PEDDERS

AIR ASSIST
ADJUSTABLE AIR SUSPENSION

FITTING INSTRUCTIONS	499000D

⚠ **It is recommended that only a properly qualified person installs the product and carries out maintenance. If you are not qualified and attempt to carry out such work ensure that all safety equipment is used and safety standards are met.**

⚠ **Ensure that you have read the full Product Manual before attempting to fit the product.**

⚠ **Ensure the Product Manual is kept with the vehicle and that any vehicle owner and/or operator are fully advised on the system and its operation before attempting to drive or operate it.**

⚠ **DO NOT connect any electrical components to the vehicle without preparing the electrical system as per the vehicle manufacturer's instructions. Connecting without preparing the vehicle could lead to component failure, vehicle damage or fire.**

⚠ **If you use a sharp utility knife or razor blade great care must be taken in all cases not to cut yourself during this operation.**

⚠ **In some Countries, States or Territories it may not be legal to position the switches inside a vehicle or within reach while operating the vehicle. Confirm with your relevant authorities.**

⚠ **The gauge is NOT weatherproof and is best mounted inside the cabin for easy pressure monitoring.**

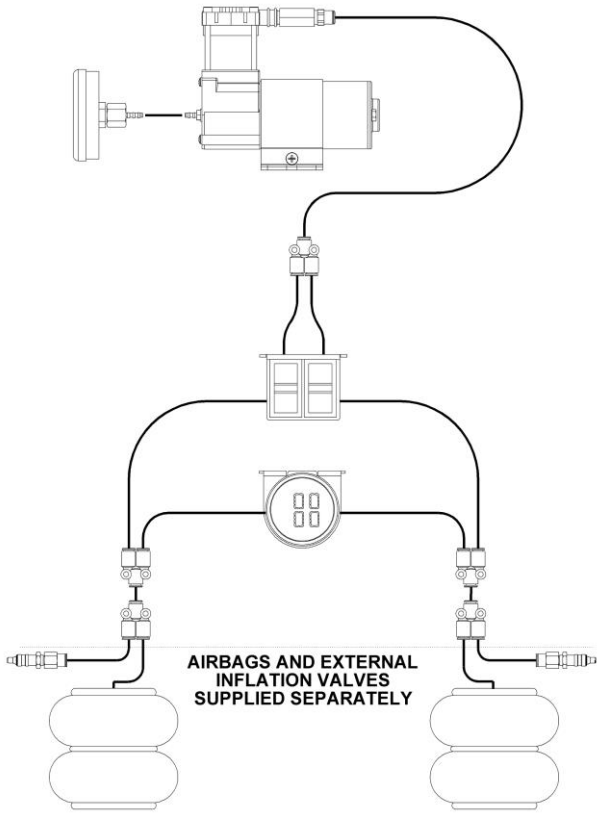
⚠ **The switches should be mounted in a protected area to minimise the effect of moisture and dirt E.g. in or under a tray, in tool box or canopy. If you mount them in the cabin please check local government regulations.**

⚠ **Air compressors get hot - avoid any flammable liquid or burn risk areas.**

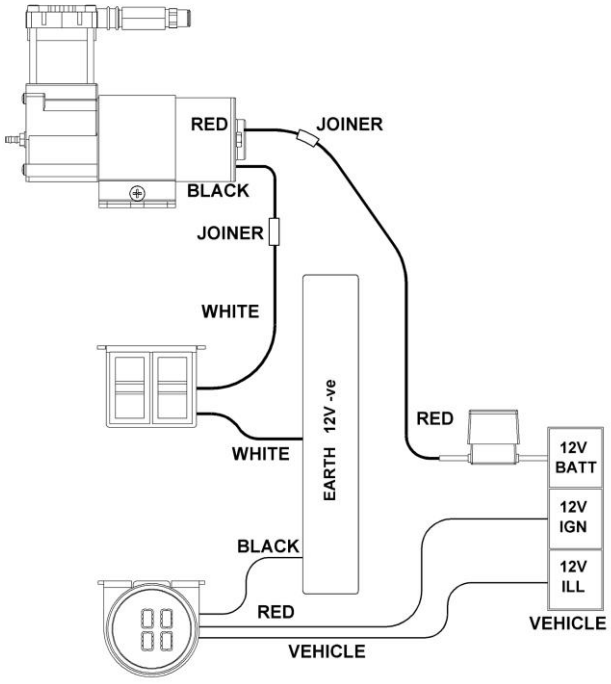
⚠ **Incorrect use of this product can result in damage to the components associated parts and/or the vehicle, which is not covered under warranty.**

