

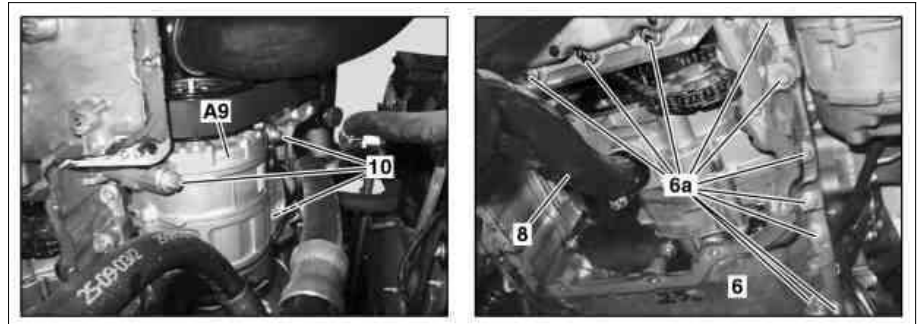
P01.45-2208-09

- 1 Oil dipstick guide tube
- 2 Screw
- 3 Electrical connector
- 4 Bracket
- 6 Oil pan top section
- 6a Bolts
- 8 Oil intake tube
- 10 Bolts

- 5 Bolts
- 6 Oil pan top section
- 7 Bolts
- 8 Oil intake tube

- 9 Bolts
- S43 Oil level check switch

- A9 Refrigerant compressor



P01.45-2205-04

**Modification notes**

13.4.10	Value modified: Oil suction pipe on oil pan and cylinder head cover	*BA01.45-P-1005-01Q
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	Remove/install		
<b>Danger!</b>	<b>Risk of death</b> caused by vehicle slipping or toppling off of the lifting platform.	Align vehicle between columns of vehicle lift and position four support plates at vehicle lift support points specified by vehicle manufacturer.	AS00.00-Z-0010-01A
<b>Danger!</b>	<b>Risk of injury</b> caused by <b>fingers being pinched or crushed</b> when removing, installing or aligning hoods, doors, trunk lids, liftgates or sliding roof	Keep body parts and limbs well clear of moving parts.	AS00.00-Z-0011-01A
	Notes on self-locking nuts and bolts		AH00.00-N-0001-01A
1	Removes strut tower brace	Model 164.8 only Remove strut tower brace from strut tower mounts.	AR62.30-P-2500GY
2	Remove engine trim panel		
3	Remove dipstick guide tube (1)	Unscrew bolt (2), pull oil dipstick guide tube (1) upward and turn to one side. <b>Installation:</b> Replace sealing ring! 	AR18.40-P-3510GZB  *BA01.45-P-1012-01Q

4	Mount the engine carrier arm and attach the engine	When attaching the engine, take care not to damage any of the lines. Engine hoist	AR33.10-P-0100-01GZ *240589006100
5	Partially remove poly-V belt	Only remove poly-V belt from belt pulley on refrigerant compressor (A9).	AR13.20-P-0001GZB
6	Disconnect electrical connector (3) at oil level check switch (S43)		
7	Remove bolts (5) on bracket (4) for power steering lines oil pan top section (6)		*BA01.45-P-1004-01Q
8	Remove bottom section of soundproofing		AR94.30-P-5300GZ
9	Drain engine oil, collect if necessary		*BA01.45-P-1006-01Q
10	Remove transmission		AR27.10-P-0500GZ
11	Remove oil pan bottom section		AR01.45-P-7555GZB
12	Remove oil level check switch (S43)	Remove bolts (7) and remove oil level check switch (S43). 	*BA18.40-P-1003-01M
13	Remove bolts (9) on oil intake tube (8)	Check sealing ring, replace if necessary. 	*BA01.45-P-1005-01Q
14	Remove bolts (10) on refrigerant compressor (A9)	Place refrigerant compressor (A9) with connected lines to the side. 	*BA83.55-P-1001-01R
15	Remove both brackets for transmission oil lines on oil pan top section (6)		*BA27.55-P-1003-01D
16	Remove end cover	<b>Installation:</b> Replace crankshaft radial sealing ring.	AR01.40-P-8913GZB
17	Unscrew bolts (6a) and remove oil pan top section (6)	Heat up the sealing surfaces on oil pan top section (6) so that the sealant can be loosened more easily. Take out oil pan top section (6) in direction of travel towards the front and also turn crankshaft slightly as required. <b>Installation:</b> Observe different bolt lengths and diameters: ↓ Bolt plan for oil pan      	AR01.45-P-7500-06GZB *BA01.45-P-1001-01Q *BA01.45-P-1002-01Q *BA01.45-P-1007-01Q *BA01.45-P-1008-01Q *BA01.45-P-1009-01Q
	Notes on sealant path for oil pan	Loctite 5970 sealant	AH01.45-P-0001-01OM *BR00.45-Z-1013-01A
	<b>Clean</b>		
18	Clean sealing surfaces	Do not use any sharp-edged tools or abrasive paper as this will damage the sealing surfaces. Loctite 7200 Cleaning spray, Loctite 7063 (150ml)	AR01.00-P-0050-01A *BR00.45-Z-1038-04A *BR00.45-Z-1046-04A
19	Install in the reverse order		
20	Check engine oil level	In order to avoid measurement errors, vehicle must be parked on an even surface. Shut off engine once it has reached operating temperature and wait approx. 5 minutes before checking engine oil level. With code 474 Particulate filter Without particulate filter	AR18.00-P-3035-01PI *BF18.00-P-1001-01S *BF18.00-P-1001-01A
<b>Danger!</b>	<b>Risk of accident</b> caused by vehicle starting off by itself when engine is running. <b>Risk of injury</b> caused by contusions and burns during starting procedure or when working near the engine as it is running	Secure vehicle to prevent it from moving by itself. Wear closed and snug-fitting work clothes. Do not touch hot or rotating parts.	AS00.00-Z-0005-01A
21	Conduct engine test run and check engine for leaks while it is running		
22	Read out fault memory and erase if necessary Connect STAR DIAGNOSIS and read out fault memory		AD00.00-P-2000-04A
<b>AD</b>			
23	Perform basic programming		AR00.19-P-0200GZ

