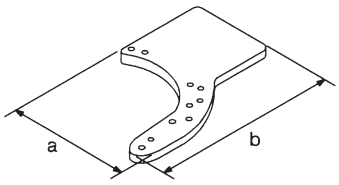
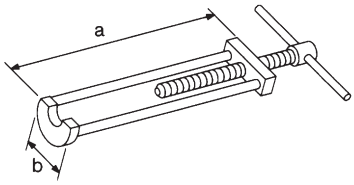
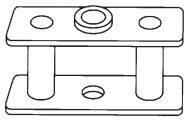
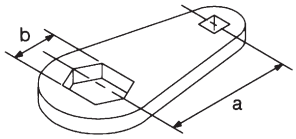
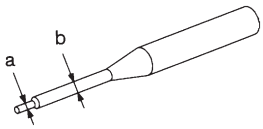
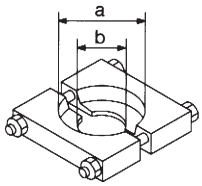
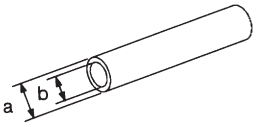
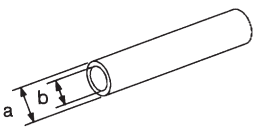
MANUAL TRANSAXLE

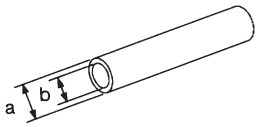
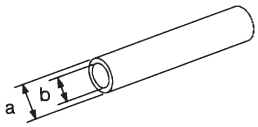
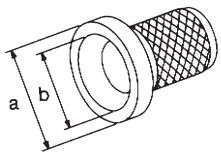
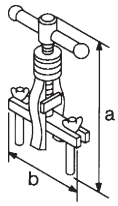
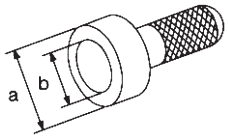
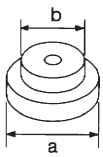
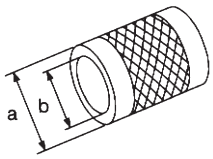
SECTION MT

CONTENTS

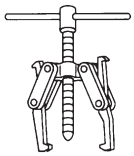
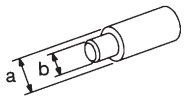
Special Service Tools

Tool number Tool name	Description	
ST23810001 Adapter setting plate	 NT407	Fixing adapter plate with gear assembly **a: 166 mm (6.54 in)** **b: 270 mm (10.63 in)**
KV32101330 Puller	 NT408	Removing OD mainshaft bearing **a: 447 mm (17.60 in)** **b: 100 mm (3.94 in)**
KV31100401 Transmission press stand	 NT068	Pressing counter gear and mainshaft
ST22520000 Wrench	 NT409	Tightening mainshaft lock nut **a: 100 mm (3.94 in)** **b: 41 mm (1.61 in)**
ST23540000 Pin punch	 NT442	Removing and installing fork rod retaining pin **a: 2.3 mm (0.091 in) dia.** **b: 4 mm (0.16 in) dia.**
ST30031000 Puller	 NT411	Removing and installing 1st gear bushing Removing main drive gear bearing **a: 90 mm (3.54 in) dia.** **b: 50 mm (1.97 in) dia.**
ST23860000 Drift	 NT065	Installing counter drive gear **a: 38 mm (1.50 in) dia.** **b: 33 mm (1.30 in) dia.**
ST22360002 Drift	 NT065	Installing counter gear front and rear end bearings **a: 29 mm (1.14 in) dia.** **b: 23 mm (0.91 in) dia.**

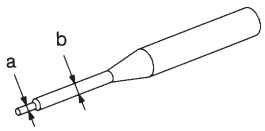
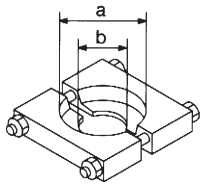
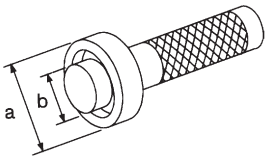
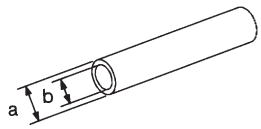
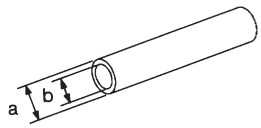
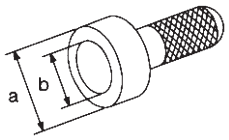
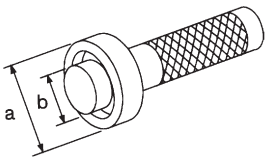
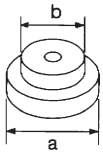
Special Service Tools (Cont'd)

Tool number Tool name	Description	
ST22350000 Drift	 NT065	Installing OD gear bushing **a: 34 mm (1.34 in) dia.** **b: 28 mm (1.10 in) dia.**
ST23800000 Drift	 NT065	Installing front cover oil seal **a: 44 mm (1.73 in) dia.** **b: 31 mm (1.22 in) dia.**
ST33400001 Drift	 NT086	Installing rear oil seal **a: 60 mm (2.36 in) dia.** **b: 47 mm (1.85 in) dia.**
ST33290001 Puller	 NT414	Removing rear oil seal **a: 250 mm (9.84 in)** **b: 160 mm (6.30 in)**
ST30720000 Drift	 NT115	Installing mainshaft ball bearing **a: 77 mm (3.03 in) dia.** **b: 55.5 mm (2.185 in) dia.**
ST30613000 Drift	 NT073	Installing main drive gear bearing **a: 71.5 mm (2.815 in) dia.** **b: 47.5 mm (1.870 in) dia.**
ST33200000 Drift	 NT091	Installing counter rear bearing **a: 60 mm (2.36 in) dia.** **b: 44.5 mm (1.752 in) dia.**

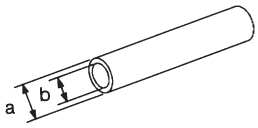
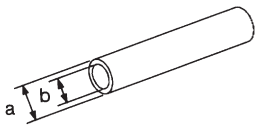
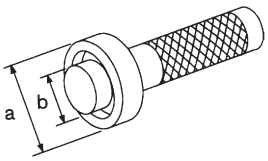
Commercial Service Tools

Tool name	Description	
Puller	 NT077	Removing counter bearings, counter drive and OD gears
Drift	 NT074	Installing counter gear rear end bearing (4WD model) **a: 40 mm (1.57 in) dia.** **b: 30 mm (1.18 in) dia.**

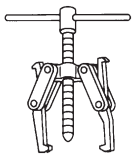
Special Service Tools

Tool number Tool name	Description	
ST23540000 Pin punch	 NT442	Removing and installing retaining pin **a: 2.3 mm (0.091 in) dia.** **b: 4 mm (0.16 in) dia.**
ST30031000 Puller	 NT411	Removing 1st & 2nd synchronizer assembly Removing counter gear rear thrust bearing Removing main drive bearing **a: 90 mm (3.54 in) dia.** **b: 50 mm (1.97 in) dia.**
ST33230000 Drift	 NT084	Removing mainshaft and counter gear **a: 51 mm (2.01 in) dia.** **b: 28.5 mm (1.122 in) dia.**
ST22350000 Drift	 NT065	Removing counter gear front bearing (Use with KV38100300) **a: 34 mm (1.34 in) dia.** **b: 28 mm (1.10 in) dia.**
KV38100300 Drift	 NT065	Removing counter gear front bearing (Use with ST22350000) Installing counter gear rear bearing **a: 54 mm (2.13 in) dia.** **b: 32 mm (1.26 in) dia.**
ST30720000 Drift	 NT115	Removing mainshaft front bearing Installing mainshaft front bearing **a: 77 mm (3.03 in) dia.** **b: 55.5 mm (2.185 in) dia.**
ST33210000 Drift	 NT084	Installing counter gear front bearing Installing front cover oil seal **a: 44 mm (1.73 in) dia.** **b: 24.5 mm (0.965 in) dia.**
ST30613000 Drift	 NT073	Installing main drive gear bearing **a: 72 mm (2.83 in) dia.** **b: 48 mm (1.89 in) dia.**

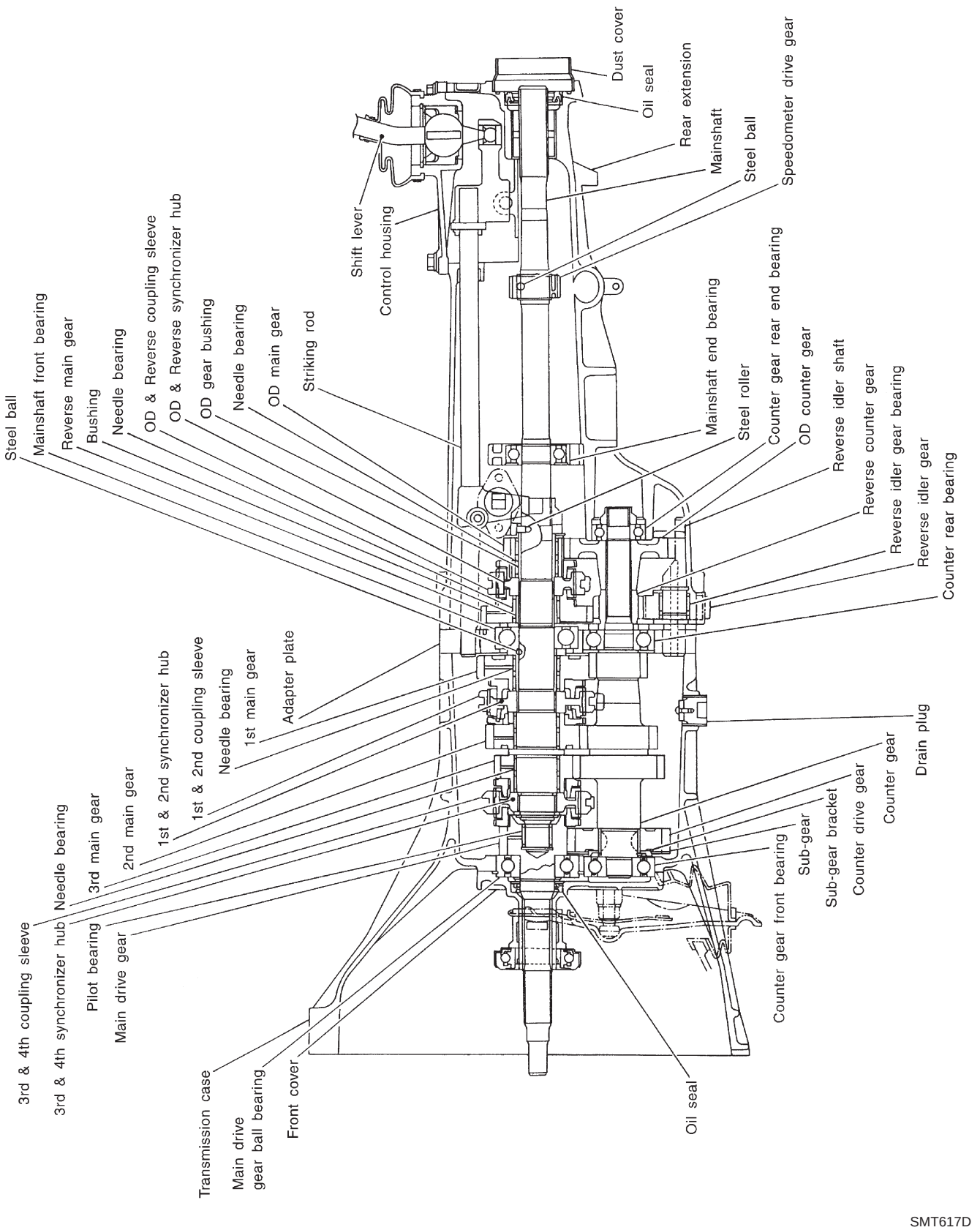
Special Service Tools (Cont'd)

Tool number Tool name	Description	
ST37750000 Drift	 NT065	Removing counter gear rear bearing Installing OD gear bushing Removing and installing mainshaft rear bearing Installing reverse cone Installing reverse counter gear Installing counter gear rear end bearing **a: 40 mm (1.57 in) dia.** **b: 31 mm (1.22 in) dia.**
ST22452000 Drift	 NT065	Installing reverse hub **a: 45 mm (1.77 in) dia.** **b: 36 mm (1.42 in) dia.**
ST33220000 Drift	 NT084	Installing mainshaft rear bearing **a: 37 mm (1.46 in) dia.** **b: 22 mm (0.87 in) dia.**

Commercial Service Tool

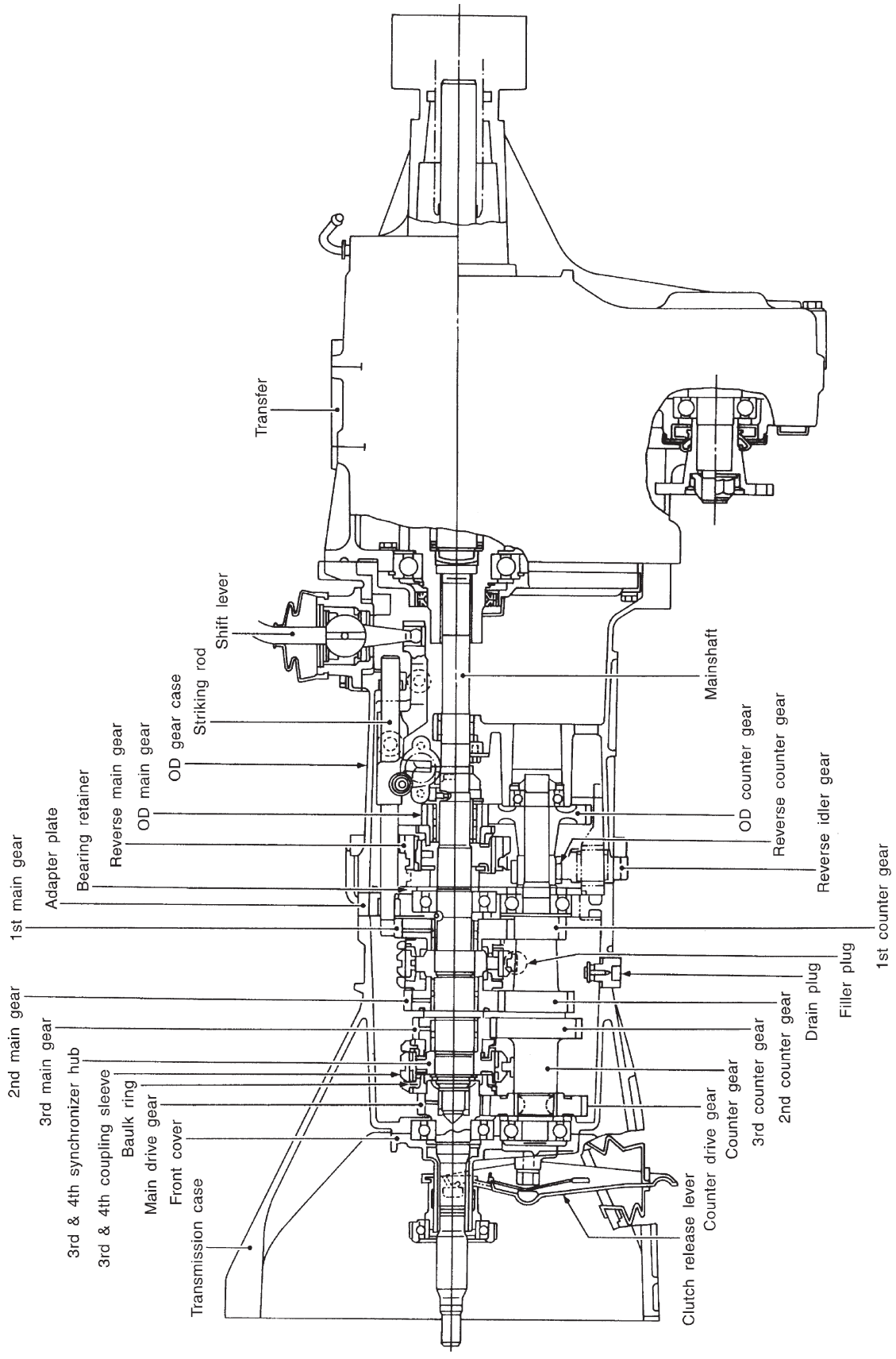
Tool name	Description	
Puller	 NT077	Removing counter gear rear end bearing Removing reverse synchronizer hub Removing reverse counter gear

Cross-sectional View — 2WD Model



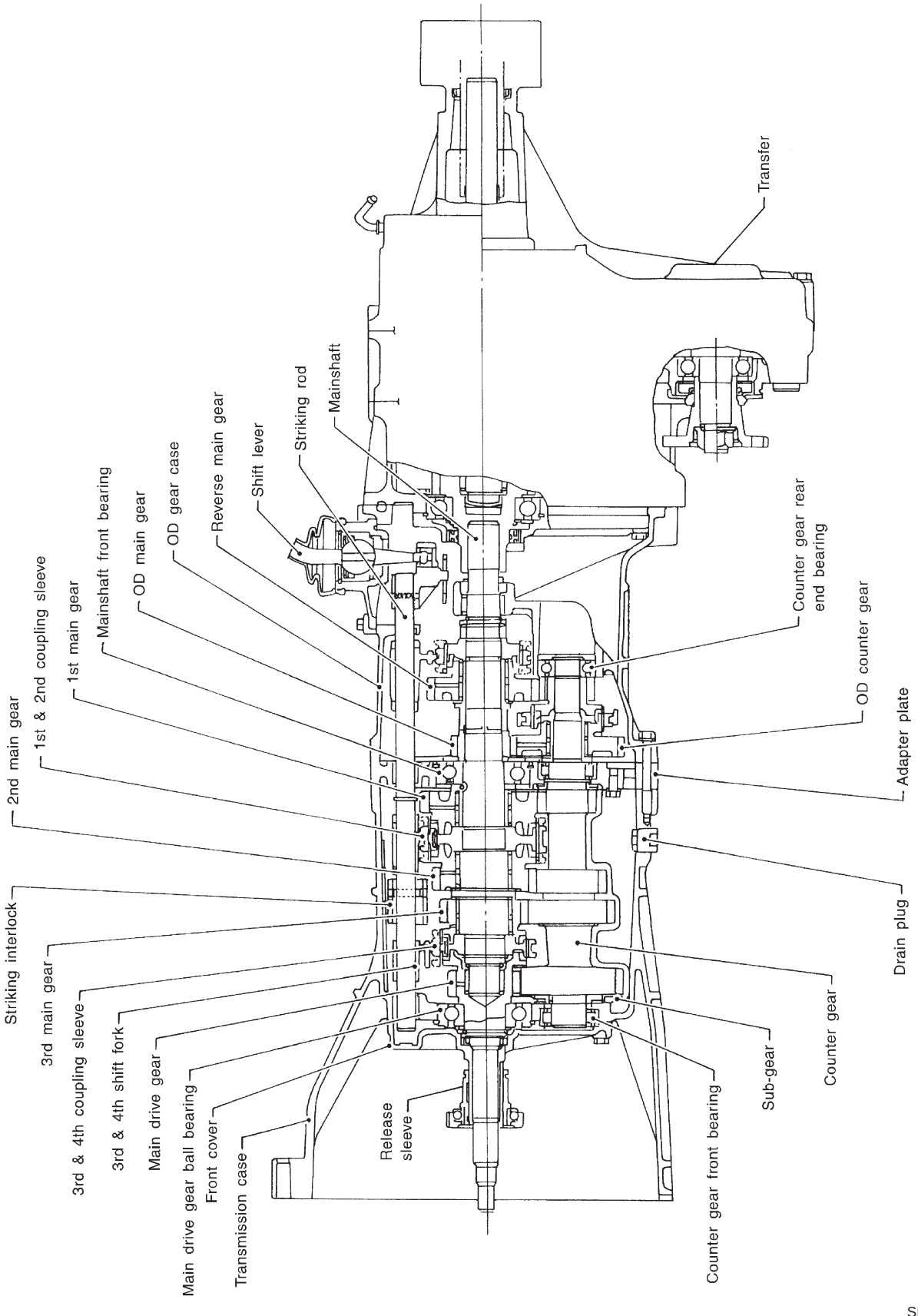
SMT617D

Cross-sectional View — 4WD Model

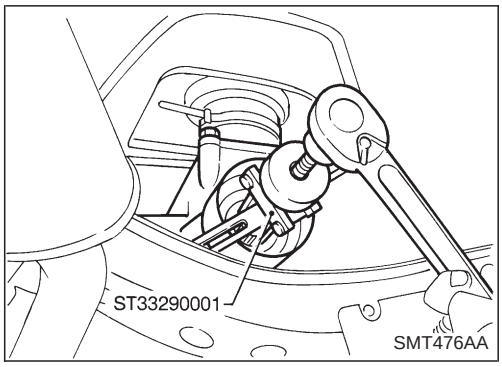


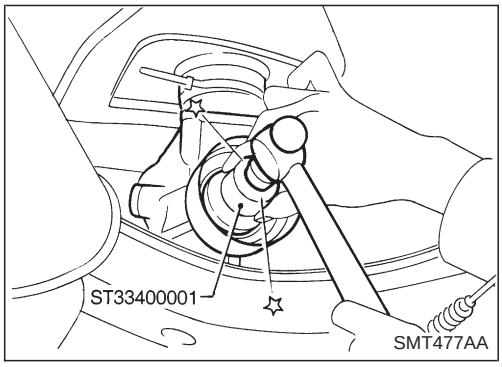
SMT154DA

Cross-sectional View — 4WD Model



SMT870CB





Replacing Rear Oil Seal — 2WD Model

REMOVAL

1. Remove the propeller shaft. Refer to PD section (''Removal and Installation'', ''PROPELLER SHAFT'').
2. Remove rear oil seal using Tool.

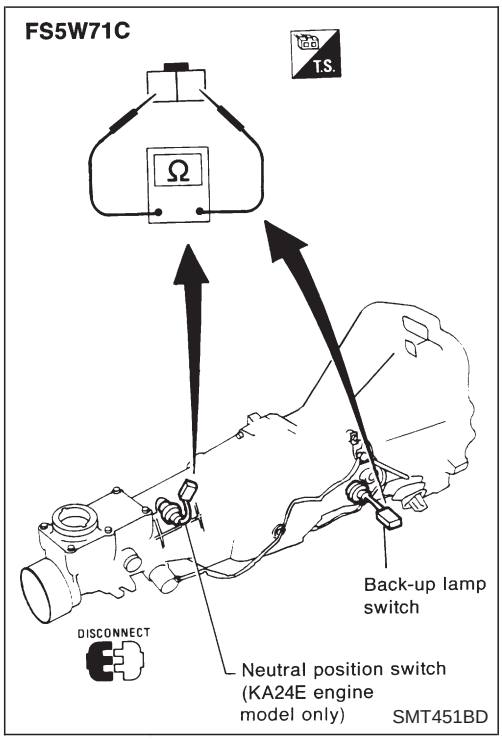
- **Always replace with a new seal once it has been removed.**

INSTALLATION

1. Install new oil seal until it stops.

- **Apply multi-purpose grease to seal lip of oil seal before installing.**

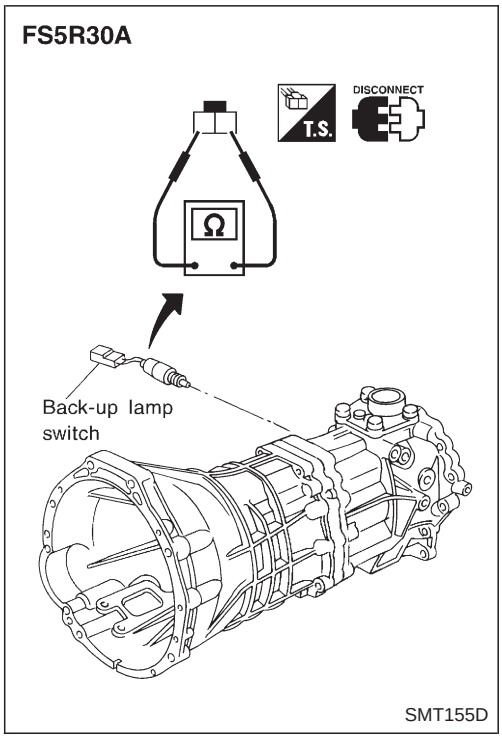
2. Install any part removed.



Position Switch Check

- Check continuity.

Switch	Gear position	Continuity
Back-up lamp switch	Reverse	Yes
	Except reverse	No
Neutral position switch (KA24E engine model only)	Neutral	Yes
	Except neutral	No



Position Switch Check — 4WD Model

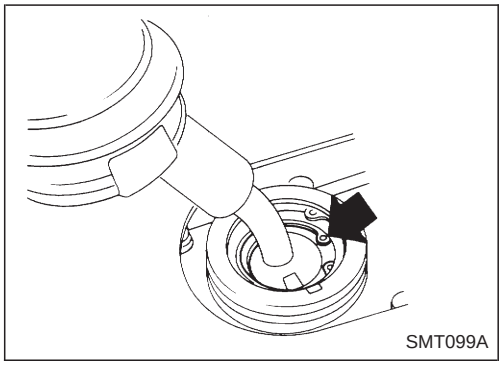
Switch	Gear position	Continuity
Back-up lamp switch	Reverse	Yes
	Except reverse	No

Removal

2WD MODEL

1. Remove battery negative terminal and starter motor. Refer to EL section (''Removal and Installation'', ''STARTING SYSTEM'').
2. Remove transmission shift knob, dust rubber boot, hole cover and transmission shift lever.
3. Remove propeller shaft. Refer to PD section (''Removal and Installation'', ''PROPELLER SHAFT'').
4. Remove exhaust tube.
5. Remove back-up lamp switch and neutral position switch harness connectors.
6. Remove clutch operating cylinder from transmission. Refer to CL section (''Operating Cylinder'', ''HYDRAULIC CLUTCH CONTROL'').

