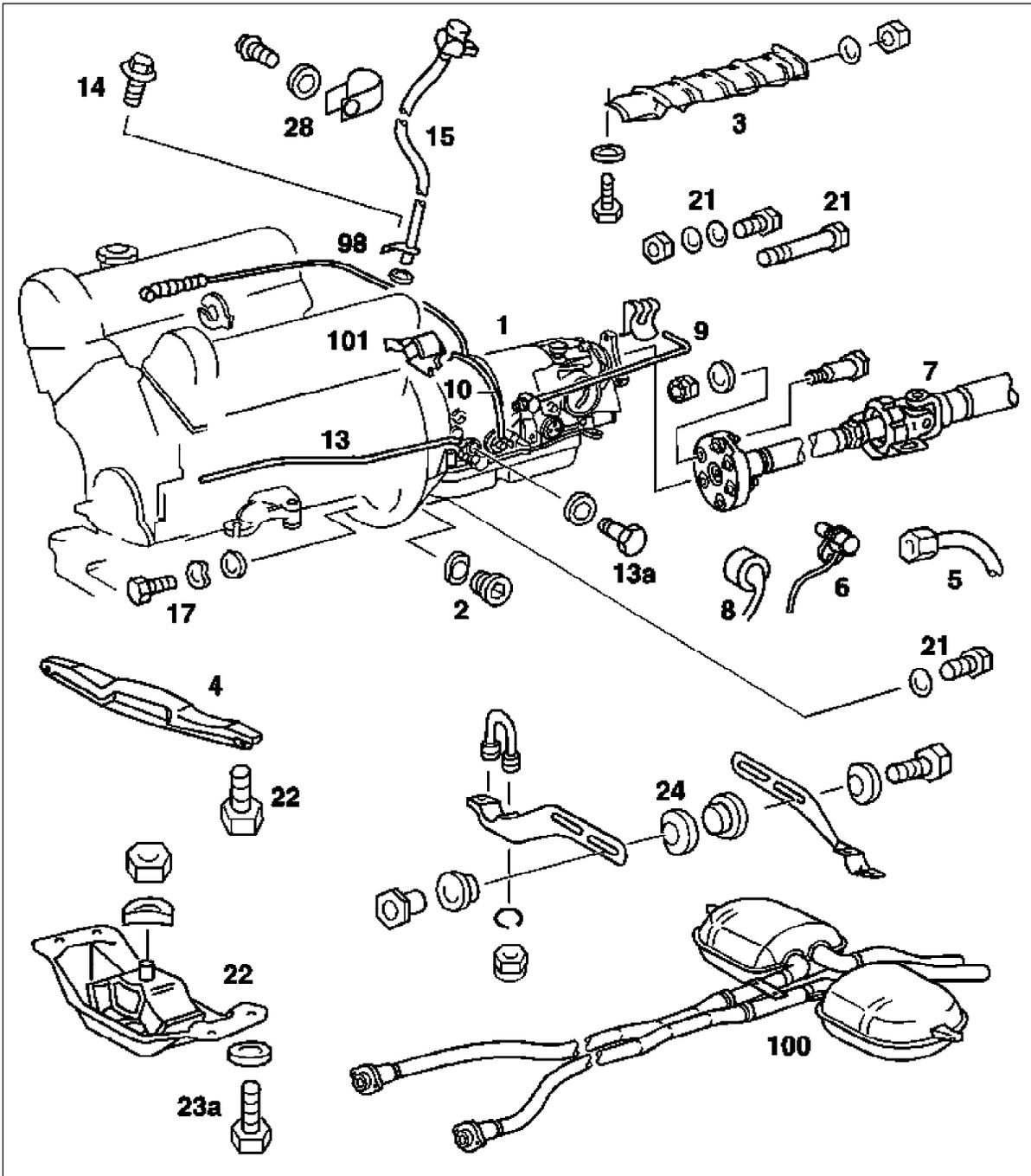


Operation number of the operation texts and work units or standard texts and flat rates:
27-2010

