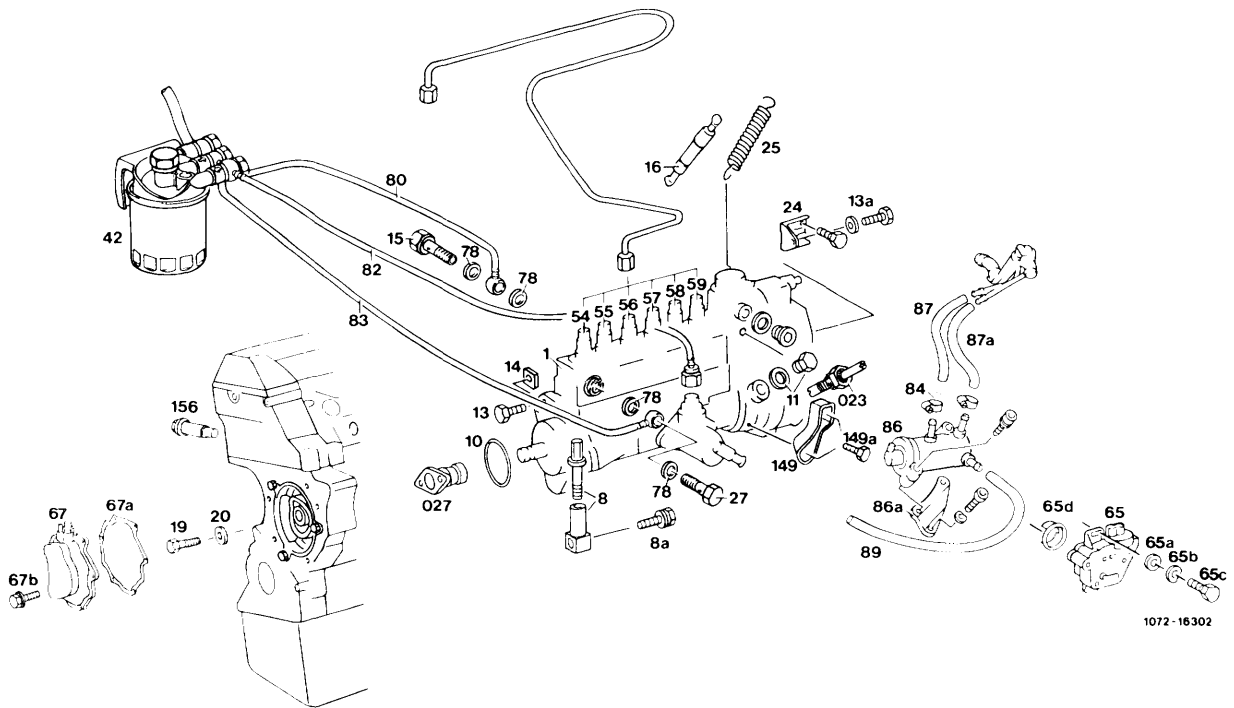


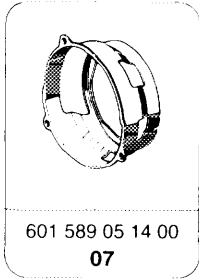
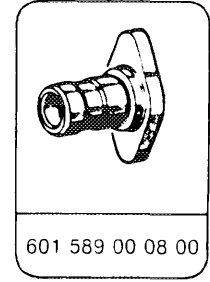
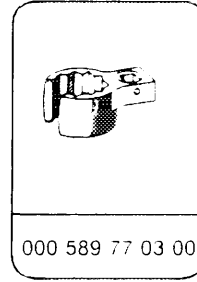
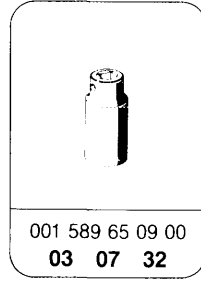
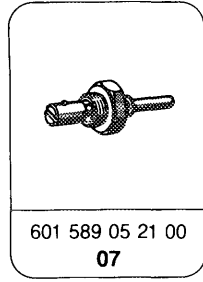
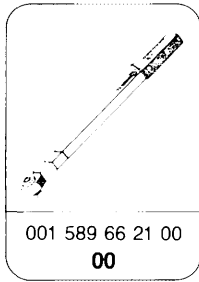
07.1-200 Removal, installation of injection pump



Noise capsule lower part	remove, mount (94-0050).
Belt tensioning device	remove, reinstall (13-340).
Fan shroud and fan	remove, reinstall (20-310-335).
Vacuum pump (67)	remove, reinstall (43-610). Gasket (67a), replace.
Adjusting element of cruise control	remove, reinstall (54-541).
Assembly cage	remove, reinstall Special tool 601 589 05 14 00 Note: Assembly cage deleted on all engines as of 09.89 (see 07.1-240).

