

MTB-2

Manual Transaxle System

General Information

Specifications

Manual transaxle type		M6GF2	
Engine type		R2.0(Low power)	R2.0(High power)
		2WD/4WD	2WD/4WD
Gear ratio	1st	3.615	3.615
	2nd	1.794	1.794
	3rd	1.542	1.542
	4th	1.176	1.176
	5th	0.921	0.974
	6th	0.732	0.829
	Reverse	3.416	3.416
Final gear ratio		4.643(1,2,R)	
		3.421(3,4,5,6)	

Tightening Torques

Item	N.m	kgf.m	lb-ft
Oil drain plug bolt	58.9~78.5	6.0~8.0	43.4~57.9
Oil filler plug bolt	29.4~34.3	3.0~3.5	21.7~25.3
Shift lever assembly bolt	8.8~13.7	0.9~1.4	6.5~10.1
Back up lamp switch	29.4~34.3	3.0 ~ 3.5	21.7~25.3
Transaxle mounting bracket bolt	88.3~107.9	9.0~11.0	65.1~79.6
Start motor installation bolt	49.0~63.7	5.0 ~ 6.5	36.2~47.0
Transaxle upper mounting bolt (TM=>ENG)	42.2~53.9	4.3~5.5	31.1~39.8
Transaxle lower mounting bolt (ENG=>TM)	42.2~53.9	4.3~5.5	31.1~39.8
	39.2~46.1	4.0 ~ 4.7	28.9 ~ 34.0

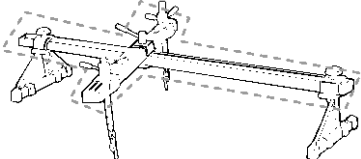
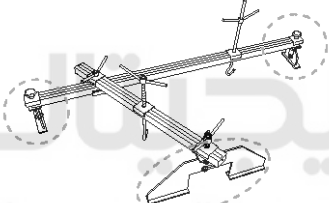
General Information

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Lubricants

Item	Specified lubricants	Quantity
Manual transaxle oil	SAE 75W/85 API GL-4	1.8L(0.48 U.S. gal., 1.90 U.S. qt., 1.58 Imp. qt.)
Manual transaxle input spline	CASMOLY L9508	0.2 gr.
Concentric slave cylinder assembly	KLUBER 9R100	As required

Special Service Tools

Tool (Number and name)	Illustration	Use
09200-38001 Engine support fixture (Beam)	 KKBF030A	Removal and installation of the transaxle. Except lower supporter, use beam only with new engine support fixture supporter(SST No.:09200-2S000)
09200 - 2S000 Engine support fixture (Supporter)	 SXMAT9080D	Removal and installation of the transaxle. Use this supporter with the upper beam of the engine support fixture(SST No.:09200-38001)

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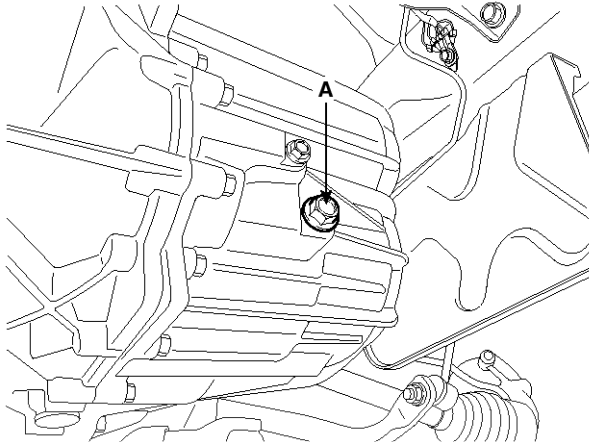
Manual Transaxle System

Manual Transaxle System

Inspection

Manual Transaxle Oil Inspection

1. Park the vehicle on a level ground and stop the engine.
2. Retighten the oil filler plug(A) with a new washer.

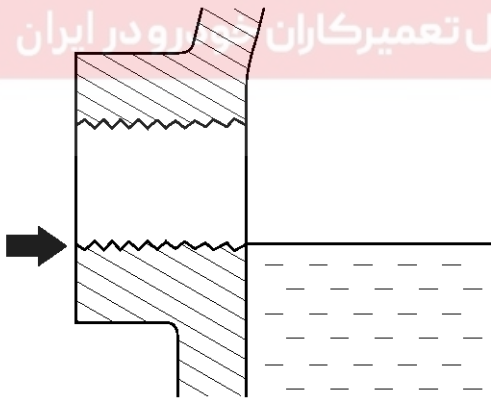


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3. Check level with finger.

NOTICE

Oil level must be up to fill the hole, if not, add oil until it runs over.



SBKMT9018D

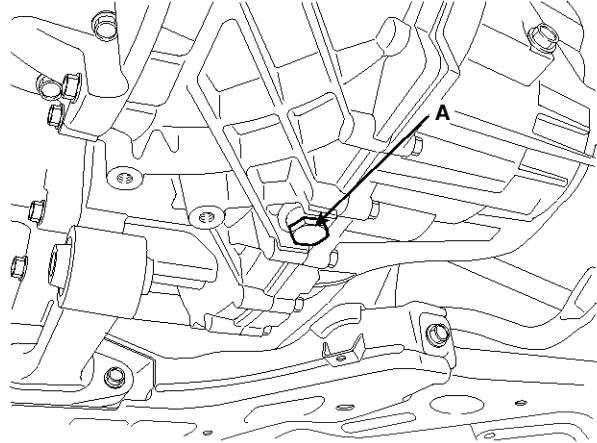
4. Retighten the oil filler plug(A) with a new washer.

Tightening torque :

29.4~34.3N.m (3.0~3.5kgf.m, 21.7~25.3lb-ft)

Manual Transaxle Oil Replacement

1. Park the vehicle on a level ground and stop the engine.
2. Drain the manual transaxle oil after loosening the drain plug (A).



