

MANUAL TRANSAXLE OVERHAUL

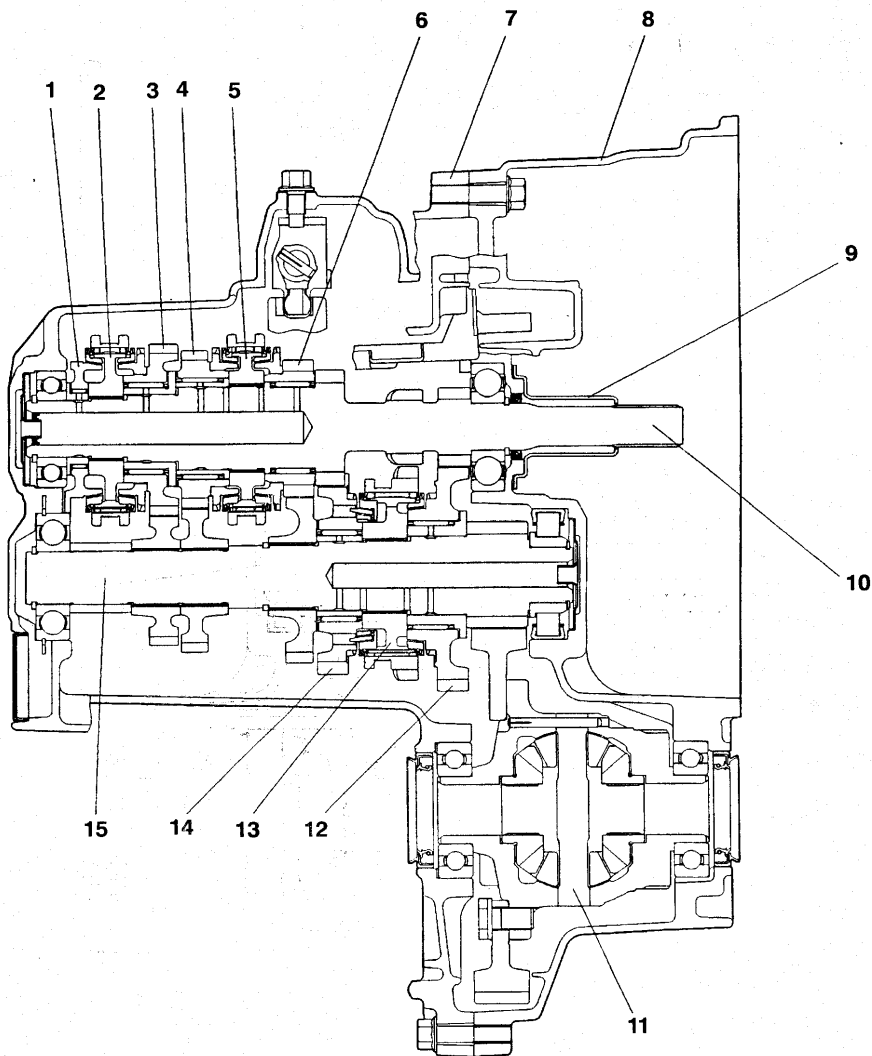
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GENERAL INFORMATION

F5M41

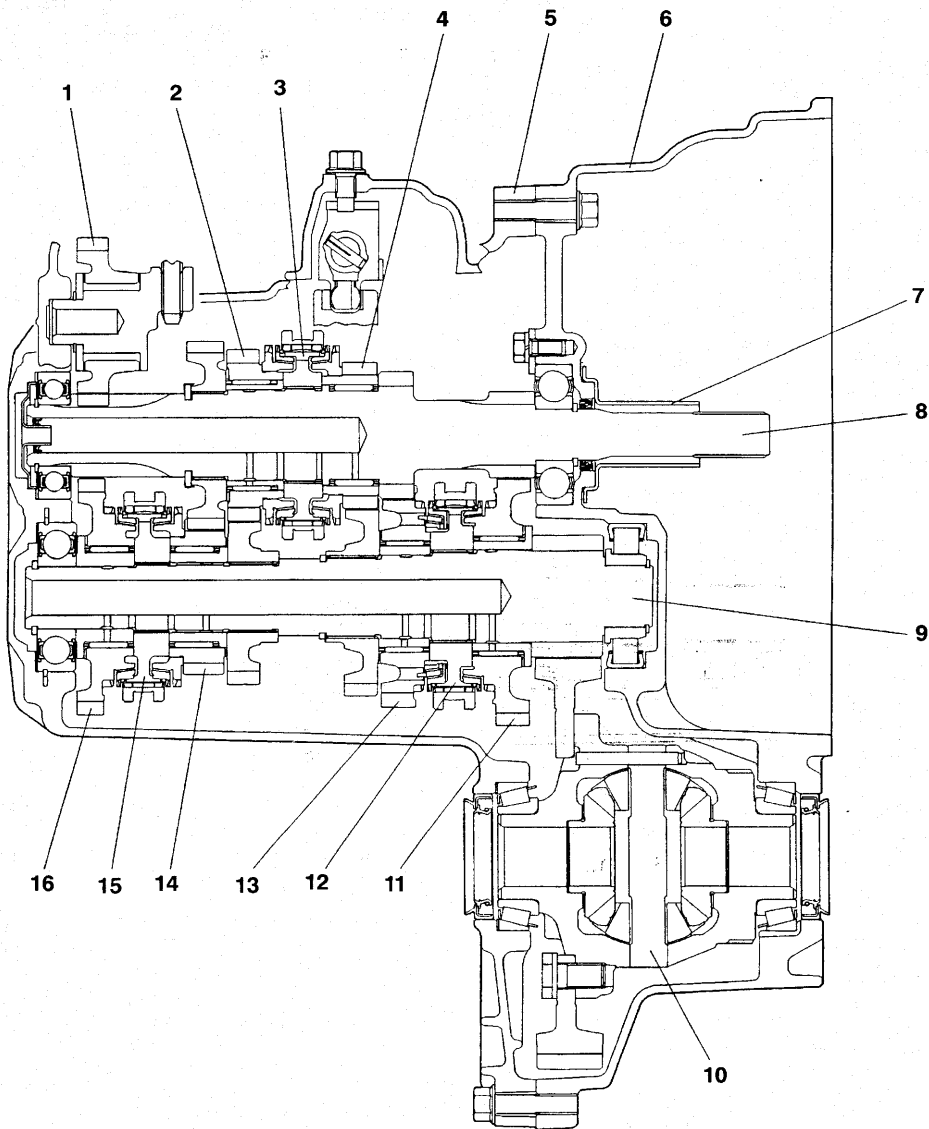


1. Reverse brake device
2. 5th speed-reverse synchronizer
3. 5th speed gear
4. 4th speed gear
5. 3rd-4th speed synchronizer
6. 3rd speed gear
7. Transaxle case
8. Clutch housing

9. Release bearing retainer
10. Input shaft
11. Differential
12. 1st speed gear
13. 1st-2nd speed synchronizer
14. 2nd speed gear
15. Output shaft

TFM0845

F5M42



TFM0849

- | | |
|-------------------------------|------------------------------------|
| 1. Reverse idler gear | 9. Output shaft |
| 2. 4th speed gear | 10. Differential |
| 3. 3rd-4th speed synchronizer | 11. 1st speed gear |
| 4. 3rd speed gear | 12. 1st-2nd speed synchronizer |
| 5. Transaxle case | 13. 2nd speed gear |
| 6. Clutch housing | 14. 5th speed gear |
| 7. Release bearing retainer | 15. 5th speed-reverse synchronizer |
| 8. Input shaft | 16. Reverse gear |

SPECIFICATIONS

22200020126

GENERAL SPECIFICATIONS

Items		Specifications	
Model		F5M41	F5M42
Applicable engine		4G15	4G93
Type		5-speed transaxle floor shift	
Gear ratio	1st	3.583	3.583
	2nd	1.947	1.947
	3rd	1.343	1.379
	4th	0.976	1.030
	5th	0.804	0.767
	Reverse	3.416	3.363
Final reduction ratio		3.714	3.722
Speedometer gear ratio (driven/drive)		31/36	31/36

SERVICE SPECIFICATIONS

22200030099

Items	Allowable range	Limit
Input shaft front bearing clearance mm (in.)	-0.01 to 0.12 (-0.0004 to 0.0047)	-
Input shaft rear bearing clearance <F5M41> mm (in.)	-0.01 to 0.09 (-0.0004 to 0.0035)	-
Input shaft rear bearing clearance <F5M42> mm (in.)	0 to 0.12 (0 to 0.0047)	-
Input shaft 5th speed gear end play mm (in.)	-0.01 to 0.09 (-0.0004 to 0.0035)	-
Output shaft front bearing clearance mm (in.)	0 to 0.12 (0 to 0.0047)	-
Output shaft rear bearing clearance mm (in.)	-0.01 to 0.09 (-0.0004 to 0.0035)	-
Output shaft 3rd speed gear end play mm (in.)	-0.01 to 0.09 (-0.0004 to 0.0035)	-
Differential case end play <F5M41> mm (in.)	0.05 to 0.17 (0.0020 to 0.0067)	-
Differential case preload <F5M42> mm (in.)	0.05 to 0.11 (0.0020 to 0.0043)	-
Differential case pinion backlash mm (in.)	0.025 to 0.150 (0.0010 to 0.0059)	-
Synchronizer ring back surface to gear clearance mm (in.)	-	0.5 (0.020)

NOTE: Standard play = 0 mm (0 in.)

SEALANTS AND ADHESIVES

22200050040

Items	Specified sealants and adhesives
Clutch housing-transaxle case mating surface	MITSUBISHI Genuine sealant part No.MD997740 or equivalent
Control housing-transaxle case mating surface	
Under cover-transaxle case mating surface <F5M42>	
Air breather	3M SUPER WEATHERSTRIP No.8001 or equivalent
Differential drive gear bolt	3M Stud Locking No.4170 or equivalent
Front bearing retainer bolt (countersunk head bolt) <F5M41>	

LUBRICANTS

22200040061

Items	Specified lubricants
Drive shaft oil seal lip area	Hypoid gear oil SAE 75W-90 or 75W-85W conforming to API classification GL-4
Input shaft oil seal lip area	
Control shaft oil seal lip area	
Select lever shoe	MITSUBISHI genuine grease part No.0101011 or equivalent

SNAP RINGS, SPACERS AND THRUST PLATE FOR ADJUSTMENT

22201200048

Snap ring (For adjustment of input shaft front bearing clearance)

Thickness mm (in.)	Identification symbol	Part No.	Thickness mm (in.)	Identification symbol	Part No.
2.24 (0.0882)	None	MD706537	2.38 (0.0937)	Brown	MD706539
2.31 (0.0909)	Blue	MD706538			

Snap ring

(For adjustment of input shaft rear bearing clearance)

(For adjustment of output shaft rear bearing clearance F5M42)

Thickness mm (in.)	Identification symbol	Part No.	Thickness mm (in.)	Identification symbol	Part No.
2.31 (0.0909)	Black (2)	MD747149	2.55 (0.1004)	Yellow	MD746566
2.35 (0.0925)	None	MD746561	2.59 (0.1020)	Black	MD746567
2.39 (0.0941)	Blue	MD746562	2.63 (0.1035)	Orange	MD746568
2.43 (0.0957)	Brown	MD746563	2.67 (0.1051)	Blue	MD746569
2.47 (0.0972)	Green	MD746564	2.71 (0.1067)	Brown	MD746570
2.51 (0.0988)	White	MD746565			

Thrust plate <F5M42>**(For adjustment of input shaft 5th speed gear end play)**

Thickness mm (in.)	Identification symbol	Part No.	Thickness mm (in.)	Identification symbol	Part No.
2.82 (0.1110)	0	MD748015	2.98 (0.1173)	6	MD748019
2.86 (0.1126)	2	MD748016	3.02 (0.1189)	7	MD748020
2.90 (0.1142)	3	MD748017	3.06 (0.1205)	8	MD748021
2.94 (0.1157)	5	MD748018	3.10 (0.1220)	9	MD748022

Snap ring (For adjustment of output shaft front bearing clearance)

Thickness mm (in.)	Identification symbol	Part No.	Thickness mm (in.)	Identification symbol	Part No.
1.43 (0.0563)	Green (2)	MD746708	1.59 (0.0626)	Yellow (2)	MD746710
1.51 (0.0594)	White (2)	MD746709			

Snap ring <F5M41>**(For adjustment of output shaft rear bearing clearance)**

Thickness mm (in.)	Identification symbol	Part No.	Thickness mm (in.)	Identification symbol	Part No.
2.31 (0.0909)	Black (2)	MD748800	2.55 (0.1004)	Yellow	MD748806
2.35 (0.0925)	None	MD748801	2.59 (0.1020)	Black	MD748807
2.39 (0.0941)	Blue	MD748802	2.63 (0.1035)	Orange	MD748808
2.43 (0.0957)	Brown	MD748803	2.67 (0.1051)	Blue	MD748809
2.47 (0.0972)	Green	MD748804	2.71 (0.1067)	Brown	MD748810
2.51 (0.0988)	White	MD748805			

Snap ring <F5M41>**(For adjustment of output shaft 3rd speed gear end play)**

Thickness mm (in.)	Identification symbol	Part No.	Thickness mm (in.)	Identification symbol	Part No.
2.81 (0.1106)	Green	MD748782	2.97 (0.1169)	Orange	MD748786
2.85 (0.1122)	White	MD849783	3.01 (0.1185)	Red	MD748787
2.89 (0.1138)	Yellow	MD748784	3.05 (0.1201)	Pink	MD748788
2.93 (0.1154)	Black	MD748785	3.09 (0.1217)	Blue	MD748789

Snap ring <F5M42>**(For adjustment of output shaft 3rd speed gear end play)**

Thickness mm (in.)	Identification symbol	Part No.	Thickness mm (in.)	Identification symbol	Part No.
2.81 (0.1106)	Green	MD745799	2.97 (0.1169)	Orange	MD745803
2.85 (0.1122)	White	MD745800	3.01 (0.1185)	Red	MD745804
2.89 (0.1138)	Yellow	MD745801	3.05 (0.1201)	Pink	MD745805
2.93 (0.1154)	Black	MD745802	3.09 (0.1217)	Blue	MD745806

Spacer <F5M41>

(For adjustment of differential case end play)

Thickness mm (in.)	Identification symbol	Part No.	Thickness mm (in.)	Identification symbol	Part No.
1.04 (0.0409)	04	MD720944	1.22 (0.0480)	G	MD700271
1.13 (0.0445)	D	MD700270	1.31 (0.0516)	E	MD706574

Spacer <F5M42>

(For adjustment of differential case preload)

Thickness mm (in.)	Identification symbol	Part No.	Thickness mm (in.)	Identification symbol	Part No.
0.80 (0.0315)	80	MD727661	1.04 (0.0409)	04	MD720944
0.83 (0.0367)	83	MD720937	1.07 (0.0421)	07	MD720945
0.86 (0.0339)	86	MD720938	1.10 (0.0433)	J	MD710454
0.89 (0.0350)	89	MD720939	1.13 (0.0445)	D	MD700270
0.92 (0.0362)	92	MD720940	1.16 (0.0457)	K	MD710455
0.95 (0.0374)	95	MD720941	1.19 (0.0469)	L	MD710456
0.98 (0.0386)	98	MD720942	1.22 (0.0480)	G	MD700271
1.01 (0.0398)	01	MD720943	1.25 (0.0492)	M	MD710457

Spacer (For adjustment of differential case backlash)

Thickness mm (in.)	Identification symbol	Part No.	Thickness mm (in.)	Identification symbol	Part No.
0.75 to 0.82 (0.0295 to 0.0323)	-	MA180862	1.01 to 1.08 (0.0398 to 0.0425)	-	MA180875
0.83 to 0.92 (0.0327 to 0.0362)	-	MA180861	1.09 to 1.16 (0.0429 to 0.0457)	-	MA180876
0.93 to 1.00 (0.0366 to 0.0394)	-	MA180860			

TORQUE SPECIFICATIONS

22201210041



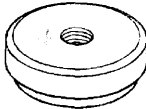


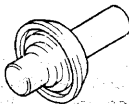
Items	Nm	ft.lbs.
Under cover mounting bolt <F5M42>	6.9	5
Interlock plate bolt	30	22
Clutch housing-transaxle case mounting bolt	44	33
Clutch release bearing retainer mounting bolt	9.8	7
Control housing mounting bolt	18	14
Shift cable bracket mounting bolt	18	14
Speedometer gear mounting bolt	3.9	3
Stopper bracket mounting bolt	18	14
Select lever mounting bolt	18	14
Select lever mounting nut	11	9
Differential drive gear mounting bolt	132	98

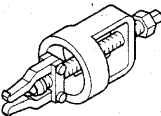
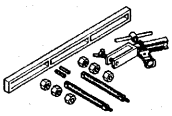
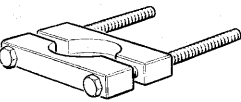

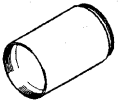
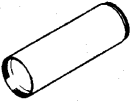



22B-8 MANUAL TRANSAXLE OVERHAUL - Specifications/Special Tools


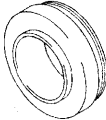
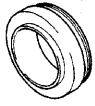
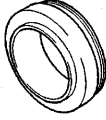
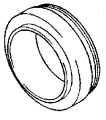


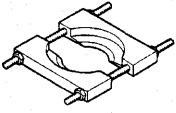

Items	Nm	ft.lbs.
Back-up light switch	32	24
Front bearing retainer mounting bolt	18	14
Poppet spring	32	24
Restrict ball <F5M41>	32	24
Reverse idler gear shaft mounting bolt	48	35
Reverse shift lever mounting bolt <F5M41>	18	14
Roll stopper bracket mounting bolt	69	51

SPECIAL TOOLS

22200060104

Tool	Tool number and name	Supersession	Application
	MB990926 Installer adapter	-	Installation of clutch housing input shaft oil seal
	MB990927 Installer adapter	-	Installation of sealing cap
	MB990934 Installer adapter	MB990934-01	Installation of roller bearing outer race
	MB990935 Installer adapter	-	Installation of differential case taper roller bearing outer race
	MB990938 Handle	MB990938-01	Use with Installer adapter
	MD998325 Differential oil seal installer	MD998325-01	Installation of differential oil seal

