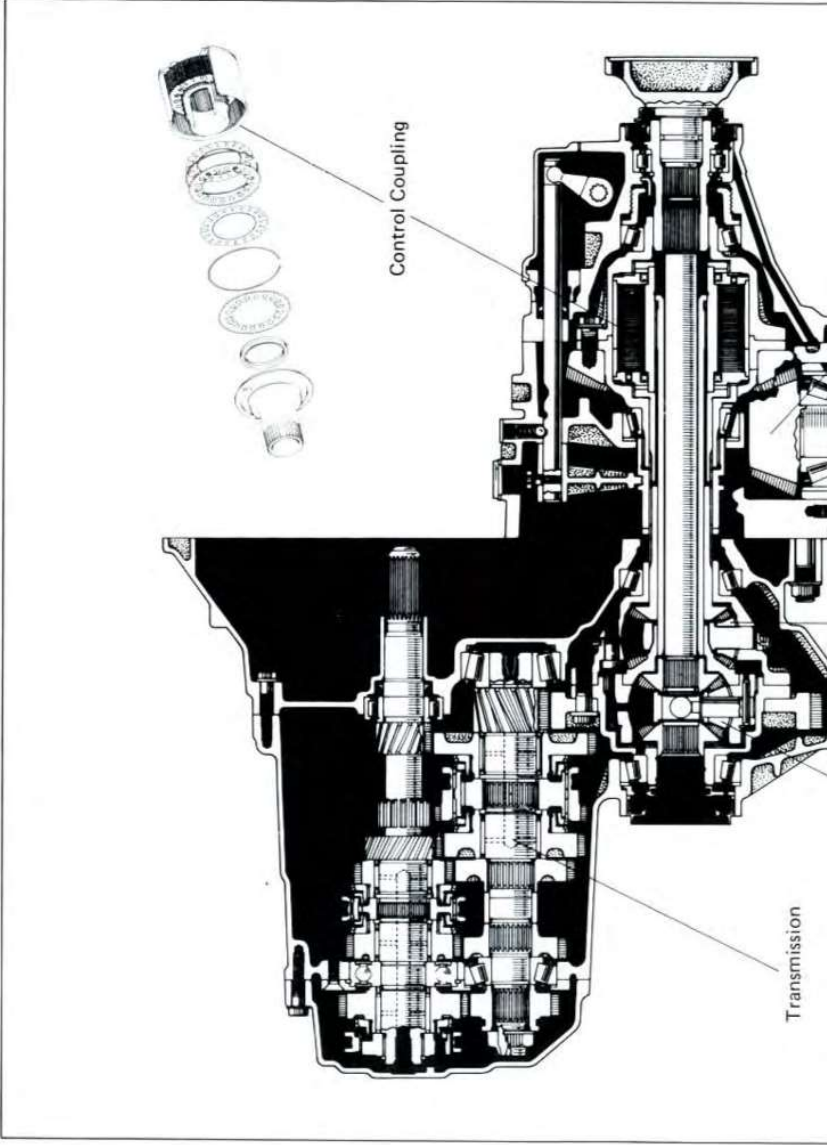


MANUAL TRANSAXLE (E50F2)

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DESCRIPTION	MT-2
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INSTALLATION OF COMPONENT PARTS	MT-83
SHIFT LEVER AND CONTROL CABLE	MT-97



MT-2	MANUAL TRANSAXLE — Description
DESCRIPTION	
GENERAL	
• The E50F2 transaxle has been compactly designed by arranging the transmission, the center differential, the front differential and the transfer on the same quadruple case axle. • The center differential, which compensates the difference in rotation speed between the front and rear wheels, utilizes bevel gear to provide durability and reliability by distributing the engine power from the transmission 50/50 to both front and rear propeller shafts. This center differential has been equipped with a control coupling which functions as a LSD.	
	

MANUAL TRANSAXLE — Description MT-3

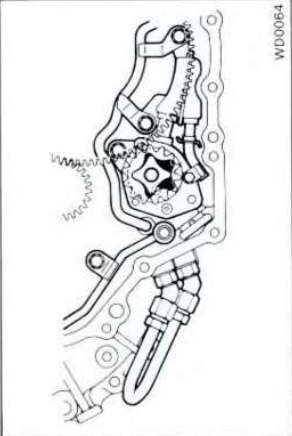
Transaxle type	E50F2	
Transmission	Operation method	Floor shift vehicles are provided with push-pull type remote control
	Transmission type	Forward : Constant mesh Reverse : Sliding mesh
Center differential	Reduction side (Gear type)	Helical gear
	Differential side (Gear type)	Bevel gear
	Type of differential center mechanism	Viscous coupling
Transfer	Gear type	Hypoid gear

- The oil used in each transaxle is as follow:
Transaxle oil E50 (08885-80206) or equivalent

(Recommended oil
Oil grade: API GL-5
Viscosity: SAE 75W-90 or 80W-90
Above -18°C (0°F) SAE90
Below -18°C (0°F) SAE80W

- The oil capacity: 4.8 Liters (5.1 US qts, 4.2 Imp. qts)

OIL PUMP

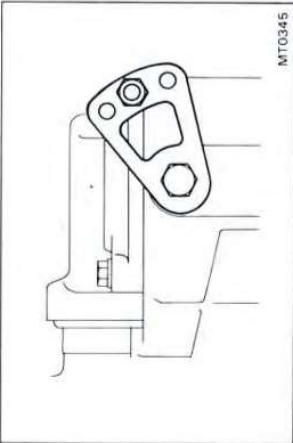


- The oil pump is of the trochoid type, and is driven by the differential ring gear and the pump drive gear. It is located at the bottom of the transaxle case.

POWER TRANSMISSION

- Power from the transmission is transmitted along the route shown below:



MT-4	MANUAL TRANSAXLE — Description
SELECT LEVER FOR SERVICING • Ordinarily, there is no need for the ordinary customer to operate anything. • However, to operate 2 wheels out of the four, the following switches have been installed.	
 MT0344	VISCOUS MODE This is the mode for use during normal driving. After finishing inspection, be sure to return the lever to this mode and attach the lock bolt.
 MT0345	VISCOUS FREE MODE This mode cuts off the driving force transmitted from the center differential to the control coupling, and makes the center differential free. CAUTION: Never use this during normal driving.
 MT0346	FF MODE This mode cuts off the driving force transmitted from the center differential to the transfer, and locks the center differential. However, when the lever is shifted to this mode, the driving force is transmitted only to the front wheels. CAUTION: Never use this during normal driving. It will have a bad effect on the transaxle.

PRECAUTIONS

When working with FIPG material, you must be observe the following.

- Using a razor blade and gasket scraper, remove all the old packing (FIPG) material from the gasket surfaces.
- Thoroughly clean all components to remove all the loose material.
- Clean both sealing surfaces with a non-residue solvent.
- Apply the seal packing in approx. 1 mm (0.04 in.) bead along the sealing surface.
- Parts must be assembled within 10 minutes of application. Otherwise, the packing (FIPG) material must be removed and reapplied.

TROUBLESHOOTING

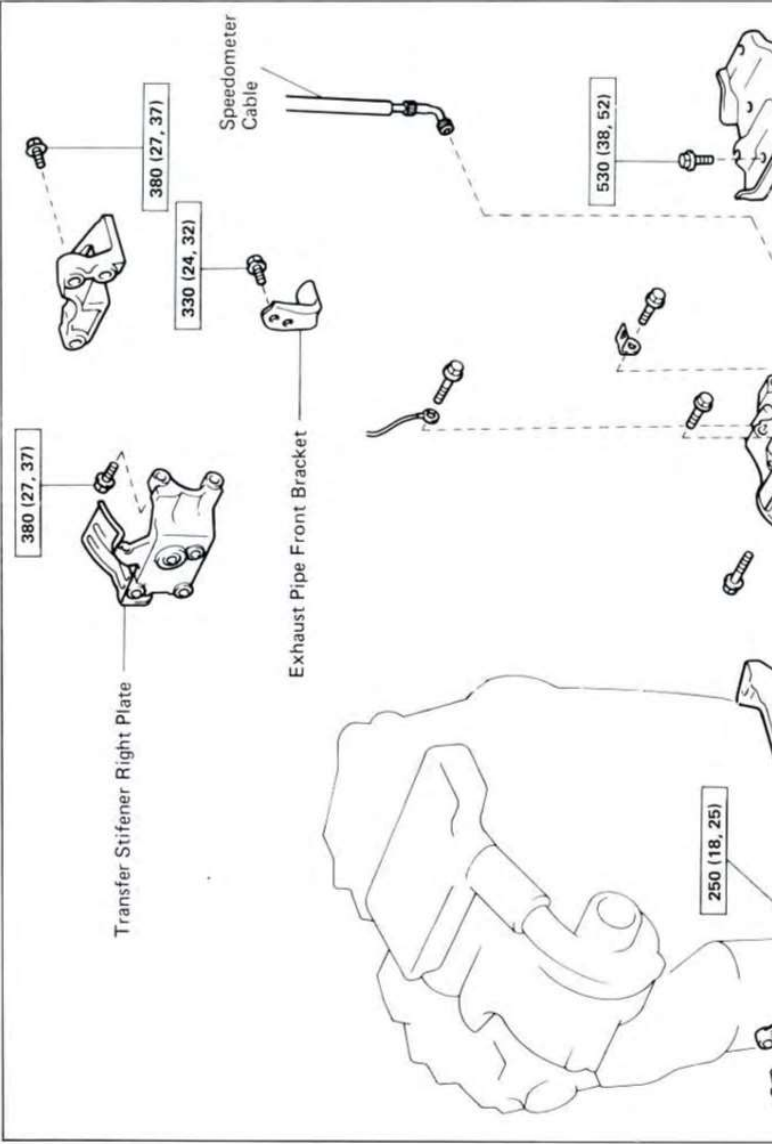
Problem	Possible cause	Remedy	Page
Noise	Transmission, differential or transfer faulty Wrong oil grade Oil level low	Disassemble and inspect trans- mission, differential or transfer Replace oil Add oil	MT-8 MT-7
Oil leakage	Oil level too high Oil seal, O-ring or gasket worn or damaged	Drain oil Replace oil seal, O-ring or gasket	FA-10 MT-8
Hard to shift or will not shift	Control cable faulty Transmission faulty	Replace control cable Disassemble and inspect trans- mission	MT-97 MT-8
Tight corner braking phenomenon	Differential, center differential or transfer faulty	Replace differential, center differential or transfer	MT-43 MT-59

REMOVAL AND INSTALLATION OF TRANSAXLE

1. REMOVE ENGINE WITH TRANSAXLE
(See page EM-43)

INSTALL ENGINE WITH TRANSAXLE
(See page EM-49)

2. REMOVE AND INSTALL TRANSAXLE AS SHOWN



(MAIN POINT OF REMOVAL AND INSTALLATION)

1. REMOVE TRANSAXLE ASSEMBLY

NOTE: When removing transaxle from engine, remove as the following procedure since cylinder block rib contacts transfer case.

- (a) Pull straight until there are space of 60 — 80 mm (2 — 3 in.) between engine and transaxle case.

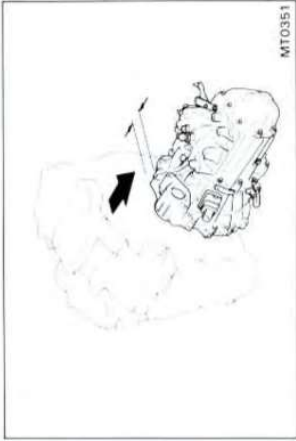
- (b) Move the transmission case cover to the arrow in the illustration.

- (c) While holding transfer output slightly, pull out whole transaxle.

2. INSTALL TRANSAXLE ASSEMBLY FOLLOWING REMOVAL SEQUENCE IN REVERSE

REPLACEMENT OF TRANSAXLE GEAR OIL

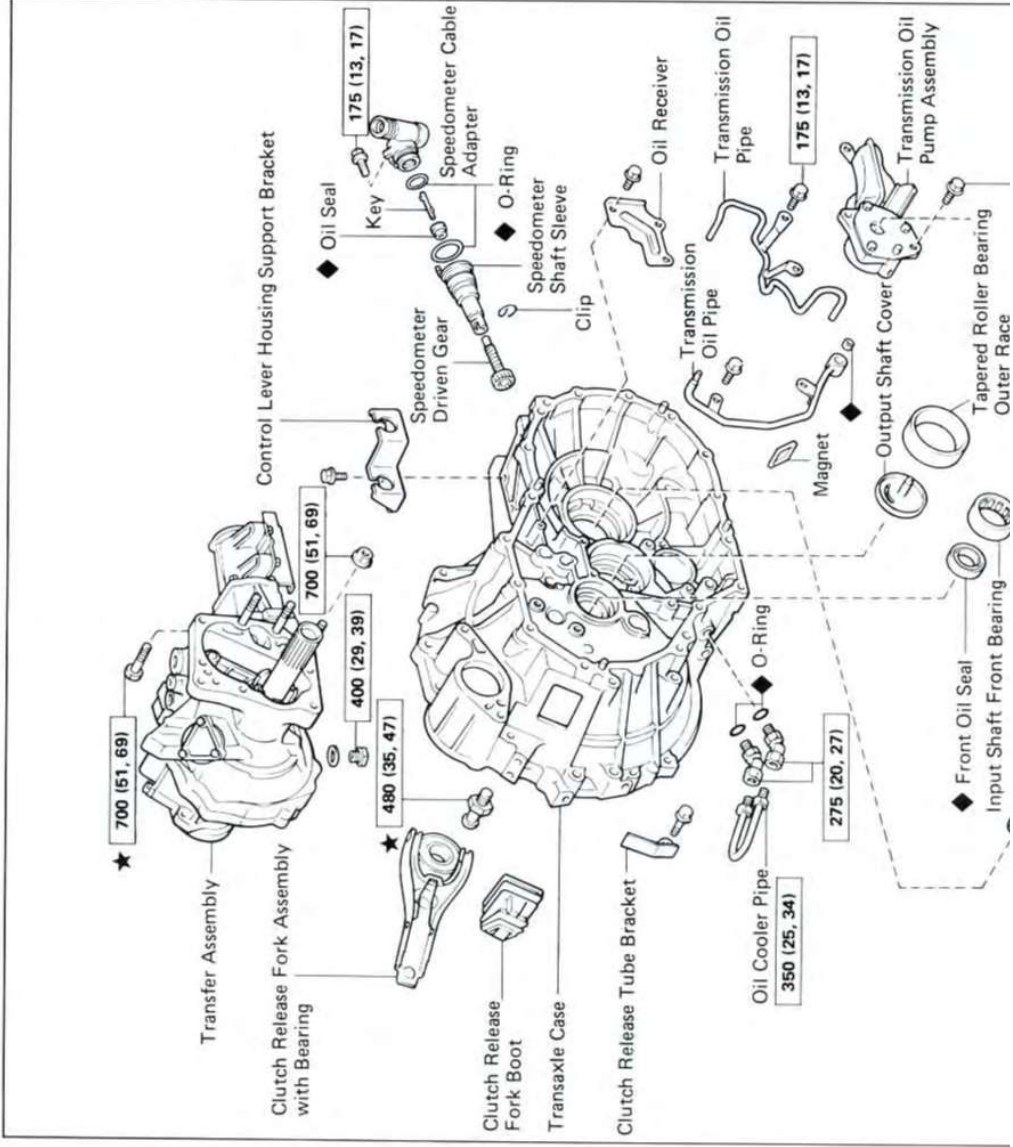
- 1. DRAIN TRANSAXLE OIL
- 2. FILL TRANSAXLE OIL WITH GEAR OIL



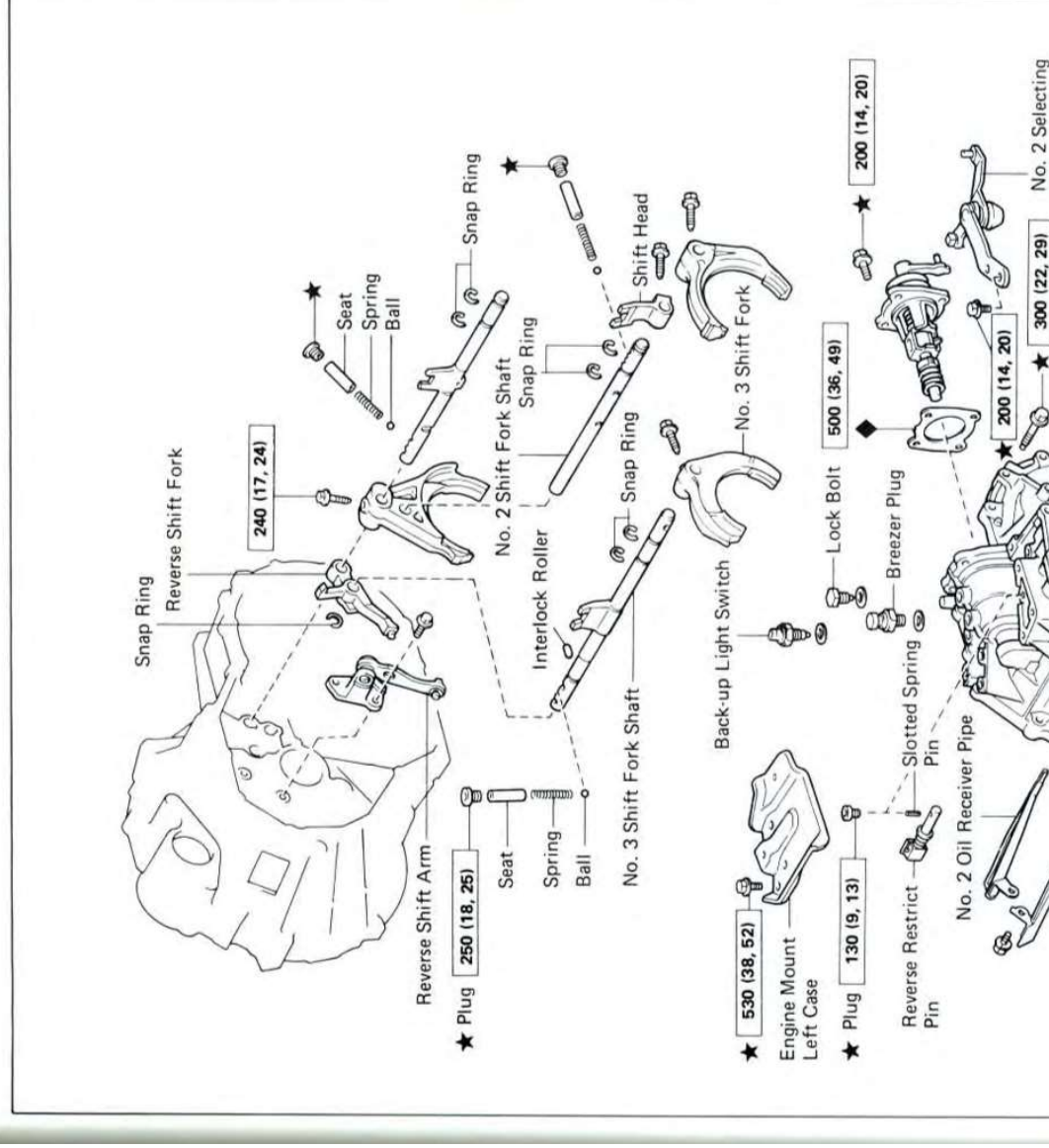
MT-8

MANUAL TRANSAXLE — Removal of Component Parts

REMOVAL OF COMPONENT PARTS COMPONENTS



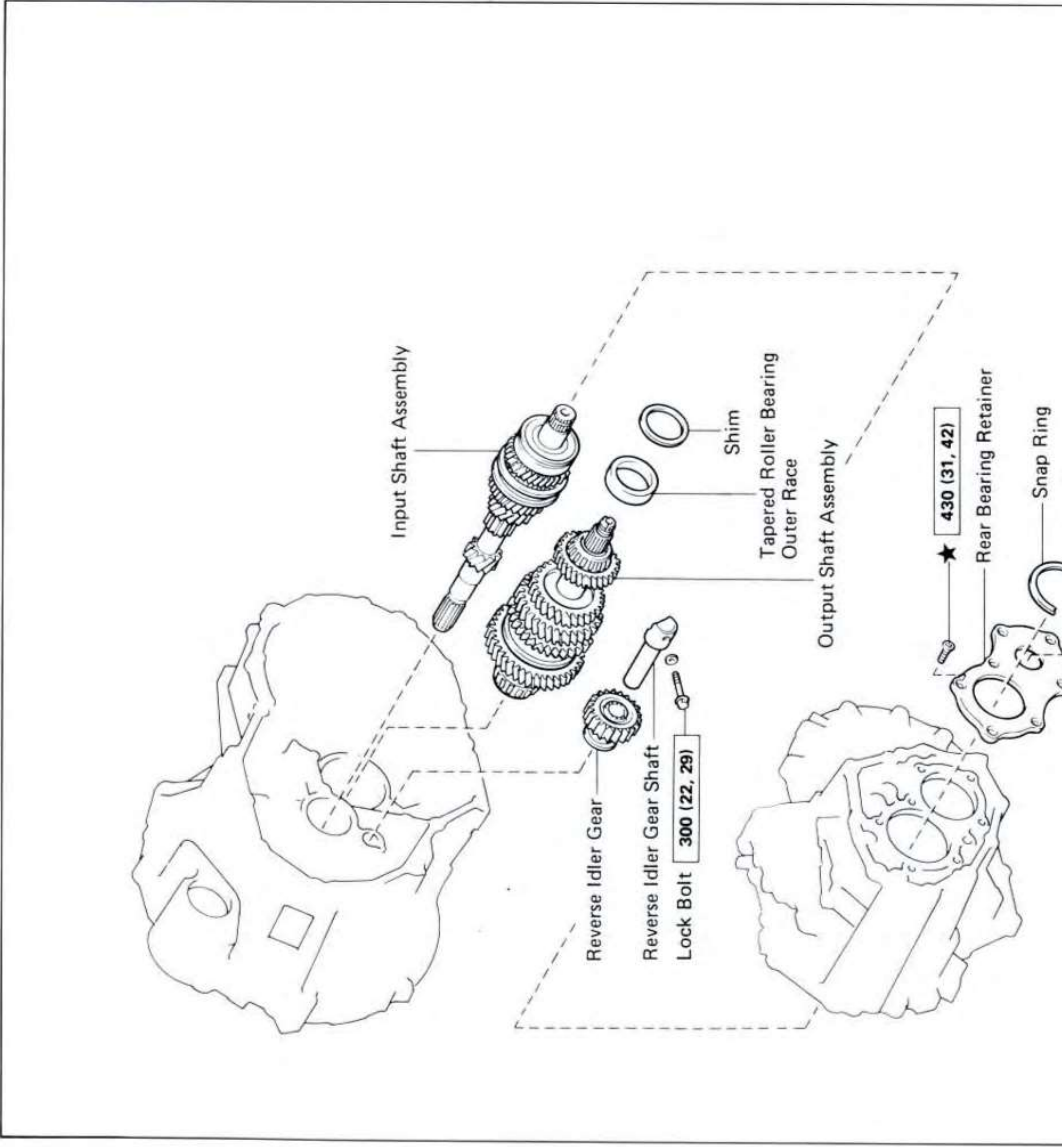
COMPONENTS (Cont'd)

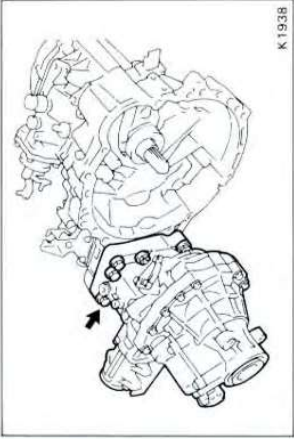
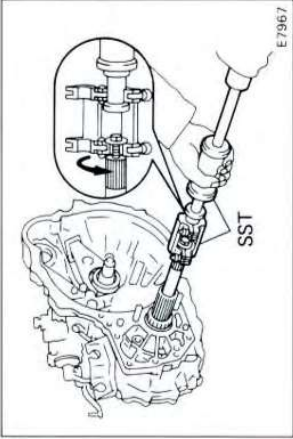
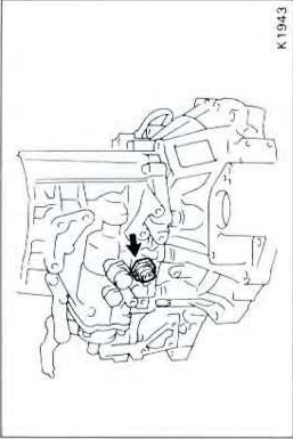


MT-10

MANUAL TRANSAXLE — Removal of Component Parts

COMPONENTS (Cont'd)



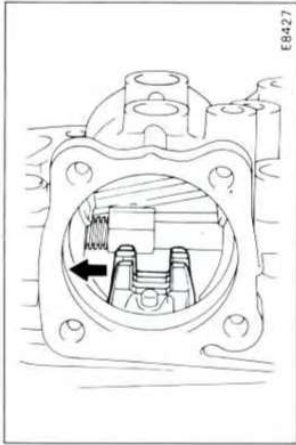
MANUAL TRANSAXLE — Removal of Component Parts		MT-11
 K 1938	1. REMOVE TRANSFER ASSEMBLY (a) Remove the three bolts and five nuts. (b) Using a plastic hammer, remove the transfer assembly from the transaxle.	
	2. REMOVE DIFFERENTIAL SIDE GEAR INTERMEDIATE SHAFT (a) Screw in a suitable bolt with washer into the side gear intermediate shaft. (b) Using SST, remove the side gear intermediate shaft. SST 09910-00015 (09911-00011, 09912-00010)	
 E 7967	3. REMOVE RELEASE FORK AND BEARING	
 K 1943	4. REMOVE BACK-UP LIGHT SWITCH	
 K 1943	5. REMOVE SPEEDOMETER DRIVEN GEAR	
	6. REMOVE NO.2 SELECTING BELLCRANK WITH SELECTING BELLCRANK SUPPORT	

MT-12

MANUAL TRANSAXLE — Removal of Component Parts



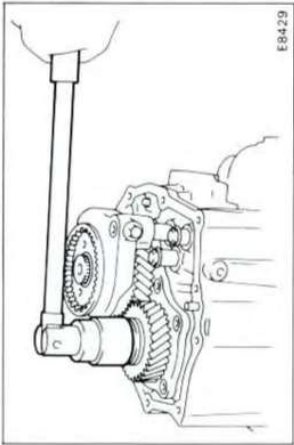
8. REMOVE SHIFT AND SELECTING LEVER ASSEMBLY



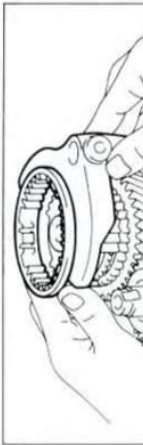
9. REMOVE TRANSMISSION CASE COVER

10. REMOVE OUTPUT SHAFT LOCK NUT

- (a) Unstake the lock nut.
- (b) Engage the gear double meshing.

