

# RZR1000-KIT INSTALLATION MANUAL

REV: A (12/3/2018)



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## **Installation and Operation Manual**

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# **Installation and Operation Manual**

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## **Installation and Operation Manual**

## 2. How to Use this Manual

#### 2.1. Interactive Manual using Adobe Reader

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

- Hyperlinks (<u>blue underlined text</u>) allow access to additional content via internet; click/tap to activate
   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 quickly navigating to any section; click/tap
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visit https://get.adobe.com/reader/otherversions/

On Android, iPhone/iPad, and Windows devices,

visit <a href="https://acrobat.adobe.com/us/en/acrobat/mobile-app.html">https://acrobat.adobe.com/us/en/acrobat/mobile-app.html</a>

## 2.2. Your Kit Part Number and this Manual

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

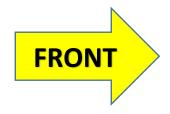
#### 2.2.1. RZR1000-KIT (i.e., On-Board Air and 102 Train Horn Kit)

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.

#### 2.3. Illustration/Photo Details and 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 this manual yellow arrows with text reading "FRONT", may be present over illustrations and pictures. These arrows specify direction toward front of vehicle and provide clarity to how illustration is viewed.



## **Installation and Operation Manual**

## 3. 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



## **Installation and Operation Manual**

## 4. Application Chart

#### 4.1. 100% Direct Bolt-On Vehicle List

RZR1000-KIT is a 100% direct bolt-on aftermarket product for POLARIS vehicles listed in below chart; every effort has been made to verify correct fitment on these vehicles in their factory, non-modified conditions.

MODEL YR	MODEL	DRIVE	ENGINE	BODY	TRIM
2014-2019	RZR 1000 XP	ALL	NON-TURBO	ALL	ALL**
2014-2019	RZR 1000 XP	ALL	TURBO	ALL	ALL**

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

#### 4.2. \*\*Excluded Vehicles

#### RZR1000-KIT may NOT be compatible with following POLARIS vehicles:

- 4.2.1. All trim packages with upgraded rear body panels (i.e., rock protection, aggressive flairs, etc.)
- 4.2.2. All trim packages with self-adjusting/automatic suspension, such as Polaris DYNAMIX
- 4.2.3. All trim packages with high-flow air intakes/clutch cooling, or snorkel style tubing
  - 4.2.3.1. Vehicles with these OEM upgrades may require body, chassis, or kit modifications to properly install
  - 4.2.3.2. Review this manual in full before unpackaging kit and verify correct space and mounting locations exist with your trim package

#### 4.3. Aftermarket Product Compatibility

This kit has NOT been designed, or tested for use with aftermarket rear suspension trailing arms, sway bars, sway bar disconnects, exhaust systems, bolt-on turbo/super chargers, air intake systems, etc.



# **Installation and Operation Manual**

## 5. Kit Installation Overview

RZR1000-KIT consists of following sub-systems, located on vehicle, as follows:

ITEM	DESCRIPTION	MOUNTING LOCATION	APPROX. INSTALL TIME
1	102 Series Dual Horn with Air Solenoid	Directly behind rear firewall, on Driver side, mounted to frame tubing	1+ Hours
2	1 Gal. Air Tank	Directly behind rear firewall, mounted between chassis sway bar mounts	2+ Hours
3	6350RC Air Compressor	Directly behind rear firewall, on Pass. side, mounted to frame tubing	1-2 Hours

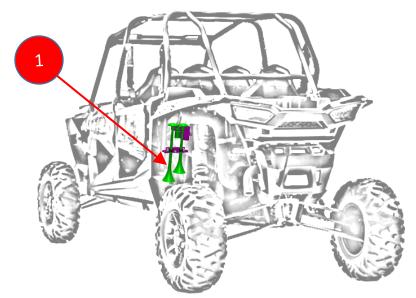


Figure 1 - Back Driver View Showing Air Horn Location

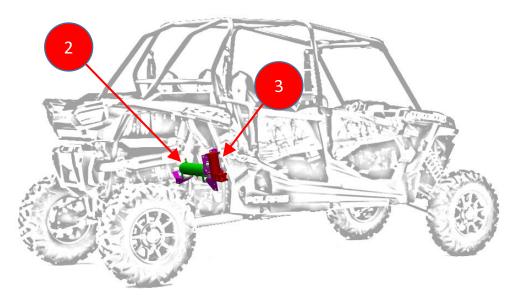


Figure 2 - Back Passenger View Showing Air System Location



# **Installation and Operation Manual**



## **Installation and Operation Manual**

#### 5.1. Approximate Installation Time

RZR1000-KIT is a multi-faceted product consisting of multiple mechanical, electrical, and pneumatic components.

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:

#### 4-8 Hours

## 5.2. \*\*\*Quick Install Outline

For person(s) with experience installing Kleinn bolt-on kits, RZR1000-KIT can be installed in an order similar to below:

- 1. Remove clutch cooling tube
- 2. Remove intake tube
- 3. Route and connect wiring and horn button
- 4. Remove firewall heat shield (TURBO ONLY)
- 5. Disconnect sway bar (one side at a time)
- 6. Attach air tank brackets into sway bar holes (one side at a time; leave nuts loose)
- 7. Attach compressor bracket to frame tube (leave nuts loose)
- 8. Reinstall firewall heat shield (TURBO ONLY)
- 9. Attach air tank (torque all bracket nuts & tank)
- 10. Attach compressor
- 11. Attach compressor hose to tank
- 12. Attach top horn mount bracket (leave nuts loose)
- 13. Attach lower horn bracket
- 14. Attach horn to brackets, re-position as needed (torque all bracket nuts & horn)
- 15. Route and connect air tubing
- 16. Reinstall clutch & intake tubes
- 17. Test system

