

MT-2

Manual Transaxle System

General Information

SPECIFICATION

| Item | M5GF1 |
|----------------------------|---------------------------------|
| TYPE | Forward 5 speed Reverse 1 speed |
| ENGINE | 2.0L GSL |
| GEAR RATIO | |
| 1st | 3.636 |
| 2nd | 2.056 |
| 3rd | 1.333 |
| 4th | 1.061 |
| 5th | 0.821 |
| Reverse | 3.455 |
| Final Reduction Gear Ratio | 4.533 |

TIGHTENING TORQUE

| Item | N.m | kgf.cm | lbf.ft |
|-----------------------------------|---------|-----------|------------|
| Select lever knob | 4.5~7.5 | 45~75 | 3.3~5.4 |
| Console upper cover | 9~14 | 90~140 | 6.4~10.1 |
| Facia bracket mounting | 9~14 | 90~140 | 6.5~10.1 |
| Facia bracket mounting 2 | 7~11 | 70~110 | 5.1~7.9 |
| Shift cable | 8~12 | 80~120 | 5.7~8.67 |
| Transaxle support bracket | 60~80 | 600~800 | 43.4~57.9 |
| Input speed sensor | 10~12 | 100~120 | 7.2~8.7 |
| Output speed sensor | 10~12 | 100~120 | 7.2~8.7 |
| Shift lever switch | 10~12 | 100~120 | 7.2~8.7 |
| Shift arm | 20~27 | 200~270 | 14.5~19.6 |
| Select lever | 20~27 | 200~270 | 14.5~19.6 |
| Reamer bolt | 43~55 | 430~550 | 31.1~39.8 |
| Side cover bolt | 10~12 | 100~120 | 7.2~8.7 |
| Release bearing sleeve mounting | 6~8 | 60~80 | 4.3~5.8 |
| Differential drive gear bolt(4WD) | 130~140 | 1300~1400 | 94.1~101.2 |
| Differential drive gear bolt(LSD) | 130~140 | 1300~1400 | 94.1~101.2 |
| Release fork shaft lever mounting | 27~40 | 270~400 | 19.5~28.9 |
| Transmission hanger mounting | 15~22 | 150~220 | 10.8~15.9 |
| Cylinder & hose assy | 15~22 | 150~220 | 10.8~15.9 |
| 1st gear switch | 13 | 130 | 9.4 |
| Back-up lamp switch | 30~35 | 300~350 | 21.7~25.3 |
| Transmission stud mounting | 15~20 | 150~200 | 10.8~14.5 |
| Oil drain plug | 30~35 | 300~350 | 21.7~25.3 |
| Filler plug | 35~45 | 350~450 | 25.3~32.5 |

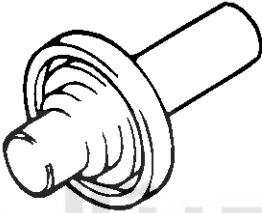
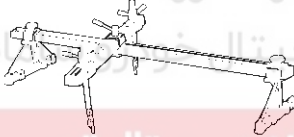
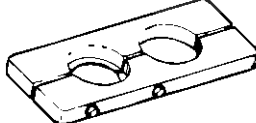
General Information

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LUBRICANTS

| Item | Lubricant | Quantity |
|-----------------------------------|------------------------------------------------|-----------------------------|
| Transmission Oil | HYUNDAI GENUINE PARTS MTF SAE 75W/85(API-GL4) | 2.1L (2.2US qt, 1.8Imp qt.) |
| Transaxle input shaft spline | CASMOLY-L9508 | as required |
| Clutch release fork shaft bushing | CASMOLY-L9508 | 1g |
| Rear axle oil | SAE 80W/90(API-GL5)-SHELL SPIRAX OR equivalent | 0.75L |
| Transfer case | SAE 80W/90(API-GL5)-SHELL SPIRAX OR equivalent | 0.8L |