- **Insert plug into rear oil seal after removing propeller shaft.**
- **Be careful not to damage spline, sleeve yoke and rear oil seal when removing propeller shaft.**


SMT099A

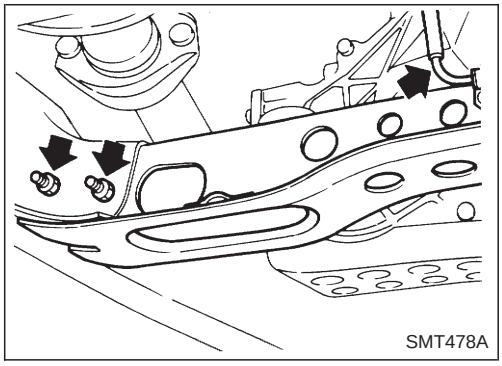
7. Support engine by placing a jack under oil pan and transmission. Then center member.

- **Do not place jack under oil pan drain plug.**

8. Separate transmission from engine.

WARNING:
Support manual transmission while removing it.

9. Lower transmission.


SMT478A

4WD MODEL

1. Remove battery negative terminal and starter motor. Refer to EL section (''Removal and Installation'', ''STARTING SYSTEM'').
2. Remove transfer control knob, dust rubber boot, hole cover, transmission shift lever and transfer control lever.
3. Remove front and rear propeller shafts. Refer to PD section (''Removal and Installation'', ''PROPELLER SHAFT'').
4. Remove exhaust tube.
5. Remove torsion bar springs. Refer to FA section (''Torsion Bar Spring'', ''FRONT SUSPENSION''). Then remove second crossmember.
6. Remove clutch operating cylinder from transmission. Refer to CL section (''Operating Cylinder'', ''HYDRAULIC CLUTCH CONTROL'').
7. Remove back-up lamp switch and neutral position switch harness connector.

- **Insert plug into front and rear oil seals of transfer after removing propeller shafts.**
- **Be careful not to damage splines, sleeve yokes and front and rear oil seals of transfer when removing propeller shafts.**

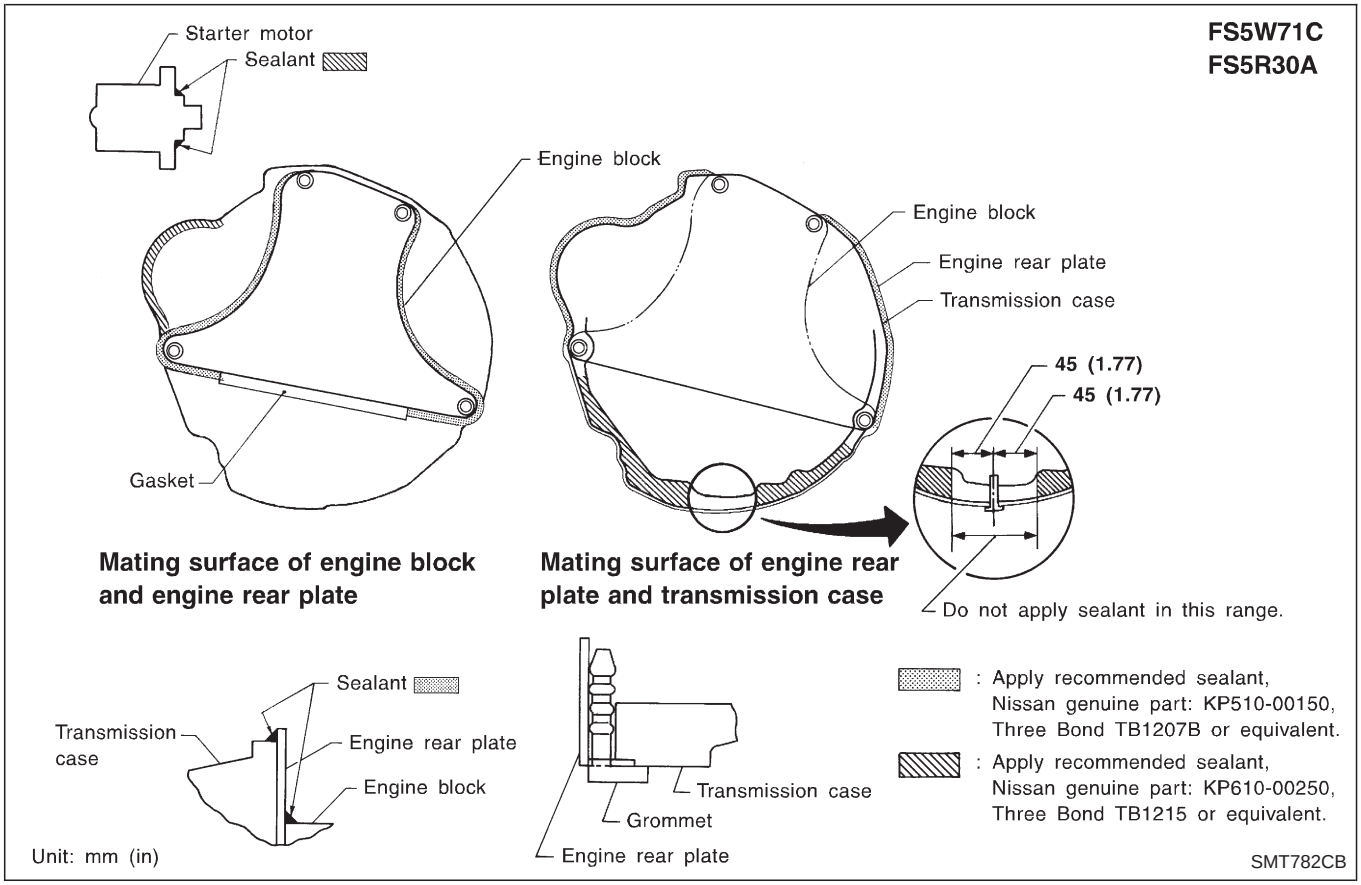
8. Remove engine gusset (FS5R30A model only).

Removal (Cont'd)

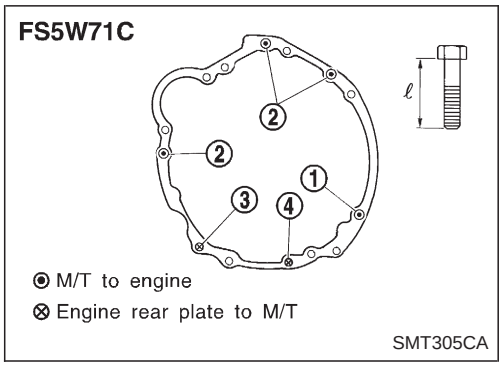
9. Support transfer and remove center member.
10. Support transmission and remove engine rear member.
11. Separate transmission and transfer from engine.
12. Lower transmission and transfer.

Installation

- Apply sealant to areas shown below: — 4WD model



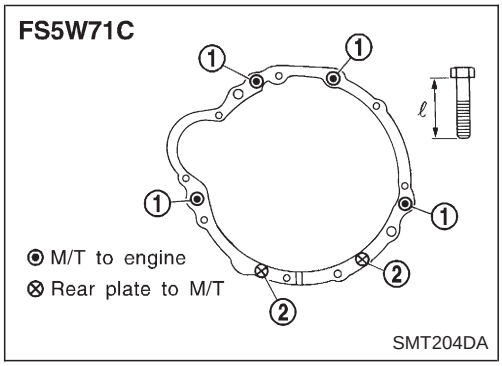
Installation (Cont'd)



- Tighten bolt securing transmission.
- **KA24E engine model**

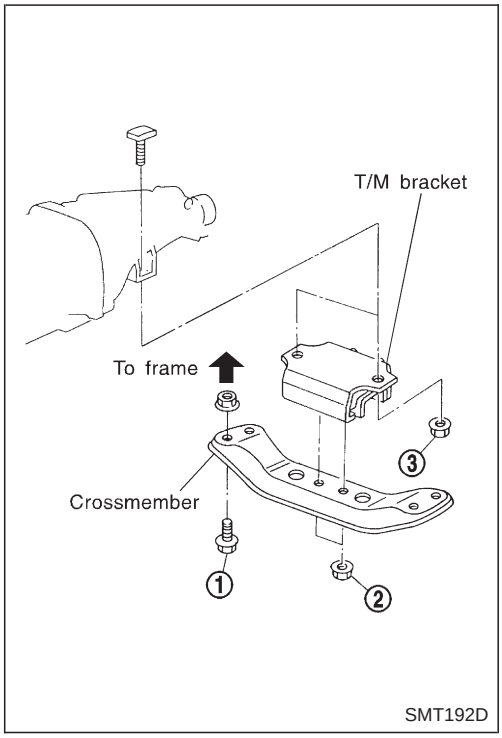
Bolt No.	Tightening torque N·m (kg-m, ft-lb)	ℓ mm (in)
①	39 - 49 (4.0 - 5.0, 29 - 36)	65 (2.56)
②	39 - 49 (4.0 - 5.0, 29 - 36)	58 (2.28)
③ *	16 - 22 (1.6 - 2.2, 12 - 16)	25 (0.98)
④	16 - 22 (1.6 - 2.2, 12 - 16)	16 (0.63)

*: With nut



- **TD25 engine model**

Bolt No.	Tightening torque N·m (kg-m, ft-lb)	ℓ mm (in)
①	39 - 49 (4.0 - 5.0, 29 - 36)	58 (2.28)
②	18 - 22 (1.8 - 2.2, 13 - 16)	16 (0.63)

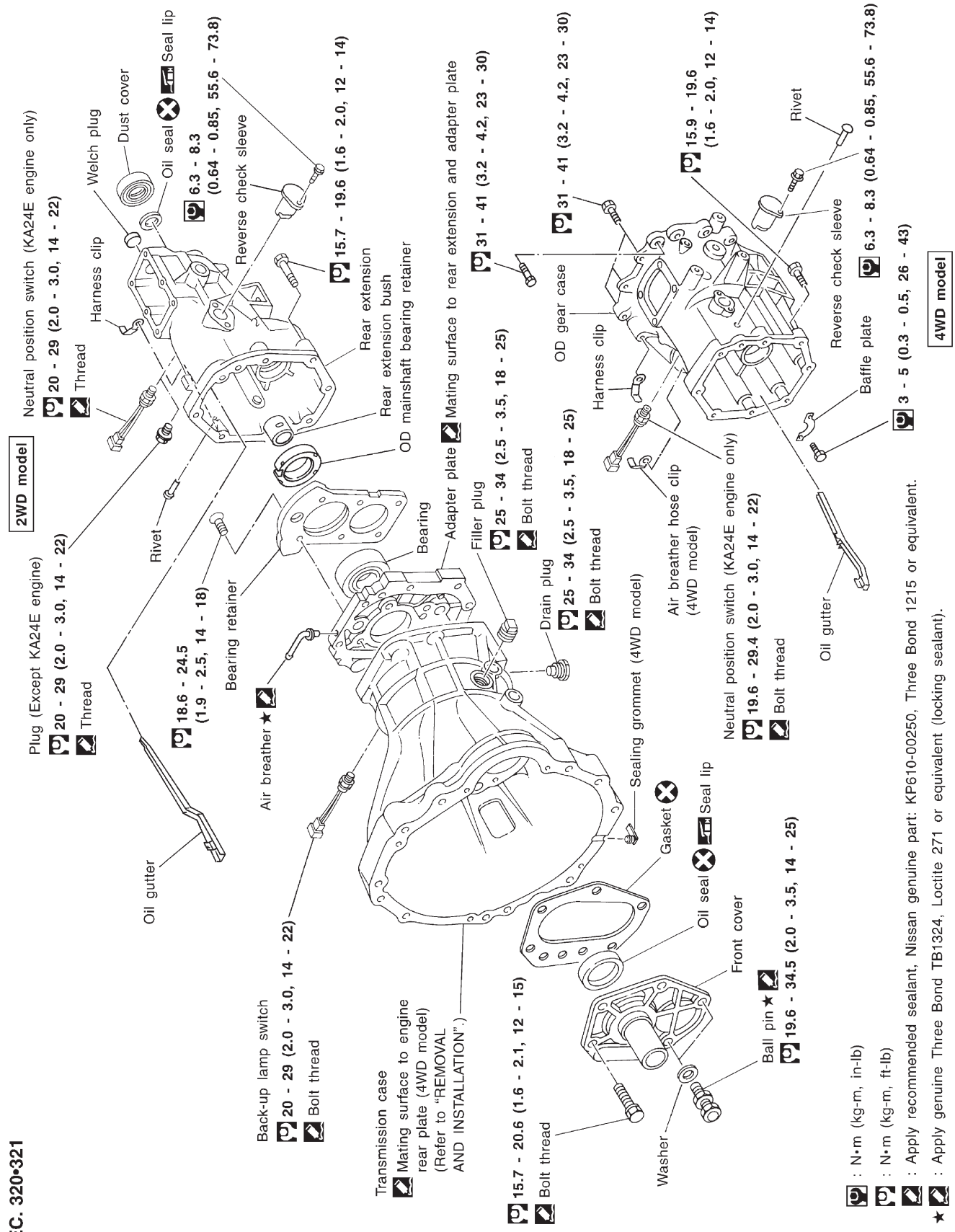


- Tighten bolts with T/M bracket, crossmember and frame.

Unit: N·m (kg-m, ft-lb)

Bolt No.	2WD & 4WD	Note
①	59 - 69 (6.0 - 7.0, 43 - 51)	Crossmember to frame
②	41 - 52 (4.2 - 5.3, 30 - 38)	T/M bracket to crossmember
③	68 - 87 (6.9 - 8.9, 50 - 64)	T/M to T/M bracket

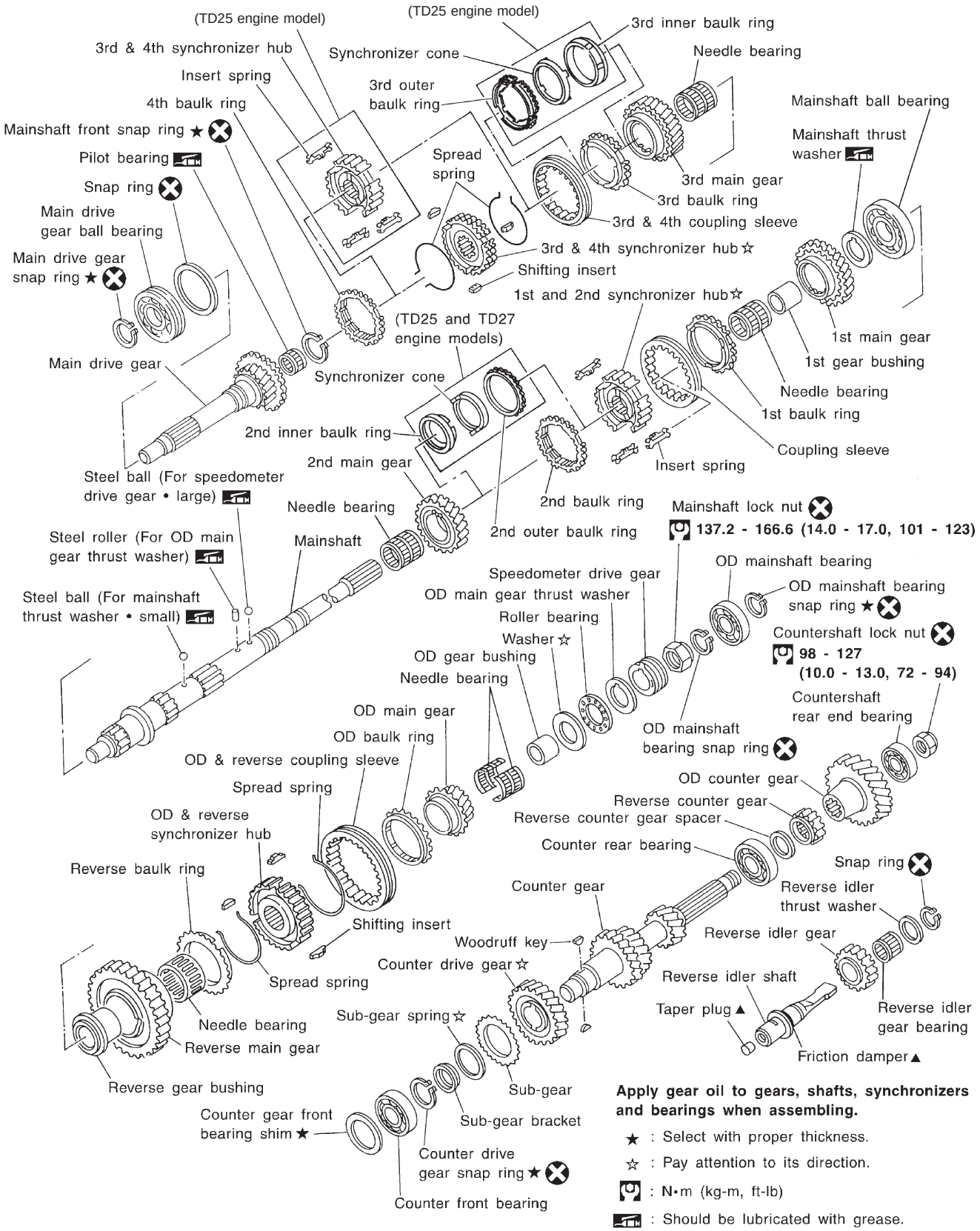
Case Components



SMT602D

Gear Components — 2WD Model

SEC. 322



Apply gear oil to gears, shafts, synchronizers and bearings when assembling.

★ : Select with proper thickness.

☆ : Pay attention to its direction.

: N•m (kg-m, ft-lb)

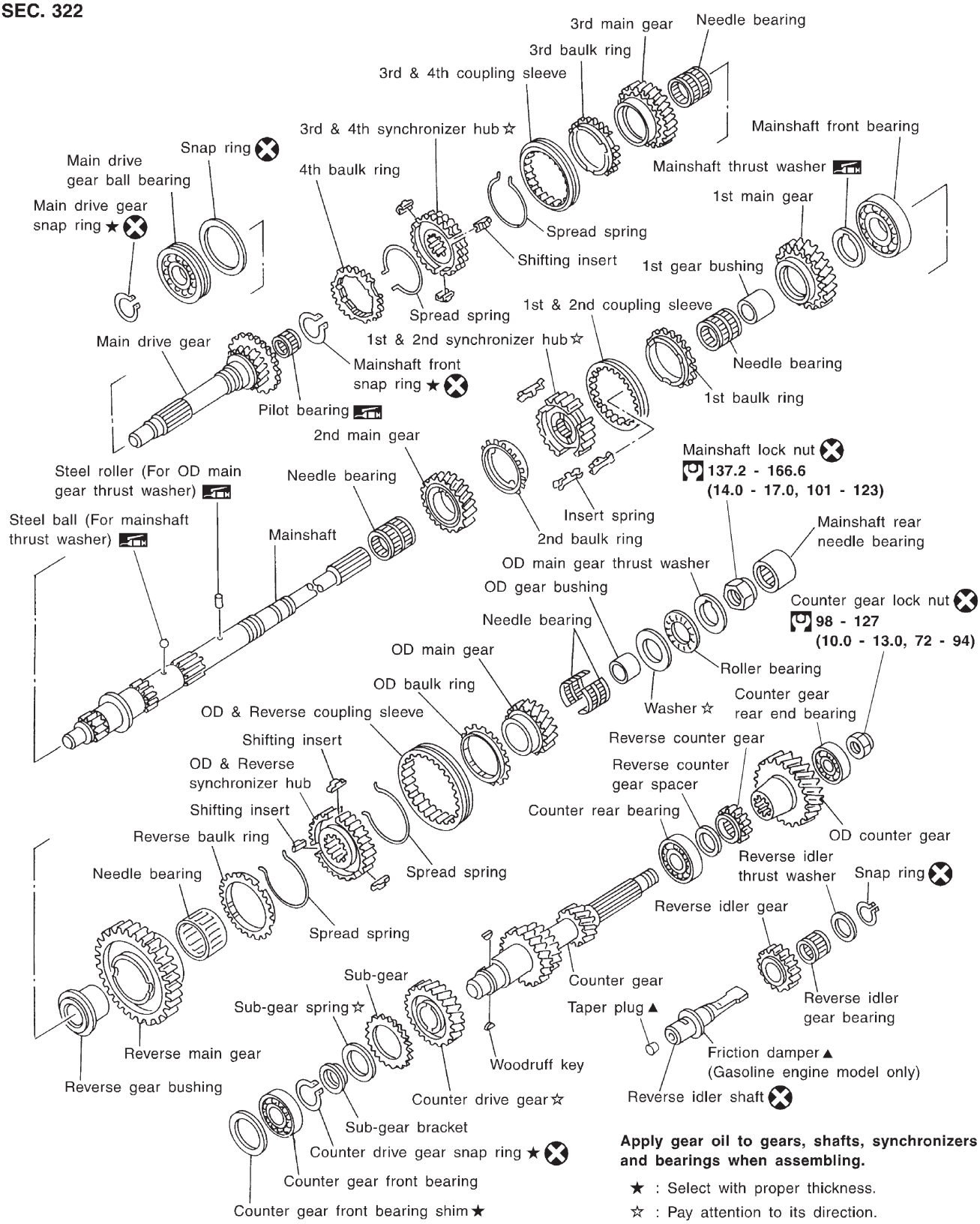
: Should be lubricated with grease.

▲ : KA24E engine model only

SMT603D

Gear Components — 4WD Model

SEC. 322



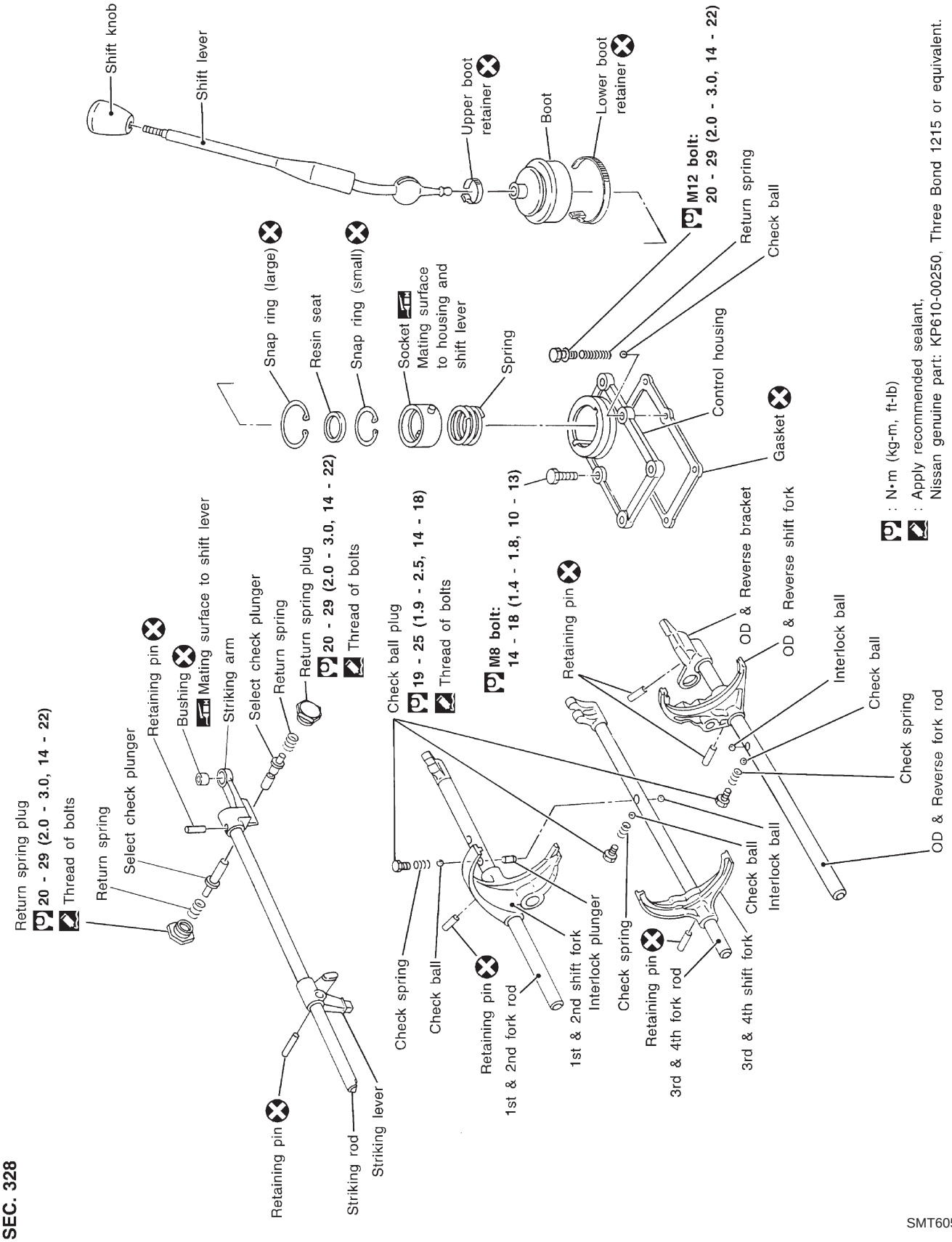
Apply gear oil to gears, shafts, synchronizers and bearings when assembling.

★ : Select with proper thickness.
☆ : Pay attention to its direction.
: N•m (kg-m, ft-lb)
: Should be lubricated with grease.
▲ : KA24E engine model only

SMT604D

Shift Control Components — 2WD Model

CAUTION:
To avoid damage when replacing shift knob, remove shift lever with knob, as assembled.