# AIR HORNS

## RZR1000-KIT

## **Installation and Operation Manual**

## 6. List of Tools and Supplies

## 6.1. Standard Tool List (Required)

- 6.1.1. Basic mechanic's 3/8" drive socket sets with extensions
  - Inch Size Sockets (1/4" − 1" Hex)
  - Metric Size Sockets (6mm 20mm Hex)
- 6.1.2. Basic mechanic's 3/8" socket swivel/UV-Joint
- 6.1.3. Basic mechanic's combination wrenches (box/open-end) Ratcheting preferred
  - Inch Size Wrenches (1/4" 1" Hex)
  - Metric Size Wrenches (6mm 20mm Hex)
- 6.1.4. Basic mechanic's hex wrench/hex driver set
  - 1. Metric Size Hexes (4mm-8mm)
- 6.1.5. Basic mechanic's screwdriver set (Philips, Flat Head)
- 6.1.6. Diagonal Cutter/Wire Cutter Pliers
- 6.1.7. Wire Strippers
- 6.1.8. Wire Terminal Crimpers
- 6.1.9. Slip-Joint Pliers
- 6.1.10. Utility Knife, or Utility Razor blade
- 6.1.11. Magnetic retrieval tool

#### 6.2. Special Tool List (Recommended)

- 6.2.1. 10-100 ft.-lb. torque wrench
- 6.2.2. 20-150 in.-lb. torque wrench
- 6.2.3. Multi-Meter for 12V DC electrical systems, or equivalent
- 6.2.4. 12V DC Test Light, or equivalent
- 6.2.5. Trim Panel Tool, for removing wiring push pins

## 6.3. Shop Consumables List (Recommended)

- 6.3.1. Quality Electrical tape
- 6.3.2. Di-electric grease for electrical connections
- 6.3.3. Silicone grease, or equivalent for rubber compressor bushings
- 6.3.4. Heat Shrink tubing for electrical connections
- 6.3.5. Medium-Strength Loctite (i.e., Blue) (i.e., Loctite PN 242), or equivalent
- 6.3.6. Sand Paper, or Wire Brushes for installing ground wires
- 6.3.7. Extra plastic zip ties > 6" long
- 6.3.8. Extra NPT sealant (i.e., Kleinn Air Horn Juice, Teflon tape, etc.)
- 6.3.9. Touch-up paint for frame/chassis
- 6.3.10. Typical cleanup supplies



## **Installation and Operation Manual**

## 7. Parts List

Below Parts List covers following kit part numbers:

RZR1000-KIT (i.e., 102 Train Horns)

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

Review pre-packaged items (i.e., train horn box, air compressor, air tank, etc.)

**Review Air Fittings and Tubing** 

**Review Wiring and Accessories** 

**Review Bolt-On Mounting Brackets** 

Review Hardware/Fasteners

## 7.1. Air Fittings and Related Items

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
1	1	2151 (view location on Air Tank)	1/4" NPT Pressure Switch	
2	1	52835 (view location on Air Tank)	1/4" NPT, Drain Valve	
3	1	52175 (view location on Air Tank)	1/4" NPT, 175 PSI Safety Valve	
4	1	54440 (view location on Air Tank)	1/4" NPT "T" MANIFOLD, FEMALE	The state of the s



# **Installation and Operation Manual**

5	1	59813 (view location on Air Tank)	1/4" NPT, Quick Connect Air Coupler, with Rubber Cover	
6	1	51414 (view location on Air Tank)	1/4" NPT X 1/4" Compression Fitting	
7	1	6230RT	Air Tank, 4" OD, 1 Gal., 5-Port	
8	1	25014	1/4" Air Tubing, 6 ft. long	
9	1	INF-1	Inflator Kit, with Air Hose and Bag	Brenth
10	1	KLEINN AIR HORN JUICE	Thread Sealant for NPT Fittings	



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## 7.2. Pre-Packaged Electro-Mechanical Items

NOTE: Items in this section come in their own packages and may include additional items inside package

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
11	1	6350RC	6350RC Compressor Kit, with included hardware, and remote air supply line	
12	1	102-1	102 Series Horn Kit, with included solenoid/valve	



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## 7.3. Electrical Small Components and Related Items

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
13	1	320	Terminator – Nickel Plated Remote Horn Button	
14	1	WIRE KIT	Full Wire Kit, with electrical connectors and zip ties	
15	1	¾" WIRE LOOM, 15 ft. Long	1/4" Wire loom for electrical routing	
16	1	1/8" WIRE LOOM, 15 ft. Long	1/8" wire loom for electrical routing	



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## 7.4. Bolt-On Mounting Brackets & Special Hardware

ITEM	QTY	PART NUMBER	DESCRIPTION	PICTURE
17	1	RZR-101	COMPRESSOR BRACKET, INNER HALF	
18	3	RZR-102	SPACER, BRACKET HALF	
19	1	RZR-103	COMPRESSOR BRACKET, OUTER HALF	
20	1	RZR-201	TANK BRACKET, PASSENGER SIDE	
21	1	RZR-202	TANK BRACKET, DRIVER SIDE	
22	1	RZR-301	HORN BRACKET, FRONT HALF	
23	1	RZR-302	HORN BRACKET, BACK HALF	



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24	1	RZR-303	TRUMPET SUPPORT CLAMP, BOTTOM HALF	
25	1	RZR-304	TRUMPET SUPPORT CLAMP, TOP HALF	
26	1	RZR-305	TRUMPET CLAMP, RUBBER TRIM (CUT FROM SUPPLIED GROMMET USING PRINTED TEMPLATE)	
27	1	RZR-306	TRUMPET CLAMP, RUBBER TRIM (CUT FROM SUPPLIED GROMMET USING PRINTED TEMPLATE)	



