



HYUNDAI

Elantra



Workshop Manual
2001 - 2006

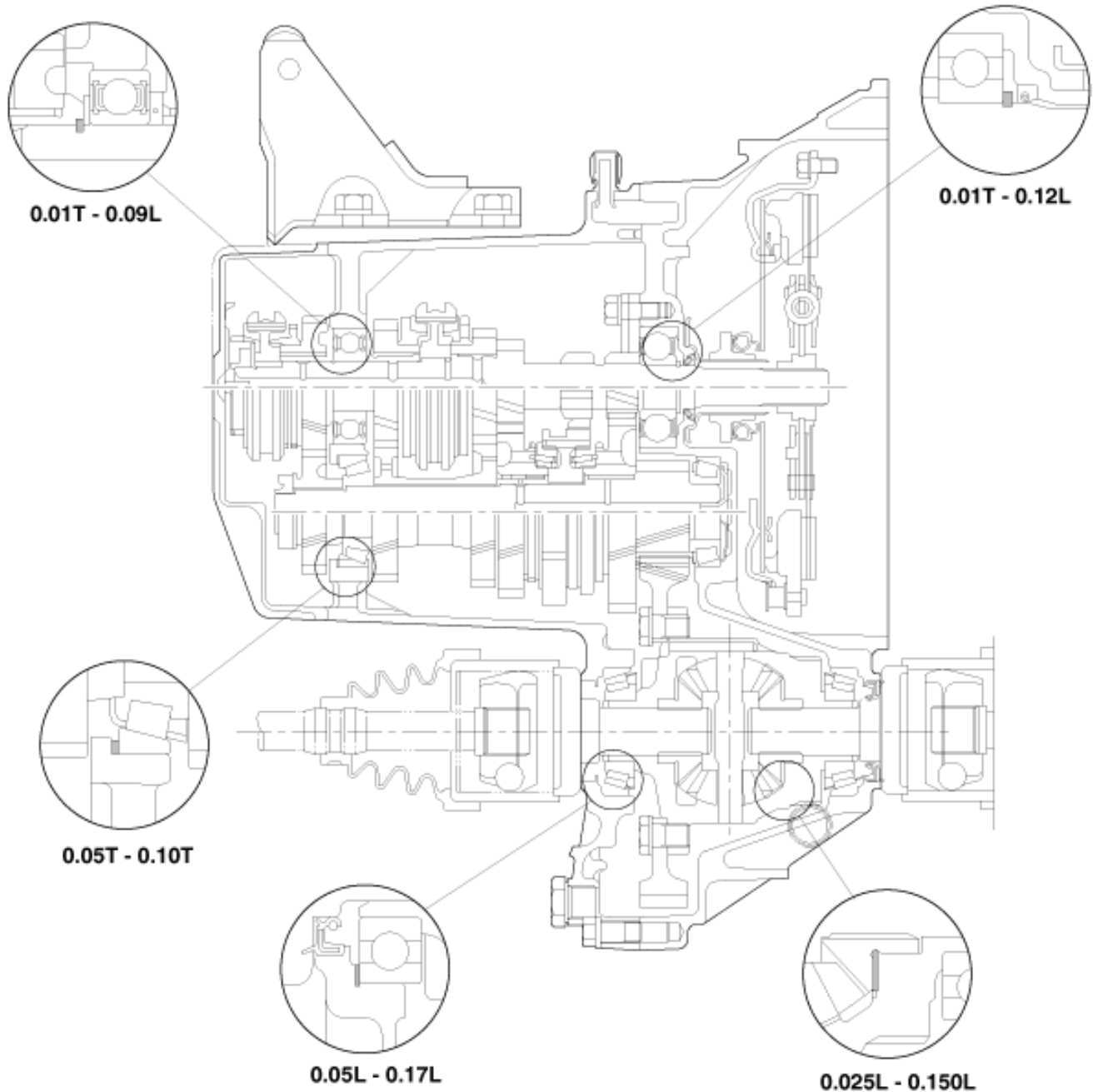


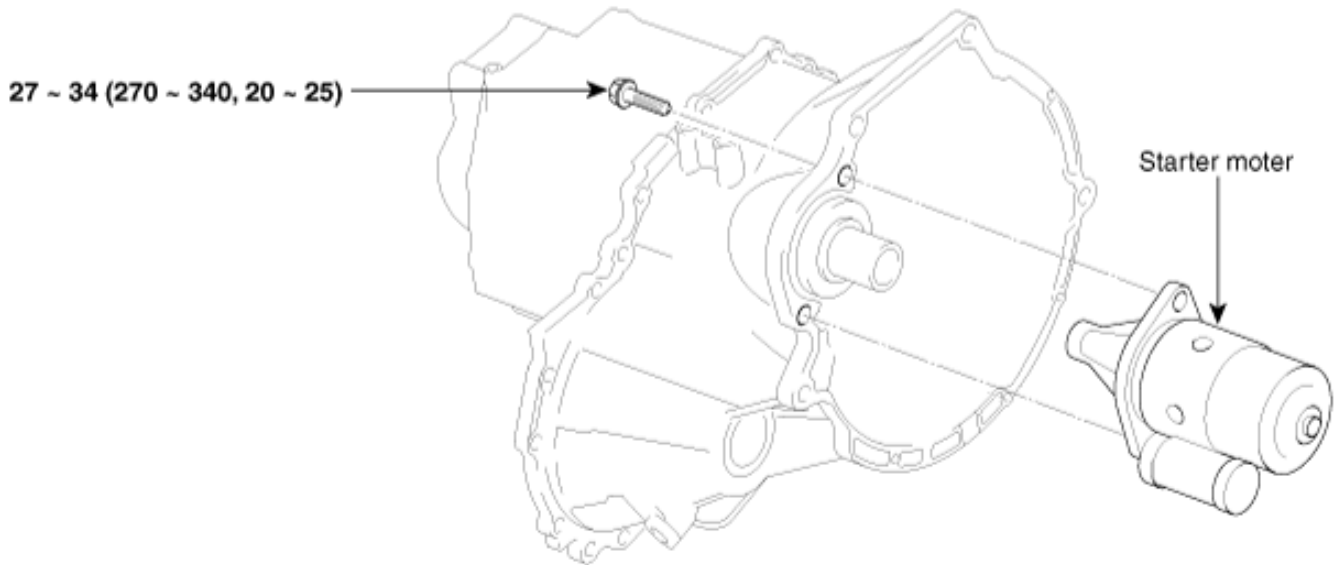
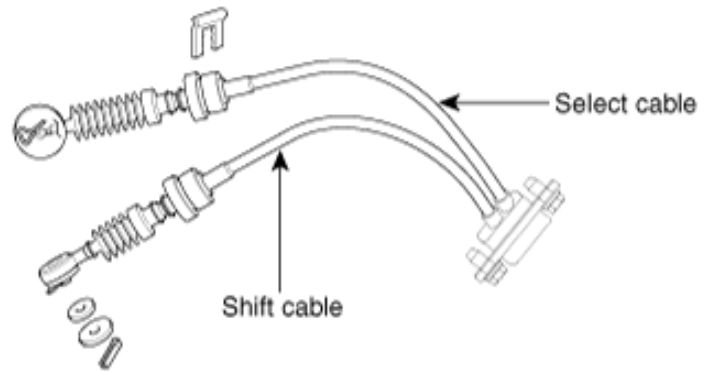
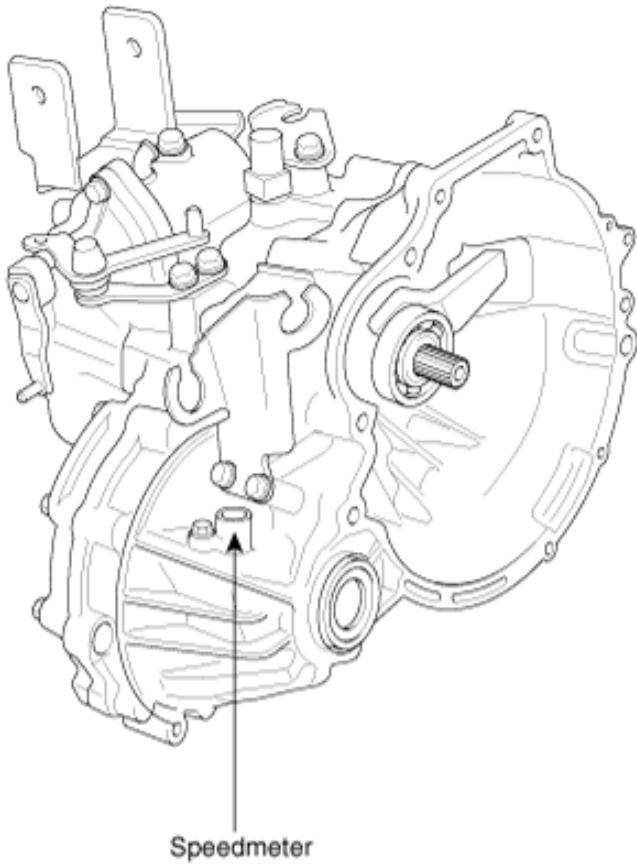
GENERAL INFORMATION (M5BF2)

Manual transaxle overhaul section has been separated from the shop manual.
M5BF2 overhaul section was included in the overhaul manual.

