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# RAM19-OBA

## Install Guide

Revision: B

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## 1. Application Chart

This kit is a direct bolt-on aftermarket product. The vehicles listed in the below table are considered to be compatible with this aftermarket kit. Every effort has been made to verify fitment on these vehicles in their factory condition.

*NOTE: Before unpacking your kit, review this manual in full & verify the correct space & mounting locations exist with your trim package.*

### 1.1. List of compatible vehicles

Year	Make	Model	Drivetrain	Engine	Cab	Bed	Trim
2019-2024	RAM	1500	8-Speed Auto 850RE	3.6L V6 24V VVT eTorque Engine with Start/Stop	Crew Cab 5'7"	N/A	Tradesman Tradesman HFE Big Horn Laramie Limited Longhorn Limited
				5.7L V8 HEMI MDS VVT			
			8-Speed Auto 8HP75	5.7L V8 HEMI MDS VVT eTorque Engine with Start/Stop	Crew Cab 6'4"		
				3.0L V6 Turbo Diesel Engine Gen4			

*NOTE: Drilling holes may be required for installing ground wires and switches based on installers preference.*

### 1.2. Incompatible Vehicle Features & Trim Packages

This kit is **NOT COMPATIBLE** with the following vehicle features / trim packages:

- N/A

### 1.3. Aftermarket Product Compatibility

*This kit has been designed to be compatible with the following products from leading manufacturers:*

- N/A

*This kit is not compatible with the following aftermarket products:*

- N/A

## 2. Before You Start

Read this manual in its entirety before starting installation. Verify you have all the parts listed & that you clearly understand the installation procedure. Contact KLEINN Technical Support with any questions you may have.

Installation of this kit requires moderate mechanical aptitude.

Use the proper tools, supplementary lighting, and safety equipment when installing this kit.

## 3. Installation Overview

### 3.1. Kit Layout & Location

Item No.	Description	Mounting Location	Approx. Install Time
1	6450RC Air Compressor	Attached to & In-front of crossmember	1 Hour
2	6355RT Air Tank	Attached to & In-front of crossmember	1 Hour
3	1302 Relocation Kit	To be determined by Installer/Customer	1 Hour

Note: Wiring time is not factored into the overall install of this kit.

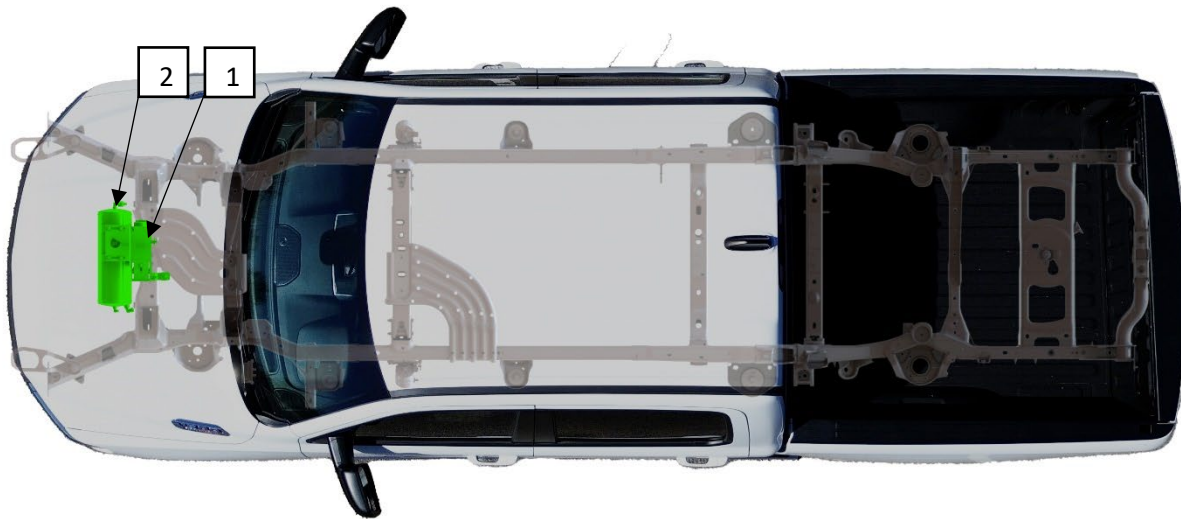


Figure 1- Kit Layout

## **4. List of Tools & Supplies**

### **4.1. Required Tools**

- Mechanic's 1/4" & 3/8" Drive & Socket Set – Imperial & Metric
- Combination wrenches – Imperial & Metric
- Hex wrenches – Imperial & Metric
- Screwdriver Set – #1, #2
- Wire Cutters
- Wire Strippers
- Wire Crimpers
- Utility Knife or Equivalent
- Magnetic Retrieval Tools (Flexible)

### **4.2. Specialty Tools**

- 1/4" & 3/8" Universal Joints
- 1/4" & 3/8" Extensions
- Multimeter, Test Light, or Equivalent
- Heat Gun
- Trim Panel Removal Tools
- Drill Driver & Bits
- Impact Driver & Bits

### **4.3. Consumables**






- Quality Electrical Tape
- Medium Strength Thread Locker
- Sandpaper, Wire Brushes or Equivalent
- Extra Zip Ties
- Touch-up Paint
- PTFE Thread Sealing Tape

## 5. Parts List





Unpackage & organize the kit contents and verify all parts listed below are included. Contact KLEINN Support if any questions arise.



