

REAR ROAD SPRING

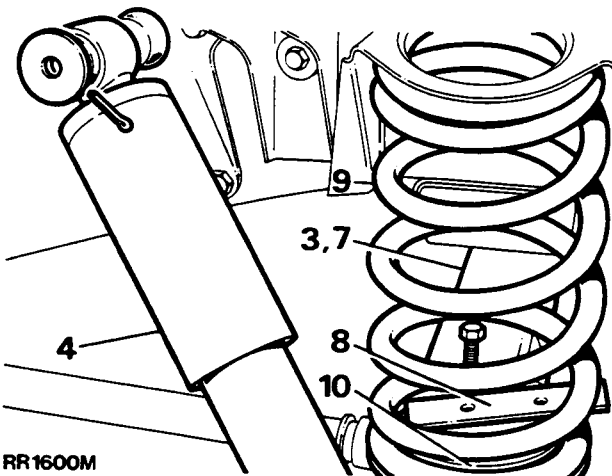
Remove and refit

Service tool:

RO1006 Extractor for ball joint.

Removing

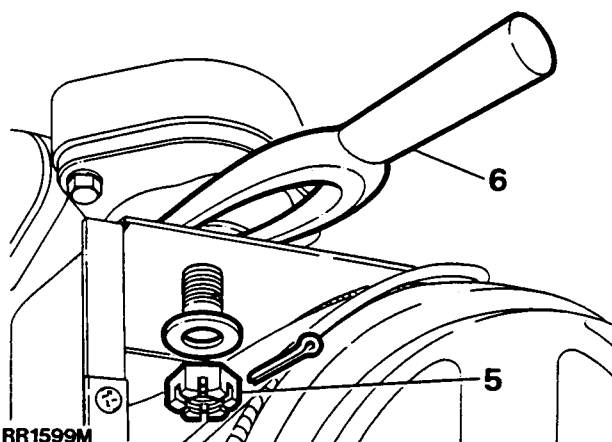
1. Raise rear of vehicle and support chassis.
2. Remove road wheels.
3. Support the axle weight.
4. Disconnect the shock absorbers at one end.



RR1600M

5. Remove fixings, pivot bracket ball joint to axle.
6. Extract the ball joint pin from the tapered housing. Extractor RO1006.
7. Lower the axle further, sufficient to free the road spring from the upper seat.

WARNING: Avoid lowering the axle further than necessary otherwise the rear brake flexible hose will become stretched.



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8. Remove the spring retainer plate.
9. Withdraw the road spring.
10. Lift off the spring seat.

Refitting

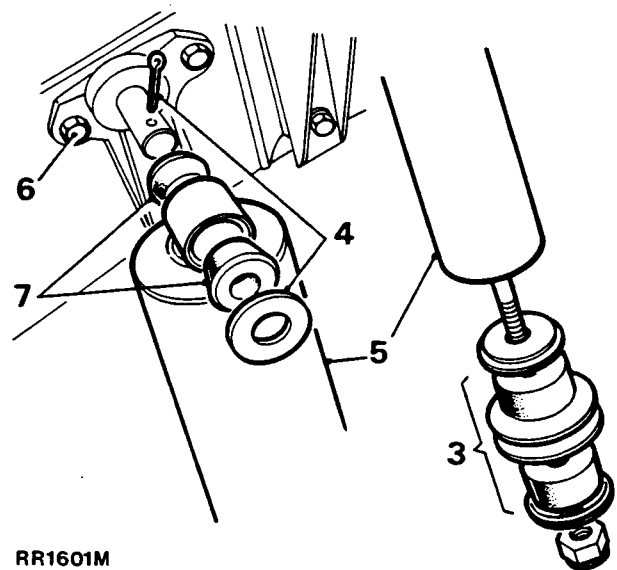
11. Reverse 1 to 10. Tighten the pivot bracket ball joint nut to the correct torque.

REAR SHOCK ABSORBER

Remove and refit

Removing

1. Remove road wheel.
2. Support the rear axle.
3. Remove the fixings and withdraw the shock absorber from the axle bracket.



RR1601M

4. Remove upper fixings.
5. Withdraw the shock absorber.
6. If required, remove the mounting bracket at the chassis side member.
7. If required, lift out the mounting rubbers at the upper end.