SSLMT1004D

3. Install the drain plug with new gasket.

Tightening torque :

58.9~78.5N.m (6.0~8.0kgf.m, 43.4~57.9lb-ft)

4. Add new oil through the filler plug hole and, fill it just below the plug opening.

Standard oil : SAE 75W/85, API GL-4

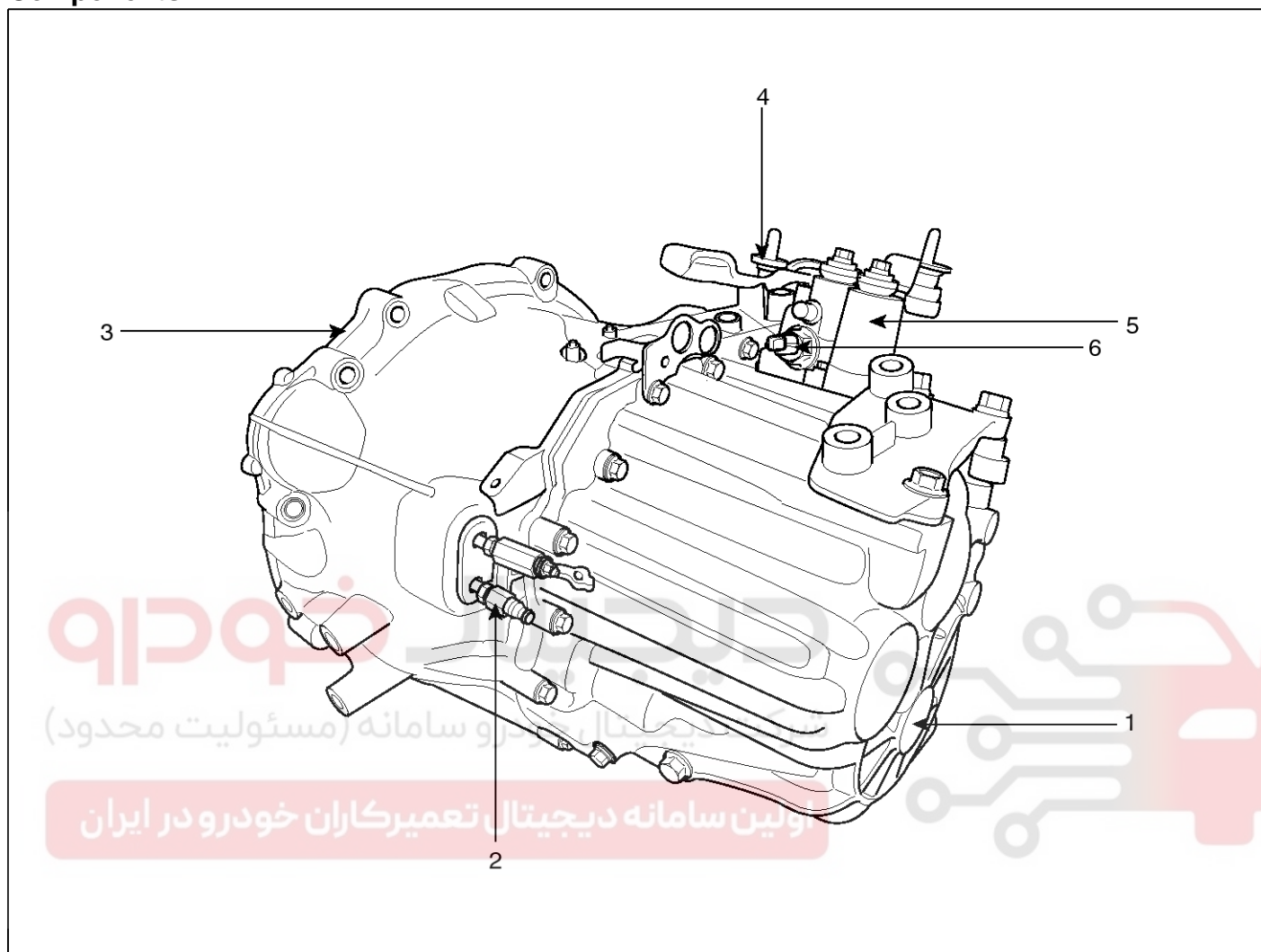
Oil capacity : 1.8L(0.48 U.S. gal., 1.90 U.S. qt., 1.58Imp. qt.)

Manual Transaxle System

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Manual Transaxle

Components



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1. Manual transaxle case
2. Concentric slave cylinder
3. Clutch housing

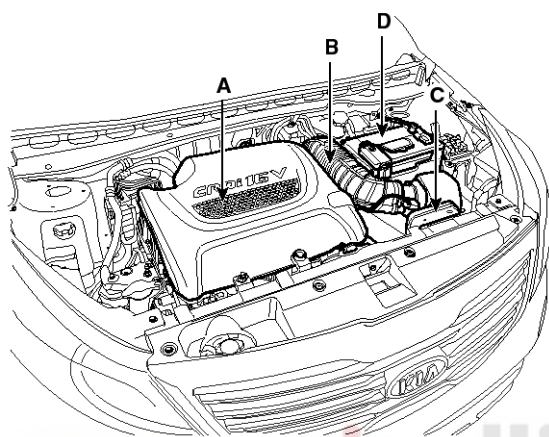
4. Shift cable bracket assembly
5. Control complete shaft
6. Back-up lamp switch

MTB-6

Removal

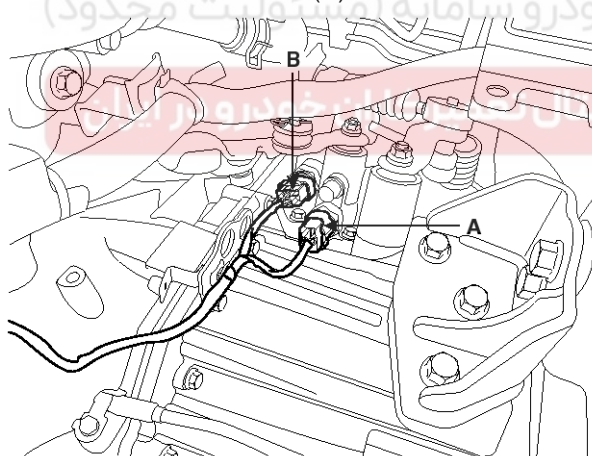
1. Remove the following items;

- Engine cover (A). (Refer to "Intake and Exhaust system" in EM group.)
- Air cleaner assembly (B) and air duct (C). (Refer to "Intake and Exhaust system" in EM group.)
- Battery and battery tray (D). (Refer to "Charging system" in EE group.)



