



RNGR-102-1/220
INSTALLATION MANUAL

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RNGR-102-1/220

Installation & Operation Manual

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1 How to Use This Manual

1.1 Interactive Manual Using Adobe Reader

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

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

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

1.2.1 RNGR-102-1/220

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

1.2.2 Warranty Registration

Please register your kit online at <https://kleinn.com/warranty/> to expedite any future warranty claims.

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



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3 Application Chart

3.1 Bolt-On Vehicle List

RNGR-102-1/220 is a direct-fit bolt-on air horn system for the following vehicles.

MODEL YEAR	MODEL	DRIVE	ENGINE	BODY	TRIM
2019-2021	Ranger	All	All	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:

No incompatible configurations are known at this time.

3.3 Aftermarket Product Compatibility

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

- Power running boards/steps
- Fix running boards/steps

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

- No incompatibilities are known at this time.

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)

RNGR-102-1/220 consists of the following components, located on vehicle as follows:

ITEM	DESCRIPTION	VEHICLE LOCATION	APROX. INSTALL TIME
1	6275RC Air Compressor (102-1 KIT) 6450RC Air Compressor (220 KIT)	Passenger-side rear bed pocket	1 hr.
2	1.5 Gal. Air Tank	Driver-side rear bed pocket	2 hrs.
3	102-1 Air Horns (102-1 KIT) 220 Air Horns (220 KIT)	Under cab	2 hrs.



Figure 1: Isometric Overlay of Kit Locations

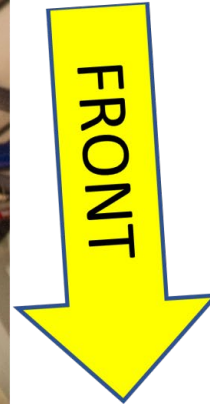
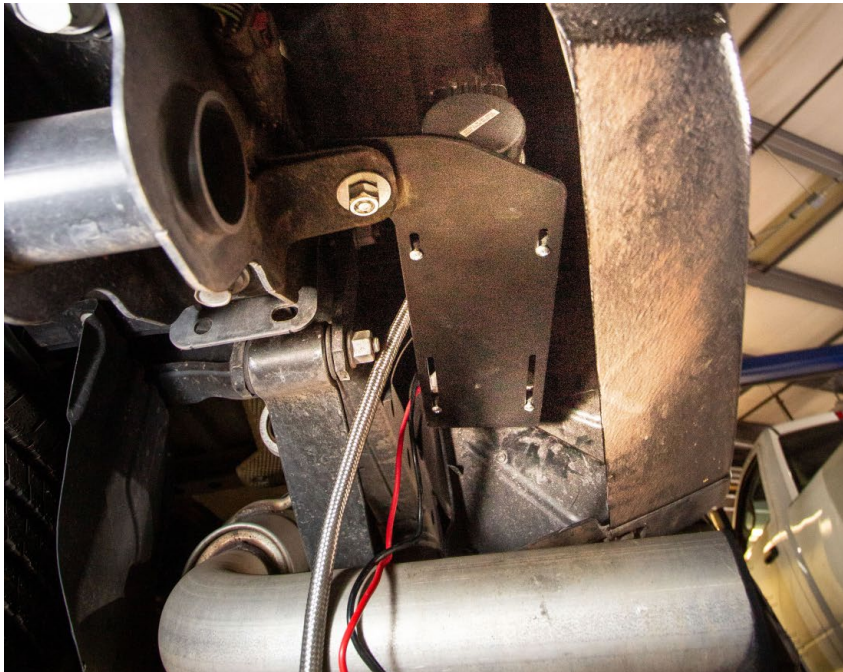


Figure 2: Under Vehicle View (Compressor) – Behind Rear Wheel Well (Passenger Side)



Figure 3: Under Vehicle View (Horns) – Under Driver Side Seating Area (220 Horns Shown)



Figure 4: Under Vehicle View (Air Tank) – Behind Rear Wheel Well (Driver Side)

4.2 Install Process Outline

For person(s) with prior experience installing RNGR-102-1/220, a reminder of the install steps is provided below:

UNPACKAGE KIT (SECTION 6)

1. Layout and organize all parts

BENCH ASSEMBLY (SECTION 8)

2. Assemble air fittings to air tank
3. Assemble air filter to air compressor
4. Attach compressor to compressor bracket
5. Attach air tank to tank brackets
6. Assemble horn (**DRIVERS**) to horn bracket

ON-VEHICLE MECHANICAL ASSEMBLY (SECTION 9)

7. Mount compressor bracket to vehicle
8. Mount tank brackets to vehicle
9. Mount horn bracket to vehicle
10. Attach horn trumpets to the horn drivers (**220KIT ONLY**)
11. Connect pneumatic components & route air tubing

ON-VEHICLE ELECTRICAL ASSEMBLY (SECTION 10)

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

FINAL STEPS (SECTION 11)

14. Test system; adjust as needed



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4.3 Approximate Installation Time

RNGR-102-1/220 is a multi-faceted product consisting of mechanical, electrical, and pneumatic components.