SPECIAL TOOLS

| TOOL(number and name) | Illustration | Use |
|-----------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 09431 - 39000 Oil seal installer |  | Installation of differential oil seal Use with (09500 - 11000) |
| 09200 - 38001 Engine support fixture |  | Removal and installation of transaxle. |
| 09432 - 33200 Bearing removing plate |  | Removal of 4WD coupling flange oil seal |

MT-4**Manual Transaxle System****Manual Transaxle System****TROUBLESHOOTING**

| Symptom | Suspect area | Remedy |
|------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------|
| Vibration, noise | Loose or damaged transaxle and engine mounts | Tighten or replace mounts |
| | Inadequate shaft end play | Correct end play |
| | Worn or damaged gears | Replace gear |
| | Inadequate grade of oil | Replace with specified oil |
| | Low oil level | Replenish |
| | Inadequate engine idle speed | Adjust idle speed |
| Oil leakage | Broken or damaged, oil seal or O-ring | Replace oil seal or O-ring |
| Hard shift | Faulty control cable | Replace control cable |
| | Poor contact or wear of synchronizer ring and gear cone | Correct or replace |
| | Weakened synchronizer spring | Replace synchronizer spring |
| | Inadequate grade of oil | Replace with specified oil |
| | Grease in flywheel | Inspect and replace flywheel |
| Jumps out of gear | Worn gear shift fork or broken poppet spring | Replace shift fork or poppet spring |
| | Synchronizer hub to sleeve spline clearance too large | Replace synchronizer hub and sleeve |
| Rear wheel lock at starting with steering wheel full-turn | 4WD ECM malfunction | Replace 4WD ECM |
| Rear wheel lock at starting with half-pressing clutch and acceleration pedal | | |

Manual Transaxle System

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SERVICE ADJUSTMENT PROCEDURE

TRANSAXLE GEAL OIL

INSPECTION

Inspect each component for evidence of leakage.

Check the gear oil level by removing the filler plug.

If the oil is contaminated, it is necessary to replace it with new oil.

1. Remove oil filler plug and check level with finger.
2. Oil level must be up to fill the hole, add oil until it runs over. Then reinstall plug.
3. Replace the oil so that the transaxle gear oil is not dirty, and so that it is of suitable viscosity.

REPLACEMENT

1. With the vehicle parked on a level surface, remove the drain plug and drain the transaxle oil.
2. Replace the gasket with a new one and install the drain plug.

TORQUE :

30 ~ 35 Nm(300 ~ 350 kgf·cm, 21.7 ~ 25.3 lbf·ft)

3. Add new oil through the filler plug and, fill it to just below the plug opening.

TORQUE :

35 ~ 45 Nm(350 ~ 450 kgf·cm, 25.3 ~ 32.5 lbf·ft)

Standard value

Transaxle oil total capacity :

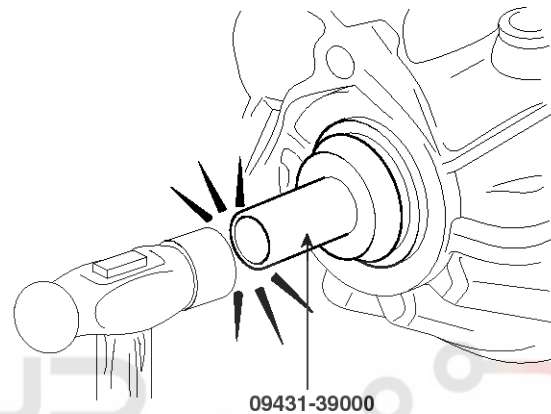
2.1 lit (2.2 U.S.qts., 1.8 imp.qts)

DRIVE SHAFT OIL SEAL REPLACEMENT

1. Disconnect the drive shaft from the transaxle (Refer to "DS" group).
2. Using a flat-tip screwdriver, remove the oil seal.
3. Apply a coating of gear oil to the oil seal.