### 5.1. Primary Kit Components

*NOTE: Items in this section may come in their own packages which may include additional items, hardware, or documentation.*



Item No.	Qty	Part No.	Description	Picture
1.	1	6450RC	150 PSI Waterproof Air Compressor Kit	
2.	1	6355RT	2.6 Gal. Air Tank, 9-Port	
3.	1	1302	Quick Disconnect Air Relocation Kit	
4.	1	INF-1	Tire Inflator Kit	
5.	1	59830	Digital Tire Inflator w/ Pressure Release	

### 5.2. Fittings & Related Items

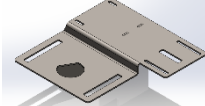
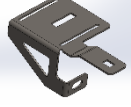

Item No.	Qty	Part No.	Description	Picture
F1.	2	51414NPTL	¼" NPT Male to ¼" NPT Female, Elbow	
F2.	1	50050	½" NPT Hex Plug	
F3.	1	52175	175 PSI Pop-Off Safety Valve	
F4.	1	2151	Pressure Switch, 110 PSI On – 145 PSI Off	

F5.	1	52835	¼" NPT Male Drain Plug	
F6.	2	JUICE	KLEINN Liquid Thread Sealant	

### 5.3. Electrical Components & Related Items








Item No.	Qty	Part No.	Description	Picture
N/A	1	6858	Wire kit w/ FT4-10 Fuse Tap	
N/A	10'	SLT14	¼" Loom Pack	
N/A	10'	SLT38	3/8" Loom Pack	
N/A	10'	SLT12	½" Loom Pack	

### 5.4. Mounting Brackets

Item No.	Qty	Part No.	Description	Picture
N/A	1	RAM19-10	Tank / Compressor Bracket	
N/A	1	RAM19-11	Compressor Support Bracket	
N/A	1	RAM19-12	Cutaway Washer	

## 5.5. Hardware & Related Items

Print out the hardware sheets at the end of this section at 100% Scale to facilitate hardware identification.

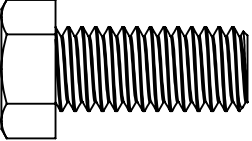
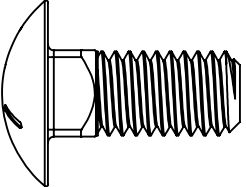
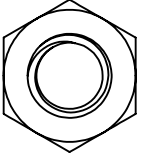
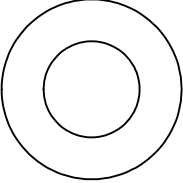
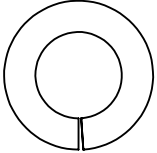
Item No.	Qty	Hardware Size	Description	Picture
H1.	6	7/16-14	Hex Bolt, 1" Long	
H2.	2		Square Neck Carriage Bolt, 1" Long	
H3.	7		Hex Nut	
H4.	1*		Nylon Lock Nut	
H5.	7	7/16	SAE Washer	
H6.	7		Split-Lock Washer	
H7.	4*	0.25" Height	GMTRK4-103, Spacer	

\*Not Illustrated on the Scale Sheets



2

1

Item No.	Scale Image	Qty.
H1		6
H2		2
H3		7
H4	Not Shown	1
H5		7
H6		7
H7	Not Shown	4

B

B

A

A

RAM19-OBA  
 Sheet Scale 1:1  
 Print at 100% scale for accuracy



2

1

## 6. Bench Assembly

### 6.1. Install Tank Fittings onto Air Tank

Use the below figures to install the tank fittings onto the air tank.

- 1) Use Kleinn Juice (F7) on the male threads to provide an airtight seal.
- 2) Tighten the threads by hand, then further tighten  $\frac{1}{4}$  turn –  $\frac{1}{2}$  turn or further to match the correct fitting orientation where applicable.