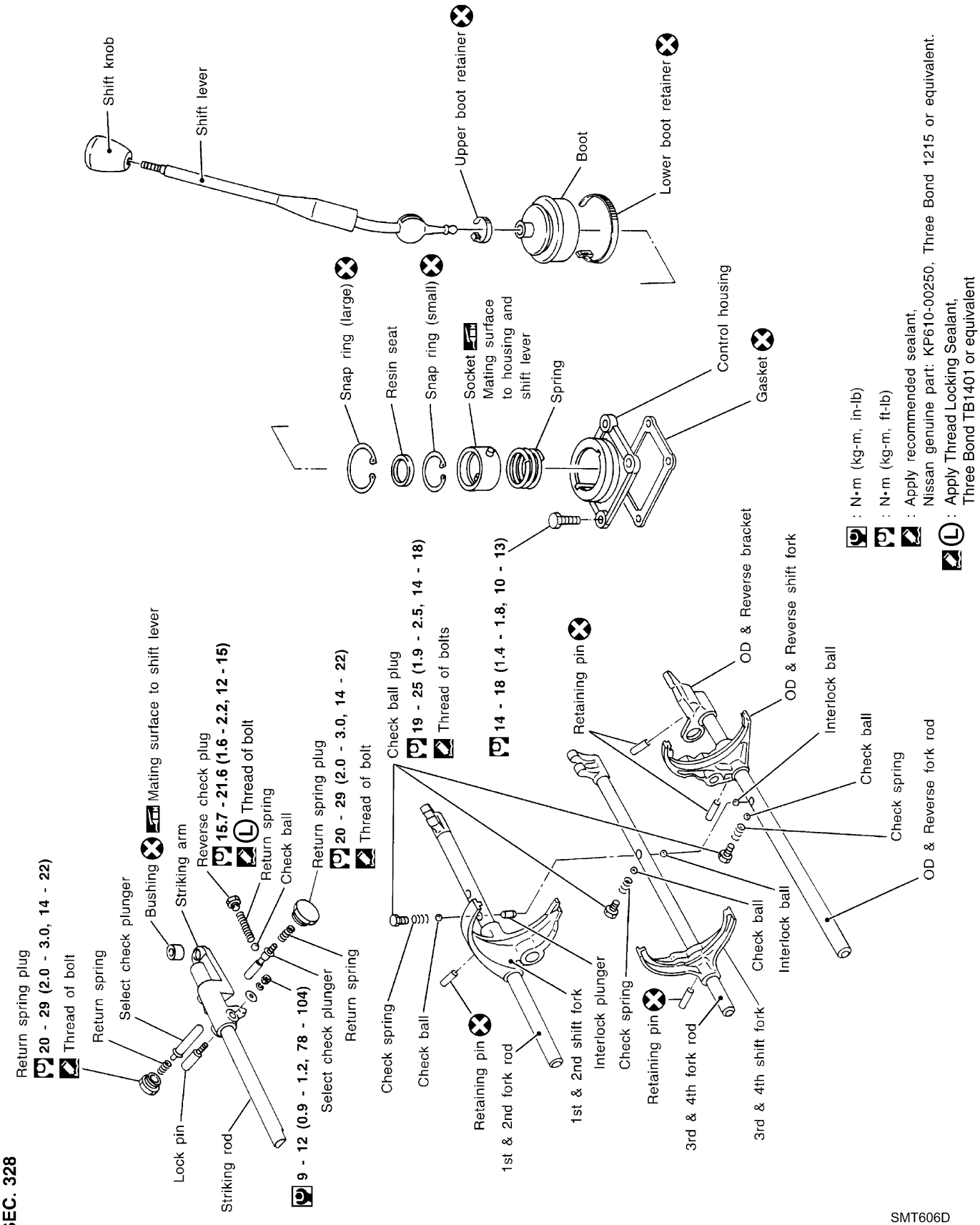


SEC. 328

SMT605D

Shift Control Components — 4WD Model

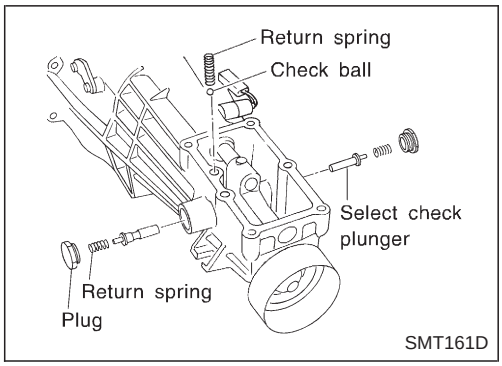
CAUTION:
To avoid damage when replacing shift knob, remove shift lever with knob, as assembled.



SEC. 328

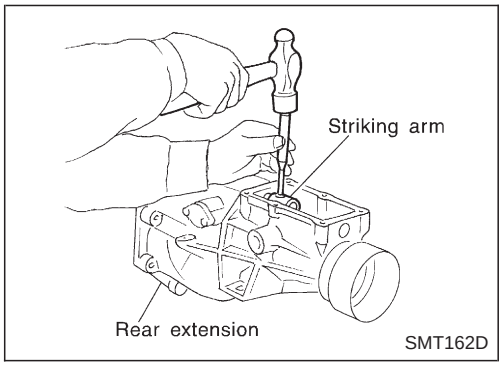
SMT606D

Case Components

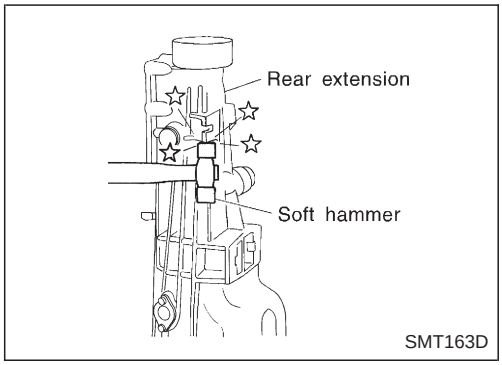


1. Remove rear extension.

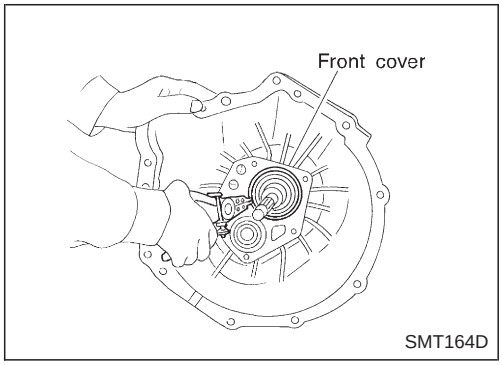
a. Remove control housing, check ball, return spring, plug, select check plunger and return springs.



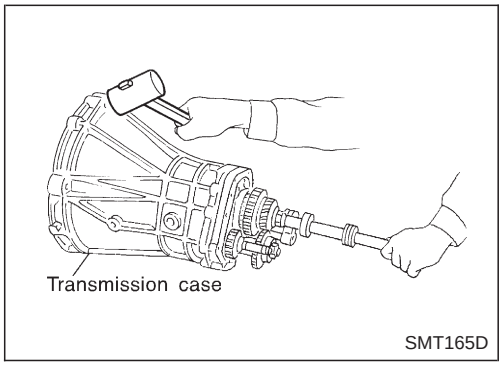
b. Drive out striking arm retaining pin.
c. Remove striking arm from striking rod.



d. Remove rear extension by lightly tapping it.

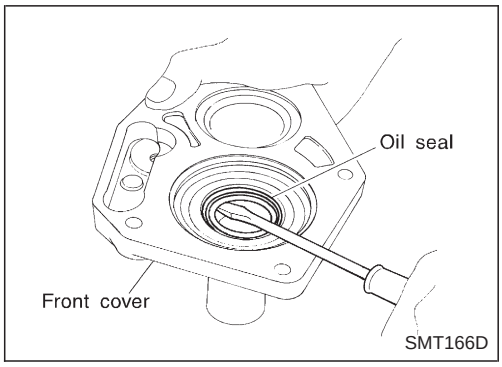


2. Remove front cover, gasket, shim of counter gear front bearing, and snap ring of main drive gear ball bearing.



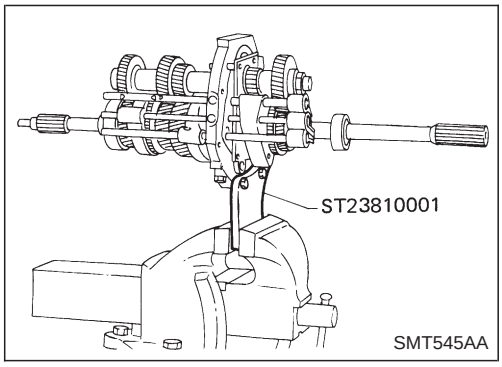
3. Remove transmission case by tapping lightly. Then separate transmission case from front adapter plate.

Case Components (Cont'd)

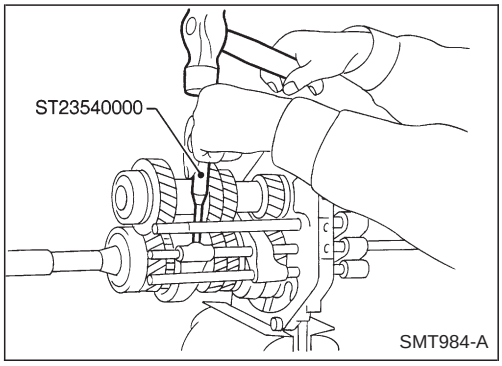


4. Remove front cover oil seal.
- **Be careful not to damage front cover mating surface.**

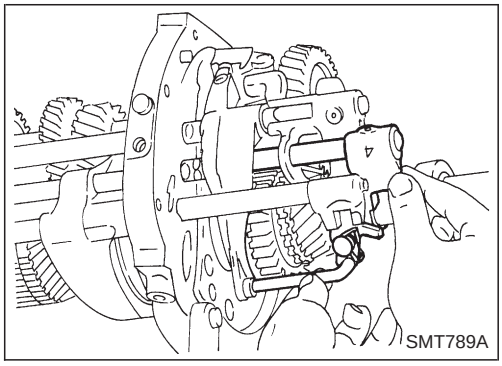
Shift Control Components



1. Set up Tool on adapter plate.
2. Remove striking rod from adapter plate.
3. Remove check ball plugs, check springs, and check balls.

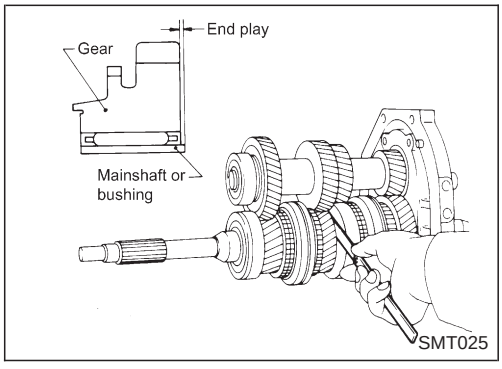


4. Drive out retaining pins. Then drive out fork rods and remove interlock balls.



5. Draw out 3rd & 4th and OD & reverse fork rods.

Gear Components



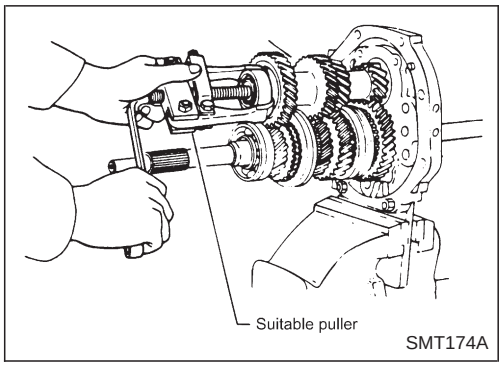
1. Before removing gears and shafts, measure each gear end play.

Gear end play:

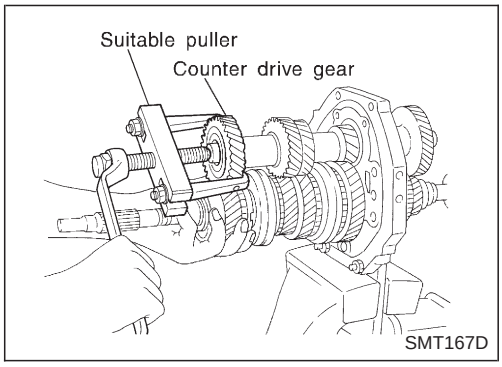
Refer to SDS, MT-59.

If not within specification, disassemble and check contact surface of gear to hub, washer, bushing, needle bearing and shaft.

Gear Components (Cont'd)



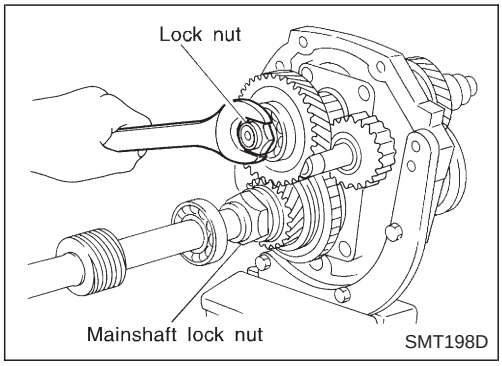
2. Mesh 2nd and reverse gear, then draw out counter gear front bearing with suitable puller.
3. Remove snap ring and then remove sub-gear bracket, sub-gear spring and sub-gear.



4. Draw out counter drive gear with main drive gear assembly with suitable puller.

- **When drawing out main drive gear assembly, be careful not to drop pilot bearing and baulk ring.**

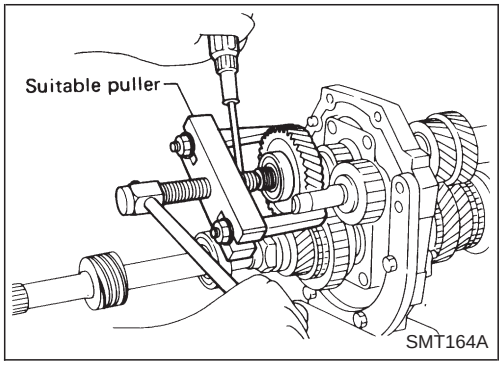
5. Remove snap ring and draw out 3rd & 4th synchronizer and 3rd gear.



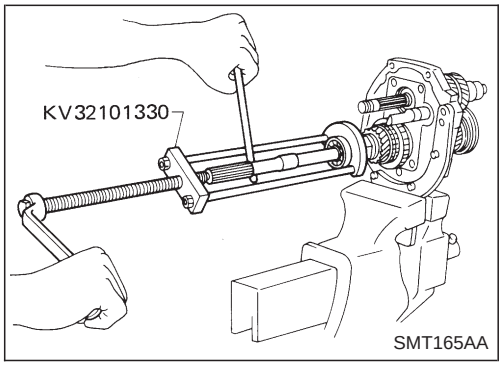
6. Remove rear side components on mainshaft and counter gear as follows.

a. Release staking on counter gear lock nut and mainshaft lock nut and loosen these nuts.

- **Mainshaft lock nut: Left-hand thread**

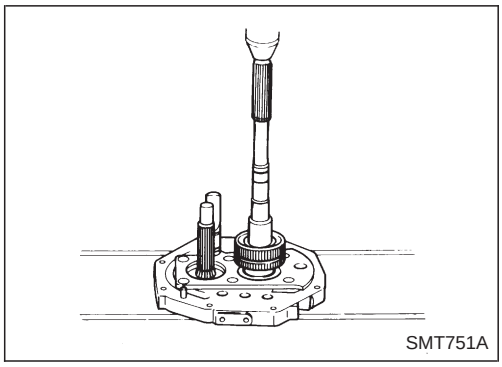


b. Pull out OD counter gear with counter gear rear end bearing with suitable puller.
c. Draw out reverse counter gear and reverse counter gear spacer.
d. Remove snap rings from reverse idler shaft and draw out reverse idler thrust washers, reverse idler gear and reverse idler gear bearing.
e. Remove speedometer drive gear and steel ball (2WD model only).



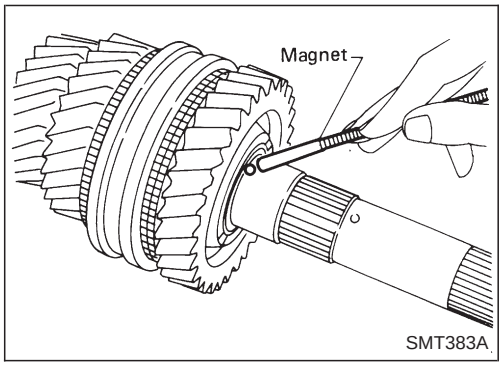
f. Remove snap ring and pull out OD mainshaft bearing, then remove snap ring.
g. Remove mainshaft lock nut.
h. Remove steel roller and thrust washer.
i. Remove roller bearing and washer.
j. Remove OD main gear, needle bearing and baulk ring (OD).
k. Remove OD coupling sleeve (4WD) and shifting inserts.
l. Remove reverse main gear (2WD) and shifting inserts.

Gear Components (Cont'd)


SMT751A

m. Press out mainshaft and counter gear alternately.

- **Press down mainshaft and counter gear alternately and carefully. Do not allow gears attached to mainshaft and counter gear underneath adapter plate to hit each other.**



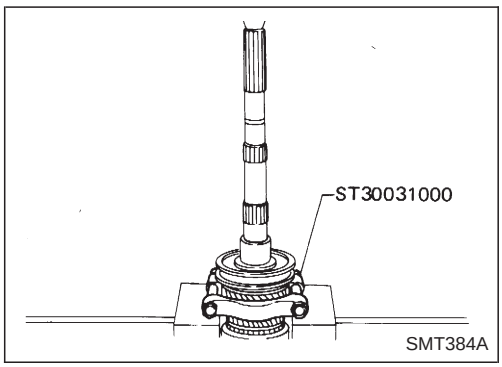
SMT383A

7. Remove front side components on mainshaft.

a. Remove mainshaft thrust washer and steel ball.

b. Remove 1st main gear and 1st gear needle bearing.

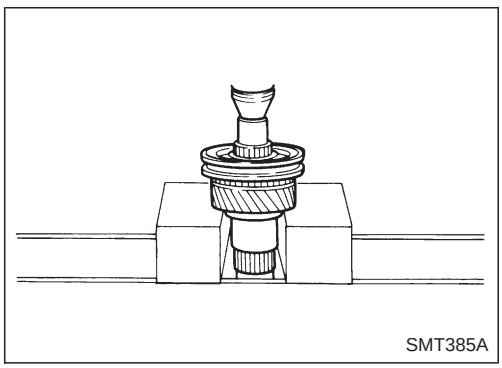
- **Be careful not to lose steel ball.**



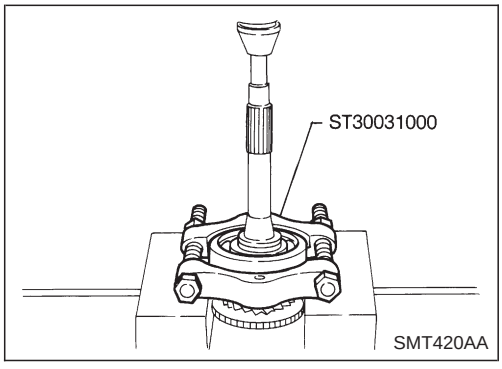
SMT384A

c. Press out 2nd main gear together with 1st gear bushing and 1st & 2nd synchronizer assembly.

d. Remove mainshaft front snap ring.


SMT385A

e. Press out 3rd main gear together with 3rd & 4th synchronizer assembly and 3rd gear needle bearing.

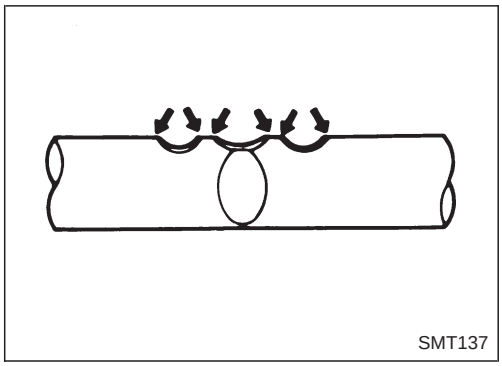


SMT420AA

8. Remove main drive gear bearing.

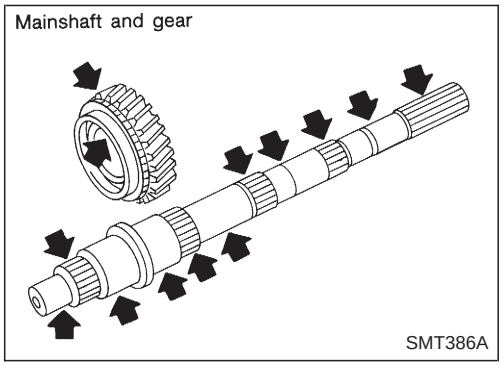
a. Remove main drive gear snap ring and spacer.

b. Press out main drive gear bearing.


SMT137

Shift Control Components

- Check contact surface and sliding surface for wear, scratches, projections or other damage.

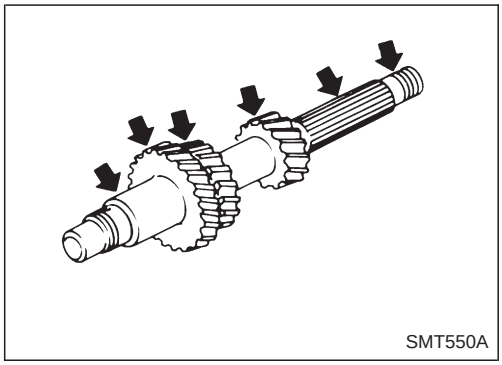


SMT386A

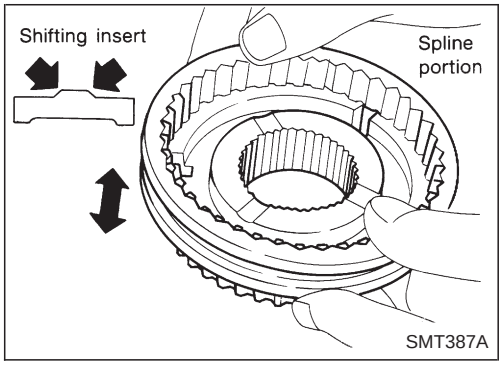
Gear Components

GEAR AND SHAFT

- Check shafts for cracks, wear or bending.
- Check gears for excessive wear, chips or cracks.

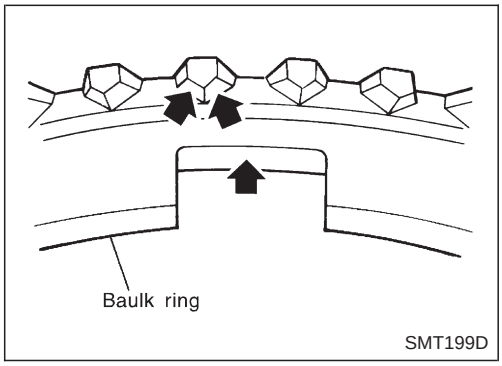

SMT550A

SYNCHRONIZERS



SMT387A

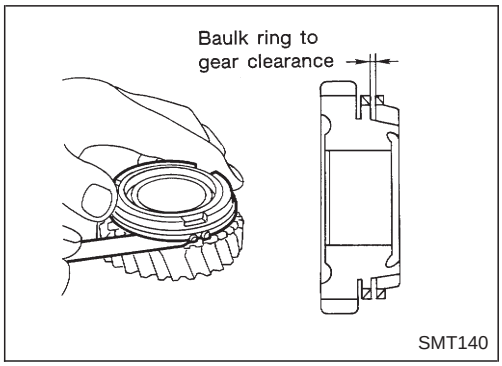
- Check spline portion of coupling sleeves, hubs and gears for wear or cracks.
- Check shifting inserts for wear or deformation.
- Check spread spring for deformation.



SMT199D

- Check baulk rings for cracks or deformation.

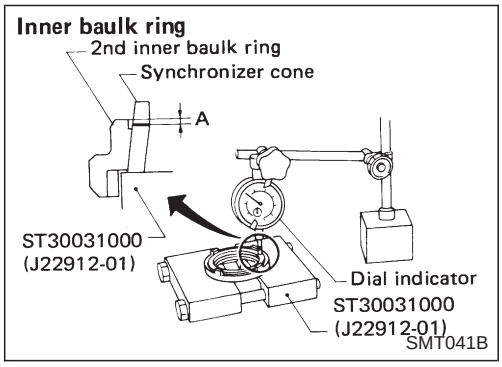
Gear Components (Cont'd)



- Measure baulk ring wear.

a. Measure clearance between baulk ring and gear.
   Clearance between baulk ring and gear:
   Refer to SDS, MT-59.

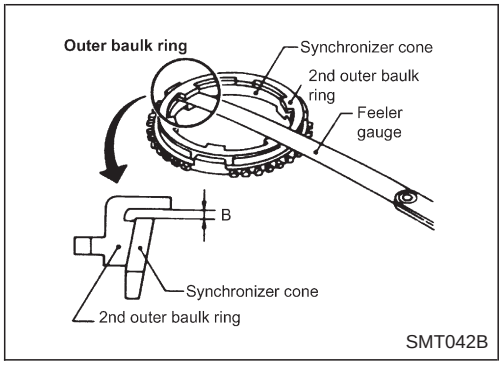
- If the clearance is less than the wear limit, replace baulk ring.



- Measure 2nd & 3rd baulk rings wear—TD25 engine model only.

