

DRIVE▶RITE

AIR SUSPENSION SYSTEMS

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DR.02.013042

FORD RANGER / MAZDA BT-50

4x2 HI RIDER & 4x4 Rear Axle

INSTALLATION INSTRUCTIONS



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Introduction

The purpose of this publication is to assist with the installation of both the DR.02.013042.

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 tyre, 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

DIAGRAM



HARDWARE LIST

#	Part Name	Quantity	Picture/Description	Part No:
1	Fastener Bracket	1		DRV-7488
2	Upper Bracket	2		DRV-7486
3	Lower Bracket	2		DRV-7487
4	Angle Brackets	2		DRV-7489
5	Spacer	1	Upper Bracket to Chassis	
6	3/4" Lock Washer	2	Air Springs to Upper Bracket	3064
7	3/4" Nut	2	Air Springs to Upper Bracket	3295
8	3/8" x 1 1/4" Hexhead Bolt	1	Upper Bracket to Chassis	0155
9	3/8" Spring Washer	1	Upper Bracket to Chassis	0061
10	3/8" Flat Washer	1	Upper Bracket to Chassis	0071
11	3/8" x 3/4" Flange Lock Bolt	4	Lower Bracket to Air Spring & Angle Brackets	3069
12	M8 Flat washers	4	for Inflation Valves	0007
13	1/4" Inflation Valves	2		3032
14	1/4" T-Piece	1		3025
15	1/4" Tubing	5m		1141-1M
16	Cable Ties	10		9037
17	Air Springs	2	Style 224	6401
18	1/4" to 1/4" Elbow	2		3031
19	Protective Sleeves	2		0899

Step by Step Installation

↘ Step 1: Prepare the Vehicle

With the vehicle on a solid, level surface, chock the front wheels and remove the negative battery cable. It is not necessary to raise the vehicle on to stands to fit this kit, but if you do, use stands rated to the vehicles weight and position them under the rear axle.

All illustrations are representational. Start by fitting the left hand side (near side) then fit the right hand side (driver's side) assembly simply follow the same procedures.

↘ Step 2: Remove the Bump Stop

Remove the nuts from the u-bolts on one side of the rear axle and lift up the u-bolt plate, and then remove the bump stop. Put the u-bolt plate and u-bolts back in place on the leaf spring, checking that the u-bolt cap under the axle seats correctly. Torque the u-bolts to the manufacturers recommended torque setting.

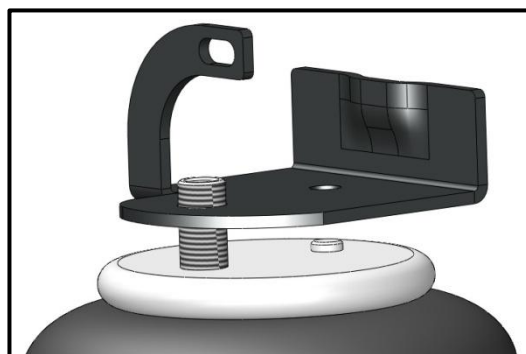


↘ Step 3: Pre-Assemble Air Spring & Upper Bracket

Place upper bracket on top of an air spring.

Ensure that the locating 'Pip' feeds into its hole during this process. If this does not happen then the air springs will be damaged during use.

Attach the air spring to the upper bracket using the supplied 3/4" nut and 3/4" lock washer, *note that the 3/4" nut needs to be rotated so that it has a face that is parallel to the chassis rail; this allows it clear the chassis rail.*



Step 4: Install Elbow Air Fitting

Install the supplied 1/4" x 1/4" elbow air fitting in the air entrance hole on the top plate (stud end) of the bellows and tighten. It is recommended that sealant is used when securing the elbow fitting.



