



RAM1500-734KIT INSTALLATION MANUAL





RAM1500-734KIT

Installation and Operation Manual

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1. How to Use this Manual

Open this digital PDF manual using Adobe Reader[®], or equivalent to take advantage of following key features:

- **Table of Contents** page allows easily navigating this manual; click/tap any section line to go to it
- **Bookmarks** (*open Adobe Reader[®] Navigation Pane*) allow quickly navigating 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

2. Safety First

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



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3. Application Chart

RAM1500-734KIT is a 100%** direct bolt-on aftermarket product for all DODGE vehicles listed in below chart

MODEL YR	MODEL	DRIVE	ENGINE	BODY	TRIM
2009-2018	RAM 1500	2WD	ALL	ALL	ALL (<i>see Exclusions</i>)
2009-2018	RAM 1500	4WD	ALL	ALL	ALL (<i>see Exclusions</i>)

****Exclusions:**

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



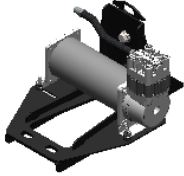
RAM1500-734KIT has not been designed to be compatible with any OEM, or aftermarket winch installed behind front bumper.

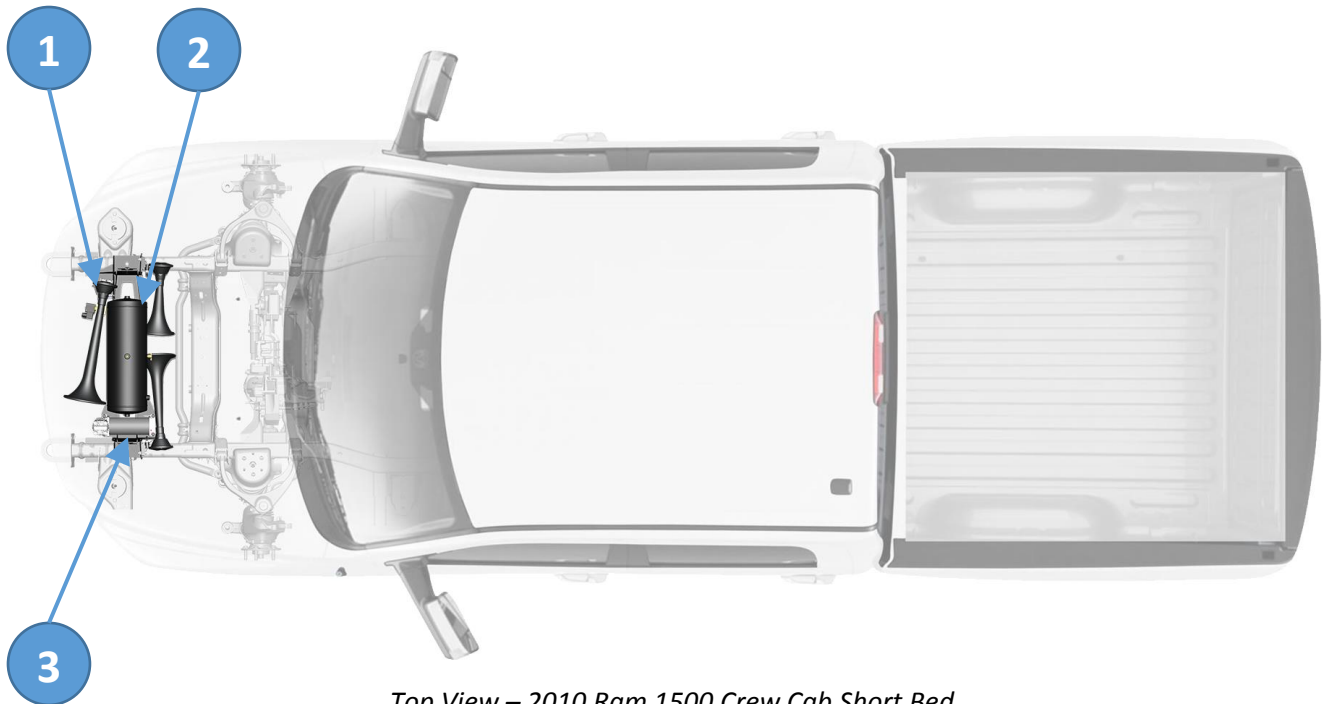
Product Compatibility:

This kit has been designed and tested to be compatible with leading manufacturers of aftermarket truck steps, such as Amp Research Power Steps[®] and all OEM standard and optional steps.

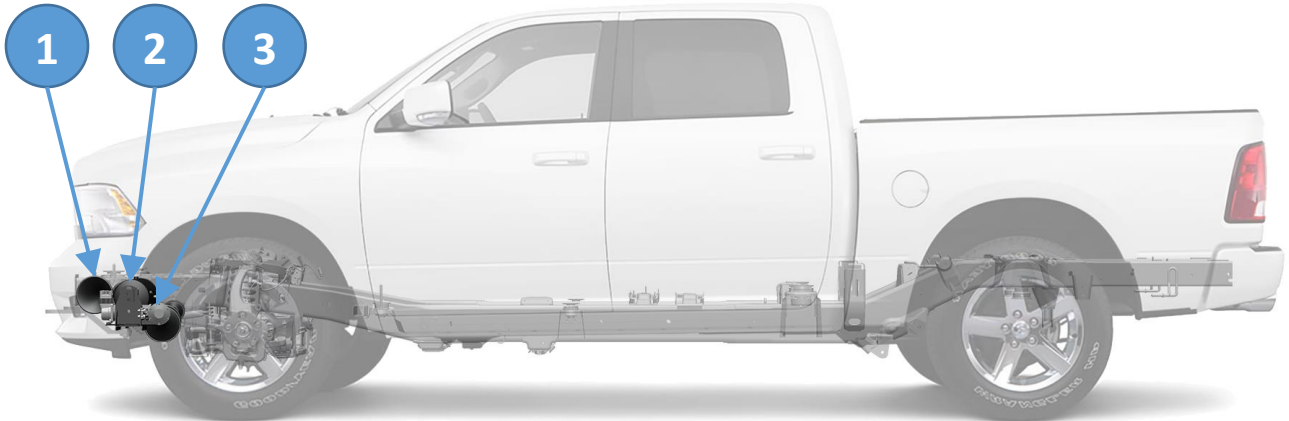
4. Kit Installation Overview

RAM1500-734KIT consists of following major components, located on vehicle per following pictures and chart

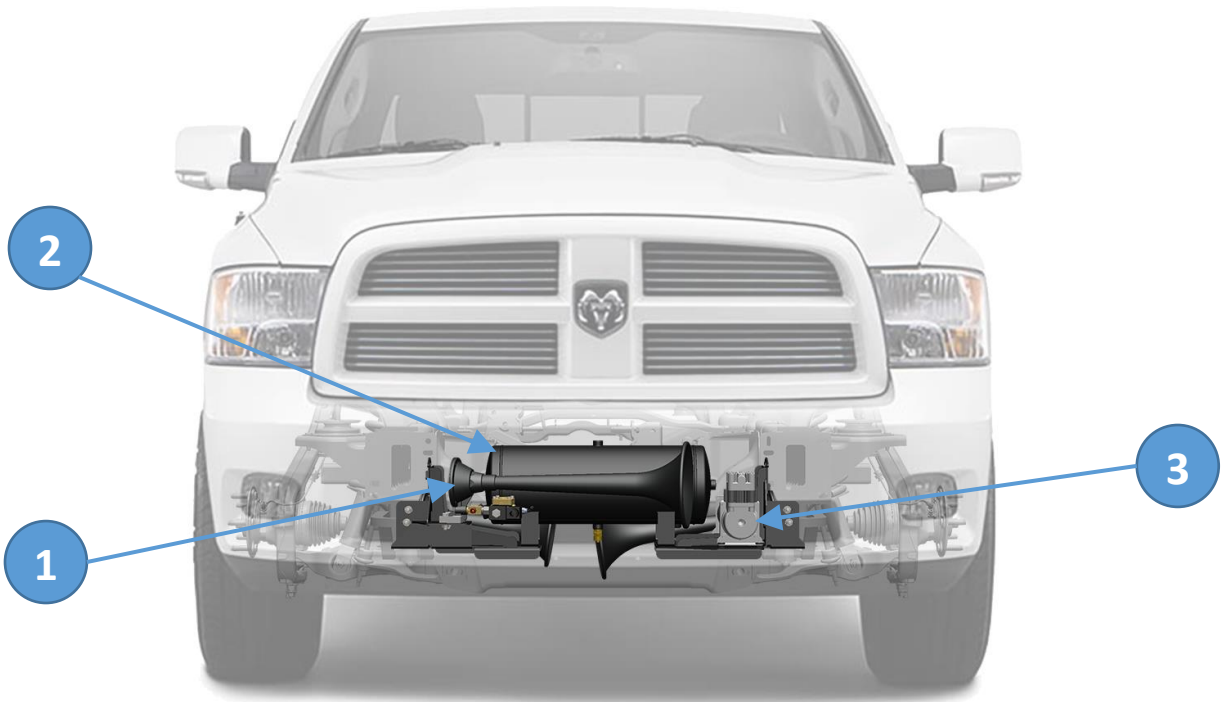
ITEM	DESCRIPTION	PICTURE	MOUNTING LOCATION	APPROX. INSTALL TIME
1	730 Series Horn Kit with Mounting Brackets and Air Solenoid		Behind front bumper. Bolted to inside frame rails.	3+ Hours
2	Air Tank with Mounting Brackets		Behind front bumper. Bolted to inside frame rails.	2+ Hours
3	Air Compressor with Mounting Bracket		Behind front bumper. Bolted to inside frame rails.	2+ Hours



Top View – 2010 Ram 1500 Crew Cab Short Bed



Driver Side View – 2010 Ram 1500 Crew Cab Short Bed



Front View – 2010 Ram 1500 Crew Cab Short Bed



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4.1. Approximate Installation Time

RAM1500-734KIT is a multi-faceted product consisting of mechanical, electrical, and pneumatic components that require integrating into vehicle chassis and electric systems.

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

- **8-12 Hours**
-

4.2. ***Quick Install Outline

For person(s) with experience installing Kleinn bolt-on kits, RAM1500-734KIT can be installed in an order similar to below:

1. Route wiring, install Relay, and Horn Switch
2. Disassemble 730 Horn Kit (i.e., separate drivers from trumpets and horn mounting plate)
3. Assemble Air Fittings to Air Tank
4. Mount Air Compressor to Left-Hand Bracket
5. Mount Air Tank to Left-Hand and Right-Hand Brackets
6. Mount Horn Drivers to Left-Hand and Right-Hand Brackets
7. Remove factory Tow Hooks, if equipped
8. Insert Nut Plates into Frame Pockets
9. Insert Bench Assembled Kit into Frame
10. Re-install factory Tow Hooks, if equipped
11. Final Tighten Bench Assembled Kit into Frame
12. Install Trumpets into Horn Drivers, adjust, and final tighten
13. Route Air Tubing, Quick Connect Coupler, Air Compressor filter, and connect all Pneumatic components
14. Connect wiring to all components
15. Test System and adjust, as needed



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5. List of Tools and Supplies

5.1. Standard Tool List (Required)

1. Basic mechanic's 3/8" drive socket sets with extensions
 - a. Inch Size Sockets (1/4" – 1" Hex)
 - b. Metric Size Sockets (6mm – 20mm Hex)
2. Basic mechanic's combination wrenches (box/open-end)
 - a. Inch Size Wrenches (1/4" – 1" Hex)
 - b. Metric Size Wrenches (6mm – 20mm Hex)
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. Utility Knife, or Utility Razor blade

5.2. Special Tool List (Recommended)

1. 10-100 ft.-lb. torque wrench
2. 50-150 in.-lb. torque wrench
3. Multi-Meter for 12V DC electrical systems, or equivalent
4. 12V DC Test Light, or equivalent

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. Sand Paper, or Wire Brushes for installing ground wires
5. Extra plastic zip ties > 6" long
6. Extra NPT sealant (i.e., Kleinn Air Horn Juice, Teflon tape, etc.)
7. Touch-up paint for frame/chassis
8. Typical cleanup supplies



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6. Parts List




RAM1500-734KIT includes following items

6.1. Pre-Packaged Electro-Mechanical Items

Following items come in their own packages and may include additional items inside, not listed below

