
Complaint:

Pedal pulsates during application of moderate braking force (not in active ABS regulation range) ABS malfunction indicator lamp not illuminated or illuminated sporadically during vehicle operation, until ignition is switched off.

Cause

- a) Wheel speed sensor defective so that the return pump of the hydraulic unit starts up.

- b) Possible power interrupt in ABS main cable harness in the area of the coaxial plug for the front axle wheel speed sensor.

Remedy

1. Check signal voltage of wheel speed sensors, with adapter test step 4 (voltmeter ~).

2. Remove wheel speed sensor and check for contamination or damage. Check rear axle speed sensor for metallic swarf on the sensor tips. Abrasion and fine metallic chips on the front axle speed sensors do not impair the function of the ABS.

3. Check wheel speed sensor cable for interrupt in the area of the bracket. The color adhesive band must be mounted directly under the clips (see arrow). If the color adhesive band is assembled on the clip or above the clip, then it can be subjected to tensile loads when the wheel rebounds. In the internal resistance test it is expedient to flatten the coaxial cable in the area of the clip.

4. Check rotor for number of teeth, damage, foreign bodies, radial and lateral runout and centricity to speed sensor.

Complaint:

ABS malfunction indicator lamp comes on at high speed.

Cause:

1. Different tire and disc wheel sizes on front and rear axle.
Non-recommended wheel/tire combination (make, type, size)
2. Incorrect rotor in the rear axle or incorrect axle ratio.
3. Severely contaminated or damaged rotors on the front axle.

Remedy

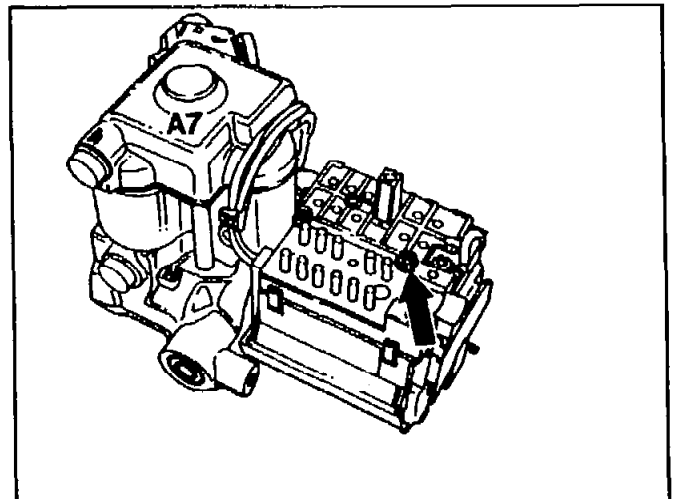
1. Fit production tires.
2. Check number of teeth on rotor of rear axle, exchange center piece assembly if required.
3. Clean rotors on front axle or exchange wheel hubs in the event of damage.

Complaint:

ABS malfunction indicator lamp remains on after engine is started, until ignition is switched off (in order after repeated engine starts).

Possible causes

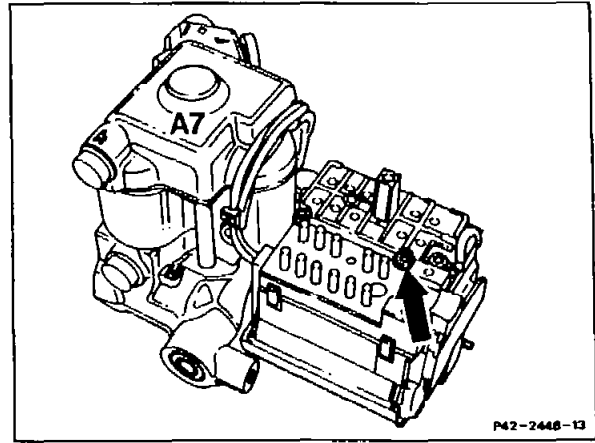
- a) Grounding point (W10) makes bad contact.
- b) Grounding point in plug socket on hydraulic unit makes bad contact.
- c) Valve relay defective or bad contacting.
- d) Diode in alternator defective.
- e) **On vehicles with diesel engine:**
Interference from preheating system cable harness to ABS cable harness.



