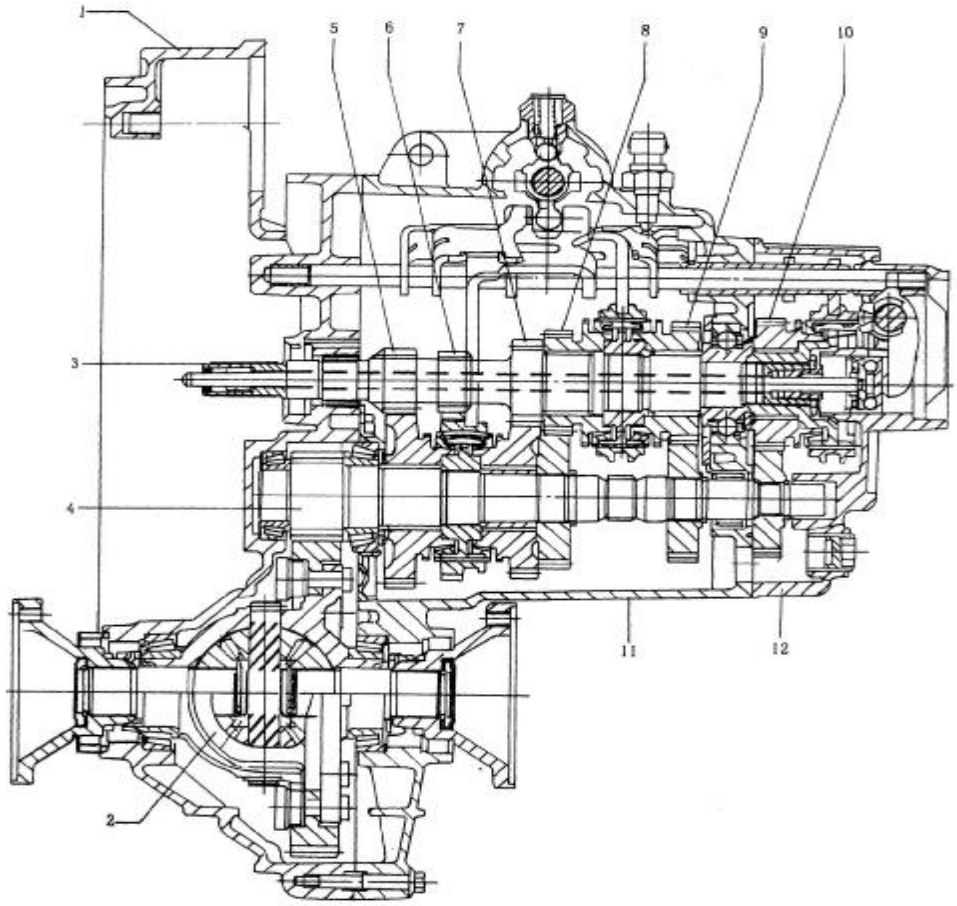
MANUAL TRANSMISSION



Clutch Assembly Schematic

1. Clutch Housing 2. Differential 3. Input Shaft 4. Output Shaft
5. 1st Shift 6. Reverse 7. 2nd Shift 8. 3rd Shift 9. 4th Shift 10. 5th Shift
11. Transmission Housing 12. Rear Housing

SPECIFICATION

Transmission		AQ015 AA type	AQ015 AB type
Ratio	Main driving	4.133	3.813
	1shift	3.455	3.455
	2shift	2.056	2.056
	3shift	1.370	1.370
	4shift	1.032	1.032
	5shift	0.850	0.850
	Reverse gear	3.167	3.167
	Speedometer	2.286	2.286
Lubricating oil quantity		2.0L	2.0L
Type of lubricating oil		Transmission oil GL-4 SAE75	Transmission oil GL-4 SAE75
Manipulation type of clutch		Mechanical	Mechanical
Diameter of clutch driven plate		210mm	210mm
Diameter of drive shaft flange		100mm	100mm
General gear ratio of top gear		3.513	3.240

DISASSEMBLY OF THE DRIVE SHAFT

——Tyre disassembly.

——Disassemble two bolts of the brake cylinder and brake shoe assembly. And hang the assembly on the shock absorber by the hook.

——Disassemble the connecting bolt of brake disc and front axle, and make front axle ball joint off by pressing it downward.

——Loosen the two fixing bolts under the brake disc and shock absorber.

——Disassemble the round head bolt of steering knuckle and steering rod, prize up the round head bolt upward.

——Turn the brake disc and disassemble the 6 torx head bolts of driving shaft and differential output shaft, and take off the shim and bolt.

——Take off the 2 fixing bolts under the brake disc and shock absorber, pull off the driving shaft and brake disc assembly.

DISASSEMBLY OF THE TRANSMISSION

——Discharge the transmission oil.

——Disassemble the driving shaft.

——Disassemble those 3 fixing bolt of the transmission lower shim.

——Disassemble the crankshaft position sensor.

——Disassemble the backup lamp switch plug.

——Disassemble the speed sensor plug.

——Prize up the round head clamp by screw driver, take off the selector rod.

——Disassemble cotter pin, and take off shift lever and shift mechanism linkage.

——Disassemble the gear shift arms subassembly.

——Disassemble cathode cable of the accumulator; disassemble the anode cable and plug of the starter.

——Disassemble the fixing bolt between engine front overhang bracket and front cross member.

——Sling the engine.

——Disassemble the fixing bolt of the starter.

——Take off front overhang bracket of the starter and the engine.

——Loosen connecting bolt between left / right suspension and sub frame.

——Disassemble the connecting bolt (altogether 3 pieces)between left/right suspension and transmission.

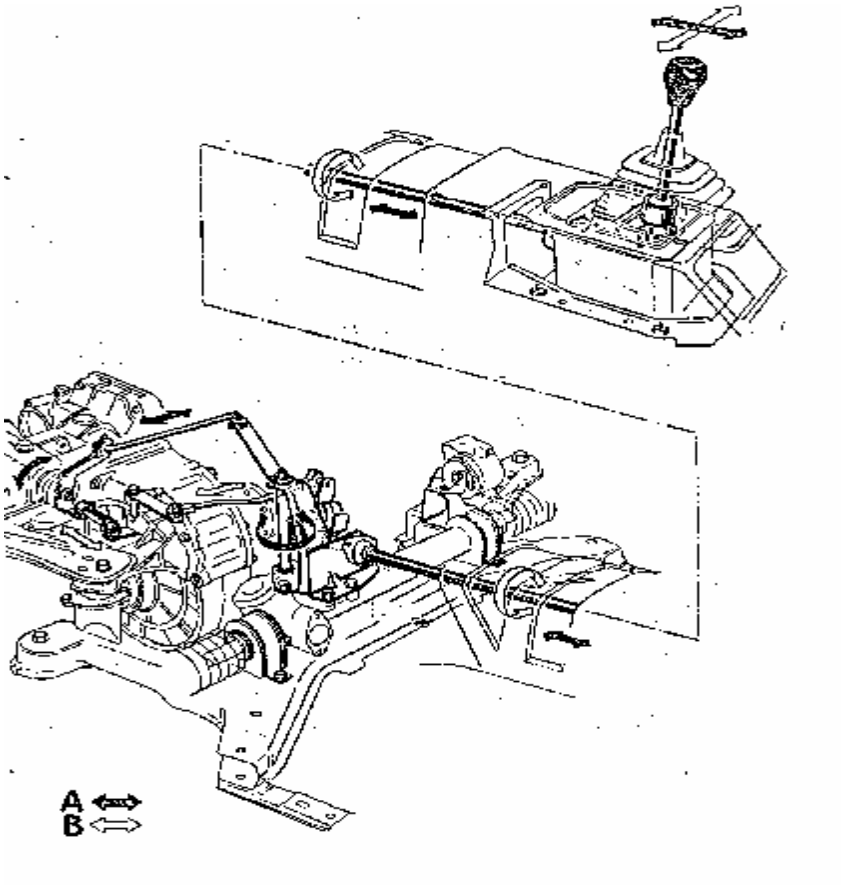
——Loosen those 5 bolts between transmission housing and engine.

——Rise engine to the ceiling, turning around it clockwise 90° .

——Lay down transmission end slowly, and sway outside off the transmission and engine.

——Take off the transmission assembly.

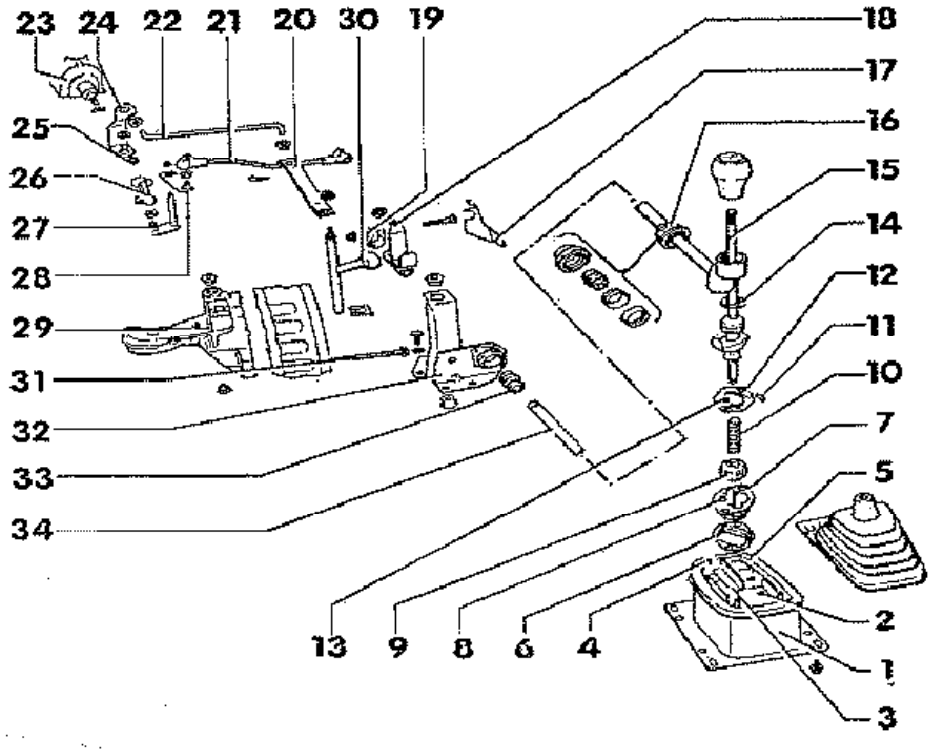
TRANSMISSION GEARSHIFT MECHANISM DIAGRAMMATIC SKETCH



ABOVE IS GEARSHIFT MECHANISM CONTROL CONFIGURATION

The transmission control mechanism must meet the requirement that only one shift can be chosen when the shift is changing and prevent from choosing reverse gear. The gear should be full length meshed after the gear shifted and prevent the gear out of position automatically. The transmission of Q/SQR7160 A15RHD car is composing of internal and external parts because it is positioning on the front driving axle far away from the driver and can not control directly.