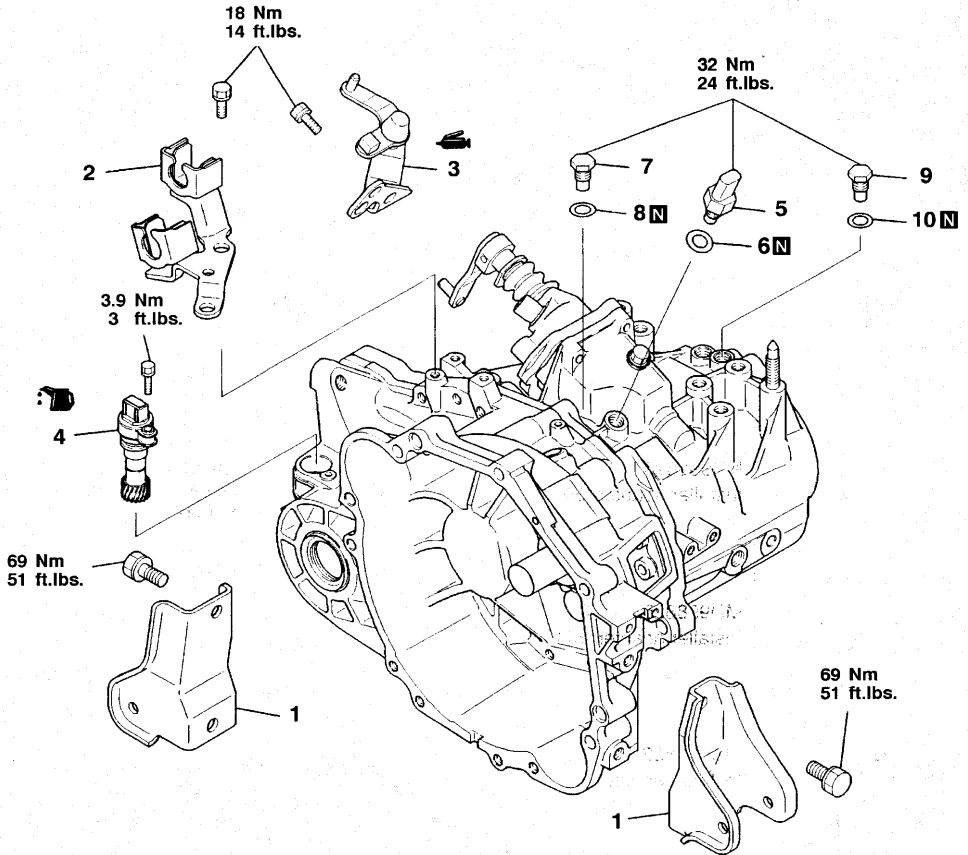
Tool	Tool number and name	Supersession	Application
	MD998346 Bearing outer race remover	MD998346-01	Removal of roller bearing outer race
	MD998772 Valve spring compressor	GENERAL SERVICE TOOL	Removal of roller bearing outer race
	MD998801 Bearing remover	MD998348-01	Installation and removal of gears, bearings and sleeves
	MD998812 Installer cap	GENERAL SERVICE TOOL	Use with Installer and Installer adapter
	MD998813 Installer-100	GENERAL SERVICE TOOL	Use with Installer cap and Installer adapter
	MD998814 Installer-200	MIT304180	Use with Installer cap and Installer adapter
	MD998816 Installer adapter (30)	GENERAL SERVICE TOOL	Installation of input shaft front bearing <F5M42>
	MD998817 Installer adapter (34)	MD998817-01	Installation of input shaft front bearing <F5M41>, output shaft rear bearing <F5M41>
	MD998818 Installer adapter (38)	MD998818	Installation of input shaft rear bearing, roller bearing inner race, reverse gear, needle roller bearing, reverse gear bearing sleeve <F5M42> and reverse bearing sleeve <F5M41>, reverse brake sleeve <F5M41>, output shaft rear bearing <F5M42>

Tool	Tool number and name	Supersession	Application
	MD998819 Installer adapter (40)	MD998819	Installation of 5th speed-reverse synchronizer hub, differential case bearing, 4th speed gear and 5th speed gear sleeve <F5M42>
	MD998820 Installer adapter (42)	MIT215013	Installation of 5th speed gear sleeve, 2nd speed gear sleeve <F5M41>
	MD998822 Installer adapter (46)	MD998822-01	Installation of 1st speed gear sleeve, 1st-2nd speed synchronizer hub <F5M41>, 2nd speed gear sleeve and 3rd speed gear <F5M42>
	MD998823 Installer adapter (48)	-	Installation of differential case taper roller bearing inner race <F5M42>
	MD998824 Installer adapter (50)	GENERAL SERVICE TOOL	Installation of 4th speed gear sleeve and 5th speed gear <F5M42>
	MD998825 Installer adapter (52)	GENERAL SERVICE TOOL	Installation of 1st-2nd speed synchronizer hub, 3rd-4th speed synchronizer hub and 1st speed gear sleeve <F5M42>
	MD998826 Installer adapter (54)	-	Installation of 3rd-4th speed synchronizer hub <F5M41>
	MD998917 Bearing remover	MD998917-01	Installation and removal of gear, bearing and sleeve
	MD999566 Claw	GENERAL SERVICE TOOL	Removal of differential case taper roller bearing outer race <F5M42>

TRANSAXLE

DISASSEMBLY AND REASSEMBLY

<F5M41>



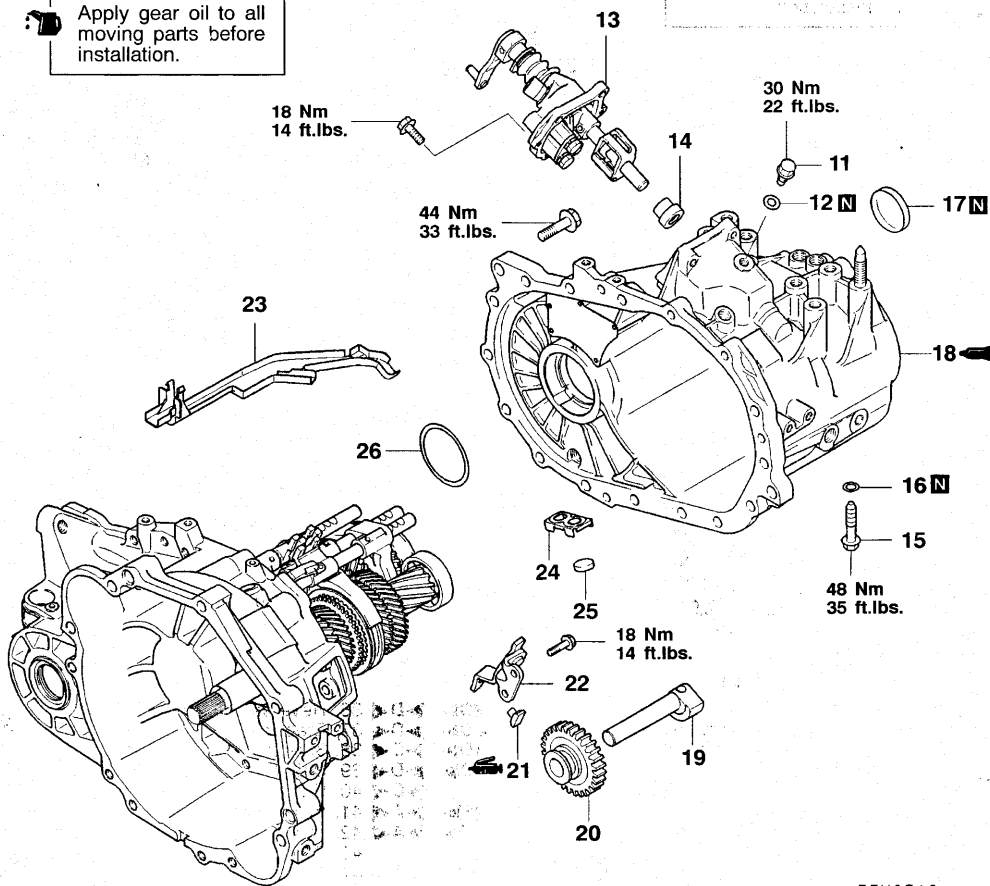
TFM0936

Disassembly steps

1. Roll stopper bracket
2. Shift cable bracket
3. Select lever
4. Speedometer gear
5. Back-up light switch
6. Gasket
7. Restrict ball
8. Gasket
9. Poppet spring
10. Gasket



Apply gear oil to all moving parts before installation.



TFM0719


Disassembly steps

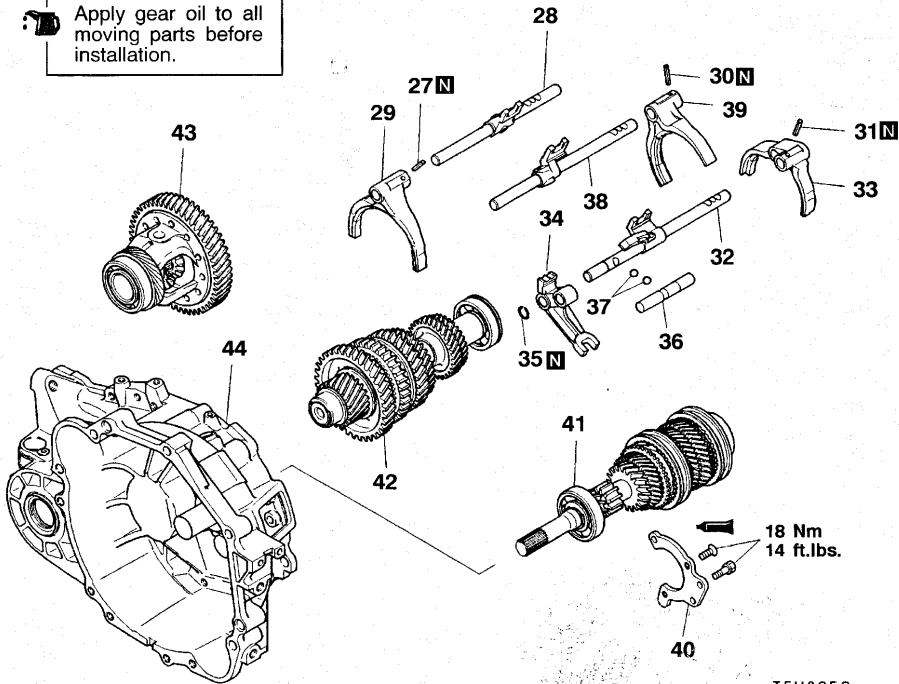
- 11. Interlock plate bolt
- 12. Gasket
- ▶O◀ 13. Control housing
- ▶M◀ 14. Neutral return spring
- ▶M◀ 15. Reverse idler gear shaft bolt
- 16. Gasket
- ▶A▶▶L◀ 17. Sealing cap
- ▶B▶▶K◀ 18. Transaxle case
- ▶C▶▶I◀ 19. Reverse idler gear shaft
- 20. Reverse idler gear
- 21. Reverse shift lever shoe
- 22. Reverse shift lever

- ▶H◀▶ 23. Oil guide
- 24. Magnet holder
- 25. Magnet
- ▶G◀▶ 26. Spacer

Caution

If it is necessary to disassemble transaxle assembly further than step 18, perform adjustment as described under "ADJUSTMENT BEFORE REASSEMBLY" on P.22B-18. Then perform transaxle reassembly.

 Apply gear oil to all moving parts before installation.



TFM0853

Disassembly steps

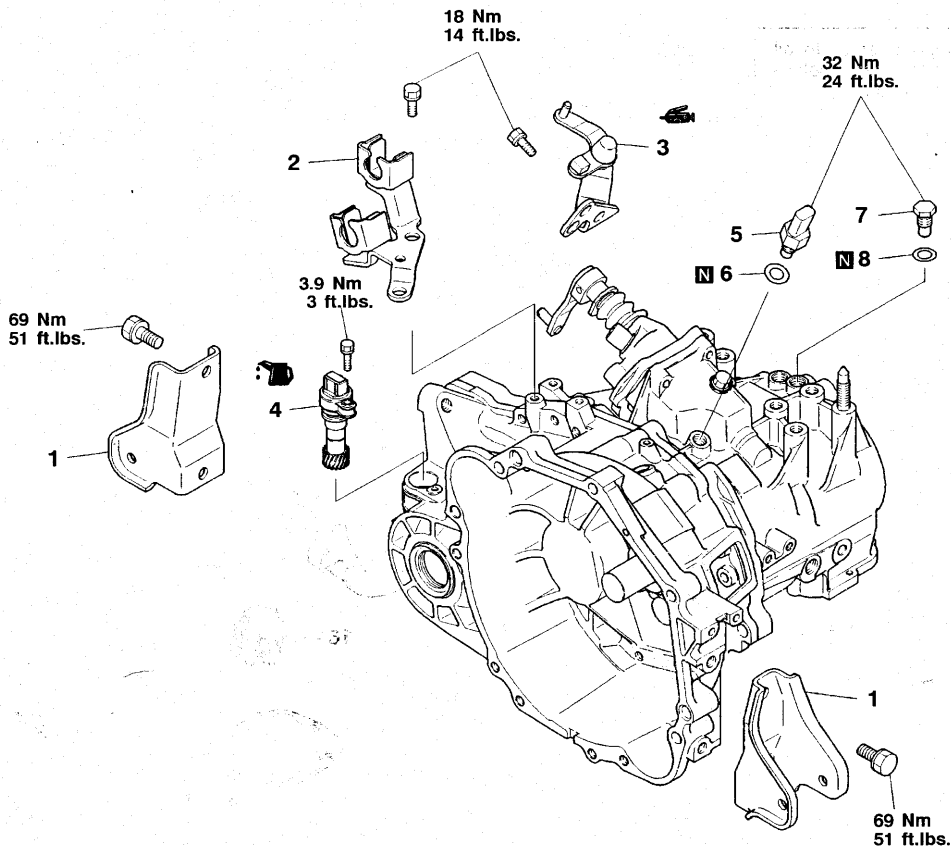
- ▶F◀ 27. Spring pin
- ▶F◀ 28. 1st-2nd speed shift rail
- ▶F◀ 29. 1st-2nd speed shift fork
- ▶F◀ 30. Spring pin
- ▶F◀ 31. Spring pin
- ▶D◀ 32. 5th speed shift rail
- ▶D◀ 33. 5th speed shift fork
- ▶D◀ 34. Reverse shift lug
- ▶D◀ 35. Snap ring

- ▶D◀ 36. Reverse interlock rail
- ▶D◀ 37. Steel ball
- ▶D◀ 38. 3rd-4th speed shift rail
- ▶D◀ 39. 3rd-4th speed shift fork
- ▶C◀ 40. Front bearing retainer
- ▶F◀ 41. Input shaft
- ▶F◀ 42. Output shaft
- ▶D◀ 43. Differential
- ▶D◀ 44. Clutch housing



DISASSEMBLY AND REASSEMBLY

<F5M42>



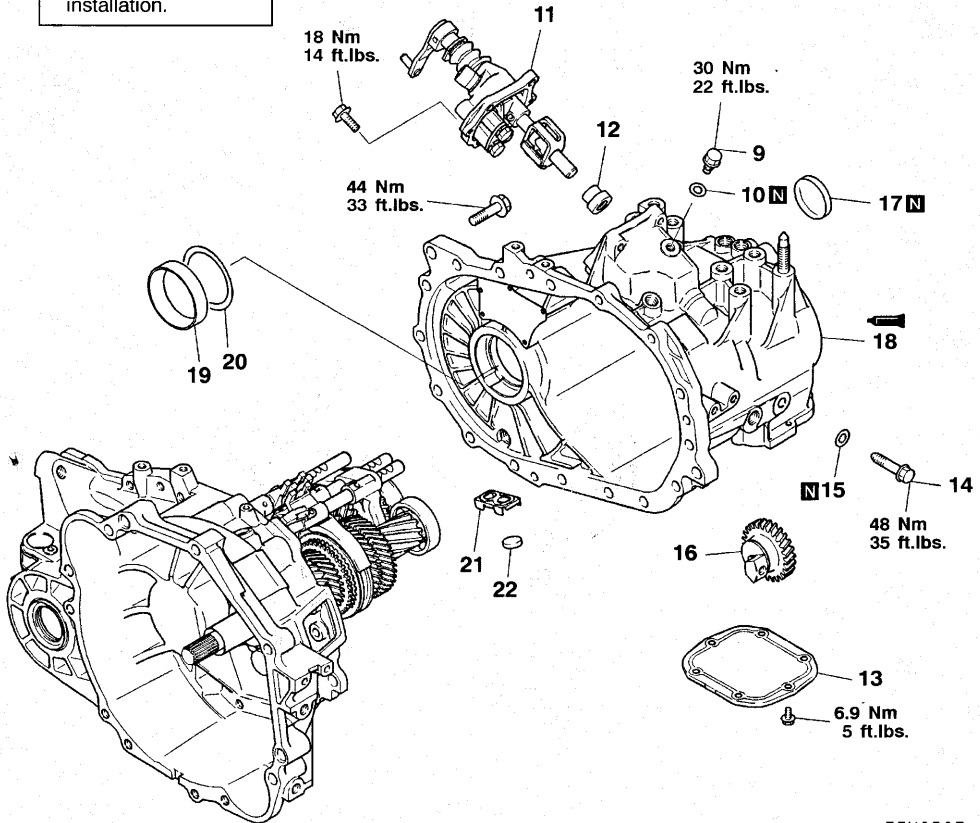
TFM0929

Disassembly steps

1. Roll stopper bracket
2. Shift cable bracket
3. Select lever
4. Speedometer gear
5. Back-up light switch
6. Gasket
7. Poppet spring
8. Gasket



Apply gear oil to all moving parts before installation.