**Transaxle gear oil : HYUNDAI GENUINE PARTS
MTF 75W/85 API GL-4**

4. Using the special tool (09431-39000), tap the drive shaft oil seal into the transaxle.



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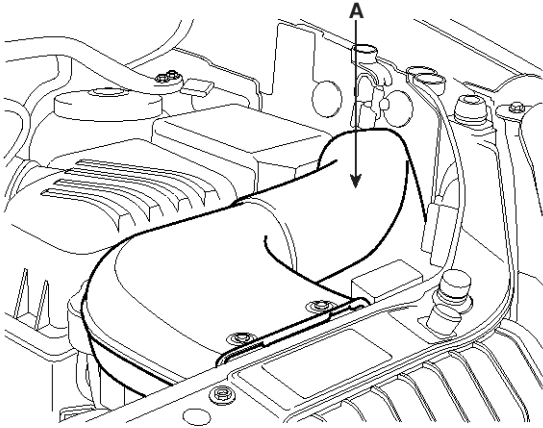
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Manual Transaxle System

Manual Transaxle

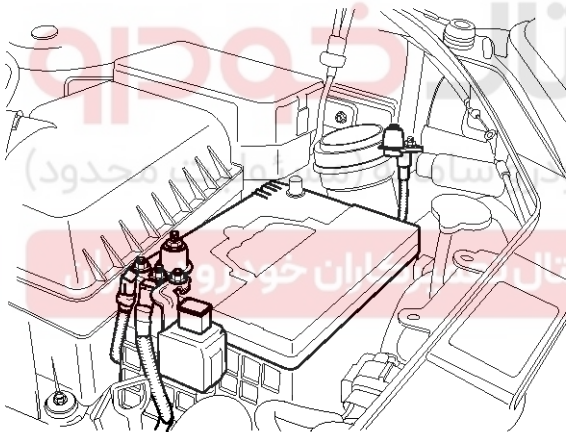
REMOVAL

1. Remove the air duct(A) and hose assembly.



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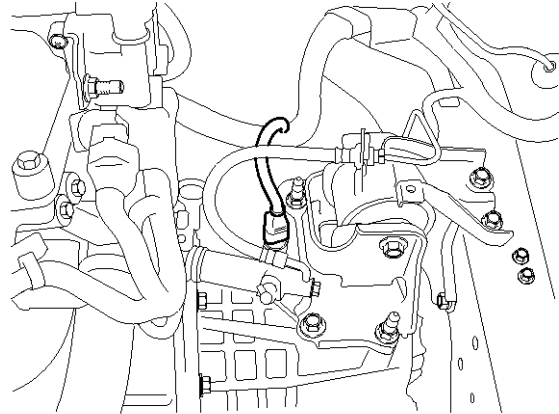
2. Remove the battery and battery tray.



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3. Remove the air cleaner assembly and air flow sensor.

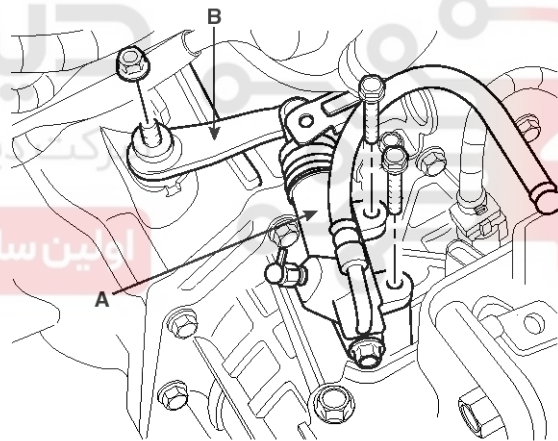
4. Remove the back-up lamp connector and the vehicle speed sensor.



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5. Disconnect the connectors and the terminals.

