



RPTR-OBA

Install Guide

Revision: A



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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	Trim
2017-2020	Ford	Raptor	4WD	3.5L EcoBoost	SuperCrew	All
2021 - Present	Ford	Raptor	4WD	3.5L Twin Turbo V6	SuperCrew	All
		Raptor R		5.2L Twin Turbo V8		

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 may not be compatible with the following vehicle features / trim packages:

- All OEM chassis cab frames with service boxes or flat beds, as purchased from dealerships.

1.3. Aftermarket Product Compatibility

This kit is compatible with the following products from leading manufacturers:

- Amp Research Power Steps

This kit is not compatible with the following 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	Outer passenger side frame rail, in between front & rear door	2 Hour
2	6353RT Air Tank	Outer passenger side frame rail, below rear door	2 Hour
3	N/A	Item Removed	N/A
*4	1302 Relocation Kit	To be determined by Installer/Customer	Approx. 1 hour

*Item not illustrated

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

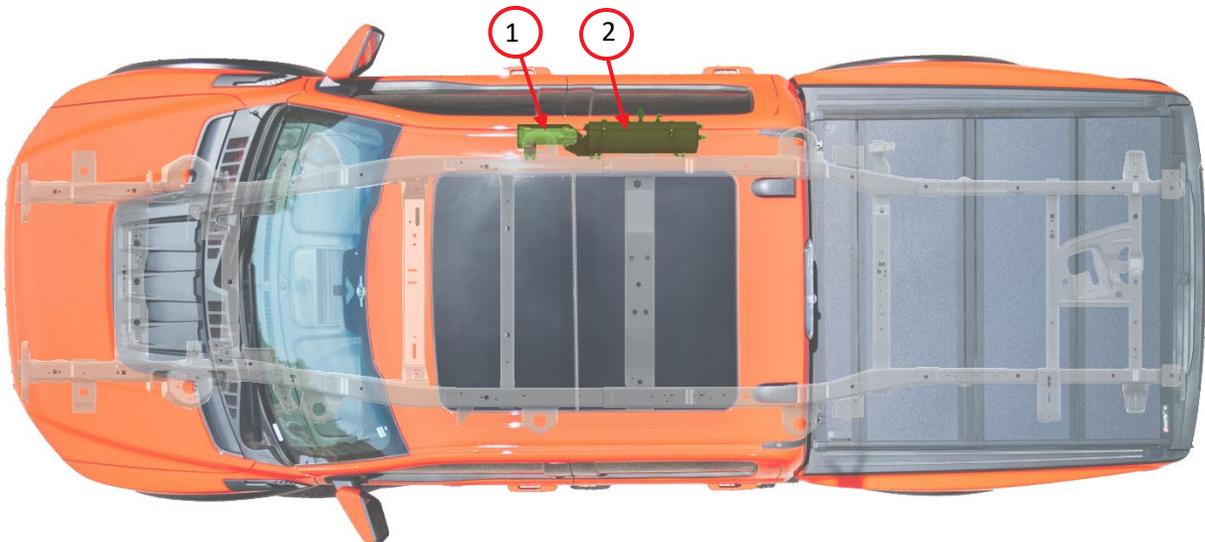


Figure 1- Overview of Component Locations

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

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

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	6353RT	2.6 Gal. Air Tank, 9-Port	
3	N/A	N/A	Item Removed	N/A
4	1	1302	Quick Disconnect Air Relocation Kit	
5	1	INF-1	Tire Inflator Kit	

5.2. Fittings & Related Items

Item No.	Qty	Part No.	Description	Picture
6	1	52835	Drain Valve, 1/4" NPT	
7	1	52175	175 PSI Safety Valve, 1/4" NPT	
8	4	50040	Hex Plug, 1/4" NPT	
9	N/A	N/A	Item Removed	N/A

10	1	2151	Pressure Switch 110 PSI On – 145 PSI Off ¼" NPT	
11	10 ft	25014	¼" Air Tubing	
12	2	Juice	Liquid Thread Sealant	

5.3. Electrical Components & Related Items

Item No.	Qty	Part No.	Description	Picture
N/A		320	Momentary Switch, NO	
N/A		6852	Wire Kit	
N/A		N/A	¼" Split Loom Pack	
N/A		N/A	1/8" Split Loom Pack	

5.4. Mounting Brackets

Item No.	Qty	Part No.	Description	Picture
N/A	1	RAPTOR-110	Compressor Bracket	
N/A	2	RAPTOR-202	Tank Strap	
N/A	2	RAPTOR-203	Nut Plate	
N/A	1	RAPTOR-210	Rear Tank Bracket	
N/A	1	RAPTOR-211	Front Tank Bracket	

