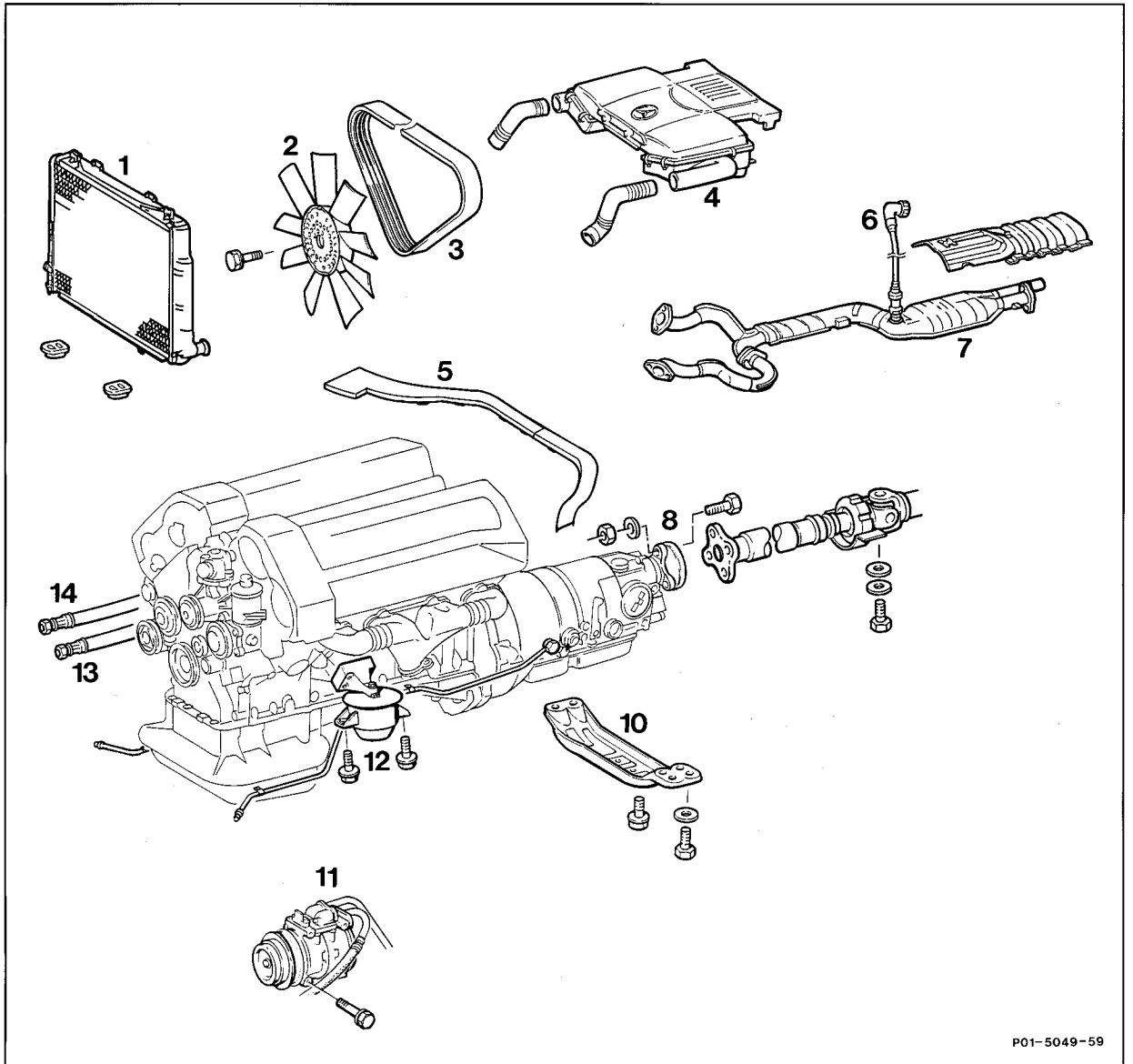


# 01-0300 Removing and installing engine

Preceding work:  
 Air cleaner (4) removed (09-0015).  
 Bottom engine compartment panel removed  
 (Maintenance Manual 6190).  
 Radiator removed (20-4200).