Step 5: Air Spring Assembly to Chassis

STEP 5A – Left Hand Side

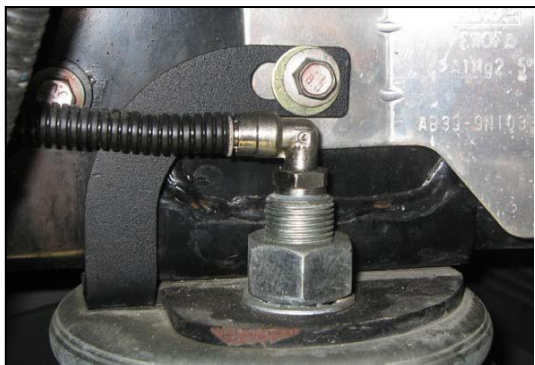
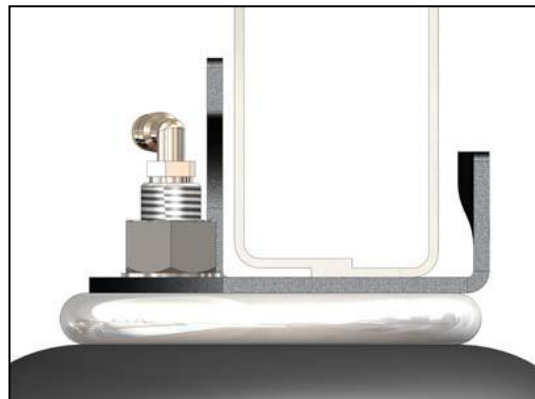
Remove the M8 bolt that holds a bright metal bracket to the inside of the chassis rail, above the bumper contact bracket, and retain the bolt.

Feed the outer part of the upper bracket up the outside of the chassis rail, then push and roll the bracket up the inside of the chassis until it seats on the bumper contact bracket.

ROTATE UPPER BRACKET IN TO POSITION, PUSHING UP ON THE INSIDE UNTIL FULLY SEATED - DO NOT SLIDE ALONG CHASSIS.

Fasten the bracket using the previously removed M8 bolt.

Torque to approx. 22Nm.



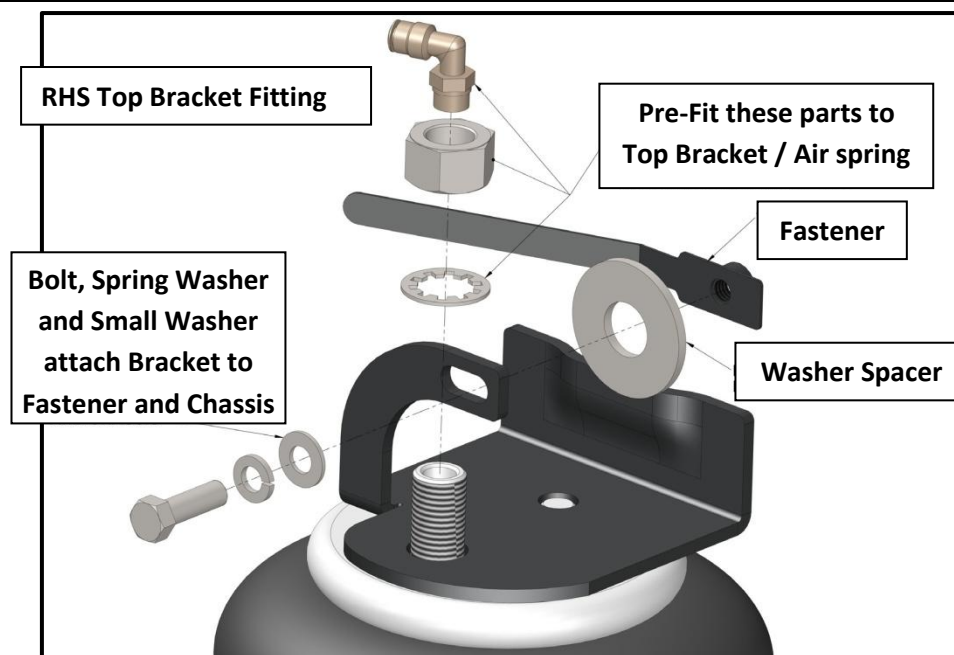
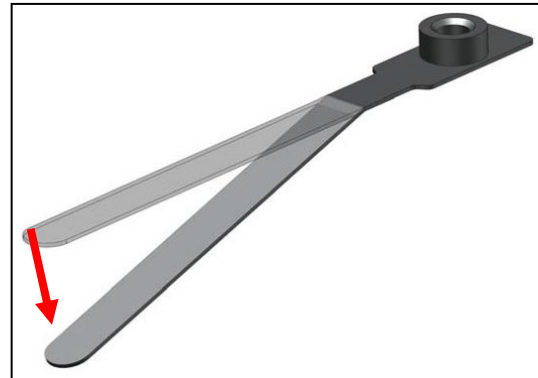
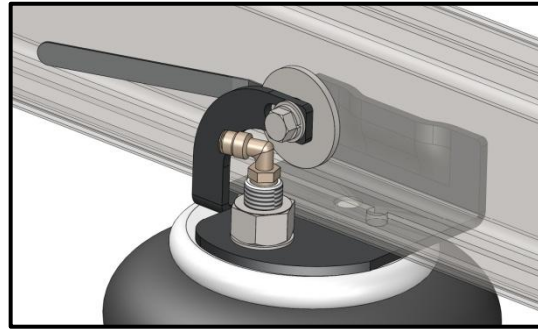
STEP5B – Right Hand Side