# **Installation and Operation Manual**

## 7.5. Hardware/Fasteners

ITEM	QTY.	HARDWARE SIZE	DESCRIPTION	WHERE USED
NO.				
1	2	7/8" ID X 15/16"	CABLE CLAMP, VINYL COATED	HORN CLAMP (2)
2	3	5/16"-18 X 2.25"	SQUARE NECK BOLT, GRADE 2,	HORN MOUNT (1)
			ZINC-PLATED	COMPRESSOR MOUNT (2)
3	4	1/4"-20 X 1"	SQUARE NECK BOLT, GRADE 2,	HORN MOUNT (2)
			ZINC-PLATED	HORN CLAMP (1)
				COMPRESSOR MOUNT (1)
4	9	1/4"-20 X .75"	SQUARE NECK BOLT, GRADE 2,	HORN MOUNT (2)
			ZINC-PLATED	HORN CLAMP (3)
				COMPRESSOR MOUNT (4)
5	4	5/16"-18 X 1"	SQUARE NECK BOLT, GRADE 2,	TANK MOUNT (4)
			ZINC-PLATED	
6	4	M5 X 0.8 X 30	HEX BOLT, GRADE 8.8, ZINC-	COMPRESSOR (4) – INCLUDED
		LONG	PLATED	IN COMPRESSOR BOX
7	13	1/4" ID X 0.63 OD	FLAT WASHER, SAE, ZINC-PLATED	HORN MOUNT (4)
				HORN CLAMP (4)
				COMPRESSOR MOUNT (5)
8	7	5/16" ID X 0.69	FLAT WASHER, SAE, ZINC-PLATED	HORN MOUNT (1)
		OD		COMPRESSOR MOUNT (2)
				TANK MOUNT (4)
9	4	M5 ID X 10 OD	FLAT WASHER, DIN, ZINC-PLATED	COMPRESSOR (4) - INCLUDED
				IN COMPRESSOR BOX
10	13	1/4"	LOCK WASHER, EXTERNAL TOOTH,	HORN MOUNT (4)
			ZINC-PLATED	HORN CLAMP (4)
				COMPRESSOR MOUNT (5)
11	7	5/16"	LOCK WASHER, EXTERNAL TOOTH,	HORN MOUNT (1)
			ZINC-PLATED	COMPRESSOR MOUNT (2)
				TANK MOUNT (4)
12	4	M5	LOCK WASHER, STANDARD SPLIT,	COMPRESSOR (4) - INCLUDED
			ZINC-PLATED	IN COMPRESSOR BOX
13	8	3/16" (#10)	FENDER WASHER, ZINC-	COMPRESSOR (8)
			PLATED	
14	13	1/4"-20	HEX NUT, GRADE 2, ZINC-PLATED	HORN MOUNT (4)
				HORN CLAMP (4)
				COMPRESSOR MOUNT (5)
15	7	5/16"-18	HEX NUT, GRADE 2, ZINC-PLATED	HORN MOUNT (1)
				COMPRESSOR MOUNT (2)
				TANK MOUNT (4)
16	4	M5 X 0.8	HEX NUT, GRADE 8.8, ZINC-	COMPRESSOR (4) - INCLUDED
			PLATED	IN COMPRESSOR BOX



## **Installation and Operation Manual**

## 8. 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.

Review Suggested Wiring Diagram for Ignition Relay

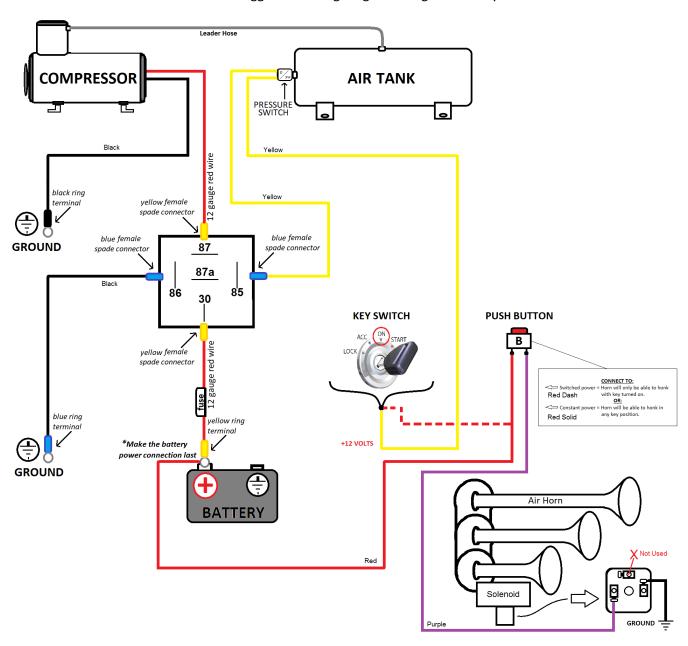


Figure 3 - Suggested Ignition Relay Diagram for Air Compressor, Air Tank, and Air Horn



## **Installation and Operation Manual**

8.1. Review suggested Wire Routing for Horn, Air Compressor, and Pressure Switch



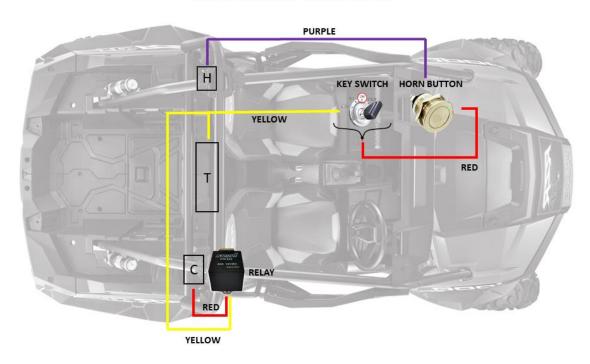


Figure 4 - Suggested Wire Routing for Horn, Air Compressor, and Pressure Switch

## 8.2. Disconnect Vehicle Battery(s)

## 8.3. Attach Relay to Vehicle

8.3.1. Fasten relay to vehicle body, under hood using supplied self-tapping screws. It is recommended to install in location near factory ground bolt, or battery(s) to minimize drilling holes.

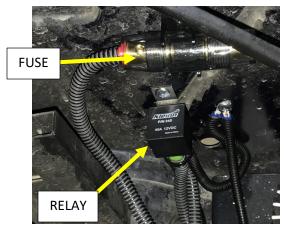


Figure 5 – Example of Relay and Fuse Mounted with Wire Loom



## **Installation and Operation Manual**

#### 8.4. Route Wiring and Install Horn Button

- 8.4.1. Route wiring throughout vehicle, per diagrams; however, installer may route as desired.
- 8.4.2. 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.

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

8.4.3. 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.