⚠ **Ensure suspension airbags are maintained at the stated ride height at all times and maintain the minimum pressure required and never exceed the maximum, as required by the particular airbag product.**

AIR CONNECTIONS



ELECTRICAL CONNECTIONS



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GENERAL ADVICE

AIRLINE TUBING & FITTINGS - GENERAL NOTES

CUTTING

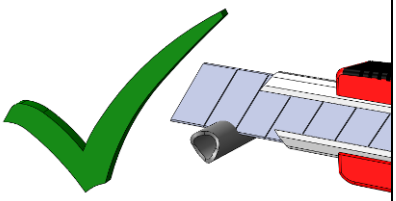
Only cut the airline tubing with a sharp blade making the cut as square as possible.

Always trim the tubing before re-inserting into the fitting.

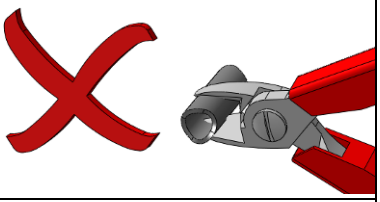
⚠ **If you use a sharp utility knife or razor blade great care must be taken in all cases not to cut yourself during this operation.**

Hint **Contact your nearest Pedders Outlet for our recommended tube cutter tool.**

CUT TUBING SQUARE WITH SHARP BLADE OR TUBE CUTTER



DO NOT USE PLIERS, SIDE CUTTERS OR PIPE CUTTERS



PUSH TO CONNECT FITTING

CONNECTING & REMOVING

To connect:

Push the cleanly trimmed tubing firmly into the fitting as far as possible.

To remove:

First release the air pressure from the system.

To withdraw the tubing, push and hold the collar on the fitting away from the tube and pull out the tubing.

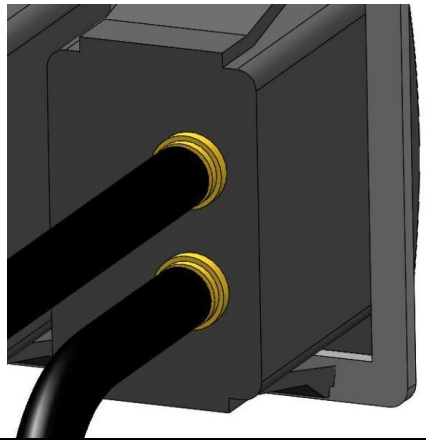
Hint **In confined spaces an open ended spanner can be used to evenly depress the collar and remove the airline tubing.**

BARB FITTING

To install the airline onto the barb fitting start by cutting a nice square edge on one end of the airline, Work the airline onto the barb by using a side to side motion until it is fully seated on the barb. DO NOT kink the airline when doing this.

Hint **Heating of the end of the airline with hot water will soften it sufficiently making it easier to connect to the barb.**

⚠ **Ensure you do not burn yourself when working with hot liquid.**



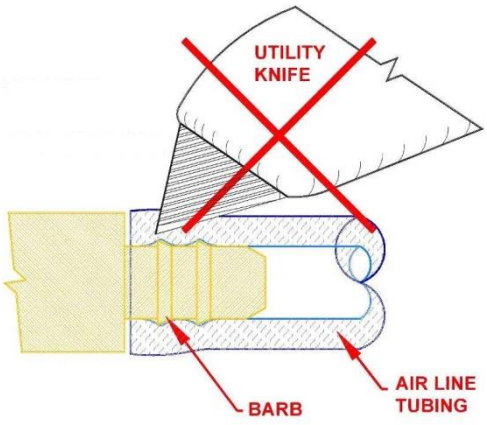
REMOVING BARB FITTING

If the airline must be removed from the barb fitting for any reason, ensure an appropriate method is used.

