

Section H10

Rear road springs

Introduction

To compensate for variation in spring load poundages, adjusting washers can be fitted to the top of each spring. These washers which are 2,64 mm. (0.104 in.) thick locate on the upper spring seat (see Fig. H40). The maximum number of washers which should be fitted to one spring is seven. A minimum of one washer should always be fitted.

As a temporary measure until a new road spring can be obtained, it is permissible to fit an extra three washers to adjust the car height.

Road spring - To remove

1. Drive the car onto a ramp and chock the front road wheels.
2. Depressurize the hydraulic system as described in Chapter G.
3. Disconnect the height control valve link from the trailing arm.
4. Disconnect the parking brake cable from the rear caliper mechanism.
5. Disconnect the bottom damper mount.
6. Remove the setscrew securing the rebound strap to the body.
7. Disconnect the drive-shaft from the hub. Care should be taken to retain the needle roller caps on the universal joint during this operation. Bind the joint with masking tape to retain the roller caps in position, then secure the shaft to the rear crossmember.

Do not pull the shaft outwards or the trunnion joint may be withdrawn from its housing.

8. Position a jack beneath the final drive. Raise the car until maximum body height is achieved with the wheels resting on the ramp.

Important

Care should be taken to ensure that the wheels do not clear the ramp as damage to the crossmember and trailing arms may occur.

9. Support the car body with sill blocks.
10. Lift the road spring over the seating cup on the trailing arm. Lower the spring from the car. On cars other than Corniche Convertible the damper piston rod will have to be raised and lifted with the spring. Care must be taken not to damage the surface of the rod during this operation. The upper spring seat will also be lowered with the spring. Note the number of adjusting washers fitted to the spring.

On convertible cars the adjusting washers are retained on the connector tube with a rubber 'O' ring.

11. Remove the flexible spring seat from the lower spring cup.

Note

On cars conforming to a North American specification, except Camargue, a 12,50 mm. (0.50 in.) thick

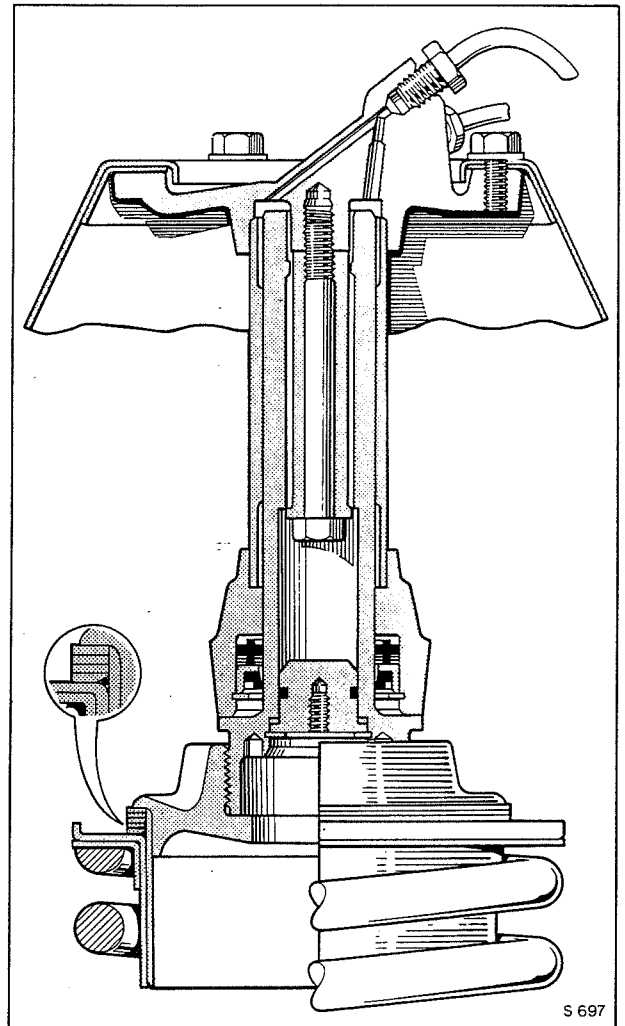


Fig. H39 Spring and height control ram location (Corniche Convertible)

aluminium packing and a second flexible seating washer should also be removed from the lower spring cup.