Refitting

8. Reverse items 7 and 8 as applicable.
9. Reverse items 1 to 6.

LEVELLING UNIT

Functional check

A Boge Hydromat levelling unit is located in the centre of the rear axle.

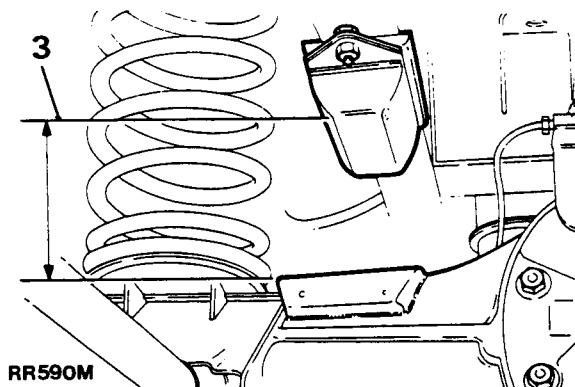
When the vehicle is unladen the levelling unit has little effect. The unit is self-energising and hence the vehicle has to be driven before the unit becomes effective, the time taken for this to happen being dependent upon the vehicle load, the speed at which it is driven and the roughness of the terrain being crossed.

If the vehicle is overloaded the unit will fail to level fully and more frequent bump stop contact will be noticed.

Should the vehicle be left for a lengthy period, e.g. overnight, in a laden condition, it may settle. This is due to normal internal fluid movement in the unit and is not detrimental to the unit performance.

Before carrying out the checks below, verify that the vehicle is being operated within the specified maximum loading capabilities. If the levelling unit is then believed to be at fault, the procedure below should be followed.

1. Check the levelling unit for excessive oil leakage and if present the unit must be changed. Slight oil seepage is permissible.
2. Remove excessive mud deposits from underneath the vehicle and any heavy items from inside the vehicle that are not part of the original equipment.
3. Measure the clearance between the rear axle bump pad and the bump stop rubber at the front outer corner on both sides of the vehicle. The average clearance should be in excess of 67 mm (2.8 in). If it is less than this figure remove the rear springs and check their free length against the 'Road Spring Data'. Replace any spring whose free length is more than 20 mm (0.787 in) shorter than the figure given. If after replacing a spring the average bump clearance is still less than 67 mm (2.8 in), replace the levelling unit.



4. With the rear seat upright, load 450 kg (992 lb) into the rear of the vehicle, distributing the load evenly over the floor area. Check the bump stop clearance, with the driving seat occupied.
5. Drive the vehicle for approximately 5 km (3 miles) over undulating roads or graded tracks. Bring the vehicle to rest by light brake application so as not to disturb the vehicle loading. With the driving seat occupied, check the bump stop clearance again.
6. If the change in clearance is less than 20 mm (0.787 in) the levelling unit must be replaced.