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Remedy

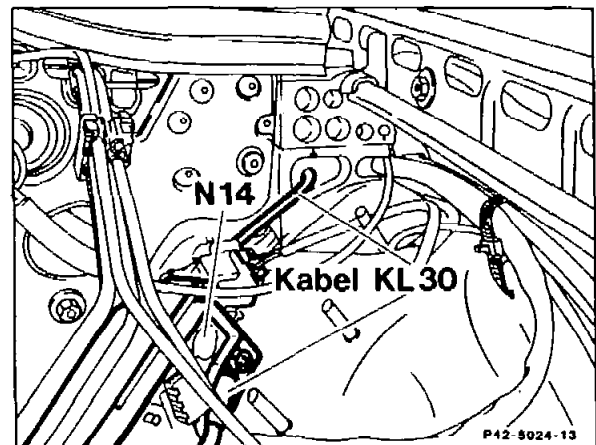
- a) Retighten grounding point (W10).
- b) Unscrew fixing bolt for plug socket (arrow), place tooth lock washer underneath and screw in again.
- c) Check valve relay for contacting (plug socket) and function, rework contacting or replace relay if required.
- d) Check alternator for ripple, replace if required.
- e) Change cable routing, refer to the following working instructions.



Working instructions

Model 124

1. Disconnect cable terminal 30 at preheating relay N14 and cut off connector lug.

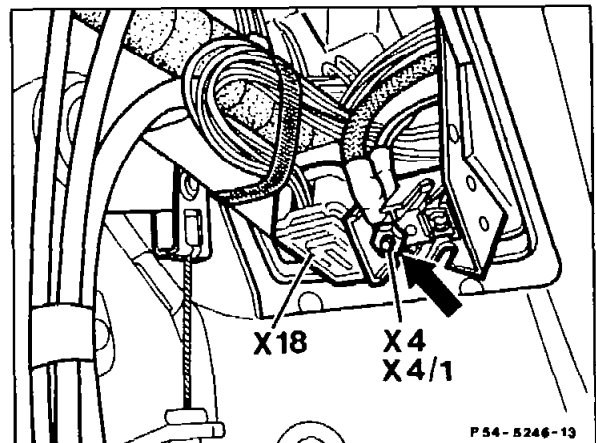


2. Disconnect cable terminal 30 for preheating relay at cable connection X4 on fuse and relay box, cut-off connector lug.

Note

By means of resistance measurement ensure that the correct cable has been disconnected.

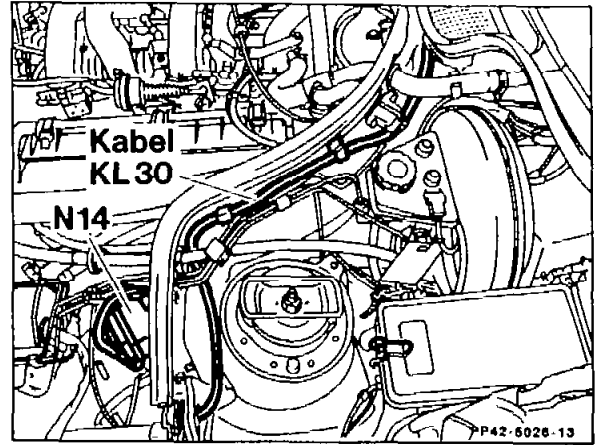
3. Insulate both ends of cable and tape back on to cable harness.



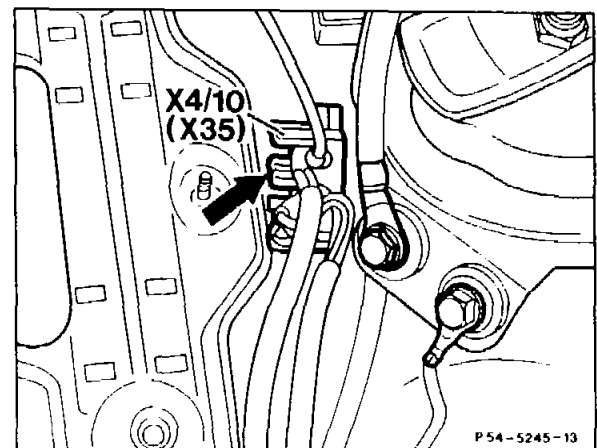
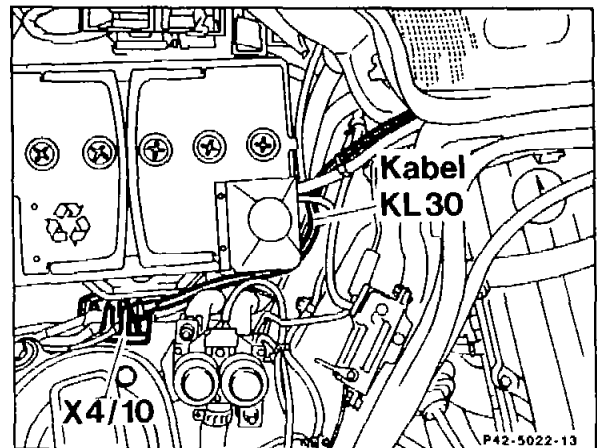
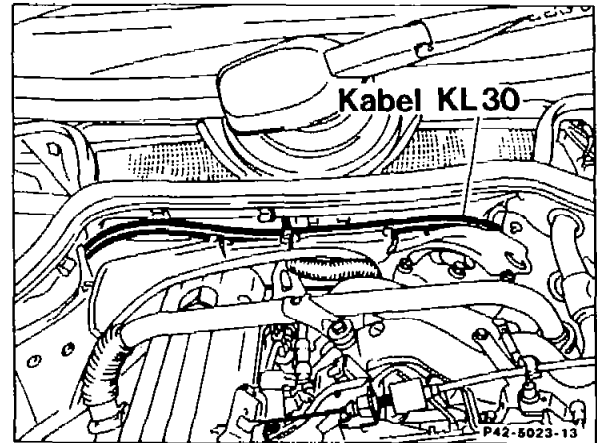