RESOLUTION GRAPH OF THE GEARSHIFT CONTROL MECHANISM

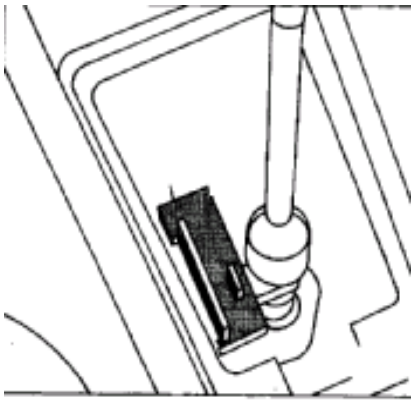


1. Shift Housing, Fasten The Fixing Bolt By 20Nm 2. Tubular Rivet：To Fix Reverse Gear Guide Rail 3. Reverse Gear Guide Rail 4. Self-Tapping Screw：To Fix The Dashboard 5. Seal 6. Gasket 7. Ball Holder 8. Spacer 9. Ball 10. Spring 11. Spring Plunger 12. Bracket Plate 13. Locknut, 10Nm 14. Plastic Ring 15. Shift Lever With Positioning Eccentric Ring：Before Installation, Installation Finished：Assemble Bracket Plate, Spring And Ball, Fixed By Spring Plunger 16. Bushing—Shift Lever：Installation, Make Sure That Do Not Press The Housing Open 17. Shield Plate 18. Selector Arm Assembly 19. Lock Washer 20. Gear Shift Arm 21. Selector Rod Ⅰ（Before Disassembly Press The Plastic Ball Clamp By Screw Driver） 22. Shift Lever (Different End Angle: Mark (Groove) Towards Selector Rod/ Gearshift Lever) 23. Gearshift Shaft 24. Gear Shift Arm Subassembly（Only One Position Can Assemble This Rod） 25. Locknut 25Nm 26. Selector Lever Ⅱ：Press The Plastic Ball Clamp By Screw Driver Before Disassembly 27. Selector Rod Arm Subassembly 28. O Ring 29. Left Back Bracket 30. Gear Shift Shaft Subassembly 31. Hexagon Bolt With Flange 35Nm 32. Gear Shift Shaft Bracket Sub-Assembly 33. Support Bushing 34. Shift Rod

SHIFT ADJUSTMENT

Neutral positioning：

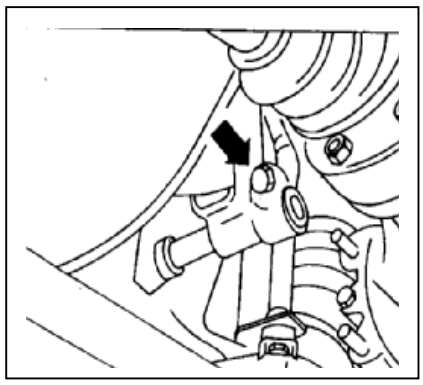
——Disassemble gearshift knob and protective cover and fix the gearshift knob according to the positioning requirement, see the chart (the black one is positioning assist)



——Leave the pipe clamp at its natural position.

——Clamp nut, fasten by 25Nm.

——Try all the shifts, gear shifting should be smooth and without stop, secure the validity of the reverse gear lockup.



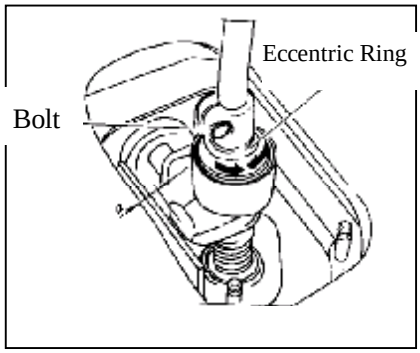
Fine adjustment:

——After a long time using of the vehicle, there will be wear and tear between gearshift mechanism parts which makes the space between shifts too much bigger and difficult for gear shifting then you need fine adjustment.

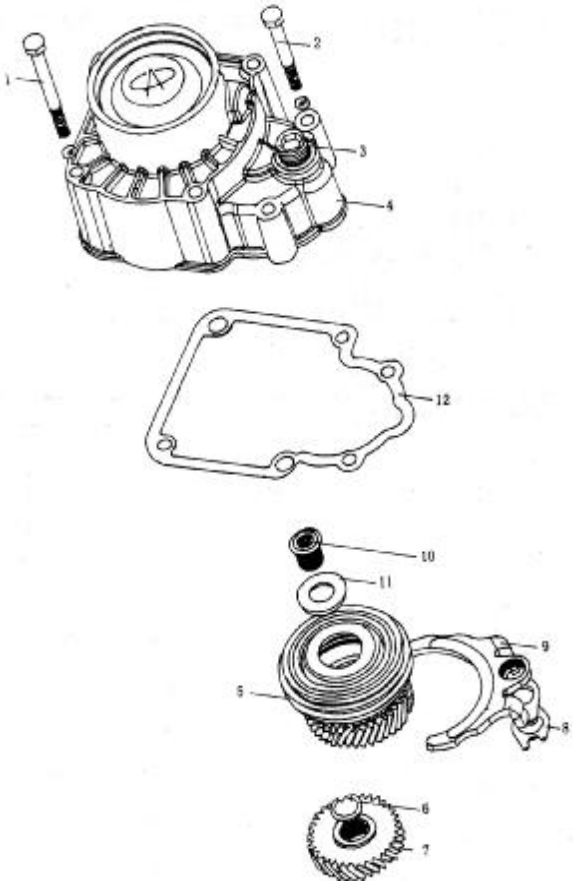
——Check the 1st shift position, loosen nut B, do as the chart show: Put transmission on 1st shift position, fasten bolt B by adjusting the eccentric ring position to a=1.5mm.

——Fasten clamp bolt (the transmission on the neutral position), try all the shifts, which should be smooth and easy.

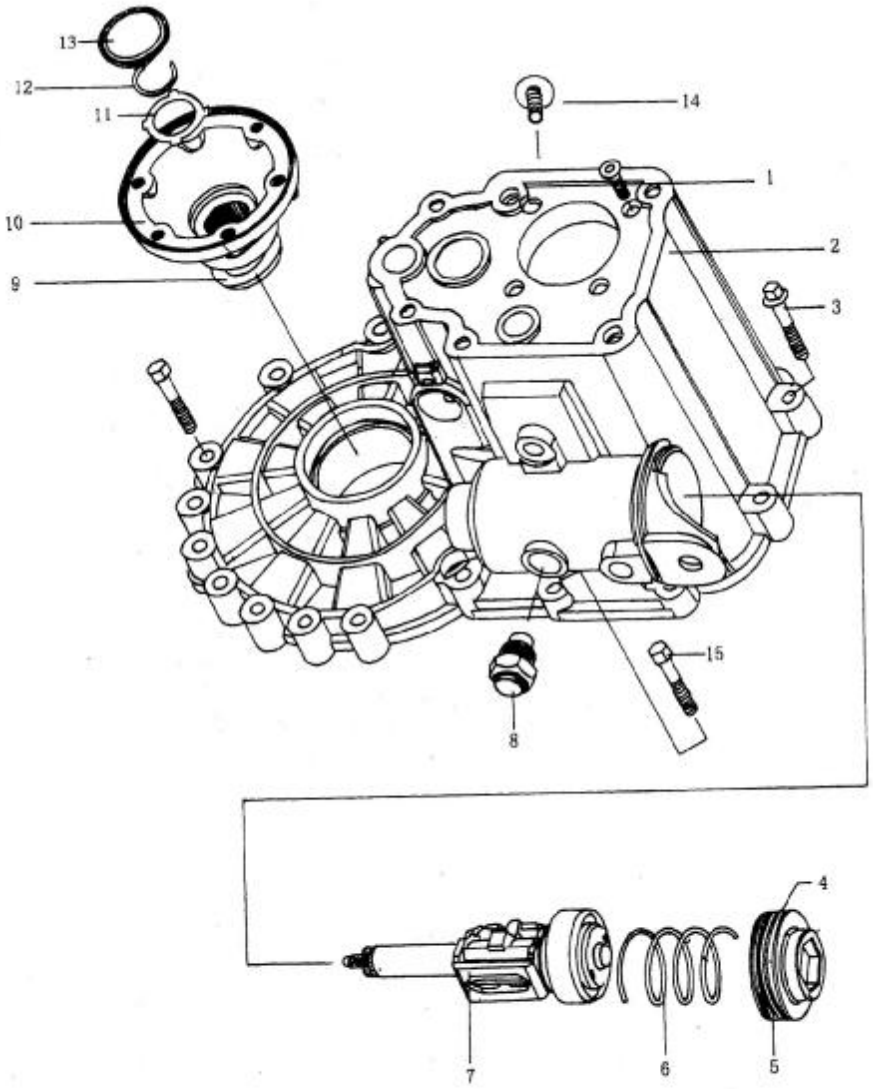
——Try all the shifts gear shifting should be smooth and without stop, secure the validity of the reverse gear lockup.



