

Manual Transaxle (M6GF2)

GENERAL

MANUAL TRANSAXLE

MANUAL TRANSAXLE SYSTEM

GENERAL

SPECIFICATION E0CCB637

Manual transaxle type		M6GF2
Engine type		2.0 Diesel
Gear ratio	1st	3.615
	2nd	1.794
	3rd	1.542
	4th	1.176
	5th	0.974
	6th	0.829
	Reverse	3.416
Final gear ratio		4.643
		3.421
T/M oil capacity()		1.9 liter

The quantity in the chart above is for the reference. The actual filling quantity of the automatic transaxle fluid must be set according to 'INSPECTION' or 'REPLACEMENT' procedure of the automatic transaxle fluid.

Recommended transaxle oil			SAE75W/85 or API GL-4
Check & Replenishment			Every 20,000 Km
Replacement	Private use	Normal use	No service required
		Severe use()	Every 100,000 Km
	Business use		

Severe use(marked ' ') is defined as:

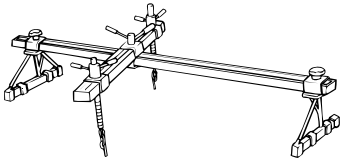
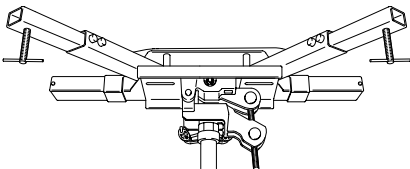
1. Driving on rough road(bumpy road, gravel road, snowy road, unpaved road etc.).
2. Driving on mountain road, ascent/descent.
3. Repetition of short distance driving.
4. More than 50% operation in heavy city traffic during hot weather above 32°C(89.6°F).
5. Police car, Taxi, Commercial type operation or trailer towing, etc.

TIGHTENING TORQUE

Item	Nm	Kgf.cm	lb-ft
Concentric sleeve cylinder assembly	11.8~14.7	120~150	8.7~10.8
Oil filler plug	29.4~34.4	300~350	21.7~25.3
Select lever	42.2~53.9	430~550	31.1~39.8
Shift link assembly	42.2~53.9	430~550	31.1~39.8
Transaxle mounting bracket assembly	63.7~83.4	650~850	47.0~61.5
Transaxle and engine mounting bolt	42.2~53.9	430~550	31.1~39.8

SPECIAL TOOL

EFE0E8B3

TOOL (Number and Name)	Illustration	Use
09200-38001 Engine support fixture	 <p>D0038001</p>	Removal and installation of the transaxle
09624-38000 Crossmember supporter	 <p>EKBF005A</p>	Supporting of the crossmember.

MANUAL TRANSAXLE SYSTEM

SERVICE ADJUSTMENT

PROCEDURE ECDA00CBA

TRANSMISSION OIL INSPECTION AND REPLACEMENT

1. After parking the vehicle on a plain, stop the engine.
2. After removing the oil filler plug and washer, inspect the manual transaxle fluid condition and quantity.
3. If the manual transaxle fluid is contaminated, drain it out by removing the oil drain plug.
4. Tighten the new oil drain plug and feed manual transaxle fluid to a proper level.

TORQUE:

29.4~34.4 Nm(300~350Kgf.cm, 21.7~25.3lb-ft)

Oil type: SAE75W/85

Oil quantity:

1.9 liter(2.0077 US qt, 1.6718 Imp qt)

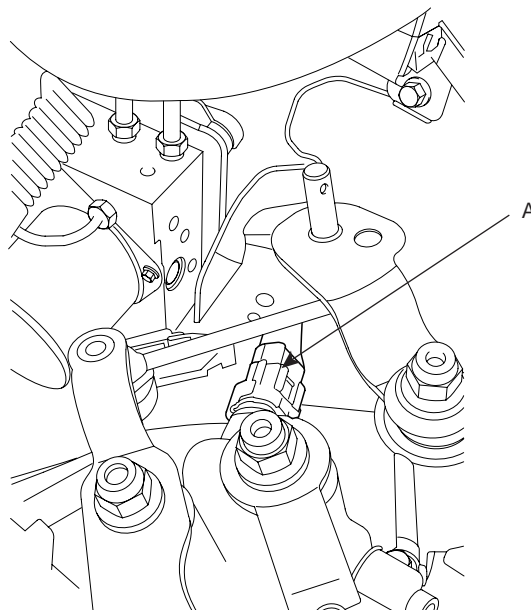
5. Retighten the oil filler plug with a new washer.

TORQUE:

29.4~34.4 Nm(300~350Kgf.cm, 21.7~25.3lb-ft)

BACK UP LAMP SWITCH INSPECTION

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



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2. Inspect the continuity of the switch. When the shift lever is located in reverse range, it should be applied an electric current.
3. Replace the back up lamp switch, if necessary.