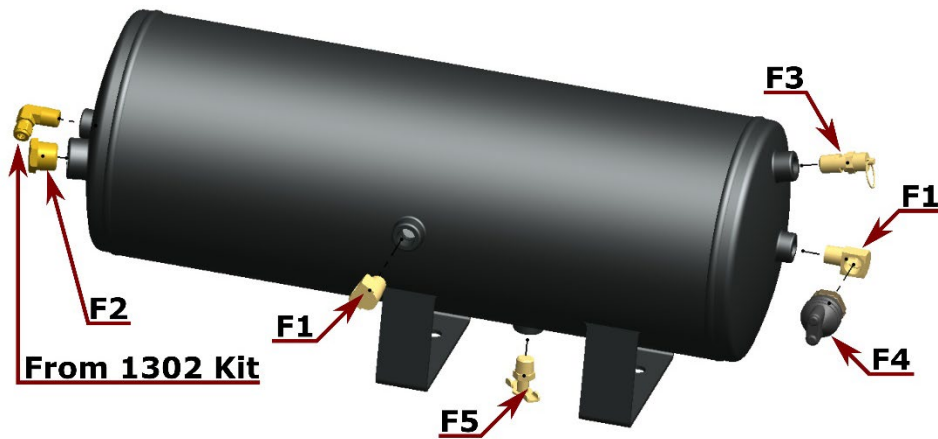


Figure 2- Air Tank Fitting Locations

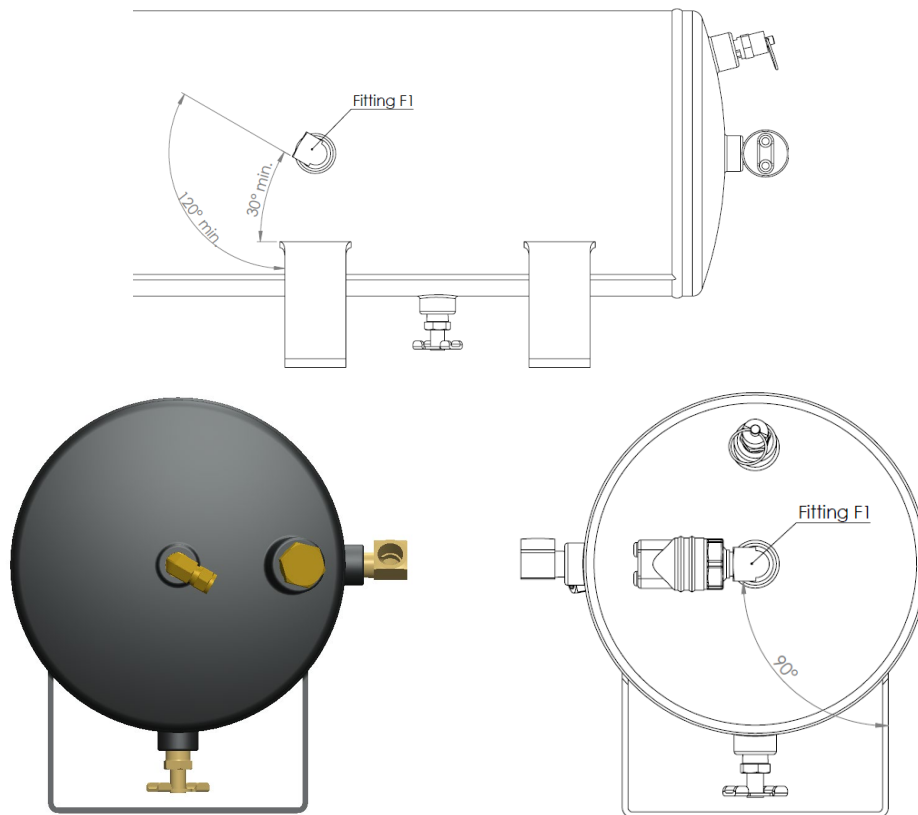


Figure 3- Fitting Orientation

**6.2. On-Board Air System**

The included on-board air system uses components from each package to make up the complete system. Follow the below instructions to assemble the system correctly.

*NOTE: Use the included Juice (liquid thread sealant) for all male NPT threads.*

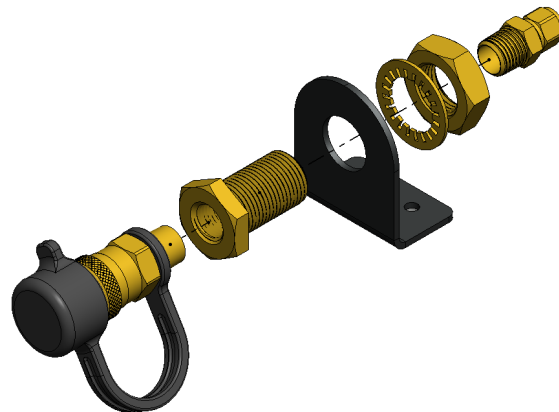


Figure 4- 1302 & INF-1 Assembly

- Tighten the threads by hand, then further tighten ¼ turn – ½ turn.

## 7. On-Vehicle Assembly

### 7.1. Install Compressor Support Bracket

The compressor support bracket is installed behind the front bumper &, directly in-front & on top of the crossmember there. Reference the below figure.

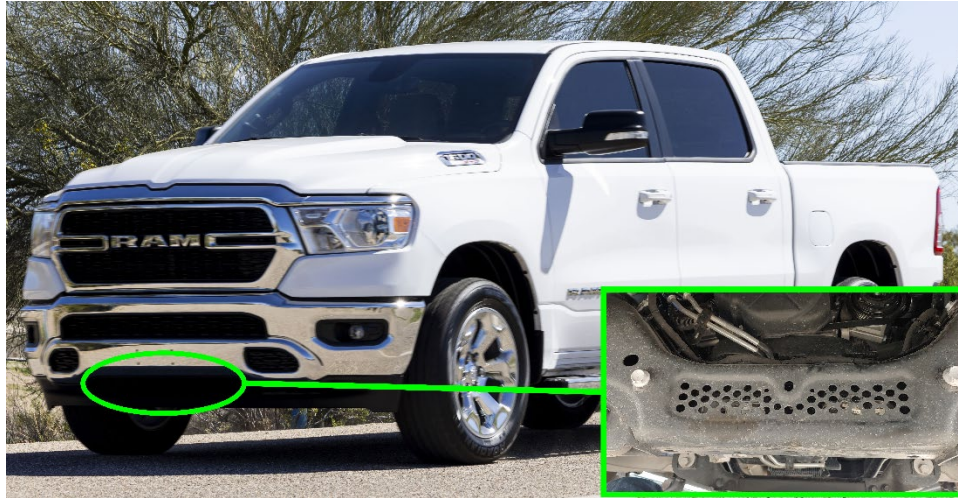


Figure 5- Compressor Support Bracket Location

- 1) Using one (1) of hardware H2, place the compressor support bracket onto the crossmember and place the bolt onto the bracket tab.
  - a. H2 can be placed onto the bracket by inserting it from the rear of the crossmember.
  - b. Seat the bolt directly on the bracket & avoid damaging the hard lines that run adjacent to the crossmember. The head of the bolt will fit underneath the hardlines.
  - c. The front lower bracket slot should align with the crossmember hole noted below.