DO NOT use pliers or a utility knife on the barb as there is a good chance the barbs will be damaged and permanently degrade their sealing ability.

WARRANTY IS VOID IF BARB IS DAMAGED

Hint **Cut the airline tube down to about 2" in length and immerse the tube and barb in hot water to soften, making it easier to remove from the barb. Pliers can be used to grip the airline away from the barb once it is heated up. Care must be taken not to submerge the paddle switch body or damage the barb.**



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SEE OTHER WARNINGS AND IMPORTANT INFORMATION IN THE PRODUCT MANUAL

LHS = LEFT SIDE OF THE VEHICLE WHEN FACING FORWARD

STEP 1 – PREPARE THE VEHICLE

Please note it may be necessary to remove components from the vehicle to fit this kit, ensure this is carried out according to the vehicle manufacturer's instructions regarding electrical connection and component positioning and mounting.

⚠ **DO NOT connect any electrical components to the vehicle without preparing the electrical system as per the vehicle manufacturer's instructions. Connecting without preparing the vehicle could lead to component failure, vehicle damage or fire.**

STEP 2 - AIR CONTROL PANEL POSITIONING AND GAUGE WIRING

Select a location for the air control panels to be mounted that provides good access and space for the electrical and pneumatic connections to be routed. To aid in positioning of the parts the air control panels are configured to allow the switches to be positioned in a different location to the gauge. The switches can also be removed from the supplied switch panel and mounted directly into a vehicles existing switch blank, or existing panel. Note that the switch can only be mounted to a maximum material thickness of 2mm and if thinner material thickness is used the switch may have a loose fit.

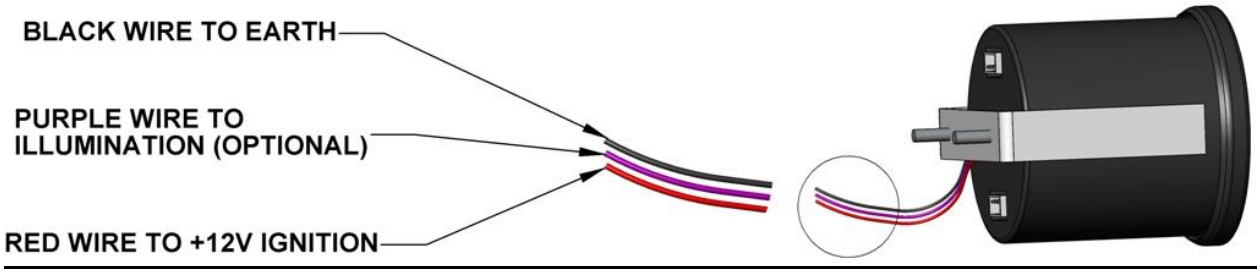
Included in this kit for your convenience are mounting fasteners and snap wiring connectors. These parts can be used, or utilise your own methods to suit the installation, vehicle and equipment available.

⚠ **In some Countries, States or Territories it may not be legal to position the switches inside a vehicle or within reach while operating the vehicle. Confirm with your relevant authorities.**

⚠ **The gauge is NOT weatherproof and is best mounted inside the cabin for easy pressure monitoring.**

⚠ **The switches should be mounted in a protected area to minimise the effect of moisture and dirt E.g. in or under a tray, in tool box or canopy. If you mount them in the cabin please check local government regulations.**

GAUGE TO VEHICLE WIRING CONNECTION



The purple gauge wire can be connected to reduce illumination levels at night. If this is required, connect it to an illumination source on the vehicle such as the dash illumination circuit (check the vehicles systems allow this first).

