



JT-OBA/220
INSTALLATION MANUAL

REV: C (6/25/2021)





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
 - **Zoom IN** on pictures by pressing “CTRL and +” at same time on PC, or pinch in on smart devices
 - **Zoom OUT** on pictures by pressing “CTRL and -” at same time on PC, or pinch out on smart devices
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1.2 Your SKU Number & this Manual

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

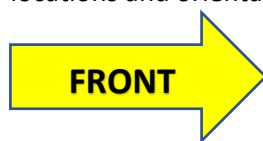
1.2.1 JT-OBA & JT220

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

The **JT-OBA & JT220** have been designed to work for Jeep Gladiator (JT) 2020 and up models (gas only).

MODEL YEAR	MODEL	DRIVE	ENGINE	BODY	TRIM
2020-2021	Gladiator	All	Gas	All	All

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

3.2 Excluded Vehicles

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

MODEL YEAR	MODEL	DRIVE	ENGINE	BODY	TRIM
2020-2021	Gladiator	Any	Diesel	Any	Any
2020-2021	Gladiator	Any	Hybrid	Any	Any

3.3 Aftermarket Product Compatibility

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

- Aftermarket steps
- Aftermarket winch

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

- Aftermarket exhaust

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)

JT-OBA & JT220 consist of the following components, located on vehicle as follows:

ITEM	DESCRIPTION	VEHICLE LOCATION	MOUNTING METHOD	APROX. INSTALL TIME
1	Air compressor	Under center of vehicle	Bolt-on with provided bracket	4 hr.
2	Tank			
3	Horns (JT220 only)	Passenger-side frame rail	Bolt-on with provided bracket	2.5 hr.





4.2 Install Process Outline

For person(s) with prior experience installing JT-OBA/JT220, 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. Prepare tank bracket and tank straps
4. Assemble compressor to OBA bracket
5. Remove horn trumpets from drivers **(JT220 Only)**
6. Attach horn drivers to horn bracket **(JT220 Only)**

ON-VEHICLE MECHANICAL ASSEMBLY (SECTION 9)

7. Attach OBA bracket to vehicle
8. Attach air tank (with fittings) to OBA bracket
9. Assemble air filter to air compressor
10. Attach horn bracket (with drivers) to vehicle **(JT220 only)**
11. Re-Attach horn trumpets to horn drivers **(JT220 only)**
12. Route air lines between compressor, tank, and remote coupler **(& horns)**

ON-VEHICLE ELECTRICAL ASSEMBLY (SECTION 10)

13. Install relay & fuse, route wiring, and install horn button
14. Connect all electrical items (air horn(s), pressure switch, air compressor)

FINAL STEPS (SECTION 11)

15. Test system

4.3 Approximate Installation Time

JT-OBA & JT220 are multi-faceted products 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:

- **6.5 hours**



5 List of Tools & Supplies

5.1 Standard Tool List (Required)

1. Basic mechanic's 3/8" drive socket sets with extensions
 - Inch size sockets
 - Metric size sockets
2. Basic mechanic's combination wrenches (box/open-end)
 - Inch size sockets
 - Metric size sockets
3. Basic mechanic's screwdriver set (Philips, Flat Head)
4. Diagonal cutter/wire cutter pliers
5. Wire strippers
6. Wire terminal crimpers
7. Slip-joint pliers
8. Vise grips or locking pliers
9. Small pry bar or large flat blade screwdriver
10. Utility knife or utility razor blade
11. Magnetic retrieval tool

5.2 Special Tool List (Recommended)

1. Power hand grinder, pneumatic grinder with cut-off wheel, or hacksaw
2. 10-100 ft-lbs. torque wrench
3. 20-150 in-lbs. torque wrench
4. Multi-meter for 12V DC electrical systems or equivalent
5. 12V DC test Light or equivalent
6. 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



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	Model 6450RC Fully Submersible Waterproof Heavy Duty Air Compressor	
K2	1	6353RT	Air Tank, 3 gallons x 9-port	
K3	1	220 (JT220 Only)	Model 220 Dual Train Horn	
K4	1	INF-1	Tire Inflation Kit	
K5	1	1302	Model 1302 Remote Quick Connect Coupler Relocation Kit	



6.3 Air Fittings & Related Items

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
F1	4	50040	Hex Plug, 1/4NPT	
F2	1	52175	Safety Valve, 175PSI, 1/4NPT	
F3	1	52835	Drain, 1/4NPT	
F4	1	51414L (JT220 only)	Comp. Fit. 1/4NPT-1/4 Elbow	
F5	1	51414NPTL	Adpt. 1/4NPT-1/4NPTF Elbow	
F6	1	51414 (included in 1302)	Comp. Fit. 1/4NPT-1/4	
F7	1	53838PL	Push Fit., 3/8NPT-3/8 Elbow	

6.4 Electrical Components & Related Items

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
E1	1	2151	Model 2151 Pressure Switch	
E2	1	320 (JT220 Only)	Button, Momentary, Nickel	

