Section H8

Rear suspension settings

Introduction

Following operations in which the suspension has been partially or fully dismantled, the standing and levelled height of the car should be checked.

For details of the procedure required for setting the levelled height refer to Chapter G.

To allow the suspension to settle after assembly, drive the car back and forth before carrying out the standing height checks.

Standing height - To check

1. Ensure that the spare wheel, jack, tools, and accessories are fitted in their relevant positions.

2. Check the tyre pressures and correct if necessary.

3. Drive the car onto a suitable level ramp and chock the wheels.

4. Move the gear range selector lever to the P Park position. Remove the gear change isolator from the fuseboard.

Release the parking brake.

5. Check the standing height of the front suspension as described in Section H5.

6. Ensure the fuel tank contains 45 litres (10 Imp. gal. 12 U.S. gal.) of fuel. Ballast the car with 136 kg. (300 lb.) equally divided between the two front seats.

7. Depressurize the hydraulic systems or disconnect the height control valve links to de-activate the system. If the links are disconnected pull the arms downwards to discharge the fluid from the height control rams.

8. Measure the standing height from the level surface on which the car stands to the centre of the rear bottom setscrew which secures the forged brackets of the rear crossmember mount (see Fig. H30 dimension A).

9. Measure from the level surface to the centre of the rear bottom bolt which secures the rear hub to the trailing arm (see Fig. H30 dimension B).

10. Subtract dimension A from dimension B. The

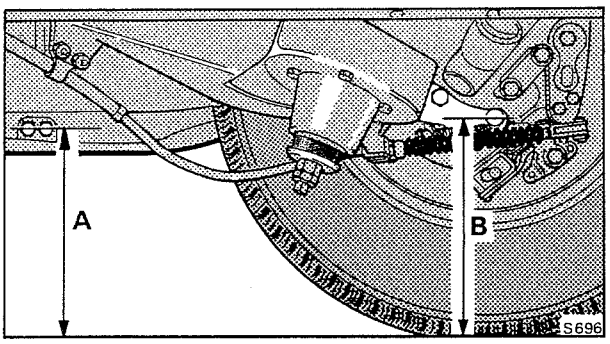

Fig. H30 Rear height setting

A Floor to centre of body bracket setscrew

B Floor to centre of parking brake linkage bracket setscrew

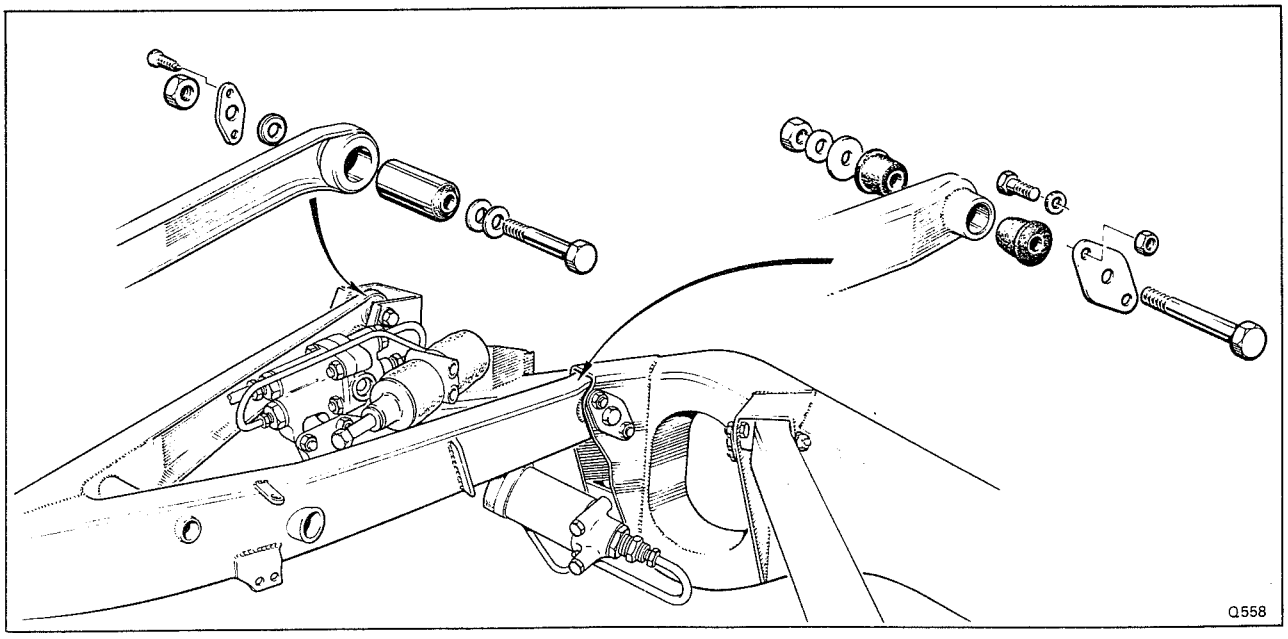

Fig. H31 Trailing arm to crossmember assembly

difference between the two dimensions should be between 16 mm. and 22 mm. (0.520 in. and 0.870 in.). The maximum permissible difference in height between each side of the car being 4,76 mm. (0.187 in.).