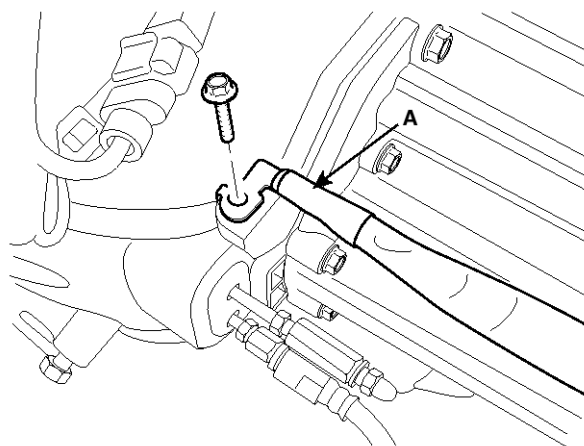
SSLMT1015D

2. Disconnect the back up lamp switch connector (A) and the neutral switch (B).



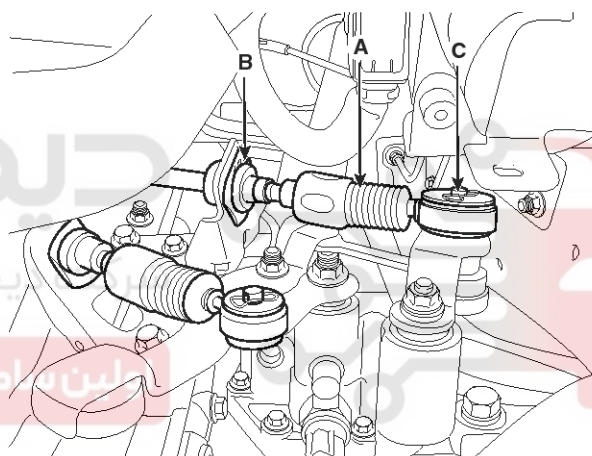
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3. Remove the ground (A).



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4. Disconnect the cable assembly (A) after removing the clips (B) and pins (C).

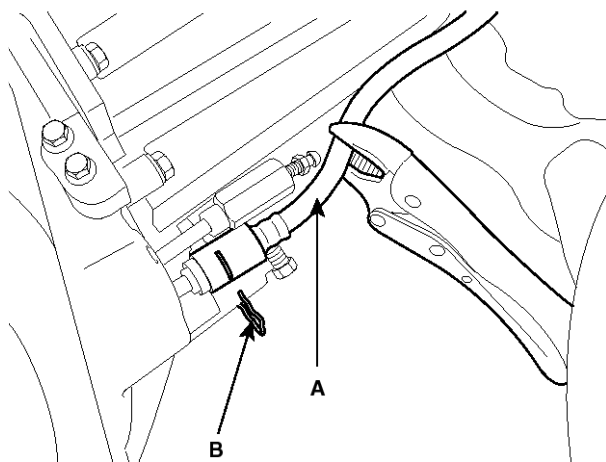


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Manual Transaxle System

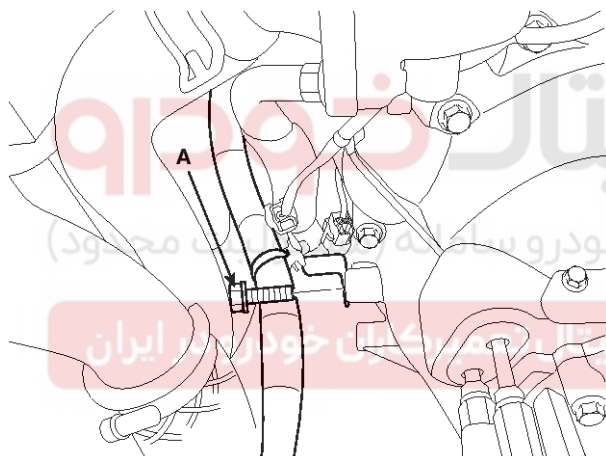
MTB-7

5. Disconnect the concentric slave cylinder tube(A) after removing the pins(B).



SXMMMA0013L

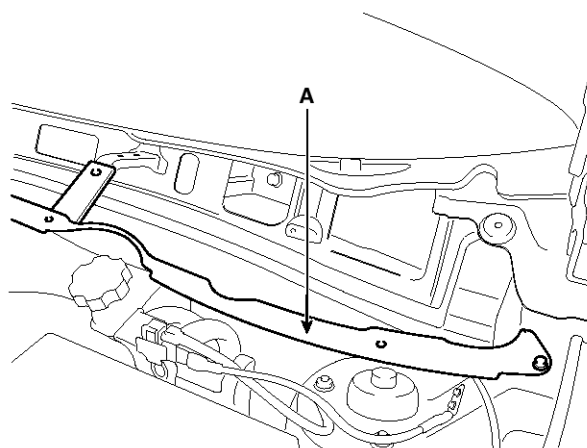
6. Remove the wiring bracket bolt (A).



