

## Section H4m

## 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 Part I I.

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. The height must be checked with a full tank of fuel. If however the tank is partially empty, weight equivalent to the amount of missing fuel should be positioned adjacent to the fuel tank.

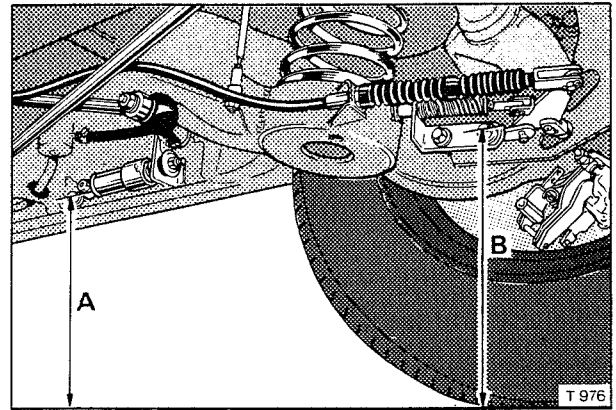
For each 4,5 litres (1 Imp. gal., 1.2 US gal. of missing fuel add 3,4 kg. (7.5 lb.) of weight.

2. Ensure that the spare wheel, jack, tools, and accessories are fitted in their relevant positions.
3. Check the tyre pressures and correct if necessary.
4. Drive the car onto a suitable level ramp and chock the front road wheels.
5. Move the gear range selector lever to the P Park position. Remove the gear change isolator from the fuseboard and release the parking brake.
6. Start and run the engine. Allow the hydraulic systems to fully pressurize.
7. Disconnect both height control valve links at the ball joints on the trailing arms.
8. Simultaneously raise both control valve links approximately 40 mm. (1.5 in.) and allow the car to level.

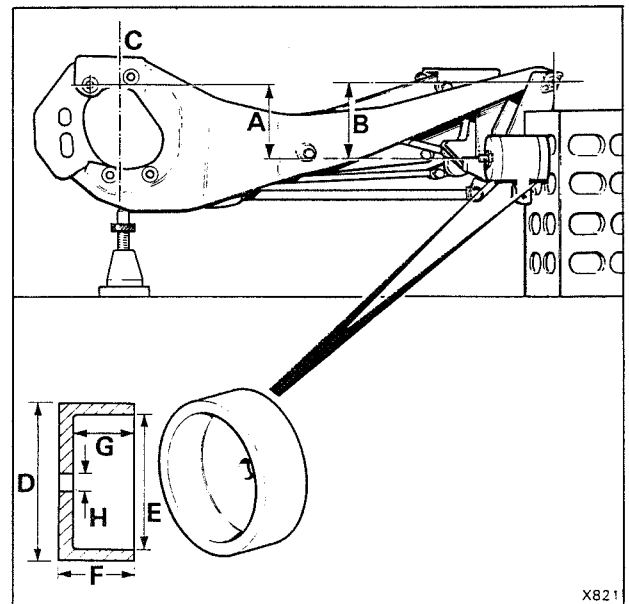
**Note**

There should be a delay before the car starts to level after raising the control valve links. This delay can vary with different cars and variations in engine speed. Always allow approximately two minutes for the levelling process to be completed.

9. Slowly pull down both control valve links approximately 25 mm. (1.0 in.) to exhaust the hydraulic pressure from the rear suspension struts. Allow three minutes for the car to stabilize.
10. Check that the standing height of the front suspension is correct as described in Section H6.
11. Measure the height from the level surface on which the car stands to the centre of the foremost bottom bolt securing the sub-frame mounting bracket to the sill (see Fig. H13m dimension A).
12. Measure the height from the level surface to the centre of the rear bolt attaching the parking brake linkage to the trailing arm (see Fig. H13m dimension B).
13. Subtract dimension B from dimension A. The resultant figure should be within the following tolerances.

**Fig. H13m Rear height setting**

- A Floor to centre line of body bracket setscrew
- B Floor to centre line of parking brake linkage bracket setscrew

**Fig. H14m Camber and toe-in setting**

- A 134,9 mm. (5.312 in.)
- B 141,8 mm. (5.582 in.)
- C Wheel centre line
- D 76,2 mm. (3.00 in.)
- E 66,8 mm. (2.63 in.)
- F 25,4 mm. (1.0 in.)
- G 15,2 mm. (0.625 in.)
- H 9,9 mm. (0.391 in.)

## H4m - 2

**Note**

The standing height setting is dependant on the springs and suspension components fitted to the car.