Operation no. of operation texts and work units or standard texts  
 and flat rates  
 01-2400, 2800

## A. Models 124, 129, 140



P01-5049-59

Engine 119, model 140

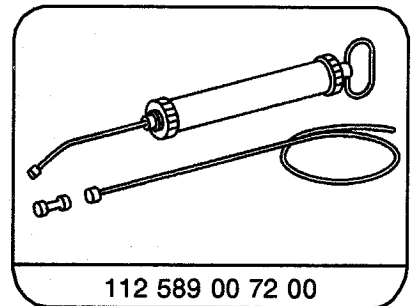
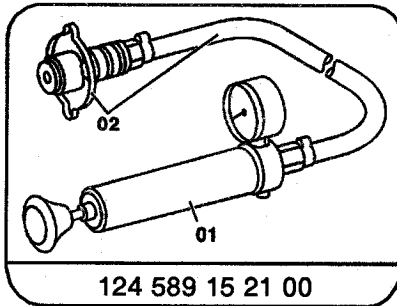
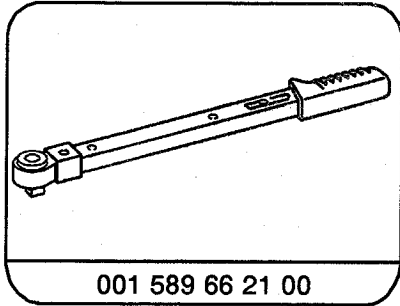
Ground cable at battery .....	disconnect, connect.
Coolant at crankcase .....	drain.

If AC fitted:	
guard plate at condenser . . . . .	attach, remove.
Model 140: left Bowden cable (engine compartment lock) . . . . .	detach, attach.
Heating water lines at rear of intake manifold and at connection pipe to rear of crankcase . . . . .	detach, attach.
Viscous fan clutch with fan (2) . . . . .	remove, install (20–3120).
If AC fitted:	
poly V-belt (3) . . . . .	remove, install (13–3420).
Fuel lines . . . . .	take off, seal with special tool 000 589 40 37 00, fit on. Open fuel filler cap briefly beforehand.
Electrical connections (engine wiring harness) .	detach, attach.
Vacuum lines . . . . .	detach, attach.
Bowden cable (accelerator control) . . . . .	remove, install (30–0025).
Model 124: accelerator control linkage at rear .	remove, install.
Vacuum line of brake servo unit . . . . .	unbolt, bolt on.
Power steering pump, oil in reservoir . . . . .	extract, special tool 112 589 00 72 00. Adjust oil to correct level (46–0715).
Oil lines of power steering pump . . . . .	detach, seal, attach.
If air injection fitted: air pump plug connection .	detach, plug in.
Model 124: front bumper . . . . .	remove, install (88–2000).
Model 124: right headlamp . . . . .	remove, install (82–4730).
Model 124: air duct, left engine mount cooling .	remove, install.
Model 140: oil cooler line bracket . . . . .	unbolt, bolt on.
Oil cooler lines at air-to-oil cooler (13) and (14)	unbolt, seal, bolt on (18–1300).
Model 124: left oil cooler line (13) at oil sump .	unbolt, bolt on.
If level control fitted: high pressure hose . . . . .	unbolt, bolt on.
Model 124: left oil line, automatic transmission	unbolt, bolt on.
Bolt for piping behind AC compressor . . . . .	unbolt, bolt on (25 Nm).
AC compressor (11) with piping connected . . .	detach, place to the side, attach (83–5300).
Plug connection, oxygen sensor (6) (lambda sensor) . . . . .	disconnect, connect.
Exhaust system (7) complete . . . . .	remove, install (49–0045, 49–0170).
Shield over starter . . . . .	unbolt, bolt on.
Model 129: electrical connection, starter . . . . .	detach, attach.
Wiring harness, starter and alternator from engine and transmission . . . . .	unbolt, bolt on.
Model 124: strut below oil sump . . . . .	unbolt, bolt on.

