

# GENESIS COUPE(BK) > 2010 > G 3.8 DOHC > Manual Transmission System

## Manual Transmission System > General Information > Specifications

### Specifications

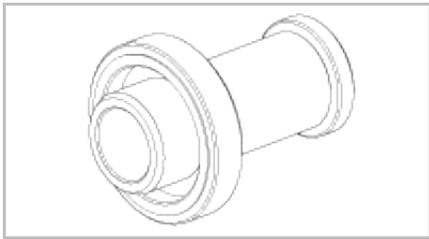
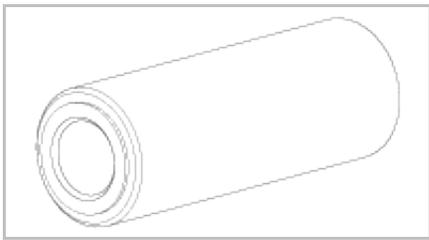
Transmission type		M6VR2
Engine type		Gasoline 3.8
Gear ratio	1st	3.848
	2nd	2.317
	3rd	1.623
	4th	1.233
	5th	1.000
	6th	0.794
	Reverse	3.985
Final gear ratio		3.538

### Lubricants

Items	Recommend lubricant	Quantity
Transmission gear oil	SAE 75W/85 API GL-4	2.2ℓ(2.3US qt, 1.94Imp qt)
Transmission housing	MS721-40	As required

## Manual Transmission System > General Information > Special Service Tools

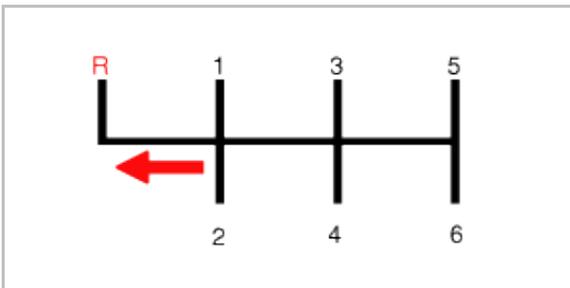
### Special Service Tools

Tool (Number and Name)	Illustration	Use
09452-25100 Oil seal installer		Installation of extension housing oil seal
09452-25400 Oil seal installer		Installation of control shaft oil seal

## Manual Transmission System > Manual Transmission System > Description and Operation

### Main Characteristics

- Optimized configuration design through intense analysis of all systems resulted in compact shape and less weight.
- This 6 speed transmission provides a 1:1 gear ratio in 5th gear for improved power and increased fuel efficiency.
- Multi-cone synchronizers are used to improve the shift feel while minimizing the shifting force required.
  - 1st, 2nd, and 3rd gears utilize a triple-cone synchronizer
  - 4th gear utilizes a double-cone synchronizer
  - 5th and 6th gears use a single-cone synchronizer
- The reverse gear has a High-Force Stage Structure which provides;
  - Quality/Sport feeling engagement
  - Improved engagement
  - Reduced reverse gear vibrations
  - Audio reverse indicator
  - How to shift 'R' : swiftly pull the lever to the left and shift to 'R'



- The gear teeth surfaces have been ground to reduce noise.
- The use of permanent, low-viscosity oil has reduced operational costs.

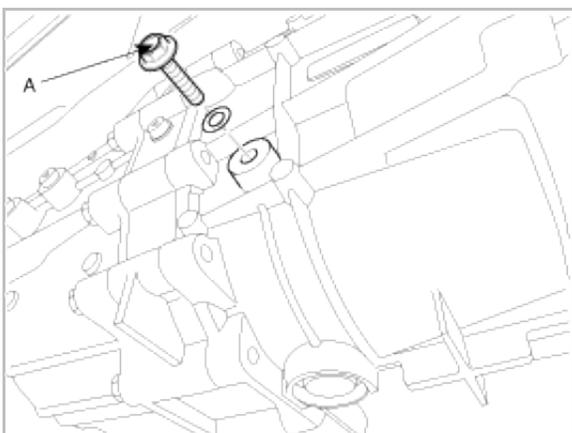
## Manual Transmission System > Manual Transmission System > Repair procedures

### Service Adjustment Procedure

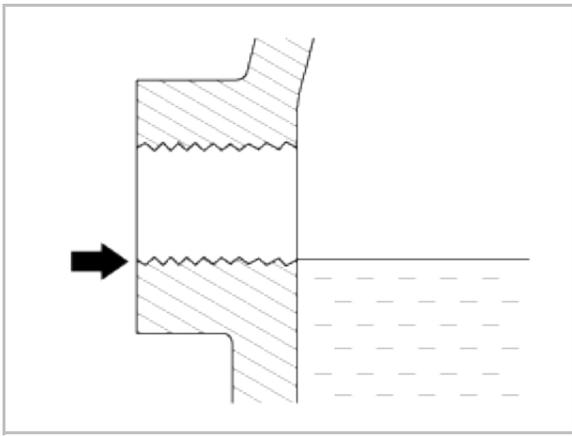
#### Transmission Gear Oil Level

##### Inspection

1. Remove oil filler plug(A).



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



3. Install filler plug with a new gasket.

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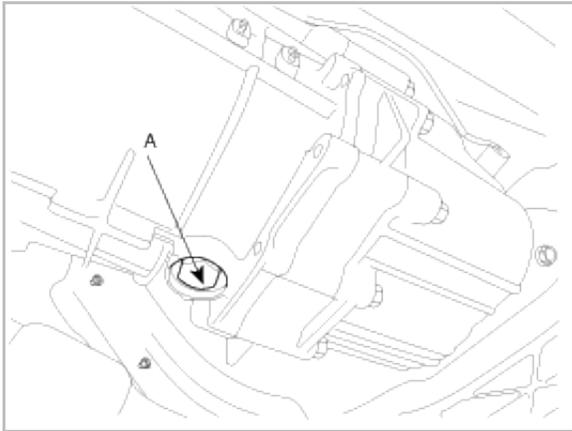
**Tightening torque :**

60~80 Nm (6.0~8.0 kgf.m, 43.4~57.8 lb-ft)

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## Replacement

1. With the vehicle parked on a level surface, remove the drain plug.
2. Drain the transmission oil after loosening the drain plug (A).



