GENESIS COUPE(BK) > 2013 > G 3.8 GDI > Manual Transaxle System

Manual Transaxle System > General Information > Specifications

Specifications

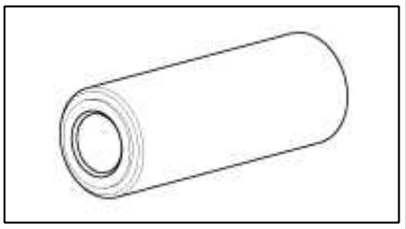
Transmission type		M6VR2
Engine type		Gasoline 3.8 GDI
Gear ratio	1st	3.848
	2nd	2.317
	3rd	1.623
	4th	1.233
	5th	1.000
	6th	0.794
	Reverse	3.985
Final gear ratio		3.538

Lubricants

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

Manual Transaxle System > General Information > Special Service Tools

Special Service Tools

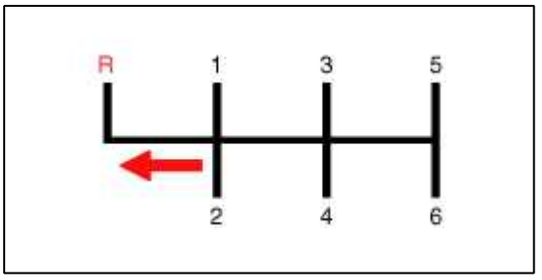
Tool (Number and Name)	Illustration	Use
09452-25200 Oil seal installer		Installation of extension housing oil seal
09432-25400 Oil seal installer		Installation of control shaft oil seal

Manual Transaxle System > Manual Transaxle System > Description and Operation

Main character

- Optimized design with compact and less weight through analyzing partial systems.

- Structure of 5th gear ratio(1:1) to improve power and fuel economy (forward 6th speed, backward 1st speed)
- Multi-cone synchronizer to improve shift feeling and minimize shifting force
- 1,2,3rd : Triple-cone synchronizer
- 4th : Double cone synchronizer
- 'HIGH FORCE TYPE' for shifting to 'R'
- Better shift feeling and sporty
- How to shift 'R' : swiftly pull the lever to the left and shift to 'R'



- Gear teeth optimization and grinding suface of teeth for noise reduction (2nd to 6th gear)
- Applying permanent transmission fluid with low viscosity

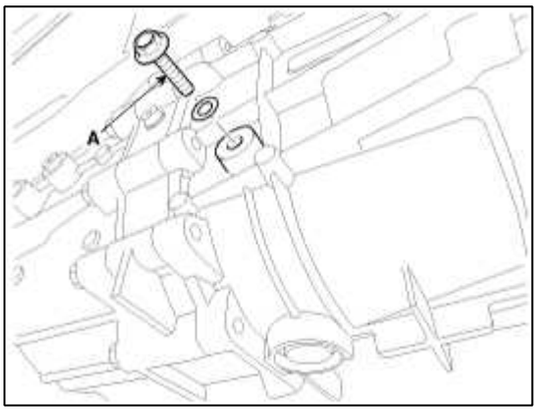
Manual Transaxle System > Manual Transaxle System > Repair procedures

Service Adjustment Procedure

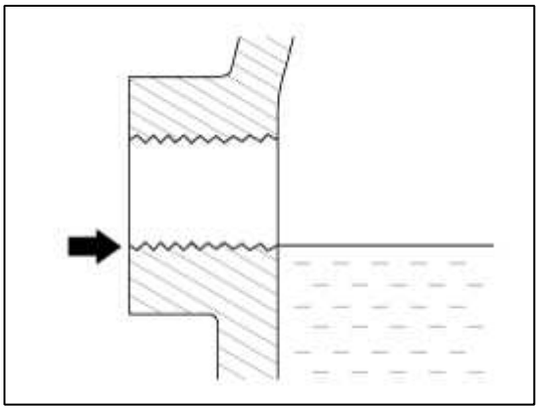
Transmission Gear Oil Level

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.

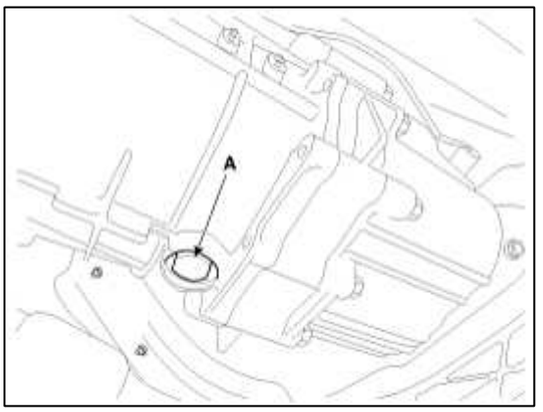


3. Install filler plug with a new gasket.

Tightening torque :
60 ~ 80 N.m (6.0 ~ 8.0 kgf.m, 43.4 ~ 57.8 lb-ft)

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.

