

To Replace

- (1) Fit one rubber bearing to each of the suspension lower links, on the side which corresponds to the small hole in each of the frame brackets.
- (2) Raise the links to the frame brackets, insert the fulcrum pins and slide the second bearing and special washer over the protruding end of each pin. Fit the nut but do not screw it home. Position the shock absorber on its top bracket and partially tighten the four setscrews.
- (3) The assembly must next be set in the normal loaded position. This can be accomplished by placing a distance piece between the shock absorber wishbone arm and the upper spring plate at a point opposite the rubber buffer. The length of the distance piece must be 2 in.
- (4) Tighten the nuts on the fulcrum pins securing the lower wishbone arms to the frame brackets. Do not forget to lock them with the split pins.
- (5) Tighten the four setscrews securing the shock absorber to its bracket on the frame.
- (6) Tighten the upper trunnion fulcrum pin nut and secure with a split pin.
- (7) Tighten the swivel pin nut and lock with a split pin.
- (8) Service Tool 18G 56, or the lower spring plate, whichever used, should now be removed from the lower wishbone arms and the coil spring refitted as described in Section L.2.
- (9) Connect the brake fluid pipe to the brake back-plate, secure the steering side tube to the steering arm, refit the road wheel, lower the car to the ground and remove the distance piece used to retain the suspension in the normal loaded position.
- (10) Finally, bleed the brakes as described in Section M.

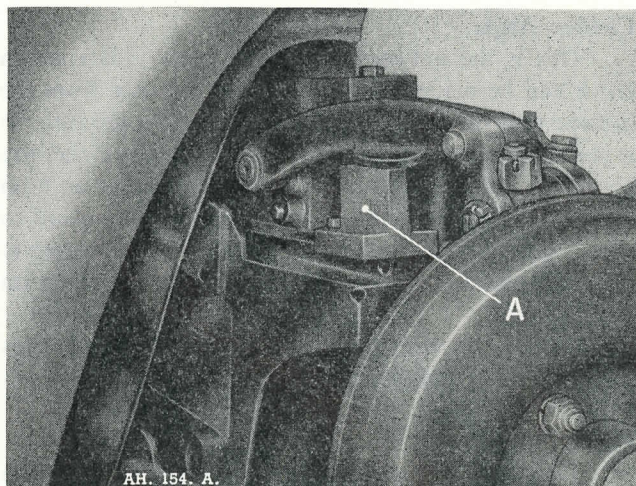


Fig. L.7. When building up the suspension, the arms must be correctly set by the distance piece A (2 in.) before the various bearings are tightened.

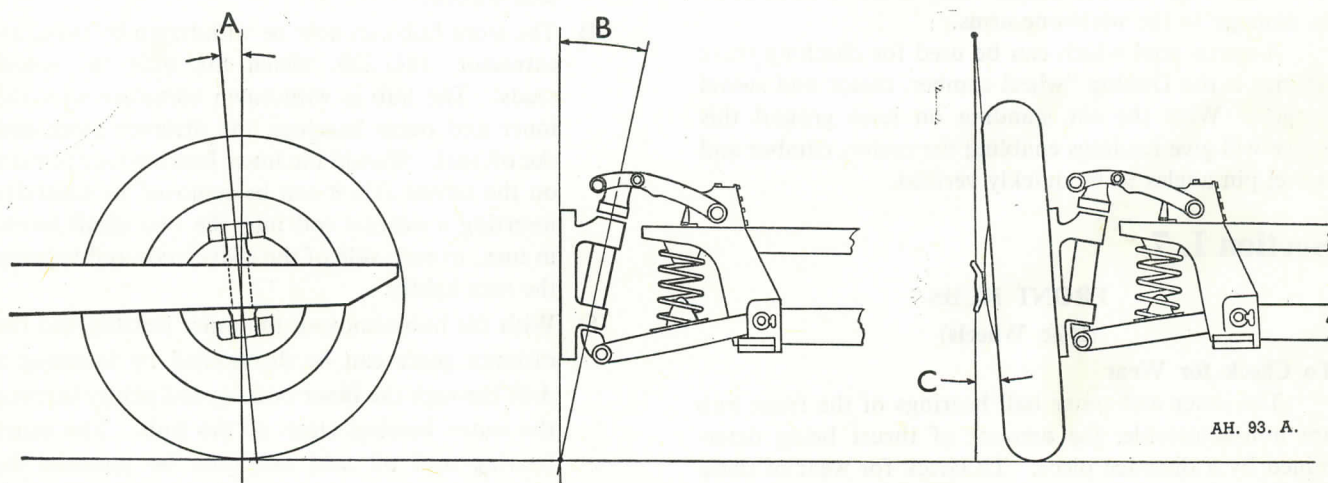
Section L.6

CASTOR AND CAMBER ANGLES AND SWIVEL PIN INCLINATION

Description

The castor and camber angles and the swivel pin inclination are three design settings of the front suspension assembly. They have a very important bearing on the steering and general riding of the car. Each of these settings is determined by the machining and assembly of the component parts during manufacture. They are not therefore adjustable.