Propeller shaft of flexible coupling (8) . . . . .	detach, attach. Replace self-locking nuts (41-0050).
	<b>Note</b>
	Flexible coupling remains on transmission.
Clamping nut and intermediate bearing attachment of propeller shaft . . . . .	slacken, tighten (41-0050).
Ground cable at transmission . . . . .	unbolt, bolt on.
Rear engine carrier (10) without engine mount	remove, install (22-2120).
Bracket of exhaust at transmission . . . . .	unbolt, bolt on.
Shift rod at transmission . . . . .	detach, attach.
Electrical connections at transmission . . . . .	disconnect, connect.
Front engine mounts (12) on left and right from below . . . . .	unbolt, bolt on (22-2110).
Model 124: sealing strip of component compartment panel . . . . .	pull off, fit on.
Engine hoist at lifting eyes . . . . .	attach, detach.
Engine with engine hoist . . . . .	move into angled position and raise.
Model 129: wiring harness of alternator . . . . .	unbolt, bolt on.
Engine . . . . .	remove, install.
Front and rear engine mounts . . . . .	examine.
Coolant, oil and fuel hoses . . . . .	examine.
Automatic transmission, Bowden cable for control pressure . . . . .	adjust (27-110).
Idle speed . . . . .	check, adjust.
Oil drain plugs . . . . .	check tightening torques.
Oil level in engine and transmission . . . . .	adjust to correct level.
Coolant . . . . .	pour in, check anti-corrosion/anti-freeze concentration and adjust to correct level (20-0100).
Cooling system . . . . .	check for leaks, special tool 124 589 15 21 00 (20-0170).
Engine . . . . .	run.
Engine leaks . . . . .	check.

**Note**  
Faults stored as a result of disconnecting cables or simulation during removal and installation or test operations, should be processed and erased in the fault memories after completing the work. Re-code or normalize radio and power windows, as appropriate.  
Perform final control actuations.  
Diagnosis Manual Volume 2, Index 0:  
Connecting and using test equipment.