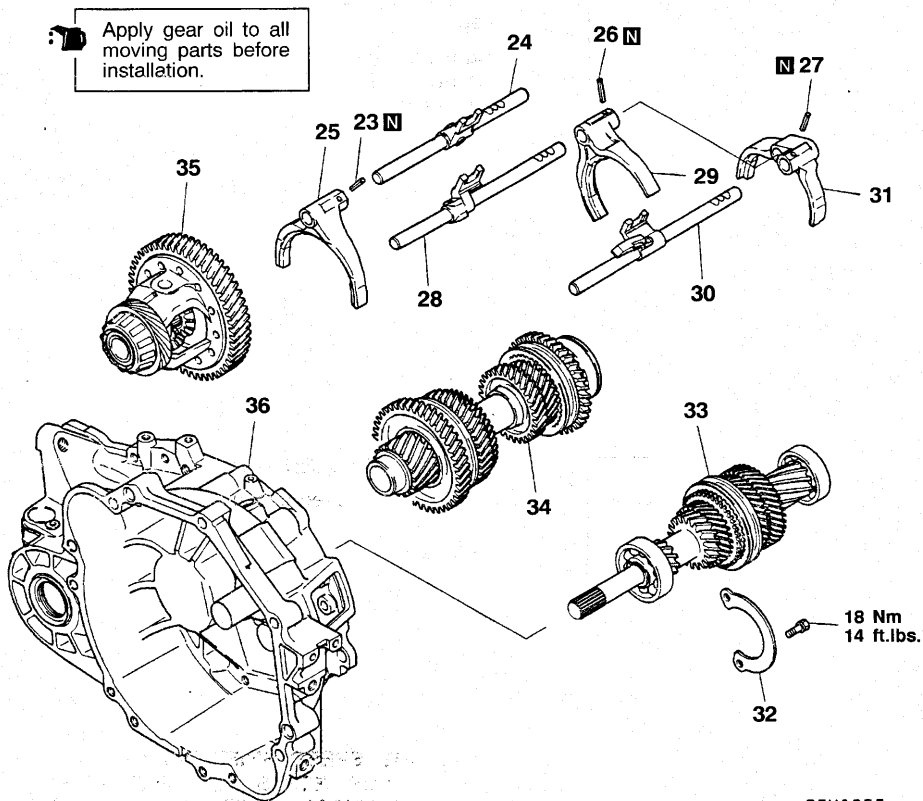
TFM0597

Disassembly steps

- 9. Interlock plate bolt
- 10. Gasket
- ▶O◀ 11. Control housing
- ▶N◀ 12. Neutral return spring
- ▶N◀ 13. Under cover
- ▶A◀ ▶L◀ 14. Reverse idler gear shaft bolt
- ▶B◀ ▶K◀ 15. Gasket
- ▶J◀ ▶G◀ 16. Reverse idler gear
- ▶L◀ ▶K◀ 17. Sealing cap
- ▶J◀ ▶G◀ 18. Transaxle case
- ▶L◀ ▶K◀ 19. Outer race
- ▶J◀ ▶G◀ 20. Spacer
- ▶L◀ ▶K◀ 21. Magnet holder
- ▶J◀ ▶G◀ 22. Magnet

Caution

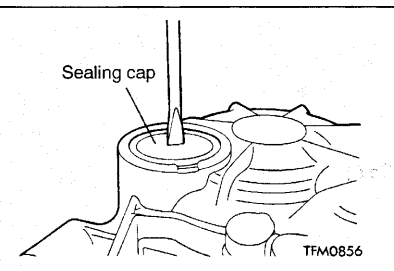
If it is necessary to disassemble transaxle assembly further than step 18, perform adjustment as described under "ADJUSTMENT BEFORE REASSEMBLY" on P.22B-19. Then reassemble the transaxle.



TFM0855

Disassembly steps

- ▶ F ▶ 23. Spring pin
- ▶ F ▶ 24. 1st-2nd speed shift rail
- ▶ F ▶ 25. 1st-2nd speed shift fork
- ▶ F ▶ 26. Spring pin
- ▶ F ▶ 27. Spring pin
- ▶ F ▶ 28. 3rd-4th speed shift rail
- ▶ F ▶ 29. 3rd-4th speed shift fork
- ▶ F ▶ 30. 5th speed-reverse shift rail
- ▶ F ▶ 31. 5th speed-reverse shift fork
- ▶ F ▶ 32. Front bearing retainer
- ▶ B ▶ 33. Input shaft
- ▶ B ▶ 34. Output shaft
- ▶ B ▶ 35. Differential
- ▶ B ▶ 36. Clutch housing



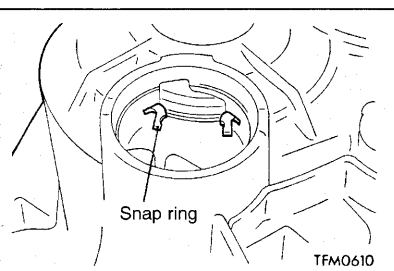
DISASSEMBLY SERVICE POINTS

◀A▶ SEALING CAP REMOVAL

- (1) Tap a chisel or screwdriver into the center of the sealing cap. Do not tap it in deeper than necessary. Next, push over the chisel or screwdriver to remove the cap.

Caution

Do not tap the chisel or screwdriver between the cap and case.

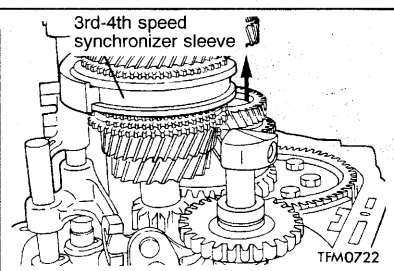


◀B▶ TRANSAXLE CASE REMOVAL

Expand the snap ring to remove it from the snap ring groove of the ball bearing.

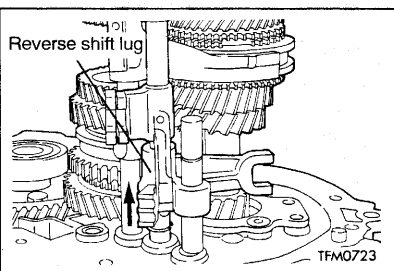
NOTE

Expanding the snap ring causes the snap ring groove to move out of position because of the output shaft's own weight.



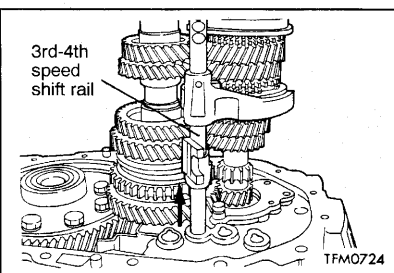
◀C▶ REVERSE IDLER GEAR SHAFT REMOVAL

Shift the 3rd-4th speed synchronizer sleeve toward the 4th speed side.

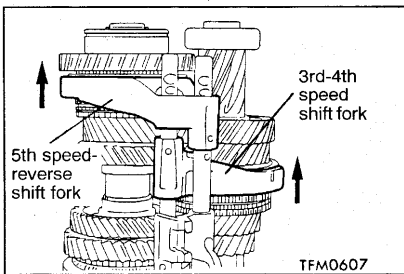


◀D▶ 3RD-4TH SPEED SHIFT RAIL/3RD-4TH SPEED SHIFT FORK/5TH SPEED SHIFT FORK/SNAP RING/REVERSE SHIFT LUG/5TH SPEED SHIFT RAIL/STEEL BALL/REVERSE INTERLOCK RAIL REMOVAL

- (1) While sliding the reverse shift lug in the direction shown, remove the 5th speed shift fork, 5th speed shift rail, reverse shift lug, snap ring, steel ball and reverse interlock rail.

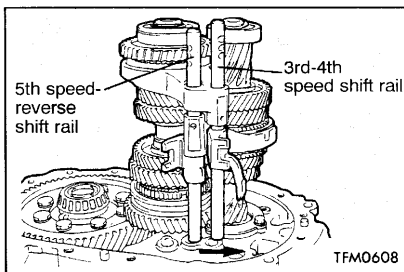


- (2) While sliding the 3rd-4th speed shift rail in the direction shown, remove it together with the shift fork.

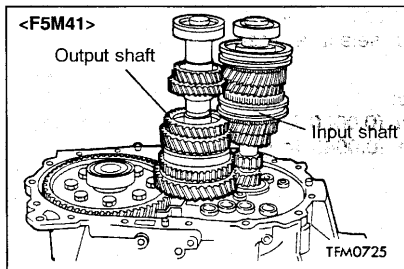


◀▶ 3RD-4TH SPEED SHIFT RAIL/3RD-4TH SPEED SHIFT FORK/5TH SPEED-REVERSE SHIFT RAIL/5TH SPEED-REVERSE SHIFT FORK REMOVAL

- (1) Shift the 3rd-4th speed shift fork and 5th speed-reverse shift fork in the direction shown.

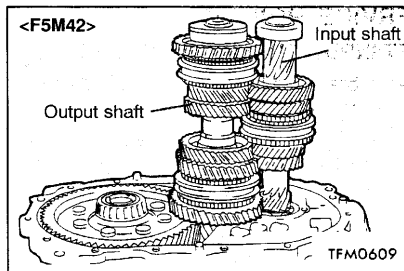


- (2) Slide the 3rd-4th speed shift rail and 5th speed-reverse shift rail in the direction shown and remove them together with the shift fork.



◀▶ INPUT SHAFT/OUTPUT SHAFT REMOVAL

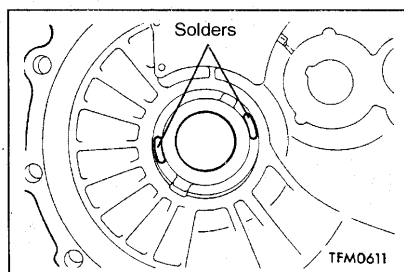
Remove the input and output shafts together.

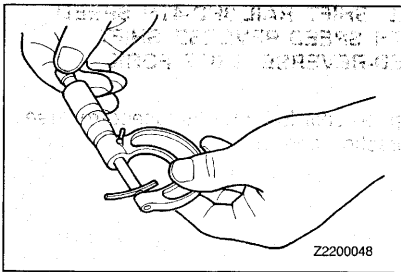


ADJUSTMENT BEFORE REASSEMBLY

SPACER SELECTION FOR DIFFERENTIAL CASE END PLAY ADJUSTMENT <F5M41>

- (1) Put solders [about 10 mm (0.39 in.) long, 1.6 mm (0.063 in.) in diameter] in the illustrated positions of the transaxle case and install the differential.
- (2) Install the clutch housing and tighten the bolts to the specified torque.
- (3) If the solders are not crushed, put larger diameter solders and repeat Steps (1) and (2).

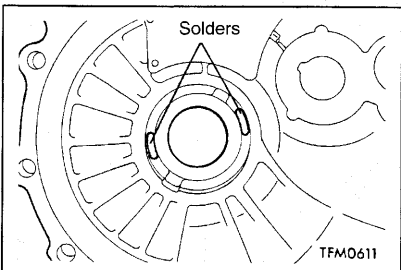




- (4) Measure the thickness (T) of the crushed solder with a micrometer and select a spacer according to the following equation.

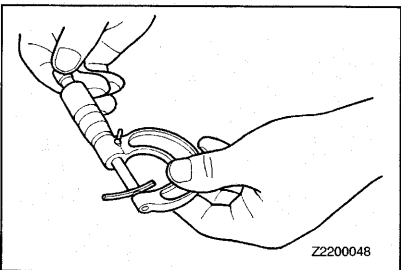
Spacer thickness:

$$\begin{aligned} & [T - 0.05 \text{ mm (0.0020 in.)}] \text{ to} \\ & [T - 0.17 \text{ mm (0.0067 in.)}] \end{aligned}$$



SPACER SELECTION FOR DIFFERENTIAL CASE PRELOAD ADJUSTMENT <F5M42>

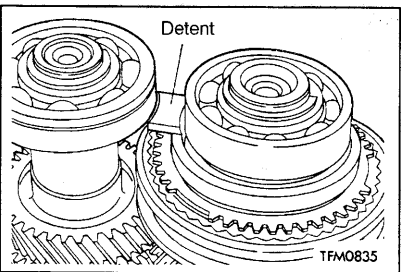
- (1) Put solders [about 10 mm (0.39 in.) long, 1.6 mm (0.063 in.) in diameter] in the illustrated positions of the transaxle case and install the bearing outer race and differential.
- (2) Install the clutch housing and tighten the bolts to the specified torque.
- (3) If the solders are not crushed, put larger diameter solders and repeat Steps (1) and (2).



- (4) Measure the thickness (T) of the crushed solder with a micrometer and select a spacer according to the following equation.

Spacer thickness:

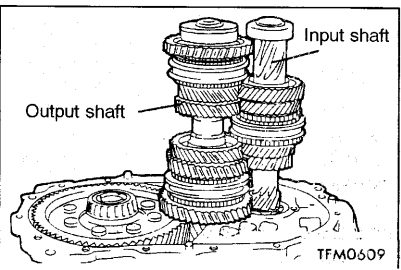
$$\begin{aligned} & [T + 0.05 \text{ mm (0.0020 in.)}] \text{ to} \\ & [T + 0.11 \text{ mm (0.0043 in.)}] \end{aligned}$$



REASSEMBLY SERVICE POINTS

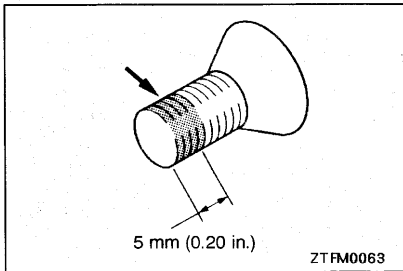
▶A◀ OUTPUT SHAFT/INPUT SHAFT INSTALLATION

While placing the reverse brake cone detent in the position shown, install the input and output shafts together.



▶B◀ OUTPUT SHAFT/INPUT SHAFT INSTALLATION

Install the input and output shafts together.

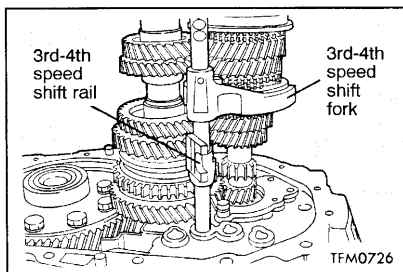


►◀ FRONT BEARING RETAINER INSTALLATION

Apply a sealant to the front bearing retainer mounting bolts (countersunk bolts only).

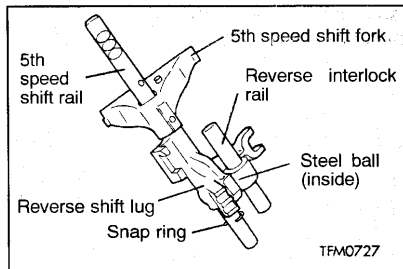
Specified sealant:

3M STUD Locking No.4170 or equivalent

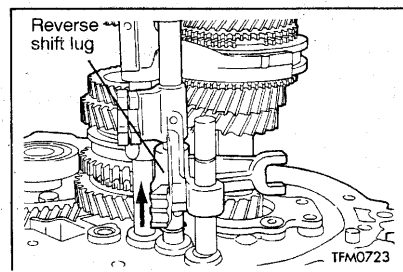
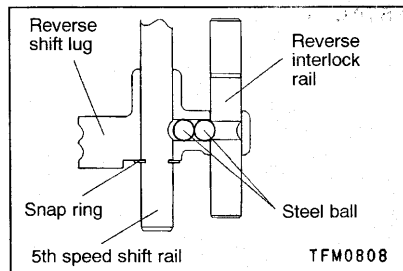


►◀ REVERSE INTERLOCK RAIL/STEEL BALL/5TH SPEED SHIFT RAIL/REVERSE SHIFT LUG/SNAP RING/5TH SPEED SHIFT FORK/3RD-4TH SPEED SHIFT FORK/3RD-4TH SPEED SHIFT RAIL INSTALLATION

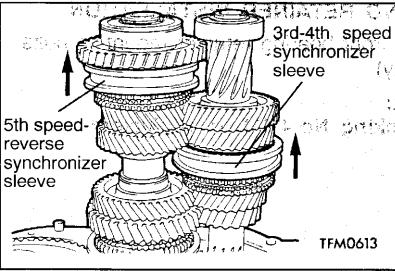
(1) Install the 3rd-4th shift rail and fork.



(2) Install the reverse interlock rail, steel ball, 5th speed shift rail, 5th speed shift fork, reverse shift lug and snap ring in the illustrated positions.

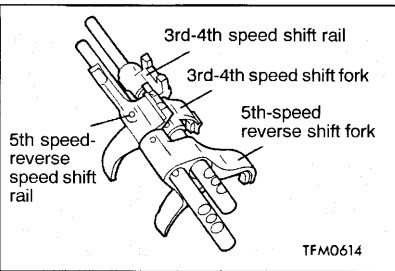


(3) While sliding the reverse shift lug in the direction shown, install the 5th speed shift fork, 5th speed shift rail, reverse shift lug, snap ring, steel ball and reverse interlock rail.

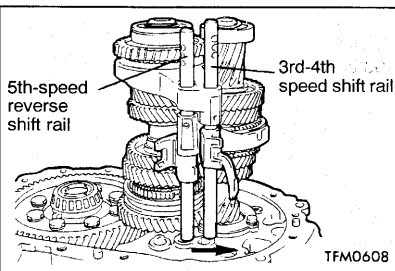


►E◄ **5TH SPEED-REVERSE SHIFT FORK/5TH SPEED-REVERSE SHIFT RAIL/3RD-4TH SPEED SHIFT FORK/3RD-4TH SPEED SHIFT RAIL INSTALLATION**

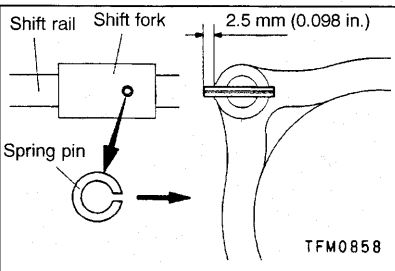
(1) Shift the 3rd-4th speed synchronizer sleeve and 5th speed-reverse synchronizer sleeve in the direction shown.



(2) Install the 3rd-4th speed shift rail and fork and the 5th speed-reverse shift rail and fork.



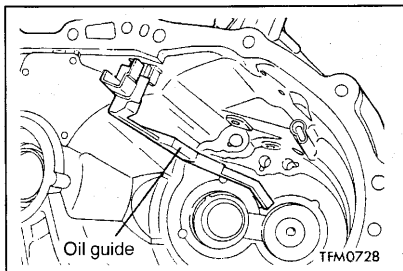
(3) While fitting each shift fork in the sleeve, slide the shift rails in the direction shown and install.



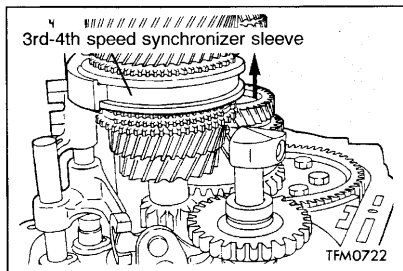
►F◄ **SPRING PIN INSTALLATION**

►G◄ **SPACER INSTALLATION**

Install the spacer selected in the section "ADJUSTMENT BEFORE REASSEMBLY."