3. Install the drain plug with new gasket.

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**Tightening torque :**

60~80 Nm (6.0~8.0 kgf.m, 43.4~57.8 lb-ft)

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

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

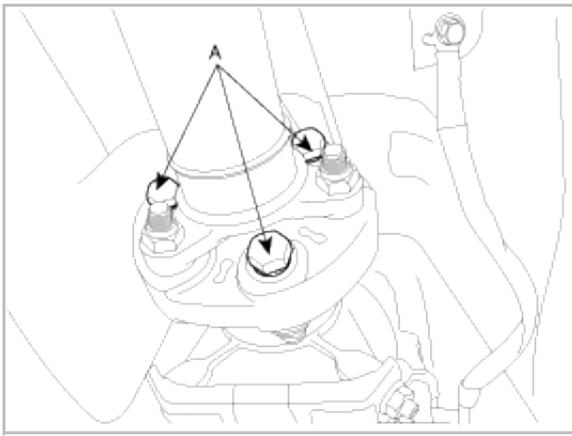
**Oil capacity :** 2.2ℓ(2.3US qt, 1.94Imp qt)

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## Extension Housing Oil Seal

### Replacement

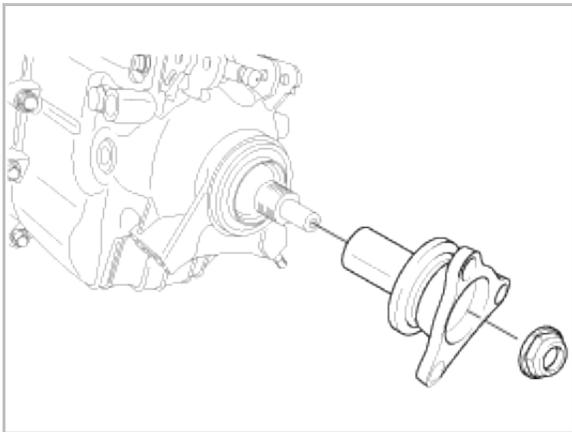
1. Remove the propellar shaft from the transmission by removing the bolts(A-3ea).



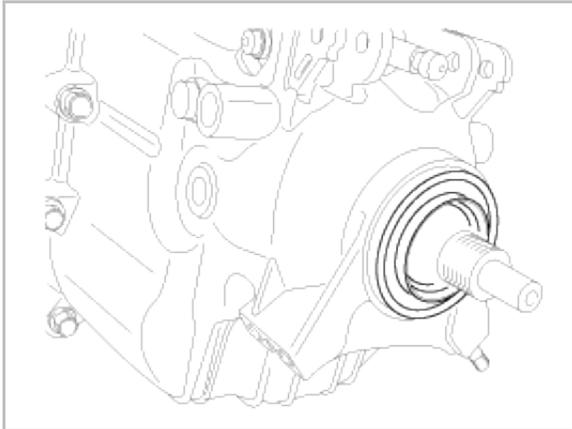
2. After releasing the caulking, remove the flange assembly by removing the locking nut(35mm) and O-ring.

**CAUTION**

Do not reuse locking nut and O-ring.



3. Remove the oil seal by using a screw driver.



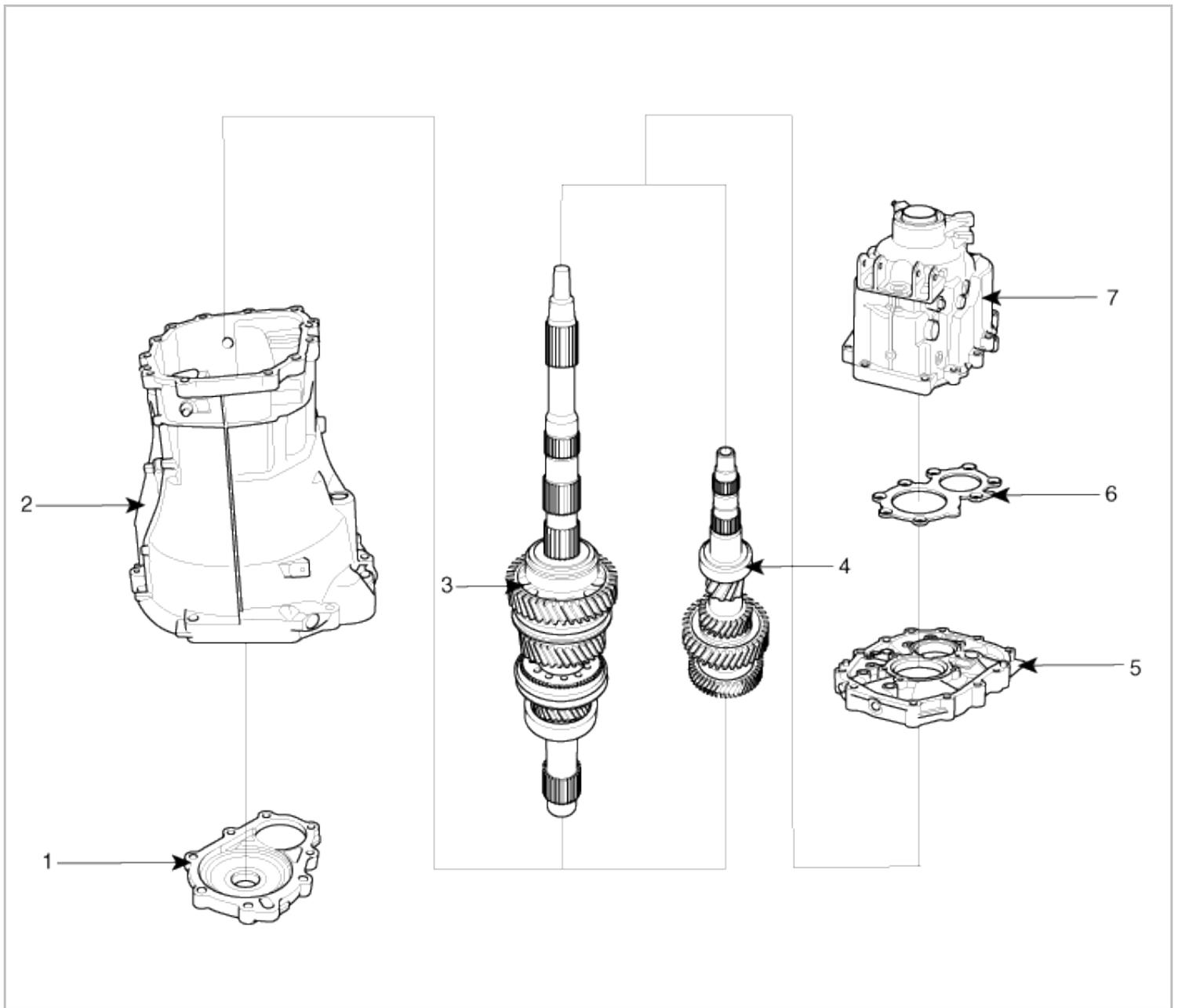
4. Replace the oil seal with a new one using the Special Service Tool(09452-25100).