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
1	1	6450RC	6450RC Compressor Kit, with included hardware, and remote air supply line	
2	1	730	730 Series Horn Kit, with included solenoid/valve, and 1/4" Air Tubing, 12 ft. long	



6.2. Air Fittings and Related Items

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
3	1	6350RT	Air Tank	
4	1	51414L (view location on Air Tank)	1/4" NPT X 1/4" Compression Fitting, 90 Deg Elbow	
5	1	52835 (view location on Air Tank)	1/4" NPT, Drain Valve	



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6	1	52175 (view location on Air Tank)	1/4" NPT, 175 PSI Safety Valve	
7	1	59014 (view location on Air Tank)	1/4" NPT FEMALE X 1/4" NPT, 90 Deg Elbow	
8	1	51214L (view location on Air Tank)	1/4" NPT X 1/2" Compression Fitting, 90 Deg Elbow	
9	1	51214R (view location on Air Tank)	1/2" NPT FEMALE X 1/4" NPT Reducer Fitting	
10	1	50040 (view location on Air Tank)	1/4" NPT PLUG, INTERNAL HEX DRIVE	
11	1	2151 (view location on Air Tank)	1/4" NPT Pressure Switch	
12	1	1302	Quick Connect Air Coupler Kit, with relocation bracket	

13	1	INF-1	Inflator Kit, with Air Hose and Bag	
14	1	KLEINN AIR HORN JUICE	Thread Sealant for NPT Fittings	

6.3. Electrical Small Components and Related Items






ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
15	1	320	Terminator – Nickel Plated Remote Horn Button	
16	1	WIRE KIT	Full Wire Kit, with electrical connectors and zip ties	

6.4. Bolt-On Brackets and Hardware/Fasteners

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
17	1	RAM1500 HARDWARE	7/16"-14 Bolts, Washers, M12 Bolts, Washers, and 3/8"-16 Bolts for bracket mounting	
18	1	4 BOLT TANK HARDWARE	7/16"-14 Bolts, Nuts, and Washers for tank mounting	

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19	1	HORN SEPARATION HARDWARE	5/16"-18 Bolts, Nuts, and Washers for horn mounting	
20	1	RAM1500_BRKT-L	Left-Hand Bracket (i.e., Driver Side)	
21	1	RAM1500_BRKT-R	Right-Hand Bracket (i.e., Passenger Side)	
22	1	RAM1500_NUT_PLATE-L	Left-Hand Nut Plate (i.e., Driver Side)	
23	1	RAM1500_NUT_PLATE-R	Right-Hand Nut Plate (i.e., Driver Side)	

7. Bench Assembly Steps

Complete following steps off vehicle to facilitate final installation.

7.1 Unpack and Layout Kit Parts

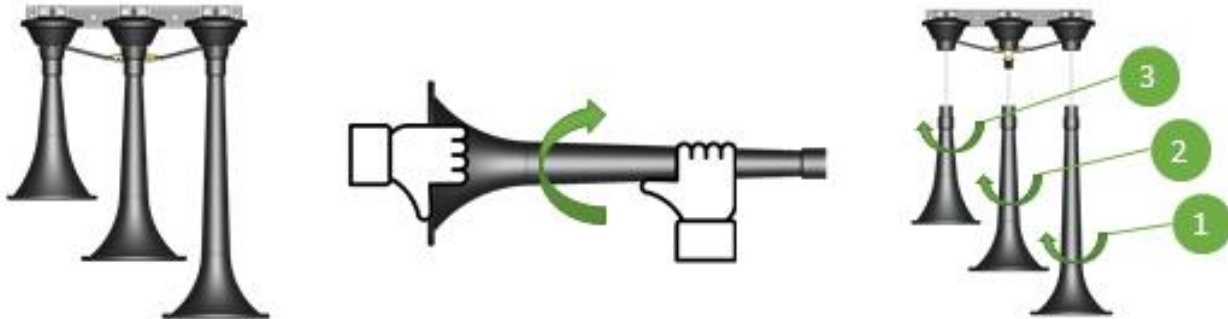
Unpackage RAM1500-734KIT and verify all parts are included per above Parts List. Contact Kleinn support if any questions arise.

It is recommended to layout and organize parts across a large work bench, or table in following order:

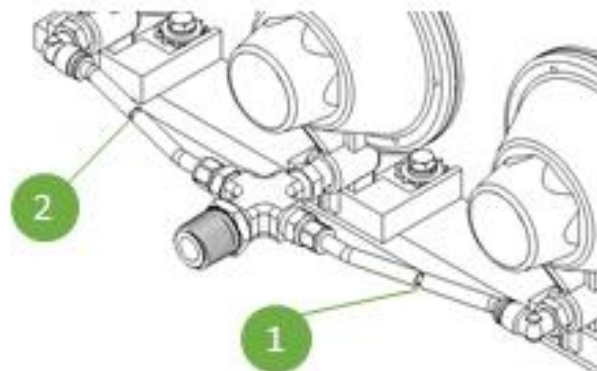
1. Review train horn box and included hardware
2. Review air compressor box and included hardware
3. Review air tank box and included hardware
4. Review kit mounting brackets and included hardware
5. Review electrical/air fittings and included wiring and tubing

7.2 Disassemble Train Horn Kit

1. Remove trumpets from drivers and set aside, per below illustrations



- a. Starting with largest trumpet, tightly grasp trumpet with both hands and unscrew counter clockwise; trumpet may be very tight. Repeat on medium trumpet, then small.
 - i. Drivers are identical and do not require marking Small, Medium, Large
- b. If necessary, clamp horn mounting plate to rigid table, in vise, or seek help to hold plate
2. Cut semi-rigid plastic air tubing between horns
 - a. Use sharp side/diagonal cutters, or equivalent to safely sever tubing

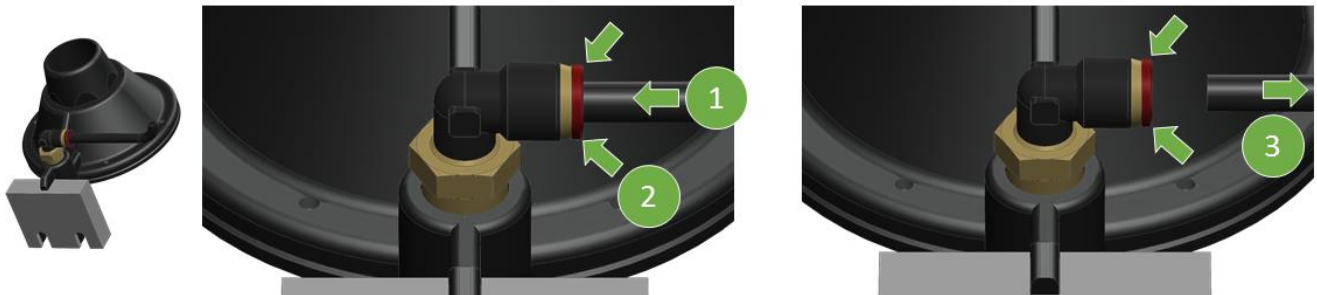


3. Loosen Compression Nuts on center driver and remove horn drivers from mounting plate, per below illustration



- a. Use properly sized socket, or box-end wrench to remove fasteners and discard
- b. Horn mounting plate will NOT be re-used during installation

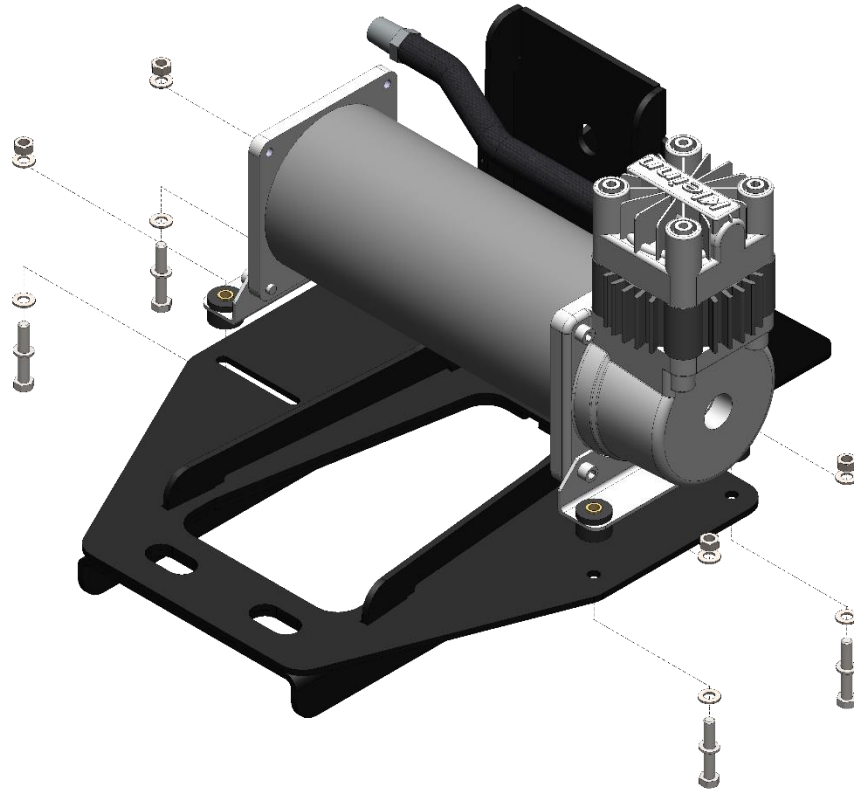
4. Remove cut tubing from fittings, per below illustrations



- a. Using slip-joint pliers, or equivalent, pull and twist off tubing connected to compression fittings
- b. Depress collar on quick release fitting with one hand, then twist and pull plastic tube out with other hand. If necessary, use slip-joint pliers, or equivalent to twist and pull tubing out while depressing collar
- c. For further instruction on properly using quick fittings, reference this [SMC Video](#)
- d. Discard old tubing

7.3 Mount Air Compressor to Left Bracket (i.e., Driver Side)

1. Gather left mounting bracket, and compressor with its attached braided hose
2. Mount compressor to left bracket, per below illustration

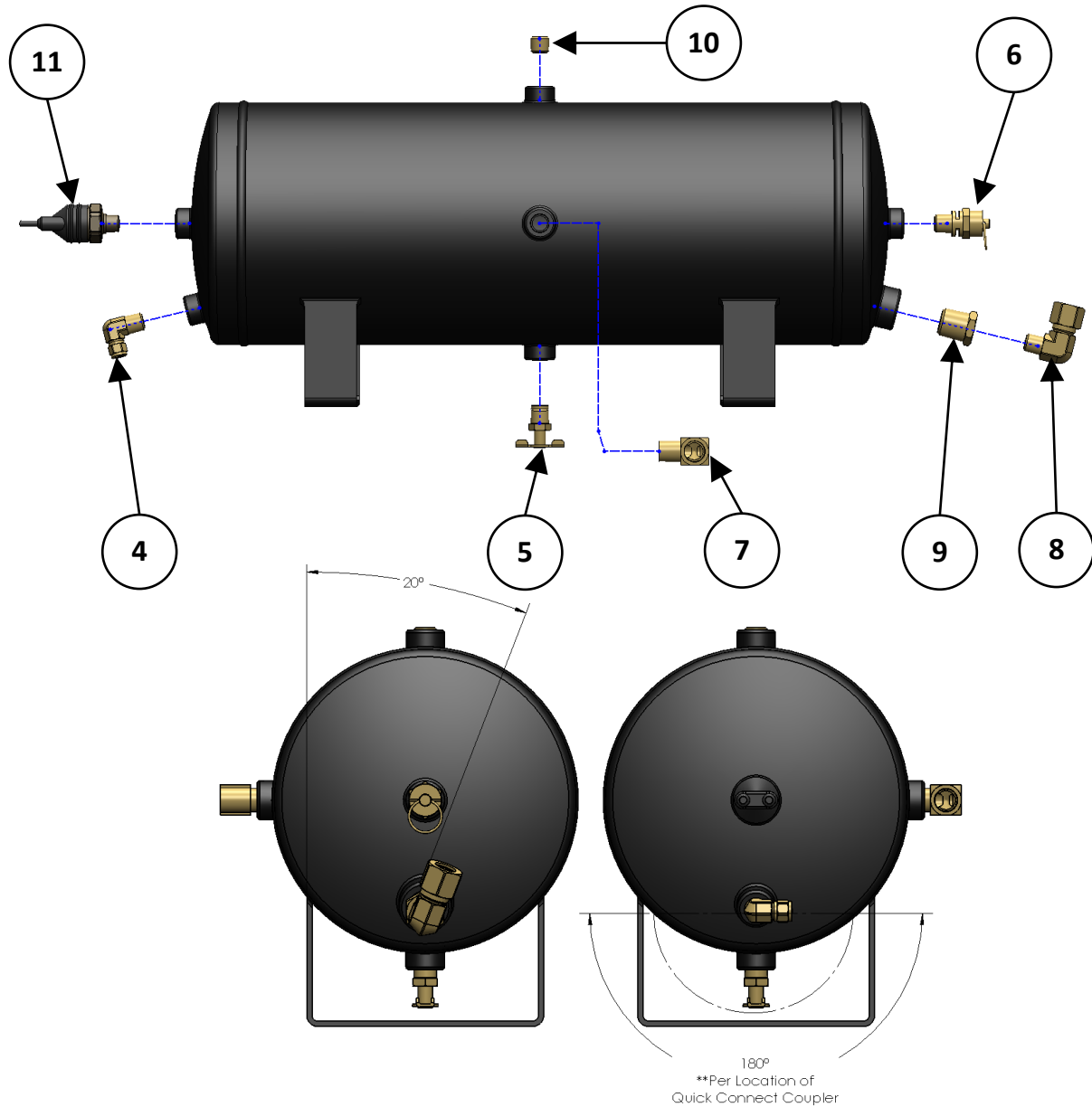


- a. Use fasteners included with compressor and assemble them clean and dry using proper socket and box-end wrench.
- b. Final tighten fasteners firmly