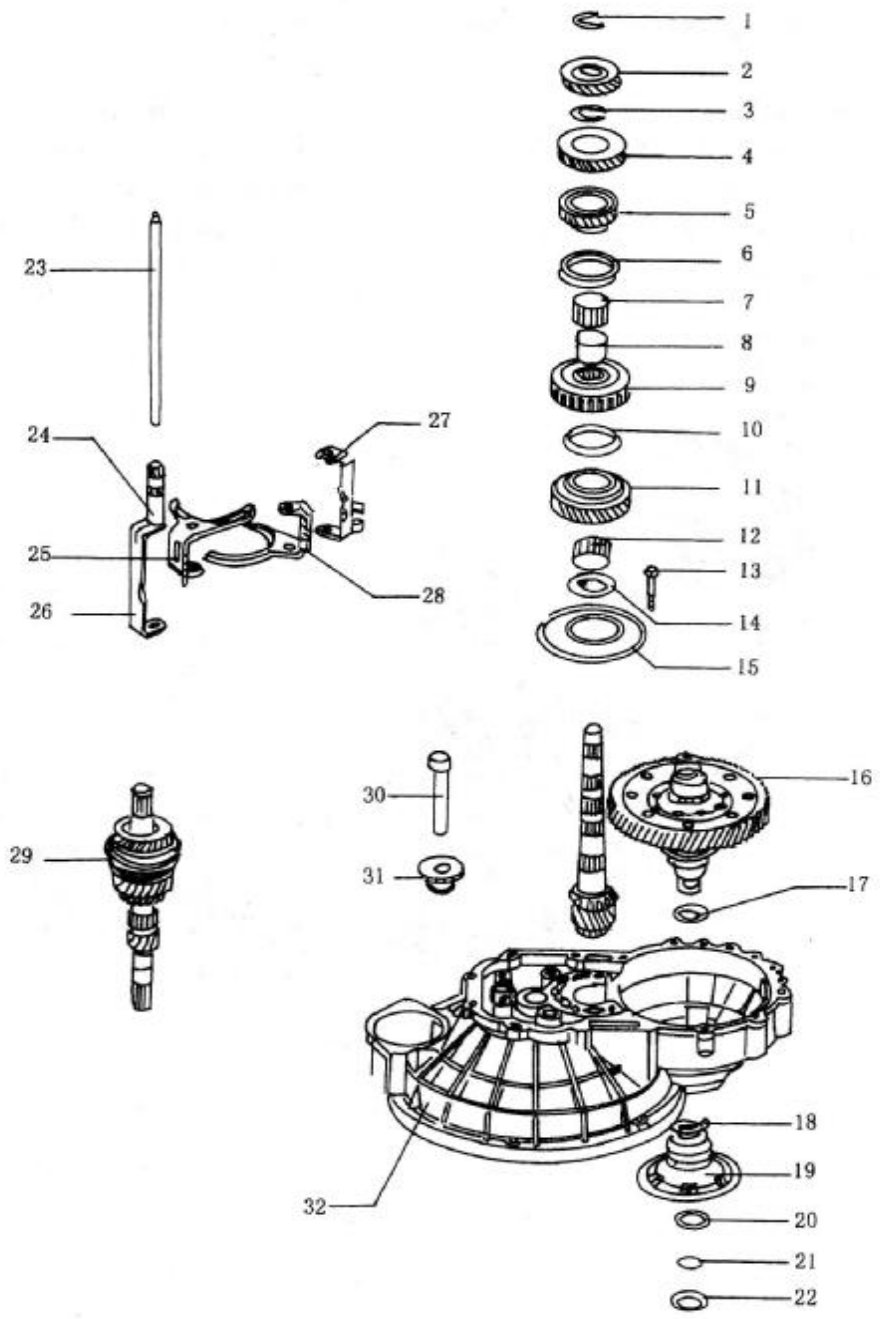
TRANSMISSION RESOLUTION



1. Fastening Screw (4 Pieces, Fasten Moment Is25n.M) 2. Fixing Screw (2 Pieces, Fasten Moment Is 25N.M) 3. Bleed Bolt 4. Transmission Rear Housing 5. 5th Synchronizer Assembly 6. 5th Driven Gear Snap Ring 7. 5th Driven Gear 8. 5th Fork Pad 9. 5th Fork Assembly 10. 5th Gear Holder Fixing Turnbuckle 11. Dish Washer 12. Shim



1. Input Shaft Rear Bearing Plate Screw (4 Pieces, Fasten Moment Is 15N.M) 2. Transmission Housing Assembly 3. Fixing Screw (12 Pieces, Fasten Moment Is 25N.M) 4. O-Ring 5. Gearshift Shaft Plug Cover 6. Gearshift Shaft Pressing Spring 7. Gearshift Assembly 8. Gearshift Positioning Holder Assembly 9. Pressing Spring-Damper Ring 10. Output Flange 11. Output Flange Dish Washer 12. Output Flange Snap Ring 13. Flange Cover 14. Idler Shaft Fixing Screw 15. Fixing Bolt (2 Pieces, Fasten Moment Is 25N.M)

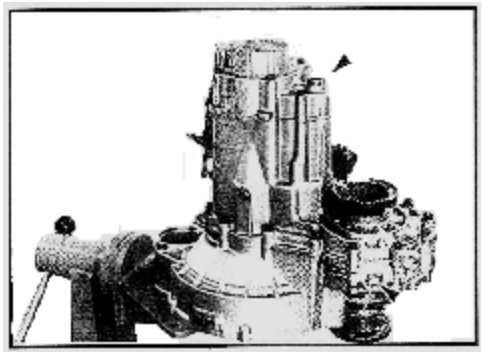


1. 4th Driven Gear Snap Ring 2. 4th Driven Gear 3. 3rd Driven Snap Ring 4. 3rd Driven Gear 5. 2nd Driven Gear 6. 2nd Synchronizer Ring 7. 2nd Roller Bearing 8. 2nd Roller Bearing Lining 9. 1st -2nd Synchronizer Assembly 10. 1st Synchronizer Ring 11. 1st Driven Gear 12. 1st Roller Bearing 13. Bearing Holder Fixing Bolt 14. 1st Roller Bearing Snap Ring 15. Output Shaft Intermediate Bearing Holder 16. Differential Assembly 17. Damper Ring 18. Pressing Spring-Damper Ring 19. Output Flange 20. Output Flange Dish Washer 21. Output Flange Snap Ring 22. Output Flange Cover 23. Fork 24. 5th Fork Sleeve 25. 3rd-4th Fork 26. 5th Fork Guide Plate 27. Reverse Fork Guide Plate 28. 1st-2nd Fork 29. Input Shaft Assembly 30. Idler Shaft 31. Idler Assembly 32. Clutch Housing assembly

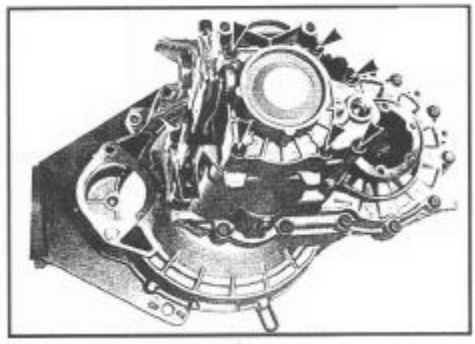
DISASSEMBLY AND ASSEMBLY OF THE TRANSMISSION

Disassembly：

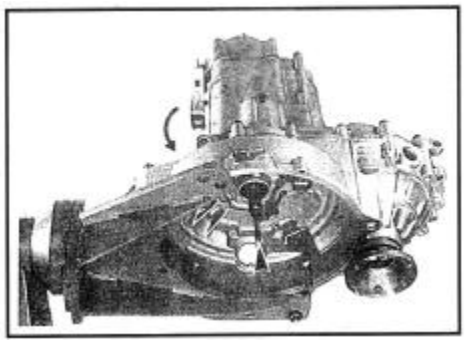
——Raise up the transmission, take off the drain plug on the transmission differential side, and at the same time take off the drain plug on the rear cover(see the arrowhead pointed stud). Discharge all the oil.



——Pull off the clutch separating tappet.

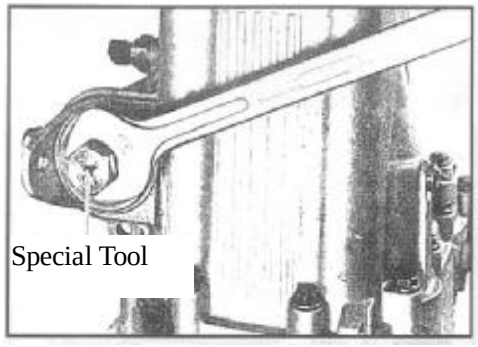


—— Take off the connecting bolt between rear housing and transmission housing and disassemble the rear housing assembly. Take off the clutch release bearing and rear housing gasket.

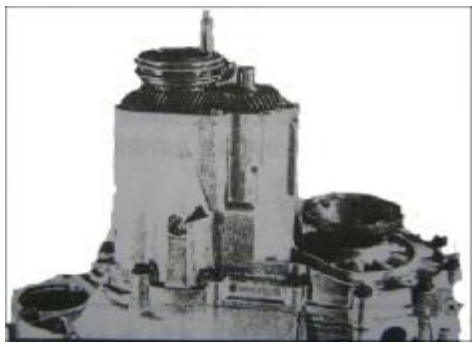


—— Take off the black gearshift shaft dustproof cover (A),take off gearshift positioning sear assembly (1) and reverse lamp switch (2).

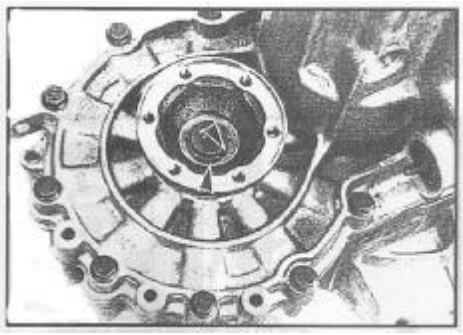
——Disassemble the gearshift shaft bolt by special tools and take off compression spring and gearshift shaft assembly.



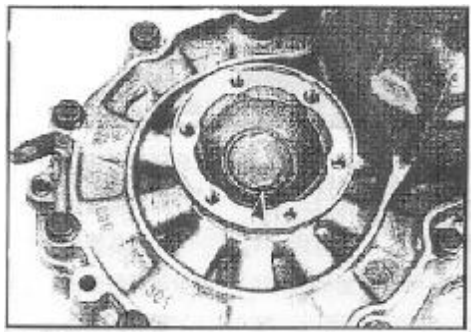
——Disassemble the reverse gear lockup screw (see as the arrowhead pointed).



——Disassemble left and right output flange cover.



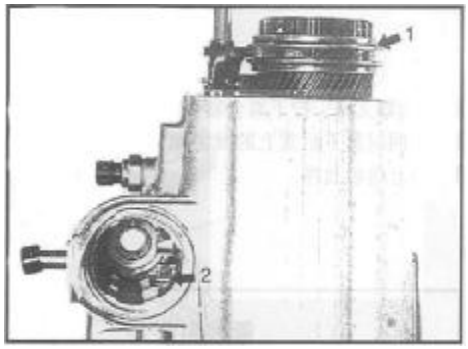
——Take out the internal snap ring and dish ring, and disassemble the output flange.



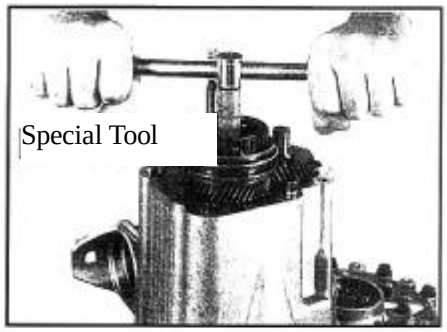
——Shift to 5th and reverse gear.

——Glide the synchronizer downward according to arrowhead 1 direction and shift to 5th.

