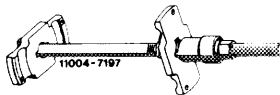

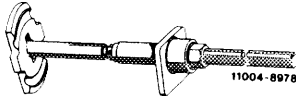
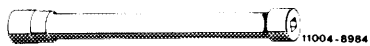
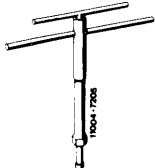



## 33–200 Removal and installation of front axle half

Tightening torques		Nm
Hex bolt for mounting of upper control arm to front end		85
Eccentric bolt of lower control arm bearing		180
Hex nut for ball joint of track rod		35
Hex bolts for attaching brake support to frame floor		35
Twelve-point bolts of lower shock absorber suspension		20
Hex bolt of support for upper control arm on torsion bar		65
Self-locking hex. socket screw for fastening rpm sensor to steering knuckle		8
<b>Special tools</b>		
Spring tensioner for front spring		116 589 06 31 00
Tubular socket wrench insert 24 mm in 1/2" square for spring tensioner		116 589 01 09 00
Spring tensioner for front spring		123 589 04 31 00
Socket wrench insert 32 mm 1/2" square 445 mm long for spring tensioner		201 589 01 09 00
Wrench for upper shock absorber suspension		107 589 00 09 00
Remover for ball joint of track rod		186 589 10 33 00

## Notes

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Control arm bearings at front end and torsion bar at front wall, as well as supports of upper control arms on torsion bar may be tightened only when vehicle is ready for driving. When tightening these bearings with the wheels free of pertinent loads, wrong values for control arm position would result.

During assembly jobs on upper control arm no distortions may occur via torsion bar. If required, slightly raise front axle half at opposite vehicle end on lower control arm.

The front shock absorber serves simultaneously as a deflection stop of front wheel. For this reason, loosen shock absorber suspension only when vehicle is on its wheels or when the lower control arm is supported. With the shock absorber released, the upper control arm rests on end stop on front end. For assembling the upper suspension, either place vehicle on its wheels or raise axle half at lower control arm.

Replace self-locking screws (bolts) and nuts!

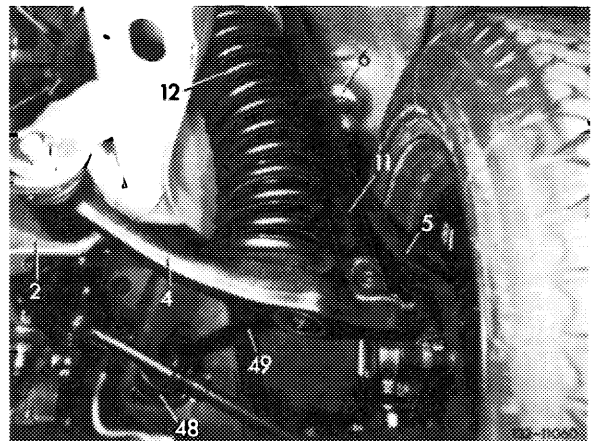
Check brake lines and brake hoses with utmost care (42–012).

For removal and installation of front springs, while simultaneously removing and installing front axle half, a specially designed spring tensioner applies (32–205).

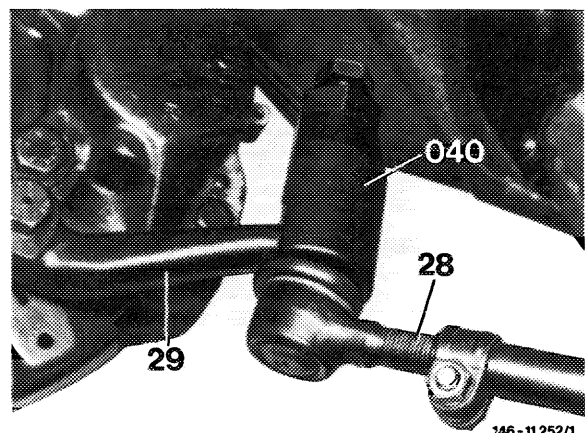
## Removal

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- 1 Remove front shock absorber (11), while making sure that the upper shock absorber suspension is released first (32–100).
- 2 Jack-up vehicle at the front, remove front wheels.
- 3 Remove front spring (12) (32–200 or 32–205).