* M5BF2 model is marked as a "J" in transmission identification number, refer to "GI-GROUP" for the detail.

SECTION VIEW





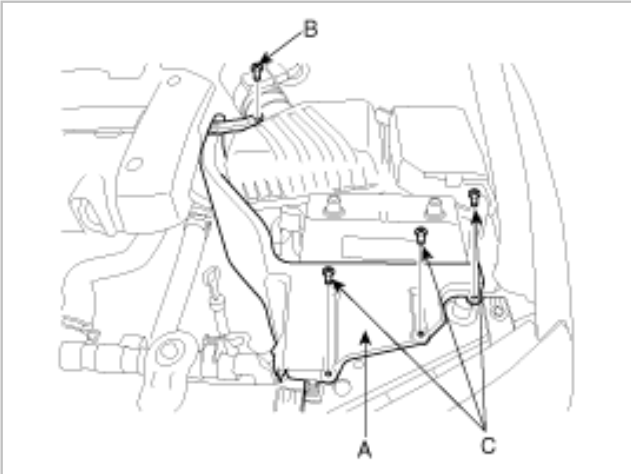
TORQUE : Nm (kg-cm, lb-ft)

REMOVAL

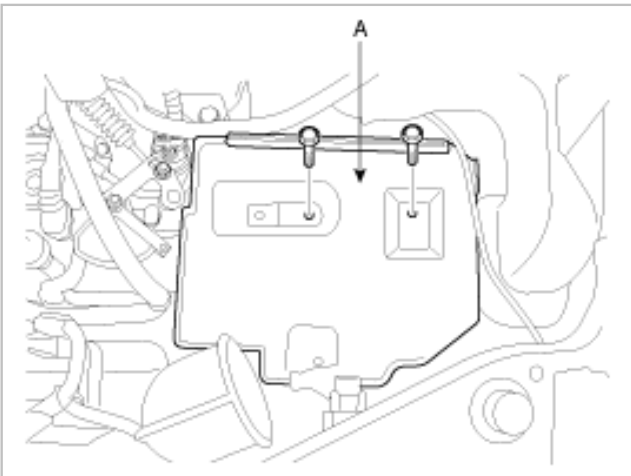
1. Remove the battery terminal. ("-","+")



2. Remove the heat shield(A). (Bolt: 1EA(B), Retainer: 3EA(C))



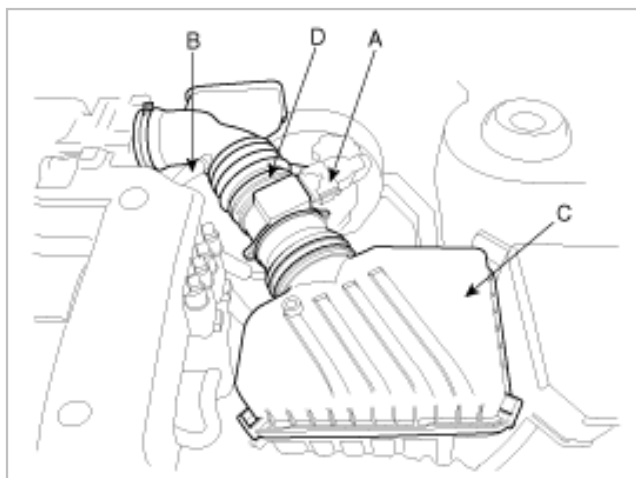
3. Remove the battery and the battery tray(A).



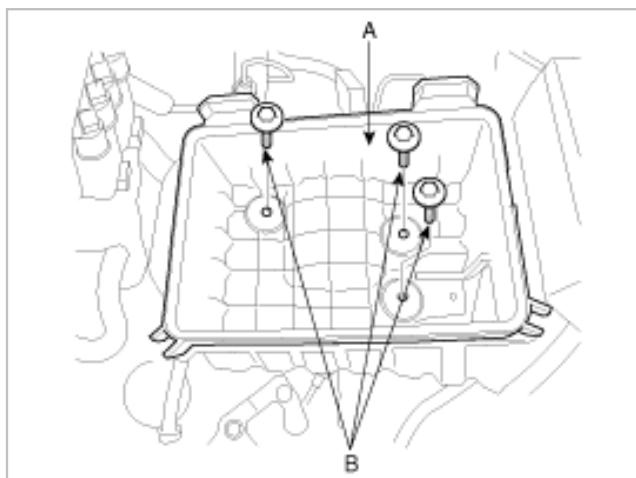
4. Removal of air cleaner and air intake hose.

Ebay User ID: reveleus1

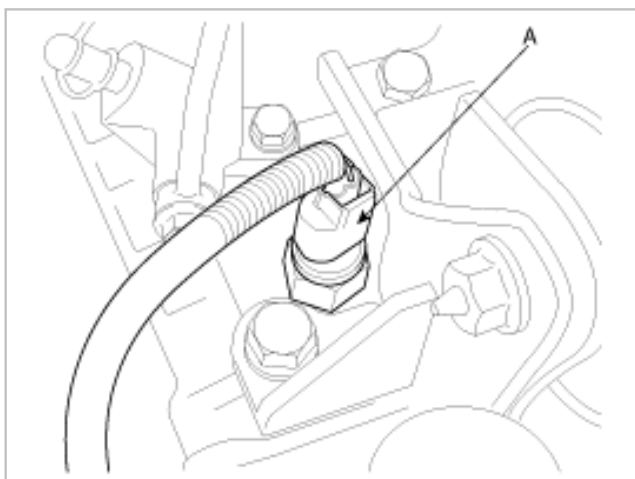
- (1) Disconnect the air flow sensor connector(A) and breather hose(B).
- (2) Air cleaner upper cover(C) and air intake hose(D).



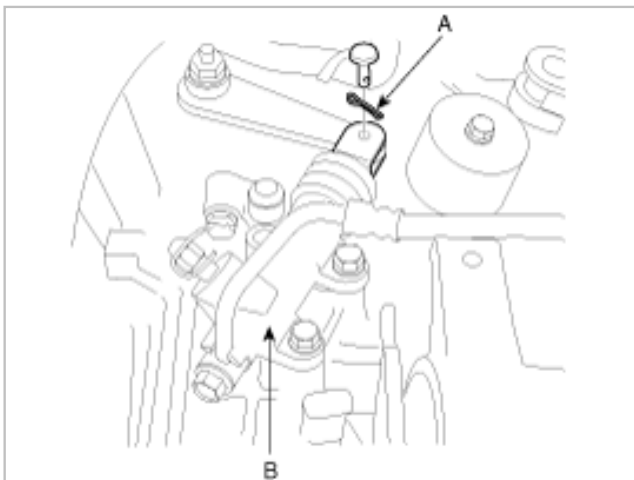
- (3) Air cleaner lower(A) (Bolt: 3EA(B)).



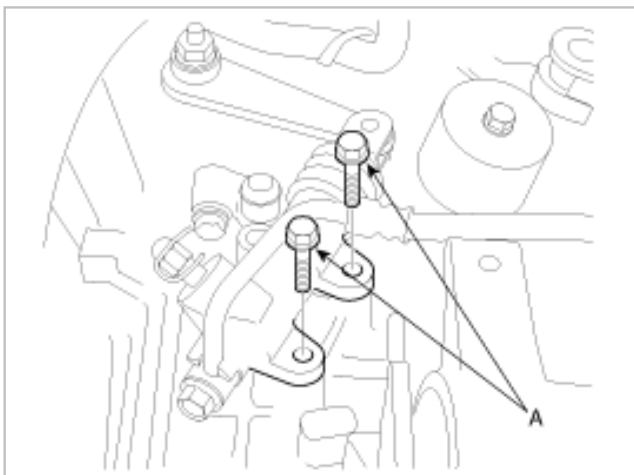
5. Disconnect the backup lamp switch connector(A).