SSLMT1008D

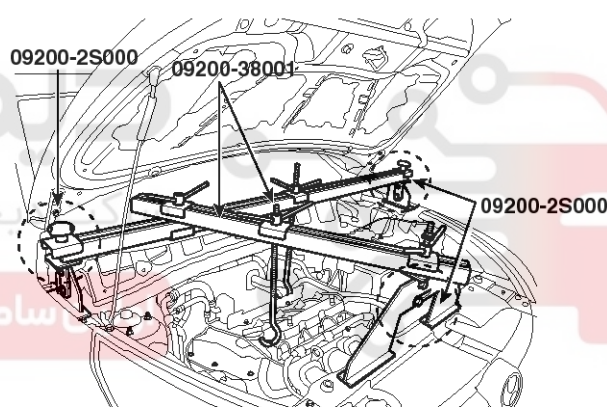
7. Remove the cowl top cover or wiper motor. (Refer to "Windshield Wiper/Washer" in BE group.)

8. Remove the cowl complete assembly panel(A).



SLMAT0013D

9. Using the engine support fixture (Support SST No.: 09200-2S000, Beam SST No.: 09200-38001), hold the engine and transaxle assembly safely.



SXMAT9082D

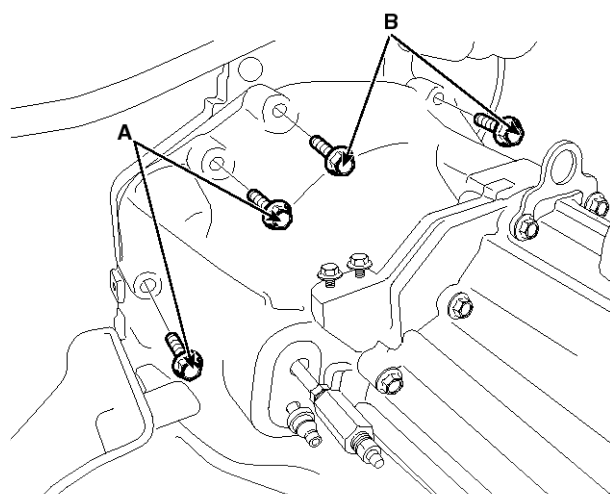
MTB-8

10. Remove the transaxle upper mounting bolt (B-2ea) and the start motor mounting bolt (A-2ea).

Tightening torque :

(A) 49.0~63.7N.m(5.0~6.5kgf.m, 36.2~47.0lb-ft)

(B) 42.2~53.9N.m(4.3~5.5kgf.m, 31.1~39.8lb-ft)

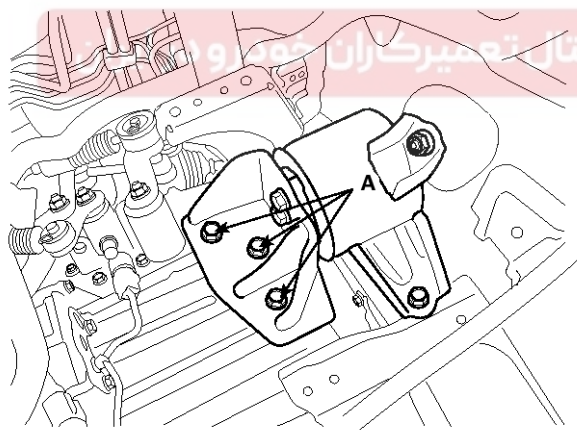


SLMMT0022D

11. Supporting the transaxle with a jack, remove the mounting bolts (A-3ea).

Tightening torque :

88.3~107.9N.m (9.0~11.0kgf.m, 65.1~79.6lb-ft)



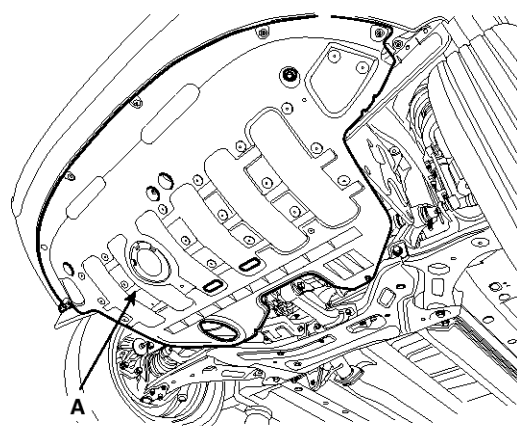
SLMMT0001D

Manual Transaxle System

12. Remove the under cover (A).

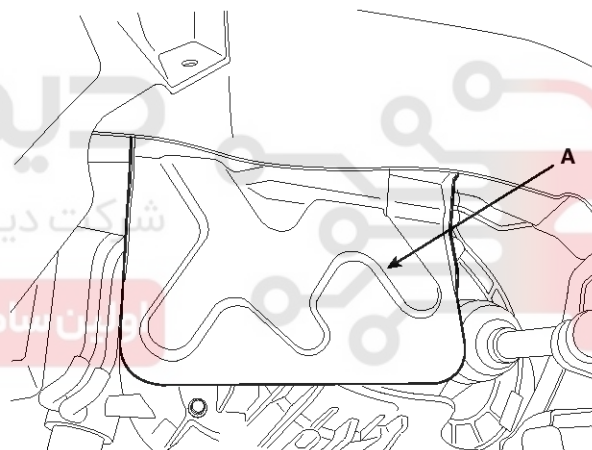
Tightening torque :

19.6~21.6N.m (2.0~2.2kgf.m, 14.5~15.9lb-ft)



SSLAT0021D

13. Remove the side cover(A).



SSLMT1006D

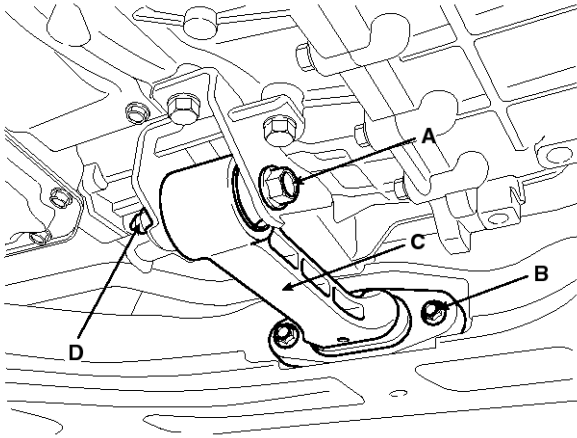
Manual Transaxle System

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14. Remove the roll rod bracket(C) after removing bolt(A,B).