5.5. Hardware & Related Items

Item No.	Qty	Hardware Size	Description	Picture
H1.	4	¼"-20, 1" Long	Socket Head Cap Screw	
H2.	2	¼"-20, .75" Long	Phillips Pan Head Screw	
H3.	4	5/16"-18, 1" Long	Hex Bolt	
H4.	2	5/16"-18, .75" Long	Carriage Bolt (knurled)	
H5.	N/A	N/A	Item Removed	N/A
H6.	N/A	N/A	Item Removed	N/A
H7.	4	¼"	Lock Washer	
H8.	6	5/16"	Lock Washer	
H9.	4	¼", .63" OD	Flat Washer	
H10.	6	5/16", .69" OD	Flat Washer	
H11.	2	5/16", .88" OD	Flat Washer	
H12.	N/A	N/A	Item Removed	N/A
H13.	2	5/16"-18	Hex Nut	
H14.	N/A	N/A	Item Removed	N/A
H15.	N/A	N/A	Item Removed	N/A
H16.	N/A	N/A	Item Removed	N/A
H17.	N/A	N/A	Item Removed	N/A
H18.	*	M5	Compressor Mounting Hardware Assorted	
H19.	2	N/A	Rubber Trim (wide "C") – 9" Strip	
H20.	2	N/A	Rubber Trim (narrow "U") – 9" Strip	

*Included within compressor box

6. Bench Assembly

Complete the following steps off-vehicle to facilitate final installation

6.1. Air Fittings

Gather the air fittings to be installed on the following components & install per the below figures:

- Air Tank
- 1302 Quick Connect Bracket
- Inf-1 Inflator Kit

NOTE: Apply liquid thread sealant to all male NPT threads before installation to minimize the potential for leaks in the air system.

NOTE: Hand tighten each fitting then further tighten $\frac{1}{4}$ to $\frac{1}{2}$ turn (or more as needed) to match fitting orientation.

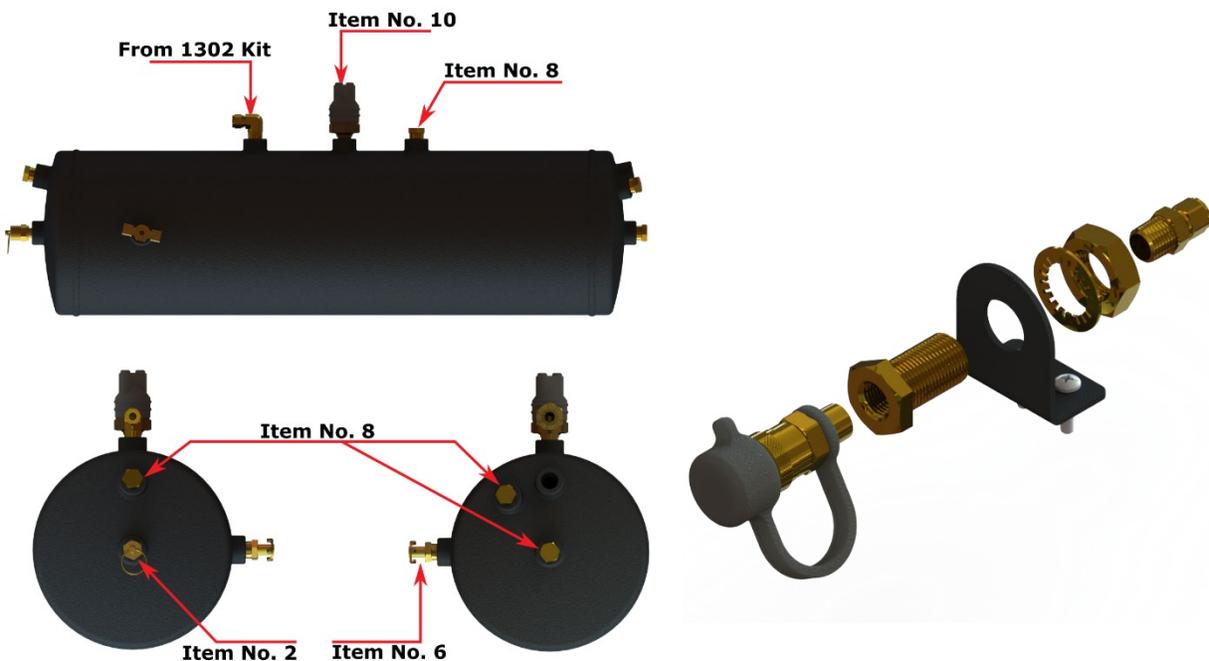


Figure 2- Air Tank Fittings & 1302 Quick Connect Kit

Assemble the INF-1 kit using the fittings included in the bag

6.2. Tank Brackets

- 1) Trim the rubber strips to fit (as needed) and install onto the RAPTOR-202, -210, & -211 brackets as shown below.