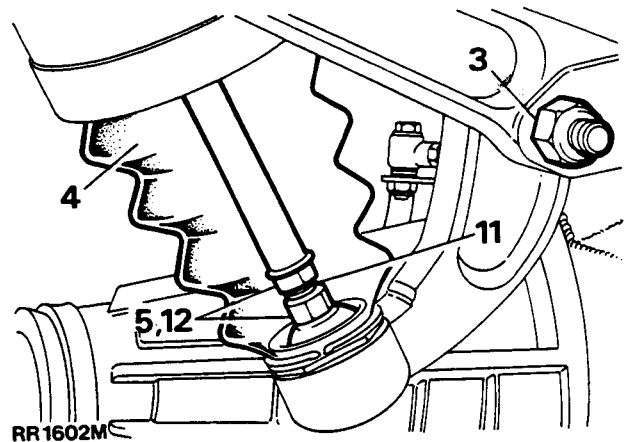
LEVELLING UNIT

Remove and refit

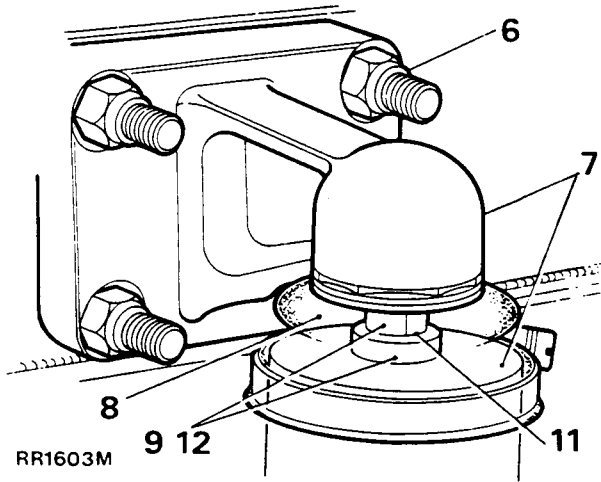
Removing

WARNING: The levelling unit contains pressurised gas and must not be dismantled nor the casing screws removed. Repair is by replacement of complete unit only.

1. Raise and support the chassis rear end.
2. Support the axle weight.
3. Disconnect the suspension upper links at the pivot bracket.



4. Ease up the lower gaiter.
5. Unscrew the lower ball joint at the levelling unit push rod, using thin jawed spanners.
6. Remove the top bracket fixings at the cross member.
7. Withdraw the levelling unit and top bracket complete.
8. Ease back the upper gaiter.
9. Unscrew the upper ball joint at the levelling unit, using thin jawed spanners.
10. Withdraw the upper and lower gaiters and their retaining spring rings.



Refitting

11. Smear 'Loctite' grade CVX or suitable equivalent sealant on to ball pin threads.
12. Reverse items 1 to 10. Do not fully tighten the fixings until all items are in their fitted position. Finally tighten to the correct torque.

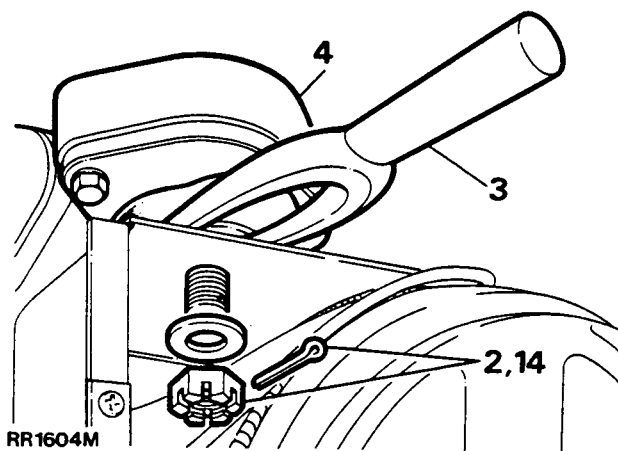
LEVELLING UNIT BALL JOINTS

Remove and refit

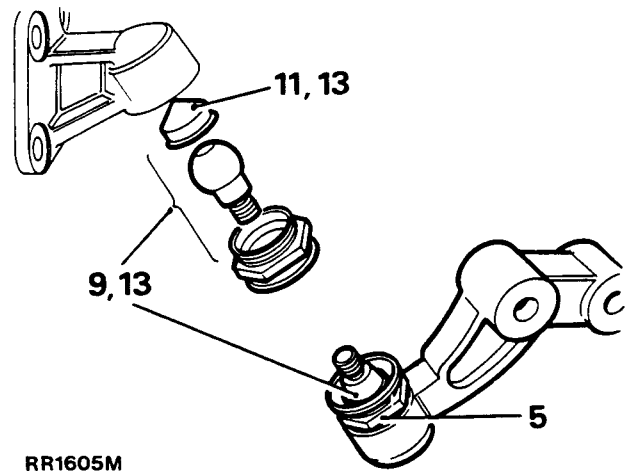
Service tools: RO 1006 Extractor for axle bracket ball joint

Removing

1. Remove the levelling unit.
2. Remove the split pin and nut at the rear axle bracket.
3. Extract the ball pin from the axle bracket. Extractor RO 1006.



4. Withdraw the pivot bracket complete with ball joints.
5. Unscrew the ball joint assembly for the levelling unit.
6. Remove the ball joint assembly for the axle bracket.

