

SECTION 2A

TRANSMISSION

GENERAL DESCRIPTION	2A — 150
TROUBLESHOOTING	2A — 156
ON-CAR SERVICE	2A — 157
Oil Check and Change	2A — 157
Gear Shift Control	2A — 158
DISASSEMBLY	2A — 159
Transmission Assembly	2A — 159
Transmission Disassembly	2A — 161
Input Shaft Assembly	2A — 164
Countershaft assembly	2A — 166
Inspection	2A — 170
Unit Assembly	2A — 172
TIGHTENING TORQUE	2A — 175
SPECIAL TOOLS	2A — 176

GENERAL DESCRIPTION

FUNCTION AND POWER TRANSFER PROCEDURE

Function

- a) It converts the rotating force from engine.
- b) It converts the rotating speed of engine.
- c) It permits idling during stopping.
- d) It permits reverse rotation.

Type

Sliding gear type

Constant mesh type(Dog clutch type)

Synchronized mesh type

<Sliding gear type>

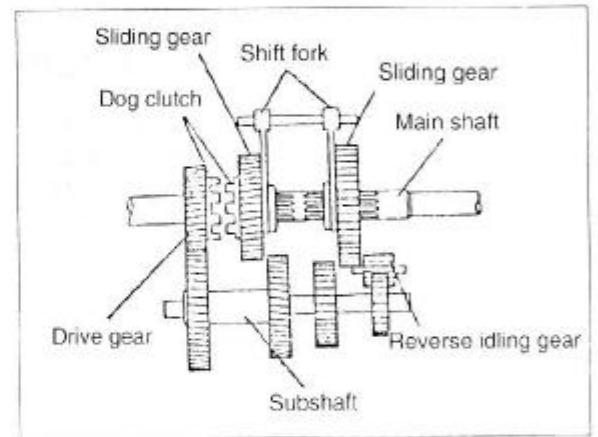


FIG. 2A — 1 SLIDING GEAR TYPE

<Constant mesh type>

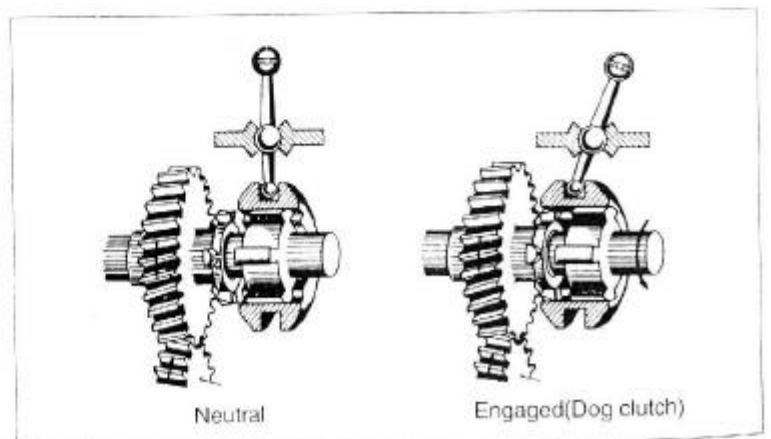


FIG. 2A — 2 CONSTANT MESH TYPE

<Synchronized mesh type>

- | | |
|--------------------------|---------------------|
| 1=Main shaft | 5=Sleeve gear |
| 2=Clutch gear(Step gear) | 6=Ball |
| 3=Shifting gear teeth | 7=Clutch hub |
| 4=Synchro cone | 8=Synchronizer ring |

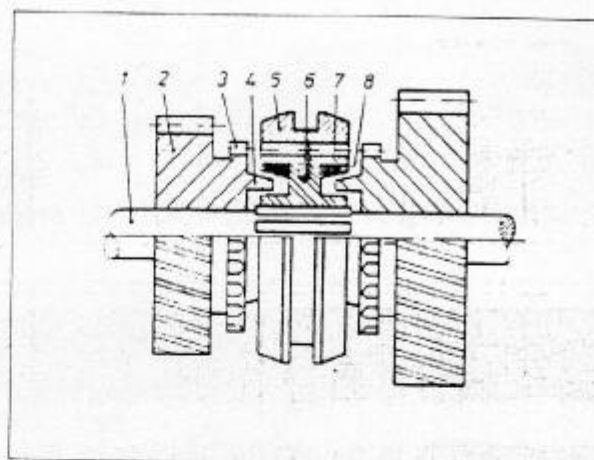


FIG. 2A — 3 SYNCHRONIZED MESH TYPE

Tico adopts the synchronized mesh type of 4 or 5 forward and 1 reverse speed and floor change type.