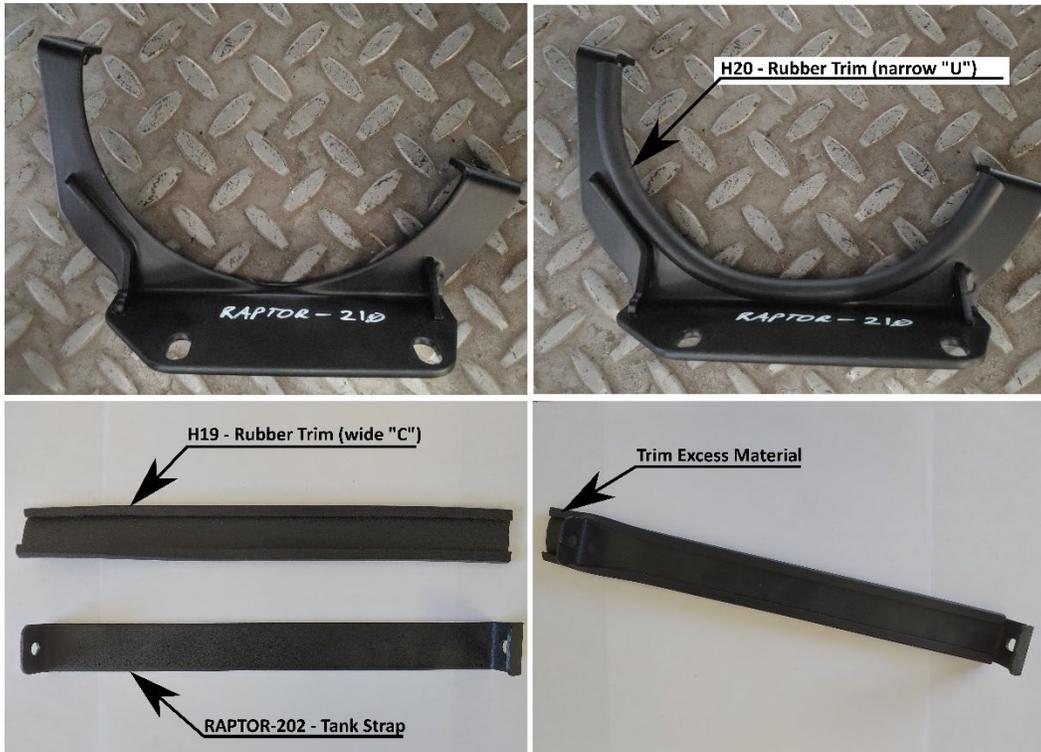


Figure 3- Rubber Trim Installation (-211 bracket not shown)

- 2) Take hardware H1, H7, & H9 and insert into the hole (**NOT SLOT**) of the tank straps in the stacking order shown below

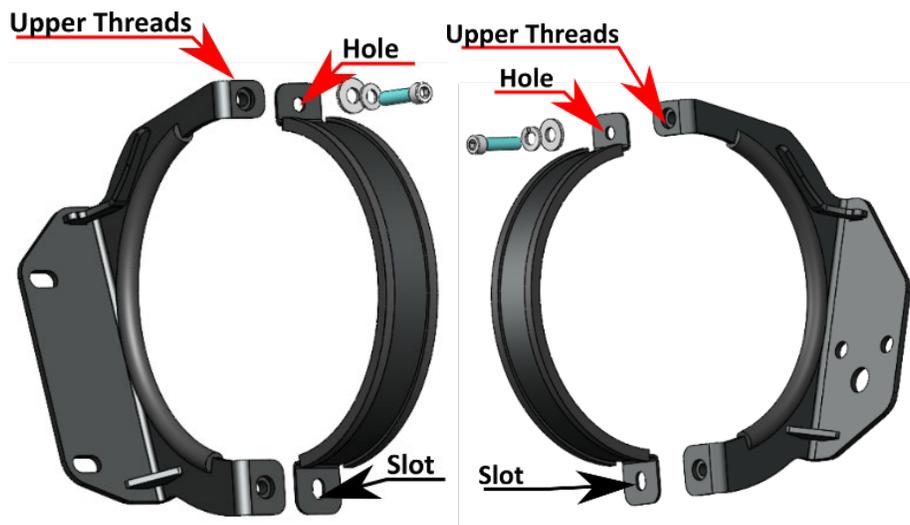


Figure 4- RAPTOR-210 (left) & -211 (right)

7. On-Vehicle Assembly

7.1. Nut Plates Installation

- 1) Thread H2 into RAPTOR-203 approx. halfway.
- 2) Thread one (1) H3 hex bolt into either threaded hole as shown below.