7.4 Assemble Air Fittings to Air Tank

1. Gather air tank, and air fittings
2. Install and tighten air fittings to tank, per below illustrations

NOTE: Match item numbers to [Parts List](#)

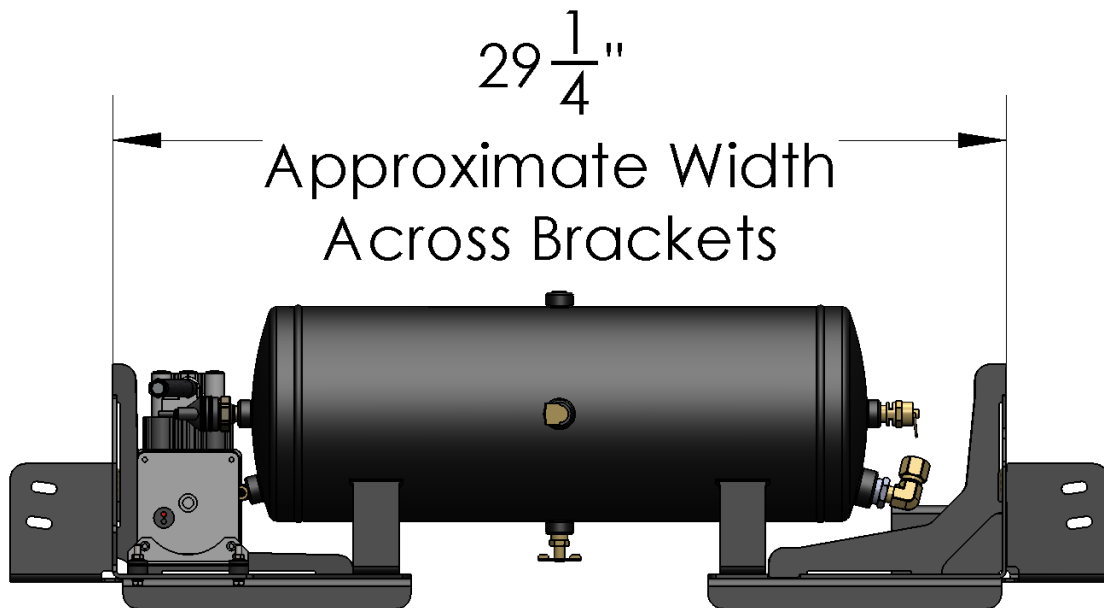
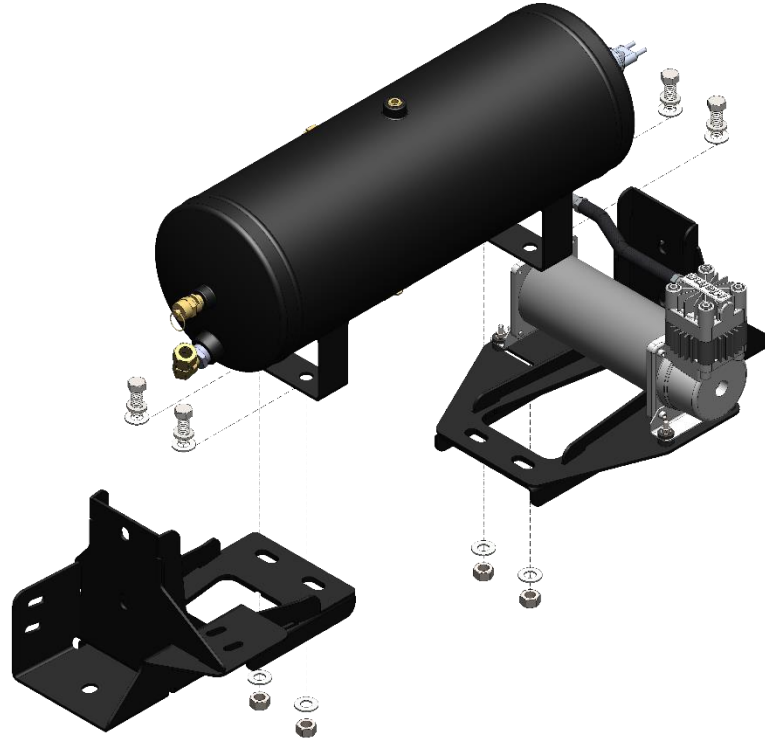


Right and Left Views of Tank with Fittings installed

- a. Apply two small drops of [Kleinn Air Horn Juice](#) to each male pipe thread
- b. Hand-tighten each fitting, then further tighten each 1/4-1/2 turn using proper sized box-end wrench; adjust as necessary to match fitting orientation shown
- c. Verify top mounted plug is as tight as possible, so it protrudes from tank minimally
- d. Verify left mounted 90 Deg elbow is as tight as possible, so it protrudes from tank minimally

7.5 Mount Air Tank to Brackets

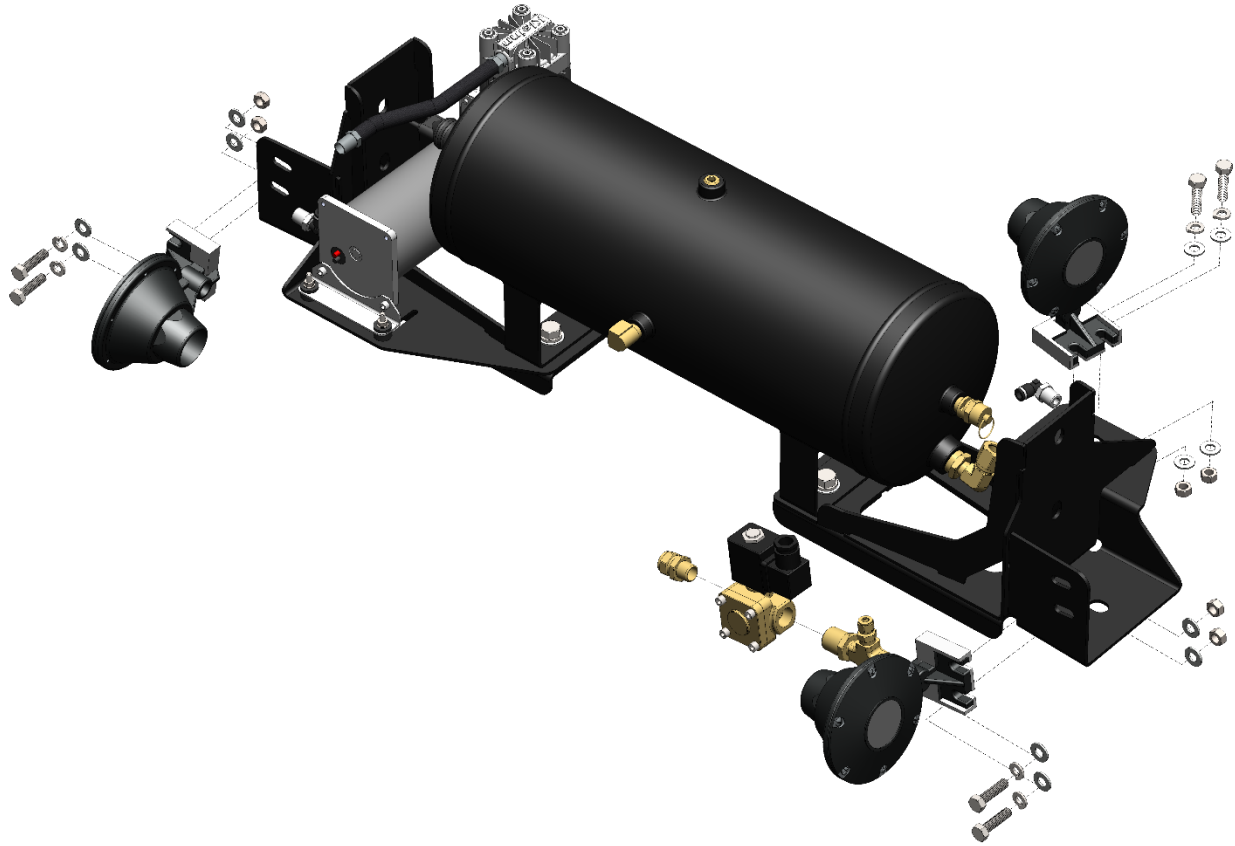
1. Gather left and right bracket, air tank, and 4 bolt tank mounting hardware
2. Attach air tank to brackets, per below illustrations



- a. Assemble fasteners clean and dry
- b. Press brackets together, as close as possible to provide bracket clearance for inserting kit into frame, then tighten all fasteners snugly by hand (final tightening occurs on vehicle)

7.6 Mount Horn Drivers to Brackets

1. Gather previously assembled brackets, train horn drivers and horn separation hardware kit
2. Mount all horn drivers to brackets, per below illustration



- a. Use Horn Separation Hardware kit
 - i. Assemble fasteners clean and dry, then finger tighten snugly only; final tightening will be completed on vehicle
- b. Supplied Ore Mount Support(s) with fasteners will not be used



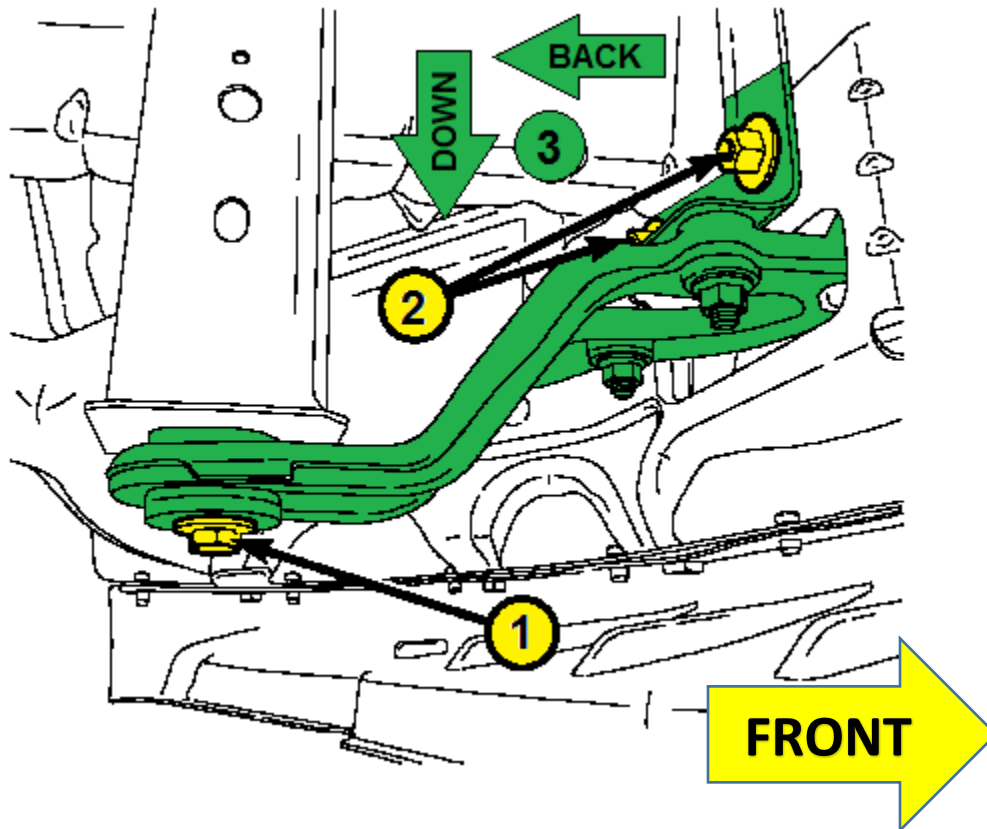
8. On-Vehicle, Mechanical Assembly

Complete following steps on vehicle; if necessary, raise vehicle off ground using appropriate equipment.

