

# Shifter Fork and Rod

MANUAL TRANSMISSION AND DIFFERENTIAL

## 19. Shifter Fork and Rod

### A: REMOVAL

1) Remove the manual transmission assembly from the vehicle. <Ref. to 5MT-23, REMOVAL, Manual Transmission Assembly.>

2) Remove the back-up light switch and the neutral position switch. <Ref. to 5MT-35, REMOVAL, Switches and Harness.>

3) Remove the transfer case together with the extension case assembly. <Ref. to 5MT-38, REMOVAL, Transfer Case and Extension Case Assembly.>

4) Remove the transmission case. <Ref. to 5MT-52, REMOVAL, Transmission Case.>

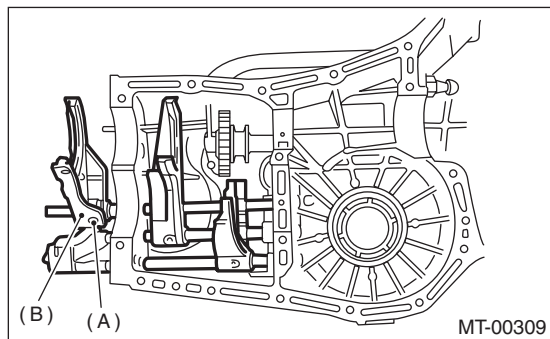
5) Remove the drive pinion shaft assembly. <Ref. to 5MT-61, REMOVAL, Drive Pinion Shaft Assembly.>

6) Remove the main shaft assembly. <Ref. to 5MT-56, REMOVAL, Main Shaft Assembly for Single-Range.>

7) Remove the front differential assembly. <Ref. to 5MT-71, REMOVAL, Front Differential Assembly.>

8) Drive out the straight pin by tapping it with the ST, and remove the 5th shifter fork.

ST 398791700 STRAIGHT PIN REMOVER 2



- (A) Straight pin
- (B) 5th shifter fork

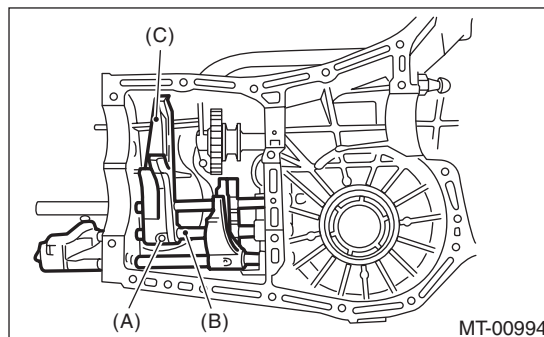
9) Remove the plugs, springs and check balls.

10) Drive out the straight pin by tapping it with the ST, and remove the 3rd – 4th fork rod and shifter fork.

### NOTE:

When removing the rod, keep other rods in neutral. When driving out the straight pin, remove it toward the inside of case so that it does not hit against the case.

ST 398791700 STRAIGHT PIN REMOVER 2



- (A) Straight pin
- (B) 3rd-4th fork rod
- (C) Shifter fork

11) Drive out the straight pin by tapping with the ST, and pull out the 1st – 2nd fork rod and shifter fork.

ST 398791700 STRAIGHT PIN REMOVER 2

12) Remove the snap ring (outer), and pull out the reverse fork rod from the reverse fork rod arm. Then take out the ball, spring and interlock plunger from the reverse fork rod arm. And then remove the rod.

### NOTE:

When pulling out the reverse fork rod arm, be careful not to let the ball pop out of arm.

13) Remove the reverse shifter lever.

### B: INSTALLATION

1) Install the spring and ball to the reverse fork rod arm, and press in the ST.

ST 399411700 ACCENT BALL INSTALLER

2) Install the reverse fork rod through the hole on the rear of the transmission case. Press out the ST using the reverse fork rod, and fix with outer snap ring.

3) Install the interlock plunger to reverse fork rod arm.

### NOTE:

Apply grease to plunger to prevent it from falling.

## Shifter Fork and Rod

### MANUAL TRANSMISSION AND DIFFERENTIAL

4) Position the ball, spring and gasket in the reverse fork rod hole on the left side of transmission case, and tighten the checking ball plug.