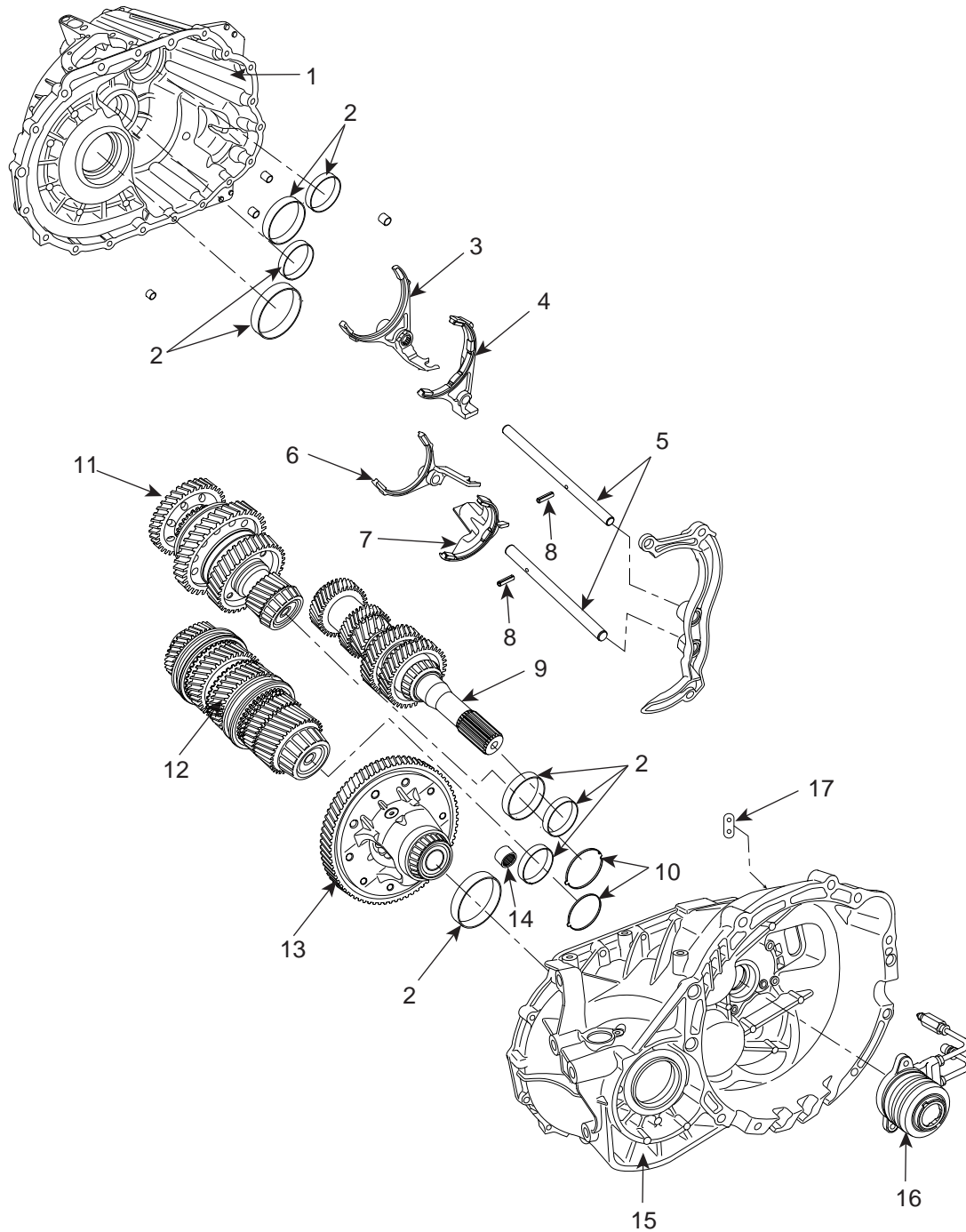
TORQUE:

29.4~34.4 Nm(300~350Kgf.cm, 21.7~25.3lb-ft)