A Vehicles without 4MATIC

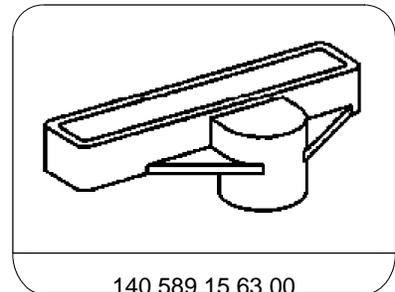
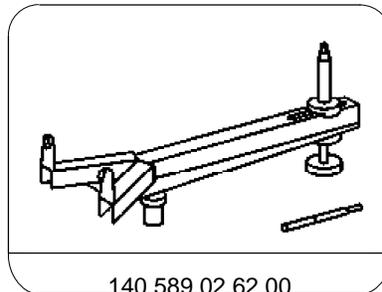
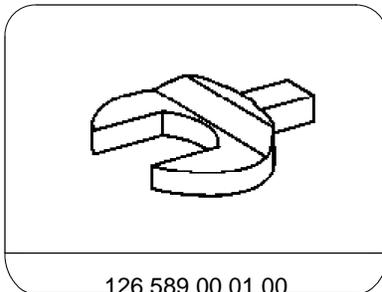
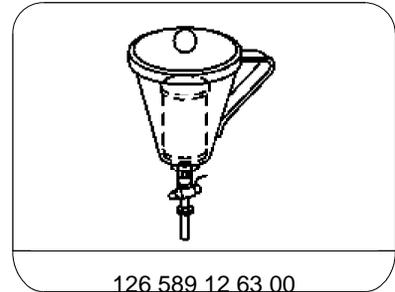
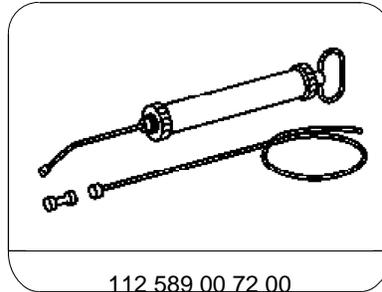
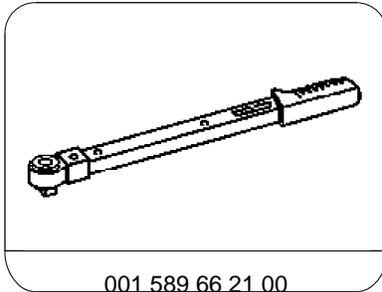
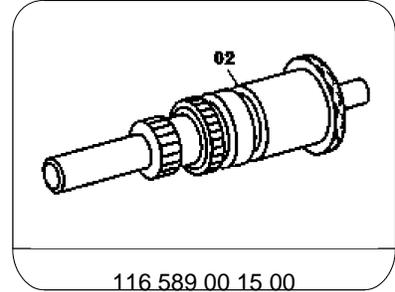
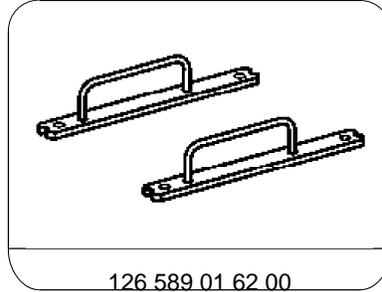
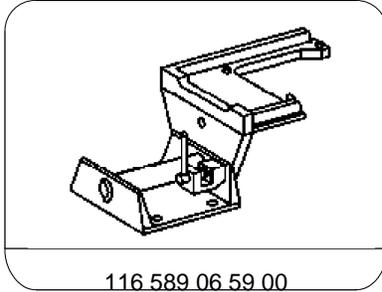


Negative cable on battery _____	Disconnect, connect.
Bracket (28) _____	Unscrew, screw on to cylinder head.
Control pressure cable (98) _____	Push off ball socket, if necessary detach locking device (20). Remove, hook in cable (item 3). After repair adjust control pressure cable.
Transverse yoke center assembly (4) _____	Unscrew, screw on. Replace self-locking hexagon bolts. Tightening torque 45 Nm (item 4).
Connecting member (5) _____	Remove, install (item 5).
Oil _____	Drain from transmission and torque converter. Fill with oil after repairs, check and correct oil level (see Maintenance Manual, op. no. 2710). Oil pan drain plug 14 Nm, converter 16 Nm.
Hexagon bolts for torque converter driver plate _____	Unscrew, screw in, tightening torque 42 Nm.
	M
Support engine and _____	Observe direction of rotation of engine Remove, install exhaust system (100) (item 9).
Rear engine mount with cross member (22) _____	Remove, install (10) (item 10).
Cable for kickdown solenoid valve (6); if necessary, cable for shift point retard, and pulse generator or speedometer shaft _____	Detach, attach (item 11).
Side exhaust support (24) _____	Remove, install complete.
Exhaust shielding plate (3) _____	Remove, install.
Propeller shaft clamping nut (7) _____	Slacken, tighten, tightening torque 30-40 Nm.
Propeller disc (25) _____	Unscrew, screw on at transmission.
Plug for starter lockout switch (8) _____	Press off, press on; turn locking device upwards (item 15).
Shift rod (9) _____	Detach, attach at range selector lever.
Vacuum line (10) _____	Disconnect, connect (item 17).
Oil cooler feed and return lines (12, 13) _____	Disconnect, connect (item 18).
Oil filler pipe (15) _____	Push out, push in (item 19).

