

## Section H3m

## Rear road springs

**Introduction**

The rear road spring assembly comprises of a road spring, upper and lower bell shaped support, adjusting rings, and pliable spring seats. The adjusting rings, are each 1,22 mm. (0.048 in.) thick and are used to obtain the correct spring load and car standing height. Each ring is equivalent to a spring load increase of 3,63 kgf. (8 lbf.) and will increase the car height by approximately 1,778 mm. (0.070 in.).

**Warning**

**Always examine the spring retention tool (RH9299) for signs of thread wear or damage prior to its use. Renew the tool if necessary.**

**Rear road spring - To remove**

1. Drive the car onto a ramp and chock the front wheels.
2. Move the gear range selector lever to the P Park position.
3. Support the final drive unit with a jack.
4. Insert spring retention tool (RH9299) through the centre of the lower spring support. Screw the tool fully into the upper spring support.
5. Lift the rear of the car until the suspension is in the full rebound position. Position sill blocks beneath the car sills to support the body.
6. Carefully manoeuvre the spring from its seat and remove it from between the trailing arm and the body.
7. Remove the spring seats and adjusting rings from the spring.

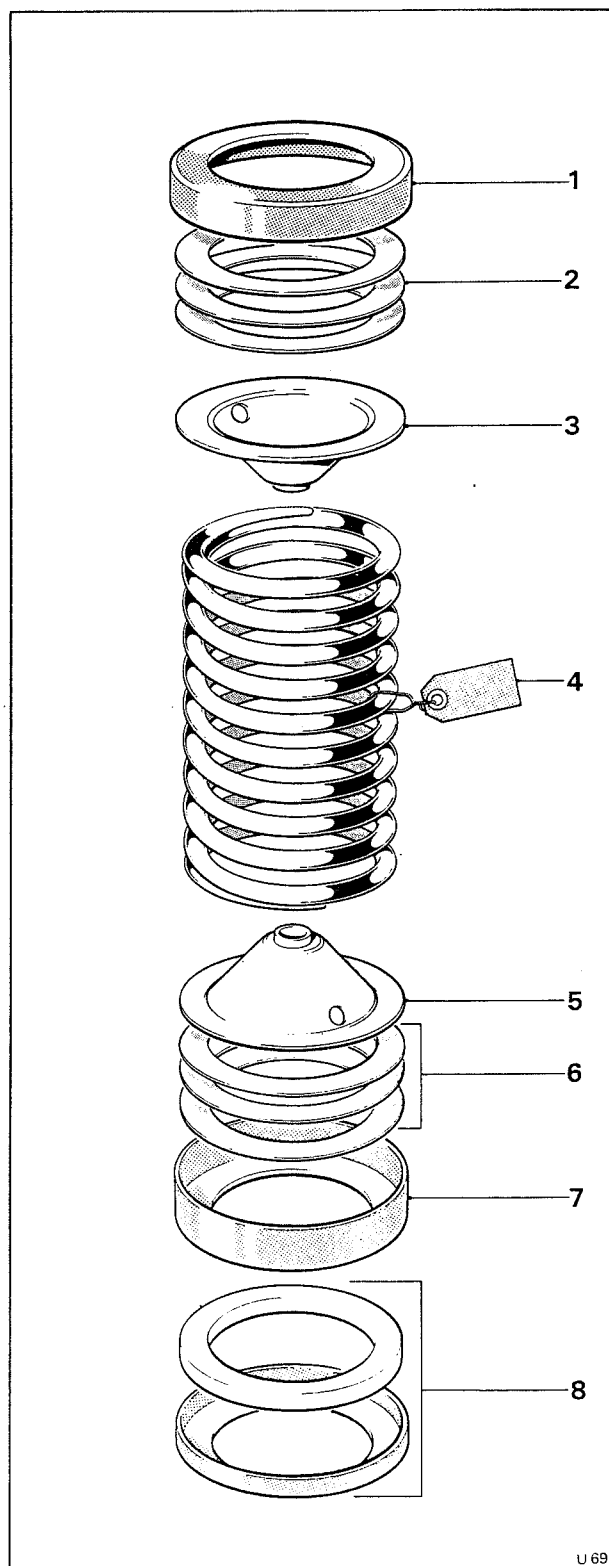
**Note**

On certain Corniche cars conforming to a North American specification an additional spacer and seat are fitted beneath the normal spring seat and adjusting rings (see Fig. H11m).

8. Remove the two dowels from the baseplate of the spring compression tool (RH7909) and fit adapter block (RH9504).
9. Position the compressed spring into the compression tool with the upper spring support in the adapter block (see Fig. H12m).
10. Fit the top plate of the tool. Screw down the

**Fig. H11m Rear road spring assembly**

- 1 Pliable spring seat
- 2 Adjusting rings
- 3 Screwed bell-shaped support
- 4 Spring loading label
- 5 Plain bell-shaped spring support
- 6 Adjusting rings
- 7 Pliable spring seat
- 8 Special 8,89 mm. (0.350 in.) thick spacer and shortened, pliable spring seat



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Spring loading chart

	Cars other than those conforming to a North American specification		Cars conforming to a North American specification	
	kgf.	lbf.	kgf.	lbf.
Corniche saloon	606	1336	615	1358
Corniche convertible	646	1424	660	1454
Camargue	660	1454	660	1454