MANUAL TRANSAXLE

COMPONENTS

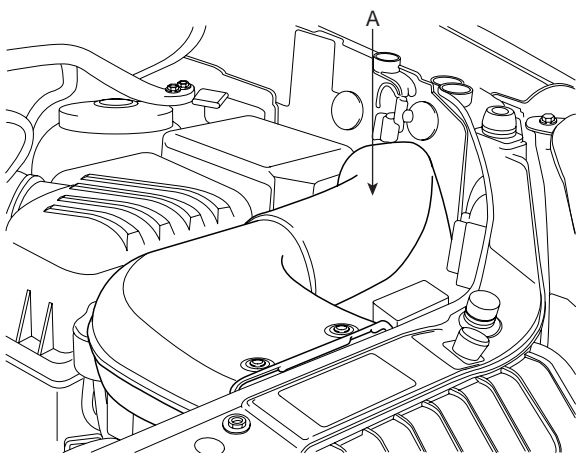
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- | | | |
|------------------------------------|-----------------------|--|
| 1. Transaxle case | 7. 5th/6th shift fork | 13. Differential assembly |
| 2. Taper roller bearing outer race | 8. Spring pin | 14. Needle bearing |
| 3. 1st/2nd shift fork | 9. Input shaft | 15. Clutch housing |
| 4. Reverse shift fork | 10. Oil guide | 16. Concentric slave cylinder assembly |
| 5. Shift rail | 11. 1st output shaft | 17. Boot |
| 6. 3rd/4th shift fork | 12. 2nd output shaft | |

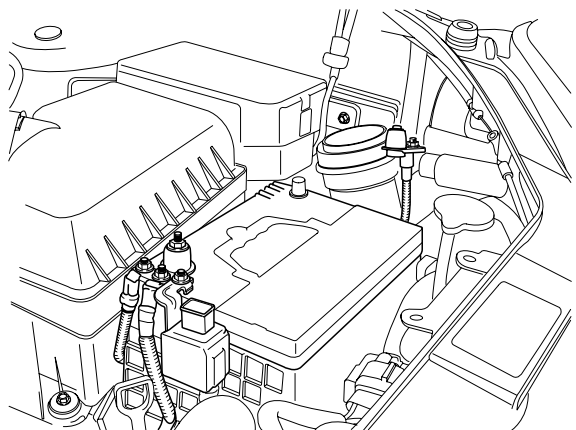
REMOVAL EB22E527

1. Remove the air duct(A).



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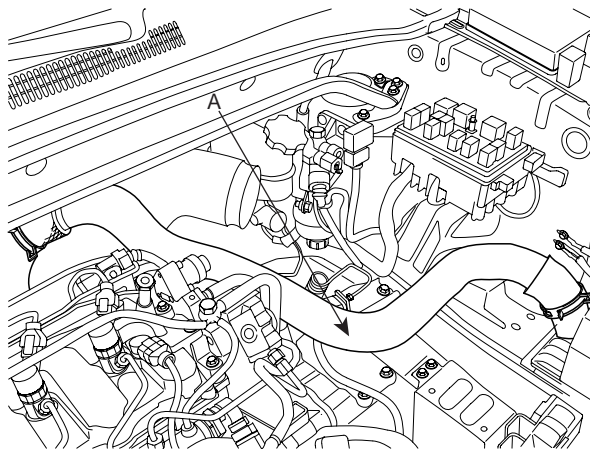
2. Remove the battery with the mounting plate and a bolt.



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3. Remove the air cleaner upper assembly after disconnecting the air flow sensor connector.
4. Remove the air cleaner lower assembly and the battery tray.

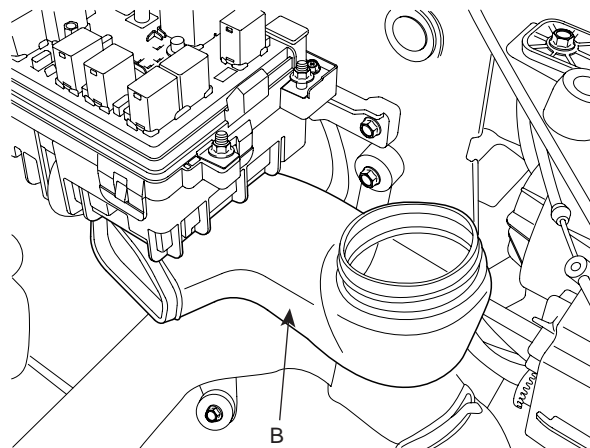
5. After removing the mounting bolts(2EA) and clamps(2EA), take the intercooler tube(A) off.



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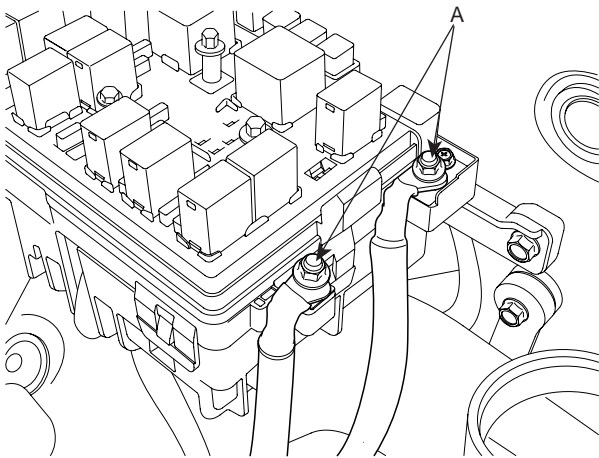
**NOTE**

It is helpful to remove the air duct(B) part first for the removal of the intercooler tube clamps.