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

- **5 hrs.**

END OF SECTION

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. Universal Joint Socket Adapters
4. Basic mechanic's screwdriver set (Philips, Flat Head)
5. Diagonal cutter/wire cutter pliers
6. Wire strippers
7. Wire terminal crimpers
8. Slip-joint pliers
9. Vise grips or locking pliers
10. Small pry bar or large flat blade screwdriver
11. Utility knife or utility razor blade
12. 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. Dielectric grease for electrical connections
3. Heat shrink tubing for electrical connections
4. Medium-strength thread-locker (i.e., Blue Loctite® PN 242) or equivalent
5. Low-strength thread-locker (i.e., Purple Loctite® PN 222) or equivalent
6. Black/Clear silicone for drilling holes in body
7. Sandpaper or wire brushes for installing ground wires
8. Extra plastic zip ties > 6" long
9. Extra NPT sealant (i.e., Kleinn Air Horn Juice, Teflon tape, etc.)
10. Touch-up paint for frame/chassis/body (i.e., primer or black epoxy)
11. Typical cleanup supplies

END OF SECTION

6 Parts List






6.1 Review Parts List

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

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


6.2 Pre-Packaged 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	6275RC (102-1KIT ONLY)	6275RC Compressor Kit, with included hardware, and remote air supply line	
K1	*1	6450RC (220KIT)	6450RC Compressor Kit, with included hardware, and remote air supply line	
K2	*1	102-1 (102-1KIT ONLY)	102-1 Series Horn Kit, with included solenoid/valve and L-bracket	
K2	*1	220 (220KIT ONLY)	220 Series Horn Kit, with included solenoid/valve, and 1/4" Air Tubing	
K3	1	6275RT	1.5 Gal Air Tank	




*Kit Specific Item

6.3 Air Fittings & Related Items





ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
F1	*2	51414 (*QTY 1 for 102-1KIT ONLY)	Comp. Fitting, 1/4" NPT - 1/4"	
F2	1	51414L	Comp. Fitting, 1/4" NPT – 1/4", Elbow	
F3	*2	51414NPTL (*QTY 1 for 102-1KIT ONLY)	Adapter, 1/4" NPT – 1/4" NPTF, Elbow	
F4	*1	54440 (*220KIT ONLY)	Adapter, T, 1/4" NPT – 1/4" NPTF – 1/4" NPTF	
F5	1	51414F	Comp. Fitting, 1/4" NPTF – 1/4"	
F6	1	52175	Safety Valve, 1/4" NPT 175PSI	
F7	1	52835	Drain, 1/4" NPT	
F8	1	2151	1/4" NPT Pressure Switch	
F9	1	Air Horn Juice	Thread Sealant for NPT Fittings	
F10	1	25014-1	1/4" Airline x 12'	
F11	1	25014-2	1/4" Airline x 25'	
F12	*1	1302 (*220KIT ONLY)	Remote Quick Connect Coupler Relocation Kit	
F13	*1	INF-1 (*220KIT ONLY)	Inflator Kit	

*QTY varies based on Kit

6.4 Electrical Components & Related Items



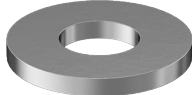

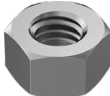

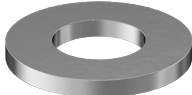

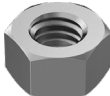
ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
C1	1	320	Terminator – Nickel Plated Remote Horn Button	
C2	1	WIRE KIT	Full Wire Kit, with electrical connectors and zip ties	
C3	1	Loom Pack	Wire Loom, Corrugated & Split <ul style="list-style-type: none"> • ½" X 30 ft • ¼" X 12 ft 	

6.5 Mounting Brackets & Special Hardware

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
H1	1	RNGR-100	Compressor Bracket	
H2	1	RNGR-201	Tank Bracket, Front	
H3	1	RNGR-202	Tank Bracket, Rear	
H4	1	RNGR-300	Horn Bracket	

6.6 Hardware, Fasteners, & Soft Parts

NOTE: Scale images of hardware is illustrated at the end of this manual.

ITEM NO.	QTY.	PART NUMBER / SIZE	DESCRIPTION	PICTURE (Not to Scale)
H1	6	7/16-14 x 1.25"	Hex Bolt, Fully Threaded, Zinc Plated	
H2	2	7/16" x .922" OD	Washer, SAE 7/16"	
H3	10	7/16" x 1.256" OD	Washer, USS 7/16"	
H4	6	7/16" Split	Lock washer, 7/16"	
H5	6	7/16-14	Nut, 7/16-14	
H6	2	1/4-20 x 1" (102-1KIT ONLY)	Button head screw	
H7	6	1/4" x # OD (102-1KIT ONLY)	Washer, SAE 1/4"	
H8	2	1/4" Split (102-1KIT ONLY)	Lock washer, 1/4"	
H9	2	1/4-20 (102-1KIT ONLY)	Nut, 1/4-20	

NOTE: Hardware included with kit components (horns, compressor) are not listed in this section.