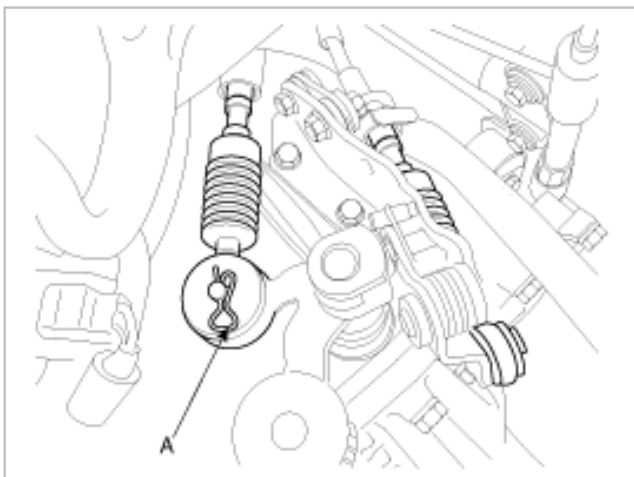
6. Remove the cotter pin(A) of the clutch release cylinder(B).
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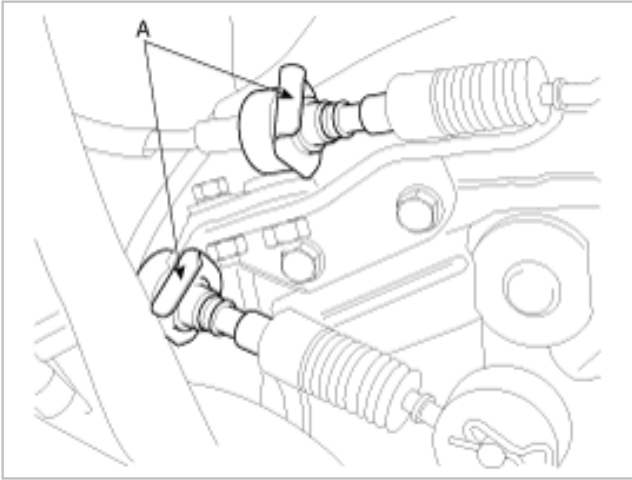
7. Remove the clutch release cylinder mounting bolts(A).



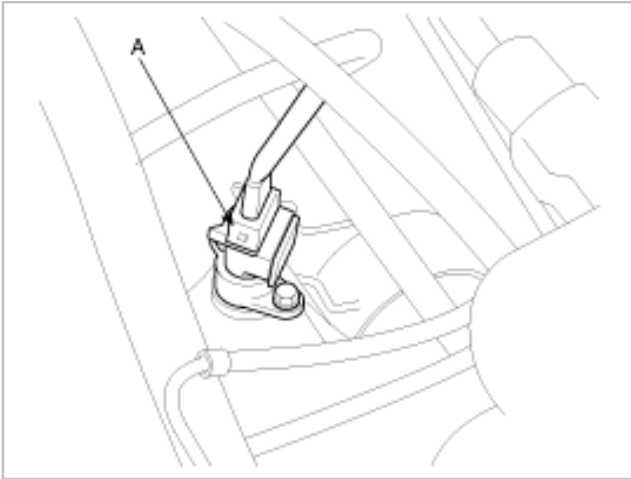
8. Remove the cotter pin(A) of the shift and selector cable.



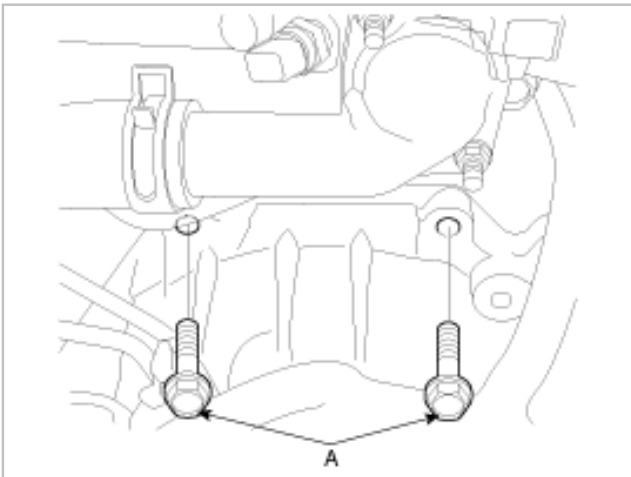
9. Remove the clip(A) of the shift and selector cable. Ebay User ID: reveleus1



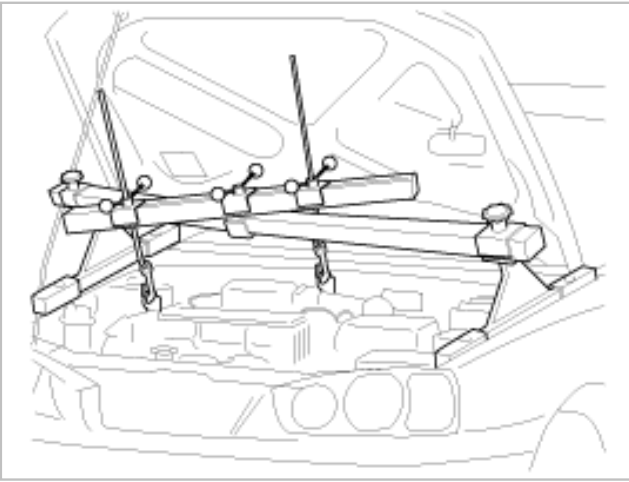
10. Disconnect the vehicle speed sensor connector(A).



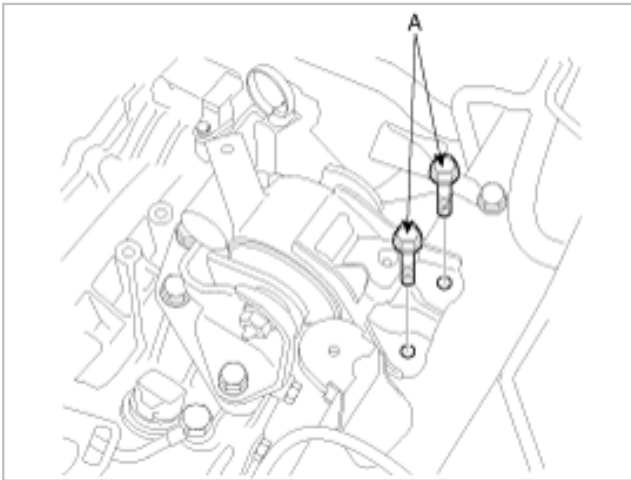
11. Remove the start motor mounting bolts and the transaxle mounting to the engine bolts(A).



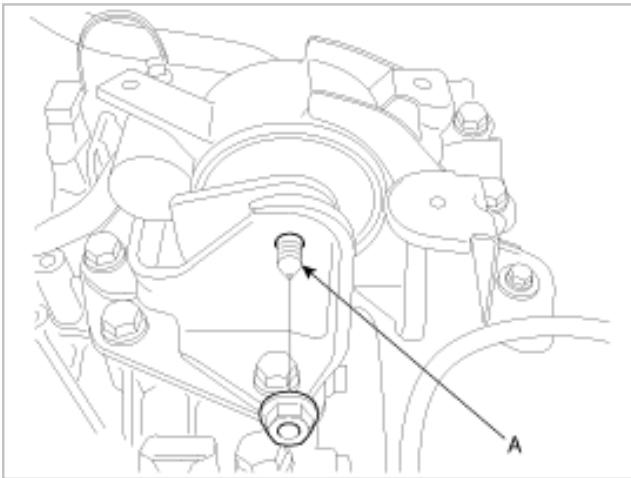
12. Attach to the engine hooks using special tool (09200-38001).
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13. Remove the transaxle-mounting bracket.
(1) Body mounting bolts(A) (Upper side)

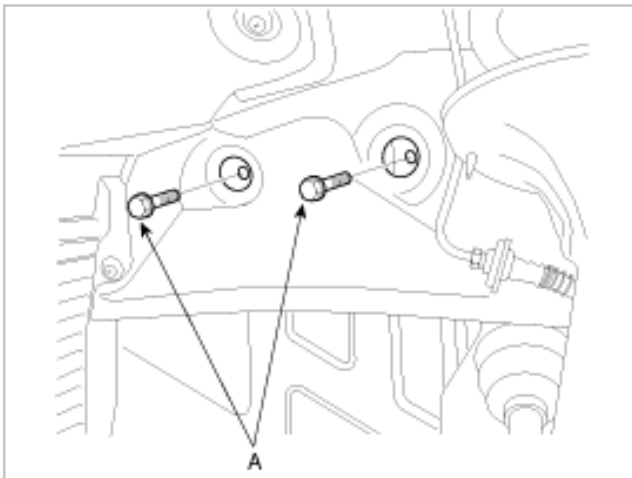


(2) Insulator bolt(A).