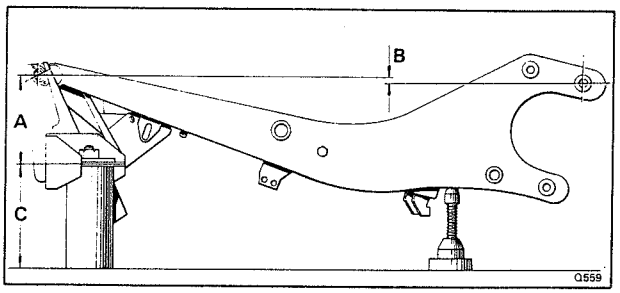

Fig. H32 Camber and toe-in setting (side elevation)
- **A** 13,49 cm. (5.312 in.)
- **B** 6,86 mm. (0.27 in.)
- **C** 25,40 cm. (10.00 in.)

On cars conforming to a North American specification with the exception of Camargue, a 12,50 mm. (0.50 in.) thick aluminium ring and a second flexible seat are fitted. On these cars the difference between dimension A and dimension B should be between 8,80 mm. and 10,60 mm. (0.150 and 0.400 in.).

11. If the standing height is incorrect, add or remove the required number of packing washers to or from the top spring seat. A minimum of one washer must always be fitted. The maximum allowed is ten.

Refer to Section H10 for spring loading details.

12. When the standing height is correct the levelled height should be set as described in Chapter G Part 1.

Note

No more than seven washers should be fitted to adjust car height when a new spring is being fitted. This will allow further adjustment to be made should the spring settle after prolonged use.

Up to ten washers can be fitted to a spring that has been in service. If necessary these can be supplemented by the addition of one 12,50 mm. (0.50 in.) aluminium ring and flexible seat fitted into the lower spring mount.

