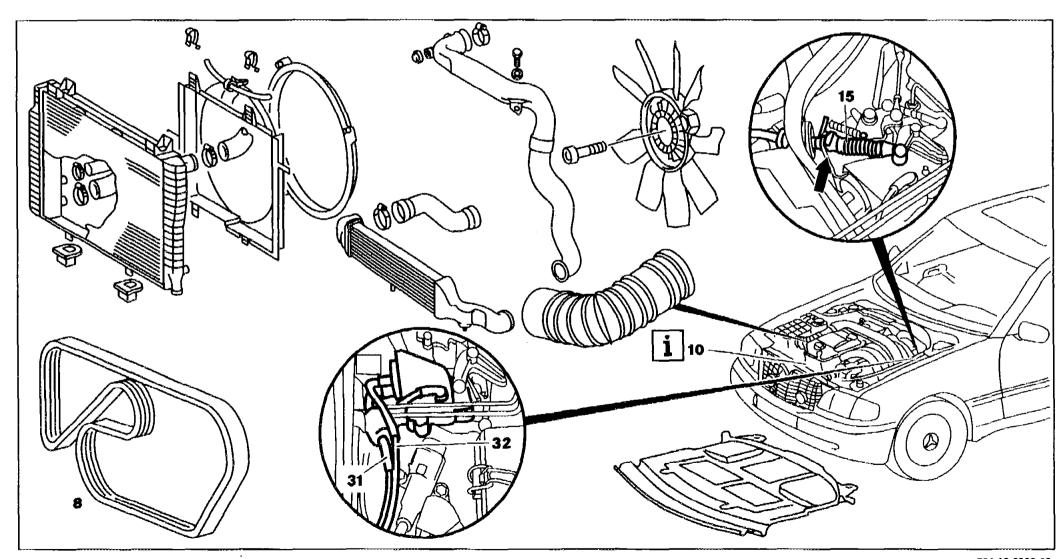
**M3** 

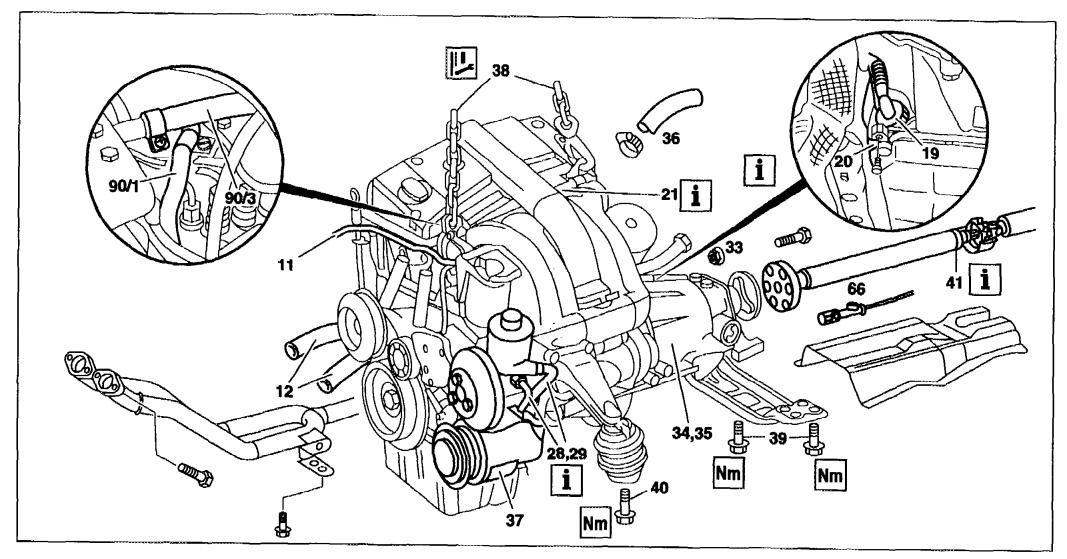
AR01.10-P-2400HA

Removing, installing engine

2.4.93

ENGINE 604, 605 in MODEL 202 ENGINE 604, 605, 606.912 in MODEL 210





P01.10-2013-09

XX	Removing, installing	
1	Disconnect ground cable of battery	AR54.10-P-0003A

2	Remove bottom parts of noise encapsulation	Model 202	AR94.30-P-5300A	
		Model 210	AR94.30-P-5300AB	
3	Remove left and right charge air pipes to intercooler	Model 202 with engine 605.960 Model 210 with engine 605.962	AR09.41-P-1311H	
⚠ Danger!	Risk of injury to skin and eyes from scalding from hot coolant which splashes out. Risk of poisoning from swallowing coolant.	Do not open the cooling system unless the coolant temperature is below 90 °C. Open cap slowly and allow the pressure to release. Do not pour coolant into containers for drinks.  Wear protective gloves, protective clothes, and eye protection.	AS20.00-Z-0001-01A H17	
4	Drain coolant at radiator		AR20.00-P-1142HW	
5.1	Remove radiator	Model 202 Model 210 with engine 606.912	AR20.20-P-3865HA	
6.1	Remove poly V-belt (8)	If AC fitted (code 580, 581)	AR13.22-P-1202HA	
7.1	Attach guard plate (10) for radiator/ condenser	If AC fitted (code 580, 581)		
₩F	Guard plate for radiator/condenser		WF58.50-P-0110-01A <b>E18</b>	

8	Disconnect vacuum lines	i At vacuum pump, intake manifold, brake booster. Transmission 722.4: at vacuum control valve. Vacuum units of EGR. Turbo engine: vacuum line at turbocharger vacuum unit.	
		i Installation: routing of vacuum lines see ↓	
		Engine 604.910 with manual or automatic transmission with TWC	AD07.13-P-2001-06A
		Engine 604.912 with manual or automatic transmission with TWC	AD07.13-P-2001-06B
İ		Engine 605.910	AD07.12-P-2000-05C
		Engine 605.912 with manual transmission with TWC	AD07.12-P-2000-05D
		Engine 605.912 with manual or automatic transmission, engine 605.960	AD07.12-P-2000-05A
		Engine 606.961	AD07.12-P-2000-05B
9	Detach coolant hoses (12, 36) at cylinder head and at coolant thermostat housing	i Model 210 with engine 606: Detach coolant hose (36) after tilting engine. Inspect condition of hose clips and hoses, replace if necessary.	

