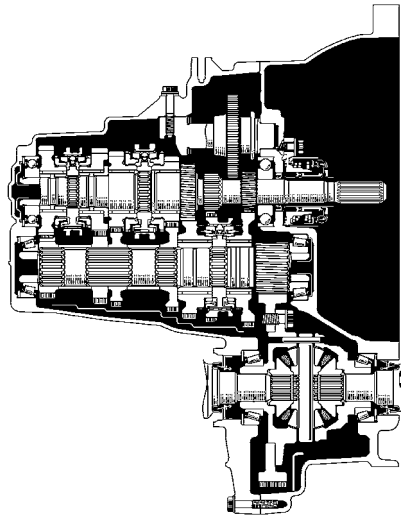
■EC67 MANUAL TRANSAXLE

1. General

The EC67 manual transaxle is a newly developed 6-speed manual transaxle.
The following items are used to improve the torque transmission efficiency and achieve excellent shift feeling.

Improvement of Torque Transmission Efficiency	● Low friction bearings are used. ● An oil separator is used.
Excellent Shift Feeling	● The shift mechanism has been optimized. ● A pre-synchronizing system is used for reverse. ● A 2-step sleeve chamfer structure is used for transmission hub sleeve No. 2 (synchromesh mechanism for the 3rd and 4th gears).



