HornBlasters

Don't Blow Your Temper, Blow Your Horns!

NATHAN AIRCHIME K3, K5LA, K5HA INSTALLATION MANUAL

500 SERIES

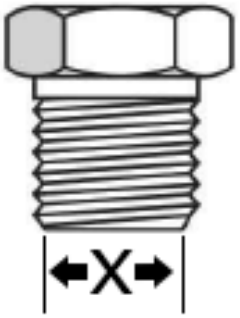
WARNING: To ensure the longevity of your system, reading and following these instructions are recommended. Make sure to change filters and to drain the moisture from your tank on a regular basis.

HORNBLASTERS HORN AIR 5-GALLON INSTALLATION GUIDE

KIT CONTENTS:

- Air Compressor (model varies)
- HornBlasters 5-Gallon Air Tank
- HornBlasters Tank Fitting Kit
- Air Filter Relocation Kit (in compressor box)
- Air line Cutter
- HornBlasters Universal Wiring Kit

Identifying Fittings



The diameter of the thread (**X**) will indicate what size thread a fitting has. If you're not sure which fittings are 1/2", 3/8", or 1/4", measure the thread on each fitting and match it up with the values below.

1/2" NPT	3/8" NPT	1/4" NPT	1/8" NPT
0.84"	0.675"	0.54"	0.405"

1x
Safety Blowoff Valve (Do not use as a drain)

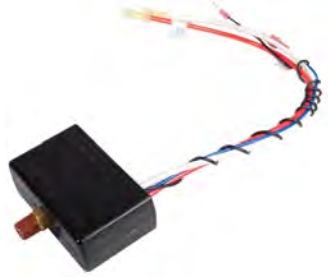
1x
Drain Cock Fitting

2x
Brass Plug

1x
1/2" Electric Valve Kit

1x
HornBlasters Universal Wiring Kit

1x
Air Gauge



1x
Pressure Switch

5x
Reducer Bushing

1x
Nathan Airchime K3, K5HA, or K5HA

Safety Tips and Important Information

IMPORTANT SAFETY INSTRUCTIONS

Caution: To prevent the risk of electric shock or electrocution:

- Do not disassemble any electrical components of this horn kit (air compressor, air valve, pressure switch).
- Do not attempt repairs or modifications of any component. Please refer to qualified service agencies for all service and repairs.
- Do not operate any component where it can fall or be submerged into water or any kind of liquid.
- Do not reach for any component that has fallen or been submerged into water or any kind of liquid.
- Use the included components with 12 volt DC systems only.
- Do not leave the air system unattended during use.

WARNING: To prevent injury:

- Never allow children to operate the compressor or air horn. Use close supervision when operating this equipment near children or animals.
- The air compressor will become very HOT during and immediately after operation. Do not touch any part of the compressor with your bare hands during or immediately after use.
- Do not use this product near open flames or explosive materials or where aerosol products are being used.
- Do not operate this product where oxygen is being administered.
- Do not pump anything other than atmospheric air.
- Never use this product while sleepy or drowsy.
- Do not use any tools or attachments with the supplied air source unit without first determining maximum air pressure for that tool or attachment.
- Never point any air nozzle or air sprayer toward another person or any part of your body.
- The included compressor is equipped with an automatic reset thermal protector and can automatically restart after the thermal protector resets. Always cut off power source when thermal protector becomes activated.
- Use only in well ventilated areas.
- Do not sound the air horn(s) in close proximity to another person's or your own ear(s).
- Do not fill the included air tank above 150 PSI. Doing so may result in death or serious injury.
- Disconnect the battery negative cable before doing anything. Failure to disconnect this terminal can lead to damaged electrical components.
- Use eye protection when operating drills or other power tools during the install.
- Ensure the parking brake is engaged before you get underneath the vehicle.
- Do not wire the system without the fuse holder.
- Do not allow the compressor to run when the vehicle is off.

Recommended Tools + Addons

Recommended Tools

- 1/2” Wrench
- 9/16” Wrench
- 1" Adjustable Wrench
- Tube Cutter
- 10mm Wrench or Socket (Air Compressor)
- Phillips Head Screwdriver
- Wire Cutter / Stripper / Crimper
- Teflon Tape

Optional Install Items (Not required but will make your install easier)

- **Add-a-fuse®** - Great for tapping into a key-power source from your fuse-box. Can also be used for the horn activation if your vehicle qualifies.
- **Self-Tapping Screws**- These can be used for ground points on the pressure switch, compressor, and valve.
- **Zip Ties®** - Used to keep your air line looking clean and organized. Handy for the runs of wire too.
- **Heat Shrink Tubing** - Can be used over the terminal connectors to better seal them up against the elements.
- **Loctite 545 Thread Sealant** - Can be used instead of Teflon to seal fittings.

