DRIVE-RITE

AIR SUSPENSION SYSTEMS

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DR.02.013117

RENAULT MASTER / NISSAN INTERSTAR
OPEL & VAUXHALL MOVANO
REAR WHEEL DRIVE

INSTALLATION INSTRUCTIONS

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Introduction

The purpose of this publication is to assist with the installation of the Drive-Rite Semi-Air air suspension kit.

It is important to read and understand the entire installation guide before beginning installation or performing any maintenance, service or repair. The information here includes a hardware list and step-by-step installation information.

Drive-Rite reserves the right to make changes and improvements to its products and publications at any time. Contact Drive-Rite at +353 1 8612 632 or visit us online at www.driveriteair.com for the latest version of this manual.

IMPORTANT SAFETY NOTICE

The installation of this kit does not alter the Gross Vehicle Weight Rating (GVWR) or payload of the vehicle. Check your vehicle's owner's manual and do not exceed the maximum load listed for your vehicle.

Gross Vehicle Weight Rating = the maximum allowable weight of the fully loaded vehicle (including passengers and cargo). This number — along with other weight limits, as well as tire, rim size and inflation pressure data — is shown on the vehicle's Safety Compliance Certification Label.

Payload: The combined, maximum allowable weight of cargo and passengers that the truck is designed to carry. Payload is GVWR minus the Base Curb Weight.

Precautions

Never exceed the maximum and minimum recommended pressure limits:

- Minimum Pressure 1 Bar (14.5 p.s.i)
- Maximum Pressure 7 Bar (100 p.s.i)

While it is possible to inflate the system in static mode to 7 Bar (100 p.s.i.), it should not be necessary to exceed operating pressure in the region of 3.5 Bar (50 p.s.i.) at vehicle full GVW. This kit should not be used to carry any greater load than manufacturers stated GVW.

To avoid damage to airsprings – When the kit has been installed, please ensure there is adequate clearance (25mm) around the airspring so the airspring does not come in contact with any other parts.

NEVER DRIVE WITH DEFLATED AIRSPRINGS

Special Instructions for Air Connections

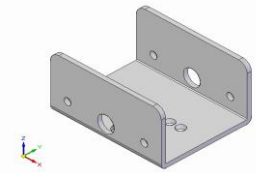
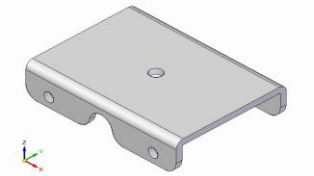
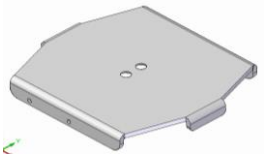
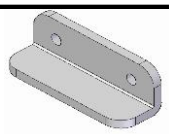
- To cut the tubing correctly an appropriate cutter must be used (not scissors)

- When inserting the tubing into the connection, it must be pushed in approximately 14mm until a 'click' is heard.
- To remove the tube, you must push the flange in on the connection and at the same time pull the tube. (No tool is necessary.)
- **ATTENTION,** when a tube is removed it is important to trim 14mm from the end before reconnection.
- It is advisable that LOCTITE or similar sealant be used on the threaded fittings.

Kit Contents

DIAGRAM

HARDWARE LIST

Part Name	Quantity	Picture/Description	Part #
Upper Outer Bracket	2		DRV-7380
Upper Inner Bracket	2		DRV-7381
Lower Bracket	2		DRV-7382
Clamp	4		DRV-7383
M6 x 10 Countersunk Bolts	8	Lower Bracket to Clamp	
M10 x 20 Heax Head Bolt	2	Upper Inner Bracket	
M10 Spring Washer	2	M10 Hex Bolt	
M8 x 120 Hex Head Bolt	4	Upper Outer to Inner	
M8 Nyloc Nuts	4	M8 x 120 bolts	
M8 Flat Washers	12	M8 Bolts & Inflation valves	
Cable Ties	10		
M10 Countersunk Bolt	2	Lower Bracket to Air spring	3845
Thermal Sleeves	2		0899
Air Spring	2		6694
6mm Tubing	5		1364-1MB
M10 Flange Nut	4	Upper Outer to Air spring	3848
1/4"-6mm Elbow	2		3047
6mm Inflation valve	2		0155
6mm Tee piece	1		3703
6mm Compression Joiner	2	6mm Tubing to 1/4" Tubing	0190

Step by Step Installation

Step 1: Remove the Bump Stop

Remove the rubber bump stop by pulling the rubber bumper away from the metal plate.