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EC67 Manual Transaxle

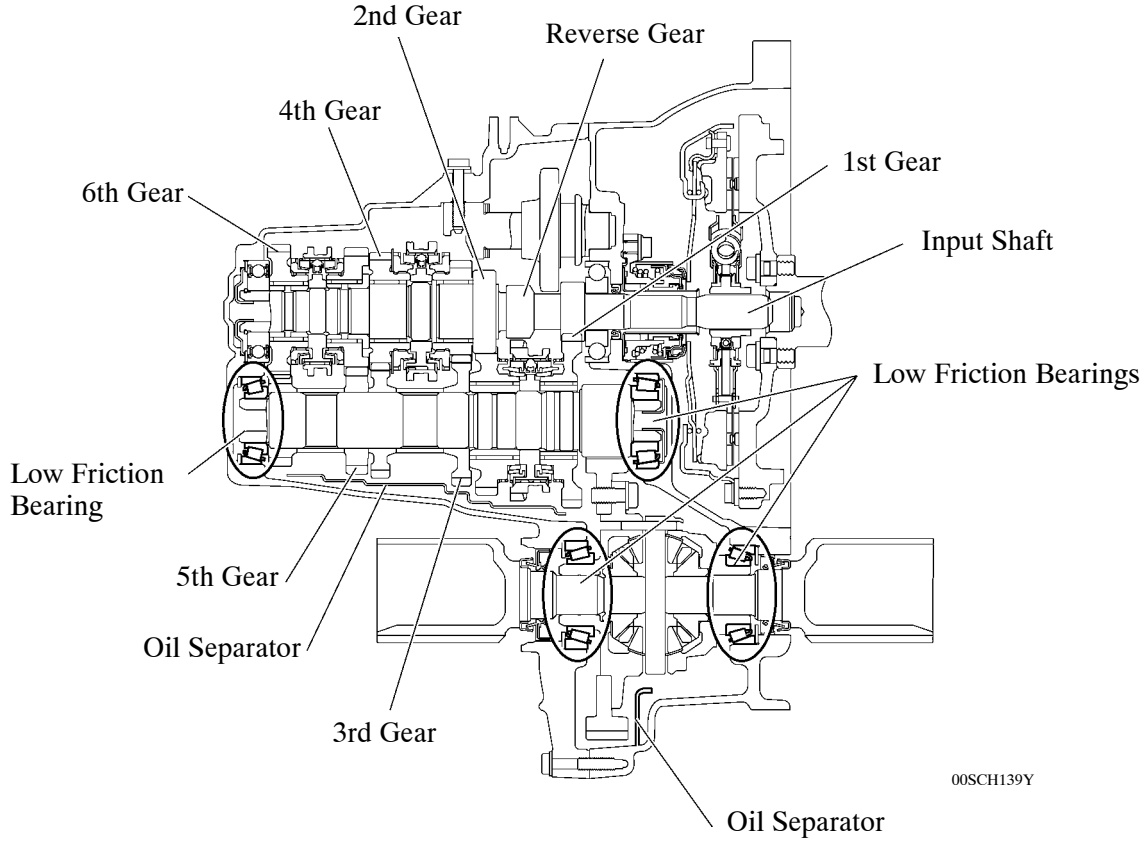
▶ Specifications ◀

Model		New	Previous
Transaxle Type		EC67	C56
Engine Type		2ZR-FE	←
Gear Ratio	1st	3.214	3.166
	2nd	1.913	1.904
	3rd	1.392	1.392
	4th	1.029	1.031
	5th	0.875	0.815
	6th	0.700	—
	Reverse	3.333	3.250
Differential Gear Ratio		4.294	4.312
Oil Capacity	Liters (US qts, Imp. qts)	2.4 (2.5, 2.1)	1.9 (2.0, 1.7)
Oil Viscosity		SAE 75W	←
Oil Grade		API GL-4	←
Weight (Reference)	kg (lb)	42.5 (93.5)	37.5 (82.5)