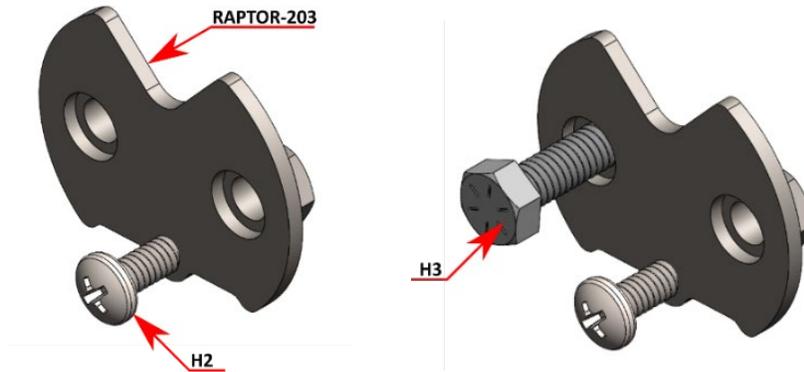


Figure 5- Nut Plate Prep. - Steps 1 & 2

- 3) Locate the two (2) oval holes on the passenger side frame rail between the front & rear doors.



Figure 6- Nut Plates (RAPTOR-203) Install Locations

- 4) Use the hex bolt as a handle and insert the Nut Plate (RAPTOR-203) into the oval hole & secure in place via the pan head screw (H2) as shown.

NOTE: The nut plate holes should be parallel to the floor and not obstructed by the hole edges.

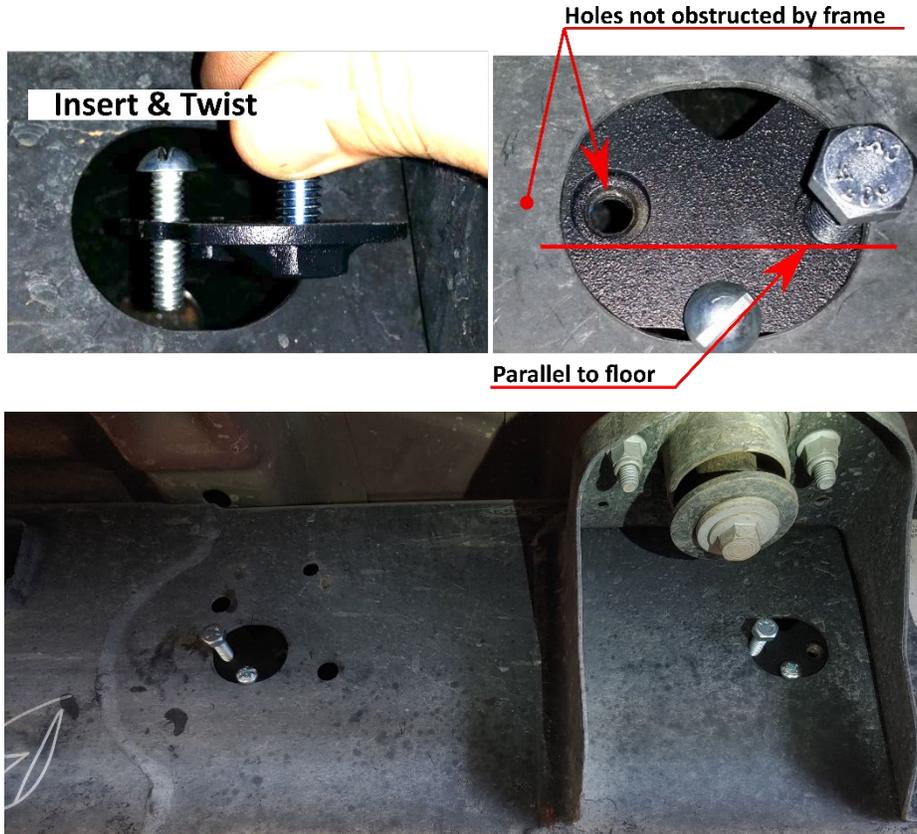
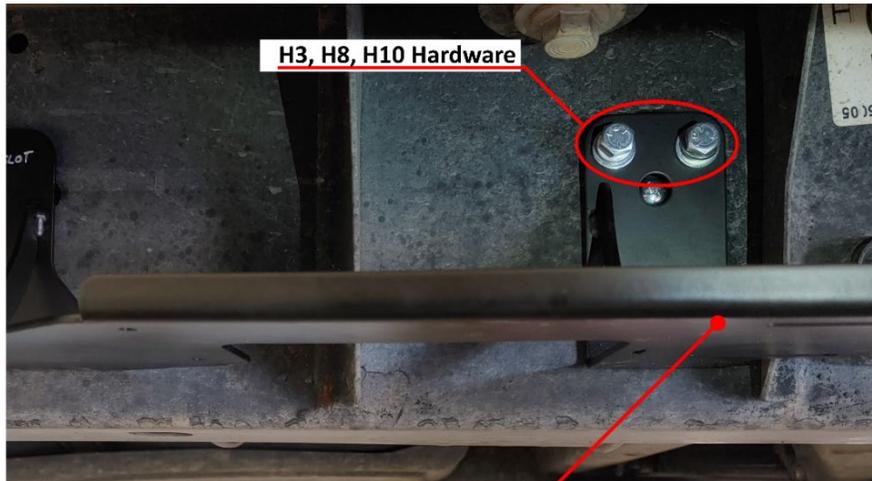


Figure 7- Nut Plates (RAPTOR-203) Installed

- 5) Remove the hex bolts (H3) from the nut plates to be reused in the following section.