6. Remove the clutch release cylinder(A) and lever(B).



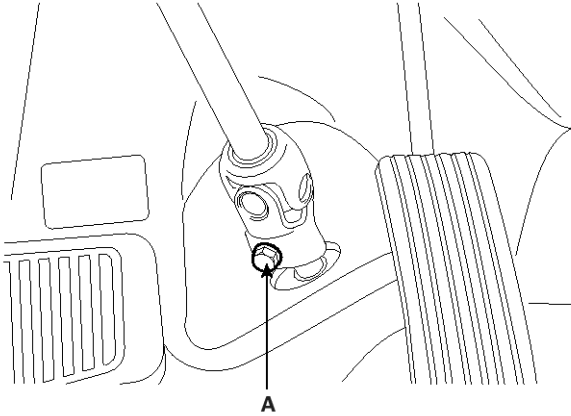
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7. Separate the transaxle cable from the transaxle assembly.

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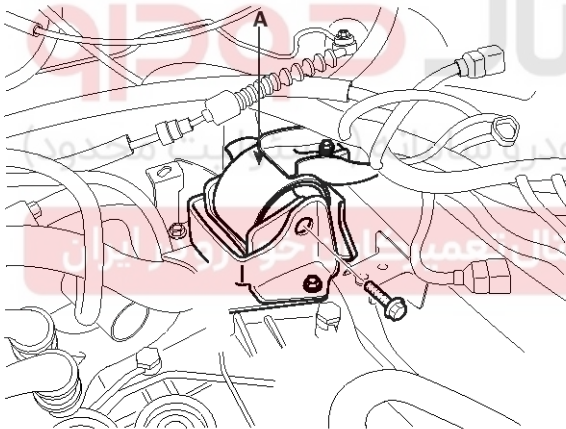
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8. Disconnect the steering column shaft from the universal joint in the gear box(See 'ST' group).



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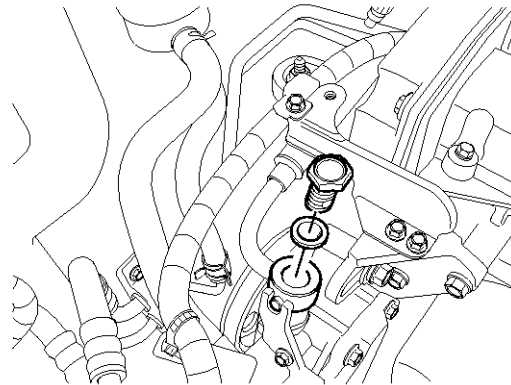
9. Remove the transaxle clutch housing upper mounting bolts.
10. Remove the transaxle mounting brackets. (front, rear, left(A))



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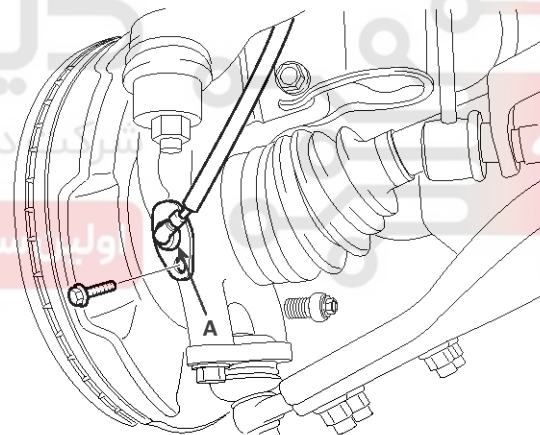
11. Using SST(09200-38001), support the engine assembly.

12. Disconnect the power steering oil pressure tube from the pump. Afterwards, stuff the hole with papers.



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13. Remove the wheel and tire.
14. Disconnect the strut assembly, tie rod and stabilizer bar link from the knuckle.
15. Remove the wheel speed sensor.