2. Construction

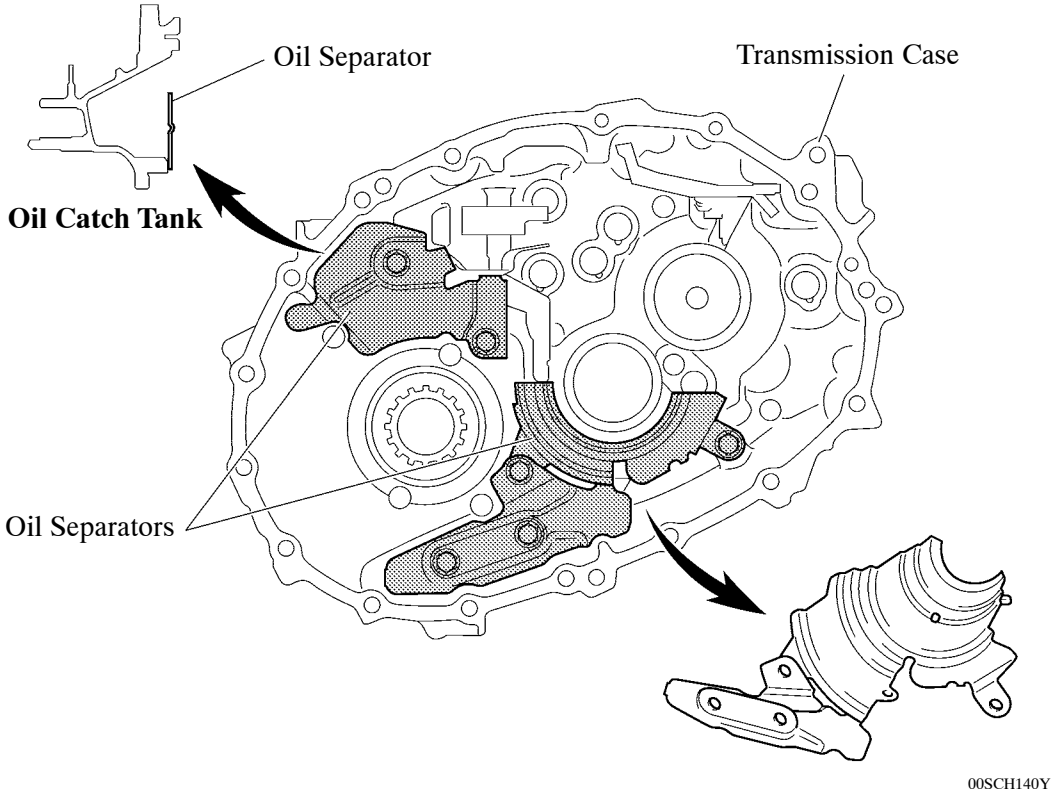
General

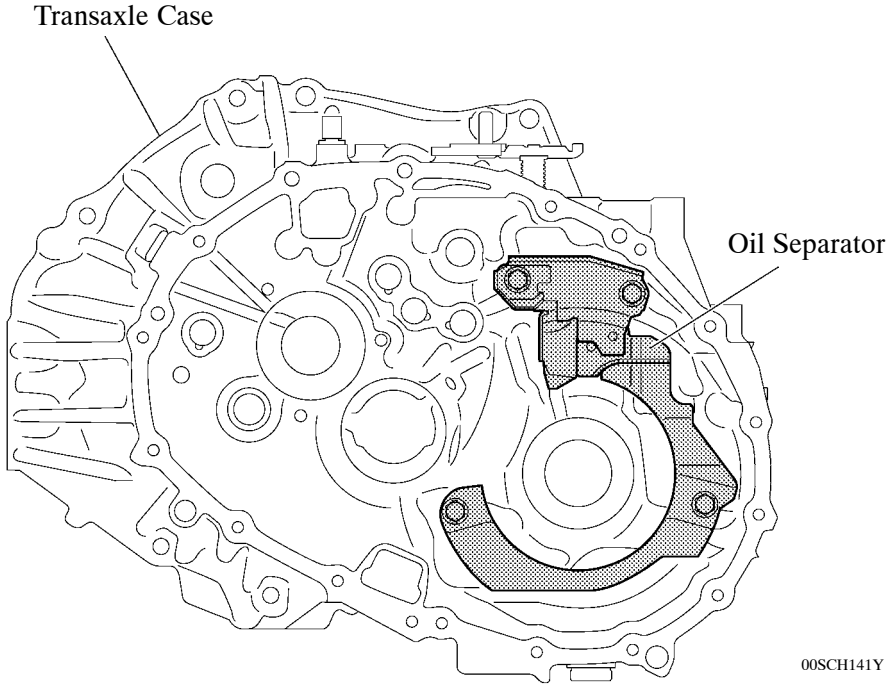
- Low friction bearings are used on the output shaft and differential portion.
- An oil separator is located in the outside gear surroundings and differential ring gear side.
- A triple-cone type synchromesh mechanism is used for the 1st and 2nd gears.
- A single-cone type synchromesh mechanism is used for the 3rd, 4th, 5th, 6th and reverse gears.