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

- 8.4.4. Find a suitable location for horn push-button (i.e., in dash, center console, etc.); verify location has 1"+ of clearance behind for terminals. Mark location for drilling.
- 8.4.5. Drill a 3/4" hole at location. Route horn button wires to hole then slide push-button retaining nut over wires and connect per wiring diagram. Install push-button into hole and tighten retaining nut securely on backside.

#### 8.5. Connect Relay to Wiring

8.5.1. Connect routed wiring to relay, per wiring diagram.

#### See Figure 4

#### 8.6. Connect Air Horn Solenoid

8.6.1. Vehicle space constraints make it difficult to connect Air Horn Solenoid in-vehicle; therefore, it is recommended to cut and connect a section of wiring to Solenoid during bench assembly, then perform final connection once Air Horn assembly is installed.

#### 8.7. Pressure Switch

8.7.1. Vehicle space constraints make it difficult to connect pressure switch in-vehicle; therefore, it is recommended to cut and connect a section of wiring to pressure switch during bench assembly, then perform final connection once Air Tank is installed in vehicle.

**End of Section** 



## **Installation and Operation Manual**

## 9. Bench Assembly Steps

Complete following steps off vehicle to facilitate final installation.

NOTE: ALL HARDWARE WILL BE SPECIFIED IN INSTRUCTIONS USING ITEM NO.'S FOUND IN PARTS LIST. See Parts List

## 9.1. Assemble Fittings to Tank

- 9.1.1. Apply two small drops of <u>Kleinn Air Horn Juice</u> to each male pipe thread.
- 9.1.2. Attach air fittings to tank, per illustrations.
- 9.1.3. 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.

# 9.1.4.Air Tank Exploded View with Fittings Return to Fittings List

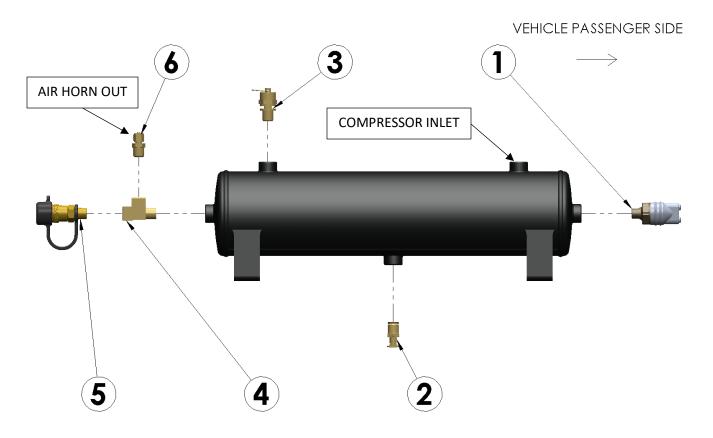
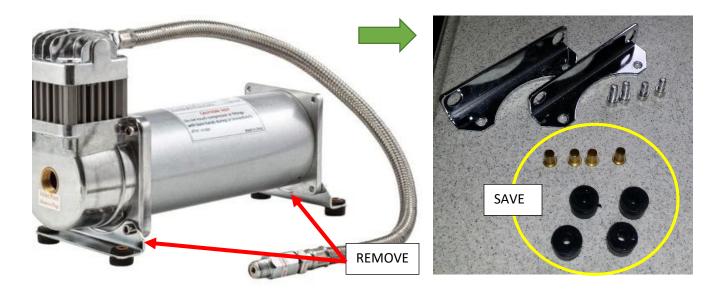


Figure 6 - Air Tank Exploded View



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- 9.2. Install Rubber Compressor Bushings & Bolts
- 9.2.1. Remove Compressor from packaging, then remove Brass sleeves and Rubber bushings from chrome feet; then set aside.
- 9.2.2. Using hex wrench, remove chrome feet from Compressor and discard, as shown below.



9.2.3. Open included hardware bag and install bolts, lock washer, and flat washer to Compressor, as shown below. Recommended to apply Medium-Strength Loctite (i.e., Blue) to threads before installing, then Torque to 20 in-lbs