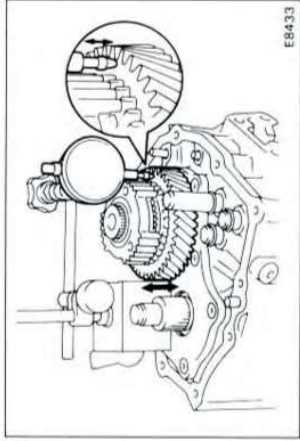


- (c) Remove the lock nut.
- (d) Disengage the gear double meshing.



11. REMOVE NO.3 HUB SLEEVE AND FIFTH SHIFT FORK

- (a) Remove the No.3 shift fork set bolt.
- (b) Remove the No.3 hub sleeve and No.3 shift fork.



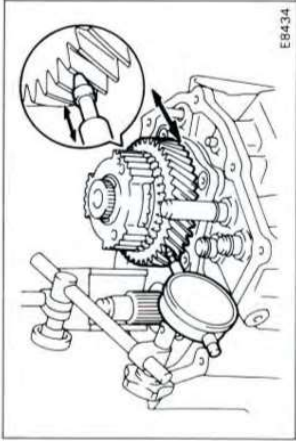
13. MEASURE FIFTH GEAR THRUST CLEARANCE

- (a) Using a dial indicator, measure the thrust clearance.

Standard clearance: 0.10 – 0.57 mm

Maximum clearance: 0.0039 – 0.0224 in.)

Maximum clearance: 0.65 mm (0.0256 in.)

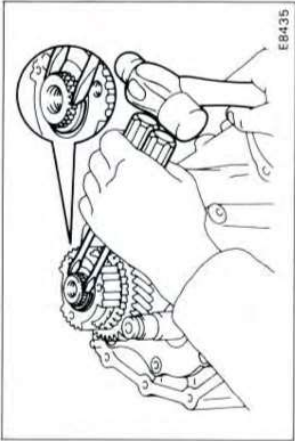


- (b) Using a dial indicator, measure the oil clearance.

Standard clearance: 0.009 – 0.050 mm

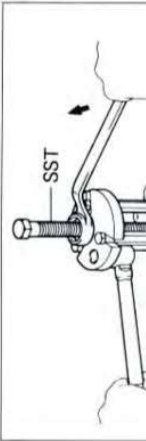
Maximum clearance: 0.0004 – 0.0020 in.)

Maximum clearance: 0.070 mm (0.0028 in.)



14. REMOVE NO.3 CLUTCH HUB AND FIFTH GEAR

- (a) Using two screwdrivers and a hammer, tap out the snap ring.



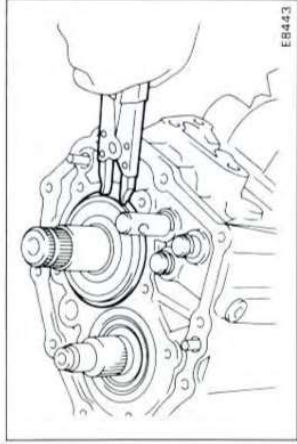
- (b) Using SST, remove the No.3 clutch hub with synchronizer ring and 5th gear.

SST 09310-17010 (09310-07010, 09310-07020

09310-07040, 09310-07050)

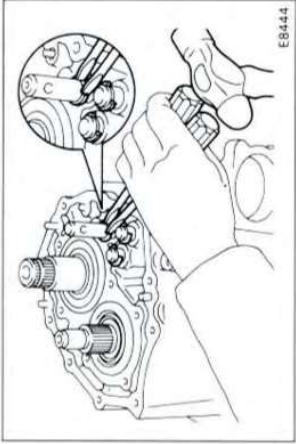
MT-14

MANUAL TRANSAXLE — Removal of Component Parts

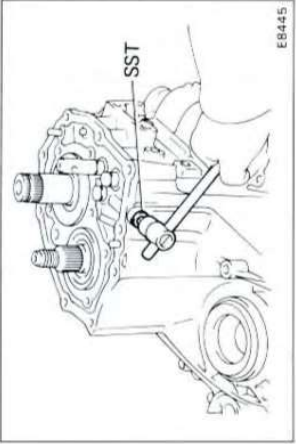


17. REMOVE SNAP RING

- (a) Using snap ring pliers, remove the snap ring.

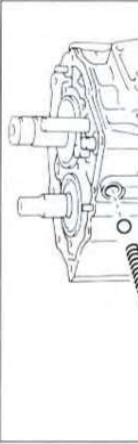


- (b) Using two screwdrivers and a hammer, remove the three snap rings.

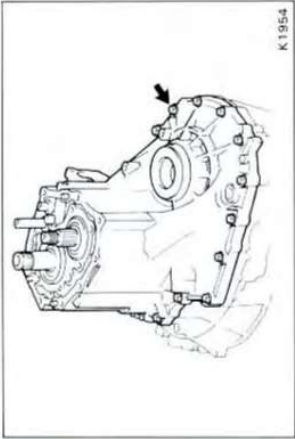


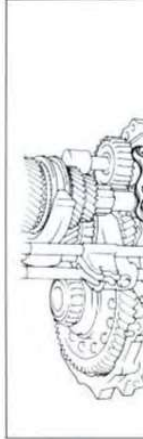
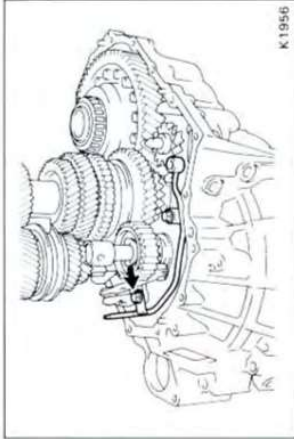
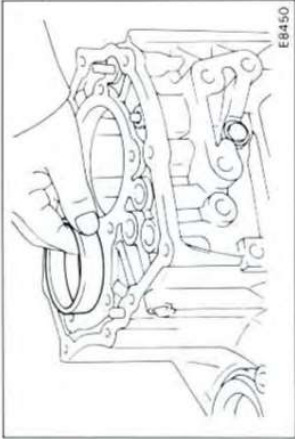
18. REMOVE PLUG, SEAT, SPRING AND LOCKING BALL

- (a) Using SST, remove the plug.
SST 09313-30021



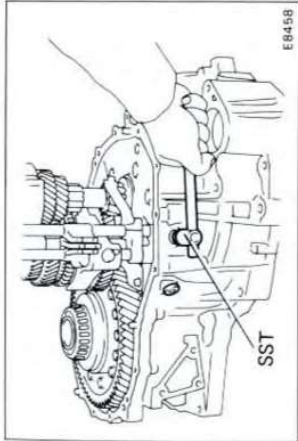
- (b) Using a magnetic finger, remove the seat, spring and ball.

MANUAL TRANSAXLE — Removal of Component Parts		MT-15
 K1954	20. REMOVE TRANSMISSION CASE Remove the seventeen bolts and tap off the case with a plastic hammer.	
	21. REMOVE OUTPUT SHAFT REAR TAPERED ROLLER BEARING OUTER RACE	
	22. REMOVE NO.2 OIL PIPE (a) Remove the gasket. (b) Remove the two bolts and oil pipe.	
	23. REMOVE REVERSE SHIFT ARM Remove the bolt and pull off the bracket.	



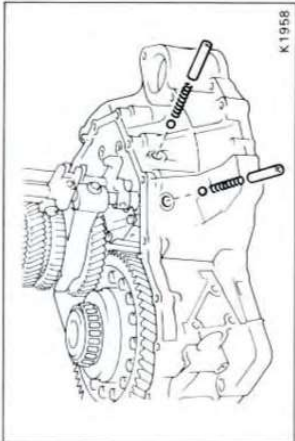
MT-16

MANUAL TRANSAXLE — Removal of Component Parts

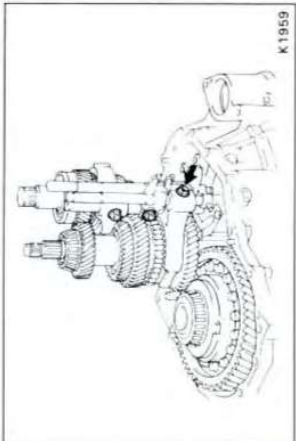


25. REMOVE PLUGS, SEATS, SPRINGS AND BALLS

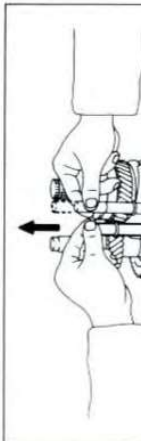
- (a) Using SST, remove the two plugs.
SST 09313-30021



- (b) Using a magnetic finger, remove the two seats, springs and balls.

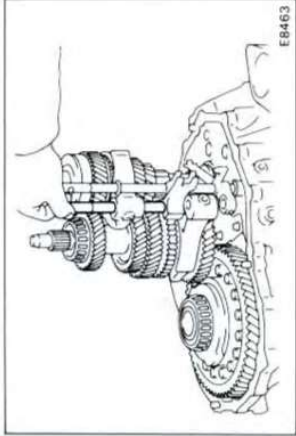


26. REMOVE SET BOLTS



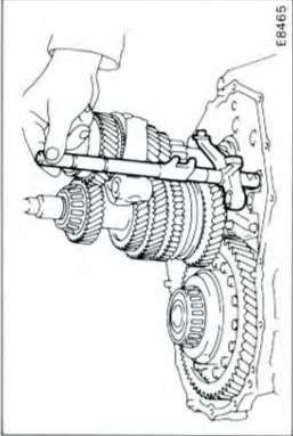
27. REMOVE NO.1 SHIFT FORK SHAFT

- Pull up No.3 shift fork shaft, remove the No.1 shift fork shaft.



29. REMOVE NO.2 SHIFT FORK SHAFT, SHIFT HEAD AND NO.1 SHIFT FORK

- (a) Pull out the No.2 shift fork shaft.
- (b) Remove the shift head and No.1 shift fork.



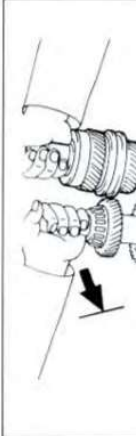
30. REMOVE NO.3 SHIFT FORK SHAFT WITH REVERSE SHIFT FORK AND NO.2 SHIFT FORK

- (a) Pull out the No.3 shift fork shaft with reverse shift fork.
- (b) Remove the No.2 shift fork.



31. REMOVE SNAP RINGS

Using two screwdrivers and a hammer, remove the snap ring and reverse shift fork from the No.3 shift fork shaft.

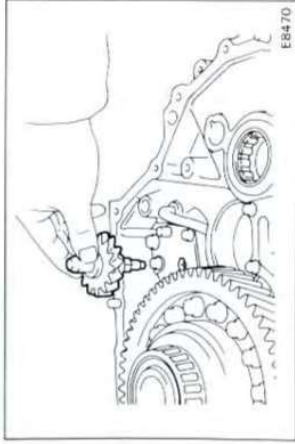


32. REMOVE INPUT AND OUTPUT SHAFT ASSEMBLY

- (a) Leaning the output shaft to the differential side, remove the input shaft assembly.

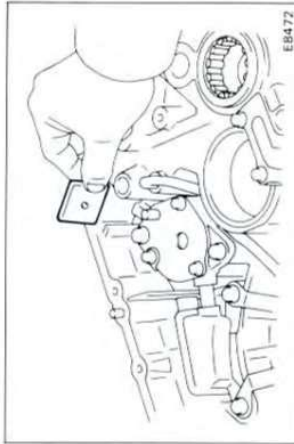
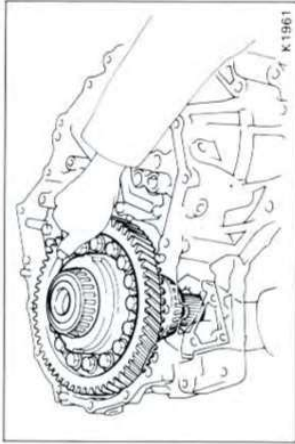
MT-18

MANUAL TRANSAXLE — Removal of Component Parts

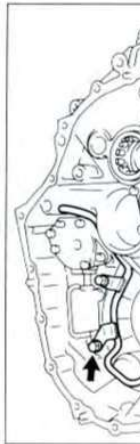


33. REMOVE DIFFERENTIAL ASSEMBLY

- (a) Remove the oil pump drive gear.
- (b) Remove the differential case assembly.



34. REMOVE MAGNET FROM TRANSAXLE CASE



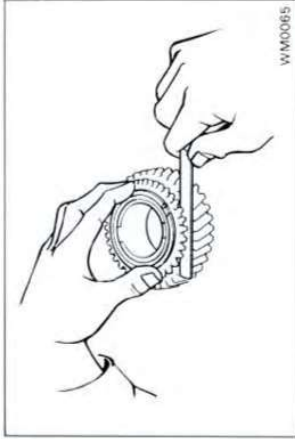
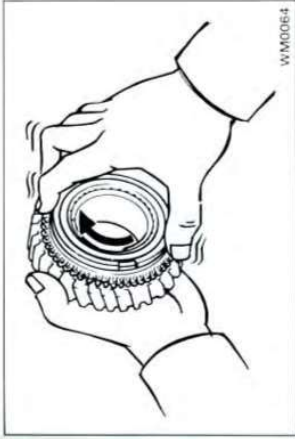
35. REMOVE OIL PUMP ASSEMBLY

- (a) Remove the two bolts and oil pipe.

INSPECTION OF COMPONENT PARTS

1. INSPECT SYNCHRONIZER RING OF FIFTH GEAR

- (a) Check for wear or damage.
- (b) Turn the ring and push it in to check the braking action.



- (c) Measure the clearance between the synchronizer ring back and the gear spline end.

Minimum clearance: 0.6 mm (0.024 in.)

If the clearance is less than the limit, replace the synchronizer ring.

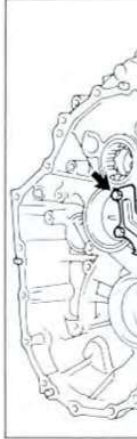


2. MEASURE CLEARANCE OF SHIFT FORK AND HUB SLEEVE

Using a feeler gauge, measure the clearance between the hub sleeve and shift fork.

Maximum clearance: 1.0 mm (0.039 in.)

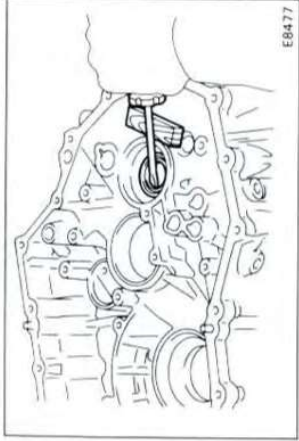
If the clearance exceeds the limit, replace the shift fork or hub sleeve.



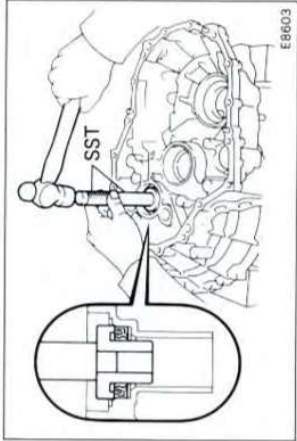
3. REMOVE TRANSAXLE CASE RECEIVER

MT-20

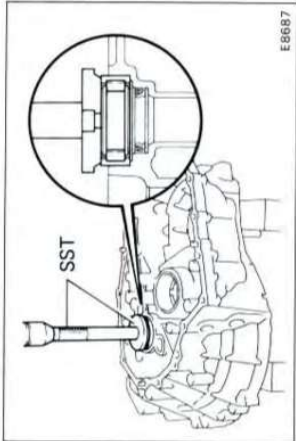
MANUAL TRANSAXLE — Removal of Component Parts



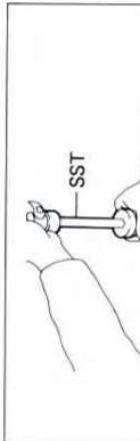
(b) Using a screwdriver, remove the oil seal.



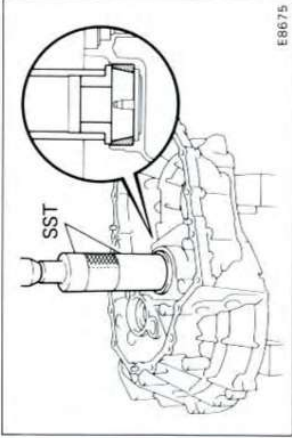
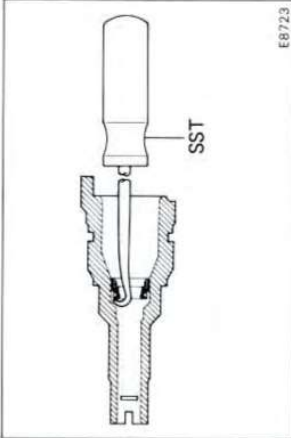
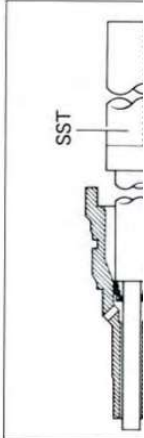
(c) Using SST, drive in a new oil seal.
SST 09608-12010 (09608-00020, 09608-00080)
(d) Coat the lip of oil seal with MP grease.

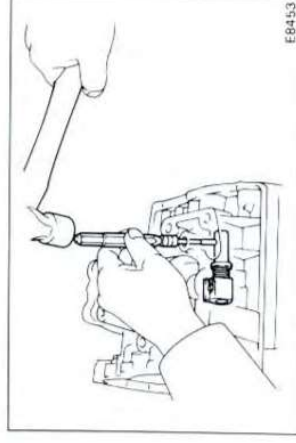


(e) Using SST, drive in a new bearing.
SST 09608-12010 (09608-00020, 09608-00060)

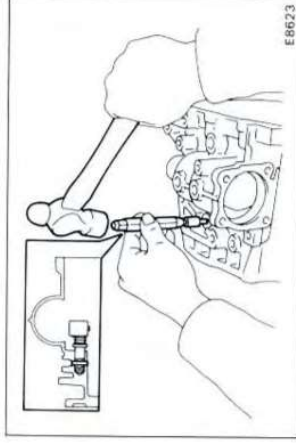


5. IF NECESSARY, REPLACE OUTPUT SHAFT FRONT OUTER RACE AND OUTPUT SHAFT COVER
(a) Using SST, pull out the outer race.
SST 09308-00010

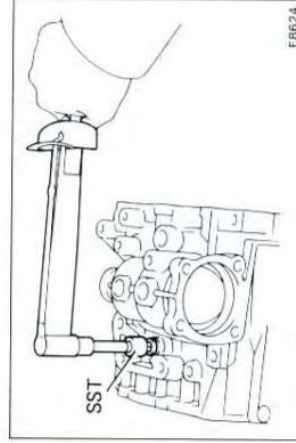
MANUAL TRANSAXLE — Removal of Component Parts		MT-21
 E8675	(d) Using SST, press in a new outer race. SST 09316-60010 (09316-00010, 09316-00020)	
6. INSTALL AND TORQUE TRANSAXLE CASE RECEIVER Torque: 75 kg-cm (65 in.-lb, 7.4 N-m)		
 K1964		
7. IF NECESSARY, REPLACE SPEEDOMETER DRIVEN GEAR OIL SEAL		
 E8723	(a) Using SST, pull out the oil seal. SST 09921-00010	
 E8723	(b) Using SST, drive in a new oil seal. SST 09201-60011 Drive in depth: 33 mm (1.30 in.) (c) Coat the lip of oil seal with MP grease.	

MT-22**MANUAL TRANSAXLE – Removal of Component Parts**

- (b) Using a pin punch and hammer, drive out the slotted spring pin.

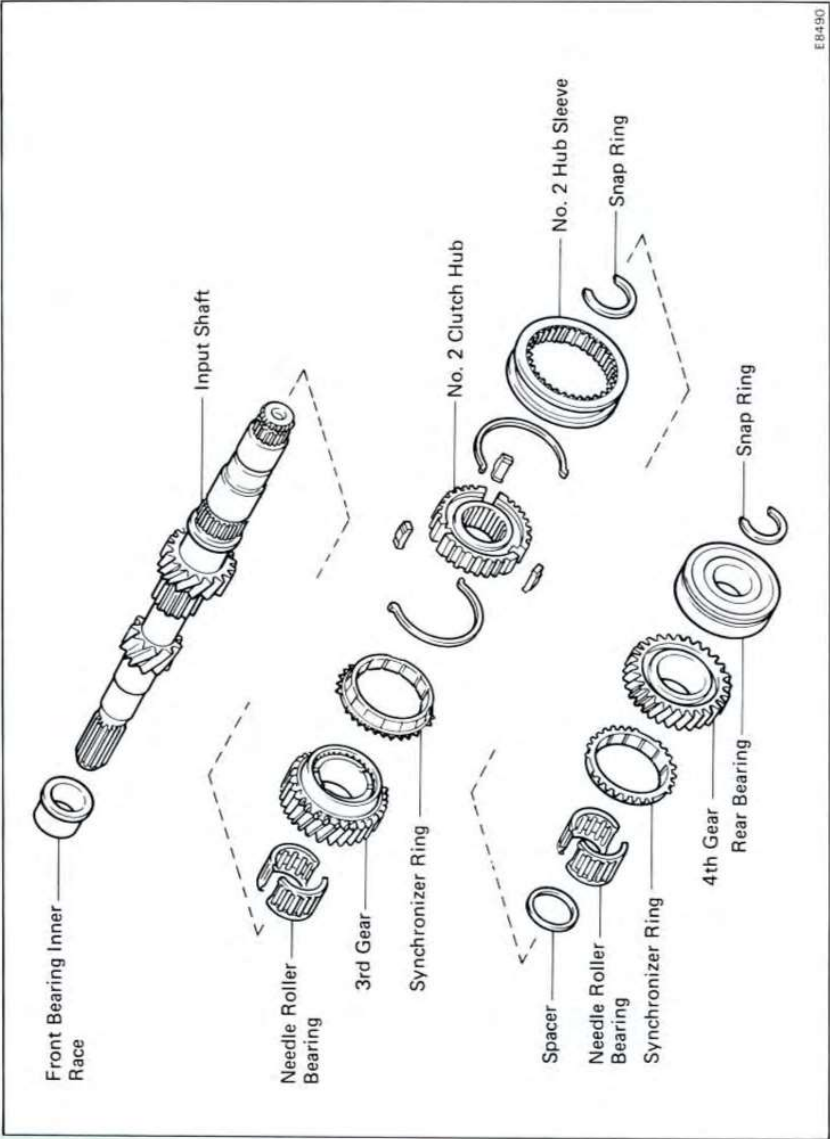


- (c) Replace the reverse restrict pin.
(d) Using a pin punch, drive in the slotted spring pin.



- (e) Apply liquid sealant to the plug threads.
Sealant: Part No.08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent
(f) Using SST, install the screw plug.
SST 09313-30021

COMPONENT PARTS
Input Shaft Assembly

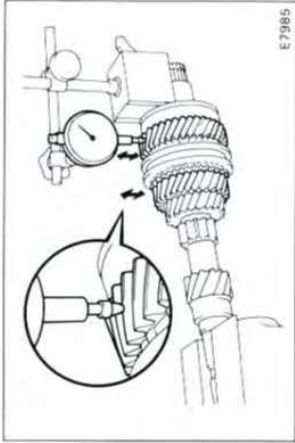


DISASSEMBLY OF INPUT SHAFT ASSEMBLY

1. MEASURE THIRD AND FOURTH GEAR THRUST CLEARANCE
Using a feeler gauge, measure the thrust clearance.

MT-24

MANUAL TRANSAXLE — Component Parts (Input Shaft Assembly)



2. **CHECK OIL CLEARANCE OF THIRD AND FOURTH GEAR**

Using dial indicator, measure the oil clearance between the gear and shaft.

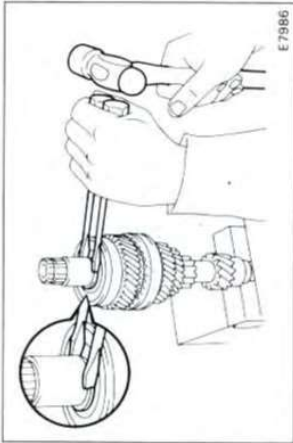
Standard clearance:

3rd gear 0.009 — 0.053 mm (0.0004 — 0.0020 in.)

4th gear 0.009 — 0.051 mm (0.0004 — 0.0020 in.)

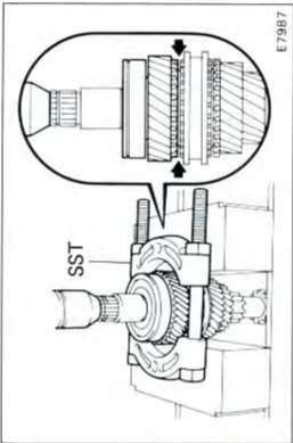
Maximum clearance: 0.080 mm (0.003 in.)

If clearance exceeds the limit, replace the gear, needle roller bearing or shaft.



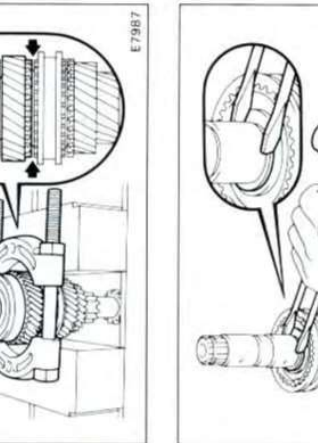
3. **REMOVE SNAP RING**

Using two screwdrivers and a hammer, tap out the snap ring.



4. **REMOVE INPUT SHAFT REAR BEARING AND FOURTH GEAR**

Using SST and a press, remove the input shaft rear bearing. SST 09950-00020

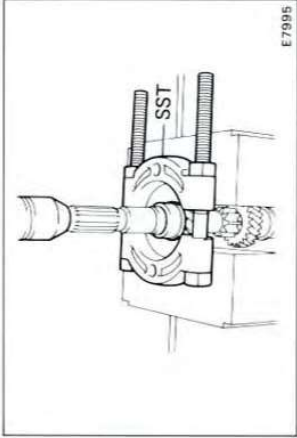
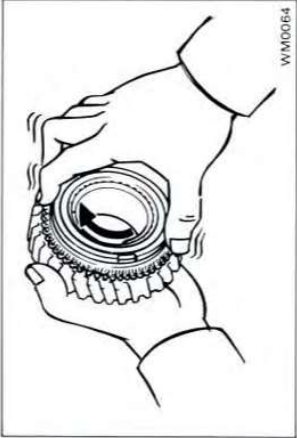
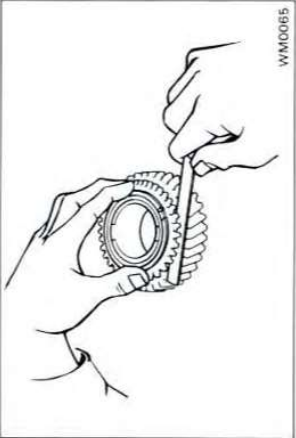


5. **REMOVE NEEDLE ROLLER BEARINGS, SPACER AND SYNCHRONIZER RING**



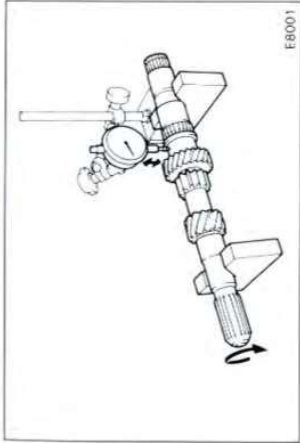
6. **REMOVE SNAP RING**

Using two screwdrivers and a hammer, tap out the snap ring.

