

Fitting Instructions for Air Bag Load Assist Kit

LA02



Make sure your work area is safe and that you do not get under a car that is not properly supported by jack stands etc.

For this Patrol coil assist kit it is best to remove the wheel but leave the coil and shock in place.

Read these instructions prior to commencing and learn the tricks the easy way before you need to undo your work.



Air Bag assembly

- **The rings on the bags do rotate and you will need to align the top and bottom brackets by rotating the rings to ensure there is no twist in the air bag.** With 3 very loose bolts securing each of the top and bottom end plate brackets, it is easiest to rotate the rings by twisting the brackets while there is virtually no clamping pressure. In the case of this kit the plates should align in the same direction top and bottom.
- There are 6 bolts and washers which clamp the bag rings to the end plates. Do NOT tighten 1 bolt all the way up and then the next as the bags won't sit straight inside the rings. Start by doing every second bolt to finger tight, then the alternate bolts. Then tighten the first 3 to semi tight, then the alternate 3, then tighten each set 2-3 more times, alternating so even pressure is applied as you go. There is no need for extreme tightness. The rubber of the bag acts just like an O'Ring and virtually never leaks and does not need extreme tightness.
- Do not add sealant to the rubber bag. It's not needed and tends to cause problems.
- Once tightened any curves or waves in the end of the bags are flattened out and do not cause leaks.
- Most kits come with the air fittings already seated into the end plates. If you need to fit the air fittings a sealant is needed, despite there being what appears to be a white or grey thread seal on the fitting.
- When cutting air lines, make sure you do not squash the air line in the process. You must not use side cutters, pliers or scissors. If you use a saw, make sure you remove 100% of debris inside hose as that can cause leaks in valves. The best cutting devices are the hose cutters we provided for free or a knife. Make sure ends are straight 90 degrees.

Fitting brackets to vehicle — do ONE side at a time.

1. The top brackets are offset so rotate brackets so the bag sits away from the tyre. Slide the bottom bracket along the axle housing so the bag sits vertically. The bottom brackets are the same but there is a left and right top bracket. The long arm of the top bracket faces forwards
2. Remove the rubber bump stop from chassis.
3. One end of the top bracket will likely need bending to conform to the shape the chassis. Different models have slightly different bends in this regard so we leave that to you. This would be easier done in a vice with a large shifter spanner and without the bag fitted.
4. Position the pre-assembled bag assembly into place. And when happy with top brackets and that the bag clears the tyres do up the top bolts from the original bump stop mount.
5. The lower curved brackets slide under the U bolts.
6. Ensure the brackets are straight and the bag sits in a straight line up and down without rubbing against the spring or tyre.
7. Sometimes you need to lower the vehicle and pump up the bags with air to fully reach and prevent a stretched bag from preventing mounting bolts to tighten.
8. Make sure nothing fouls with the air bag such as tyres, sway bar brackets, mounts for brake lines or breathers etc and remember the bags get wider as they compress.
9. Pump bags temporarily up to 80+ psi to bed them in and the rings "Bite" into the rubber flanges of the bags. Don't drive at such high pressure just do it as a bedding in process.

Trouble shooting

You should not have leaks and can expect air to remain in the bags for a few weeks without refilling. It is near impossible to find a leak if it takes more than 3 days to leak out and only replacing fittings or refitting bags until the leak stops can solve such slow leaks. But if you have a bag that deflates in say less than 2 days then we stand a good chance of finding the leak. Start by pumping the bag with as much air as possible like 100+ psi (pretty much until compressor stops pumping) – the bags are good for 1,000+ psi and you won't hurt them but don't drive with this extreme pressure for the sake of your chassis and handling. At extreme pressure air should be wanting to escape quickly. With a spray bottle (or a plastic drink bottle with small hole drilled in cap) spray soapy water on the bag and on all fittings. It is rare to find a leak in a bag and more common to find a leak in a valve or where the air line goes into a fitting or around the thread of a fitting in an end plate. After a few minutes a small bubble might appear and show you the leak. Leaking fittings can be taken apart and cleaned out. Often a bit of dirt can cause the leak – a drop of oil and a blow of compressed air through the fitting can be a great way to clean out a fitting or valve.

By the way AAA Suspension use 6mm air hose and all threads are BSP type.



The air bags and brackets in this kit are built to be super strong. In some cases stronger than your car. Do not carry extreme loads and travel at high speeds with high pressure as hitting holes and dips at speed with extreme loads could result in damage to your vehicle. This is an overloading issue and by being sensible you will avoid damage.

Do not exceed your vehicle's GVM (Gross Vehicle Mass). Your GVM will be detailed on your vehicle compliance plate. Know your limits with regard to loads carried or towed.

If you remain within your load limits, drive at a safe speed for the conditions and run your air bags at an ideal working pressure below 60 psi you will have trouble free travelling.

The good thing about air bag suspension is you can just keep adding more air to suit your preferred ride height and loads carried. Typically a good working pressure is 25 to 50 psi per bag. The bags become your bump stops. When unloaded you may run the bags empty but a few psi will cushion your bump stop and offer a bit of added stability to your handling.