Oil Separator

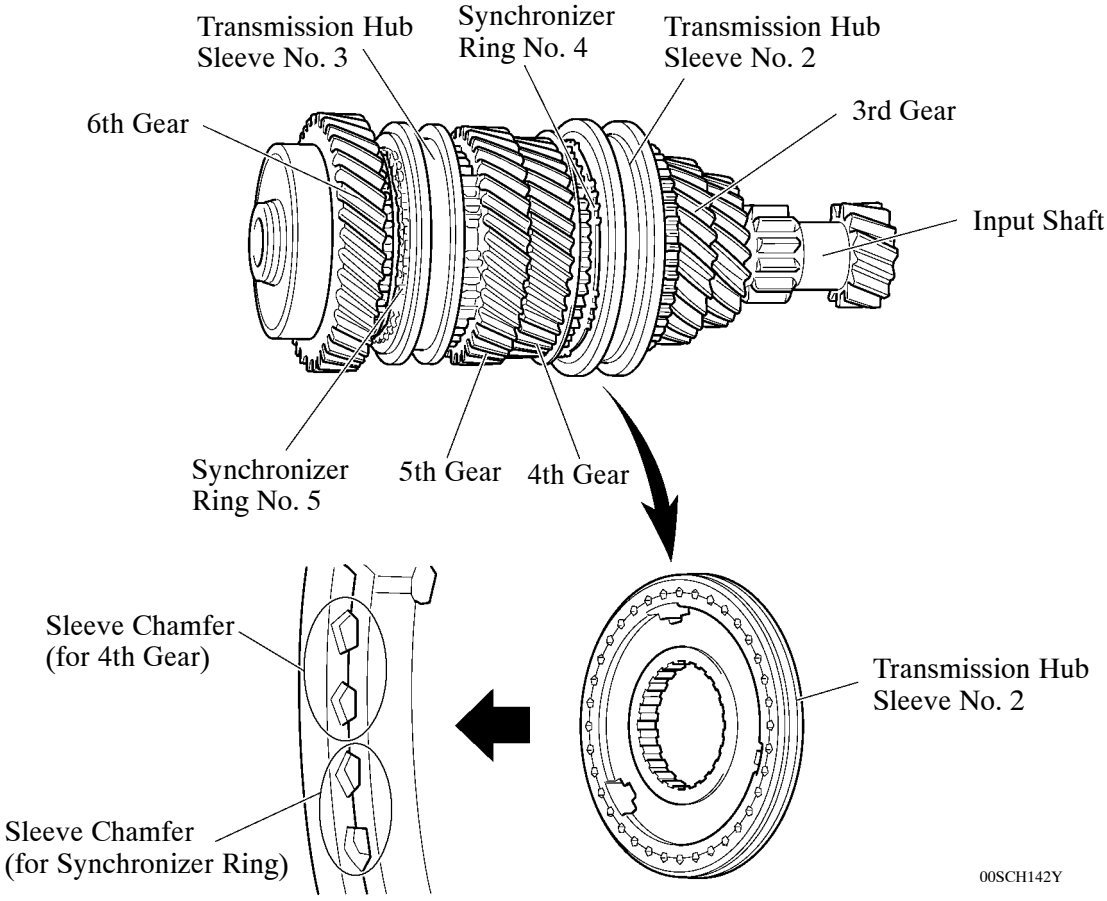
- The oil separator prevents the oil in the sump from being directly mixed by the output gears and differential ring gear.
- An oil catch tank is formed in the space between the transmission case and the oil separator located in the upper area of the differential ring gear side, thereby reducing energy losses caused by oil mixing.