Tightening torque :

- (B) 49.0~63.7N.m (5.0~6.5kgf.m, 36.2~47.0lb-ft)
(D) 107.9~127.5N.m (11~13kgf.m, 79.6~94.1lb-ft)



SSLWD1030N

15. Remove the following items;

- Drive shaft assembly. (Refer to "Drive shaft assembly" in DS group.)
- Sub frame assembly. (Refer to "Front suspension system" in SS group)
- In the case of 4WD vehicle, remove the transfer assembly. (Refer to "Transfer assembly" in WD group)

NOTICE

In the case of 2WD vehicle, not remove the transfer assembly.

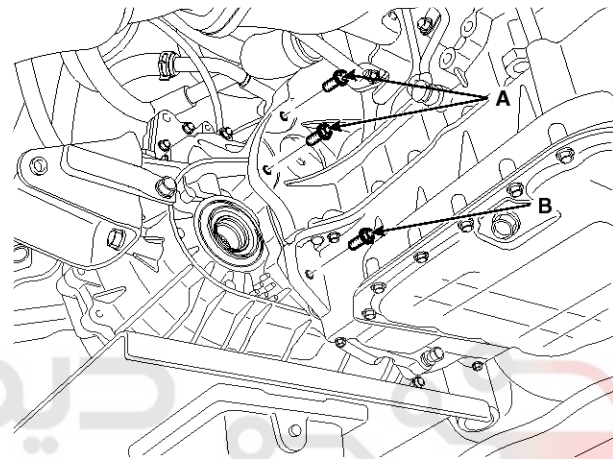
16. Remove the mounting bolts(A-3ea, B-3ea) of lower part of the transaxle, and the left side cover and remove the transaxle assembly by supporting it with a jack.

CAUTION

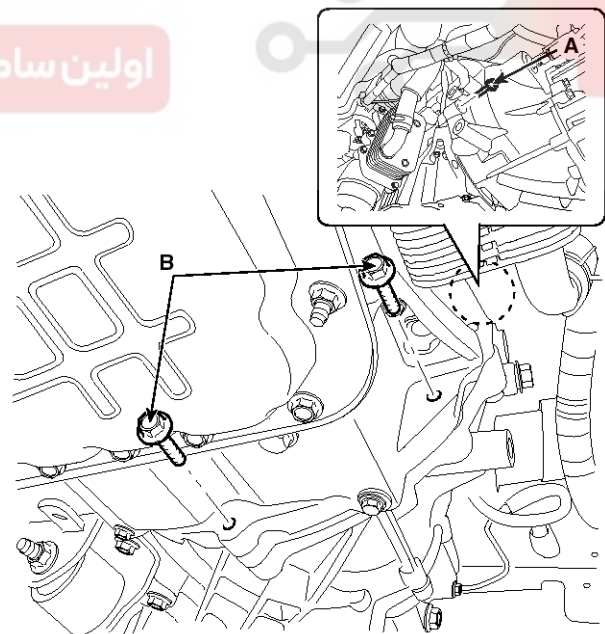
Be careful not to damage other system or parts near by when removing the engine and transaxle assembly.

Tightening torque :

- (A) 42.2~48.1 N.m (4.3~4.9kgf.m, 31.1~35.4lb-ft)
(B) 42.2~53.9 N.m (4.3~5.5kgf.m, 31.1~39.8lb-ft)



SSLMT1014D



SSLMT1032D

MTB-10

Manual Transaxle System

Installation

1. Installation is the reverse of removal.

⚠ CAUTION

- Power steering fluid replacement and air bleeding (Refer to "General information" in ST group.)
- Adding Manual transaxle fluid. (Refer to "Manual transaxle system" in this group.)
- Perform bleeding air procedure in concentric slave cylinder after pouring the brake fluid.(Refer to "Concentric slave cylinder" in CH group.)

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



Manual Transaxle Control System

MTB-11

Manual Transaxle Control System

Back-up Lamp Switch

Description

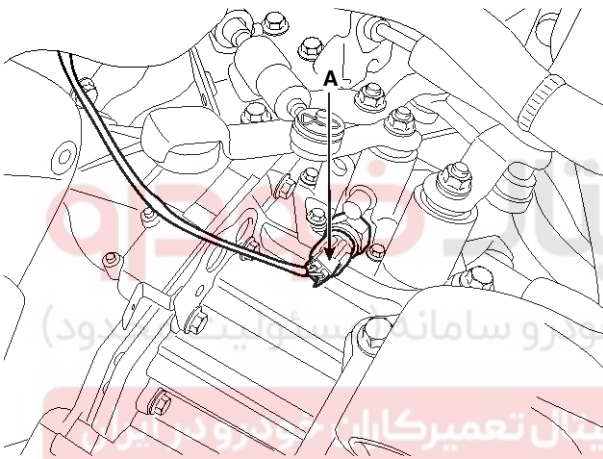
Back up lamp switch is pushed by the reverse lug sliding when select arm, and switches the back up lamp.