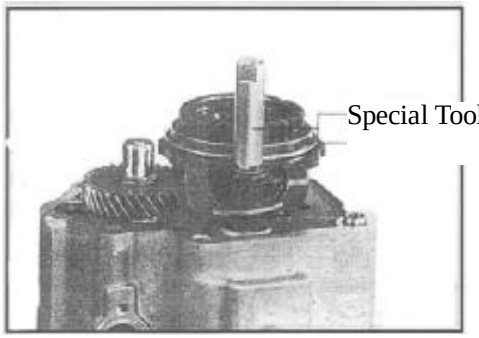
——Move the first fork downward according to the arrowhead 2 direction and shift to reverse gear.



——Take off fixing bolt and washer of the 5th synchronizer by a special tool.

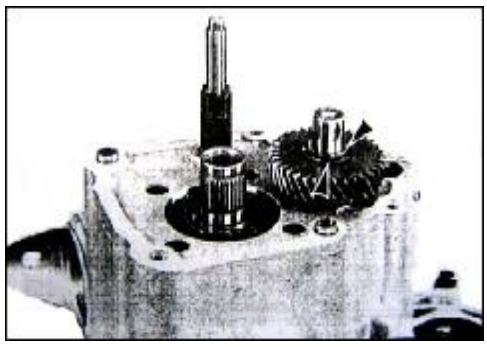


——Prize up the 5th fork pad and turn left the 5th fork bushing, take off the 5th fork assembly.

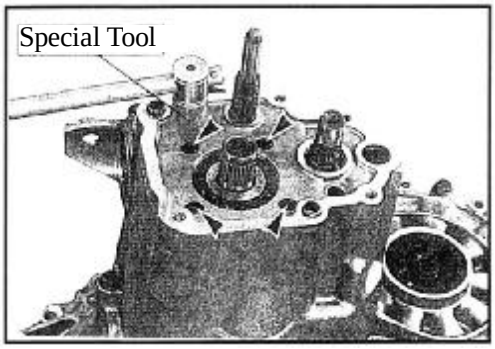


— — Disassemble 5th driving gear and its synchronizer assembly.（by special tools）

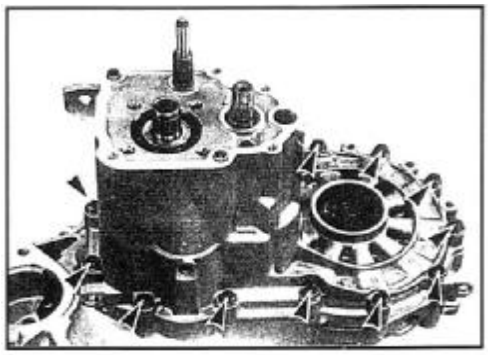
——Take off 5th driven gear snap ring and 5th driven gear.



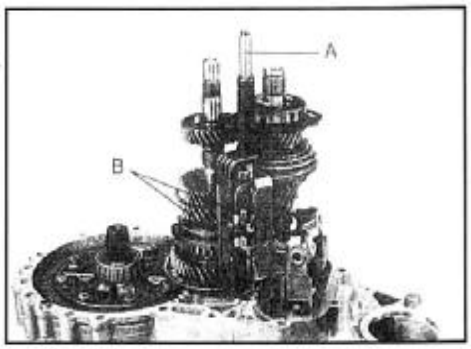
——Take off the bearing shift slice clamping bolt behind of input shaft by a special tool.



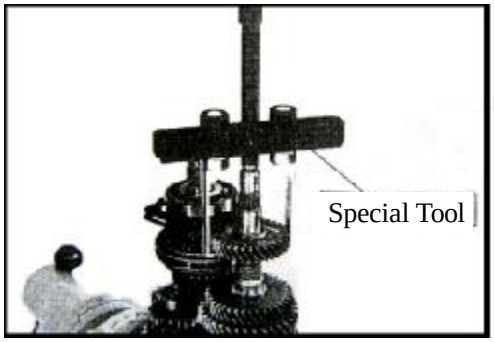
——Disassemble the fixing bolt of transmission front and rear housing, take off the transmission housing and front/rear housing gasket.



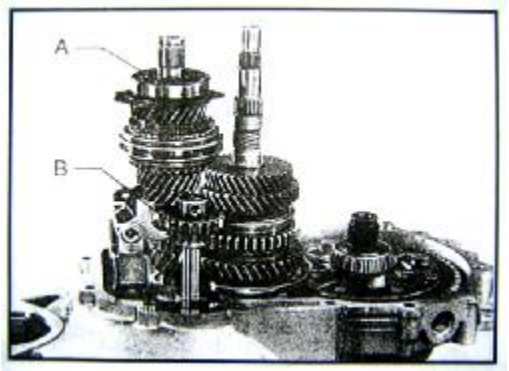
——Take off the fork shaft and its upper and lower spring, take off 5th fork guide assembly, reverse gear fork guide, 3rd-4th shift fork and 1st-2nd fork.



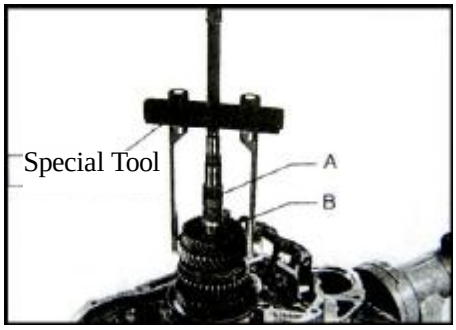
——Take off 4th driven gear snap ring and 4th driven gear (by a special tool).



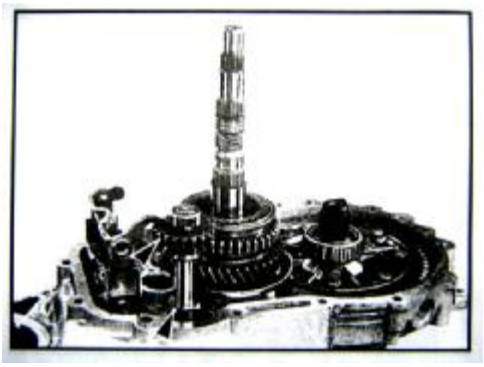
——Take off input shaft A assembly, pay attention that the reverse gear B are not the shift.



——Take off 3rd driven gear snap ring B from output shaft, and take off 3rd driven gear. And take off 2nd driven gear, needle bearing, and synchronizer ring from output shaft. (by special tool)



——Prize up reverse shaft by reverse gear idler until both of them are off clutch housing.

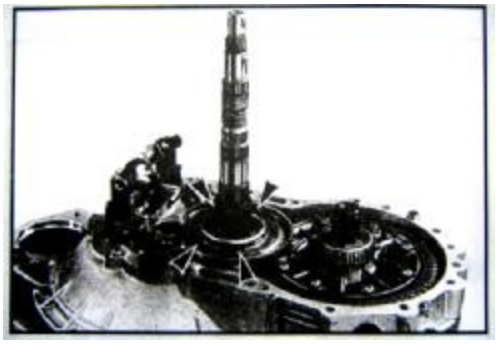


——Take off output shaft 1st and 2nd synchronizer assembly and 1st synchronizer ring, 1st driven gear and needle bearing, take off shift slice by a special tool.

——Screw off output shaft front bearing plate fixing screw, take out output shaft front bearing plate and output shaft.

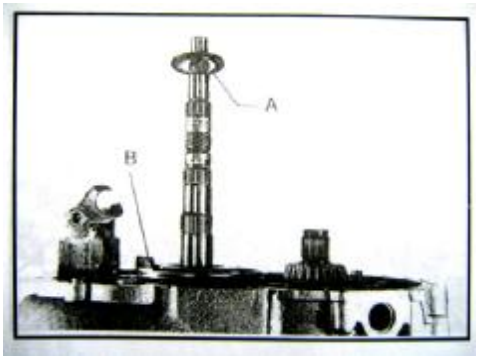
——Take off differential assembly.

——Disassemble reverse gear fork and bracket, returning spring and knob holder.



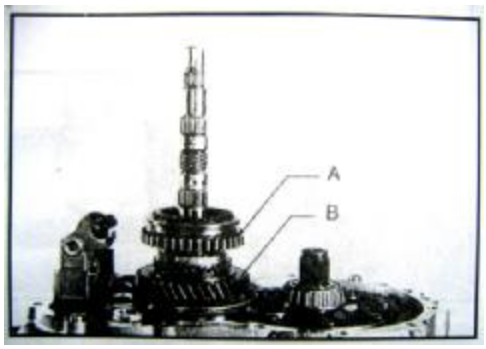
Assembly:

——The assembly of the transmission is in reverse of its disassembly, pay attention to the below items:

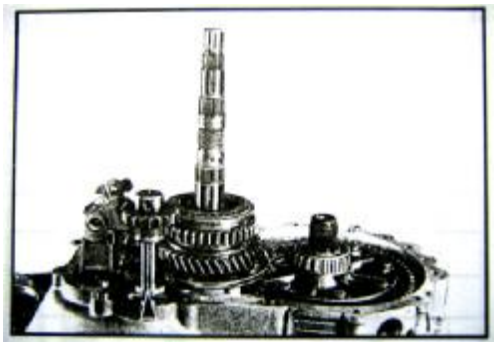


1. Assemble differential assembly on clutch housing, at first do not assemble output flange.
2. Assemble output shaft and output shaft front bearing plate, plug into fixing bolt and fasten by 40Nm moment.
3. Assemble thrust shim needle bearing. Pay attention to the direction of the thrust shim, the inside diameter of thrust shim A should be integrate closely with the bearing holder. Pay attention that don't mix up the 1st and 2nd synchronizer ring, 1st synchronizer ring is not sprayed molybdenum and has three gears missing.

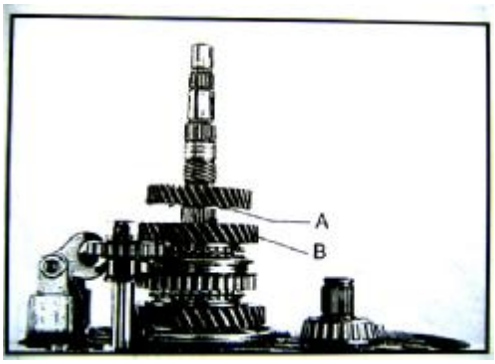
——The side with gears A towards 1st driven gear B when you assemble the 1st and 2nd synchronizer.



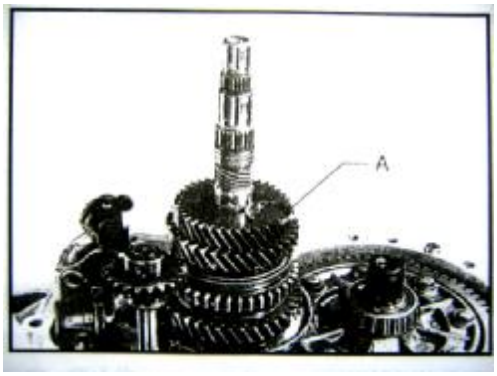
——Assemble reverse gear idler and idler shaft onto clutch housing.