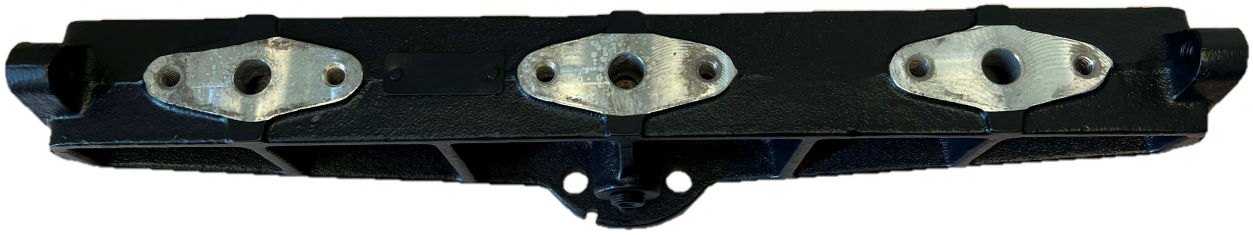
Hardware Specifications

- K5LA Hardware
  - Horn Bell to Manifold
    - **3/8"-16** x 1-1/2" Bolt
  - Bell Back-cap
    - **1/4"-20** x 7/8" Bolt
  - K5LA Horn to Mounting Pedestal
    - **3/8"-16** x 1-1/2" Bolt
- Compressor Hardware
  - Compressor Mounting Hardware
    - **#10-32** x 1" Bolt (A longer bolt can be used)
  - Compressor Mounting Bracket (bolts used to mount to vehicle)
    - **3/8"-16** x 1-1/2" Bolt

To get started on the assembly process for this kit, locate the 5 horn bells and manifold for the K5LA. The bells can be installed onto the manifold in any orientation of your choice. All 5 bells can be mounted facing forward, or with a combination of 2 facing backward and 3 facing forward. It's entirely up to you. The next page details how the hardware is used to assemble the bells to the manifold.

Assembling the Horn

Start by locating the manifold for the horn assembly. A picture of the manifold is shown below. This manifold will hold all five horn bells together in a flat configuration. The order in which the horns are assembled to the bracket does not matter. You can have a couple facing forward with the rest backward, in any order.



Each horn bell will use two bolts and two split lock-washers to mount to the manifold. The bolt/washer can be seen to the right.

Before you mount the bells to the manifold, make sure to insert an O-ring into each bell's inlet to ensure a proper seal. The image below on the left shows this step.

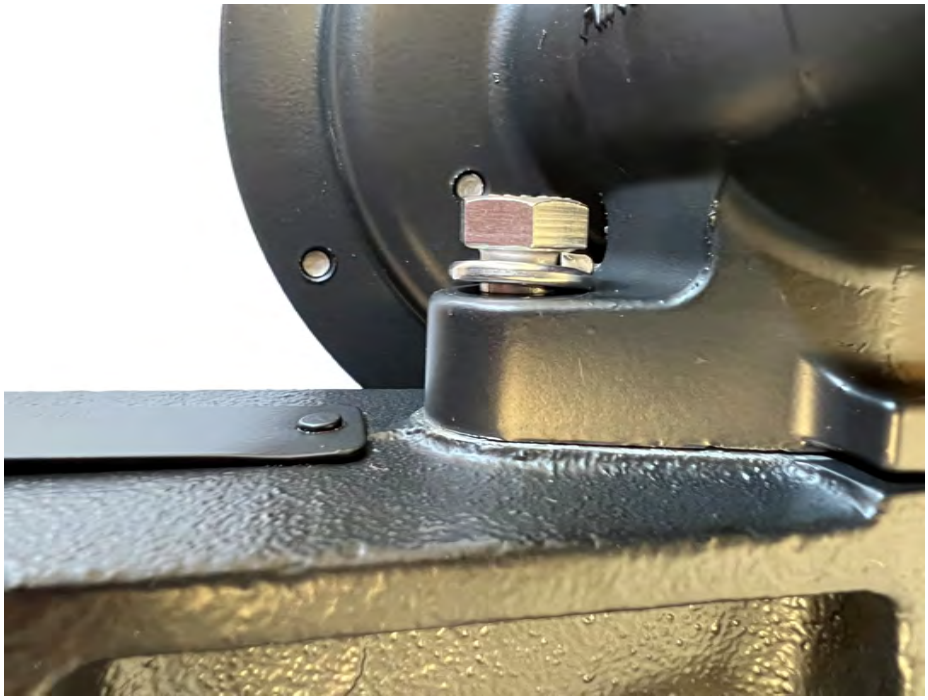
Make sure that the O-ring is firmly seated into the groove on the bell. This prevents excess air from escaping before it enters the horn and makes a sound.