Specifications

1. Working voltage : DC 10~15V
2. Operating force : 3.0kg Max.
3. Voltage drop : - 0.4V
4. Working temperature : -30°C ~ 100°C [-30°F ~ 212°F]

Inspection

1. Disconnect the back up lamp switch connector(A).

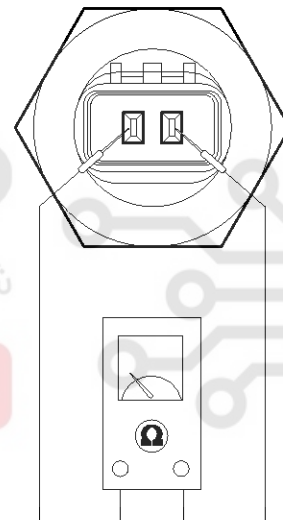


SXMMMA0001L

2. Check the continuity between no. 1 and 2 terminals of backup lamp switch. When the shift lever is in reverse, there should be continuity.
3. If necessary, repair or replace the backup lamp switch.

Condition	1	2
Reverse Range	●	●
Other Range		

*The back up Lamp "ON" shall keep over 0.5mm(0.02in) From ON-OFF point.



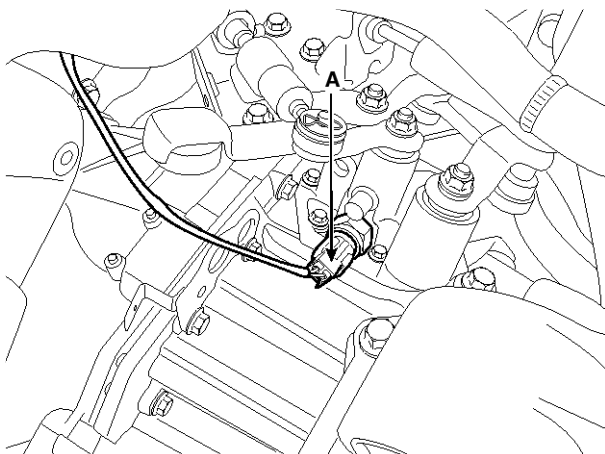
LMJF003B

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Manual Transaxle System

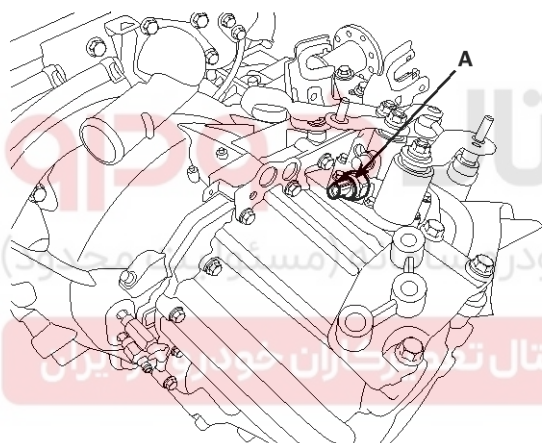
Replacement

1. Disconnect the back up lamp switch connector(A).



SXMMMA0001L

2. Remove the back up lamp switch (A).



SSLMT1010D

3. Replace a new one and install the back up lamp switch.

Tightening torque :

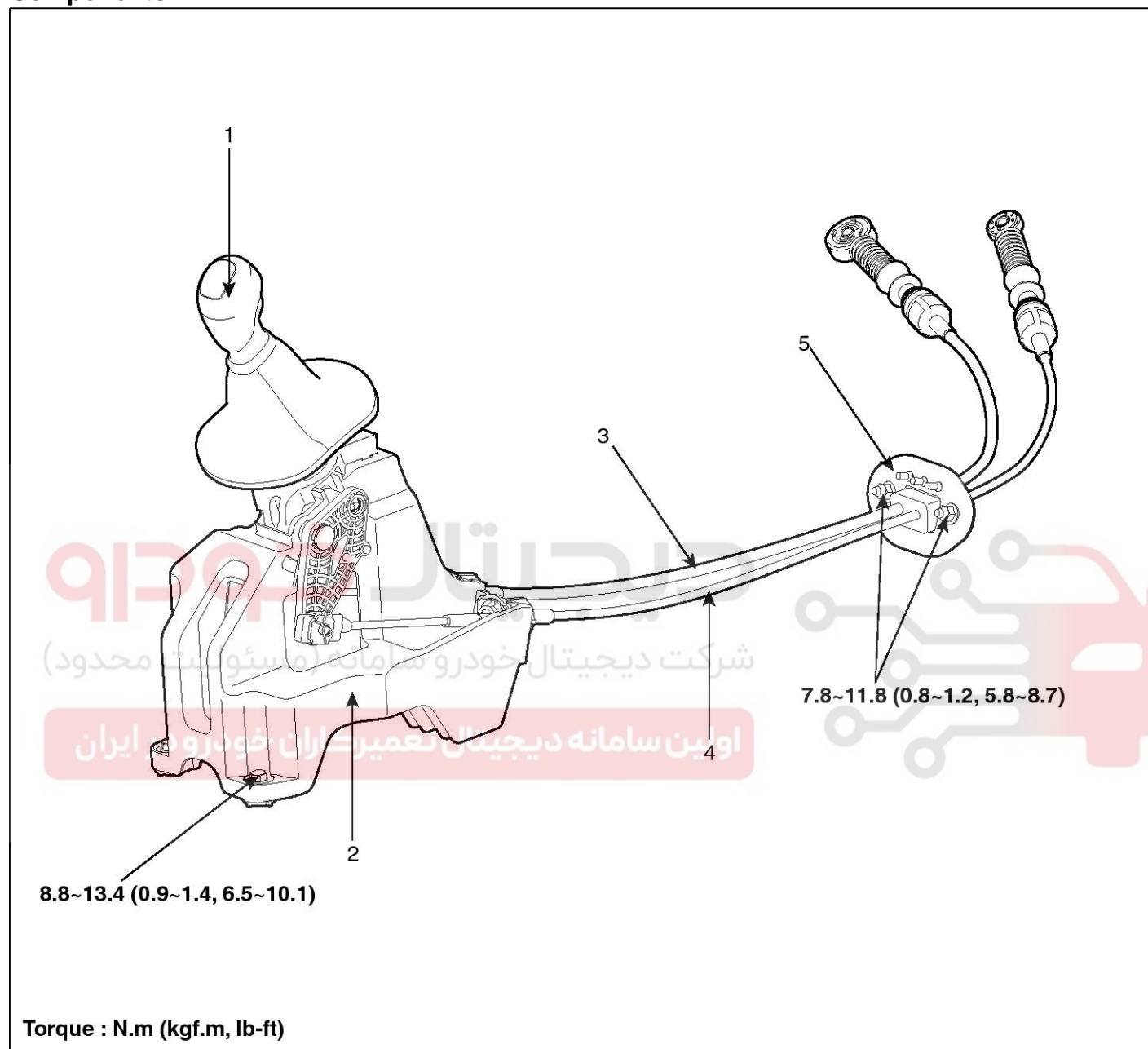
29.4~34.3N.m (3.0~3.5kgf.m, 21.7~25.3lb-ft)