——Assemble the needle bearing, synchronizer ring, and gear of 2nd and 3rd driven gear. When you assemble the 3rd driven gear, make sure that the side with bulge towards 2nd driven gear.

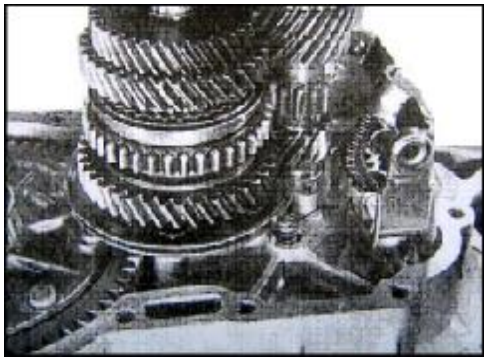


——Use snap ring to adjust the axial size after the assembly of 3rd driven gear. Choose the thickest snap ring from the permitted size and assemble it into the snap ring groove. Make sure that the snap ring can not too big and can be assembled into the groove.



Part No.	thickness（mm）
015-1700381AA	2.8
015-170038AB	2.9
015-1700381AC	3.0
015-1700381AD	3.1
015-1700381AE	3.2

——Make sure put the balance spring of fork shaft into the clutch housing fork shaft hole.



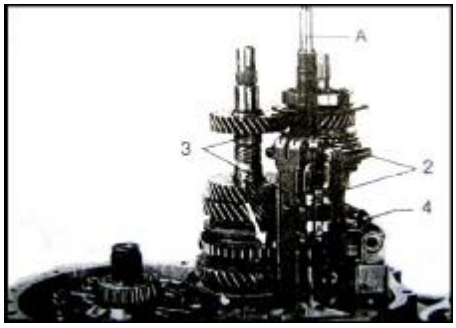
——Assemble the fork assembly into its right position, and then assemble the idler shaft.

1—1st and 2nd fork

2—3rd and 4th fork

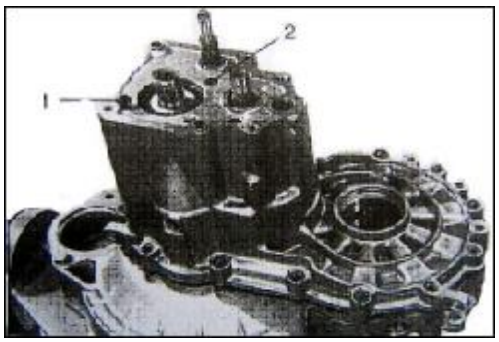
3—5th fork guide and bushing

4—reverse gear fork guide



——Assemble input shaft rear axle pump plate A, pay attention that the position of A should be the same as in the picture. Put new front and rear housing seal shim and assemble transmission housing.

——Put M17 bolt 1 into the threaded hole(see the picture), grasp the fork shaft and fillip the transmission housing with plastic hammer until the bearing out of position to the right place. Put in bolt 2 with 15Nm moment. Put in reverse gear shaft bolt and fasten by 20Nm moment, put in front/rear housing fixing bolt and fasten by 25Nm moment; fasten the rear bearing plate of input shaft by 15Nm moment.

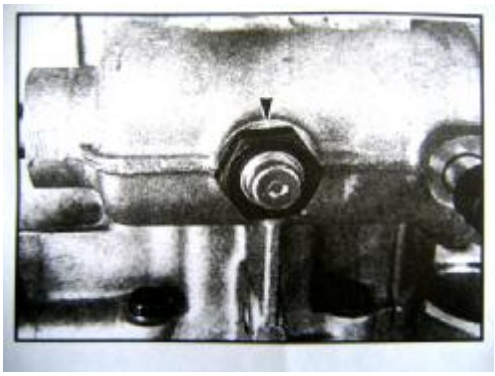


Main points:

1. Please do not take off the fork shaft from 5th fork bushing otherwise the fork and guide plate will deviate its right position and fallout.
2. Before assemble the gearshift shaft please put the transmission at it neutral position.

—— Inset gearshift shaft and big compression spring, fasten the bolt cover by 50Nm moment.

——Screw in gearshift positioning holder assembly and fasten it by 40Nm moment.



ADJUSTMENT OF 5TH FORK

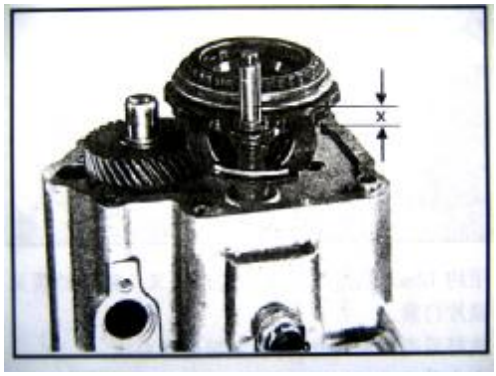
Adjustment:

——Adjust the 5th fork as below:

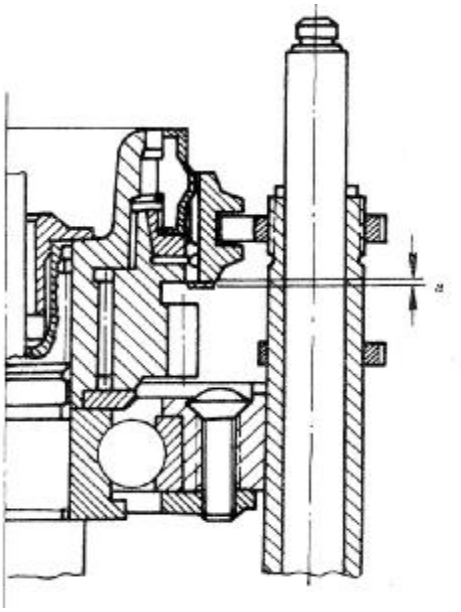
Turn fork bushing right until the fork bushing out X=5mm.

Pull off selector shaft and turn left shift to 5th.

Lift 5th coupling housing sleeve slightly by the fork to eliminate the space between the driving elements.



——Inspect the space between 5th coupling sleeve and 5th driving gear. Nominal value a=1mm. turn 5th fork bushing and adjust the value to 1mm if it is necessary.



Main points:

Move the slip cap and fork slightly to eliminate the free space when measuring the space a.

——Fasten the 5th shift fork pad using a special tool to support the gearshift fork. At last put on the rear housing gasket and rear housing assembly.

——Lubricate the top of clutch separating rod and insert. Shift to the gears and check the meshing conditions.

DISASSEMBLY, RESOLUTION GRAPH AND ASSEMBLY OF THE REAR HOUSING

Disassembly:

The disassembly of the rear housing can be finish even if the transmission is not disassembled from the car. The disassembly as below:

1）Drive the car to the platform.

2）Disassemble clutch control cable assembly.

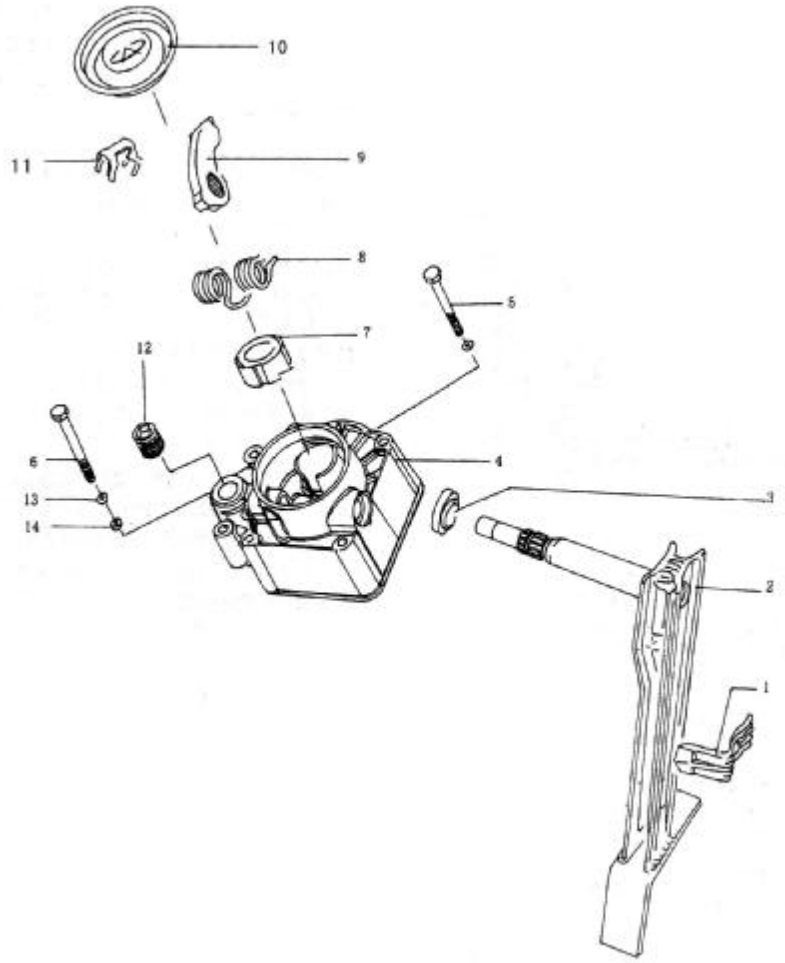
3）Disassemble the engine bracket on the transmission side.

4）Lift the vehicle by a lifter.

5）Screw off the drain bolt under the differential, discharge all the transmission oil

6）Take off the fixing bolt of rear housing and dismantle the rear housing.

Resolution graph:



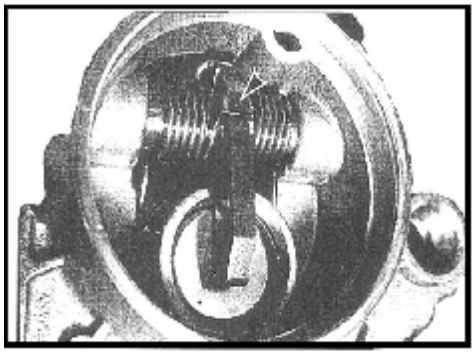
1. Clamp—release arm 2. Release arm assembly 3. Clutch release shaft oil seal 4. Rear housing 5. Fixing bolt 6. Rear housing fixing bolt 7. Clutch release bearing 8. Return spring 9. Clutch release finger 10. Back cover 11. Fixing clip 12. Drain bolt 13. Flat spacer 14. Spring washer

Assembly：

The assemble process of rear housing is opposite to it's disassemble process.

DISASSEMBLY AND ASSEMBLY OF CLUTCH CONTROL ARM, CLUTCH RELEASE SHAFT OIL SEAL, AND CLUTCH RELEASE BEARING

Disassembly:



——Drive car to the platform.