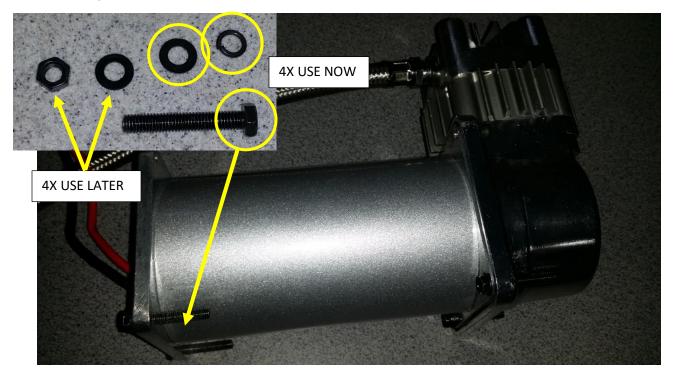


Figure 7 - Air Compressor with Bolts Installed as Studs



## **Installation and Operation Manual**

9.2.4. Insert Rubber bushings and Brass sleeves into Compressor Bracket, as shown below

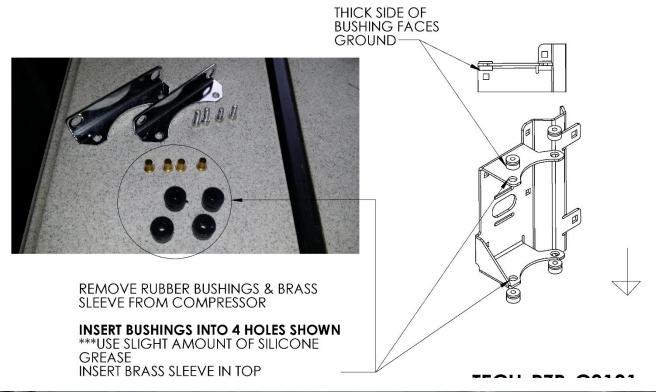




Figure 8 - Air Compressor Bracket with Rubber Grommets Installed



# **Installation and Operation Manual**

## 9.3. Assemble Trumpet Support Clamp

9.3.1. Using supplied large rubber grommets and printed template, cut each one to match template, as shown below.

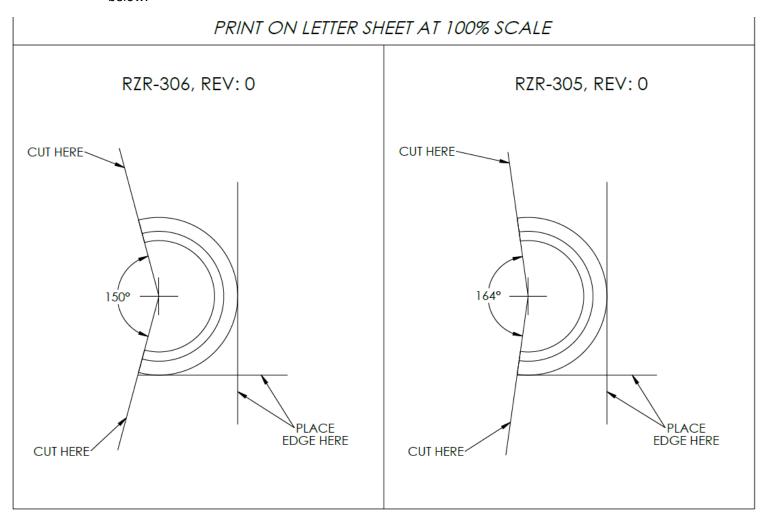


Figure 9 - RZR-305 & RZR-306 Cut Template



## **Installation and Operation Manual**

- 9.3.2. Assemble Trumpet Support Clamp using supplied hardware, as shown below.
  - 1. Leave fasteners loose.
  - 2. Do not attach Vinyl Coated Bands yet.

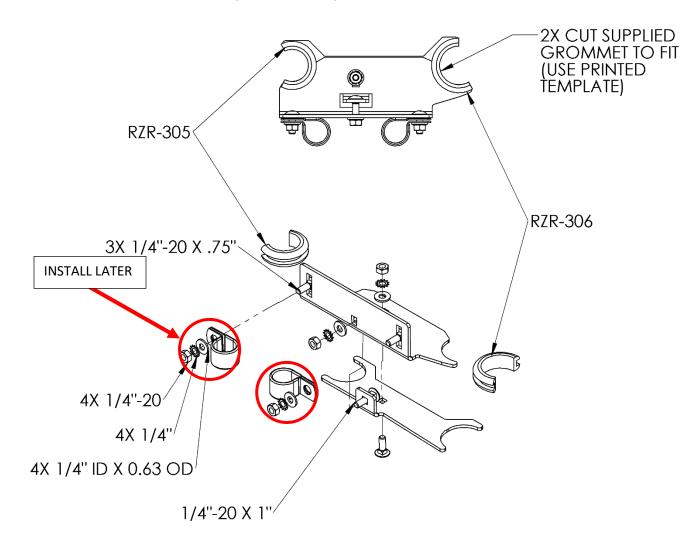


Figure 10 - Trumpet Support Clamp Exploded View

**End of Section** 



## **Installation and Operation Manual**

## 10. On-Vehicle Mechanical Assembly Steps

Complete following steps on vehicle.

Raise vehicle off ground using appropriate vehicle lift, ramps, or jack stands.

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

#### 10.1. Vehicle Preparation

Note: All parts removed in this section will be installed after the installation of RZR1000-KIT is complete.

Refer to Owner's Manual for further instruction, or consult Shop Repair Manual, or dealership for instruction

10.1.1. On the Driver side of the vehicle, remove the Drive Belt Cooling Tube.



Figure 11 - Drive Belt Cooling Tubing, to Remove

10.1.2. On the Passenger side of the vehicle, remove the Air Intake Tube. Refer to Owners Manual for further instruction.



# **Installation and Operation Manual**



Figure 12 - Air Intake Tubing, to Remove

#### 10.1.3. TURBO MODELS ONLY

1. Remove the firewall heat shield

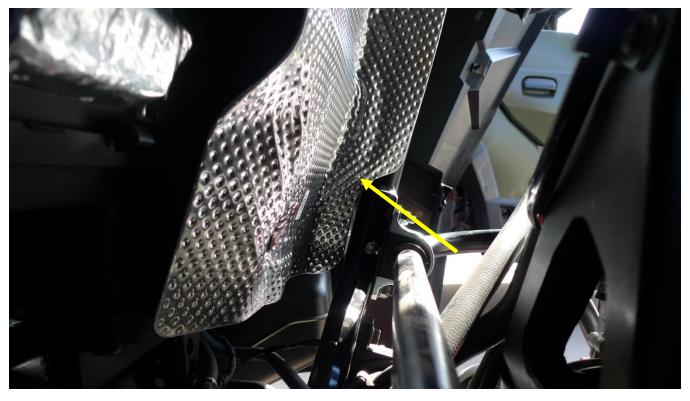


Figure 13 - Firewall Heat Shield, to Remove (Turbo Only)



## **Installation and Operation Manual**

#### 10.2. Air Tank Brackets Installation

- 10.2.1. Using short pieces of electrical tape, or similar, temporarily attach fasteners #5 to Air Tank Brackets RZR-201, and RZR-202, before installing. (click to return to hardware list)
- 10.2.2. Starting on the Passenger side of the vehicle, remove the 2 Sway Bar Bushing nuts, as shown below.
- 10.2.3. While pulling sway bar away from frame (i.e., toward back of vehicle), slide RZR-201 into space between frame and sway bar mount, sandwiching the bracket.
- 10.2.4. Re-install original hardware, and tighten loosely; bracket must be able to move side to side.
- 10.2.5. Repeat the same steps on the Driver side, instead using RZR-202.