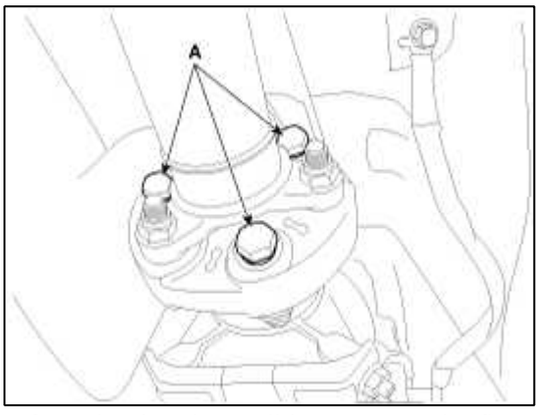
Tightening torque :
60 ~ 80 N.m (6.0 ~ 8.0 kgf.m, 43.4 ~ 57.8 lb-ft)

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

Standard oil : SAE 75W/85, API GL-4
Oil capacity : 2.2ℓ(2.3US qt, 1.94lmp qt)

Extension Housing Oil Seal
Replacement

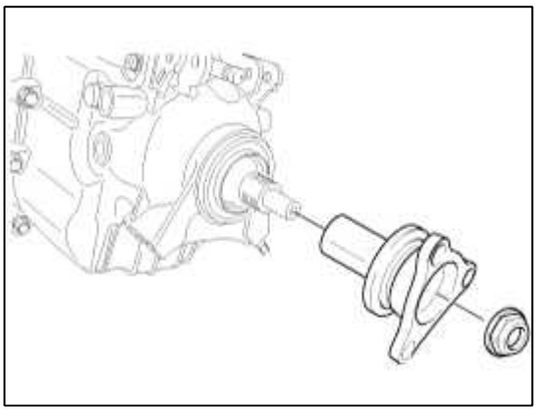
1. Remove the popellar shaft from the transmission by removing the bolts(A-3ea).



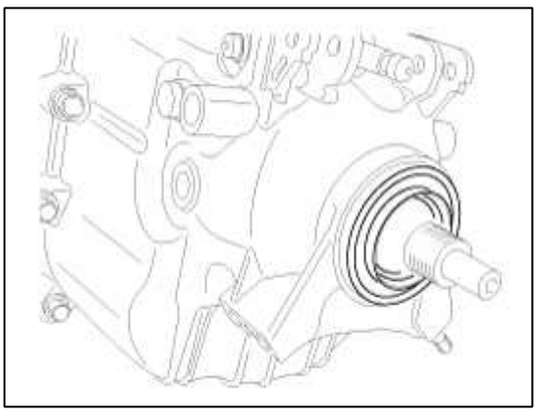
2. After releasing the caulking, remove the flange assembly by removing the locking nut(35mm) and O-ring.

CAUTION

Do not reuse locking nut and O-ring.



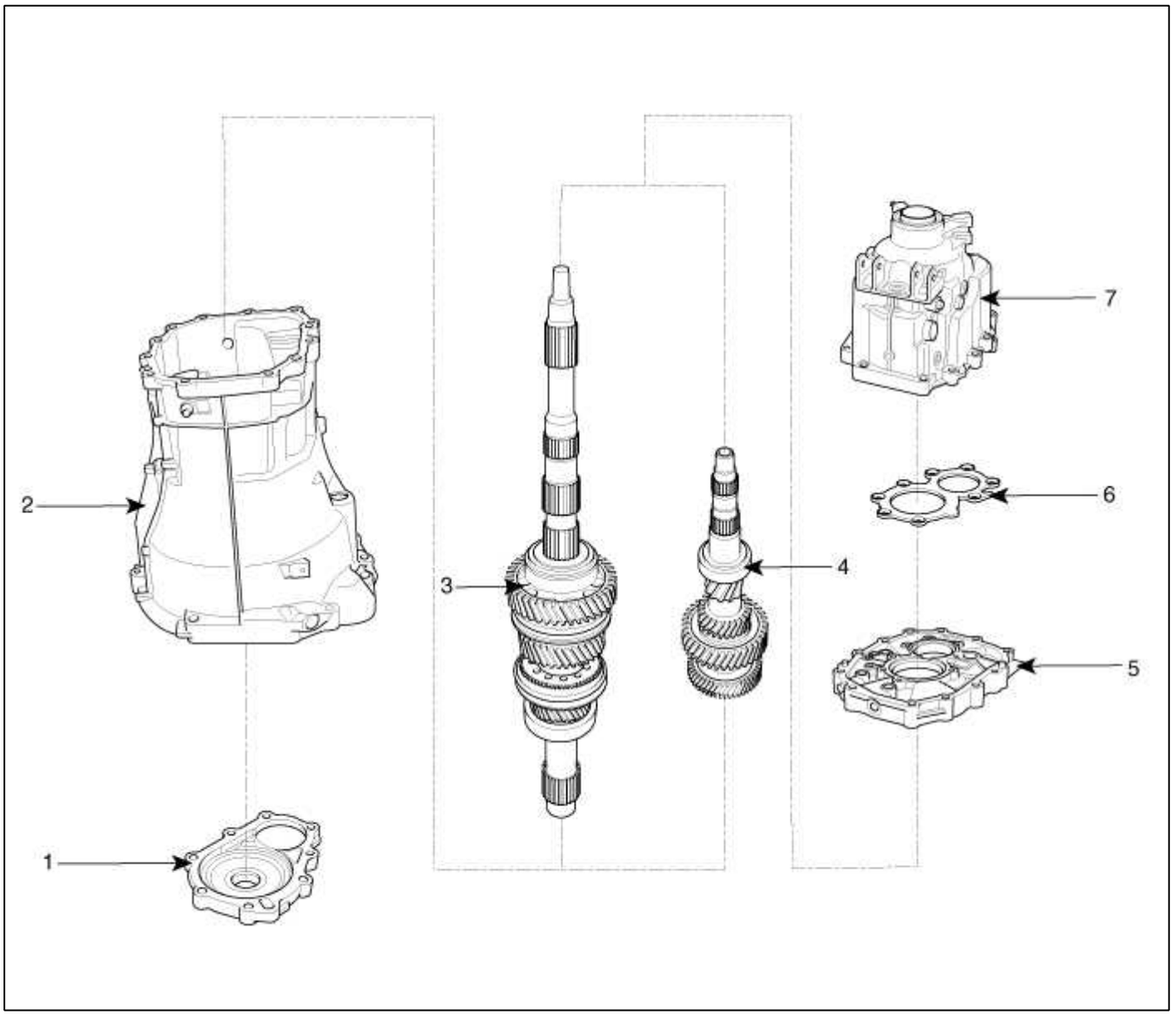
3. Remove the oil seal by using a screw driver.