——Disassemble the clutch control cable assembly.

——Disassemble engine bracket on the transmission side.

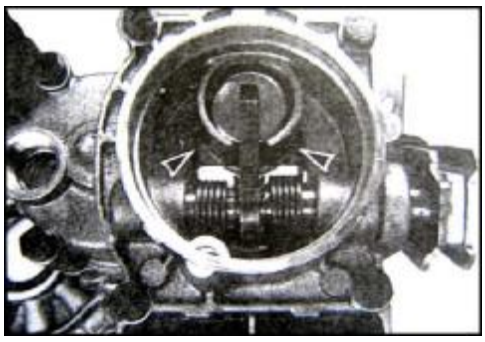
——Lift the vehicle by lifter.

——Discharge all the transmission oil by screw off the drain bolt under the differential.

——Get off the back cover by punch, do not hurt the contact surface. Disassemble the fixing clip of the separated finger; pull off clutch release shaft, separated finger and spring.

——Take off clutch release bearing, and punch off clutch release shaft oil seal assembly. Do not hurt the contact surface.

Assembly:



Assembly is opposite to the disassembly process, pay attention to the following items:

——Lubricate the oil seal surface and put it in by a special tool.

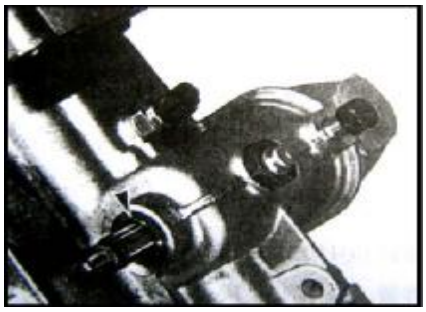
——Assemble clutch separated finger to the position shows in the picture, and then assemble release bearing, spring and clip. The spring position shows in the picture.

——Press the new back cover to its right position by special tool. If it is assembled on the vehicle, extra work as below: fill transmission oil to the specified level.

——Lower the vehicle on the platform and connect to clutch control cable.

DISASSEMBLY AND ASSEMBLY OF THE GEARSHIFT SHAFT OIL SEAL

——The disassembly and assembly of the gearshift shaft oil seal can be done when the transmission is not broke down.

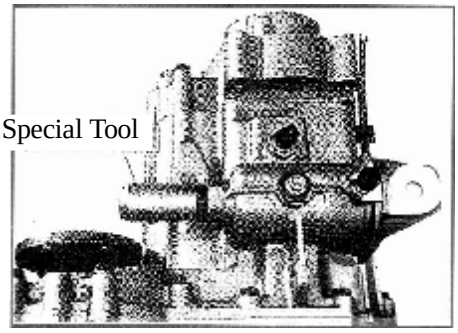


Disassembly:

——See the picture, remove the oil seal by a flat spade or punch.

Assembly:

——Lubricate the lip of oil seal and press oil seal into transmission housing completely by a special tool.

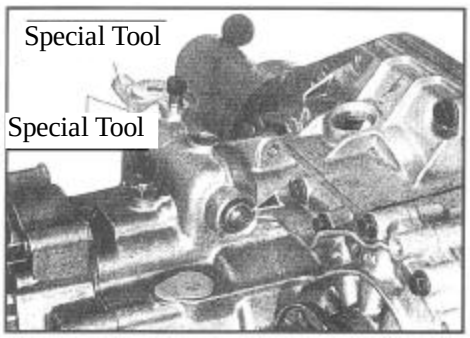


DISASSEMBLY AND ASSEMBLY OF THE GEARSHIFT SHAFT BEARING

Disassembly:

——It needs to take off the gearshift shaft and oil seal as changing the gearshift shaft bearing.

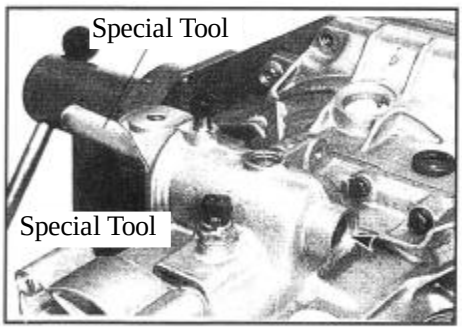
——Penetrate the special tool into gearshift shaft housing, see the picture, and tap it slightly until the gearshift shaft out from the other side.



Assembly:

——Assemble the bearing inside of the position which can contain the gearshift shaft.

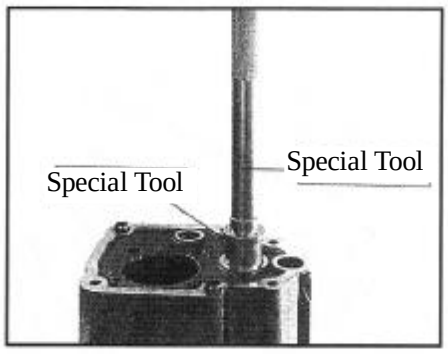
——Press the bearing to its right position by special tool and then assemble the gearshift shaft.



DISASSEMBLY AND ASSEMBLY OF THE OUTPUT SHAFT NEEDLE BEARING

Disassembly:

——Remove the needle bearing by special tool, see the picture.

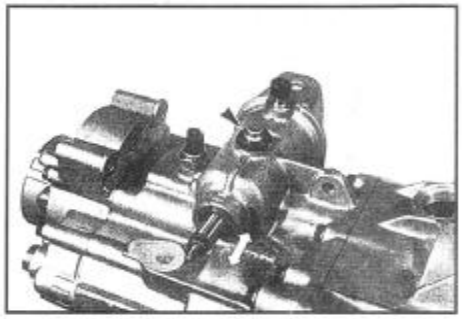


Assembly:

——Press the needle bearing to its right position by special tool.

DISASSEMBLY AND ASSEMBLY OF THE GEARSHIFT SHAFT

——It need not to break down the transmission assembly.



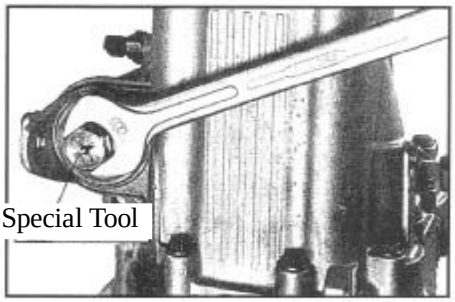
Disassembly:

——Put transmission assembly on the shelf or workbench.

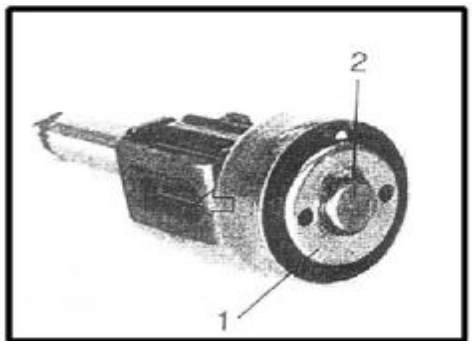
——Leave it on the neutral position. (The gearshift shaft move smoothly on arrowhead direction)

——Screw off the gearshift positioning holder assembly.

——Unscrew the bolt cover by special tool and take off gearshift shaft.



——See the picture, press the spring holder to the arrowhead direction to compress the internal spring. Keep at this position until disassemble the snap ring No.2.



Assembly:

——The assemble process is opposite to above process.

Main point:

——Make sure the fork system on neutral gear.

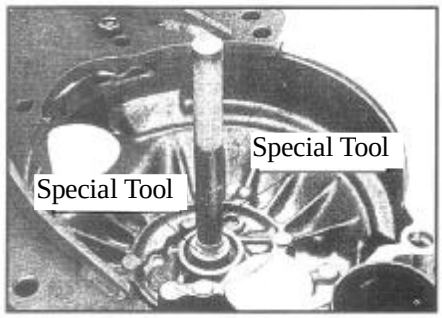
——Moment to fasten bolt cover is 50Nm.

——Moment of fastening the gearshift shaft positioning holder is 40Nm.

DISASSEMBLY AND ASSEMBLY OF INPUT SHAFT NEEDLE BEARING

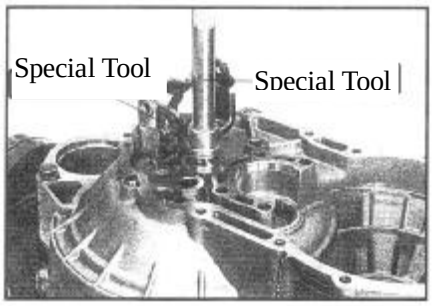
Disassembly:

——See the picture, dismantle the needle bearing by special tool.



Assembly:

——See the picture, assemble the input shaft needle bearing by special tool, and make sure press it to the right position.

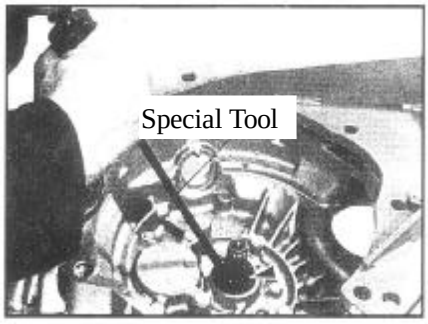


DISASSEMBLY AND ASSEMBLY OF THE INPUT SHAFT OIL SEAL

Disassembly:

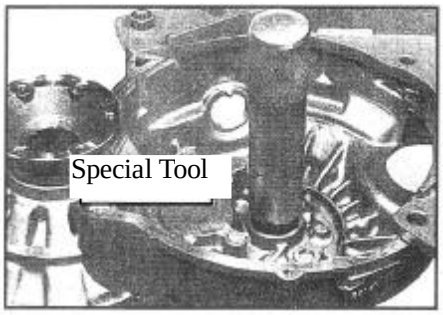
——It need not to break down the transmission when disassemble the input shaft oil seal.

