

33–100 Removal and installation of front axle

Tightening Torques	Nm
Hex. bolts for rubber mountings of suspension on frame floor	45
Hex. nuts of lower shock absorber suspension	20
Hex. bolts of front engine mounting	35
Hex. nuts of track rod joints	35
Self-locking hex. head screw for fastening rpm sensor to steering knuckle	8

Special Tools	
Carrying stirrup for engine	107 589 02 61 00
Cradle for pit lift	115 589 06 63 00
Intermediate angle piece for pit lift	115 589 02 63 00
Remover for track rod	186 589 10 33 00

Notes

The jobs described below apply when the individual parts are subsequently controlled or the front axle is repaired. In such a case, the shock absorber, the torsion bar and the front springs are already removed on vehicle.

But if the vehicle will be placed on the frame straightening bench, for example, as the result of repairs following an accident in which the front axle has not been damaged, remove front axle **complete** with front springs, shock absorbers and torsion bar.

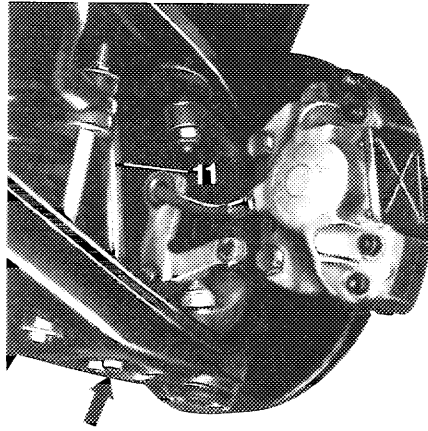
The front shock absorbers are serving simultaneously as a deflection stop for the front wheels. Therefore loosen shock absorber suspension only when the vehicle is on its wheels or when the lower control arm is supported.

There is a safety stop between the upper control arm and the front axle carrier.

Remove self-locking screws and nuts on principle!

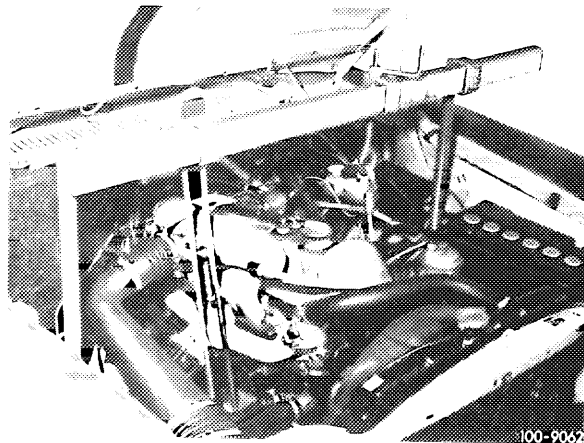
Removal

- 1 Loosen lower shock absorber suspension (arrow).
- 2 Jack-up vehicle at front and rear and place on supporting stands of similar height. Remove front wheels.
- 3 Remove front shock absorbers (11) (32–100).



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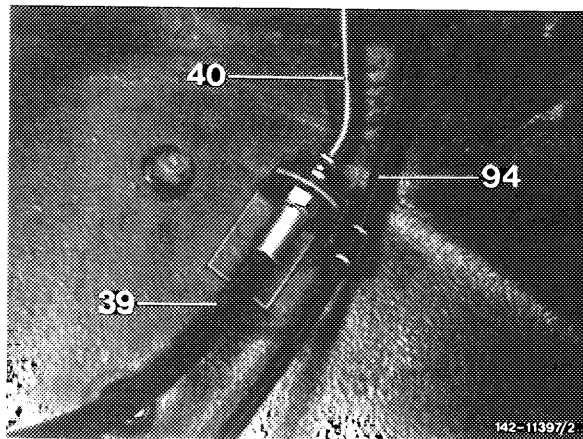
- 4 Connect carrying stirrup to engine.
- 5 Additional work on type 107:
Unscrew the right and left metal shields from exhaust manifold.
- 6 Loosen hex. bolts of front engine mounting right and left.