Manual Transaxle Control System

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Shift Lever

Components



SSLMT1011N

1. Shift lever knob & boot assembly
2. Shift lever assembly
3. Shift cable assembly

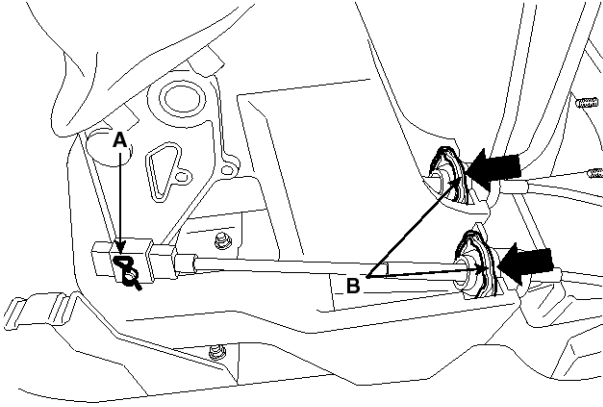
4. Select cable assembly
5. Retainer

MTB-14

Removal

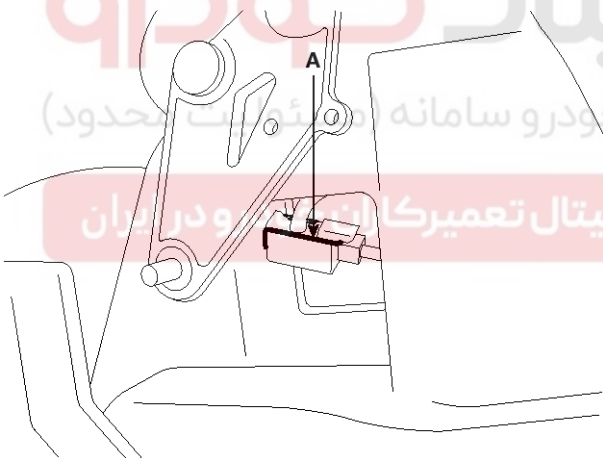
Shift Lever Assembly Replacement

1. Remove the floor Interior console assembly. (Refer to "Interior(Console)" in BD group)
2. Remove the select cable snap pin (A) and the clip (B) from the select cable assembly.



SSLMT1003D

3. Remove the clip (A) from the shift cable assembly.



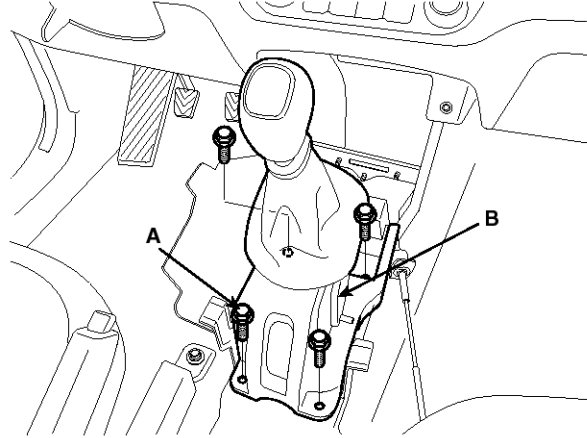
SSLMT1001D

Manual Transaxle System

4. Remove the shift lever assembly(B) after removing shift lever assembly installation bolt(A).

Tightening torque :

8.8~13.7N.m (0.9~1.4kgf.m, 6.5~10.1lb-ft)



SSLMT1002D

5. Installation is the reverse of removal.

NOTICE

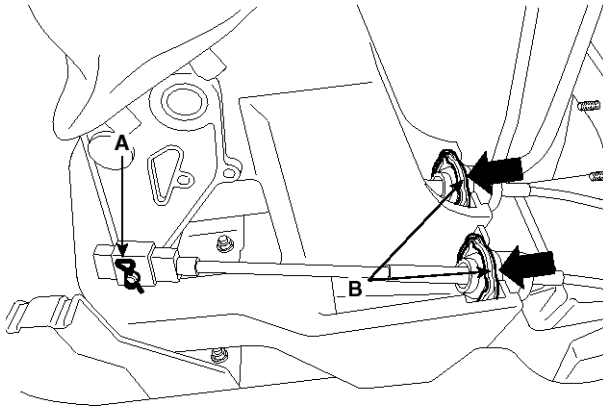
- Make sure vehicle does not roll before setting room side shift lever and T/M side manual control lever to "N" position.