**NOTE:**

Use a new gasket.

**Tightening torque:**

**20 N·m (2.0 kgf·m, 14.8 ft·lb)**

5) Install the 1st-2nd fork rod into 1st-2nd shifter fork through the hole on the rear of transmission case.

**NOTE:**

- Set the reverse fork rod to neutral.
- Check that the positions of interlock plunger is correct.

6) Align the holes in the rod and the fork, and drive the new straight pin into these holes using the ST. ST 398791700 STRAIGHT PIN REMOVER 2

7) Install the interlock plunger (thin) onto the 3rd-4th fork rod.

**NOTE:**

Apply grease to plunger to prevent it from falling.

8) Attach the 3rd – 4th fork rod into 3rd – 4th shifter fork and reverse fork rod arm through the hole on the rear of the transmission case.

9) Align the holes in the rod and the fork, and drive the new straight pin into these holes.

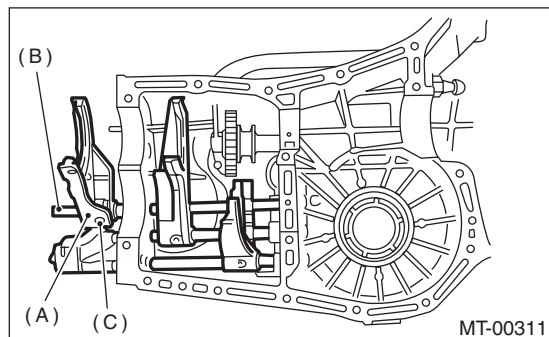
**NOTE:**

- Set the reverse fork rod and the 1st – 2nd fork rod to neutral.
- Check that the positions of interlock plunger is correct.

ST 398791700 STRAIGHT PIN REMOVER 2

10) Install the 5th shifter fork onto the rear of reverse fork rod. Align the holes in the two parts and drive new straight pin into the specified place.

ST 398791700 STRAIGHT PIN REMOVER 2



- (A) 5th shifter fork
- (B) Reverse fork rod
- (C) Straight pin

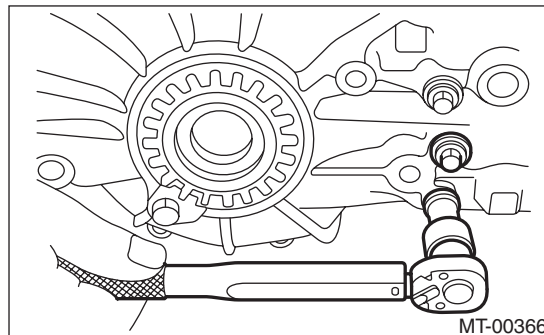
11) Position the balls, checking ball springs and gaskets to the 3rd – 4th fork rod and 1st – 2nd fork rod holes, and install plugs.

**NOTE:**

Use a new gasket.

**Tightening torque:**

**20 N·m (2.0 kgf·m, 14.8 ft·lb)**



12) Install the front differential assembly. <Ref. to 5MT-71, INSTALLATION, Front Differential Assembly.>

13) Install the main shaft assembly. <Ref. to 5MT-56, INSTALLATION, Main Shaft Assembly for Single-Range.>

14) Install the drive pinion shaft assembly. <Ref. to 5MT-61, INSTALLATION, Drive Pinion Shaft Assembly.>

15) Install the transmission case. <Ref. to 5MT-52, INSTALLATION, Transmission Case.>

16) Install the transfer case together with the extension case assembly. <Ref. to 5MT-38, INSTALLATION, Transfer Case and Extension Case Assembly.>

17) Install the back-up light switch and the neutral position switch. <Ref. to 5MT-35, INSTALLATION, Switches and Harness.>

18) Install the manual transmission assembly to the vehicle. <Ref. to 5MT-26, INSTALLATION, Manual Transmission Assembly.>

### C: INSPECTION

1) Check the fork and rod for damage. Replace if it is damaged.

