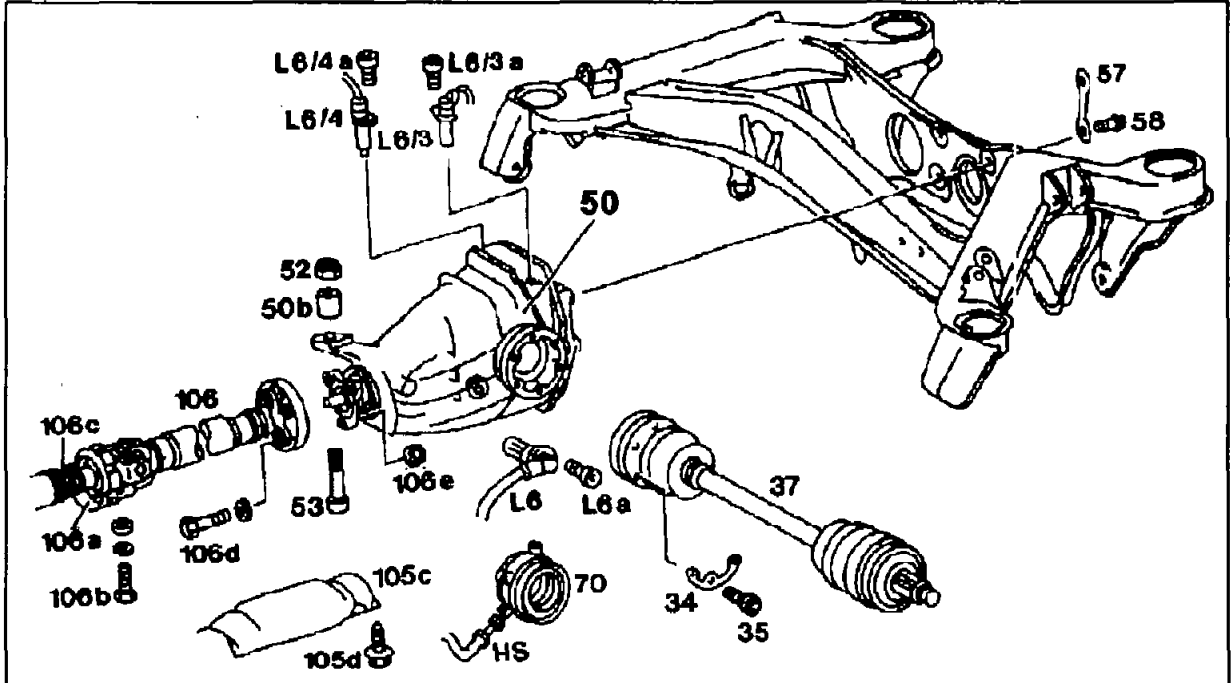


# 35-520 Removal and installation of rear axle center assembly

Preceding work:

Operation no. of operation texts and work units or standard texts and flat rates:

## A. Model 201



P35-5696-55

### On vehicles with ABS

Rear axle oil .....

Drain, fill. Filling height up to lower edge of filler opening (number 1a).

Speed sensor L6 ABS .....

Remove, install. Replace O-ring and self-locking hexagon socket bolt. 8 Nm. Torque wrench 001 589 72 21 00 (number 1b).

### Note

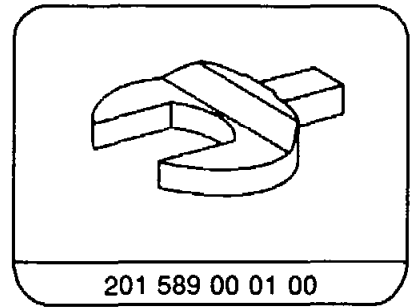
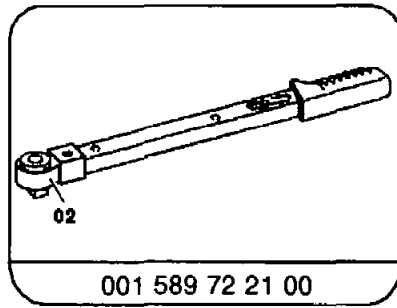
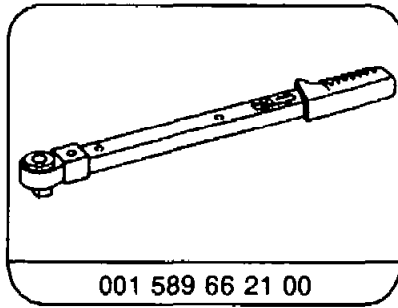
When installing, ensure that there are no metallic residues on the magnetic tip.

Exhaust shield (105c) .....

Remove, install (number 2).

Clamp nut (106c) . . . . .	Loosen at propeller shaft, tighten. 30–40 Nm. Torque wrench 001 589 66 21 00, open end wrench 41 mm 201 589 00 01 00 (number 3).
Propeller shaft intermediate bearing (106a) . . . . .	Remove, install at frame floor, 25 Nm. Torque wrench 001 589 66 21 00 (number 4).
Propeller shaft (106) . . . . .	Disconnect and connect at flange on rear axle center assembly. Push rear propeller shaft forwards out of centering device to prevent it from falling down, if required place on the bracket of the seat belt attachment. Replace self-locking hexagon nut. Tightening torque 40 Nm. Torque wrench 001 589 66 21 00 (number 5).
Rear axle shaft (37) . . . . .	Disconnect, connect at connecting flange, replace locking bolts and plain washers. Lightly oil bolt head support and thread. M10 = 70 Nm, M12 = 100 Nm. Torque wrench 001 589 66 21 00 (numbers 6 and 7).
Rear axle center assembly (50) . . . . .	Support (number 8).
Rear rear axle center assembly mounting (57/58)	Remove, install. Replace locking bolts with locking tab, 50 Nm. Torque wrench 001 589 66 21 00 (number 9).
Front rear axle center assembly mounting . . . . .	Remove, install. Replace self-locking hexagon nut, 45 Nm. Torque wrench 001 589 66 21 00 (number 10).
<b>On vehicles with ASD</b>	
Hydraulic line (HS) . . . . .	Remove, install. Bleed hydraulic system (35–519, number 11).
<b>On vehicles with ASR</b>	
Rear axle center assembly (50) . . . . .	Lower slightly (number 12).
Speed sensor (L6/3 or L6/4) . . . . .	Remove, install, replace hexagon socket bolts (L6/3a or L6/4a). Replace O-ring. Tightening torque 8 Nm. Torque wrench 001 589 72 21 00 (number 13).
Rear axle center assembly (50) . . . . .	Lower, raise (number 14).

## Special tools



## Types of oil and capacity

Standard differential

SAE 90 hypoid gear oil  
Refer to Specifications for Service Products,  
sheet no. 235

Differential with ASD (information plate  
on rear axle housing)

Special hypoid gear oil  
Refer to Specifications for Service Products,  
sheet no. 235.3

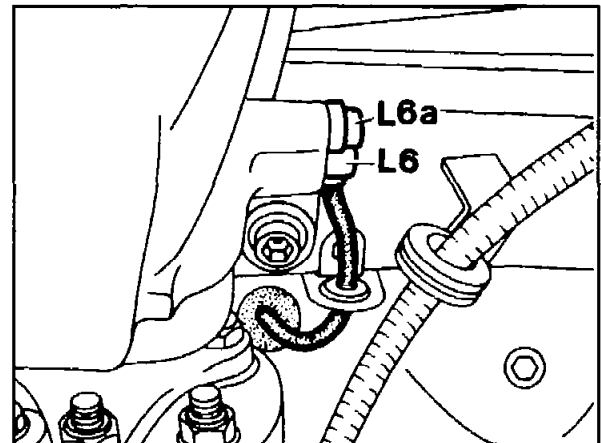
Capacity

with 168 mm dia.crown wheel, 0.7 liter,  
with 185 mm dia. crown wheel, 1.1 liter.