MANUAL TRANSAXLE – Component Parts (Input Shaft Assembly)		MT-25
	9. REMOVE INPUT SHAFT FRONT BEARING INNER RACE Using SST and a press, remove the inner race. SST 09950-00020	
	INSPECTION OF INPUT SHAFT COMPONENT PARTS 1. INSPECT SYNCHRONIZER RINGS (a) Check for wear or damage. (b) Turn the ring and push it in to check the breaking action. (c) Measure the clearance between the synchronizer ring back and gear spline end. Minimum clearance: 0.6 mm (0.024 in.) If the clearance is less than the limit, replace the synchronizer ring.	
		
		
	2. MEASURE CLEARANCE OF NO.2 SHIFT FORK AND HUB SLEEVE Using a feeler gauge, measure the clearance between the hub sleeve and shift fork.	

MT-26

MANUAL TRANSAXLE — Component Parts (Input Shaft Assembly)



- (c) Using a dial indicator, check the shaft runout.
Maximum runout: 0.060 mm (0.0024 in.)

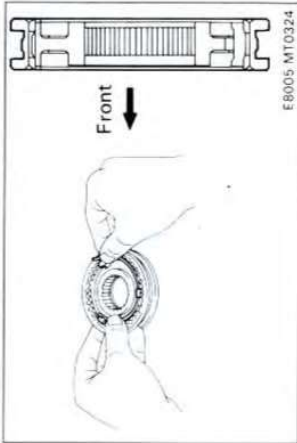
ASSEMBLY OF INPUT SHAFT ASSEMBLY (See page MT-23)

NOTE: Coat all of the sliding and rotating surface with gear oil before assembly.

1. INSERT NO.2 CLUTCH HUB SLEEVE

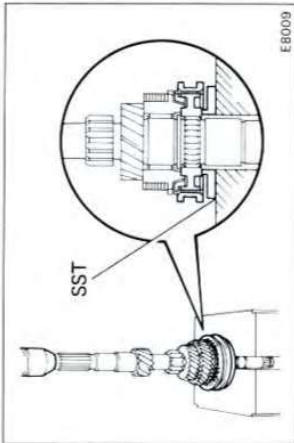
- (a) Install the clutch hub and shifting keys to the hub sleeve.
(b) Install the shifting key springs under the shifting keys.

CAUTION: Install the key springs positioned so that their end gaps are not in line.



2. INSTALL NEEDLE ROLLER BEARING, THIRD GEAR, SYNCHRONIZER RING AND NO.2 HUB SLEEVE ASSEMBLY TO INPUT SHAFT

- (a) Apply MP grease to the needle roller bearings.
(b) Install the 3rd gear.
(c) Place the synchronizer ring on the gear and align the ring slots with the shifting keys.
(d) Using SST and a press, install the 3rd gear and No.2 hub sleeve.



SST 09506-35010

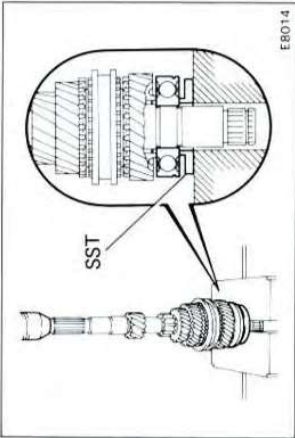
3. INSTALL SNAP RING

Select a snap ring that will allow minimum axial play and install it on the shaft.



MANUAL TRANSAXLE – Component Parts (Input Shaft Assembly)

MT-27

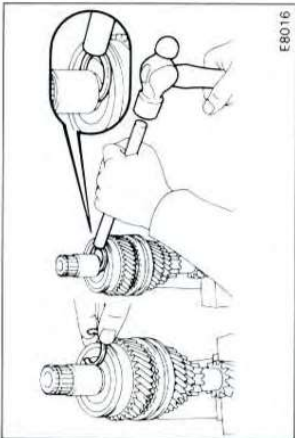


E8014

5. INSTALL SPACER, SYNCHRONIZER RING, NEEDLE ROLLER BEARINGS, FOURTH GEAR AND RADIAL BALL BEARING

- (a) Install the spacer.
- (b) Apply MP grease to the needle roller bearings.
- (c) Place the synchronizer ring on the gear and align the ring slots with the shifting keys.
- (d) Install the 4th gear.
- (e) Using SST and a press, install the radial ball bearing.

SST 09506-35010



E8016

6. INSTALL SNAP RING

Select a snap ring that will allow minimum axial play and install it on the shaft.

Mark	Thickness	mm (in.)
1	2.35 – 2.40	(0.0925 – 0.0945)
2	2.40 – 2.45	(0.0945 – 0.0965)
3	2.45 – 2.50	(0.0965 – 0.0984)
4	2.50 – 2.55	(0.0984 – 0.1004)
5	2.55 – 2.60	(0.1004 – 0.1024)
6	2.60 – 2.65	(0.1024 – 0.1043)
7	2.65 – 2.70	(0.1043 – 0.1063)
8	2.70 – 2.75	(0.1063 – 0.1083)

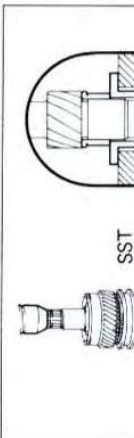


E8017

7. MEASURE FOURTH GEAR THRUST CLEARANCE

Using a feeler gauge, measure the 4th gear thrust clearance.

Standard clearance: 0.10 – 0.55 mm
(0.0039 – 0.0217 in.)



SST

8. INSTALL INPUT SHAFT FRONT BEARING INNER RACE

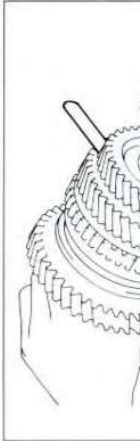
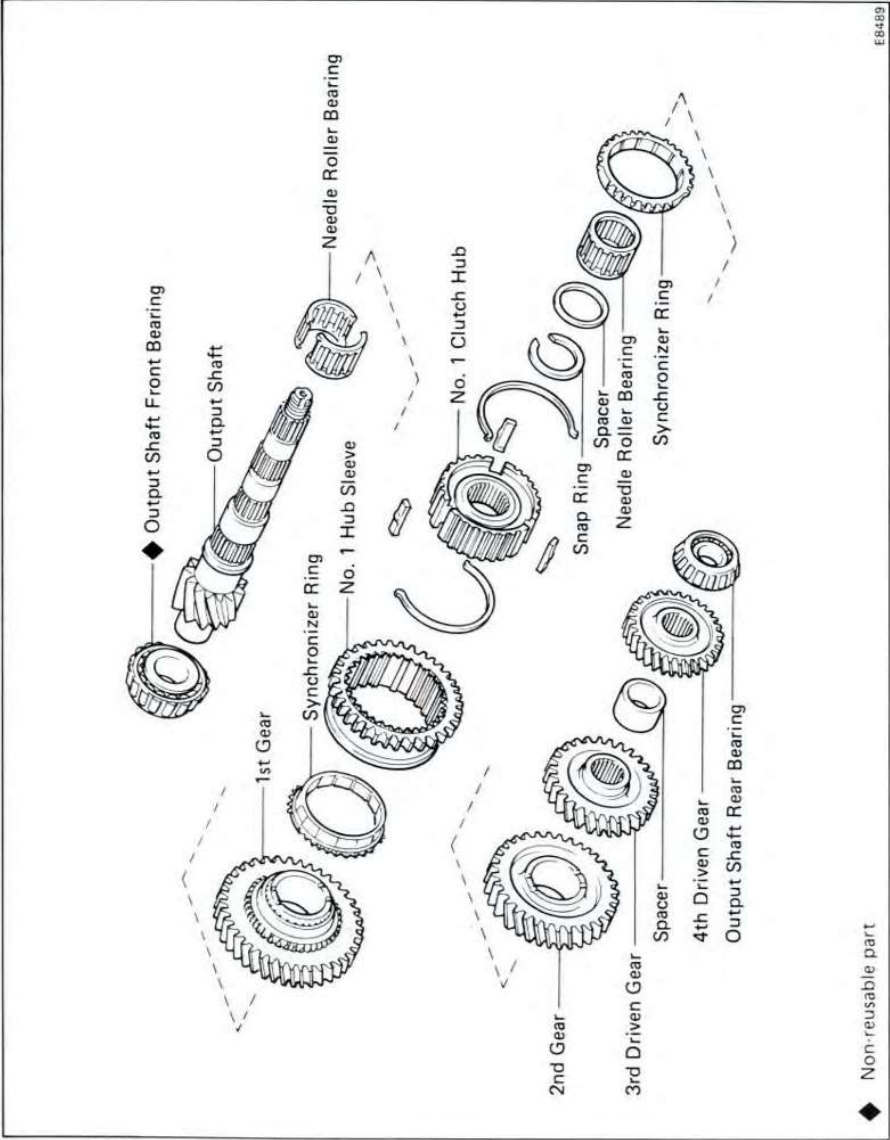
Using SST and a press, install the input shaft front bearing inner race.

SST 09316-60010 (09316-00020)

<https://cardiagn.com/manual-transaxle-1988-celica/>

27/98

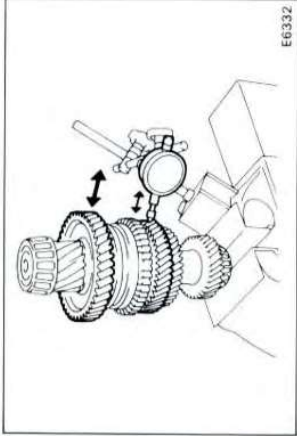
Output Shaft Assembly



DISASSEMBLY OF OUTPUT SHAFT ASSEMBLY

1. MEASURE FIRST AND SECOND GEAR THRUST CLEARANCE

Using a feeler gauge, measure the thrust clearance.



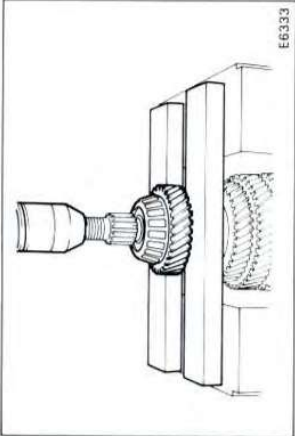
2. CHECK OIL CLEARANCE OF FIRST AND SECOND GEAR
Using dial indicator, measure the oil clearance between the gear and shaft.

Standard clearance:

- 1st gear 0.009 – 0.051 mm
(0.0004 – 0.0020 in.)
- 2nd gear 0.009 – 0.053 mm
(0.0004 – 0.0020 in.)

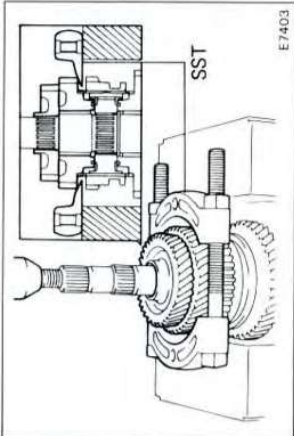
Maximum clearance: 0.080 mm (0.003 in.)

If the clearance exceeds the limit, replace the gear, needle roller bearing or shaft.



3. REMOVE OUTPUT SHAFT REAR BEARING, FOURTH DRIVEN GEAR AND SPACER

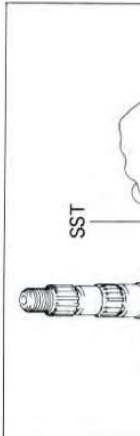
- (a) Using a press, remove the bearing and 4th driven gear.
- (b) Remove the spacer.



4. REMOVE THIRD DRIVEN GEAR AND SECOND GEAR

Using SST and a press, remove the 3rd driven gear and 2nd gear.
SST 09950-00020

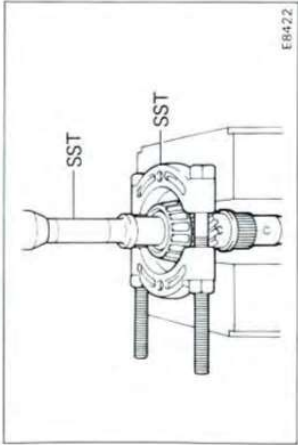
5. REMOVE NEEDLE ROLLER BEARINGS, SPACER AND SYNCHRONIZER RING



6. REMOVE SNAP RING
Using snap ring pliers, remove the snap ring.

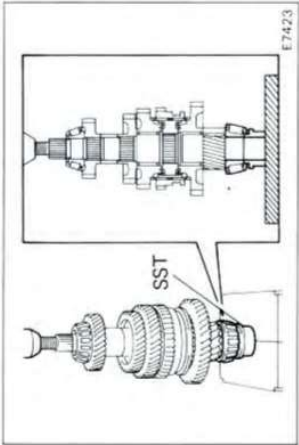
MT-30

MANUAL TRANSAXLE – Component Parts (Output Shaft Assembly)

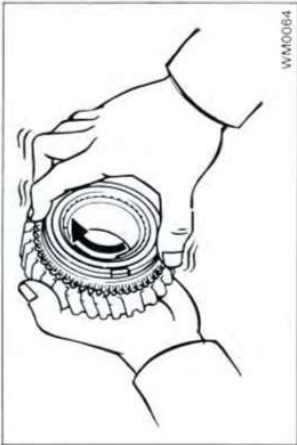


9. IF NECESSARY, REPLACE OUTPUT SHAFT FRONT BEARING

- (a) Using SST and a press, remove the bearing.
SST 09307-12010, 09950-00020



- (b) Using SST and a press, install the new bearing.
SST 09316-60010 (09316-00070)



INSPECTION OF OUTPUT SHAFT COMPONENT PARTS

1. INSPECT SYNCHRONIZER RINGS

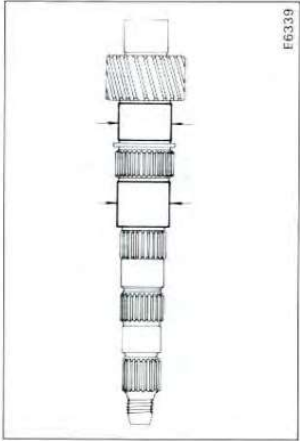
- (a) Check for wear or damage.
- (b) Turn the ring and push it in to check the braking action.



- (c) Measure the clearance between the synchronizer ring back and the gear spline end.

Minimum clearance: 0.6 mm (0.024 in.)

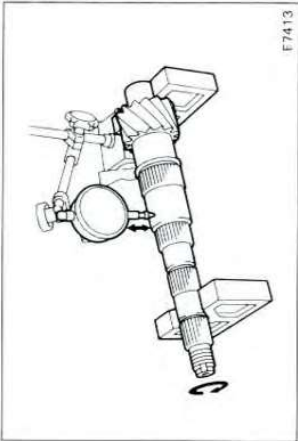
If the clearance is less than the limit, replace the synchronizer ring.



3. INSPECT OUTPUT SHAFT

- (a) Check the output shaft for wear or damage.
- (b) Using a micrometer, measure the outer diameter of the output shaft journal surface.

Minimum outer diameter: 38.950 mm (1.5335 in.)



- (c) Using a dial indicator, check the shaft runout.
- Maximum clearance: 0.060 mm (0.0024 in.)

ASSEMBLY OF OUTPUT SHAFT ASSEMBLY
(See page MT-28)

NOTE: Coat all of the sliding and rotating surface with gear oil before assembly.

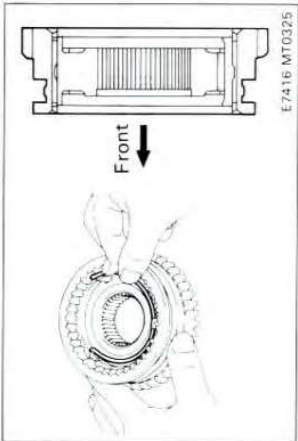
1. INSERT NO.1 CLUTCH HUB INTO HUB SLEEVE

- (a) Install the clutch hub and shifting keys to the hub sleeve.
- (b) Install the shifting key springs under the shifting keys.

CAUTION: Install the key springs positioned so that their end gaps are not in line.

2. INSTALL NEEDLE ROLLER BEARINGS, FIRST GEAR, SYNCHRONIZER RING AND NO.1 HUB SLEEVE TO OUTPUT SHAFT

- (a) Apply MP grease to the needle roller bearings.
- (b) Install the 1st gear.
- (c) Place the synchronizer ring on the gear and align the

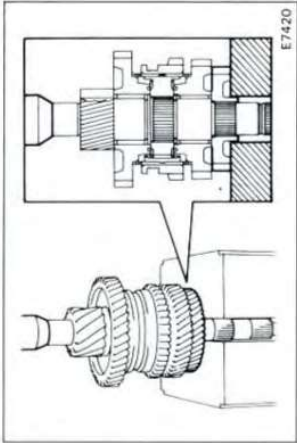




4. MEASURE FIRST GEAR THRUST CLEARANCE

Using a feeler gauge, measure the 1st gear thrust clearance.

Standard clearance: 0.10 – 0.35 mm
(0.0039 – 0.0138 in.)



5. INSTALL SPACER, NEEDLE ROLLER BEARING, SYNCHRONIZER RING, SECOND GEAR AND THIRD DRIVEN GEAR

- (a) Install the spacer.
- (b) Apply MP grease to the needle roller bearing.
- (c) Place the synchronizer ring on the gear and align the ring slots with the shifting keys.
- (d) Install the 2nd gear.
- (e) Using a press, install the 3rd driven gear.



6. MEASURE SECOND GEAR THRUST CLEARANCE

Using a feeler gauge, measure the 2nd gear thrust clearance.

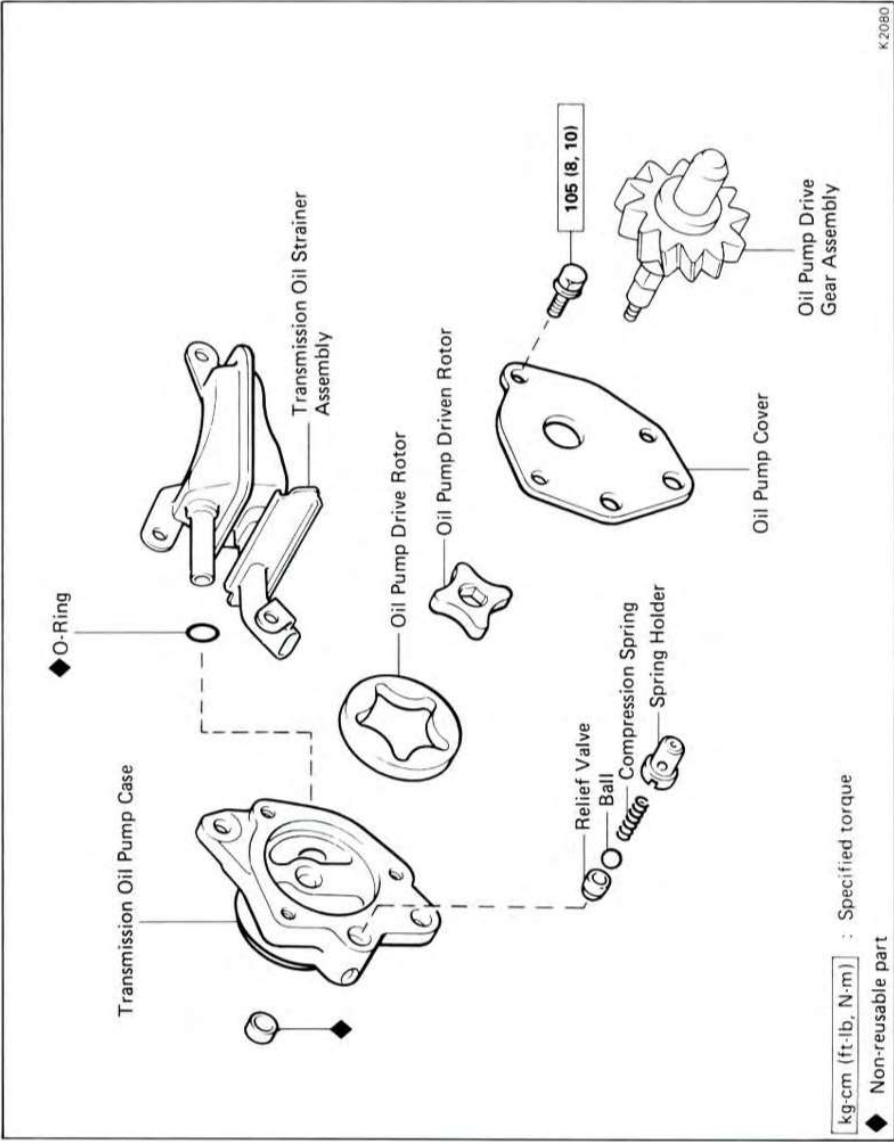
Standard clearance: 0.10 – 0.45 mm
(0.0039 – 0.0177 in.)



7. INSTALL SPACER AND FOURTH DRIVEN GEAR

- (a) Install the spacer.
- (b) Using a press, install the 4th driven gear.

Oil Pump



DISASSEMBLY OF OIL PUMP

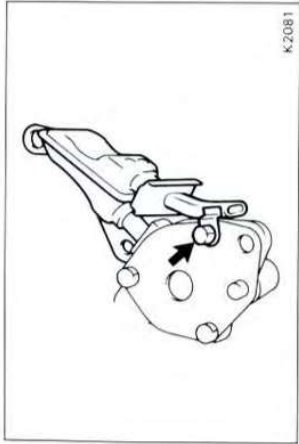
1. CHECK OPERATION OF OIL PUMP

Install the oil pump drive gear to the drive rotor, check that the drive rotor turns smoothly.

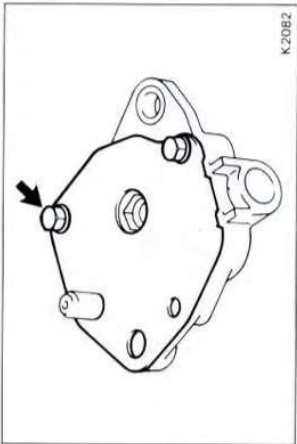


MT-34

MANUAL TRANSAXLE — Component Parts (Oil Pump)

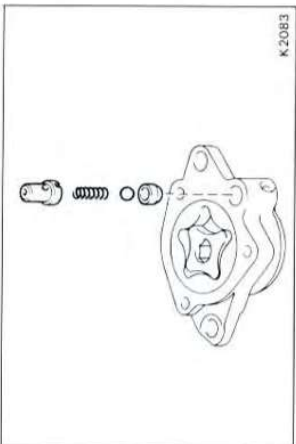


3. REMOVE BOLT AND OIL STRAINER



4. REMOVE OIL PUMP COVER

- (a) Hold the oil pump cover, remove the two bolts and the cover.

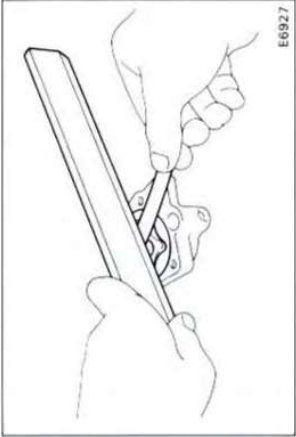
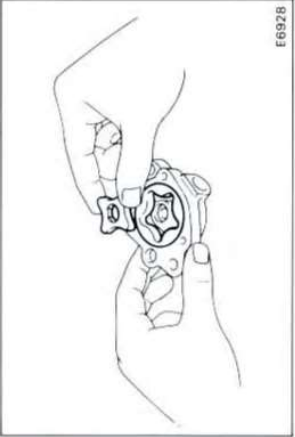
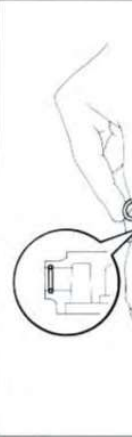


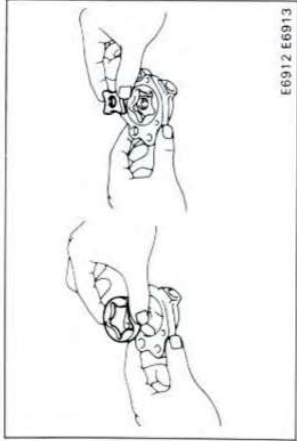
- (b) Remove the spring holder, spring, ball and relief valve seat.



5. CHECK ROTOR BODY CLEARANCE

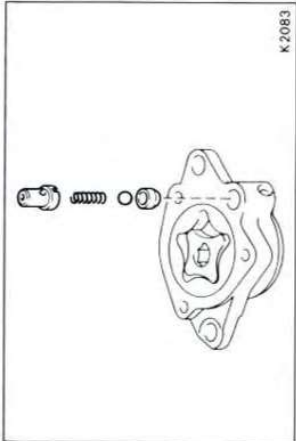
- (a) Install the oil pump drive gear to the drive rotor.
(b) Using a feeler gauge, measure the body clearance between the drive rotor and oil pump case.

MANUAL TRANSAXLE – Component Parts (Oil Pump)		MT-35
 E6927	7. CHECK SIDE CLEARANCE Using a precision straight edge and feeler gauge, measure the side clearance of both rotors. Standard clearance: 0.03 – 0.08 mm (0.001 – 0.003 in.) Maximum clearance: 0.15 mm (0.006 in.)	
	8. REMOVE OIL PUMP DRIVE ROTOR AND DRIVEN ROTOR	
 E6928	9. IF NECESSARY, REPLACE O-RING (a) Using a screwdriver, remove the o-ring.	
 E6929	(b) Apply gear oil to the O-ring. (c) Install the O-ring.	
 E6930		



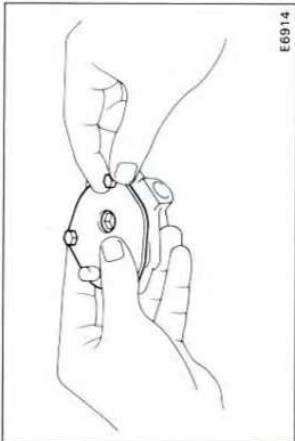
ASSEMBLY OF OIL PUMP
(See page MT-33)

1. INSTALL DRIVEN ROTOR AND DRIVE ROTOR

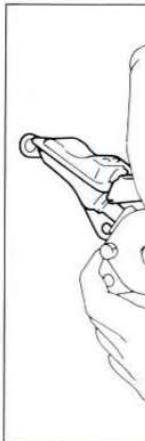


2. INSTALL OIL PUMP COVER

- (a) Install the relief valve, ball, spring and spring holder to the oil pump case.