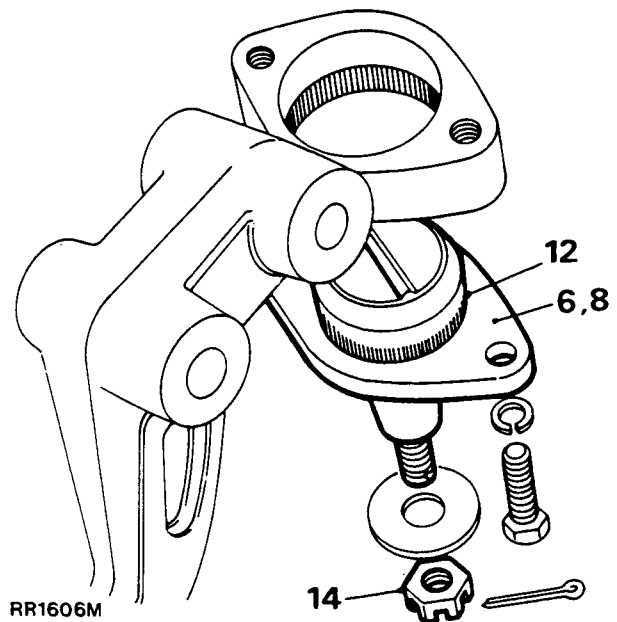


RR1605M

7. Replacement ball joints are supplied as complete assemblies, less fixings, and are pre-packed with grease.
8. The ball joint for the axle bracket must not be dismantled.
9. The ball joints for the levelling unit may be dismantled and cleaned if required.
10. Pack the ball joint with Dextagrease GP or an equivalent grease when assembling.
11. Ensure that the ball seating is square in its housing before refitting.

Refitting

12. Press the knurled ball joint into the pivot bracket.

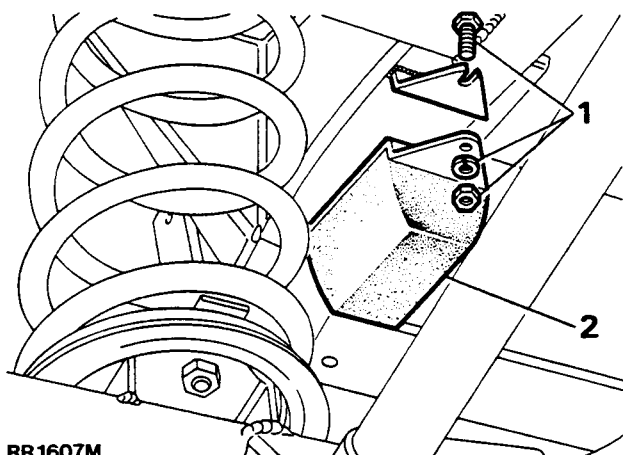


RR1606M

13. Screw the ball joints for the levelling unit into the mounting brackets. If the ball joints do not screw in easily and fully, remove and refit the assemblies ensuring that the plastic seats do not foul in the housings. Tighten to the correct torque.
14. Fit the pivot bracket complete with ball joints to the rear axle. Tighten to the correct torque.
15. Fit the levelling unit.

BUMP STOP**Remove and refit****Removing**

1. Remove the fixings.
2. Withdraw the bump stop assembly.



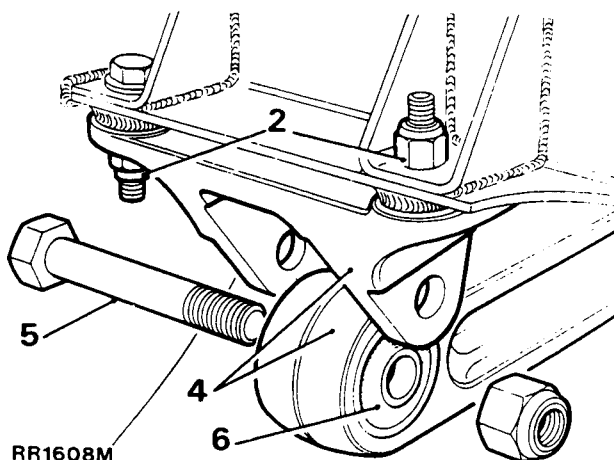
RR1607M

Refitting

3. Position the fixing bolts in the slots in the chassis brackets.
4. Fit the bump stop assembly, position the shoulder on the carrier to suit the chassis configuration.