⚠

⚠ **NOTE: DO NOT connect the digital gauge to a fluctuating power supply, such as a dual battery circuit or battery charging circuit. As this can damage the gauge and pressure sensors.**

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STEP 3 – AIR CONTROL AIRLINE AND WIRING CONNECTION

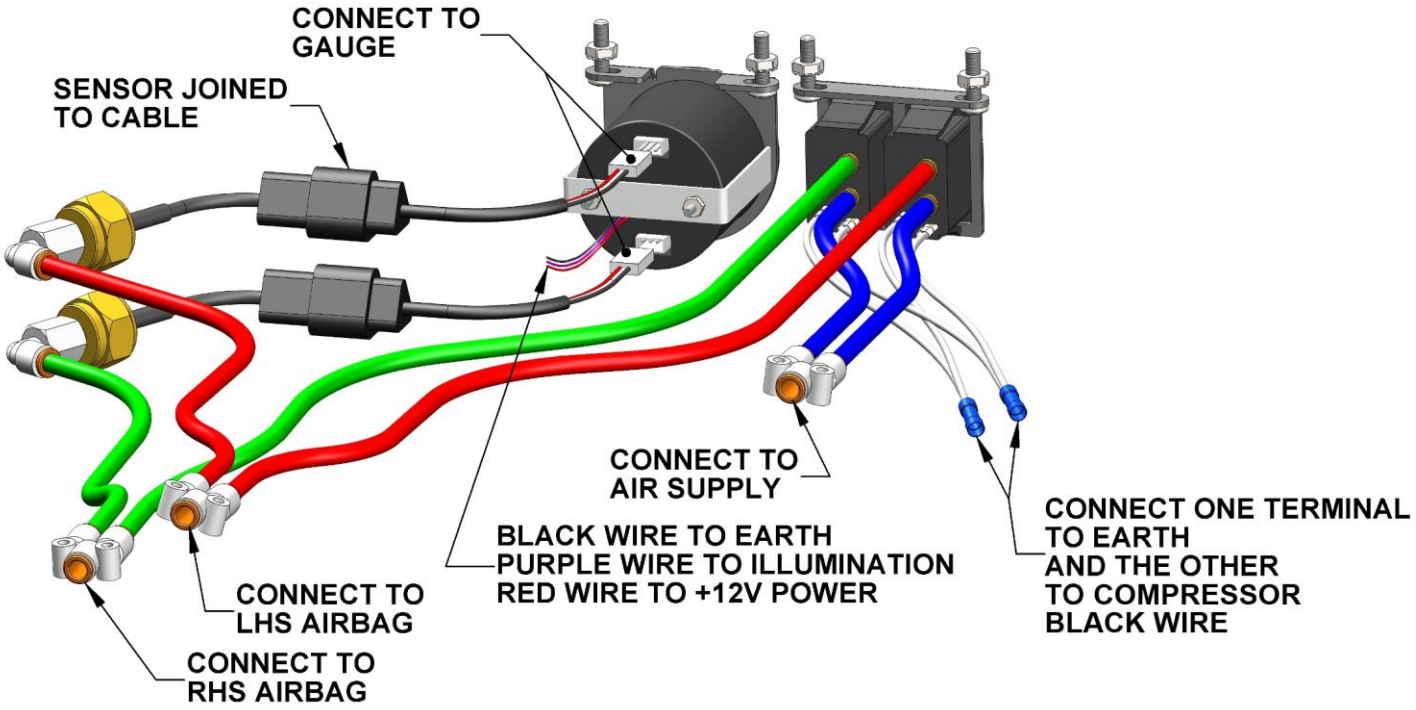
The paddle switches have two groups of white wires linked together from each switch as shown. One group of wires is to be connected to the black wire from the compressor (remove the ring terminal fitted) using the crimp terminal supplied. The second group of wires is to be connected to Earth using the crimp terminal and ring terminal (if required). It **DOES NOT** matter which group of wires from the paddle switches is connected to the compressor or Earth to create the compressor on circuit. These connections can be extended using the white wire supplied (if required).

The gauge receives signals from the two supplied pressure sensors. The brass pressure sensors from the gauge are connected to the airbag delivery airlines via the pre-fitted y-pieces, and are connected to the airbag kit inflation valves with the supplied y-pieces.. The paddle switch plumbing and sensor readout can be configured to suit your preference and vehicle layout using the below diagram as a guide.

When the air control switch levers are pushed up this causes the compressor to be triggered on through the white wires and air to flow from the compressor to the airbags, via the switches. When the switch levers are pushed down they release air from the airbags via a hole in the back of the switch body.