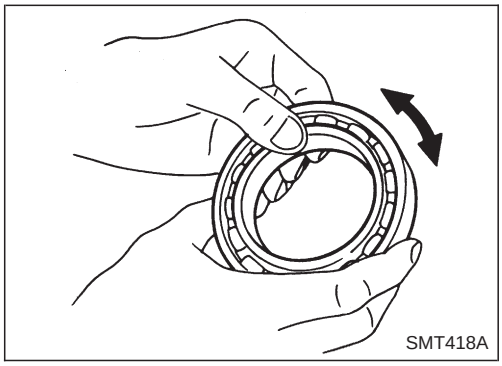
a. Place baulk rings in position on synchronizer cone.
b. While holding baulk rings against synchronizer cone as far as possible, measure dimensions "A" and "B".
   Standard:
   Inner "A": 0.7 - 0.9 mm (0.028 - 0.035 in)
   Outer "B": 0.6 - 1.1 mm (0.024 - 0.043 in)
   Wear limit:
   0.2 mm (0.008 in)

- **If dimension "A" or "B" is smaller than the wear limit, replace outer baulk ring, inner baulk ring and synchronizer cone as a set.**



BEARINGS

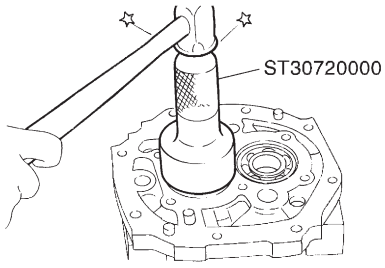
- Make sure all bearings roll freely and are free from noise, cracks, pitting or wear.



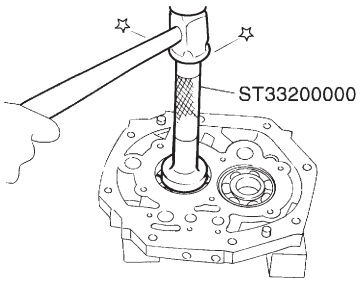
Gear Components

1. Install bearings into case components.

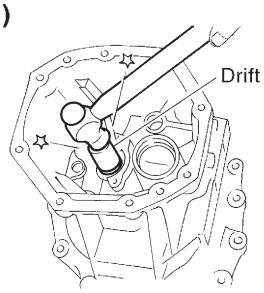
Mainshaft front bearing in adapter plate



Counter rear bearing in adapter plate

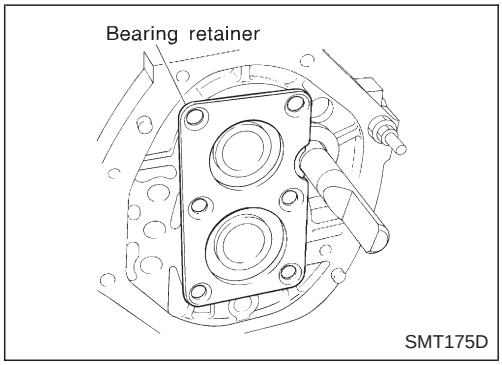


Counter gear rear end bearing in OD gear case (4WD model)



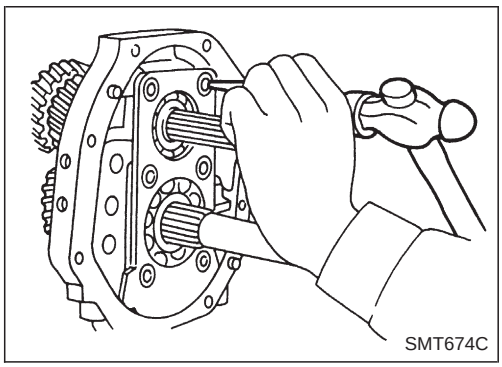
Be flush with front surface of OD gear case.

SMT168D



SMT175D

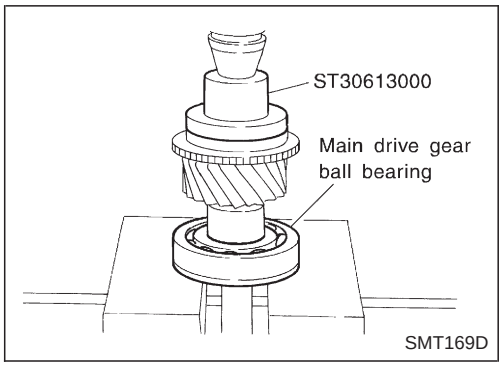
2. Assemble adapter plate parts.
● Install bearing retainer.
a. Insert reverse idler shaft, then install bearing retainer.



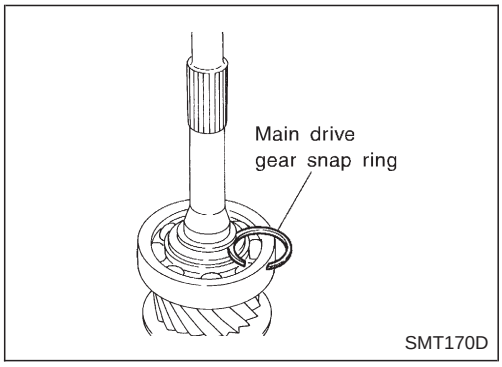
SMT674C

b. Tighten each screw, then stake it at two points.

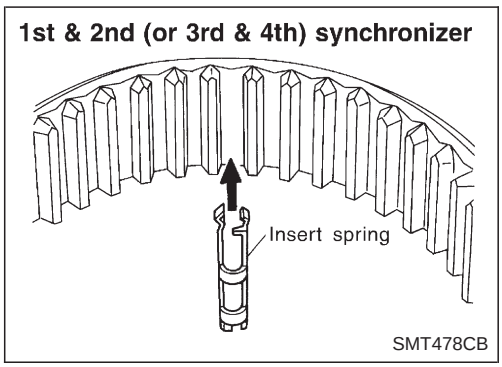
Gear Components (Cont'd)



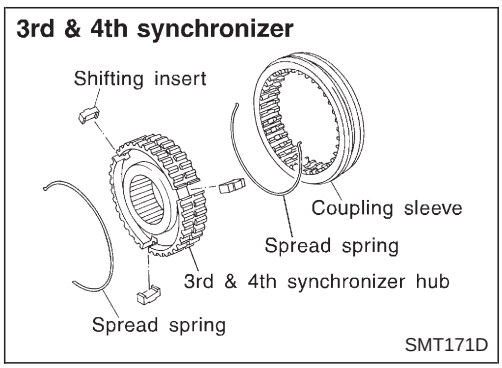
3. Install main drive gear ball bearing.
a. Press main drive gear ball bearing.



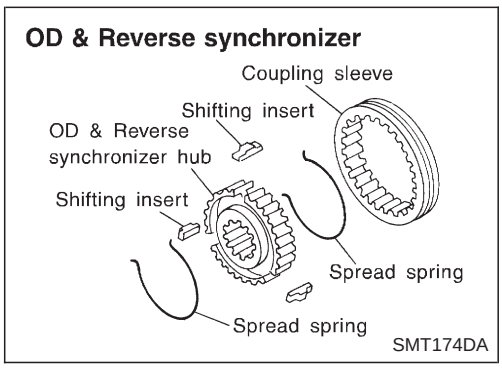
b. Select proper main drive gear bearing snap ring to minimize clearance of groove.
Allowable clearance of groove:
0 - 0.13 mm (0 - 0.0051 in)
Main drive gear bearing snap ring:
Refer to SDS, MT-59.
c. Install selected snap ring on main drive gear.



4. Assemble synchronizers.
- 1st & 2nd synchronizer
- (3rd & 4th synchronizer for TD25 engine model)

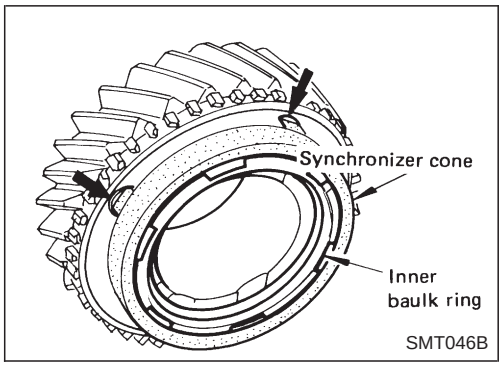


- 3rd & 4th synchronizer

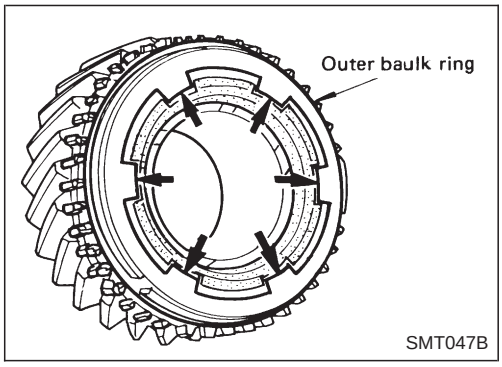


- OD & Reverse synchronizer

Gear Components (Cont'd)



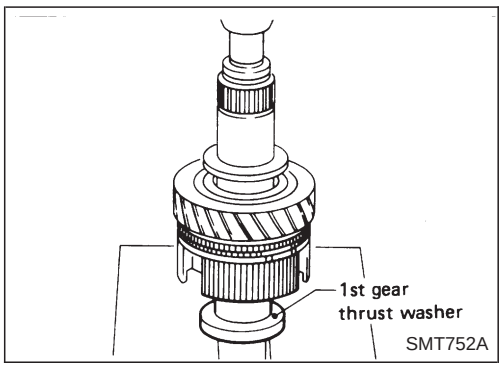
- 2nd & 3rd double baulk ring type synchronizer (TD25 engine model only)



5. Assemble front side components to mainshaft.

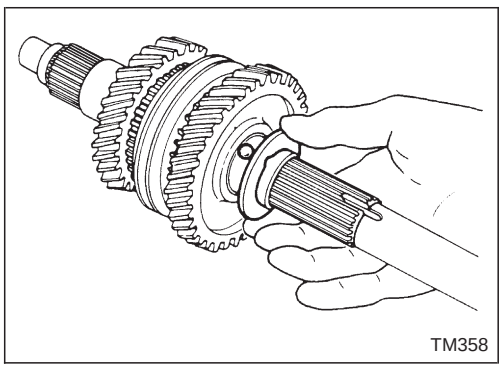
a. Install 2nd main gear, needle bearing and 1st & 2nd synchronizer assembly, then press 1st gear bushing on mainshaft.

b. Install 1st main gear.



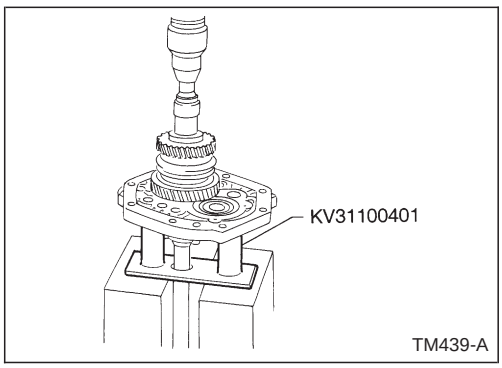
c. Install steel ball and 1st gear washer.

- **Before installation, apply multi-purpose grease to steel ball and to both sides of the thrust washer.**

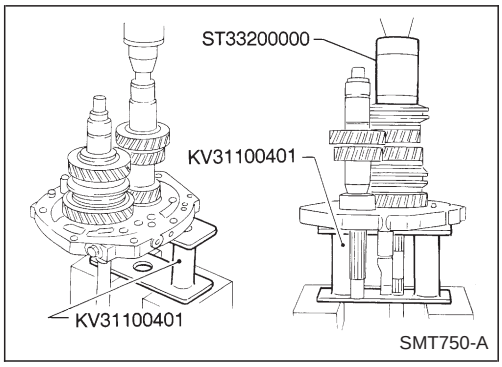


6. Install mainshaft and counter gear on adapter plate and main drive gear on mainshaft as follows:

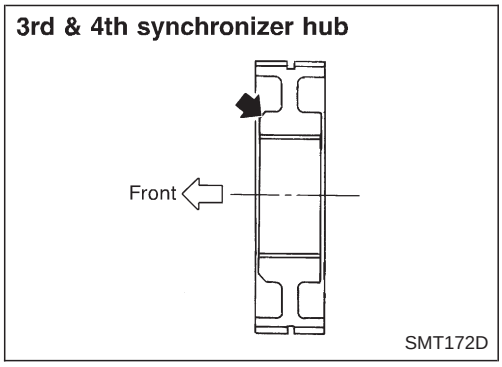
a. Press mainshaft assembly into adapter plate using Tool.



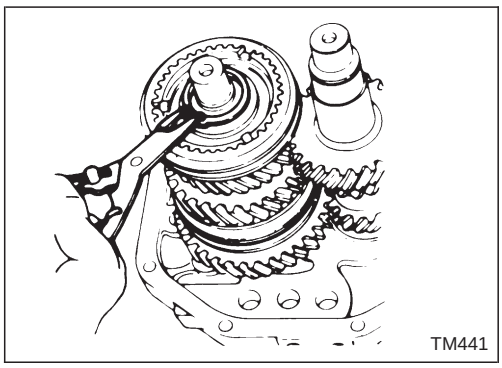
Gear Components (Cont'd)



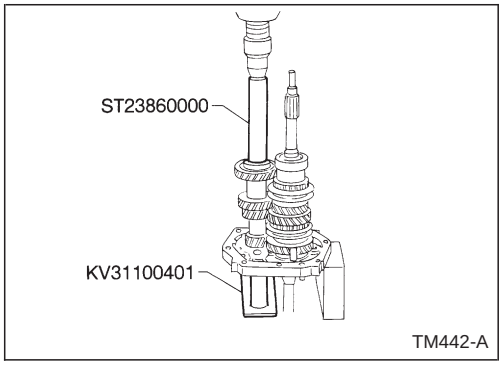
b. Press counter gear into adapter plate using Tool.
c. Install 3rd main gear and needle bearing, then press 3rd & 4th synchronizer assembly onto mainshaft.



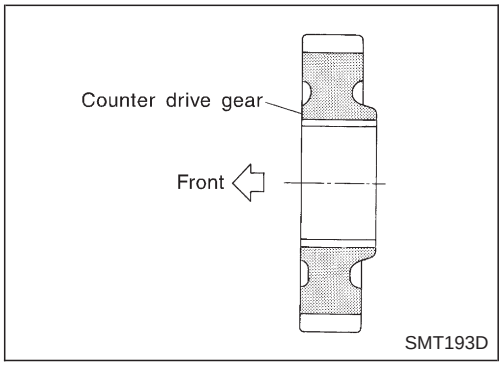
- **Pay attention to the direction of 3rd & 4th synchronizer hub.**



7. Install thrust washer on mainshaft and secure it with mainshaft front snap ring.
- **Select proper snap ring that will minimize clearance of groove in mainshaft.**
  Allowable clearance of groove:
  0 - 0.18 mm (0 - 0.0071 in)
  Mainshaft front snap ring:
  Refer to SDS, MT-59.
8. Apply gear oil to mainshaft pilot bearing and install it on mainshaft.

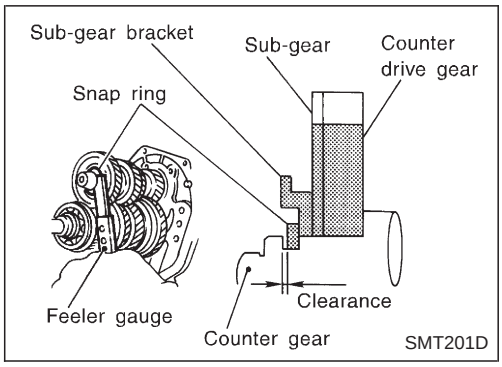


9. Press counter drive gear with main drive gear with Tool.



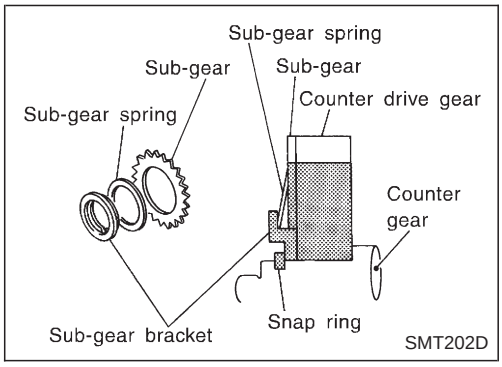
- **Pay attention to the direction of counter drive gear.**

Gear Components (Cont'd)

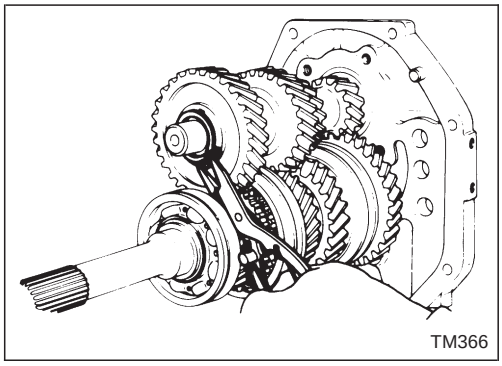


10. Install sub-gear components.
a. Install sub-gear and sub-gear bracket on counter drive gear and then select proper snap ring that will minimize clearance of groove in counter gear.

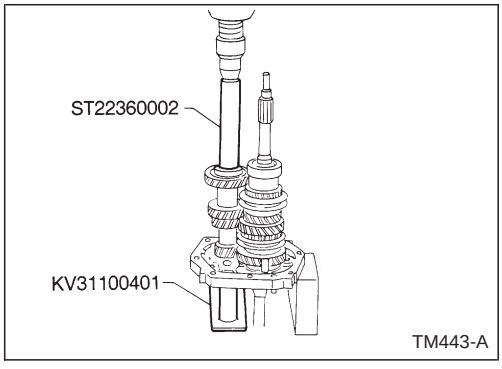
- **Do not install sub-gear spring at this time.**
  Allowable clearance of groove:
  0 - 0.18 mm (0 - 0.0071 in)
  Counter drive gear snap ring:
  Refer to SDS, MT-59.



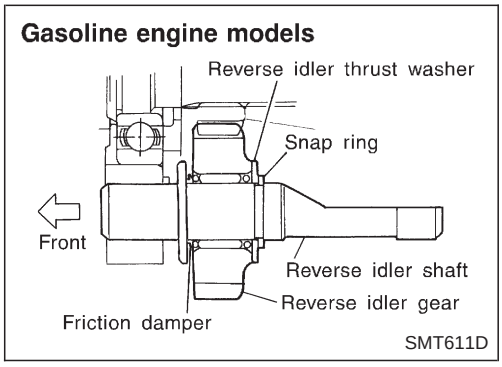
b. Remove snap ring, sub-gear bracket and sub-gear from counter gear.
c. Reinstall sub-gear, sub-gear spring and sub-gear bracket.



11. Install selected counter drive gear snap ring.

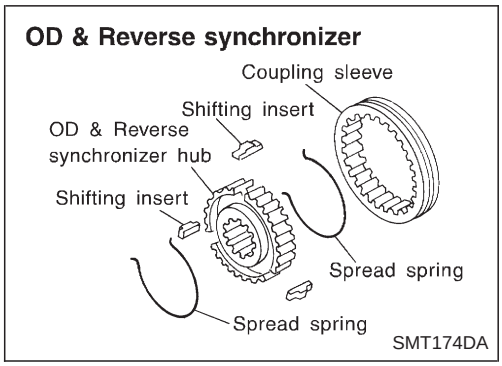


12. Press counter gear front bearing onto counter gear.

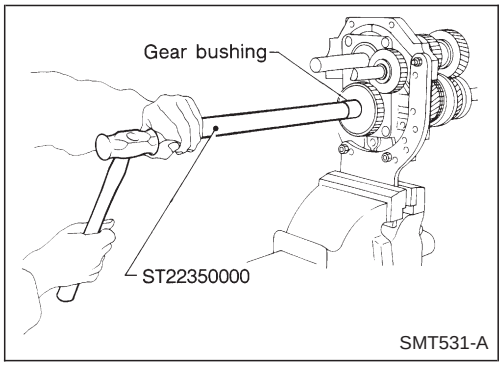


13. Assemble parts at rear of adapter plate as follows:
a. Install reverse idler gear to reverse idler shaft with reverse idler thrust washer, snap rings and needle bearing.

Gear Components (Cont'd)

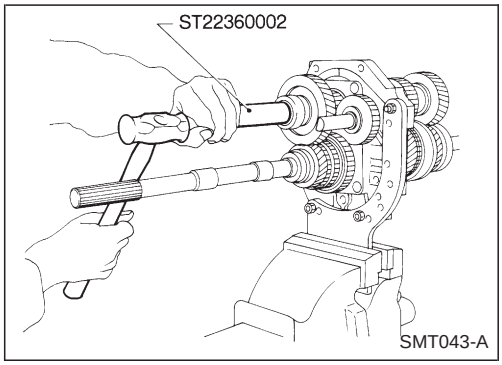


b. Install insert retainer and OD & Reverse synchronizer to mainshaft.
- **Pay attention to the direction of hub.**

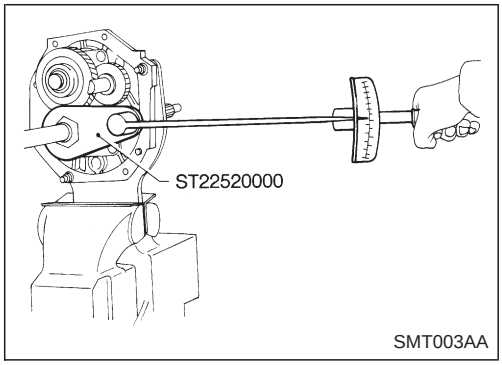


c. Install OD gear bushing with Tool.
d. Install OD main gear, needle bearing.
e. Install reverse counter gear spacer, reverse counter gear and OD counter gear.
- **OD main gear and OD counter gear should be handled as a matched set.**

f. Install washer, roller bearing, steel roller, thrust washer, steel ball and speedometer drive gear (2WD).
g. Tighten mainshaft lock nut temporarily.
- **Always use new lock nut.**

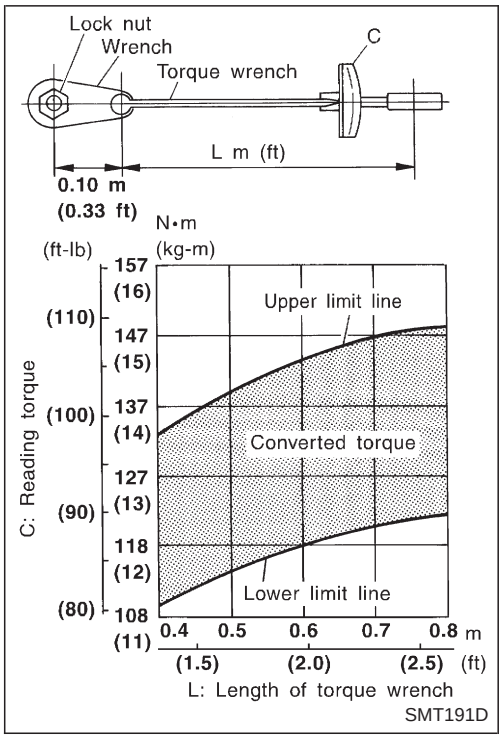


h. Install counter gear rear end bearing with Tool.



14. Mesh 2nd and reverse gears, then tighten mainshaft lock nut with Tool.
- **An error exists between the torque wrench scale indication and the true torque value. Taking into account the torque wrench length, calculate the converted torque value.**

Gear Components (Cont'd)



- Refer to the figure at the left to determine the converted torque value.

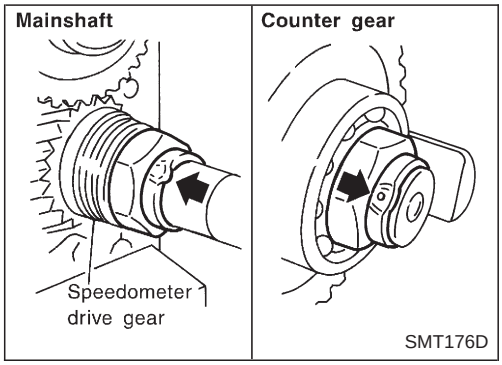
Reference: Formula to convert torque wrench indication to the true torque value:

$$T = \frac{0.1\ m\ (0.33\ ft) + L}{L} \times C$$

If the specified torque is T kg-m (ft-lb), the torque wrench scale indication C is determined using the following formula.

$$C = \frac{T \times L}{0.1\ m\ (0.33\ ft) + L}$$

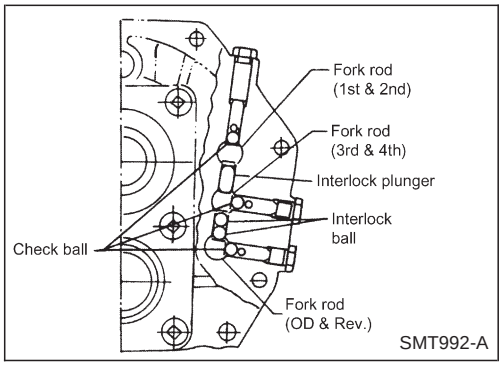
15. Tighten counter gear lock nut.
- **Always use new lock nut.**



16. Stake mainshaft lock nut and counter gear lock nut with a punch.
17. Measure gear end play.
    Gear end play:
    Refer to SDS, MT-59.

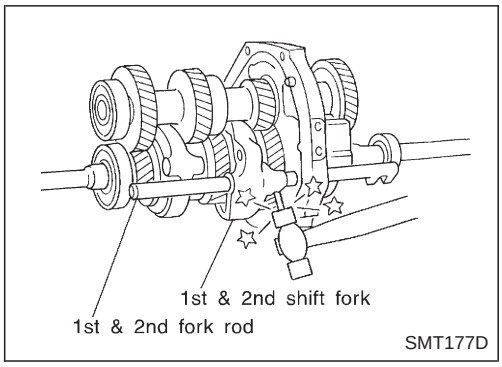
18. Install snap ring and OD mainshaft bearing, then snap ring (2WD model only).
    Allowable clearance:
    0 - 0.14 mm (0 - 0.0055 in)
    OD mainshaft snap ring (2WD model):
    Refer to SDS, MT-59.