Secure each horn bell to the manifold using a bolt/lock-washer on each side of the horn bell. Tighten each bolt down with a 9/16" wrench until the lock washer is crushed. Do not leave these bolts loose!

<u>START EACH BOLT BY HAND.</u> DO NOT START THESE BOLTS WITH A WRENCH AND RUN THE RISK OF CROSS-THREADING THEM, RENDERING THE MANIFOLD UNUSABLE.

O-Ring Example

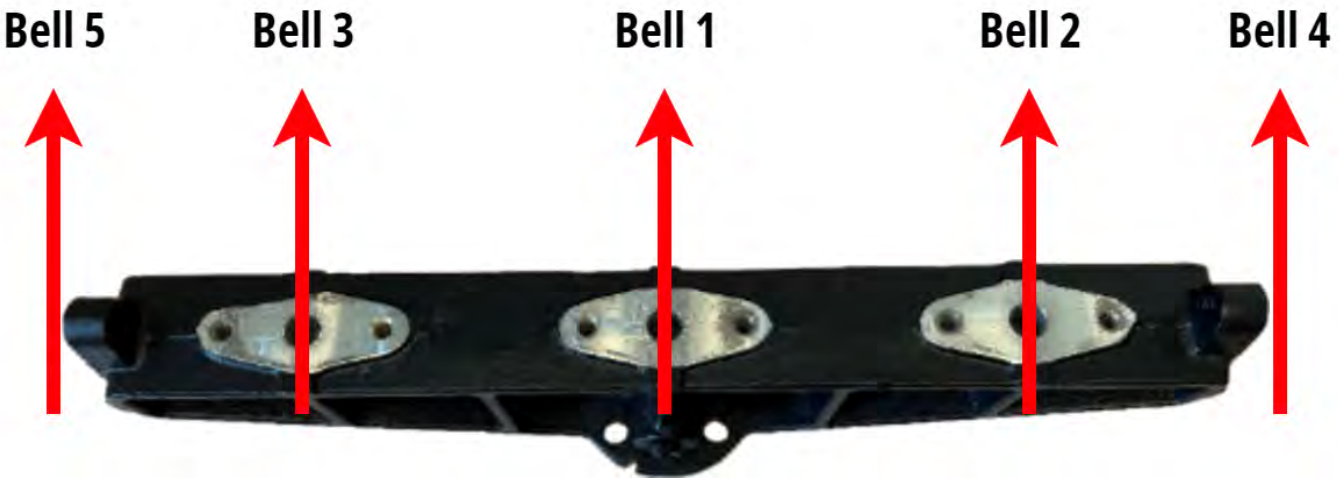
Mounting Hardware



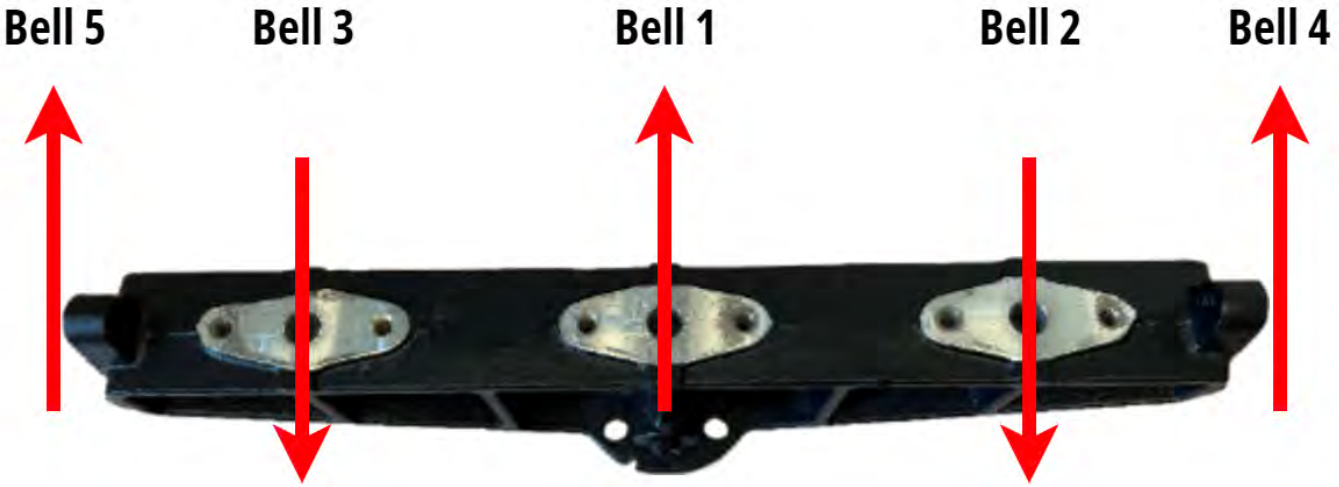
Assembling the Horn

Common Horn Configurations

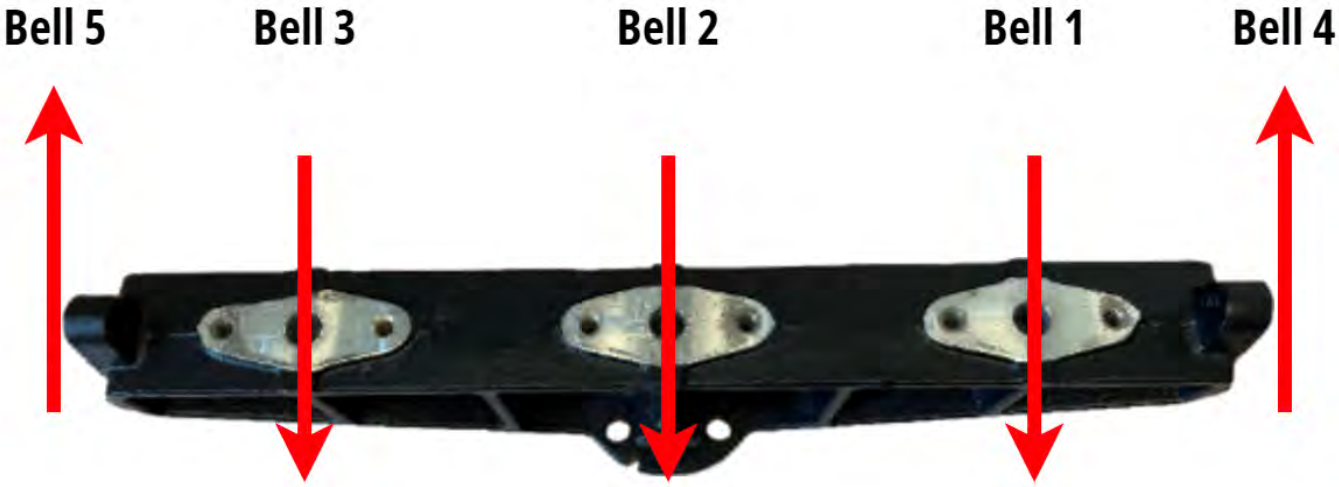
Standard



2 Bells Reversed



3 Bells Reversed



Preparing the Air Compressor