TUBE AND FITTINGS

Ensure the airline route is chosen and measured up before connecting the airline to the barbs as it is critical for the fittings to be in an accessible position for leak check and maintenance purposes. Refer to the previous pages for airline to fitting installation.



STEP 4 – POSITION AIR COMPRESSOR

MOUNTING LOCATION

Select a mounting position considering the following:

1. Mounting surface needs to be **Flat, Rigid and Secure (preferably horizontal).**
2. As **close to the Battery** as possible. It is better to use more air line tubing than more electrical wiring as longer runs of wiring require heavier wiring to maintain voltage.
3. **Cool location** away from **Heat Sources** with good **natural ventilation**.
4. **Protected location** - avoid positions that objects may strike and where excessive dust or debris can collect.
5. **Water ingress** will damage the air compressor - the air filter may need remote mounting in an elevated position, away from the elements.

⚠ **The outlet of the compressor must be routed to ensure condensation does not drain back to the compressor.**

⚠ **Air compressors get hot - avoid any flammable liquid or burn risk areas.**

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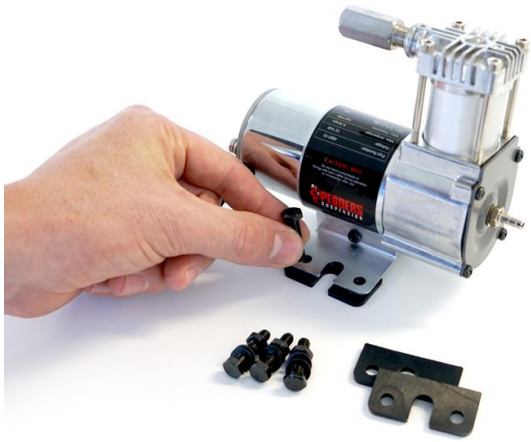
STEP 5 – MOUNT AIR COMPRESSOR

1. Disconnect ground (-i.e. earth) cable from the vehicle's battery(s).
2. Temporarily position the air compressor where it will be mounted and mark the mounting bolt hole positions. Check air filter position and hose routing as required.
3. Mount the air compressor using the supplied bolts, washers and nuts as shown.



STEP 6 – CONNECT COMPRESSOR OUTLET

1. If not already fitted connect the check valve to the compressor.
2. Connect push to connect fitting to the check valve for compressor outlet.
3. Connect air line tubing to the compressor air fitting and route and connect to the control panel supply inlet.

Hint **When connecting check valve and fittings use a suitable liquid thread sealant and allow setting before running the compressor.**

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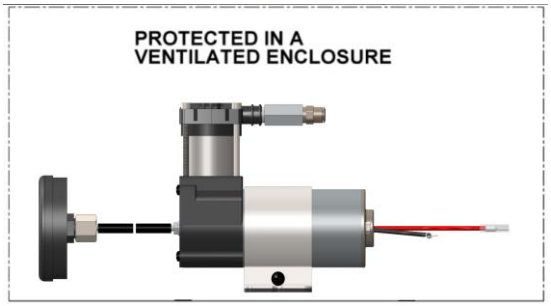
STEP 7 – CONNECT AIR COMPRESSOR INLET FILTER

1. Confirm the air filter configuration based on the compressor mounting location.
2. If in a protected location the filter can be mounted close to the compressor inlet as shown to the right.
3. If the compressor is mounted where water or debris ingress may occur the air filter must be remote mounted using the supplied parts as shown below. The same barb connection technique can be used as shown for the paddle switches.
4. Ensure air filter and airline mounting is secure and leak free.