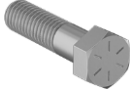



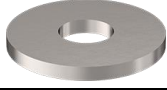

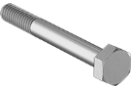

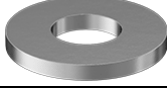

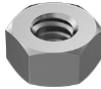

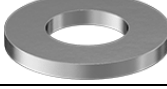




6.5 Mounting Brackets & Special Hardware

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
C1	1	JT-100	Tank & Compressor (OBA) Bracket	
C2	2	JT-101	Tank Strap	
C3	1	JT-200 (JT220 Only)	220 Horn Bracket	
C4	1	RZR-102	1/4" Bolt Spacer	
C5	1	JT-102	Zip Tie Bracket	



6.6 Hardware, Fasteners, & Soft Parts

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
H1	1		3/8"-16 x 2-3/4" Hex Bolt	
H2	1		3/8" Flat Washer	
H3	1		3/8" Split-Lock Washer	
H4	2		M8-1.25 x 25mm Hex Bolt	
H5	2		M8 x 24mm Fender Washer	
H6	2		M8 Split-Lock Washer	
H7	1		1/4"-20 x 2-1/4" Hex Bolt	
H8	4		1/4"-20 x 1-1/4" Hex Bolt	
H9	5		1/4" Flat Washer	
H10	5		1/4" Split-Lock Washer	
H11	1		1/4"-20 Hex Nut	
H12	4	(JT220 Only)	5/16" Flat Washer	
H13	4	(JT220 Only)	5/16" Flat Washer	
H14	4	(JT220 Only)	5/16"-18 Hex Nut	
H15	2		9" Rubber, Tank Strap	



H16	2		8" Rubber, Tank Mount	
H17	1	(JT220 Only)	M12-1.5 x 90mm Hex Bolt	
H18	2	(JT220 Only)	M12 Flat Washer	
H19	1	(JT220 Only)	M12 Split-Lock Washer	
H20	1	(JT220 Only)	M12-1.5 Hex Nut	
H21	1		5/16 x 1-1/4" Fender Washer	
H22	1		1/4" ID Rubber Grommet	

END OF SECTION



7 Bench Assembly

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

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

When assembling components using bolts, nuts, washers, and lock washers follow the assembly order shown below:

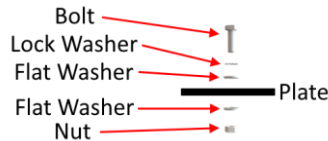


Figure 1: Hardware Assembly Order

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	3/8"-16	Rear Bracket Mounting	23
H4	M8-1.25	Front Bracket Mounting	22
H7 & H8	1/4"-20	Tank Mounting	6
-	M5-0.8	Compressor Mounting	5

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, before inserting.
3. Attach air fittings to the air tank, per below illustrations; ensure they are oriented correctly.

[Click here to view fittings list](#)

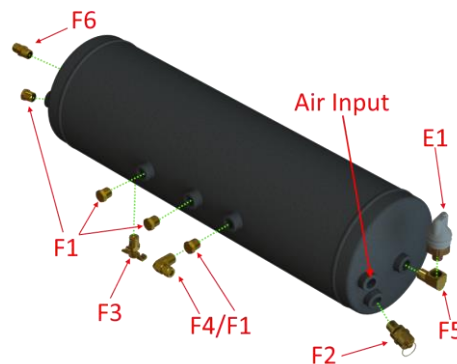


Figure 2: Tank Fittings

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.
5. **JT220:** Swap one F1 with F4 provided (F4/F1 in above image).

7.2 Assemble Rubber to Tank Mounts & Tank Straps

1. Rubber is applied to the tank mounts and tank straps to prevent excessive wear and noise. Apply rubber stripping as shown:

Tank Mount
[H16](#)

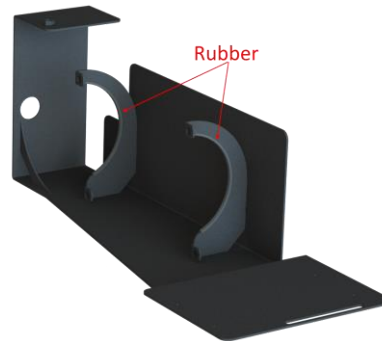


Figure 3: Tank Mount Rubber

Tank Straps
[H15](#)

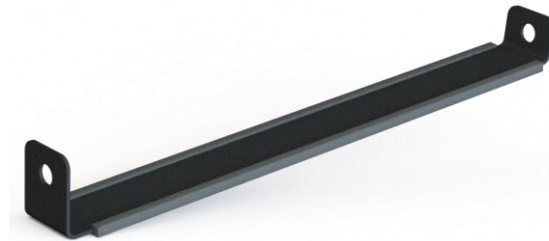


Figure 4: Tank Strap Rubber

2. Form the tank straps by hand-bending them around the body of the tank.

7.3 Assemble Compressor to OBA Bracket

1. Use hardware provided with the compressor to mount the compressor to the OBA bracket as shown. Ensure that the extra length of the bolt is facing up. Note orientation of compressor head on OBA bracket.