7.2. Tank & Compressor Brackets Installation

- 1) Using the previously installed nut plates as the primary mounting points, place & install the compressor bracket (RAPTOR-110) onto the nut plates. Use hardware H3, H8 & H10 to secure the bracket onto the nut plates & torque to 75 – 88 in-lbs.



RAPTOR-110 Installed on foremost RAPTOR-203 bracket

Figure 8- Compressor Bracket, One Side Installed

- 2) On the rearmost mounting point (vehicle rear), layer the front tank bracket (RAPTOR-211) with the rear of the compressor bracket & fasten them together on the rearmost nut plate.

NOTE: The tank bracket can & should be placed over the compressor bracket unless clearance issues arise (shown below).



Figure 9- Compressor & Front Tank Bracket Installed

7.3. Rear Tank Bracket Installation

Use the stacking order (shown below) to install the Rear Tank Bracket (RAPTOR-210).

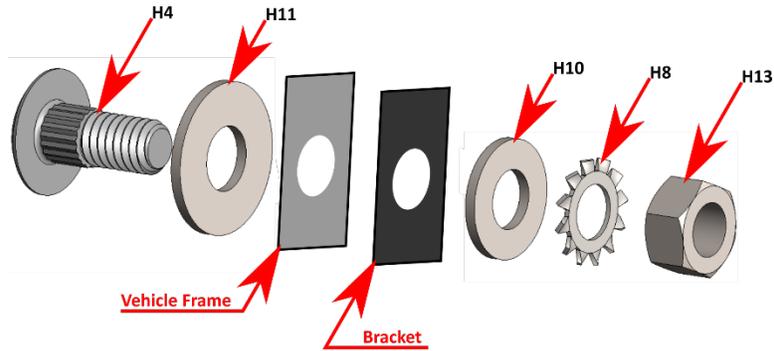


Figure 10- Hardware Stacking Order - RAPTOR-210

- 1) Locate the square and circle cutouts on the passenger side frame rail, below the rear door.

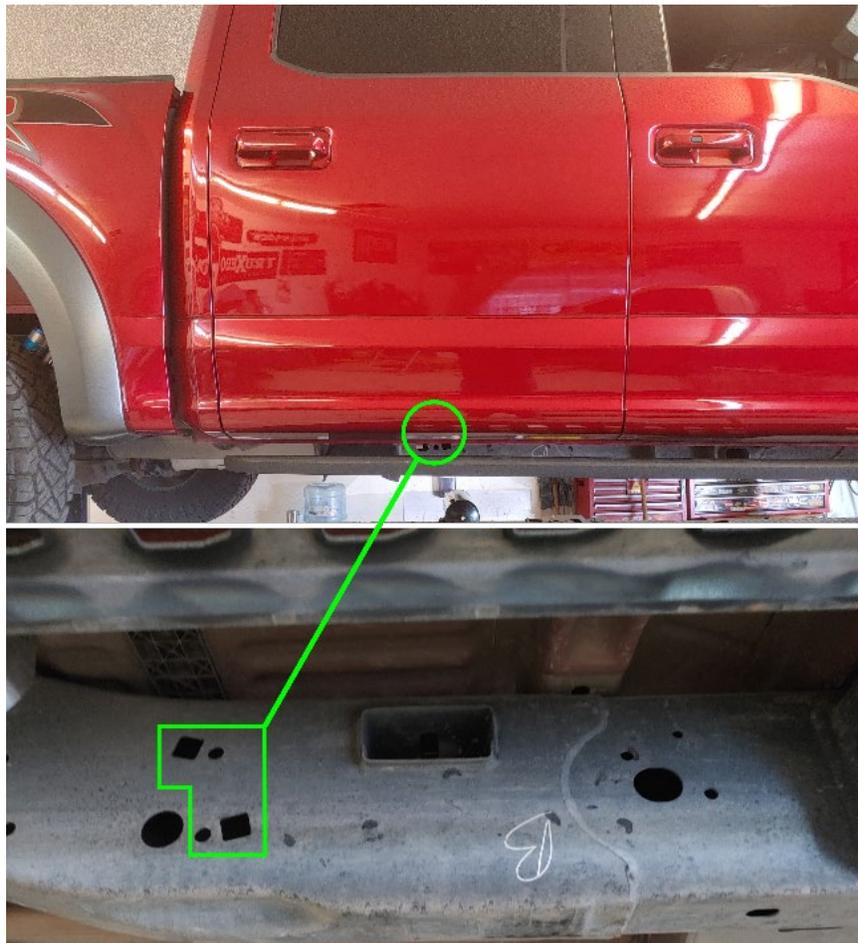


Figure 11- Install Location, RAPTOR-210

Hardware H4 & H11 are fastened from inside the frame rail as shown below.