12. If it is necessary to remove the connector tube the height control ram should be removed as described in Chapter G Part 1.

Road spring - To fit (see Figs. H39 and H40)

Fit the spring by reversing the procedure given for removal noting the following.

1. Ensure that the flexible spring seats and adjusting washers are clean and in a serviceable condition. Renew if necessary.
2. Check that the correct number of adjusting

H10 - 2

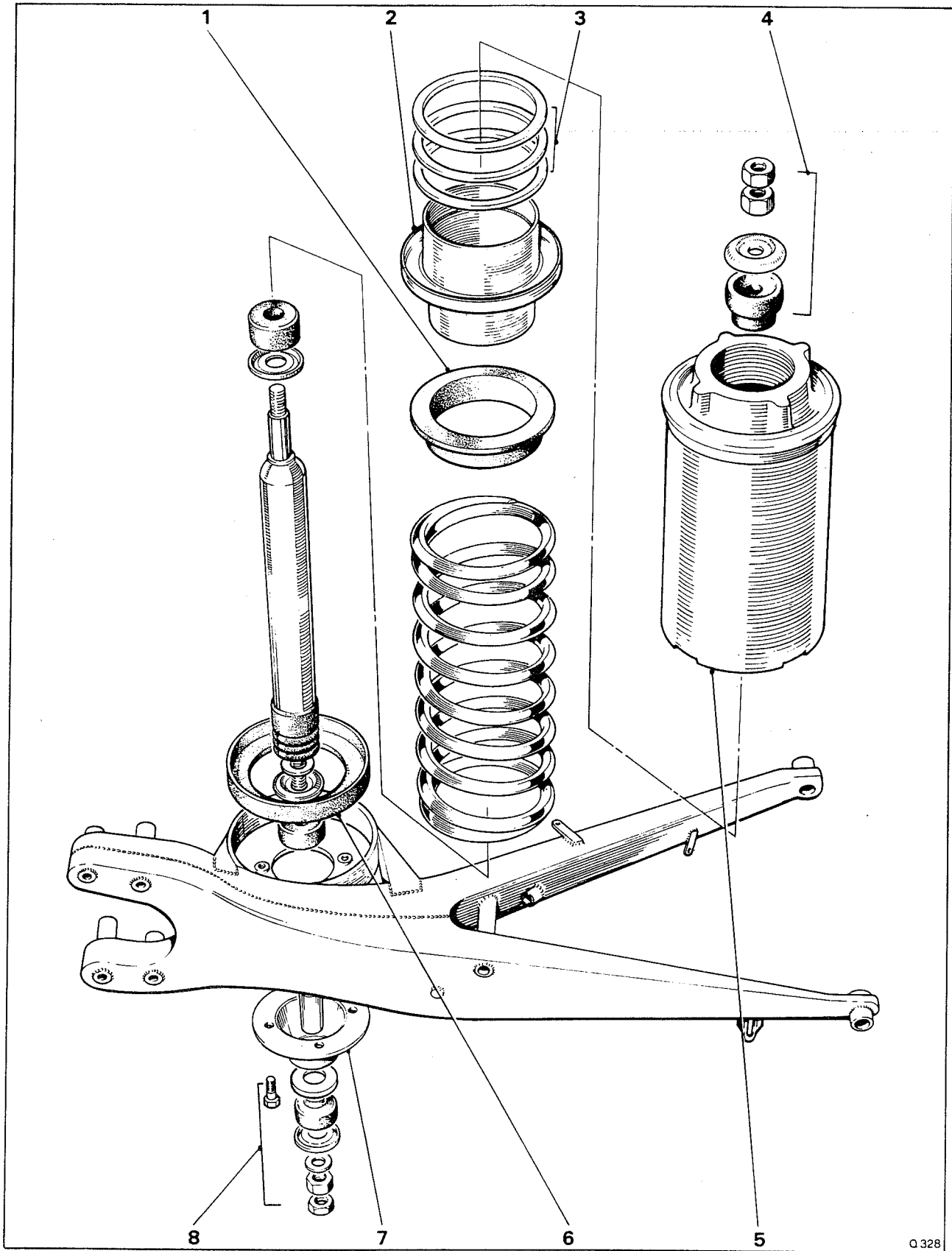


Fig. H40 Spring and damper arrangement (all cars except Corniche Convertible)