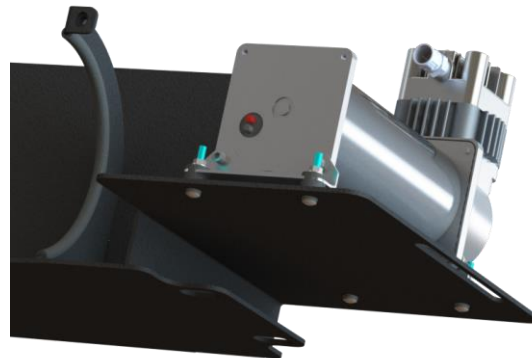


Figure 5: Compressor Install



7.4 JT220: Disassemble Horn Drivers from Air Horns

1. Remove trumpets from drivers and set aside.
 - a. Tightly grasp trumpet with both hands and unscrew counter-clockwise. Trumpet may be very tight.



7.5 JT220: Attach Horn Drivers to Horn Bracket (JT-200)

1. Use [H12](#), [H13](#), & [H14](#) to attach horn drivers to the bracket, as shown.

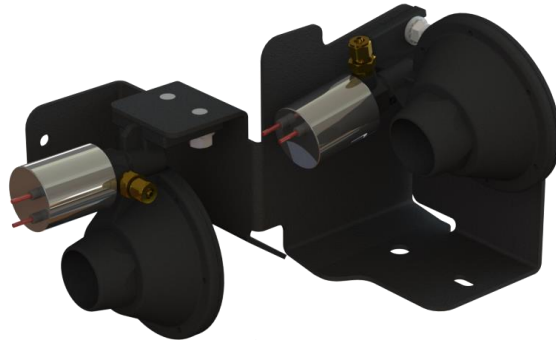


Figure 6: JT220 Horn Drivers Installed

2. Pre-wire the horn driver solenoids and connect the solenoids using the provided T-compression fitting. Connect full length of included 1/4" hose to T-fitting (yellow) (to be routed later) See [Section 10](#) for wiring instructions. Example shown below.

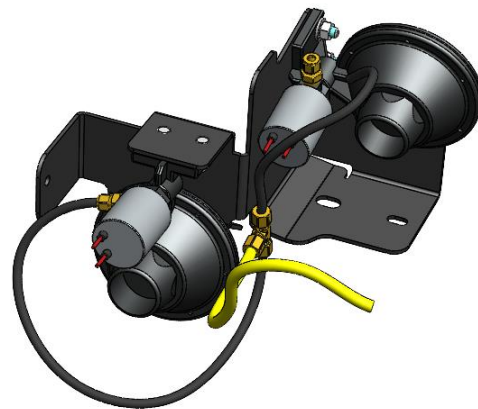


Figure 7: JT220 Horn Driver Prewire and T-Fitting



7.6 Attach Relay to Tank Bracket

1. Use the supplied self-tapping screw to attach the relay to the rear of the tank/compressor bracket as shown:

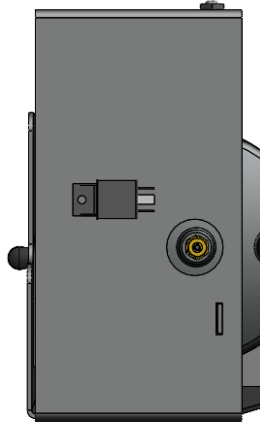


Figure 8: Relay Mounting Location

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 Attach Bracket to Vehicle (JT-100)

1. Slide the bracket into position. The front of the bracket slides over the skid plate below the transfer case (1), and the back of the bracket slides over rear crossmember (2). Slightly bend the compressor mounting plate with your hands to slide the heads of the bolts over crossmember. ****NOTE:** Image shown for reference. Tank must not be on bracket to allow access to rear bolt mounting point. See 9.1.3

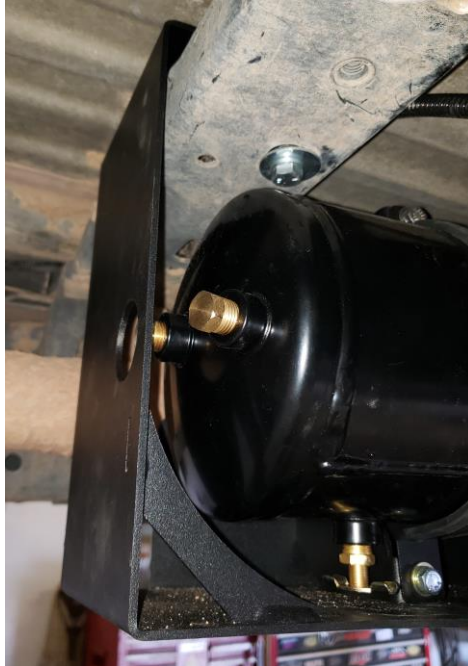


2. Use 2x [H4](#), [H5](#), & [H6](#) to secure the front of the bracket to the skid plate (1).





3. Use [H1](#), [H2](#), & [H3](#) to secure the back of the bracket to the rear crossmember (2). **This must be done before tank is installed.**



4. Use [H7](#), [H9](#), [H10](#), [H11](#), [H21](#), & [C4](#) to secure the back of the compressor mounting plate to the front crossmember. Use any hole in crossmember that is accessible. ([C4](#) not shown)



8.2 Attach Tank to Bracket (JT-100)

1. Use the tank straps along with [H8](#), [H9](#), & [H10](#) to attach the tank to the bracket as shown. **The shorter-bent end of the tank strap attaches to the top of the tank mount.**