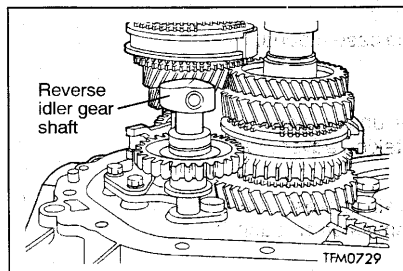


►H◄ OIL GUIDE INSTALLATION

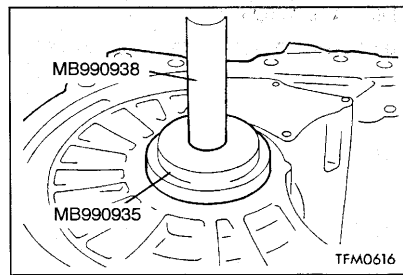


►I◄ REVERSE IDLER GEAR SHAFT INSTALLATION

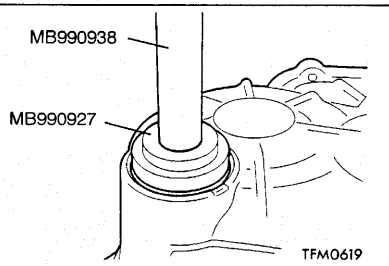
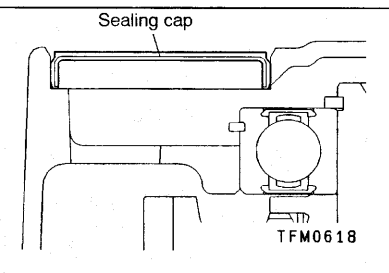
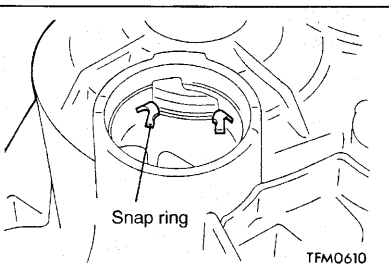
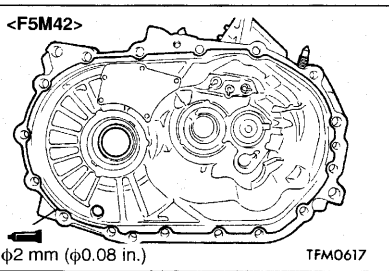
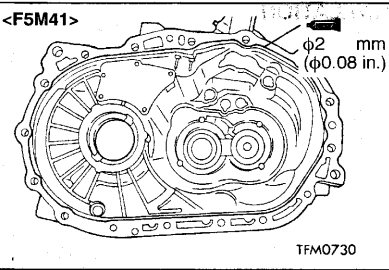
- (1) Shift the 3rd-4th speed synchronizer sleeve toward the 4th speed side.



- (2) Face the threaded hole of the reverse idler gear shaft toward the direction shown.



►J◄ OUTER RACE INSTALLATION



►K◄ TRANSAXLE CASE INSTALLATION

- (1) Apply sealant to the mating surface of the transaxle case. Be sure to install the transaxle within 15 minutes after applying sealant.

Specified sealant:

MITSUBISHI genuine sealant part No.MD997740 or equivalent

Caution

Squeeze out the sealant uniformly, while making sure that it is not broken or excessively applied.

- (2) Install the transaxle case and expand the snap ring.
- (3) Tighten the transaxle case mounting bolts to the specified torque.

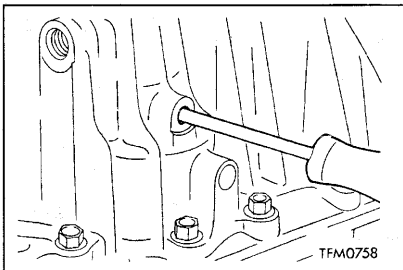
NOTE

Place the transaxle upside down and let the snap ring fit in the groove by taking advantage of the output shaft's own weight.

- (4) After installation, wait at least one hour. Never run the transaxle or let transmission oil touch the adhesion surface during that time.

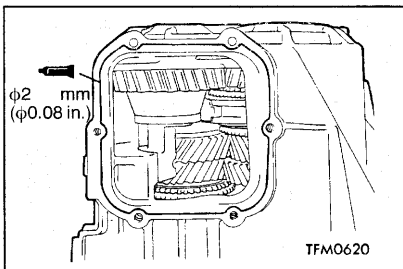
►L◄ SEALING CAP INSTALLATION

Press-fit the new sealing cap all the way up to the illustrated position.



►M◄ REVERSE IDLER GEAR SHAFT BOLT INSTALLATION

Using a Phillips screwdriver [8 mm (0.31 in.) in shank diameter] center the bolt hole.



►N◄ UNDER COVER INSTALLATION

- (1) Apply the sealant to the mating surface of the transaxle case. Be sure to install the under cover within 15 minutes after applying sealant.

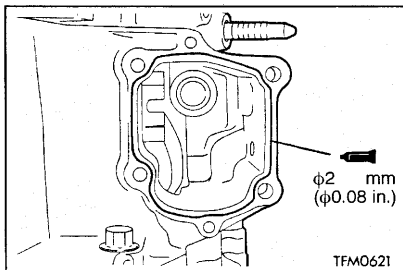
Specified sealant:

MITSUBISHI genuine sealant part No.MD997740 or equivalent

Caution

Squeeze out the sealant uniformly, while making sure that it is not broken or excessively applied.

- (2) After installation, wait at least one hour. Never run the transaxle or let transmission oil touch the adhesion surface during that time.



►O◄ CONTROL HOUSING INSTALLATION

- (1) Apply sealant to the mating surface of the transaxle case. Be sure to install the control housing within 15 minutes after applying sealant.

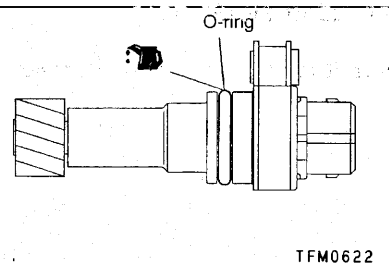
Specified sealant:

MITSUBISHI genuine sealant part No.MD997740 or equivalent

Caution

Squeeze out the sealant uniformly, while making sure that it is not broken or excessively applied.

- (2) After installation, wait at least one hour. Never run the transaxle or let transmission oil touch the adhesion surface during that time.

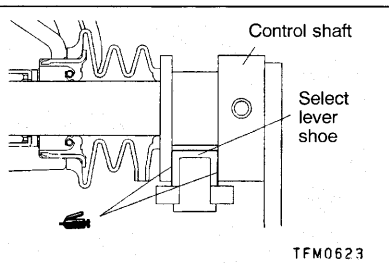


▶◀ SPEEDOMETER GEAR INSTALLATION

Apply transmission oil to the O-ring of the speedometer gear.

Transmission oil:

Hypoid gear oil SAE 75W-90 or 75W-85W conforming to API classification GL-4

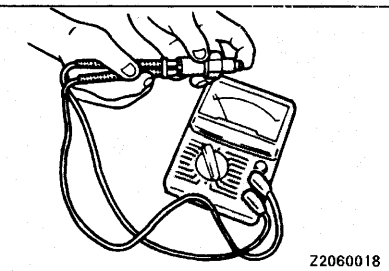


▶◀ SELECT LEVER INSTALLATION

Apply grease to the control shaft sliding portion of the select lever shoe.

Specified grease:

MITSUBISHI genuine grease part No.0101011 or equivalent



INSPECTION

22200110021

BACK-UP LIGHT SWITCH

Check for continuity between terminals.

Swith condition	Continuity (Resistance)
Pressed	Not continuity (Infinity)
Released	Continuity (approx. zero)

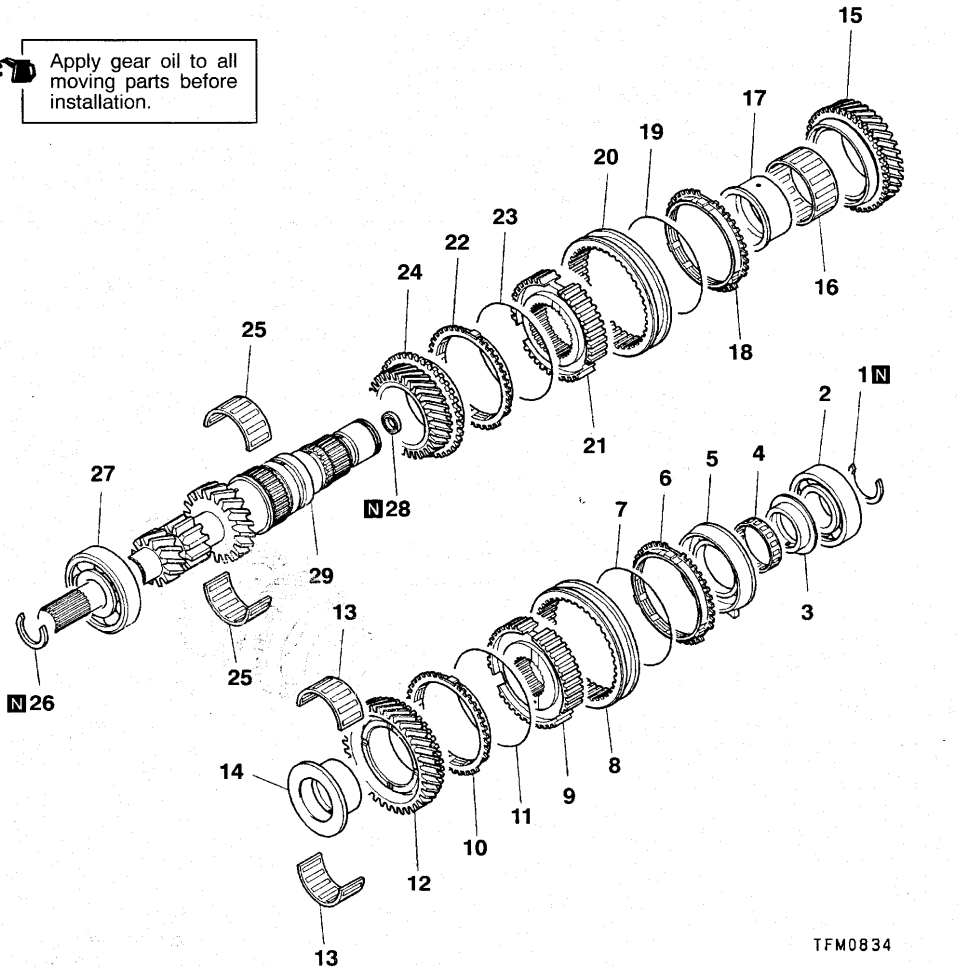
INPUT SHAFT

DISASSEMBLY AND REASSEMBLY

<F5M41>



Apply gear oil to all moving parts before installation.



TFM0834

Disassembly steps

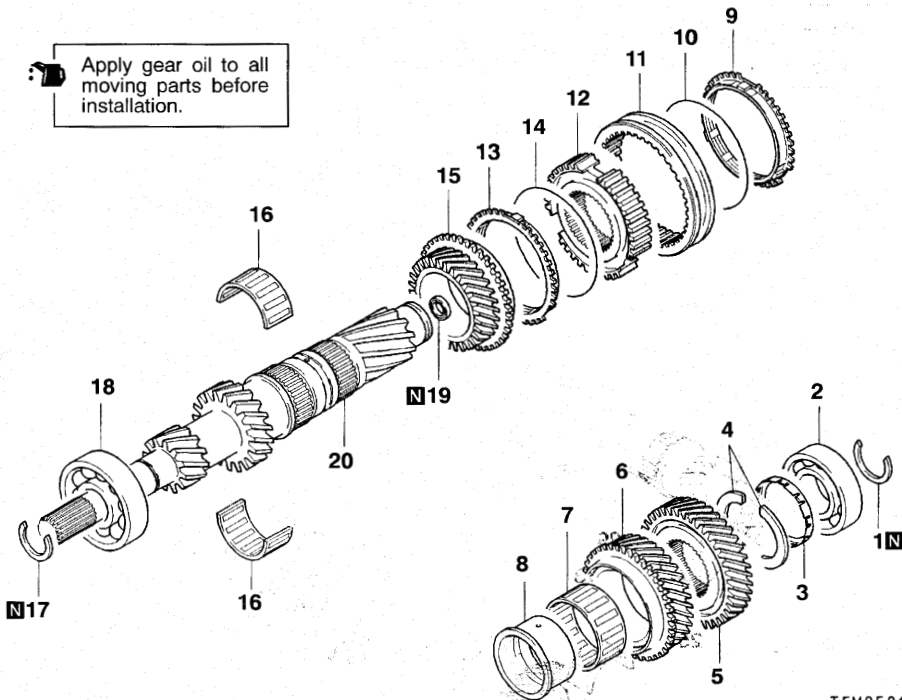
- | | | | | |
|----------|--------------|----------|---------------------------|------------------------------------|
| P | 1. Snap ring | G | 16. Needle roller bearing | |
| A | O | F | G | 17. 4th speed gear sleeve |
| B | M | D | F | 18. Synchronizer ring |
| | | F | E | 19. Synchronizer spring |
| | | E | D | 20. Synchronizer sleeve |
| | | D | D | 21. 3rd-4th speed synchronizer hub |
| D | | | | 22. Synchronizer ring |
| K | | | | 23. Synchronizer spring |
| J | | | | 24. 3rd speed gear |
| D | | | | 25. Needle roller bearing |
| | | C | B | 26. Snap ring |
| | | G | A | 27. Ball bearing |
| | | | | 28. Oil seal |
| D | H | | | 29. Input shaft |
| | | | | |

15. 4th speed gear

DISASSEMBLY AND REASSEMBLY

<F5M42>

Apply gear oil to all moving parts before installation.



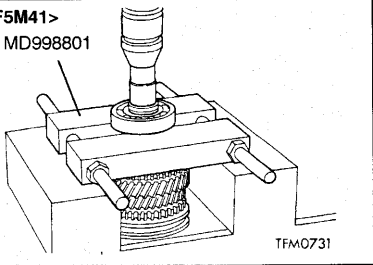
TFM0591

Disassembly steps

- | | | | | | |
|-----|-----|--------------------------|-----|------------------------------------|------------------|
| ◀A▶ | ▶P▶ | 1. Snap ring | ▶F▶ | 11. Synchronizer sleeve | |
| | ▶O▶ | 2. Ball bearing | ▶E▶ | 12. 3rd-4th speed synchronizer hub | |
| | ▶N▶ | 3. Thrust plate stopper | | 13. Synchronizer ring | |
| | ▶L▶ | 4. Thrust plate | ▶D▶ | 14. Synchronizer spring | |
| ◀C▶ | ▶I▶ | 5. 5th speed gear | | 15. 3rd speed gear | |
| | | 6. 4th speed gear | | 16. Needle roller bearing | |
| | | 7. Needle roller bearing | | 17. Snap ring | |
| ◀E▶ | ▶G▶ | 8. 4th speed gear sleeve | ◀G▶ | ▶C▶ | 18. Ball bearing |
| | | 9. Synchronizer ring | | ▶B▶ | 19. Oil seal |
| | | 10. Synchronizer spring | | ▶A▶ | 20. Input shaft |

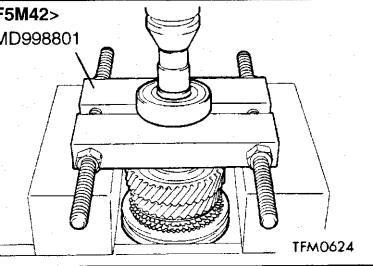
<F5M41>

MD998801



<F5M42>

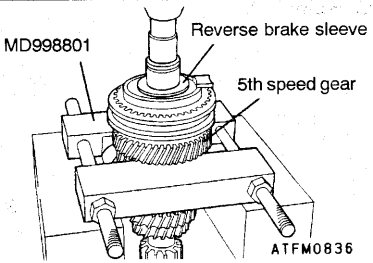
MD998801



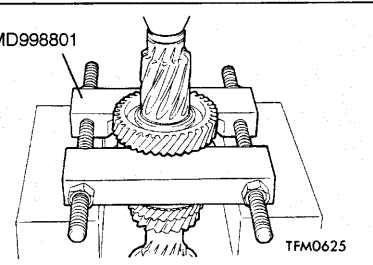
MD998801

Reverse brake sleeve

5th speed gear



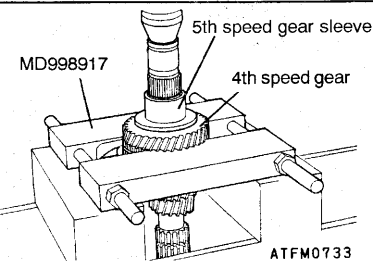
MD998801



MD998917

5th speed gear sleeve

4th speed gear



DISASSEMBLY SERVICE POINTS

◀A▶ BALL BEARING REMOVAL

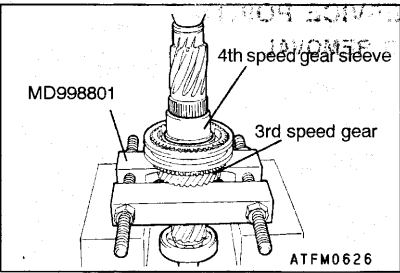
◀B▶ REVERSE BRAKE SLEEVE REMOVAL

Mount the special tool on the 5th speed gear and remove the reverse brake sleeve.

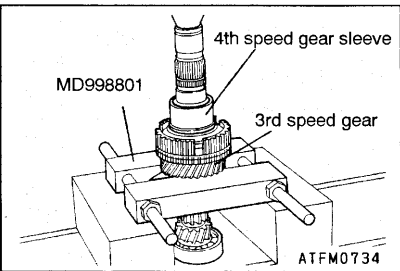
◀C▶ 5TH SPEED GEAR REMOVAL

◀D▶ 5TH SPEED GEAR SLEEVE REMOVAL

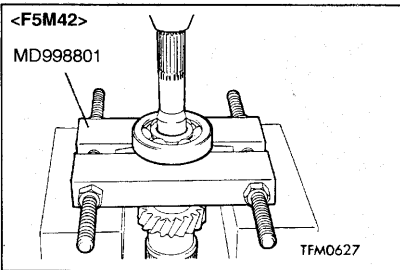
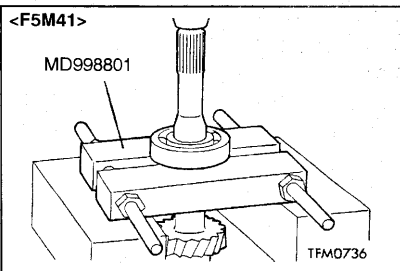
◀E▶ 4TH SPEED GEAR SLEEVE REMOVAL



◀F▶ 4TH SPEED GEAR SLEEVE REMOVAL

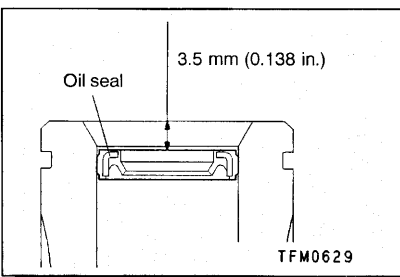


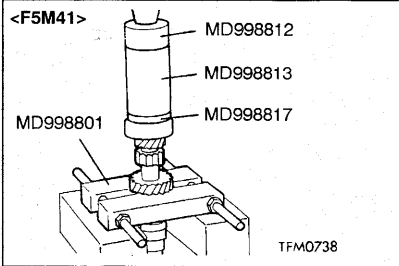
◀G▶ BALL BEARING REMOVAL



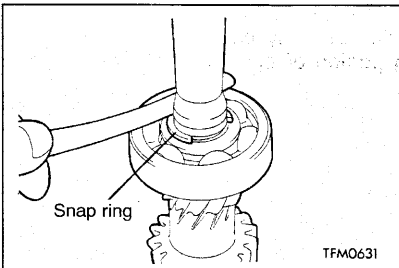
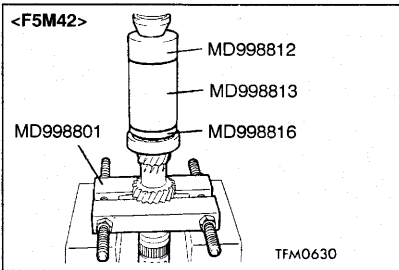
REASSEMBLY SERVICE POINTS

▶A◀ OIL SEAL INSTALLATION





▶B◀ BALL BEARING INSTALLATION

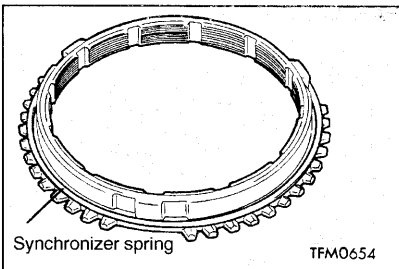


▶C◀ SNAP RING INSTALLATION

Select and install a snap ring so that the input shaft front bearing clearance will have the standard value.

