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# DESCRIPTION OF FRONT AXLE

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## General

The front axle consists of two rigidly joined tubes which are welded to the frame. The axle tube ends carry the four suspension arms which are free to pivot in one fiber bushing at the inside and one bearing at the outer end each. One torsion bar in each tube, adjustably anchored in the center counteracts twisting and lateral movement. The suspension arm ends are connected to the suspension arm links by adjustable pins, which are free to pivot. The stub axle swivels on king pins which pass through bushings in the suspension arm link. A thrust washer is fitted between the upper end and a rubber ring between the lower end of the stub axle and the suspension arm link, in order to prevent dirt from entering. Front axle tubes, suspension arms and suspension arm links have approximately the form of a parallelogram. Hydraulic, double-acting telescopic shock absorbers lessen road shocks and prevent rebound. Stops with rubber bumpers prevent bottoming of the suspension.

## Lubrication

Under normal driving conditions the front axle should be lubricated at regular intervals as set out in the lubrication chart. If, however, the car is mainly used on bad roads or if it is driven no more than 7500 to 10 000 miles (12 000 to 15 000 km) in a year, that is a monthly average of less than 600 miles (1000 km), it is recommended to effect additional lubrication, say every 800 miles (1250 km) particularly at the lubricating points of the suspension arm link and the outer tie rod joints. The front wheel bearings should be thoroughly cleaned and repacked with the specified amount of grease once a year.

## Important!

Perfect lubrication of the front axle bearing points is only ensured with the front axle raised off its wheels (unloaded condition). Grease should be applied to the nipples until the excess grease begins to emerge at the edges of the lubrication points. The service life of the front axle depends on proper lubrication with the recommended brand of lubricants. Before lubricating, the grease guns should be perfectly clean.

### Maintenance

To maintain the good riding qualities of the car with regard to roadholding and perfect safety of operation, regular inspections and maintenance of the front axle and steering are absolutely necessary.

Proceed as set out below:

1. Check and adjust front wheel bearings
2. Check and adjust suspension arm link pins
3. Check and re-set toe-in of front wheels
4. Check shock absorbers for proper fit and effectiveness
5. Check wheel nuts or knock-off wheel nuts for tightness
6. Check and correct tire pressure

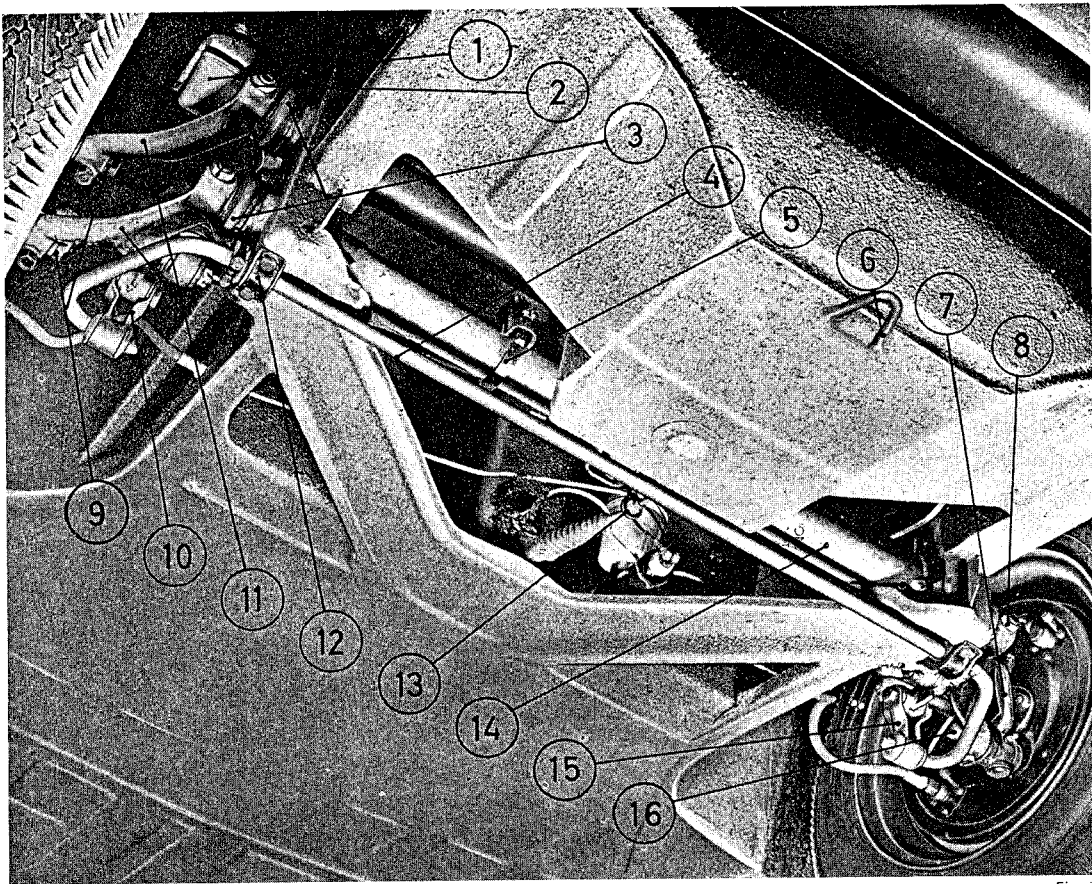


Fig. 1

- |                                      |  |
|--------------------------------------|--|
| ① Rubber stop                        | ⑨ Suspension arm link pin                |
| ② Retaining screw for suspension arm | ⑩ Shackle for anti-roll bar, right       |
| ③ Suspension arm oil seal            | ⑪ Suspension arm                         |
| ④ Anti-roll bar                      | ⑫ Bearing cap for anti-roll bar, right   |
| ⑤ Retaining clip for steering damper | ⑬ Connecting eye for parking brake cable |
| ⑥ Towing hook                        | ⑭ Lower torsion bar housing tube         |
| ⑦ Suspension arm link for stub axle  | ⑮ Shackle for anti-roll bar, left        |
| ⑧ Retaining screw for suspension arm | ⑯ Lower suspension arm link pin, left    |