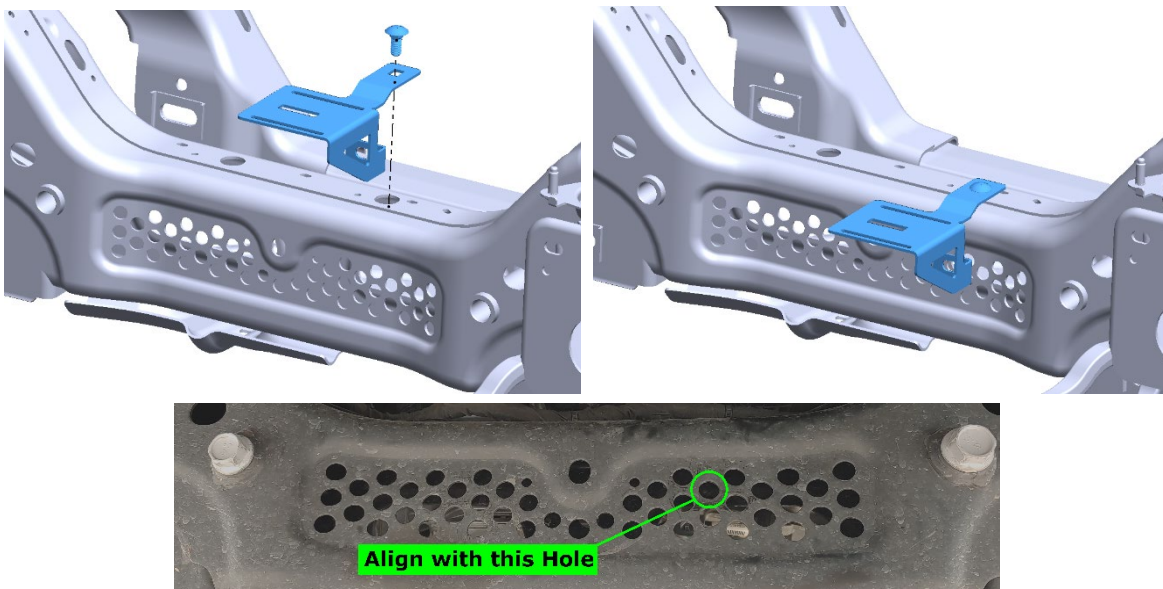


Figure 6- Compressor Support Bracket Installation 1



- 2) Using a flexible magnetic pickup tool, Insert the Cutaway Washer onto the carriage bolt from inside the crossmember. Reference the below figure.

*NOTE: Orient the cutout on the washer towards the driver side & vehicle back to avoid the barbs of the plastic retaining clip.*

- 3) Use hardware H4 to retain the washer in place. **Hand tighten** the nylon lock nut at this time.

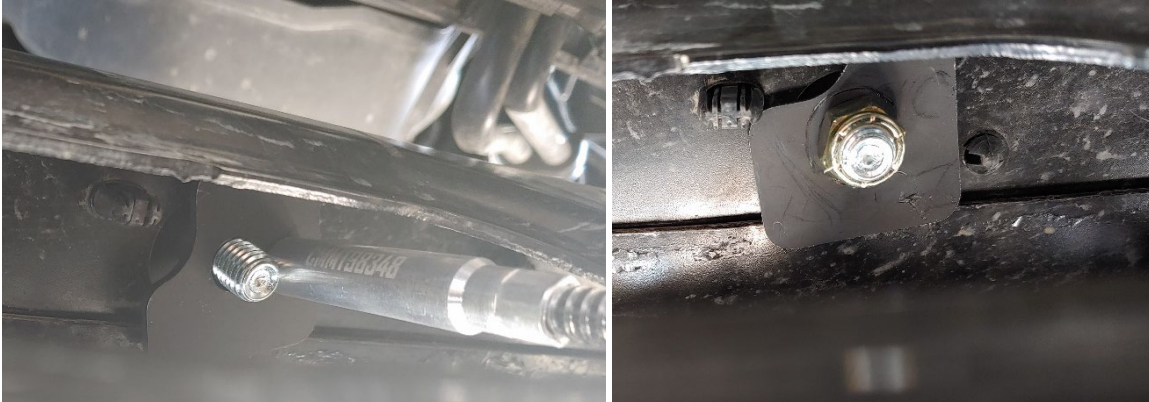


Figure 7- Cutaway Washer Installation

- 4) Insert one (1) H1 bolt from inside the crossmember and through the front hole (identified earlier) and through the lower slot on the bracket.
- 5) Fully tighten the bolt with one each of H5, H6, & H3. Reference the below figure.