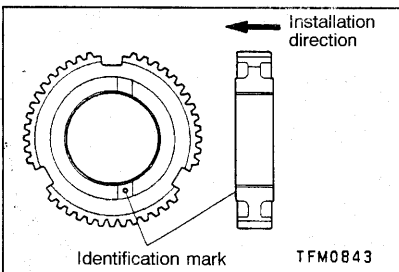
Standard value:

-0.01 to 0.12 mm (-0.0004 to 0.0047 in.)



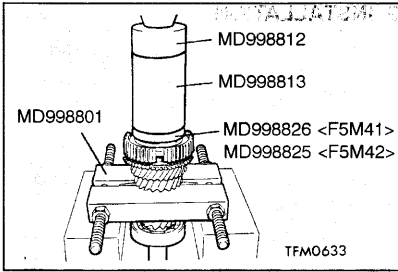
▶D◀ SYNCHRONIZER SPRING INSTALLATION

Install the synchronizer spring to the illustrated position of the synchronizer ring.



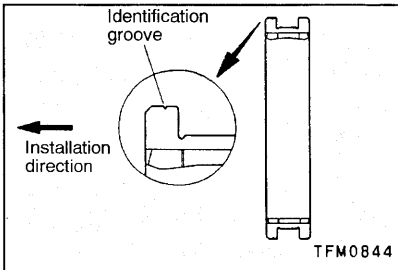
▶E◀ 3RD-4TH SPEED SYNCHRONIZER HUB INSTALLATION

Install the 3rd-4th speed synchronizer hub so that it will be oriented in the direction shown.



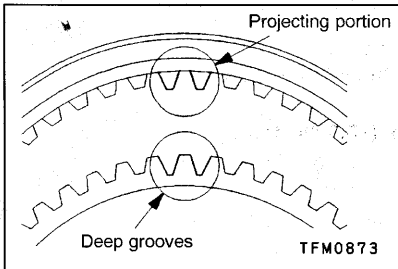
Caution

When installing the hub, check that the synchronizer ring is not caught.

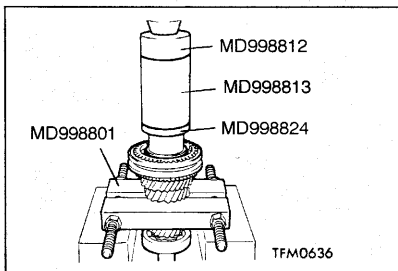


►F◄ SYNCHRONIZER SLEEVE INSTALLATION

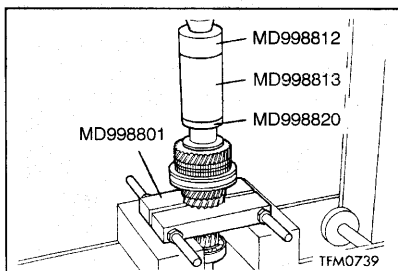
- (1) Install the synchronizer sleeve so that it will be oriented in the direction shown.



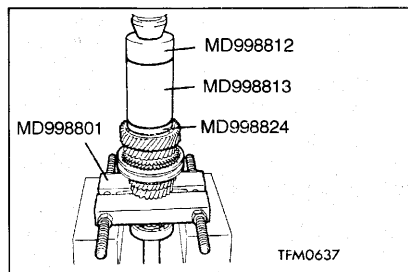
- (2) When the synchronizer sleeve is installed, check that the deep groove portion of the synchronizer hub is aligned with the projecting portion of the sleeve.



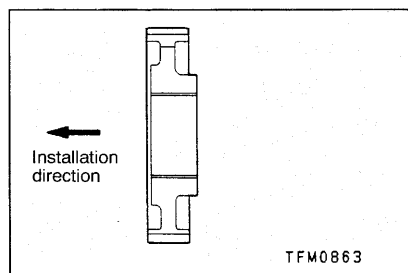
►G◄ 4TH SPEED GEAR SLEEVE INSTALLATION



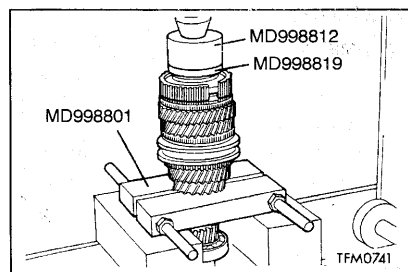
►H◄ 5TH SPEED GEAR SLEEVE INSTALLATION



►I◄ 5TH SPEED GEAR INSTALLATION

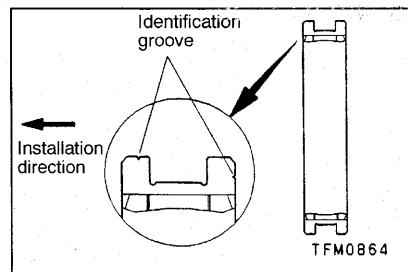


►J◄ 5TH SPEED-REVERSE SYNCHRONIZER HUB INSTALLATION



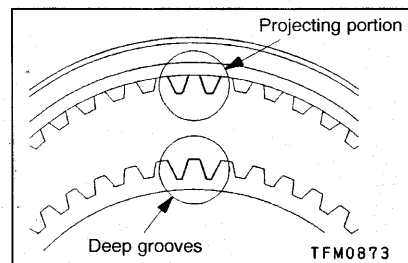
Caution

When installing the 5th-reverse speed synchronizer hub, check that the synchronizer ring is not caught.

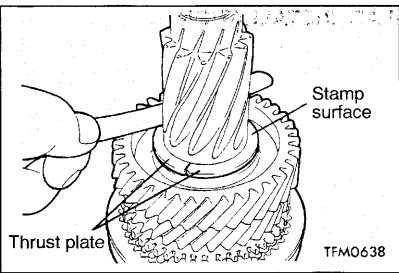


►K◄ SYNCHRONIZER SLEEVE INSTALLATION

- (1) Install the synchronizer sleeve so that the identification grooves are oriented in the direction shown.



- (2) When the synchronizer sleeve is installed, check that the deep groove portion of the synchronizer hub is aligned with the projecting portion of the sleeve.



►L◄ THRUST PLATE INSTALLATION

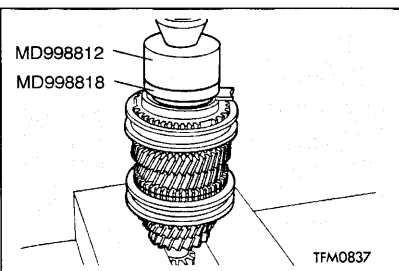
Select and install a thrust plate so that the input shaft 5th speed gear end play has the standard value.

Standard value:

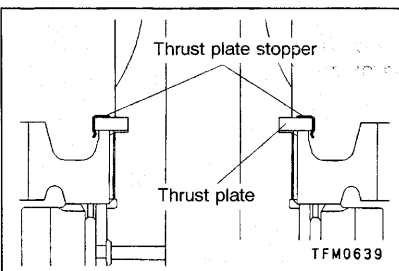
-0.01 to 0.09 mm (-0.0004 to 0.0035 in.)

Caution

Assemble with the identification stamp surface on the thrust plate stopper side.

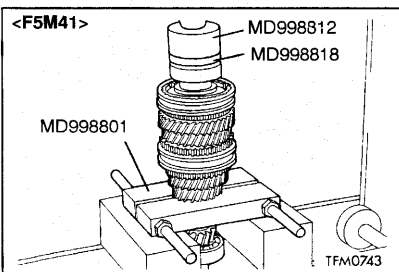


►M◄ REVERSE BRAKE SLEEVE INSTALLATION

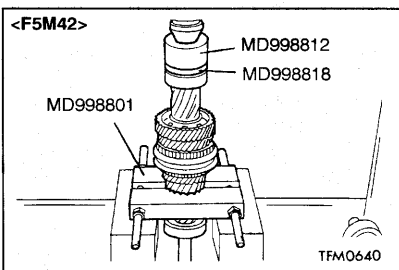


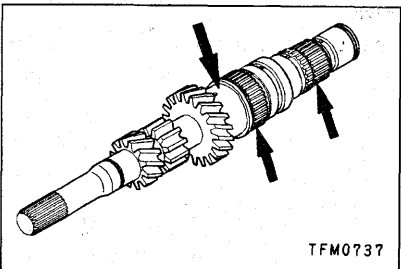
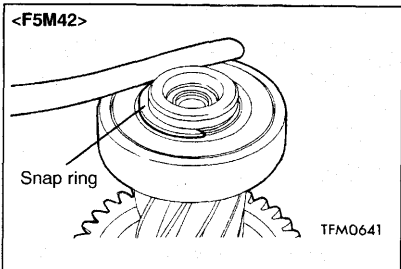
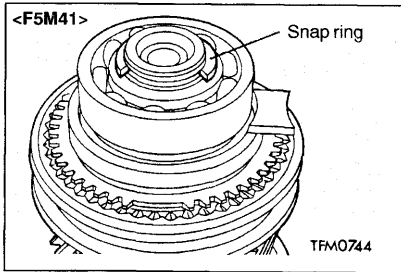
►N◄ THRUST PLATE STOPPER INSTALLATION

When the thrust plate is installed, check that it is not tilted.



►O◄ BALL BEARING INSTALLATION





▶▶◀ SNAP RING INSTALLATION

Select and install a snap ring so that the input shaft rear bearing clearance will have the standard value.

Standard value:

-0.01 to 0.09 mm (-0.0004 to 0.0035 in.) <F5M41>
0 to 0.12 mm (0 to 0.0047 in.) <F5M42>

INSPECTION

22200170050

INPUT SHAFT

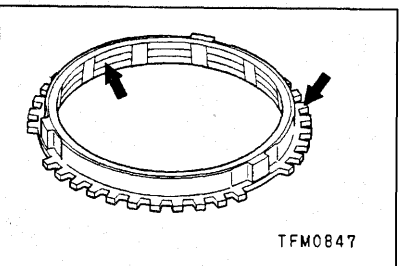
- (1) Check the outside diameter of the needle bearing mounting portion for damage, abnormal wear and seizure.
- (2) Check the splines for damage and wear.

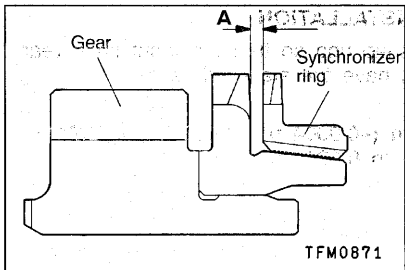
NEEDLE ROLLER BEARING

- (1) Check that when the input shaft, sleeve and gear are combined and made to rotate, they rotate smoothly without noise.
- (2) Check to ensure that the cage is not deformed.

SYNCHRONIZER RING

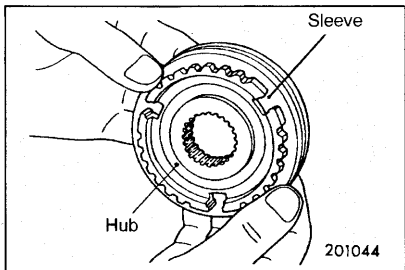
- (1) Check to ensure that the clutch gear tooth surfaces are not damaged and broken.
- (2) Check to ensure that the cone inside diameter is not damaged or worn and that the threads are not crushed.





(3) Press the synchronizer ring against the gear and check clearance "A." If "A" is less than the limit, replace.

Limit: 0.5 mm (0.020 in.)



SYNCHRONIZER SLEEVE AND HUB

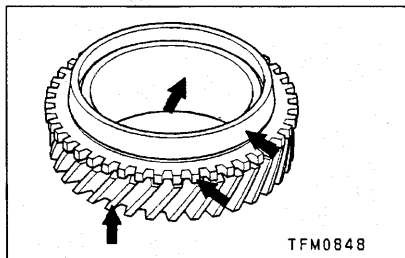
- (1) Check that when the synchronizer sleeve and hub are combined and made to slide, they slide smoothly without binding.
- (2) Check to ensure that the front and rear ends of the sleeve inside surface are not damaged.

Caution

When replacement of either the synchronizer sleeve or hub is necessary, check that the synchronizer sleeve and hub are replaced as a set.

SYNCHRONIZER SPRING

Check to ensure that the spring is not sagging, deformed or broken.



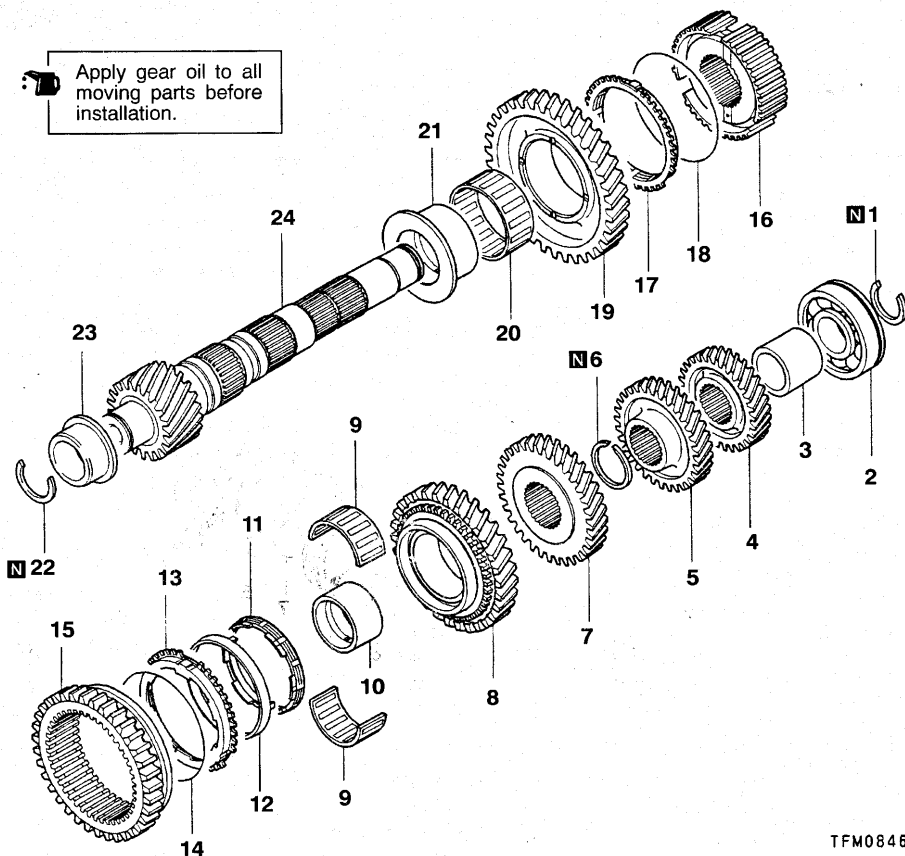
SPEED GEARS

- (1) Check to ensure that the helical and clutch gear tooth surfaces are not damaged or worn.
- (2) Check to ensure that the synchronizer cone surfaces are not roughened, damaged or worn.
- (3) Check to ensure that the gear inside diameter and front and rear surfaces are not damaged and worn.