Start by locating the hardware that was packaged with your air compressors. You should have a set of mounting bolts, two barb fittings, and an air filter housing for each. A picture of each is shown below for reference.

Barb Fittings (Male & Female)

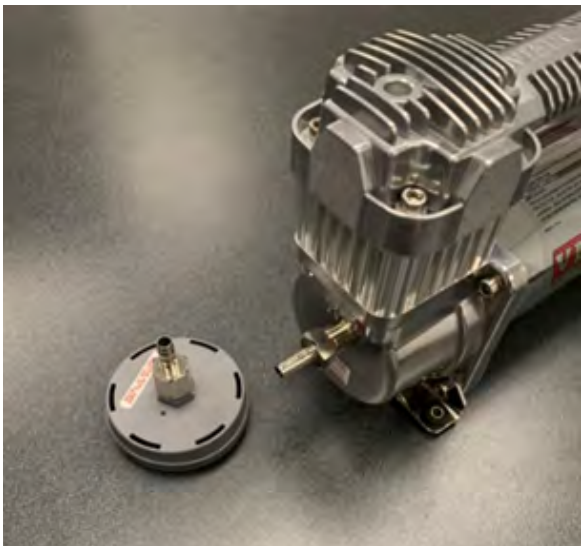
Let's start by taking the fitting on the left with the male thread and inserting it into the compressor inlet. The other fitting (female end) can be threaded onto the filter housing directly. Your compressor/filter should look like the image below. At this point, you can use the supplied air line that was packaged with the compressor to connect the compressor and filter together. **Repeat this for all 4 compressors.**