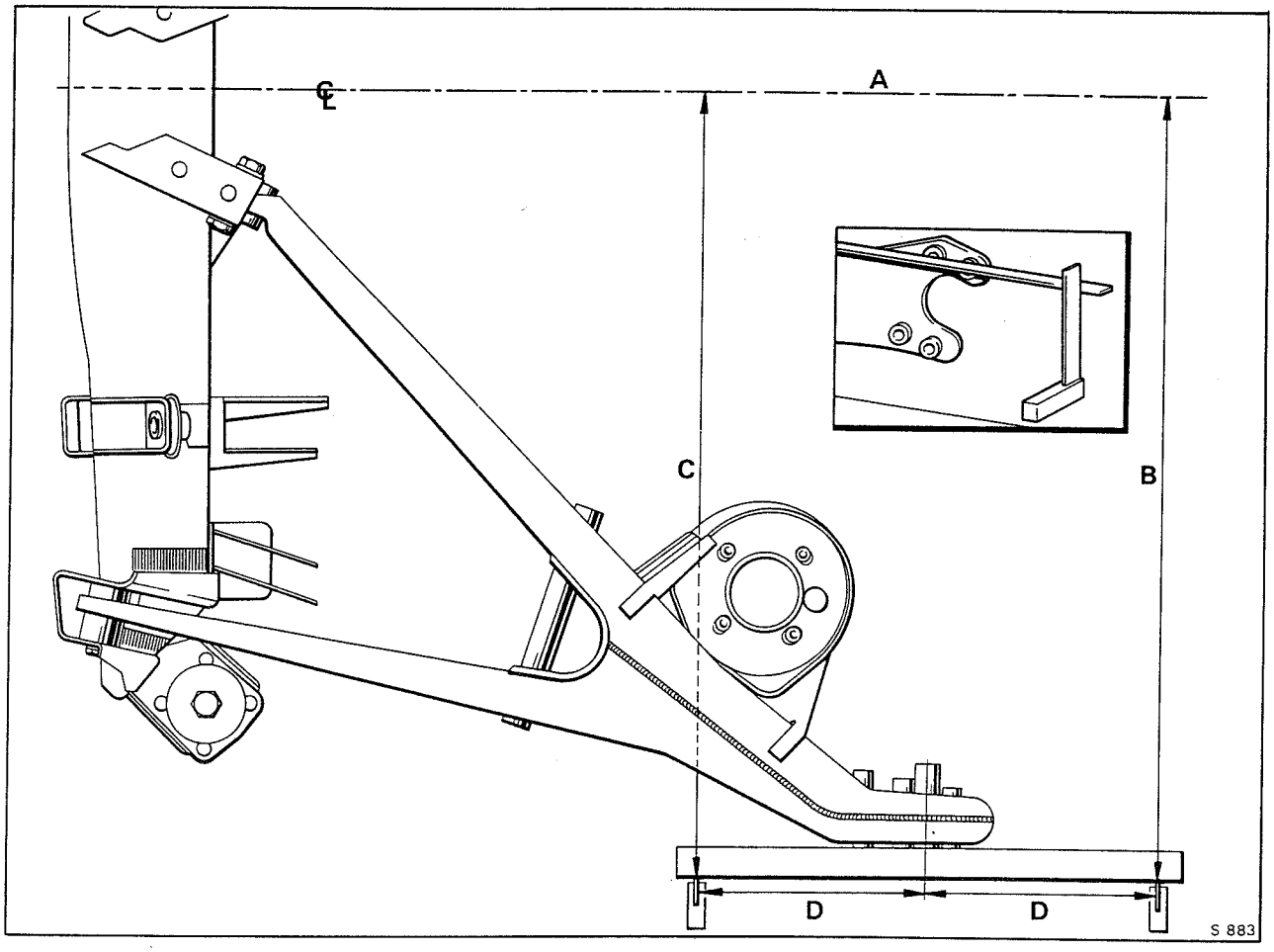

Fig H33 Camber and toe-in setting (Plan view)
- **A** Centre line marked on surface table
- **B** Measurement taken along the surface table from the centre line to each engineers square
- **C** As B
- **D** 21,60 cm. (8.50 in.) about road wheel centre line

Inset - Position of the straight edge

The use of the aluminium ring does not apply to cars which already have it fitted as standard i.e. Silver Shadow II, Silver Wraith II and Corniche conforming to a North American specification.

If the ring is used, it should be calculated as equivalent to six packing rings, giving a change in car height of approximately 19 mm. (0.750 in.).

Trailing arm camber - To set

1. Mount the crossmember on a surface table as shown in Figure H32.
2. Fit the trailing arms to the crossmember (see Fig. H31) and set them in the 'normal ride' position using small screw jacks situated beneath each arm.
3. Tighten the centre bolt of the inner bush and the bolts securing the plate on each trailing arm.
4. Tighten the centre bolt of the outer bush sufficiently to remove end play but still allow trailing arm movement.

Ensure that the location plate is suitably positioned.

5. Using suitable camber setting equipment or a precision square across the upper and lower faces of the hub location tubes, check the camber of the trailing arm. The setting must be between minus 0° 15' and plus 0° 15'. The trailing arm settings must be within 0° 15' of each other.
6. Tighten the outer bush centre bolt.
7. Check the toe-in of each trailing arm. Adjustment of the camber will also alter the toe-in, therefore it is necessary to adjust both settings until a satisfactory position is obtained.

Toe-in - To check

1. Mount the crossmember on a surface table as shown in Figure H33.
2. Mark a centre line between the centre of the rear crossmember and the final drive crossmember.
3. Place a straight edge across the hub mounting tubes to give the equivalent of the road wheel rim diameter.

With the aid of a set square positioned 208 mm. (8.20 in.) from the centre line of the hub mounting tubes (see Fig. H33), measure the distance from the base of the square to the centre line on the table.
4. Repeat the measurement from the other side of the hub centre line.
5. Compare the measurements taken from each side of the hub.

The toe-in reading for one wheel to the centre line on the surface table should be between 0,79 mm. and zero (0.031 in. and zero).

If the toe-in is incorrect adjust the outer trailing arm mounting point in the crossmember then tighten the centre bolt.

Adjustment to the toe-in will also alter the camber, therefore it is necessary to adjust both camber and toe-in until a satisfactory position is obtained.
6. Repeat the procedure for the other trailing arm until a satisfactory reading of camber and toe-in for both wheels is obtained.

The maximum permissable toe-in differential between each side of the car is 0,38 mm. (0.015 in.).

7. On completion, torque tighten the centre bolts to the figures quoted in Chapter P. Repeat the toe-in and camber checks.
8. Secure the outer location plates in position. It will be necessary to drill two 4 mm. (0.156 in.) diameter holes in each crossmember bracket to accept the self-tapping securing screws.