DANGER: Installation requires being underneath vehicle and applying forces to vehicle chassis. Follow all recommended safety precautions for raising vehicle; consult vehicle owner's manual.

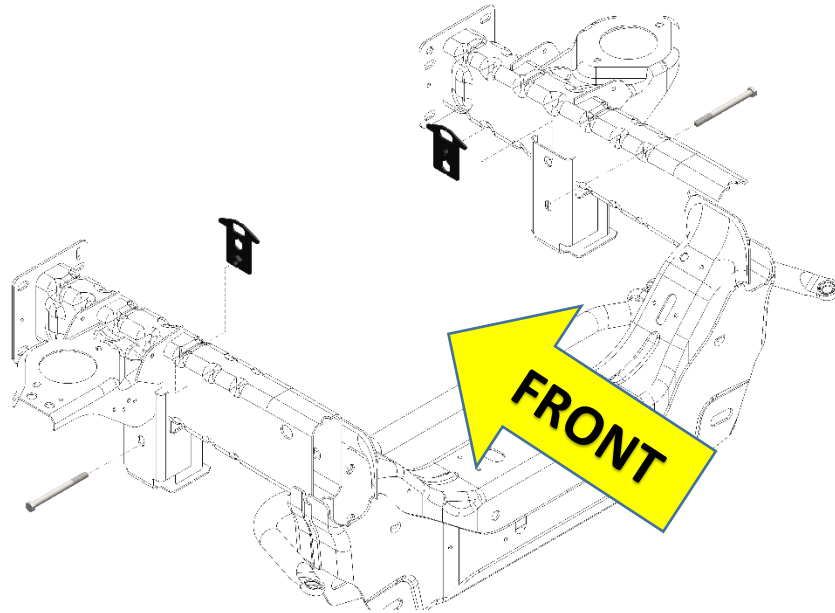
8.1 Remove Factory Tow Hooks (if equipped)

1. Disassemble toe hooks from chassis and set fasteners aside for later use, per below illustration

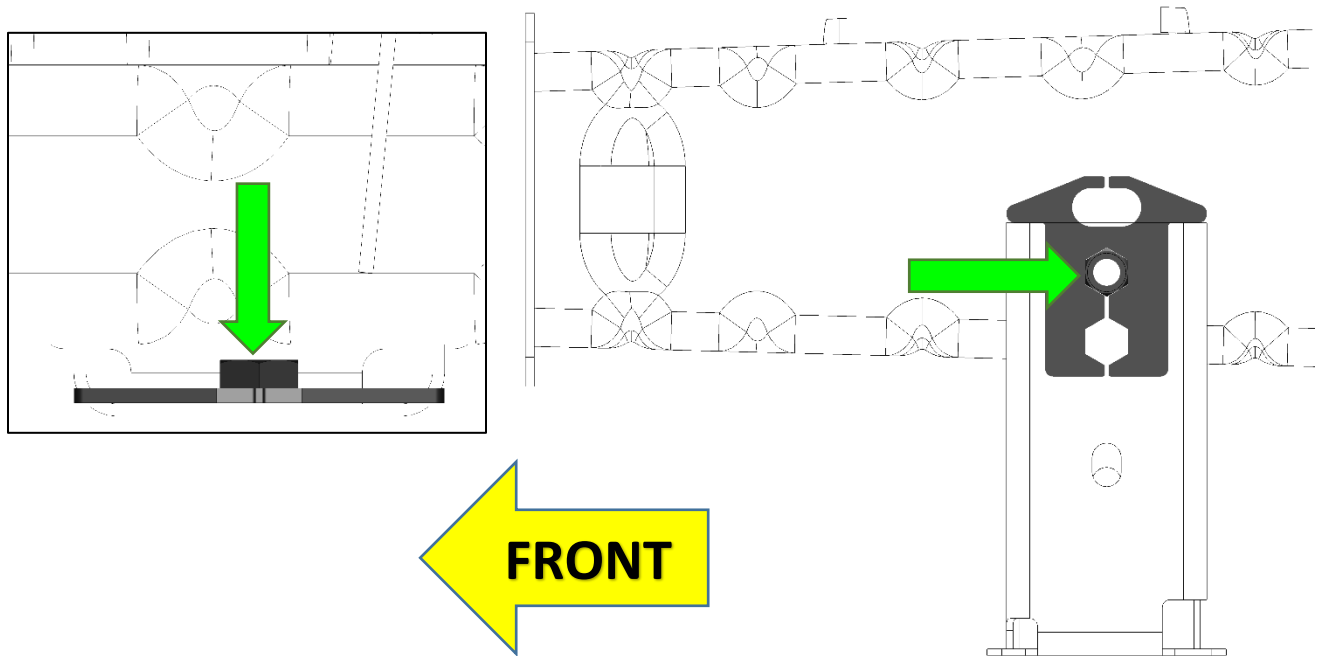


8.2 Insert Nut Plates and Temporary Install Bolts into Frame

1. Gather nut plates and RAM1500 Hardware Kit
2. Insert both left (i.e., driver side) and right (passenger side) nut plates into frame pockets, per below illustration



View above driver wheel looking toward front

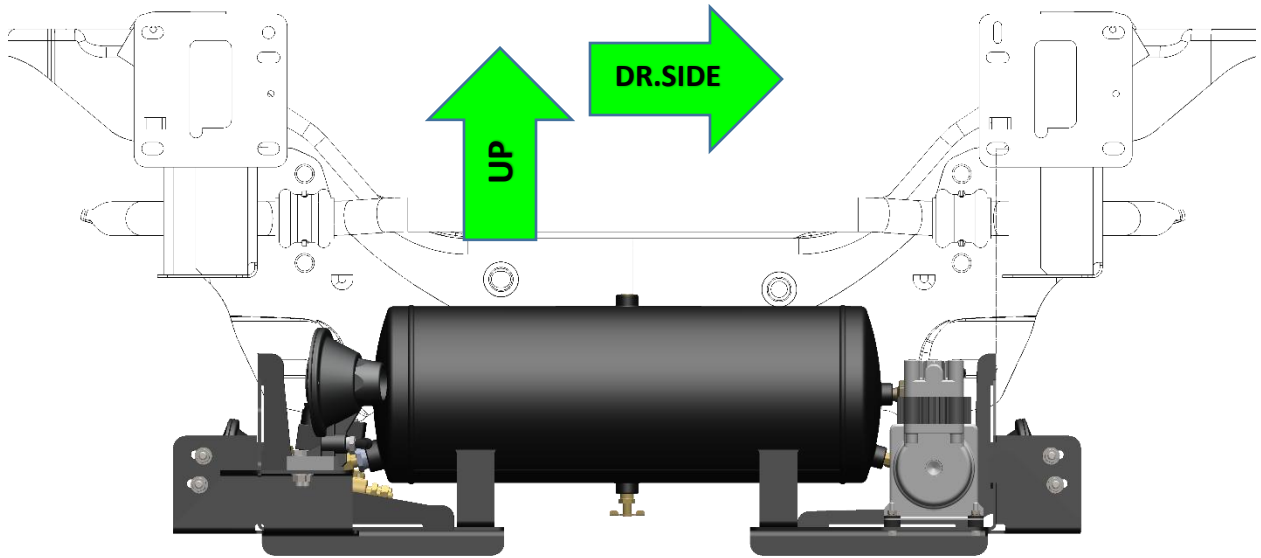


View above and inside passenger frame rail

- a. Ensure nut plates are properly installed; **welded nuts should directly line up with slots in frame on both sides and nut side should be towards frame rail**
3. Insert temporary installation bolts into frame slots, per above illustration
 - a. Use 3/8-16 X 4.5" Hex Bolts from RAM1500 Hardware Kit
 - b. Ensure end of bolts just barely protrude through frame, so they don't interfere with kit when inserting into frame

8.3 Insert Bench Assembled Kit into Frame

1. Raise assembled kit into frame, per below illustration

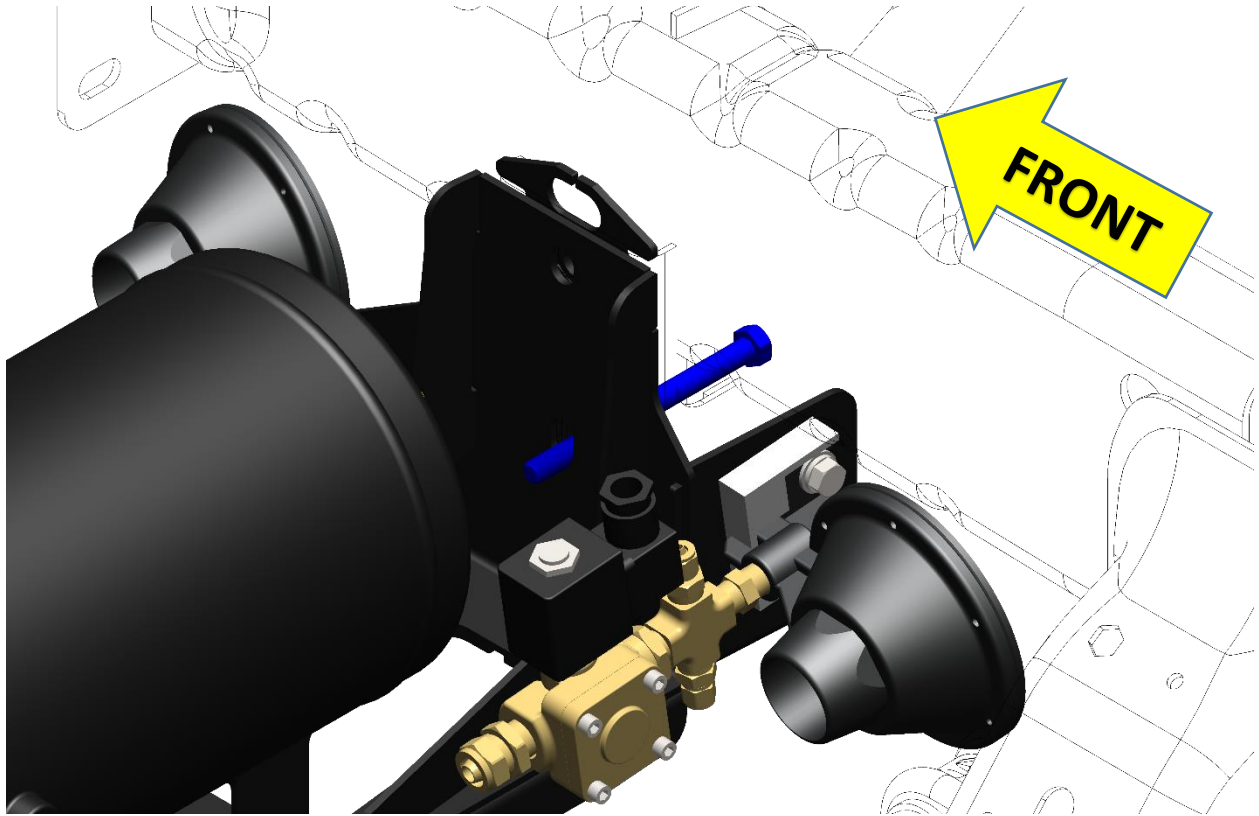


View from front of vehicle looking toward engine

- a. Ensure brackets are positioned as close together as possible
- b. Lift evenly (i.e., level) with brackets closer to passenger side then move towards driver side; there is small lip that left bracket will temporarily rest on