4. Replace a new one and install the oil seal by using the special service tool (09452-25200).
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.

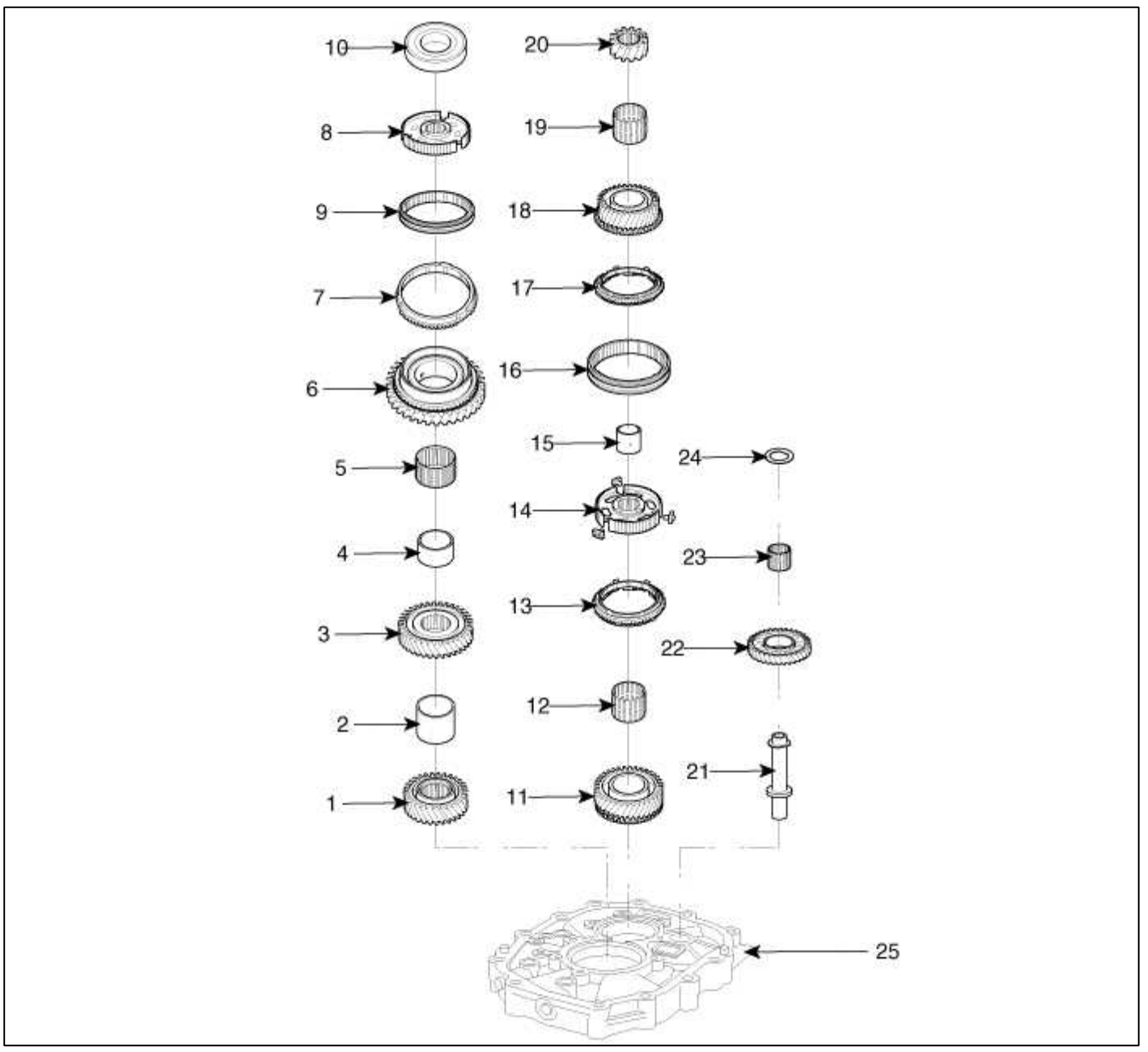
Manual Transaxle System > Manual Transaxle System > Manual Transaxle > Components and Components Location

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)



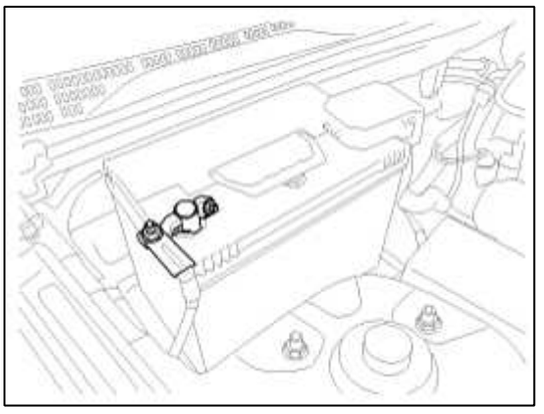
1. 4th gear 2. Spacer 3. 3rd gear 4. Reverse gear sleeve 5. Needle roller bearing 6. Reverse speed gear 7. Synchronizer ring 8. Reverse synchronizer hub 9. Reverse synchronizer sleeve	10. Ball bearing 11. 4th speed gear 12. Needle roller bearing 13. Synchronizer ring assembly 14. 3&4th synchronizer hub 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