This will reveal an M10 bolt. Remove this bolt and the bump stop bracket.

This hole will be used to fix the upper bracket to the chassis.

Step 2: Upper Bracket to Chassis

Using the M10 countersunk bolt fix the upper bracket to the threaded hole that was originally used to hold the bump stop receiver in place. **Ensure the bracket is running parallel with the chassis,** as indicated on the picture on the right.

Torque the M10 bolt to approx. 40Nm.

Note that this particular style bag acts as a bump stop when deflated. So in the unlikely event that there is a leak in the air spring the top and bottom bracket cannot touch as the air spring rubber folds in on itself.

Step 3: Prepare the Air Spring Assembly

Insert the 6mm elbow into the air spring and bolt the Upper Outer Bracket to the air spring using the M10 flange nuts.

Torque to approx 22Nm.

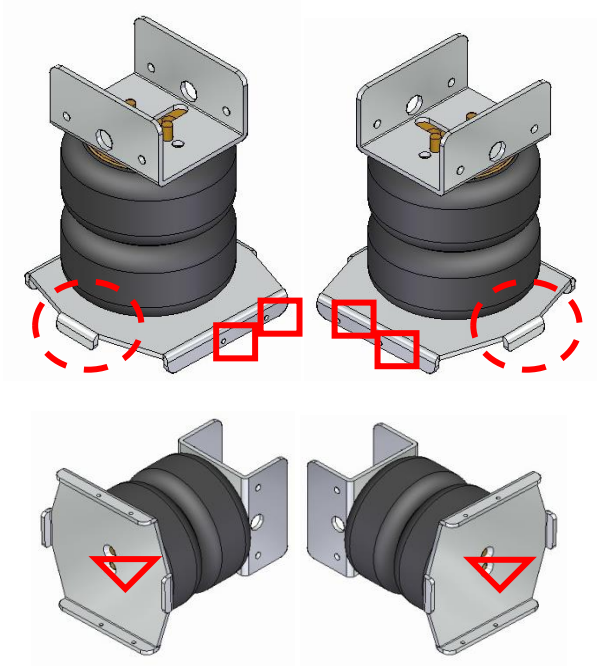
There are 2 countersunk holes in the lower bracket. Use the hole that is facing closest to the front of the vehicle (Outlined by the triangle).

Note that the M6 threaded holes (Outlined by the square) face inboard.

Assemble the air spring to the lower bracket using the M10 countersunk bolt

Torque to approx. 27Nm.

Note that the narrowest flange (Circled) of the Lower Bracket **must** be facing in the same direction as the axle.



Step 4: Air Spring Assembly to Vehicle

Compress the assembly and place the Lower Bracket on the bump stop receiver plate with the M6 holes (Circled) running in the same direction as the chassis.

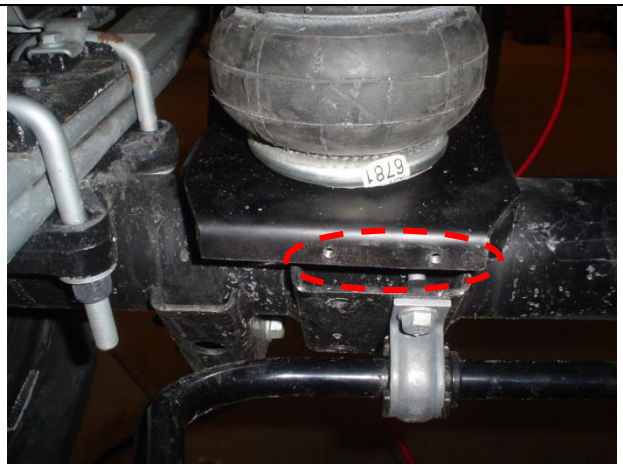
Allow the assembly to extend so that the 4 holes in the Upper *Outer* Bracket align with the corresponding 4 holes on the Upper *Inner* Bracket.

Bolt the Upper Inner Bracket to the Upper Outer Bracket using the M8x1.25-120mm bolts, M8 flat washers and nyloc nuts.

Torque to approx. 22Nm.

↘ Step 5: Secure Lower Bracket to Axle

There are 2x M6 holes on the front and rear of the Lower Bracket (Circled). These will be used to clamp the lower bracket to the bump stop receiver plate.



Align the holes on the clamp with the M6 holes on the lower bracket. The narrow flange should be facing in line with the axle.