Shift Control Components

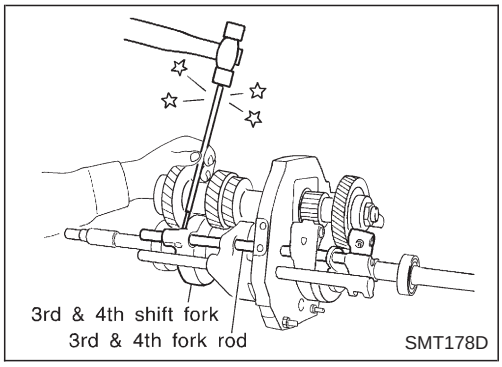


1. Install fork rods, interlock plunger, interlock balls and check balls.

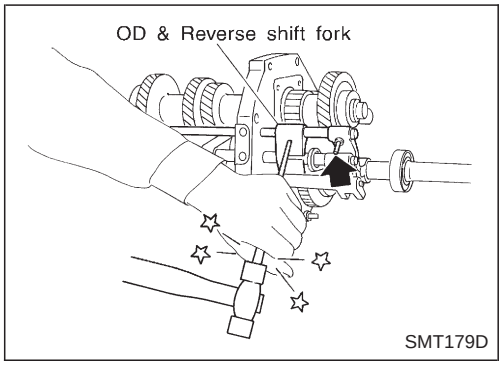
Shift Control Components (Cont'd)



2. Install 1st & 2nd shift fork, then drive in retaining pin.

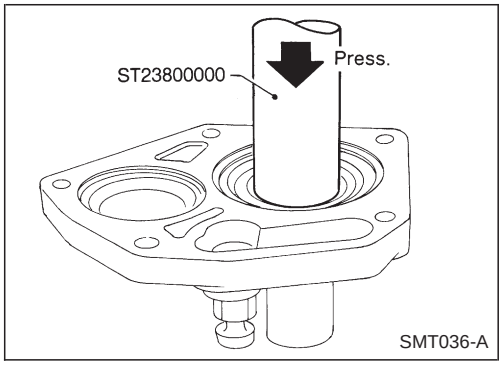


3. Install 3rd & 4th shift forks, then drive in retaining pin.

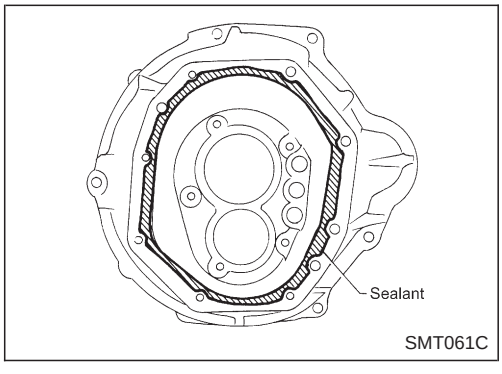


4. Install OD & Reverse shift fork, then drive in retaining pin.

Case Components

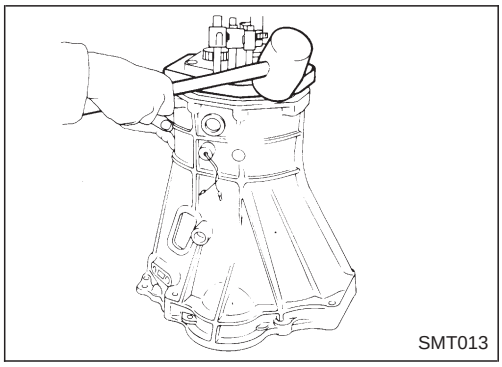


1. Install front cover oil seal using Tool.
- **Apply multi-purpose grease to seal lip.**

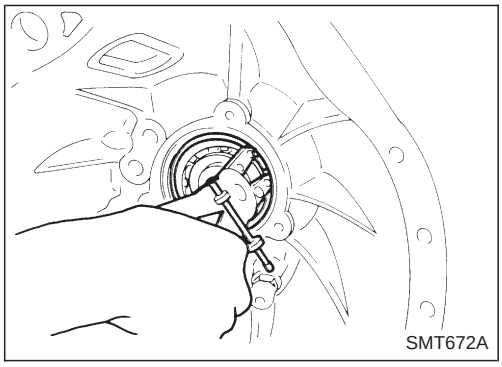


2. Apply sealant to mating surface of transmission case.

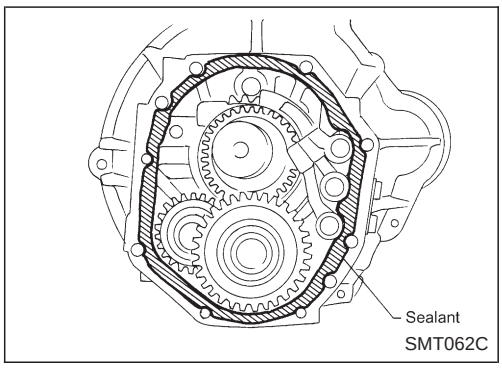
Case Components (Cont'd)


SMT013

3. Install gear assembly with adapter plate on transmission case by lightly tapping with a soft hammer.

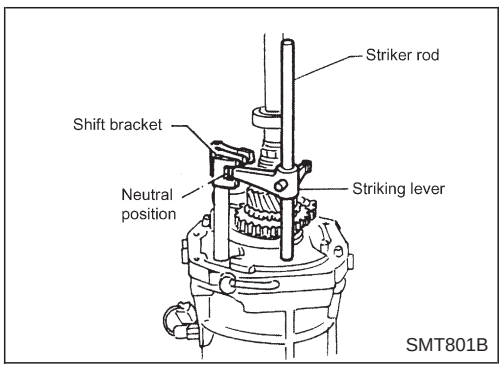

SMT672A

4. Install main drive gear ball bearing snap ring.



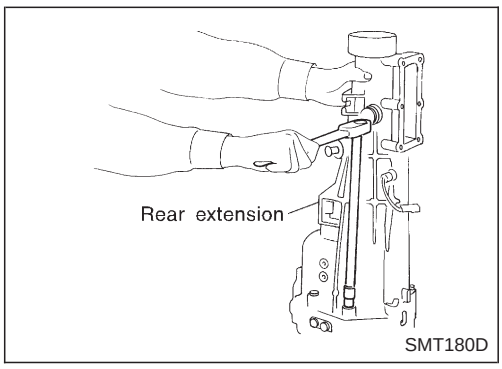
SMT062C

5. Apply sealant to mating surface of adapter plate.



SMT801B

6. Place shift forks in neutral position.
7. Install striking lever and rod onto adapter plate and align striking lever with shift brackets.

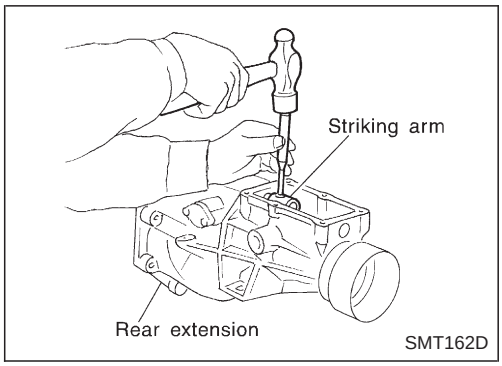


SMT180D

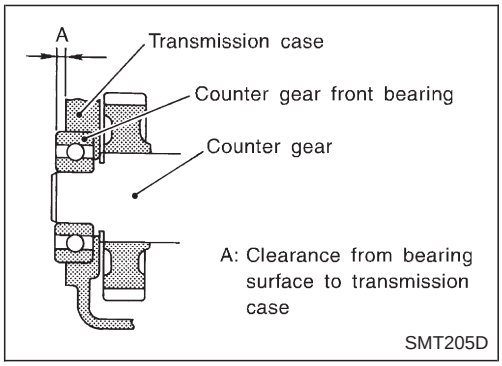
8. Install rear extension.

- **Tighten mounting bolts equally in a criss-cross pattern.**

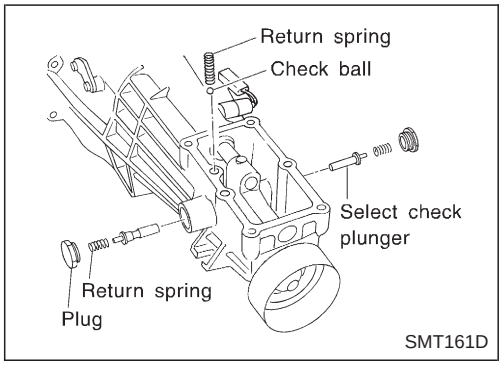
Case Components (Cont'd)



9. Install striking arm lock pin.

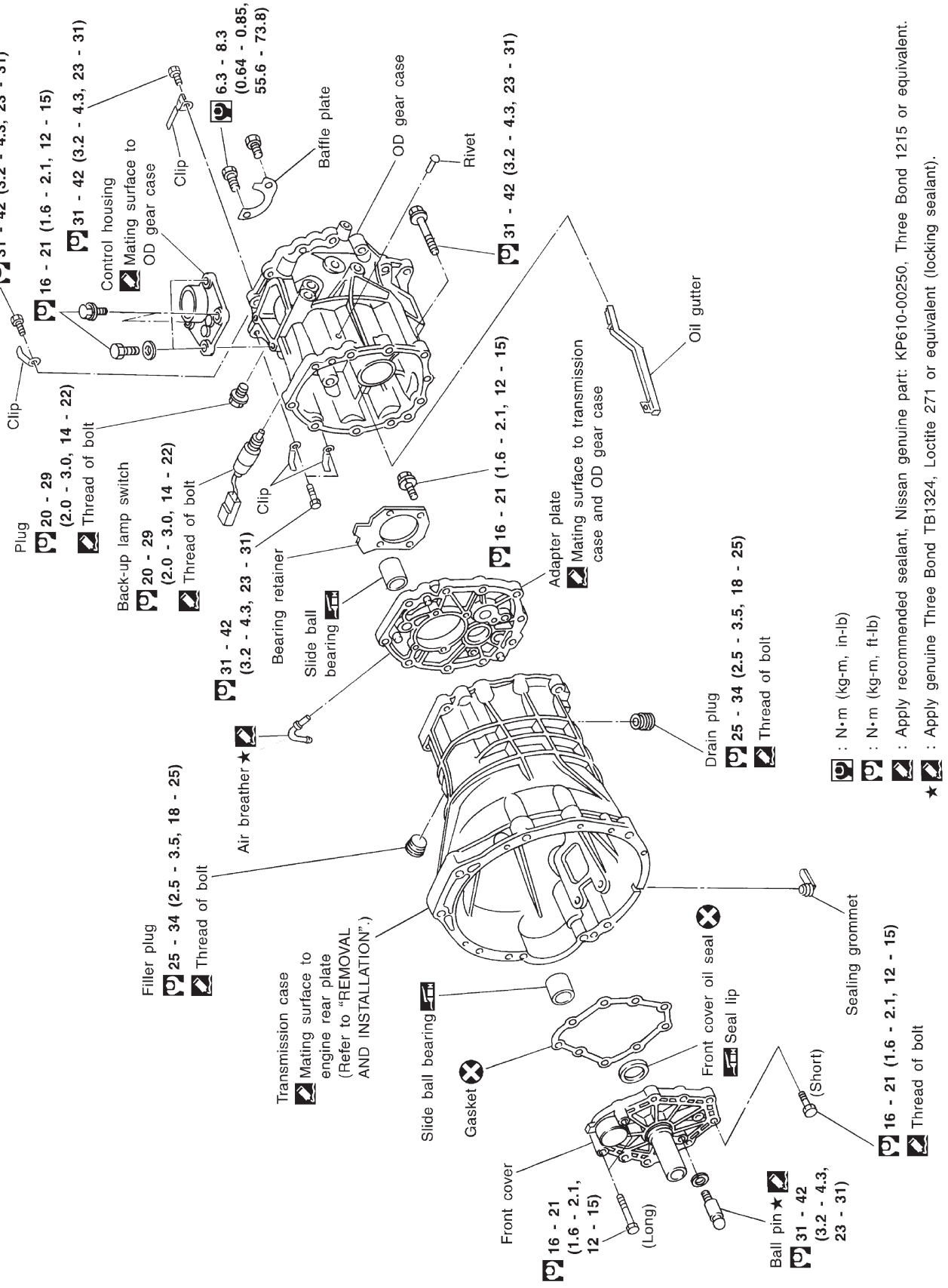


10. Select counter gear front bearing shim.
    Allowable clearance (A) from bearing surface to transmission case:
    0 - 0.16 mm (0 - 0.0063 in)
    Counter gear front bearing shim:
    Refer to SDS, MT-59.
11. Install gasket and front cover.



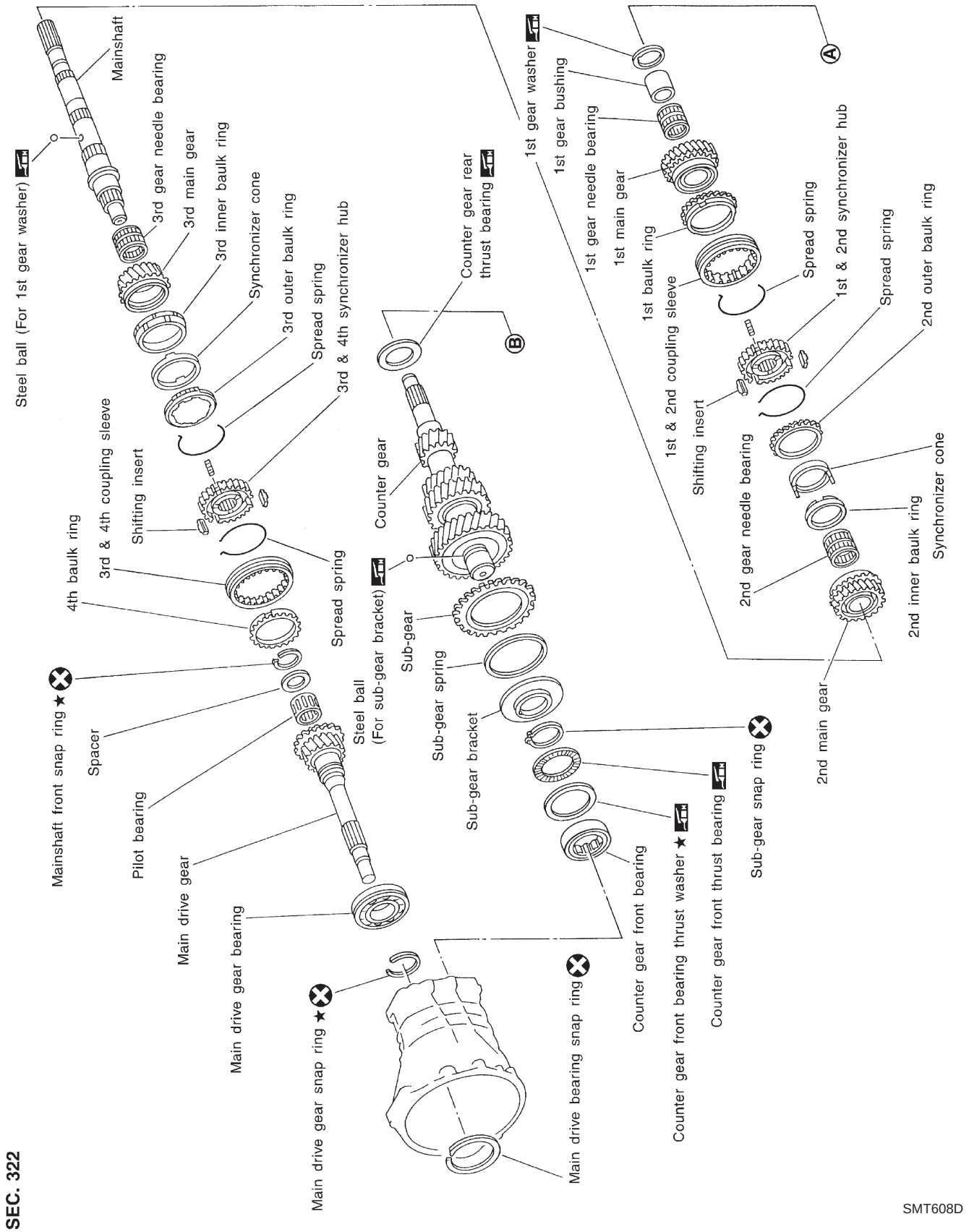
12. Install return spring plugs, check ball, return springs and select check plungers.
13. Install control housing and gasket.

Case Components



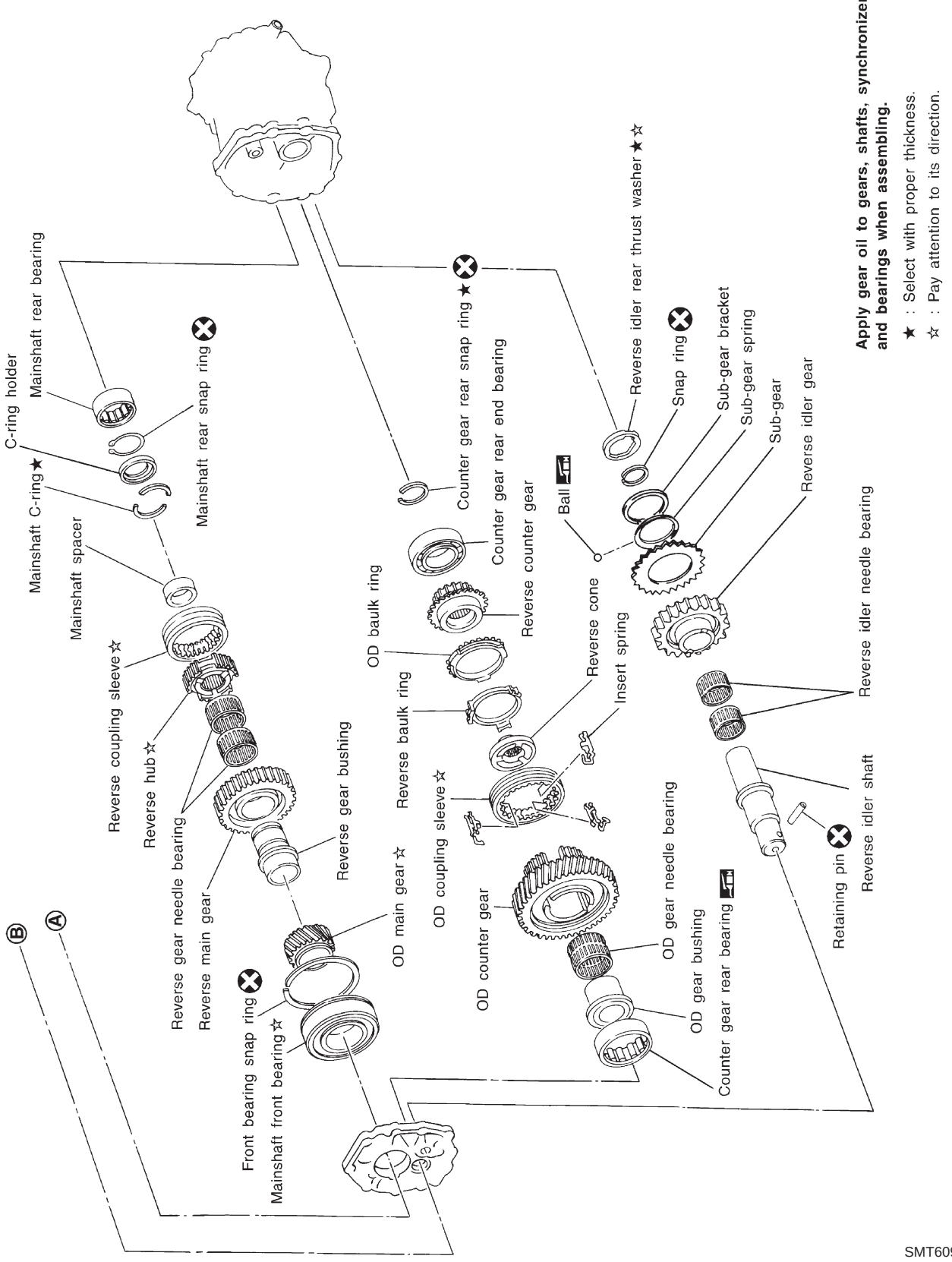
SMT607D

Gear Components



SEC. 322

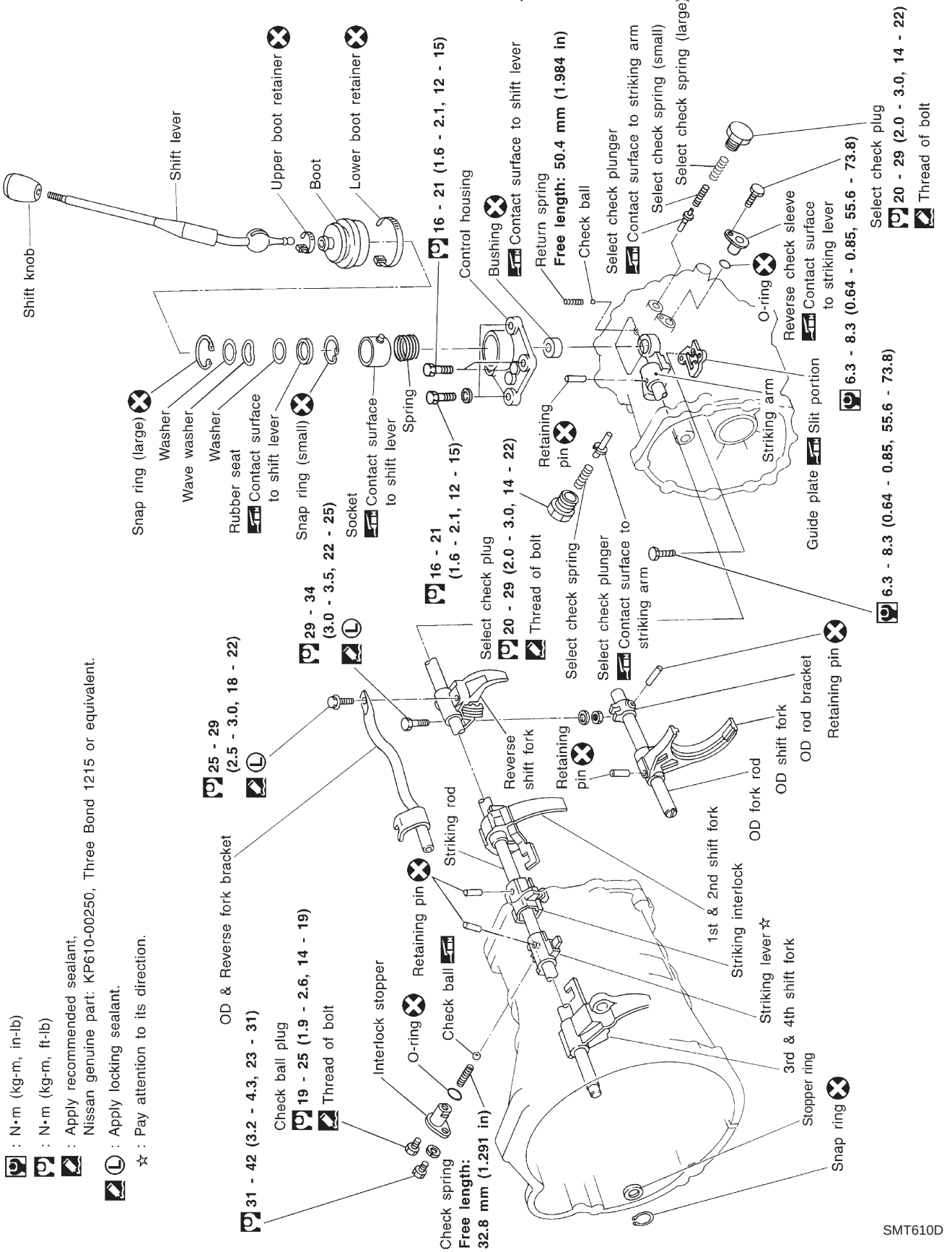
Gear Components (Cont'd)



SEC. 322

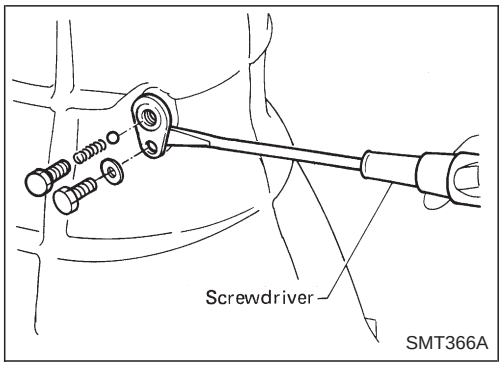
Shift Control Components

CAUTION:
To avoid damage when replacing shift knob, remove shift lever with knob, as assembled.



: N•m (kg-m, in-lb)
: N•m (kg-m, ft-lb)
: Apply recommended sealant, Nissan genuine part: KP610-00250, Three Bond 1215 or equivalent.
Ⓛ : Apply locking sealant.
☆ : Pay attention to its direction.

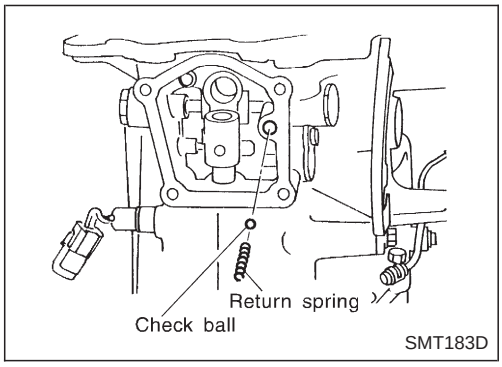
SMT610D



Case Components

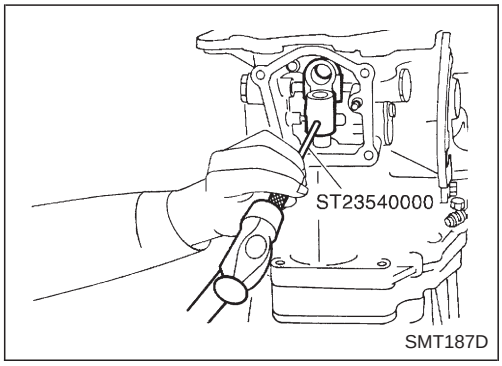
1. Remove check ball plug, check spring and check ball. Then remove interlock stopper.