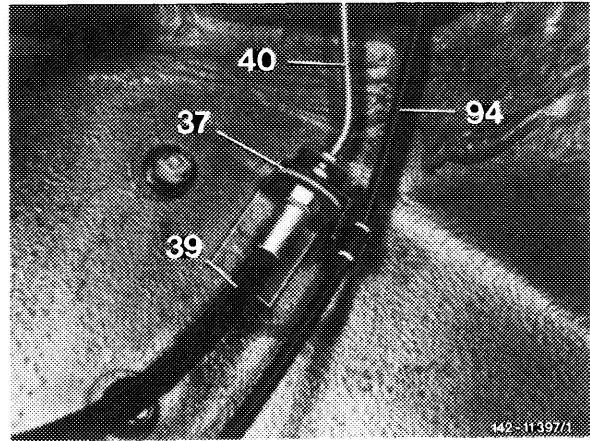
- 4 Loosen ball joint of track rod (28) on steering knuckle arm (29) and remove with tool (040).



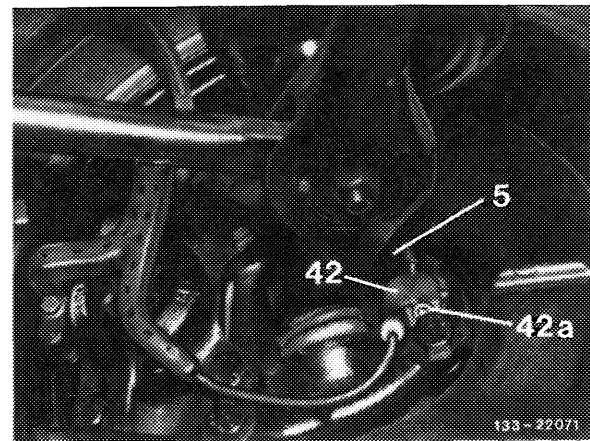
146-11 252/1

5 Separate brake line (40) and brake hose (39) at front end from each other. Loosen plug connection of brake lining wear indicator on brake caliper. Close lines against penetration of dirt.

- 37 Holder for brake hose
- 39 Brake hose
- 40 Brake line
- 94 Cable of brake line wear indicator

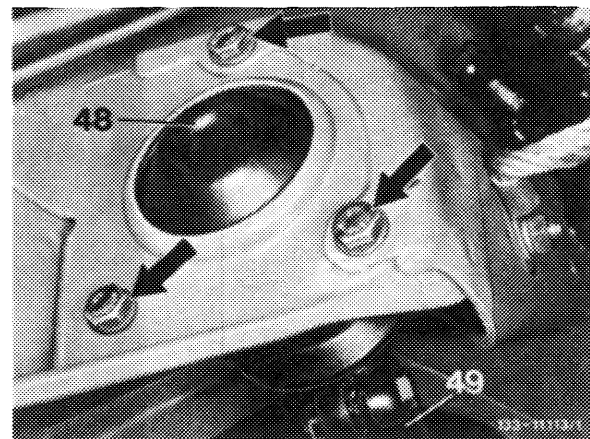


6 On vehicles with ABS, remove rpm sensor (42) from steering knuckle (5) by loosening hex. socket screw (42a) (42-712).



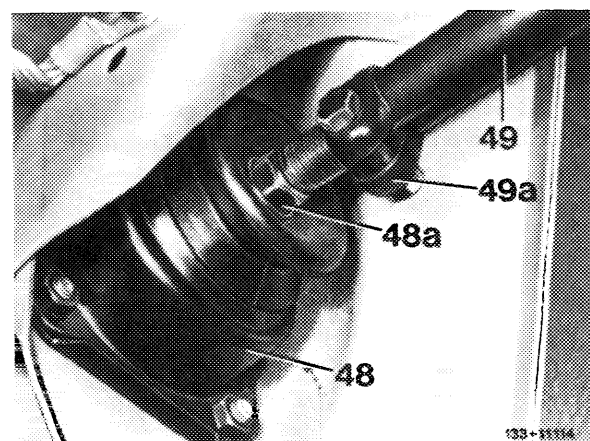
7 Unscrew hex bolts (refer to arrows) for attaching brake support to frame floor.