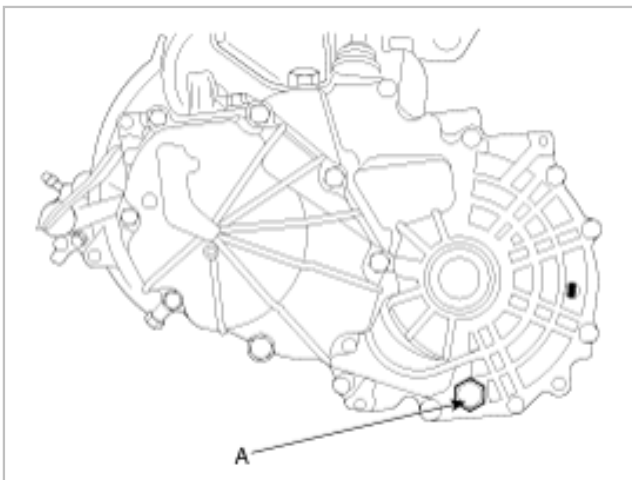


(3) Body mounting bolts(A) (Left side)

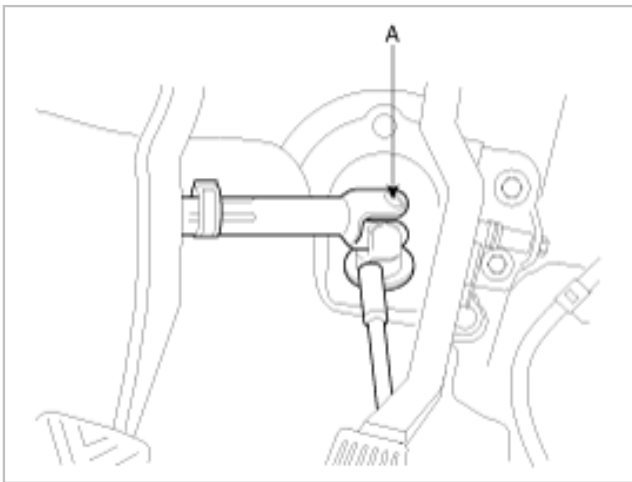
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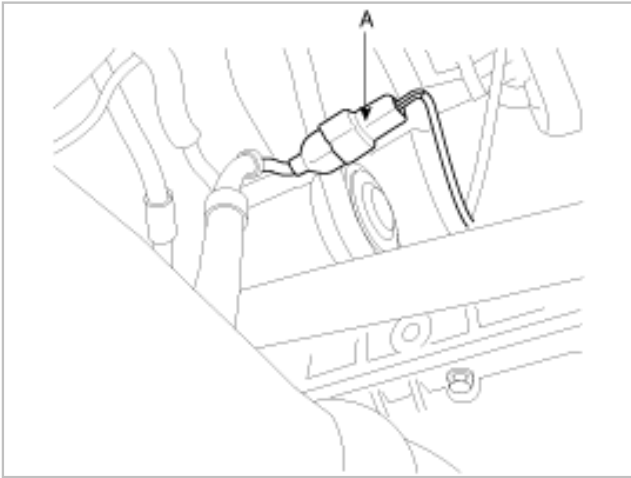
14. Lift up the vehicle.
15. Remove the front tire.
16. Remove the drain plug(A) and drain the transaxle gear oil.



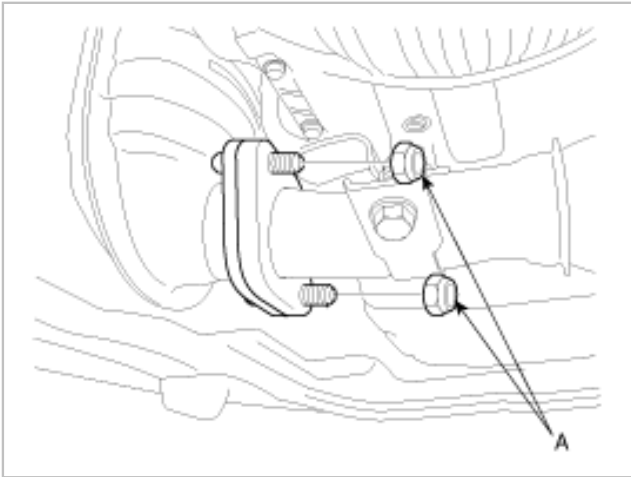
17. Disconnect the tie rod end, wheel speed sensor, knuckle, caliper and drive shaft. (see "DS" group).
18. Remove the gear box u-joint(A) mounting bolt.



19. Disconnect the oxygen sensor connector(A). Ebay User ID: reveleus1



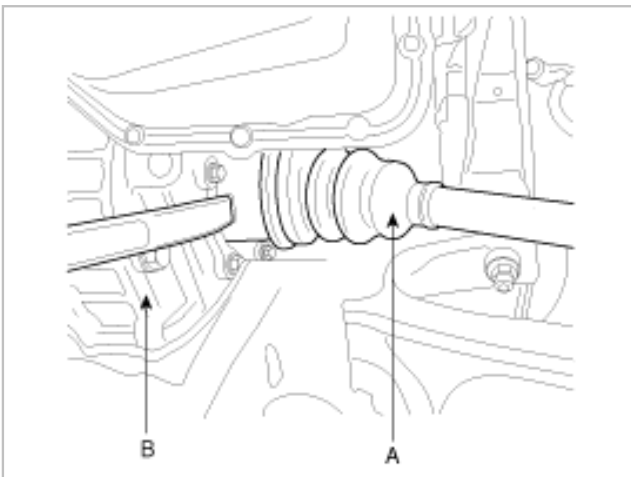
20. Remove the front muffler mounting nuts(A).



21. Remove the front muffler to the center muffler mounting nuts. (2EA)

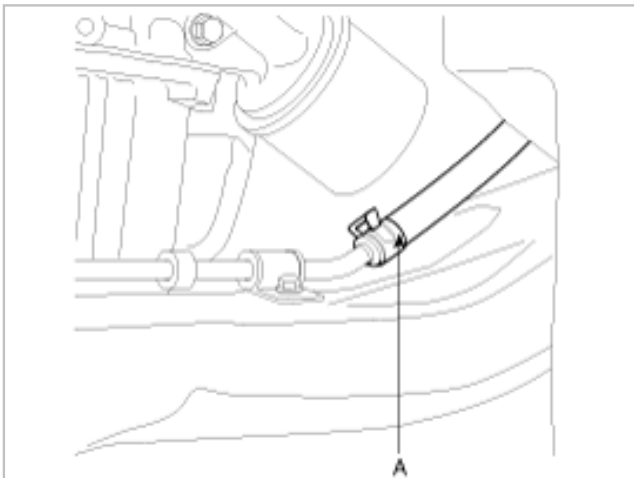
22. Remove the front muffler bracket bolt and front muffler. (1EA)

23. Remove the drive shaft(A) from the transaxle(B).

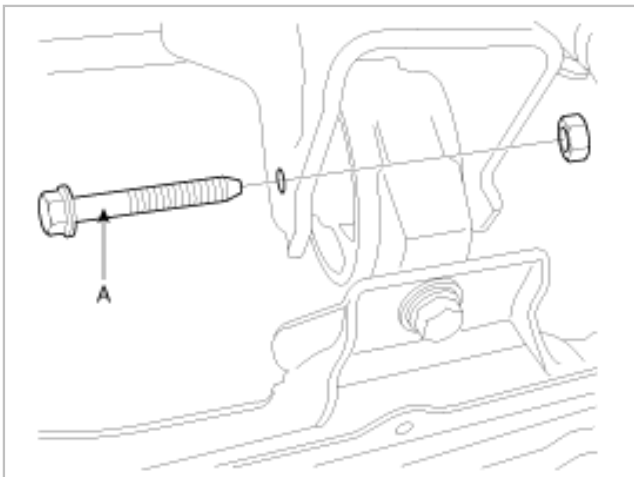


24. Remove the power return hose(A) and drain the power steering oil.

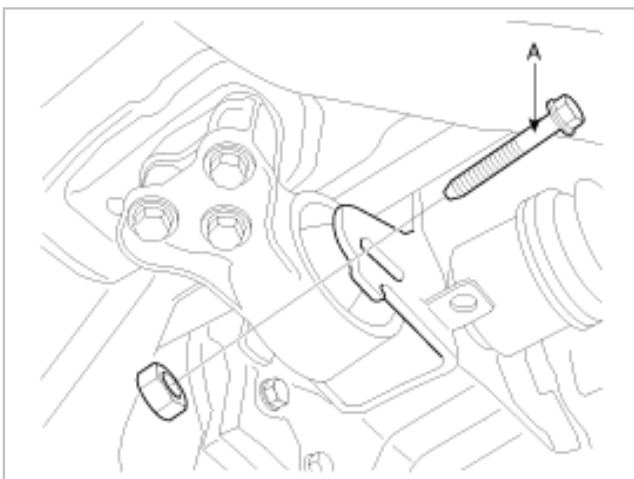
Ebay User ID: reveleust



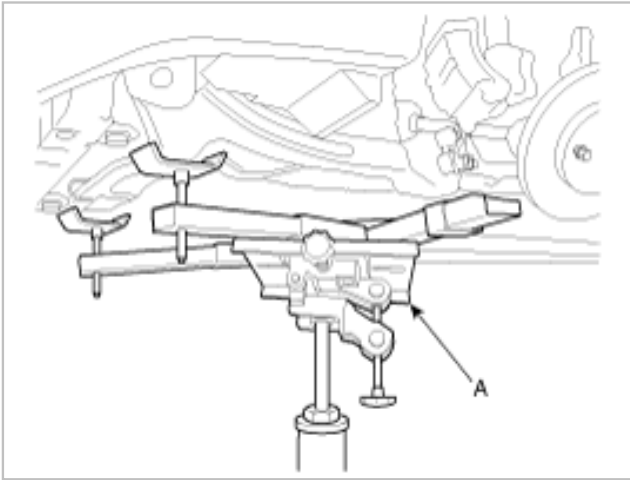
25. Remove the front roll stopper-mounting bolt(A).