END OF SECTION

7 Bench Assembly

Complete the following steps on a bench to prepare for on-vehicle installation.

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

It is recommended to clean any re-used OEM hardware before re-apply threadlocker and re-installing.

Use the following chart for torque specifications.

Item No.	Thread Size	Used for	Torque Spec (lb.-ft.)
H1/H5	7/16-14	Tank/Compressor Bracket	37
H6/H9	1/4-20	Horn Mounting (102-1KIT)	6

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](#)

NOTE: The fittings identified with an (*) & "1302" are not included with 102-1KIT. Thread 51414 "to horns" directly into tank.

4. Hand-tighten each fitting, then further tighten ¼ to ½ turn using proper sized combination wrench; adjust as necessary to match fitting orientation, as shown.

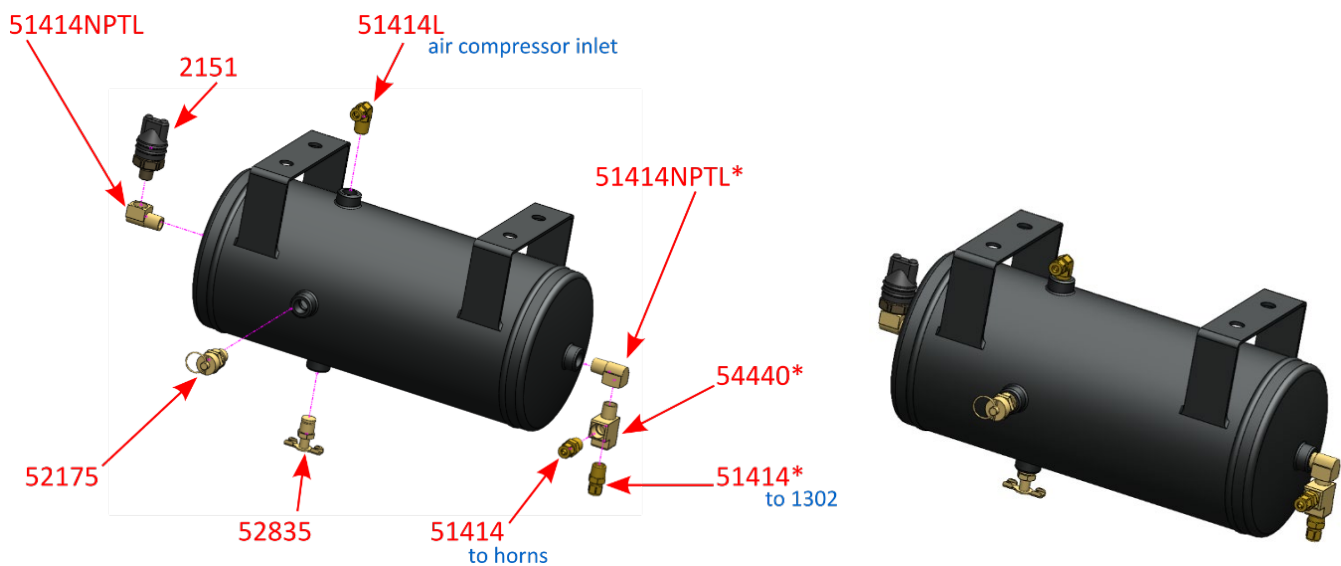


Figure 5: Air Tank Exploded / Assembled View

5. Attach one roll of 1/4" airline to each of the following fittings:
 - 5.1. 51414L fitting for the air compressor inlet (12')
 - 5.2. 51414 fitting for the horn output (25')
 - 5.3. 51414 for remote quick-connect (12') **(220KIT ONLY)**