- 48 Supporting joint
- 49 Supporting tube



Brake support on frame floor

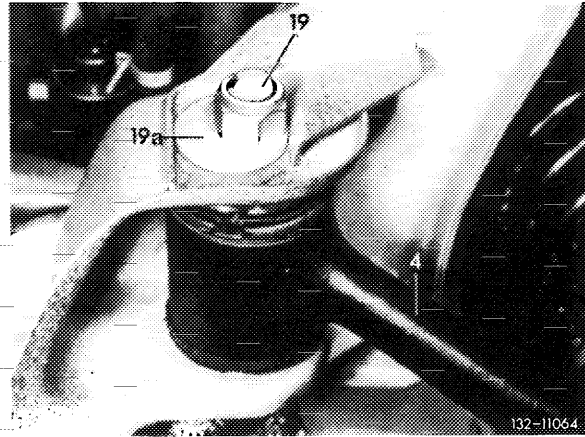
- 48 Supporting joint
- 48a Ball pin
- 49 Supporting tube
- 49a Clamp



8 Support front axle half.

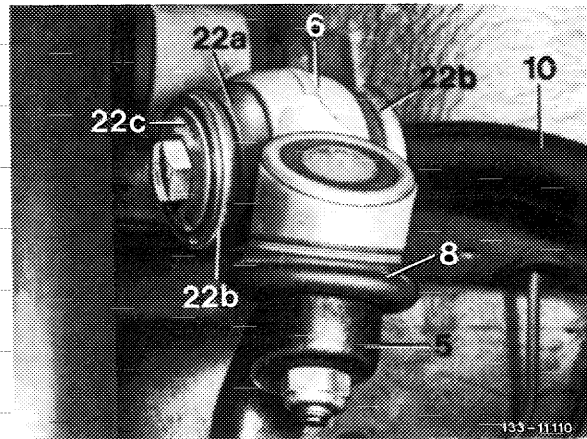
9 On bearing of lower control arm mark position of eccentric bolt for frame cross member.

10 Loosen eccentric bolt on bearing of lower control arm and remove.



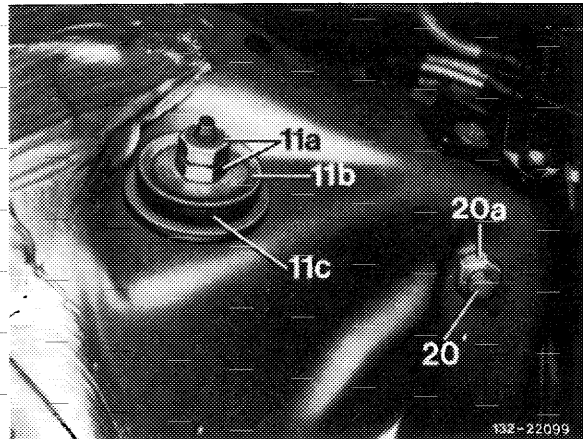
- 4 Lower control arm
- 19 Eccentric bolt
- 19a Eccentric disc

11 Remove support of upper control arm on torsion bar.



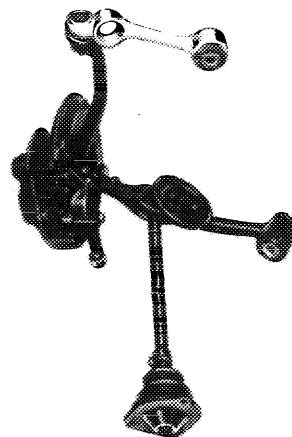
- 5 Steering knuckle
- 6 Upper control arm
- 10 Torsion bar
- 22a Rubber bearing
- 22b Disc washer
- 22c Cone washer

12 Loosen hex. head screw (20) of upper control arm bearing at front end from direction of engine compartment and remove.



13 Remove front axle half.

14 Check rubber bearing of upper and lower control arm, as well as rubber bearing for supporting upper control arm on torsion bar and renew, if required.



## Installation

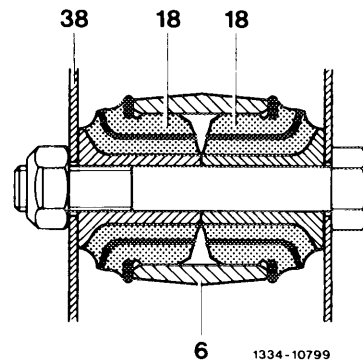
15 Introduce front axle half and mount upper control arm to front end and torsion bar, but do not tighten bolts.