- (b) Hold the oil pump cover, temporarily install the two bolts.

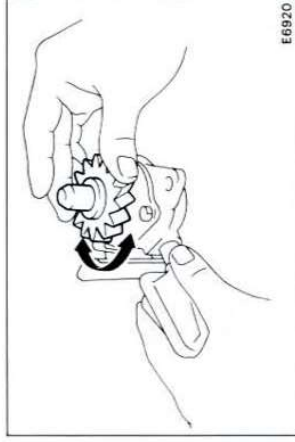


3. INSTALL OIL STRAINER

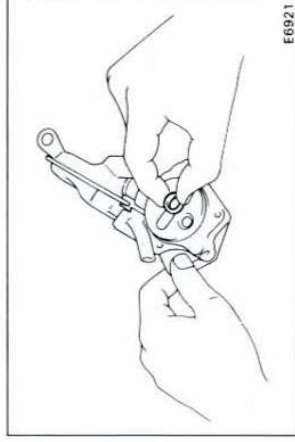
- Install the oil strainer to the oil pump case, temporarily install the bolt.

MANUAL TRANSAXLE — Component Parts (Oil Pump) MT-37**5. CHECK OPERATION OF OIL PUMP**

Insert the oil pump drive gear to the drive rotor, check that the drive rotor turns smoothly.

**6. INSTALL GASKET**

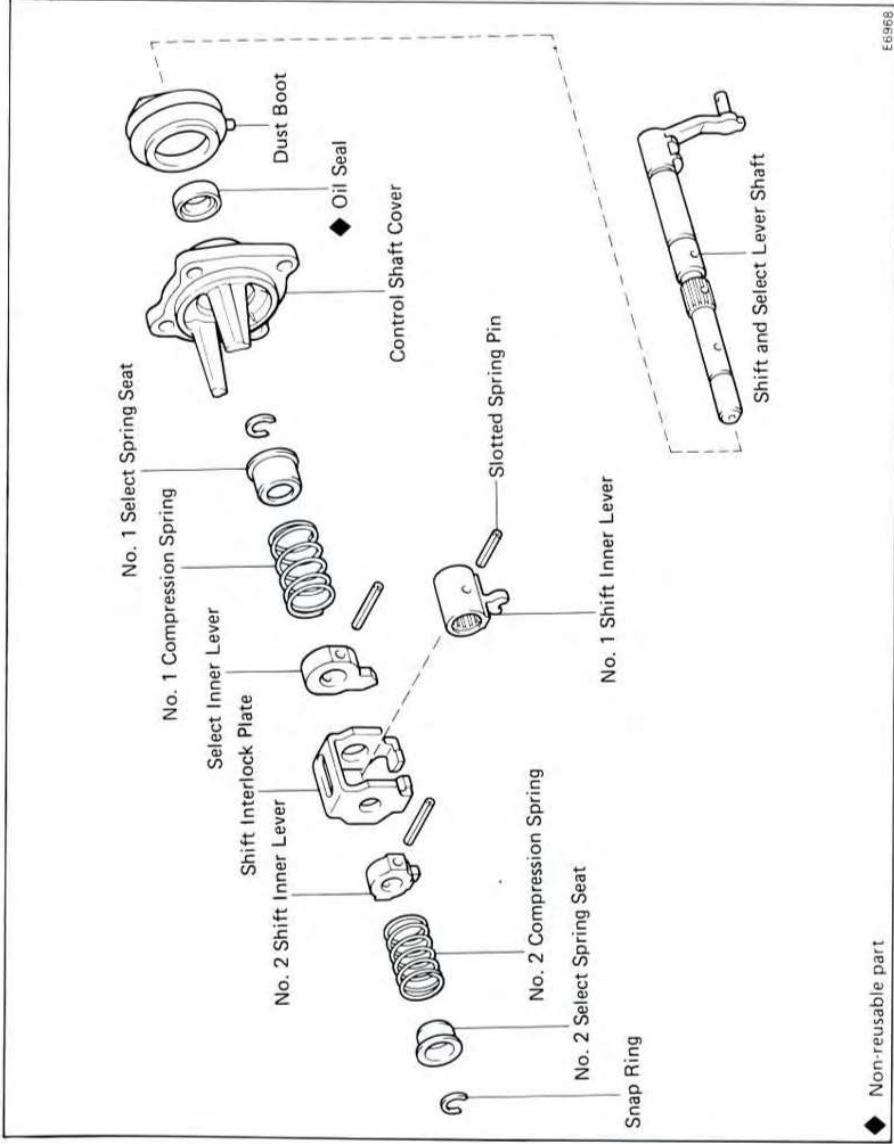
Install the new gasket to the oil pump case.



MT-38

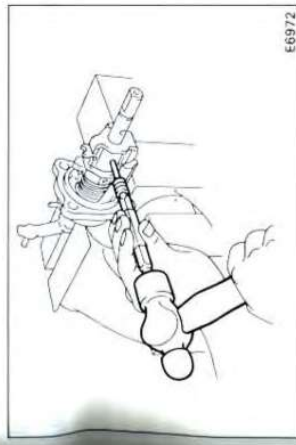
MANUAL TRANSAXLE — Component Parts (Shift and Select Lever Shaft)

Shift and Select Lever Shaft

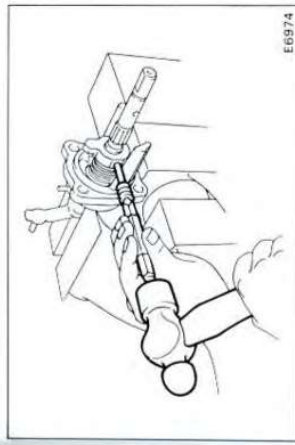


DISASSEMBLY OF SHIFT AND SELECT LEVER SHAFT

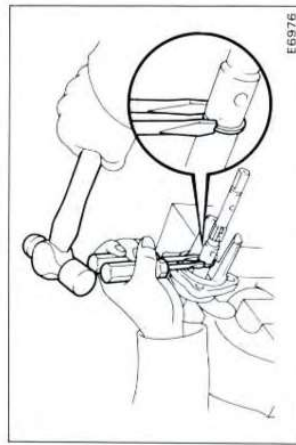
1. REMOVE NO.2 SHIFT INNER LEVER
 - (a) Using a pin punch and a hammer, drive out the slot-

MANUAL TRANSAXLE — Component Parts (Shift and Select Lever Shaft) MT-39**2. REMOVE SHIFT INTERLOCK PLATE AND NO.1 SHAFT INNER LEVER**

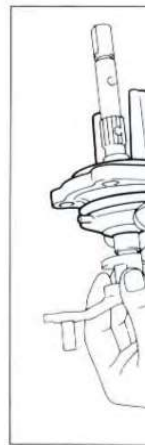
- (a) Using a pin punch and hammer, drive out the slotted spring pin.
- (b) Remove the shift interlock plate and No.1 shift inner lever.

**3. REMOVE SELECT INNER LEVER**

- (a) Using a pin punch and hammer, drive out the slotted spring pin.
- (b) Remove the select inner lever, No.1 compression spring and No.1 select spring seat.

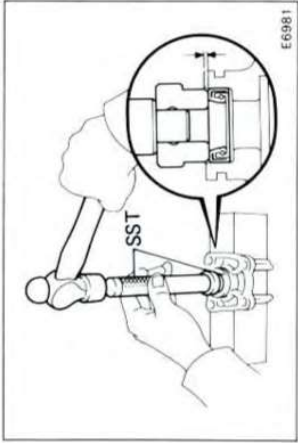
**4. REMOVE SNAP RING**

- Using two screwdrivers and a hammer, remove the snap ring.

**5. REMOVE CONTROL SHAFT COVER AND DUST BOOT**

MT-40

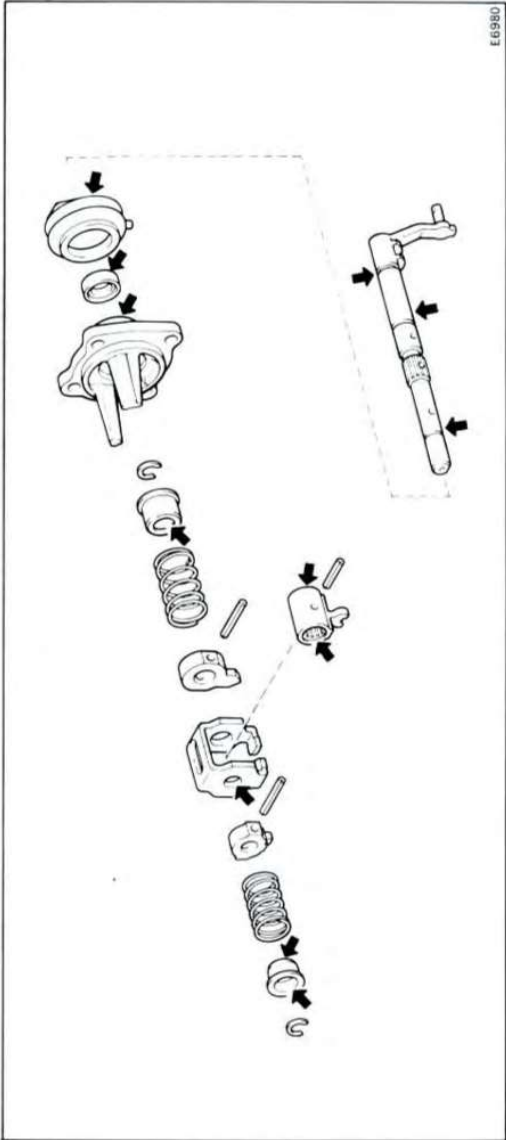
MANUAL TRANSAXLE — Component Parts (Shift and Select Lever Shaft)



- (b) Using SST and a hammer, drive in the new oil seal.
SST 09620-30010 (09627-30010 and 09631-00020)
Oil seal depth: 0 — 1.0 mm (0 — 0.039 in.)
- (c) Apply MP grease to the oil seal.

ASSEMBLY OF SHIFT AND SELECT LEVER SHAFT

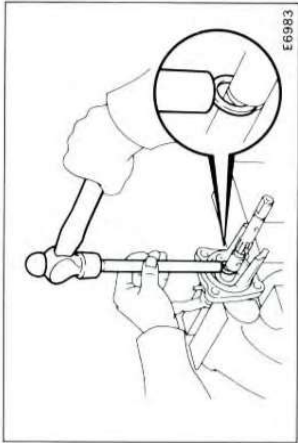
1. APPLY MP GREASE TO PARTS, AS SHOWN



2. INSTALL SHIFT AND SELECT LEVER SHAFT

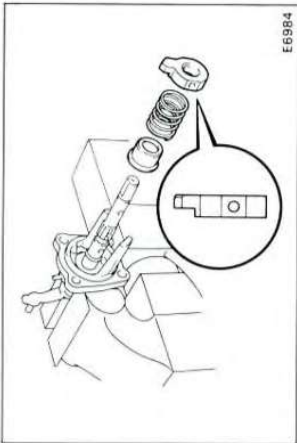
- (a) Install the boot to the control shaft cover, as shown.





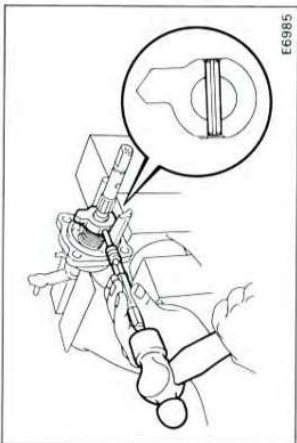
3. **INSTALL SNAP RING**

Using a brass bar and hammer, install the snap ring and spring seat.

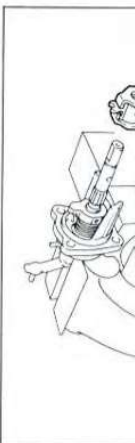


4. **INSTALL SELECT INNER LEVER**

(a) Install the No. 1 spring seat, No. 1 select spring and select inner lever, as shown.



(b) Using a pin punch and hammer, drive in the slotted spring pin.



5. **INSTALL SHIFT INTERLOCK PLATE AND NO. 1 SHIFT INNER LEVER**

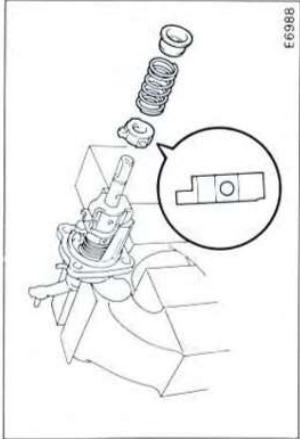
(a) Install the shift interlock plate and No. 1 shift inner lever.

MT-42

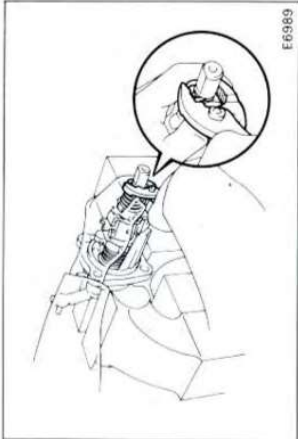
MANUAL TRANSAXLE — Component Parts (Shift and Select Lever Shaft)

6. INSTALL NO.2 SHIFT INNER LEVER

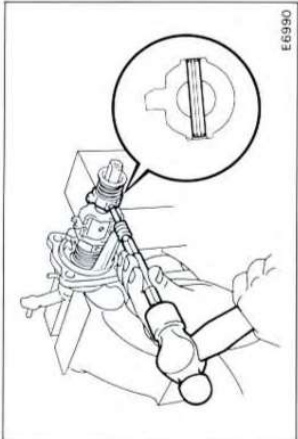
- (a) Install the No.2 shift inner lever, No.2 compression spring and No.2 select spring seat, as shown.



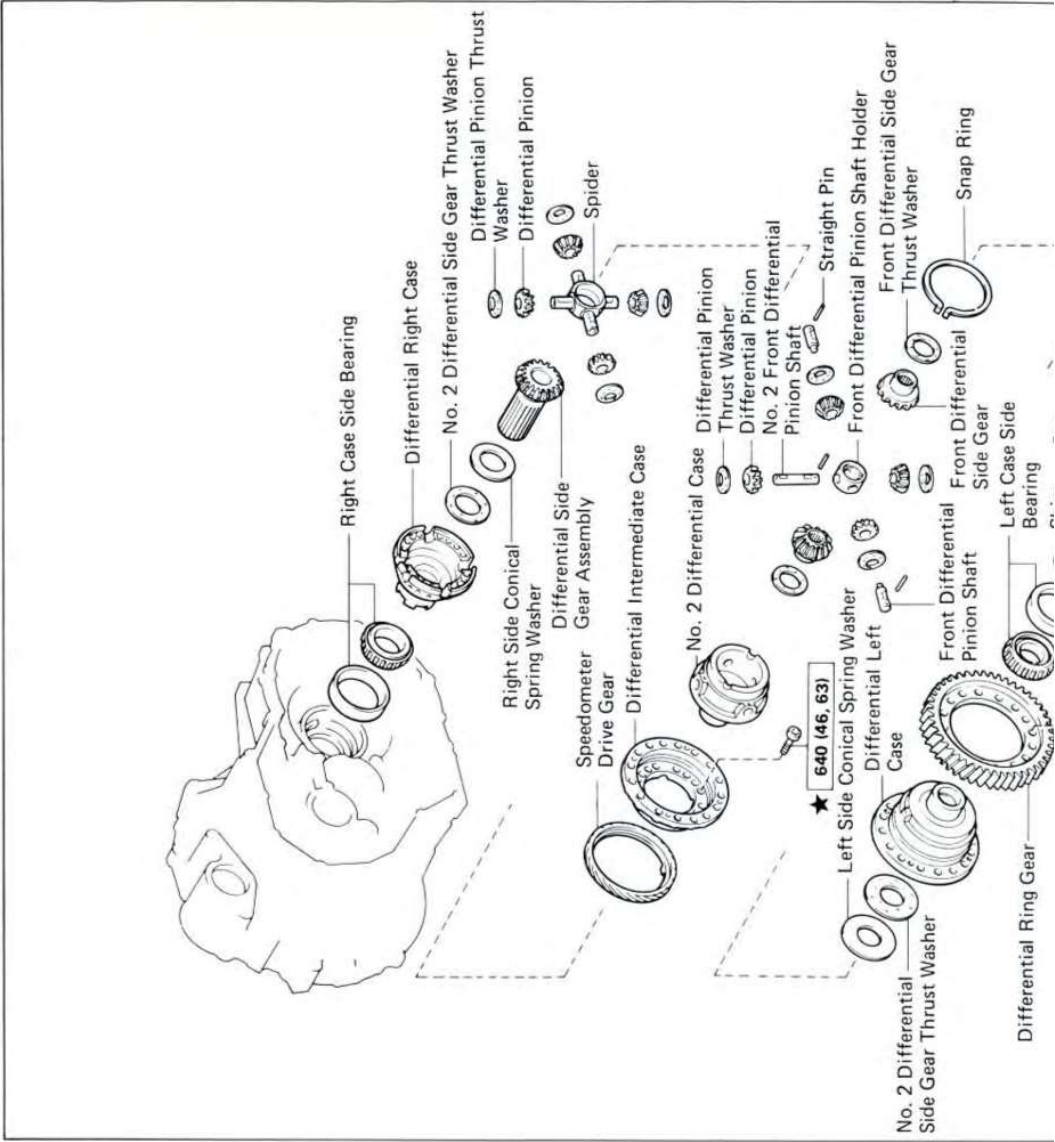
- (b) Install the snap ring.

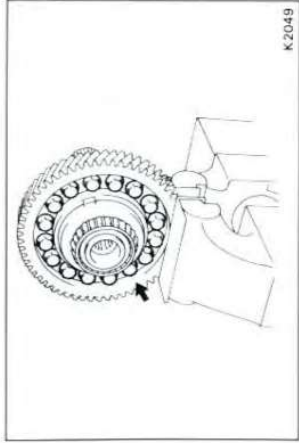


- (c) Using a pin punch and hammer, drive in the slotted spring pin.



Differential Case

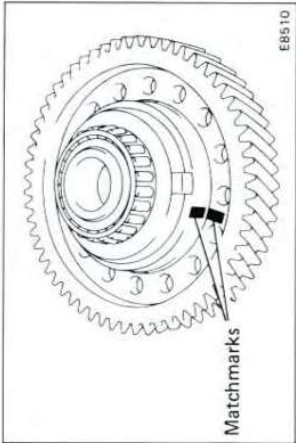
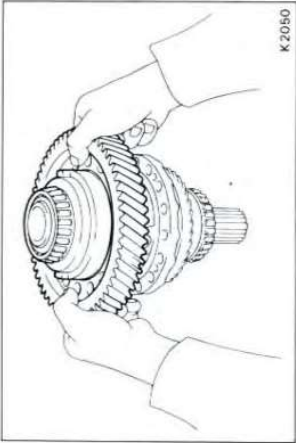




DISASSEMBLY OF DIFFERENTIAL CASE

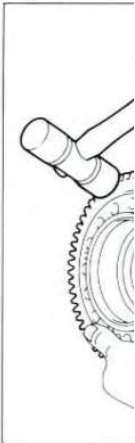
1. REMOVE DIFFERENTIAL LEFT CASE

- (a) Remove the sixteen bolts.
- (b) Remove the differential left case up ward.

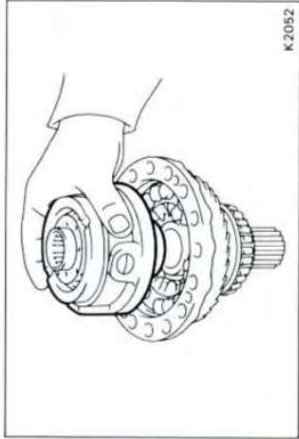


2. REMOVE RING GEAR

- (a) Place the matchmarks on both the differential left case and ring gear.
- (b) Using a plastic hammer, tap out the ring gear.

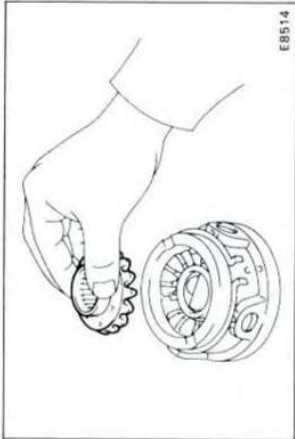


4. REMOVE DIFFERENTIAL NO.2 CASE ASSEMBLY

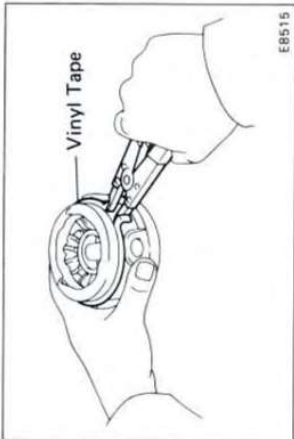


5. DISASSEMBLE DIFFERENTIAL NO.2 CASE

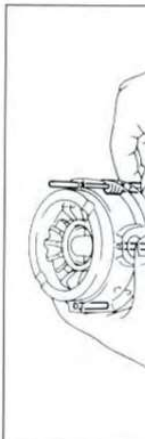
- (a) Remove the front differential side gear together with thrust washer.
- (b) Remove the front differential side gear thrust washer from the side gear.



- (c) Using snap ring pliers, remove the snap ring.
- NOTE: Before removing the shaft snap ring, wrap vinyl tape around the case prevent from damage.

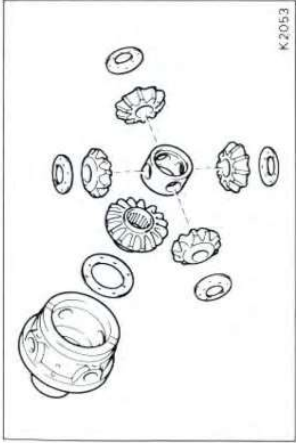


- (d) Using a pin punch, push out the three straight pins.



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MANUAL TRANSAXLE – Component Parts (Differential Case)

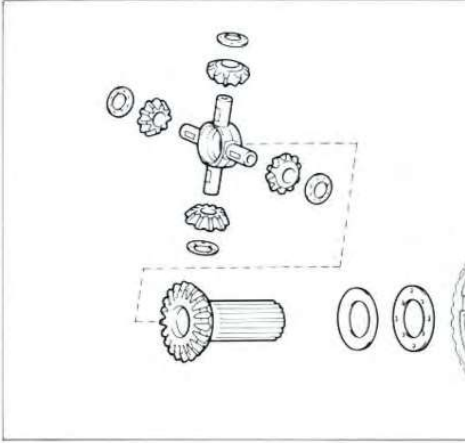


- (f) Remove the pinion shaft holder, four differential pinions, pinion thrust washers, front side gear and thrust washer from the differential No.2 case.



6. REMOVE DIFFERENTIAL INTERMEDIATE CASE

Using a torx wrench, remove the sixteen torx screws and differential intermediate case.

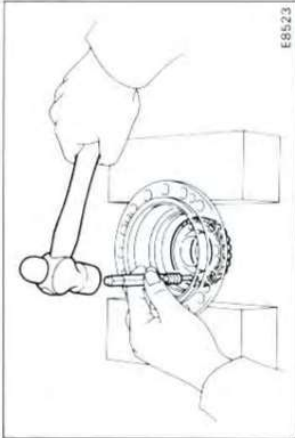


7. DISASSEMBLY DIFFERENTIAL RIGHT CASE

- (a) Remove the differential spider, four pinions, pinion thrust washers, side gear subassembly, conical spring washer and No.2 side gear thrust washer.

MANUAL TRANSAXLE — Component Parts (Differential Case)

MT-47



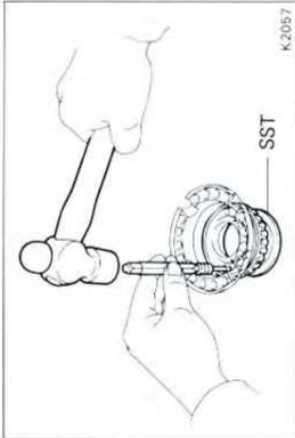
E8523

9. REMOVE SIDE BEARING

(a) Using a pin punch and hammer, drive out the side bearing evenly through two holes in the differential left case.

(b) Using a pin punch and hammer, drive out the side bearing evenly through four holes in the differential right case.

SST 09316-60010 (09316-00020)



K2057

INSPECTION OF DIFFERENTIAL CASE

1. MEASURE DIFFERENTIAL LEFT CASE

Using a cylinder gauge, measure the inner diameter of the differential left case bushing.

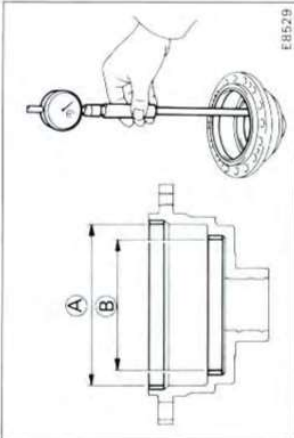
Standard diameter: A 111.000 — 111.035 mm (4.3701 — 4.3714 in.)
B 90.500 — 90.535 mm (3.5630 — 3.5644 in.)

Maximum diameter: A 110.060 mm (4.331 in.)
B 90.560 mm (3.5653 in.)

2. MEASURE DIFFERENTIAL NO.2 CASE

Using a micrometer, measure the outer diameter of differential No.2 case.

Standard diameter: A 110.929 — 110.964 mm (4.3673 — 4.3686 in.)
B 90.429 — 90.464 mm (3.5606 — 3.5615 in.)
C 35.000 — 35.025 mm (1.3778 — 1.3789 in.)



