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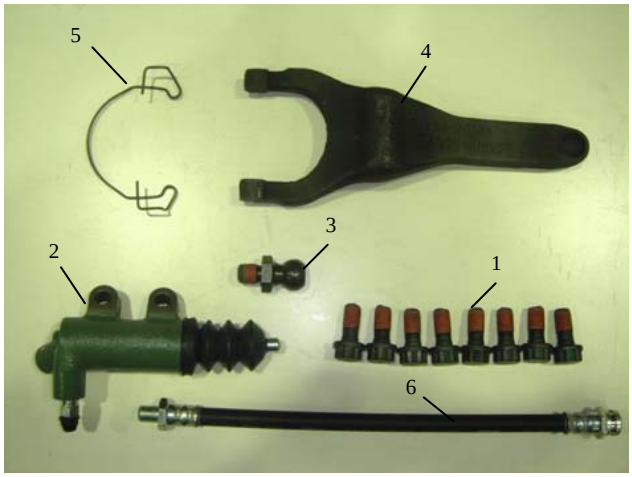
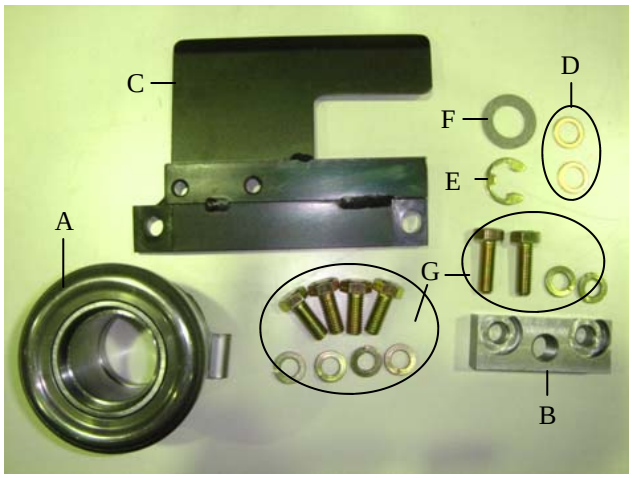
Instruction manual to convert pull style to push for Toyota 1JZ-GTE and 2JZ-GTE





Necessary parts (It comes with clutch kit)
1 - Toyota flywheel bolts (8)
2 - Toyota slave cylinder (1)
3 - Toyota support for pivot (1)
4 - Toyota release fork (1)
5 - Toyota release clip (1)
(Release fork spring to tie the fork and sleeve)
6 - Mazda flexible oil hose (1)

Parts enclosed with the kit (for 1JZ-GTE)
A - Bearing & bearing sleeve (1),
B - Spacer (1),
C - Cylinder bracket (1),
D - Copper washer (2),
E - E-shape stopper (1),
F - Washer (1),
G - Bolt M8x20 (w/ SW) (4), Bolt M8x25 (w/ SW) (2)

Parts enclosed with the kit (for 2JZ-GTE)
A - Bearing & Bearing sleeve (1),
B - Spacer (1),
C - Cylinder bracket(1),
D - Copper washer (2),
E - E-shape stopper (1),
F - washer (1),
G - Bolt M10x25 (w/SW) (2), M8x25 (w/SW) (1), M8x20 (w/SW) (3)

* SW - Spring washer

Pull style to push style conversion process

Note: 1) apply grease to the metal contact areas of pivot, sleeve, and cylinder rod 2) Use the torque specified by the Toyota service manual for tightening the flywheel bolts. (Tighten the flywheel bolts with 5Kg-m torque first, then the bolts further by 90 degrees.)

(1) Before removing the clutch oil hose from the slave cylinder, check if you can push the piston of the slave cylinder manually by your hand. If you can push it, the free travel is fine. If you cannot, the free travel is not sufficient (negative). Please adjust the free travel level by referring to the attachment “Clutch pedal free travel adjustment”.

(2) Check the parts which are possibly worn out (like the piston of master cylinder.) If necessary, replace them with new parts.

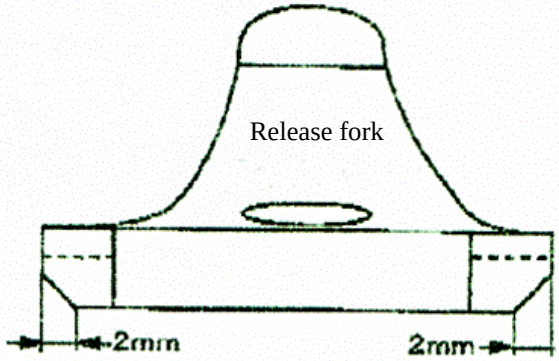
(3) After removing the transmission from the engine, clean the main input shaft and make sure if you can insert the main input shaft into the carbon clutch smoothly. If there is extensive rust on the shaft or if the shaft is damaged or deformed, either fix it or replace it. (Refer to one of the attachments - Caution for clutch assembly)

(4) Remove the stock release fork, the stock pivot, and the stock slave cylinder.

