

# DRIVE RITE

## AIR SUSPENSION SYSTEMS

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### DR.02.013120

W21-760-3120

RENAULT MASTER / NISSAN INTERSTAR

OPEL & VAUXHALL MOVANO

FRONT WHEEL DRIVE

Single Rear Wheel

### 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](http://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 #
Bottom Bracket	2		DRV-7327
Axle Strap	2		DRV-7328
Anti Twist Plate	2		DRV-7329
Upper Bracket	2		DRV-7330
M10 Locknuts	4	For Carriage Bolts	0034
M10 x 35 Countersunk Bolts	2	Upper Bracket to Vehicle	0111
M10 x 110 Carriage Bolts	4	Axle Strap to Bottom Bracket	0110
M10 Flat Washer	4	For Carriage Bolts	0079
3/8 x 3/4 Countersunk Bolt	2	Bottom Bracket to Airbag	6034
Thermal Sleeves	2		0899
Airbags	2		6397
6mm Tubing	5		1364-1MR
5/8-18 UNF Half Nut	2	Anti Twist plate to Airbag	3332
5/8 Flat Washer	2	Anti Twist Plate to Airbag	0075
Cable Ties	10		9037
6mm Inflation Valve	2		3660
6mm Tee Piece	1		3666
6mm to 1/8 Elbow	2	For Air Springs	3618
Compression Joiner	2	For use with 1/4" Gauge Kit	0190
Dust Cap	2	For Inflation Valves	9064

## 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.



Remove this bolt and the bump stop bracket. This hole will be used to fix the upper bracket to the chassis.

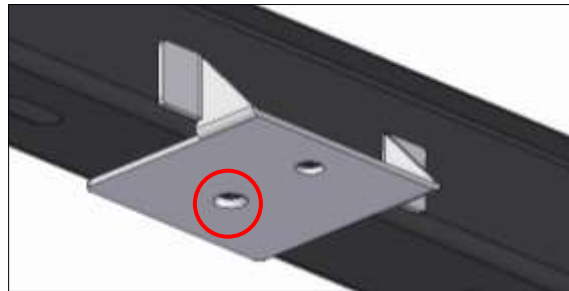


### Step 2: Upper Bracket to Chassis

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.

**The bracket is fastened with two flanges facing outboard.**

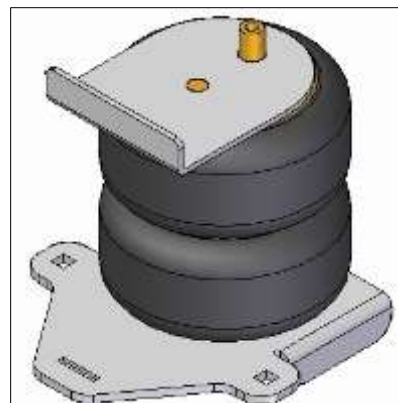
*Torque to approx. 40Nm.*



### Step 3: Prepare the Air Spring Assembly

Assemble the air spring to the Lower Bracket using the 3/8" UNC x 3/4" countersunk bolt. Note that the pointed end of the lower bracket must be facing forwards the centre of the vehicle.

Place the anti-twist plate on the top of the air spring as shown



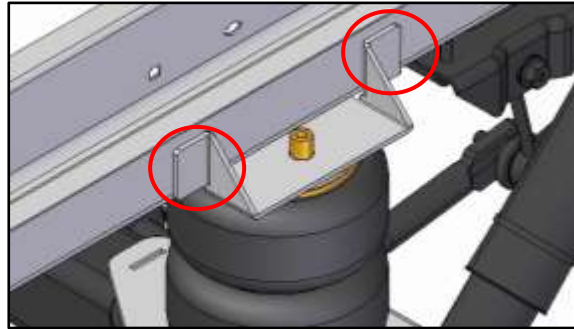
**Centre of Vehicle** ←

### ↘ Step 4: Air Spring Assembly to Upper Bracket

Compress the assembly and place the Lower Bracket on the bump stop receiver plate.