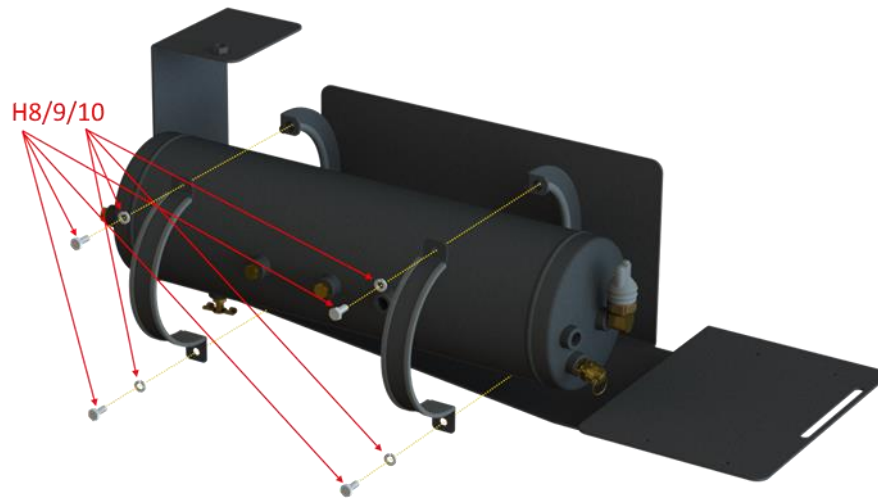


Figure 9: Tank Install

8.3 Attach Zip-Tie Bracket (JT-102)

1. Remove and reuse OEM bolt on front of skid plate to mount JT-102 bracket.

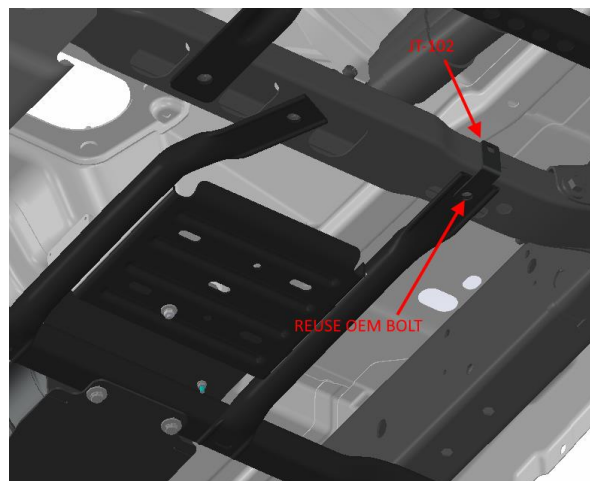


Figure 10: JT-102 Attachment

8.4 JT220: Attach Horn Bracket (JT-200)

1. Remove M6 nut and bolt from OEM gas tank splash shield, near Transmission crossmember, as shown circled in Figure 6 below. These bolts will be reused.

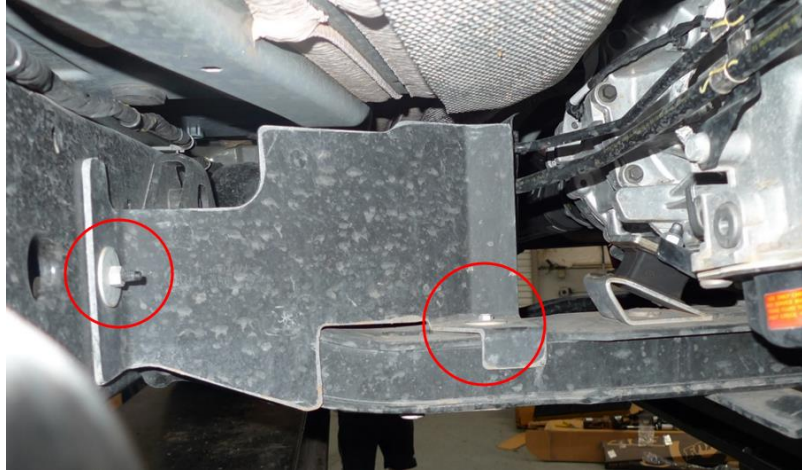
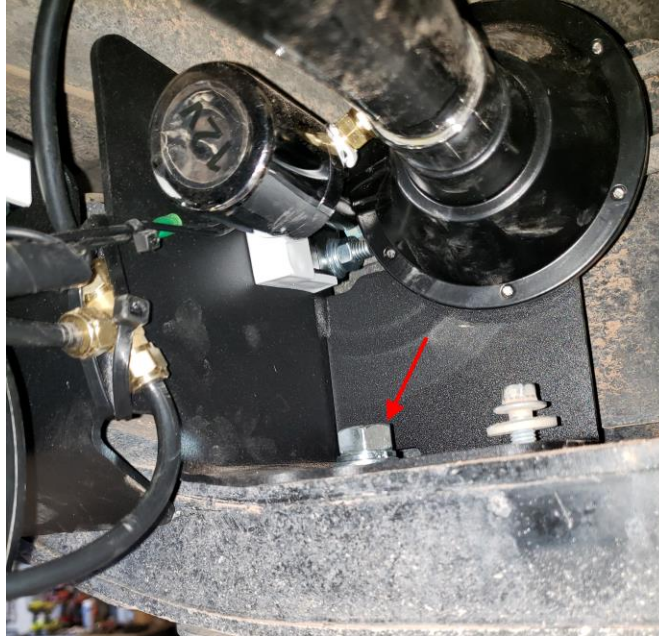


Figure 11: Splash Shield Mounting Points

2. Attach the horn bracket in place of the factory splash shield. Reuse factory hardware.



3. Remove factory gas tank skid plate bolt that attaches to this same crossmember. Insert [H17](#) with washer [H18](#) up through this hole.