CAUTION: if necessary, seek help to safely lift assembly; it may be heavy, especially if laying on back

2. Push both temporary installation bolts through frame and into brackets, per below illustration



View above engine looking toward front

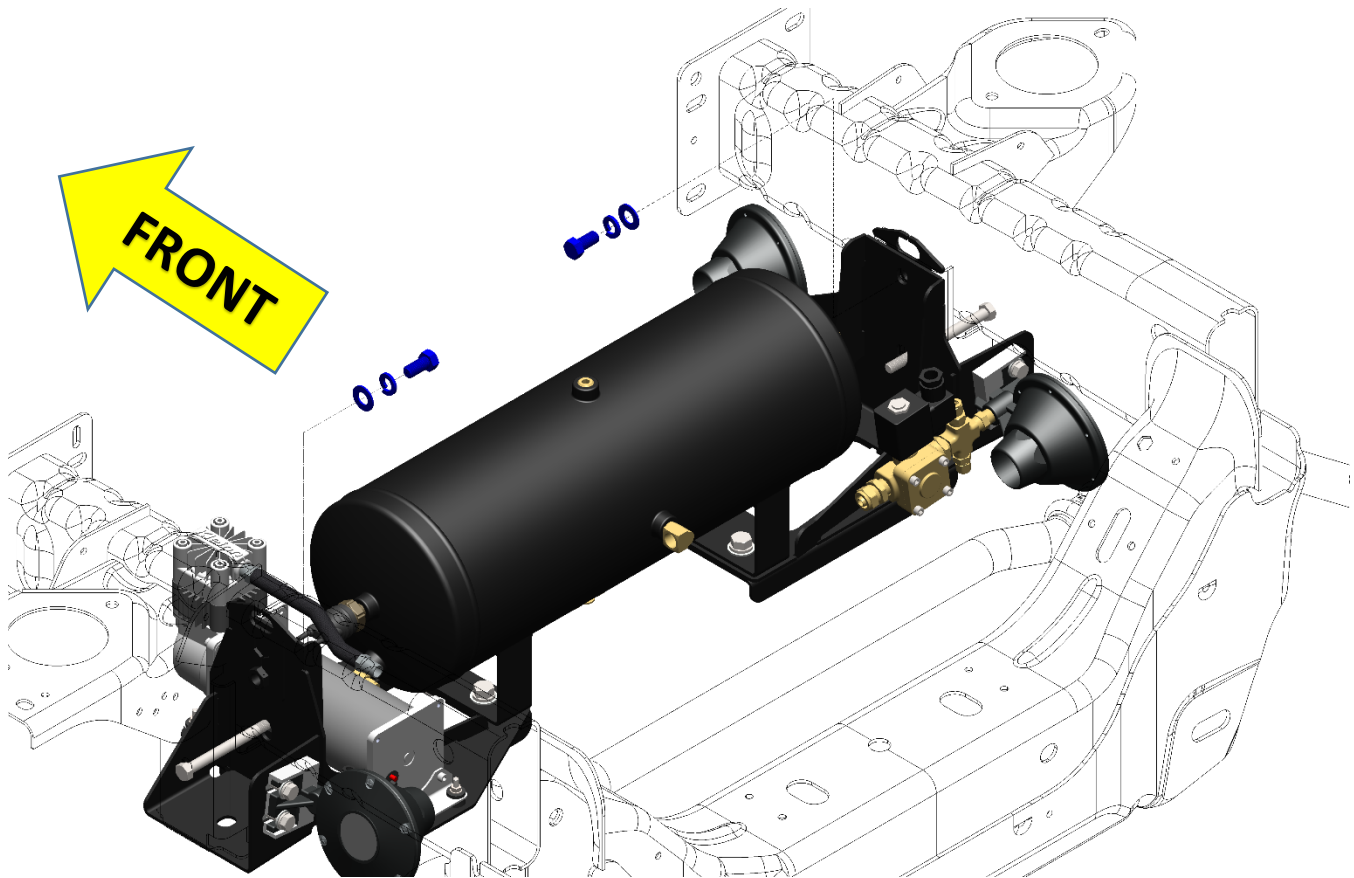
- a. Kit will be supported by both bolts, but may not hang level and will still move

CAUTION: exercise care while any person is under assembled kit with temporary installation bolts installed; if bolts are pulled out with kit unsupported, a serious fall hazard will occur

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3. Press brackets outward until both sides contact frame, then install nut plate mounting bolts, per below illustration

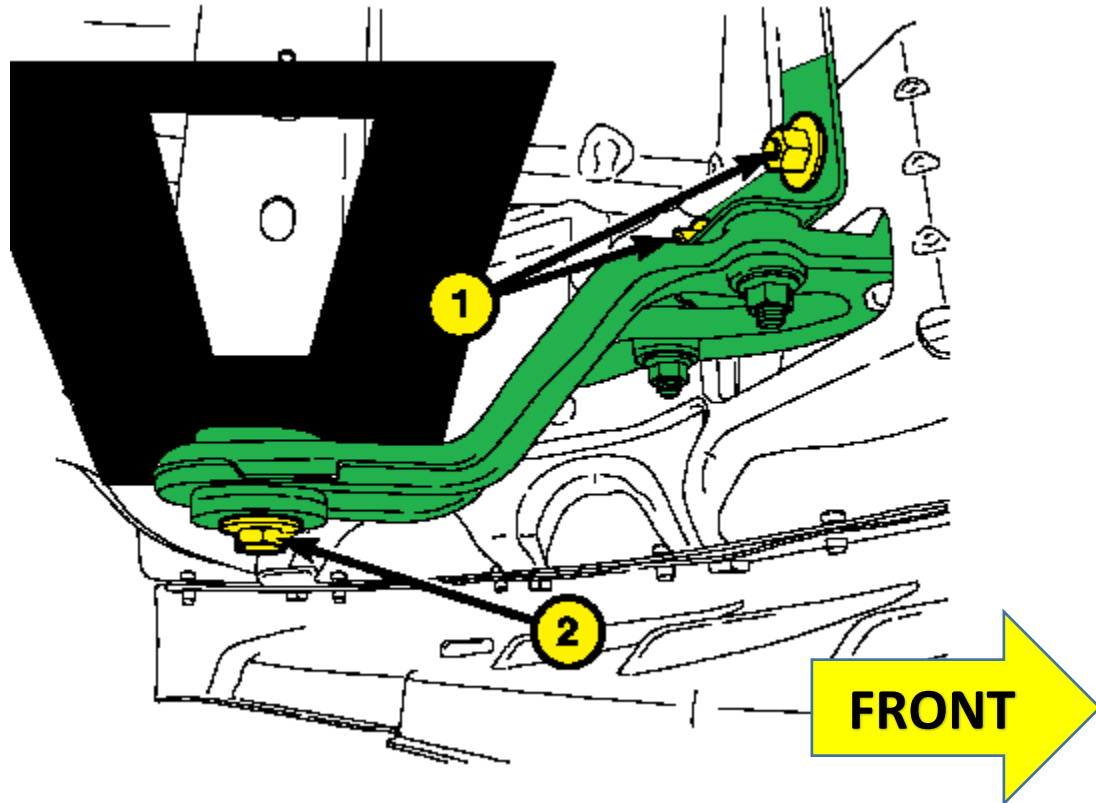


View above driver front tire looking toward front

- a. Slightly loosen tank mounting bolts, if necessary
- b. Use 7/16-14 X 7/8" Hex Bolts, 7/16" split lock washers, and 7/16" flat washers from RAM1500 Hardware Kit
- c. Assemble fasteners clean and dry and finger tighten only; final tightening will occur later

8.4 Re-install Factory Tow Hooks (if equipped)

1. Move toe hooks back into position over brackets and re-install original fasteners, per below illustration

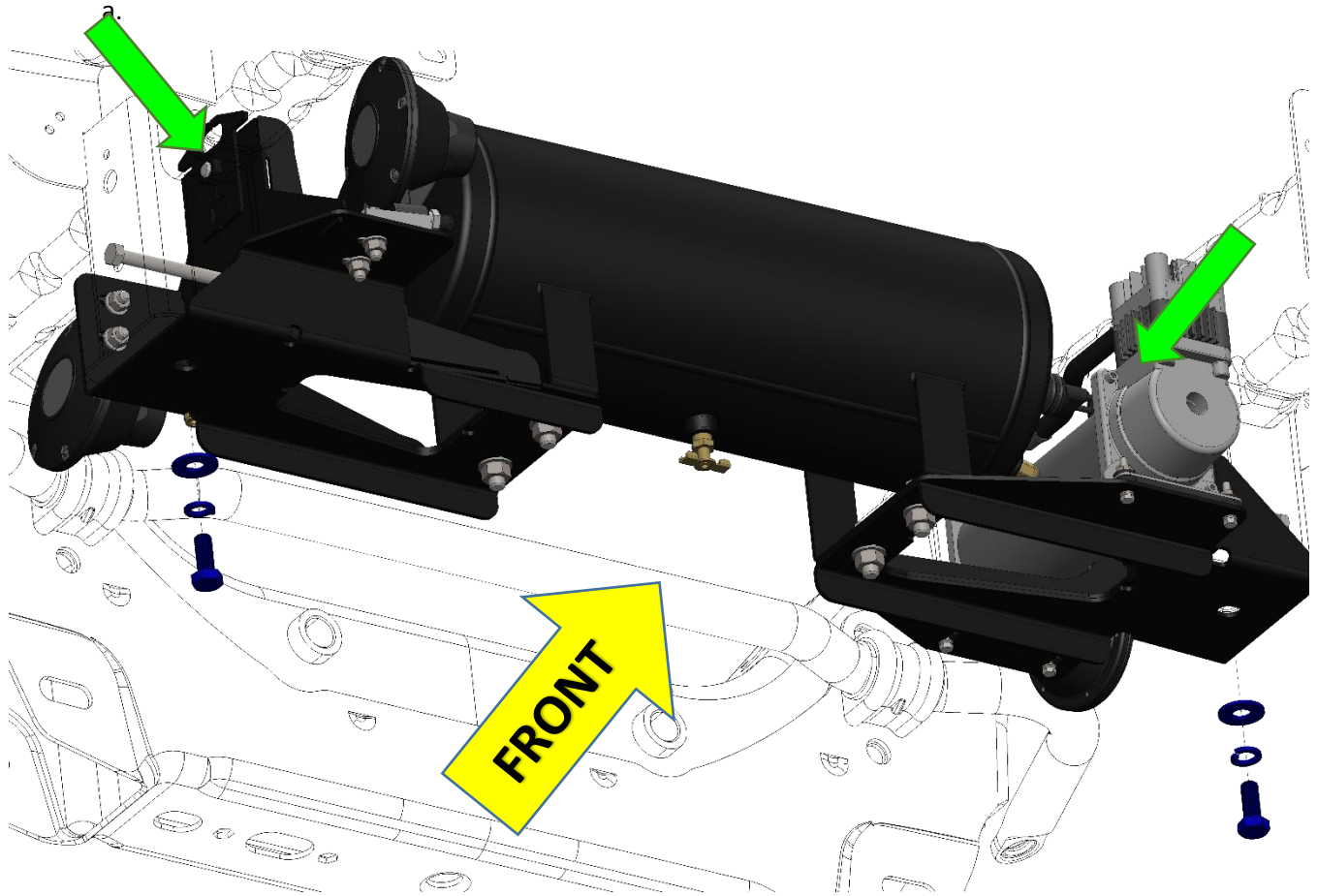


NOTE: Skip this step if vehicle not equipped with OE Tow Hooks

- a. Ensure both left and right brackets are fully contacting frame on both sides before tightening lower tow hook bolts
- b. Reference these [online MOPAR Tow Hook instructions](#) for further instruction, including proper bolt torque values
- c. Tow Hook Rubber Spacers will slightly compress, but accommodate thickness of bracket
- d. Discard M12X1.5X30 Hex Bolts and corresponding washers from RAM1500 Hardware Kit