Refrigerant compressor

Number	Designation	Model 164.1/8
BA83.55-P-1001-01R	Bolt, refrigerant compressor to timing case and left engine support	Nm 20

**Nm** Oil level/oil pressure sensor

Number	Designation	Engine 642
BA18.40-P-1003-01M	Bolt at oil level check switch	Nm 11

**Nm** Transmission oil cooling system

Number	Designation	Trans- mission 722.9
BA27.55-P-1003-01D	Bolt, oil cooler line to engine oil pan	Nm 12

**Nm** Oil pan

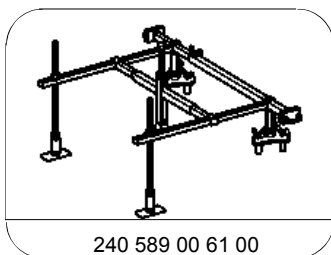
Number	Designation	Engine 642
BA01.45-P-1001-01Q	Oil pan top section to cylinder block top at front	M6 Nm 14
BA01.45-P-1002-01Q	Oil pan top section to cylinder crankcase on transmission side	M8 Nm 20
BA01.45-P-1004-01Q	Bracket on top part of oil pan	M6 Nm 14
		M8 Nm 20
BA01.45-P-1005-01Q	Oil suction pipe on oil pan and cylinder head cover	M6 Nm 14
BA01.45-P-1006-01Q	Oil drain screw to oil pan	M12 Nm 30
		M24 Nm 45
BA01.45-P-1007-01Q	Bolt, oil pan to cylinder crankcase	M6 Nm 14
		M8 Nm 20
		M10 Nm -
BA01.45-P-1008-01Q	Bolt, oil pan to timing case cover	M6 Nm 14
BA01.45-P-1009-01Q	Bolt, oil pan to crankshaft housing sealing at the rear	M6 Nm 14
BA01.45-P-1012-01Q	Bolt, oil dipstick guide tube to muffler bracket	M6 Nm 14

 **Engine lubrication system**

Number	Designation	Engine 642.940/950 with particulate filter
BF18.00-P-1001-01S	Engine oil Filling capacity (oil and filter change)	Liters 8.5
	Specifications for Operating Fluids	Sheet <a href="#">BB00.40-P-0228-51A</a>
		Sheet <a href="#">BB00.40-P-0229-31A</a>
		Sheet <a href="#">BB00.40-P-0229-51A</a>

 **Engine lubrication system**

Number	Designation	Engine 642.940/950 without particulate filter
BF18.00-P-1001-01A	Engine oil Filling capacity (oil and filter change)	Liters 8.5
	Specifications for Operating Fluids	Sheet <a href="#">BB00.40-P-0228-03A</a>
		Sheet <a href="#">BB00.40-P-0228-05A</a>
		Sheet <a href="#">BB00.40-P-0228-51A</a>
		Sheet <a href="#">BB00.40-P-0229-03A</a>
		Sheet <a href="#">BB00.40-P-0229-31A</a>
		Sheet <a href="#">BB00.40-P-0229-05A</a>
		Sheet <a href="#">BB00.40-P-0229-51A</a>



240 589 00 61 00

Engine lifting fixture

**Repair materials**

Number	Designation	Order number
BR00.45-Z-1013-01A	Loctite 5970 sealant	A 003 989 98 20
BR00.45-Z-1038-04A	Loctite 7200	Henkel Loctite Deutschland GmbH Arabellastrasse 17 81925 München Germany Tel. +49 899268-0 Fax + 49 899101978 <a href="http://www.Loctite.de">www.Loctite.de</a>
BR00.45-Z-1046-04A	Cleaning spray, Loctite 7063 (150ml)	A 001 986 71 71 10