MERCEDES-BENZ

240D

DESCRIPTION

Clutch is a dry single disc type, using a diaphragm spring type pressure plate. Clutch actuation is hydraulic, using a clutch pedal mounted master cylinder and a clutch housing mounted slave cylinder. A prelubricated clutch release bearing is also used.

REMOVAL & INSTALLATION

1) Disconnect battery ground cable. Remove exhaust cross over pipe, and remove rear exhaust section with front and main muffler. Disconnect slave cylinder hydraulic flex line at metal pipe on floor pan, and cap openings to prevent loss of fluid.

2) Remove bolts securing transmission mount to crossmember, raise transmission slightly, and remove crossmember. Disconnect speedometer cable from rear transmission cover, and shifting rods from shifting levers.

3) Loosen, do not remove, bolts attaching drive shaft center support to body. Loosen drive shaft clamping nut, and disconnect drive shaft from transmission flange in such a way as to leave flange attached to transmission.

4) Slide drive shaft to rear as far as center bearing and clamping piece will permit, then place a block of wood under drive shaft in front of tunnel so that drive shaft is pushed completely upward.

5) Remove bolts attaching starter to clutch housing, and place starter out of way. Remove bolts attaching transmission to intermediate flange, removing upper two bolts last. *NOTE — Due to heavy ribbing of clutch housing, most bolts are accessible only by using a 17 mm or 19 mm socket and extension.*

6) Prior to removing, rotate transmission at least 45° to the left so that starter domes on case will clear tunnel. Pull transmission to rear until clear of clutch splines, then lower to remove. Loosen clutch attaching bolts 1 to 1 ½ turns at a time until spring tension is released, then remove bolts and clutch assembly.

7) To install, center clutch disc on flywheel using a suitable aligning tool, and install pressure plate. Tighten attaching bolts 1 to 1 ½ turns at a time until tight. *CAUTION — During assembly, make sure that clutch is fully pulled into recess in flywheel.* To complete installation, reverse removal procedure and bleed hydraulic system .

RELEASE BEARING & LEVER

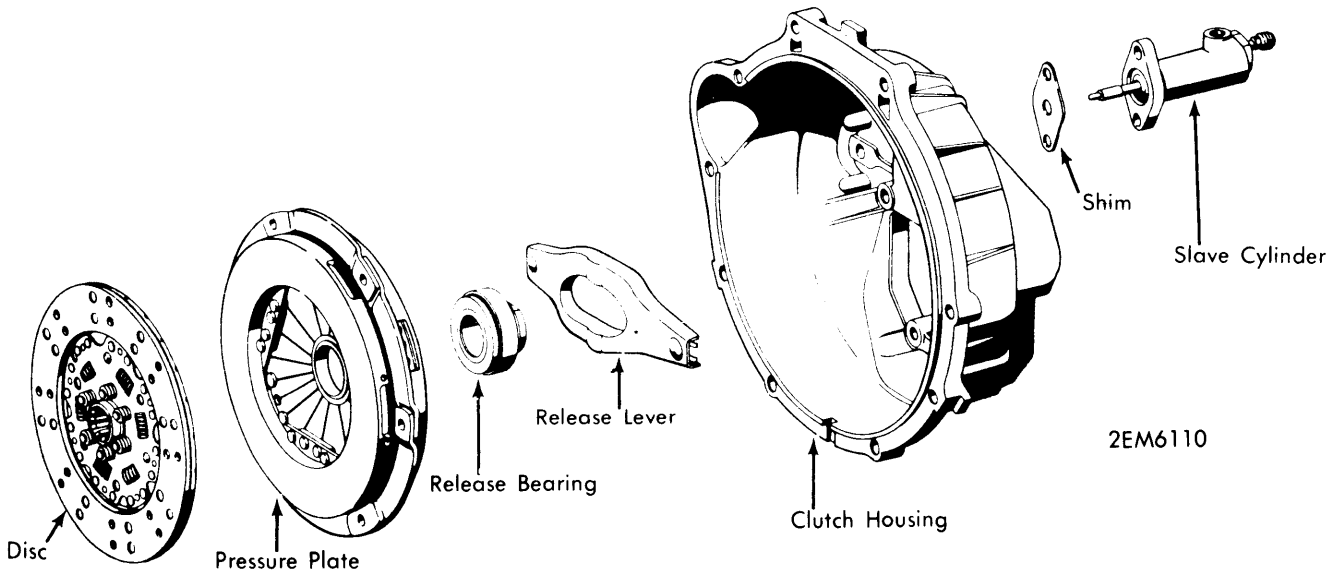
1) Remove release bearing from bearing tube on front transmission cover. Move release lever down and to the left, and pull from ball pin on clutch housing.

2) To install, apply a suitable lubricant to all bearing and lever contact surfaces, and reverse removal procedure. *NOTE — Do not use pure molybdenum disulphide lubricants on contact surfaces.*

CLUTCH MASTER CYLINDER

1) Remove floor mats and lining from driver compartment, and remove cover under instrument panel. Siphon sufficient fluid from fluid reservoir to bring level below minimum mark. Loosen input line by pulling elbow out of rubber clamping ring on master cylinder.