7.2 Assemble Air Tank to Tank Brackets

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

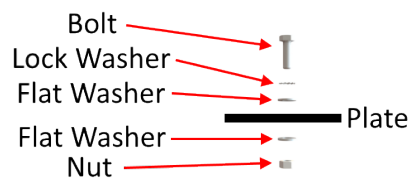


Figure 6: Hardware Assembly Order

1. Use [H1](#), [H3](#), [H4](#), & [H5](#) to attach the tank brackets to the tank as shown.

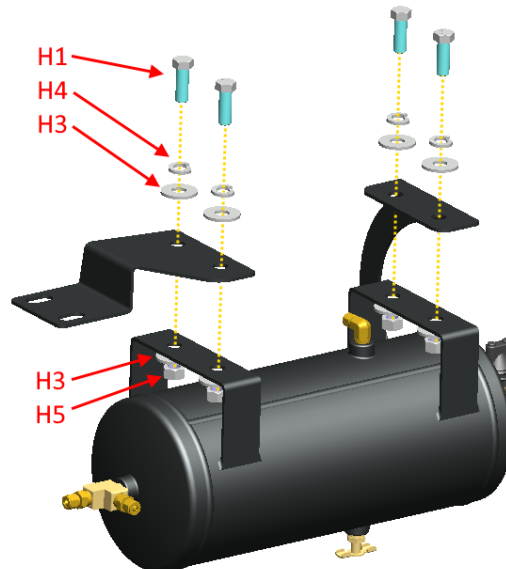


Figure 7: Air Tank / Bracket Assembly Exploded View

7.3 Assemble Air Filter to Air Compressor

1. Remove the compressor, included hardware and air filter from its packaging.

2. Review included directions in the compressor package pertaining to the remote air filter; select location on vehicle where to mount the air filter, or if desired, filter housing may be secured to included brackets using zip ties.
3. Pry open plastic air filter housing and install the foam filter inside. Attach fittings for filter to the end of the air compressor and filter housing. Follow instructions included in the compressor package.

NOTE: The air filter tubing is rigid and may be difficult to route without kinks or install over fittings. If necessary, use a heat source (heat gun or similar) at a safe distance to make tubing pliable for routing & installation on fittings.



Figure 8: Remote Air Intake w/ Tubing (For Compressor)

7.4 Assemble Air Compressor to Compressor Bracket

1. Apply Air Horn Juice to the male threads on the 1/4" NPT check valve at the end of the compressor leader hose. Thread the 51414F (F5) on to the end of the check valve.
2. Use the hardware included with the compressor to attach the compressor to the bracket as shown.

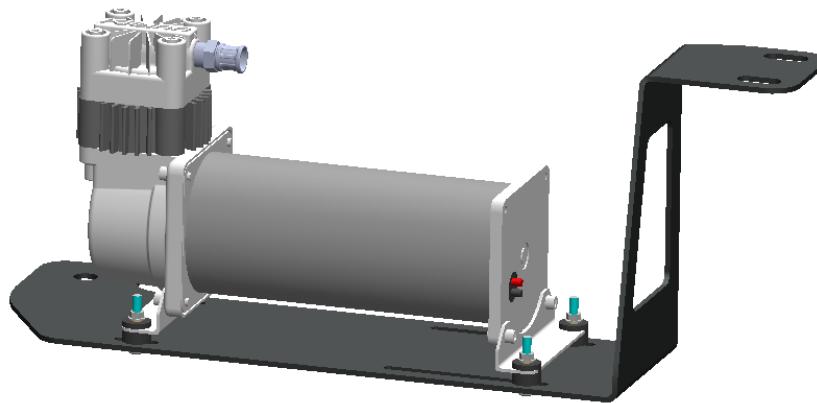


Figure 9: Air Compressor Attached to Compressor Bracket

NOTE: The following instructions listed on Section 7.5 are for the 220KIT ONLY. 102-1KIT, skip this section.

7.5 Disassemble Trumpets from Air Horn Drivers

(220KIT ONLY)

1. Remove the air horns and the included hardware from packaging.
2. Remove the trumpets from the air horn drivers by the following:
 - Firmly grasp the trumpet near the metal collar with one hand & the horn driver with the other hand.
 - Twist counter-clockwise to unscrew the trumpet from the driver as shown below.



Figure 10- Trumpet & Driver Separation

7.6 Assemble Air Horn Driver to Horn Bracket

(102KIT ONLY)

Use the hardware included with the horns, along with [H6](#), [H7](#), [H8](#), & [H9](#) to attach the horns to the bracket as shown.

(220KIT ONLY)

Use the hardware included with the horns attach the horns to the bracket as shown.

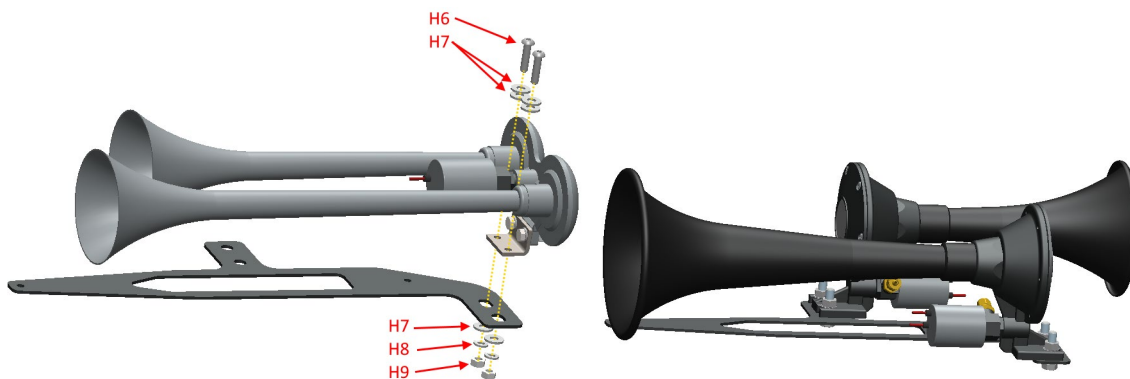


Figure 11- Horn-to-Bracket Installation (102-1 / 220)

1. Prewire the solenoid(s)
2. Connect the included T-fitting between the two horns **(220KIT ONLY)**.

END OF SECTION

8 On-Vehicle Assembly, Mechanical

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 Install Air Tank on Vehicle

1. Locate the highlighted mounting points circled (REF. below Figure) in the "pocket" behind the driver side rear wheel well.
2. Remove the hardware indicated by the arrows & set aside. This hardware will be reused.