## Removal, Installation

### 1 On vehicles with ABS

- a) Drain rear axle oil.
- b) Unscrew hexagon socket bolt (L6a),  
remove speed sensor (L6) from rear axle  
housing.
- c) Clean any metallic residues off metallic  
tip, cover and set aside.

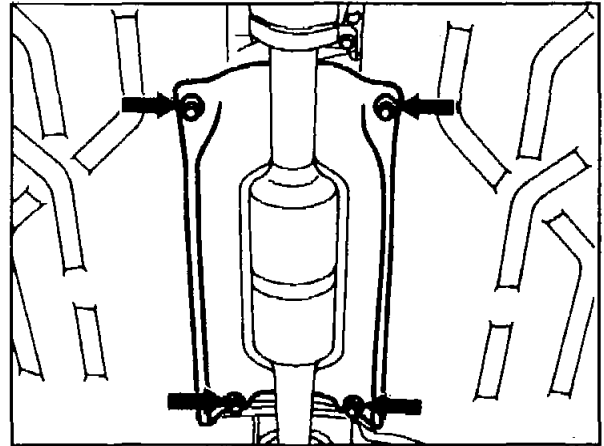


P35-5700-13

### Installation note

Replace self-locking hexagon bolt and O-ring.  
Ensure that there are no metallic foreign bodies  
on the magnetic tip of the speed sensor. When  
installing the speed sensor in the housing, do  
not damage the O-ring. Check oil in the rear  
axle, if required fill up to the filler opening.

2 Unscrew exhaust shield and remove (arrow).



P35-5695-13

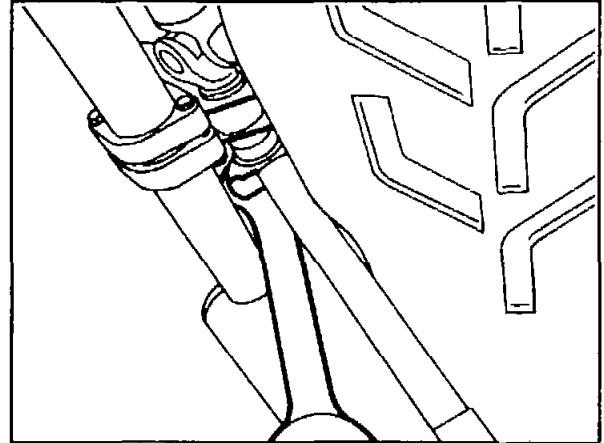
3 Loosen clamp nut on the propeller shaft.

**Installation note**

Tightening torque 30 – 40 Nm.

Open end wrench 41 mm 201 589 00 01 00.

Torque wrench 001 589 66 21 00.



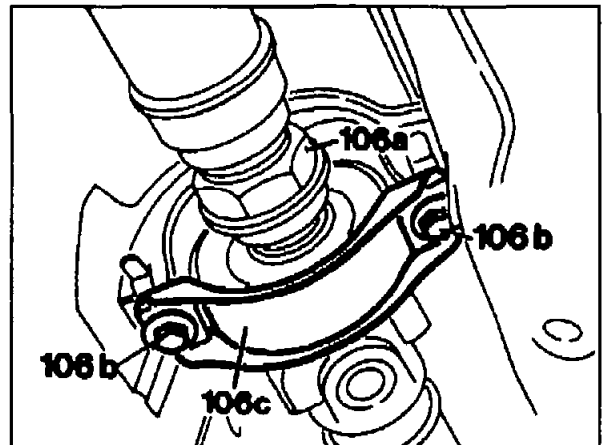
P41-2035-13

4 Unscrew hexagon bolts (106b) on propeller shaft intermediate bearing (106c) on frame floor and remove.

**Installation note**

Tightening torque 25 Nm.

Torque wrench 001 589 66 21 00.

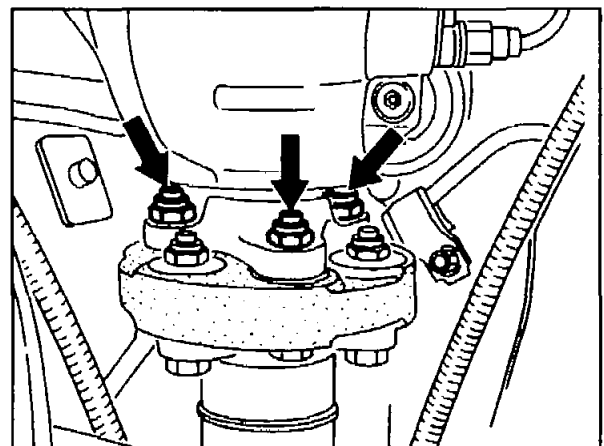


P35-5439-13

5 Remove propeller shaft at joint flange of bevel drive pinion (arrows), push forward and secure to prevent it from falling down.

**Installation note**

Replace self-locking hexagon nuts. Tightening torque 40 Nm, torque wrench 001 589 66 21 00.



P35-5440-13

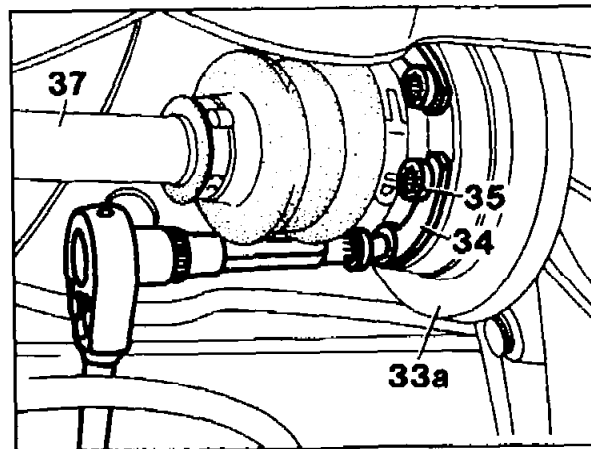
6 Remove rear axle shaft (37) at connecting flange (33a) and remove with locking bolts (35) and plain washers (34).



When loosening the locking bolts ensure that the screwdriver insert is completely inserted in the polygon head section and clean bolt head, if required.

**Installation note**

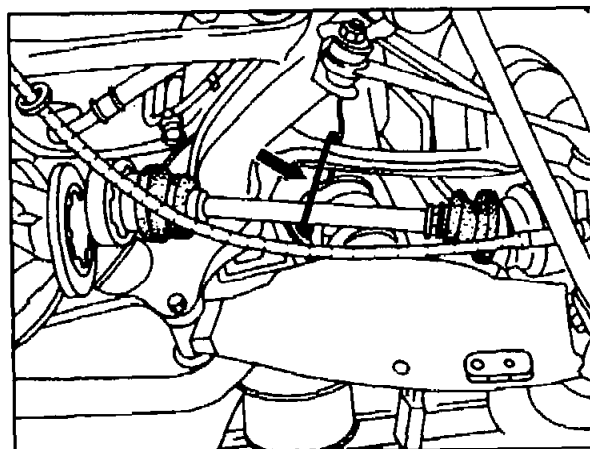
Replace locking bolts. Lightly oil bolt head support and thread. Tightening torque 70 Nm. Torque wrench 001 589 66 21 00.