5. Apply the lithium grease (0.2~0.5g) to lip of the oil seal.

6. Install the removed parts in reverse order of removal.

**Manual Transmission System > Manual Transmission System > Manual Transmission > Components and Components Location**

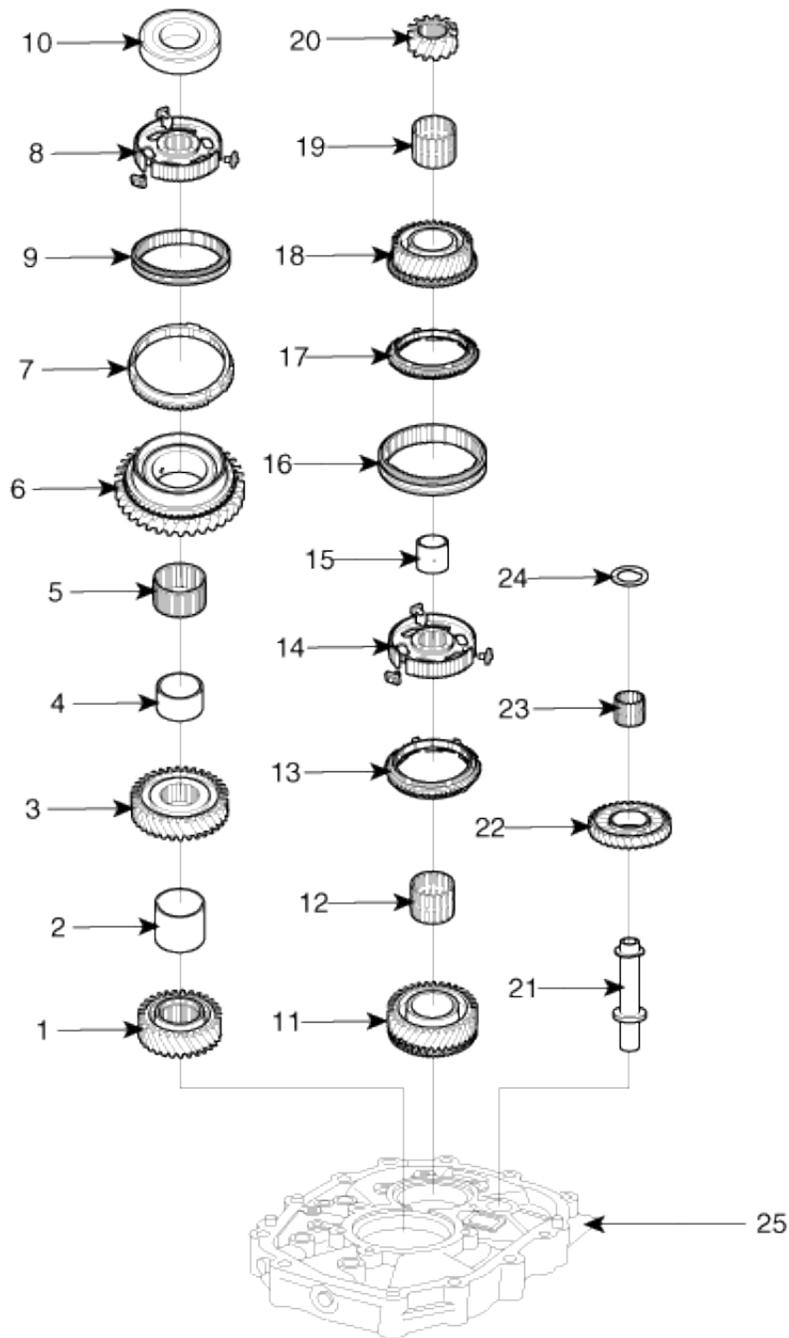
**Components (1)**



- 1. Front bearing retainer assembly
- 2. Transmission case assembly
- 3. Main shaft assembly and main drive assembly
- 4. Counter shaft assembly

- 5. Intermediate plate
- 6. Rear bearing retainer
- 7. Extension housing assembly