Transmission (1) _____	Unscrew, screw in all hexagon bolts, as well as 2 nuts in vehicles with 8-cylinders engine. Tightening torque M10=55 Nm, M12=65 Nm. Raise transmission using tool 140 589 02 62 00. Push transmission with torque converter out/in horizontally (item 22).
Torque converter _____	Remove, install (item 23).
Installed height of torque converter in transmission housing _____	Check, (item 24).
Transmission housing _____	Check, (item 25).

Torque converter _____ Flush out with ATF oil (item 27).
Oil cooler with lines _____ Flush out with ATF oil (item 29).
Correct transmission oil level _____ See Maintenance Manual item 2710.

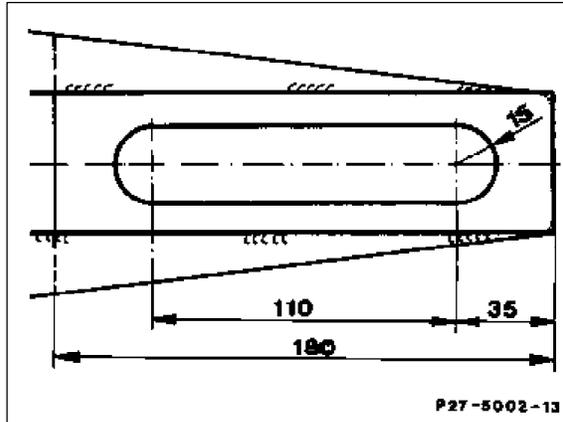
Special tools



The removal/installation tool 116 589 06 62 00 can also be used for model 140 if the adjustment range for the rear mount is increased.

The existing oblong hole must be lengthened from 95 mm to 110 mm and the milled contact surfaces at top and bottom must be enlarged from 165 mm to 180 mm.

After this modification, the removal/installation tool should be stamped with the new part no. 140 589 02 62 00.



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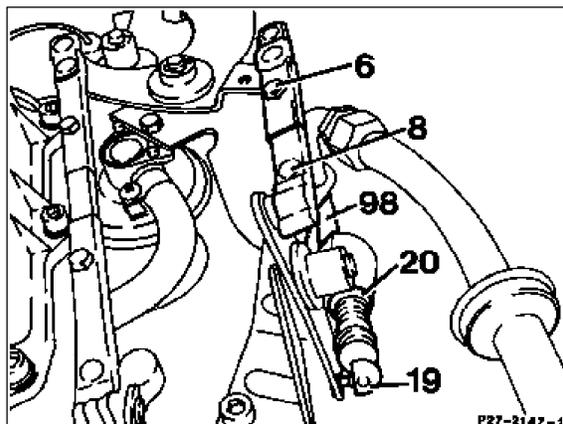
Types of oil

Transmission fluid (ATF)		See Specifications for Service Products
Approved oils		
Filling quantities in liters		
Models with	First filling	Oil change
6-cylinder engines	7.3	6.2
8-cylinder engines	8.6	7.7

Removing and installing

- 1 Disconnect negative cable from battery.
- 2 Disconnect longitudinal engine throttle control shaft.
- 3 Unhook control pressure cable (98).

In vehicles with engines 116 and 117, pull out circlip (20) and control cable.