P35-5693-13

7 Compress rear axle shafts and fasten on the camber strut using a wire (arrow).

8 Support rear axle center assembly.

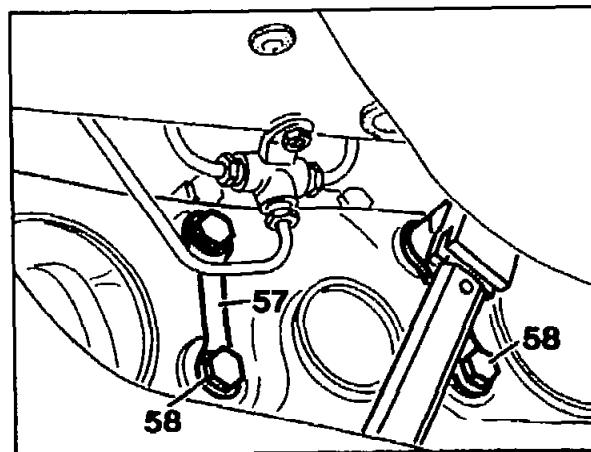


P35-5694-13

9 Unscrew locking bolts (58) on rear axle bracket to closing plate and remove with locking tab (57).

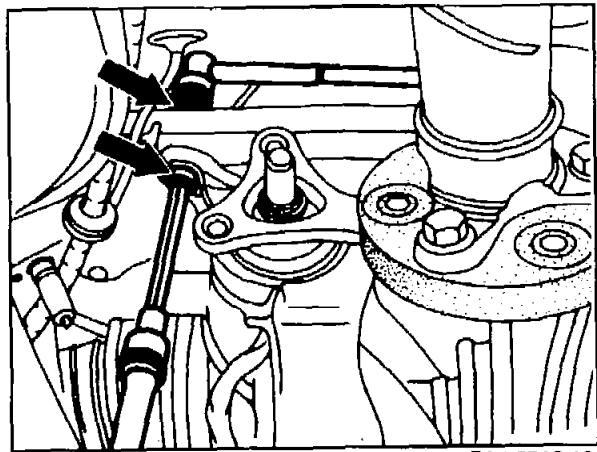
**Installation note**

Replace locking hexagon bolts and locking tab. Tightening torque 50 Nm, torque wrench 001 589 66 21 00.



P35-5543-13

10 Loosen front hexagon socket bolt for attachment of rear axle center assembly to rear axle bracket and remove (arrows).



P35-5712-13

**Installation note**

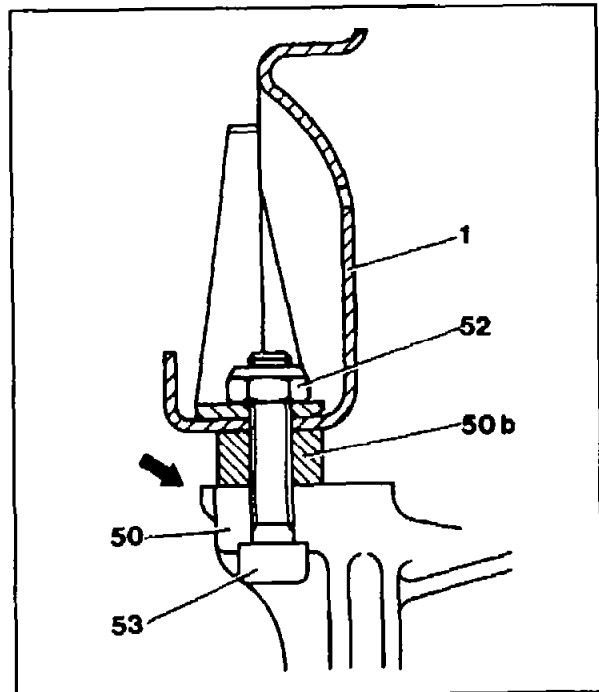
Replace self-locking hexagon nut (52) and hexagon socket bolt (53).

Tightening torque 45 Nm.

Torque wrench 001 589 66 21 00.



Do not install spacer sleeve (50b) on rear axle center assembly without identification rib (arrow, see programmed repair).



P35-5697-15

2nd version as of 12/84

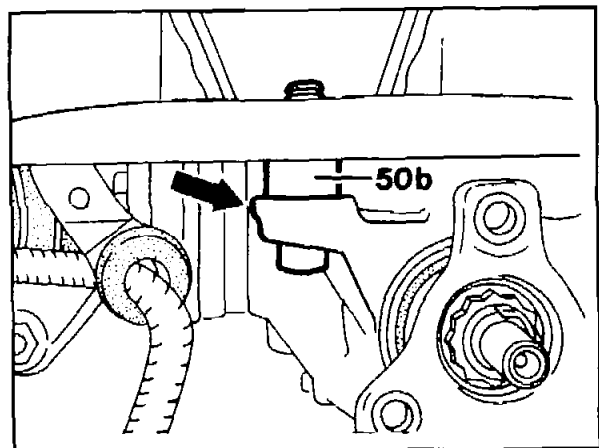
1 Rear axle bracket

50 Rear axle center assembly

52 Self-locking hexagon nut

53 Hexagon socket bolt  
M10 x 1 x 65

50b Spacer sleeve



P35-5576-13

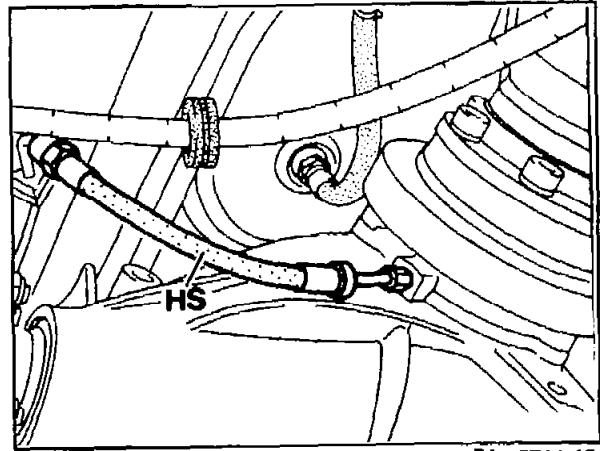
Rear axle center assembly with identification rib as of 12/84

**11 On vehicles with ASD**

Unscrew hydraulic line (HS) on center assembly and seal.

**Installation note**

Bleed hydraulic system (35-519).  
Ensure correct line routing.



P35-5711-13

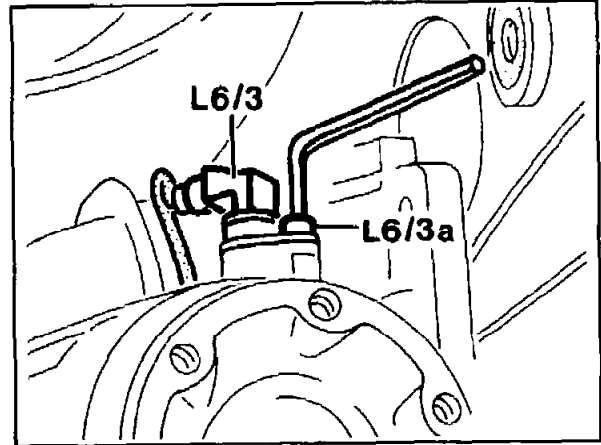
**12 On model 201.029 with ASR**

Lower rear axle center assembly slightly.