4. Secure bracket to crossmember using [H18](#), [H19](#), & [H20](#).
5. Route compressor inlet hose and connect filter.
 - a. Remove the compressor from its packaging, including hardware and air filter.
 - b. Review the included directions in the compressor box 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.
 - c. Use [F7](#) at the compressor inlet. See [Section 10](#) for intake routing.

NOTE: The air filter tubing is rigid and may be difficult to install over barbed & compression fittings. If necessary, use 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 the tubing sharply.



Figure 12: Air Compressor Remote Air Filter & Tubing (shown without Air Compressor)



6. Route air hose and wiring to horns and reassemble trumpets to air horn drivers.



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

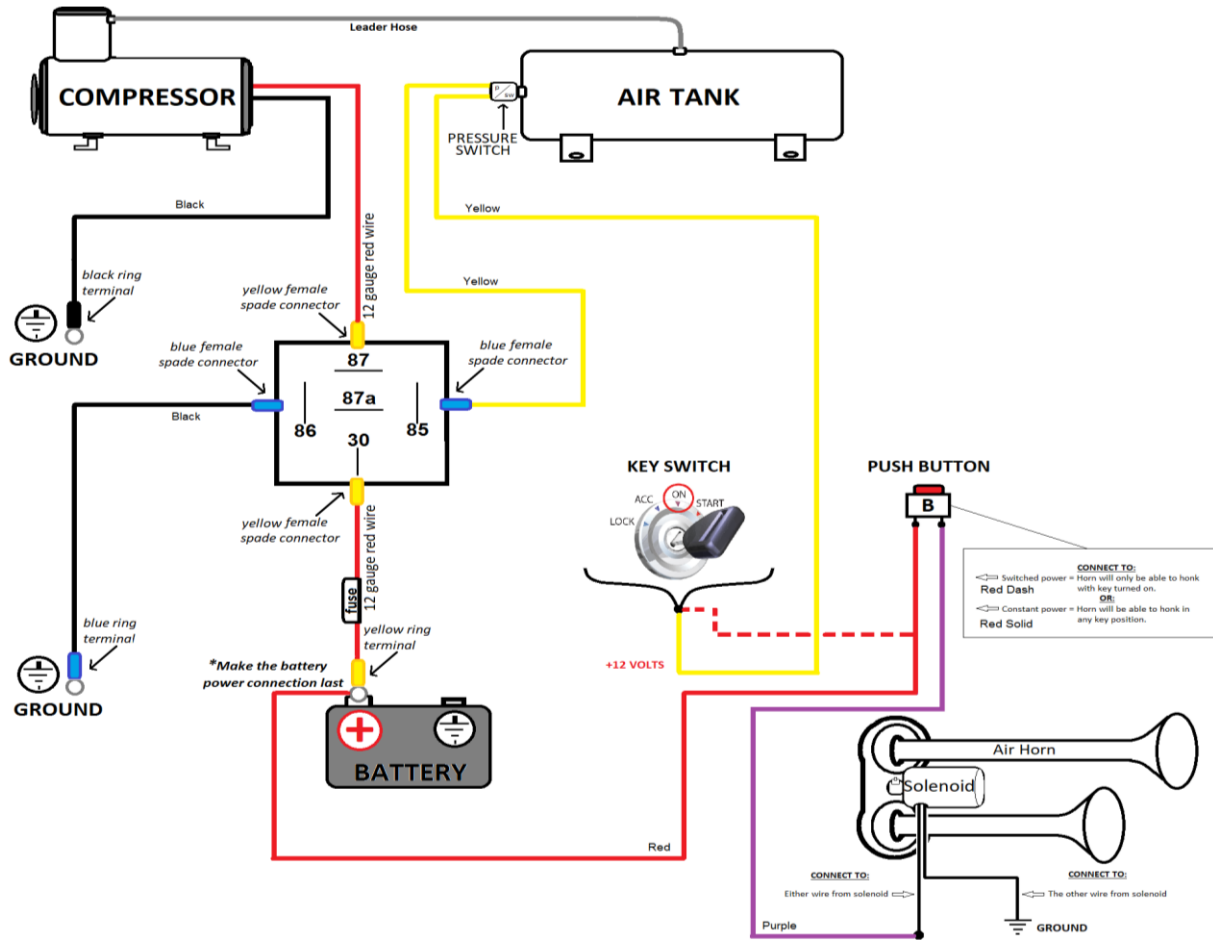


Figure 13: Suggested Ignition Relay Diagram for Air Horn System

<p>PRESSURE SWITCH (either wire can go to Relay or Ignition)</p>			<p>AIR HORN SOLENOID (either wire can be PWR or GND)</p>
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9.2 Disconnect Vehicle Battery(s)