8.5 Tighten Bench Assembled Kit to Frame

1. Install lower bracket bolts to frame, per below illustration



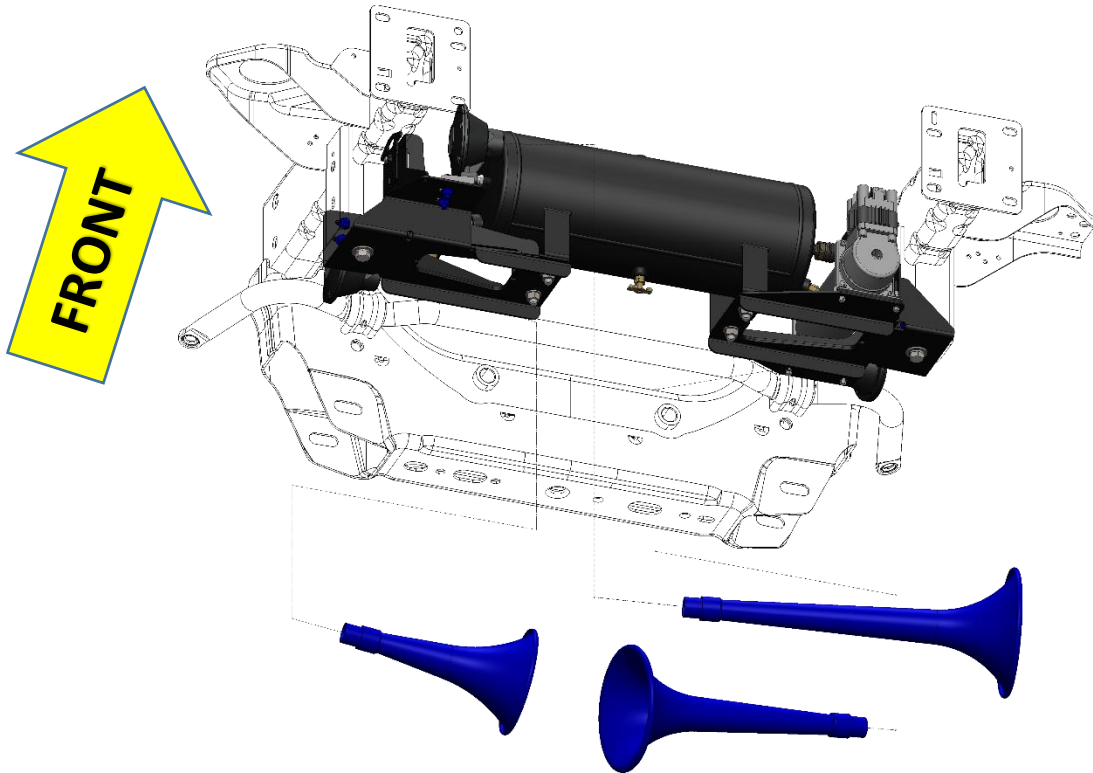
View from below bumper looking toward engine

NOTE: Skip this step if vehicle is equipped with OE Tow Hooks and using OE Bottom Bolts

- a. Before tightening lower bolts, **ensure brackets are fully contacting frame on both sides**
 - b. Use M12X1.5X30 Hex Bolts, M12 split lock washers, and 7/16" flat washers from RAM1500 Hardware Kit and tighten firmly
2. Firmly tighten both upper nut plate bolts
 3. Remove temporary installation bolts and discard

8.6 Install Trumpets and Tighten Drivers

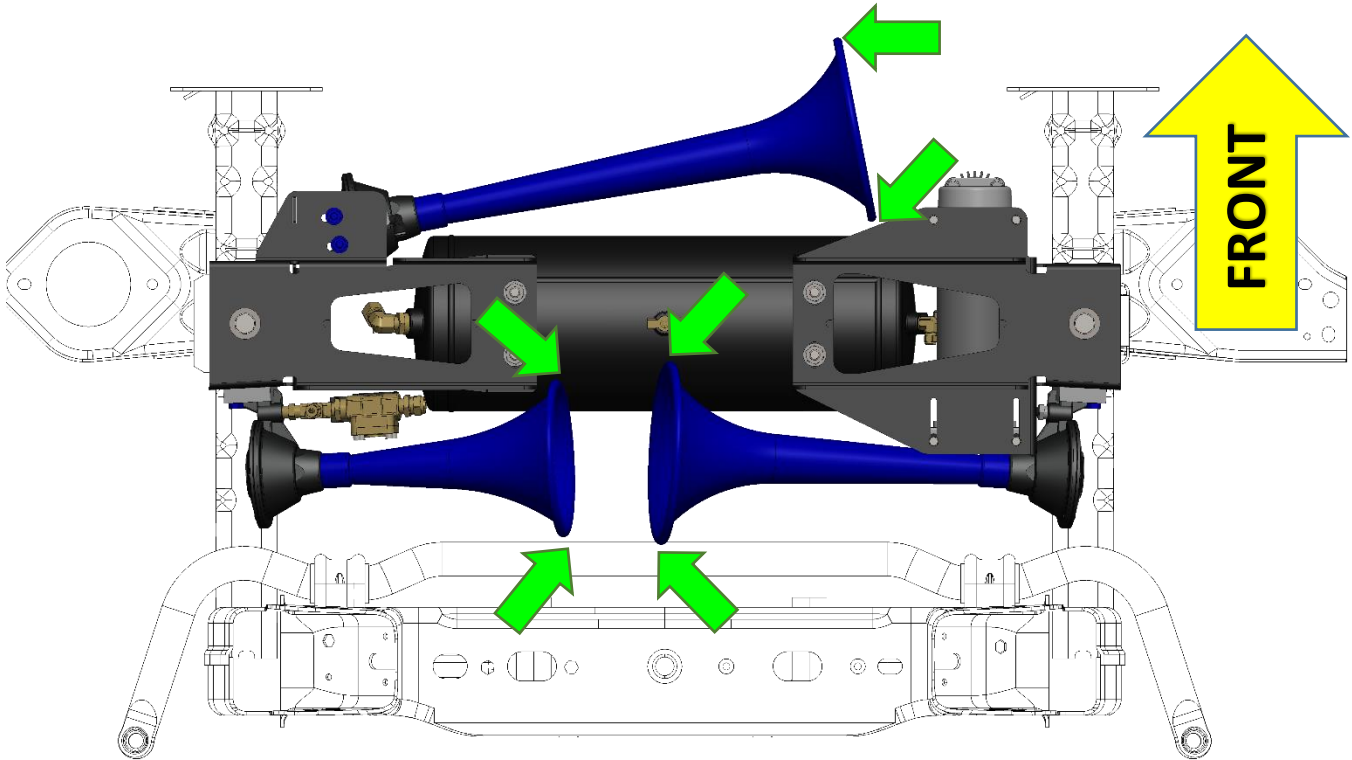
1. Install trumpets into horn drivers, per below illustration



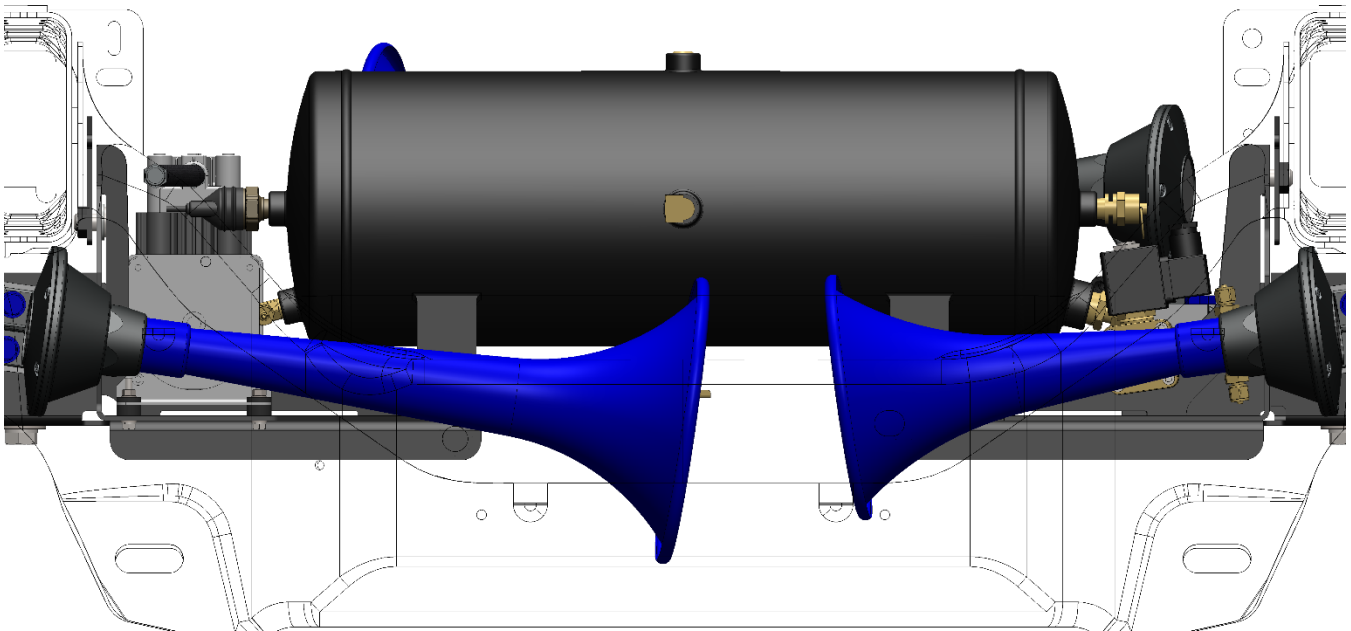
View from below bumper looking toward engine

- a. Slightly loosen driver mounting fasteners, if necessary
- b. Assemble trumpets clean and dry, then tighten firmly

2. Reposition horn drivers, as needed to **ensure minimum 1/4" clearance** (i.e., thickness of BIC pen) all around, then final tighten, per below illustrations



View from below kit



View looking from engine towards front

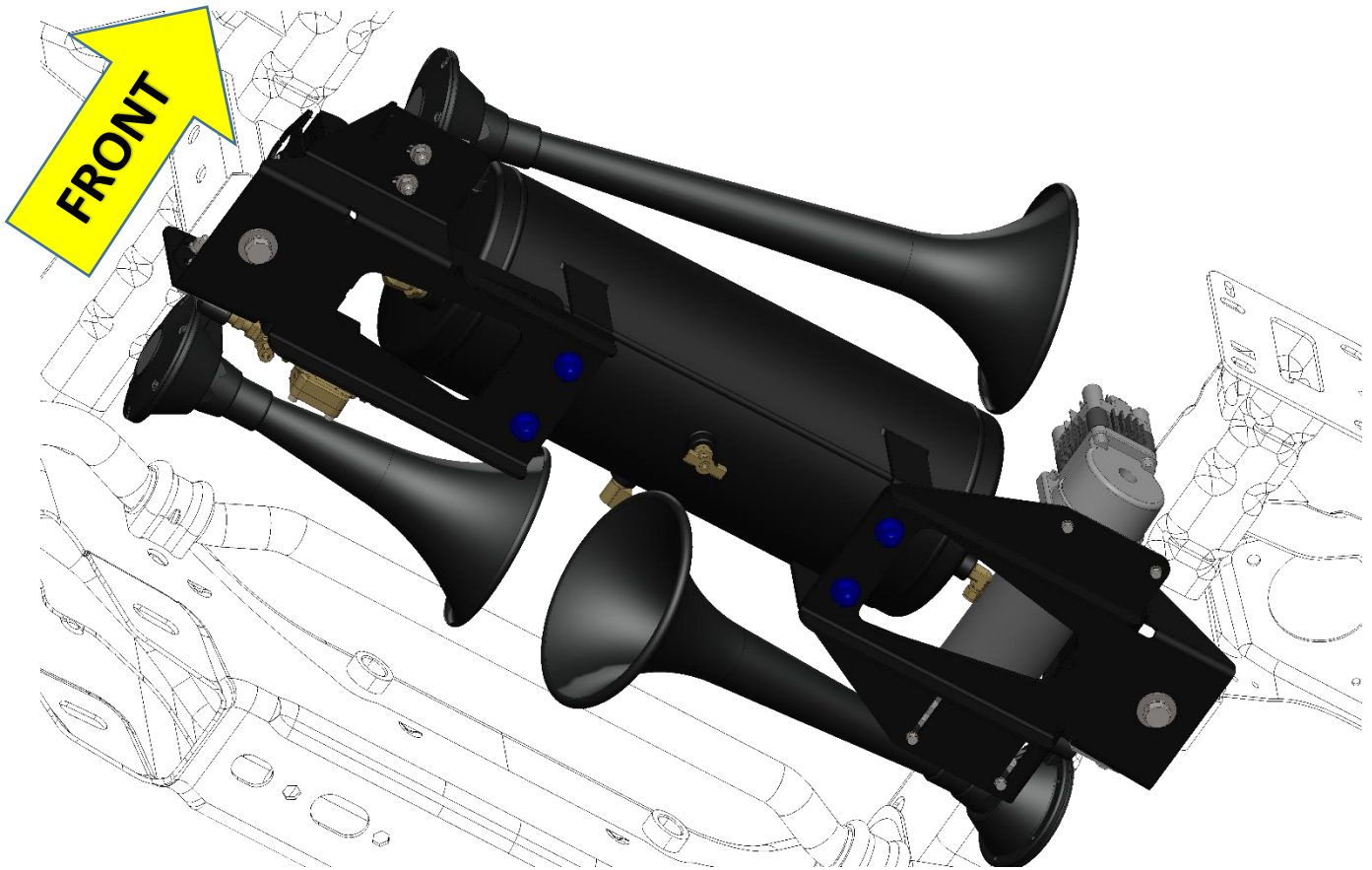
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- a. Small and Medium trumpet should be angled down slightly (i.e., 5 – 15 Deg)
- b. Check clearance at trumpet ends, air tank, front bumper, and anti-sway bar
- c. Firmly tighten horn driver mounting hardware
- d. Slightly bump end of each trumpet using your fist to replicate road bumps and verify clearance