13 Remove speed sensors (L6/3 and L6/4).

**Installation note**

Replace hexagon socket bolt with an O-ring, 8 Nm. Torque wrench 001 589 72 21 00. Electric cables must not be twisted when assembled.

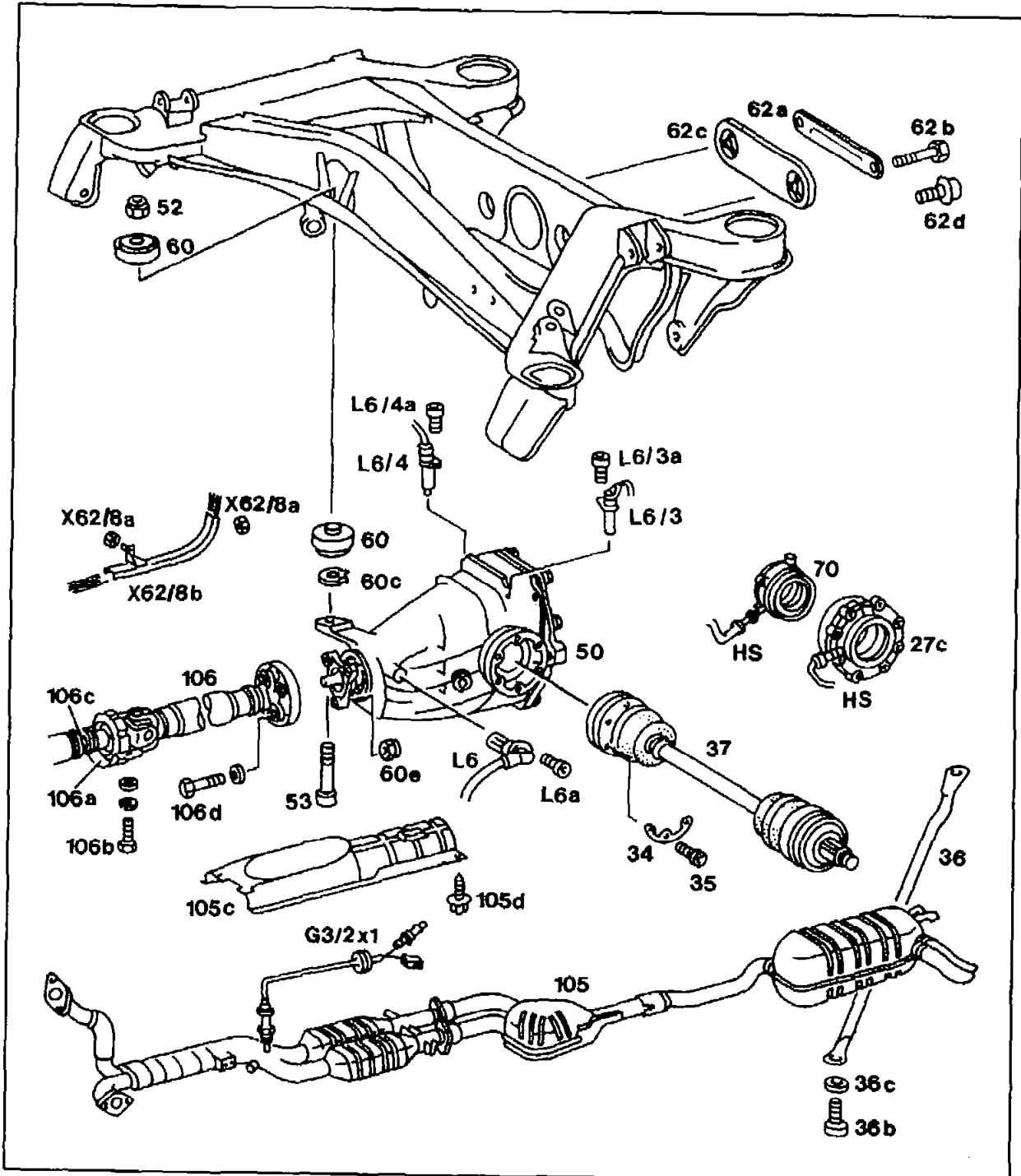


P35-5547-13A

14 Lower the rear axle center assembly and remove.

15 Install in reverse sequence.

**B. Model 124**



P35-5513-61

**Model 124.06 (convertible)**

Cross brace (36) .....

Remove, install on the left. Replace self-locking polygon head bolts (36b). Tightening torque 120 Nm (number 1).

Torque wrench 001 589 66 21 00.





The body must be jacked up without any distortion when working on diagonal struts. A twin-pillar hoist can be used for this.

### Vehicles with ABS

Rear axle oil	Drain, fill. Filling height up to lower edge of filler opening (number 2a).
Speed sensor (L6)	Remove, install. Replace self-locking hexagon socket bolt (L6a) and O-ring. Tightening torque 8 Nm (number 2b). Torque wrench 001 589 72 21 00. Unclip cable for ABS speed sensor at bracket (only in the case of the rear axle center assembly with 210 mm dia. crown wheel, number 2c).

### Note

When installing, ensure that there are no metallic residues on the magnetic tip (number 2d).

### Models 124.034 and 124.036

Exhaust system (105)	Remove, install complete system (number 3, 49–100).
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### Model 124 all (except model 124.034/036)

Exhaust system (105)	Disengage, engage rubber rings and support exhaust system (number 4). Check rubber rings for damage, replace if required.
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### All models

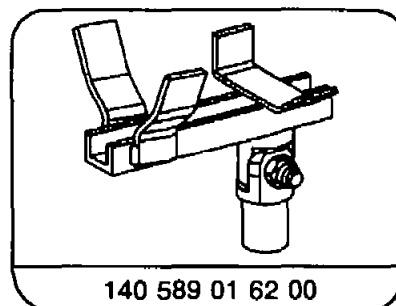
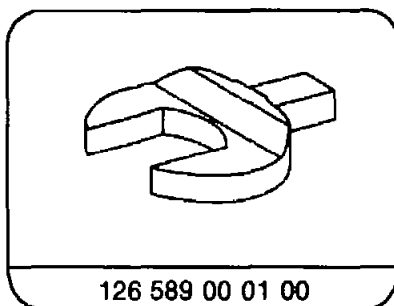
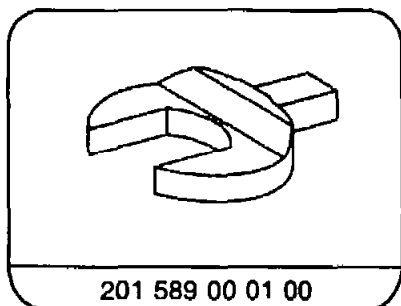
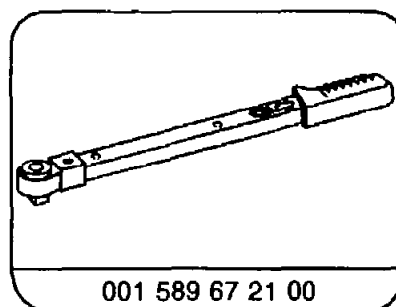
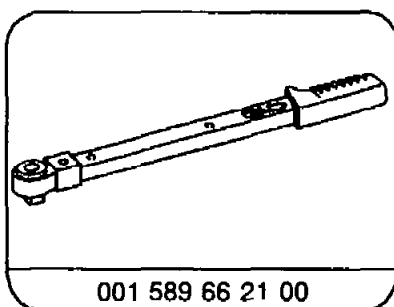
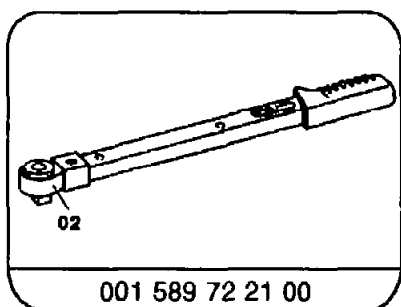
Exhaust shield (105c)	Remove, install (number 5).
Clamp nut (106c)	Loosen, tighten at propeller shaft. Tightening torque 30 – 40 Nm. Torque wrench 001 589 66 21 00 Open end wrench 46 mm 126 589 00 01 00 or Open end wrench 41 mm 201 589 00 01 00 (number 6).
Propeller shaft intermediate bearing (106a)	Loosen, tighten at frame floor. Tightening torque of hexagon bolts 25 Nm. Torque wrench 001 589 66 21 00 (number 7).