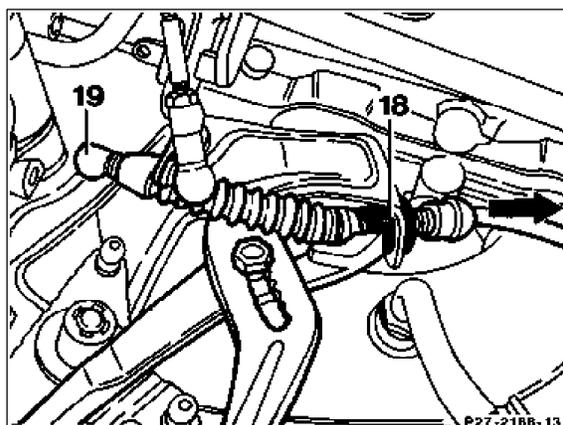
P27-2147-13

Vehicles with engines 103 and 104

Compress both lugs on the plastic clip (18) with pliers and pull out the cable in the direction of the arrow.

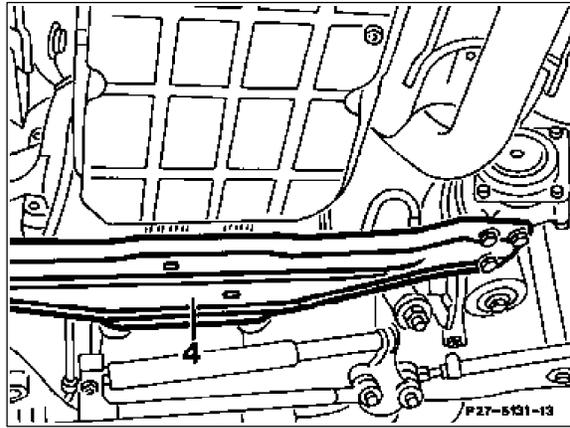
Installation note

Adjust control pressure cable (27-110).



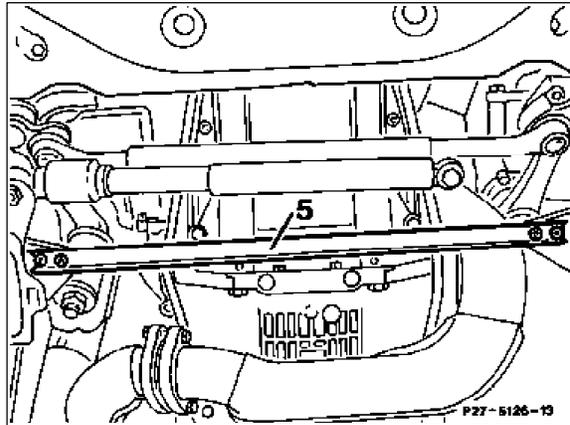
P27-2168-13

4 Unscrew transverse yoke center assembly (4).



P27-5131-13

5 Remove/install connecting member (5), model 124.036.

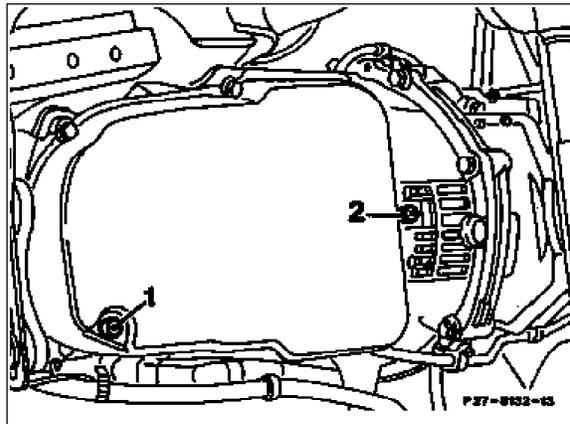


P27-5126-13

6 Unscrew drain plugs (1 and 2) and drain oil.

Installation note

Tightening torque, oil pan 14 Nm,
converter 16 Nm.