Gear ratio

	Gear ratio
1st speed	3.818
2nd speed	2.210
3rd speed	1.423
4th speed	0.971
5th speed	0.837
Reverse	3.583
Final reduction ratio	4.263

Bearing

	Type
Input shaft bearing	Ball bearing
Countershaft bearing	Taper roller bearing on both sides
Differential side bearing	Ball bearing

Speedometer Driving and Driven Gear

Weight is lessened using resin material.

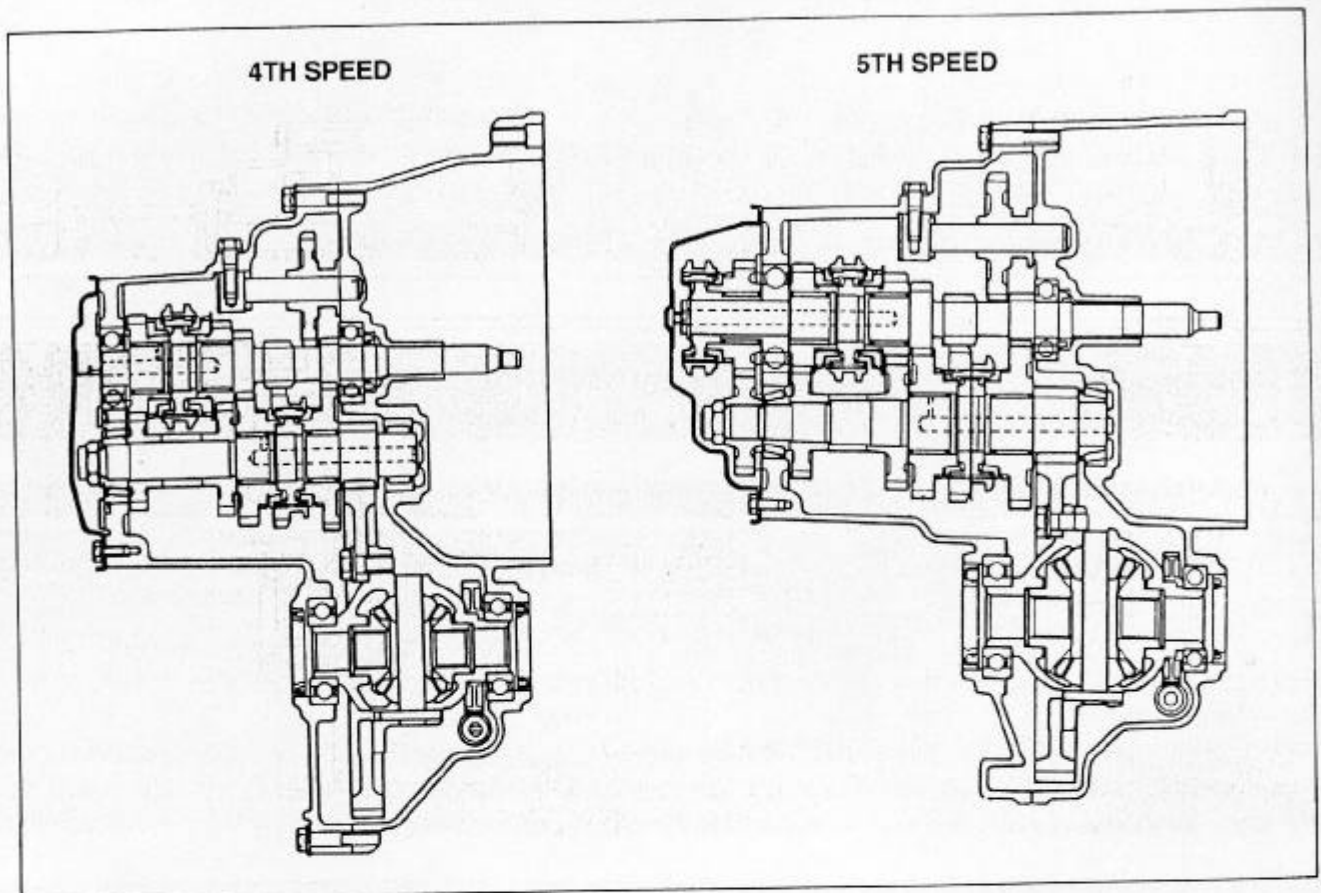


FIG. 2A — 4 SECTIONAL VIEW OF 4TH-SPEED AND 5TH-SPEED TRANSMISSIONS

GEAR SHIFT CONTROL(ROD TYPE)