Propeller shaft (106) .....	Disconnect, connect at flange of rear axle center assembly. Push rear propeller shaft forwards out of centering device, secure to prevent it from falling down, if required place it on bracket of seat belt attachment. Replace self-locking hexagon nuts. Tightening torque M10 = 40 Nm, M12 = 60 Nm. Torque wrench 001 589 66 21 00 (numbers 8 and 9).
Rear axle shafts (37) .....	Remove, install at connecting flange, tie up rear axle shafts to rear axle bracket using wire. Replace locking bolts, lightly oil thread and bolt head support, M10 = 70 Nm, M12 = 100 Nm (numbers 10 and 11) Torque wrench 001 589 67 21 00.
<b>On vehicles with ASD</b>	
Hydraulic line (HS) .....	Remove, install, seal lines. Bleed hydraulic system (35–519, number 12).
Rear axle center assembly (50) .....	Support (number 13).
Rear mounting of rear axle center assembly (62d)	Remove, install. Replace hexagon bolts or hexagon socket bolts. Tightening torque with tilger (62b) 150 Nm, otherwise 120 Nm. Torque wrench 001 589 67 21 00 (number 14).
Front mounting of rear axle center assembly (60)	Remove, install. Replace self-locking hexagon nut or upper plate (on model 124.034/036), 45 Nm. Follow installation notes. Torque wrench 001 589 66 21 00 (number 15).
<b>On vehicles with ASR</b>	
Rear axle center assembly (50) .....	Lower slightly (number 16).
Speed sensor (L6/3 and L6/4) .....	Remove, install. Replace self-locking hexagon socket bolt and O-ring. Tightening torque 8 Nm. Torque wrench 001 589 72 21 00 (number 17).
Rear axle center assembly (50) .....	Lower, raise (number 18).

## Types of oil and capacity

Standard differential	SAE 90 hypoid gear oil Refer to Specifications for Service Products, sheet no. 235
Differential with ASD (information plate on rear axle housing)	Special hypoid gear oil Refer to Specifications for Service Products, sheet no. 235.3
Capacity	with 168 mm dia.crown wheel, 0.7 liter, with 185 mm dia. crown wheel, 1.1 liter. with 210 mm dia. crown wheel, 1.3 liter.

## Special tools



### Removal, installation

#### Model 124.06 (convertible)

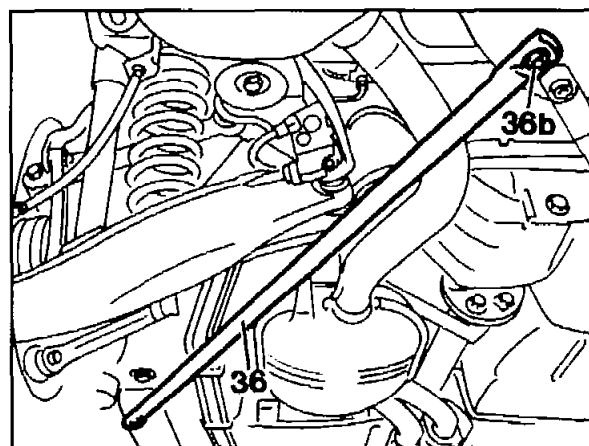
1 Unscrew self-locking polygon head bolts (36b) of cross brace (36) and remove. Left side only.

#### Installation note

Replace self-locking polygon head bolts.  
Tightening torque 120 Nm.  
Torque wrench 001 589 66 21 00.



The body must be jacked up without any distortion when working on diagonal struts. A twin-pillar hoist can be used for this.

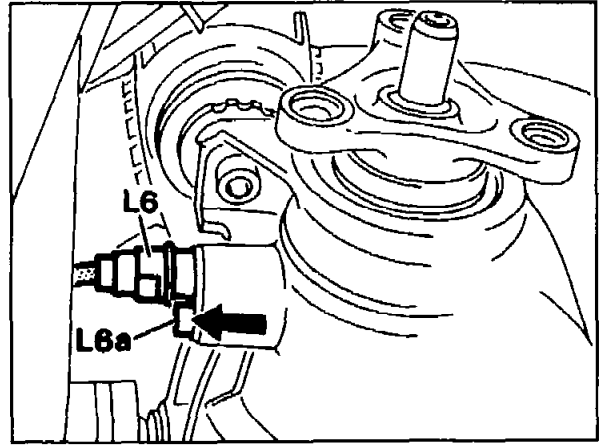


P35-5588-13

### Vehicles with ABS

- 2 a) Drain rear axle oil.
- b) Unscrew hexagon socket bolt (L6a), remove speed sensor (L6) from rear axle housing.

Location of ABS speed sensor, right

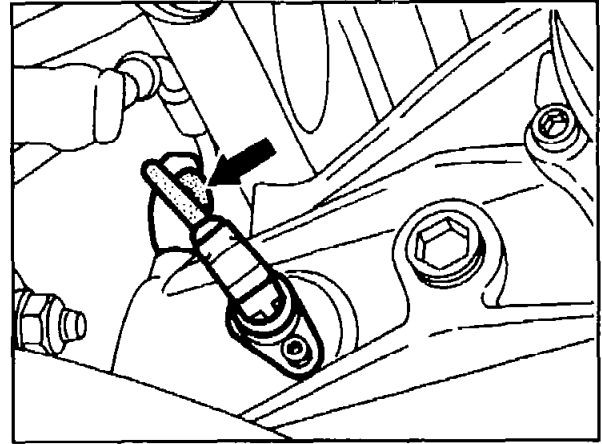


P35-5443-13

- c) Unclip cable from ABS speed sensor at bracket (arrow).
- d) Clean any metallic residues off metallic tip, cover and set aside.

### Installation note

Replace self-locking hexagon bolts and O-ring on speed sensor. Tightening torque 8 Nm. Torque wrench 001 589 72 21 00. Replenish rear axle oil up to lower edge of filler opening.