- **If interlock assembly is removed as a unit, the check ball can fall into transmission case.**
- **Be careful not to lose check ball.**

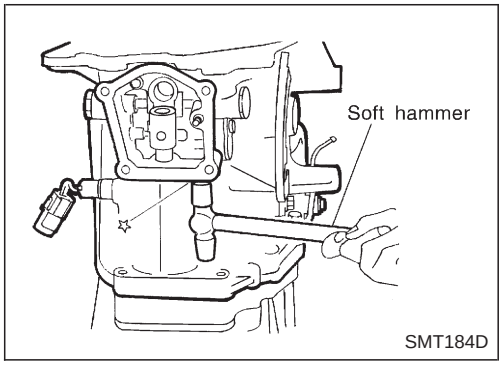


2. Remove control housing, return spring and check ball.

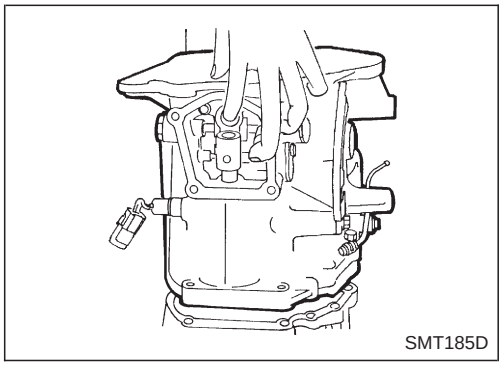
- **Be careful not to lose check ball.**



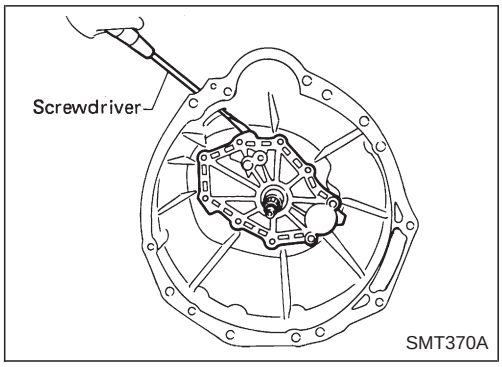
3. Drive out retaining pin from striking arm.



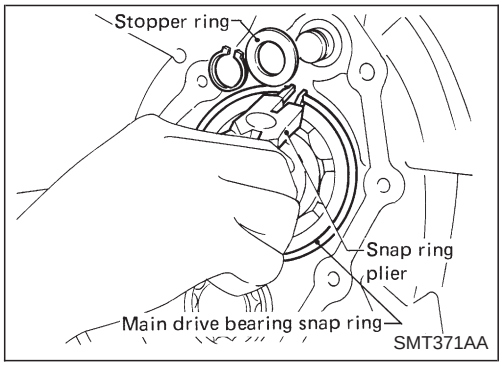
4. Remove OD gear case together with striking arm by tapping lightly.



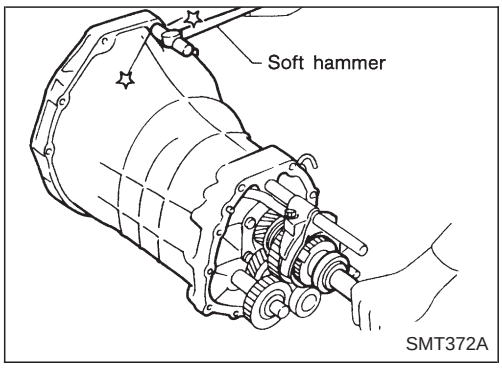
Case Components (Cont'd)



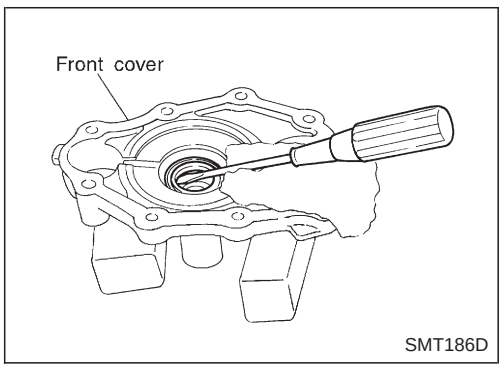
5. Remove front cover and gasket.



6. Remove stopper ring and main drive bearing snap ring.

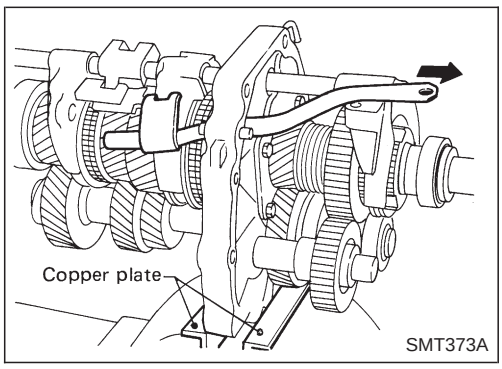


7. Remove transmission case by tapping lightly.



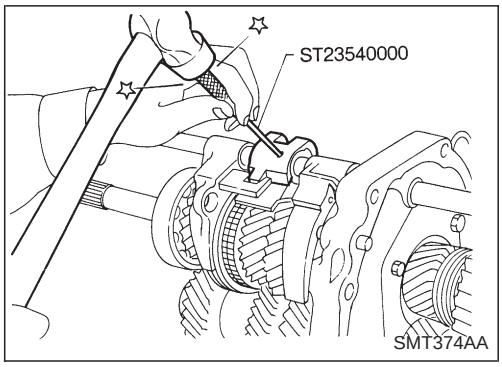
8. Remove front cover oil seal.

Shift Control Components

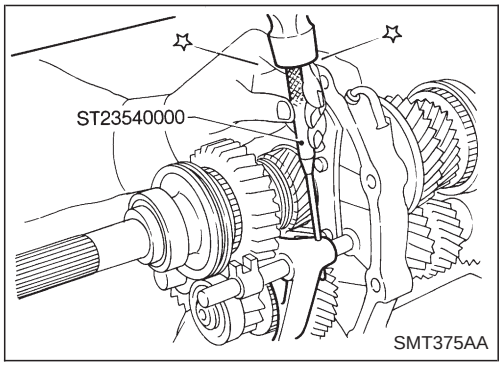


1. Mount adapter plate on vise.
2. Remove OD & Reverse fork rod.

Shift Control Components (Cont'd)

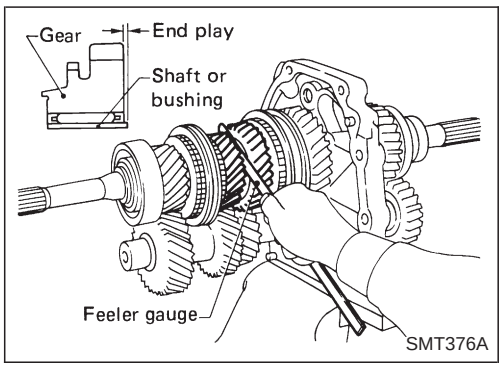


3. Drive out retaining pin from striking lever.
4. While pulling out striking rod, remove striking lever and striking interlock. Then remove 1st & 2nd, 3rd & 4th and reverse shift fork.



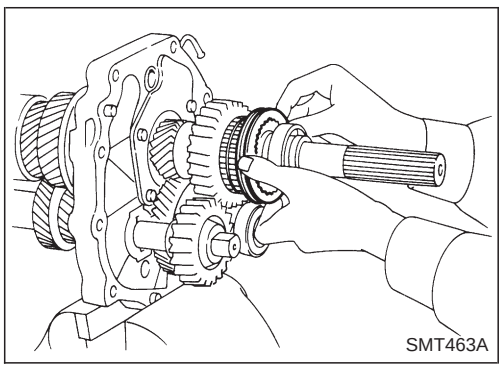
5. Drive out retaining pin from OD shift fork.
6. Pull out OD fork rod and then remove OD shift fork.

Gear Components



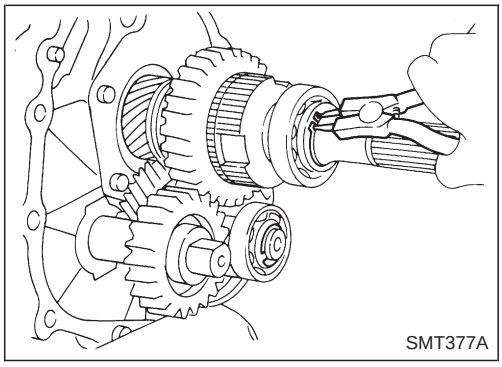
1. Before removing gears and shafts, measure each gear end play.
   Gear end play:
   Refer to SDS, MT-61.

- If not within specification, disassemble and check contact surface of gear to hub, washer, bushing, needle bearing and shaft.



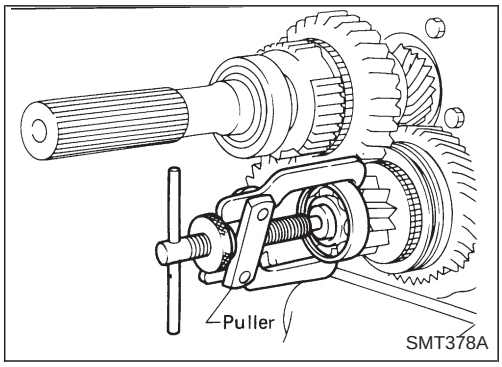
2. Remove rear side components on mainshaft and counter gear.

a. Remove reverse coupling sleeve.

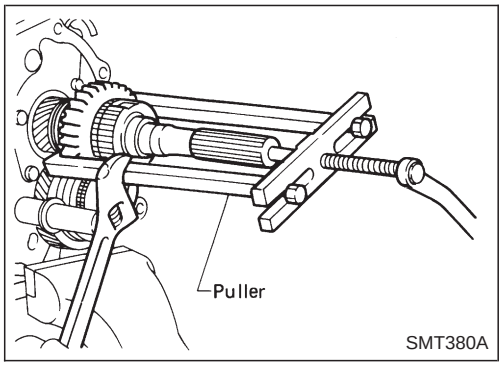


b. Remove mainshaft rear snap ring and counter gear rear snap ring.
c. Remove C-ring holder and mainshaft C-rings from mainshaft. Use punch and hammer to remove C-rings.

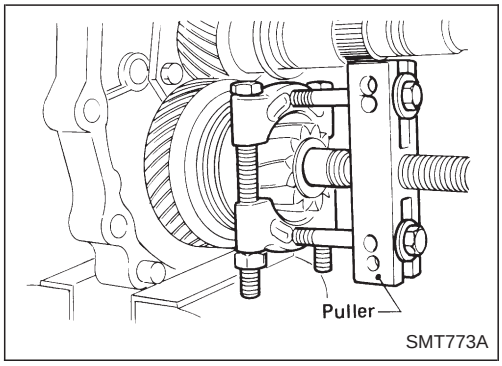
Gear Components (Cont'd)



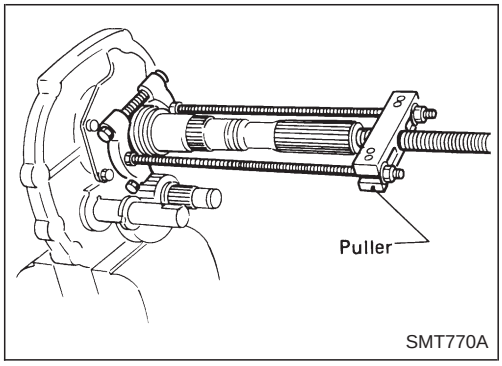
d. Pull out counter gear rear end bearing.
e. Remove reverse idler gear and reverse idler thrust washers.



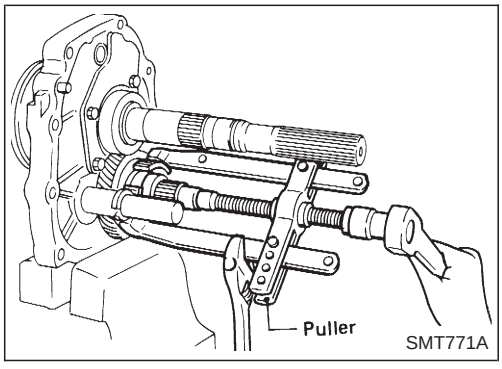
f. Pull out reverse main gear together with mainshaft spacer and reverse synchronizer hub. Then remove reverse gear needle bearings.



g. Pull out reverse counter gear.
h. Remove OD coupling sleeve together with OD baulk ring, reverse baulk ring and spring inserts.



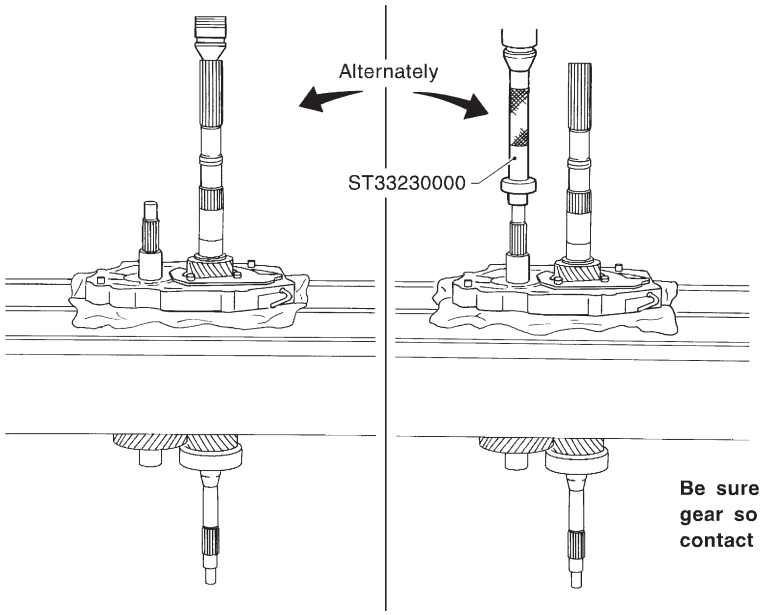
i. Pull out reverse gear bushing.



j. Pull out OD counter gear together with reverse cone.

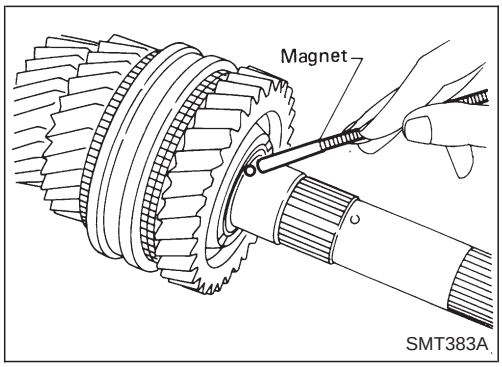
Gear Components (Cont'd)

3. Press out mainshaft and counter gear alternately.



Be sure to alternately press mainshaft and counter gear so as not to allow the front surface of one to contact the rear surface of the other.

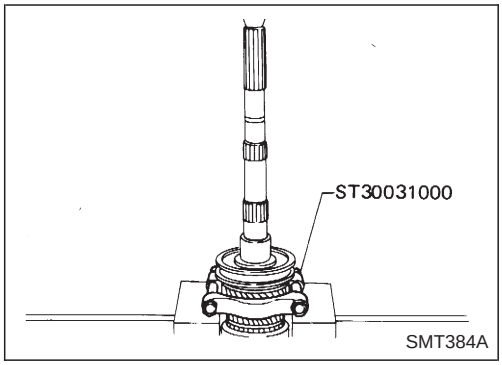
SMT772AB



SMT383A

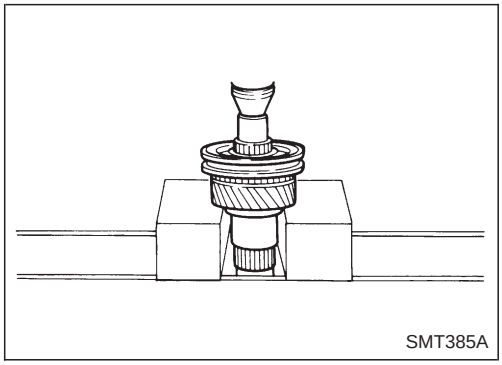
4. Remove front side components on mainshaft.
a. Remove 1st gear washer and steel ball.
b. Remove 1st main gear and 1st gear needle bearing.

- **Be careful not to lose steel ball.**



SMT384A

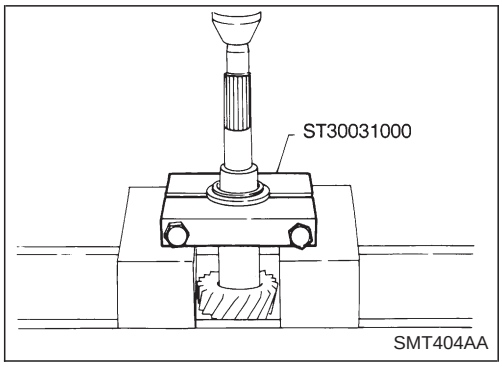
c. Press out 2nd main gear together with 1st gear bushing and 1st & 2nd synchronizer assembly.
d. Remove mainshaft front snap ring.



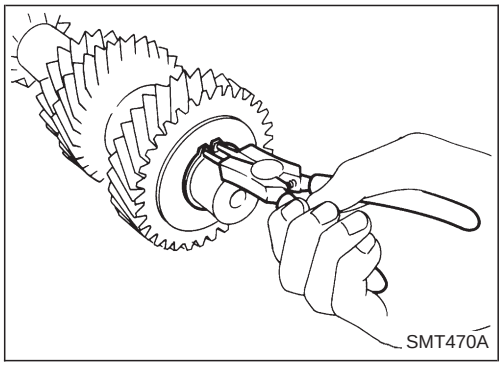
SMT385A

e. Press out 3rd main gear together with 3rd & 4th synchronizer assembly and 3rd gear needle bearing.

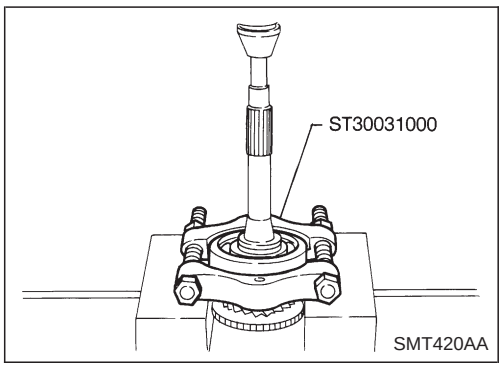
Gear Components (Cont'd)



5. Remove front side components on counter gear.
a. Remove counter gear rear thrust bearing.



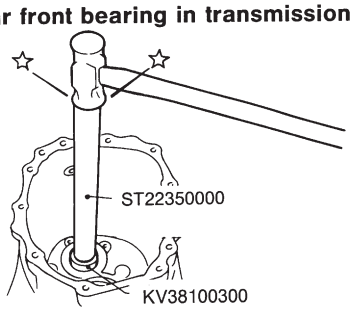
b. Remove sub-gear components.



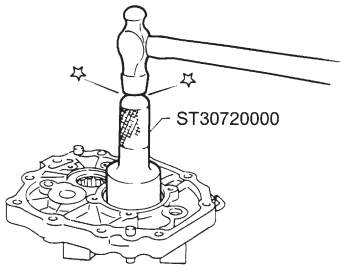
6. Remove main drive gear bearing.
a. Remove main drive gear snap ring and spacer.
b. Press out main drive gear bearing.

7. Remove bearings from case components.

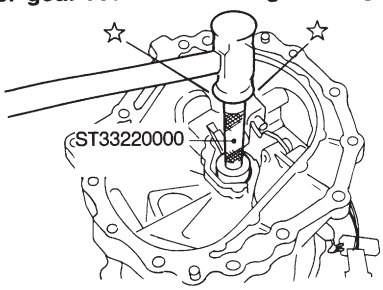
Counter gear front bearing in transmission case



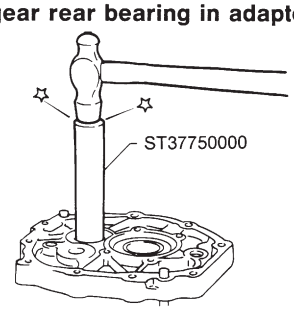
Mainshaft front bearing in adapter plate

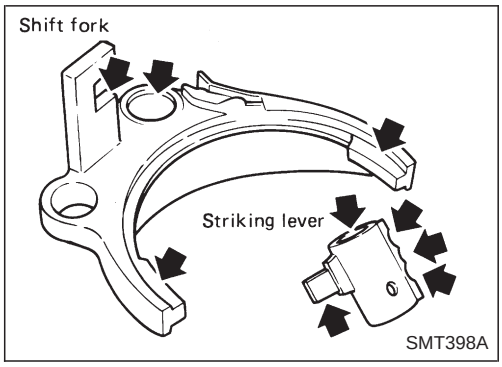


Counter gear rear end bearing in OD gear case



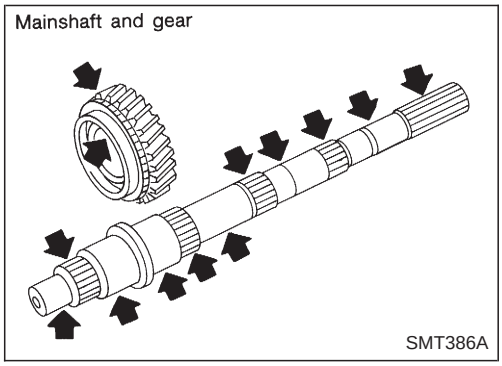
Counter gear rear bearing in adapter plate





Shift Control Components

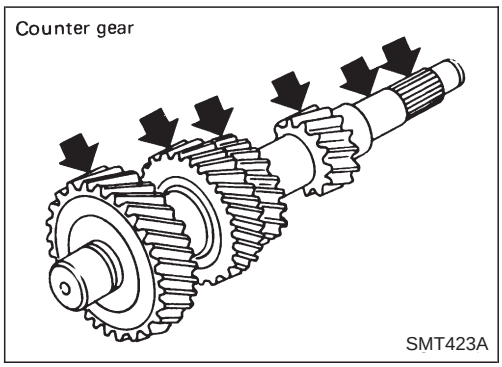
- Check contact surface and sliding surface for wear, scratches, projections or other damage.

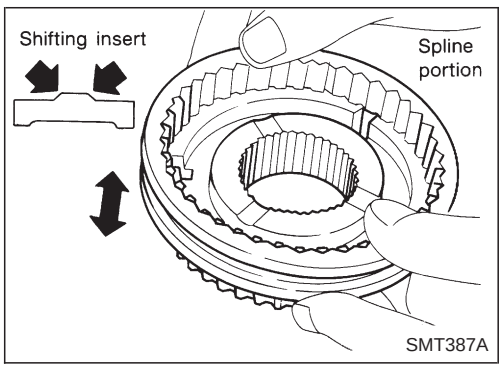


Gear Components

GEARS AND SHAFTS

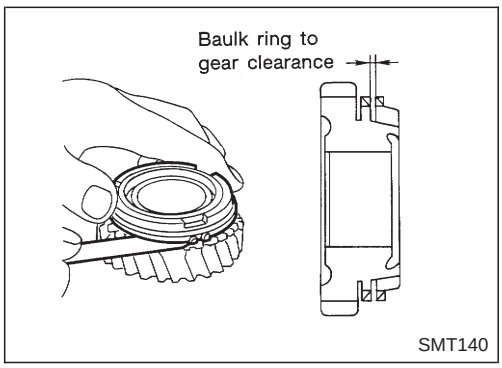
- Check shafts for cracks, wear or bending.
- Check gears for excessive wear, chips or cracks.





SYNCHRONIZERS

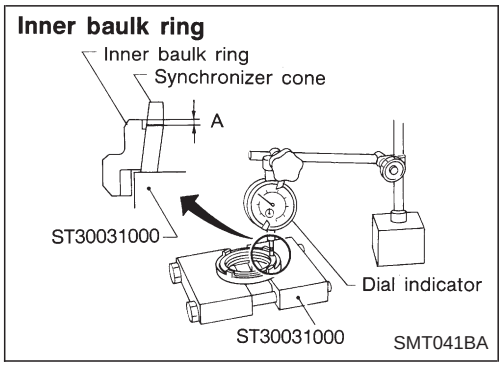
- Check spline portion of coupling sleeves, hubs, and gears for wear or cracks.
- Check baulk rings for cracks or deformation.
- Check shifting inserts for wear or deformation.
- Check insert springs for deformation.



Clearance between baulk ring and gear:
Refer to SDS, MT-61.