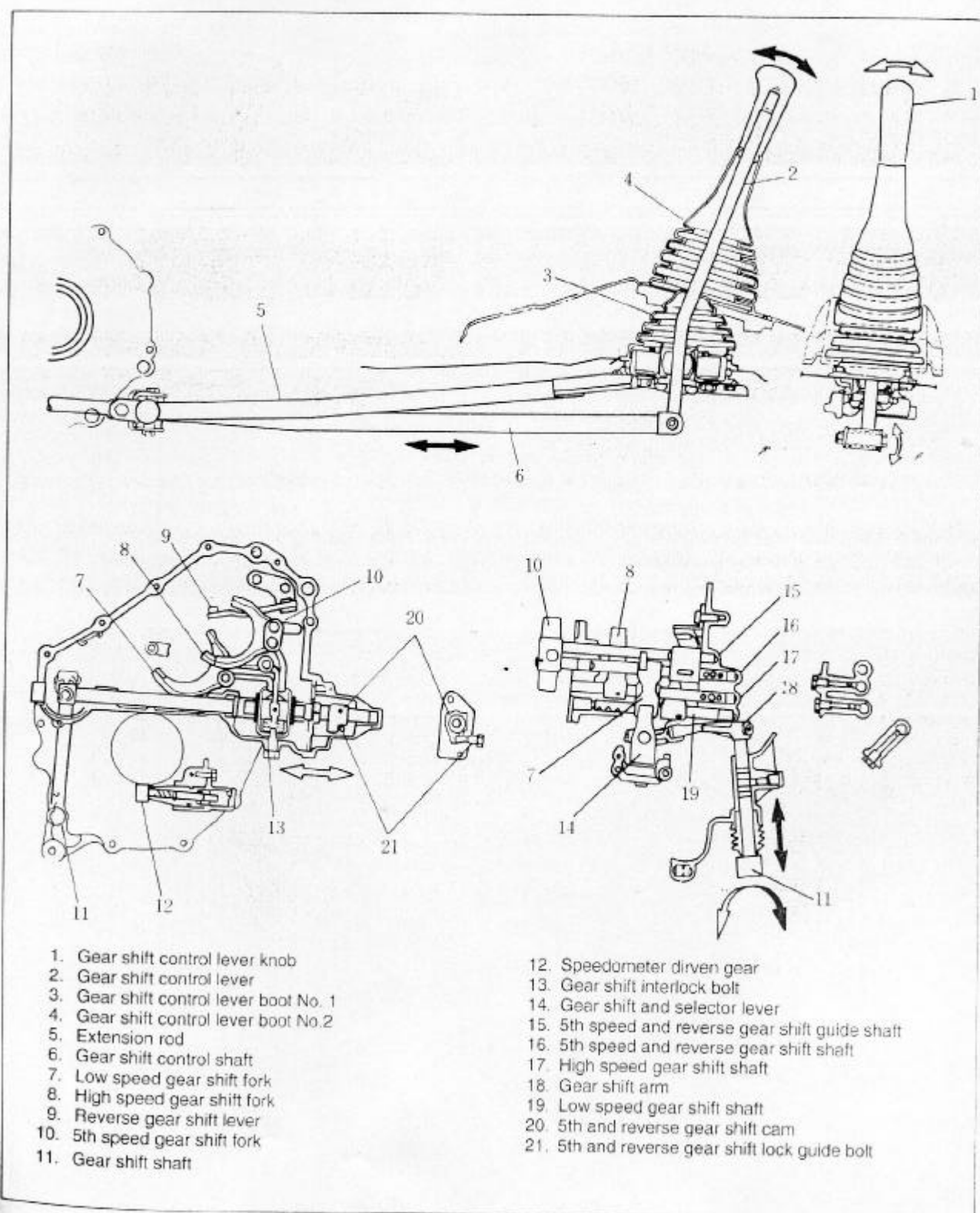


FIG. 2A — 5 GEAR SHIFT CONTROL

Reverse Gear Misshift Preventing Mechanism

It prevents the gear from directly being shifted from 5th to reverse.