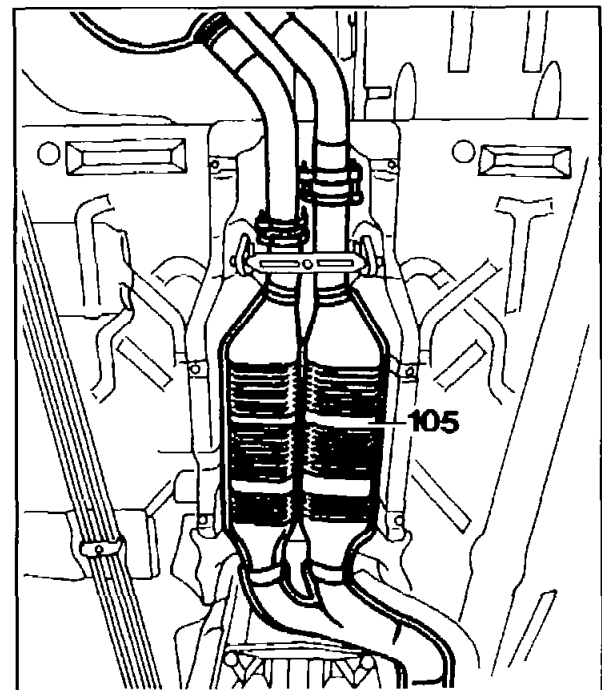


P35-5708-13

Location of ABS speed sensor, left

### Models 124.034 and 124.036

- 3 Remove exhaust system (105) complete (49-100).

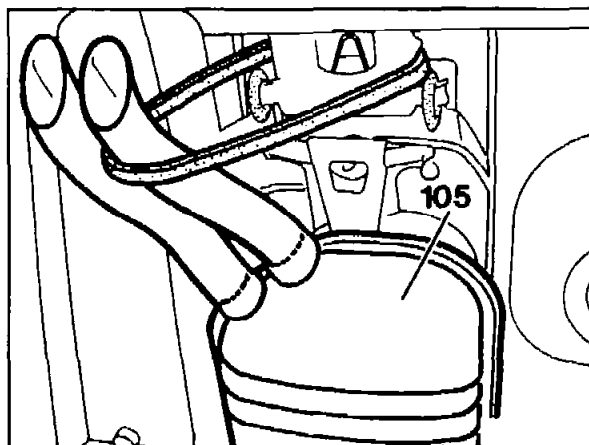


P35-5709-15

**All models 124 (except model 124.034/036)**  
4 Disengage rubber rings of exhaust system (105).  
Support exhaust system.

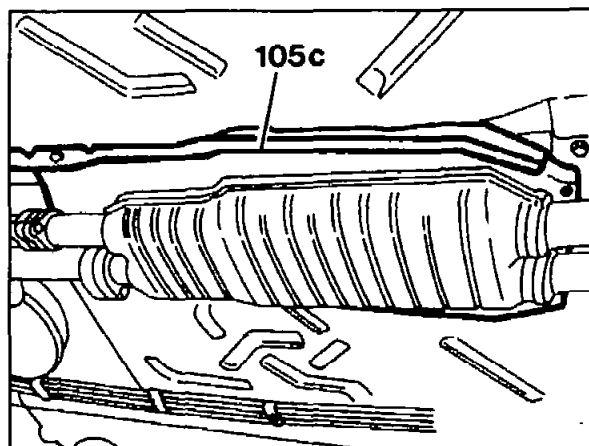
**Installation note**

Check rubber rings for damage and replace, if required.



P35-5593-13

**All models**  
5 Remove exhaust shield (105c).

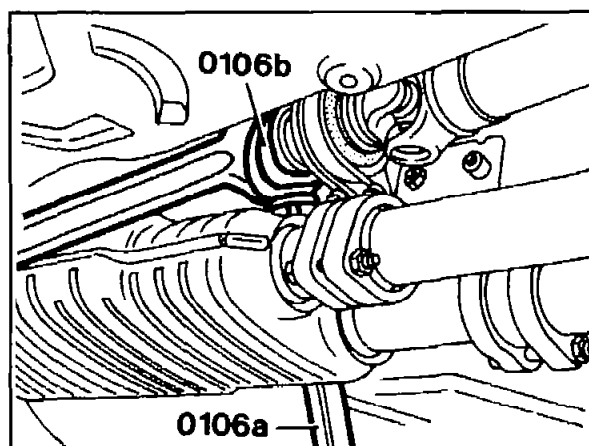


P35-5701-13

6 Loosen clamp nut on propeller shaft.

**Installation note**

Tightening torque of clamp nut 30 – 40 Nm.  
Torque wrench (0106a) 001 589 66 21 00. Open  
end wrench 41 mm (0106b) 201 589 00 01 00  
or open end wrench 46 mm (0106b)  
126 589 00 01 00.

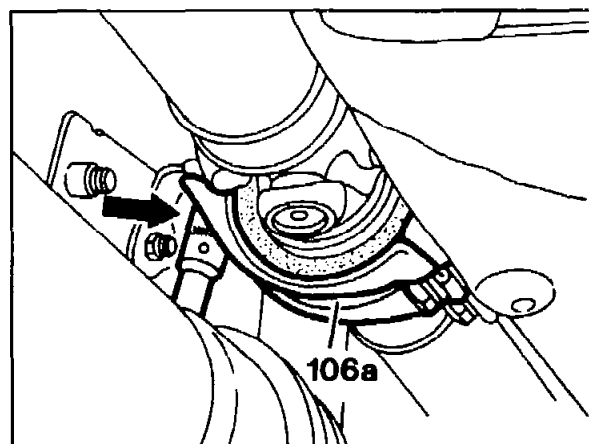


P35-5702-13

7 Loosen propeller shaft intermediate bearing (106a) on frame floor and lower (arrow).

**Installation note**

Tightening torque 25 Nm.  
Torque wrench 001 589 66 21 00.



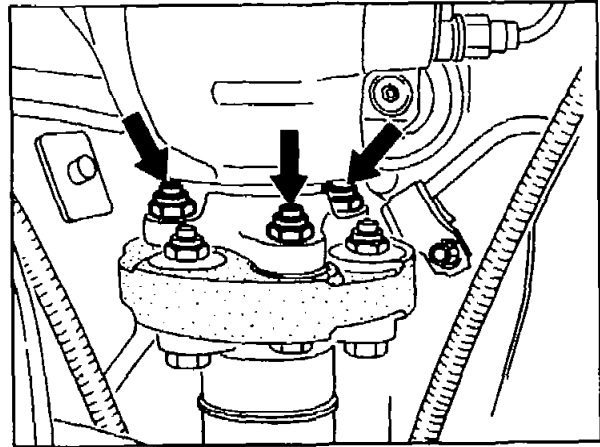
P35-5703-13

8 Disconnect propeller shaft at flange on rear axle center assembly (arrows).

**Installation note**

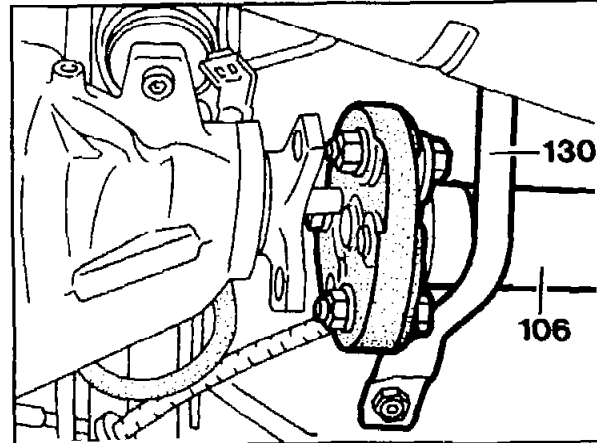
Replace self-locking hexagon nuts. Tightening torque of hexagon bolts M10 = 40 Nm, M12 = 60 Nm.

Torque wrench 001 589 66 21 00.



P35-5440-13

9 Loosen flexible disc from centering in joint flange using suitable drift, and slide forwards. Place propeller shaft (106), if fitted, on bracket (130) for seat belt attachment.