*The Upper Bracket flanges (Circled in red) must be resting against the outboard face of the chassis.*

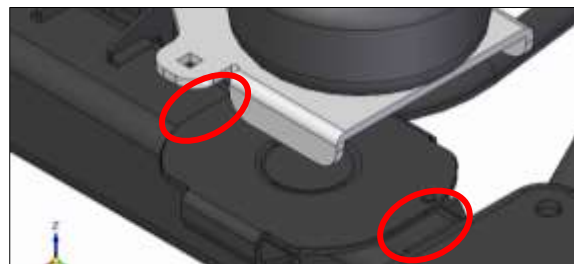
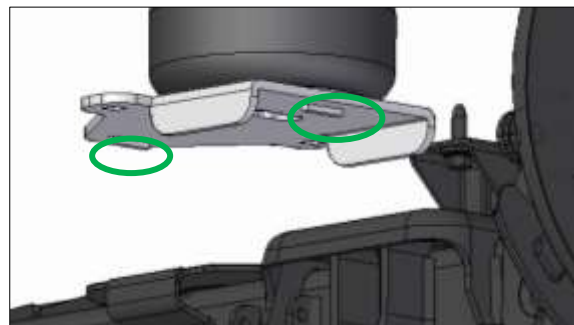
The threaded stud on the air spring will sit in the remaining hole on the upper bracket. Bolt the air spring to the upper bracket using the 5/8" UNF Nyloc half nut and the large flat washer. Torque to approx. 27Nm.



### ↘ Step 5: Air Spring Assembly to Axle

There are 2 locators on the base of the lower bracket (Circled in Green).

These will sit inboard and outboard on the bump stop receiver plate (Circled in Red below).



### ↘ Step 6: Securing the Lower Bracket

Place an axle strap under the axle in line with the square cutouts on the lower bracket and fix the lower bracket to the axle strap using the M10 carriage bolts, flat washers and nyloc nuts.

*Torque to approx. 38Nm.*



### ↘ Step 7: Install the Air Fittings

Insert the swivel elbow into the air spring.

*It is recommended that sealant is used when installing the Air Fittings.*

### ↘ Step 8: 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.

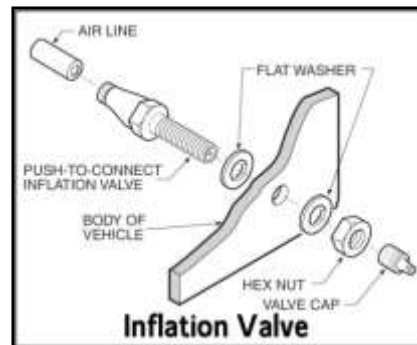


When cutting the air tube, it is vital that the tube is not cut at an angle. This could cause an air leak. It is recommended that a tube cutter or a sharp blade.



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.


#### 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.

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		VCA, 1 Eastgate Office Centre, Parkgate Road, Bristol, BS20 8DQ, United Kingdom enquiries@vca.gov.uk   www.vca.gov.uk   +44(0)1179610101	
Report Number: VSQ307275		Revision: 0	
<b>Test Report:</b> <b>ECE Regulation 13.11, Revision 8, Supplement 10.</b> <b>Special Requirements for vehicles equipped with</b> <b>vehicle stability function</b>			
<b>Legislation</b> ECE Regulation 13.11, Revision 8, Supplement 10, Annex 21 2007/46/EC as amended by Regulation (EU) 214/2014, Annex XI, Appendix 1./3, Item 9B			
<b>Test Details</b> 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 Maylor, Padraig Giles Reason for Test Report: Test report only to cover vehicles with mass in running order >1728kg			
<b>Manufacturer Details</b> Name and Address: Drive-Rite 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			



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Teilgutachten Nr.: 13-00852-CX-GBM-00 Hersteller: Drive-Rite Ltd. Typ: DR.02.01312..		Seite 1 von 10	
<b>TEILEGUTACHTEN</b> Nr. 13-00852-CX-GBM-00 TGA-Art: 8.1			
über die Vorschriftmäßigkeit eines Fahrzeuges bei bestimmungsgemäßem Ein- oder Anbau von Teilen gemäß § 19 Abs. 3 Nr. 4 StVZO			
für das Teil / den Änderungsumfang : Zusatzluftfedersystem			
vom Typ : DR.02.01312..			
Ausführungen: DR.02.013122/ DR.11.012196 DR.02.013122/ DR.11.028534 DR.02.013122/ DR.11.006120 DR.02.013122/ DR.11.012236 DR.02.013122/ DR.11.006121 DR.02.013122/ DR.11.012436 DR.02.013122/ DR.11.012332 DR.02.013120/ DR.11.012196 DR.02.013120/ DR.11.028534 DR.02.013120/ DR.11.006120 DR.02.013120/ DR.11.012236 DR.02.013120/ DR.11.006121 DR.02.013120/ DR.11.012436 DR.02.013120/ DR.11.012332			
des Herstellers : Drive-Rite Ltd. Unit 626 Kilshane Avenue IRL - 15 Dublin			
für das Fahrzeug : Renault Master (X62), Opel Movano (X62); Nissan NV400			



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