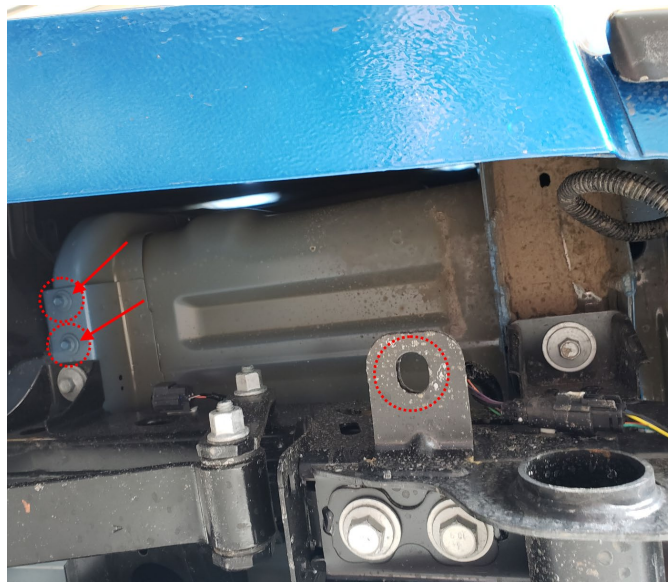


Figure 12- Air Tank Install Location

3. Lift the air tank with brackets attached, up over the flange with the slot. The bracket should rest **on top** of this flange. Attach the brackets to the mounting points reusing the OEM hardware, along with [H1](#), [H2](#), [H3](#), [H4](#), & [H5](#) as shown below.

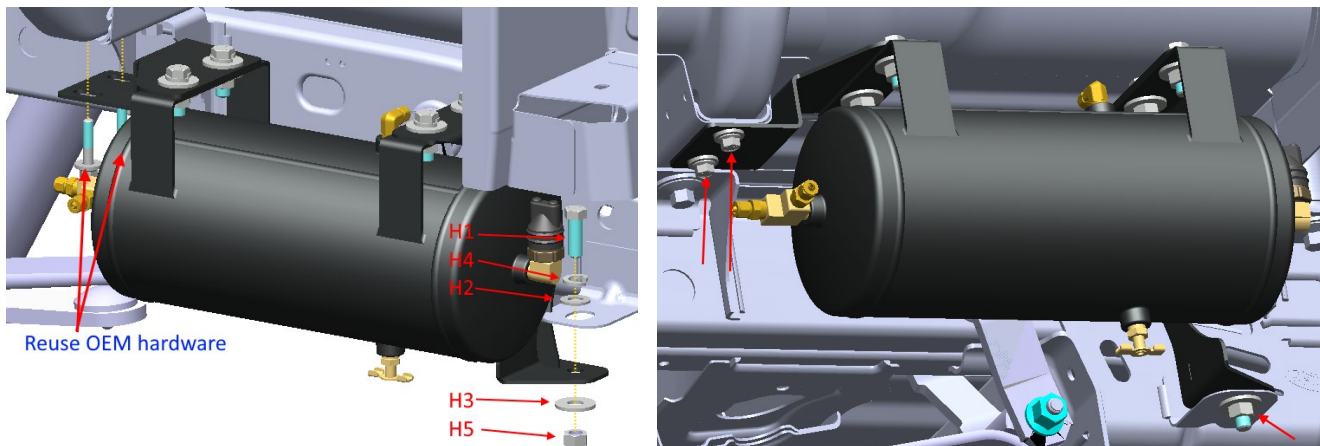


Figure 13- Air Tank Installation

8.2 Install Air Compressor on Vehicle

1. Locate the same mounting points for the tank on the passenger side of the vehicle. Circled below.
2. Remove the hardware indicated by the arrows & set aside to be reused.