## Components (2)



1. 4th gear

2. Spacer

3. 3rd gear

4. Reverse gear sleeve

5. Needle roller bearing

6. Reverse speed gear

7. Synchronizer ring

8. Reverse synchronizer hub

9. Reverse synchronizer sleeve

10. Ball bearing

11. 4th speed gear

12. Needle roller bearing

13. Synchronizer ring assembly

14. 3&4th synchronizer hub

15. 3rd gear sleeve

16. 3&4th synchronizer sleeve

17. Synchronizer ring assembly

18. 3rd speed gear

19. Needle roller bearing

20. Counter reverse gear

21. Reverse idler shaft

22. Reverse idler gear

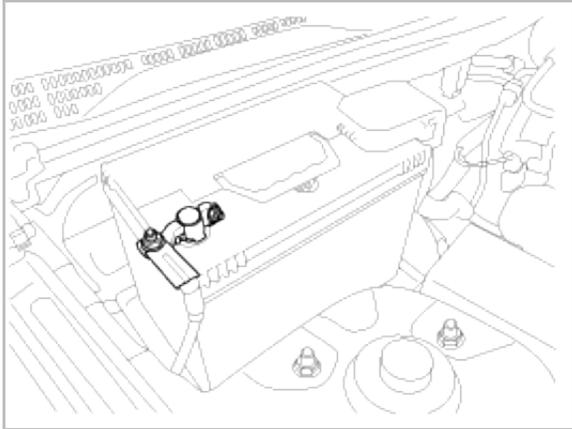
23. Needle roller bearing

24. Reverse spacer

25. Intermediate plate

## Removal

- Use fender covers to avoid damaging painted surfaces.
  - To avoid damage, unplug the wiring connectors carefully while holding the connector portion.
  - Mark all wiring and hoses to avoid misconnection.
1. Disconnect the (-) terminal from the battery in order to prevent current flow through wire.



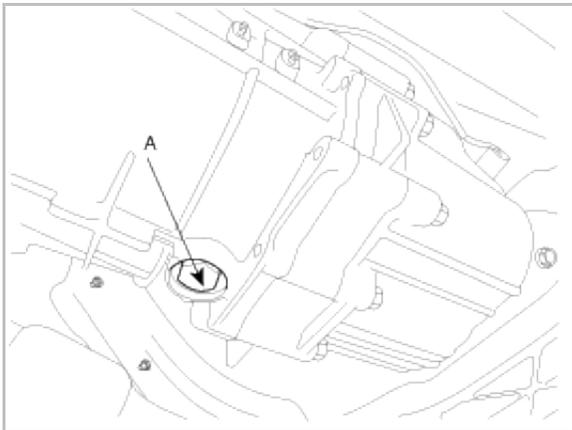
2. Drain the transmission fluid by removing the drain plug (A).

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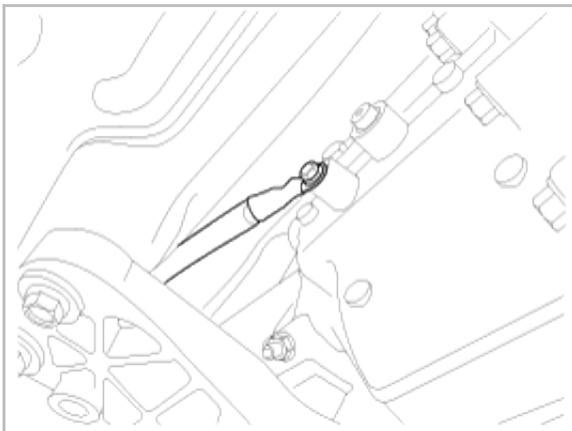
### Tightening torque :

60~80 Nm (6.0~8.0 kgf.m, 43.4~57.8 lb-ft)

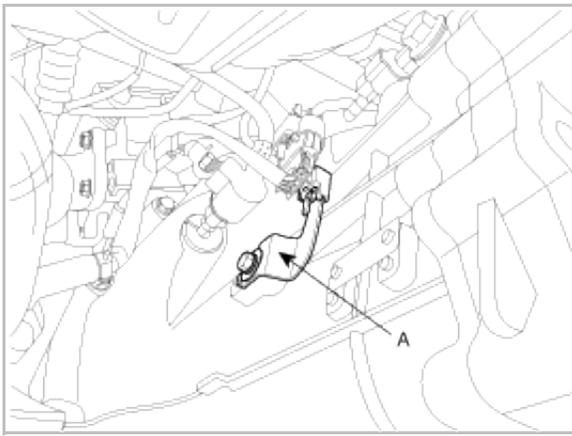
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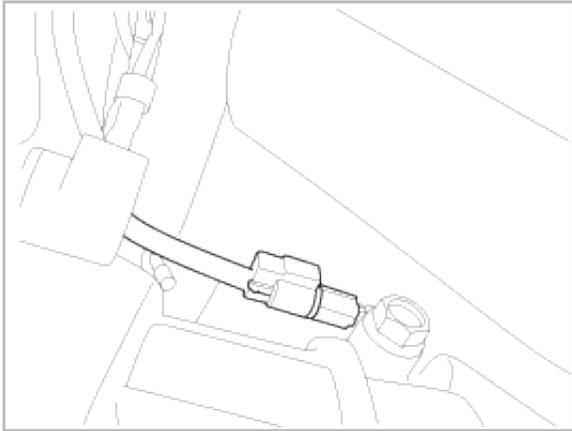
3. Remove the ground wire by removing a bolt.



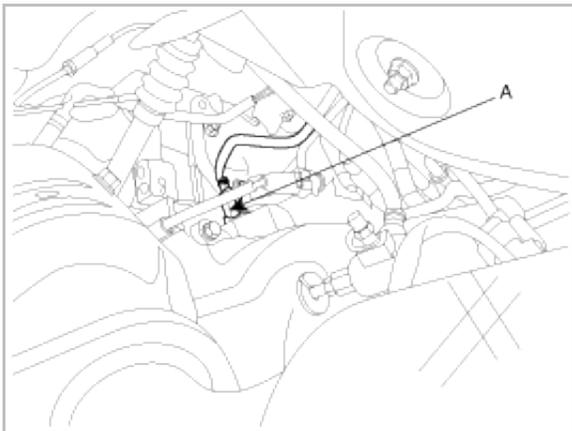
4. Disconnect the oxygen sensor connectors (A,B) from both sides of transmission.