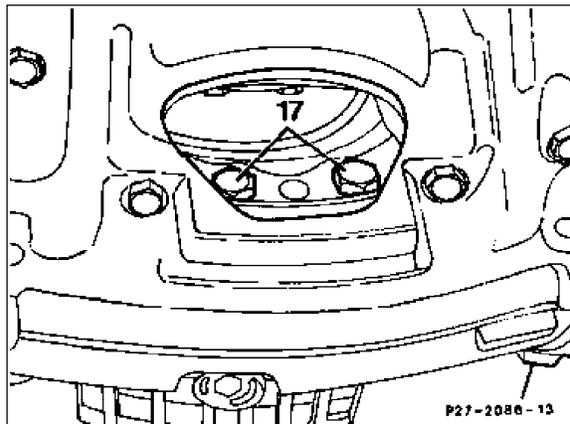


P27-5132-13

7 Unscrew bolts (17) for driver plate of torque converter (total of 6 bolts).

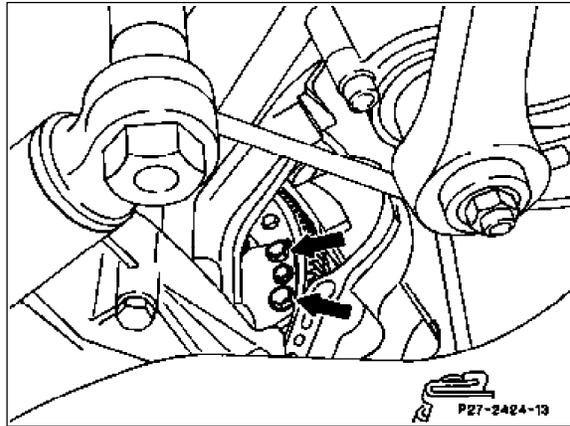
Installation note

Tightening torque 42 Nm.



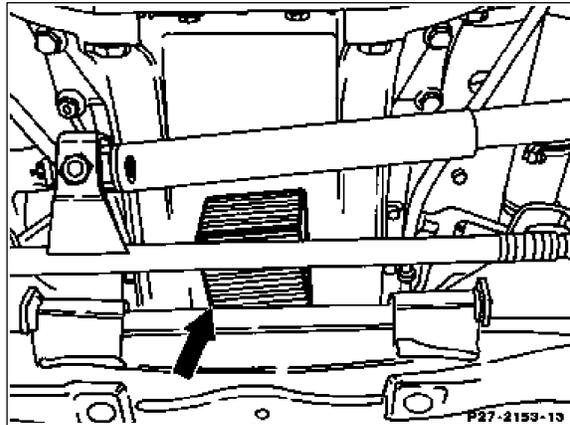
P27-2086-13

On engines 117 and 119



P27-2424-13

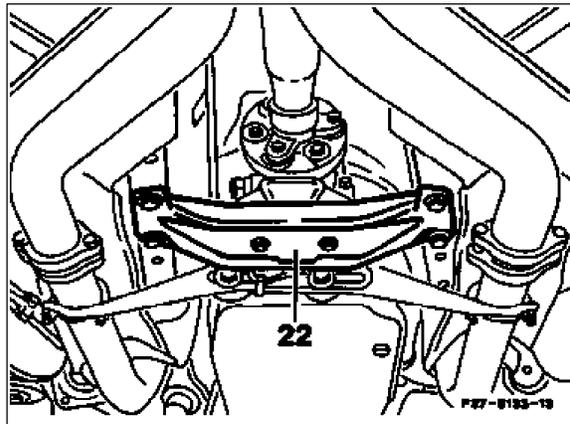
8 Insert a suitable wooden wedge (arrow) between engine oil pan and transverse yoke.



P27-2153-13

9 Remove entire exhaust system assembly.

10 Remove cross member (22) with rear engine mount.

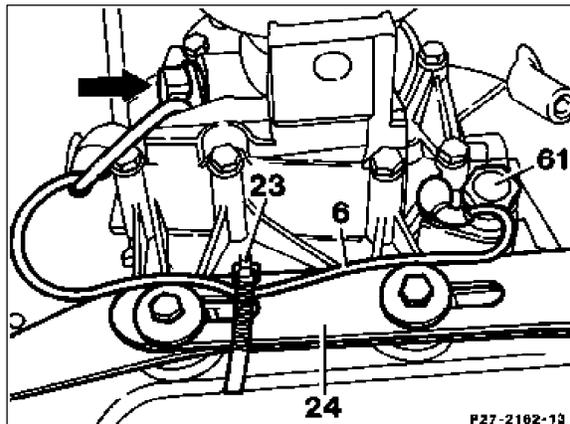


P27-5133-13

11 Release cable strap (23) and unscrew cable (6) on kickdown solenoid valve (61). Unscrew retaining bolts for pulse generator (arrow) and pull out pulse generator.