8.7 Tighten Air Tank to Brackets

1. Center air tank between brackets and horns, then firmly tighten fasteners



View looking below front bumper toward engine

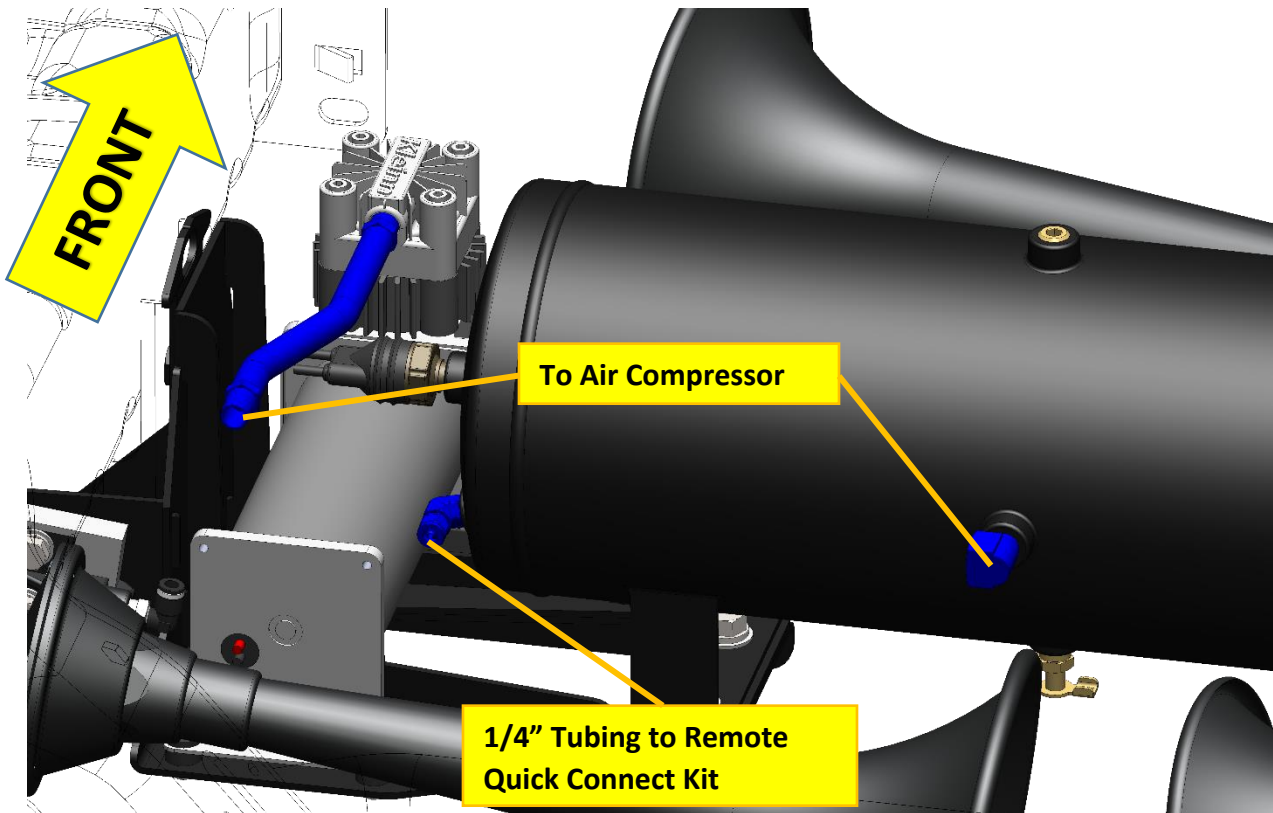
- a. Ensure minimum 1/4" clearance between tanks and trumpet ends

9. On-Vehicle, Air Line Installation

NOTE: During routing and installation of air tubing, ensure it is away from all sharp edges, hot vehicle parts (i.e., exhaust, engine, radiator), and fasten securely to vehicle using zip ties, or equivalent.

9.1 Connect Air Compressor to Air Tank

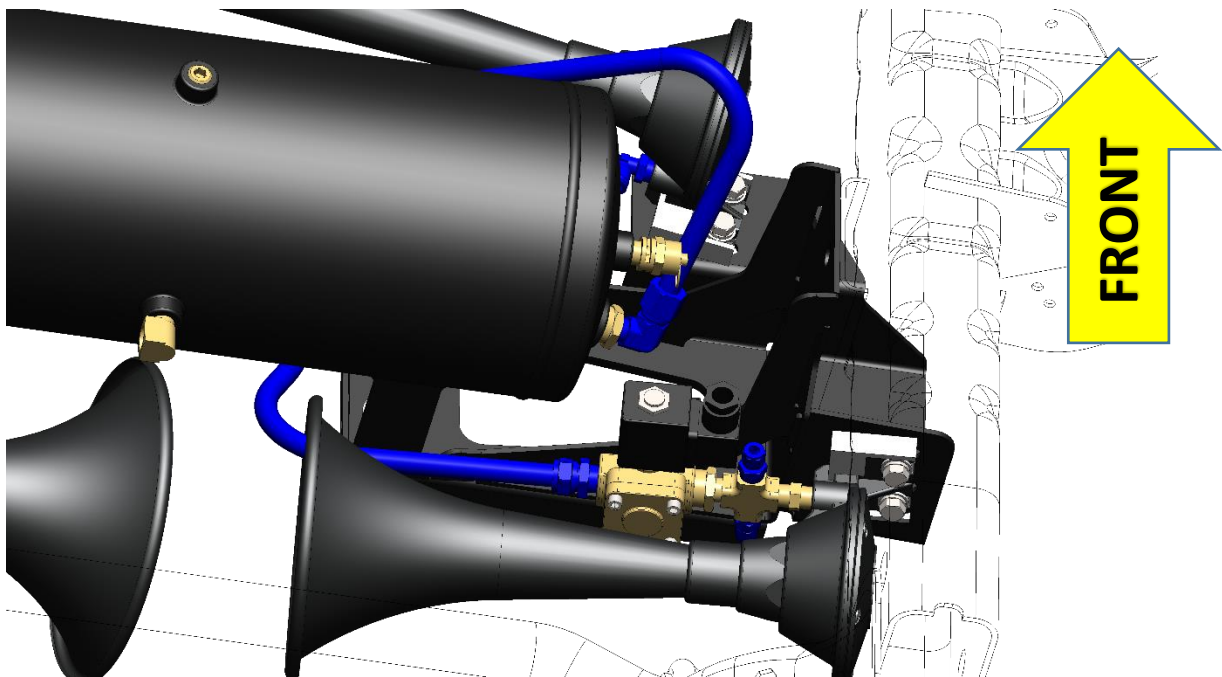
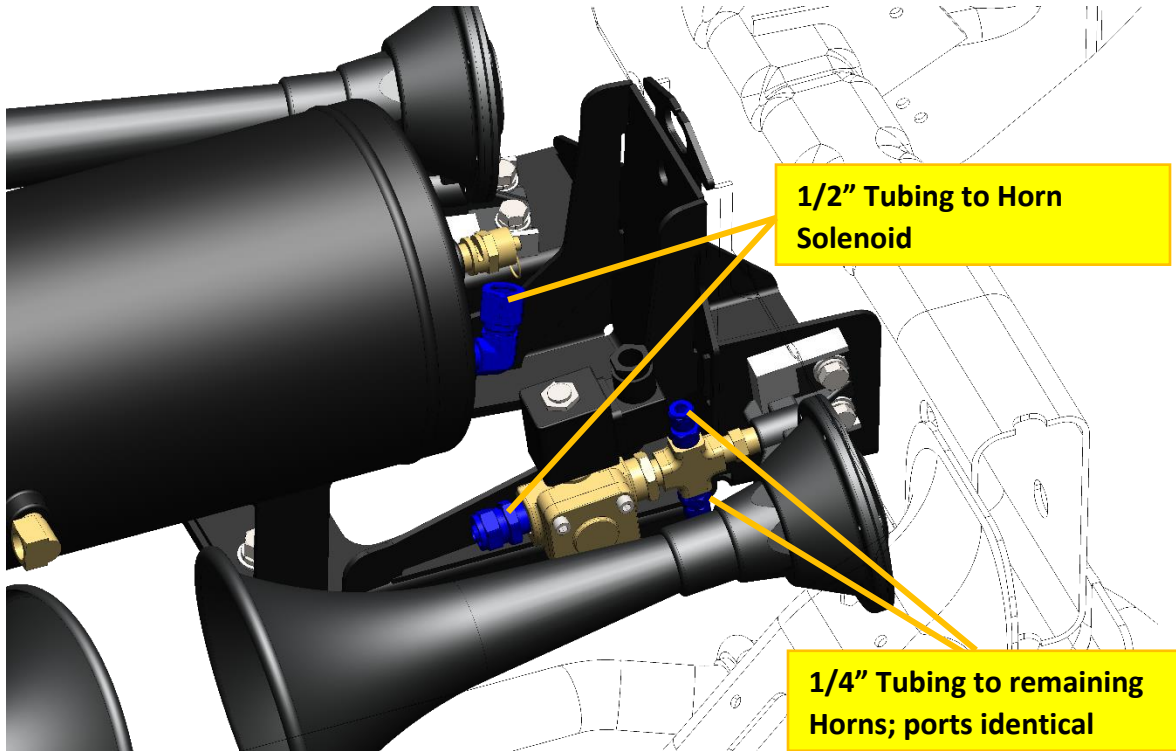
1. Use supplied air compressor braided line, per below illustration



- a. Apply two small drops of [Kleinn Air Horn Juice](#) to each male pipe thread
- b. Hand-tighten each fitting, then further tighten each 1/4-1/2 turn using proper sized box-end wrench; adjust as necessary to match fitting orientation shown

9.2 Connect Horn Solenoid to Horns and Air Tank

1. Use supplied 1/2" and 1/4" tubing, per below illustrations



- a. Recommended to minimize bends in semi-rigid tubing and route similar to shown
- b. Either horn may be connected to either output port on Solenoid
- c. Reference [Kleinn 730 Horn Kit installation manual](#) for more information

9.3 Connect Remote Quick Connect Kit to Air Tank

1. Use supplied 1/4" tubing
 - a. Route and attach Quick Connect Coupler Kit to vehicle, as desired (I.e., under hood, near grill, behind bumper, etc.)