## Special tools



## Commercially available tools

Engine hoist No. 3188  
self-locking

e.g. Bäcker GmbH  
und CO KG  
D-42895 Remscheid

## Shop-made tool

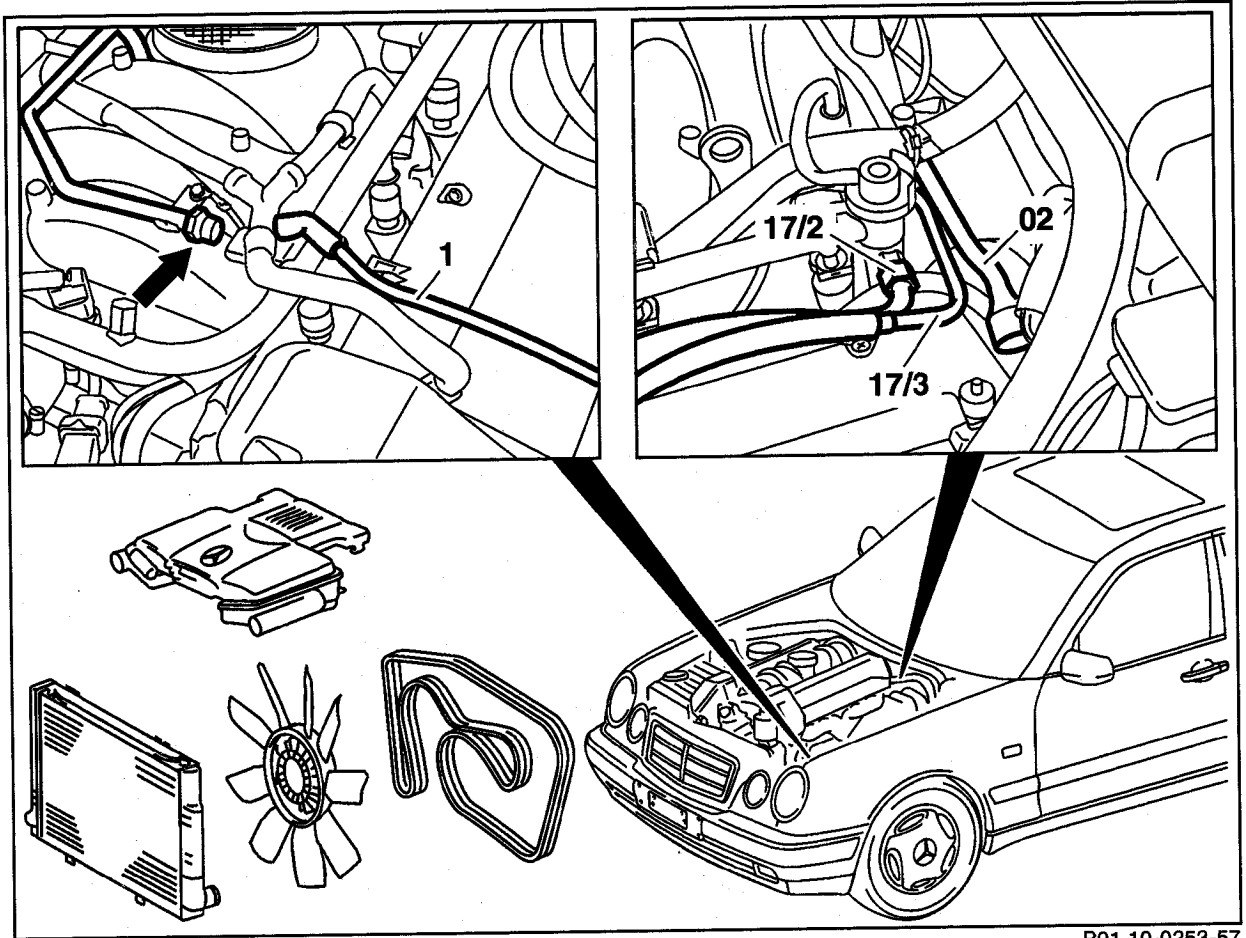
Guard plate for radiator/condenser

Dimensions approx. 400 × 680 × 1

## B. Model 210

Preceding work:  
 Bottom engine compartment panel removed  
 (Maintenance Manual 6190)  
 Viscous fan removed (20-3120)  
 Radiator removed (20-4200)

Operation no. of operation texts and work units or standard texts  
 and flat rates  
 01-2400