			WH58.30-Z-1002-06	
10	Disconnect lines (28, 29) of power steering pump	Extract oil at reservoir before disconnecting the lines.	AR46.30-P-0500A	
		i Installation: if level control fitted (code 217B) ↓		
		empty pressurized oil system, fill	AR32.30-P-0630A	
11.1	Detach control pressure bowden cable (15) of automatic transmission	If automatic transmission 722.4 fitted  i Installation: ↓		
		Check setting of control pressure bowden cable (15), adjust if necessary	AR30.10-P-1010HB	
12	Disconnect engine wiring harness (21)	Model 202	AR01.00-P-2410HA	N2
		Model 210 up to 05.96	AR01.00-P-2410D	D2
		Model 210 as of 06.96	AR01.00-P-2410H	J2
⚠ Danger!	Risk of explosion from ignition. Risk of poisoning from inhaling and swallowing fuel. Risk of injury as a result of fuel coming into contact with skin and eyes.	No fire, naked flame or smoking. Pour fuels only into suitable and appropriately marked containers. Wear protective clothing when handling fuel.	AS47.00-7-0001-01A L17	
13	Disconnect fuel lines (90/1, 90/2)	i Open fuel filler cap.		

14	Unbolt exhaust system at turbocharger or exhaust manifold and transmission intermediate bearing	Model 202	AR49.10-P-7000I
		Engine 604.912, 605.912, 606.912 in model 210.0	AR49.10-P-7000B
		Engine 605.912, 606.912 in model 210.2	AR49.10-P-7000BA
15	Detach shift rods (34) at transmission	manual transmission	AR26.10-P-0020A
		automatic transmission	RA27-0600
16.1	Separate clutch line (35) at transmission	If manual transmission	AR25.20-P-0150A
17.1	Slacken clamping nut (41) of propshaft	If clamping nut at propshaft	AR41.10-P-0050EA
18	Unbolt front propshaft at transmission, push to the rear		AR41.10-P-0050EA
19.1	Release park lock interlock (66) at transmission	If automatic transmission 722.6  The park lock interlock must only be removed when selector lever in position "p"  Installation:  Adjust cable for park lock interlock	AR27.60-P-0965B
20.1	Remove guard plate (20) on right of transmisison and separate plug connection (19) of electronic control unit at transmission	If automatic transmission 722.6	