***This line is not meant to hold pressure. Do not use this for anything other than the filter.**

Filter Housing

Relocation Air Line

Connect fittings to compressor & filter



Route 3/8" air line in between filter/compressor

Filter Placement

Your compressor is fully sealed against the elements. If the compressor is mounted outside with the air filter on the end of the compressor, the filter will get wet and water will get pulled into the compressor. To prevent this, the filter must be relocated to an **ENCLOSED AND DRY** location. If your compressor is mounted in the bed of your truck or underneath the bed, the filter could be relocated into the cab of the vehicle. The filter must be relocated to an area where it will not be exposed to debris or moisture.

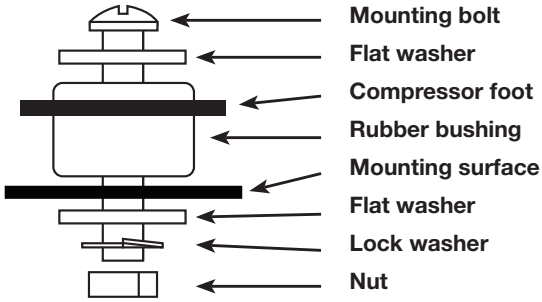
If the air filter is not relocated, the compressor will pull in water/dirt and will stop working properly. 9 out of 10 compressors that fail within the first year have pulled in water/debris from the intake.

WE DO NOT WARRANTY COMPRESSORS THAT HAVE FAILED DUE TO WATER/DEBRIS BEING PULLED INTO THE INTAKE/FILTER

Prepping The Air Compressor

The compressors come with a set of mounting hardware for your use. The diagram below shows how the mounting hardware is used to secure the compressor to the desired mounting surface.

1. Position the air compressor mounting feet over the bracket so that the four feet line up with the slots on the bracket.
2. Locate the supplied mounting hardware that was packed with the air compressor.
3. Secure the air compressor to the bracket with the hardware from step 2. The diagram below shows how the hardware can be assembled.



4. Tighten down each nut/bolt combination with the Phillips-head screwdriver and wrench. Repeat this step for all four air compressors/brackets.
5. Check and ensure that the air line used to re-route the air filter is not kinked on the bracket. The compressor can be moved around the slots to ensure a proper fit.

Compressor Placement Notes

- Make sure the compressor is mounted close enough to the tank so that the leader hoses from each compressor can connect into the tank. If you need to mount the four compressors further away from the tank, we sell fittings that can be used to extend the hose on the compressor.
- Try to mount the compressors in a dry area if possible, this helps the compressors last longer and prevents the finish from tarnishing over time.
- **Be careful when handling the compressor. Do not use the head (part with fins) as a carry handle.** The head can crack/break off due to the weight of the compressor. Always handle the compressor by the cylinder/crank case.
- The compressors will get hot as they run. This is normal but take this into consideration when installing your compressors.
- Make sure the compressors have air flow at their install location as they will generate heat as they run.
- Do not under any circumstance mount the air filter directly to the compressor if it is mounted outside the vehicle. The filter will get wet and the compressor will pull in water. This is not good for the compressor!
- Mount the compressors in an upright position when possible. The compressor will still work if mounted sideways, but gravity will pull the piston to one side of the cylinder and it will wear quicker on that side.

Recommended Tank Assembly

Option 1

Always make sure the drain cock is facing DOWN. Regardless of how you decide to assemble the tank, the drain fitting needs to point down to allow water to drain. Gravity will pull water to the bottom of the tank.

Option 2 (Upside down)

Plumbing the Compressor Into the Tank

Once you have assembled and mounted both the tank & compressor, plumb the compressor into the tank. The compressors braided hose will thread into the reducer bushing that we plumbed into the end-cap of the tank, (on the right hand side of the tank in the photos on page 8).

The photo to the right shows the check valve plumbed into the reducer bushing.
It is extremely important that you **do not over-tighten this piece**. Over-tightening this piece can lead to the compressor not filling the tank.

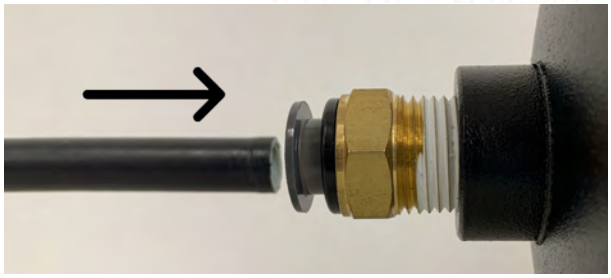
Use a small amount (2-3 wraps) of teflon on this fitting. If teflon won't seal well, we recommend a PTFE based thread sealant.