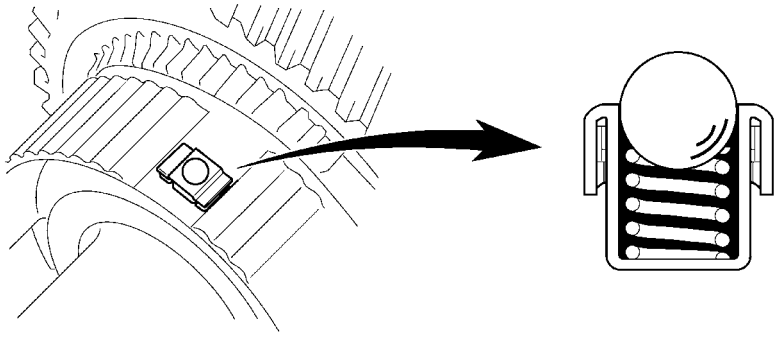


Synchromesh Mechanism

- The transmission hub sleeve No. 2 has a 2-step sleeve chamfer structure. This reduces the amount of time needed for gears to engage after synchronizing, thereby improving shift feeling.



- The ball and spring in the synchromesh shifting key have been combined into one unit, thus ensuring the stable position of the synchromesh shifting and improving shift feeling.



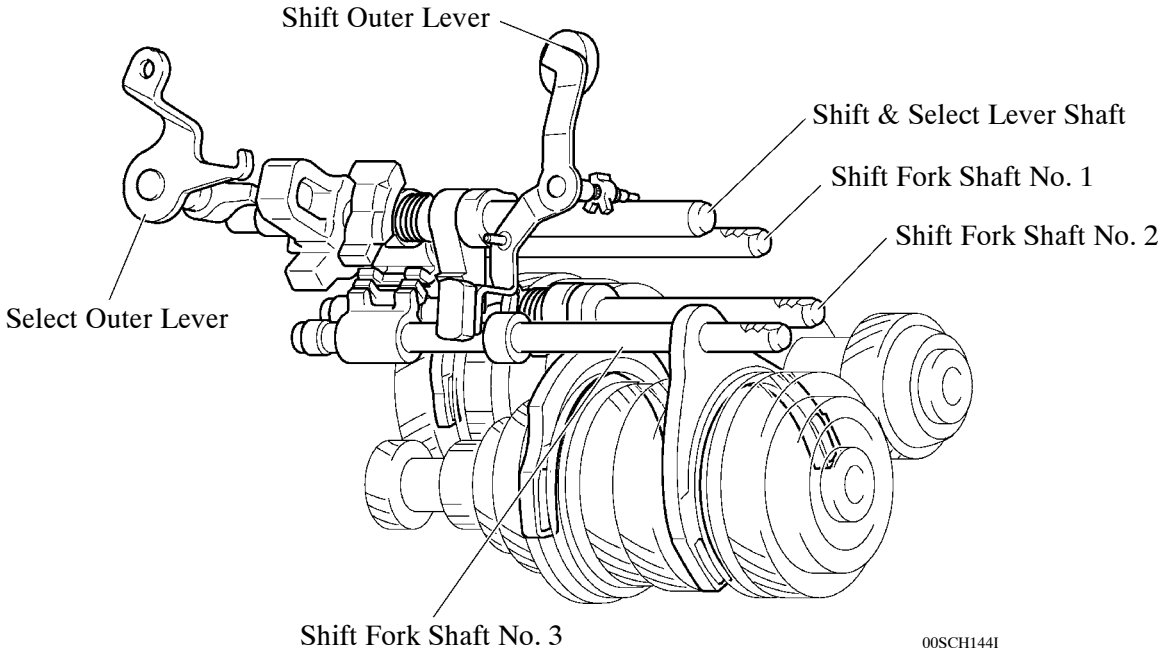
Synchromesh Mechanism (for 1st & 2nd Gears)