Do not assign cable elsewhere.

4. Route new cable (6 mm²) from preheating relay terminal 30 to cable connection X4/10 (battery).



5. Route as follows:
From the preheating relay through the bulkhead (max. distance to ABS harness), inside along the bulkhead on to the starter cable up to the cable connection X4/10 (battery) and there connect to terminal 30.

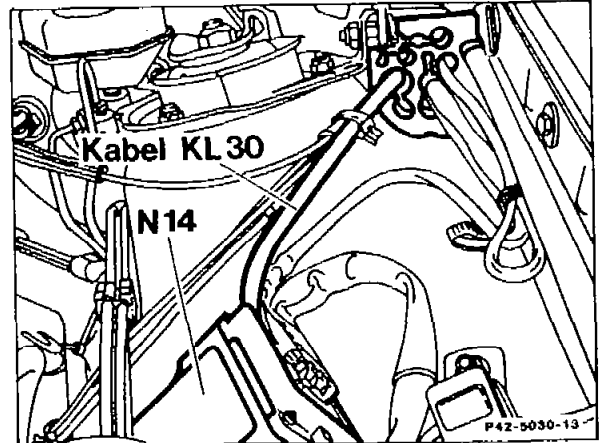


Replacement parts

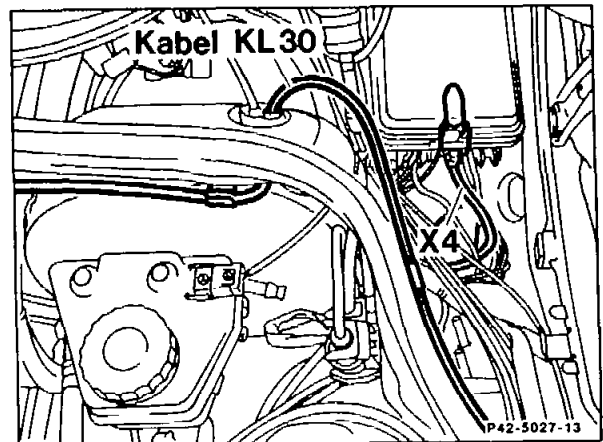
Quantity	Designation	Part no.
1	6 mm ² red cable, length 2.2 m	N072551006870
2	Connector lug, dia. 6 mm	001 546 05 40
2	Clips	005 988 44 78
1	Sleeving, dia. 8 mm, length 2.2 m	006 997 6882

A. Model 201

1. Disconnect cable terminal 30 (red 4 mm²) on preheating relay N14 and cut off connector lug.



2. Disconnect cable terminal 30 for preheating relay at cable connector X4 on fuse box and relay box, cut off connector lug.



Note

By means of resistance measurement ensure that the correct cable has been disconnected.

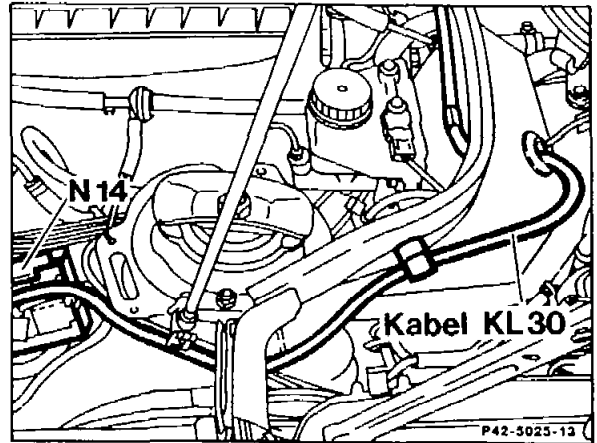
3. Insulate both ends of the cable and tape back on to cable harness.