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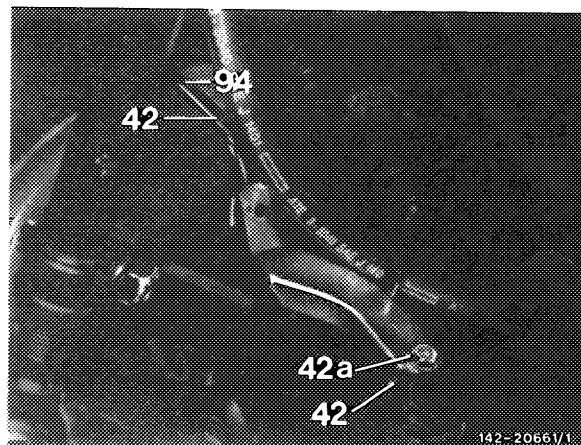
- 7 Separate brake lines and brake hoses from each other. Close connections with rubber plugs.

Note: On model 107 with brake lining wear indicator, pull cables of clip sensor out of plug connection on fixed caliper.



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Note: On vehicles with ABS (model 107 only), remove rpm sensor (42) from steering knuckle by loosening hex. head screw (42a) (42-712).

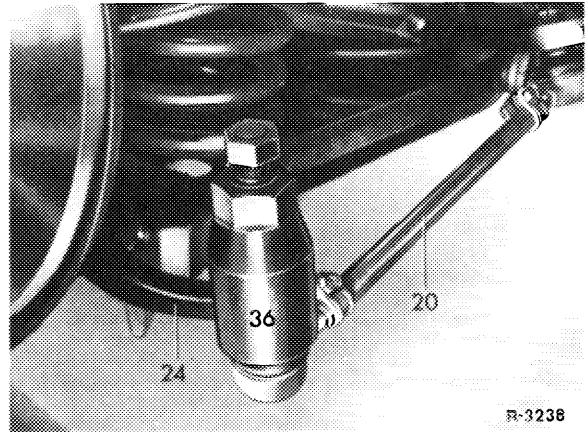


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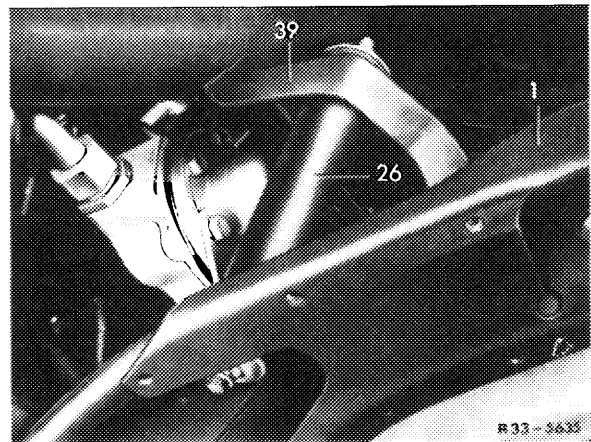
8 Remove track rods left and right from steering knuckle arm (46–530).

9 Remove front torsion bar (32–300).

- 20 Track rod
- 24 Steering knuckle arm
- 36 Remover

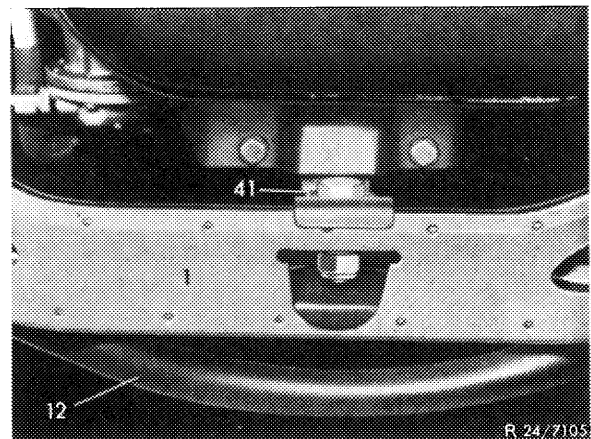


10 On vehicles with engines 110, 115, 117, 130, 180 and 615, 616, 617 detach engine shock absorber suspension from front axle carrier.



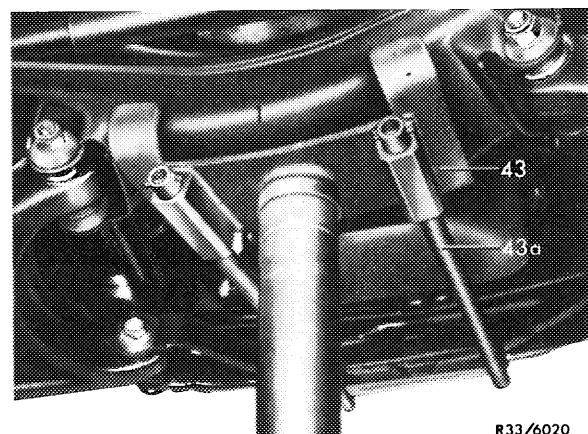
11 On vehicles with engines, 115, and 615, 616, detach engine movement limiter from front axle carrier.