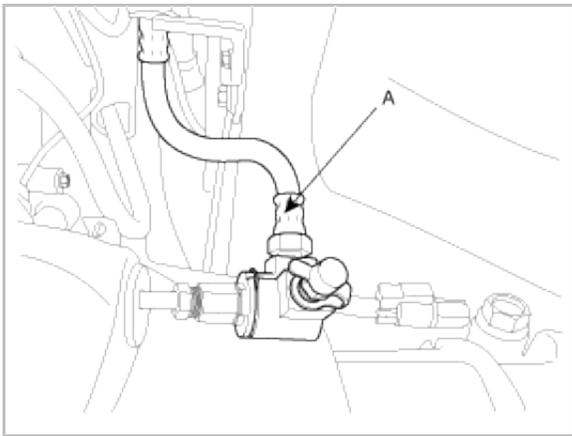
5. Disconnect the back up lamp switch connector.



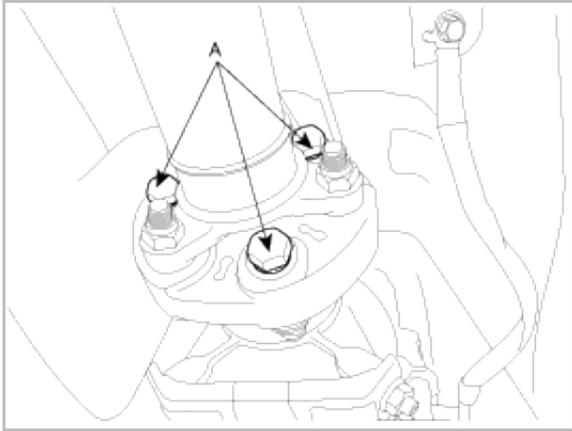
6. Remove the CKP sensor (A) by removing a bolt.



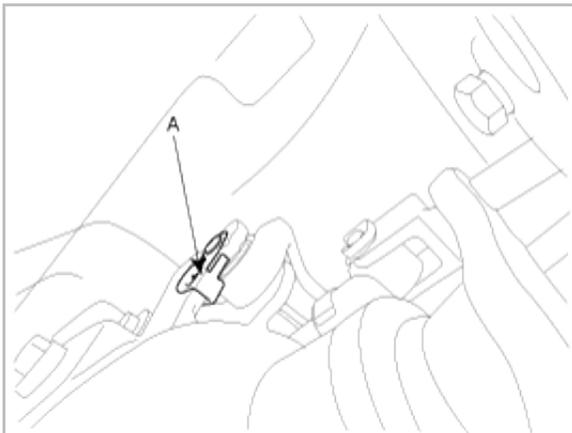
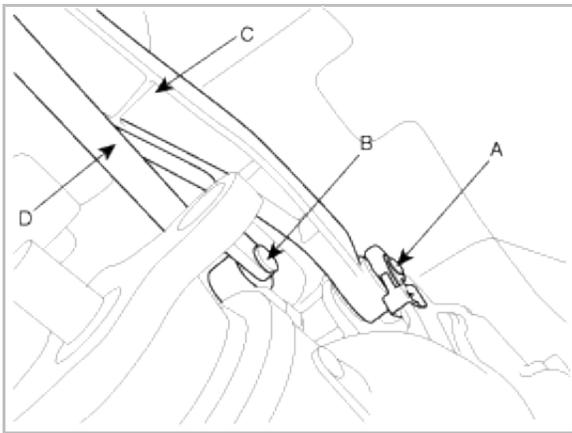
7. Remove the clutch hose from the C.S.C assembly.



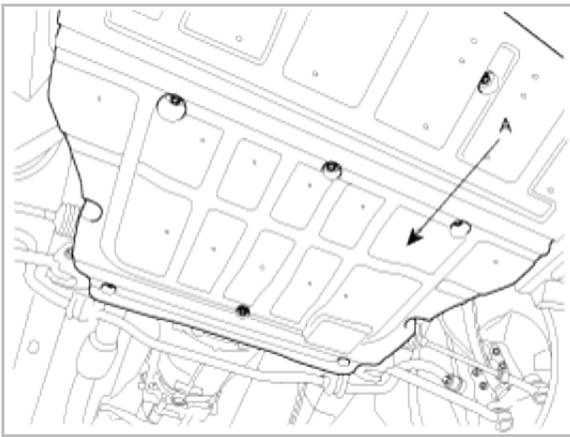
8. Remove the propellar shaft from the transmission by removing the bolts (A-3ea).



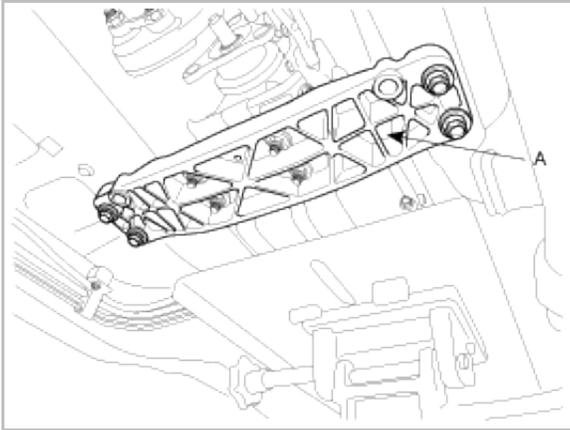
9. Remove the base bracket (C) and select rod (D) from the transmission by removing the clips (A-2ea) and snap pin (B).



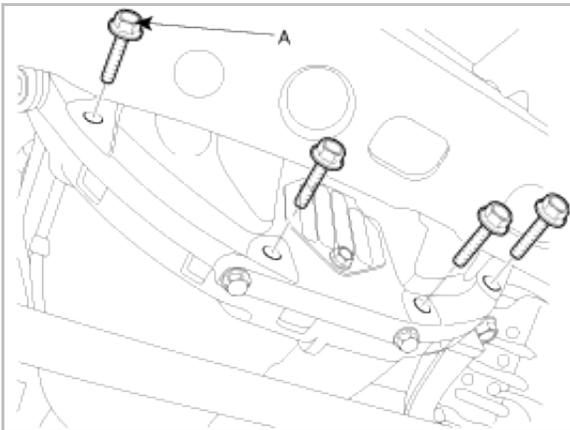
10. Remove the under shield cover (A).