OUTPUT SHAFT

DISASSEMBLY AND REASSEMBLY

<F5M41>



TFM0846

Disassembly steps

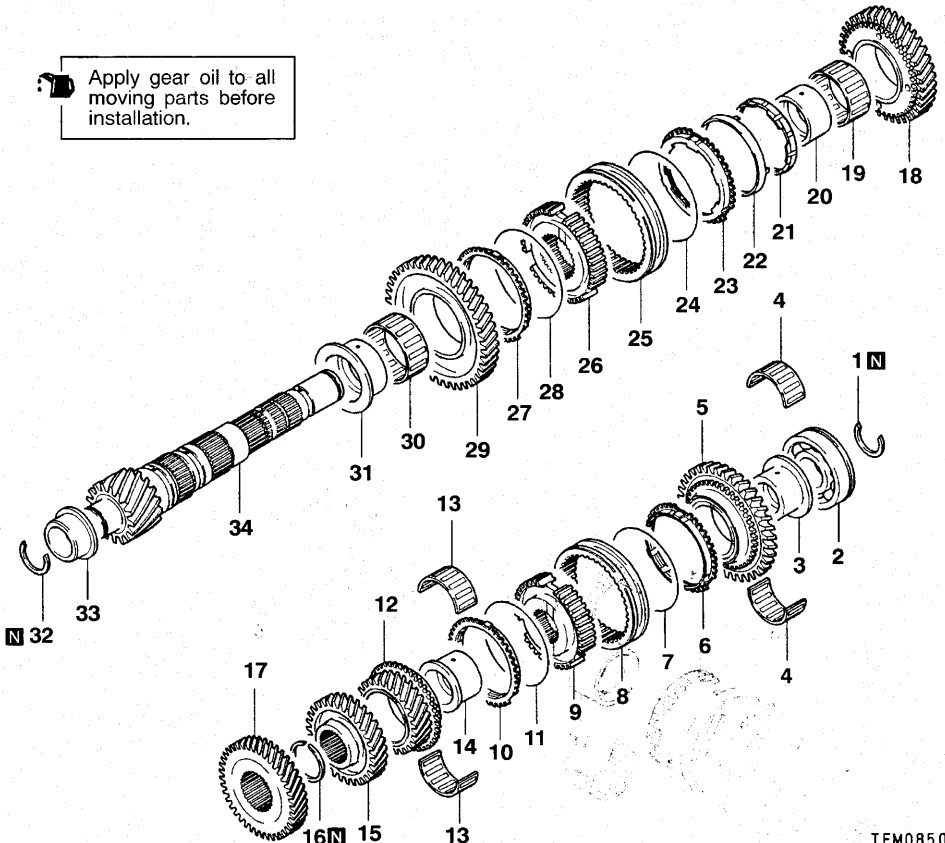
- | | | | | | |
|-----|-----|-----------------------------|-----|------------------------------------|-------------------------------|
| ◀A▶ | ▶P▶ | 1. Snap ring | ▶G▶ | 13. Outer synchronizer ring | |
| | ▶O▶ | 2. Ball bearing | ▶F▶ | 14. Synchronizer spring | |
| | | 3. Collar | ▶E▶ | 15. Synchronizer sleeve | |
| | | 4. 5th speed gear | | 16. 1st-2nd speed synchronizer hub | |
| | | 5. 4th speed gear | ▶D▶ | 17. Synchronizer ring | |
| | ▶J▶ | 6. Snap ring | | 18. Synchronizer spring | |
| | | 7. 3rd speed gear | | 19. 1st speed gear | |
| | | 8. 2nd speed gear | | 20. Needle roller bearing | |
| | | 9. Needle roller bearing | ▶F▶ | ▶C▶ | 21. 1st speed gear sleeve |
| ◀B▶ | ▶H▶ | 10. 2nd speed gear sleeve | ▶B▶ | ▶A▶ | 22. Snap ring |
| | | 11. Inner synchronizer ring | ▶G▶ | | 23. Roller bearing inner race |
| | | 12. Synchronizer cone | | | 24. Output shaft |

DISASSEMBLY AND REASSEMBLY

<F5M42>



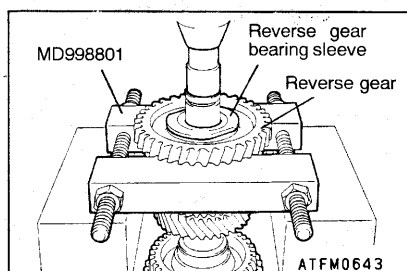
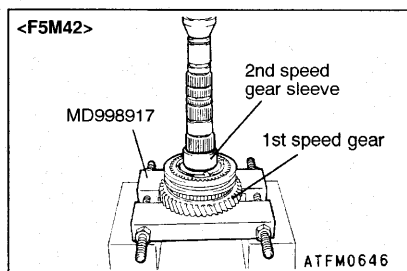
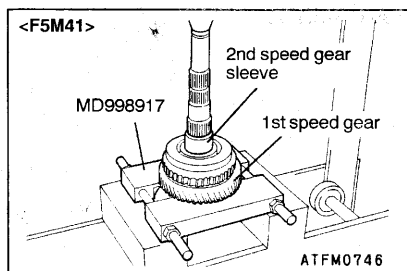
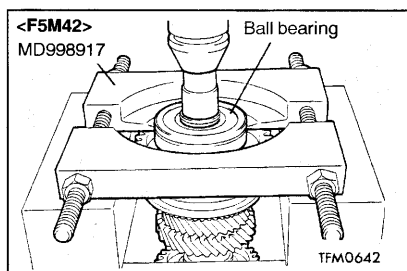
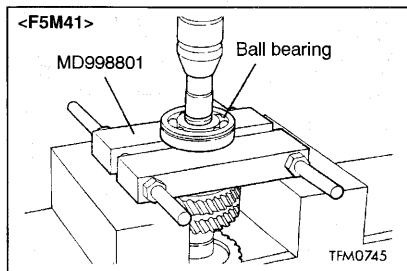
Apply gear oil to all moving parts before installation.



TFM0850

Disassembly steps

- | | | | |
|-------|---------------------------------------|-------|------------------------------------|
| ▶ P ◀ | 1. Snap ring | ▶ H ◀ | 18. 2nd speed gear |
| ▶ O ◀ | 2. Ball bearing | ▶ G ◀ | 19. Needle roller bearing |
| ▶ N ◀ | 3. Reverse gear bearing sleeve | ▶ F ◀ | 20. 2nd speed gear sleeve |
| ▶ N ◀ | 4. Needle roller bearing | ▶ E ◀ | 21. Inner synchronizer ring |
| ▶ N ◀ | 5. Reverse gear | ▶ D ◀ | 22. Synchronizer cone |
| ▶ D ◀ | 6. Synchronizer ring | ▶ D ◀ | 23. Outer synchronizer ring |
| ▶ F ◀ | 7. Synchronizer spring | ▶ G ◀ | 24. Synchronizer spring |
| ▶ M ◀ | 8. Synchronizer sleeve | ▶ F ◀ | 25. Synchronizer sleeve |
| ▶ D ◀ | 9. 5th-reverse speed synchronizer hub | ▶ E ◀ | 26. 1st-2nd speed synchronizer hub |
| ▶ D ◀ | 10. Synchronizer ring | ▶ D ◀ | 27. Synchronizer ring |
| ▶ D ◀ | 11. Synchronizer spring | ▶ D ◀ | 28. Synchronizer spring |
| ▶ L ◀ | 12. 5th speed gear | ▶ F ◀ | 29. 1st speed gear |
| ▶ K ◀ | 13. Needle roller bearing | ▶ C ◀ | 30. Needle roller bearing |
| ▶ J ◀ | 14. 5th speed gear sleeve | ▶ B ◀ | 31. 1st speed gear sleeve |
| ▶ J ◀ | 15. 4th speed gear | ▶ A ◀ | 32. Snap ring |
| ▶ I ◀ | 16. Snap ring | ▶ A ◀ | 33. Roller bearing inner race |
| ▶ I ◀ | 17. 3rd speed gear | | 34. Output shaft |



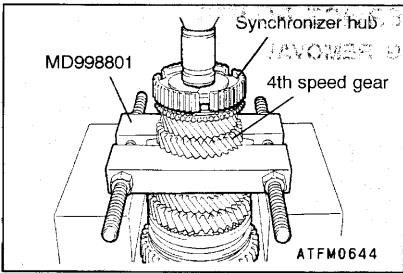
DISASSEMBLY SERVICE POINTS

◀A▶ BALL BEARING REMOVAL

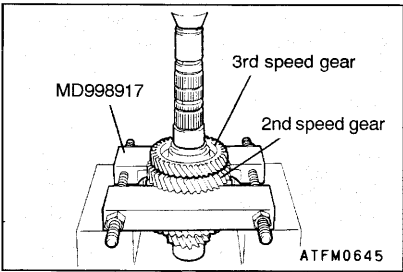
◀B▶ 2ND SPEED GEAR SLEEVE REMOVAL

◀C▶ REVERSE GEAR BEARING SLEEVE REMOVAL

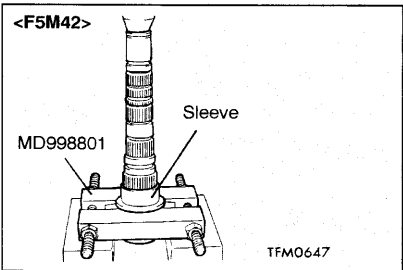
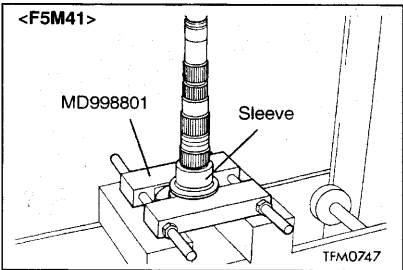
◀D▶ 5TH-REVERSE SPEED SYNCHRONIZER HUB REMOVAL



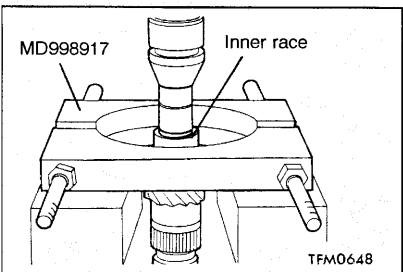
◀E▶ 3RD SPEED GEAR REMOVAL

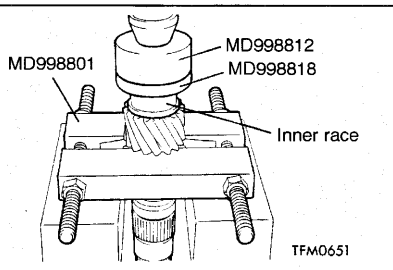


◀F▶ 1ST SPEED GEAR SLEEVE REMOVAL



◀G▶ ROLLER BEARING INNER RACE REMOVAL

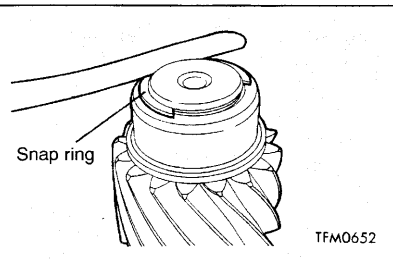
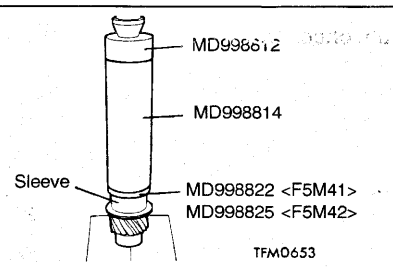


REASSEMBLY SERVICE POINTS**►A◄ ROLLER BEARING INNER RACE INSTALLATION****►B◄ SNAP RING INSTALLATION**

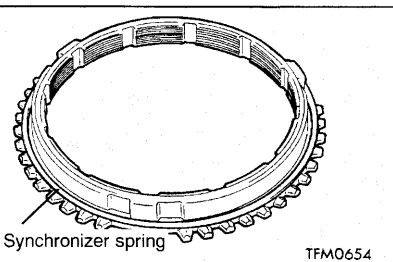
Select and install a snap ring so that the output shaft front bearing clearance will have the standard value.

Standard value:

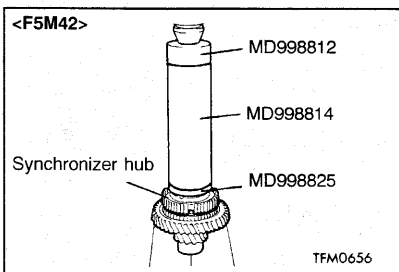
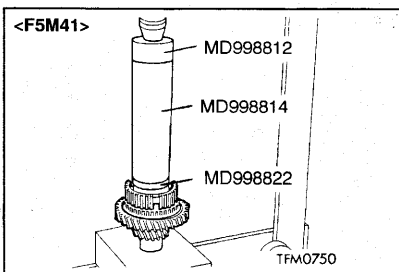
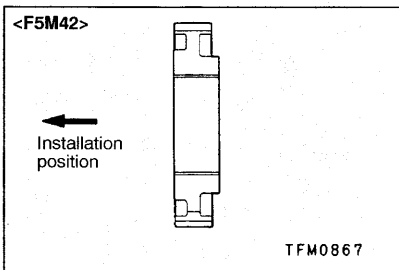
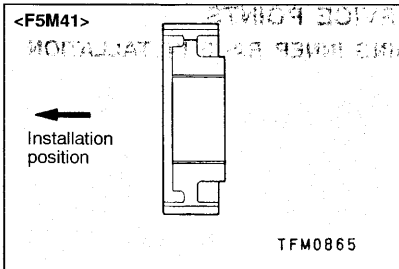
0 to 0.12 mm (0 to 0.0047 in.)

**►C◄ 1ST SPEED GEAR SLEEVE INSTALLATION****►D◄ SYNCHRONIZER SPRING INSTALLATION**

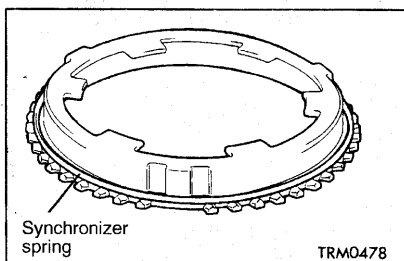
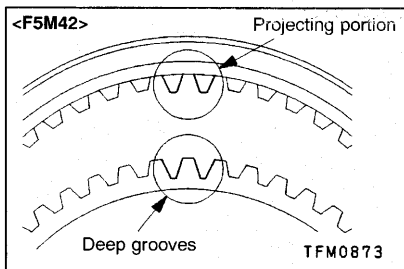
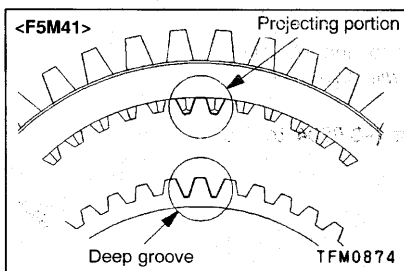
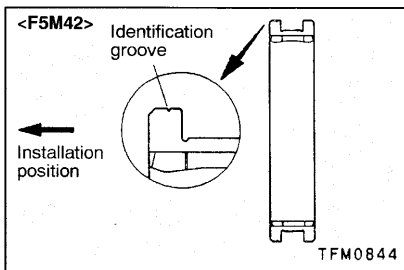
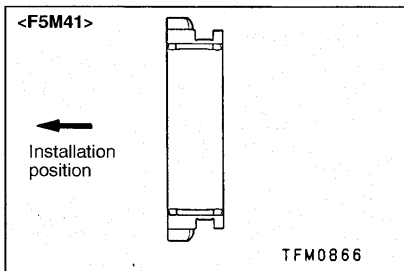
Install the synchronizer spring to the illustrated position of the synchronizer ring.



▶◀ 1ST-2ND SPEED SYNCHRONIZER HUB INSTALLATION



Caution
When installing the hub, check that the synchronizer ring is not caught.



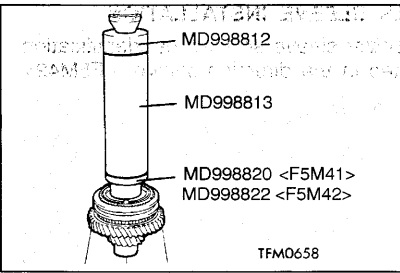
►F◄ SYNCHRONIZER SLEEVE INSTALLATION

- (1) Install the synchronizer sleeve so that the identification grooves are oriented in the direction shown. <F5M42>

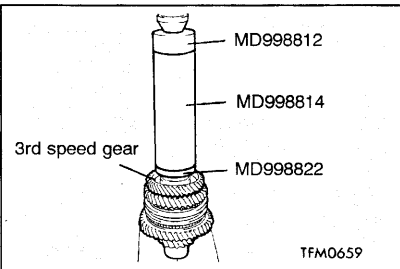
- (2) When the synchronizer sleeve is installed, check that the deep groove portion of the synchronizer hub is aligned with the projecting portion of the sleeve.

◄G► SYNCHRONIZER SPRING INSTALLATION

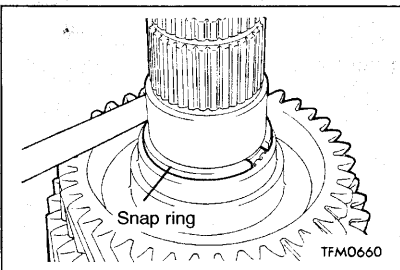
- Install the synchronizer spring to the illustrated position of the outer synchronizer ring.



▶H◀ 2ND SPEED GEAR SLEEVE INSTALLATION



◀I▶ 3RD SPEED GEAR INSTALLATION

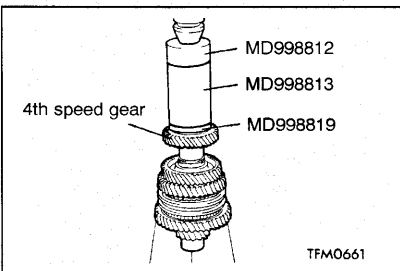


▶J◀ SNAP RING INSTALLATION

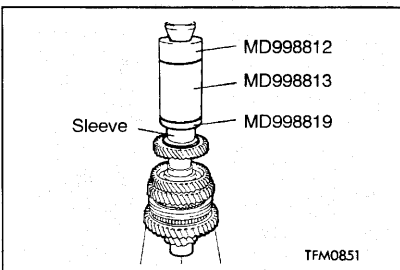
Select and install a snap ring so that the output shaft 3rd speed gear end play will have the standard value.

Standard value:

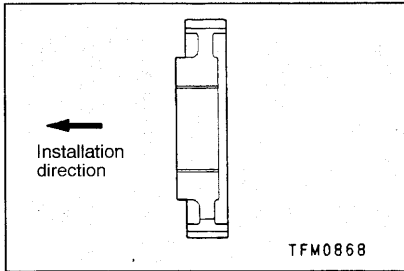
-0.01 to 0.09 mm (-0.0004 to 0.0035 in.)



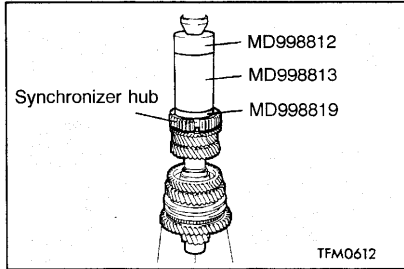
◀K▶ 4TH SPEED GEAR INSTALLATION



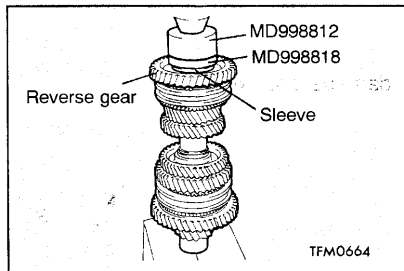
▶L◀ 5TH SPEED GEAR SLEEVE INSTALLATION



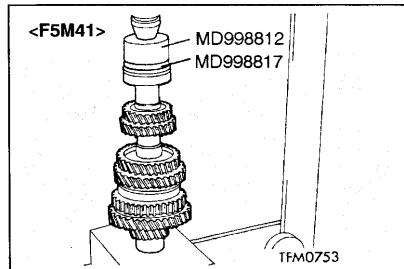
►M◀ 5TH SPEED-REVERSE SYNCHRONIZER HUB INSTALLATION



Caution
When the 5th speed-reverse synchronizer hub is installed, check that the synchronizer ring is not caught.

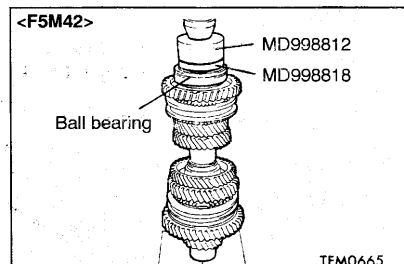


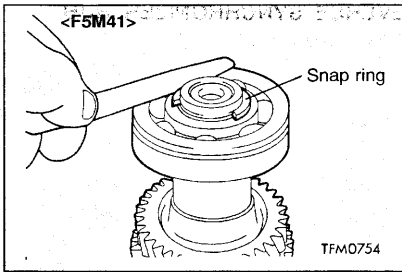
◀N► REVERSE GEAR/NEEDLE ROLLER BEARING/REVERSE GEAR BEARING SLEEVE INSTALLATION



►O◀ BALL BEARING INSTALLATION

NOTE
Install the ball bearings so that the groove on the bearing snap ring faces upward.