- 1 Front axle carrier
- 12 Torsion bar
- 41 Engine movement limiter



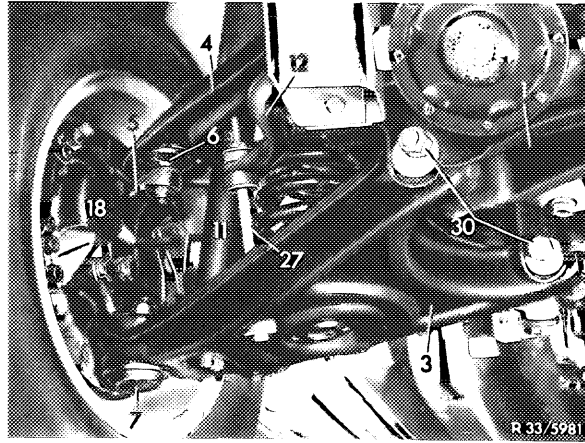
12 Remove front springs (32–200), attach lower control arms again temporarily to front axle carrier.

13 Support front axle carrier with pit lift and cradle (43) with supplementary member (43a).

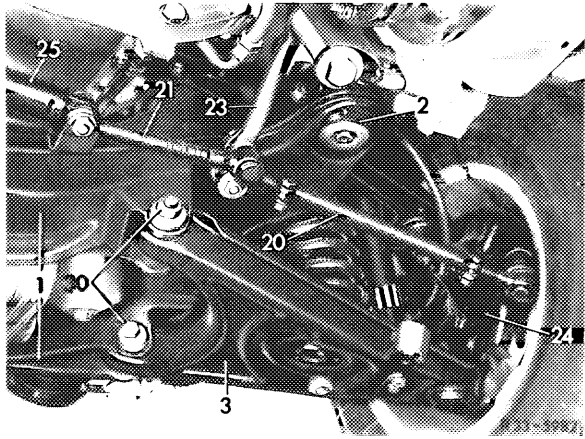


Front axle seen from the front

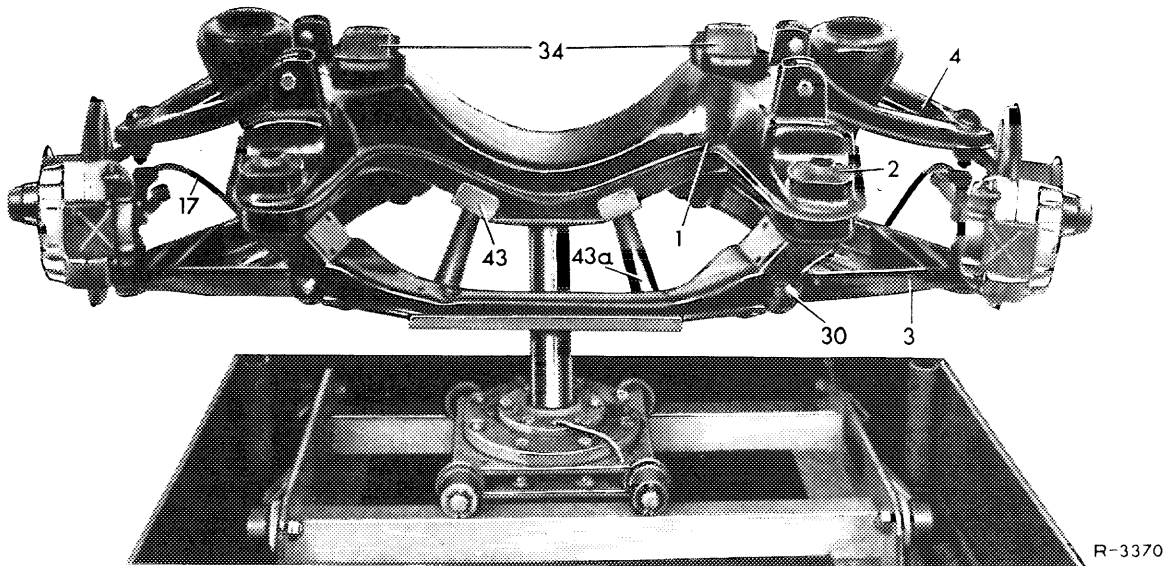
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|----------------------|-----------------------------------|
| 1 Front axle carrier | 11 Front shock absorber |
| 3 Lower control arm | 12 Torsion bar |
| 4 Upper control arm | 27 Torsion bar connecting linkage |
| 5 Steering knuckle | 30 Eccentric bolts |
| 6 Guide joint | |
| 7 Supporting joint | |