When checking the standing height reference should be made to the Spring loading charts in Section H3m.

**Cars listed in Spring loading chart**

Applicable to cars other than Corniche built to a North American specification.

+ 12,5 mm. and + 4,5 mm. (+ 0.50 in. and + 0.175 in.)

Applicable to Corniche cars built to a North American specification.

+ 27,5 mm. and + 19,5 mm. (+ 1.10 in. and + 0.770 in.)

14. If the standing height is incorrect, add or remove the required number of packing washers to or from

the spring seats. The quantity should be equally divided between the top and bottom seats.

15. When the standing height is correct, the height control valve links should be adjusted as described in Chapter G Part I I.

**Trailing arm camber - To set**

1. Mount the crossmember on a surface table as shown in figure H14m.

2. Fit the trailing arms to the crossmember (see Fig. H15m) 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 of the frame tube mounting bracket 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.

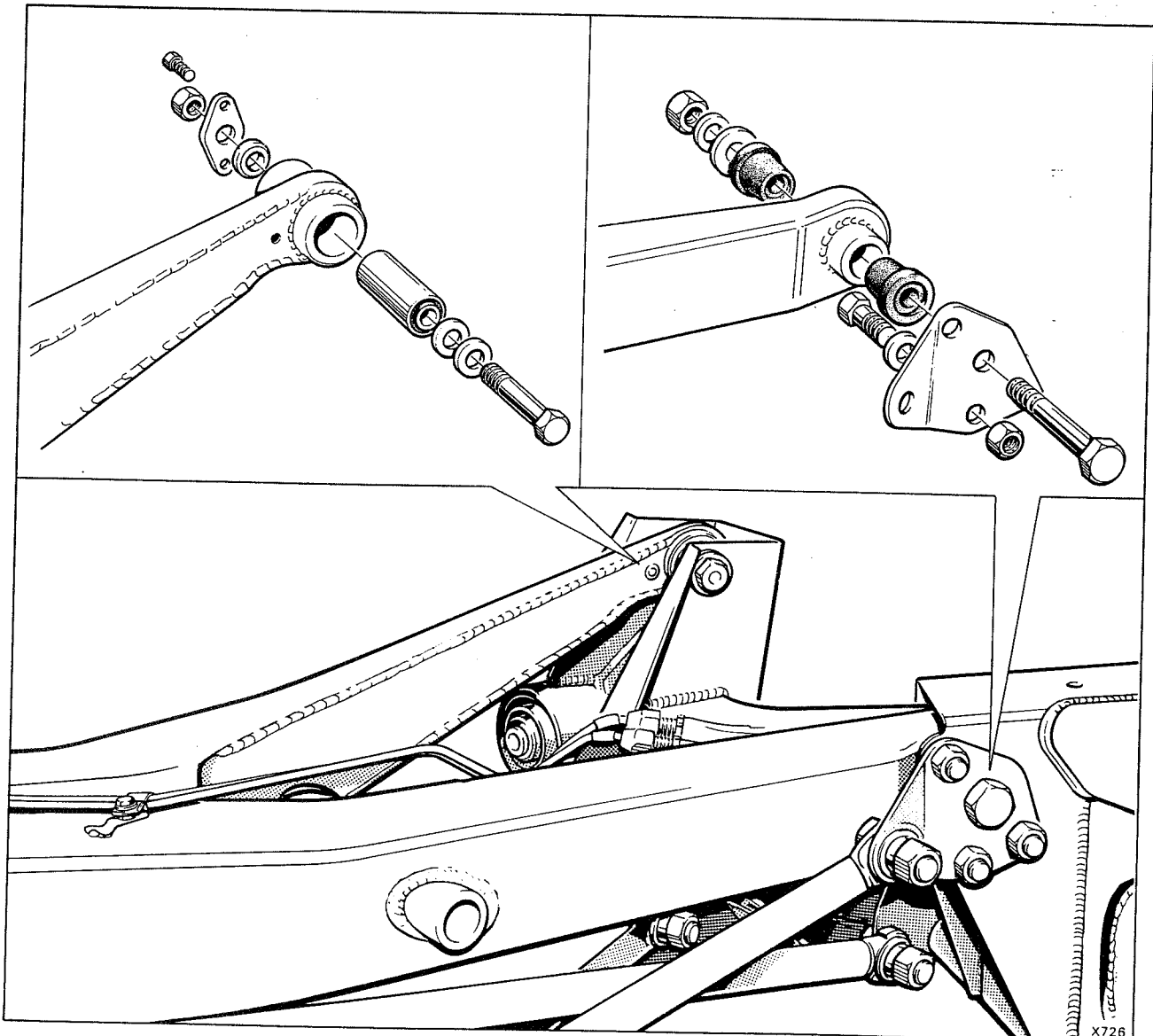