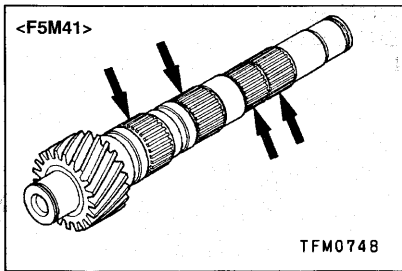
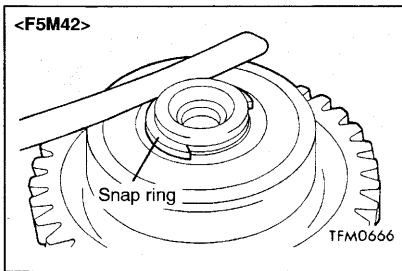


◀▶ SNAP RING INSTALLATION

Select and install a snap ring so that the output shaft rear bearing clearance will have the standard value.

Standard value:

-0.01 to 0.09 mm (-0.0004 to 0.0035 in.)

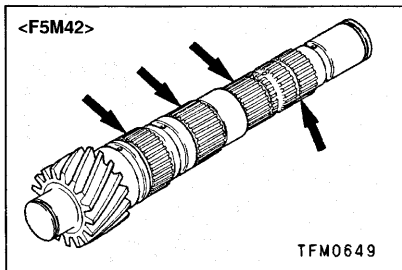


INSPECTION

22200230017

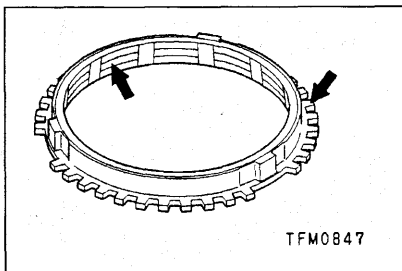
OUTPUT SHAFT

Check the splines for damage and wear.



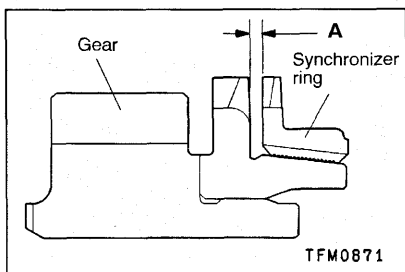
NEEDLE ROLLER BEARING

- (1) Check that when the bearing sleeve and gear are combined and made to rotate, they rotate smoothly without looseness and noise.
- (2) Check to ensure that the cage is not deformed.



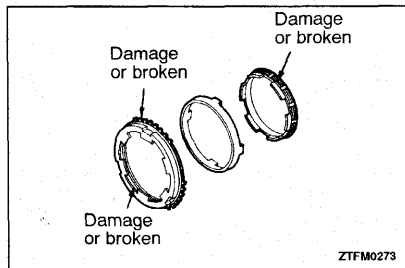
SYNCHRONIZER RING

- (1) Check to ensure that the clutch gear tooth surfaces are not damaged and broken.
- (2) Check to ensure that the cone inside diameter is not damaged or worn and that the threads are not crushed.



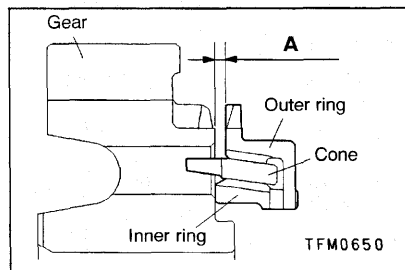
- (3) Press the synchronizer ring against the gear and check clearance "A." If "A" is less than the limit, replace.

Limit: 0.5 mm (0.020 in.)



OUTER SYNCHRONIZER RING/INNER SYNCHRONIZER RING/SYNCHRONIZER CONE

- (1) Check to ensure that the clutch gear tooth surfaces and cone surfaces are not damaged and broken.

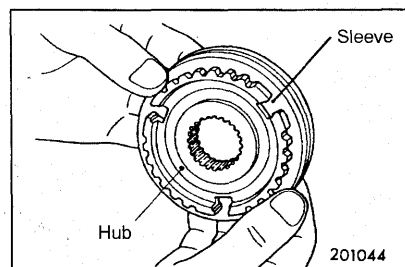


- (2) Install the outer ring, inner ring and cone, press them against the gear, and check clearance "A." If "A" is less than the limit, replace.

Limit: 0.5 mm (0.020 in.)

Caution

When the outer ring, inner ring or cone has to be replaced, check that the outer ring, inner ring and cone are replaced as a set.



SYNCHRONIZER SLEEVE AND HUB

- (1) Check that when the synchronizer sleeve and hub are combined and made to slide, they slide smoothly without binding.
- (2) Check to ensure that the front and rear ends of the sleeve inside surface are not damaged.

Caution

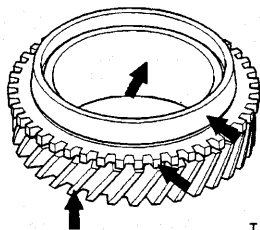
When replacement of either the synchronizer sleeve or hub is necessary, check that the synchronizer sleeve and hub are replaced as a set.

SYNCHRONIZER SPRING

Check to ensure that the spring is not sagging, deformed or broken.

SPEED GEARS

- (1) Check to ensure that the helical and clutch gear tooth surfaces are not damaged or worn.
- (2) Check to ensure that the synchronizer cone surfaces are not roughened, damaged or worn.
- (3) Check to ensure that the gear inside diameter and front and rear surfaces are not damaged and worn.




TFM0848

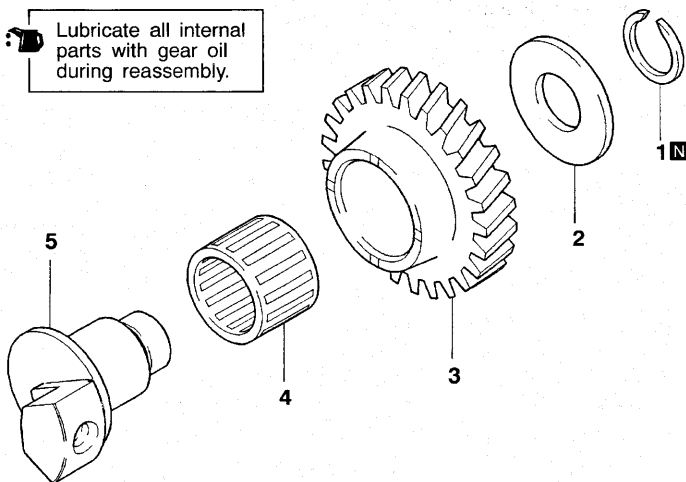
REVERSE IDLER GEAR <F5M42>

DISASSEMBLY AND REASSEMBLY

FABO PIRELLA 22201250012

MANUAL TRANSAXLE OVERHAUL

 Lubricate all internal parts with gear oil during reassembly.



TFM0590

Disassembly steps

1. Snap ring
2. Thrust washer
3. Reverse idler gear
4. Needle roller bearing
5. Reverse idler gear shaft

INSPECTION


22201240019

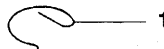
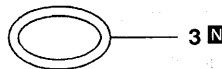
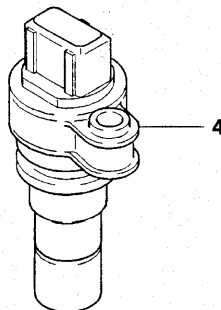
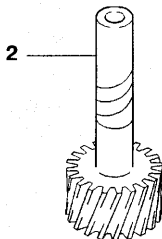
NEEDLE ROLLER BEARING

- (1) Check that when the shaft and gear are combined and made to rotate, they rotate smoothly without looseness and noise.
- (2) Check to ensure that the cage is not deformed.

SPEEDOMETER GEAR

DISASSEMBLY AND REASSEMBLY

 Lubricate all internal parts with gear oil during reassembly.



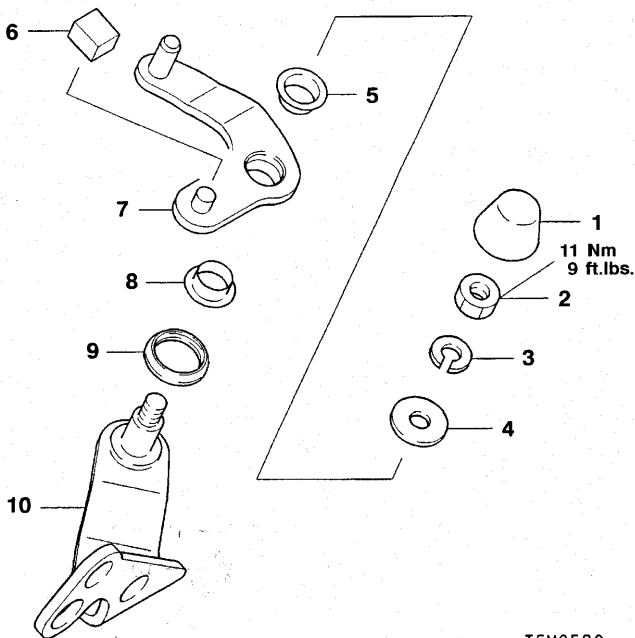
TFM0593

Disassembly steps

1. e-clip
2. Speedometer driven gear
3. O-ring
4. Sleeve

SELECT LEVER

DISASSEMBLY AND REASSEMBLY



TFM0589

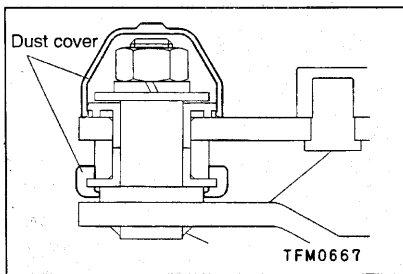
Disassembly steps



1. Dust cover
2. Nut
3. Spring washer
4. Washer
5. Select lever bushing



6. Select lever shoe
7. Select lever
8. Select lever bushing
9. Dust cover
10. Select lever shaft



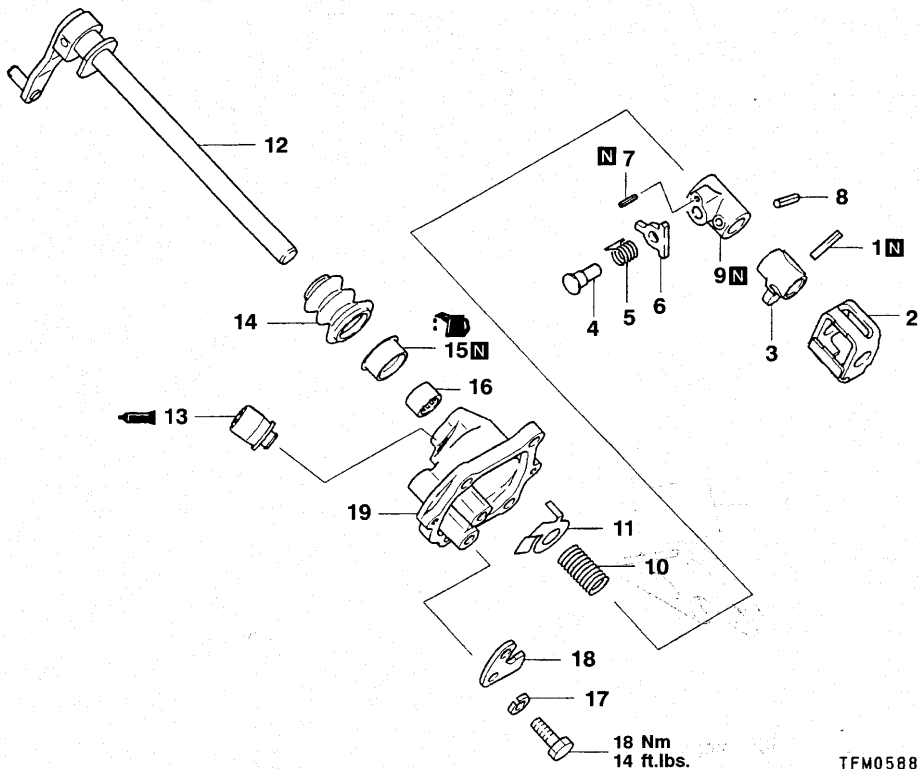
REASSEMBLY SERVICE POINT

DUST COVER INSTALLATION

TFM0667

CONTROL HOUSING

DISASSEMBLY AND REASSEMBLY



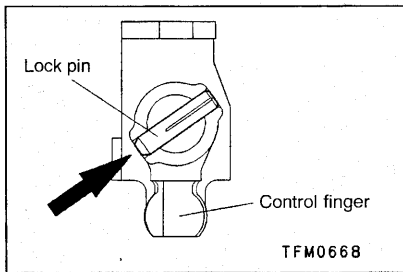
TFM0588

Disassembly steps

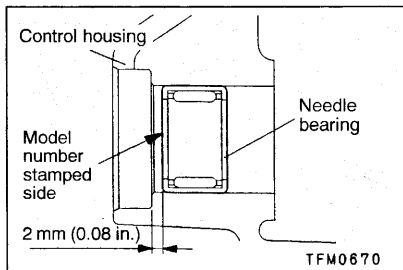


1. Lock pin
2. Interlock plate
3. Control finger
4. Pin
5. Return spring
6. Stopper plate
7. Spring pin
8. Spring pin
9. Stopper plate
10. Neutral return spring

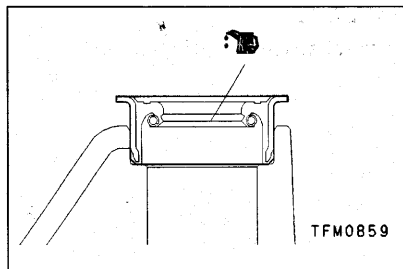
11. Spacer
12. Control shaft
13. Air breather
14. Control shaft boot
15. Oil seal
16. Needle bearing
17. Spring washer
18. Stopper bracket
19. Control housing

**DISASSEMBLY SERVICE POINT****◀A▶ LOCK PIN REMOVAL**

Drive the lock pin out of position from the direction shown.

**REASSEMBLY SERVICE POINTS****▶A◀ NEEDLE BEARING INSTALLATION**

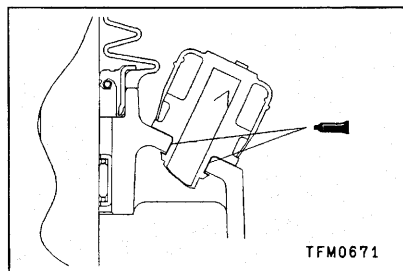
Press fit the needle bearing up the illustrated dimension, while making sure that the model number stamped side is oriented towards the control housing side.

**▶B◀ OIL SEAL INSTALLATION**

Apply transmission oil to the oil seal lip area.

Specified oil:

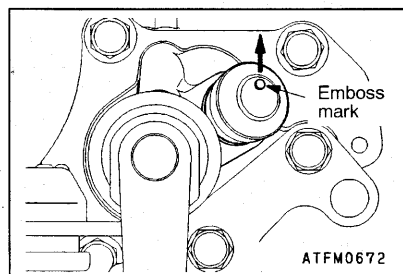
Hypoid gear oil SAE 75W-90 or 75W-85W conforming to API classification GL-4

**▶C◀ AIR BREATHER INSTALLATION**

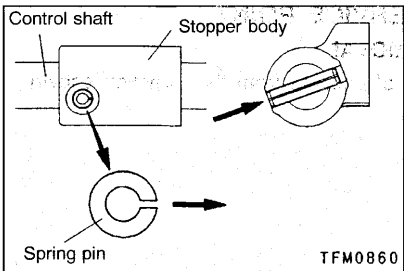
(1) Apply sealant to the inserting portion of the air breather.

Specified sealant:

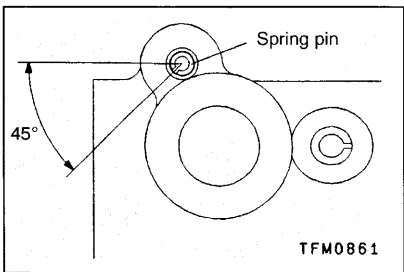
3M SUPER WEATHERSTRIP No.8001 or equivalent



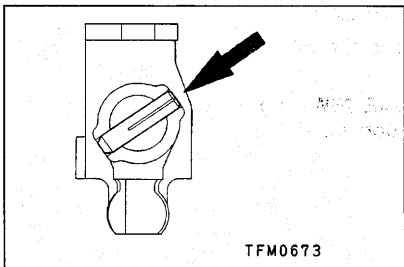
(2) Install the air breather so that the emboss mark is oriented in the direction shown.



►D◄ SPRING PIN INSTALLATION



►E◄ SPRING PIN INSTALLATION

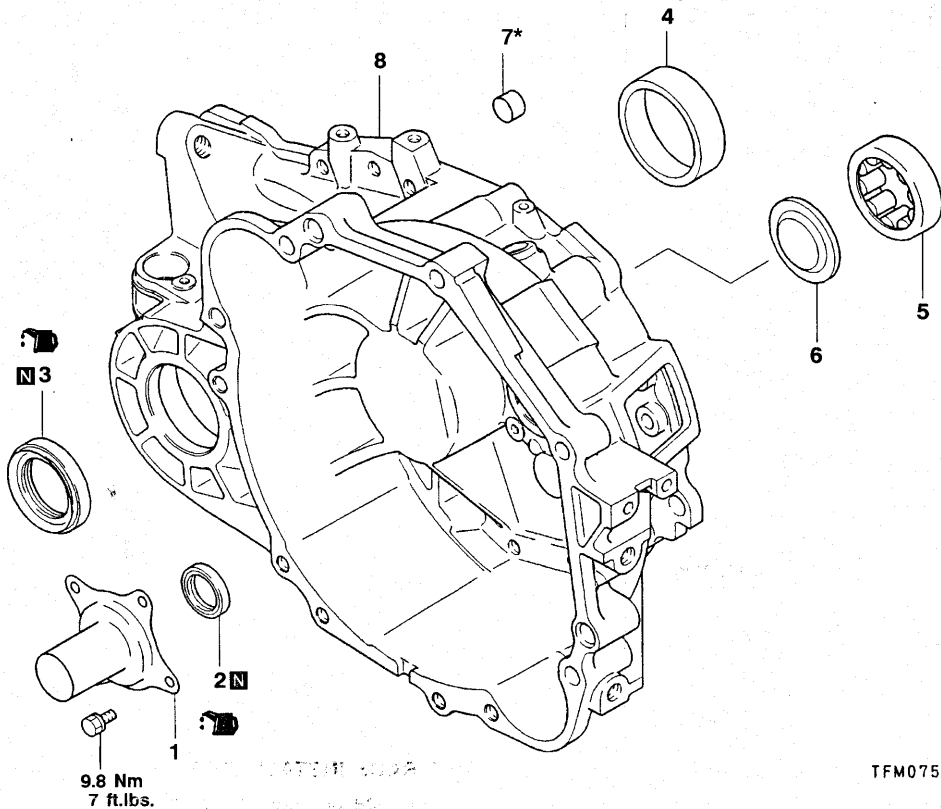


►F◄ LOCK PIN INSTALLATION

Knock the lock pin in from the direction shown in the illustration.