21.1	Unbolt AC compressor (37)	If AC (code 580, 581) Attach AC compressor at the side in bottom of engine compartment with piping connected.	BA83.55-P-1001-01A
22	Bolts (39, 40) of engine mounts and engine support	Model 202	
		Nm	BA22.10-P-1002-01D
		Nm	BA22.10-P-1003-01D
		Nm	BA22.10-P-1008-01D
		Model 210	
		Nm	BA22.10-P-1001-01D
		Nm	BA22.10-P-1002-01D
		Nm	BA22.10-P-1003-01D
24	Raise engine (38), remove	Ensure that the injection line is not damaged when attaching to the front engine lifting eye!	AR01.10-P-7500-03HA A15
		i Model 210 with engine 604, 605: use removing device for removing ↓	WH58.30-Z-1003-07A
25		Remove engine with removing device	AR01.10-P-2400-01A <b>O14</b>
			WH58.30-Z-1015-07A
			WH58.30-Z-1004-07A

			WH58.30-Z-1003-07A
26	Install in the reverse order		
⚠ Danger!	Risk of accident as a result of vehicle starting off when engine running. Risk of injury as a result of bruises and burns if you insert your hands into engine when it is being started or when it is running.	Secure vehicle to prevent it starting off. Wear closed and close-fitting work clothes. Do not grasp hot or rotating parts.	AS00.00-Z-0005-01A <b>J17</b>
27.1	Inspect ATF level in automatic transmission	Transmission 722.4 Transmission 722.6	AR27.00-P-0100A AR27.00-P-0101A
28	Inspect oil level of power steering pump, adjust to correct level		AP46.00-P-4611BB
29	Inspect cooling system for leaks	Engine with new cylinder head gasket: Do not pressure-test cooling system until engine has reached operating temperature.	AR20.00-P-1010HA
30	Read fault memory, erase.	Stored faults which may be caused by disconnecting cables or by simulation when carrying out removal and installation or test work, have to be processed and erased in the fault memories after completing the work.	AD00.00-P-1000AZ

## Nm AC compressor

Number	Designation		Engine 104.945/995, 111.942/947/970, 604.912/917, 605.912/962, 606.912/962 in
			model 210
BA83.55-P-1001-01A	Bolt of AC compressor to bracket	Nm	23

## Engine suspension, engine mounts, engine supporting brackets

Number	Designation		Engine 604, 605 in model 202	Engine 604, 605, 606 in model 210
BA22.10-P-1001-01D	Bolt of front engine mount to front axle carrier	Nm	_	35
BA22.10-P-1002-01D	Bolt of rear engine mount to rear engine crossmember	Nm	25	30
BA22.10-P-1003-01D	Bolt of rear engine crossmember to body	Nm	40	40
BA22.10-P-1008-01D	Bolt of engine mount to frame crossmember	Nm	25	_

## Commercially available tools (see Workshop Equipment Manual)

Number	Designation	Make (e.g.)	Order number
WH58.30-Z-1001-06A	6 mm wrench hexagon on flexible shaft for hose clips with worm drive	Hazet Güldenwerther Bahnhofstraße 25-28 D-42857 Remscheid	426-6
WH58.30-Z-1002-06A	7 mm wrench hexagon on flexible shaft for hose clips with worm drive	Hazet Güldenwerther Bahnhofstraße 25-28 D-42857 Remscheid	426-7
WH58.30-Z-1015-07A	Engine hoist (self-locking)	Bäcker Herderstraße D-42853 Remscheid	3180
WH58.30-Z-1002-07A	Shackle		C1 DIN 82101
WH58.30-Z-1004-07A	Hook mount	Erwin Schairer GmbH Keltenstraße 9 D-72459 Meßstetten	0304.01.005
WH58.30-Z-1003-07A	Engine supporting arm	Erwin Schairer GmbH Keltenstraße 9 D-72459 Meßstetten	0304.01.001