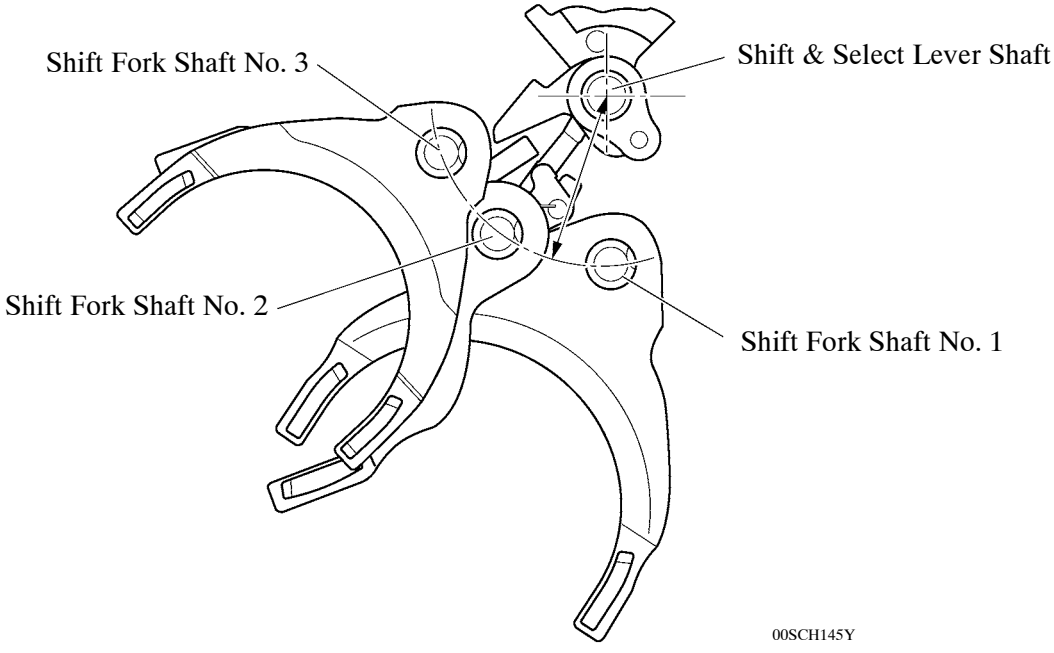
Synchromesh Shifting Key

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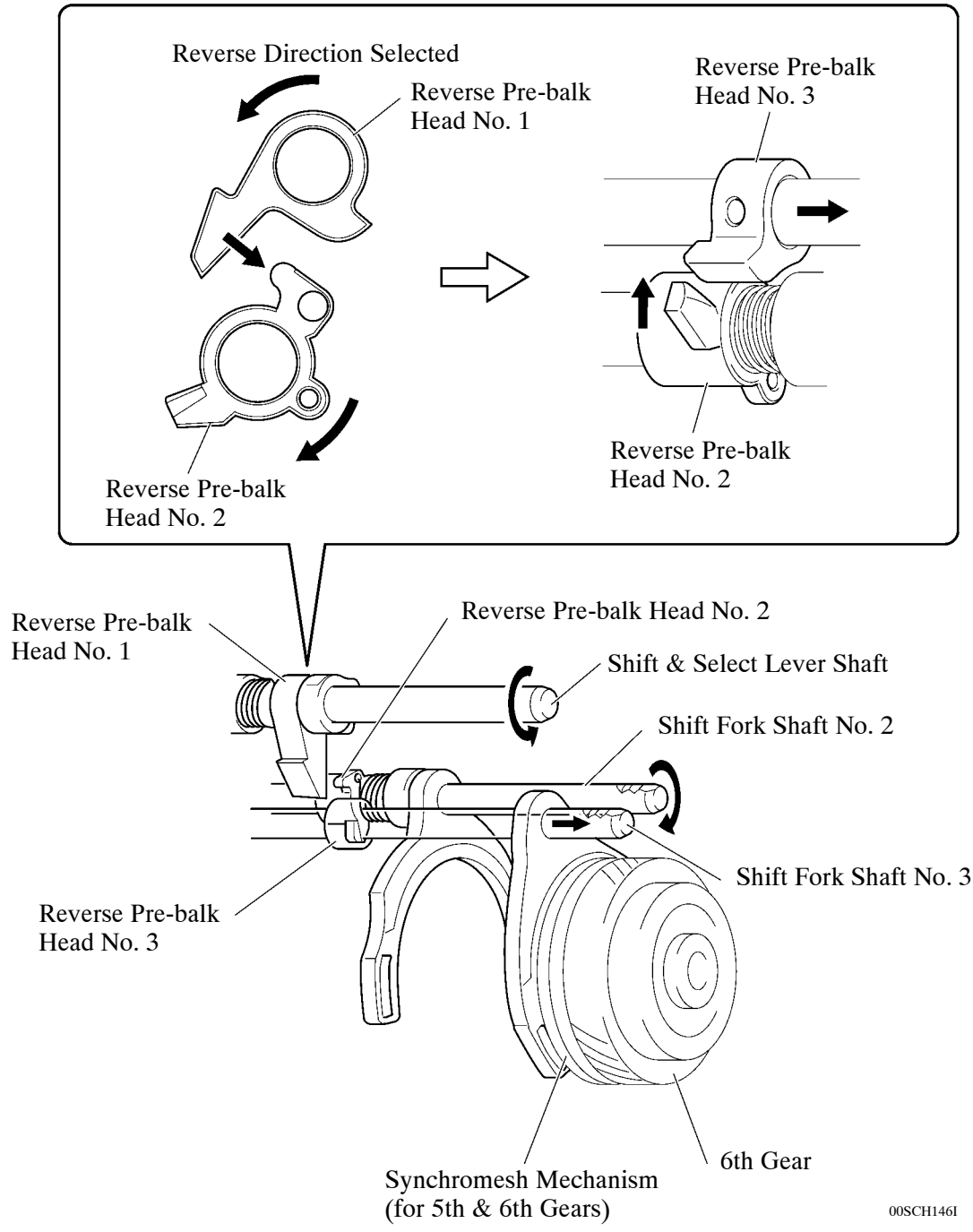
Shift Mechanism

- The shift mechanism consists of a shift outer lever, a select outer lever, a shift & select lever shaft, 3 shift forks, a reverse shift arm bracket assembly, and a reverse shift fork.
- The distances between the shift & select lever shaft and each shift fork shaft, and the distance between the shift fork and shift fork shaft have been shortened. This reduces sliding resistance, thereby improving shift feeling.
- The shape of the shift fork has been made symmetrical to improve shift feeling.