Spring loading washer selection

Number of adjusting washers	1	2	3	4	5	6	7	8	
Packing thickness	mm.	1,22	2,44	3,66	4,88	6,09	7,31	8,53	9,75
	in.	0.048	0.096	0.144	0.192	0.240	0.288	0.336	0.384
Spring load increase/decrease	kgf.	3,63	7,26	10,89	14,51	18,14	21,77	25,40	29,03
	lbf.	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0
Standing height increase/decrease	mm.	1,78	3,56	5,33	7,11	8,89	10,67	12,45	14,22
	in.	0.070	0.140	0.210	0.280	0.350	0.420	0.490	0.560
Number of adjusting washers	9	10	11	12	13	14	15	16	
Packing thickness	mm.	10,97	12,19	13,41	14,63	15,85	17,07	18,28	19,50
	in.	0.432	0.480	0.528	0.576	0.624	0.672	0.720	0.768
Spring load increase/decrease	kgf.	32,66	36,29	39,92	43,54	47,17	50,80	54,43	58,05
	lbf.	72.0	80.0	88.0	96.0	104.0	112.0	120.0	128.0
Standing height increase/decrease	mm.	16,00	17,78	19,56	21,34	23,11	24,89	26,67	28,45
	in.	0.630	0.700	0.770	0.840	0.910	0.980	1.050	1.120

special nuts and thrust washers to secure the spring.

11. Measure and record the distance between the upper and lower plates.
12. Remove the spring retention tool (RH9299).
13. Evenly unscrew the two nuts on the compression tool to completely extend the spring.
14. Examine all the components for serviceability. Ensure that the threads in the upper spring support are in good condition to withstand the full spring load when the retention tool is inserted.

Road spring - To fit

1. Fit the spring and spring supports into the compression tool. The threaded support should rest in the baseplate adapter.
2. Evenly tighten the tool nuts to compress the spring until the measurement taken during spring removal is achieved.
3. Screw the spring retention screw (RH9299) into the threaded spring support to retain the spring in its compressed condition.
4. Remove the spring compression tool (RH7909) and the adapter block (RH9504).
5. Obtain the spring load figure from the label attached to the spring.

6. Refer to the spring adjustment chart above to ascertain the correct number of adjusting rings required.

One adjusting ring is equivalent to 3,63 kgf. (8 lbf.) therefore to achieve the correct nominal load multiples of this figure should be added to the load figure quoted on the spring label. This will give the number of rings required.

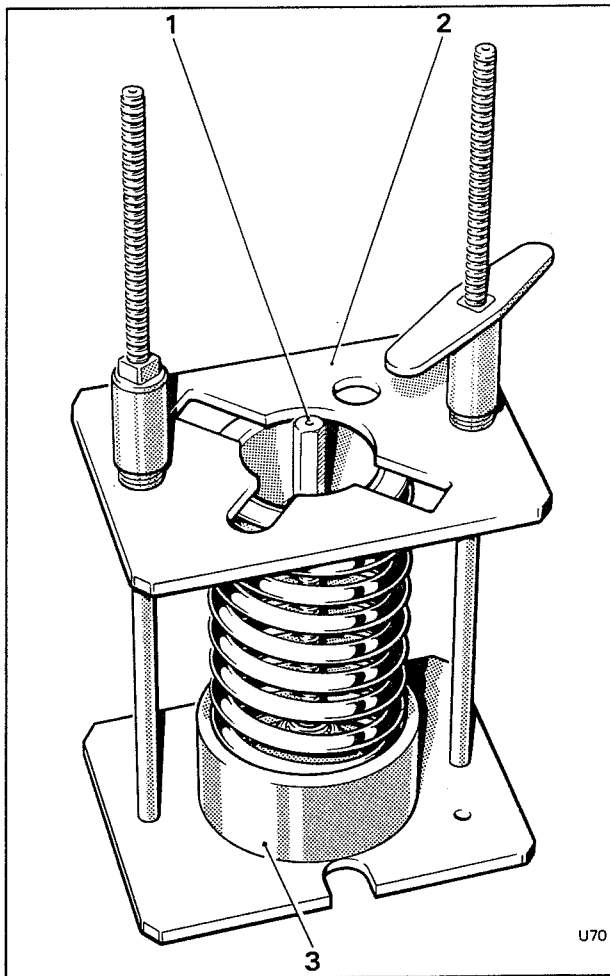
7. Ensure the trailing arm is in the full rebound position.
8. Fit the spring by placing a pliable seating and half the required number of adjusting rings estimated in Operation 6, into the trailing arm spring location.

On Corniche cars conforming to a North American specification fitted with the additional 9,0 mm. (0.350 in.) thick packing and special flexible seat, these should be fitted first.

9. Place the remainder of the adjusting rings and a flexible seat over the upper spring support. Position the spring in the body spring cup.
10. Raise the trailing arm until the spring is held in position.

Note

Always ensure that the rings used are clean and that no foreign matter becomes trapped between them during assembly.



**Fig. H12m Spring compressing tools in position**

- 1 Tool RH9299 and thrust washer
- 2 Tool RH7909
- 3 Adapter block RH9504

11. Remove the sill blocks and lower the car onto its wheels.

12. Carefully remove the spring retention tool from the centre of the spring.

13. Lower the ramp to the ground.

14. Roll the car backwards and forwards until the wheels attain a stable camber angle.

15. Check the car standing height as described in Section H4m.