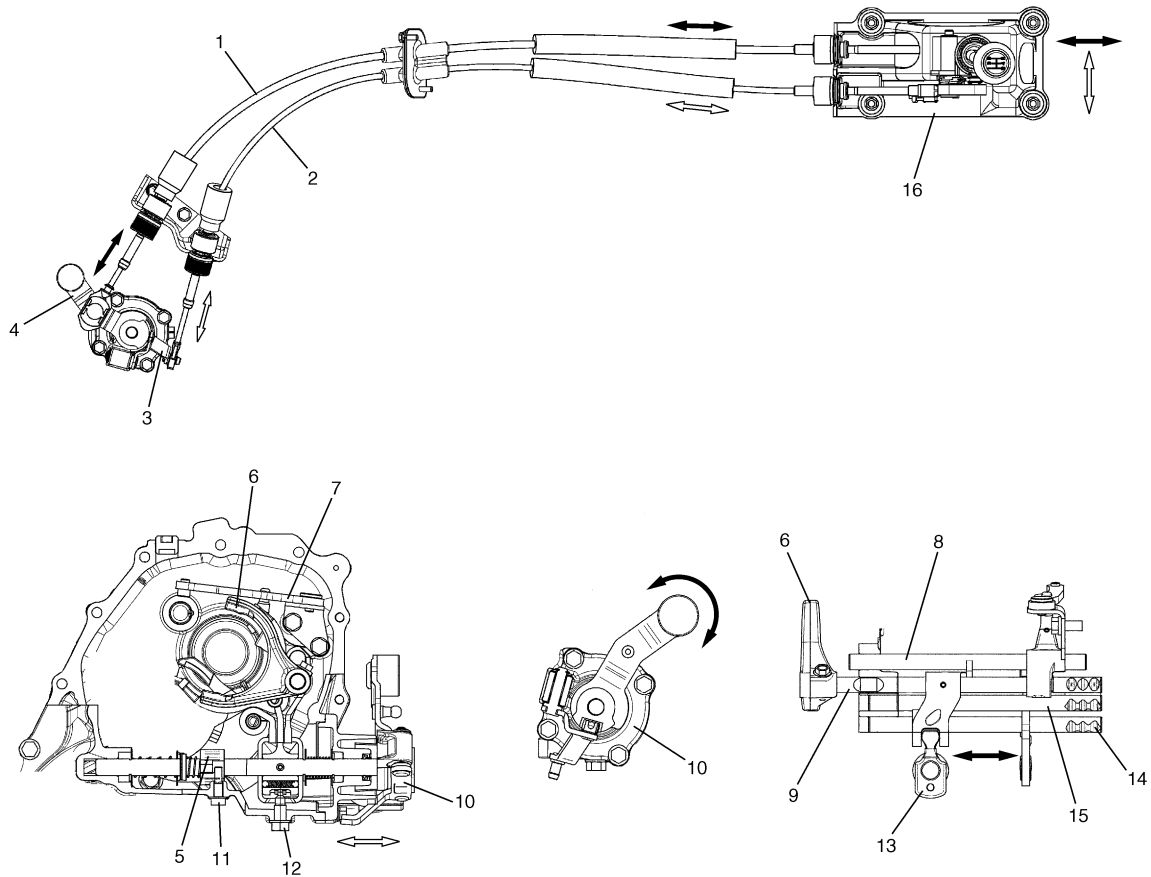


Gear Shift Mechanism

The gear shifting control system consists of the following main parts. Movement of gear shift control lever is transmitted to gear shift & select shaft through gear shift and gear select cables.

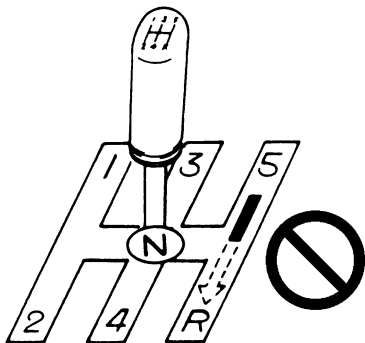


I7RW01520011-01

1. Gear shift control cable	7. Reverse gear shift lever	13. Gear shift & select lever
2. Gear select control cable	8. 5th & reverse gear shift guide shaft	14. Low speed gear shift shaft
3. Select cable lever	9. 5th & reverse gear shift shaft	15. High speed gear shift shaft
4. Shift cable lever	10. Gear shift & select shaft assembly	16. Gear shift control lever assembly
5. 5th & reverse gear shift cam	11. 5th to reverse interlock guide bolt	
6. 5th gear shift fork	12. Gear shift interlock bolt	

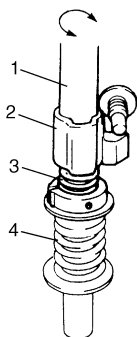
5th & Reverse Gear Shift Cam

5th & reverse gear shift cam, cam guide return spring and 5th to reverse interlock guide bolt are provided to prevent the gear from being directly shifted from 5th to reverse.