(5) Grind / shave off the edge of both side of release fork by 2 mm. Please refer to the diagram 1, and the picture 1. This is to avoid an interference with the CARBONETIC bearing sleeve which has slight R (curved portion) .

(6) Shave off the tip of stock M10 bolt used for bolting the engine and the transmission by about 5mm in order to avoid an interference with the bracket. Please refer to the picture 2.

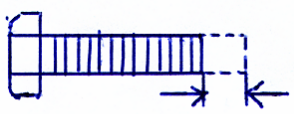
Diagram 1



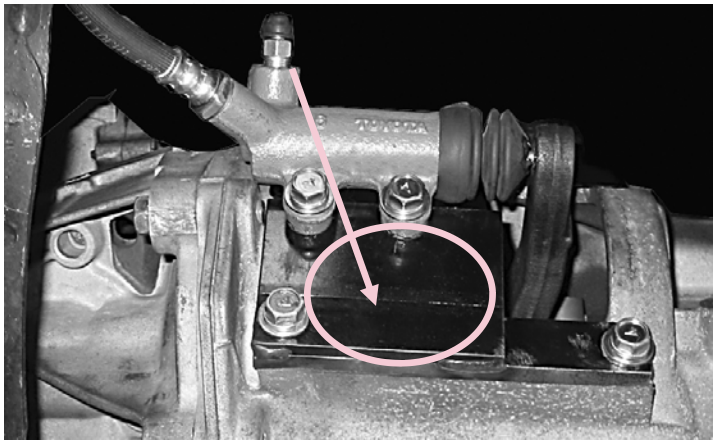
Picture 1

Shave off the circled portion by 2mm for both sides of the fork.

Picture 2



Shave off 5 mm

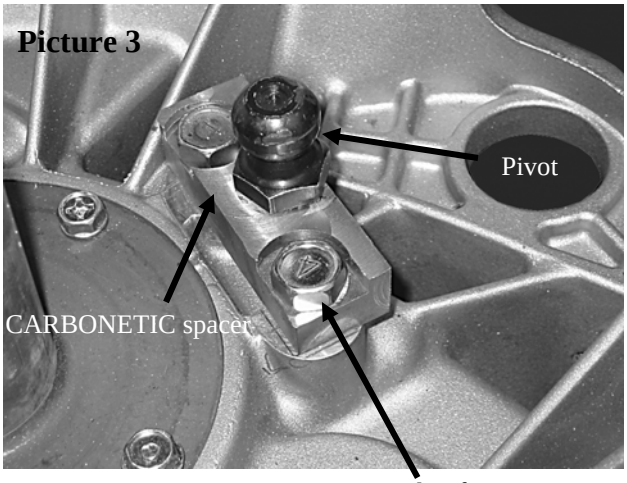


(7) Attach the pivot (Toyota 31236-20070) to CARBONETIC spacer provided in the kit. Refer to the picture 3.

(8) Tentatively bolt down the CARBONETIC spacer with the pivot (Do not tighten fully. You may want to adjust it slightly later). Pay attention to the direction of the spacer. After the process #14, align the center of the release fork and the slave cylinder, then tighten the bolt fully. Specified bolts are: for 2JZ - M10xL25 (w/SW [spring washer]) x 2, for 1JZ - M8xL20 (w/SW) x 2.

(9) Insert the clutch bearing (Nissan 30502-21000 for 1JZ, and Isuzu 5-09803004-0 or NSK TK-45-4B for 2JZ) onto the CARBONETIC bearing sleeve if they do not. (* Basically, the clutch bearing is already inserted to the bearing sleeve at the factory.)