- | | |
|--------------------------------------|--|
| 1 Pliable spring seat | 5 Connector and spigot tube - Height control ram |
| 2 Upper spring seat assembly | 6 Pliable spring seat |
| 3 Adjusting washers | 7 Damper bracket |
| 4 Damper - Upper mounting components | 8 Damper - Lower mounting components |

Spring loading chart

	Right-hand drive cars				Left-hand drive cars			
	Right-hand spring		Left-hand spring		Right-hand spring		Left-hand spring	
	kgf	lbf	kgf	lbf	kgf	lbf	kgf	lbf
Silver Shadow II	607	1339	580	1279	560	1234	619	1364
Bentley T2	607	1339	580	1279	560	1234	619	1364
Silver Wraith (Non division)	625	1379	614	1354	596	1314	637	1404
Silver Wraith (Division)	675	1490	675	1490	648	1428	676	1490
Corniche Saloon	630	1390	644	1420	594	1310	667	1470
Corniche Convertible	662	1460	653	1440	630	1390	685	1510
Camargue	664	1465	664	1465	626	1380	698	1540

Spring load adjusting washer selection

Number of adjusting washers		1	2	3	4	5	6	7	8	9	10
Packing thickness	mm.	2,64	5,28	7,92	10,57	13,21	15,85	18,49	21,13	23,77	26,42
	in.	0.104	0.208	0.312	0.416	0.520	0.624	0.728	0.832	0.936	1.040
Silver Shadow II Bentley T2 Spring load increase/decrease	kgf	8,62	17,69	26,76	35,83	44,45	53,52	62,60	71,22	80,29	89,36
	lbf	19	39	59	79	98	118	138	157	177	197
Silver Wraith (Non division) Corniche Saloon Corniche Convertible Spring load increase/decrease	kgf	9,53	18,60	28,12	37,65	46,72	56,25	65,77	75,30	84,37	93,90
	lbf	21	41	62	83	103	124	145	166	186	207
Silver Wraith (Division) Camargue Spring load increase/decrease	kgf	9,98	19,96	29,94	39,92	49,90	59,88	69,85	79,83	89,81	99,79
	lbf	22	44	66	88	110	132	154	176	198	220

Note

One adjusting washer will increase or decrease the standing height of the car by 2,720 mm. (0.136 in.)

washers are fitted to the upper spring seat. A minimum of one washer must always be fitted. Refer to the above chart for adjusting washer information

On Corniche Convertible cars renew the rubber 'O' ring used to retain the adjusting washers on the connector tube. Ensure that the special locating washer is fitted last to enable the 'O' ring to locate in the chamfer of the washer (see Fig. H39).

3. Ensure that the drive-shaft universal joint is correctly located in the hub yoke.
4. Roll the car backwards and forwards several times to allow the suspension to settle, then check the car standing height as described in Section H8.

Spring adjustment washer selection

To determine the quantity of adjusting washers required, when fitting a new spring, proceed as follows.

1. Obtain the spring load figure from the label attached to the spring.
2. Subtract this figure from the spring load shown on the chart, relevant to the type and side of the car. This will give the load increase required.
3. Using the spring load adjusting washer chart determine the number of washers required.

Important

Always ensure that the correct spring has been obtained, as the spring rate of the springs varies dependent on the car model. This spring rate variation accounts for the variation in spring load and thus the number of washers required, shown on the adjusting washer selection chart.