1. Consult owner's manual.

9.3 Suggested Air Hose/Wire Routings

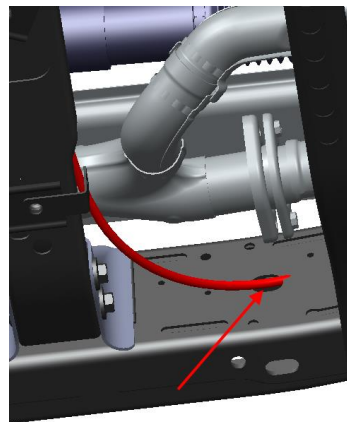
In general, when routing air hose and wires, keep all runs in common areas as much as possible and branch off as needed. Keep runs away from heat sources and sharp edges as much as possible. Below is one possible routing solution. Use this guide with the remaining directions to complete your install. Alternatively, follow the directions below and route as desired.

1. Air Intake/Battery Connection Run (red/blue)

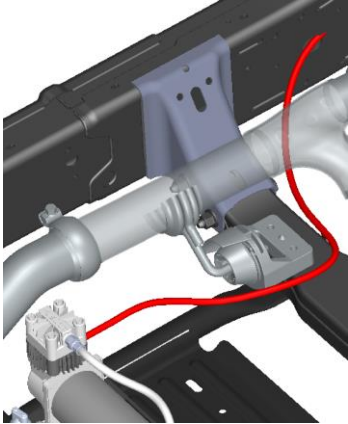
- a. Open the hood and locate the power steering fluid reservoir (drivers-side top corner). This is where the compressor intake filter will sit.
- b. Temporarily tape over the openings at each end of the 3/8" hose included with compressor to prevent debris from getting in the hose during routing.



- c. Locate the "Y" in the exhaust (under driver's door).
- d. Feed the 3/8" hose up into the hole, through the frame, and out the frame hole near the drivers-side front wheel well (outside wall) and up into the space shown above.

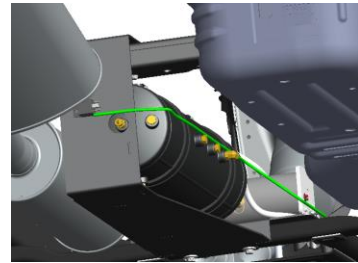




- e. Follow the frame under the driver's door and route the other end of the hose to the compressor.
 - f. Use the included 3/8" push-to-connect elbow fitting (F7) at the compressor inlet.
 - g. Use the zip-tie bracket attached in [Section 9](#) (in addition to using zip-ties elsewhere) to secure the airline/wires away from the exhaust.
 - h. Trim excess length from the end in the engine bay and attach compressor intake filter using barb fitting included in compressor box.
- 
- i. Make your battery connections and follow the firewall over to the air intake. From there, follow the same route to the compressor.
 - j. Use provided self-tapping screw and ring terminal to ground to the frame near this hole. Run this wire along the hose to the relay. (see 2)

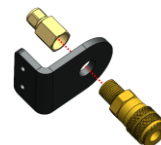
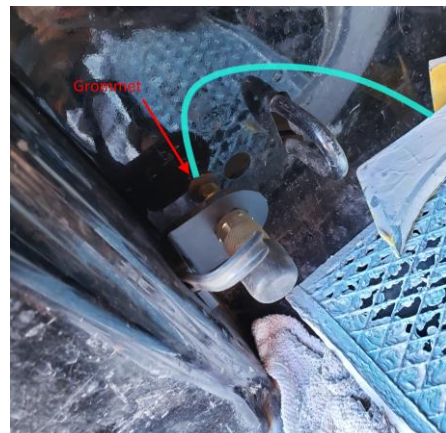
2. Relay Connection Run (green)

- a. Run wires to/from the relay along the top of the tank ports. Secure to tank straps and rear of bracket with zip ties.



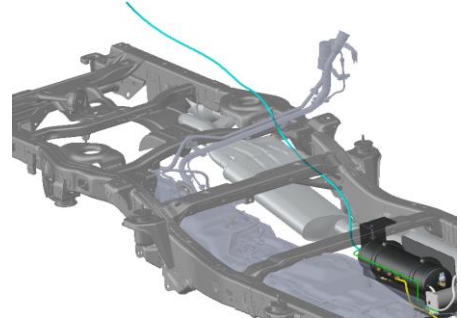
3. Remote Quick Connect Run (cyan)

- a. The QC coupler is mounted in the rear driver-side corner of the bed (near tail-light and bed hook).
- b. Use the bracket provided with 1302 to determine location to drill 7/16" hole through side of the truck bed.
- c. Insert 1/4" grommet in 7/16" hole.
- d. Connect the hose to the QC compression fitting.
- e. The QC is secured to the bracket by sandwich-ing the bracket between the compression fitting and the QC coupler.
- f. Temporarily tape over the opening at the other end of the 1/4" hose to prevent debris from getting in the hose during routing.