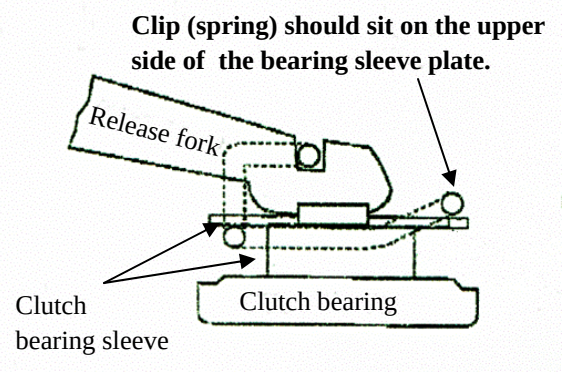
Picture 3



M8x20 & Spring washer for 1JZ-GTE.
M10x25 & Spring washer for 2JZ-GTE.

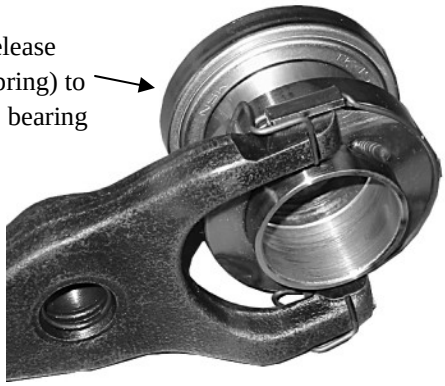
(10) Attach the release fork and release clip (31232-20031) to the CARBONETIC bearing sleeve. Referring to the diagram 2 and Picture 4, make sure the clip (spring) is attached correctly. Improper installment of the clip hampers the smooth operation of the clutch.

Diagram 2



Picture 4

Attaching the release fork and clip (spring) to CARBONETIC bearing sleeve.