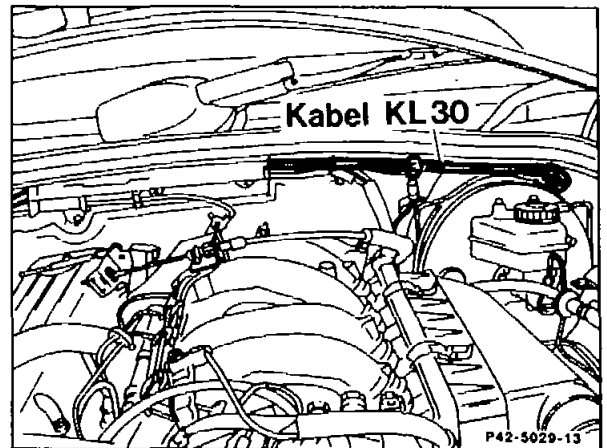
Do not assign cable elsewhere.

4. Route new cable (6 mm²) from preheating relay terminal 30 to cable connection X4/10 (battery).

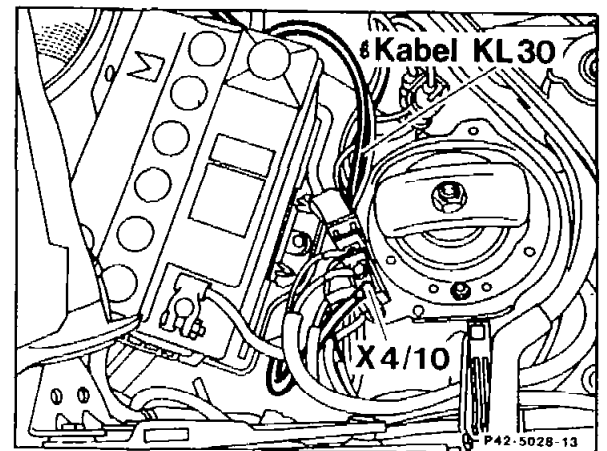
5. Route as follows:
From the preheating relay through the left-hand bulkhead breakthrough (max. distance to ABS harness), inside on the bulkhead up to the breakthrough at the level of the brake booster.



6. Also connect through the outer bulkhead breakthrough past the bulkhead on to the starter cable harness up to the cable connection X4/10 on the front right spring dome.



7. Connect to the cable connection X4/10 term. 30.



Replacement parts

Quantity	Designation	Part no.
1	6 mm ² red cable, length 2.2 m	N072551006870
2	Connector lug, dia. 6 mm	001 546 05 40
3	Clips	005 988 44 78
1	Sleeving, dia. 8 mm, length 2.2 m	006 997 6882

Complaint:

Brake pedal pulsates when first driving off after engine is started

Note

The return pump starts up briefly.

The self-test cycle (BITE) runs which is detectable by brake pedal pulsations for a short time (caused by the system).

Complaint:

Noisy return pump during the course of ABS regulation

Cause

1. Brake lines make contact with body.
2. Hydraulic unit makes contact with body.

Remedy

1. Modify position of brake lines.
 2. Check rubber mount of hydraulic unit and realign if required.
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Complaint:

ABS malfunction indicator lamp comes on during vehicle operation and remains on until ignition is switched off.

Models 124, 201

Cause

One of the causes of this complaint is the absence of or an incorrect speed sensor signal.

In the event of this complaint, the adjacent list of vehicles are to be checked with particular care in respect of speed sensor cable fracture (front) in the area of the moulded mounting (PUR grommet).

Model	Vehicle ident. end no.
124	B091000-B384627 F125313-F165294
126	A508272-A581591
201	A537251-A598199 F672571-F795796

Remedy

Perform test steps 4 and 5 using ABS adapter, whilst subjecting the cable to tensile and torsional loads. If necessary, replace wheel speed sensor.

Complaint:

ABS malfunction indicator lamp comes on (fault code 2 + 3).

Model 140

Cause

X62 and X62/7 plug connection not engaged.

Remedy

Check plug connections and engage fully.

Note

Correct assembly is ensured as of vehicle ident.
end no. 013 050.

Complaint:

ABS malfunction indicator lamp remains on intermittently after engine is started. The lamps generally go out after repeated engine starts

Model 124 (except model 124.034) as of 1.10.93 up to 31.5.94

Cause

The test cycle does not run correctly when engine is started

Remedy

Replace ABS control module on a trial basis.

Complaint:

ABS malfunction indicator lamp does not go out after engine is started or comes on and goes out at random while driving

Model 124 with engine 104.942/992, 111.960 up to 10.11.92

Cause

Loose contact in overvoltage protection relay in the area of the withdrawable part of the 15 A fuse.

Remedy

By moving the 15 A fuse to and fro, try to eliminate or reproduce the fault when the engine is running. If this is the case: Replace the overvoltage relay.