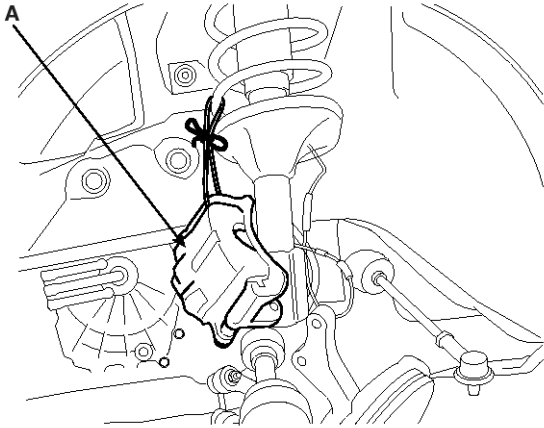


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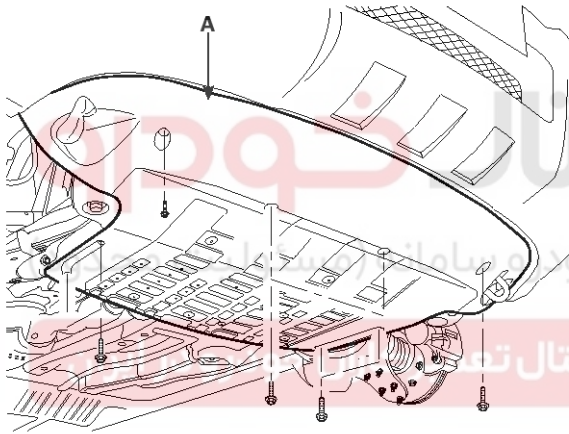
Manual Transaxle System

16. Remove the brake caliper(A) and suspend it with a string.



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17. Lift up the vehicle and remove the undercover(A).

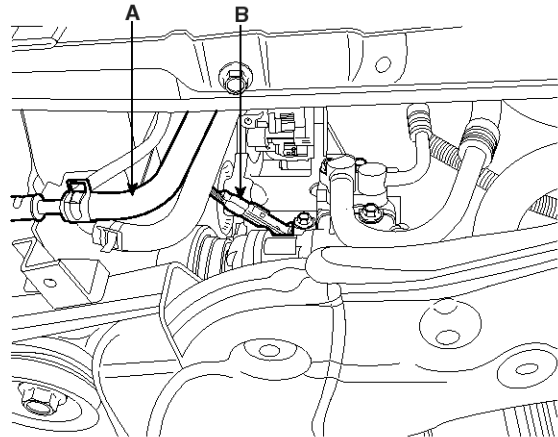


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18. Remove the oil drain plug and drain the fluid.

19. Remove the front muffler.

20. Disconnect the steering tube (A) on the cross member(sub-frame) and air condition switch(B).



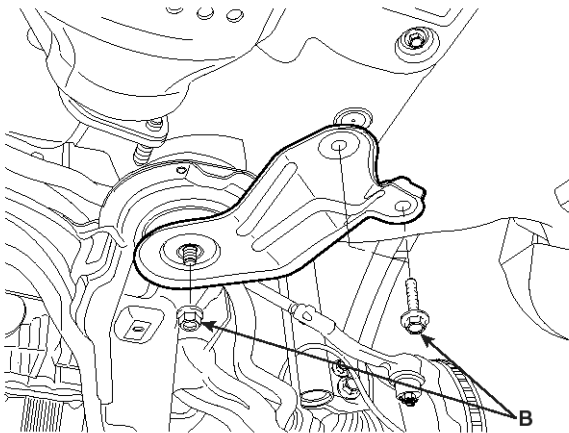
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21. Install a jack for the removal of a cross member(sub-frame).