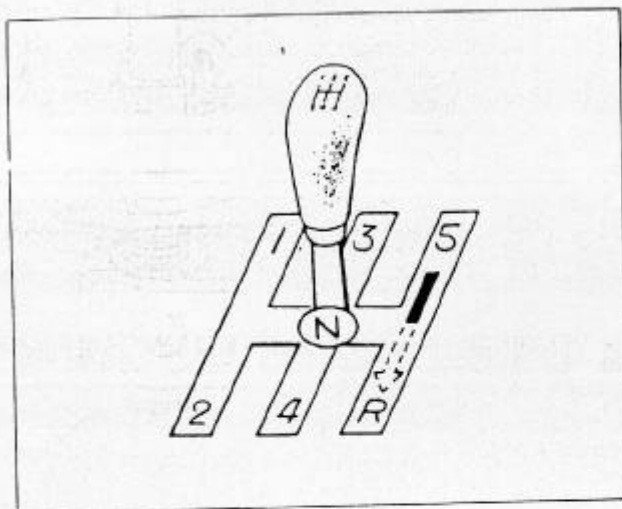


FIG. 2A — 6 GEAR SHIFTING POSITION

1. When shift lever is in neutral position of 3rd-4th, shift cam is below guide bolt that free movement is possible to right(3rd) or left (4th) direction

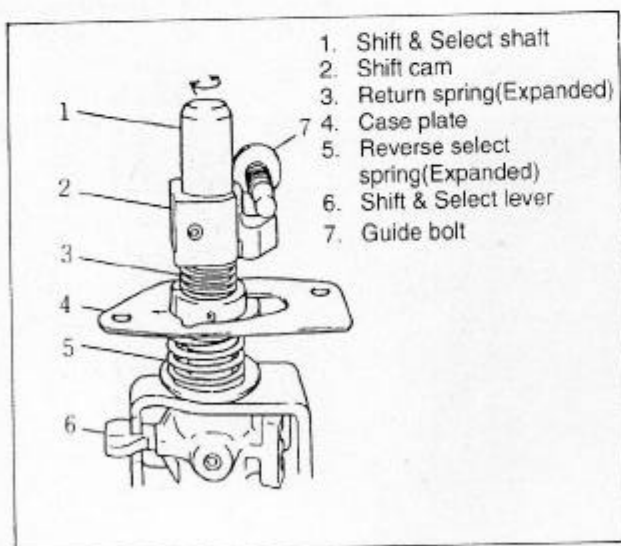


FIG. 2A — 7 NEUTRAL POSITION OF 3RD- 4TH

2. When shift lever moves to right from neutral, shift and select shaft move upwardly but shift cam compresses return spring because of interference of guide bolt.

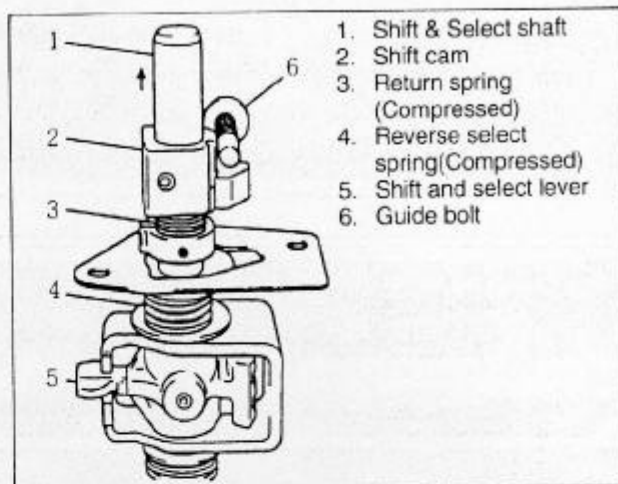


FIG. 2A — 8 NEUTRAL POSITION OF 5TH- REVERSE

3. In case of shifting to 5th gear, shift and select shaft rotates to right that shift cam apart from guide bolt and moves upwardly by returning spring. Therefore, shifting to reverse in this condition is impossible because of interference of guide bolt.

