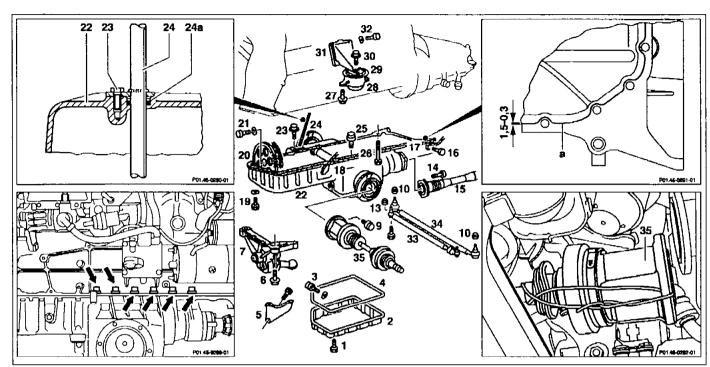
ENGINE 603.913/963 in MODEL 124



P01.45-0288-09

| KK | Removing, installing | | |
|----|--|---|-----------------------------|
| 1 | Remove bottom engine compartment panel | | |
| 2 | Remove air cleaner cover and air filter housing, respectively | | |
| 3 | Remove fan shroud | | |
| 4 | Disconnect ground cable at battery | | AR54.10-P-0003A |
| 5 | Drain engine oil | i Pay attention to specified oil capacity | AP18.00-P-0101AA |
| 5 | Detach dipstick guide tube (24) | i Installation: Replace seal (24a) | |
| 7 | Unbolt steering shock absorber (33) at body | i Replace self-locking hexagon nuts (13) | 46-6177 |
| 3 | Remove track rod (34) | Replace self-locking hexagon nuts (13) | 46-7007 201 589 14 33 00 |
| 9 | Unbolt speed sensor £3 (16) | | |
| 10 | Unbolt propellor shaft (15) for front wheel drive | | 41-060 |
| 11 | Unbolt front drive shafts (35) at front axle housing | Do not pull inner joint too far apart and align. Push together propellor shaft and secure with wire. Replace self-locking hexagon nuts. | 33-0620 |
| 12 | Unplug connector of oil level sensor (18) | | |
| 13 | Unscrew hexagon socket bolts (1) of bottom part of oil pan (2) | , Man | BA01.45-P-1006-01A |
| 14 | Take off bottom part of oil pan (2) together with gasket (4) | i Installation: Clean off gasket residues at contact surfaces of bottom part. Replace gasket. | |