CLUTCH HOUSING

DISASSEMBLY AND REASSEMBLY



TFM0759

Disassembly steps

1. Clutch release bearing retainer
2. Oil seal
3. Oil seal
4. Outer race <F5M42>
5. Outer race
6. Oil guide <F5M41>

- ▶◀ 7. Bushing*
- ▶◀ 8. Clutch housing

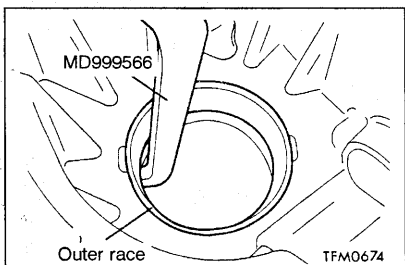
NOTE

*: Refer to the bushing installation procedures only when replacing the clutch housing.

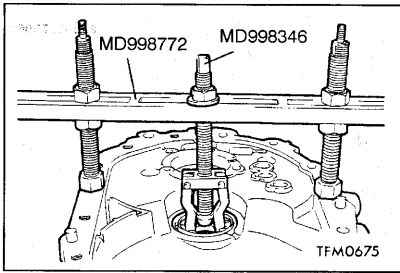


DISASSEMBLY SERVICE POINTS

◀▶ OUTER RACE REMOVAL



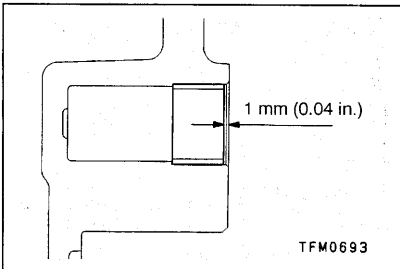
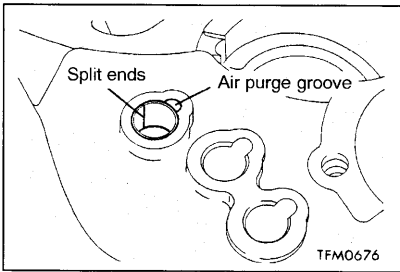
◀B▶ OUTER RACE REMOVAL



REASSEMBLY SERVICE POINTS

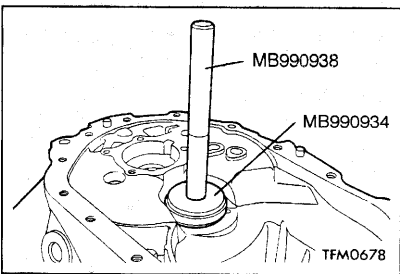
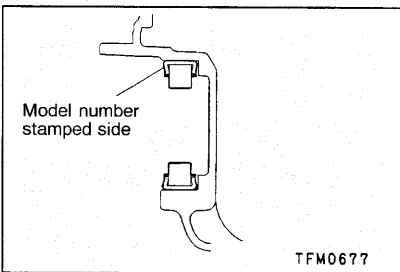
▶A◀ BUSHING INSTALLATION

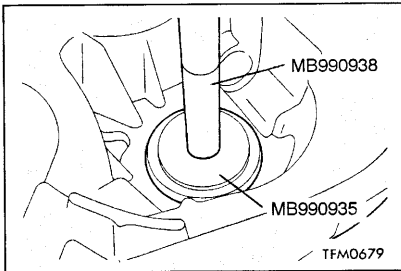
Press fit the bushing up to the illustrated position, while making sure that the split ends of the bushing do not coincide with the air purge groove.



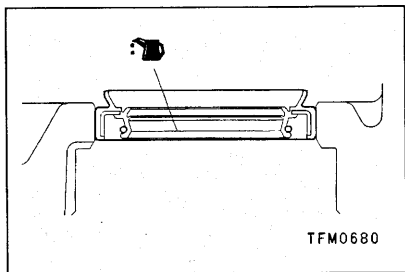
▶B◀ OUTER RACE INSTALLATION

Install the outer race so that the model number stamped side faces the direction shown.





►C◄ OUTER RACE INSTALLATION

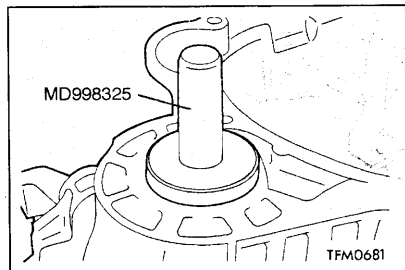


►D◄ OIL SEAL INSTALLATION

Apply transmission oil to the oil seal lip area.

Specified oil:

Hypoid gear oil SAE 75W-90 or 75W-85W conforming to API classification GL-4

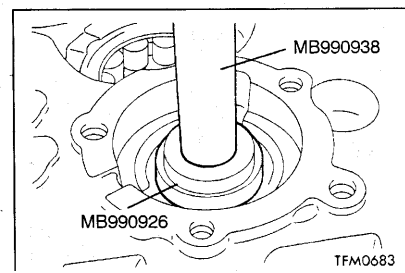
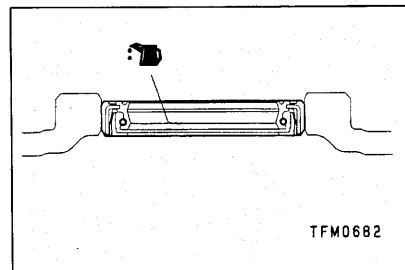


►E◄ OIL SEAL INSTALLATION

Apply transmission oil to the oil seal lip area.

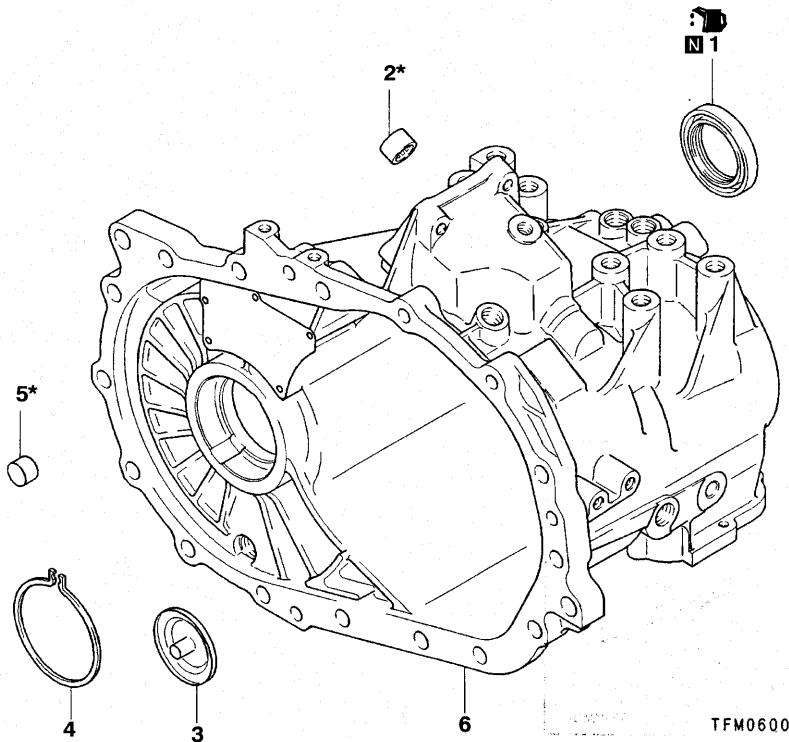
Specified oil:

Hypoid gear oil SAE 75W-90 or 75W-85W conforming to API classification GL-4



TRANSAXLE CASE

DISASSEMBLY AND REASSEMBLY



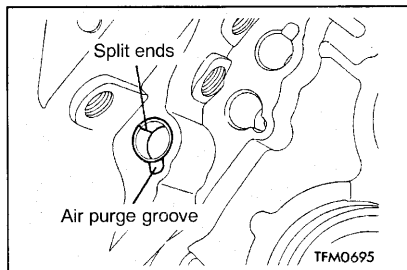
TFM0600

Disassembly steps

- ▶C◀ 1. Oil seal
- ▶B◀ 2. Needle bearing*
- 3. Oil guide
- 4. Snap ring
- ▶A◀ 5. Bushing*
- 6. Transaxle

NOTE

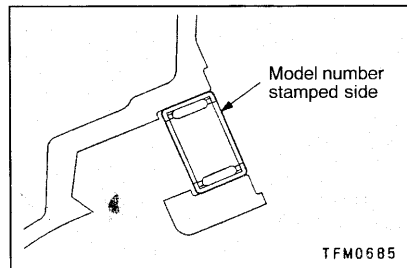
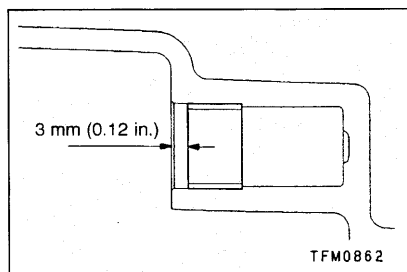
*: Refer to the needle bearing and bushing installation procedures only when replacing the transaxle case.



REASSEMBLY SERVICE POINTS

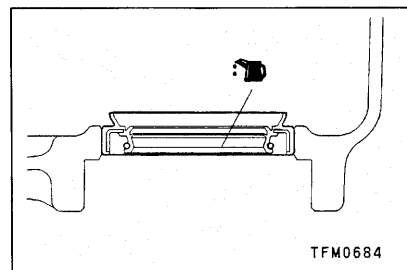
►A◄ BUSHING INSTALLATION

Press fit the bushing up to the illustrated position, while making sure that the split ends of the bushing do not coincide with the air purge groove.



►B◄ NEEDLE BEARING INSTALLATION

Press fit the needle bearing until it is flush with the case, while making sure that the model number stamped side faces the direction shown.

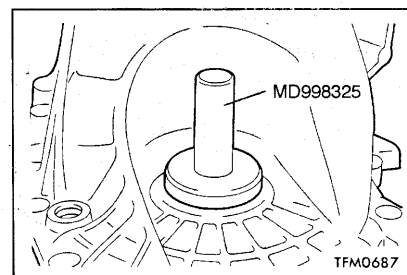


►C◄ OIL SEAL INSTALLATION

Apply transmission oil to the oil seal lip area.

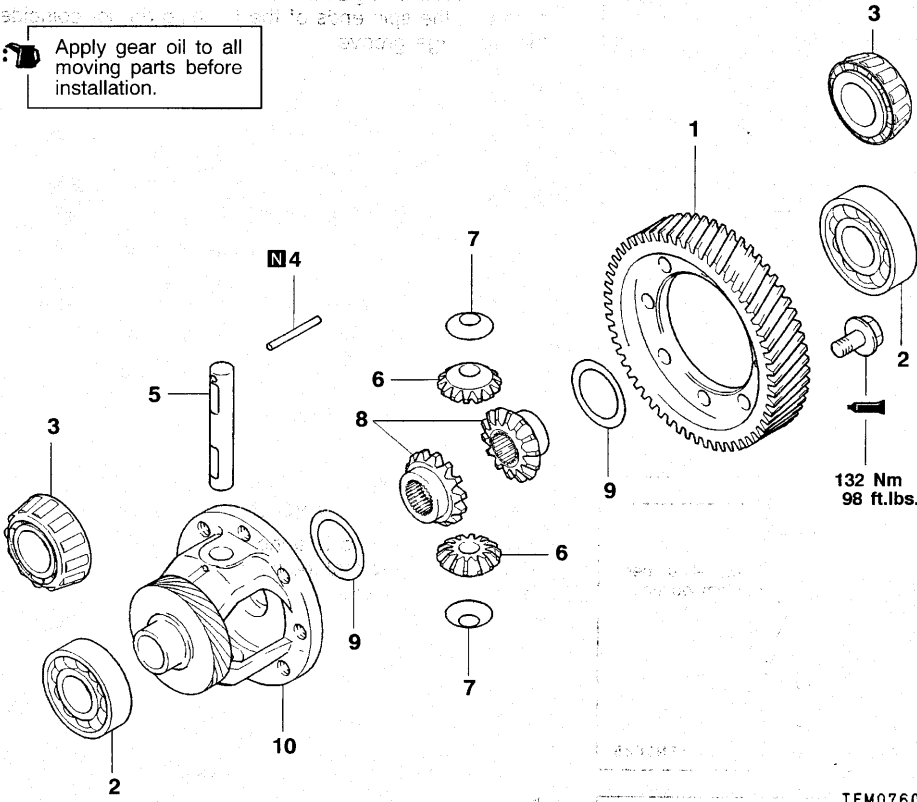
Specified oil:

Hypoid gear oil SAE 75W-90 or 75W-85W conforming to API classification GL-4



DIFFERENTIAL DISASSEMBLY AND REASSEMBLY

Apply gear oil to all moving parts before installation.



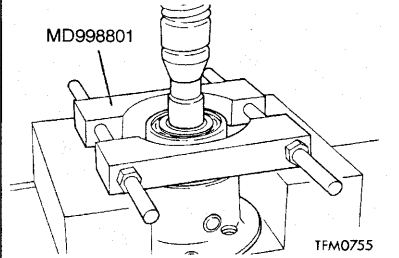
Disassembly steps

- ◀A▶ E 1. Differential drive gear
- ◀A▶ D 2. Ball bearing <F5M41>
- ◀A▶ C 3. Taper roller bearing <F5M42>
- ◀A▶ B 4. Lock pin
- ▶A 5. Pinion shaft
- ▶A 6. Pinion
- ▶A 7. Washer
- ▶A 8. Side gear
- ▶A 9. Spacer
- ▶A 10. Differential case

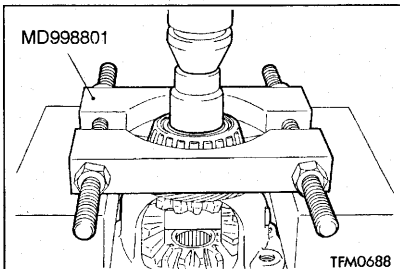
TFM0760

DISASSEMBLY SERVICE POINTS

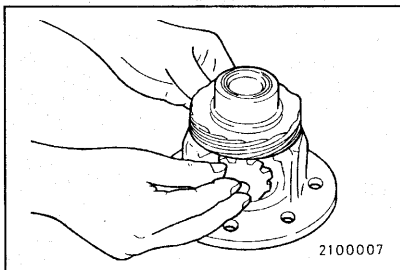
◀A▶ BALL BEARING REMOVAL



TFM0755



◀B▶ TAPER ROLLER BEARING REMOVAL



REASSEMBLY SERVICE POINTS

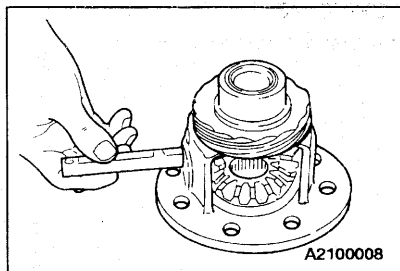
▶A◀ SPACER/SIDE GEAR/WASHER/PINION/PINION SHAFT INSTALLATION

- (1) After a spacer has been mounted on the back surface of the side gear, install the side gear in the differential case.

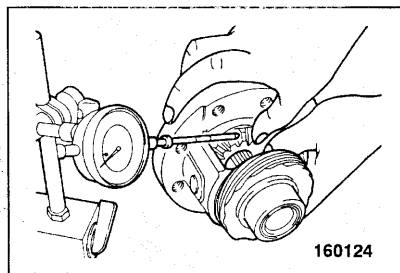
NOTE

When a new side gear is to be installed, mount a medium thickness spacer [0.93 to 1.00 mm (0.0366 to 0.0395 in.)]

- (2) Set the washer on the back of each pinion, and put both pinions simultaneously in mesh with the side gears. While rotating them, install them in position.



- (3) Insert the pinion shaft.



- (4) Measure the backlash between the side gear and pinion.

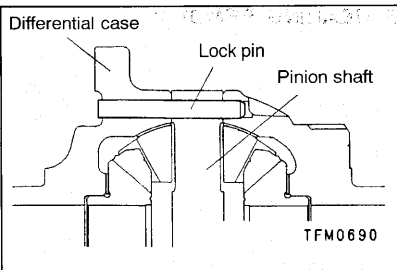
Standard value:

0.025 to 0.150 mm (0.00098 to 0.00591 in.)

- (5) If the backlash is out of specification, select a spacer and re-measure the backlash.

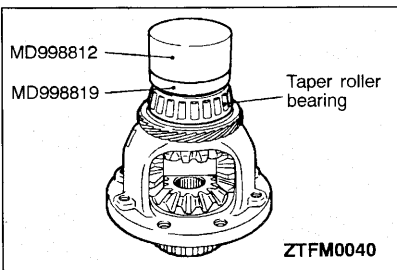
NOTE

Adjust until the backlashes on both sides are equal.

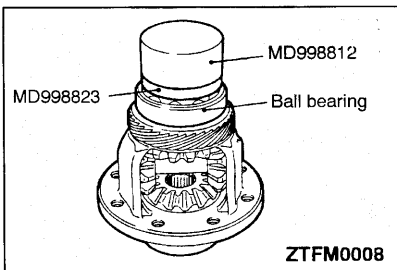


►B◄ LOCK PIN INSTALLATION

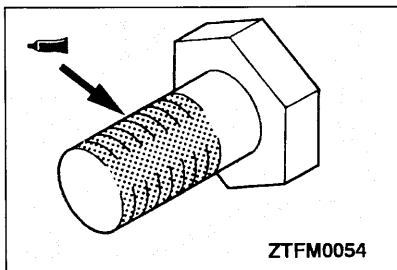
Install the lock pin so that it will be oriented in the direction shown.



►C◄ TAPER ROLLER BEARING INSTALLATION



►D◄ BALL BEARING INSTALLATION

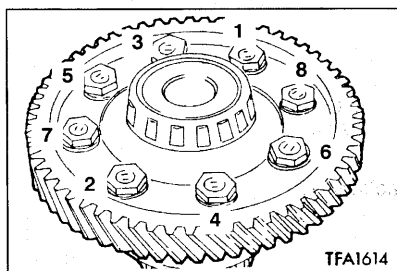


►E◄ DIFFERENTIAL DRIVE GEAR INSTALLATION

(1) Apply a sealant to the entire threaded portion of the bolt.

Specified sealant:

3M Stud Locking No.4170 or equivalent



(2) Tighten the bolts to the specified torque in the illustrated sequence.