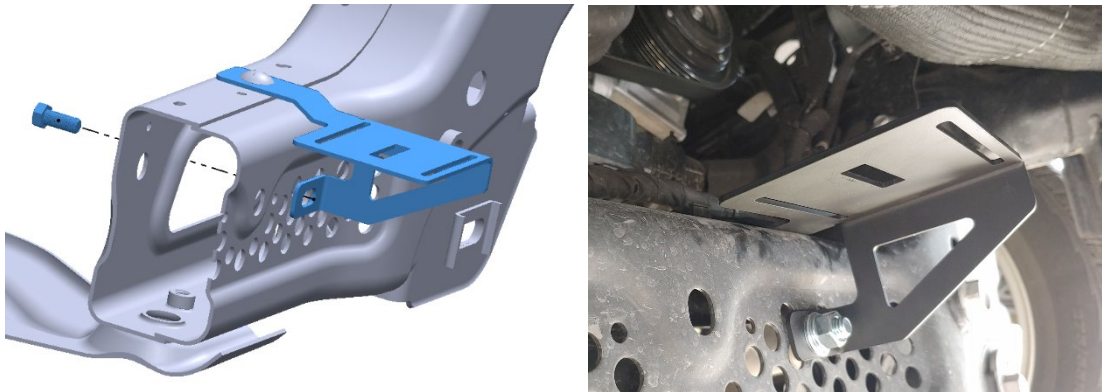


Figure 8- Compressor Support Bracket Installation 2

- 6) Fully tighten the Nylon Lock Nut (installed in Step 3) to fully secure the bracket in place.

## 7.2. Install Tank / Compressor & Bracket

The Tank/Compressor Bracket gets placed on top of the previously installed bracket. It gets mounted to the front of the crossmember in a similar fashion & bolts directly onto the support bracket.

- 1) Set the Tank/Compressor Bracket on top of the support bracket and align the square slots of both brackets.
- 2) Set the remaining H2 bolt into the slot, and loosely attach both brackets together using **one of each hardware** H5, H6 & H3 as shown below.

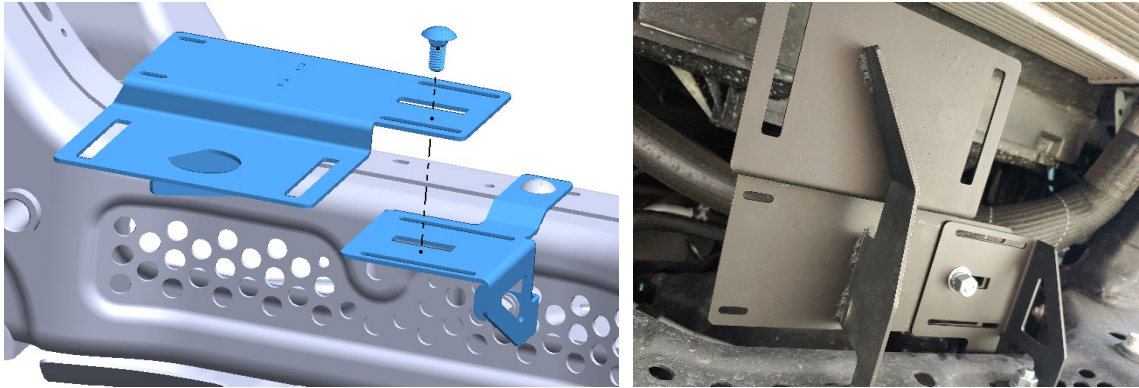


Figure 9- Tank / Compressor Bracket Installation 1

- 3) Insert one (1) H1 bolt from inside the crossmember and through the front hole (identified below) and through the lower slot on the bracket.

*NOTE: Slide the bracket sideways (as needed) to align the lower slot onto the correct crossmember hole (See Below).*

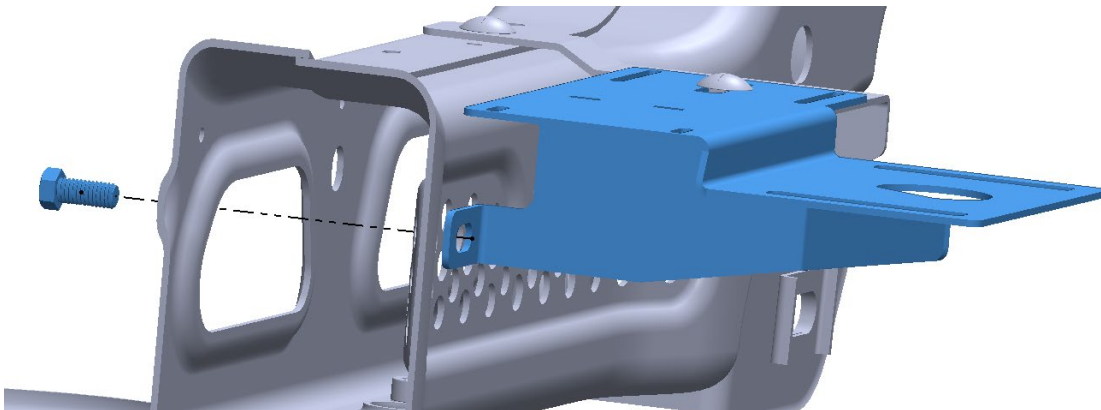
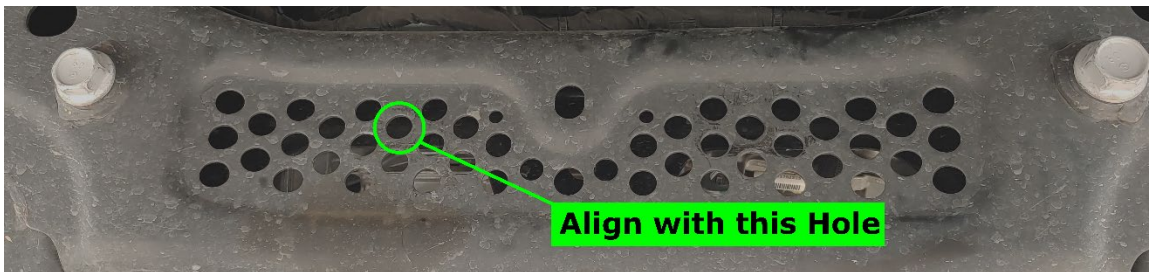