I2RH01520003-02

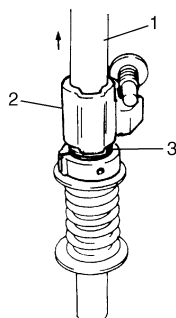
1) When shift lever is at neutral position between 3rd and 4th gear, shift cam (2) is under guide bolt and can turn freely clockwise (to 3rd gear) and counterclockwise (to 4th gear).



I2RH01520004-01

1. Shift & select shaft
3. Return spring (expanded)
4. Reverse select spring (expanded)

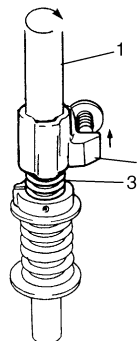
2) When shift lever is shifted toward the right from neutral position, shift and select shaft (1) moves up but shift cam (2) is restricted by guide bolt and return spring is contracted.



I2RH01520005-01

3. Reverse select spring (contracted)

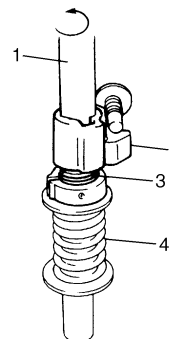
3) When shift lever is shifted to 5th gear, shift & select shaft (1) turns clockwise letting shift cam (2) off from guide bolt and pushed up by return spring. In this state, movement of shift cam is restricted by guide bolt and therefore, gearshift to reverse is not attainable.



I2RH01520006-01

3. Reverse select spring (expanded)

4) When shift lever is shifted from neutral position between 5th gear and reverse gear to reverse gear, shift cam (2) turns counterclockwise to attain reverse gear.



I2RH01520007-01

1. Shift & select shaft
3. Return spring (contracted)
4. Reverse select spring (contracted)

Diagnostic Information and Procedures

Manual Transaxle Symptom Diagnosis

S6RW0C5204001

Condition	Possible cause	Correction / Reference Item
Gears slipping out of mesh	Worn shift fork shaft	Replace
	Worn shift fork or synchronizer sleeve	Replace
	Weak or damaged locating springs	Replace
	Worn bearings on input shaft or countershaft	Replace
	Worn chamfered tooth on sleeve and gear	Replace sleeve and gear
Hard shifting	Inadequate lubricant	Replenish
	Improper clutch pedal free travel	Replace clutch arm or master cylinder
	Distorted or broken clutch disc	Replace
	Damaged clutch pressure plate	Replace clutch cover
	Worn synchronizer ring	Replace
	Worn chamfered tooth on sleeve or gear	Replace sleeve or gear
	Worn gear shift control shaft joint bush	Replace
	Distorted shift shaft	Replace
Noise	Broken gear shift / select control cables	Replace
	Inadequate or insufficient lubricant	Replenish
	Damaged or worn bearing(s)	Replace
	Damaged or worn gear(s)	Replace
	Damaged or worn synchronizer parts	Replace

Repair Instructions

Manual Transaxle Oil Level Check

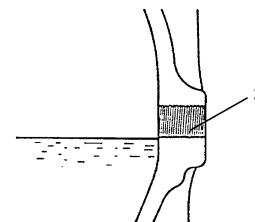
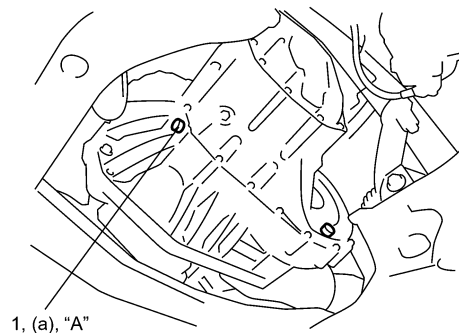
S6RW0C5206001

- Lift up vehicle and check oil leakage. Repair leaky point, if any.
- Remove oil level / filler plug (1) and check oil contamination and oil level is lower end of oil level / filler plug hole (2).
If oil is excessive dirty or insufficient, replace oil or pour specified oil up to plug hole.
- Apply sealant to thread of level / filler plug, and then tighten it to specified torque.