14 Loosen hex. bolts of four rubber mounts (2) for attaching front axle carrier to frame floor.



15 Lower pit lift and remove front axle.



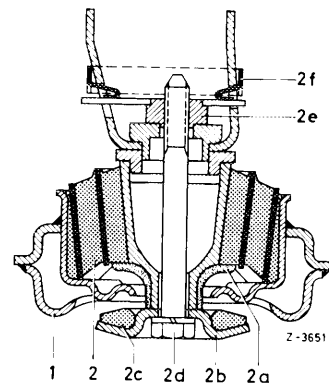
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|----------------------|---------------------|--|---|
| 1 Front axle carrier | 4 Upper control arm | 34 Rubber mount of front engine mounting | 43a Supplementary member for removal and installation of front axle |
| 2 Rubber mount | 17 Brake hose | | |
| 3 Lower control arm | 30 Cam bolt | 43 Cradle | |

Installation

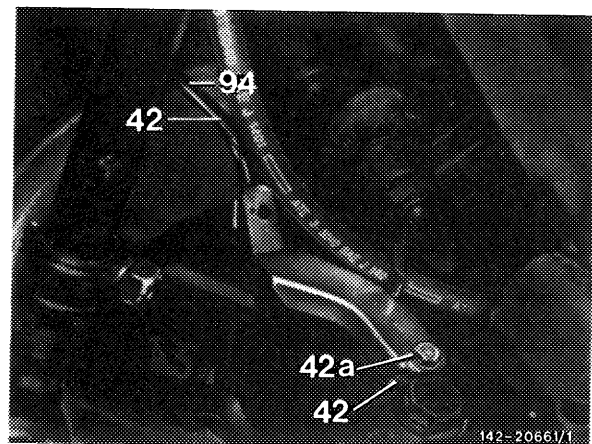
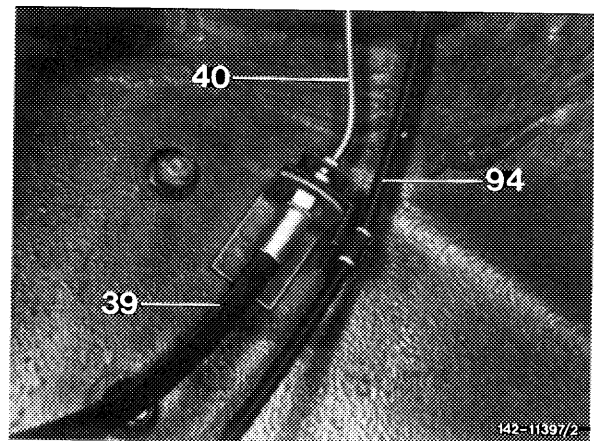
- 16 Check rubber mount of front engine mounting.
- 17 Check condition of rubber mount for suspending front axle and for tight seat in front axle carrier (33–110).
- 18 Introduce front axle and attach to frame floor.
- 19 Remove engine carrying stirrup. Install the hex. bolts for the engine suspension.
- 20 On type 107: Attach right and left metal shields to the exhaust manifold.

- 1 Front axle carrier
- 2 Rubber mount
- 2a Stop buffer for deflection
- 2b Stop plate
- 2c Stop buffer for deflection
- 2d Hex. bolt
- 2e Fastening nut
- 2f Holder for fastening nut



- 21 Connect brake hoses.

On model 107 mount brake lining wear indicator and rpm sensor for ABS.



22 Install front springs (32–200).

Attention!

Tighten hex. nuts of eccentric bolt for lower control arms **only, if the vehicle is resting on its wheels ready for driving.**

23 Install front shock absorber (32–100).

24 Mount track rod joints.

25 Install torsion bar (32–300).

26 On vehicles with engines 110, 115, 116, 117, 130, 180 and 615, 616, 617, attach engine shock absorber to front axle carrier.

27 On vehicles with engine 115 and 615, 616, mount engine movement limiter to front axle carrier and adjust.

28 Bleed brake system (42 -010).

29 Mount front wheels, lower vehicle.

30 Check vehicle level at front axle.

31 Check wheel adjustment at front axle and correct, if necessary (40 -320).

32 Check adjustment of headlights.