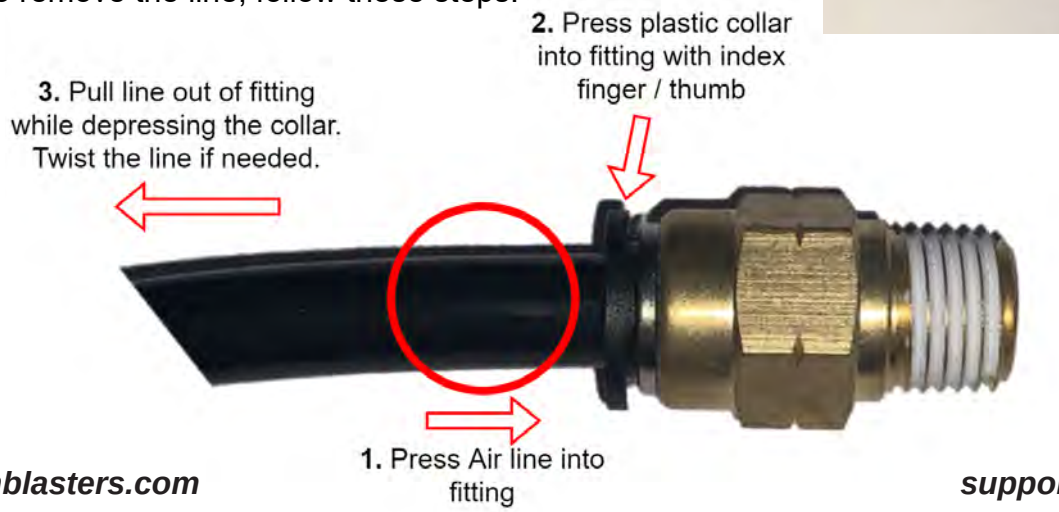
The check valve needs to be torqued to 12-14 ft lbs. Screw this piece in hand-tight and give it another 1/4" turn with a wrench.
It helps if you tighten the reducer bushing into the tank all the way first, that way the reducer isn't spinning with the check valve.

Plumbing the Air Valve to the Tank

Now that the compressor's plumbed into the tank, let's get the horns connected. Locate the roll of 1/2" air line that was supplied with your kit. Make sure both ends are cut straight/flush. If one end is not cut straight, the line will not make a proper seal in the fitting. Once the line is cut, go ahead and push the line into the fitting on the end of the tank. The line will simply push into the fitting and lock into place.

Be careful not to bend the airline right out of the fitting. This can cause the fitting to leak over time. Take a larger bend further away from the fitting to prevent the line from stretching the fitting out.
These fittings can be re-used with the same line multiple times. If you need to remove the line, follow these steps:





Plumbing the Valve to the Tank (Continued)

Locate the solenoid valve for your horns. Take note of the arrow on the side of the body of the valve. This arrow must point TOWARDS your horns. If the valve is mounted with the arrow pointing towards the tank, the valve will not hold air pressure and leak instantly.

Locate two of the four 1/2" NPT x 1/2" PTC fittings that came with your kit. Plumb each fitting into the air valve. Use a wrench to tighten the fitting snug. Be careful not to apply pressure to the plastic portion of the fitting. It can break.

Grab the 1/2" line that we plumbed into the tank and route it up to this valve. Insert the line into the 1/2" fitting on the inlet portion of the valve.

Securing the horn to the Mounting Bracket (only if you purchased the Nathan horn mount)

Locate the horn mounting bracket as we need to secure the horn to this mount before it can be plumbed to the solenoid valve. The image below shows what the hardware looks like when assembled.

Figure 1

Figure 2

Flat washer - Split Washer - Nut

Start by positioning the horn manifold over the bracket so that the four mounting holes line up. You will need the following hardware:

- 4x - 3/8" Threaded Bolt
- 8x - 3/8" Flat Washer
- 4x - 3/8" Split Lock Washer
- 4x 3/8" Nut

Start by feeding a bolt through one of the flat washers (figure 1). Move the washer all the way up to the head of the bolt. Route the bolt/washer combo down through the horn manifold and horn bracket.
On the bottom of the bracket, feed a flat washer and split lock washer over the bolt thread. Make sure the split lock washer is on the bottom of the stack (figure 2).