"A": Sealant 99000-31260 (SUZUKI Bond No.1217G)

Tightening torque

Transaxle oil level / filler plug (a): 21 N·m (2.1 kgf-m, 15.5 lb-ft)



I5RW0A520004-01

Manual Transaxle Oil Change

S6RW0C5206002

- 1) Before changing oil, be sure to stop engine and lift vehicle horizontally.
- 2) With vehicle lifted up, check leakage.
If leakage exists, correct it.

NOTE

Whenever vehicle is hoisted for any other service work than oil change, also be sure to check for oil leakage.

- 3) Remove oil level / filler plug (2).
- 4) Remove drain plug (1), and drain old oil.
- 5) Apply sealant to thread of drain plug (1), and tighten it to specified torque.

“A”: Sealant 99000–31260 (SUZUKI Bond No.1217G)

Tightening torque

Transaxle oil drain plug (a): 21 N·m (2.1 kgf·m, 15.5 lb·ft)

- 6) Pour new specified oil until oil level reaches bottom of oil filler plug hole (3) as shown in figure.

NOTE

It is highly recommended to use API GL-4 75W-90 gear oil.

Transaxle oil specification

: API GL-4 (For SAE classification, refer to viscosity chart [A] in figure.)

Transaxle oil capacity

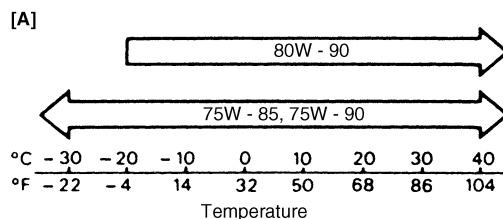
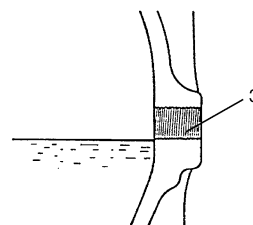
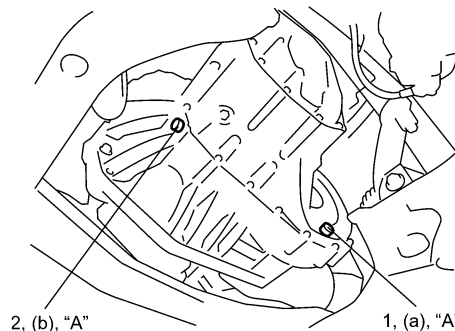
Reference: 2.5 liters (5.3/4.4 US/Imp. pt.)

- 7) Apply sealant to thread of level / filler plug, and then tighten it to specified torque.

“A”: Sealant 99000–31260 (SUZUKI Bond No.1217G)

Tightening torque

Transaxle oil level / filler plug (b): 21 N·m (2.1 kgf·m, 15.5 lb·ft)



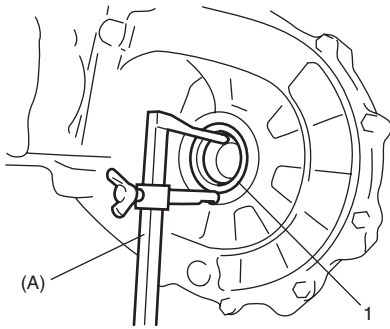
Differential Side Oil Seal Replacement

S6RW0C5206003

- 1) Lift up vehicle and drain transaxle oil.
- 2) Remove drive shaft assembly and center shaft referring to "Front Drive Shaft Assembly Removal and Installation in Section 3A".
- 3) Remove oil seal (1) by using special tool.

Special tool

(A): 09913-50121



I5RW0A520006-02

- 4) Install a new oil seal (1) by using special tool.

NOTE

- When installing oil seal, face its spring side inward.
- Install oil seal horizontally to surface of case.