See the picture, disassemble the input oil seal according to the arrowhead direction by special tool



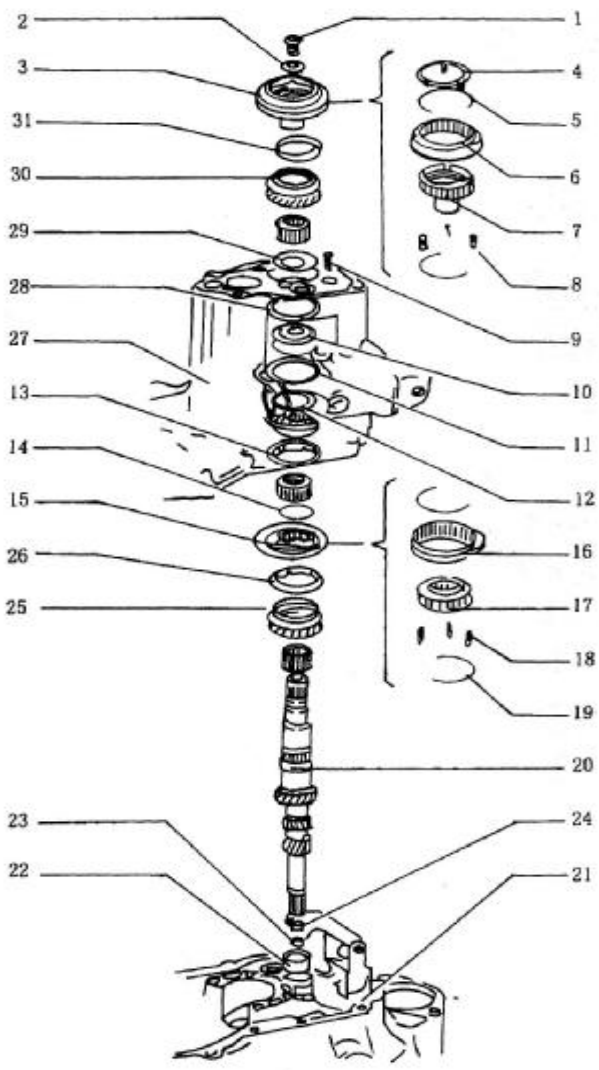
Assembly:

——See the picture, lubricate the lip of the oil seal and press the oil seal to its right position by special tool.



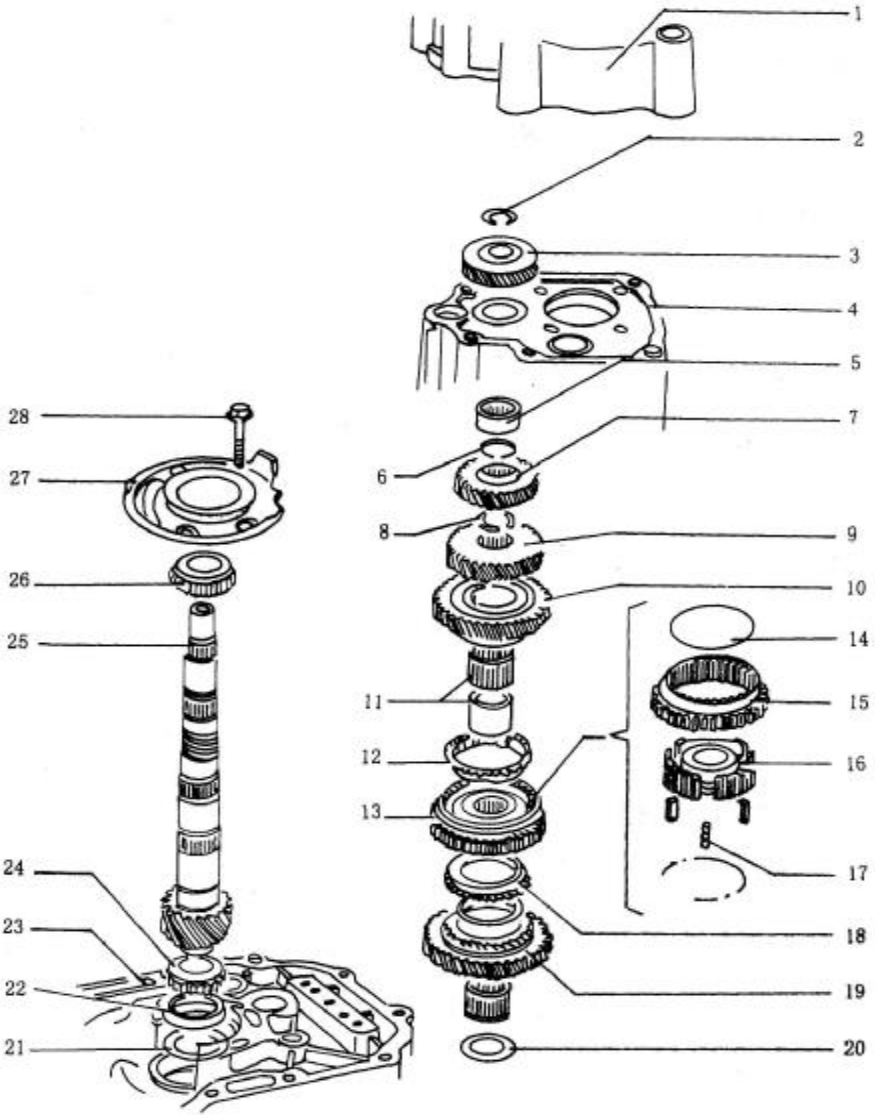
RESOLUTION GRAPH OF INPUT SHAFT

1. 5th Synchronizer fixing bolt 2. Fixing bolt shim 3. 5th Synchronizer assembly 4. 5th Synchronizer gate bracket 5. 19 Steel spring 6. 5th Hub sleeve 7. 5th Clutch hub 8. 18 Gate 9. Fixing screw of rear bearing plate 10. Input shaft rear bearing 11. Rear bearing plate 12. 4th Driving gear 13. 4th Synchronizer ring 14. Snap ring 15. 3rd-4th Synchronizer assembly 16. 3rd-4th Hub sleeve 17. 3rd-4th Clutch hub 20. Input shaft 21. Clutch housing 22. Needle bearing 23. Oil seal of clutch tappet 24. Bushing of clutch tappet 25. 3rd Driving gear 26. 3rd Synchronizer 27. Transmission housing 28. Adjustment shim (may not use) 29. 5th Driving gear plate 30. 5th Driving gear 31. 5th Synchronizer ring



Resolution Of Input Shaft

RESOLUTION GRAPH OF OUTPUT SHAFT



1. Rear housing 2. 5th Driven gear snap ring 3. 5th Driven gear 4. Transmission housing 5. Needle bearing 6. 4th Driven gear snap ring 7. 4th Driven gear 8. 3rd Driven gear snap ring 9.3rd Driven gear 10. 2nd Driven gear 11. 2nd Driven gear and bushing 12. 2nd Synchronizer ring 13. 1st-2nd Synchronizer assembly 14. Steel spring 15. 1st-2nd Gear sleeve 16. 1st-2nd Hub 17. Gate 18. 1st Synchronizer ring 19. 1st Driven gear 20. 1st Needle bearing snap ring 21. Adjustment shim 22. Front bearing external ring 23. Clutch housing 24. Output shaft front bearing 25. Output shaft 26. Output shaft intermediate shaft 27. Intermediate bearing pedestal 28. Bearing fixing bolt Output shaft break down

ADJUSTMENT TABLE

Adjustment items:

——During the repair of transmission assembly, you should think about to adjust the output shaft or differential assembly installing dimension when you change any of the below element.

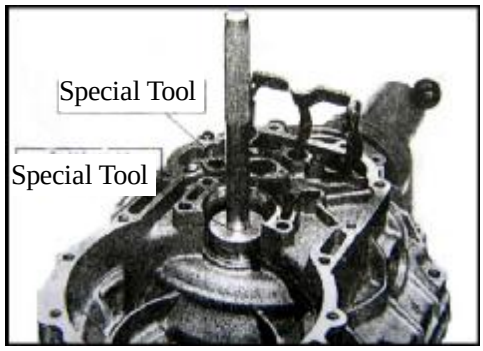
——In order to avoid the ungrateful work we provide the right table to you.

Changed parts	Adjusted items	
	Output shaft	Differential
Transmission housing	No	Adjust
Clutch housing	Adjust	Adjust
Differential cone bearing	No	Adjust
Output shaft	Adjust	No
Output shaft intermediate bearing pedestal	Adjust	No
Differential housing	No	Adjust
Output shaft intermediate bearing	Adjust	No
Output shaft front bearing	Adjust	No

ADJUSTMENT OF OUTPUT SHAFT

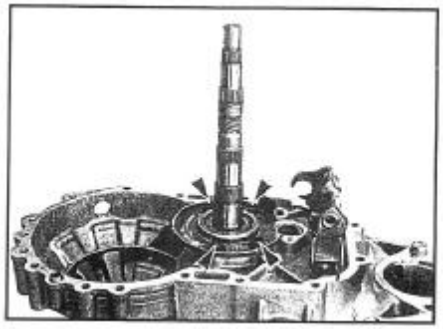
Adjustment:

——You need adjust the thickness of the output shaft shim after you replaced any part of clutch housing,output shaft,output shaft intermediate bearing pedestal, output shaft intermediate bearing or output shaft front bearing.



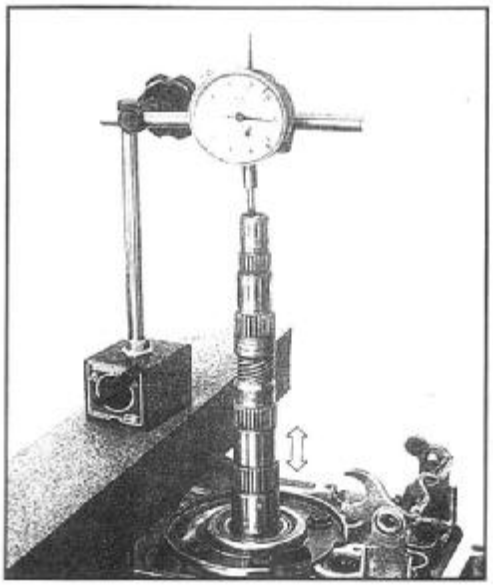
——See the picture, insert adjustment shim with 0.65mm thickness, and press front bearing external ring of output shaft to bearing pedestal.

——Insert the output shaft assembly, put on bearing pedestal and fasten with 40Nm moment. See the picture.



CALCULATE THE THICKNESS OF THE ADJUSTMENT SHIM

——Put a platform benchmark on the clutch housing, and put a dial indicator with magnetic base on the benchmark. Set to zero when the pre fasten force is 1mm. Move the input shaft up and down according to the arrowhead direction, read and record the indication of the indicator.

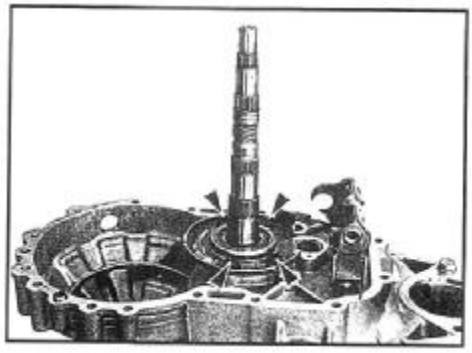


Main points:

——During measuring, do not roll the output shaft otherwise the bearing will fall down and get wrong measuring value.