Manual Transaxle System > Manual Transaxle System > Manual Transaxle > Repair procedures

Removal

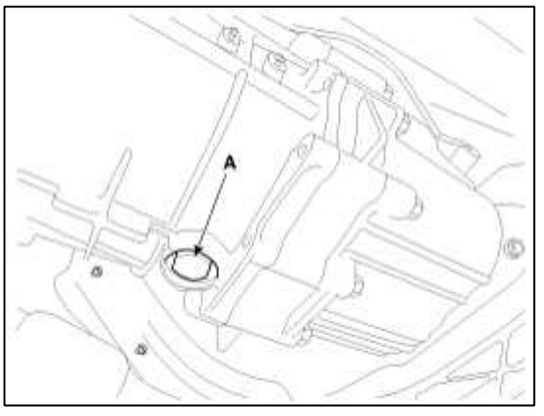
- Use fender covers to avoid damaging painted surfaces.
- To avoid damage, unplug the wiring connectors carefully while holding the connector portion.
- Mark all wiring and hoses to avoid misconnection.

1. Disconnect the (-) terminal from the battery in order to prevent current flow through wire.

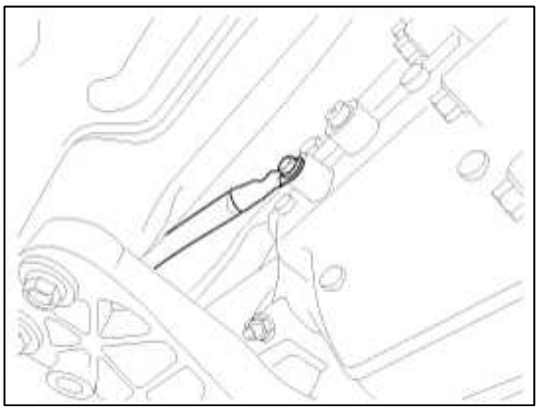


2. Drain the transmission fluid by removing the drain plug (A).

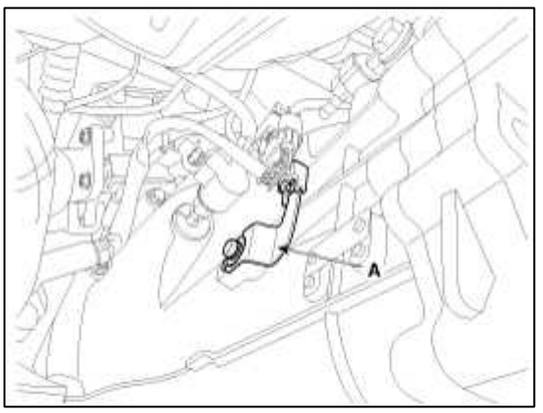
Tightening torque :
60 ~ 80 N.m (6.0 ~ 8.0 kgf.m, 43.4 ~ 57.8 lb-ft)

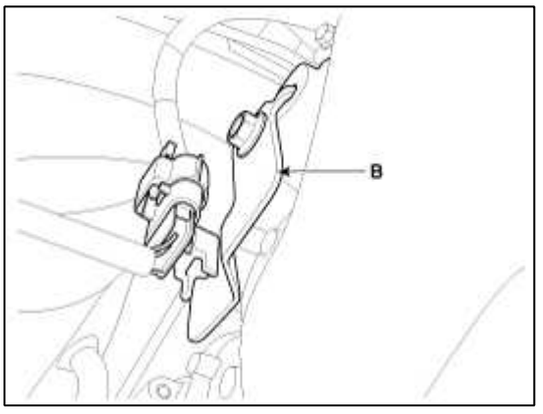


3. Remove the gound wire by removing a bolt.

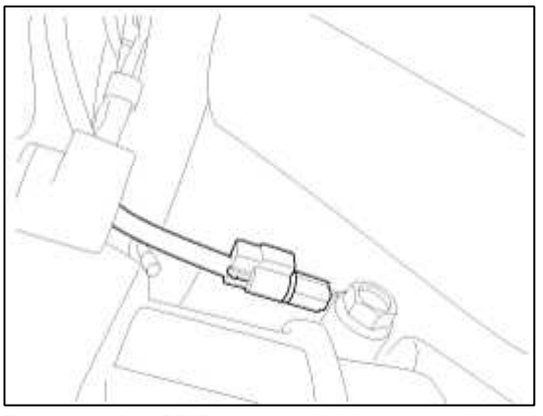


4. Disconnect the oxygen sensor connectors (A,B) from both sides of transmission.

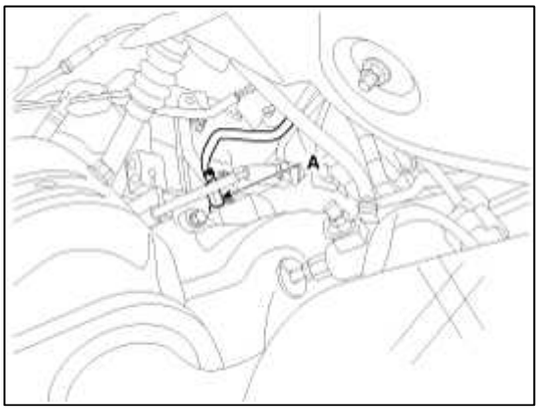




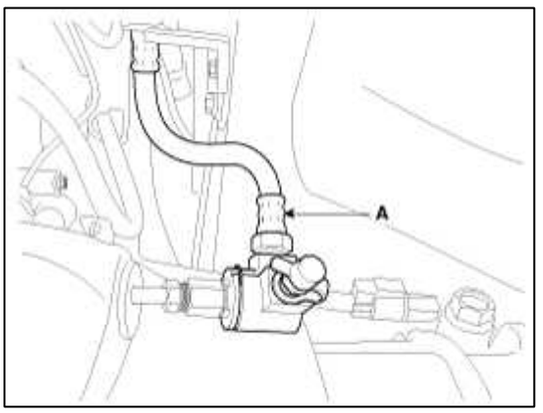
5. Disconnect the back up lamp switch connector.