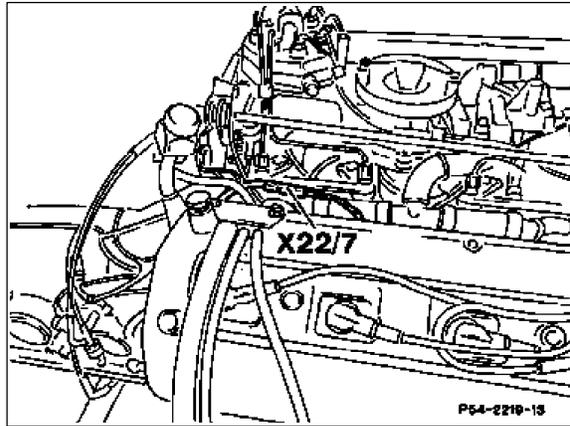
Note

On vehicles with mechanical speedometer, disconnect shaft. On vehicles with catalytic converter heating, disconnect cable for shift point retard.



P27-2162-13

12 In vehicles with 8-cylinder engines, disconnect plug for upshift delay cable (X22/7).

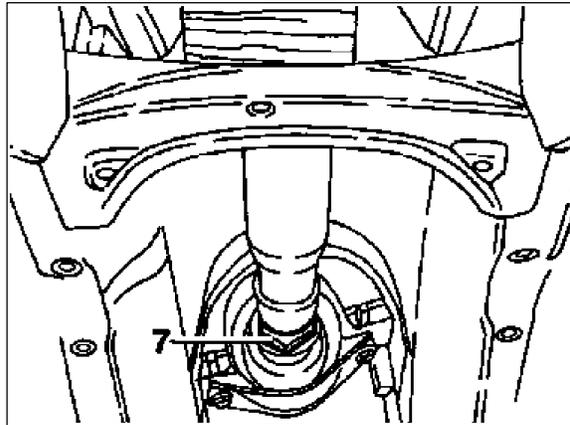


P54-2219-13

13 Slacken propeller shaft clamping nut (7).

Installation note

Tightening torque 30-40 Nm.



P27-2166-13

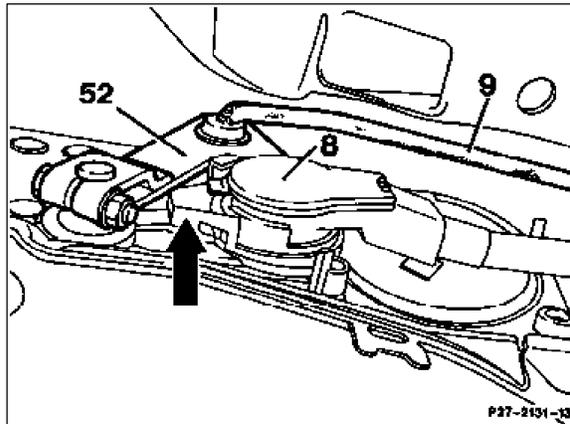
14 Unscrew propeller disc at transmission.

15 Remove plug for starter lockout switch (8).

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The plug is secured by a locking device. The locking device must be turned upwards (arrow) before the plug can be disconnected.

16 Unhook shift rod from range selector lever.



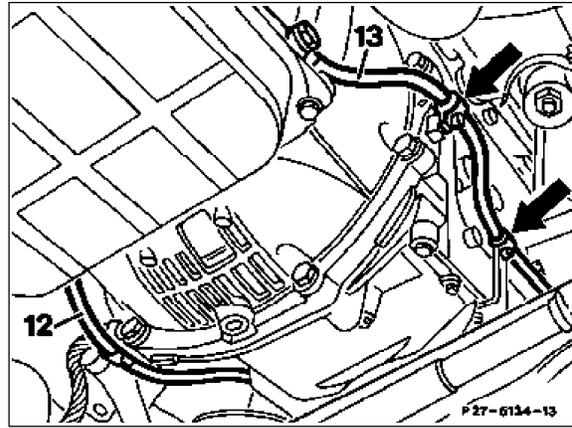
P27-2131-13

17 Disconnect vacuum lines for vacuum box (white), mode program (red) and shift point retard (black/green).

18 Unscrew oil cooler feed and return lines (12 and 13).

Installation note

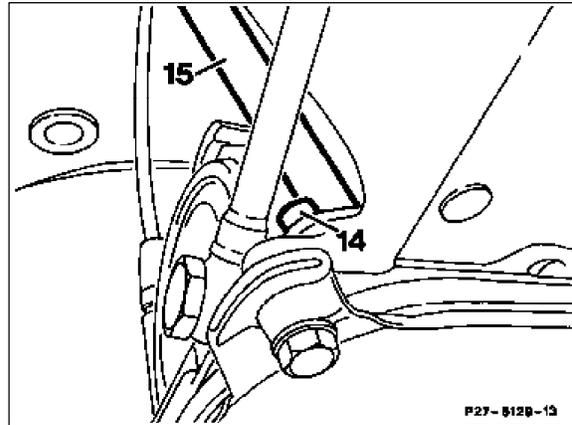
Replace sealing rings.