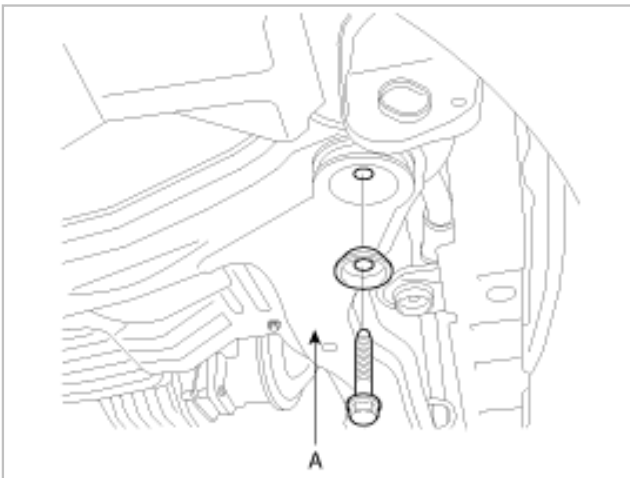
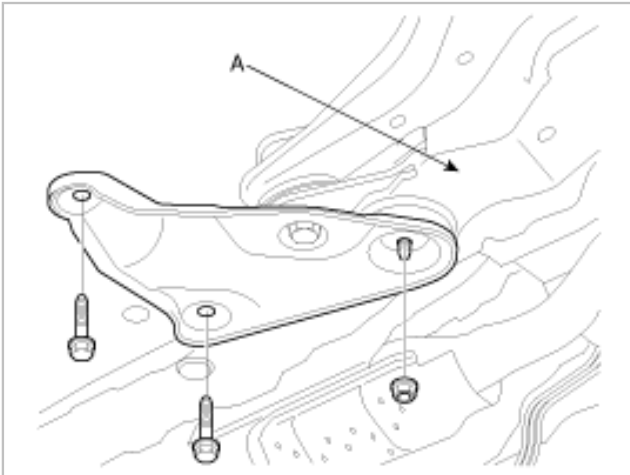
26. Remove the rear roll stopper-mounting bolt(A).



27. Install the jack(A) for supporting sub-frame. Ebay User ID: reveleus1

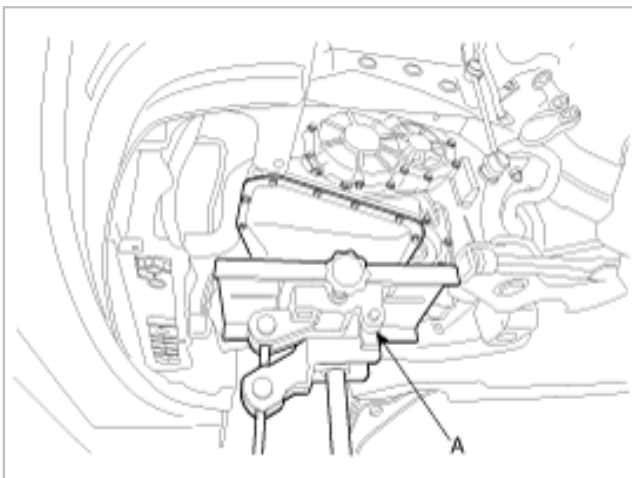


28. Remove the sub frame(A).

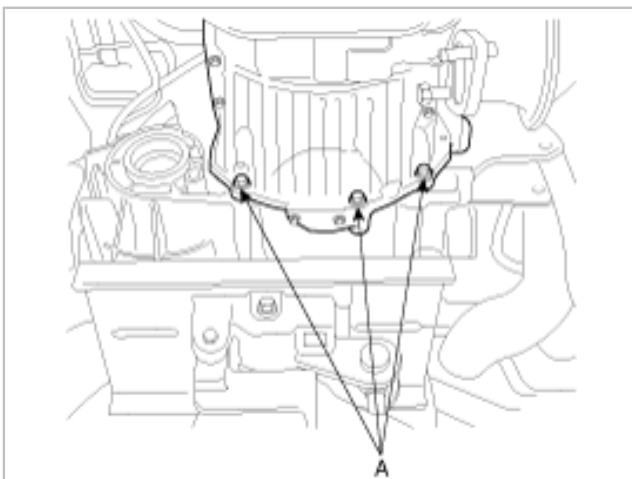


29. Install the T/M jack(A).

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30. Remove the transaxle lower mounting bolts(A).



31. Remove the transaxle assembly supporting by a jack.

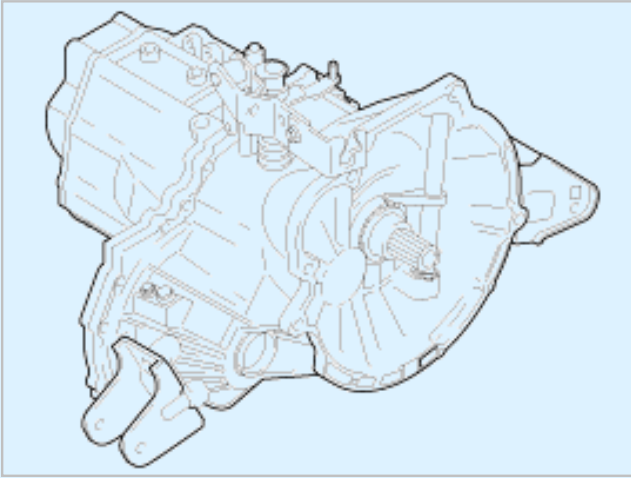
NOTE

When supporting the transaxle assembly, make sure that the lifting force is applied to a wide area, not to a small localized area.

CAUTION

- Engine and transaxle mounting insulators should be installed the specified them.
- Mounting bracket installation procedures.
 - Engine mounting bracket.
 - T/M mounting bracket.
 - Rear roll stopper mounting bracket.
 - Front roll stopper mounting bracket.

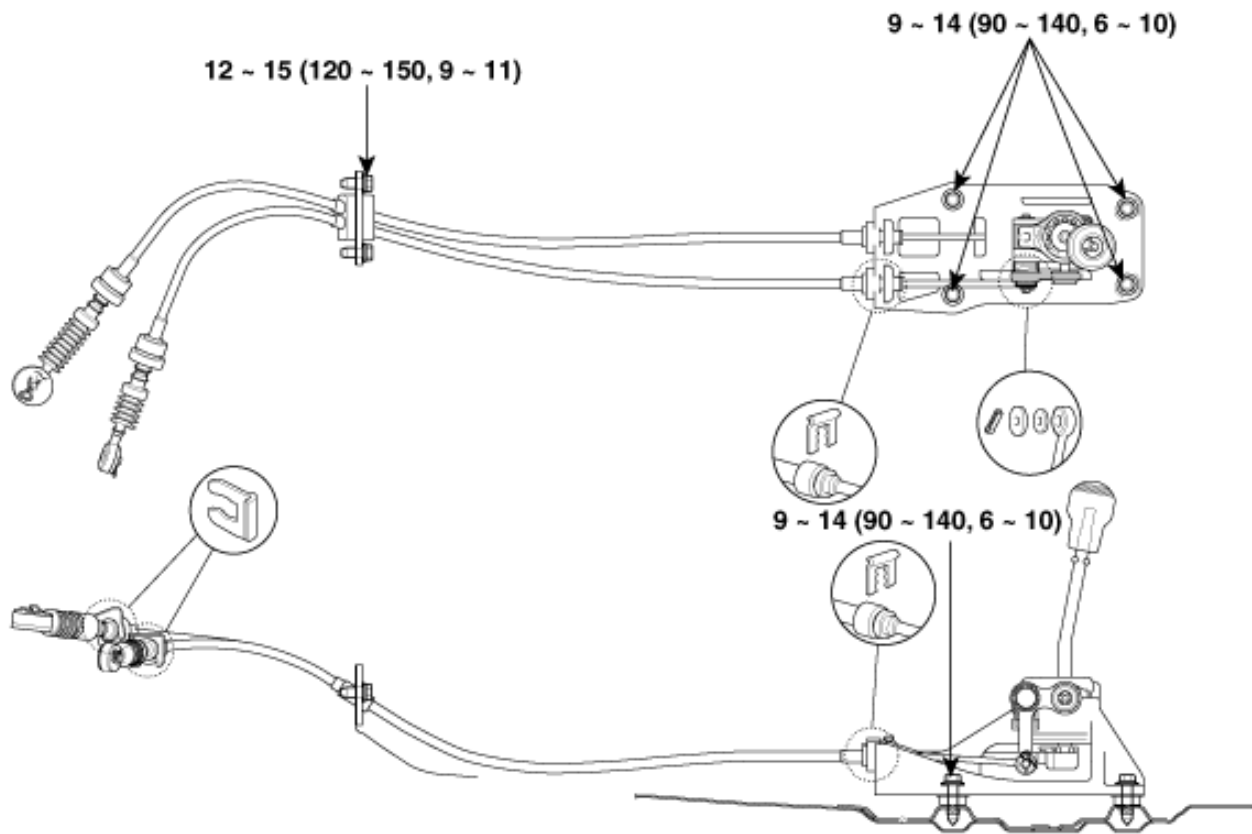
- Especially, when installing front roll stopper mounting bracket, be careful not to be crushed the insulator. If being crushed, idle vibration is high.