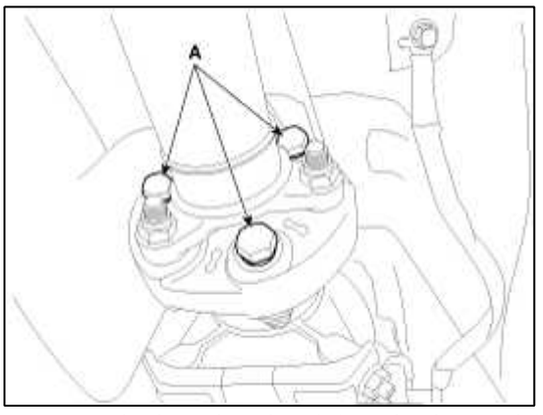
6. Remove the CKP sensor (A) by removing a bolt.



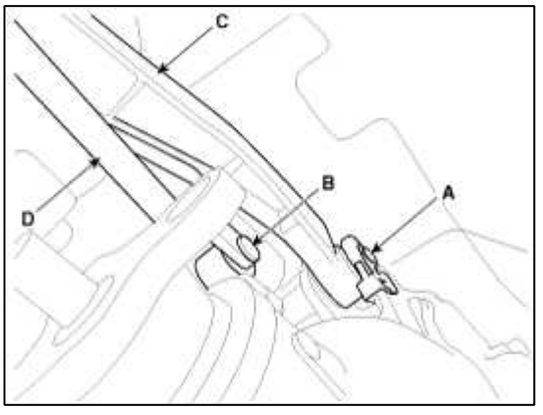
7. Remove the clutch hose from the C.S.C assembly.

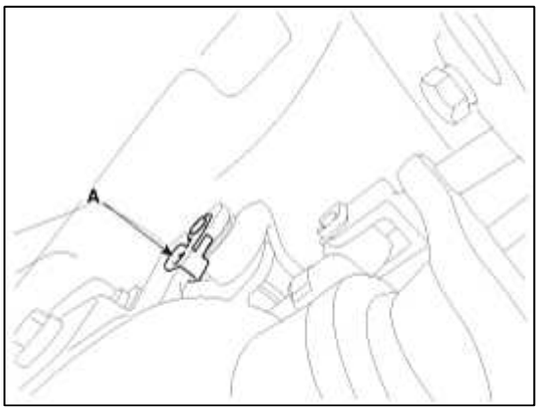


8. Remove the propellar shaft from the transmission by removing the bolts (A-3ea).

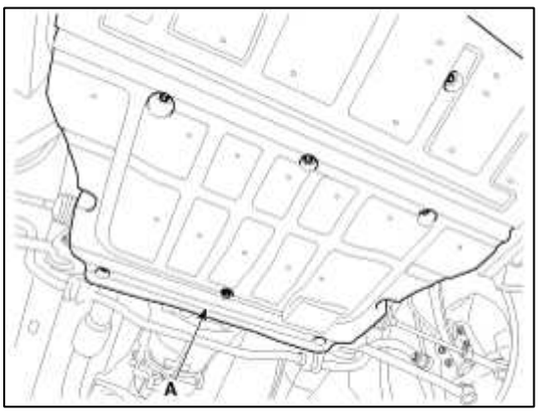


9. Remove the base bracket (C) and select rod (D) from the transmission by removing the clips (A-2ea) and snap pin (B).

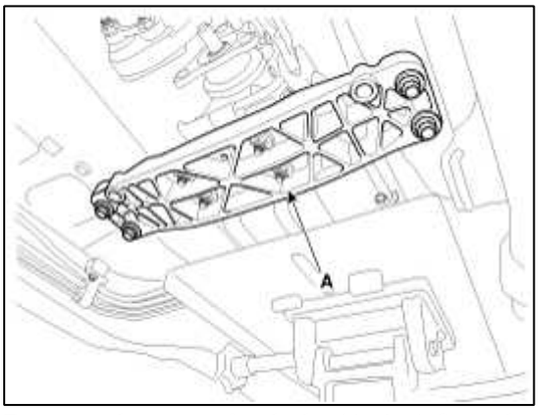




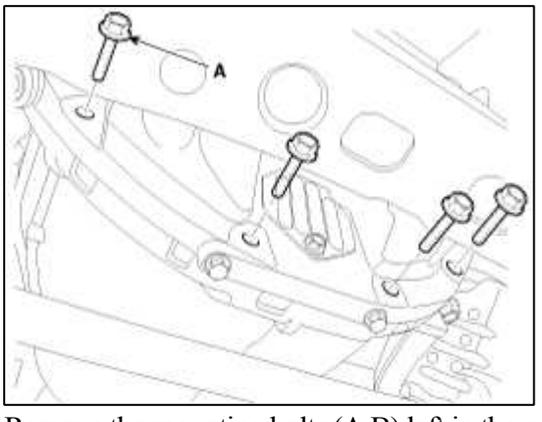
10. Remove the under shield cover (A).