**Note:** Starting September 1978 the hex. head screw is mounted from the rear toward the front.

Raise front axle half at opposite vehicle end as required to obtain a favourable position of torsion bar.

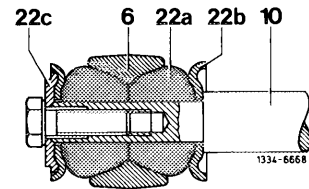
Bearing of upper control arm on front end

6	Upper control arm	38	Front end
18	Rubber bearing		



Support of upper control arm on torsion bar

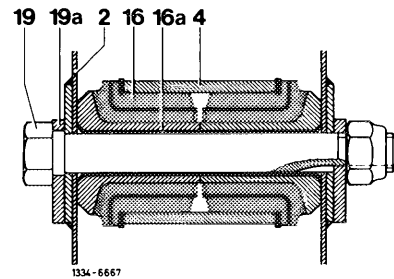
6	Upper control arm	22a	Rubber bearing
10	Torsion bar	22b	Disc washer
		22c	Cone washer



16 Mount bearing of upper control arm to frame cross member.

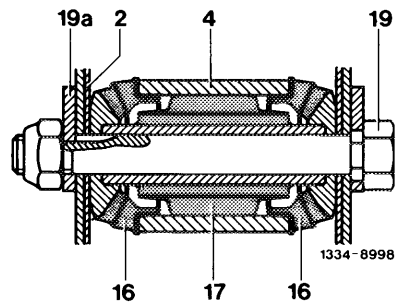
Bearing of lower control arm on frame cross member (2-part bearing)

2	Frame cross member	19	Eccentric bolt (camber adjustment)
4	Lower control arm	19a	Eccentric disc
16	Rubber bearing		
16a	Clamping sleeve		



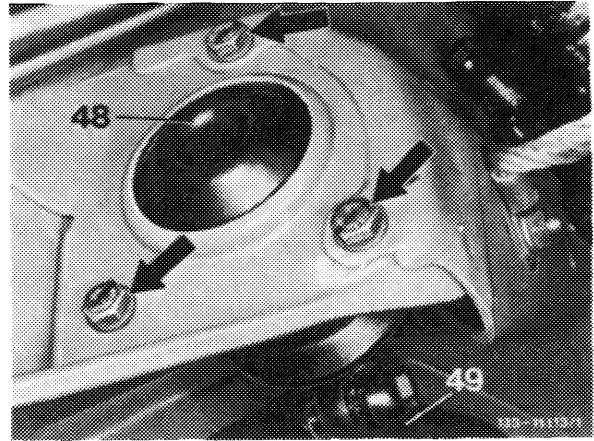
Bearing of lower control arm on frame cross member (3-part bearing)

2	Frame cross member		
4	Lower control arm		
16	Axial-torsion rubber bearing		
17	Radial-torsion rubber bearing		
19	Eccentric bolt (camber adjustment)		
19a	eccentric disc		



17 Attach brake support to frame floor.

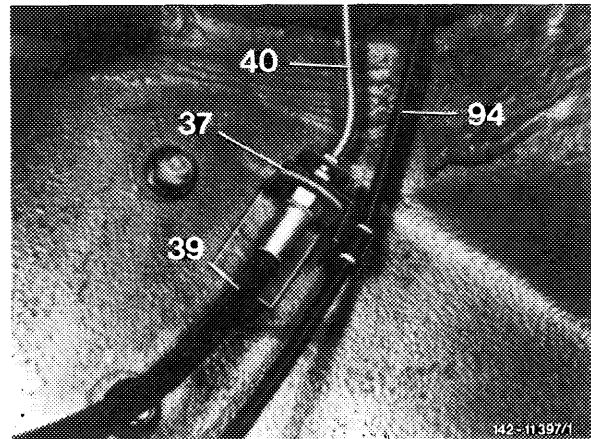
- 48 Supporting joint
- 49 Supporting pipe



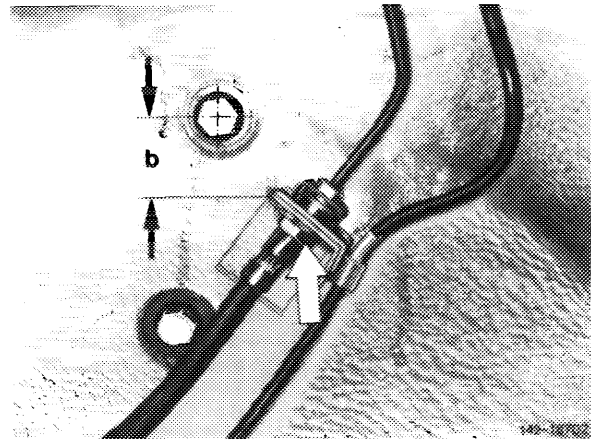
18 Connect brake line and brake hose at front end to each other, attach plug connection of brake lining wear indicator to caliper (42-100).

