

# **DRIVE▶RITE**

## **AIR SUSPENSION SYSTEMS**

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**DR.02.013503**

W21-760-3503

**VOLKSWAGEN CADDY**

**ABS Vehicles Only**

### **INSTALLATION INSTRUCTIONS**



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# Introduction

The purpose of this publication is to assist with the installation of the DR.02.013503 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)

### **NEVER DRIVE WITH DEFLATED AIR SPRINGS**

## 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

## HARDWARE LIST

Part Name	Quantity	Picture/Description	Part #
Upper Inner Bracket	2		DRV-7291
Upper Outer Bracket	2 (Handed)		DRV-7292
Lower Bracket	2		DRV-7290
Axle Strap	4		DRV-7293
Spacer	8		DRV-7326
Heat Shield	1		1004
3/8" x 3/4" UNC Countersunk Bolts	2	Air Spring to Lower Bracket	
M10 x 50 Bolts	8	For Spacers for Double Leaf Spring	
M10 Nylocs	8	For M10 x 50 bolts	
M10 Flat Washers	24		
M10 Spring Washers	2	For Upper Outer Bracket to Chassis	
M8 x 100 Bolts	4	Upper Inner to Upper Outer Bracket	
M8 Flat Washers	8	For M8 x 100 Bolts	
M8 Nylocs	4	For M8 x 100 Bolts	
Cable Ties	10		
Thermal Sleeves	2		0899
3/8" UNC Flange Nuts	4	Air Spring to Upper Bracket	3022
Style 267 Bag	2		6781
1/4" Elbow	2		3031
1/4" Inflation valve	2		3032
5/16 Flat Washer	4	For Inflation Valves	
1/4" Tee piece	1		3025
1/4" Tubing	5m		1141-1M

# Step by Step Installation

## Step 1: Remove the Bump Stop

Remove the original bump stops located above the rear axle.

The rubber bumper will “pop” off with some force leaving the metal bracket attached to the chassis.

Remove this bracket using an M10 spline and ratchet.

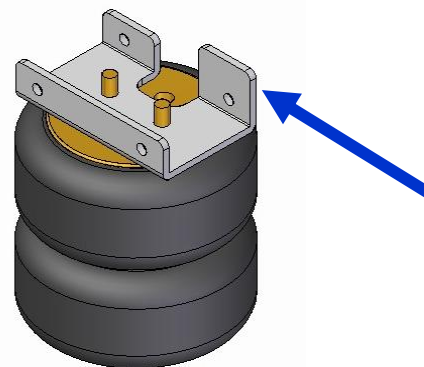


## Step 2: Prepare the Air Spring Assembly

Screw the 1/4" Elbow into the air inlet port on the Air Spring.

Assemble the Upper Outer Bracket to the Air Spring as shown with the higher flange on the air inlet side of the bag as shown in the picture on the right.

Bolt together using the 3/8" UNC flange nuts. (Torque to approx. 20-25Nm.)



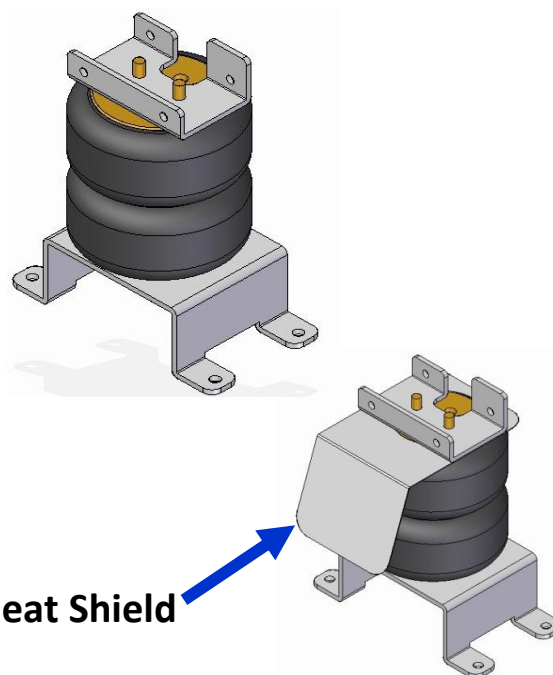
Bolt the Lower Bracket to the Air Spring using the countersunk bolts. (Torque to approx. 20-25Nm.)

**Note:** that some models have an exhaust location which is close to the Air Spring assembly on the right hand side. In this instance a heat shield must be used to protect the Air Spring.

*The heat shield will mount between the upper outer bracket and the air spring as shown.*

Bend the heat shield so it is half way between the Air Spring and the closest point to the exhaust.

**Be sure that the heat shield will not contact any other components as the suspension compresses.**



### ↘ Step 3: Upper Inner Bracket to Chassis

Using the original M10 bolt and the supplied M10 spring washers, bolt the Upper Inner Bracket to the chassis through the same threaded hole that the bump stop spline bolt used.