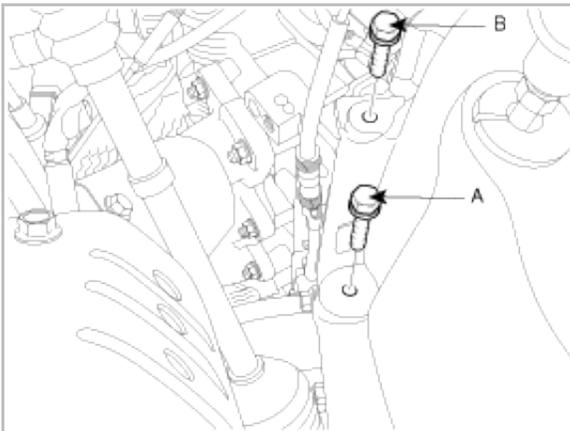
11. After supporting the transmission assembly with a jack, remove the crossmember (A) by removing the bolts(4ea).



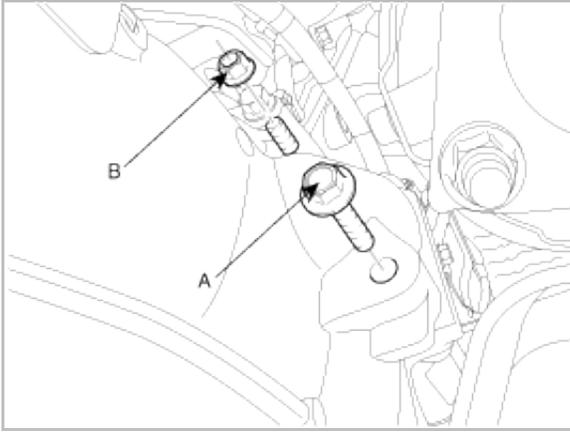
12. Remove the mounting bolts (A-4ea) from the engine side.



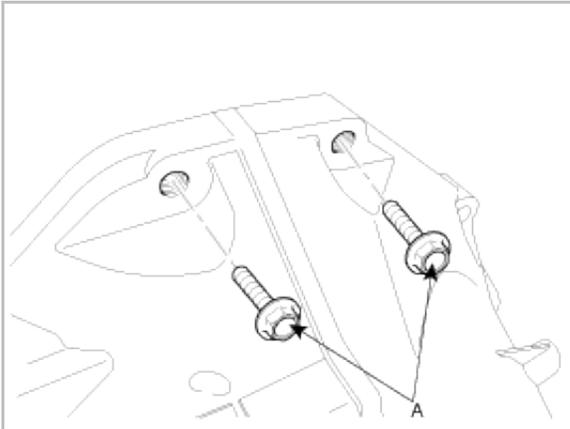
13. Remove the mounting bolts (A,B) left in the engine side.



14. Remove the starter motor mounting bolt (A) and nut (B).



15. Remove the mounting bolts (A-2ea) on the transmission.



16. Lowering the jack slowly, remove the transmission assembly.

**CAUTION**

Be careful not to damage to wire, tubes or suspension parts.

**NOTE**

In case remove the transmission mounting bracket assembly from the transmission assembly.

**Tightening torque :**

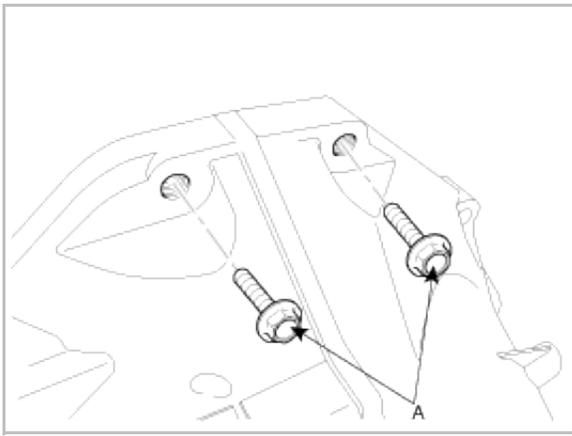
50~65 Nm (5.0~6.5 kgf.m, 36.2~47.0 lb-ft)

**Installation**

1. Temporarily install the transmission assembly to the engine assembly.
2. Install the mounting bolts (A-2ea) on the transmission.

**Tightening torque :**

65~85 Nm (6.5~8.5 kgf.m, lb-ft)



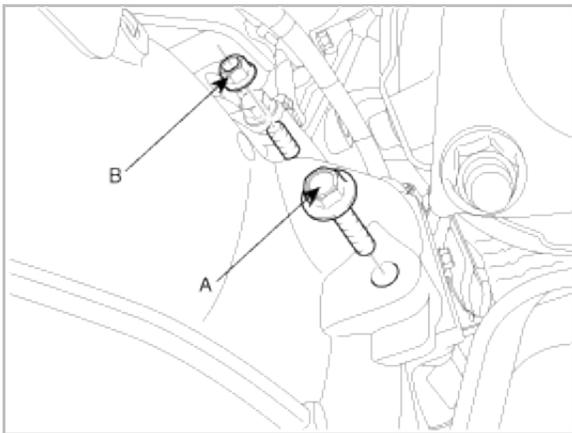
3. Install the starter motor mounting bolt (A) and nut (B).

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**Tightening torque :**

43~55 Nm (4.3~5.5 kgf.m, 31.1~39.8 lb-ft)

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4. Install the mounting bolts (A,B) left in the engine side.