9.4 Connect Remote Air Compressor Filter

1. Use parts supplied with Compressor
 - a. Ensure filter is installed in location away from road spray, water, excessive dust, etc.
 - b. Reference [Kleinn 6450RC installation manual](#) for more information



10. On-Vehicle, Electrical Installation

10.1. Disconnect Vehicle Battery(s)

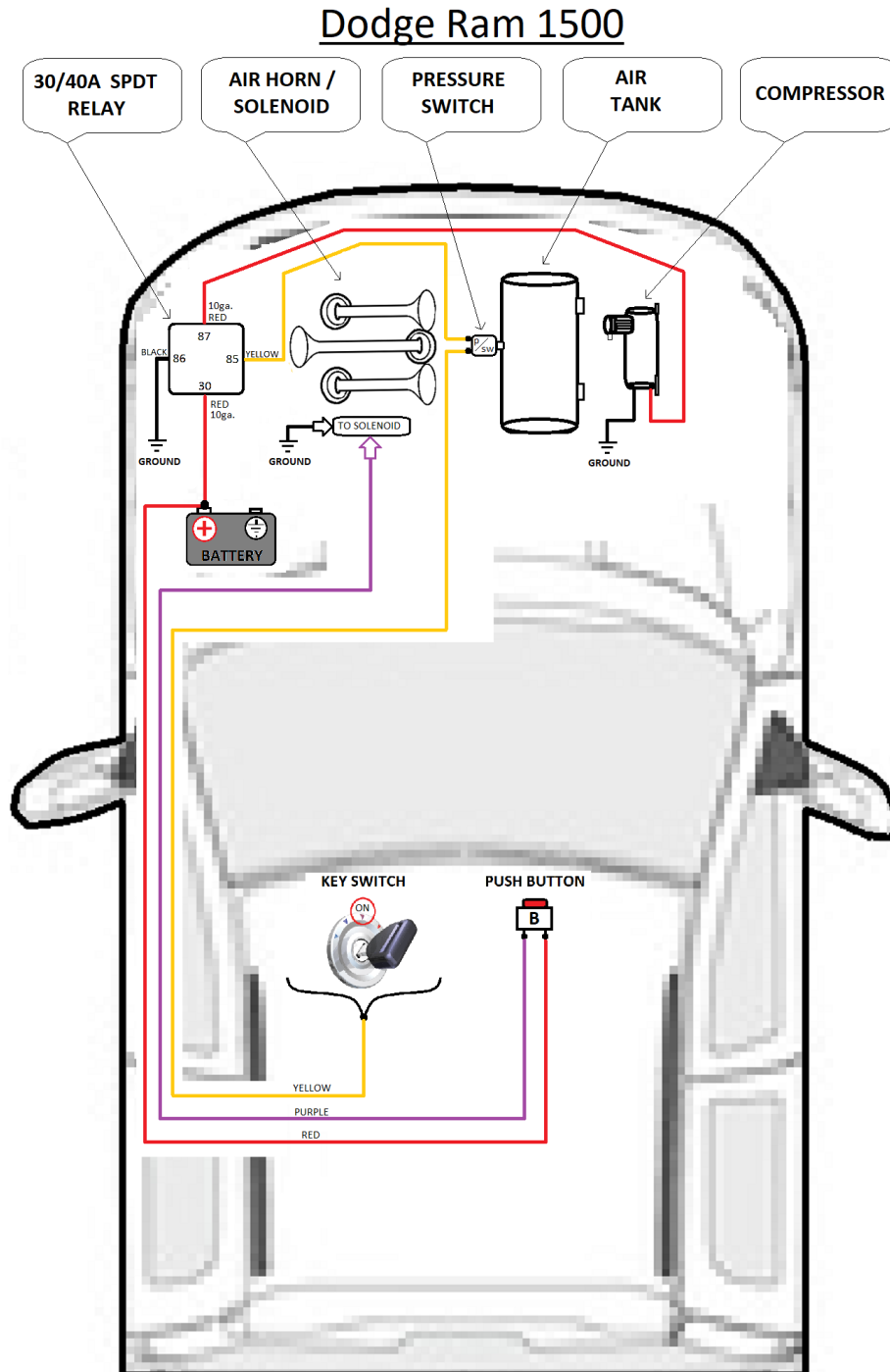
CAUTION: Follow all recommended safety precautions for working on vehicle's electrical system; consult vehicle owner's manual for further instruction.

10.2. Attach Relay to Vehicle

- a. The supplied relay is pre-wired so that it can be installed in line with main power wire. Before cutting any wires, determine adequate placement of relay, and wire accordingly.
 - i. Under hood near battery is always recommended, but final placement is at discretion of end user.
 - ii. Mount relay to vehicle using supplied self-tapping screws.
- b. Connect Pin #87 to compressor's Red power wire, using supplied large Yellow female crimp connector.
- c. Connect Pin #86 to supplied 18-gauge black wire (12-18 inches in length), and attach to adequate vehicle, or chassis ground, using supplied small blue ring terminal and self-tapping screw.
- d. Connect Pin #85 to supplied Yellow wire and route to pressure switch wire on Air Tank (either wire can be connected). Connect remaining yellow wire to other wire on pressure switch, route to vehicle interior, and connect it to a fused, 12v switched power source (i.e., open accessory spot on fuse block).

10.3. Route Wiring and Install Horn Button

- a. Route and connect wiring, per below illustration





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- b. Locate red 10-gauge power wire, this wire will be run to battery and down to compressor bracket. Wire should be routed away from all exhaust, for later connection to compressor; however, installer may route as desired.
 - i. Install supplied fuse holder on end of power wire by cutting the loop in fuse holder and connecting supplied Ring terminal to one end and butt connector on other end. Connect butt connector to red power wire and crimp properly.

CAUTION: Do not install 30-amp fuse provided until all electrical connections are final.

- ii. Connect ring terminal to positive terminal of battery; if multiple batteries exist on vehicle, it's recommended to attach to secondary battery.
 - iii. Route wire through 1/4" supplied split loom.

NOTE: Do not cut wires to length until you are 100% sure of length required for final connections.

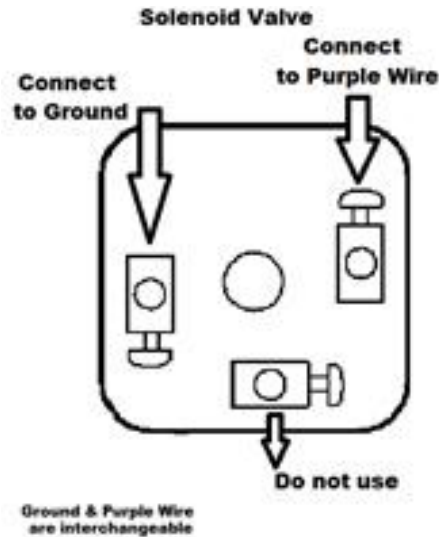
- c. Route yellow and purple wires from horn and ignition switch through a grommet in cab floor; user preference on grommet to use, based on selected route of wiring.
- d. Find a suitable location for horn pushbutton (i.e., in dash, center console, etc.) and drill a 3/4" hole. Run purple wire from behind and through hole along with supplied section of 18-gauge red wire. Slide pushbutton retaining nut over both wires, then connect purple wire to one terminal of pushbutton and red wire to other terminal. Install pushbutton into drilled hole and tighten nut on backside securely.
 - i. Reference [Kleinn Horn Button Install Manual](#), and [Kleinn Factory Horn Button Manual](#) for additional information
- e. Route 18-gauge red wire to a fused power source and connect.
- f. Insert all wiring into included wire loom and ensure loom is away from all sharp edges, hot vehicle parts (i.e., exhaust, engine, radiator), and fasten securely to vehicle using zip ties, or equivalent.

10.4. Connect Relay to Wiring

- a. Connect Pin #87 to compressor's Red power wire, using supplied large Yellow female crimp connector.
- b. Connect Pin #85 to supplied 18-gauge black wire (12-18 inches in length), and attach to adequate vehicle, or chassis ground, using supplied small blue ring terminal and self-tapping screw. Ensure ring terminal is properly grounded by either touching bare metal, or via self-tapping screw.
- c. Connect Pin #86 to supplied Yellow wire and to pressure switch wire on Air Tank (either wire can be connected). Connect remaining yellow wire to other wire on pressure switch, route to vehicle interior, and connect it to a fused, 12v switched power source (i.e., open accessory spot on fuse block).

10.5. Connect Air Horn Solenoid

- a. Remove single screw holding black plastic protective housing from solenoid and insert end of long purple wire and short black wire into round port on housing; fasten wires to solenoid screws, per below illustration



- b. Black ground wire from solenoid can be trimmed to length, and small blue ring terminal crimped on, it can then be attached to a paint free surface (i.e., grounded), with supplied self-tapping screw.
- c. Purple wire can be routed down frame rail and into vehicle interior; it will later be attached to horn activation button.
- d. Install supplied 30-amp fuse into inline fuse holder

10.6. Reconnect Vehicle Battery(s)

CAUTION: Before connecting 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.

11. Initial Testing of Kit

11.1. Test Air Compressor

- a. Turn vehicle ignition to on position and allow compressor to fill Air Tank. Initial fill may take approximately 1.5-3 minutes; Air Compressor should shut off automatically once full pressure is achieved.
- b. If compressor runs excessively (i.e., 5 minutes or more), disconnect electrical power to Air Compressor and listen for air leaks in system. Repair any problems and retest; contact Kleinn technical support if problem persists.
- c. 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
 - a. System must be pressurized or at least Air Compressor running
- d. If an air leak is found:
 - a. Safely release air pressure from system (i.e., slowly open drain valve)
 - b. Disassemble leaky connection, re-seal and reinstall fittings as needed

11.2. Test Train Horns

- a. Allow Air Compressor to run and shut-off automatically (i.e., Air Tank is full)
- b. Verify all tubing and electrical wire is securely fastened to vehicle, brackets, or kit parts; if necessary, use extra zip ties to hold tubing and wire in place



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- c. 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 Ear Muffs) for all persons closer than 100 feet from vehicle. Never operate train horns outdoors when persons are near vehicle without adequate hearing protection.

- a. Briefly activate Horns by pressing Horn Button for one (1) second; repeat three (3) times with a short rest period between (i.e., 1-3 seconds)
 - i. Horns should sound as expected and be loud; [click to listen to example 230 Kit](#)
 - ii. Horn sound/loudness will taper quickly as Air Tank loses pressure
- b. Allow Air Compressor to refill tank, if needed and activate Horns for longer three (3) second period to ensure Horns are functioning properly.

11.3. Test Quick Connect Coupler

- a. Allow Air Compressor to refill tank, if needed
- b. Attach supplied INF-1 inflator kit to Quick Connect Coupler and verify adequate air pressure is available
 - i. Test fill tires on vehicle, bicycle, etc.
 - ii. Use Air Blow Gun
 - iii. Use Air Impact Gun

12. General Operation of Kit

12.1. Compressor Operation

WARNING: Never operate Air Compressor above its MAXIMUM PRESSURE RATING (see label on body). Operation exceeding maximum pressure will damage Air Compressor and may result in Dangerous Air System failure.

- a. Air compressor is equipped with an automatic thermal overload protection circuit, to protect air compressor from overheating and damage; overload protector automatically resets after 30 minutes
- b. To prevent discharge of vehicle's battery and for best performance, keep vehicle's engine running while using air compressor for any prolonged use (i.e., filling tires, using air tools, etc.).

12.2. Horn Operation

- a. Allow Air Compressor to run until it shuts off automatically (i.e., Air Tank is full), or for at least one minute in between horn activations.
- b. Press Horn Button to activate Horns
 - i. Horn sound/loudness will taper quickly as Air Tank loses pressure.
 - ii. Horns should sound for 3-7 seconds depending on kit and tank size

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

13. Routine Maintenance

Perform following steps at least once during recommended intervals.

1. Yearly, or every 12000 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 12000 miles remove all road grime and mud from 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 high pressure washers may damage part finishes and must be used with care. Do this more frequently if traveling regularly off-road, or in winter climates where road salts are used.
3. Yearly, or every 12000 miles check electrical and air fitting connections and wires for abrasion, corrosion, or other damage. Replace damaged components.
NOTE: if system runs continuously or turns on unexpectedly, leaks or intermittent electrical connection may be present.
4. Monthly, or every 10 hours of compressor run time, drain moisture from air tank using drain valve installed at bottom of tank.
WARNING: Failure to regularly drain air tank may result in corrosion inside tank and possible failure in tank or air lines, which can suddenly release air pressure causing injury to nearby people.
5. Yearly, or every 12000 miles clean, or replace air compressor air filter element. Replacement frequency depends on operating frequency and conditions of operating environment (i.e., daily use of air compressor in dusty, or wet environment requires more frequent filter change).
NOTE: Never lubricate or add any liquids to the included oil-less air compressor.