*(Torque to approx. 38Nm)*



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

Place the Air Spring Assembly over the leaf spring.

*Ensure the high flange is facing the rear and is inboard. This should rest against the chassis.*

Bolt the Upper Inner Bracket to the Upper Outer Bracket using the M8 x 100 bolts, M8 flat washers and M8 nyloc nuts. *(Torque to approx. 22Nm)*



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

**Note that the Caddy *may* have a helper spring installed.**

**Option 1.** shows an example of the single leaf configuration

**Option 2.** shows an example of a dual leaf (1 x helper leaf) configuration. *The upper spring is the main spring while the lower spring is the helper spring.*

Clamp the Lower Bracket to the leaf spring using the axle straps and the M10 bolts. *(Torque to approx. 38Nm).*

**Option 1:** Use a 4 x M10 flat washer on each bolt as spacers between the Lower Bracket and the axle strap to prevent distortion in the brackets.

**Option 2:** Use 4 x Spacers on each bolt between the Lower Bracket and the axle strap to prevent distortion in the brackets.

Ensure that the axle straps are not interfering with any vehicle components (i.e. shock absorbers)

**Note that the fittings related to the air springs are imperial. Do not mix up the imperial and metric fittings.**

**Option  
1**



**Option  
2**





## 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.

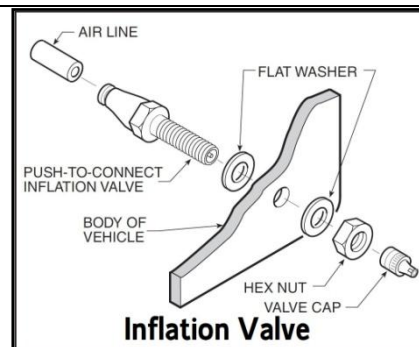


When cutting the air tube, it is vital that the tube is not cut at an angle. This could cause an air leak. It is recommended that a tube cutter or a sharp blade.



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.

### 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.



TÜV SÜD AUTOMOTIVE GMBH Westendstrasse 199 D-80686 München		 Automotive
Teilgutachten Nr.:	13-00987-CX-GBM-00	
Hersteller:	Drive-Rite Ltd.	
Typ:	DR.02.013503	Seite 1 von 7

**TEILEGUTACHTEN**  
Nr. 13-00987-CX-GBM-00  
TGA-Art: 8.1

über die Vorschriftsmäßigkeit eines Fahrzeuges bei bestimmungsgemäßem Ein- oder Anbau von Teilen gemäß § 19 Abs. 3 Nr. 4 StVZO

für das Teil / den Änderungsumfang : Zusatzluftfedersystem an der Hinterachse

vom Typ : DR.02.013503

Ausführungen: : DR.02.013503 / DR.11.010003  
DR.02.013503 / DR.11.016110  
DR.02.013503 / DR.11.012236  
DR.02.013503 / DR.11.016112  
DR.02.013503 / DR.11.012436  
DR.02.013503 / DR.30.013332

des Herstellers : Drive-Rite Ltd.  
Unit 626 Kilshane Avenue  
IRL - 15 Dublin

für das Fahrzeug : VW Caddy

**0. Hinweise für den Fahrzeughalter**

**Unverzügliche Durchführung und Bestätigung der Änderungsabnahme:**  
Durch die vorgenommene Änderung erlischt die Betriebserlaubnis des Fahrzeuges, wenn nicht unverzüglich die gemäß StVZO § 19 Abs. 3 vorgeschriebene Änderungsabnahme durchgeführt und bestätigt wird oder festgelegte Auflagen nicht eingehalten werden!  
Nach der Durchführung der technischen Änderung ist das Fahrzeug unter Vorlage des vorliegenden Teilgutachtens unverzüglich einem amtlich anerkannten Sachverständigen oder Prüfer einer Technischen Prüfstelle oder einem Prüflingenieur einer amtlich anerkannten Überwachungsorganisation zur Durchführung und Bestätigung der vorgeschriebenen Änderungsabnahme vorzuführen.

**Einhaltung von Hinweisen und Auflagen:**  
Die unter III. und IV. aufgeführten Hinweise und Auflagen sind dabei zu beachten.

**Mitführen von Dokumenten:**  
Nach der durchgeführten Abnahme ist der Nachweis mit der Bestätigung über die Änderungsabnahme mit den Fahrzeugpapieren mitzuführen und zuständigen Personen auf Verlangen vorzuzeigen; dies entfällt nach erfolgter Berichtigung der Fahrzeugpapiere.

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registration-number: KBA-P-00001-95

**TÜV Report available at [www.driveriteair.com](http://www.driveriteair.com) or contact Drive-Rite for details**

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