⚠ **The air filter element must be checked regularly and replaced as required. A blocked air filter will affect compressor performance and lead to compressor failure which is not covered under warranty.**

Hint **Air filter condition is directly related to compressor location, driving environment and compressor usage. For high debris applications inspect the air filter every month.**



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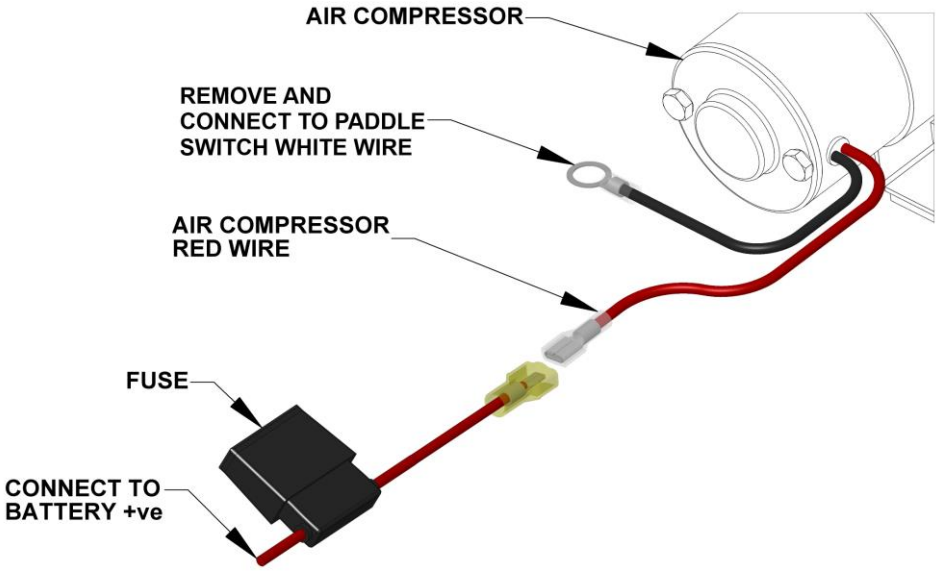
STEP 8 – CONNECT WIRING

Select a possible position for the air compressor then loosely lay the supplied wired fuse holder between each of the connection points. If the wiring can be fitted then proceed with installation. If not select a different air compressor location or modify the wiring according to standard auto electrical practices.

⚠ **Only carry out electrical wiring on the vehicle if you are suitably qualified and experienced in doing so. We recommend that an Auto Electrician or Qualified Mechanic carries this out - note that incorrect wiring can lead to component failure, vehicle damage or a fire.**

Please note that any electrical components supplied in the kit are common standard components. However, you need to check that these are suitable for the installation and application for which they are being used and that the electrical system you are connecting to can supply the required current and voltage and will not be damaged. Please check the compressor label for current and voltage details.



STEP 9 – LEAK TEST

INFLATE the system and the airbags to their maximum allowed pressure (See Pressure Advice in Airbag Owner's Manual) and check for leaks at all connections using soapy water spray. We recommend a soapy water spray solution of 25% soap to 75% water.

DEFLATE If no leaks deflate airbags to required height. If leak detected, deflate airbags and air supply, check and tighten the air fittings (if required), remove the airline tubing, re-cut and re-test.

⚠ **Ensure airbags are returned to correct height (see Airbag Kit Fitting Instructions) after Leak Test is completed.**

STEP 10 – FITMENT COMPLETION

Reattach all components removed earlier and return the vehicle to driving position. Ensure this operation is carried out according to the vehicle manufacturer's instructions.

STEP 11 – USE & MAINTENANCE

Periodically check that the air filter for the air compressor is clean. Spare filters are provided for replacements and they may be needed often if the compressor is operating in a dusty environment.

Regularly clean dust and debris from the compressor fins and motor housing.

Periodically check the electrical and pneumatic connections are tight and not damaged.

Periodically check the fasteners for the compressor and control panel are tight.

The air compressor is equipped with a permanently lubricated, maintenance-free motor. Never try to lubricate the air compressor.

In the event of the compressor repeatedly turning off early or blowing fuses check that the battery voltage is sufficient, the wiring is suitable and in good condition.

If all the electrical components appear correct then check that the compressor has adequate ventilation and is clean. If problems still occur the compressor may be worn out and in need of replacement.

⚠ **CAUTION: Never touch the air compressor or fittings connected to the air compressor with bare hands during or immediately after use. The leader hose (where fitted) and fittings connected to the leader hose or pump head will become very HOT during and after use. If necessary wear heat resistant gloves to handle fittings, airline and leader hose.**

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Ensure suspension airbags are maintained at the stated ride height at all times and maintain the minimum pressure required and never exceed the maximum, as required by the particular airbag product.

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