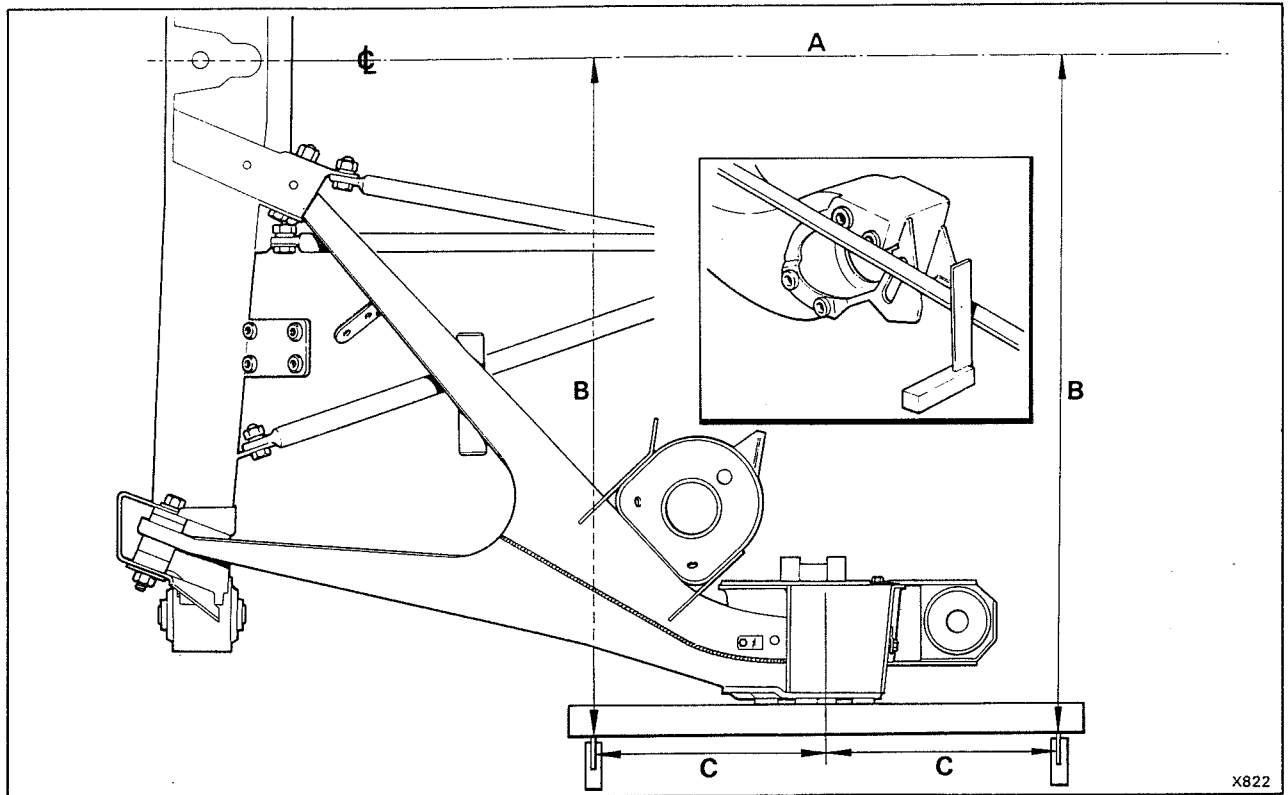


Fig. H15m Trailing arm pivot components



**Fig. H16m** Checking the toe-in setting

- A** Centre line marked on surface table  
**B** Measurement from engineers square to centre line across the surface of the table

**C** 208 mm. (8.20 in.) from road wheel centre

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  $0^{\circ} 15'$  and plus  $0^{\circ} 15'$ . The trailing arm settings must be within  $0^{\circ} 15'$  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 (see Fig. H16m)

1. Mount the crossmember on a surface table as shown in figure H14m.

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 216 mm. (8.20 in.) from the centre line of the hub nut mounting tubes (see Fig. H16m), 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 on each side of the hub.

The toe-in reading for one wheel to the centre line on the surface table should be between 1,35 mm. and 1,8 mm. (0.053 in. and 0.071 in.).

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 permissible 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.