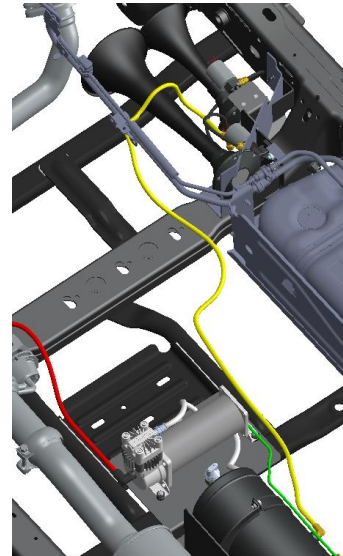


- g. Route the hose down through the drivers-side rear fender, along the top of the frame (above the exhaust), to the back of the tank.
- h. Mount the bracket to the bed using the included self-tap screws.
- i. Trim extra length and attach to compression fitting in tank.
- j. Secure the airline to the vehicle, away from the exhaust, using zip-ties.



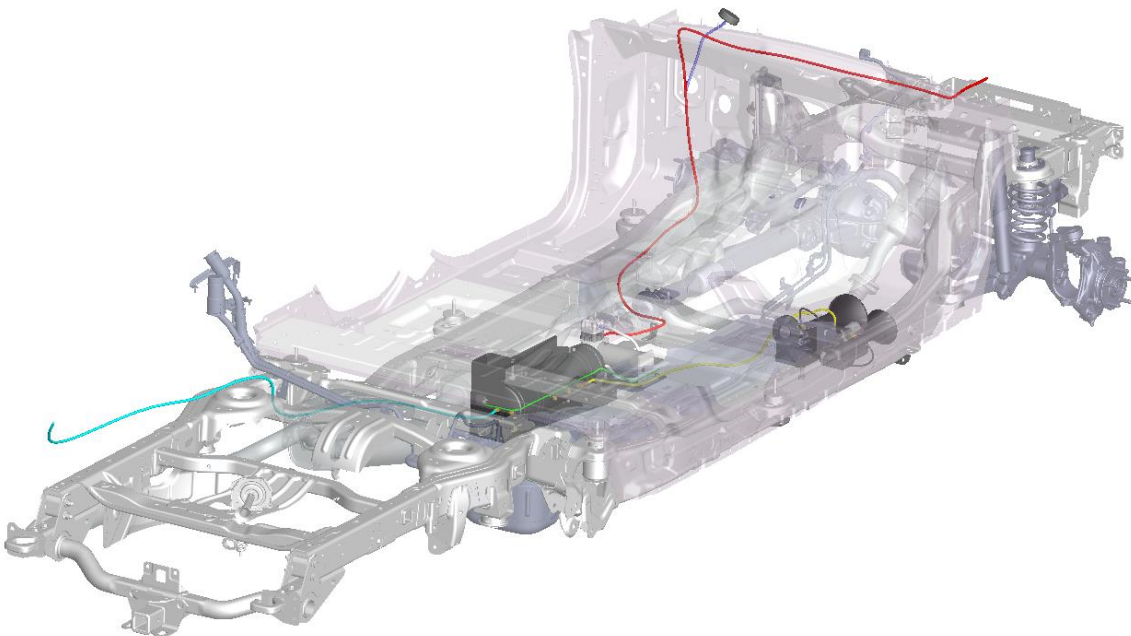
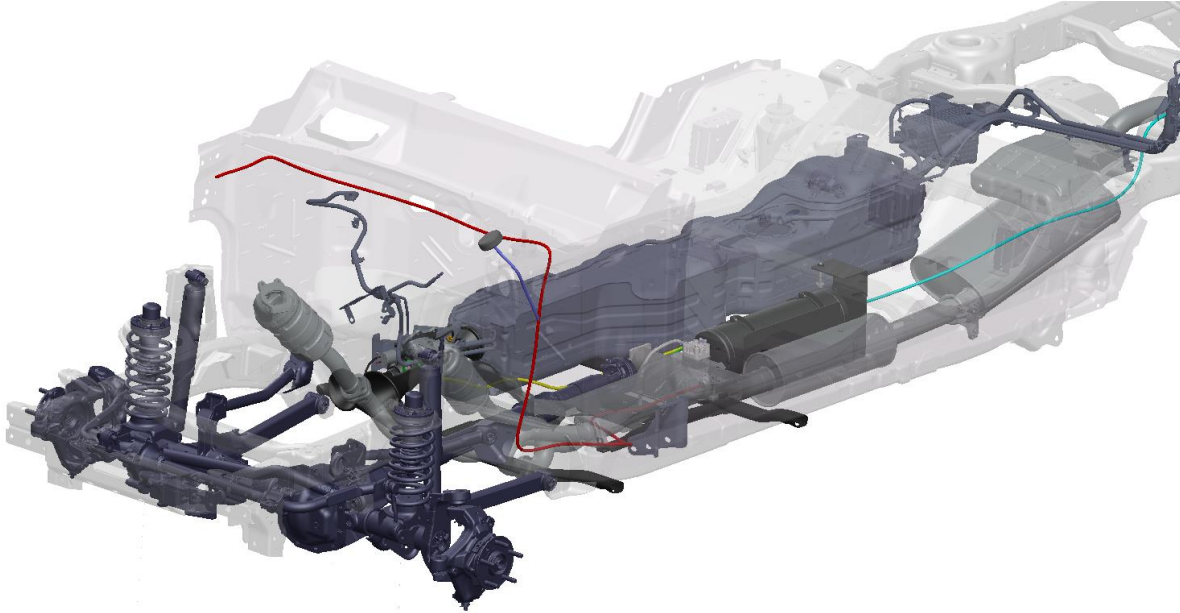
4. Air Horn Run (yellow) **(JT220 only)**

- a. Route the air hose from the horn T-fitting over the longer trumpet, back towards the gas tank, around the transfer case, to the cross-member that the horns are attached to.
- b. Route the air hose along this crossmember to the skid plate.
- c. Route the air hose along the skid plate to the compression fitting in the tank.