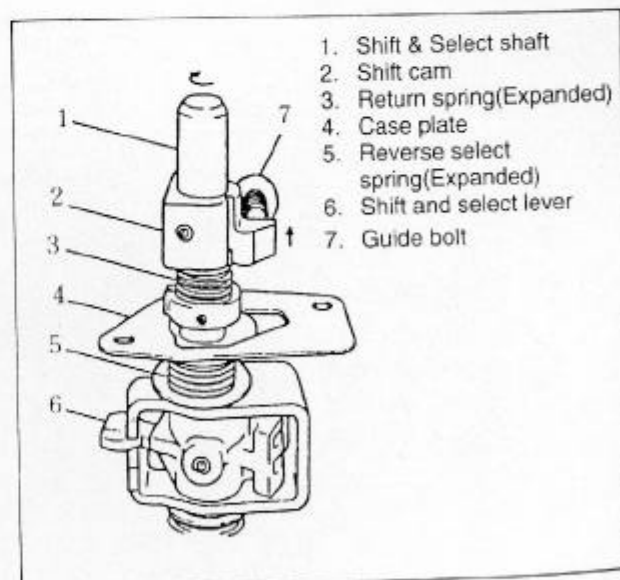


FIG. 2A — 9 5TH SHIFT

4. When shifting to reverse from neutral position between 5th and reverse, shift cam rotates to left and shifting is possible.

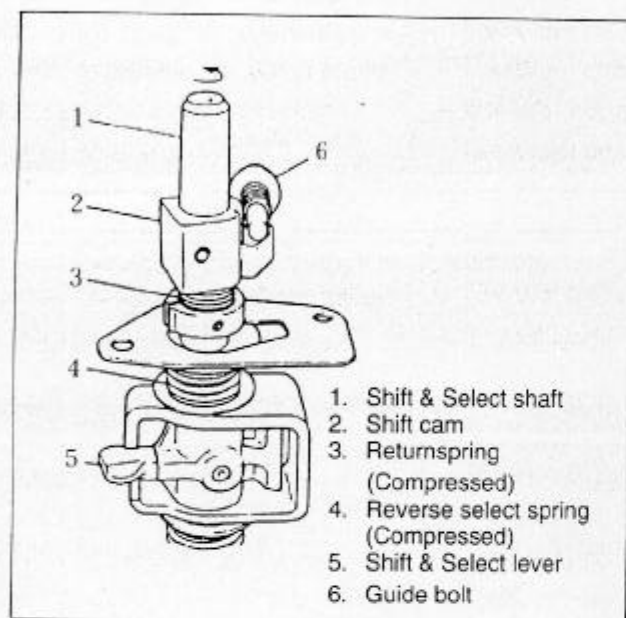


FIG. 2A — 10 REVERSE SHIFT

TROUBLESHOOTING

Condition	Probable Cause	Correction
Gear slipping out of mesh	<ul style="list-style-type: none"> • Worn shift fork shaft • Worn shift fork or synchronizer sleeve • Weak or damaged location springs • Worn bearings on input shaft or main shaft • Worn tooth on sleeve and gear • Looseness or missing of snap ring 	<ul style="list-style-type: none"> • Replace • Replace • Replace • Replace • Replace sleeve and gear • Replace
Gear catching	<ul style="list-style-type: none"> • Weak or damaged synchronizer snap ring • Bent or distorted shift shaft or shift fork 	<ul style="list-style-type: none"> • Replace • Replace
Hard shifting	<ul style="list-style-type: none"> • Improper clutch pedal free travel • Distorted or broken clutch disk • Damaged clutch pressure plate • Worn synchronizer ring • Worn on sleeve and gear chamfer • Bent or distorted shift shaft 	<ul style="list-style-type: none"> • Adjust • Replace • Replace clutch cover • Replace • Replace sleeve or gear • Replace
Noise	<ul style="list-style-type: none"> • Inadequate or insufficient lubricant • Damaged or worn bearing • Damaged or worn gear • Damaged or worn synchronizer ring • Damaged or worn sleeve and gear chamfer 	<ul style="list-style-type: none"> • Replace or supplement • Replace • Replace • Replace • Replace