2) Disconnect pressure line from master cylinder, and loosen piston rod of brake unit by removing coliar screw from brake pedal. Disconnect return spring from brake pedal and allow pedal to fall to floor. Remove cylinder attaching nuts and bolts, and remove master cylinder and push rod as an assembly.

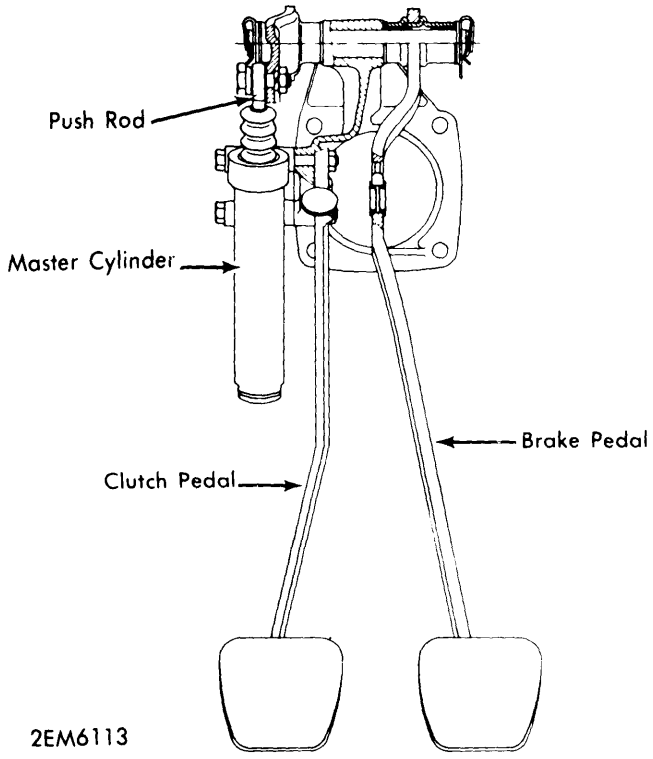


CLUTCH COMPONENTS (ROCKER TYPE RELEASE LEVER)

MERCEDES-BENZ (Cont.)

NOTE — Travel limit stop for clutch pedal is attached with master cylinder mounting bolts and spaced by means of washers. Record number of washers used for reassembly reference.

3) To install, reverse removal procedure, adjust fluid level in fluid reservoir, adjust master cylinder push rod length, and bleed hydraulic system.

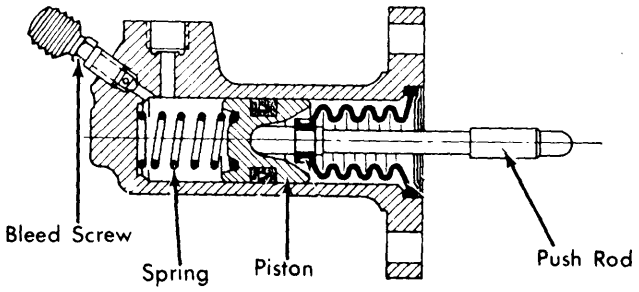


MASTER CYLINDER

CLUTCH SLAVE CYLINDER

1) Disconnect hydraulic line from slave cylinder, then plug line with a rubber cap to prevent loss of fluid. Remove bolts attaching cylinder to clutch housing, and remove slave cylinder and push rod from housing as an assembly. *NOTE — Take care not to lose plastic shim installed between cylinder and housing.*

2) To install, place shim with grooved end against clutch housing and hold in position. Insert slave cylinder with push rod into clutch housing, and install and tighten mounting bolts. Connect hydraulic line to cylinder, and bleed hydraulic system.



SLAVE CYLINDER

ADJUSTMENT

MASTER CYLINDER

PUSH ROD-TO-PISTON CLEARANCE

Clearance between master cylinder piston and push rod should be .008". This play cannot be measured at push rod, but may be determined at clutch pedal. When clearance is correct between push rod and cylinder piston, play at clutch pedal should be .040". Loosen hex nut of adjusting screw, and turn screw until proper clearance is obtained. *NOTE — When checking or adjusting play, make sure line marking (arrow) on head of adjusting screw points rearward.*

HYDRAULIC SYSTEM BLEEDING

With Pressure Bleeder — 1 Connect pressure line of bleeder to opened bleeder screw of slave cylinder. Fluid reservoir of vehicle should be almost empty so that brake fluid can flow from bottom upward through system, allowing air to escape in upward direction.

2) Make sure bleeder is set at lowest possible pressure, and watch reservoir to prevent overflow of fluid. When fluid approaches maximum level in reservoir, remove bleeder and close bleeder screw. Adjust fluid level in reservoir, if necessary, to maximum level in reservoir.

With Assistance of Brake System — 1) Check fluid level in reservoir and make sure it is at maximum level. Place a hose on bleeder screw of right front brake caliper and open screw. Press down on brake pedal until hose is filled with brake fluid and no more air bubbles are showing.

2) Place opposite end of hose on clutch slave cylinder bleeder screw, and open screw. Keep pressure on brake pedal. Close bleeder screw on caliper and release brake pedal. Repeat operation until no more air bubbles appear at fluid reservoir.