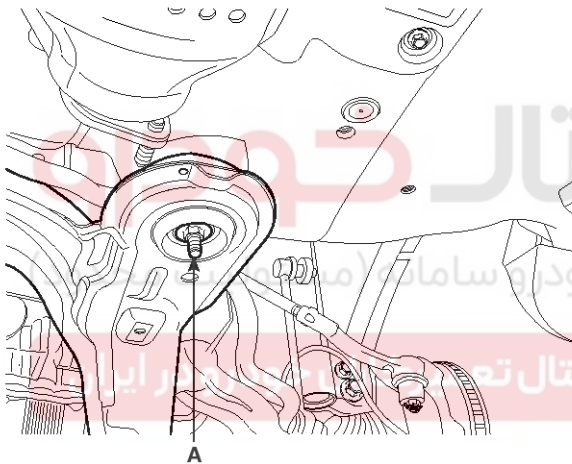
Manual Transaxle System

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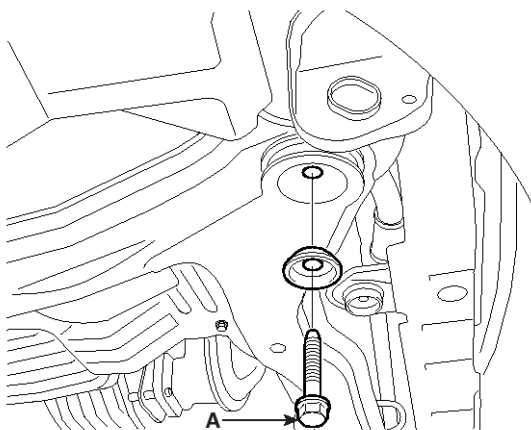
22. After removing the cross member mounting bolts and nuts, remove the cross member with the steering gear box and the stabilizer bar.



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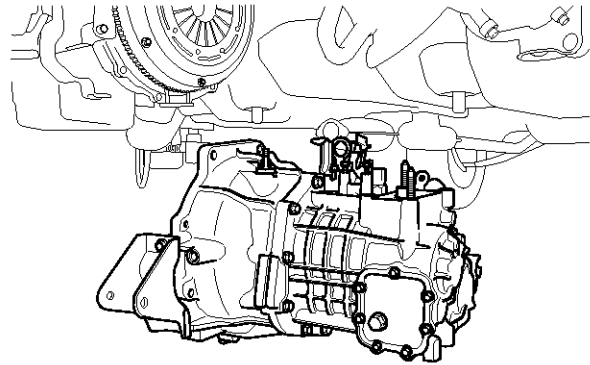
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23. Install a jack for the removal of the transaxle.
 24. Remove the front and the rear roll stopper.
 25. Remove the engine and the transaxle mounting bolts.

26. Lowering the jack slowly, remove the transaxle.



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INSTALLATION

Installation is in the reverse order of removal.