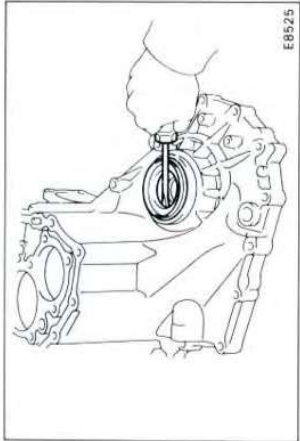
E8529



E8529

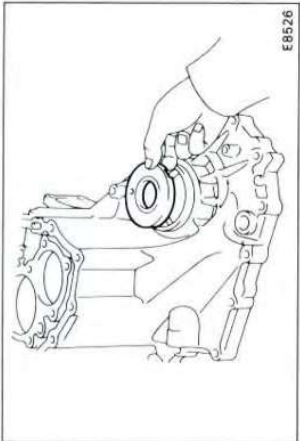
MT-48

MANUAL TRANSAXLE — Component Parts (Differential Case)

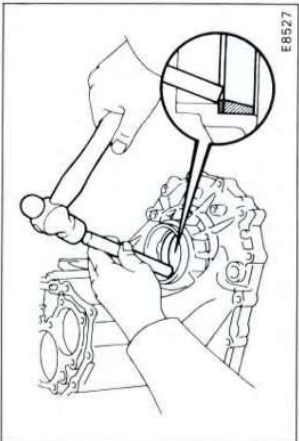


4. (Transmission Case Side)
IF NECESSARY, REPLACE OIL SEAL AND TAPERED
ROLLER BEARING OUTER RACE

(a) Using a screwdriver, remove the oil seal.



(b) Remove the transmission oil baffle.



(c) Using a brass bar and hammer, drive out the bearing
outer race lightly and evenly.

(d) Remove the adjust shim.

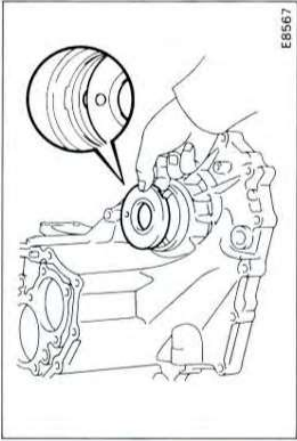


(e) Install the adjust shim.
(See page MT-57)

NOTE: First select and install a shim of lesser thickness
than before.

MANUAL TRANSAXLE — Component Parts (Differential Case)

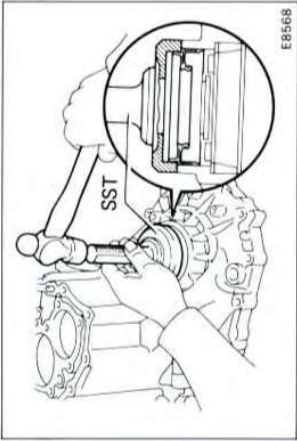
MT-49



E8567

(g) Install the transmission oil baffle.

NOTE: Install the transmission oil baffle projection into the case side cutout.

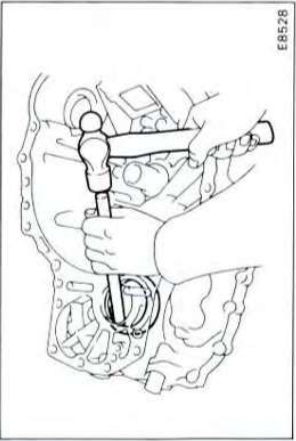


E8568

(h) Using SST, drive in a new oil seal.

SST 09223-15010

(i) Coat the lip of the oil seal with MP grease.

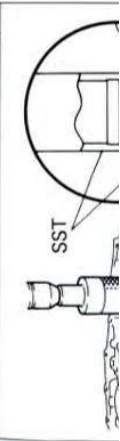


E8528

5. (Transaxle Case Side)

IF NECESSARY, REPLACE TAPER ROLLER BEARING OUTER RACE

(a) Using a brass bar and hammer, drive out the bearing outer race lightly and evenly through the cut-out portion on the transaxle case.

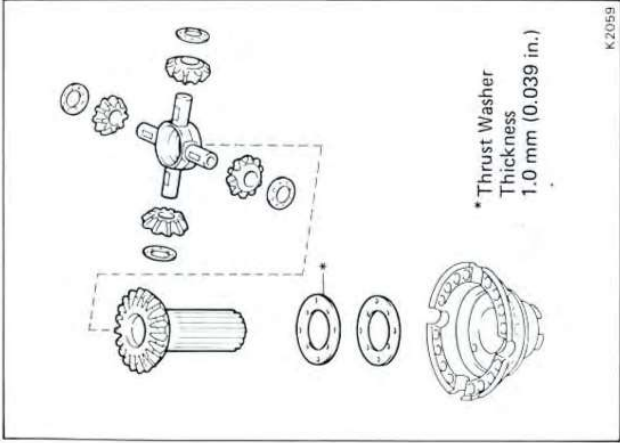


(b) Using SST and a press, install the taper roller bearing outer race.

SST 09316-60010 (09316-00010, 09316-00040)

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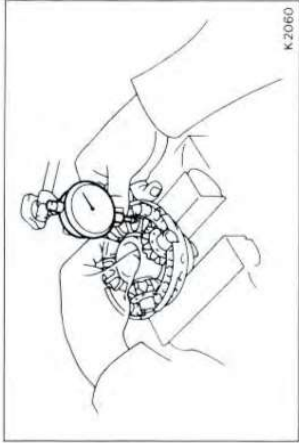
ASSEMBLY OF DIFFERENTIAL CASE

NOTE: Coat all of of the sliding surface with gear oil before assembly.

1. CHECK AND ADJUST CENTER DIFFERENTIAL SIDE GEAR BACKLASH
(Differential Side Gear Sub Assembly)

- (a) Install the No.2 side gear thrust washer, (Temporarily install) 1.0 mm (0.039 in.) size thrust washer, differential side gear subassembly, spider, four pinions and pinion thrust washers to the differential right case.

NOTE: Thrust washer 1.0 mm (0.039 in.) size is for check of backlash.



- (b) Using a dial indicator, measure the backlash of one pinion gear while holding the differential side gear sub assembly toward the case.

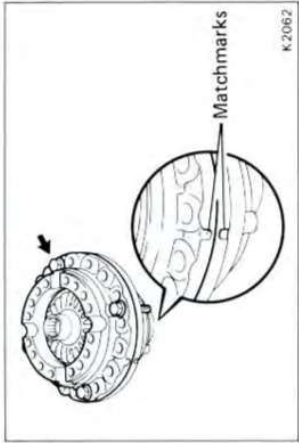
Standard clearance: 0.05 — 0.20 mm
(0.0020 — 0.0079 in.)

NOTE: Push the pinion gear of the right side of the differential case.

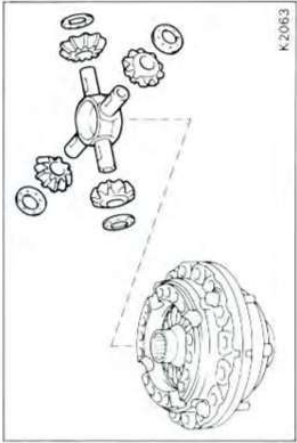
Referring to the table below, select the No.2 thrust washer which will ensure that the backlash is within specification. Try to select a washer of the same size.

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
—	0.80 (0.0315)	—	1.15 (0.0453)
—	0.85 (0.0335)	—	1.20 (0.0472)
—	0.90 (0.0354)	—	1.25(0.0492)
—	0.95 (0.0374)	—	1.30(0.0512)

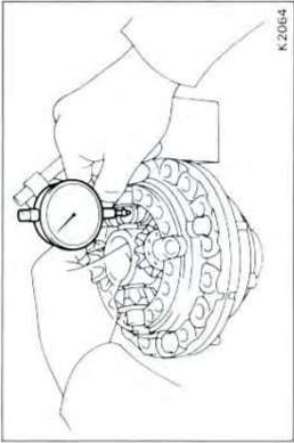
MANUAL TRANSAXLE — Component Parts (Differential Case) MT-51



- (b) Using four transmission case cover bolts, install the differential intermediate case to the left case.
- NOTE: Align the matchmarks on the differential left case and connect the intermediate case.



- (c) Install the differential spider, four pinions and pinion thrust washers to the differential intermediate case.



- (d) Using a dial indicator, measure the backlash of one pinion gear while holding the No.2 differential case.

**Standard backlash: 0.05 — 0.20 mm
(0.0020 — 0.0079 in.)**

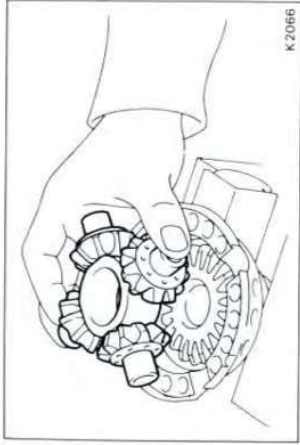
NOTE: Push the pinion gear of the differential intermediate case.

Referring to the table below, select the thrust washer which will ensure that the backlash is within specification. Try to select a washer of the same size.

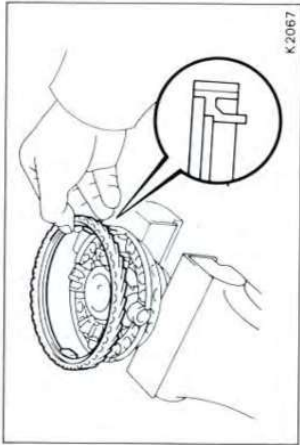
Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
—	0.80 (0.0315)	—	1.15 (0.0453)
—	0.85 (0.0335)	—	1.20 (0.0472)
—	0.90 (0.0354)	—	1.25 (0.0492)
—	0.95 (0.0374)	—	1.30 (0.0512)
—	1.00 (0.0394)	—	1.35 (0.0531)

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MANUAL TRANSAXLE – Component Parts (Differential Case)

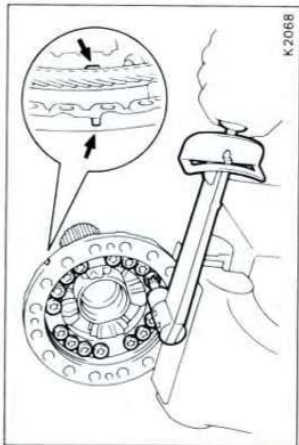


- (b) Install the differential spider, four pinion and pinion thrust washers to the differential right case.



6. INSTALL SPEEDOMETER DRIVE GEAR

Install the speedometer drive gear to the differential right case.



7. INSTALL DIFFERENTIAL INTERMEDIATE CASE

- (a) Align the matchmarks on the right case and connect the intermediate case.
- (b) Install the sixteen torx screws. Using a torx wrench, tighten the screws uniformly and a little at a time in succession. Torque the screws.

Torque: 640 kg-cm (46 ft-lb, 63 N·m)

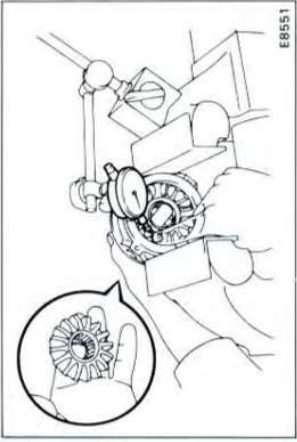


8. CHECK AND ADJUST FRONT SIDE GEAR BACKLASH (Differential No.2 Case)

- (a) Install the front differential side gear thrust washer, side gear, pinion shaft holder, four pinions and thrust washers

MANUAL TRANSAXLE – Component Parts (Differential Case)

MT-53



E8551

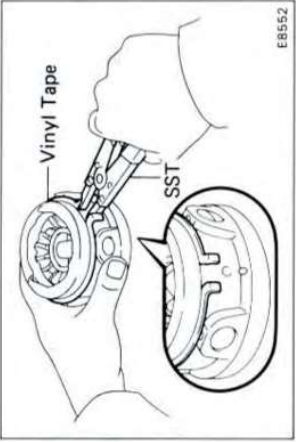
(d) Using a dial indicator, measure the backlash of one pinion gear while holding the front differential side gear toward the case.

Standard backlash: 0.05 – 0.20 mm (0.0020 – 0.0079 in.)

NOTE: Do not mount the surface of No.2 differential case which contacts with bushing in a vise.

Referring to the table below, select the thrust washer which will ensure that the backlash is within specification. Try to select a washer of the same size.

Mark	Thickness	mm (in.)
B	1.00	(0.0394)
C	1.05	(0.0413)
D	1.10	(0.0433)
E	1.15	(0.0453)
F	1.20	(0.0472)
G	1.25	(0.0492)



E8552

9. INSTALL SNAP RING

Using snap ring pliers, install the shaft snap ring toward as shown.

NOTE: Before installing the shaft snap ring, wrap vinyl tape around the case prevent from damage.



E8553

10. CHECK AND ADJUST FRONT DIFFERENTIAL SIDE GEAR THRUST CLEARANCE (Differential Left Case)

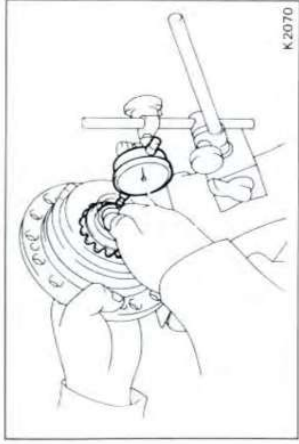
(a) Install the No.2 side gear thrust washer, (temporarily install 1.0 mm (0.0394 in.) thick No. 2 side gear thrust washer)

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MANUAL TRANSAXLE — Component Parts (Differential Case)



- (b) Using a dial indicator, measure the thrust clearance of front differential side gear while holding the No. 2 case on the left side.

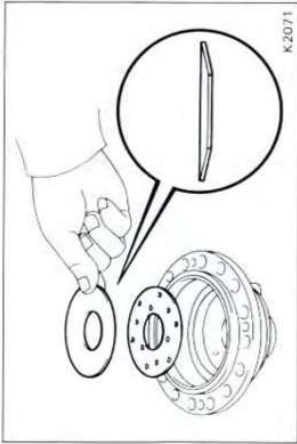
Standard clearance: 0.14 — 0.21 mm
(0.006 — 0.008 in.)

NOTE: Turning the side gear a bit, check the maximum value of thrust clearance.

Referring to the table below, select the thrust washer which will ensure that the thrust clearance within specification. Try to select a washer of the same size.

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
A	0.95 (0.0374)	F	1.20 (0.0472)
B	1.00 (0.0394)	G	1.25 (0.0492)
C	1.05 (0.0413)	H	1.30 (0.0512)
D	1.10 (0.0433)	J	1.35 (0.0531)
E	1.15 (0.0453)	K	1.40 (0.0551)

- (c) Remove the differential left case.



11. ASSEMBLY DIFFERENTIAL LEFT CASE

- (a) Install the No. 2 side gear thrust washer (previously selected) and conical spring washer to the left case.

NOTE: Be careful not to mistake the direction of conical spring washer.



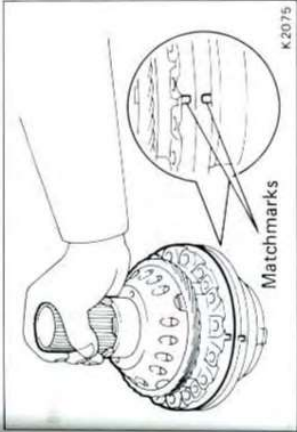
- (b) Install the front differential side gear thrust washer and side gear to the left case.

- (c) Install the differential No. 2 case assembly.

NOTE: Engage the front differential side gear and pinion

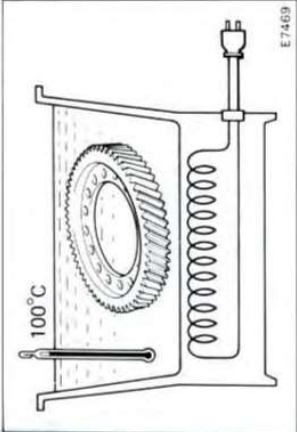
MANUAL TRANSAXLE — Component Parts (Differential Case)

MT-55



(e) Install the intermediate case to the differential left case.

NOTE: Align the matchmarks on the differential left case and connect the intermediate case.



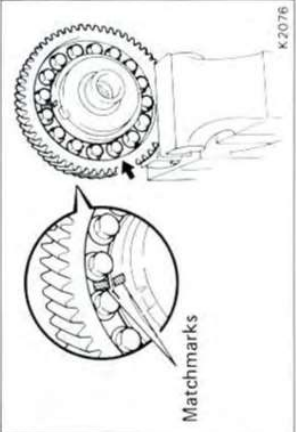
12. INSTALL RING GEAR

(a) Clean the contact surface of the differential left case.

(b) Heat the ring gear to about 100°C (212°F) in an oil bath.

CAUTION: Do not heat the ring gear above 110°C (230°F)

(c) Clean the contact surface of the ring gear with cleaning solvent.



(d) Then quickly install the ring gear on the differential case.

NOTE: Align the matchmarks on the differential left case and connect the ring gear.

(e) Install the sixteen set bolts. Tighten the set bolts uniformly and a little at a time in succession. Torque the bolts.

Torque: 1260 kg-cm (91 ft-lb, 124 N·m)



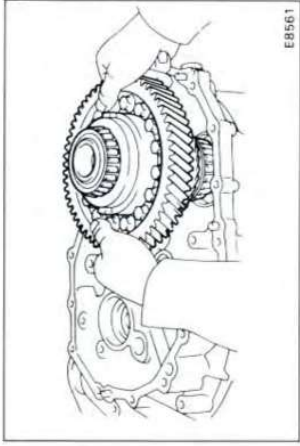
13. INSTALL SIDE BEARING

Using SST and a press, install the side bearing to the differential case.

SST 09316-20011 and 09316-60010 (09316-00010)

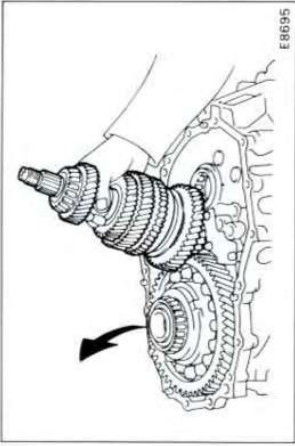
MT-56

MANUAL TRANSAXLE — Component Parts (Differential Case)



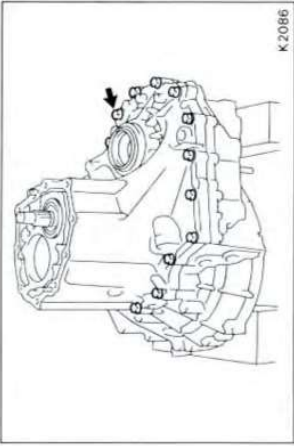
15. INSTALL DIFFERENTIAL CASE ASSEMBLY

Install the differential case assembly to the transaxle case.



16. INSTALL OUTPUT SHAFT ASSEMBLY

Lift up the differential case, install the output shaft assembly.



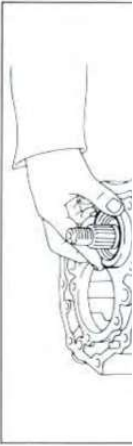
17. INSTALL TRANSMISSION CASE

(a) Install the transmission case.

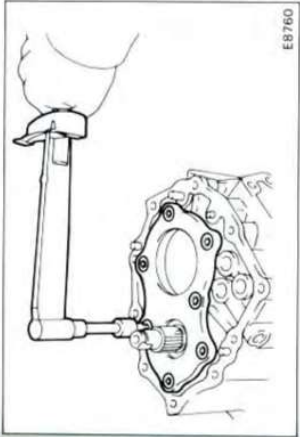
NOTE: If necessary, tap on the case with a plastic hammer.

(b) Install and torque the seventeen bolts.

Torque: 300 kg-cm (22 ft-lb, 29 N·m)



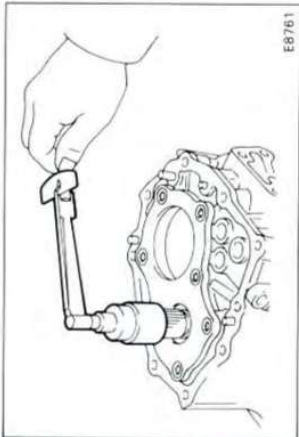
18. INSTALL OUTPUT SHAFT REAR TAPERED ROLLER BEARING OUTER RACE



20. INSTALL REAR BEARING RETAINER

Using a torx wrench, install and torque the seven torx screws.

Torque: 430 kg-cm (31ft.-lb, 42 N·m)



21. ADJUST DIFFERENTIAL CASE PRELOAD

- (a) Install the new lock nut to the output shaft.
- (b) Turn the output shaft right and left two or three times to allow the bearings to settle.
- (c) Using a torque wrench, measure the preload.

Preload (at starting):

New bearing

Add output shaft preload

1.9 — 3.7 kg-cm

(1.6 — 3.2 in.-lb, 0.2 — 0.4 N·m)

Reused bearing

Add output shaft preload

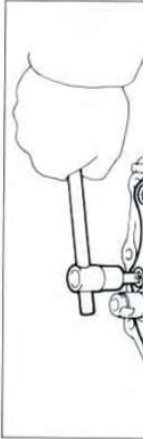
1.2 — 2.3 kg-cm

(1.0 — 2.0 in.-lb, 0.1 — 0.2 N·m)

If the preload is not within specification, select the thrust washers.

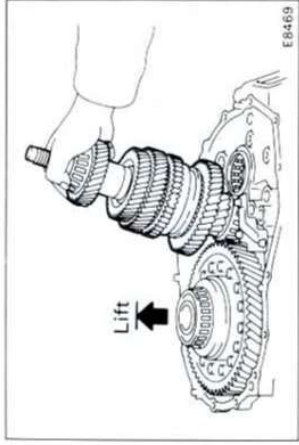
NOTE: The preload will change about 1.3 kg-cm (1.13 in.-lb, 0.13 N·m) with each shim thickness.

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
0	2.00 (0.0787)	9	2.45 (0.0965)
1	2.05 (0.0807)	A	2.50 (0.0984)
2	2.10 (0.0827)	B	2.55 (0.1004)
3	2.15 (0.0846)	C	2.60 (0.1024)
4	2.20 (0.0866)	D	2.65 (0.1043)
5	2.25 (0.0886)	E	2.70 (0.1063)
6	2.30 (0.0906)	F	2.75 (0.1083)



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MANUAL TRANSAXLE – Component Parts (Differential Case)

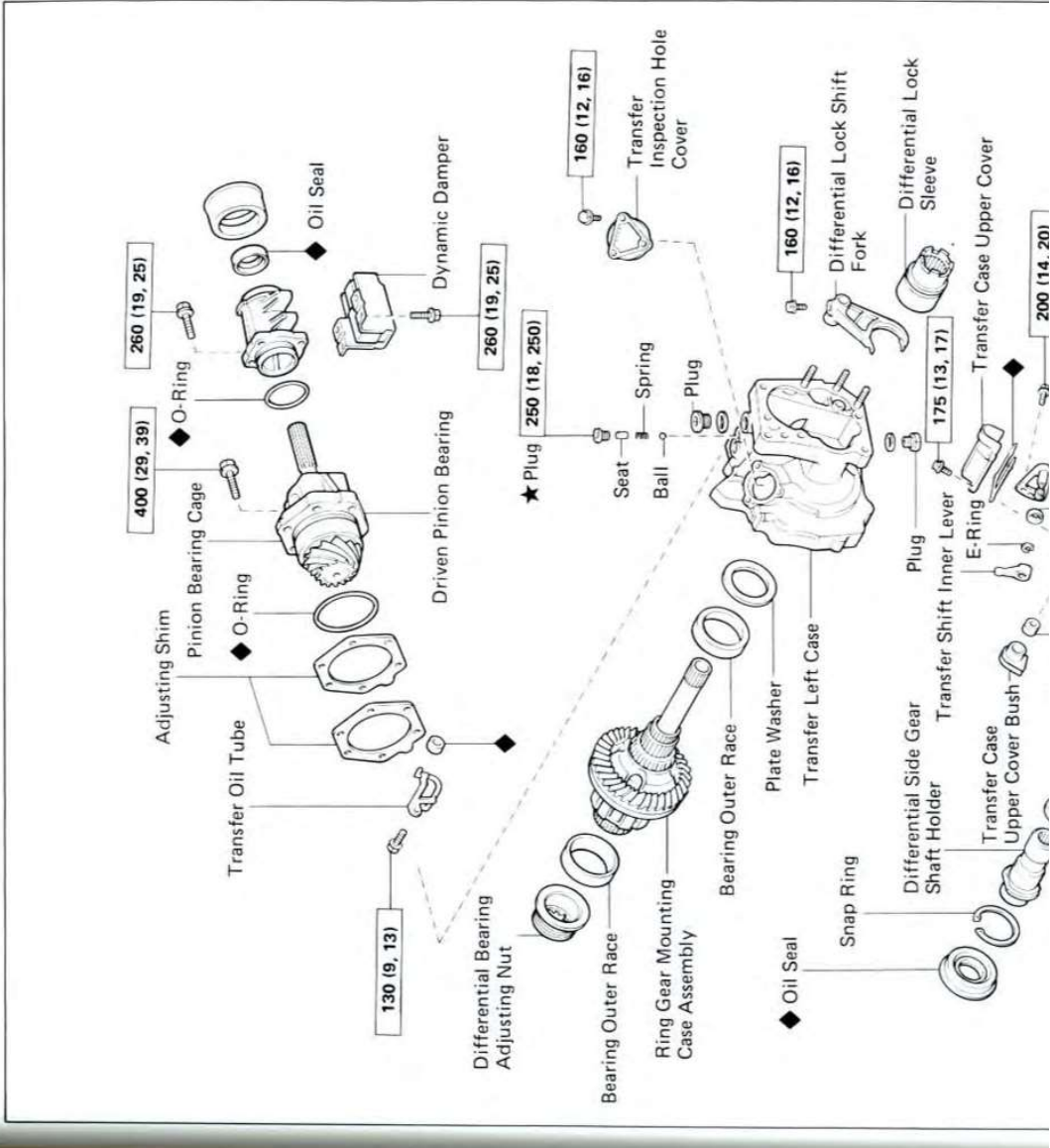


25. REMOVE OUTPUT SHAFT ASSEMBLY

26. REMOVE DIFFERENTIAL CASE ASSEMBLY

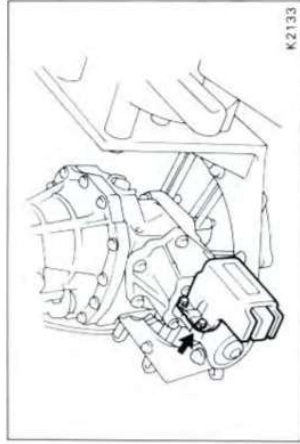


Transfer



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MANUAL TRANSAXLE – Component Parts (Transfer)



DISASSEMBLY OF TRANSFER COMPONENT PARTS

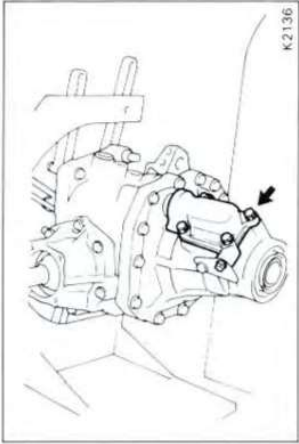
1. REMOVE DYNAMIC DAMPER

Remove the four bolts and dynamic damper.



2. REMOVE EXTENSION HOUSING

- (a) Remove the four bolts and tap off the housing with a plastic hammer.
- (b) Remove the O-ring from the extension housing.