Thread the nut onto the bolt and use a 9/16" wrench to tighten it up. You will need another wrench on the bolt head to tighten the nut up later. The split lock washer will compressor when full tightened. Repeat this process for all four mounting points to secure the horn to the mounting bracket. Leave these bolts loose for now, as we still need to plumb the inlet fitting into the horn. Leaving the bracket loose makes the next step much easier.

Plumbing the Inlet Fitting Into the Horn

Flip the horn upside down so that the mounting bracket (if purchased) points upwards. In the middle of the four bolts we just installed is a 1/2" NPT port. This is where our inlet fitting will plumb into.

Insert the 1/2" NPT x 1/2" PTC fitting into the port. Start it by hand and use an adjustable wrench to finish tightening this piece. It is recommended to keep the bracket loose so that you slide it around the hole to give clearance for the wrench. This is a bit tight and tricky to get right, take your time.

Get the fitting as tight as you can without shearing the hex off the fitting. Once tight, position the bracket so that it is centered and tighten up the four bolts/nuts for the horn/bracket.

The horn bracket can be secured to the vehicle using the same hardware that we used to secure the mount to the horn. The 'KB1' mounting template that was included with this manual (if purchased) lines up with the four holes on the bracket. You can use this to drill the necessary holes on the vehicle and install the bracket.

If you source your own hardware for this install, we would recommend a minimum bolt size of 3/8" for this horn.

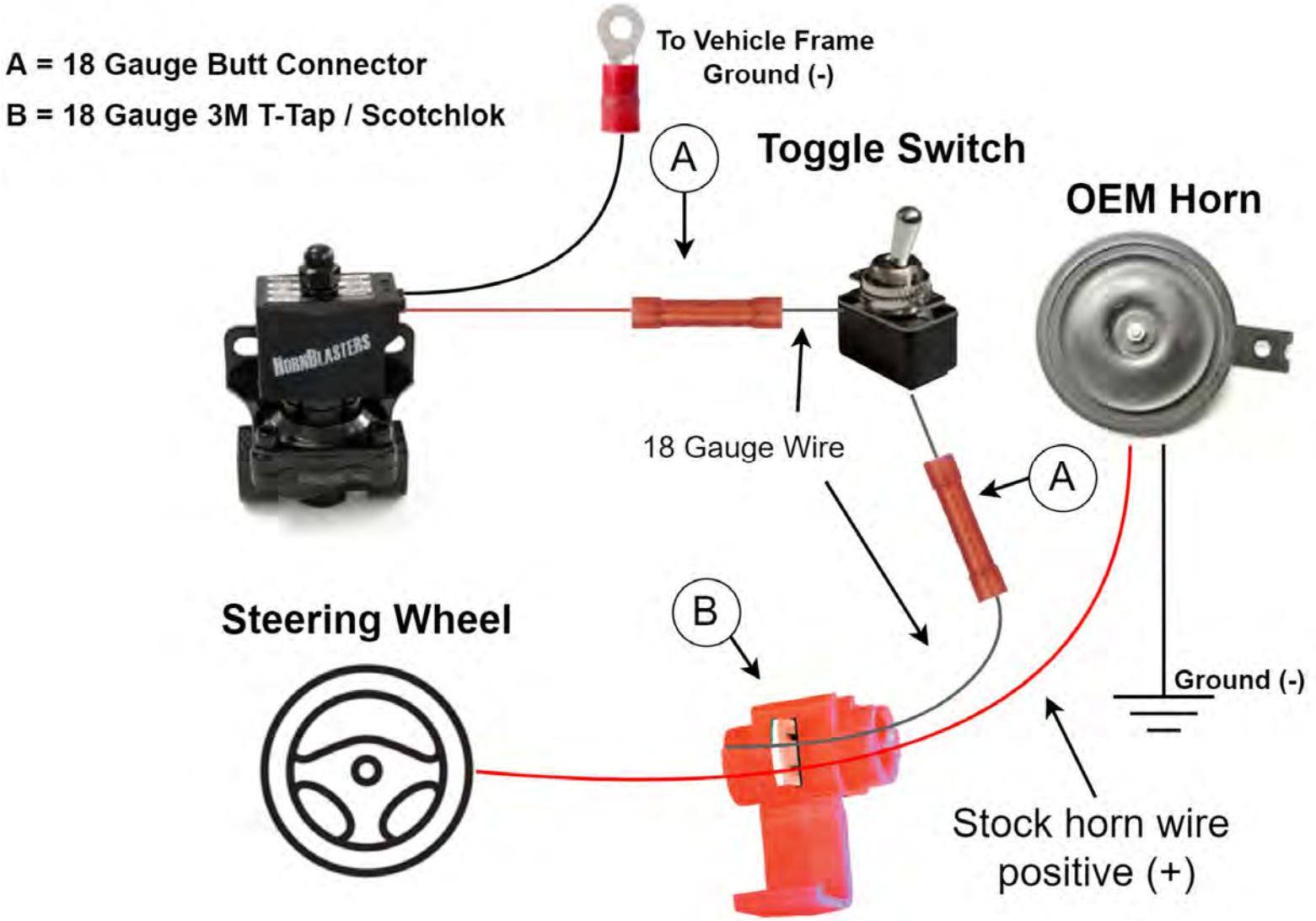
Once the horn has been mounted to the vehicle, you can plumb the horn to the air valve from page 11. Simply press the line into the PTC portion of the elbow fitting. Makes sure the line is routed carefully and away from any heat sources. The line will melt if it is too close to your exhaust.