INSTALLATION

Installation is the reverse of removal.

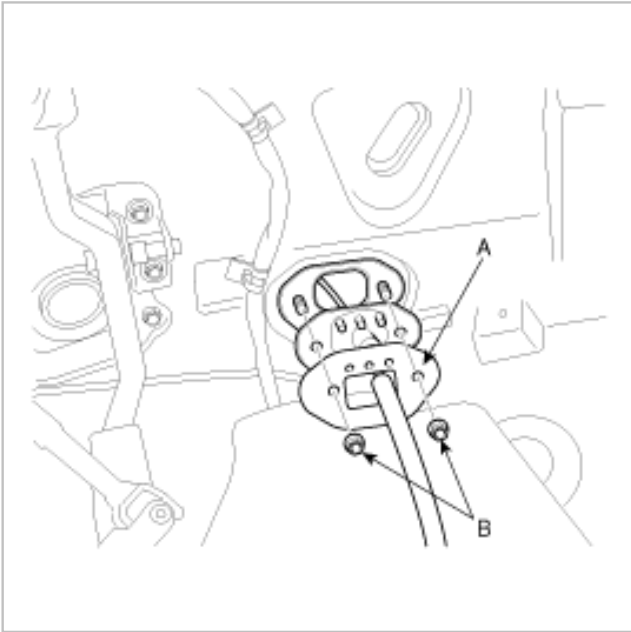
COMPONENTS



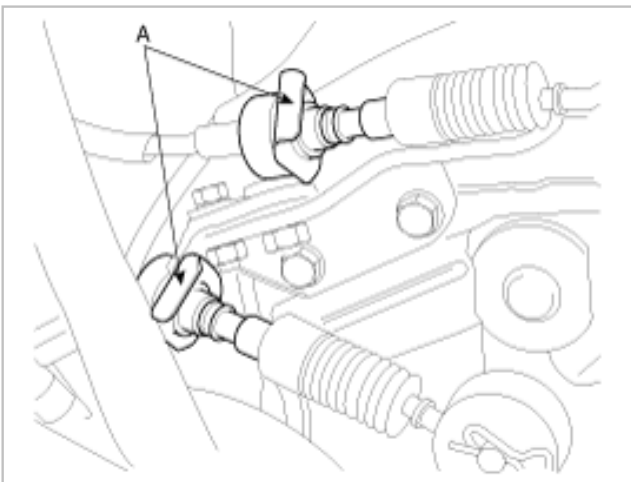
TORQUE : Nm (kg-cm, lb-ft)

REMOVAL

1. Remove the shift knob.
2. Remove the console assembly.
3. Remove the cotter pins and clips (shift lever side).
4. Remove the retainer(A) and bolts(B).



5. Remove the cotter pins and clips(A) (Transaxle side).



6. Remove the shift cable and selector cable.

INSTALLATION

1. Install the shift lever assembly.
2. Installation is the reverse of the removal.

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.

Purchased
from Ebay seller
Reveleus1

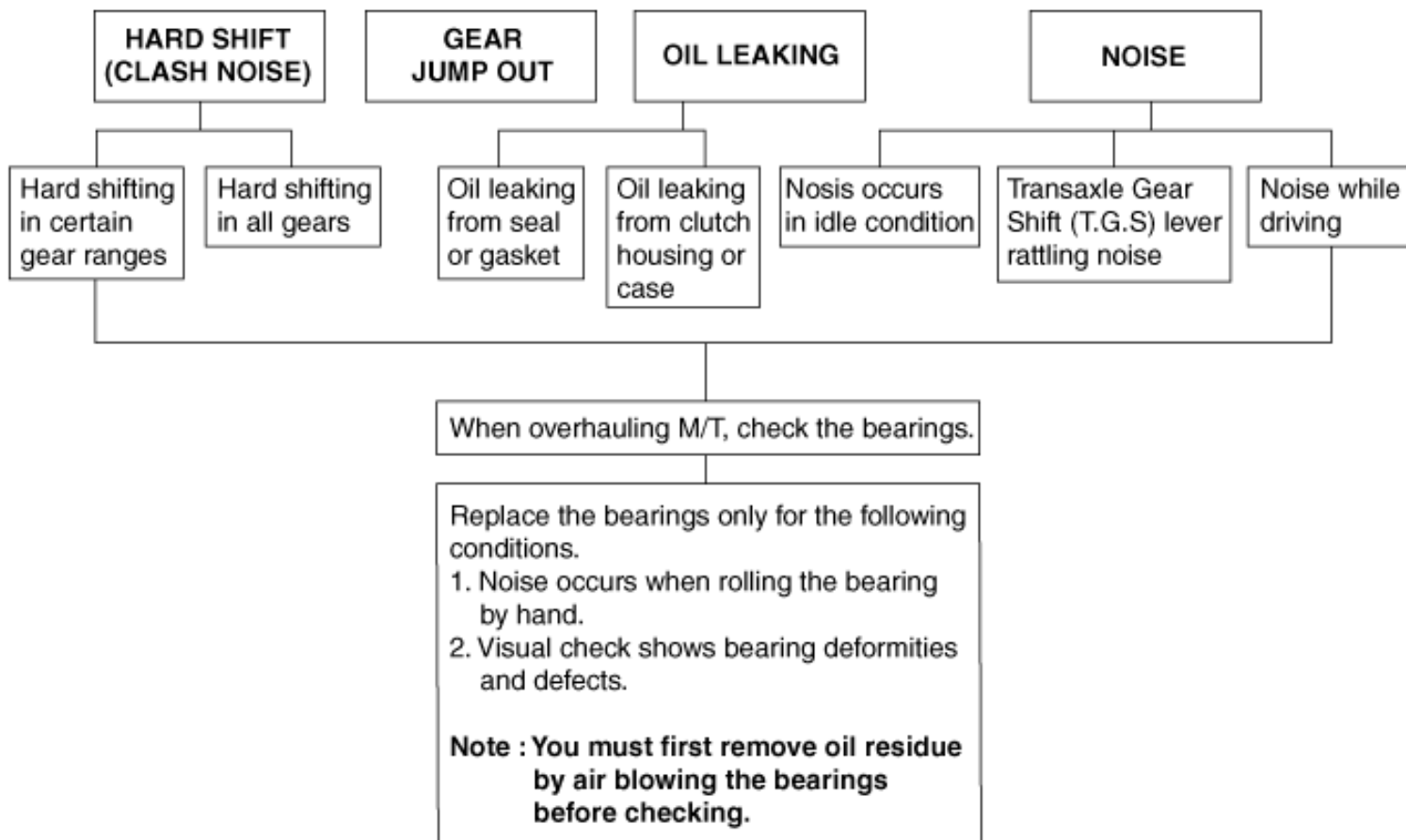
Thank-you for purchasing from me, it
is much appreciated.

To contact me please email
suzlever@gmail.com

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

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INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS



Hard shift in certain gears

HARD SHIFT (CLASH NOISE)

Hard shift in certain gears

Check and repair the problem gears

Check the sync. ring and speed gear ass'y for the problem gears.

1. Check the inner diameter of sync. ring for wear or unevenness.
2. Check the sync. ring outer teeth for wear.
3. Check the speed gear cone for chattering or uneven wear (burn marks).
4. Check the speed gear for clutch gear chamfer condition.