Special tool

(A): 09913-75810

(B): 09913-75510

Distance between case and right oil seal for 2WD

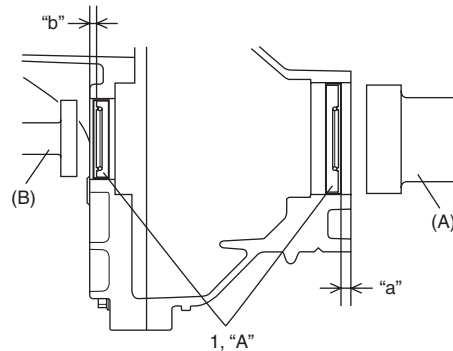
"a": 9.5 – 10.5 mm (0.37 – 0.41 in.)

Distance between case and left oil seal

"b": 0 – 1.0 mm (0 – 0.04 in.)

- 5) Apply grease to oil seal lip and at the same time check drive shaft where oil seal contacts and make sure of its smoothness.

"A": Grease 99000-25011 (SUZUKI Super Grease A)

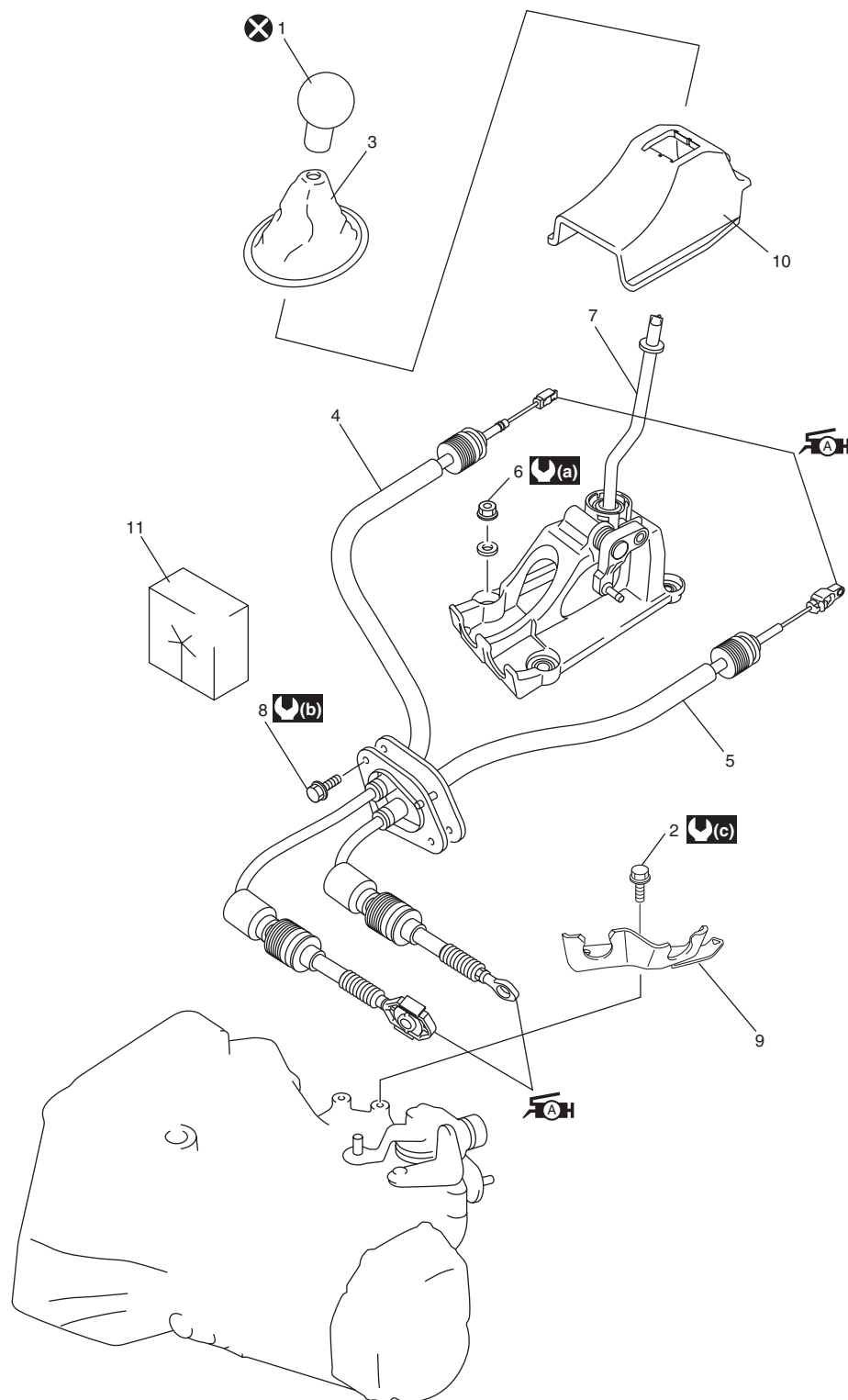


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- 6) Insert drive shaft assembly and center shaft referring to "Front Drive Shaft Assembly Removal and Installation in Section 3A".
- 7) Pour transaxle oil referring to "Manual Transaxle Oil Change".