Fastening at front end  
1st version (up to August 1979)

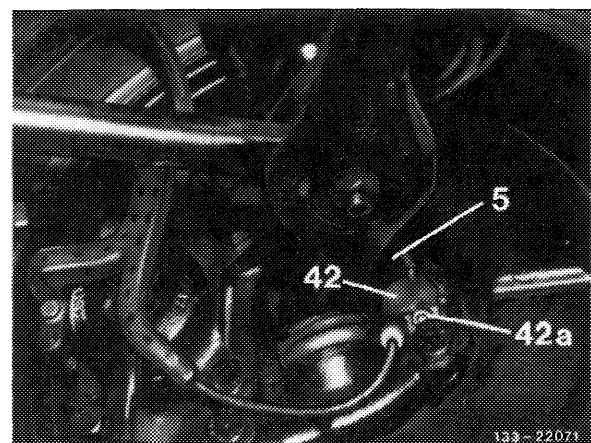
- 37 Holder for brake hose
- 39 Brake hose
- 40 Brake line
- 94 Cable of brake lining wear indicator



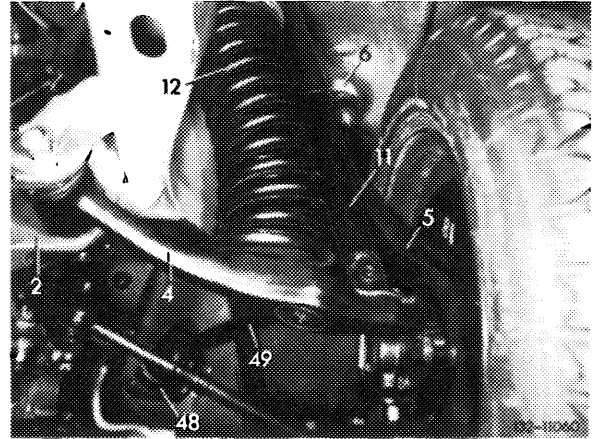
Fastening at front end  
2nd version (starting September 1979)



19 On vehicles with ABS, fasten ABS rpm sensor (42) with hex. socket screw (42a) in steering knuckle (5) (42-712).



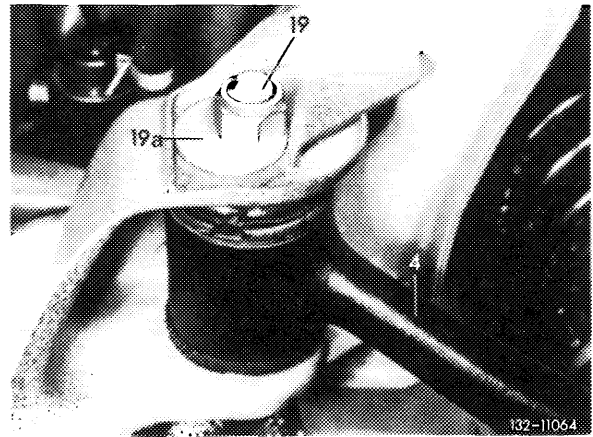
- 20 Install front spring (12) (32-200).
- 21 Install front shock absorber (11) (32-100).
- 22 Attach ball joint of track rod to steering knuckle arm.
- 23 Bleed brake system (42-010).
- 24 Mount front wheel, lower vehicle.



- 25 Place eccentric bolt (19) of camber adjustment to previously made mark and tighten.

**Attention!**

If the position of the eccentric bolt has not been marked during removal, mount eccentric bolt in center position for initial adjustment.



- 26 Tighten hex bolt of upper control arm bearing on front end and bolt of support on torsion bar.
- 27 Check vehicle level at front axle (40-300).
- 28 Check adjustment of front wheels (40-320).
- 29 Check adjustment of head lights.