Disassembly:

——For bearing pre fasten it needs thickness of the adjustment shim 0.20m; if the reading of the dial indicator is 0.30mm, and the thickness of the shim put in advance is 0.65mm, then the thickness of the adjustment shim should be 0.20mm+0.30mm+0.65mm =1.15mm.



——See the picture, screw off bearing plate bolt and take out output shaft.

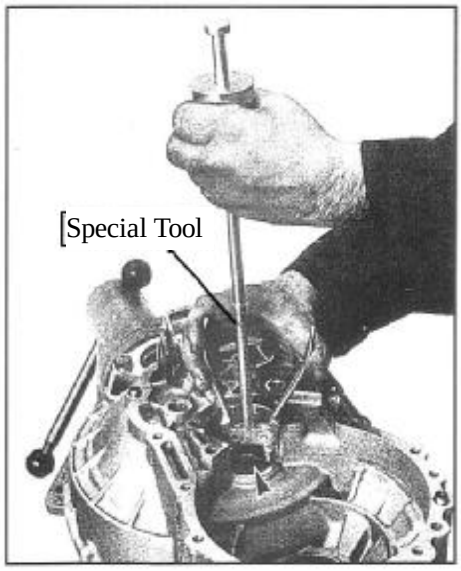
——Take out front bearing external ring of output shaft.

——Take out the original adjustment shim.

Assembly:

——Put the propriety adjustment shim to it right position and press output shaft front bearing external ring. Lubricate the bearing by gear oil and insert output shaft. Put on bearing plate and bolt fasten by 40Nm moment.

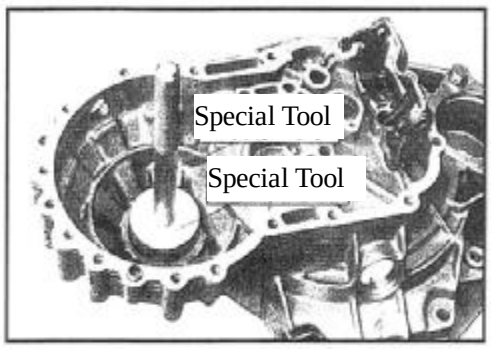
——After changing one of below parts: Clutch housing, transmission housing, differential bearing and differential housing, you need readjust the adjustment shim thickness for differential bearing pre fasten.



Adjustment:

——Press differential bearing external ring completely by special tool.

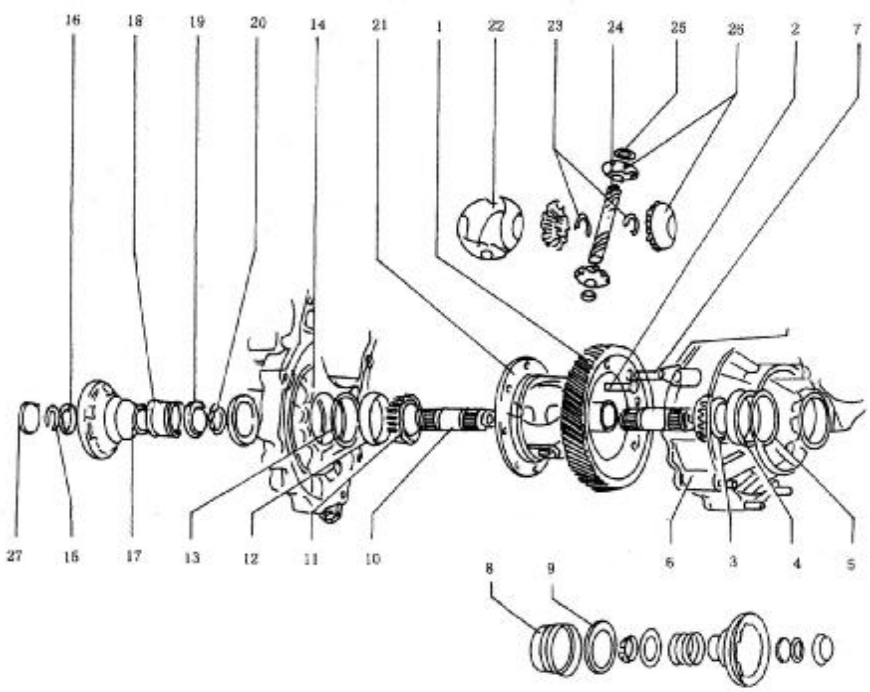
——Press differential bearing external ring to the right position on transmission housing without any adjustment shim, and put differential assembly. Assemble transmission housing on to clutch housing and fasten the connecting bolt by 25Nm moment.



Put a special tool on small axle shaft and put a dial indicator with magnetic base on the benchmark. Set the dial indicator to zero when the pre fasten force is 1mm. Move the differential assembly up and down from one side and record the indication of the indicator.
Notice: during measuring, do not roll the differential assembly otherwise it will influence the accuracy.
Calculate the adjustment shim thickness:
For bearing pre fasten it needs thickness of the adjustment shim 0.40m; if the reading of the dial indicator is 0.90mm, then the thickness of the adjustment shim should be 0.40mm+0.90mm=1.30mm.
Disassemble the connecting bolt of differential housing and clutch housing, take out differential bearing external ring, and buildup the needed adjustment shim thickness by the least shim, put it to its right position on clutch and press differential bearing external ring completely. Assemble gasket and transmission housing, and fasten the fixing bolt by 25Nm moment.

RESOLUTION GRAPH OF THE DIFFERENTIAL ASSEMBLY

RESOLUTION GRAPH

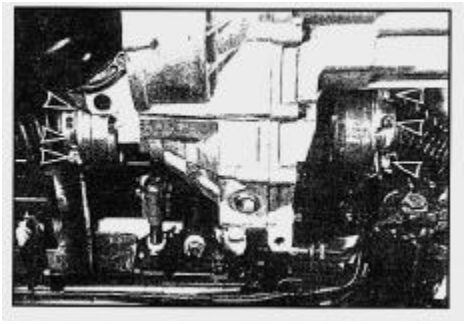


1, Final drive driven gear 2, Rivet 3, 11, Needle bearing 4,12, Needle bearing external ring 5,13, Adjustment shim 6, Clutch housing 7, Rivet (may not use) 8, Oil seal holder 9, Oil seal 10, Small axle shaft 14, Transmission housing 15, Output flange snap ring 16, Output flange dish washer 17, Output flange 18, Compression spring 19, Spring seat ring 20, Damper ring 21, Differential housing 22, Knob gasket 23, Snap ring 24, Planet gear shaft 25, Planet gear snap ring 26, Axle shaft gear and planet gear 27, Output flange cover

Break down of differential assembly

DISASSEMBLY AND ASSEMBLY OF OIL SEAL AND OUTPUT FLANGE

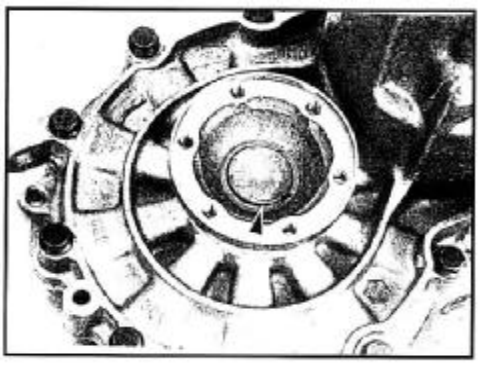
——The disassembly of this part can be carried out at the condition not break down the transmission assembly.



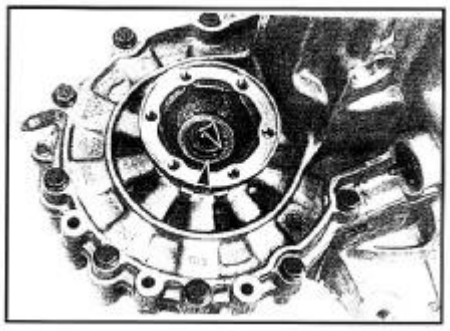
Disassembly:

——Disassemble the connecting bolt between propeller s haft and flange, disassemble drive shaft and fix it on somewhere.

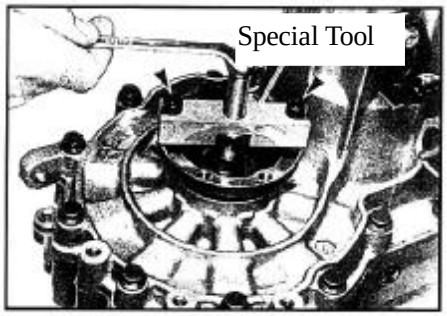
——Remove flange cover by a special tool.



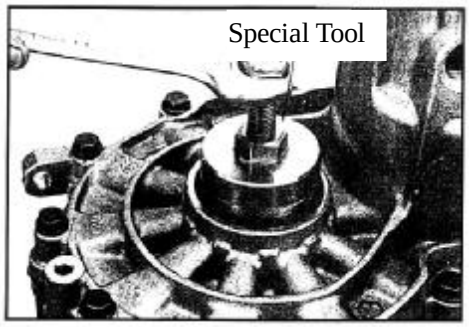
——Take out snap ring and dish washer.



——See the picture, fix the special tool on flange by M8 bolt, rotate the shaft of special tool by wrench to disassemble the output flange. Take off spring seat and compression spring.

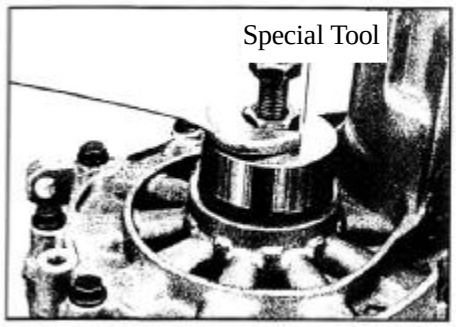


——Fasten the special tool on oil seal, rotate the special tool threaded shaft by wrench until screw off the oil seal.

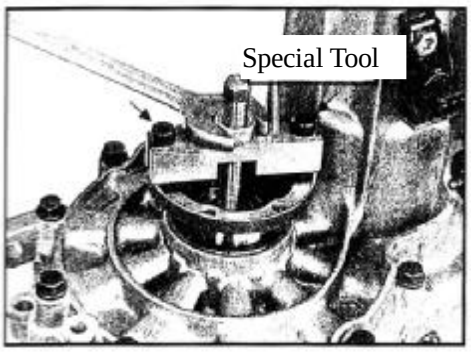


Assembly:

——Use the right size oil seal and lubricate its lip. Put it to its right position by special tool and rotate the screw of the special tool make oil seal to its true position.



——For the assembly of output flange, you can use press or special tool press it into its position, see the picture.



——Assemble dish washer and check if it is at its right position

——Assemble snap ring and make sure it is inside of snap ring groove.

——Assemble a new flange cover.

——Connect drive shaft and output flange together, if it is necessary put lubricant to the stipulated position.