However, should the car suffer damage to the suspension affecting these settings, the various angles must be verified to ascertain whether replacements are necessary.



A. Castor angle 2° .

B. Swivel pin inclination $6\frac{1}{2}^{\circ}$.

C. Camber angle 1°

L FRONT SUSPENSION AND FRONT HUBS

Camber Angle

This is the outward tilt of the wheel and a rough check can be made by measuring the distance from the outside wall of the tyre, immediately below the hub, to a plumb line hanging from the outside wall of the tyre above the hub. The distance must be the same on both wheels. Before making this test, it is very important to ensure that the tyres are in a uniform condition and at the same pressure. Also that the car is unladen and on level ground.

Damage to the upper and lower wishbone arms may well affect the camber angle.

Castor Angle

This is the tilt of the swivel pin when viewed from the side of the car. This also is only likely to be affected by damage to the upper and lower wishbone arms.

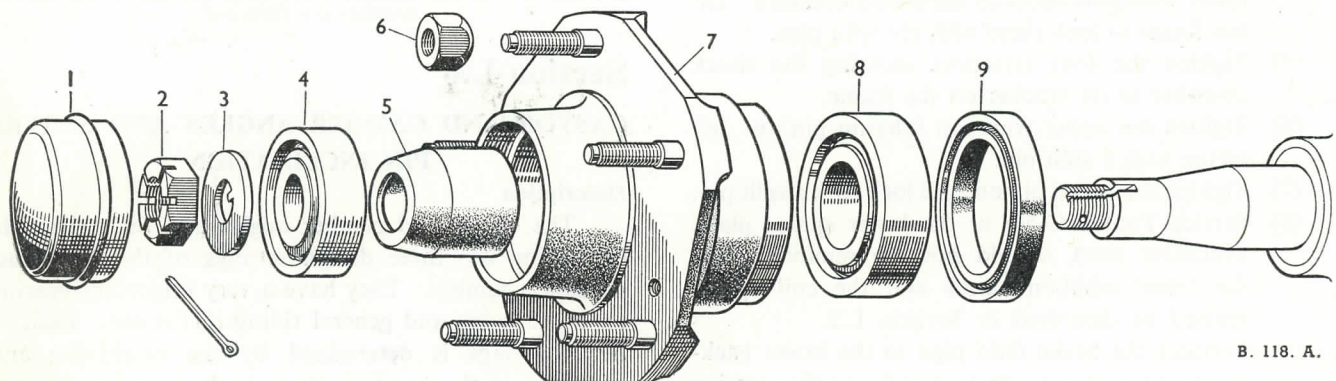


Fig. L.8. Front hub exploded (for disc wheels).

- | | | |
|---------------------|--------------------|-------------------|
| 1. Hub cap. | 4. Outer bearing. | 7. Hub. |
| 2. Castellated nut. | 5. Distance piece. | 8. Inner bearing. |
| 3. Locating washer. | 6. Wheel nut. | 9. Oil seal. |

Swivel Pin Inclination

This is the tilt of the swivel pin when viewed from the front of the car and is again only likely to be affected by damage to the wishbone arms.

A useful tool which can be used for checking these settings is the Dunlop "wheel camber, castor and swivel gauge". With the car standing on level ground this gauge will give readings enabling the castor, camber and swivel pin angles to be quickly verified.

Section L.7

FRONT HUBS (Disc Wheels)

To Check for Wear

The inner and outer ball bearings of the front hub are non-adjustable, the amount of thrust being determined by a distance piece. To check for wear of these bearings, the car should be jacked until the wheel of the front hub is clear of the ground. Then grasp the tyre

with both hands in the vertical position and rock the wheel. Movement between the wheel and the back plate denotes wear of the hub bearings. Should a very positive movement be apparent, the front hub bearings will need renewing.

To Remove and Dismantle

- (1) Jack the car until the wheel is clear of the ground and then place blocks under the independent suspension spring plate. Lower the car on to the blocks.
- (2) Remove the wheel and the countersunk screw holding the brake drum. If the drum appears to bind on the brake shoes, the shoe adjusters should be slackened.
- (3) Lever off the hub cap, and then extract the split pin from the swivel axle locking nut. Using a box

spanner and tommy bar remove the axle nut and ease the flat washer, under the nut, clear of the axle thread.

- (4) The front hub can now be withdrawn by using an extractor, 18G 220, which fits over the wheel studs. The hub is withdrawn complete with the inner and outer bearings, the distance piece and the oil seal. Should the inner bearing race remain on the swivel axle it can be removed by carefully inserting a narrow rod into the two small holes, in turn, in each side of the swivel axle and tapping the race lightly.
- (5) With the hub removed, the outer bearing and the distance piece can be dismantled by inserting a drift through the inner bearing and gently tapping the outer bearing clear of the hub. The inner bearing and oil seal can then be removed by inserting the drift from the opposite side of the hub.