Manual Transaxle Control System

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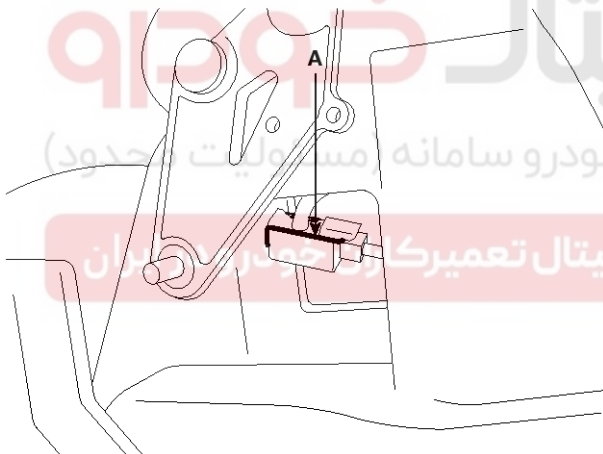
Shift Cable Replacement

1. Remove the floor Interior console assembly. (Refer to "Interior(Console)" in BD group)
2. Remove the select cable snap pin (A) and the clip (B) from the select cable assembly.



SSLMT1003D

3. Remove the clip (A) from the shift cable assembly.

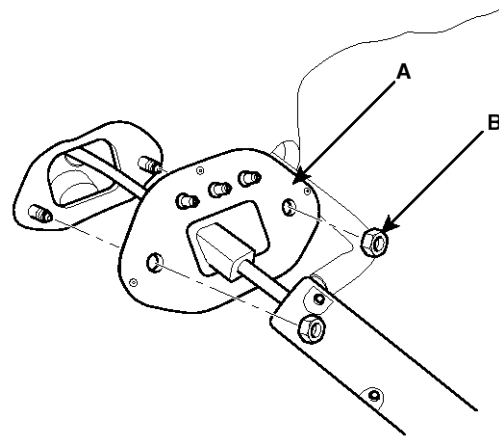


SSLMT1001D

4. Remove the retainer (A) and nuts (B).

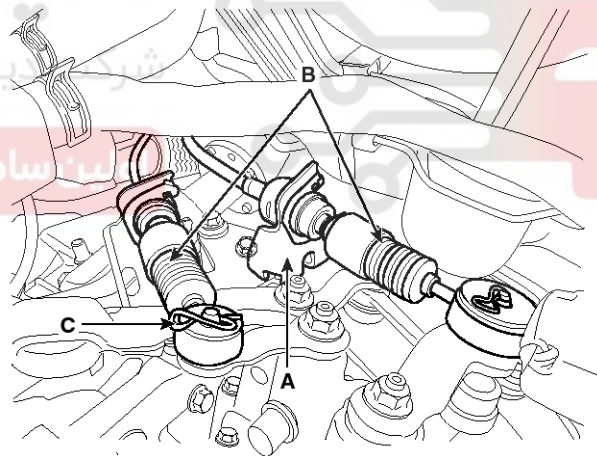
Tightening torque :

7.8~11.8N.m (0.8~1.2kgf.m, 5.8~8.7lb-ft)



SHDAT6108D

5. Remove the cable(B) from the cable bracket(A) at manual transaxle assembly side.
6. Remove the pins(C).
7. Remove the shift cable and select cable at cabin room.



SSLMT1051D

8. Installation is the reverse of removal.

NOTICE

- Make sure vehicle does not roll before setting room side shift lever and T/M side manual control lever to "N" position.

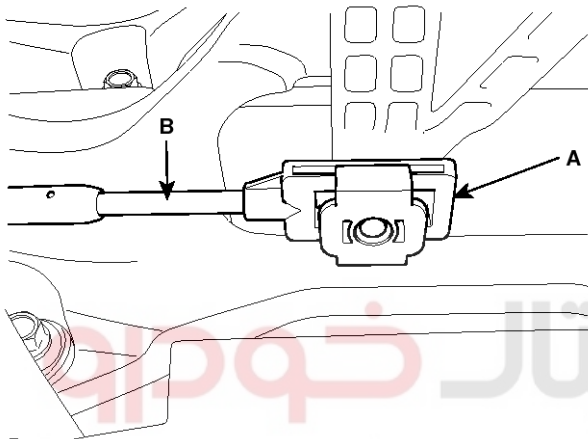
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Inspection

1. Check the select cable for proper operation and for damage.
2. Check the shift cable for proper operation and for damage.
3. Check the boots for damage.
4. Check the boots for wear abrasion sticking, restricted movement or damage.
5. Check for the weak or damaged spring.

Adjustment

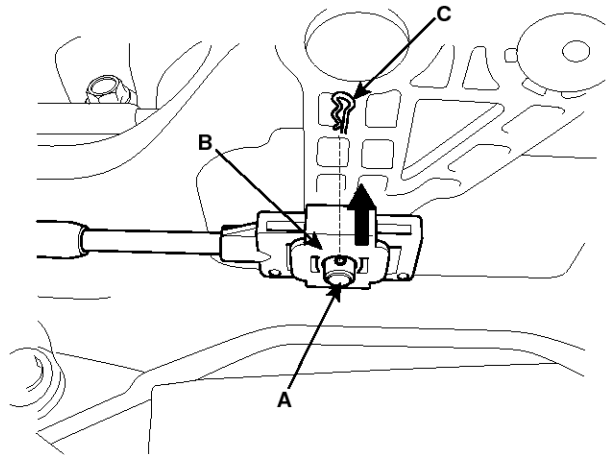
1. Install the guide member (A) of the select cable (B).



AMLF006A

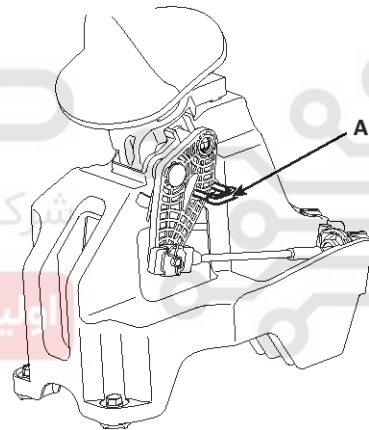
Manual Transaxle System

2. Adjust the slide clip (B) to fit it into the select lever pin (A) and install the snap pin (C).



AMLF007A

3. Remove neutral position pin (A) after shift lever assemble.



SSLMT1033D