Central mounting bolt (19)	remove, reinstall " left-hand thread " Tightening torque 40-50 Nm.
Turn crankshaft in direction of rotation	to -15° ATDC of 1st cylinder.
Chain tensioner (156)	remove, reinstall, tightening torque 80 Nm (05-310).
Control damper (16)	remove, reinstall (only manual transmission).
Injection lines (54-59)	on injection pump disconnect, connect, tightening torque 10-20 Nm., special tool 000 589 770 300
Fuel lines (80, 82, 83)	disconnect, connect.
Sealing rings (78)	replace.
Vacuum lines on stop unit	remove, fit.
Couplings on electromagnetic actuators	disconnect, connect.
Control linkage	disconnect, connect.
Vacuum control valve (65)	remove, reinstall, adjust (07.1-170).
Mounting bolts (13 and 13a)	remove, reinstall, tightening torque 20-25 Nm.
Combination screw (8a)	loosen.
Fuel thermostat (86)	remove, reinstall.
Injection pump	pull out to the rear while counterholding injection timing device.
O-ring (10)	replace, lubricate with oil for injection pump installation.
Check if engine	is positioned on -15° ATDC of 1st cylinder, correct if necessary. Caution! Turn engine only in direction of rotation.
Screw plug (11)	remove.
Injection pump	turn in removed condition with splined wrench (027) and lock with locking bolt (023).
Start of delivery	check (07.1-112), adjust if necessary (07.1-117).

Special tools



Note

Until the production breakpoints shown, a gasket with oil pocket must be installed when replacing the gasket (67a) of the vacuum pump.

As of the production breakpoint, a gasket without an oil pocket is installed.

Engine model design.	Transmission	As of engine end no.
602.911	manual	019187
	automatic	004738

Removal, installation

- 1 Remove assembly cage (arrow).
- 2 Loosen central mounting bolt (19), unbolt and hold crankshaft against rotation.

Caution!

LEFT-HAND THREAD

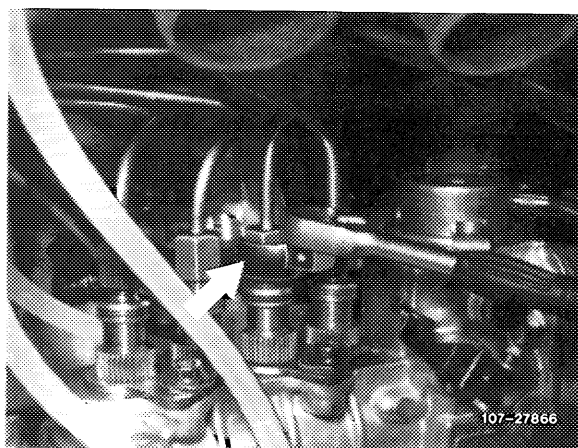
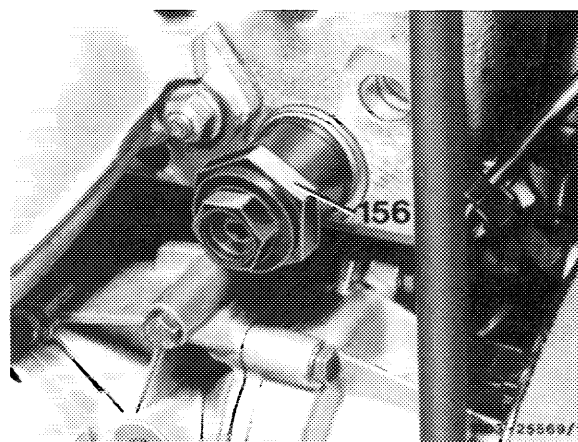
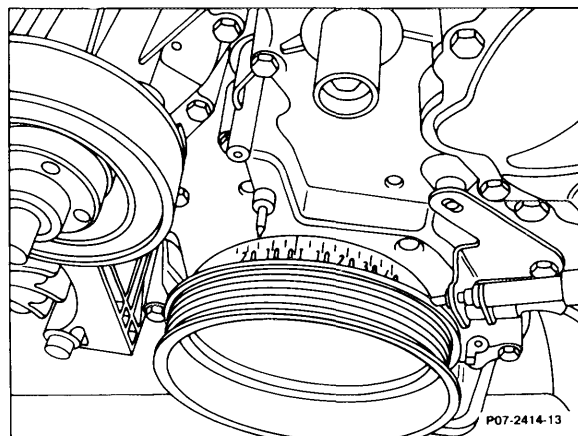
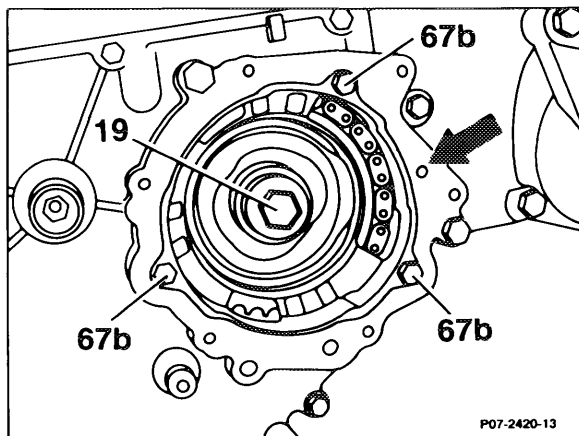
- 3 Turn crankshaft in direction of rotation to -15° ATDC of 1st cylinder.

