

Installation Manual



10124

Universal Vehicle Applications

Use this kit in conjunction with air tank kits and air compressor kits to build your own customizable onboard air system.

Thank you and congratulations on the purchase of a Basic Independent Paddle Valve In-Cab Control Kit with Mechanical Gauge.

Please read the installation manual prior to starting to ensure you can complete the installation once started.

NOTE: The existing vehicle air system must be capable of 100 PSI.



PLEASE NOTE:

These kit contains push-to-connect fittings; using scissors or wire cutters to cut the nylon airline will distort the line and cause the connection to leak. THE AIRLINE MUST BE CUT OFF SQUARELY WITH THE NYLON HOSE CUTTER PROVIDED IN THIS KIT OR A SHARP UTILITY KNIFE.

BEFORE STARTING THE INSTALLATION:

It is recommended to use a good quality anti-seize on all fasteners. This will reduce the chance of corrosion on the fasteners and will help facilitate removal, if required at a later date.

**1 INSTALL THE AIR SPRING ASSEMBLIES
(if not previously installed).**

Follow the installation instructions provided in your air spring kit.

Use the red and green nylon hoses provided in the control system kit to connect the air springs to the control panel as they are longer than the black nylon hoses provided in the kit.

Connect the green nylon hose to the right side air spring and the red nylon hose to the left side air spring.

Route these airlines to the control panel mounting location.



1

2 SOURCE AIR FROM THE TANK.

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Install the tee fitting and straight push-to-connect fitting provided into the top of the air tank. Cut the end of the black nylon hose off squarely with the hose cutter provided in this kit or a sharp razor knife, then insert it into the push-to-connect fitting until it clicks and stops.

Route this nylon hose into the cab through the firewall boot with the red and green air spring to gauge panel mounting location.

Once complete, secure all 3 nylon hoses away from heat sources and moving components with the tie-straps provided.



2

3 COMPONENT MOUNTING

Choose a location to mount the gauge and switch panel. It should be in reach and in clear view to the driver.

Using the bracket as a template, mark and drill two 3/16" diameter holes to secure the bracket.

Do not install the bracket until the electrical and airlines are connected.



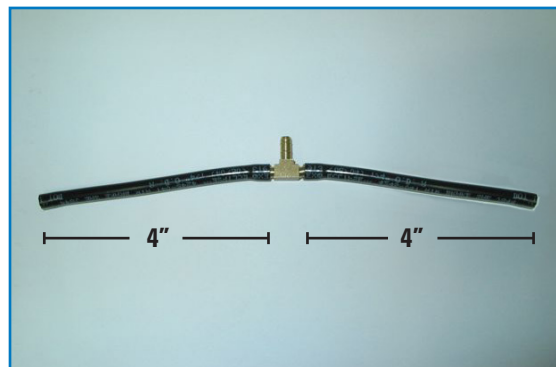
3

4 GAUGE PLUMBING

Locate the two 1/8" NPT female push-to-connect fittings provided. These fittings are installed on the back of the dual needle gauge. Use thread sealant or Teflon tape on the threads to prevent leaks. When tightening these fittings, hold the jam nut on the back of the gauge fitting to provide support.

Cut two 4" pieces of black airline. Insert one end of each piece onto the supplied push-on "T" fitting (see Figure 4).

Connect the black hose and "T" fitting (as shown in Figure 4) push each end of the hose onto the SUPPLY port on both switches (as shown in Figure 10). This is the air supply line.



4

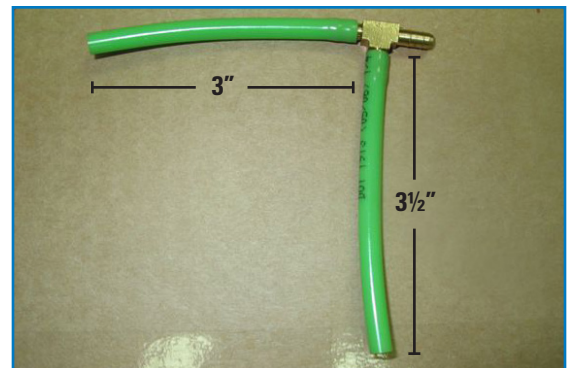
5 RIGHT AIR SPRING AIRLINE ASSEMBLY

Cut two pieces of the green airline provided. One to 3", one to 3 1/2".

Connect these two airlines to the bared "T" fitting provided, (as shown in Figure 5A).

Using Figure 5B: Connect the 3 1/2" long airline onto the R/H switch DELIVERY port. Insert the 3" long airline into the left air gauge supply fitting.

Please note: It is recommended to use a wrench on the flat spot of the threaded ports on the backside of the mechanical gauge, when installing lines. Failure to do so may result in damaged ports



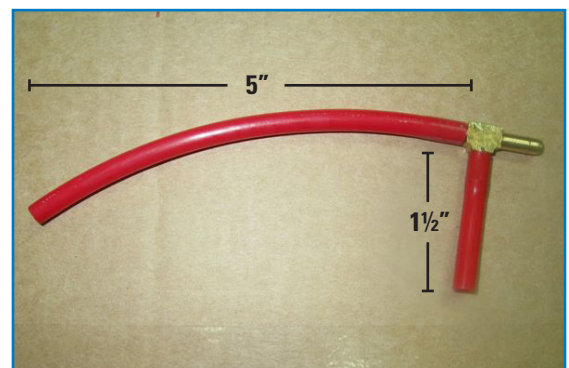
5A

6 LEFT AIR SPRING AIRLINE ASSEMBLY

Cut two pieces of the red airline provided: one to 5", the other to 1 1/2".

Connect these two airlines to the barbed "T" fitting provided (as shown in Figure 6A).