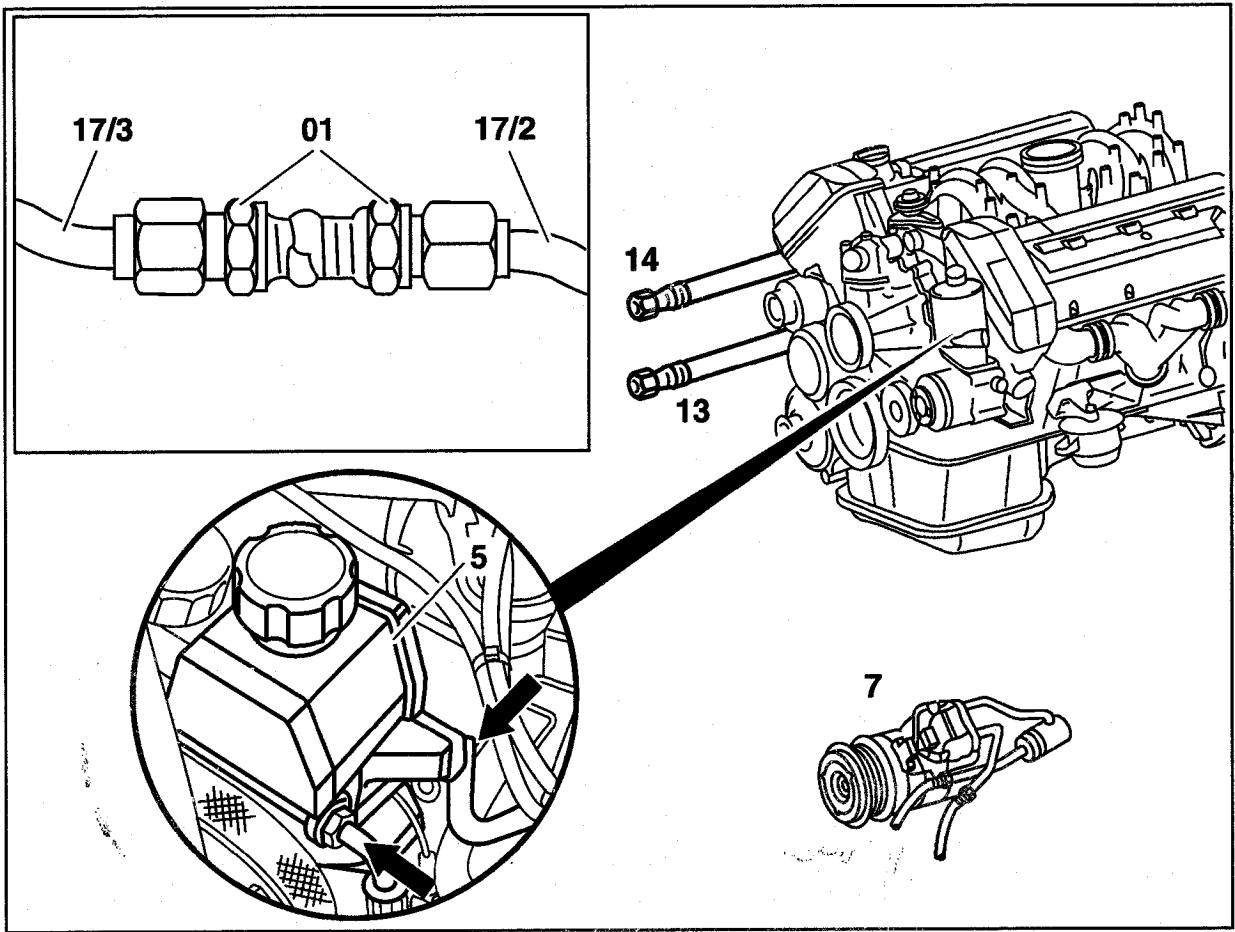


P01.10-0253-57

Cover over intake manifold .....	remove, install.
If A/C fitted: guard plate .....	attach at condenser, take off.
If A/C fitted: poly V-belt .....	remove, install (13-1200).
Engine wiring harness .....	disconnect, connect (01-0310).
Vacuum pipe (arrow) to brake servo unit at intake manifold .....	unbolt, bolt on.
Purge pipe (1) .....	disconnect, fit on.
Fuel filler cap .....	open to release pressure in fuel tank.
Fuel pipes (17/2) and (17/3) at fuel distributor pipe .....	disconnect, connect.

### Note

Use box wrench bit (02) 000 589 68 03 00 to  
 disconnect fuel pipe (17/3) and connect.