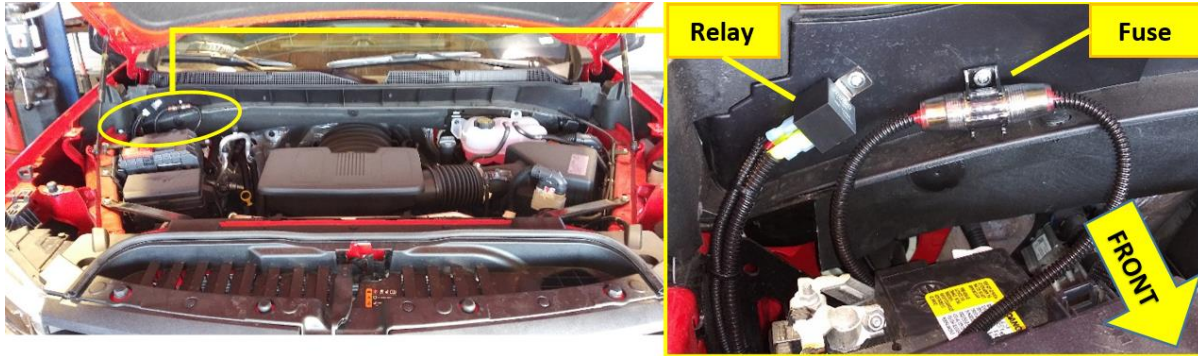
- a. Route wire from one side of the horn button (or up-fitter button) through the firewall (via clutch-grommet) and follow the battery/compressor intake run down to the horn solenoids.
- b. Use provided ring terminal to add a ground connection to frame ground point (see 1j)
- c. Use included butt connectors and/or bullet connectors to connect power and ground to each solenoid.
- d. Secure airline and wires with zip-ties.

Completed routings:



9.4 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.

9.5 Install Horn Button

1. Find a suitable location for the horn button (i.e., in dash, center console, etc.). Verify location has at least 1" of clearance behind for terminal connectors. Mark location for drilling.
2. Drill a 3/4" hole in this location. Route the horn button wires to the hole, then slide push-button retaining nut over wires and connect wiring. Install the button into the hole and tighten the retaining nut from the backside.



Figure 14: Horn Button Installed in Dash



Figure 15: OE Upfitter Switches

NOTE: FOR VEHICLES WITH OE/FACTORY UPFITTER SWITCHES:

If your vehicle is equipped with factory upfitter (i.e., auxiliary) switches, you may elect to use one of them for your Kleinn Air Horn kit. Consult your owner's manual, or dealership, for further instructions on what wire terminals/fuse block location to use and what programming may be required.



9.6 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.

9.7 Connect Air Compressor

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

9.8 Connect Air Horn Solenoid(s)

1. Route wiring, as desired, to the air horns and connect to the solenoid(s), per wiring diagram.
NOTE: Either air solenoid wire can be connected to power (PWR) or ground (GND); they are identical.

9.9 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 Train Horns

1. Allow the air compressor to run and shut-off automatically (i.e., air tank is full)
2. Verify all tubing and electrical wires are securely fastened to the vehicle, brackets, or kit parts. If necessary, use extra zip ties to hold tubing and wire in place.
3. Ensure all nearby persons have adequate hearing protection and provide courtesy warning to neighbors or others in vicinity.

WARNING: NEVER operate train horns with ears close to trumpets or in an enclosed space without [substantial hearing protection](#) (i.e., > Ear Plugs and Earmuffs) for all persons closer than 100 feet from vehicle. Never

operate train horns outdoors when persons are near vehicle without adequate hearing protection.

4. Briefly activate the horns by pressing the horn button for one (1) second. Repeat three (3) times with a short rest period between (i.e., 1-3 seconds).
5. Horns should sound as expected and be loud. [click to listen to example 230 Kit](#)
6. Horn sound/loudness will taper quickly as the air tank pressure decreases.
7. Allow the air compressor to refill the tank, if needed, and activate the horns for three (3) second period to ensure the horns are functioning properly.

10.4 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

END OF SECTION



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.).

11.2 Horn Operation

1. Allow the air compressor to run until it shuts off automatically, (i.e., air tank is full) or for at least one minute between horn activations.
2. Press the horn button to activate the horns
3. Horn sound/loudness will taper quickly as the air tank pressure decreases.
4. Horns should sound for 3-7 seconds depending on kit and tank size.

WARNING: NEVER operate train horns with ears near trumpets or in an enclosed space without hearing protection (i.e., > Ear Plugs/Muffs) for all persons closer than 100 feet from vehicle. Never operate train horns outdoors when persons are near vehicle without hearing protection.

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).

NOTE: NEVER lubricate or add liquids to the compressor.

END OF SECTION