Figure 10- Tank / Compressor Bracket Installation 2

- 4) Secure the bolt with one of each hardware H5, H6, & H3, but DO NOT fully tighten the hardware at this time. Reference the below figure.



Figure 11- Tank / Compressor Bracket Installation 3

- 5) Install compressor air filter onto the compressor head, or use the directions (included in compressor box) to install & route the air snorkel kit.
- 6) Place the compressor onto the upper bracket shelf (compressor head towards passenger side OR driver side if hoses are interfering with the compressor head) and secure in place using the hardware included with the compressor.

**NOTE:** DO NOT overtighten the compressor hardware or the rubber bushings will be damaged.

- 7) Adjust the brackets as needed for good fitment of the compressor, then fully tighten all bracket hardware.



Figure 12- Compressor Installation



- 8) Place the air tank onto the lower bracket shelf (pressure switch on the passenger side).
- 9) Use four (4) of each hardware H1, H11, H5, H6 & H3 to secure the tank onto the bracket.

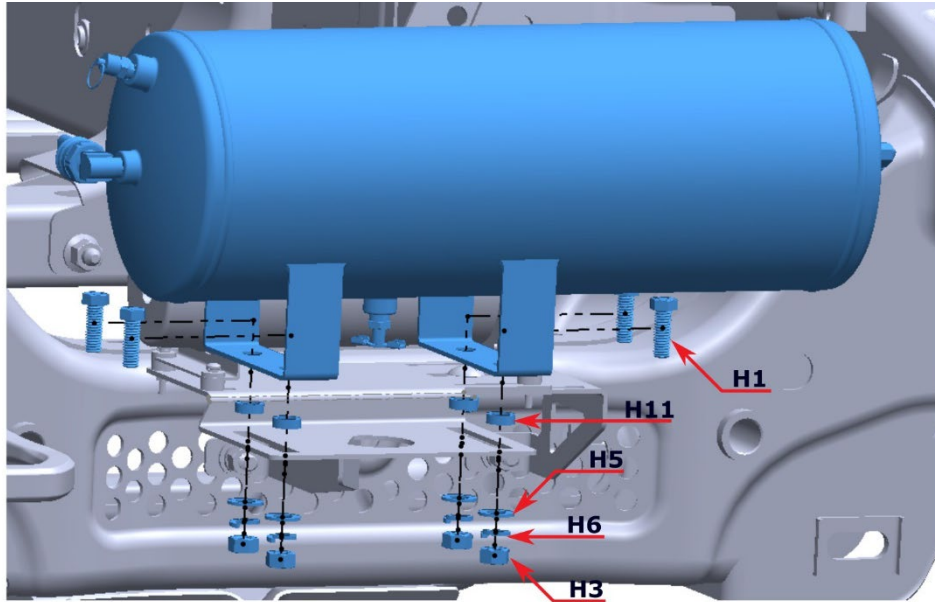


Figure 13- Tank Installation

- 10) Route the compressor leader hose behind the F1 fitting (in-between the compressor & tank) and form a loop to thread it (using JUICE) into the fitting. Ref. the below figures.



Figure 14- Tank / Compressor Plumbing

- 11) Hand tighten the leader hose end, then further tighten  $\frac{1}{4}$  -  $\frac{1}{2}$  turn.



## 7.3. Plumbing

- 1) Route the air tubing to all the fittings as desired. The below figure illustrates a routing path for the air system, but you may deviate & route your air tubing as you see fit.

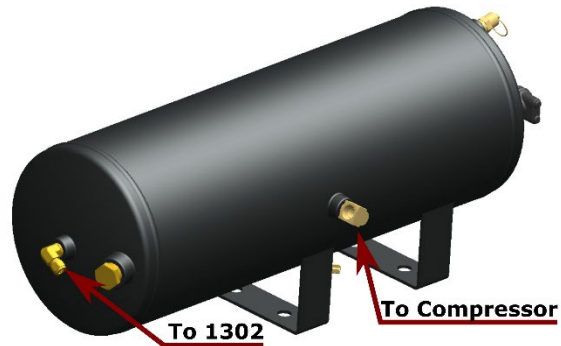


Figure 15- Plumbing, Recommended Routing & Fitting Identification

- 2) Use the 1/4" air tubing from the 1302 kit & install it onto the air tank 1/4" compression elbow.
- 3) Route the tubing & mount the 1302 Relocation Kit as desired.