Gear Shift Control Lever and Cable Components

S6RW0C5206004



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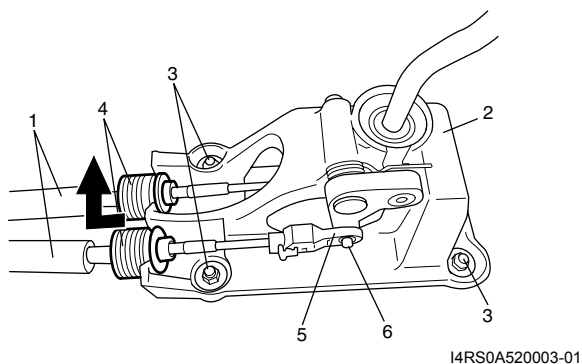
1. Gear shift control lever knob	6. Gear shift control lever assembly mounting nut	11. Shift cable seal
2. Cable bracket bolt	7. Gear shift control lever assembly	: 13 N·m (1.3 kgf·m, 9.5 lb·ft)
3. Gear shift lever boot	8. Cable grommet bolt	: 10 N·m (1.0 kgf·m, 7.5 lb·ft)
4. Gear shift control cable : Apply grease 99000-25010 to cable end.	9. Cable bracket	: 23 N·m (2.3 kgf·m, 17.0 lb·ft)
5. Gear select control cable : Apply grease 99000-25010 to cable end.	10. Shift lever cover	: Do not reuse.

Gear Shift Control Lever and Cable Removal and Installation

S6RW0C5206005

Removal

- 1) Remove console box.
- 2) Disconnect cable ends (5) from pivot (6) of gear shift control lever assembly by removing clip.
- 3) Disconnect gear shift and select control cables (1) from gear shift control lever assembly (2) while pulling quick joint (4) as shown in figure.
- 4) Remove gear shift control lever assembly mounting nuts (3) and gear shift lever assembly from floor panel.
- 5) Disconnect gear shift and select control cables from transaxle.
- 6) Remove cable grommet bolt, and then remove gear shift and select control cables from floor panel.



Installation

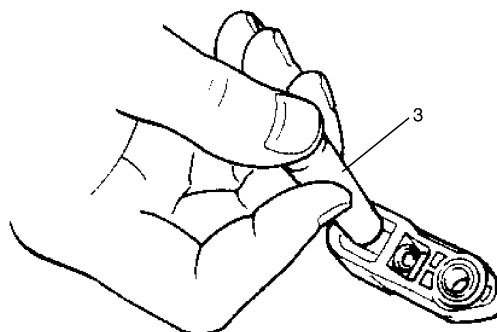
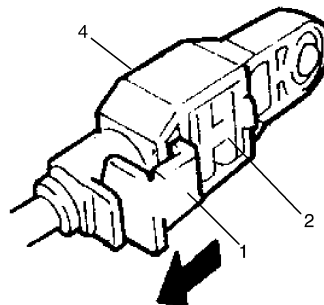
Reverse removal procedure for installation nothing the following.

- Tighten each bolts and nuts to specified torque referring to "Gear Shift Control Lever and Cable Components".
- Adjust gear select control cable referring to "Gear Select Control Cable Adjustment".

Gear Select Control Cable Adjustment

S6RW0C5206006

- 1) Release lock plate (1) which restricts moving of cable end holder (2).
- 2) Push cable end holder (2) out from adjuster (4) using appropriate tool (3) to disengage cable.



I4RS0A520004-01

- 3) Apply grease to pin (5) of gear shift control lever, and then install adjuster (1) into pin of gear shift control lever securely.

"A": Grease 99000-25011 (SUZUKI Super Grease A)

- 4) Push cable end holder (2) in the direction of A.

NOTE

At this time, do not apply force in the cable operation direction B to adjuster.