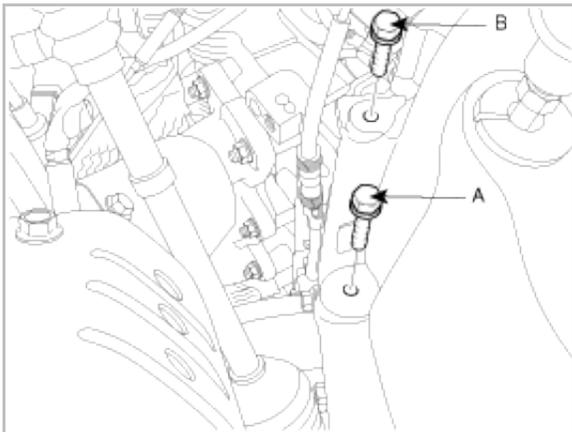
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**Tightening torque :**

[A] 65~85 Nm (6.5~8.5 kgf.m, lb-ft)

[B] 35~47 Nm (3.5~4.7 kgf.m, 25.3~34.0 lb-ft)

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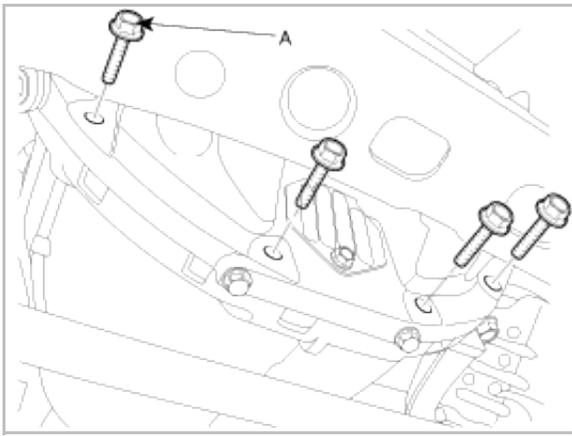
5. Install the mounting bolts (A-4ea) from the engine side.

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**Tightening torque :**

43~49 Nm (4.3~4.9 kgf.m, 31.1~35.4 lb-ft)

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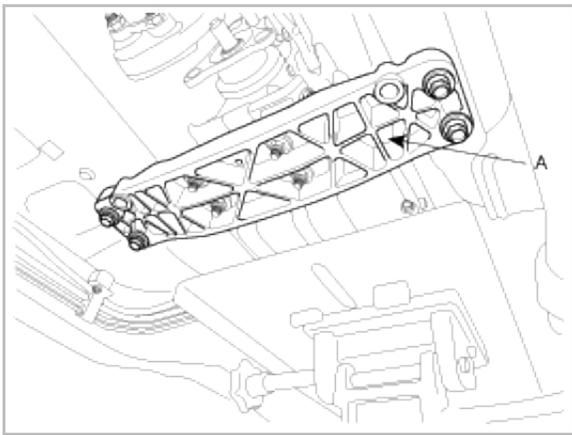
6. Install the crossmember (A) by installing the bolts(4ea) and put aside the supporting jack.

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**Tightening torque :**

50~65 Nm (5.0~6.5 kgf.m, 36.2~47.0 lb-ft)

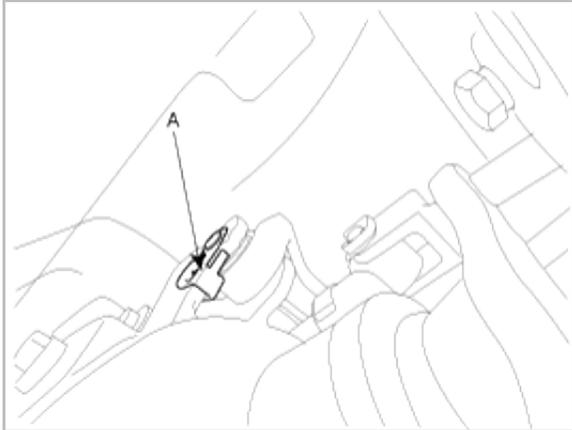
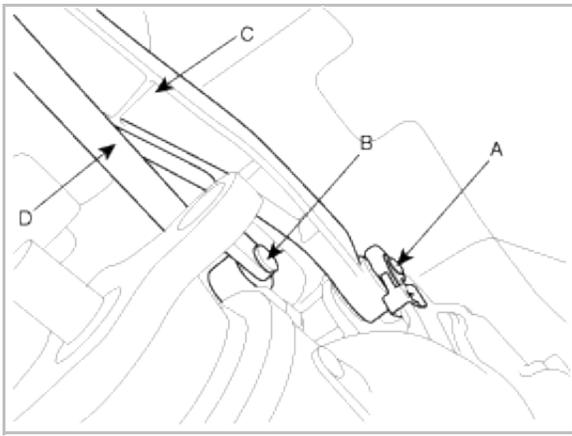
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7. Install the under shield cover (A).



8. Install the base bracket (C) and select rod (D) to the transmission with clips (A-2ea) and snap pin (B).



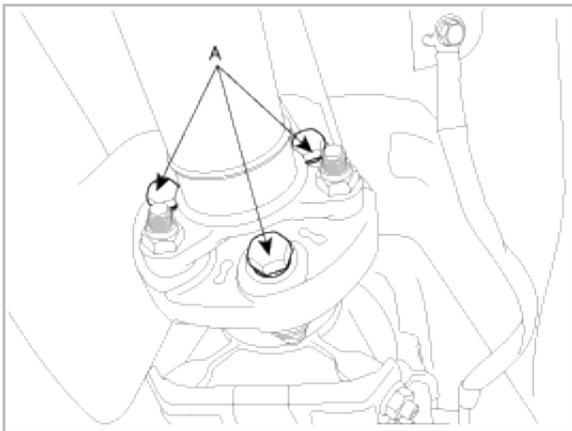
9. Install the propeller shaft to the transmission by installing the bolts (A-3ea).