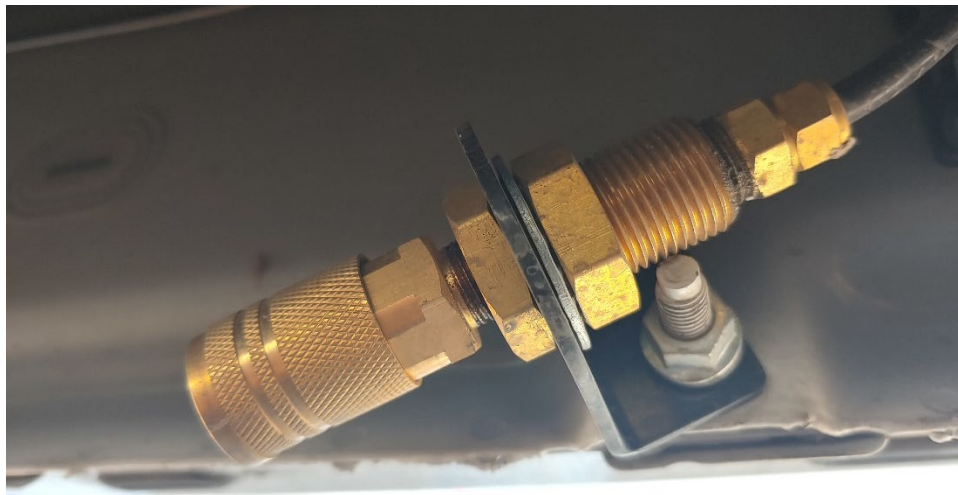


Figure 16- Example, 1302 Installed

## 8. On-Vehicle Electrical Installation

It is recommended to disconnect the vehicle battery prior to performing any electrical work.

It is recommended to use the included loom for all wiring applications.

### 8.1. Attach Relay & Fuse to Vehicle

Locate a suitable location under the hood and install the fuse housing & relay.

- For the Fuse: Select an area close to the POS (+) battery terminal
- The fuse housing can be attached to the vehicle body panel using the supplied screws
- The relay can be attached to the vehicle body using the supplied self-tapping screws

### 8.2. Route Wiring & Make Connections

Route wiring as desired and make the appropriate connections (REF. the below figures). Use the included wiring loom and crimp connectors as desired.