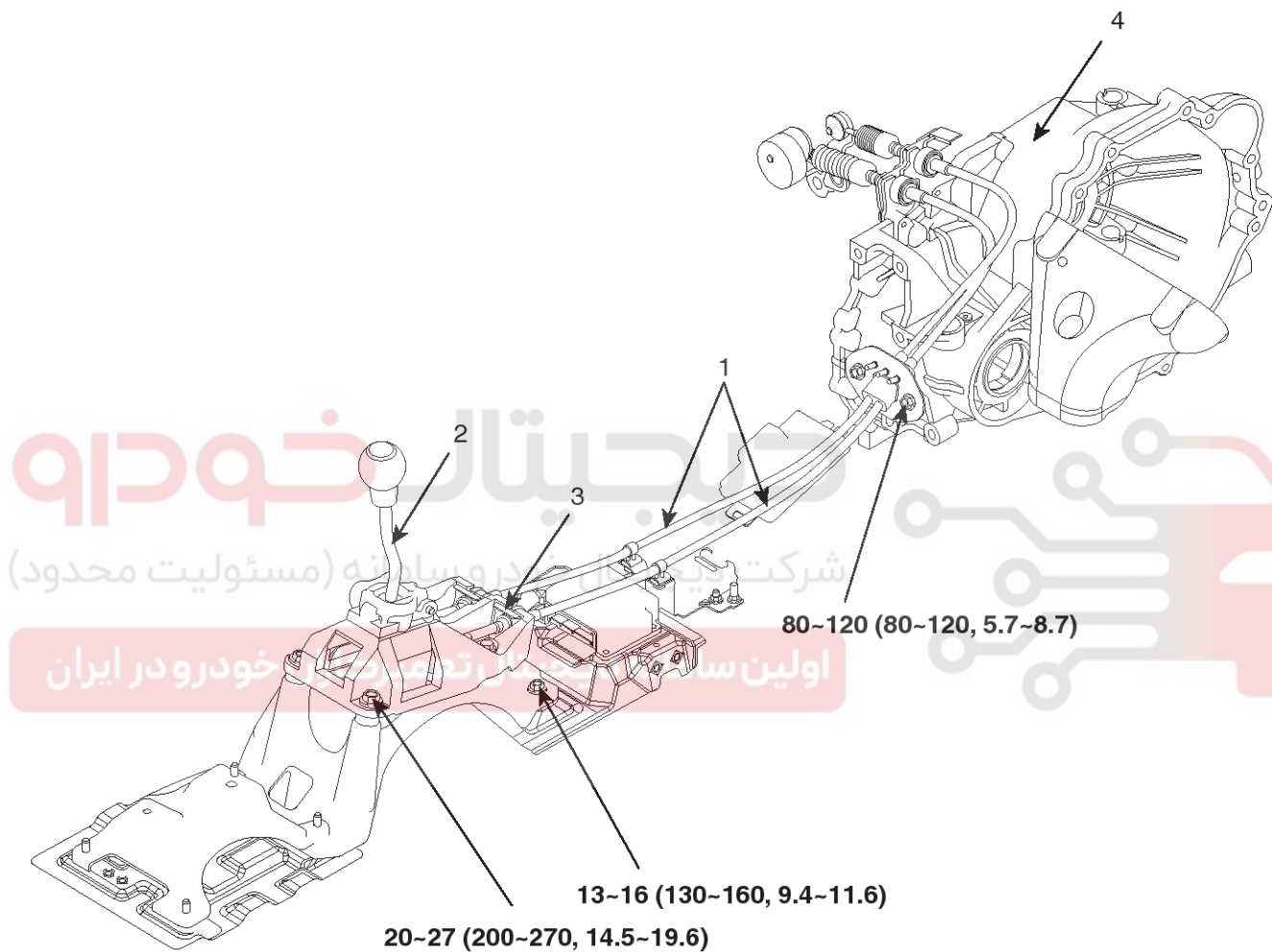
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Manual Transaxle System

Manual Transaxle Control System

Manual Transaxle Shift Control

COMPONENTS



TORQUE : N.m(kgf.cm, lbf.ft)

- 1. Cable assembly
- 2. Shift lever

- 3. Fixing Pin
- 4. Transaxle

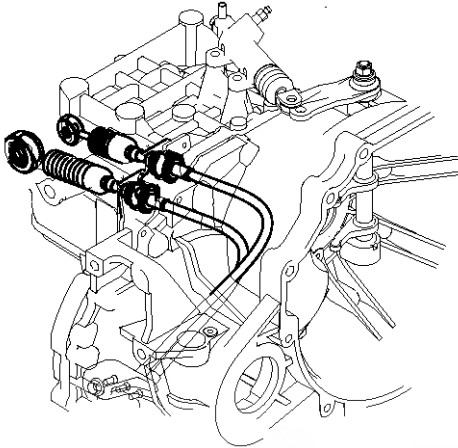
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Manual Transaxle Control System

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REMOVAL

1. Remove the console assembly.
2. Remove the cotter pins and clips (shift lever side).
3. Remove the shift lever assembly.
4. Remove the retainer and bolts.
5. Remove the cotter pins and clips (Transaxle side).
6. Remove the shift cable and select cable.



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INSTALLATION

1. Install the shift lever assembly.
2. Install the shift lever and select cable.

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 boot for damage.
4. Check each bushing for wear, abrasion, sticking, restricted movement or damage.
5. Check for a weak or damaged return spring.