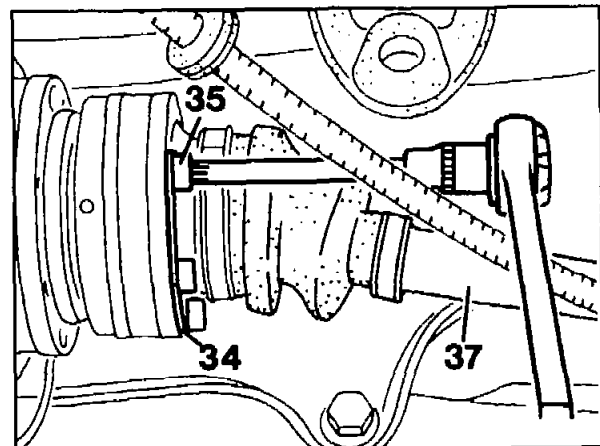
P35-5704-13

10 Remove rear axle shafts at connecting flange and remove locking bolts (35) and plain washers (34).



When loosening the locking bolts ensure that the screwdriver insert is completely inserted in the polygon head section and clean bolt head, if required.

Location - left



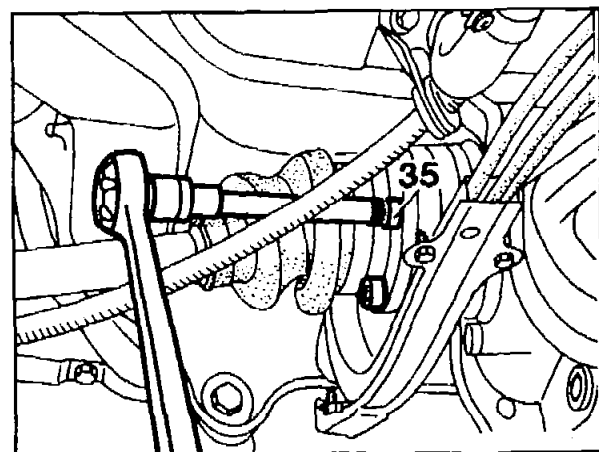
P35-5541-13

**Installation note**

Replace locking bolts. Oil contact surface on bolt head lightly. Tightening torque M10 = 70 Nm, M12 = 100 Nm.

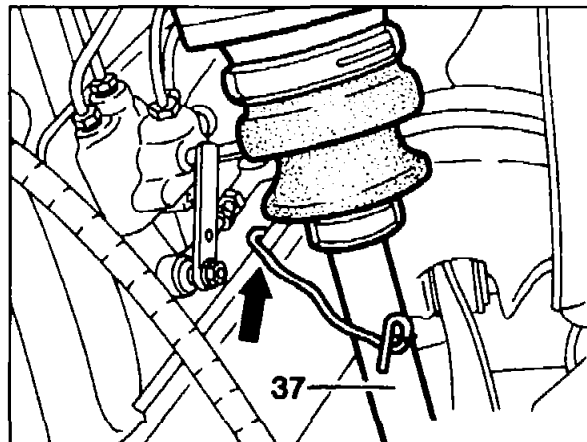
Torque wrench 001 589 67 21 00.

Location - right



P35-5528-13

11 Compress rear axle shafts (37) and tie securely to the rear axle bracket using a wire (arrow).

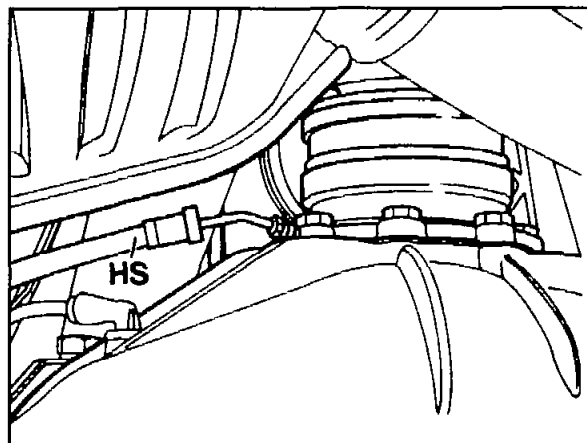


P35-5706-13

12 On vehicles with ASD  
Unscrew hydraulic line (HS) on center assembly and seal.

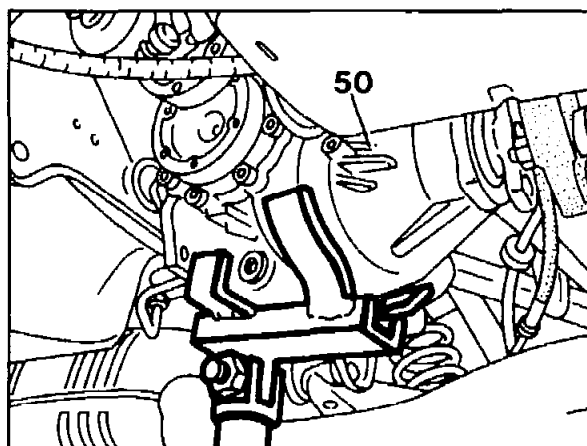
**Installation note**

Bleed hydraulic system (35–519).  
Ensure correct line routing.



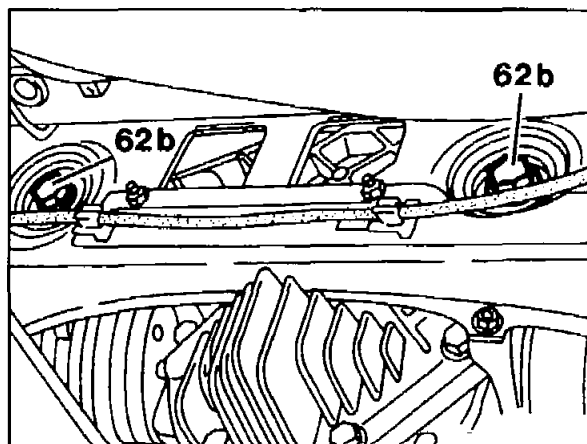
P35-2055-13

13 Support rear axle center assembly (50) with pick-up attachment 140 589 01 62 00.



P35-5707-13

14 Remove self-locking hexagon bolts (62b) or hexagon socket bolts of rear mounting.



P35-5705-13

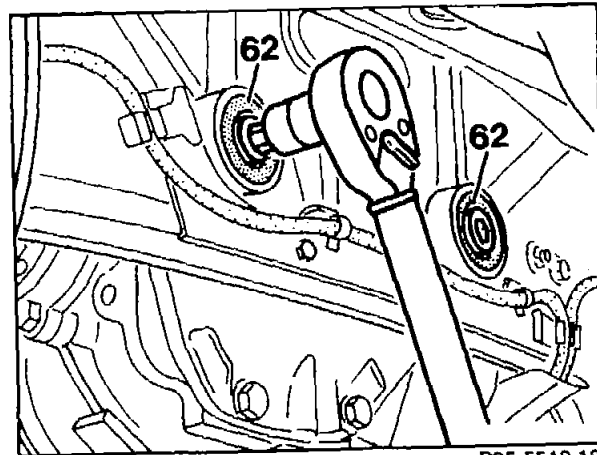
Location on model 124.034 and 124.036

**Installation note**

Replace self-locking hexagon socket bolts.

Tightening torque 120 Nm.