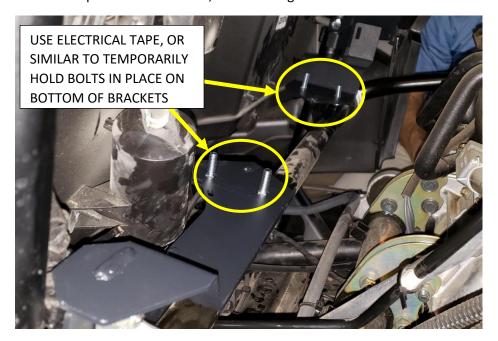


Figure 14 - Air Tank Brackets with Air Tank Bolts taped to bottom

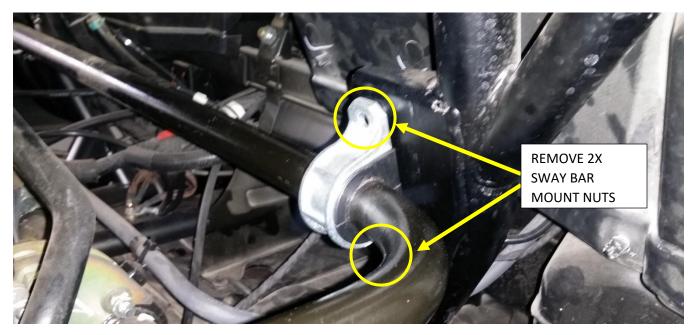


Figure 15 - Driver Side Sway Bar Nuts/Bolts, to Remove



# **Installation and Operation Manual**

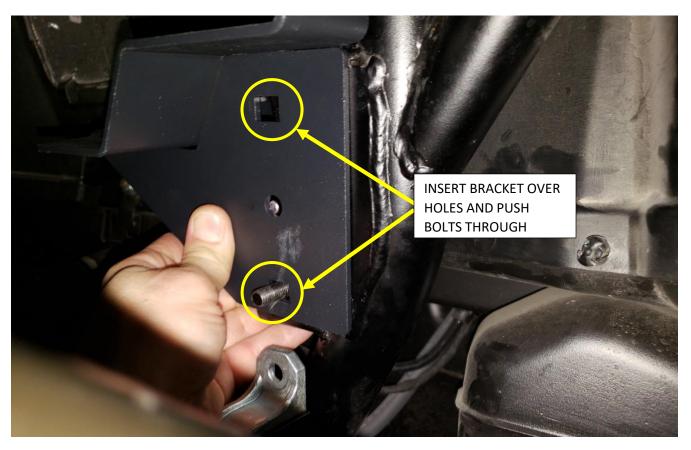


Figure 16 - Driver Side Air Tank Bracket Insertion



Figure 17 - Driver Side Sway Bar Nuts/Bolts with Air Tank Bracket Inserted



## **Installation and Operation Manual**

## 10.3. Air Compressor Bracket Installation

- 10.3.1. Attach Air Compressor Brackets, using supplied hardware to Passenger side, inner frame tube, as shown in below pictures; do not attach Compressor yet.
  - 1. Apply Medium-Strength Loctite (i.e., Blue) to fasteners, but do not final torque



Figure 18 - Air Compressor Bracket Installed on Frame



## **Installation and Operation Manual**

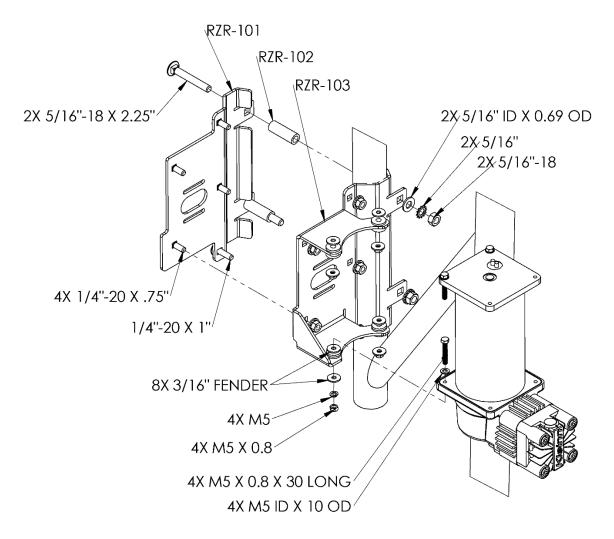


Figure 19 - Air Compressor Assembly & Hardware Exploded View

#### 10.4. TURBO ONLY: Re-install Firewall Heat Shield

- 10.4.1. With Compressor Bracket installed on frame, lift it vertically along tube and rotate slightly, to provide space to insert Heat Shield.
- 10.4.2. Refer to Owner's Manual, or consult Shop Repair Manual, or Dealership for instruction on re-installing Shield.

#### 10.5. Air Tank Installation, Preliminary

- 10.5.1. With Compressor Bracket installed on frame, lift it vertically along tube and rotate slightly, to provide space to insert Air Tank. Insert bench assembled Air Tank between engine and Compressor Bracket and rest on top of Brackets.
- 10.5.2. Using hardware items #5, 8, 11, and 15, install Air Tank onto Brackets, as shown below.
  - 5.1.1. Apply Medium-Strength Loctite (i.e., Blue) to fasteners, but do not final torque
  - 5.1.2. Loosely tighten hardware, so Air Tank and Brackets can slide side to side
  - 5.1.3. Position Air Tank, as necessary to maintain 1/4" clearance between vehicle and Air Tank, per below picture (i.e., use a pencil, Bic Pen, #1 Phillips screwdriver, etc. as a spacer between Firewall, Turbo and Tank)