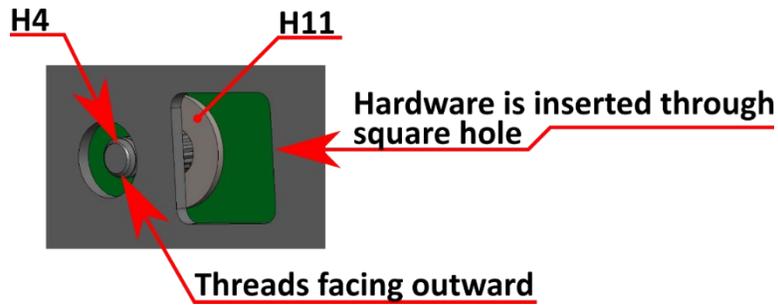


Figure 12- Hardware Inside the Frame

- 2) Insert H4 & H11 into the square holes & rest the bolt against the inside of the frame with threads directed out.
- 3) Place the rear tank bracket (RAPTOR-210), with the bent tabs towards the front of the vehicle, onto the protruding bolt and secure in place using H10, H8 & H13.

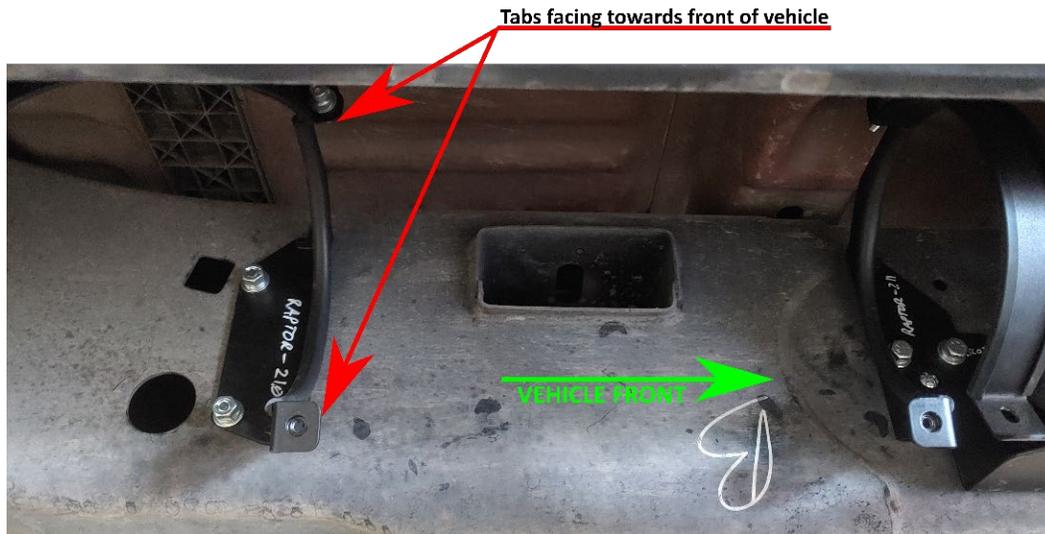


Figure 13- RAPTOR-210 Installed

- 4) Repeat this process for the second mounting location & torque the fasteners to 75-88 in-lbs.

7.4. Compressor Installation

- 1) Install the air filter onto the compressor
- 2) Set the compressor onto the compressor bracket, with the head of the compressor towards the rear of the vehicle.
- 3) Use the hardware included in the compressor box and secure it in place, **inserting the hardware from the underside of the bracket** & torque the hardware to 20 in-lbs.

