleinn support.

KLEINN MANUFACTURER LIMITED DEFECT WARRANTY:

Kleinn Automotive Air Horns warrants this product to the end-user, when properly installed and under normal conditions of use, to be free from defects in workmanship and materials for a period of one year from the provided date of purchase, to the original purchaser of the product. This warranty does not cover abuse, operation in a manner inconsistent with the product's design, or damage resulting from exposure to the elements. If the defect is considered "under warranty", Kleinn will, at its option, repair or replace the product free of charge to the original purchaser. Kleinn is not liable for any installation charges, loss or damage of any kind incurred in the replacement or repair of any warranted product.

END OF MANUAL

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