2) Gearshift mechanism

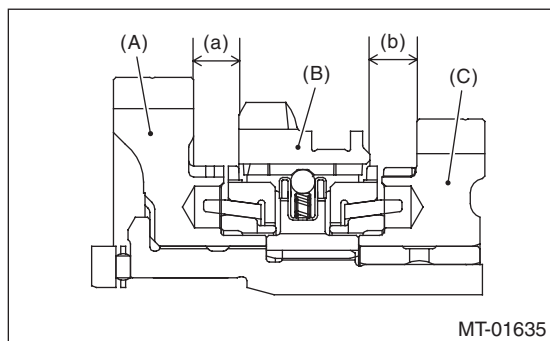
Repair or replace the gearshift mechanism if excessively worn, bent or defective in any way.

3) Inspect the clearance between 1st, 2nd driven gear and reverse driven gear. If any clearance is not within specifications, replace the shifter fork as required.

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**Clearance (a) and (b):**  
**9.5 mm (0.374 in)**

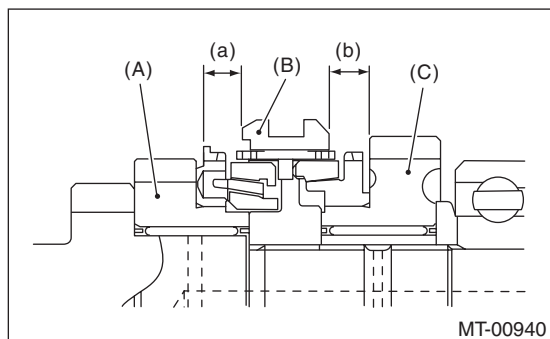


- (A) 1st driven gear
- (B) Reverse driven gear
- (C) 2nd driven gear

1st-2nd shifter fork		
Part No.	Mark	Remarks
32804AA060	1	Approaches 1st gear by 0.2 mm (0.008 in)
32804AA070	No mark	Standard
32804AA080	3	Approaches 2nd gear by 0.2 mm (0.008 in)

4) Inspect the clearance between the 3rd, 4th drive gear and the coupling sleeve. If any clearance is not within specifications, replace the shifter fork as required.

**Clearance (a) and (b):**  
**9.3 mm (0.366 in)**

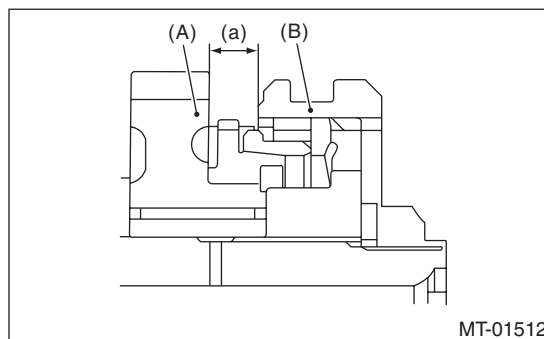


- (A) 3rd drive gear
- (B) Coupling sleeve
- (C) 4th drive gear

3rd-4th shifter fork		
Part No.	Mark	Remarks
32810AA061	1	Approaches 4th gear by 0.2 mm (0.008 in)
32810AA071	No mark	Standard
32810AA101	3	Approaches 3rd gear by 0.2 mm (0.008 in)

5) Inspect the clearance between 5th drive gear and coupling sleeve. If any clearance is not within specifications, replace the shifter fork as required.

**Clearance (a):**  
**9.3 mm (0.366 in)**



- (A) 5th drive gear
- (B) Coupling sleeve

5th shifter fork		
Part No.	Mark	Remarks
32812AA201	7	Approaches 5th gear by 0.2 mm (0.008 in)
32812AA211	No mark	Standard
32812AA221	9	Moves away from 5th gear by 0.2 mm (0.008 in)

6) Inspect the rod end clearances (A) and (B). If any clearance is not within specifications, replace the rod or fork as required.

**Clearance (A):**  
**3rd-4th — 5th**  
**0.5 — 1.3 mm (0.020 — 0.051 in)**

**Clearance (B):**  
**1st-2nd — 3rd-4th**  
**0.4 — 1.4 mm (0.016 — 0.055 in)**