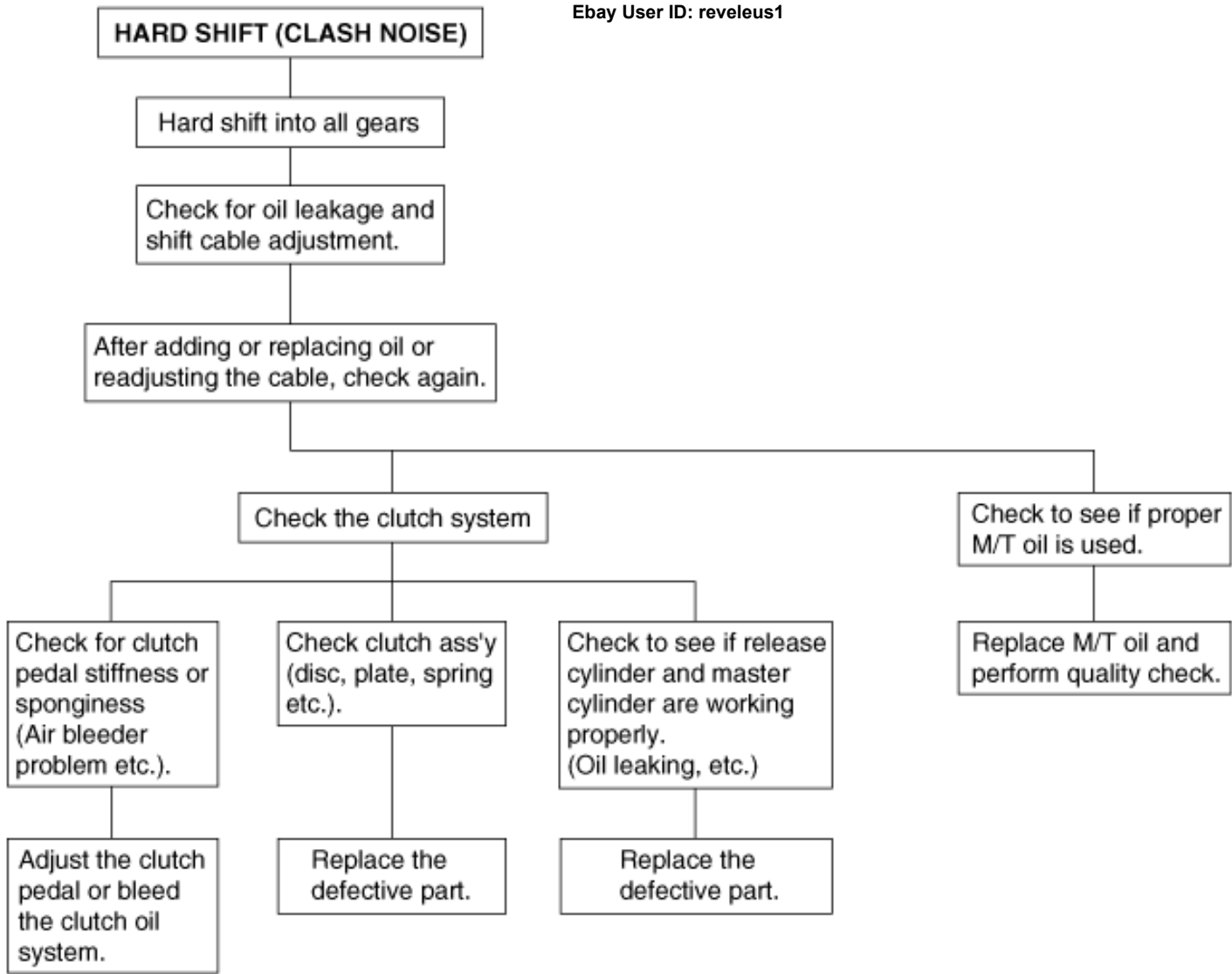
If any of the above problems exist, replace sync. ring and speed gear on problem gears.

Check the sync. sleeve and hub ass'y for the problem gears.

1. Check the unevenness when sync. sleeve meets clutch gear (gear chamfer condition).
2. Check the ass'y of sync. spring and key.

If sync. sleeve is problem, then replace only the sleeve.
If hub and spring are problems, then replace sleeve and hub ass'y.

While repairing, check to see if there are any sliding difficulties of sleeve and hub. If there are, then replace sleeve and hub.



Before performing any work, check the driving habits of customers :
If shifting occurs as the clutch is being pressed, then hard shifting would occur in all gears.

GEAR JUMPS OUT

Check the adjustment of T.G.S cable

After cable adjusting, test again.

Jumps out of forward gear

Check and replace component for following problems.

1. Poppet spring & ball is missing.
2. The shape of the sync. sleeve teeth in problem gear is deformed.
3. Needle bearing missing in problem gear.
4. Worn out shift fork.
5. Input shaft bearing retainer worn.
6. The shape of the clutch gear teeth in problem gear is deformed.

Jumps out of reverse gear

Check and replace component for following problems.

1. Reverse lever ass'y worn.
2. Reverse gear worn.
3. 1st and 2nd sleeve worn.

OIL LEAKING

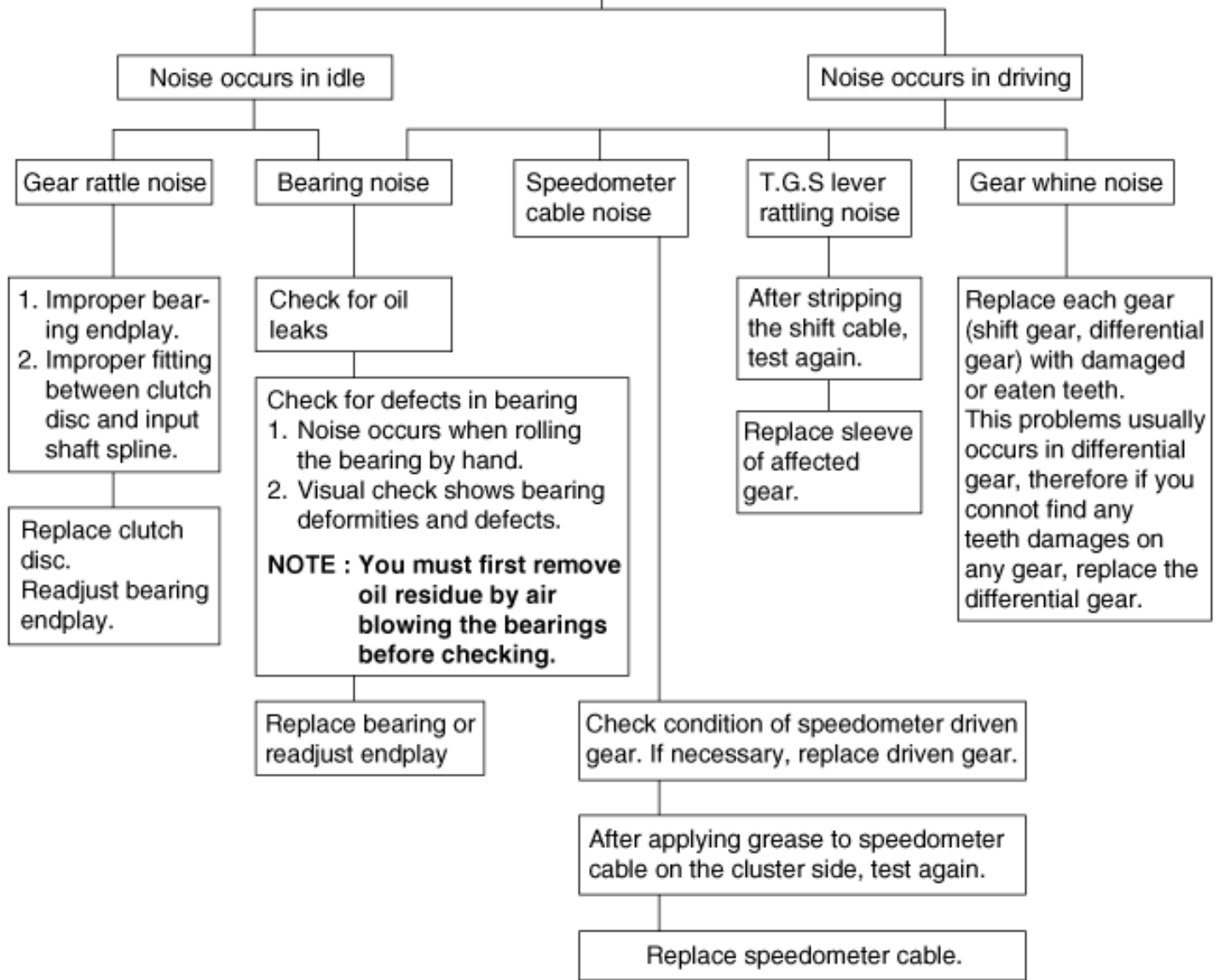
1. Check oil seal for oil leak.
(Differential oil seal, input shaft seal)
2. Check control shaft seal for oil leaks.
3. Check gasket.

1. After replacing seal and gasket, see if no leaks exists.
2. If oil leaks from control shaft seal, replace control shaft ass'y.

Check to see if there are damages to the other parts because of oil leaks.

Oil leaks due to cracks or deformities in clutch housing & T/M case because of improper casting. Replace clutch housing or T/M case.

Check to see if there are damages to other parts because oil leaks.





SERVICE ADJUSTMENT PROCEDURES

TRANSAXLE GEAR OIL LEVEL 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 a suitable viscosity.

REPLACEMENT OF TRANSAXLE GEAR OIL

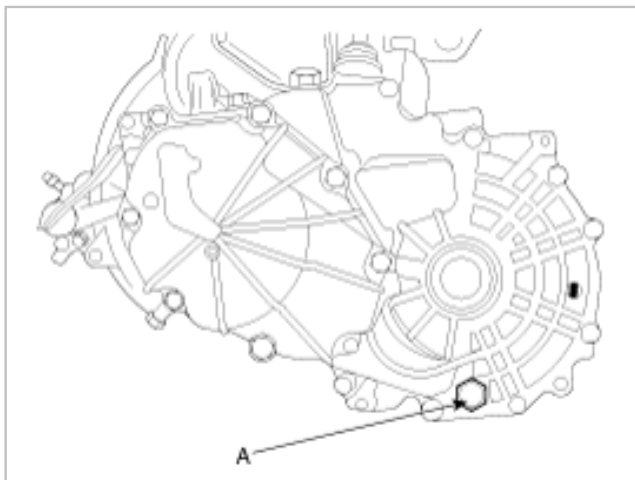
Transaxle gear oil :

HYUNDAI GENUINE PARTS MTF 75W/90 (API GL-4)

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(A).