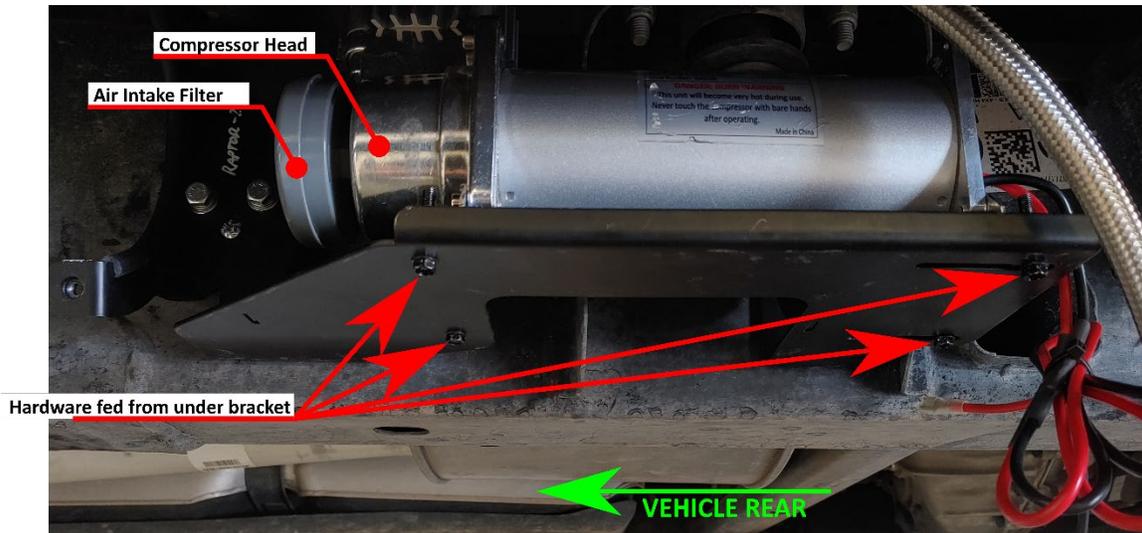


Figure 14- Compressor Installation

7.5. Tank Installation

Reference the below figure to ensure tank is placed onto brackets correctly.

Align the drain valve towards the ground & use hardware H1, H7 & H9 to secure the tank in place using the slotted holes on the tank straps.

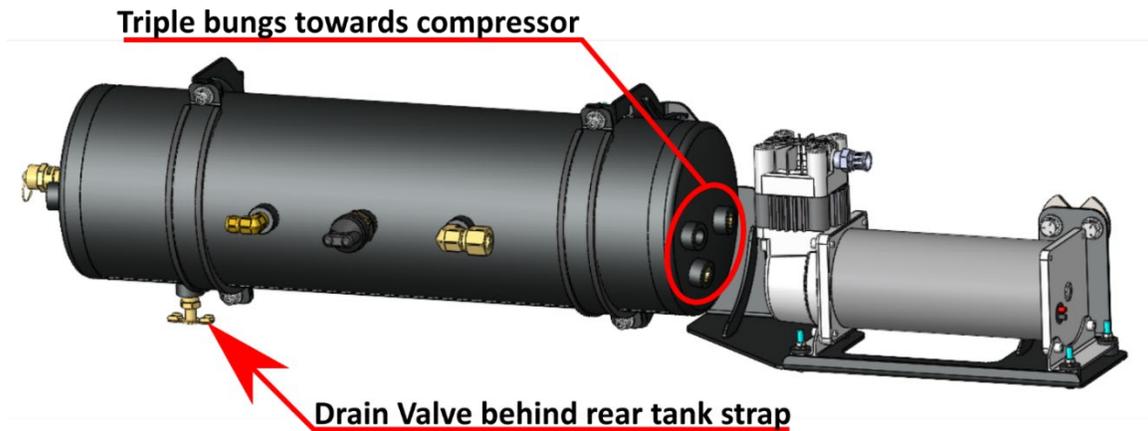


Figure 15- Air Tank Installation 1

Attach the compressor hose into the unused port on the tank using KLEINN Liquid thread sealant. Hand tighten the fitting & then turn ¼ turn more.