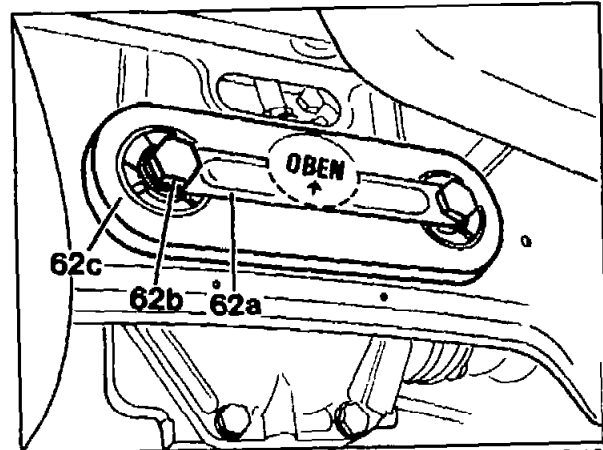
Torque wrench 001 589 67 21 00.



Location on model 124

P35-5542-13

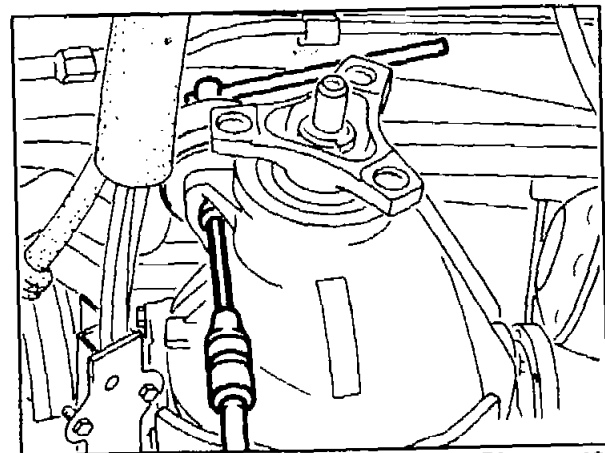
On vehicles with vibration damper, replace self-locking hexagon bolts, observe installation position, tightening torque 150 Nm.  
Torque wrench 001 589 67 21 00.  
Check rubber mount for cracks, replace if required.



- 62a Mounting plate
- 62b Hexagon bolts
- 62c Vibration damper

P41-2045-13

15 Loosen front hexagon socket bolt for attaching rear axle center assembly to rear axle bracket and remove with suspended parts.



Location on model 124

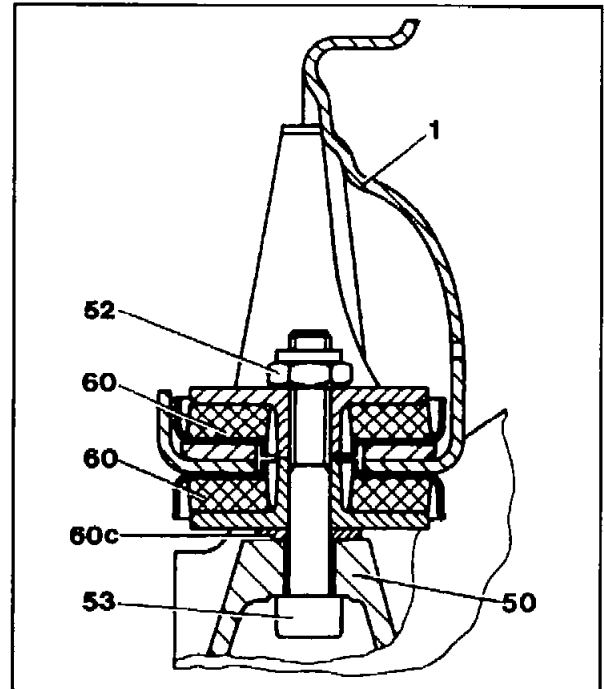
P35-5544-13



### Installation note

Replace self-locking hexagon nut (52). Install upper and lower rubber mount (60) in rear axle bracket and mount together with the standard washer (60c). Tightening torque of hexagon socket bolt (53) 45 Nm.

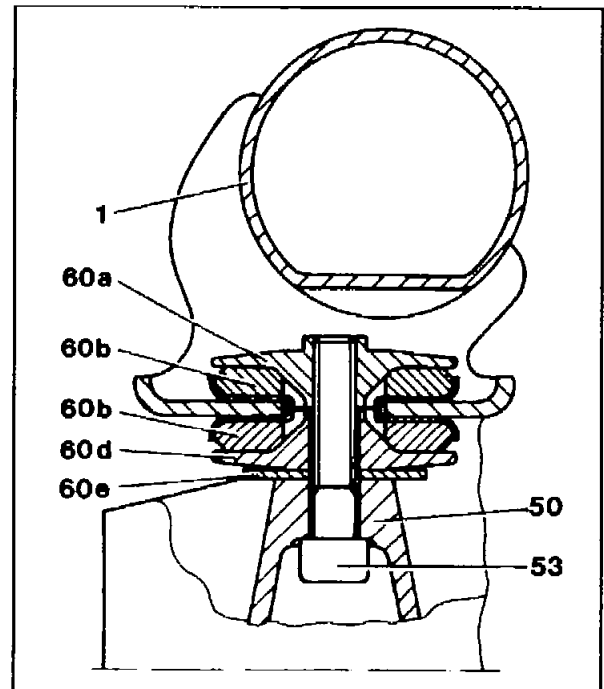
- Location on model 124
- 1 Rear axle bracket
  - 52 Self-locking hexagon nut
  - 53 Hexagon socket bolt
  - 60 Rubber mount
  - 60c Standard washer, 2.6 mm thick
  - 50 Rear axle center assembly



P35-5698-15

Mount upper plate (60a) with integral thread and upper and lower rubber mount (60b) with plate (60d), and washer (60e). Tightening torque of hexagon socket bolt (53), 45 Nm.  
Torque wrench 001 589 66 21 00.

- Location on model 124.034/036
- 1 Rear axle bracket
  - 50 Rear axle center assembly
  - 60a Plate with integral thread
  - 60b Rubber mount
  - 60d Lower plate
  - 60e Washer
  - 53 Hexagon socket bolt



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### Note on taxi version

As of approx. 07/93 the front mounting for the rear axle center assembly has been equipped with a two-piece mount (nearly identical with model 124.034/036, see parts microfiche).

**16 On vehicles with ASR**

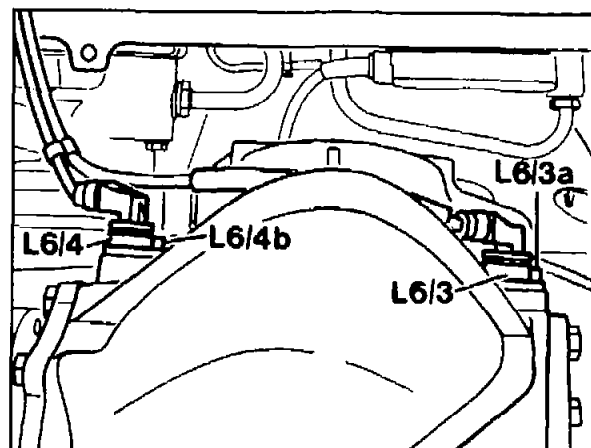
Lower rear axle center assembly slightly.

17 Remove speed sensors (L6/3 and L6/4).

**Installation note**

Replace self-locking hexagon socket bolts (L6/3a and L6/4a) and O-ring. Tightening torque 8 Nm.

Torque wrench 001 589 72 21 00.



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18 Lower rear axle center assembly and remove.

19 Install in reverse sequence.