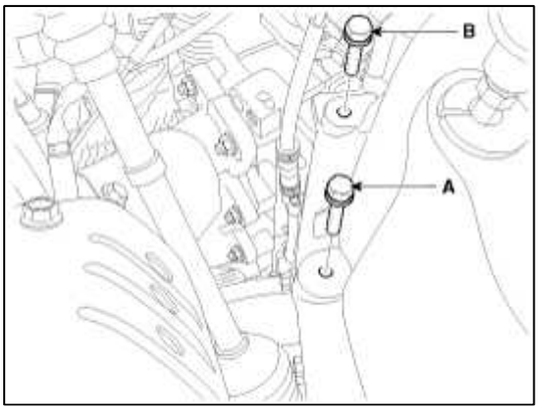
11. After supporting the transmission assembly with a jack, remove the crossmember (A) by removing the bolts(4ea).



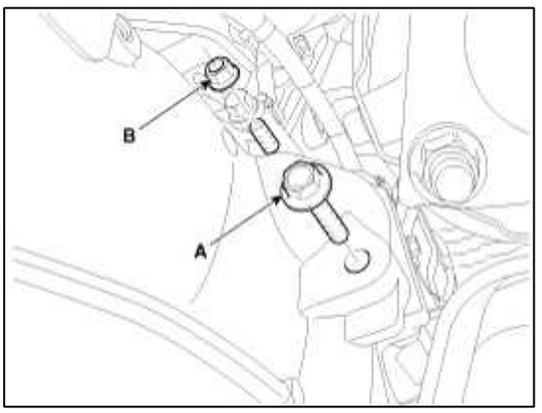
12. Remove the mounting bolts (A-4ea) from the engine side.



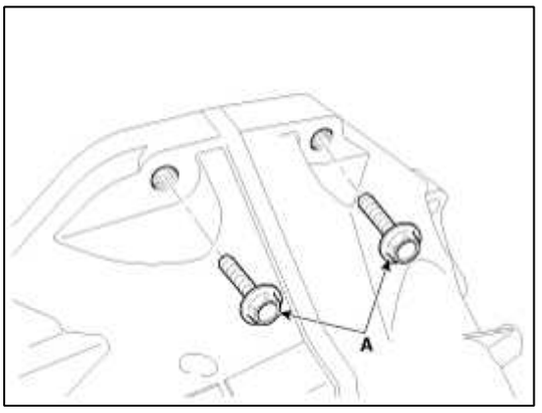
13. Remove the mounting bolts (A,B) left in the engine side.



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.

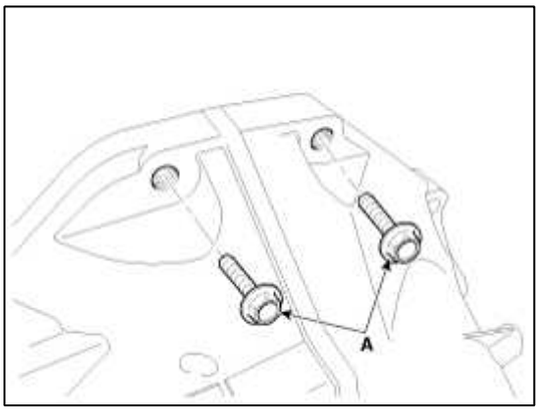
> NOTE
>
> In case remove the transmission mounting bracket assembly from the transmission assembly.

Tightening torque :
50 ~ 65 N.m (5.0 ~ 6.5 kgf.m, 36.2 ~ 47.0 lb-ft)

Installation

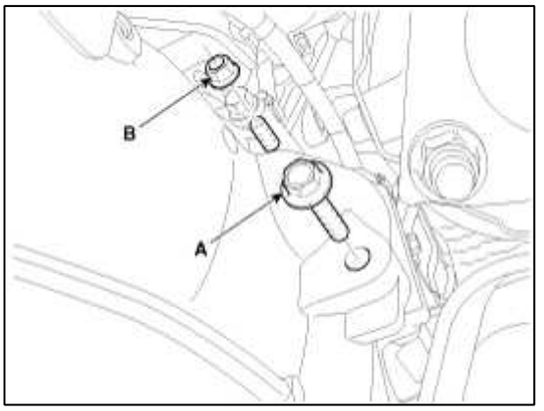
1. Temporarily install the transmission assembly to the engine assembly.
2. Install the mounting bolts (A-2ea) on the transmission.

Tightening torque :
65 ~ 85 N.m (6.5 ~ 8.5 kgf.m, 47.0 ~ 61.5 lb-ft)



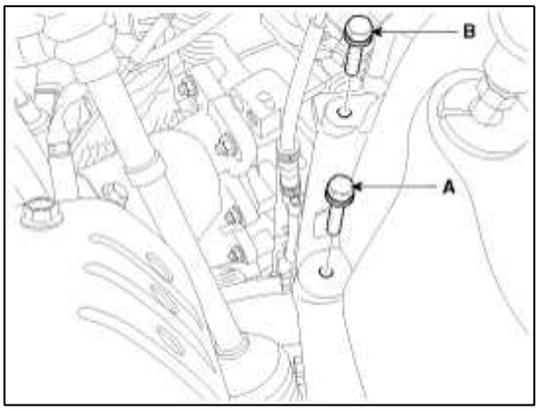
3. Install the starter motor mounting bolt (A) and nut (B).