- 4 Remove chain tensioner (156) (05-310).

Socket wrench insert
Special tool 001 589 65 09 00

- 5 Disconnect injection and fuel lines from injection pump.

Socket wrench insert (arrow)
Special tool 000 589 77 03 00
with 1/4" ratchet

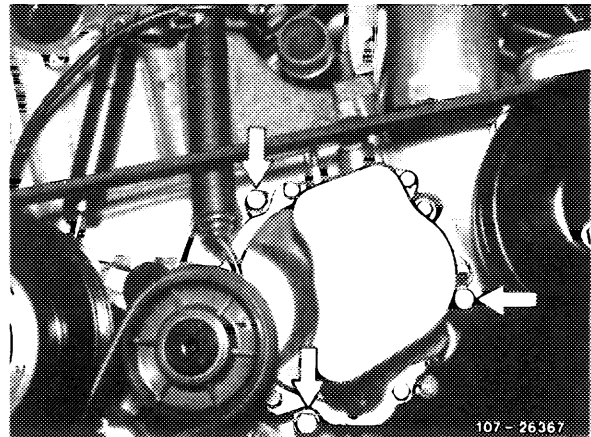


6 Pull off vacuum lines for idle speed increase, stop unit and vacuum control valve vacuum unit. Pull off ELR double couplings with electromagnetic actuators.

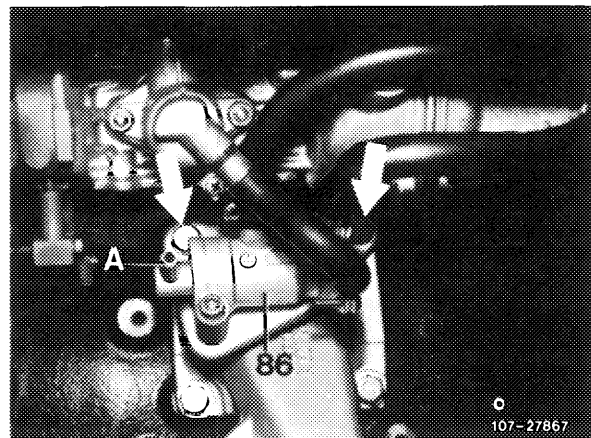
7 Disconnect control linkage on control lever as well as shock absorber and spring.

8 Remove vacuum control valve (only with automatic transmission or EGR).

9 Remove mounting bolts (arrows) and install bracket.

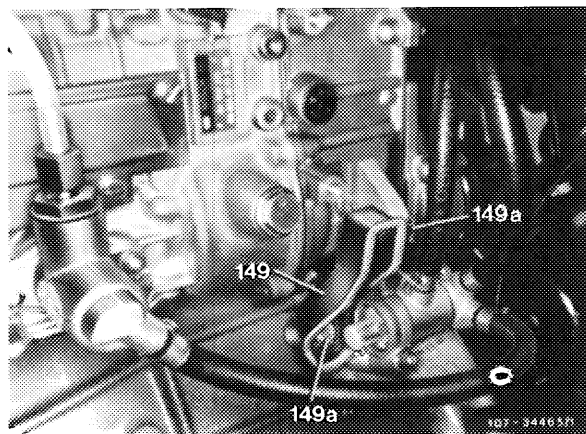


10 Completely remove fuel thermostat (86) by removing bolts (arrows).



A = Supply from fuel tank

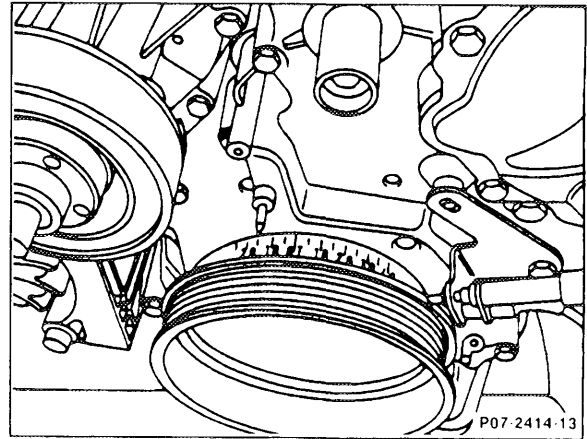
11 Pull injection pump out to the rear while holding the injection timing device.