# **Installation and Operation Manual**

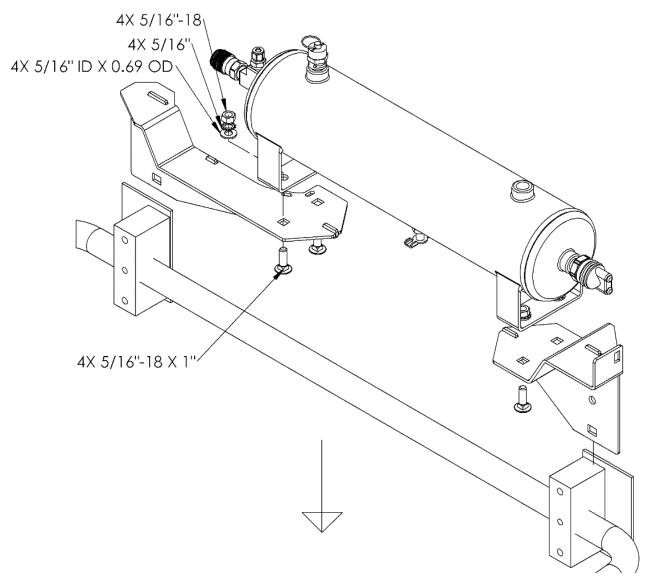


Figure 20 - Air Tank and Air Tank Brackets Exploded View



# **Installation and Operation Manual**

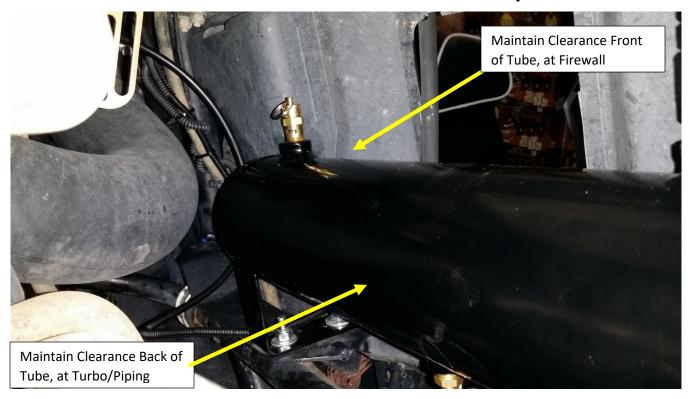


Figure 21 - Air Tank to Vehicle Clearance



Figure 22 - Air Tank Installed with Pressure Switch Wired



## **Installation and Operation Manual**

#### 10.6. Air Compressor Installation

- 10.6.1. Rotate Compressor Bracket into position, so it contacts outside tab of Air Tank Bracket, then insert final 1/4"–20 X 1" carriage bolt through Air Tank Bracket into Compressor Bracket and attach flat washer, lock washer, and nut. Apply Medium-Strength Loctite (i.e., Blue) to all fasteners, if not already performed and Torque, as required:
  - 1. <u>5/16" 18 GRADE 2, 75 in-lbs</u>
  - 2. 1/4" 20 GRADE 2, 37 in-lbs
- 10.6.2. Install Air Compressor onto Air Compressor Bracket, by sliding bolts through Brass Sleeves and Rubber Bushings. Use correct <a href="https://hardware">hardware</a> items 9, 12, 13, and 16, as shown below and in <a href="https://example.com/example.co
  - 1. Torque M5 nuts to 20 in-lbs



Figure 23 - Air Compressor Installed to Bracket



## **Installation and Operation Manual**

#### 10.7. Air Tank Installation, Final

- 10.7.1. To best gain access to Air Tank feet bolts, it's recommended to remove inside Oil Filter access panel, as shown below
- 10.7.2. With Compressor Bracket fully installed on frame, ensure Air Tank has adequate clearance between vehicle, as noted above and tighten all Air Tank fasteners using following sequence:
  - 1. Tighten Passenger Side Sway Bar Nuts; torque to 23 ft-lbs (or, use official Shop manual spec)
  - 2. Tighten Driver Side Sway Bar Nuts; torque to 23 ft-lbs (or, use official Shop manual spec)
  - 3. Tighten Air Tank feet to Brackets; torque to 75 in-lbs

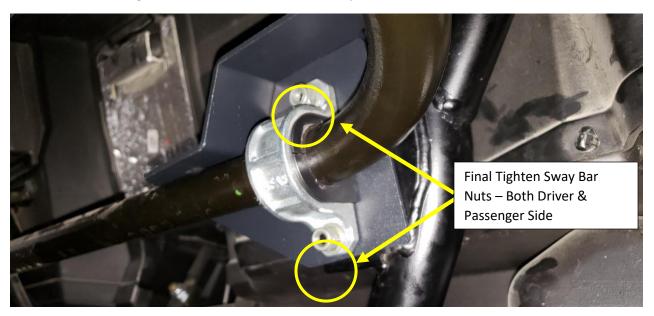


Figure 24 - Driver Side Sway Bar Final Torque of Nuts/Bolts

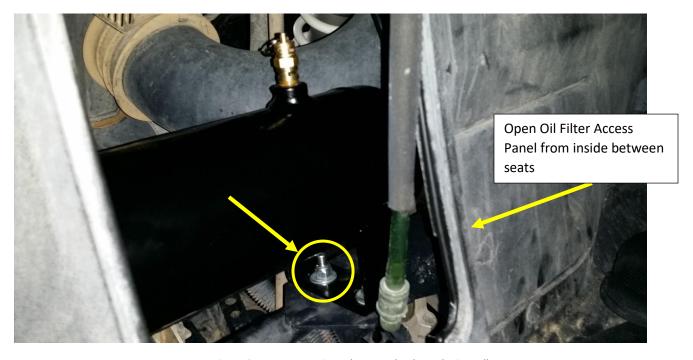


Figure 25 - Access to Air Tank Feet Bolts through Firewall



## **Installation and Operation Manual**

#### 10.8. Connect Air Compressor to Air Tank and Electrical

- 10.8.1. Slide Air Compressor leader hose through slot on Air Compressor Bracket, then connect it to last available port, on passenger side top of Air Tank, as shown below.
  - 1. Use Kleinn Air Horn Juice on air line threads, per instruction
- 10.8.2. Use supplied plastic zip ties to hold Air Hose to Compressor Bracket.
- 10.8.3. Connect Air Compressor wiring, to previously installed wiring from Step 7

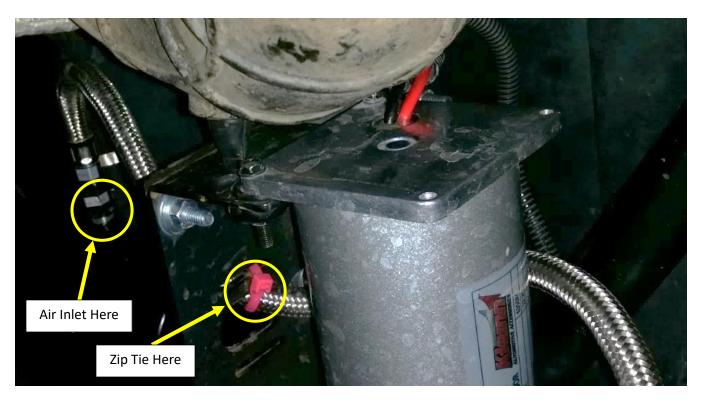


Figure 26 - Air Compressor Final Install with Leader Hose Connection to Air Tank

## 10.9. Connect Air Compressor to Inlet Filter

- 10.9.1. Pry-open plastic air filter housing and install foam filter inside.
- 10.9.2. Using included fittings, attached filter housing to front input of Air Compressor, or route and attach filter remotely, as desired.