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**Tightening torque :**

90~110 Nm (9~11 kgf.m, 65.1~79.5 lb-ft)

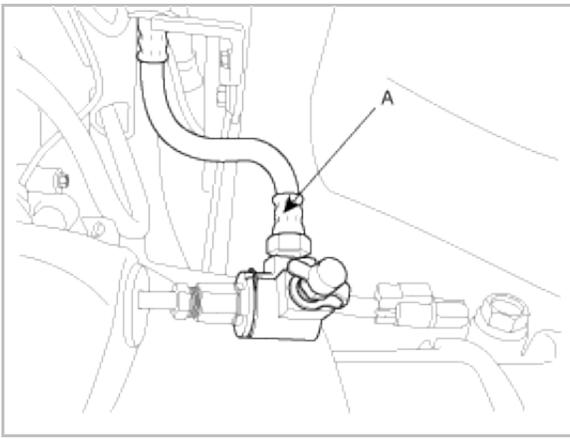
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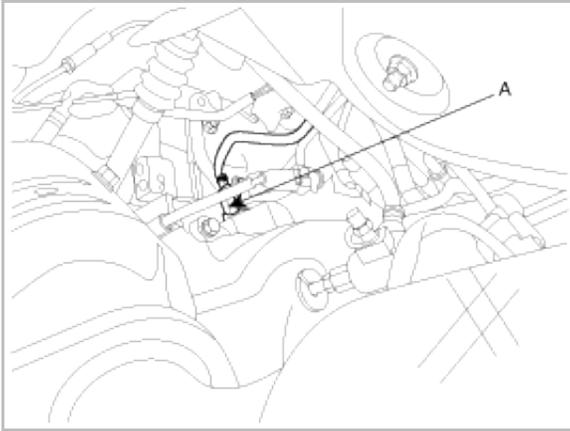
10. Install the clutch hose (A) to the C.S.C assembly.

**NOTE**

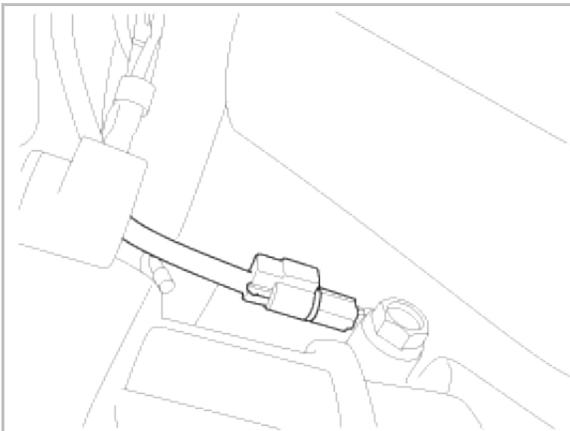
In case of loss of clutch fluid , refill the fluid. (refer to Bleeding in CH group)



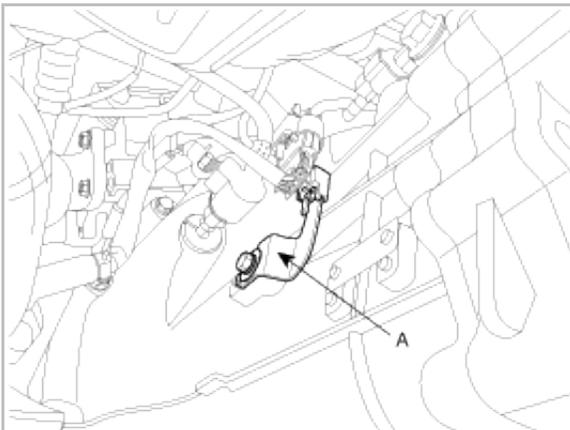
11. Install the CKP sensor (A) by installing a bolt.

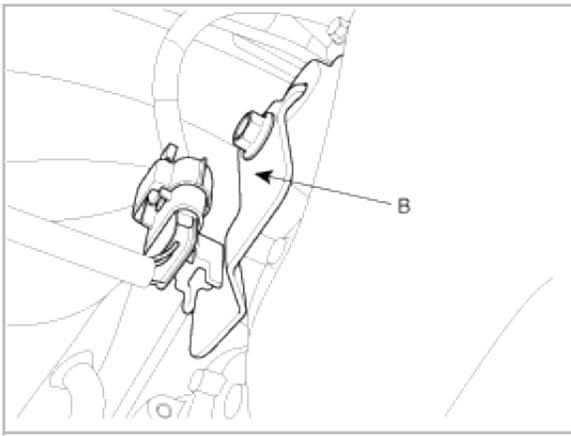


12. Connect the back up lamp switch connector.

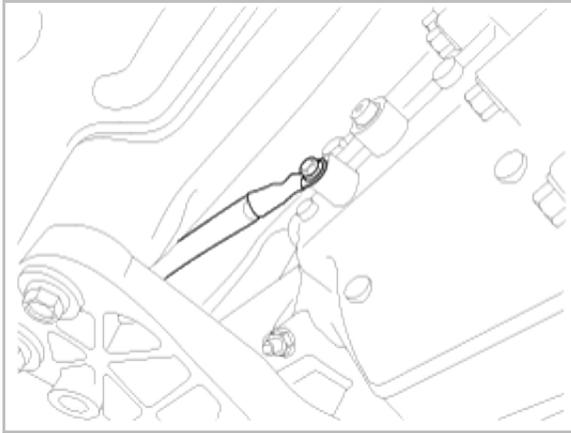


13. Connect the oxygen sensor connectors (A,B) from both sides of transmission.

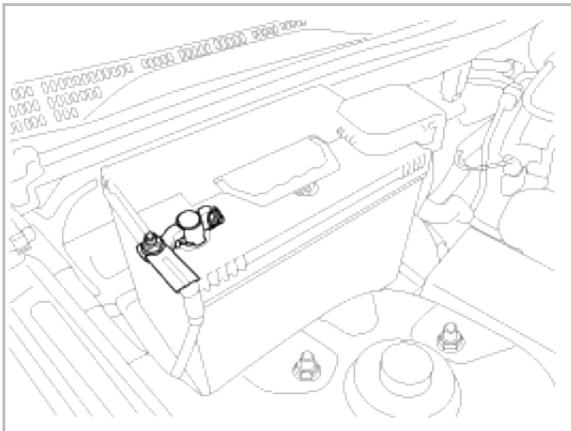




14. Install the ground wire by installing a bolt.



15. Connect (-) terminal to the battery.



16. Refill the transmission fluid. (refer to Service Adjustment Procedure)