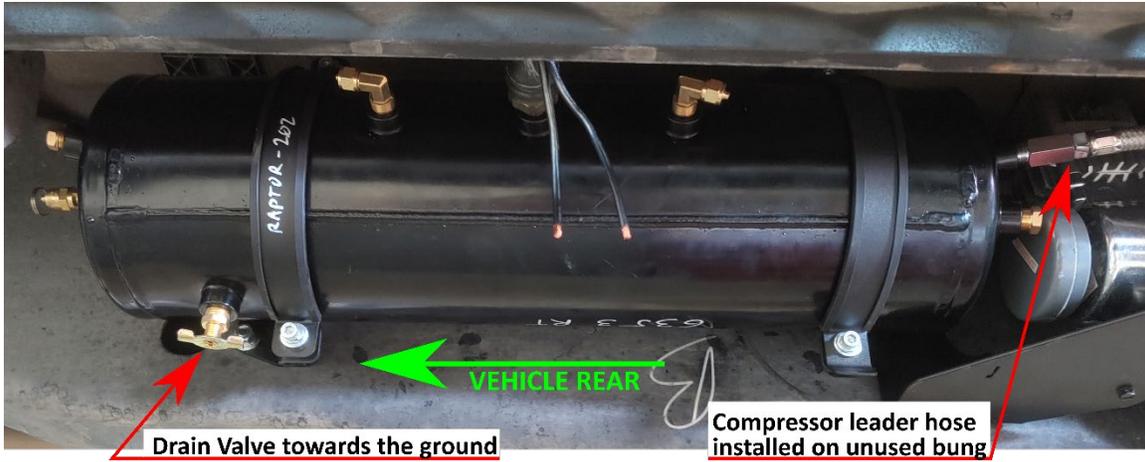


Figure 16- Air Tank Installation 2

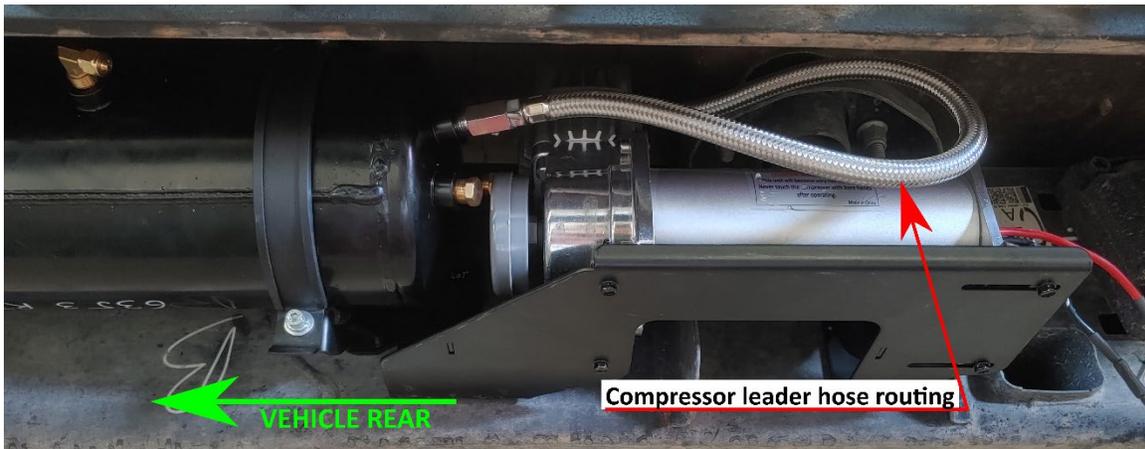


Figure 17- Air Tank Installation 3

Fully tighten the lower tank strap hardware.

8. On-Vehicle Electrical Installation

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

NOTE: 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. Install Horn Button

Locate a desirable & accessible location to install the horn button. There should be a minimum of 1" clearance behind the location to allow for the switch to be mounted and wired easily.

Factory upfitter switches may be used at the installers/customers discretion. Consult the owners manual or OEM documentation if using this option.

8.3. Route Wiring & Make Connections

Route wiring as desired and make the appropriate connections per the below figure. Use the included wiring loom and crimp connectors as desired.

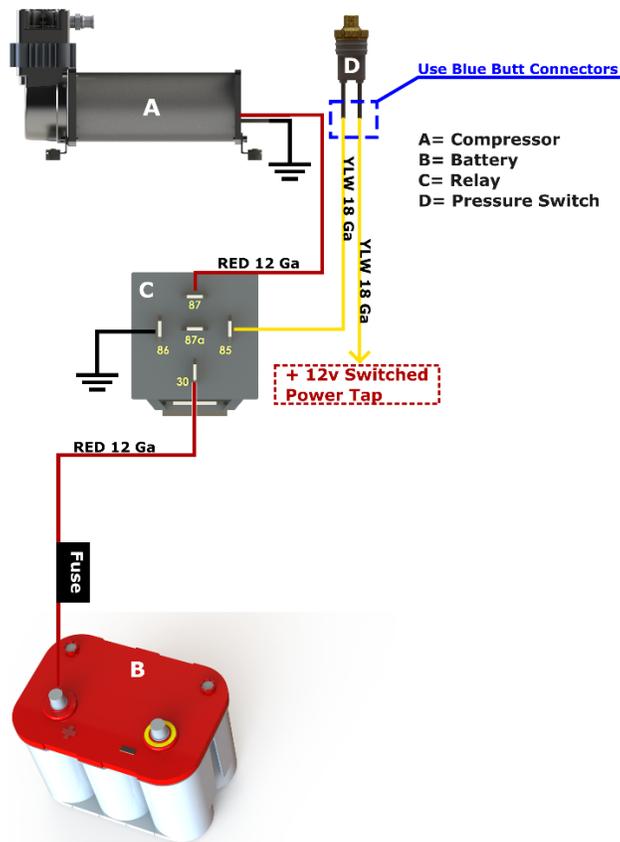


Figure 18- Recommended Wiring

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. Air Horn Test

Ensure all persons nearby have adequate hearing protection & provide courtesy warning to neighbors before testing the horn system.

!!WARNING!! NEVER operate the air horns with ears in close proximity to the trumpets or in an enclosed space without SUBSTANTIAL HEARING PROTECTION for all persons closer than 50 feet from the vehicle.!!

1. Activate the air horns by pressing the horn button briefly. Horns should sound as expected and be loud.

The horn sound & loudness will diminish as the air tank loses pressure. Repeat, if desired, until the compressor turns on and begins refilling the air tank.

9.3. 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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Record of Revisions

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Revision	Description	Date	Approval
A	Initial Revision	6/18/2024	AG