P27-6134-13

P27-5134-13

19 Unscrew bolt (14) and bracket on cylinder head for oil filler pipe (15) and push pipe upwards.



P27-6128-13

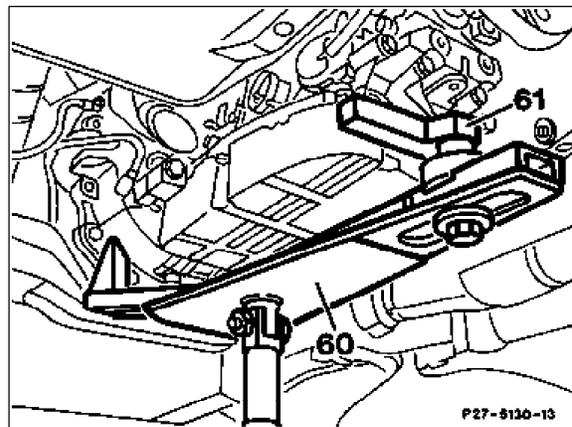
P27-5129-13

20 Unscrew all hexagon bolts holding the transmission, apart from the two bolts at the side.

Note

In 8-cylinder engines, two hexagon bolts (27) are replaced by stay pins with hexagon nuts.

21 Raise transmission using attachment 140 589 02 62 00 (60) for vehicle lift.



P27-6130-13

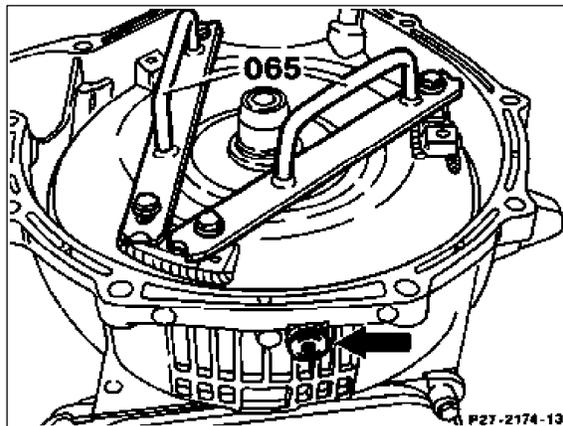
P27-5130-13

22 Unscrew side bolts, push transmission towards the rear and lower carefully.

Installation note

Observe correct seating of plain dowel pins.
Raise transmission and push forwards at the height of the engine until the converter housing rests snugly.

23 Rotate plastic retaining pin (arrow) for torque converter in a counter-clockwise direction through 1/4 revolution using an 8 mm Allen wrench and remove. Bolt handles (065) to torque converter and lift out torque converter.



P27-2174-13

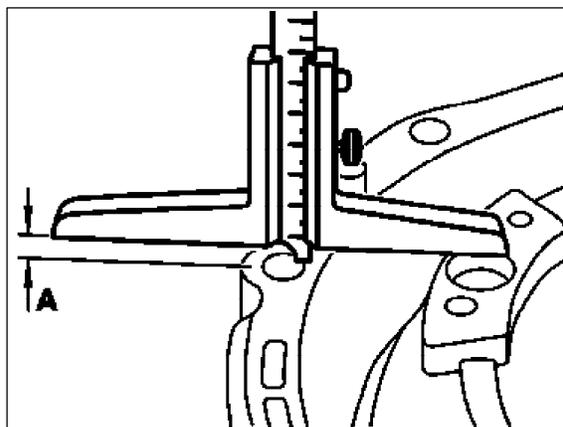
24 Checking installed height of torque converter in transmission housing

Using a depth gauge, measure the distance "A" between the transmission housing and converter fixing.