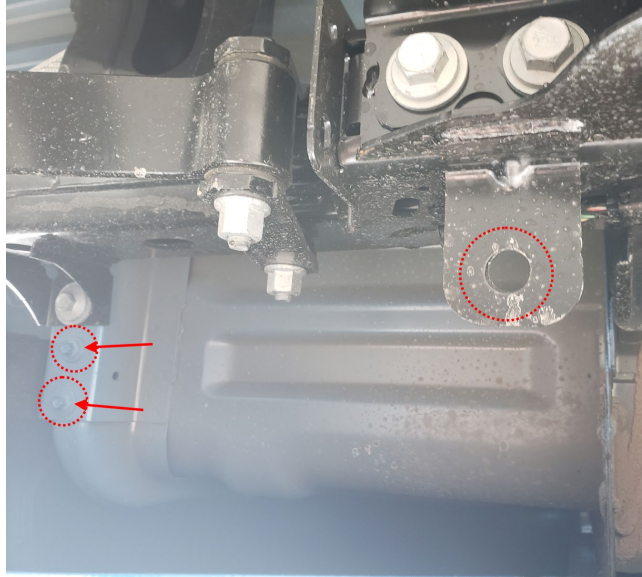


Figure 14- Air Compressor Install Location

3. Lift the air compressor with bracket attached, up over the flange with the slot. The bracket should rest **on top** of this flange. Attach the bracket to the mounting points reusing the OEM hardware, along with [H1](#), [H2](#), [H3](#), [H4](#), & [H5](#) as shown below.

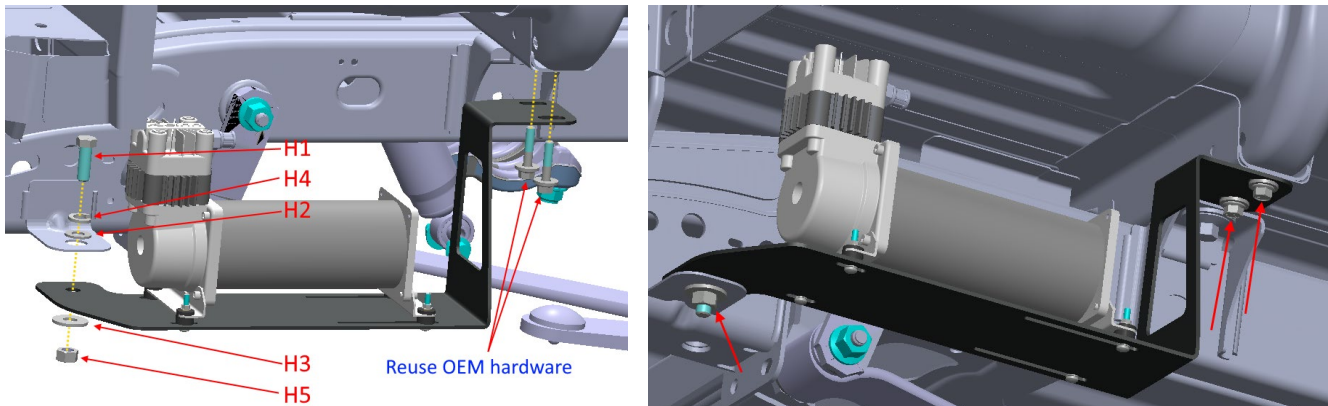


Figure 15- Air Compressor Installation

8.3 Install Horns on Vehicle

1. Locate the highlighted mounting points circled below underneath the driver's seat.
2. Remove the hardware indicated by the arrows. Retain this hardware to be reused for installation of the horn bracket.



Figure 16- Horn Bracket Install Location

3. Attach the bracket to the mounting points reusing the OEM hardware as shown below.

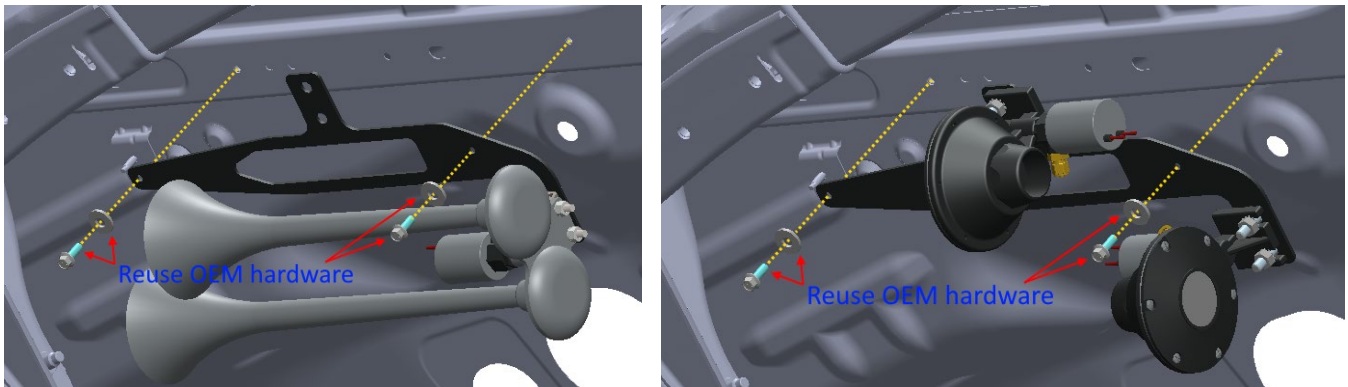


Figure 17- Horn Bracket Installation (102-1 / 220)