- **If the clearance is smaller than the wear limit, replace baulk ring.**

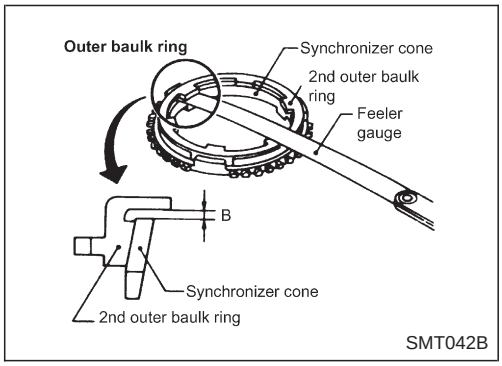
Gear Components (Cont'd)

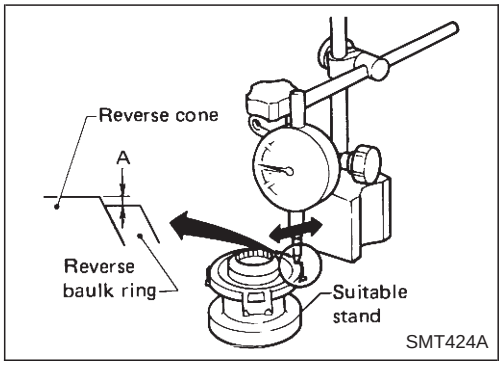


- Measure wear of 2nd and 3rd baulk rings.

a. Place baulk rings in position on synchronizer cone.
b. While holding baulk rings against synchronizer cone as far as it will go, measure dimensions "A" and "B".
   Dimensions "A" and "B":
   Refer to SDS, MT-61.

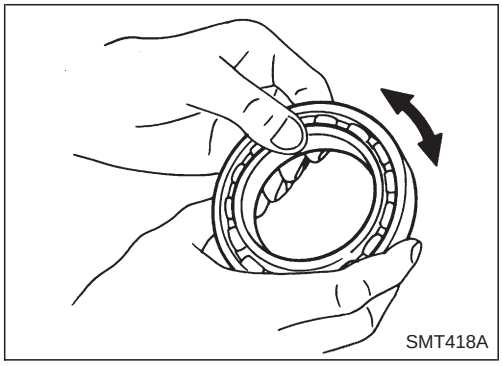
- **If dimension "A" or "B" is smaller than the wear limit, replace outer baulk ring, inner baulk ring and synchronizer cone as a set.**





- Measure wear of reverse baulk ring.

a. Place baulk ring in position on reverse cone.
b. While holding baulk ring against reverse cone as far as it will go, measure dimension "A" with dial indicator.
   Dimension "A":
   Refer to SDS, MT-61.
c. If dimension "A" is larger than the wear limit, replace baulk ring.



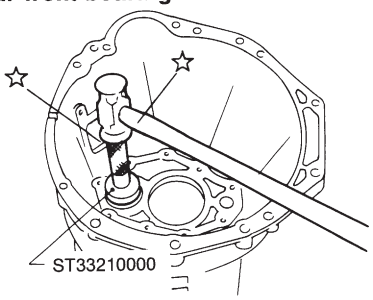
BEARINGS

- Make sure bearings roll freely and are free from noise, crack, pitting or wear.

Gear Components

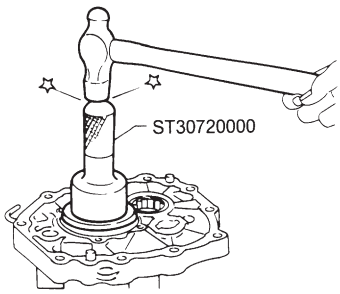
1. Install bearings into case components.

Counter gear front bearing in transmission case



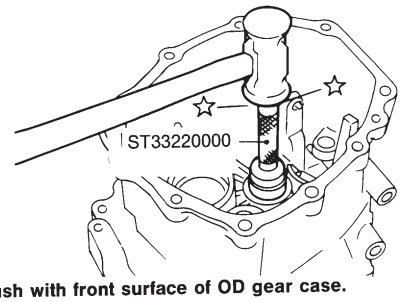
SMT389A

Mainshaft front bearing in adapter plate



SMT397A

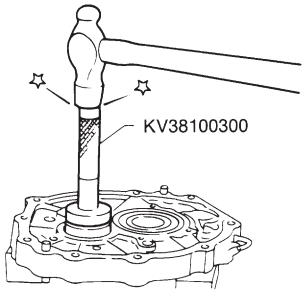
Counter gear rear end bearing in OD gear case



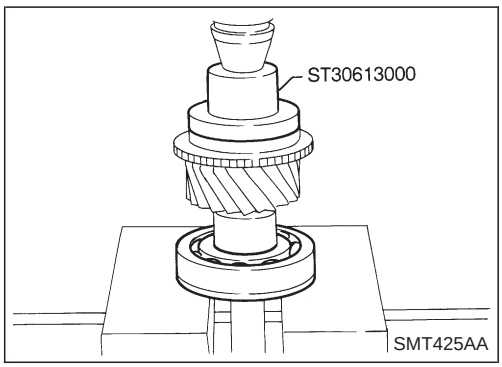
Be flush with front surface of OD gear case.

SMT391A

Counter gear rear bearing in adapter plate

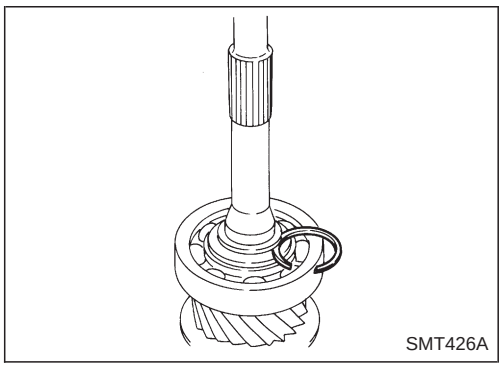


SMT484CD



SMT425AA

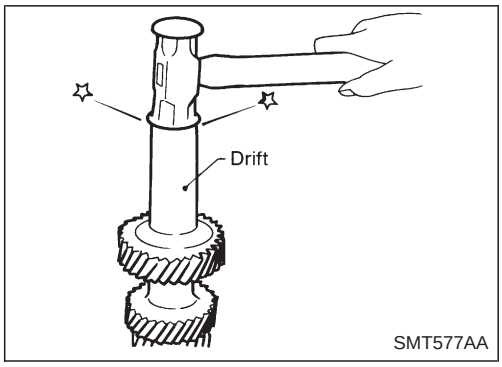
2. Install main drive gear bearing.
a. Press main drive gear bearing.
b. Install main drive gear spacer.



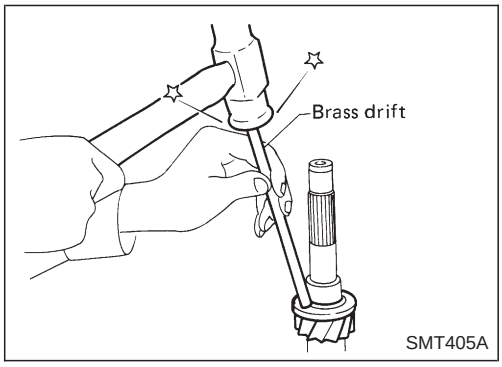
SMT426A

c. Select proper main drive gear snap ring to minimize clearance of groove.
   Allowable clearance of groove:
   0 - 0.1 mm (0 - 0.004 in)
   Main drive gear snap ring:
   Refer to SDS, MT-61.
d. Install selected snap ring on main drive gear.

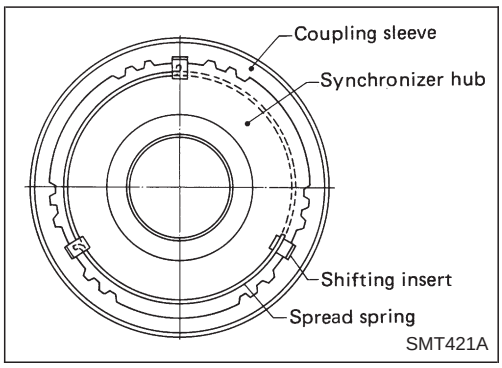
Gear Components (Cont'd)



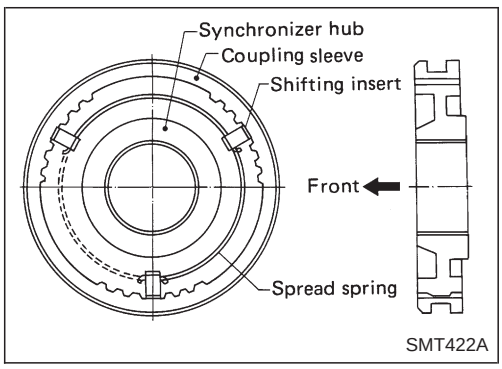
3. Install components on counter gear.
a. Install sub-gear components.
- **When installing sub-gear snap ring, tap sub-gear snap ring into position on counter gear.**



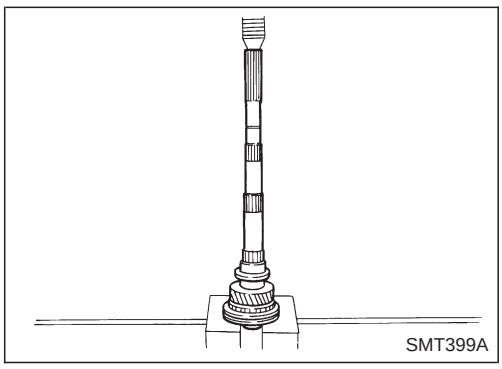
b. Install counter gear rear thrust bearing.



4. Install front side components on mainshaft.
a. Assemble 1st & 2nd synchronizer.

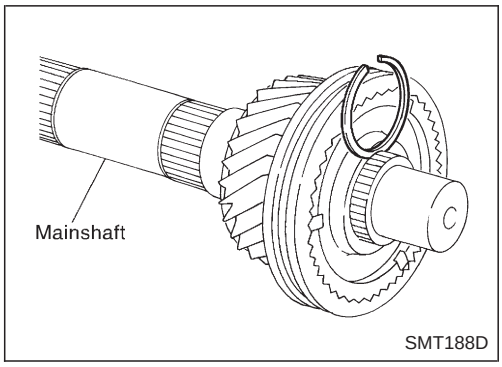


b. Assemble 3rd & 4th synchronizer.

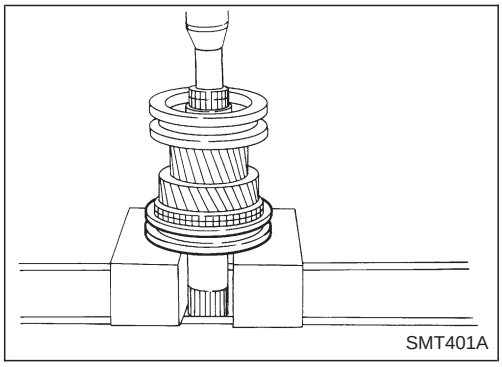


c. Press on 3rd & 4th synchronizer assembly together with 3rd main gear and 3rd gear needle bearing.
- **Pay attention to the direction of synchronizer assembly.**

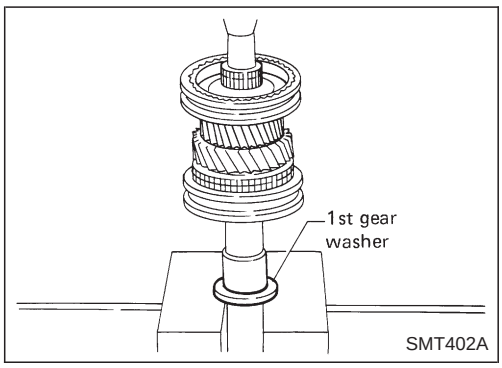
Gear Components (Cont'd)



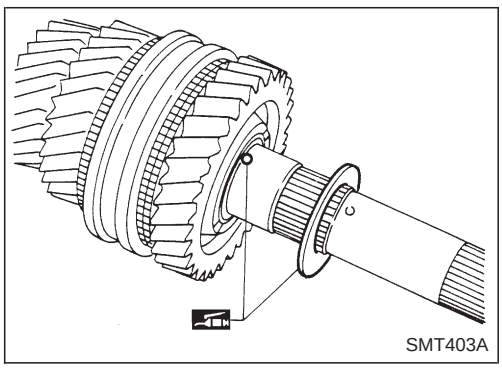
d. Select proper snap ring to minimize clearance of groove.
Allowable clearance of groove:
0 - 0.1 mm (0 - 0.004 in)
Mainshaft front snap ring:
Refer to SDS, MT-61.
e. Install selected snap ring on mainshaft.



f. Press on 1st & 2nd synchronizer assembly together with 2nd main gear and 2nd gear needle bearing.

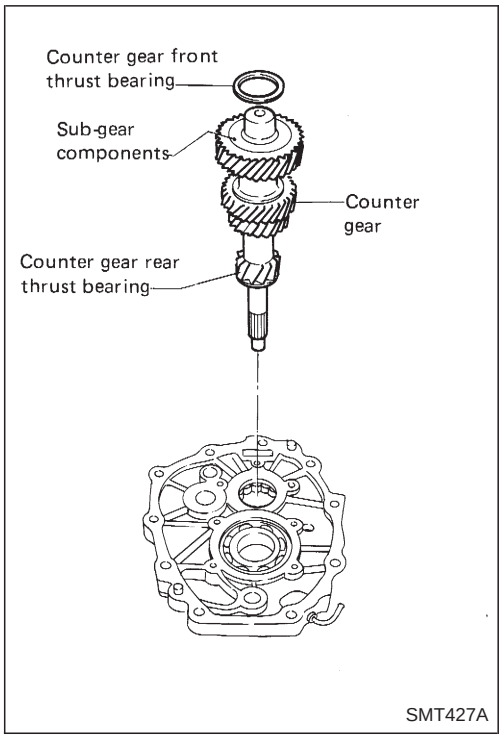


g. Press on 1st gear bushing using 1st gear washer.
h. Install 1st main gear and needle bearing.



i. Install steel ball and 1st gear washer.
- **Apply multi-purpose grease to steel ball and 1st gear washer before installing.**

Gear Components (Cont'd)

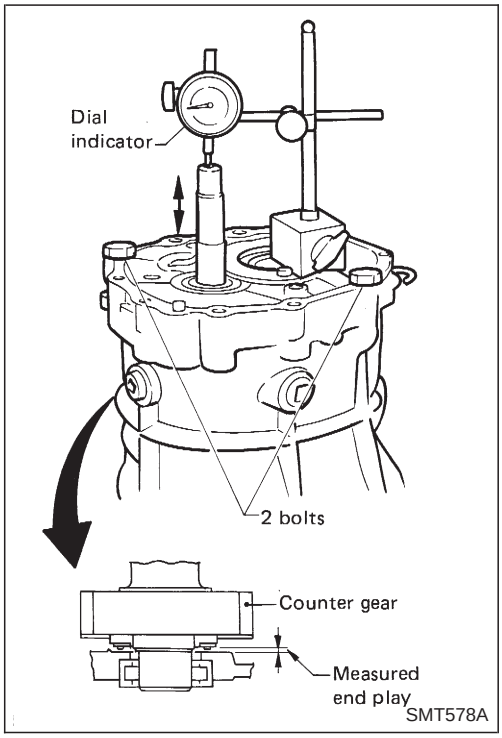


5. Select proper counter gear front bearing shim when replacing transmission case, counter gear, counter gear front or rear thrust bearing, or sub-gear components.

a. Install counter gear with sub-gear components, counter gear front and rear thrust bearing on adapter plate.

- **Do not install counter gear front bearing shim at this time.**

b. Place adapter plate and counter gear assembly in transmission case (case inverted).

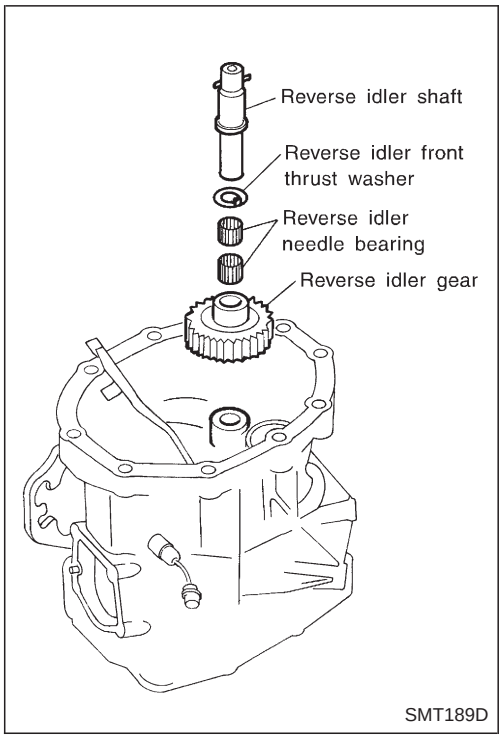


c. Tighten adapter plate to transmission case using 2 bolts.
d. Place dial indicator on rear end of counter gear.
e. Move counter gear up and down and measure dial indicator deflection.
f. Select proper shim using table below as a guide.

Allowable counter gear end play:
0.10 - 0.26 mm (0.0039 - 0.0102 in)

Table for selecting proper counter gear front bearing shim:
Refer to SDS, MT-62.

Gear Components (Cont'd)



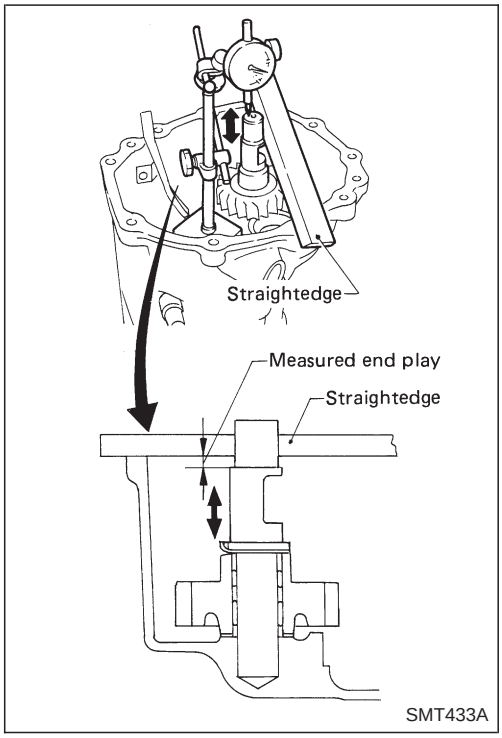
6. Select proper reverse idler rear thrust washer when replacing OD gear case, reverse idler gear, reverse idler shaft or reverse idler front thrust washer.

a. Install sub-gear, sub-gear spring, sub-gear bracket, snap ring and ball to reverse idler gear.

Refer to gear components, MT-36.

b. Install reverse idler gear, reverse idler needle bearings and reverse idler shaft into OD gear case.

- **Do not install reverse idler rear thrust washer at this time.**



c. Place dial indicator on front end of reverse idler shaft.

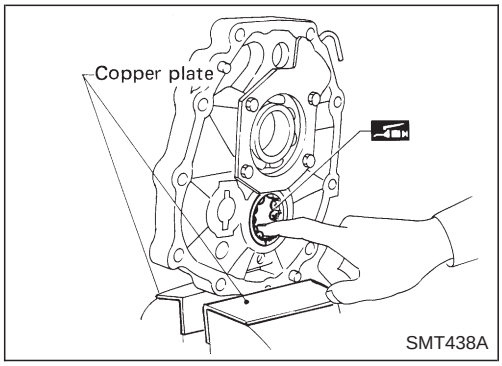
d. Put straightedge on front surface of OD gear case as a stopper for reverse idler shaft.

e. Move reverse idler shaft up and down and measure reverse idler gear end play.

Reverse idler gear end play:
0.30 - 0.53 mm (0.0118 - 0.0209 in)

f. If not within specification, replace reverse idler rear thrust washer with the other (A or B) and check again.

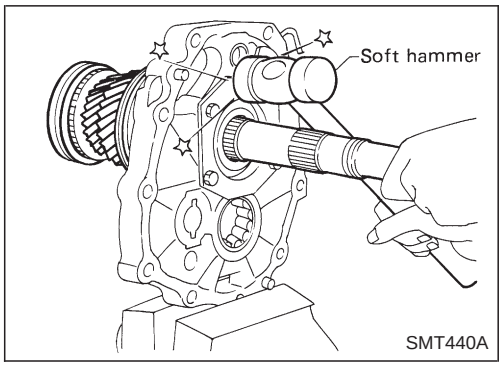
Reverse idler rear thrust washer:
Refer to SDS, MT-62.



7. Install mainshaft and counter gear on adapter plate and main drive gear on mainshaft.

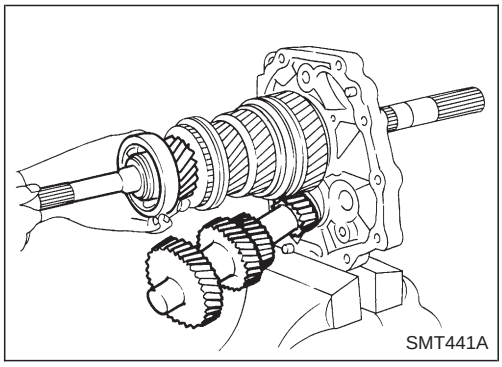
a. Mount adapter plate on vise and apply multi-purpose grease to counter gear rear bearing.

Gear Components (Cont'd)

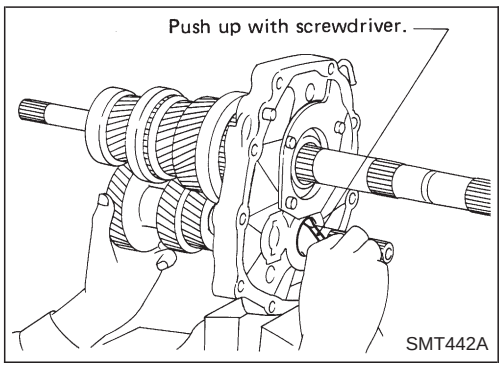


b. Install mainshaft a little on mainshaft front bearing.

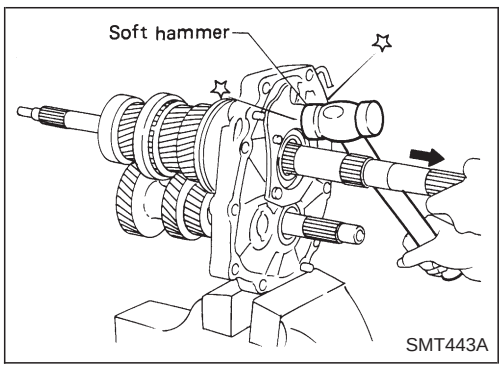
- **To allow for installation of counter gear, do not install mainshaft completely.**



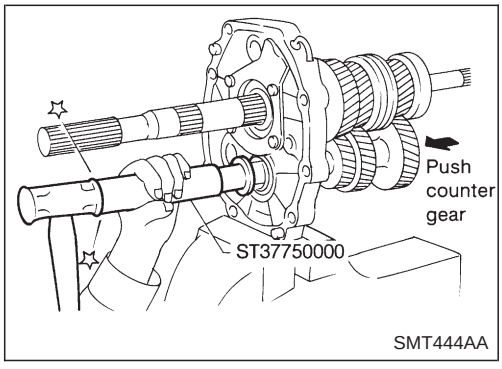
c. Install counter gear on counter gear rear bearing and install main drive gear, pilot bearing and spacer on mainshaft.



- **When installing counter gear into counter gear rear bearing, push up on upper roller of counter gear rear bearing with screwdriver.**

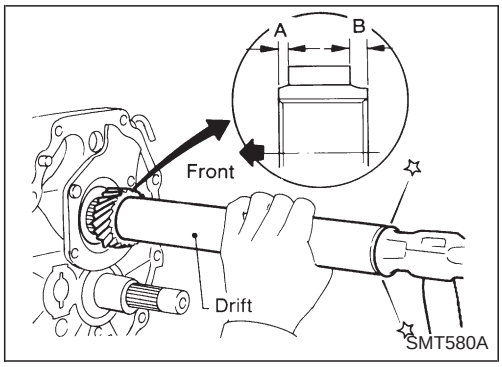


d. Install mainshaft and counter gear completely by tapping rear side of adapter plate and pulling mainshaft.



8. Install rear side components on mainshaft and counter gear.
a. Install OD gear bushing while pushing on the front of counter gear.

Gear Components (Cont'd)

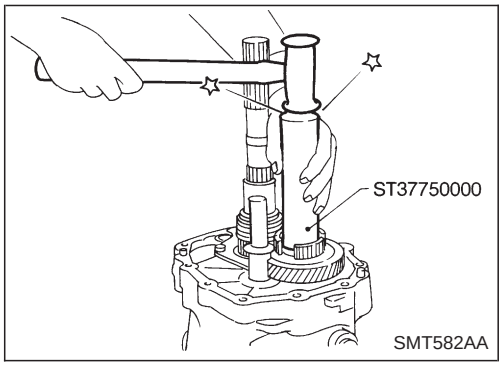


b. Install OD main gear.

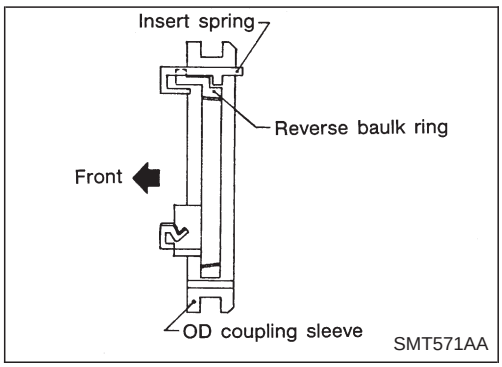
- **Pay attention to direction of OD main gear. (B is wider than A as shown at left.)**

c. Install adapter plate with gear assembly onto transmission case.

d. Install OD gear needle bearing and then install OD counter gear and reverse idler shaft.