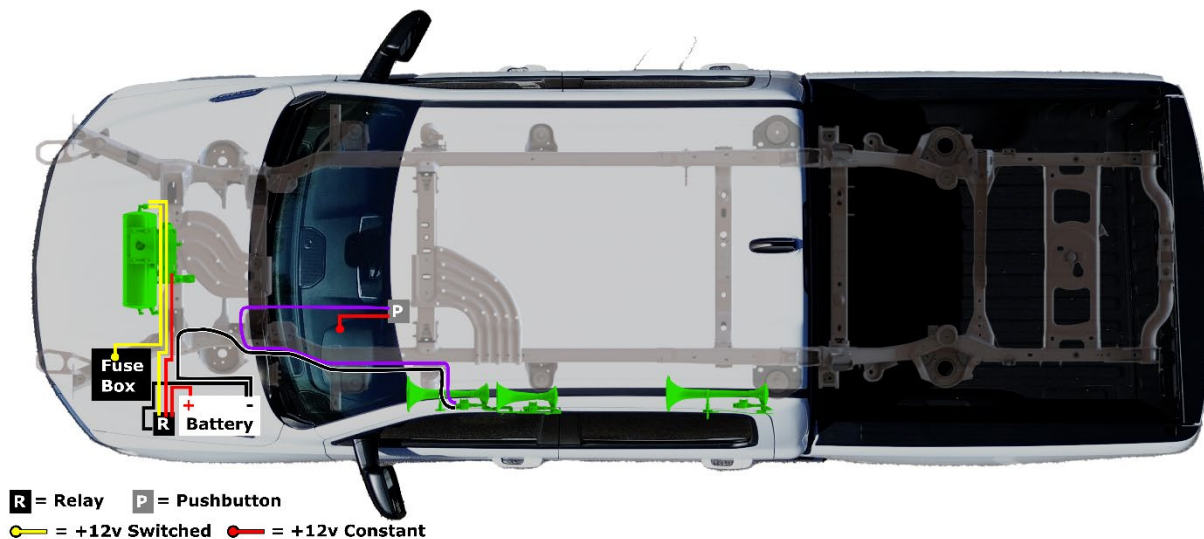


Figure 17- Electrical, Recommended Routing

--Continue to the following page for a connection diagram--

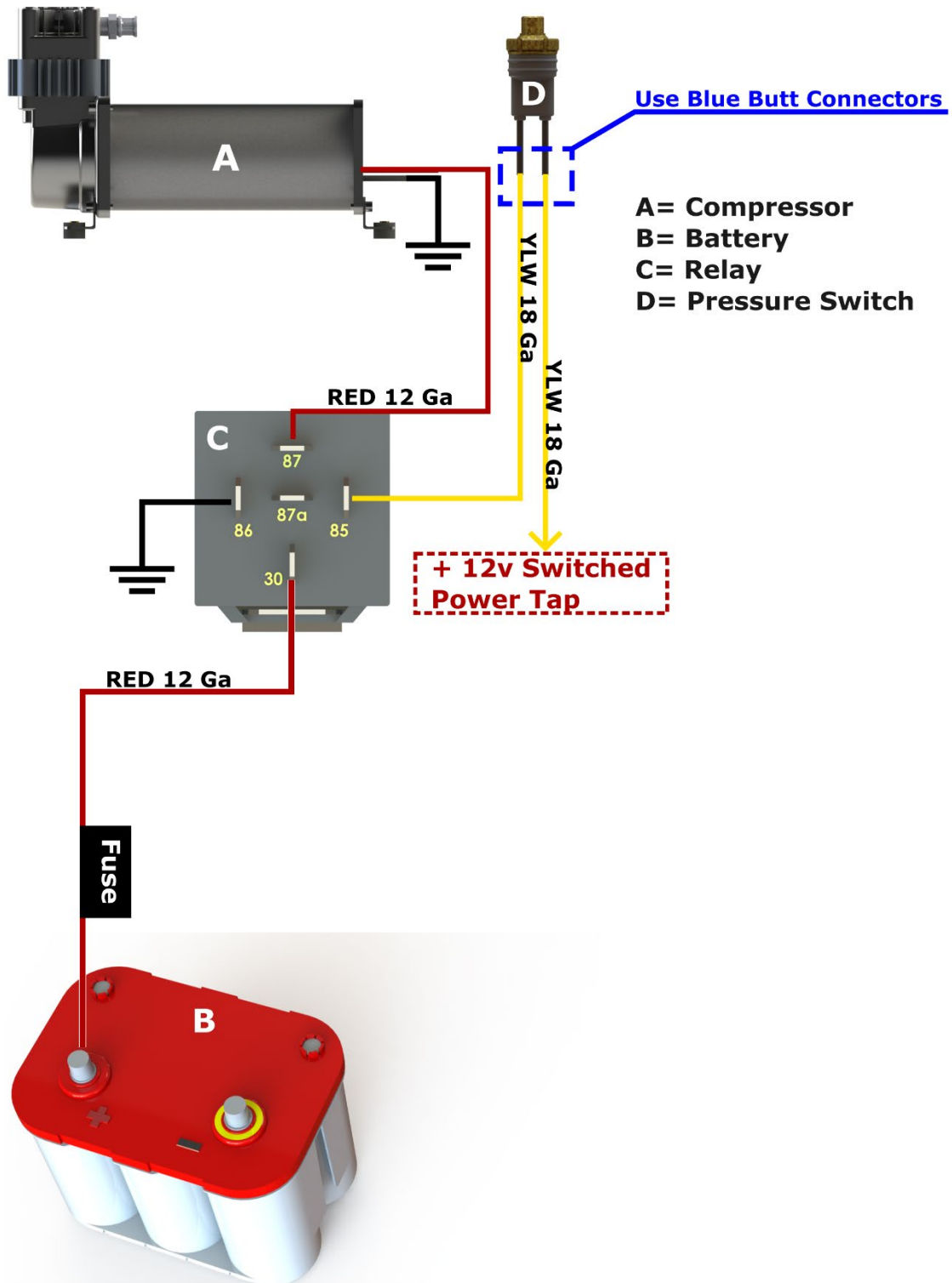


Figure 18- Wiring Diagram

## 9. Testing the Air System

It is recommended to check your wiring for shorts & continuity & double checking your connections prior to reconnecting the battery.

It is recommended to check the drain valve on the tank and ensure it is fully closed.

### 9.1. Air Compressor Test

1. Start the vehicle & allow the air compressor to run and fill up the tank.

*NOTE: The compressor should turn off after tank reaches  $\approx$  150 PSI. This should take between 2-5 minutes. If the compressor runs excessively, a leak may be present in the system.*

2. Allow the tank to drain via, the horns (if installed), the Inflator kit, or the tanks drain valve.
3. Wait for the compressor to start up again to replenish the air supply.
4. Wait for the compressor to turn off when tank is fully pressurized.

### 9.2. Quick Connect Coupler Test

The quick connect coupler can be used to run the included INF-1 tire inflator kit or certain air tools.

1. If needed, allow the air compressor to refill the air tank.
2. Attach the INF-1 inflator kit and inflate tires
3. Optionally, an air blow gun/nozzle or an air nailer can be used to test the quick connect coupling.

## 10. Maintenance

**!!WARNING!!** Operating the air compressor above its maximum pressure rating may damage the internal components and/or cause unsafe system conditions. It is recommended not to exceed 150 PSI pressure in the system.!!

This air compressor is equipped with automatic thermal overload protection. If thermal overload is triggered, the safety circuit will reset after 30 minutes.

This air compressor is oil-less, never lubricate or add liquids to this compressor.

### **Monthly or every 10 Hours of Compressor Use:**

- Drain the moisture from the air tank via the tank's drain valve.

### **Yearly or 12,000 Miles**

- Replace the compressor's air filter element. – Replacement frequency depends on operating & environmental conditions.
- Remove road grime or mud from components & brackets.
- Inspect all mounting fasteners to ensure they remain secure. Tighten as needed.
- Inspect electrical connections & loom for damage. Repair/Replace as needed.

## 11. Warranty Information

Thank you for purchasing this Air System. If you experience any unexpected problems during installation, or part failure at any time, please contact KLEINN Support.

**KLEINN MANUFACTURER LIMITED DEFECT WARRANTY:**

Kleinn Automotive Accessories 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.

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# Install Guide

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## Record of Revisions

Revision	Description	Date	Approval
A	Initial Revision	7/22/2024	AG
B	Added Scale Hardware Sheet Populated Item No.'s in Section 5.3 & 5.4	9/6/2024	AG