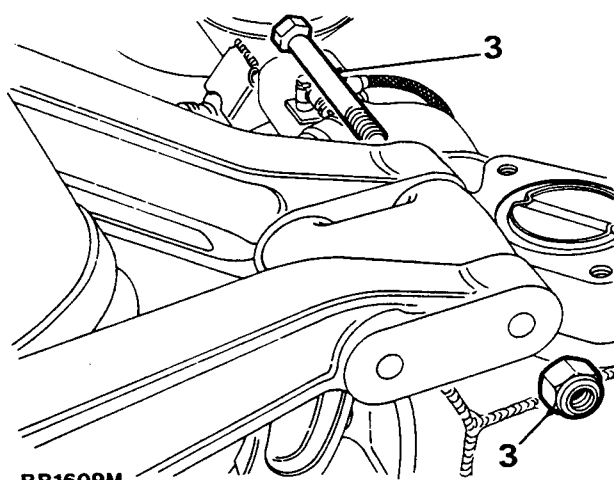
UPPER SUSPENSION LINK**Remove and refit 1 to 6 and 9****BUSH****Remove and refit 7 and 8****Removing**

1. Jack up under the chassis until the rear axle is freely suspended.
2. Remove the fixings, upper link bracket to frame.



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3. Remove the fixings, upper links to pivot bracket.
4. Withdraw the upper link complete with frame bracket.
5. Remove the fixing bolt.
6. Separate link and bush assembly from bracket.



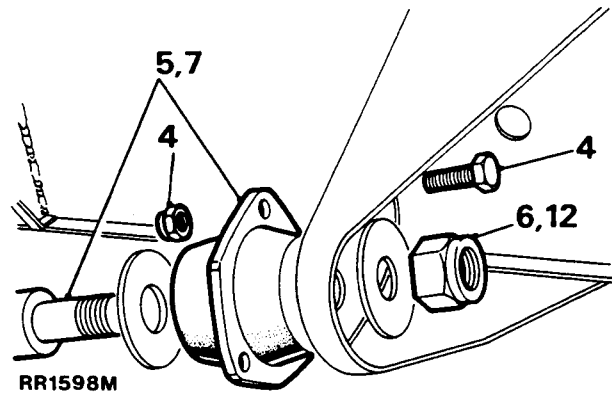
RR1609M

Replacing the bush

7. Press out the bush assembly.
8. Fit the replacement bush assembly central in the housing.

Refitting

9. Reverse 1 to 6. Do not fully tighten the fixings until all components are in position.



Replacing the bush

8. Press out the bush assembly from the rear end.
9. Fit the replacement bush assembly central in the housing.

Refitting

10. Reverse items 6 and 7. Do not tighten the locknut at this stage.
11. Reverse items 3 to 5.
12. Lower the vehicle, remove the jack and allow the axle to take up its static laden position.
13. Tighten the locknut to the correct torque.

LOWER SUSPENSION LINK

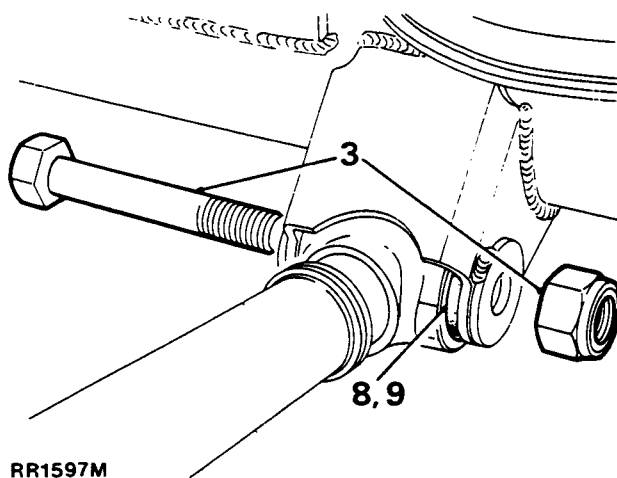
Remove and refit 1 to 7, 10 to 12

BUSH

Remove and refit 8 and 9

Removing

1. Jack up the rear end or use a ramp for accessibility.
2. LH side only. Remove the shock absorber lower fixings and withdraw the shock absorber from the axle bracket.
3. Remove the link rear fixings.



4. Remove the mounting bracket fixings at the side member bracket.
5. Withdraw lower link complete with mounting bracket.
6. Remove the locknut.
7. Withdraw the mounting bracket from the lower link.