3. REMOVE TRANSFER CASE COVER

- (a) Remove the five bolts.
- (b) Remove the case cover and gasket.

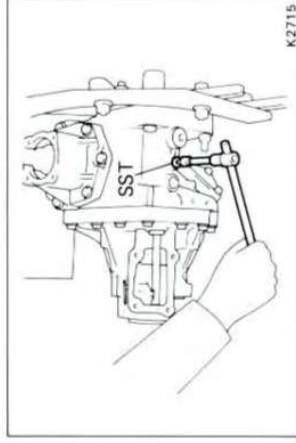


4. REMOVE SHIFT LEVER SHAFT AND INNER LEVER

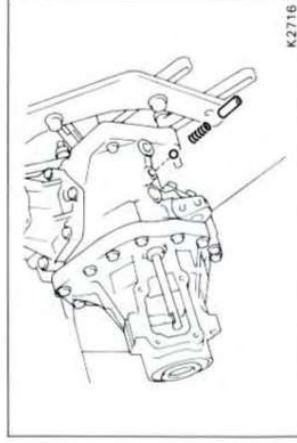
- (a) Remove the E-ring.
- (b) Remove the shift lever shaft and inner lever.

MANUAL TRANSAXLE — Component Parts (Transfer) MT-61**6. REMOVE PLUG, SEAT, SPRING AND LOCKING BALL**

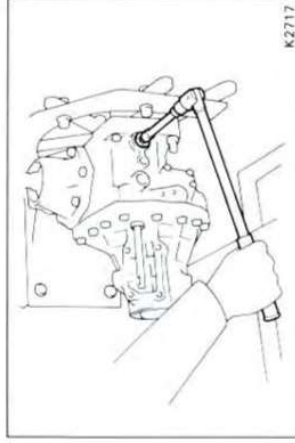
- (a) Using SST, remove the plug.
SST 09313-30021



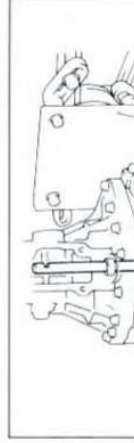
- (b) Using a magnetic finger, remove the seat, spring and ball.

**7. REMOVE DIFFERENTIAL LOCK SHIFT FORK AND SHIFT FORK SHAFT**

- (a) Using SST, remove the plug.
SST 09043-38100



- (b) Remove the set bolt.
(c) Remove the differential lock sleeve and shift fork.

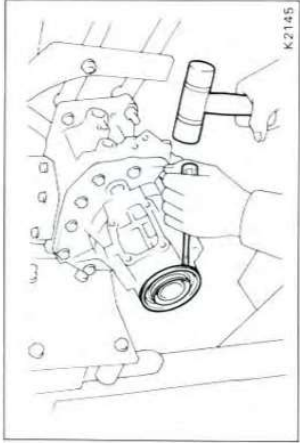


MT-62

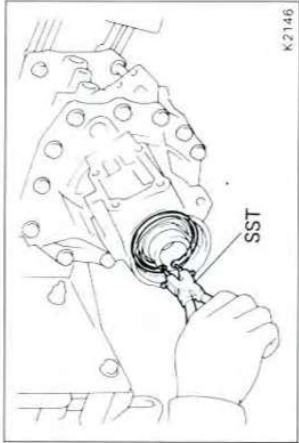
MANUAL TRANSAXLE — Component Parts (Transfer)

8. REMOVE SIDE GEAR SHAFT HOLDER

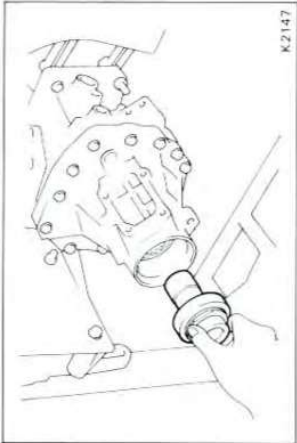
- (a) Using a screwdriver and hammer, remove the oil seal.



- (b) Using snap ring pliers, remove the snap ring.



- (c) Remove the shaft holder.



9. CHECK PRELOAD

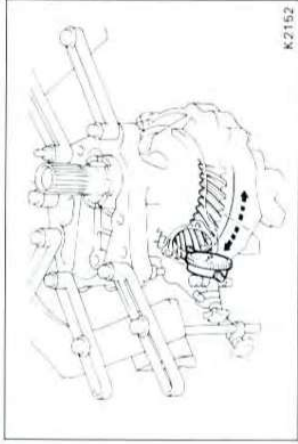
- (a) Using SST and a spring tension gauge, measure the driven pinion preload of the backlash between the driven pinion and ring gear.



11. CHECK RING GEAR BACKLASH

Using a dial indicator, measure the ring gear backlash.

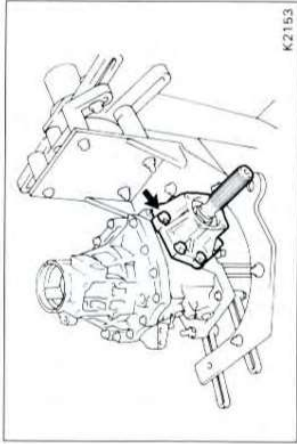
Backlash: 0.13 — 0.18 mm (0.0051 — 0.0071 in.)



12. CHECK TOOTH CONTACT (See page MT-00)

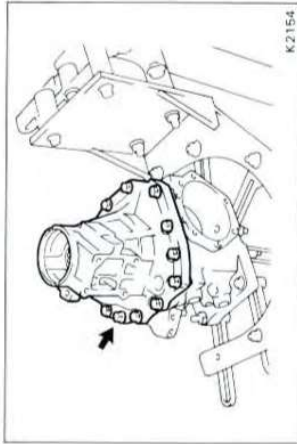
13. REMOVE DRIVEN PINION BEARING CAGE ASSEMBLY

- (a) Remove the six bolts and tap off the bearing cage assembly with a plastic hammer.
- (b) Remove the O-ring from the driven pinion bearing cage.



14. REMOVE TRANSFER RIGHT CASE

Remove the twelve bolts and tap off the case with a plastic hammer.

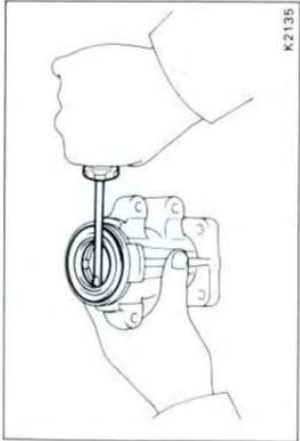


15. REMOVE RING GEAR MOUNTING CASE ASSEMBLY



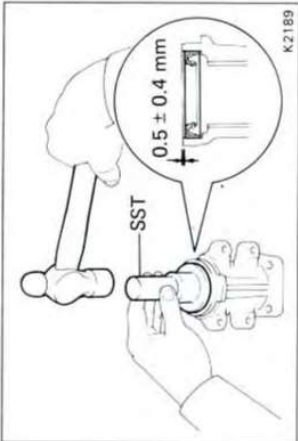
MT-64

MANUAL TRANSAXLE – Component Parts (Transfer)

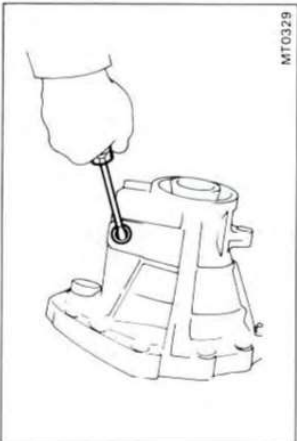


17. IF NECESSARY, REPLACE EXTENSION HOUSING OIL SEAL

- (a) Using a screwdriver, remove the oil seal.



- (b) Using SST and a hammer, drive in a new oil seal.
SST 09325-20010
Oil seal depth: 0.1 – 0.9 mm (0.004 – 0.035 in.)
(c) Coat the lip of oil seal with MP grease.

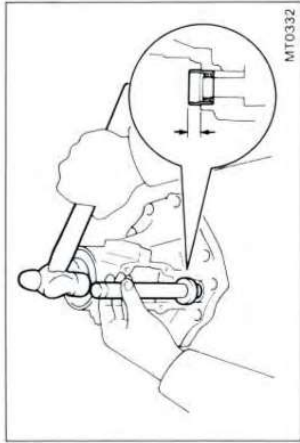


18. IF NECESSARY, REPLACE DIFFERENTIAL LOCK SHIFT LEVER SHAFT OIL SEAL

- (a) Using a screwdriver, remove the oil seal.



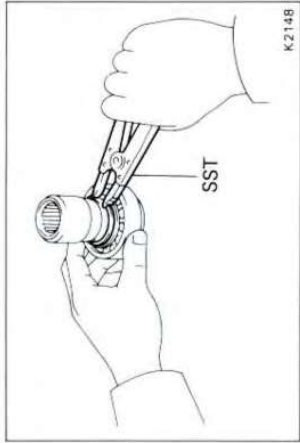
- (b) Coat the lip seal with MP grease.
(c) Using SST and a hammer, drive in a new oil seal.
SST 09620-30010 (09625-30010, 09631-00020)
Oil seal depth: 1.0 – 2.0 mm (0.039 – 0.079 in.)



- (b) Coat the lip of the oil seal with MP grease.
- (c) Using SST and a hammer, drive in a new oil seal as shown.

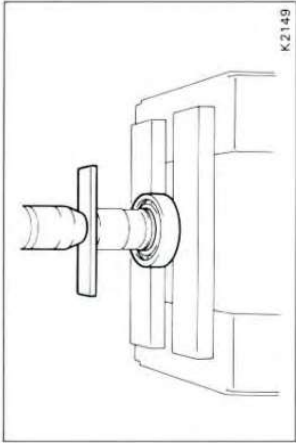
SST 09620-30010 (09625-30010, 09631-00020)

Oil seal height: 8.5 — 9.5 mm (0.335 — 0.374 in.)

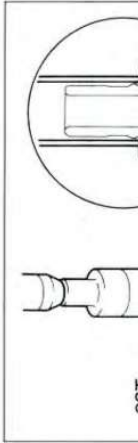


20. IF NECESSARY, REPLACE SIDE GEAR SHAFT HOLDER BEARING

- (a) Using snap ring pliers, remove the snap ring.



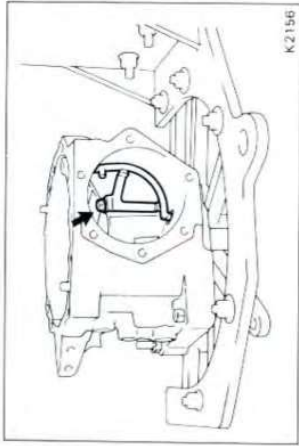
- (b) Using a press, remove the bearing from the side gear shaft holder.



- (c) Using SST and a press, install the new bearing as shown.
SST 09316-60010 (09316-00010)

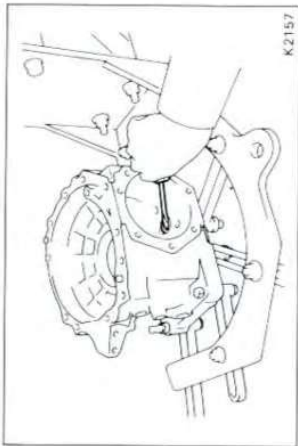
MT-66

MANUAL TRANSAXLE — Component Parts (Transfer)

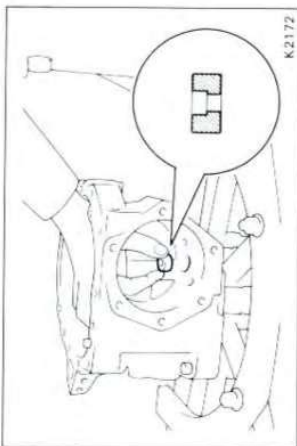


21. IF NECESSARY, REPLACE TRANSFER OIL TUBE

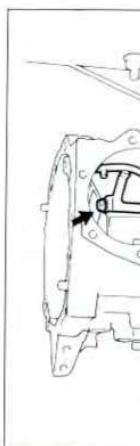
- (a) Remove the bolt and oil tube.



- (b) Using a screwdriver, remove the cushion.



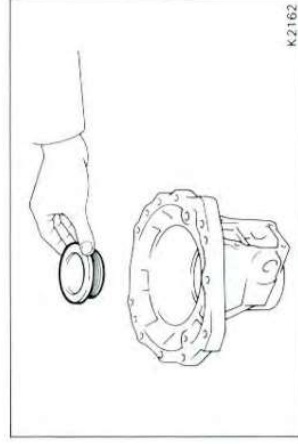
- (c) Install the new cushion.



- (d) Install the oil tube.

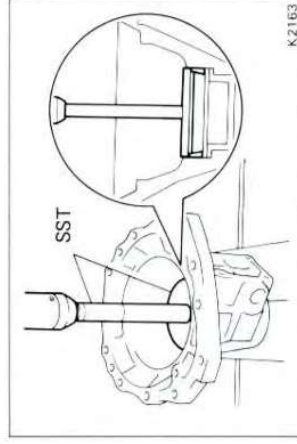
- (e) Install and torque the bolt.

Torque: 130 kg-cm (9 ft-lb, 13 N·m)

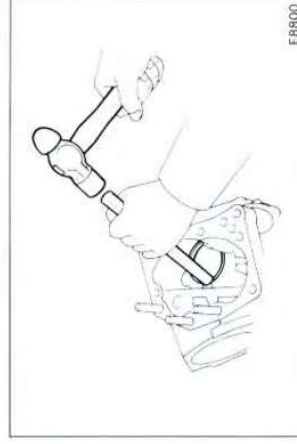
MANUAL TRANSAXLE — Component Parts (Transfer)
MT-67


- (b) Install the bearing adjusting nut until it touches the lip of the case.

NOTE: If the nut is difficult to turn, use SST (09318-20010).



- (c) Using SST and a press, install the bearing outer race until it is almost touching the bearing adjusting nut.
SST 09608-35014 (09608-06020, 09608-06180)


(Transfer Left Case)

- (a) Using a brass bar and hammer, drive out the bearing outer race lightly and evenly.
(b) Remove the plate washer.



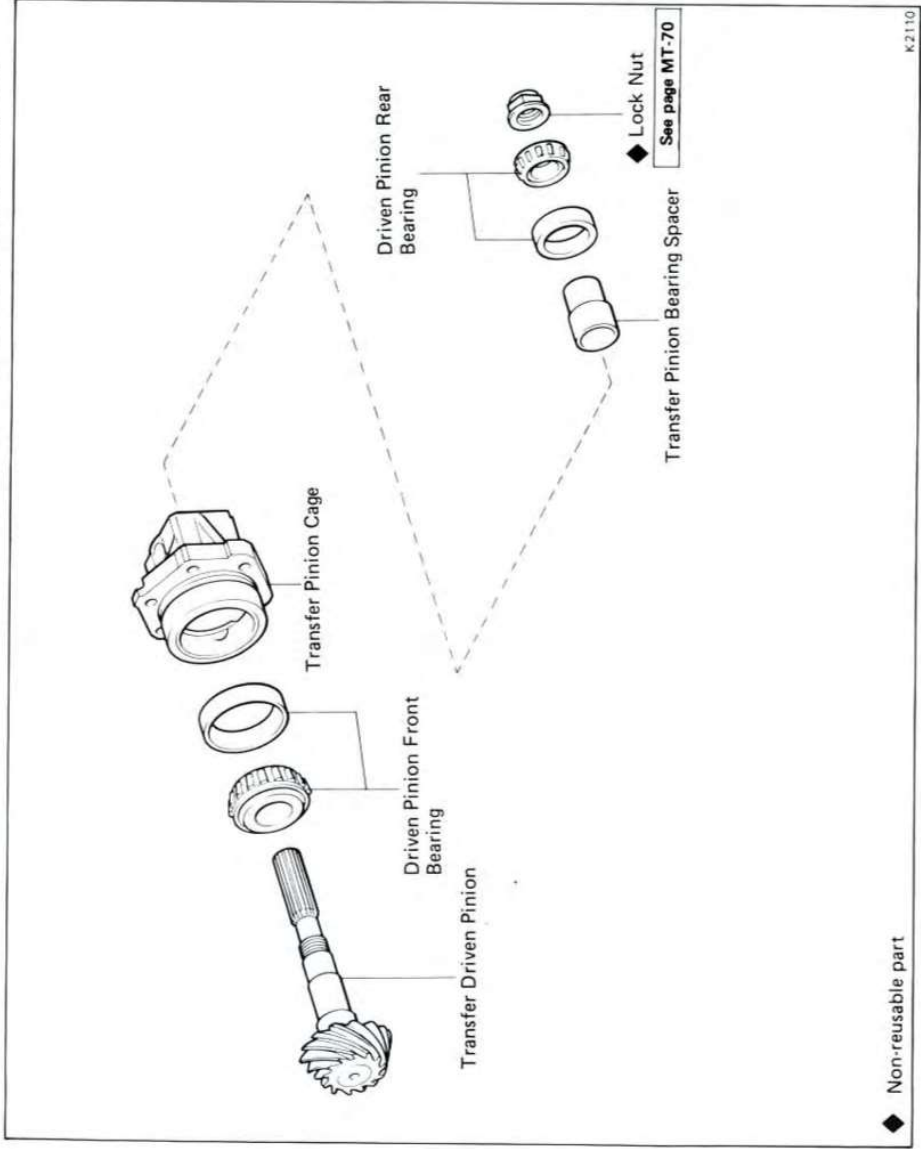
- (c) Install the plate washer.

NOTE: First install a washer of the same thickness as before.

MT-68

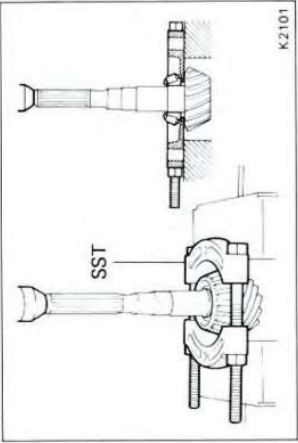
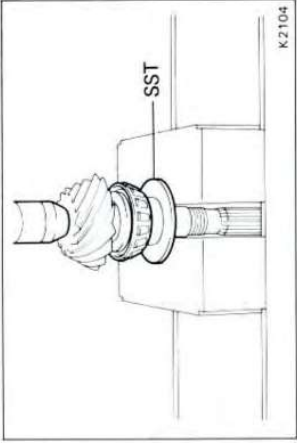
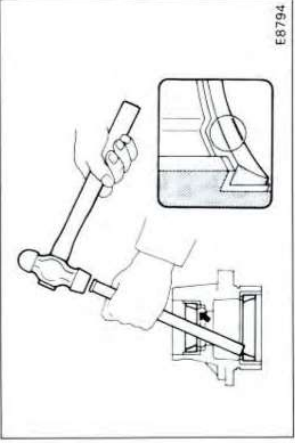
MANUAL TRANSAXLE — Component Parts (Transfer)

DRIVEN PINION BEARING CAGE ASSEMBLY



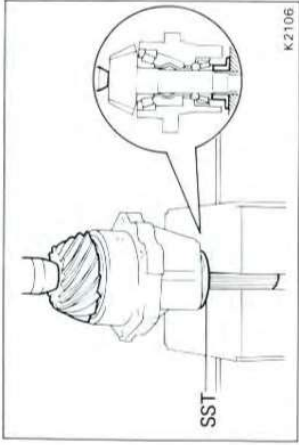
DISASSEMBLY OF DRIVEN PINION BEARING CAGE

1. REMOVE LOCK NUT

MANUAL TRANSAXLE — Component Parts (Transfer)		MT-69
	3. IF NECESSARY, REPLACE DRIVEN PINION FRONT BEARING	
	(a) Using SST and a press, remove the front bearing. SST 09950-00020	
	(b) Using SST and a press, install the front bearing. SST 09316-60010 (09316-00050)	
	4. IF NECESSARY, REPLACE FRONT AND REAR BEARING OUTER RACE	
	(a) Using a brass bar and hammer, drive out the bearing outer race lightly and evenly.	
	(b) Using SST and a press, install the front bearing outer race. SST 09608-35014 (09608-06020, 09608-06210)	
	(c) Using SST and a press, install the rear bearing outer race.	

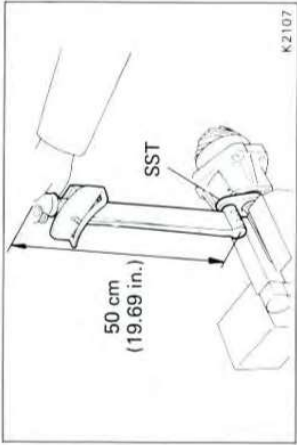
MT-70

MANUAL TRANSAXLE — Component Parts (Transfer)



(b) Using SST and a press, install the rear bearing.

NOTE: Press down until the pinion can just move slightly up and down.



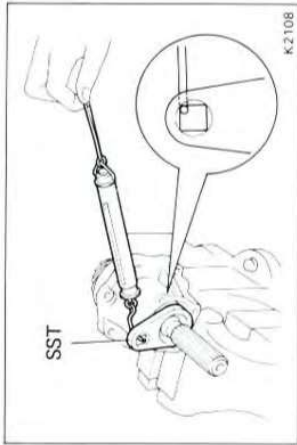
2. ADJUST DRIVEN PINION PRELOAD

(a) Using SST, install and torque the new lock nut.

SST 09326-20011

Torque: 1,000 kg-cm (72 ft-lb, 98 N·m)

NOTE: Use a torque wrench with a fulcrum length of 50 cm (19.69 in.).



(b) Using SST and a spring tension gauge, measure the driven pinion preload.

NOTE: Turn the driven pinion right and left two or three times to allow the bearings to settle.

Preload (at starting):

New bearing 1.8 – 2.9 kg
(4.0 – 6.4 lb, 17.7 – 28.4 N)

Reused bearing 0.9 – 1.4 kg
(1.1 – 2.0 lb, 4.9 – 8.8 N)

- If preload is greater than specification, replace the bearing spacer.
- If preload is less than specification, retighten the nut 5 – 10° at a time until the specified preload is reached.

If the maximum torque is exceed while retightening the nut, replace the bearing spacer and repeat the preload procedure.

MANUAL TRANSAXLE — Component Parts (Transfer)

MT-71

RING GEAR MOUNTING CASE ASSEMBLY

985 (71, 97)

kg-cm (ft-lb, N.m) : Specified torque

K2112

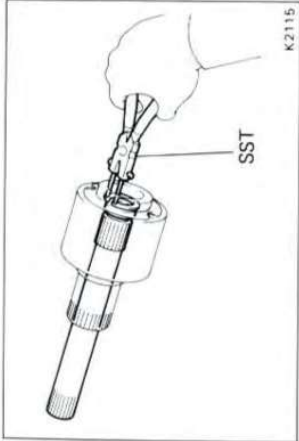
DISASSEMBLY OF RING GEAR MOUNTING CASE

1. REMOVE RING GEAR MOUNTING RIGHT CASE

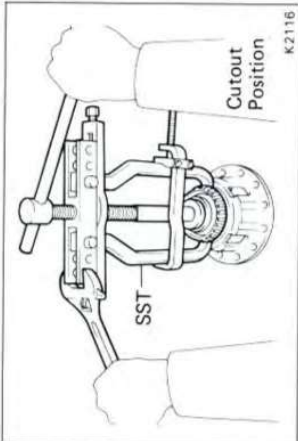
Remove transfer tubes and right case

MT-72

MANUAL TRANSAXLE — Component Parts (Transfer)

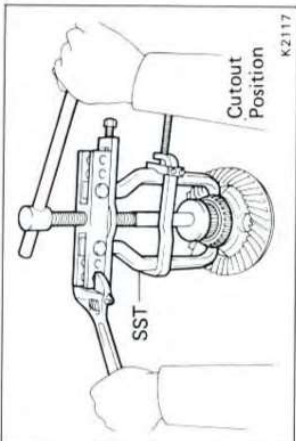


- (c) Using a snap ring pliers , remove the snap ring and No.2 intermediate shaft.



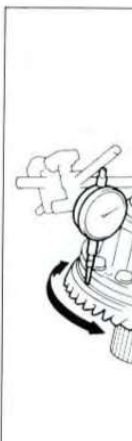
3. REMOVE MOUNTING CASE SIDE BEARING
(Right Case Side)

- Using SST, remove the side bearing.
SST 09950-20017



(Left Case Side)

- Using SST, remove the side bearing.
SST 09950-20017



4. CHECK RING GEAR RUNOUT

- (a) Install the mounting right case to the left case.
(b) Using a dial indicator, check the ring gear runout.

Maximum runout: 0.1 mm (0.004 in.)

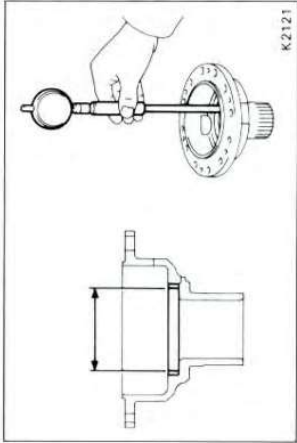
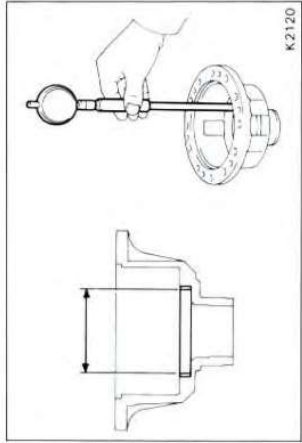
INSPECTION OF RING GEAR MOUNTING CASE

1. MEASURE RING GEAR MOUNTING CASE

- (a) Using a cylinder gauge, measure the inner diameter of the mounting right case bushing.

Standard diameter: 69.000 — 69.035 mm
(2.7165 — 2.7179 in.)

Maximum diameter: 69.060 mm (2.7189 in.)



- (b) Using a cylinder gauge, measure the inner diameter of the mounting left case bushing.

Standard diameter: 69.000 — 69.035 mm
(2.7165 — 2.7179 mm)

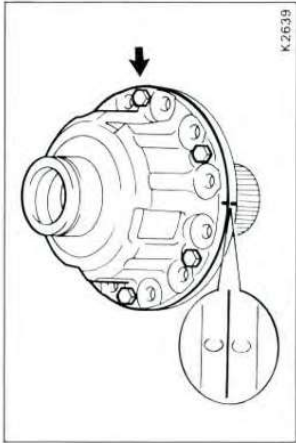
Maximum diameter: 69.060 mm (2.7189 in.)

2. CHECK RING GEAR MOUNTING CASE RUNOUT

NOTE: Perform only when the limit is exceeded in the ring gear runout inspection.

- (a) Using six bolts (Diameter 8 mm, Pitch 1.25 mm), install the mounting right case to the left case.