Make sure the line doesn't rub against a metal surface while driving the vehicle. A small rub can lead to a blown line later on down the road. Use zip ties to secure the line so that it doesn't move around or rub when driving the vehicle.

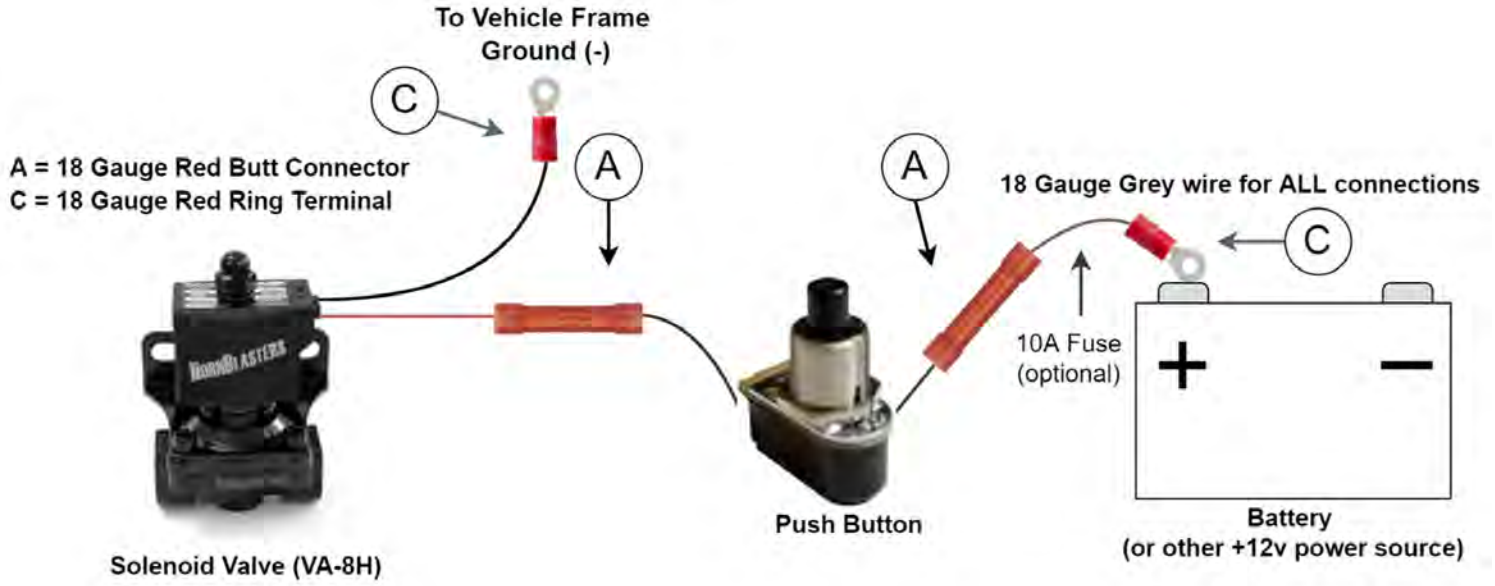
If the compressor does not turn on when you turn the key on the first time, double-check the key-power source that was ran to the pressure switch. If the pressure switch is not receiving +12v power at the blue lead, the pressure switch will not allow the compressor to run.

If the pressure switch starts to make a 'buzzing' sound, double-check and try a new ground for the pressure switch. The buzzing you hear is the relay inside switching on/off rapidly due to the poor ground.

Connecting the Train Horns to the Steering Wheel



Connecting the Train Horns to a Push Button

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