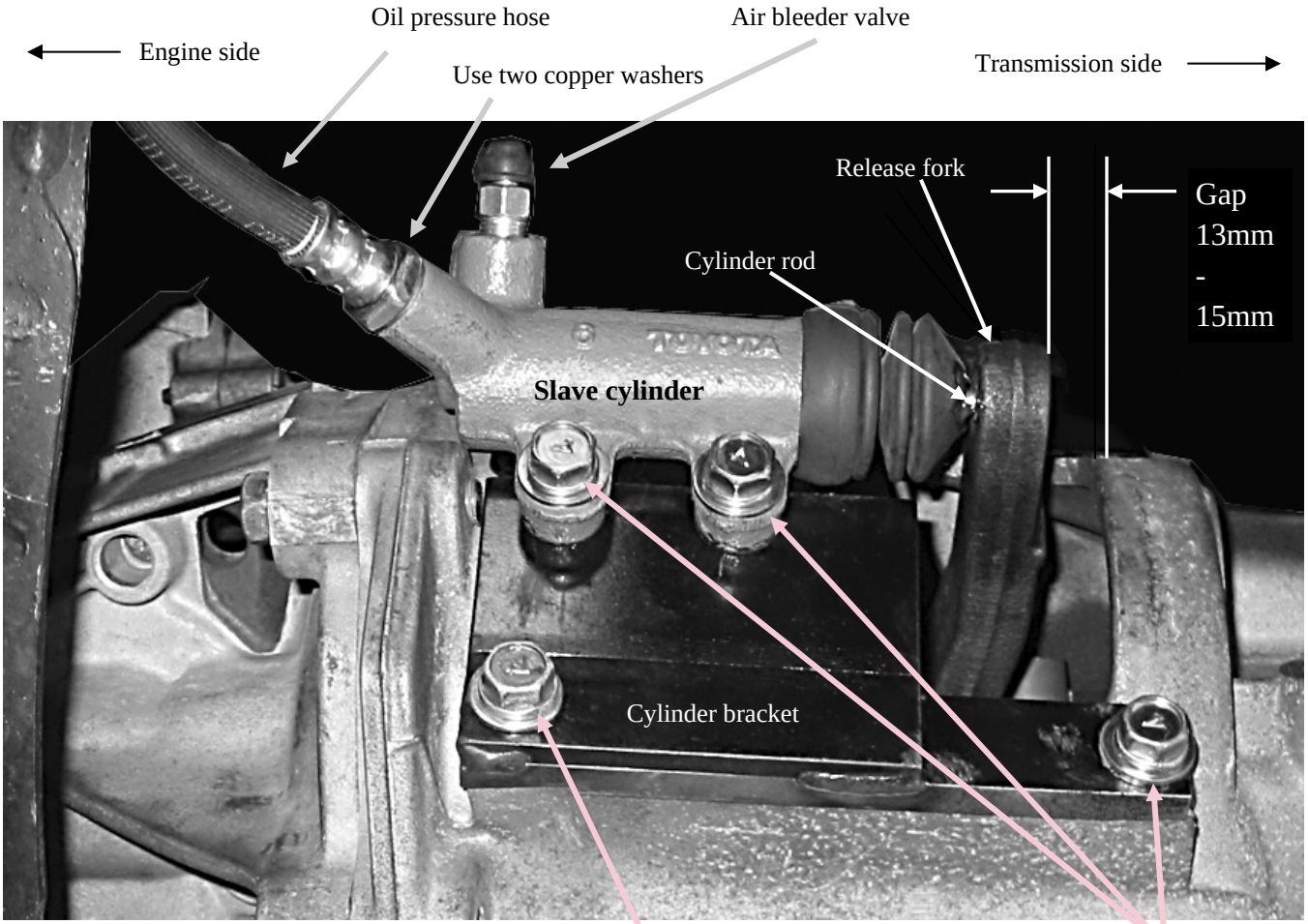


(11) Install the release fork and clutch bearing (assembled in the process #10) into the clutch housing. Referring to the Picture 5.

(12) Bolt down the slave cylinder to the CARBONETIC bracket. Specified bolts - M8 x 20 (w/SW) x 2

Picture 5

Picture 6



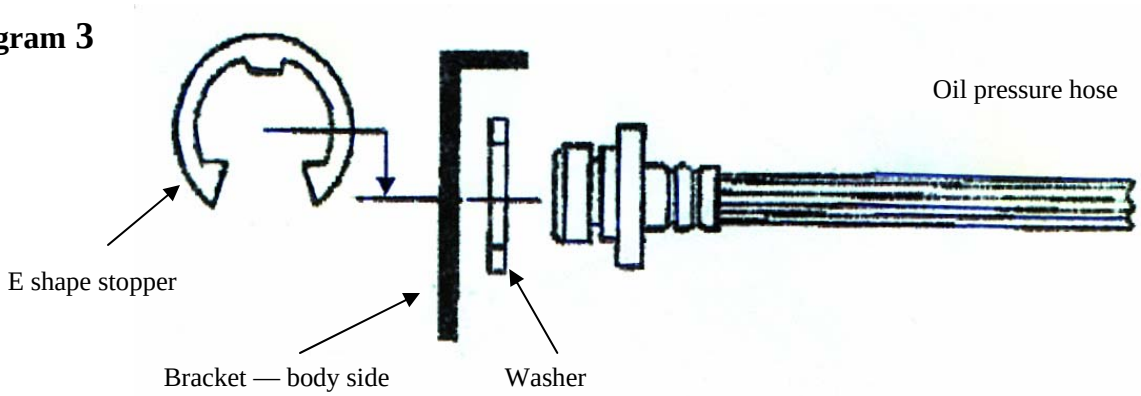
(13) Tentatively fix the bracket (assembled in the process #12) to the clutch housing. **Specified bolts: for 2JZ M8xL25 (w/SW) x 1 and M8xL20 (w/SW) x 1 [L25 is for the engine side]. for 1JZ M8xL20 (w/SW) x 2.** Refer picture 6

(14) Align the center of the release fork (assembled in the process #10) and the slave cylinder (assembled in the process of #13). If the center is not aligned, check the location of the pivot—check to see if the direction of the spacer is correct, and check and adjust the location of the slave cylinder. Attach the release fork again and align the center again. Once the centering is finished, tighten the bolts fully for the bracket.

(15) Assemble the release fork and the clutch bearing into the clutch housing again like the process #11.

(16) Assemble the clutch to the engine and attach the transmission to the engine.

Diagram 3



17) After the assembly of the release fork and the slave cylinder, check to see if the gap in the picture 6 is 13mm to 15mm. If the gap is beyond this specification, check if the pivot is fully tightened or if the clutch bearing is fully inserted. Adjust if necessary. The cylinder stroke movement at the full clutch pedal stroke is about 11mm.

18) Fix the oil pressure hose on the bracket (body side) by using the one washer (included in the kit) and E-shape stopper (also included in the kit). Attach the other side of the hose to the slave cylinder with two CARBONETIC copper washer. Refer to the diagram 3 and picture 6.

19) Refill the clutch oil and bleed the air.

Important

Pedal free travel

At the final stage of the assembly, check to see if the clutch disengages and engages without any problem by pressing the pedal. The disengagement point becomes deeper than the stock. However, it is not a malfunction. After bleeding the air completely, adjust the disengagement point by minimizing the free travel, by adjusting the rod at the end of the pedal, or by adjusting the stopper on the pedal.

After the pedal free travel adjustment, make sure

1) you can push the piston of the slave cylinder by hand

2) If you cannot, adjust the free travel again