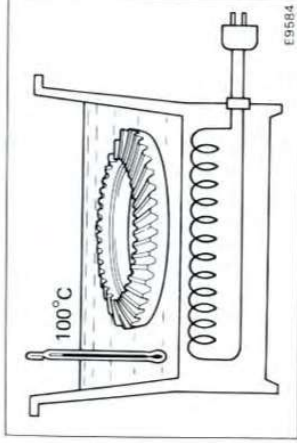
NOTE: Align the matchmarks on the right case and connect the left case.



- (b) Using a dial indicator, check the mounting case runout.

Maximum runout: 0.1 mm (0.004 in.)

- (c) Remove the six bolts.
(d) Remove the mounting right case from the left case.



ASSEMBLY OF RING GEAR MOUNTING CASE

1. INSTALL RING GEAR

- (a) Clean the contact surface of the mounting left case.
- (b) Heat the ring gear to about 100°C (212°F) in an oil bath.

CAUTION: Do not heat the ring gear above 110°C (230°F).

- (c) Clean the contact surface of the ring gear with cleaning solvent.
- (d) Turn quickly install the ring gear on the mounting left case.

NOTE: Align the matchmarks on the mounting left case and connect the ring gear.

2. CHECK RING GEAR RUNOUT (See page MT-72)

3. INSTALL MOUNTING CASE SIDE BEARING (Right Case Side)

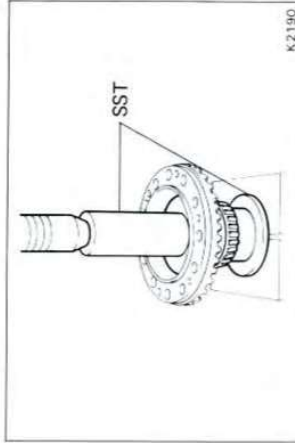
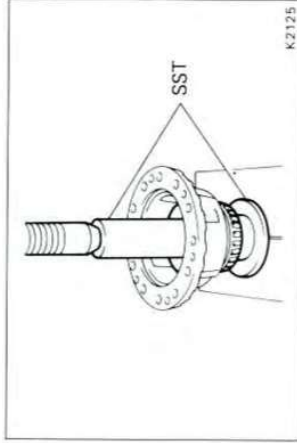
Using SST and a press, install the side bearing.

SST 09309-36010, 09316-20011

(Left Case Side)

Using SST and a press, install the side bearing.

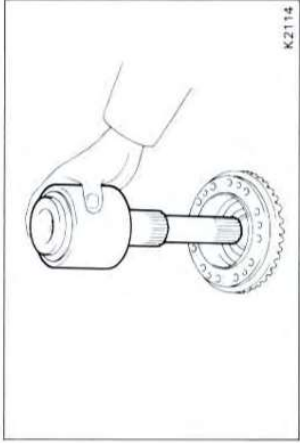
SST 09309-36010, 09316-20011



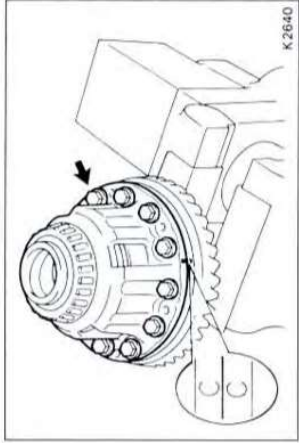
4. INSTALL CENTER DIFFERENTIAL CONTROL COUPLING

- (a) Insert the No.2 intermediate shaft to the center differential control coupling.
- (b) Using snap ring pliers, install the snap ring.





- (d) Install the center differential control coupling to the left case.
- NOTE: Do not drop the washer.



4. **INSTALL RING GEAR MOUNTING RIGHT CASE**
- (a) Install the right case to the left case.
- (b) Install and torque the twelve bolts.
- Torque: 985 kg-cm (71 ft-lb, 97 N·m)**
- NOTE: Align the matchmarks on the left case and connect the right case.



ASSEMBLY OF TRANSFER COMPONENT PARTS
(See page MT-59)

NOTE: Coat all of the sliding and rotating surface with gear oil before assembly.

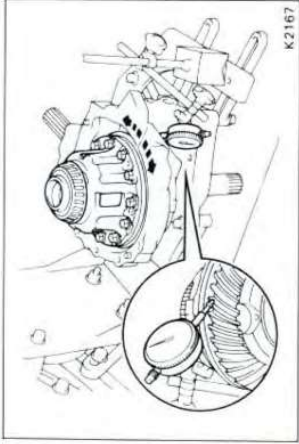
1. **ADJUST RING GEAR BACKLASH**
- (a) Install the adjusting shim to the driven pinion bearing cage assembly.
- NOTE: First install a shim of the same thickness as before.



- (b) Install the driven pinion bearing cage assembly to the transfer left case.
- (c) Install and torque the six bolts.
- Torque: 400 kg-cm (29 ft-lb, 39 N·m)**

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MANUAL TRANSAXLE — Component Parts (Transfer)



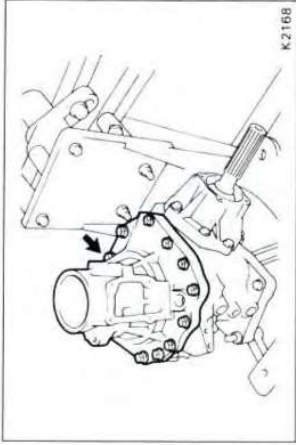
- (e) Using a dial indicator, measure the ring gear backlash.
Backlash: 0.13 — 0.18 mm (0.0051 — 0.0071 in.)
- (f) Referring to the table below, select the plate washer which will ensure that the backlash is within specification. Try to select a washer of the same size.
- NOTE:** The backlash will change about 0.02 mm (0.0008 in.) with each shim thickness.

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
1	2.13 (0.0839)	13	2.49 (0.0980)
2	2.16 (0.0850)	14	2.52 (0.0992)
3	2.19 (0.0862)	15	2.55 (0.1004)
4	2.22 (0.0874)	16	2.58 (0.1016)
5	2.25 (0.0886)	17	2.61 (0.1028)
6	2.28 (0.0898)	18	2.64 (0.1039)
7	2.31 (0.0909)	19	2.67 (0.1051)
8	2.34 (0.0921)	20	2.70 (0.1063)
9	2.37 (0.0933)	21	2.73 (0.1075)
10	2.40 (0.0945)	22	2.76 (0.1087)
11	2.43 (0.0957)	23	2.79 (0.1098)
12	2.46 (0.0968)	24	2.82 (0.1110)

2. ADJUST TOTAL PRELOAD

- (a) Install the transfer right case.
(b) Install and torque the twelve bolts.

Torque: 450 kg-cm (33 ft-lb, 44 N·m)

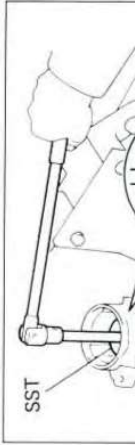


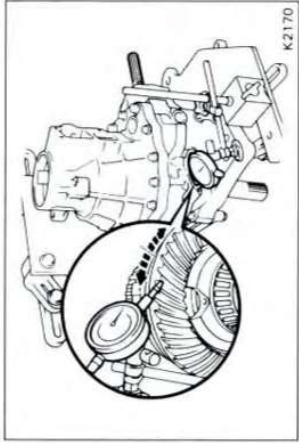
- (c) Adjust the total preload by tightening the bearing adjusting nut.

Using SST, tightening the adjusting nut.

SST 09318-20010

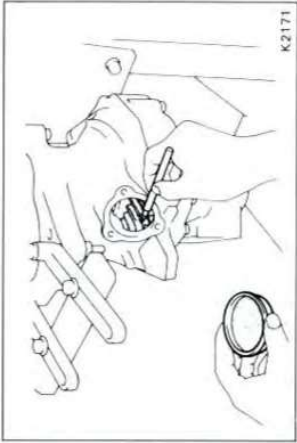
NOTE: Measure the preload while tightening the adjust-





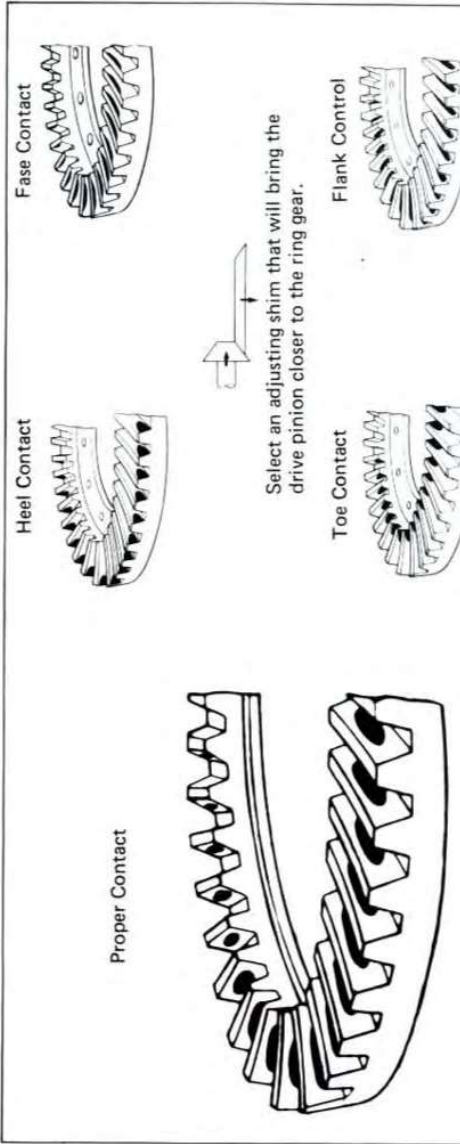
3. CHECK RING GEAR BACKLASH

- (a) Using a dial indicator, measure the ring gear backlash.
Backlash: 0.13 — 0.18 mm (0.0051 — 0.0071 in.)
- (b) When the backlash is outside the standard value, select a different plate washer to the one selected step 2. Again adjust the backlash and total preload.



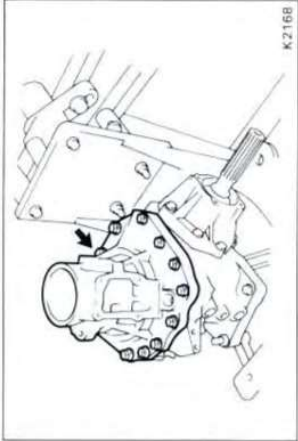
4. CHECK TOOTH CONTACT

- (a) Coat 3 or 4 teeth at four different position on the ring gear with red lead.
- (b) Rotate the ring gear, inspect the teeth pattern.

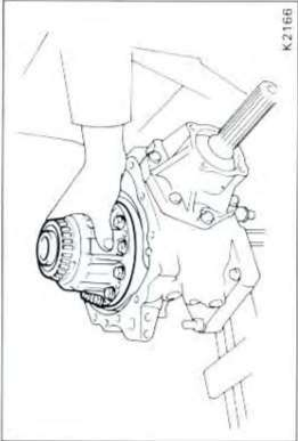


MT-78

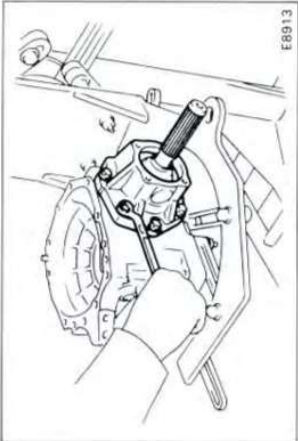
MANUAL TRANSAXLE — Component Parts (Transfer)



5. REMOVE RING GEAR MOUNTING CASE ASSEMBLY
- (a) Remove the twelve bolts and transfer right case.



- (b) Remove the ring gear mounting case assembly.



6. REMOVE DRIVEN PINION BEARING CAGE ASSEMBLY
- Remove the six bolts and bearing cage assembly.



7. INSTALL DRIVEN PINION BEARING CAGE ASSEMBLY
- (a) Coat the O-ring with gear oil.
 - (b) Install the O-ring to the driven pinion bearing cage.
 - (c) Install the driven pinion bearing cage with the adjust-

9. INSTALL TRANSFER RIGHT CASE

(a) Remove any packing material and be careful not to drop oil on the contacting surfaces of the transfer left case or right case.

(b) Apply seal packing to the transfer left case as shown in the figure.

Seal packing: Part No.08826-00090, THREE BOND 1281 or equivalent

NOTE: Install the transfer right case as soon as the seal packing is applied.

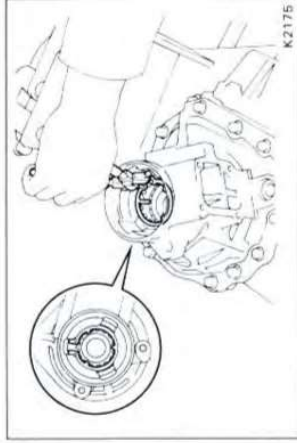
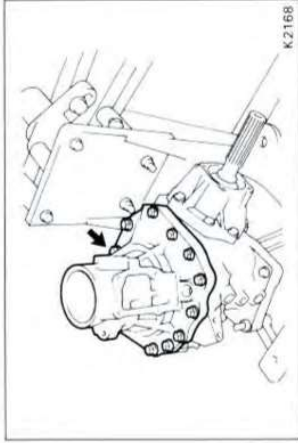
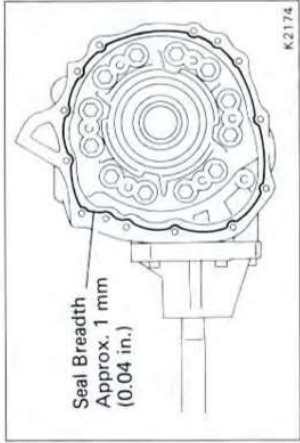
(c) Apply sealant to the bolt threads.

Sealant: Part No.08833-00080, THREE BOND 1344, LOCTITE 242 OR EQUIVALENT

(d) Install and torque the twelve bolts.

Torque: 450 kg-cm (33 ft-lb, 44 N·m)

10. CHECK TOTAL PRELOAD
(See page MT-76)



11. INSTALL ADJUSTING NUT LOCK PLATE

Using snap ring pliers, install the lock plate so that the projection from the lock plate fits properly into the groove of the adjusting nut.

NOTE: Choose one of the two types of lock plate can be installed, tighten the adjusting nut to the minimum limit.

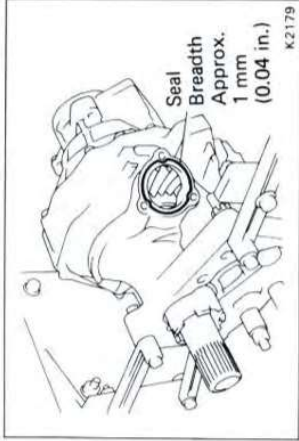
12. INSTALL SIDE GEAR SHAFT HOLDER

(a) Install the side gear shaft holder to the transfer right case.

(b) Using snap ring pliers, install the snap ring.

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MANUAL TRANSAXLE — Component Parts (Transfer)



14. INSTALL TRANSFER INSPECTION HOLE COVER

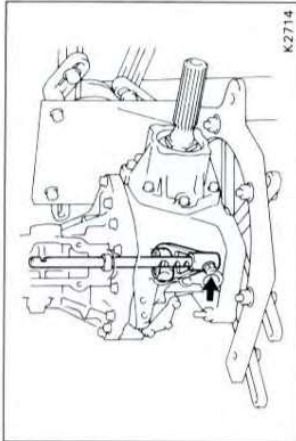
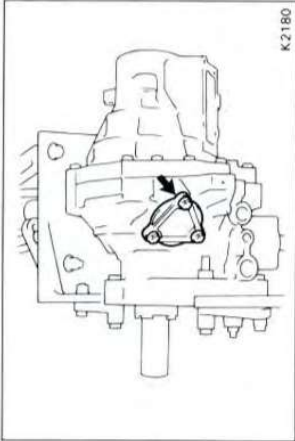
- (a) Remove any packing material and be careful not to drop oil on the contacting surfaces of transfer left case or transfer inspection hole cover.
- (b) Apply seal packing to the transfer left case as shown in the figure.

Seal packing: Part No.08826-00090, THREE BOND 1281 or equivalent

NOTE: Install the transfer inspection hole cover as soon as the seal packing is applied.

- (c) Install and torque the three bolts.

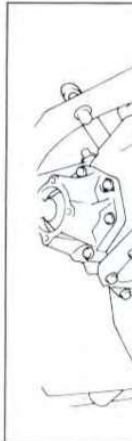
Torque: 160 kg-cm (12 ft-lb, 16 N·m)



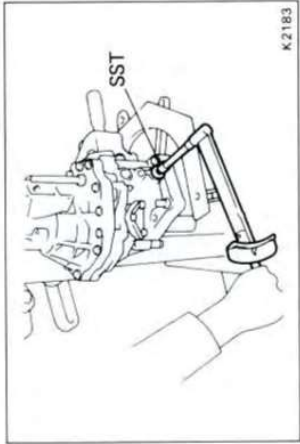
15. INSTALL DIFFERENTIAL LOCK SHIFT FORK SHAFT

- (a) Install the differential lock sleeve with shift fork.
- (b) Install the shift fork shaft to the transfer case.
- (c) Install and torque the bolt.

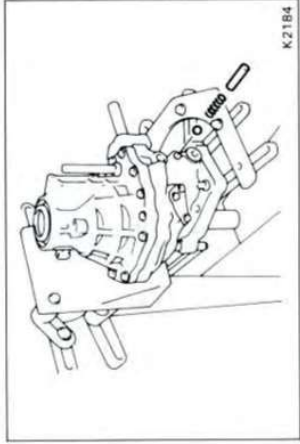
Torque: 160 kg-cm (12 ft-lb, 16 N·m)



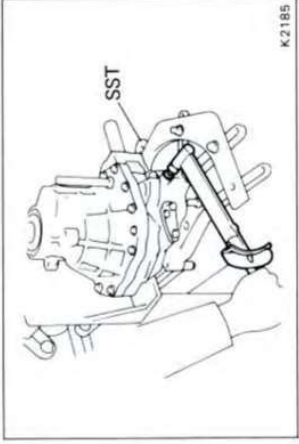
- (b) Install the transfer case upper cover bushing.



- (d) Using SST, install and torque the plug.
SST 09043-38100
Torque: 400 kg-cm (29 ft-lb, 39 N·m)



16. INSTALL LOCKING BALL, SPRING, SEAT AND PLUG
(a) Using magnetic finger, install the locking ball, spring and seat.



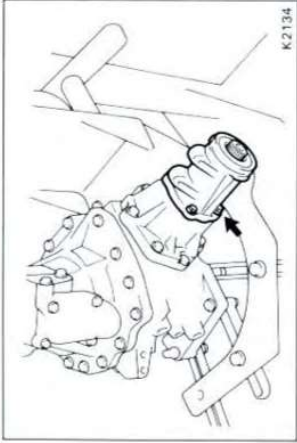
- (b) Apply sealant to the plug threads.
Sealant: Part No.08833-00080, THREE BOND 1344,
LOCTITE 242 or equivalent
(c) Using SST, install and torque the plug.
SST 09313-30021
Torque: 250 kg-cm (18 ft-lb, 25 N·m)



17. INSTALL TRANSFER CASE COVER
(a) Install the new gasket and case cover.
(b) Install and torque the four bolts.
Torque: 175 kg-cm (13 ft-lb, 17 N·m)

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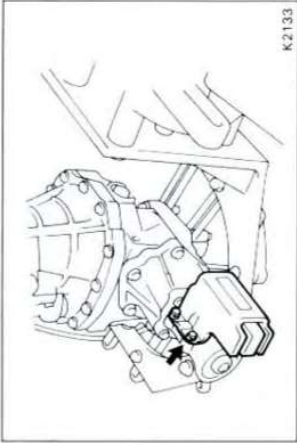
MANUAL TRANSAXLE — Component Parts (Transfer)



18. INSTALL EXTENSION HOUSING

- (a) Coat the O-ring with gear oil.
- (b) Install the O-ring to the extension housing.
- (c) Install the extension housing to the driven pinion bearing cage.
- (d) Install and torque the four bolts.

Torque: 260 kg-cm (19 ft-lb, 25 N·m)



19. INSTALL DYNAMIC DAMPER

Install and torque the four bolts.

Torque: 260 kg-cm (19 ft-lb, 25 N·m)

INSTALLATION OF COMPONENT PARTS

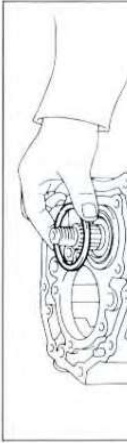
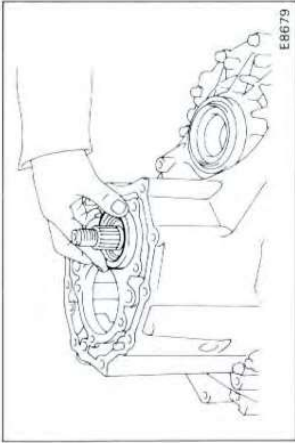
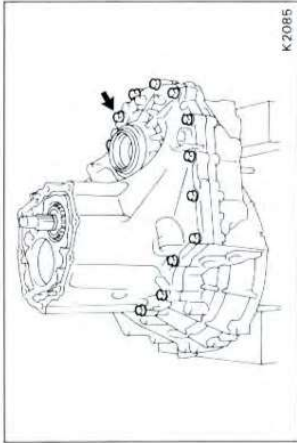
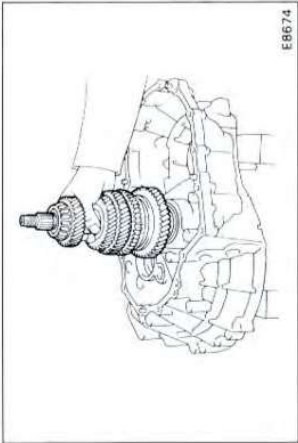
(See page MT-8 to MT-10)

NOTE: Coat all of the sliding and rotating surface with gear oil before assembly.

1. ADJUST OUTPUT SHAFT PRELOAD

- (a) Install the output shaft assembly to the transaxle case.
- (b) Install the transmission case to the transaxle case. If necessary, tap on the case with a plastic hammer.
- (c) Install and torque the seventeen bolts.

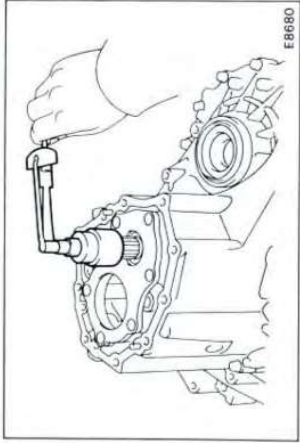
Torque: 300 kg-cm (22 ft-lb, 29 N·m)



- (d) Install the output shaft rear bearing outer race.
 - (e) Install the adjust shim.
- NOTE: When reusing the output shaft bearing, first install a shim of the same thickness as before. If installing a new tapered roller bearing, first select and install a shim of same thickness as before.

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MANUAL TRANSAXLE — Installation of Component Parts



- (g) Install the new lock nut to the output shaft.
- (h) Turn the output shaft counterclockwise and clockwise several times.
- (i) Using a torque meter, measure the preload of the output shaft.

Preload (at starting)

New bearing

8.0 — 16.0 kg-cm
(6.9 — 13.9 in.-lb, 0.78 — 1.57 N·m)

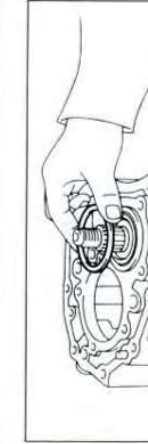
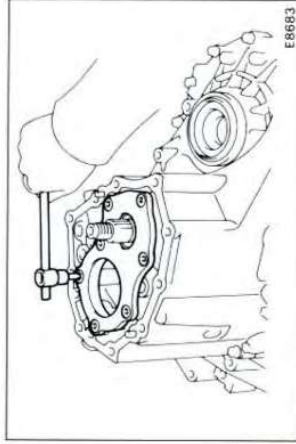
Reused bearing

5.0 — 10.0 kg-cm
(4.3 — 8.7 in.-lb, 0.49 — 0.98 N·m)

If the preload is not within specification, select the thrust washers.

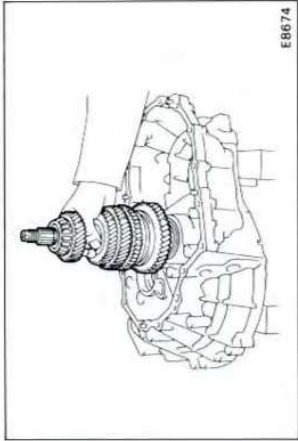
NOTE: The preload will change about 4 — 5 kg-cm (3.5 — 4.3 in.-lb, 0.4 — 0.5 N·m) with each shim thickness.

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
—	0.80 (0.0315)	—	1.15 (0.0453)
0	1.30 (0.0512)	D	1.95 (0.0768)
1	1.35 (0.0531)	E	2.00 (0.0787)
2	1.40 (0.0551)	F	2.05 (0.0807)
3	1.45 (0.0571)	G	2.10 (0.0827)
4	1.50 (0.0591)	H	2.15 (0.0846)
5	1.55 (0.0610)	J	2.20 (0.0866)
6	1.60 (0.0630)	K	2.25 (0.0886)
7	1.65 (0.0650)	L	2.30 (0.0906)
8	1.70 (0.0669)	M	2.35 (0.0925)
9	1.75 (0.0689)	N	2.40 (0.0945)
A	1.80 (0.0709)	P	2.45 (0.0965)
B	1.85 (0.0728)	Q	2.50 (0.0984)
C	1.90 (0.0748)		

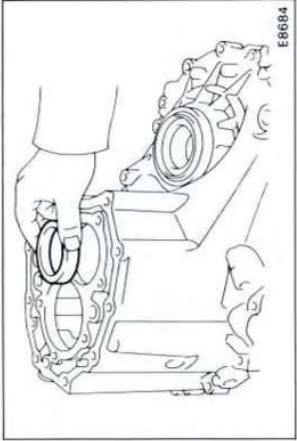


- (j) Remove the lock nut.
- (k) Using a torx wrench, remove the seven torx screws.
- (l) Remove the adjusting shim.

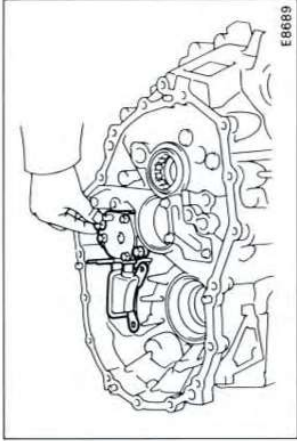
MANUAL TRANSAXLE — Installation of Component Parts **MT-85**



(n) Remove the output shaft rear bearing outer race.



(o) Remove the output shaft assembly.



2. INSTALL OIL PUMP ASSEMBLY AND OIL PIPE

(a) Install the oil pump assembly. Install two bolts.