4. Reattach the horn trumpets to the drivers as shown. (Short trumpet closer to driver side). **(220KIT ONLY)**

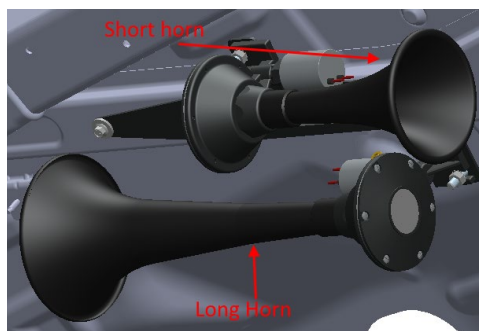


Figure 18- Trumpets Install Location

NOTE: The following instructions on Section 8.4 are for the 220KIT ONLY. 102-1KIT, skip this section.

8.4 Route Air Hose and Install Remote Quick-Connect Coupler

1. Route airline as desired from compressor to the tank, from the tank to the horns, and to the remote quick connect coupler.
2. Mount the remote quick connect coupler as desired using the hardware and bracket provided, as shown below.

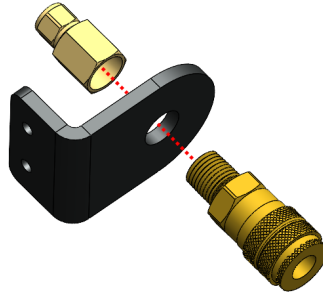


Figure 19- Remote Quick Connect Coupler Assembly

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

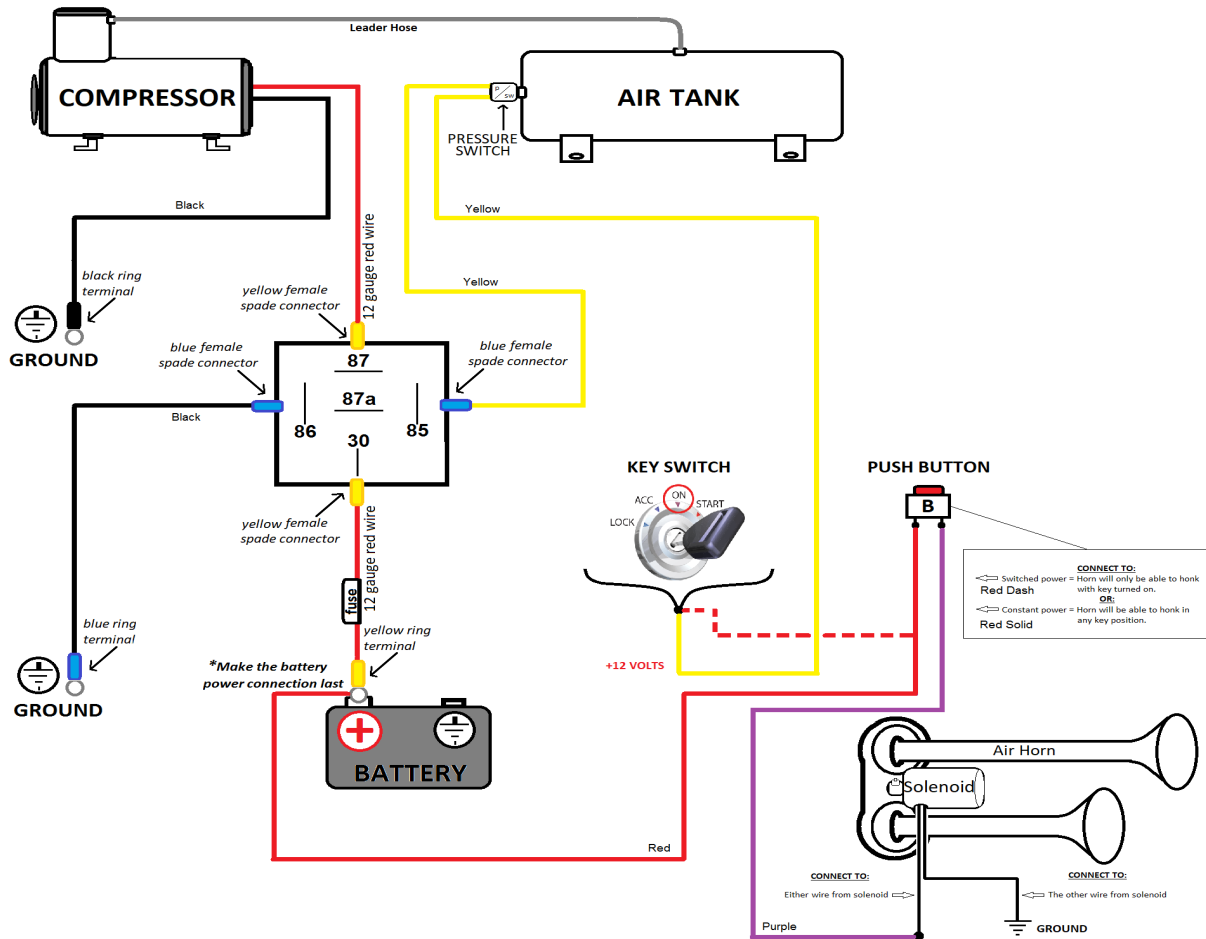


Figure 20: Suggested Ignition Relay Diagram for Air Horn System

PRESSURE SWITCH
(either wire can go to Relay or Ignition)