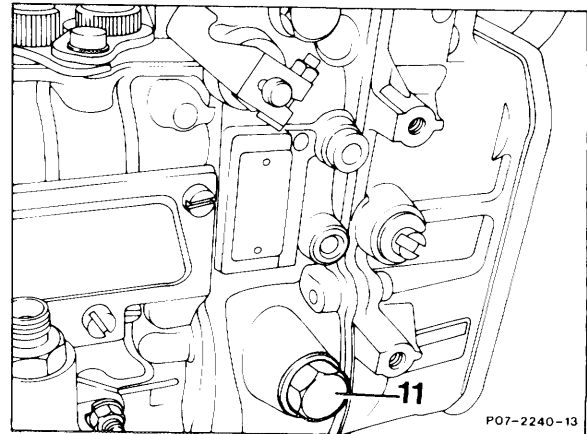
12 Check if the engine is positioned at -15° ATDC of 1st cylinder, correct if necessary.

Caution!

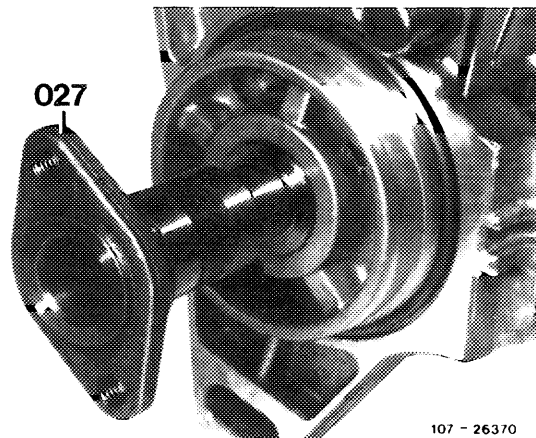
Turn engine only in direction of rotation with the installed centering sleeve!



13 Remove screw plug (11).



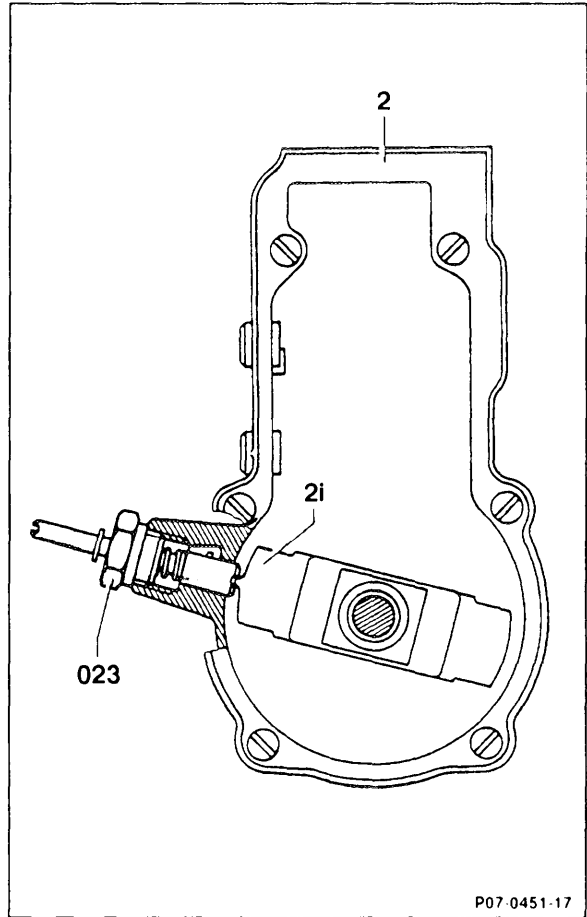
14 Turn injection pump with splined wrench (027) on the injection pump camshaft until the lug of the governor is visible in the hole, then insert locking bolt (023) in this position and engage in the lug, tighten by hand.



027 Splined wrench
Special tool 601 589 00 08 00

Caution!

Remove locking bolt (023) after installation of the injection pump to avoid damage to the injection pump during starting.



023 Locking bolt
Special tool 601 589 05 21 00

15 Reassemble engine in reverse order.

Note

Bleeding of the injection system is automatic when starting the engine.

16 Check start of delivery 07.1-112, adjust if required 07.1-117.

17 Install, adjust vacuum control valve 07.1-170.