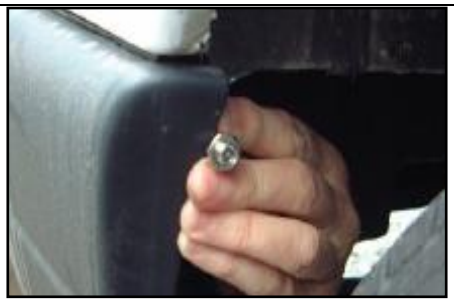
Bolt the clamp to the lower bracket using the M6 countersunk bolts.

Torque to approx. 13Nm

*Note: Check that there is at least **15mm** clearance around the air spring when inflated. If not adjust accordingly*

Step 6: Routing the Air Tubing

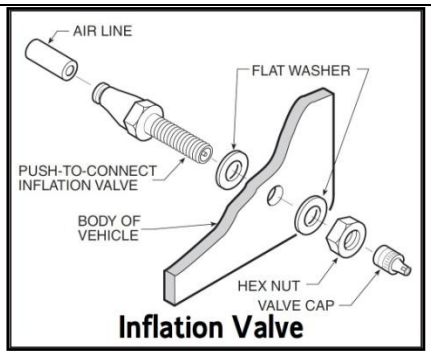
Cut a long length of tubing in order to connect the valve to the nearest air spring. Do the same for the opposite side. Choose whether you want separate inflation valves for each side or one valve common to both sides using the T shaped connector. Use the nylon ties provided to tie the tubing up into a safe position.



When cutting the air tube, it is vital that the tube is not cut at an angle. This could cause an air leak. It is recommended that a tube cutter or a sharp blade.

Drill an 8mm (5/16”) hole and mount the inflation valve as shown in the diagram, pushing the valve through the hole from behind and attaching with 2 washers and a nut.

Cut the air tube to length, making sure the end is cut squarely, and push the end as far as possible into the back of the inflation valve.



IMPORTANT:

- Attach all tubing securely to the underneath of the vehicle using nylon ties.
- Do not attach to brake lines.
- Protect the tube with the sleeves provided where there are any sharp edges or sources of heat.
- Tighten all fittings to the recommended torque

Examination:

After assembly, inflate air springs and check all mounting bolts are tight. Screw all connections tight again. It must be ensured that the mounting brackets cannot move. If the plates touch the brake hose at the air springs, then these must be moved by suitable means.

↘ Step 7: Imperial to Metric Adapter Kit

This kit is supplied with metric air fittings. Please follow the procedures outlined in this document if combining a metric air spring kit with an imperial compressor and gauge kit (Control kit).

Do not attempt to connect imperial fittings to metric tubing (or vice versa) as leaks will occur.

The air springs should be connected to the control kit using the supplied Compression Joiners.

1. Unscrew the two caps off the air fitting adaptor.
2. Insert the cap over the 6mm and 1/4" tubing.
3. Force the tubing over the air fitting collar. Ensure the tubing is fully inserted over the collar.
   -Do not use a flame to soften the tubing as this can damage it and cause leaks.

1/4" Imperial Tubing

6mm Metric Tubing

Notes

FULL REPORT AVAILABLE FOR DOWNLOAD AT WWW.DRIVERITEAIR.COM

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Report Number: VSQ307275 Revision: 0

Test Report:
ECE Regulation 13.11, Revision 8, Supplement 10. Special Requirements for vehicles equipped with vehicle stability function

Legislation

ECE Regulation 13.11, Revisions 8, Supplement 10, Annex 21
2007/46/EC as amended by Regulation (EU) 214/2014, Annex XI, Appendix 1 / 3, Item 9B

Test Details

Location of Test:	VCA Midlands Centre using MIRA Limited facilities.
Date of Test:	26 August – 5 September 2014
VCA Representative(s):	Simon Fraser
Manufacturer's Representative(s):	Sharon Meyler, Padraig Giles
Reason for Test Report:	Test report only to cover vehicles with mass in running order >1735kg

Manufacturer Details

Name and Address:	Driverite Ltd., Unit 626 Kilshane Avenue, North West Business Park, Ballycoolin, Dublin 15, IRELAND
Type:	X62 project code, covering the following commercial names
Commercial description :	Renault Master, Nissan NV400 and Opel/Vauxhall Movano
Category:	M1 and N1

Conclusion

The above mentioned vehicle was tested in accordance with the above mentioned legislation was found to comply in all respects.

QUALITY
I.S. EN ISO 9001:2008
NSAI Certified

TÜV PROFI CERT certified!! 73 102 3432