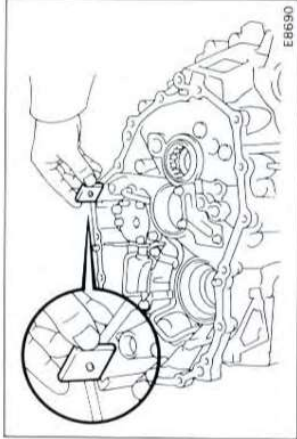
NOTE: Do not drop the oil pump gasket.



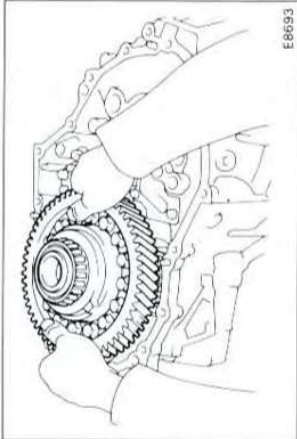
(b) Install the oil pipe.

MT-86

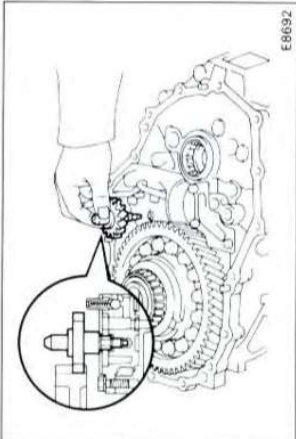
MANUAL TRANSAXLE — Installation of Component Parts



3. INSTALL MAGNET TO TRANSAXLE CASE



4. INSTALL DIFFERENTIAL CASE ASSEMBLY

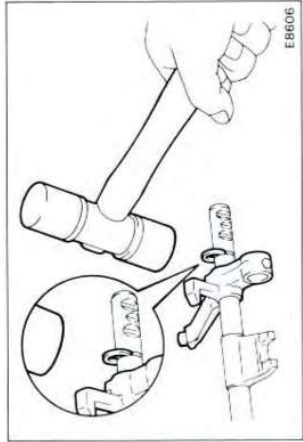


5. INSTALL OIL PUMP DRIVE GEAR



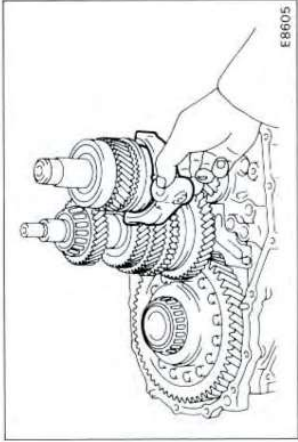
6. INSTALL OUTPUT SHAFT ASSEMBLY

Left the differential case assembly, install the output shaft assembly.



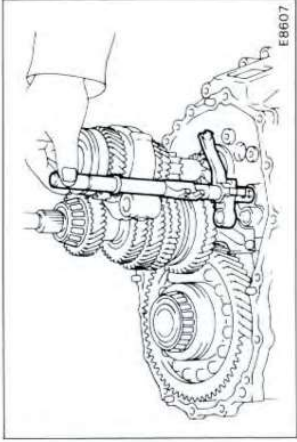
8. INSTALL SNAP RING

- (a) Install the reverse shift fork to the No.3 shift fork.
- (b) Using a hammer, install the snap ring.

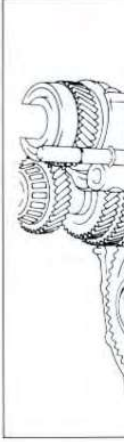


9. INSTALL NO.2 SHIFT FORK AND NO.3 SHIFT FORK SHAFT WITH REVERSE SHIFT FORK

- (a) Place No.2 shift fork into the groove of No.2 hub sleeve.



- (b) Install the No.3 shift fork shaft with reverse shift fork to the case.

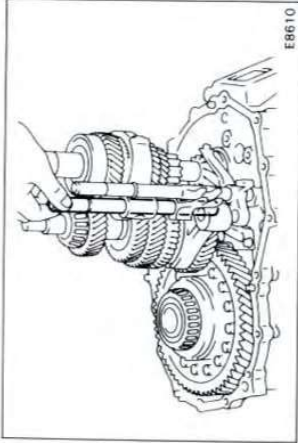


10. INSTALL NO.1 SHIFT FORK, SHIFT HEAD AND NO.2 SHIFT FORK SHAFT

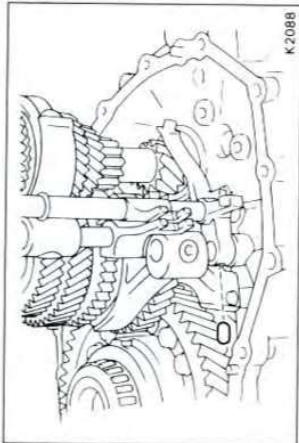
- (a) Place No.1 shift fork into the groove of No.1 hub sleeve.

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MANUAL TRANSAXLE — Installation of Component Parts

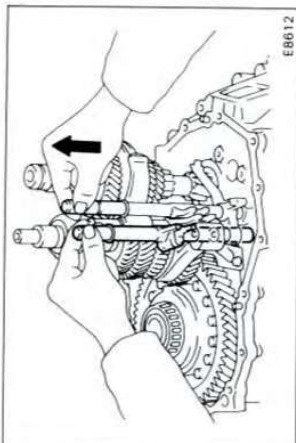


- (c) Install the No. 2 shift fork shaft to the case, through the No. 2 shift fork, the shift head and the No. 1 shift fork.



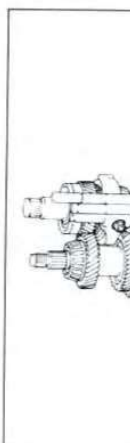
11. INSTALL NO. 1 SHIFT FORK SHAFT

- (a) Using a magnetic finger, install the interlock roller into the reverse shift fork.



- (b) Install the No. 1 shift fork shaft to the case, through the No. 1 shift fork and reverse shift fork.

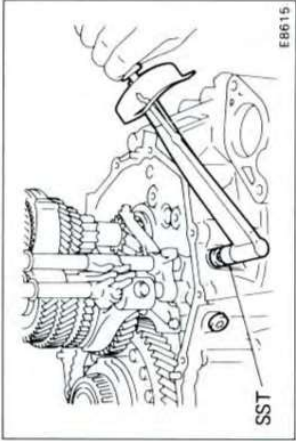
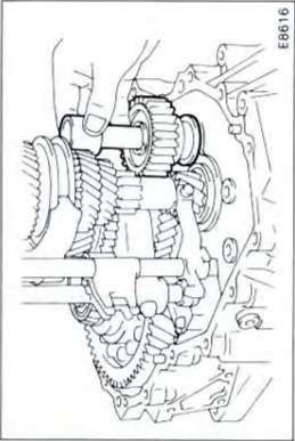
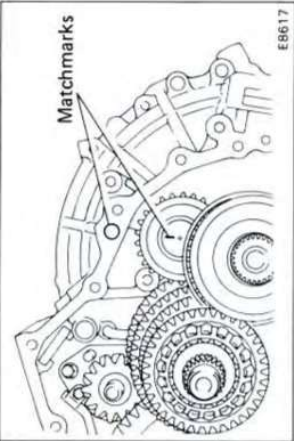
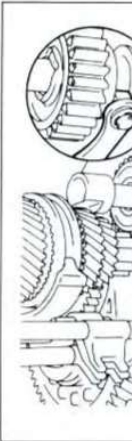
NOTE: If it is difficult to put the fork shaft through the reverse shift fork, pull up the No. 3 shift fork shaft.



12. INSTALL SET BOLTS

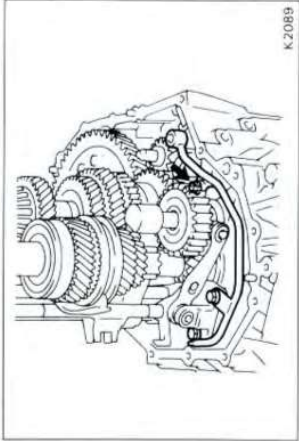
Install and torque the three bolts.

Torque: 240 kg-cm (17 ft-lb, 24 N·m)

MANUAL TRANSAXLE – Installation of Component Parts		MT-89
	(b) Apply sealant to the screw plugs. Sealant: Part No.08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent (c) Using SST, torque the screw plugs. SST 09313-30021 Torque: 250 kg-cm (18 ft-lb, 25 N·m)	
	14. INSTALL REVERSE IDLER GEAR SHAFT AND GEAR (a) Install the reverse idler gear shaft with gear to the case.	
	(c) Align the matchmarks, as shown.	
	15. INSTALL REVERSE SHIFT ARM BRACKET ASSEMBLY AND NO.2 OIL PIPE (a) Put the reverse shift fork pivot into the reverse shift arm and install the reverse shift arm bracket to the transaxle case.	

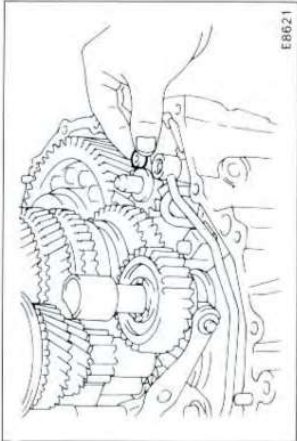
MT-90

MANUAL TRANSAXLE — Installation of Component Parts

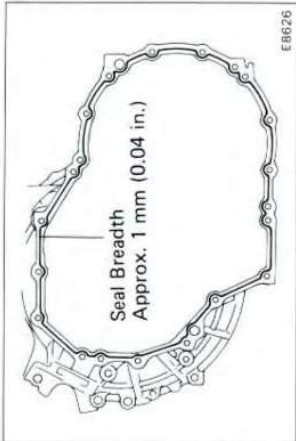


- (d) Torque the two oil pipe bolts and shift arm bracket bolt.

Torque: 175 kg-cm (13 ft-lb, 17 N·m)



- (e) Install the new gasket to the oil pipe.



16. INSTALL TRANSMISSION CASE

- (a) Remove any packing material and be careful not to drop oil on the contacting surfaces of the transaxle case.
- (b) Apply seal packing to the transmission case as shown in the figure.

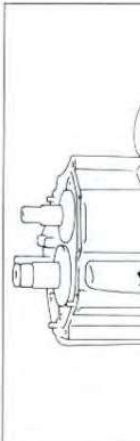
Seal packing: Part No.08826-00090, THREE BOND 1281 or equivalent

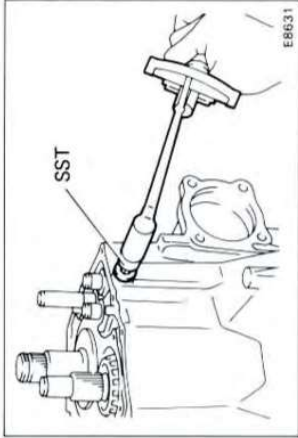
NOTE: Install the transmission case as soon as the seal packing is applied.

- (c) Install and torque the seventeen bolts.

Torque: 300 kg-cm (22 ft-lb, 29 N·m)

17. INSTALL AND TORQUE REVERSE IDLER GEAR SHAFT BOLT WITH GASKET



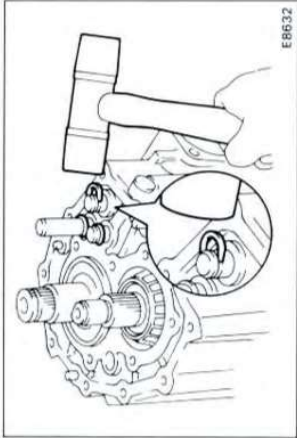


(b) Apply sealant to the screw plug.

Sealant: Part No.08833-00080, THREE BOND 1344,
LOCTITE 242 or equivalent

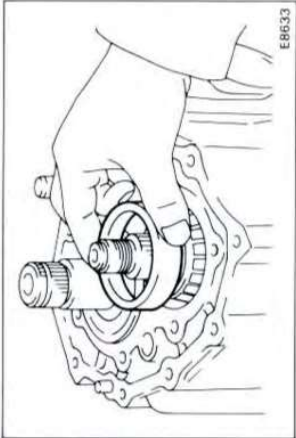
(c) Using SST, torque the screw plug.
SST 09313-30021

Torque: 250 kg-cm (18 ft-lb, 25 N·m)



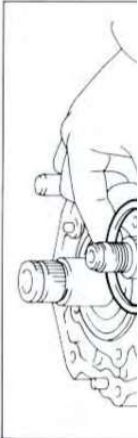
19. INSTALL SNAP RINGS

Using a plastic hammer, install the three snap rings.



20. INSTALL REAR BEARING RETAINER

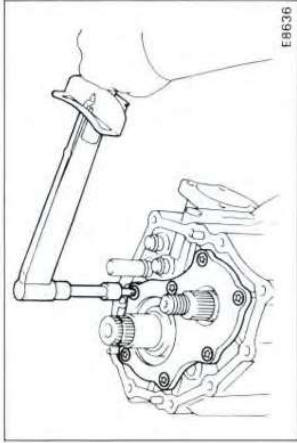
(a) Install the output shaft rear bearing outer race.



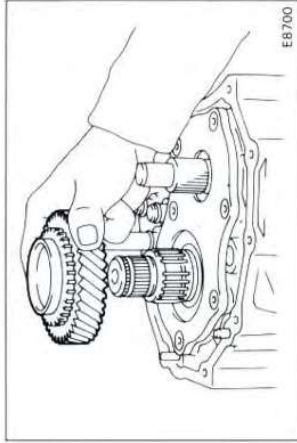
(b) Install the adjusting shim.

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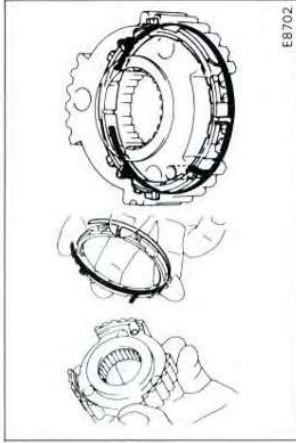
MANUAL TRANSAXLE — Installation of Component Parts



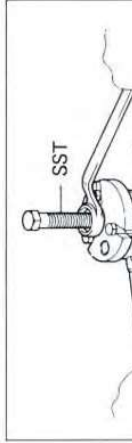
- (d) Apply sealant to the screw plugs.
Sealant: Part No.08833-00070, THREE BOND 1324,
LOCTITE 242 or equivalent
(e) Using a torx wrench, torque the screw plug.
Torque: 430 kg-cm (31 ft-lb, 42 N·m)



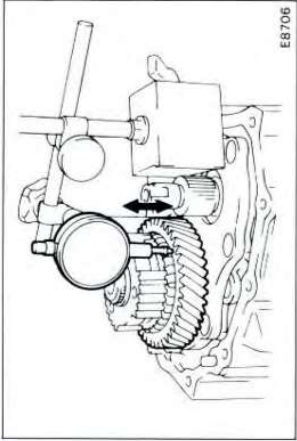
- 21. INSTALL FIFTH GEAR AND NO.3 CLUTCH HUB**
(a) Install the spacer, needle roller bearings and 5th gear.



- (b) Install the synchronizer ring and key spring to the No.3 clutch hub.

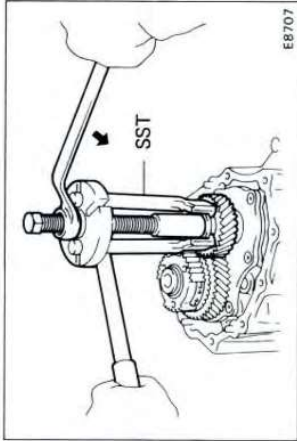


- (c) Using SST, install the No.3 clutch hub with synchronizer ring and key spring.
SST 09310-17010 (09310-07010, 09310-07020,
09310-07030)



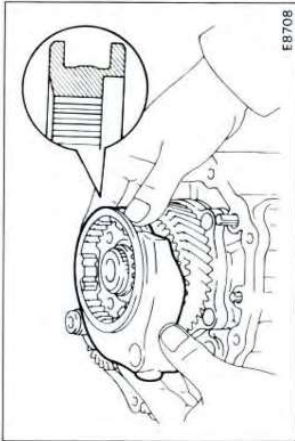
(e) Using a dial indicator, measure the 5th gear thrust clearance.

Standard clearance: 0.10 — 0.57 mm
(0.004 — 0.022 in.)



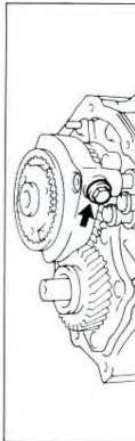
22. INSTALL FIFTH DRIVEN GEAR

Using SST, install the 5th driven gear.
SST 09310-17010 (09310-07010, 09310-07020
09310-07040, 09310-07050)



23. INSTALL NO.3 HUB SLEEVE AND FIFTH SHIFT FORK

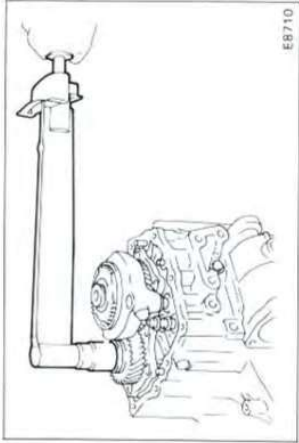
(a) Install the No.3 hub sleeve and 5th shift fork.



(b) Install and torque the set bolt.
Torque: 240 kg-cm (17 ft-lb, 24 N·m)

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MANUAL TRANSAXLE — Installation of Component Parts

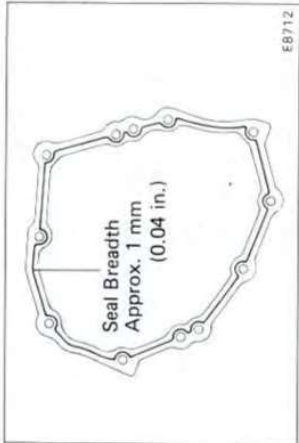


(b) Install and torque the nut.

Torque: 1,250 kg-cm (90 ft-lb, 123 N·m)

(c) Disengage the gear double meshing.

(d) Stake the lock nut.



25. INSTALL TRANSMISSION CASE COVER

(a) Remove any packing material and be careful not to drop oil on the contacting surfaces of the transmission case cover.

(b) Apply seal packing to the transmission case as shown in the figure.

Seal packing: Part No.08826-00090, THREE BOND 1281 or equivalent

NOTE: Install the transmission case cover as soon as the seal packing is applied.

(c) Install and torque the ten bolts.

Torque: 300 kg-cm (22 ft-lb, 29 N·m)

26. INSTALL SHIFT AND SELECT LEVER SHAFT ASSEMBLY

(a) Install the shift and select lever shaft assembly and new gasket.

(b) Apply sealant to the bolt threads.

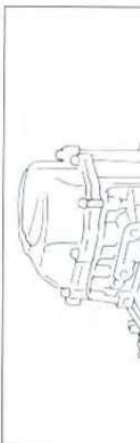
Sealant: Part No.08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

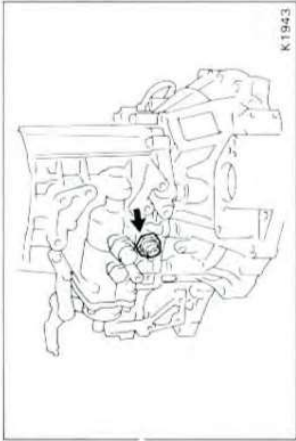
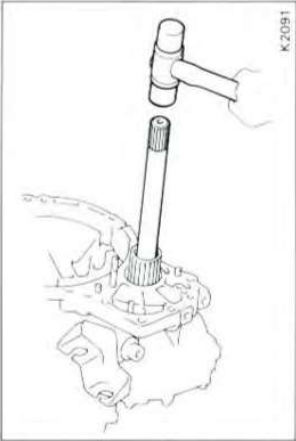
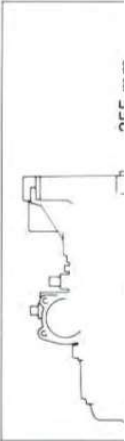
(c) Install and torque the four bolts.

Torque: 200 kg-cm (14 ft-lb, 20 N·m)

(d) Install and torque the lock bolt with gasket.

Torque: 500 kg-cm (36 ft-lb, 49 N·m)

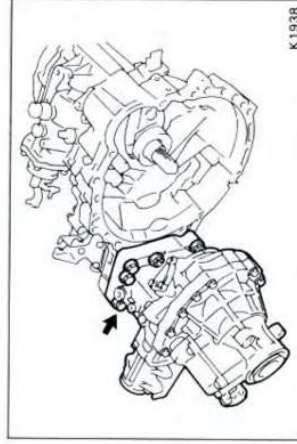


MANUAL TRANSAXLE — Installation of Component Parts		MT-95
 K.1943	28. INSTALL BACK-UP LIGHT SWITCH Using SST, install and torque the back-up light switch. Torque: 410 kg-cm (30 ft-lb, 40 N·m)	
	29. INSTALL SPEEDOMETER DRIVEN GEAR	
 E8586	30. INSTALL RELEASE FORK AND BEARING Apply molybdenum disulphide lithium base grease to the following part: • Release bearing hub inside groove • Input shaft spline • Release fork contact surface	
 K.2091	31. INSTALL DIFFERENTIAL SIDE GEAR INTERMEDIATE SHAFT (a) Coat the MP grease to the intermediate shaft. (b) Using a plastic hammer, correctly drive the intermediate shaft straight until the top of it touches the differential pinion shaft.	NOTE: Keeping the intermediate shaft on the pinion shaft of differential, measure the point in the illustration. Protrusion length: 255 mm (10.04 in.)
		

MT-96**MANUAL TRANSAXLE — Installation of Component Parts**

- (c) Install the transfer assembly to the transaxle assembly.

NOTE: Shift into 4th gear, install the transfer assembly while turning the input shaft of the transaxle.



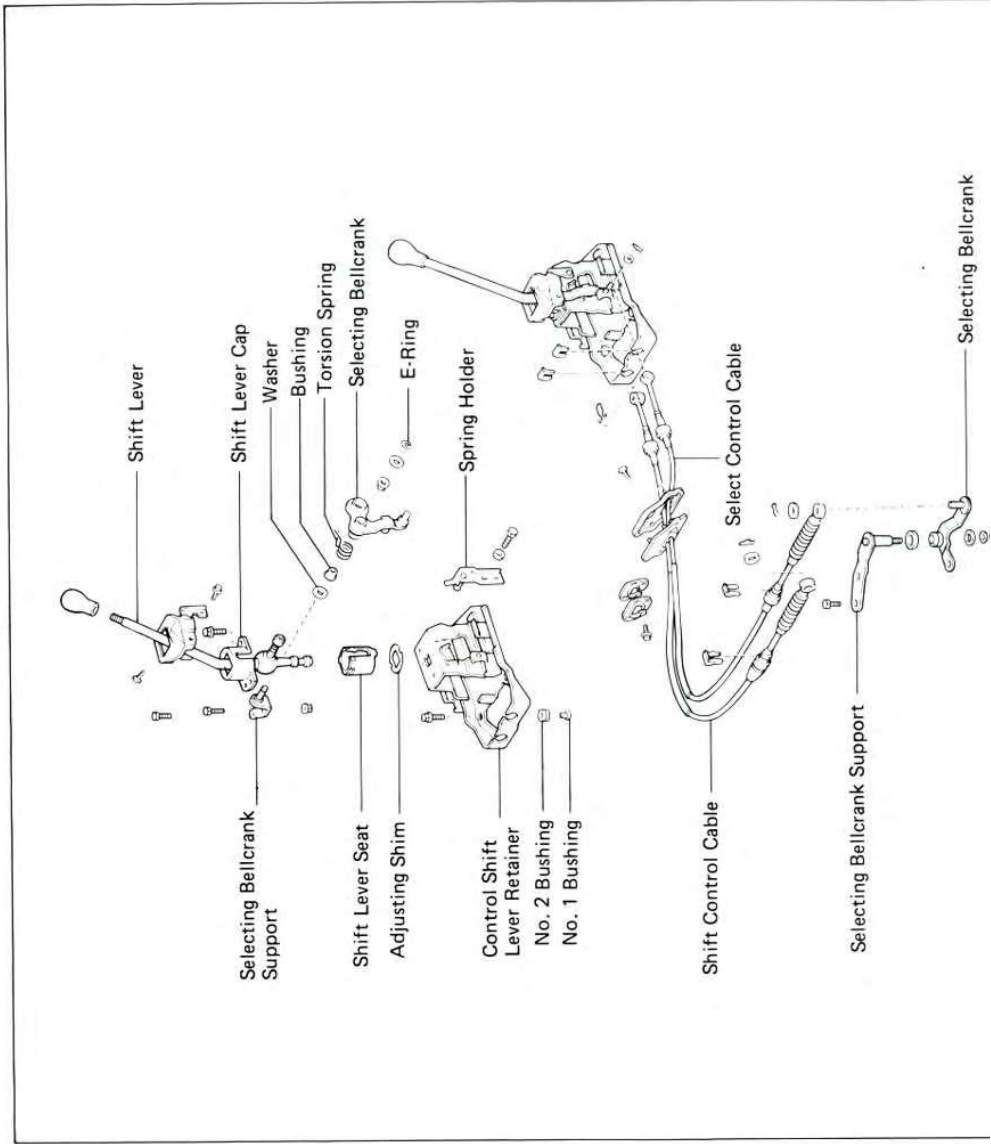
- (d) Apply sealant to the bolt threads.

Sealant: Part No.08833-00080, **THREE BOND 1344**,
LOCTITE 242 or equivalent

- (e) Install and torque the three bolts and five nuts.

Torque: 700 kg-cm (51 ft-lb, 69 N·m)

SHIFT LEVER AND CONTROL CABLE COMPONENTS



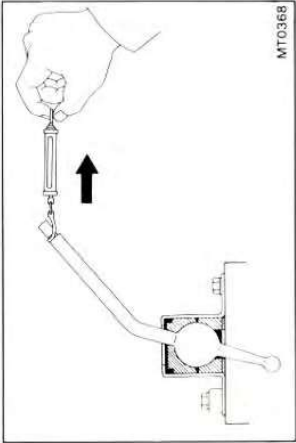


MT0339

ADJUSTMENT OF SHIFT LEVER FREEPLAY

ADJUST SHIFT LEVER SEAT CLEARANCE

Select a shim of a thickness that allow a preload of 50 — 100 g (0.1 — 0.2 lb, 0.5 1.0 N) at the top of lever and install it in the shift lever seat.



Shim thickness

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
C or 5	0.5 (0.020)	G or 9	0.9 (0.035)
D or 6	0.6 (0.024)	H or 10	1.0 (0.039)
E or 7	0.7 (0.028)	K or 11	1.1 (0.043)
F or 8	0.8 (0.031)	L or 12	1.2 (0.047)