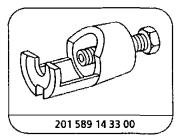
| Attach engine hoist to front lifting eye of engine Attach engine hoist to front lifting eye of engine Unscrew hexagon bolts (27) at front left and right engine mounts (28) at frame crossmember Raise engine with engine hoist Unbolt left engine support (31) together with engine mounts Pinch off oil lines between transmission and oil cooler and transmission and oil cooler and transmission and oil cooler and transmission and unscrew hexagon bolts Support front axle housing (22) and length of the hexagon bolts. Unbolt chain sprocket (20) of oil pump Unbolt oil pump (7) Take off front axle housing (22) to the rear Unbolt oil pump (7) Take off front axle housing (22) to the rear Install at a silicon bead). First of all position front axle housing and apply sealant (a = silicon bead). First of all position front axle housing against transmission and then against crankcase. Install in the reverse order A Dangerl 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 lineer ty our hands into engine when it is being started or when it is running. | | | | |
|--|-----------|---|--|--|
| engine Unscrew hexagon bolts (27) at front left and right engine mounts (28) at frame crossmember BR Raise engine with engine hoist Unbolt left engine support (31) together with engine mounts Unbolt left engine support (31) together with engine mounts Unbolt coler and transmission air-oil cooler, respectively, and unbolt at front axle housing Support front axle housing (22) and length of the hexagon bolts. Unbolt chain sprocket (20) of oil pump Unbolt chain sprocket (20) of oil pump Take off front axle housing (22) to the rear with axle housing (22) to the rear chain for this step. Clean off gasket residues on front axle housing and apply sealant (a=silicon bead). First of all position front axle housing against transmission and then against crankcase. Install in the reverse order A Dangerl 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. | 15 | Unbolt support (5) at oil pump (7) | Nm | BA18.10-P-1006-01A |
| and right engine mounts (28) at frame crossmember Raise engine with engine hoist Unbolt left engine support (31) together with engine mounts Pinch off oil lines between transmission and oil cooler and transmission and oil cooler and transmission and oil cooler, respectively, and unbolt at front axle housing Support front axle housing (22) and unscrew hexagon bolts Unbolt chain sprocket (20) of oil pump Unbolt chain sprocket (20) of oil pump Installation: Install chain sprocket so that the convex face points toward oil pump. BA18.10-P-1001-01A BA18.10-P-1001-01A BA18.10-P-1004-01A Installation: Pay attention to oil pump chain for this step. Clean off gasket residues on front axle housing and apply sealant (a = silicon bead). First of all position front axle housing against transmission and then against crankcase. Install in the reverse order Dangerl 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. | 16 | 1 | | WH58.30-Z-1001-07A |
| Unbolt left engine support (31) together with engine mounts Pinch off oil lines between transmission and oil cooler and transmission air-oil cooler, respectively, and unbolt at front axle housing Support front axle housing (22) and unscrew hexagon bolts Unbolt chain sprocket (20) of oil pump Unbolt oil pump (7) Take off front axle housing (22) to the rear Take off front axle housing (22) to the rear Installation: Install chain sprocket so that the convex face points toward oil pump. BA18.10-P-1001-01A BA18.10-P-1001-01A BA18.10-P-1004-01A Installation: Pay attention to oil pump drain for this step. Clean off gasket residues on front axle housing and apply sealant (a = silicon bead). First of all position front axle housing and apply sealant (a = silicon bead). First of all position front axle housing and apply sealant (a = silicon bead). First of all position front axle housing and apply sealant (a = silicon bead). First of all position front axle housing and apply sealant (a = silicon bead). First of all position front axle housing and apply sealant (a = silicon bead). First of all position front axle housing and apply sealant (a = silicon bead). First of all position front axle housing and apply sealant (a = silicon bead). First of all position front axle housing and apply sealant (a = silicon bead). First of all position front axle housing and apply sealant (b = silicon bead). First of all position front axle housing and apply sealant (b = silicon bead). First of all position front axle housing and apply sealant (b = silicon bead). First of all position front axle housing and apply sealant (c = silicon bead). First of all position front axle housing and apply sealant (c = silicon bead). First of all position front axle housing and apply sealant (c = silicon bead). First of all position front axle housing and apply sealant (c = silicon bead). First of all position front axle housing and apply sealant (c = silicon bead). First of all position front axle housing and apply sealant (c = silicon bead). | 17 | and right engine mounts (28) at frame | | AR22.10-P-1260HX |
| with engine mounts 20 Pinch off oil lines between transmission and oil cooler and transmission air-oil cooler, respectively, and unbolt at front axle housing 21 Support front axle housing (22) and unscrew hexagon bolts 22 Unbolt chain sprocket (20) of oil pump 23 Unbolt oil pump (7) 24 Take off front axle housing (22) to the rear 25 Install in the reverse order A Dangerl 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. | 18 | Raise engine with engine hoist | | |
| and oil cooler and transmission air-oil cooler, respectively, and unbolt at front axle housing 21 Support front axle housing (22) and unscrew hexagon bolts 22 Unbolt chain sprocket (20) of oil pump 23 Unbolt oil pump (7) 24 Take off front axle housing (22) to the rear residues on front axle housing against transmission and then against crankcase. 25 Install in the reverse order A Danger! Risk of accident as a result of bruises and burns if you insert your hands into engine when it is being started or when it is running. BA01.45-P-1001-01A BA18.10-P-1001-01A BA18.10-P-1004-01A BR00.45-Z-1031-01A BR00.45-Z-10 | 19 | T | | |
| unscrew hexagon bolts length of the hexagon bolts. Unbolt chain sprocket (20) of oil pump that the convex face points toward oil pump. Unbolt oil pump (7) Take off front axle housing (22) to the rear cesidues on front axle housing and apply sealant (a = silicon bead). First of all position front axle housing against transmission and then against crankcase. Install in the reverse order A Dangerl 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. | 20 | and oil cooler and transmission air-oil cooler, respectively, and unbolt at front | 3 | 000 589 40 37 00 |
| that the convex face points toward oil pump. 23 Unbolt oil pump (7) 24 Take off front axle housing (22) to the rear 25 Install in the reverse order A 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. | 21 | | | BA01.45-P-1001-01A |
| Take off front axle housing (22) to the rear Take off front axle housing (22) to the rear Installation: Pay attention to oil pump chain for this step. Clean off gasket residues on front axle housing and apply sealant (a = silicon bead). First of all position front axle housing against transmission and then against crankcase. Install in the reverse order 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. BR00.45-Z-1031-01A BR00.45-Z-1031-01A BR00.45-Z-1031-01A BR00.45-Z-1031-01A 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 AR01.45-P-7500HX/ | 22 | Unbolt chain sprocket (20) of oil pump | that the convex face points toward oil | BA18.10-P-1001-01A |
| chain for this step. Clean off gasket residues on front axle housing and apply sealant (a = silicon bead). First of all position front axle housing against transmission and then against crankcase. 25 Install in the reverse order 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. Chain for this step. Clean off gasket residues on front axle housing and apply sealant (a = silicon bead). First of all position front axle housing and apply sealant (a = silicon bead). First of all position front axle housing against transmission and then against crankcase. 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 AR01.45-P-7500HX/ | 23 | Unbolt oil pump (7) | | BA18.10-P-1004-01A |
| 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. | 24 | Take off front axle housing (22) to the rear | chain for this step. Clean off gasket residues on front axle housing and apply sealant (a = silicon bead). First of all position front axle housing against | BR00.45-Z-1031-01A |
| 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. Wear closed and close-fitting work clothes. Do not grasp hot or rotating parts. AR01.45-P-7500HX/ | 25 | Install in the reverse order | | |
| Run engine and inspect for leaks | ⚠ Dangerl | 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 | Wear closed and close-fitting work clothes. | AS00.00-Z-0005-01A AR01.45-P-7500HX/4 |
| | 26 | Run engine and inspect for leaks | | |