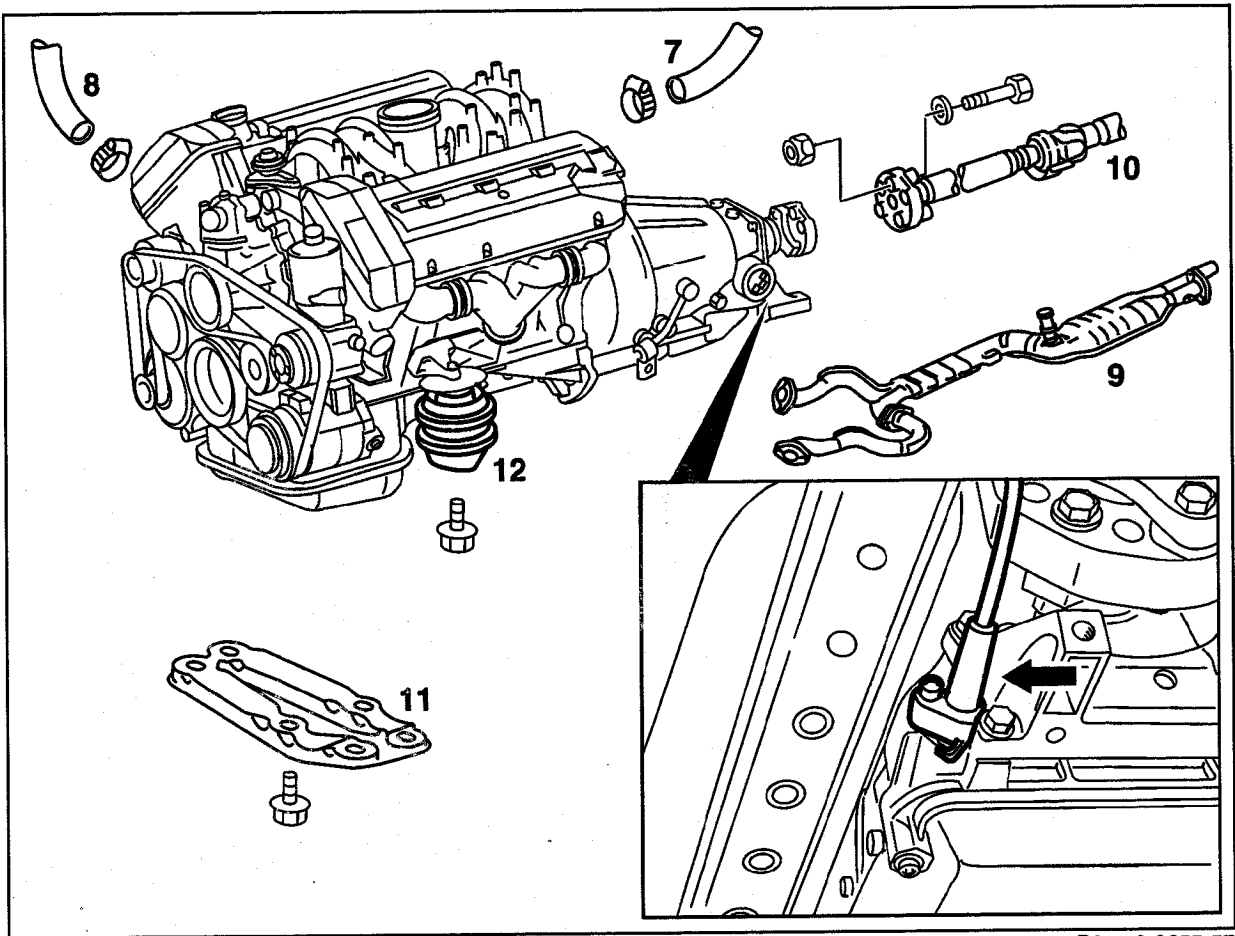
P01.10-0254-57

- Fuel pipes (17/2 and 17/3) ..... seal with fitting (01) (shop-made).
- Power steering pump: ..... extract oil from reservoir with priming pump  
112 589 00 72 00 for sampling oil.

**Note**

Fill, bleed power steering pump (AR46.30-0010A).

- Suction and delivery oil pipes (arrows) at power steering pump (5) ..... disconnect, connect.
- Vacuum pipe at rear of intake manifold ..... pull off, fit on.
- Electric wiring of O2 sensors at bracket at rear of transmission bell housing ..... detach, attach.
- If air-oil cooling fitted: oil cooler pipes (13, 14) at oil cooler. .... unbolt, bolt on.
- If A/C fitted: A/C compressor (7) with connected piping ..... unbolt, bolt on, attach to side of engine compartment.



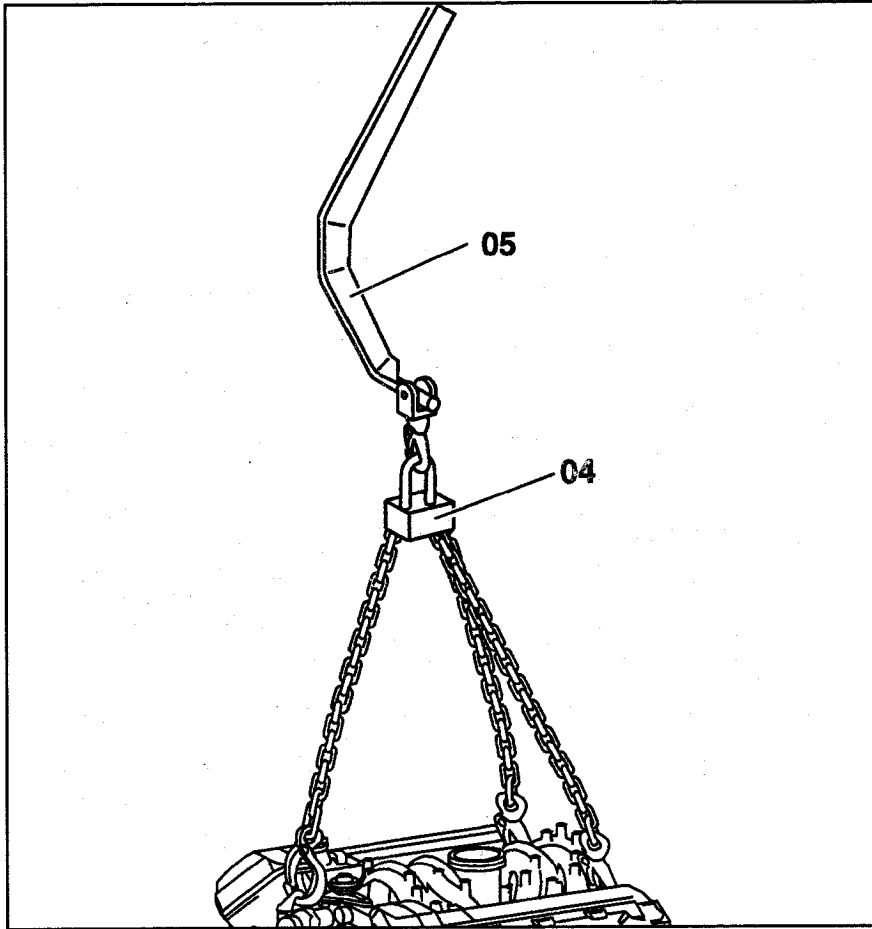
P01.10-0255-57

Coolant at crankcase .....	drain (20-0100).
Coolant hoses (7) and (8) .....	disconnect, connect.
Exhaust system (9) at exhaust manifold and transmission intermediate mount .....	unbolt, bolt on.
Front propeller shaft (10) at transmission .....	unbolt, bolt on (AR41.10-0050B).
Propeller shaft (10) .....	push to the rear.
Rear engine support (11) .....	remove, install (22-2120).
Transmission cable (arrow) for park lock .....	unclip at transmission, clip into place (AR27.60-0500-05A).