Bend the Fastener bracket to a shape as shown by hand, then insert into the slot in the inside of the chassis rail, above the bumper contact bracket.

Feed the outer part of the upper bracket up the outside of the chassis rail, then push and roll the bracket up the inside of the chassis until it seats on the bumper contact bracket.

Fasten the Upper Bracket to the Fastener Bracket using the supplied 3/8" x 1 1/4" bolt, spring washer and flat washer.

Torque to approx. 22Nm.



Step 6: Air Spring Assembly to Axle

Fasten the air spring to the lower bracket using a supplied 3/8" x 3/4" flange lock bolt.

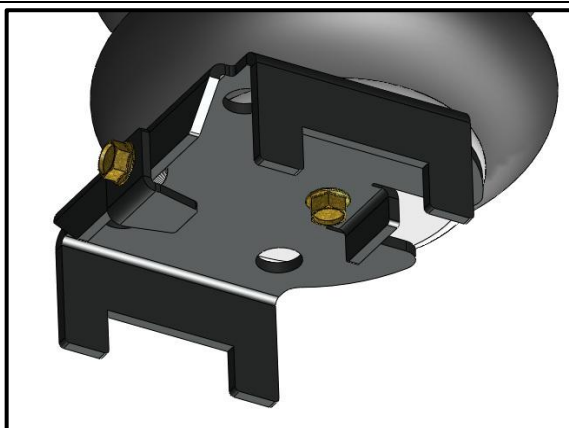
Torque to approx. 22Nm.

Visually check the alignment of the Air Spring on the vehicle. Re-position the bottom bracket as necessary and re-tighten.

Fasten the lower bracket to the u-bolt plate using the supplied 3/8" flange lock bolt and angle bracket.

Torque to approx. 22Nm.

Note that the angle bracket is to be mounted as square as possible.



Step 7: 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.

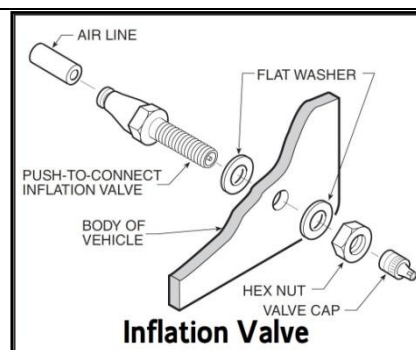


When cutting the air tube, it is vital that the tube is not cut at an angle. This could cause an air leak. It is recommended that a tube cutter or a sharp blade be used.



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.
- Ensure all fittings are fastened to 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.

Notes

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