Engine	Distance
104	9,6 mm
119	29,8 mm
120	21,6 mm
All diesel engines	8,7 mm

M

If the torque converter is not correctly seated in the transmission housing, this causes irreparable damage to the torque converter and the primary pump.



P27.20-0213-13

25 Checking torque converter

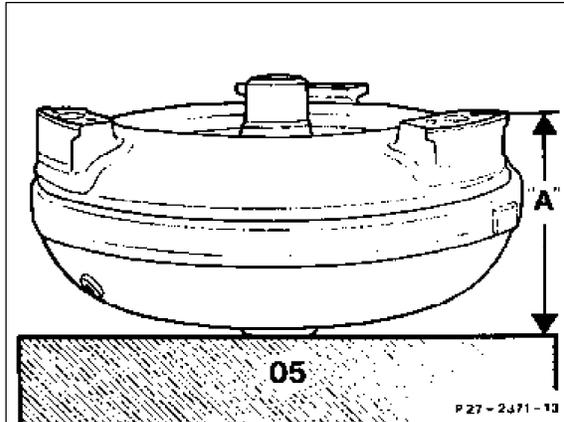
Excessive engine speeds which cause overspeed damage to the engine, can also result in permanent widening of the torque converter. This then fouls the primary pump and damages the radial seal ring.

The overall height of the torque converter must therefore be measured each time the engine is damaged due to overspeed.

26 Place the torque converter on a measuring plate with the primary pump flange downwards and measure dimension "A". If dimension "A" is less than 121.5 mm, the torque converter can be re-used; if the measured value is greater, the torque converter should be replaced.

Note

If it is necessary to replace the torque converter, the primary pump radial seal ring is also to be replaced.



P27-2471-13

P27-2371-13

Torque converter dia.	Overall height "A" when new	Overall height "A" Maximum dim. in the event of repair
270 mm	120.7 mm	121.5 mm
290 mm	121.9 mm	122.7 mm

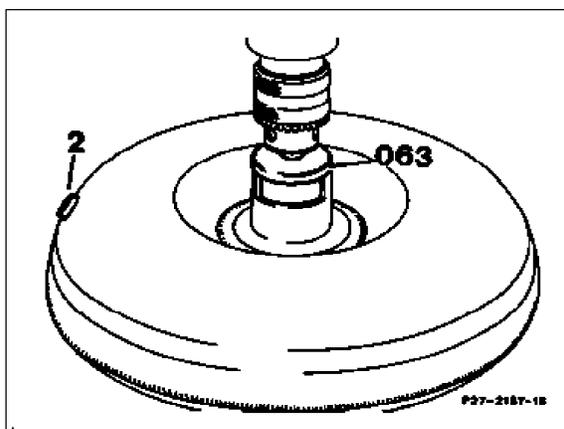
27 Flushing out torque converter



If the transmission oil is **burnt**, interspersed with **lining abrasion** and/or **metal swarf**, the **torque converter**, **oil cooler lines** and **oil cooler** must be **flushed out**.

28 Fill torque converter half full with ATF oil. Insert flushing mandrel (63) and drive at low speed for approx. 2 minutes using a hand drill. Then drain ATF oil through a clean cloth via the drain plug and allow the oil to drip through.

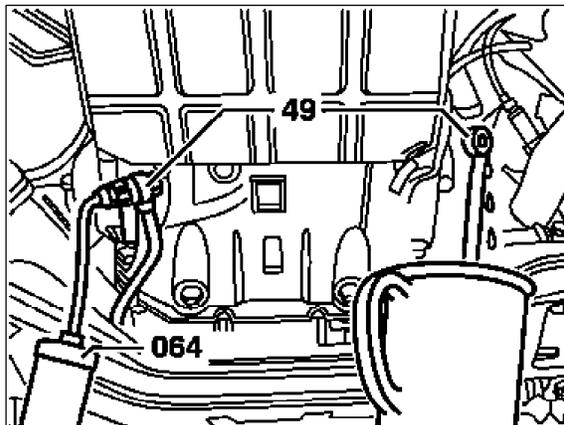
If after this there is metal swarf in the cloth, the torque converter must be replaced.



P27-2187-1B

P27-2187-13

29 Screw oil cooler with oil cooler lines (49) onto the injector (064) and flush out with **ATF oil**, ensuring that the transmission oil **flows freely**. Then blow out oil cooler with oil cooler lines with compressed air.



P27.20-0217-13