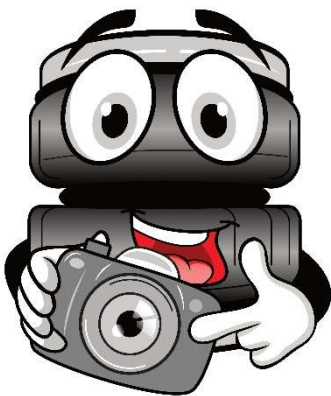
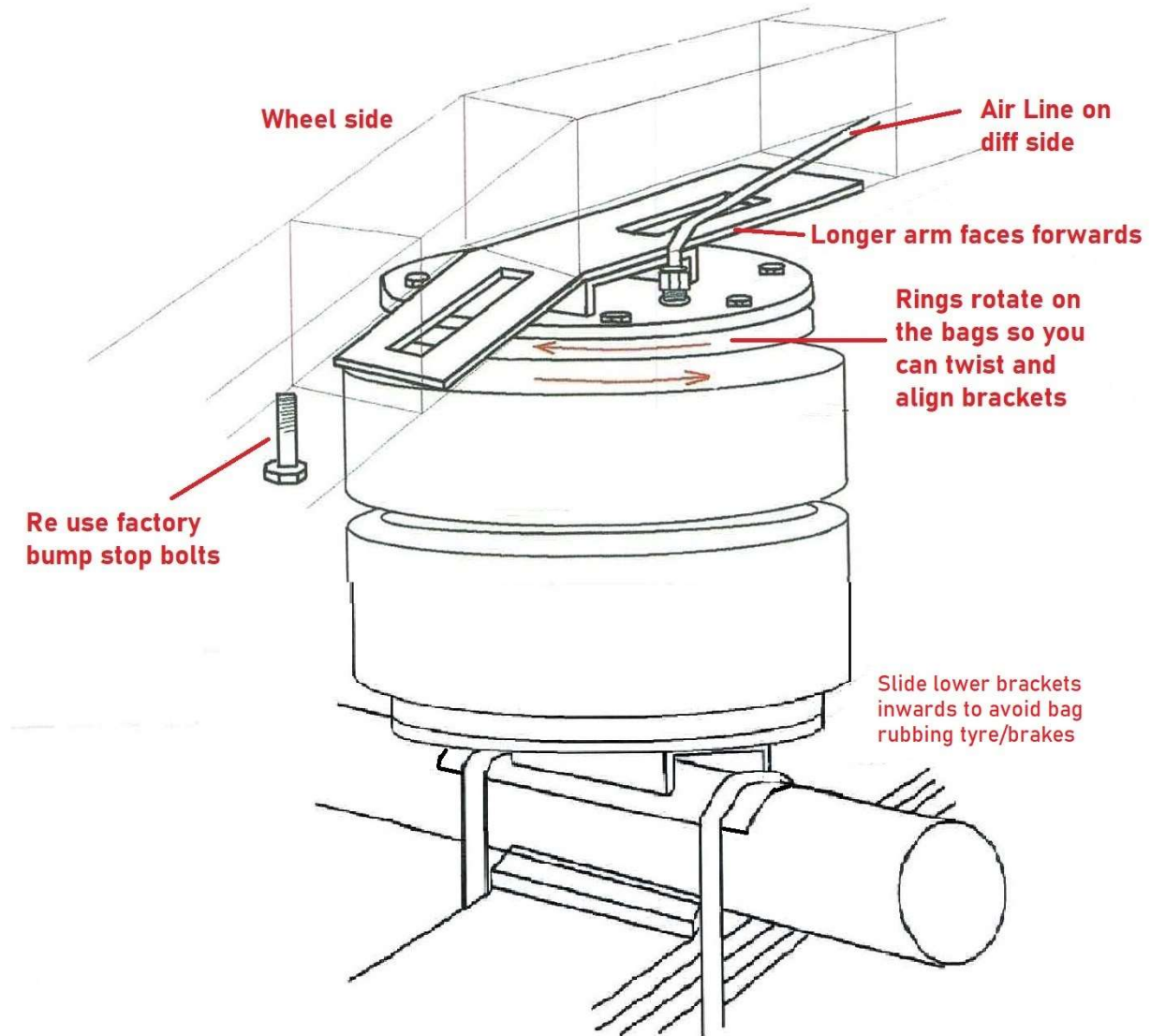
Air Assist kits come with a 5 year parts replacement warranty on bags, brackets and air fittings. Keep a copy of your invoice or online purchase so you can show us later when you purchased your kit.

- Warranties are parts replacement only and exclude postage, labour and any other incidental cost or damage.
- Warranties also exclude corrosion or damage caused by external influences such as road hazards, heat, chemicals, salt or fuel spills.
- It is the responsibility of the fitter and owner to make sure bags do not rub on anything. Warranty excludes damage caused by rubbing.

The brackets in this kit are proudly made by us in Australia. We use local steel merchants, laser cutters and even our local powder coater uses locally made powder by Dulux. We have been approved and are licenced to display the Australian Made logo and proud of it.



Here's how your kit should look



One thing we really struggle with is obtaining photos of our kits out in the real world. If you can send us some pics of your kit fitted and also some pics of your vehicle carrying a load with and without air in your bags to demonstrate their effectiveness, we would certainly appreciate that.

And you know we also just like seeing all the varied places and applications our bags are used.

Please email all pics to steve@aaasuspension.com.au

Feel free to call me at any time for support – 1300 396 892.

Thanks,

AAA Suspension