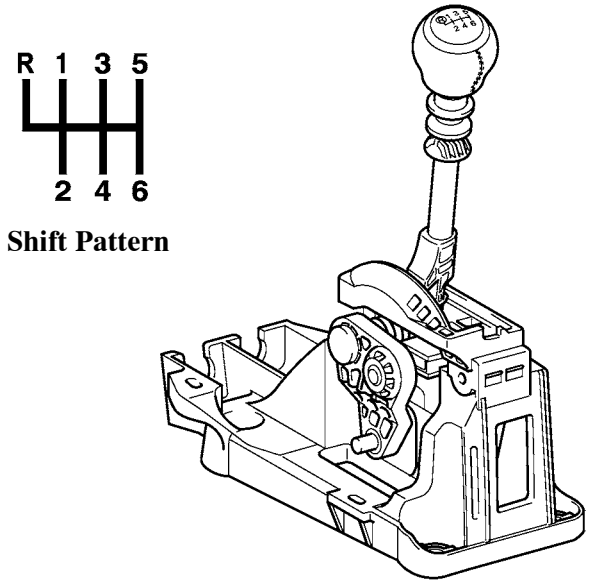


- A pre-synchronizing system is used. While reverse is selected, the synchromesh mechanism of the 6th gear is activated, thereby preventing gear noise when shifting into reverse gear.



3. Shift Control Mechanism

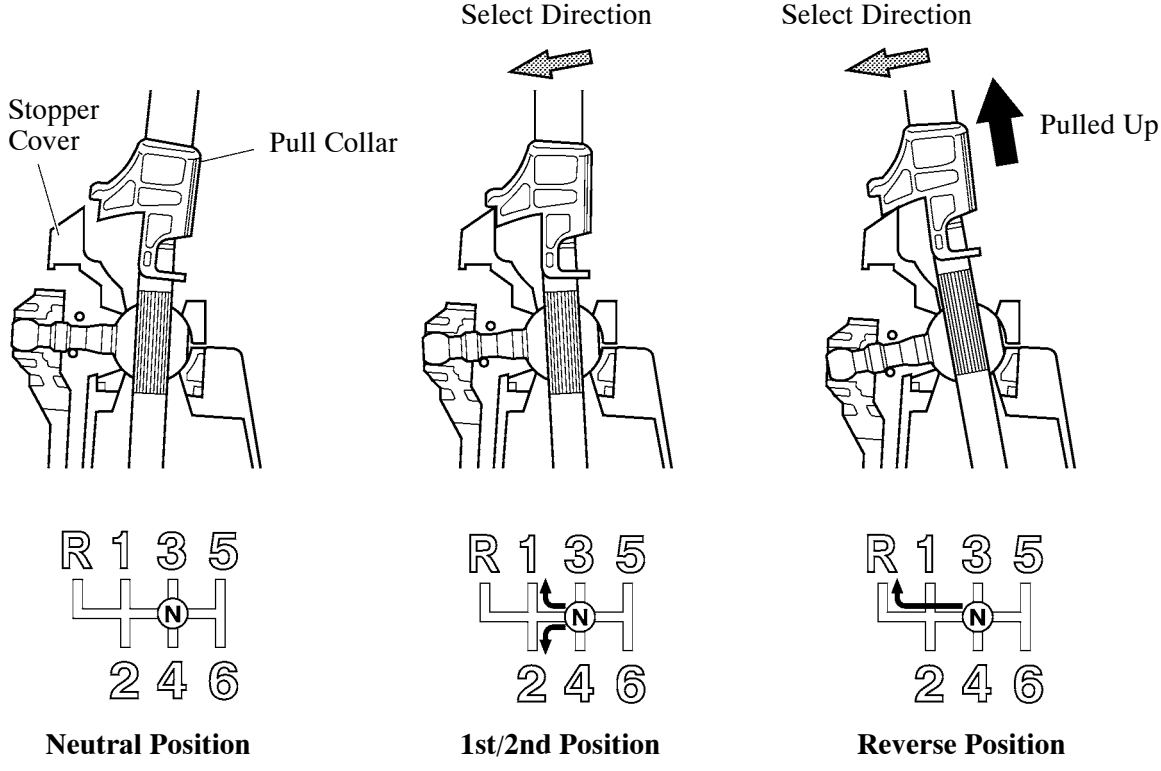
- A pull collar type shift lever assembly, which is equipped with an inhibit mechanism, is used.



Shift Pattern

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- A stopper cover is provided on the 1st-2nd side, so that the pull collar must be pulled upward in order to shift into reverse. This reduces the amount of shift effort and ensures a precise shifting operation.



Neutral Position **1st/2nd Position** **Reverse Position**

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