The cable must only be disconnected when  
**selector lever in position "P"**.

Selector rod .....	detach, attach.
Front engine mount (12) at front suspension carrier .....	unbolt, bolt on (22-2110).



P01.10-0256-37

Engine hoist (04) .....	attach to the three lifting eyes of the engine with engine supporting bar (05), detach.
Engine with transmission .....	move into sloping position.
Engine .....	remove, install.
Front and rear engine mounts .....	inspect.
Oil drain plugs .....	check tightening torques.
Engine and transmission oil level .....	adjust to correct level.
Coolant .....	pour in, check anticorrosion/antifreeze agent and adjust to correct concentration (20-0100).
Leaktightness .....	check.



Fault memory .....

read, erase.

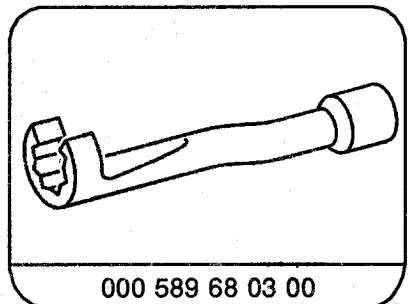
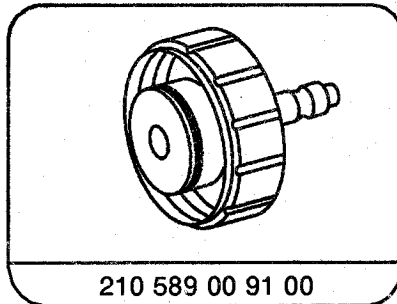
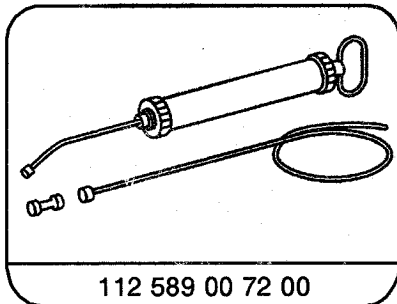
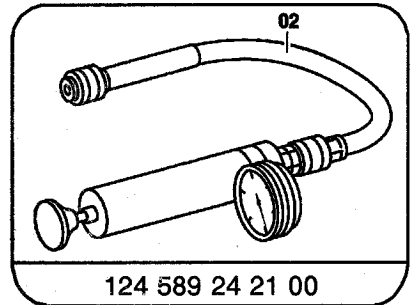
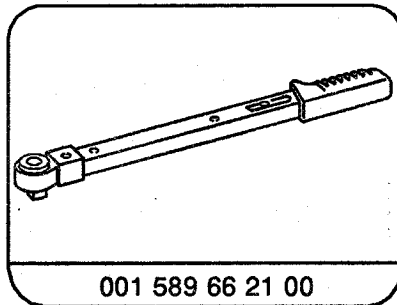
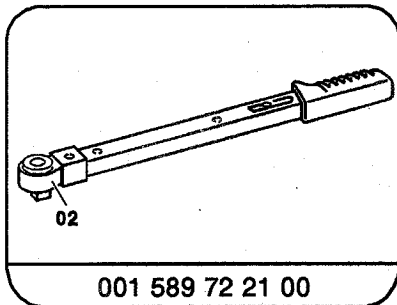
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Perform final control actuations.

Diagnosis Manual Volume 2, Index 0:

Connecting and using test equipment.

### Special tools



**Commercially available tools**

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Removal device equipment model 3188  
(lifting capacity 500 kg)

e.g. Bäcker GmbH  
und CO KG  
42895 Remscheid

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Engine supporting bar

e.g. Schairer  
Weidenstraße 5  
72459 Albstadt  
Order no. 0304.01.001

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**Shop-made tool**

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Guard plate for radiator/condenser

Dimensions approx. 400 × 680 × 1 mm

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