Drain plug tightening torque :

30~35Nm (300~350kg-cm , 22~25lb-ft)



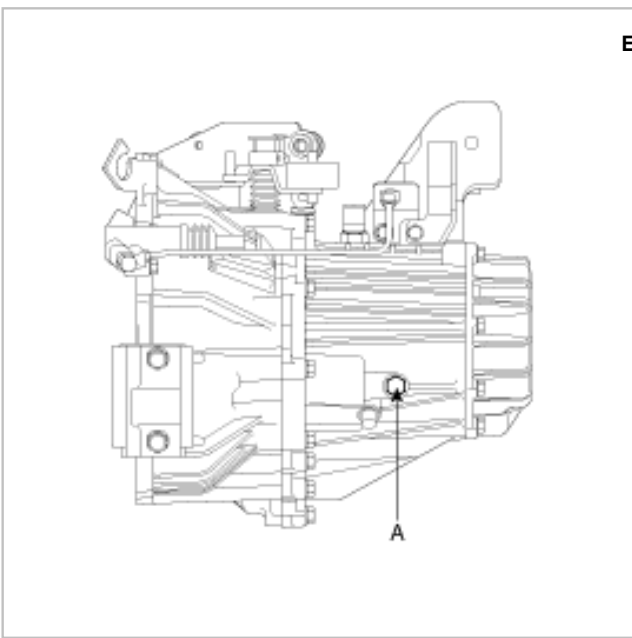
3. Add new oil through the filler plug(A) and, fill it to just below the plug opening.

Transaxle oil total capacity:

2.15 lit (2.27 U.S.qts., 1.89 imp.qts.)

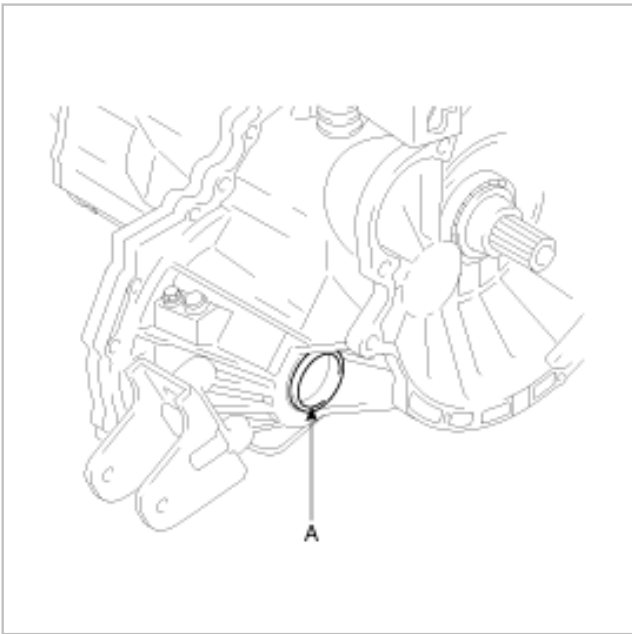
Filler plug tightening torque :

30~35Nm (300~350kg-cm , 22~25lb-ft)

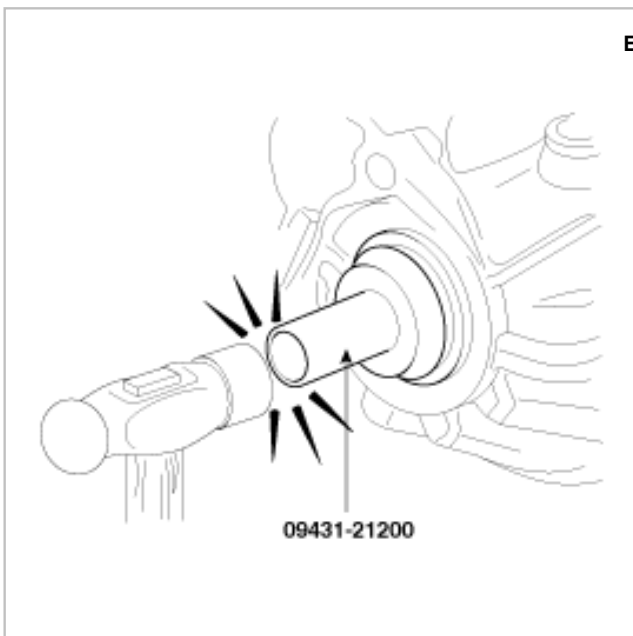


DRIVE SHAFT OIL SEAL REPLACE

1. Disconnect the drive shaft from the transaxle (see "DS" group).
2. Using a flat-tip screwdriver, remove the oil seal(A).



3. Using the special tool (09431-21200), tap the drive shaft oil seal into the transaxle.

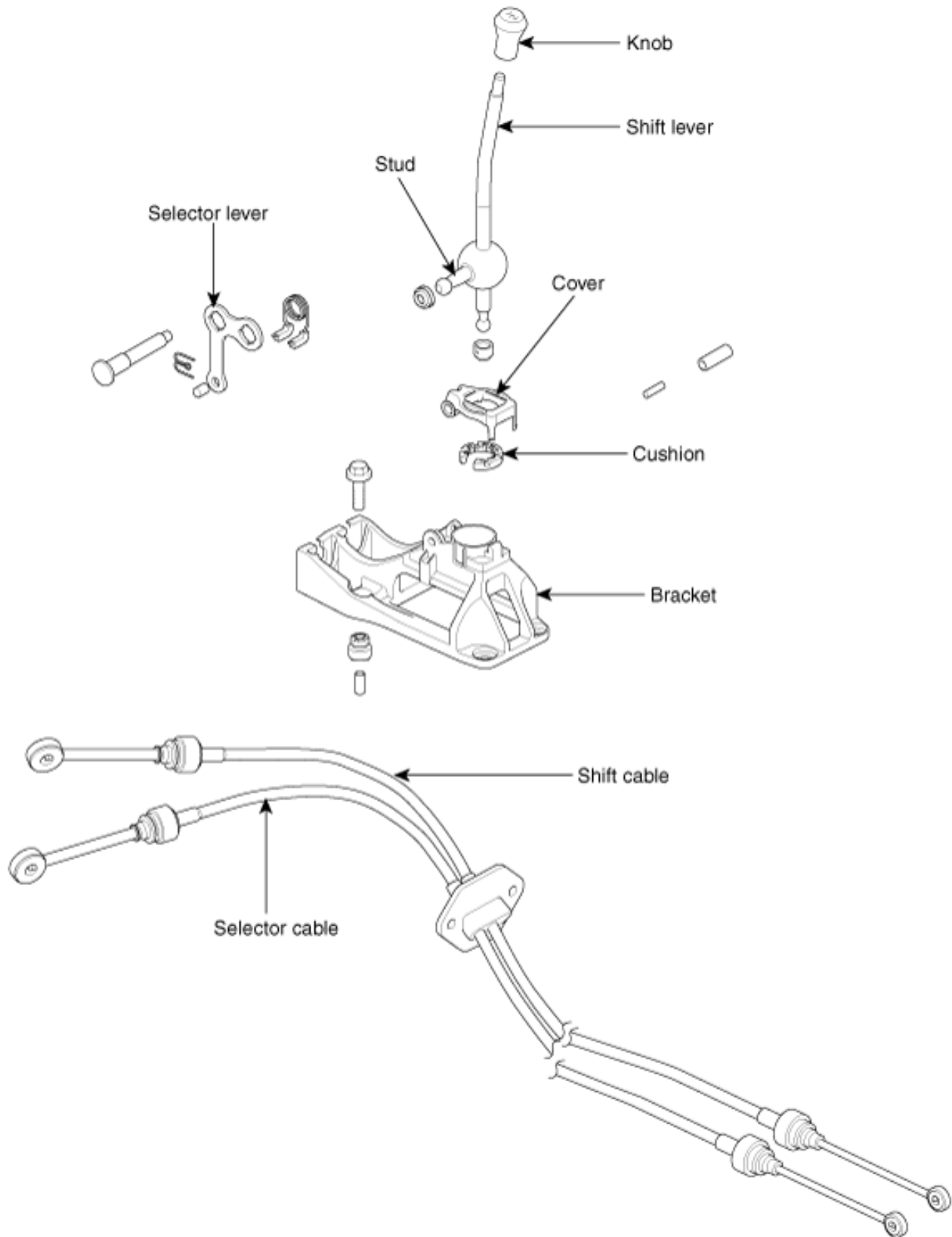


4. Apply a coating of gear oil to the oil seal.

Transaxle gear oil :

HYUNDAI GENUINE PARTS MTF 75W/90 (API GL-4)

COMPONENTS





INSPECTION

1. Check the bushing for wear or damage.
2. Check the return spring for damage or deterioration.

REASSEMBLY

1. Apply multi-purpose grease to the sliding part of the bushings.
2. Reassembly is reverse of the disassembly.