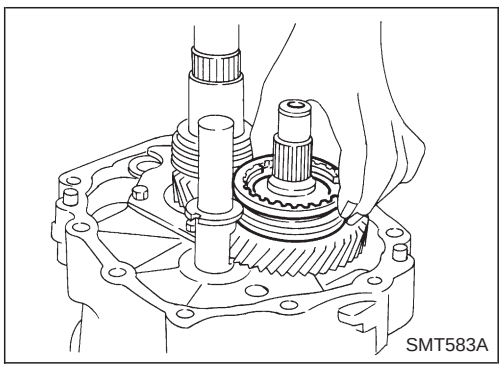


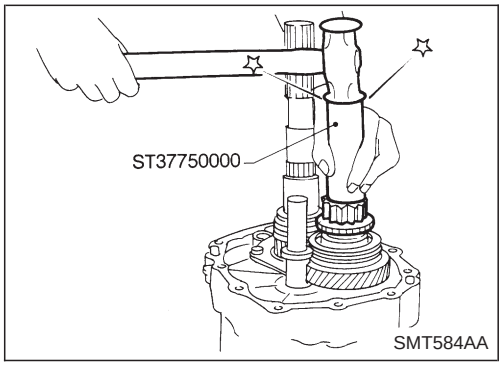
e. Install reverse cone.



f. Install insert springs and reverse baulk ring on OD coupling sleeve. Then install them and OD baulk ring on OD counter gear.

- **Pay attention to direction of OD coupling sleeve.**

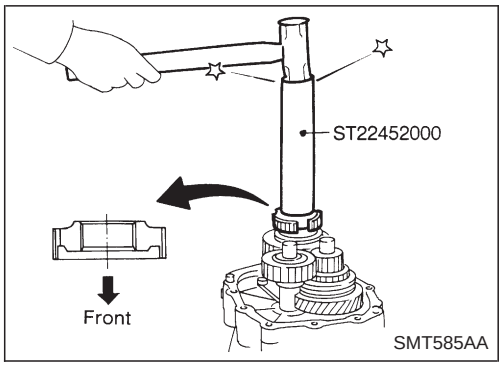




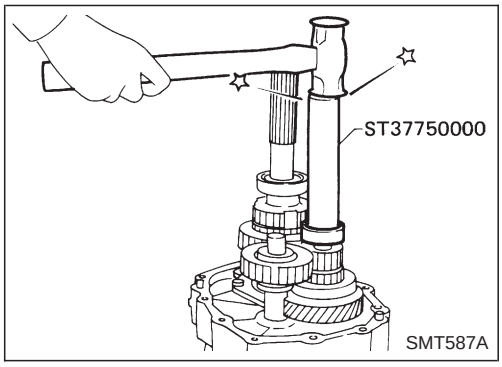
g. Install reverse counter gear.

h. Install reverse gear needle bearing and then install reverse main gear, reverse idler gear and reverse idler thrust washers.

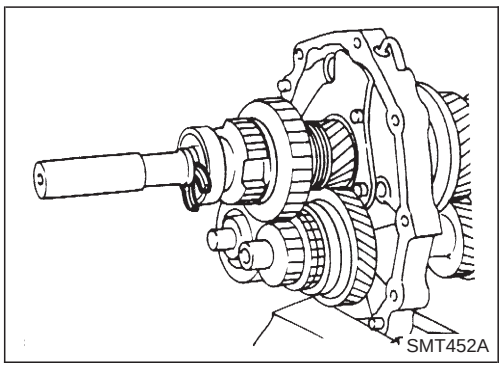
Gear Components (Cont'd)



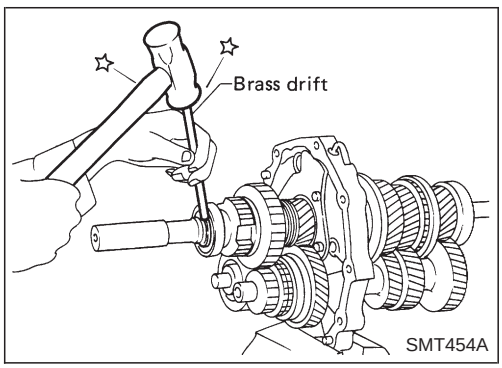
i. Install reverse hub.
- **Pay attention to its direction.**



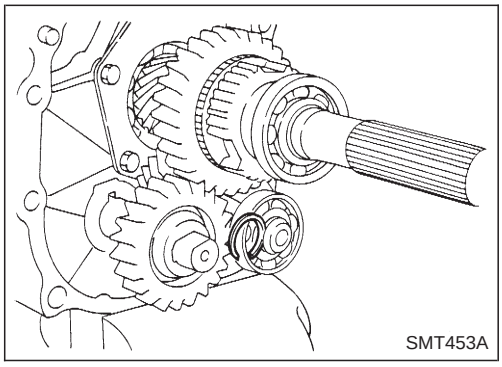
j. Install counter gear rear end bearing.
k. Separate adapter plate from transmission case and mount adapter plate on vice again.



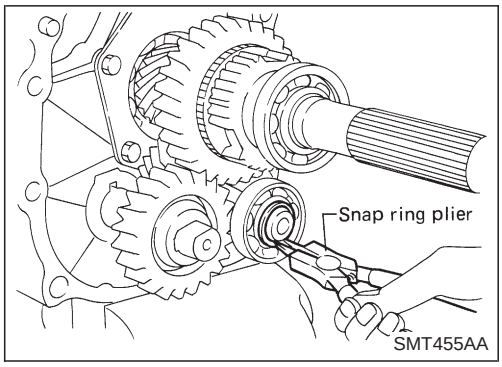
l. Select proper mainshaft C-ring to minimize clearance of groove.
Allowable clearance of groove:
0 - 0.1 mm (0 - 0.004 in)
Mainshaft C-ring:
Refer to SDS, MT-62.



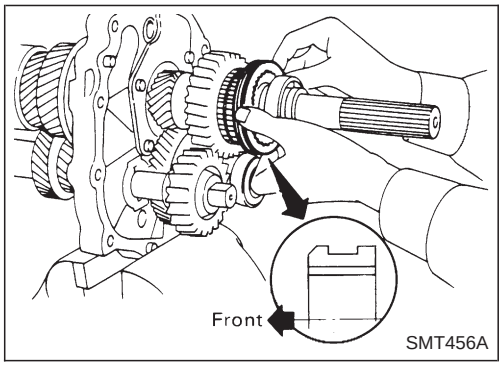
m. Install selected C-ring, C-ring holder and mainshaft rear snap ring.



Gear Components (Cont'd)



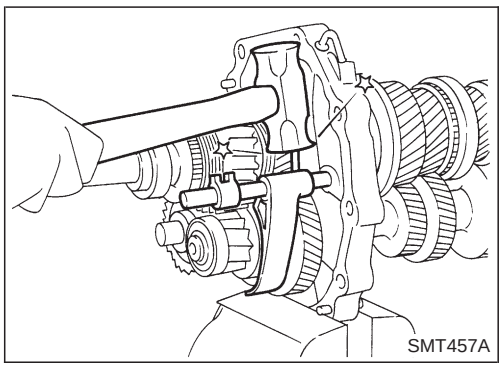
n. Install spacer and then select proper counter gear rear snap ring to minimize clearance of groove.
Allowable clearance of groove:
0 - 0.1 mm (0 - 0.004 in)
Counter gear rear snap ring:
Refer to SDS, MT-62.
o. Install selected counter gear rear snap ring.



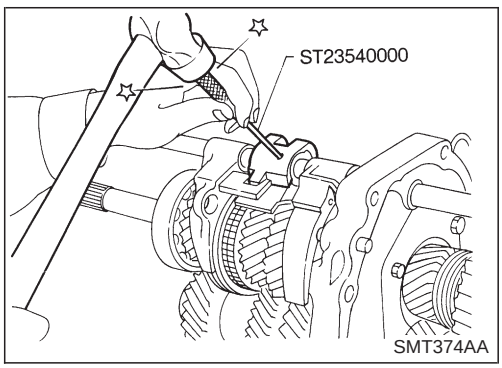
p. Install reverse coupling sleeve.
- **Pay attention to its direction.**

q. Measure each gear end play as a final check. Refer to SDS, MT-61.

Shift Control Components

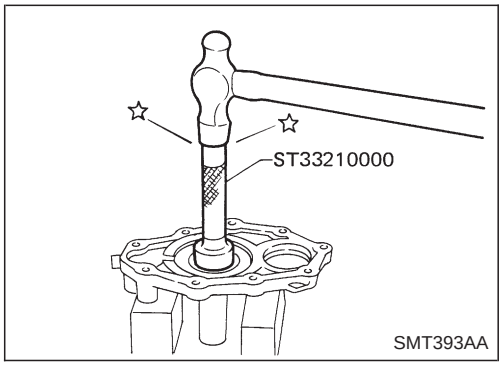


1. Install OD fork rod and OD shift fork. Then install retaining pin into OD shift fork.
2. Install 1st & 2nd, 3rd & 4th and reverse shift fork onto coupling sleeve.



3. Install striking rod into hole of shift forks, striking lever and interlock and then install retaining pin into striking lever.
- **Make sure that striking rod moves smoothly.**

Case Components

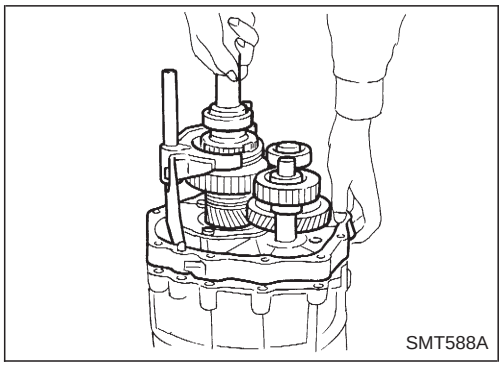


1. Install front cover oil seal.
- **Apply multi-purpose grease to seal lip.**

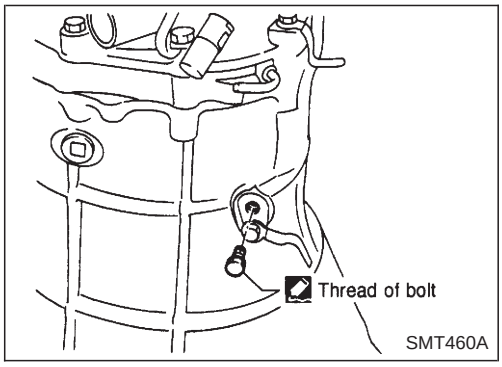
2. Install selected counter gear front bearing shim onto transmission case.
- **Apply multi-purpose grease.**

3. Apply sealant to mating surface of transmission case.

Case Components (Cont'd)

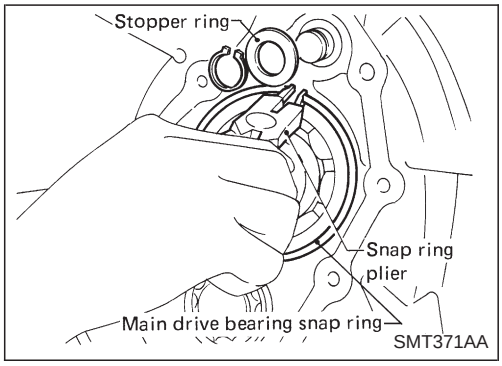

SMT588A

4. Install gear assembly onto transmission case.
5. Install check spring and check ball into interlock stopper.
- **Apply multi-purpose grease to check ball.**



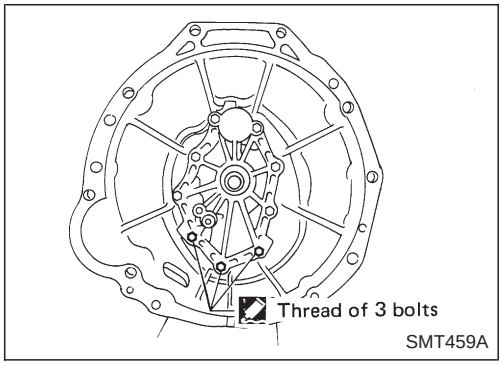
SMT460A

6. Install interlock stopper assembly and then tighten check ball plug.
- **Apply sealant to thread of check ball plug.**



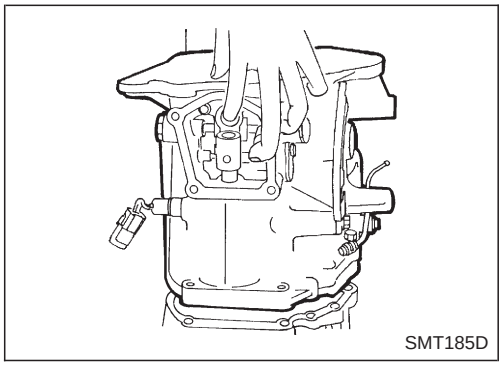
SMT371AA

7. Install stopper ring and main drive bearing snap ring.



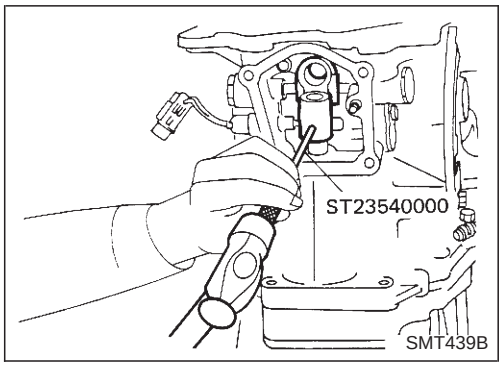
SMT459A

8. Install front cover and gasket.
- **Apply sealant to thread of 3 bolts shown left.**
9. Apply sealant to mating surface of adapter plate.

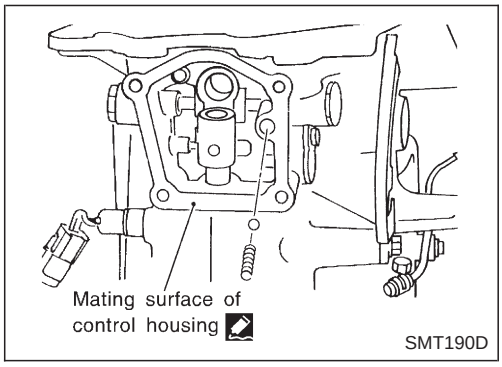

SMT185D

10. Install OD gear case together with striking arm.

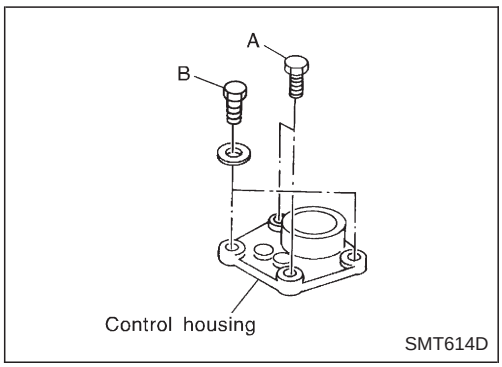
Case Components (Cont'd)



11. Install retaining pin into striking arm.



12. Install return spring and check ball and then install control housing.
- **Apply sealant to mating surface of OD gear case.**



13. Tighten control housing bolts.
    Bolt head size:
    A bolts 12 mm (0.47 in)
    B bolts 13 mm (0.51 in)
    Tightening torque:
    Refer to Shift Control Components, MT-38.

General Specifications

Destination	Australia and Europe	Europe	Australia, Europe and General areas
Applied model	2WD		4WD
	KA24E	TD25	KA24E
Transmission	FS5W71C		
Number of speed	5		
Shift pattern			
Synchromesh type	Warner		
Gear ratio			
1st	3.592	3.985	3.592
2nd	2.246	2.246	2.246
3rd	1.415	1.415	1.415
4th	1.000	1.000	1.000
OD	0.821	0.821	0.821
Reverse	3.657	3.657	3.657
Number of teeth			
Mainshaft			
Drive	21	21	21
1st	33	34	33
2nd	28	28	28
3rd	26	26	26
OD	21	21	21
Reverse	36	36	36
Countershaft			
Drive	32	32	32
1st	14	13	14
2nd	19	19	19
3rd	28	28	28
OD	39	39	39
Reverse	15	15	15
Reverse idler gear	21		21
Oil capacity ℓ (Imp pt)	2.0 (3-1/2)		4.9 (8-5/8)
Remarks	Reverse synchronizer 2nd & 3rd double baulk ring type synchronizer (TD25 engine model)		

Inspection and Adjustment

GEAR END PLAY

Unit: mm (in)

1st gear	0.31 - 0.41 (0.0122 - 0.0161)
2nd gear	0.11 - 0.21 (0.0043 - 0.0083)
3rd gear	0.11 - 0.21 (0.0043 - 0.0083)
Overdrive gear	0.24 - 0.41 (0.0094 - 0.0161)

CLEARANCE BETWEEN BAULK RING AND GEAR

Unit: mm (in)

Standard	
1st & 2nd (2WD)	1.20 - 1.60 (0.0472 - 0.0630)
3rd & main drive	1.20 - 1.60 (0.0472 - 0.0630)
Overdrive	1.20 - 1.60 (0.0472 - 0.0630)
Reverse	1.10 - 1.55 (0.0433 - 0.0610)
Wear limit	
1st & 2nd (2WD)	0.80 (0.0315)
3rd & main drive	0.80 (0.0315)
Overdrive	0.80 (0.0315)
Reverse	0.70 (0.0276)

AVAILABLE SNAP RING

Main drive gear bearing snap ring

Allowable clearance	0 - 0.13 mm (0 - 0.0051 in)
Thickness mm (in)	Part number
1.87 (0.0736)	32204-78001
1.94 (0.0764)	32204-78002
2.01 (0.0791)	32204-78003

Mainshaft front snap ring

Allowable clearance	0 - 0.18 mm (0 - 0.0071 in)
Thickness mm (in)	Part number
2.4 (0.094)	32263-V5200
2.5 (0.098)	32263-V5201

Counter drive gear snap ring

Allowable clearance	0 - 0.18 mm (0 - 0.0071 in)
Thickness mm (in)	Part number
1.4 (0.055)	32215-E9000
1.5 (0.059)	32215-E9001
1.6 (0.063)	32215-E9002

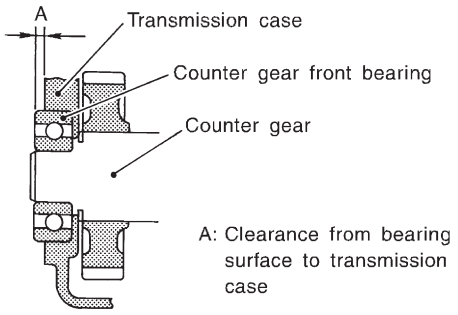
OD mainshaft bearing snap ring (2WD model)

Allowable clearance	0 - 0.14 mm (0 - 0.0055 in)
Thickness mm (in)	Part number
1.1 (0.043)	32228-20100
1.2 (0.047)	32228-20101
1.3 (0.051)	32228-20102
1.4 (0.055)	32228-20103

AVAILABLE SHIM

Counter gear front bearing shim

Unit: mm (in)



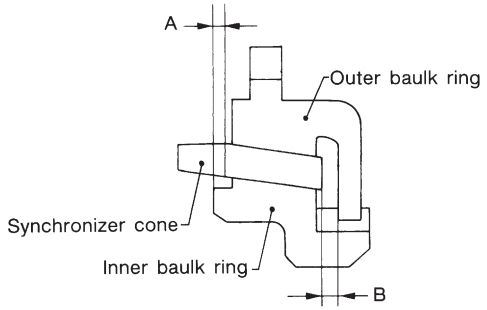
SMT205D

Allowable clearance	0 - 0.16 (0 - 0.0063)	
"A"	Thickness of shim	Part number
4.52 - 4.71 (0.1780 - 0.1854)	Not necessary	
4.42 - 4.51 (0.1740 - 0.1776)	0.1 (0.004)	32218-V5000
4.32 - 4.41 (0.1701 - 0.1736)	0.2 (0.008)	32218-V5001
4.22 - 4.31 (0.1661 - 0.1697)	0.3 (0.012)	32218-V5002
4.12 - 4.21 (0.1622 - 0.1657)	0.4 (0.016)	32218-V5003
4.02 - 4.11 (0.1583 - 0.1618)	0.5 (0.020)	32218-V5004
3.92 - 4.01 (0.1543 - 0.1579)	0.6 (0.024)	32218-V5005

Inspection and Adjustment (Cont'd)

2nd and 3rd baulk ring (TD25 engine model)

Unit: mm (in)



SMT733C

Dimension	Standard	Wear limit
A	0.7 - 0.9 (0.028 - 0.035)	0.2 (0.008)
B	0.6 - 1.1 (0.024 - 0.043)	

Inspection and Adjustment

GEAR END PLAY

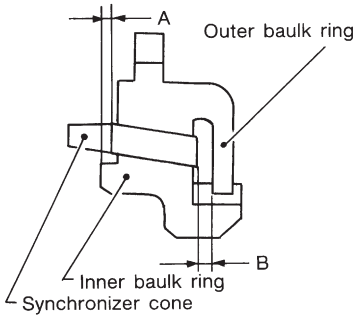
Gear	End play mm (in)
1st main gear	0.23 - 0.33 (0.0091 - 0.0130)
2nd main gear	0.23 - 0.33 (0.0091 - 0.0130)
3rd main gear	0.06 - 0.16 (0.0024 - 0.0063)
OD counter gear	0.23 - 0.33 (0.0091 - 0.0130)
Reverse main gear	0.33 - 0.43 (0.0130 - 0.0169)
Counter gear	0.10 - 0.25 (0.0039 - 0.0098)
Reverse idler gear	0.30 - 0.53 (0.0118 - 0.0209)

CLEARANCE BETWEEN BAULK RING AND GEAR

Unit: mm (in)

	Standard	Wear limit
1st	1.05 - 1.3 (0.0413 - 0.0512)	0.7 (0.028)
Main drive	1.05 - 1.3 (0.0413 - 0.0512)	
OD	1.05 - 1.3 (0.0413 - 0.0512)	

2nd and 3rd baulk ring

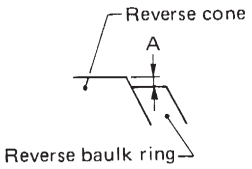


SMT742C

Unit: mm (in)

Dimension	Standard	Wear limit
"A"	0.7 - 0.9 (0.028 - 0.035)	0.2 (0.008)
"B"	0.6 - 1.1 (0.024 - 0.043)	

DISTANCE BETWEEN REAR SURFACE OF REVERSE CONE AND REVERSE BAULK RING



Unit: mm (in)

	Standard	Wear limit
Dimension "A"	−0.1 to 0.35 (−0.0039 to 0.0138)	0.7 (0.028)

AVAILABLE SNAP RING

Main drive gear snap ring

Allowable clearance	0 - 0.1 mm (0 - 0.004 in)
Thickness mm (in)	Part number
1.89 (0.0744)	32204-01G60
1.95 (0.0768)	32204-01G61
1.99 (0.0783)	32204-01G62
2.03 (0.0799)	32204-01G63
2.07 (0.0815)	32204-01G64
2.11 (0.0831)	32204-01G65

Mainshaft front snap ring

Allowable clearance	0 - 0.1 mm (0 - 0.004 in)
Thickness mm (in)	Part number
1.99 (0.0783)	32204-01G62
2.03 (0.0799)	32204-01G63
2.07 (0.0815)	32204-01G64
2.11 (0.0831)	32204-01G65
2.15 (0.0846)	32204-01G66
2.19 (0.0862)	32204-01G67

Counter gear rear snap ring

Allowable clearance	0 - 0.1 mm (0 - 0.004 in)
Thickness mm (in)	Part number
1.32 (0.0520)	32236-01G00
1.38 (0.0543)	32236-01G01
1.44 (0.0567)	32236-01G02
1.50 (0.0591)	32236-01G03
1.56 (0.0614)	32236-01G04
1.62 (0.0638)	32236-01G05
1.68 (0.0661)	32236-01G06
1.74 (0.0685)	32236-01G07

AVAILABLE SHIM AND WASHER

Table for selecting proper counter gear front bearing shim

Allowable end play	0.10 - 0.26 mm (0.0039 - 0.0102 in)	
Dial indicator deflection mm (in)	Thickness of proper washer mm (in)	Part number
0.93 - 1.02 (0.0366 - 0.0402)	0.80 (0.0315)	32218-01G00
1.01 - 1.10 (0.0398 - 0.0433)	0.88 (0.0346)	32218-01G11
1.09 - 1.18 (0.0429 - 0.0465)	0.96 (0.0378)	32218-01G12
1.17 - 1.26 (0.0461 - 0.0496)	1.04 (0.0409)	32218-01G13
1.25 - 1.34 (0.0492 - 0.0528)	1.12 (0.0441)	32218-01G14
1.33 - 1.42 (0.0524 - 0.0559)	1.20 (0.0472)	32218-01G04
1.41 - 1.50 (0.0555 - 0.0591)	1.28 (0.0504)	32218-01G15
1.49 - 1.58 (0.0587 - 0.0622)	1.36 (0.0535)	32218-01G16
1.57 - 1.66 (0.0618 - 0.0654)	1.44 (0.0567)	32218-01G17

Reverse idler rear thrust washer

Allowable end play		0.30 - 0.53 mm (0.0118 - 0.0209 in)
	Thickness mm (in)	Part number
A	1.97 (0.0776)	32284-01G10
B	2.07 (0.0815)	32284-01G11

AVAILABLE C-RING

Mainshaft C-ring

Allowable clearance	0 - 0.1 mm (0 - 0.004 in)
Thickness mm (in)	Part number
2.63 (0.1035)	32348-01G15
2.70 (0.1063)	32348-01G00
2.77 (0.1091)	32348-01G01
2.84 (0.1118)	32348-01G02
2.91 (0.1146)	32348-01G03
2.98 (0.1173)	32348-01G04
3.05 (0.1201)	32348-01G05
3.12 (0.1228)	32348-01G06
3.19 (0.1256)	32348-01G07
3.26 (0.1283)	32348-01G08
3.33 (0.1311)	32348-01G09
3.40 (0.1339)	32348-01G10
3.47 (0.1366)	32348-01G11
3.54 (0.1394)	32348-01G12
3.61 (0.1421)	32348-01G13
3.68 (0.1449)	32348-01G14