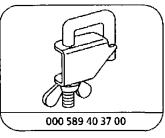
Nm Oil pan

| Number | Designation | | | Engine 603.913/ 963 |
|--------------------|---|-----|----|---------------------------|
| BA01.45-P-1001-01A | Bolt of oil pan to crankcase | M6 | Nm | 10 |
| | | M8 | Nm | 25 |
| | | M10 | Nm | _ |
| BA01.45-P-1006-01A | Bolt of bottom part of oil pan to oil pan | | Nm | 10 |

Nm Oil pump

| Number | Designation | | | Engine 601, 602 except 602.98, 603 | Engine 604, 605, 606 |
|--------------------|-------------------------------------|---------|----|--|----------------------------|
| BA18.10-P-1001-01A | Bolt of chain sprocket to oil pump | | Nm | 25 | 32 |
| BA18.10-P-1004-01A | Bolt for oil pump (M8) to crankcase | Hexagon | Nm | 25 | 25 |
| | | Torx | Nm | - | - |
| BA18.10-P-1006-01A | Support of oil pump strainer | | Nm | 10 | - |





Puller

Clamp

Commercially available tools (see Workshop Equipment Manual)

| Number | Designation | Make (e.g.) | Order number |
|--------------------|-----------------------------|---|--------------|
| WH58.30-Z-1001-07A | Engine hoist (self-locking) | Bäcker Herderstraße D-42853 Remscheid | 3188 |

Repair products

| Number | Order number |
|--------|----------------------|
| | 001 989 61 20 10 |

| AS00.00-Z-0005-01A | Risk of accident as a result of vehicle | Secure vehicle to prevent it from | ⚠ Danger! |
|--------------------|--|-------------------------------------|-----------|
| | starting off when engine is running. Risk of | moving off. | |
| | injury as a result of bruises and burns if you | Wear closed and close-fitting work | |
| | insert your hands into engine when it is | clothes. | |
| | being started or when it is running. | Do not grasp hot or rotating parts. | |

Possible dangers

Risk of accident

from vehicle starting off during starting operation (e.g. when testing compression pressure) as a result of gear engaged or when engine running and vehicles with automatic transmission as a result of selector lever position "P" or "N" not engaged (exception: some vehicles do not have a selector lever position "P").

Risk of Injury

Severe injuries may be caused by freely rotating parts in the area of the running engine. The heat produced by the engine when it is operating can result in severe burns if contact is made with individual, unshielded parts.

First aid measures in the event of burns

- Do not rub the skin areas affected; flush with plenty of cold water and cover skin with sterile bandages.
- Immediately consult a physician.

Rules of conduct / Protective measures

- As a general rule, carry out work on the running engine only if this is absolutely essential.
- Before starting the engine, apply parking brake.
- On models with manual transmission, move gearshift lever into Neutral position.
- On models with automatic transmission, move selector lever into position "P" or "N" (exception: some vehicles do not have a selector lever position "P").
- On models which do not have selector lever position "P", secure selector lever to prevent it from being operated unintentionally.
- Wear closed and close-fitting work clothes.
- Take off any jewelry, such as chains, rings etc.
- If you have long hair, wear a suitable head cover.
- Before commencing work on the running engine, check to obtain a general picture of the positioning of parts which may be hot.
- When carrying out work when starting the engine or when engine is running, do not touch any hot and rotating parts.