Tightening torque :
43 ~ 55 N.m (4.3 ~ 5.5 kgf.m, 31.1 ~ 39.8 lb-ft)



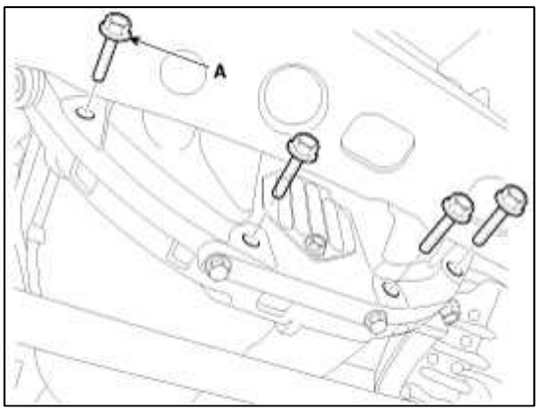
4. Install the mounting bolts (A,B) left in the engine side.

Tightening torque :
[A] 65 ~ 85 N.m (6.5 ~ 8.5 kgf.m, 47.0 ~ 61.5 lb-ft)
[B] 35 ~ 47 N.m (3.5 ~ 4.7 kgf.m, 25.3 ~ 34.0 lb-ft)



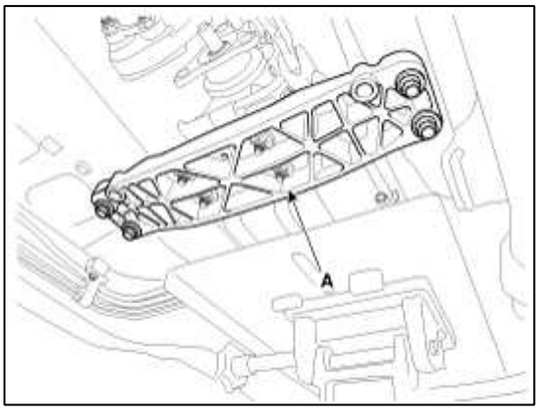
5. Install the mounting bolts (A-4ea) from the engine side.

Tightening torque :
43 ~ 49 N.m (4.3 ~ 4.9 kgf.m, 31.1 ~ 35.4 lb-ft)

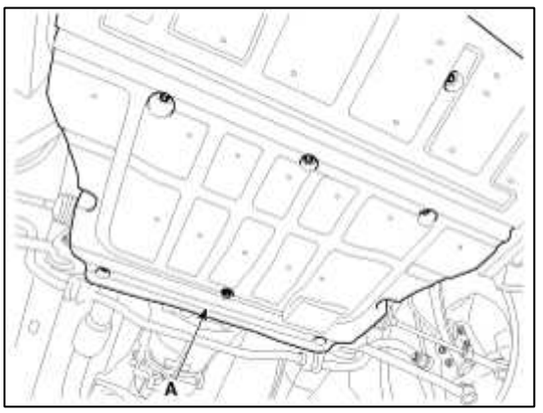


6. Install the crossmember (A) by installing the bolts(4ea) and put aside the supporting jack.

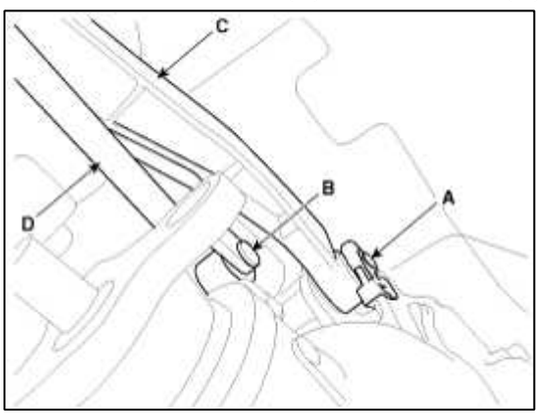
Tightening torque :
50 ~ 65 N.m (5.0 ~ 6.5 kgf.m, 36.2 ~ 47.0 lb-ft)

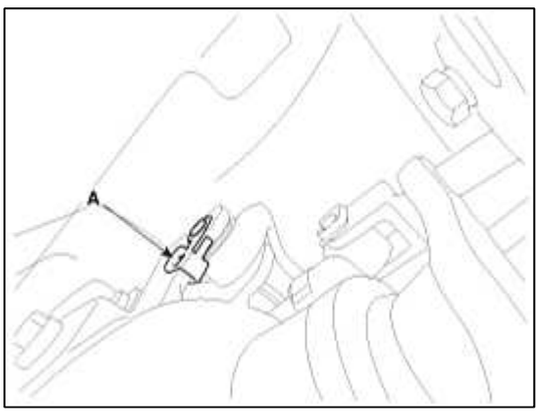


7. Install the under shield cover (A).



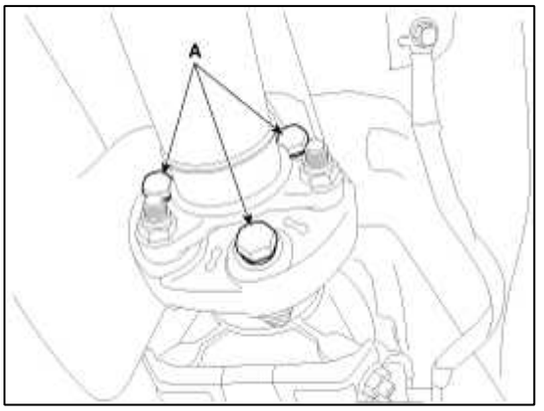
8. Install the base bracket (C) and select rod (D) to the transmission with clips (A-2ea) and snap pin (B).