AIR HORN SOLENOID
(either wire can be PWR or GND)

9.2 Disconnect Vehicle Battery(s)

1. Consult owner's manual.

9.3 Connect Wires to Fuse & Relay

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

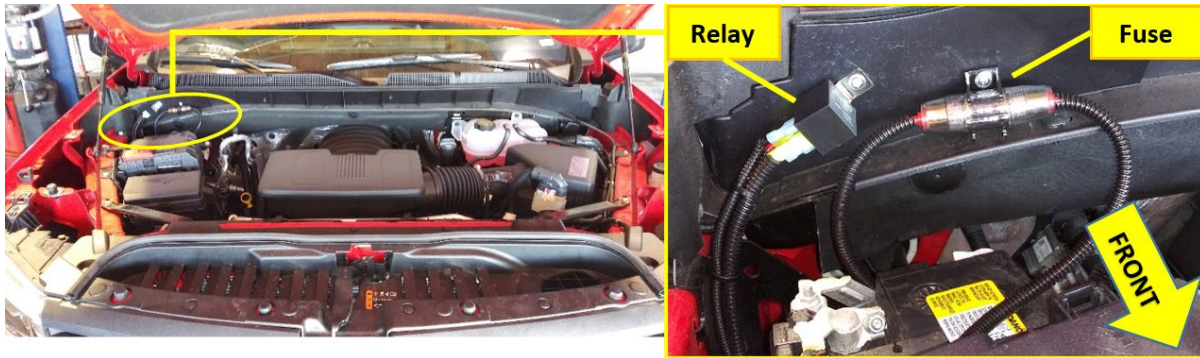


Figure 21- Fuse / Relay Installation Location (REFERENCE)

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.

CAUTION: Do not install fuse until all electrical connections are final.

9.4 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 22: Horn Button Installed / OEM Upfitter Switches



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NOTE: For vehicles with OEM / 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.

9.5 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.

9.6 Connect Air Compressor

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

9.7 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).

9.8 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).
2. Fasten loom 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

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good practice to quickly ensure fasteners have not moved.

2. Yearly, or every 12,000 miles, **inspect OE wiring, tubing, cables, etc.** where kit parts may touch to **verify no abrasion or rubbing.**
3. Yearly, or every 12,000 miles, remove all road grime and mud from the mounting brackets and kit parts using clean water from a garden hose. Pay special attention to corners where dirt may collect. Touch up all paint chips using automotive grade enamel in either spray or brush form.

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

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

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

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

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

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

NOTE: NEVER lubricate or add liquids to the compressor.

END OF SECTION



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13 Warranty Information

Thank you for purchasing RNGR-102-1/220/OBA. If you experience any unexpected problems during installation or have problems with any part, please contact Kleinn support.

KLEINN MANUFACTURER LIMITED DEFECT WARRANTY:

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

END OF MANUAL

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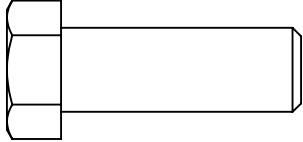
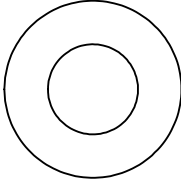
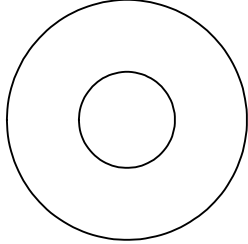
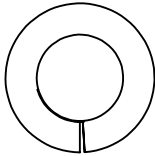
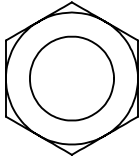


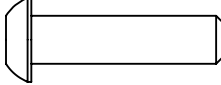
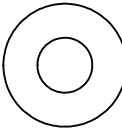


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14 Record of Revisions

<i>Date</i>	<i>Revision</i>	<i>Description</i>	<i>Author</i>
10/28/2021	BETA	Beta Manual	AG
02/15/2022	IR	Initial Revision	AG


ITEM #	QTY	SCALE IMAGE
H1	6	
H2	2	
H3	10	
H4	6	
H5	6	

ITEM #	QTY	SCALE IMAGE
H6	2	
H7	6	
H8	2	
H9	2	

NOTE:

SCALE IMAGES OF PREPACKAGED HARDWARE INCLUDED WITH HORNS & COMPRESSOR ARE NOT ILLUSTRATED ON THIS SHEET.

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