#### 10.10. Attach Air Horn Brackets and Air Horn

10.10.1. Install Air Horn Upper Brackets (RZR-301, RZR-302, RZR-102) to Driver inside frame tube using supplied hardware, as shown below.

Apply Medium-Strength Loctite (i.e., Blue) to fasteners, but do not final torque.

- 10.10.2. Install Air Horn Lower Bracket between Driver Side frame tubes, as shown below.
  - 1. Method of installation is to rotate it into position, ensuring rubber grommets (i.e., RZR-305/306) are evenly contacting frame tubes.
  - 2. Once in position, torque 2X 1/4"-20 clamp nuts to 37 in-lbs; 2X bolt shown below in Red.
- 10.10.3. Attach Air Horn to Brackets, and re-position Brackets as needed to ensure Air Horn Trumpets are not contacting frame tubes, or any other part of vehicle, then final torque all fasteners.



## **Installation and Operation Manual**

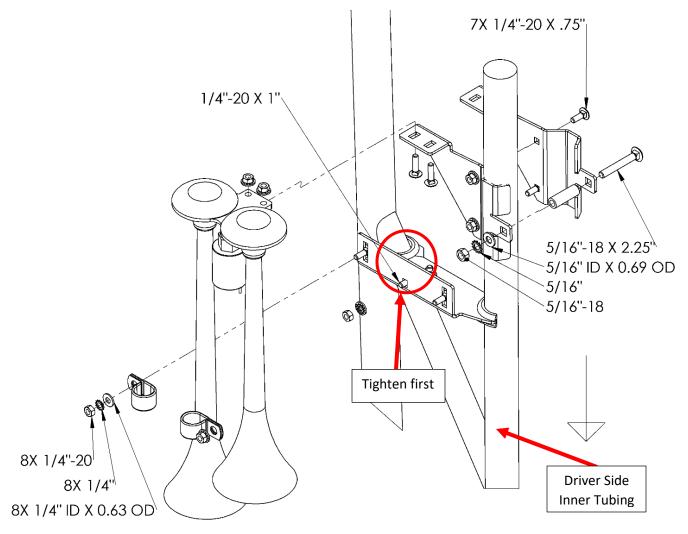


Figure 27 - Air Horn and Brackets to Frame Exploded View



## **Installation and Operation Manual**



Figure 28 - Air Horn Installed to Brackets and Frame

#### 10.11. Connect Air Horn to Air Tank

10.11.1. Using supplied 1/4" Air Tubing, connect Air Horn Solenoid to available outlet port on Air Tank and properly tighten fittings, then secure to vehicle with included plastic zip ties.

#### 10.12. Re-Connect Air Intake and Drive-Belt Cooling Tube

10.12.1. Follow reverse steps taken to remove these parts and verify clamps and rubber seals are properly seated.

**End of Section** 

## 11. Initial Testing of Kit

#### 11.1. 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.

#### 11.2. Test Air Compressor

- 11.2.1. 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.
- 11.2.2. 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.



## **Installation and Operation Manual**

- 11.2.3. 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
- 11.2.4. System must be pressurized or at least Air Compressor running
- 11.2.5. If an air leak is found:
- 11.2.6. Safely release air pressure from system (i.e., slowly open drain valve)
- 11.2.7. Disassemble leaky connection, re-seal and reinstall fittings as needed

#### 11.3. Test Train Horns

- 11.3.1. Allow Air Compressor to run and shut-off automatically (i.e., Air Tank is full)
- 11.3.2. 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
- 11.3.3. 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 <u>substantial hearing protection</u> (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.

- 11.3.4. 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)
- 11.3.5. Horns should sound as expected and be loud; click to listen to example 230 Kit
- 11.3.6. Horn sound/loudness will taper quickly as Air Tank loses pressure
- 11.3.7. Allow Air Compressor to refill tank, if needed and activate Horns for longer three (3) second period to ensure Horns are functioning properly.

#### 11.4. Test Quick Connect Coupler

- 11.4.1. Allow Air Compressor to refill tank, if needed
- 11.4.2. Attach supplied INF-1 inflator kit to Quick Connect Coupler and verify adequate air pressure is available
- 11.4.3. Test fill tires on vehicle, bicycle, etc.
- 11.4.4. Use Air Blow Gun
- 11.4.5. Use Air Impact Gun

**End of Section** 



## 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.

- 12.1.1. Air compressor is equipped with an automatic thermal overload protection circuit, designed to protect air compressor from overheating and causing permanent damage.
- 12.1.2. Automatic thermal overload protector will automatically reset after 30 minutes.
- 12.1.3. 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

- 12.2.1. 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.
- 12.2.2. Press Horn Button to activate Horns
- 12.2.3. Horn sound/loudness will taper quickly as Air Tank loses pressure.
- 12.2.4. 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 <u>substantial hearing protection</u> (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.

# RZR1000-KIT

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- 13.1. 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.
- 13.2. 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 offroad, or in winter climates where road salts are used.
- 13.3. 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.
- 13.4. 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.
- 13.5. 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). Order replacement filters at Kleinn.com.

NOTE: Never lubricate or add any liquids to the included oil-less air compressor



## **Installation and Operation Manual**

## 14. Warranty Information

Thank you for purchasing RZR1000-KIT. Shall you experience any unexpected problems during installation, or have problems with any part at any time 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.

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