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

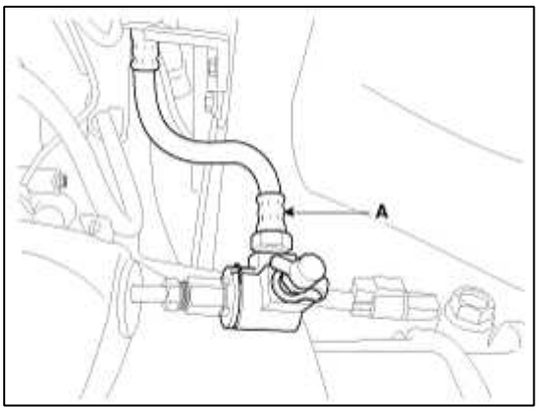
Tightening torque :
90 ~ 110 N.m (9 ~ 11 kgf.m, 65.1 ~ 79.5 lb-ft)



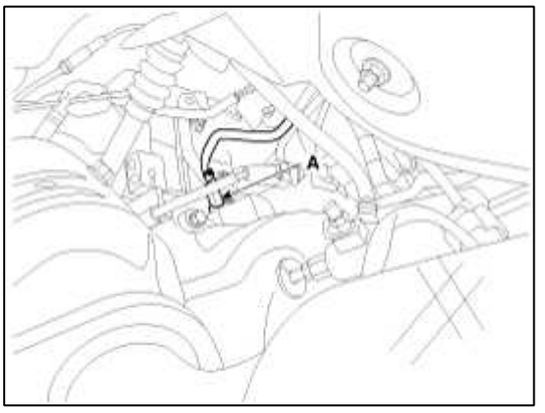
10. Install the clutch hose (A) to the C.S.C assembly.

NOTE

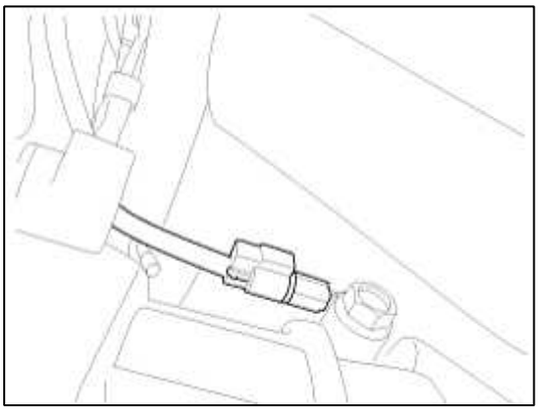
In case of loss of clutch fluid , refill the fluid. (refer to Bleeding in CH group)



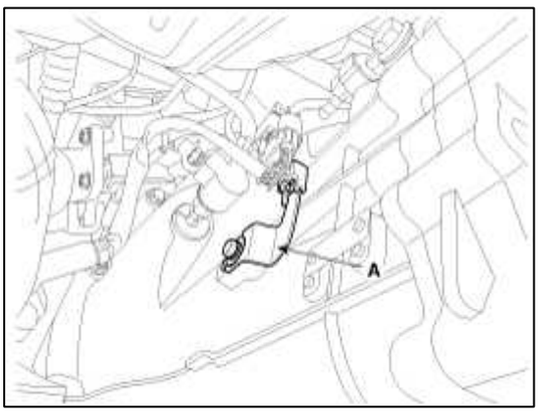
11. Install the CKP sensor (A) by installing a bolt.

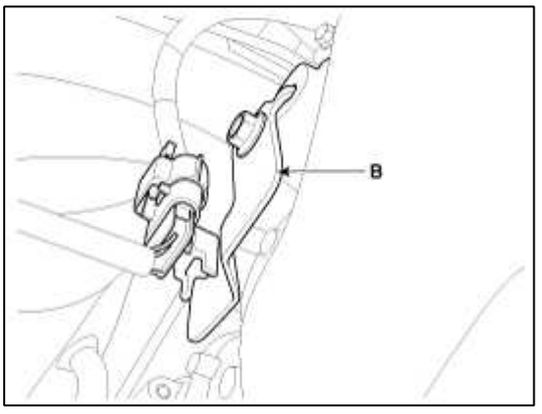


12. Connect the back up lamp switch connector.

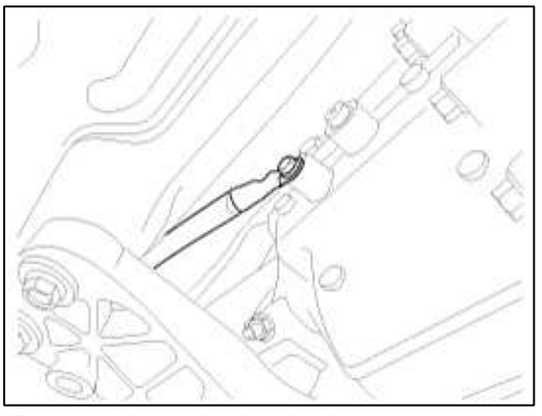


13. Connect the oxygen sensor connectors (A,B) from both sides of transmission.

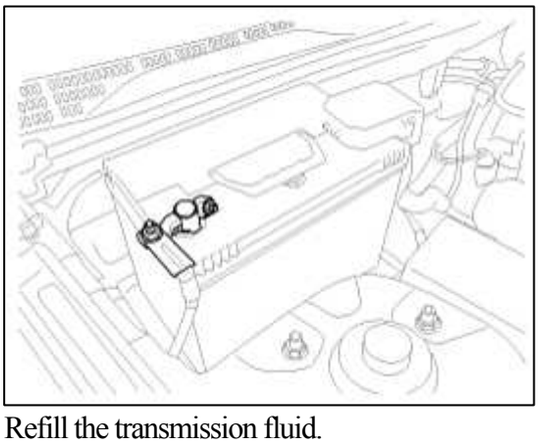




14. Install the ground wire by installing a bolt.



15. Connect (-) terminal to the battery.



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