(Using Figure 6B:) Connect the 5" long airline onto the L/H switch DELIVERY port. Insert the 1 1/2" long airline into the right air gauge supply fitting.



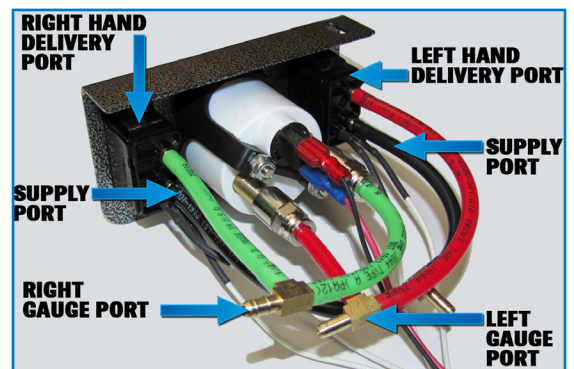
6A

7 ELECTRICAL CONNECTIONS

At the rear of the control panel, locate the single red wire, (use Figure 7 as reference). This is for the air pressure gauge lighting.

Using the red "T" tap provided, connect this wire to the dashboard illumination circuit. Crimp the insulated male blade terminal to the red wire and connect it to the red "T" tap.

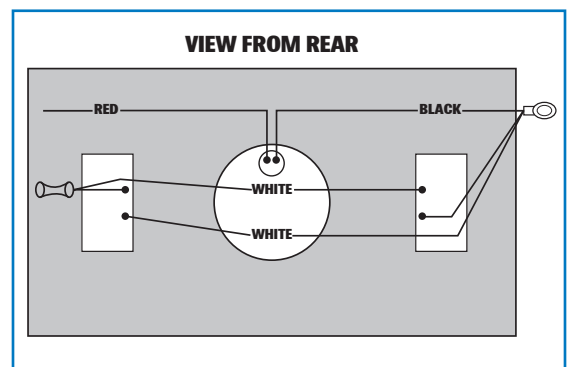
NOTE: If you do not wish to have the ability to dim the gauge lights with the vehicles dimmer switch, then attach the red wire from the gauge to a 12 VDC fused ignition source.



5B / 6B

- 8 At the rear of the control panel, locate the three wire harness (one black and two white wires) with the eye terminal.

Attach this eye terminal to a good chassis ground. It is not necessary to connect the two white wires with the blue butt connector for this installation.



7

9 PLUMBING CONNECTIONS

The remaining lengths of red and green nylon airline are to connect the control panel to the air springs. The airline colour identifies which air spring they will be connected to.

Red is for the left air spring.

Green is for the right air spring.

Starting at the control panel, route two lengths of nylon airline through the firewall boot and along the frame rail to the correct air spring.

Cut the ends of the airlines off squarely with the hose cutter provided or a sharp razor knife, then push firmly all the way into the fitting at the air spring.

Secure the nylon airline with tie-straps provided.

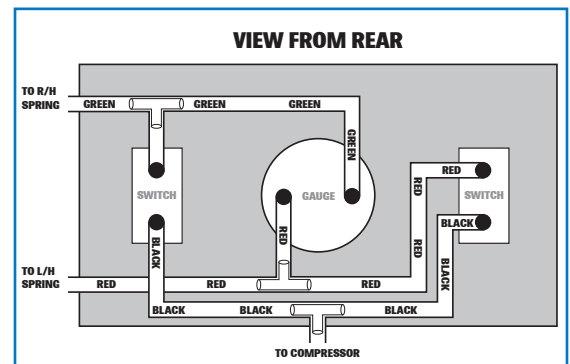
- 10** At the rear of the control panel, locate the three “T” fittings with different coloured airline. These colours pertain to where they get connected.

Black is the supply line from the air tank to the control panel.

Green is the inflate/deflate line to the right side air spring

Red is the inflate/deflate line to the left side air spring.

See Figure 10 for airline routing.



10

- 11** Using the fasteners provided, secure the control panel to the chosen mounting location. Secure the wiring and airlines with the tie-straps provided.



11

12 TESTING THE SYSTEM

Turn the ignition ON, move the left paddle switch to the UP position. The left side needle of the gauge should show air pressure being delivered to the air spring raising the left side of the vehicle.

Then move the left paddle switch to the lower position. The needle of the gauge should show the air pressure dropping and lowering the left side of the vehicle.

Repeat on the right side switch. The right side air spring should raise and lower with movement of the switch.

13 AIR LEAK CHECK

Inflate both the air springs to 90 PSI. Use a dish soap and water mixture on all airline connections to detect air leaks. Repair as necessary and retest. Inflate the air springs to a predetermined value and then the following day recheck the pressure. If one or both of the air springs have lost pressure, a leak is present. The leak must be repaired and then retest the vehicle until no leaks exist.

DO NOT EXCEED 100 PSI TO THE AIR SPRINGS AT ANY TIME



13

14 OPERATING YOUR VEHICLE WITH AIR SUSPENSION

Air springs have minimum and maximum pressure requirements. Never operate your vehicle with less than 10 PSI in the air spring and never inflate the air springs over 100 PSI. Damage to the air springs will result.

Check the air pressure in the air springs daily for the first couple of days to ensure a leak does not develop. The air springs are designed to maintain the vehicles stock ride height with a load. Do not use the air springs as a means to lift the vehicle with no load. A rough ride will result.

15 SERVICING YOUR VEHICLE WITH AIR SUSPENSION

When lifting the vehicle with a floor jack or hoist on the frame, never allow the air spring to limit the travel of the axle. Try to always jack the vehicle on the axle. Suspending the axle with the air spring limiting the axle travel will damage the air spring and void the air spring warranty.