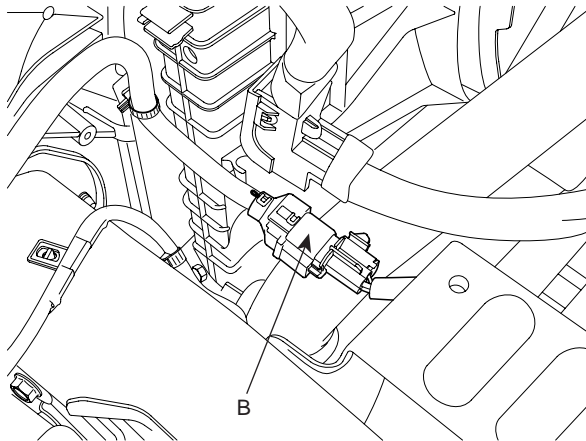


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6. Open the engine room fuse & relay box and disconnect the terminals, the ground circuit line(A) and the front lamp connector(B).



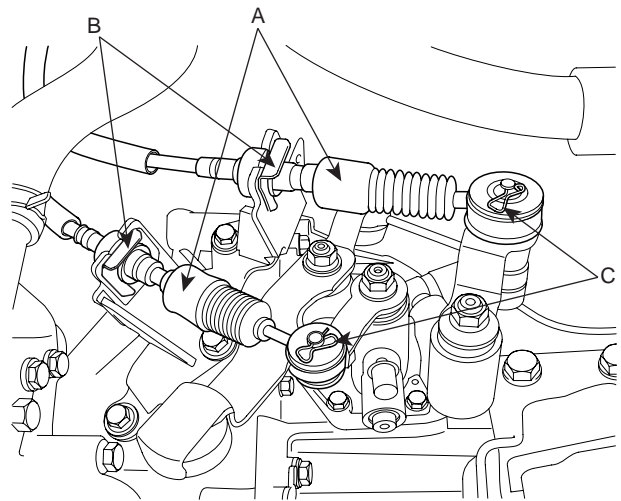
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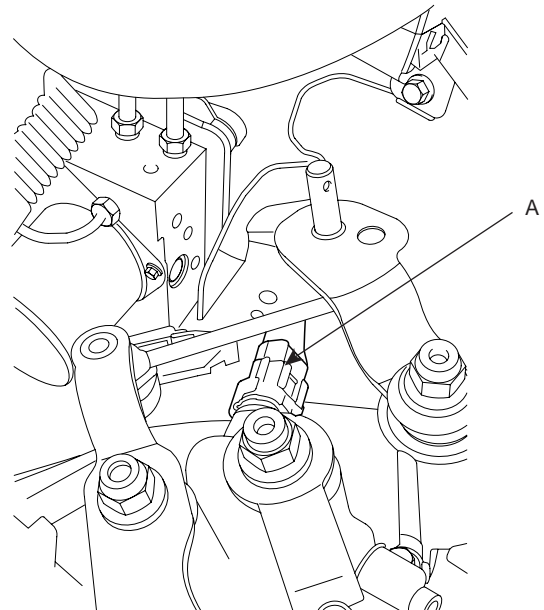
7. Disconnect the vehicle speed sensor connector.
8. Remove the intake hose.

9. Disconnect the shift cable assembly(A) after remaining the clips(B) and pins(C).



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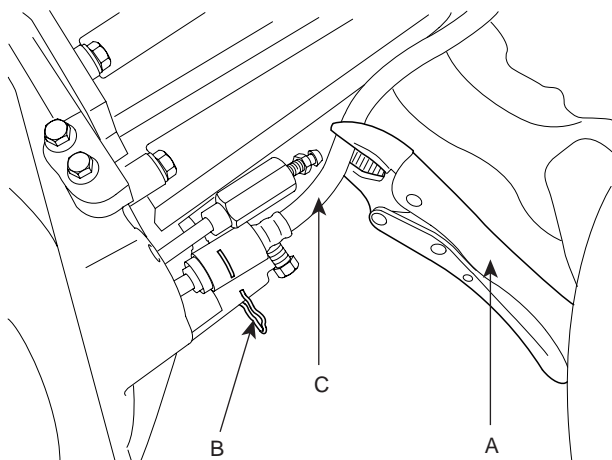
10. Disconnect the back up lamp switch(A).



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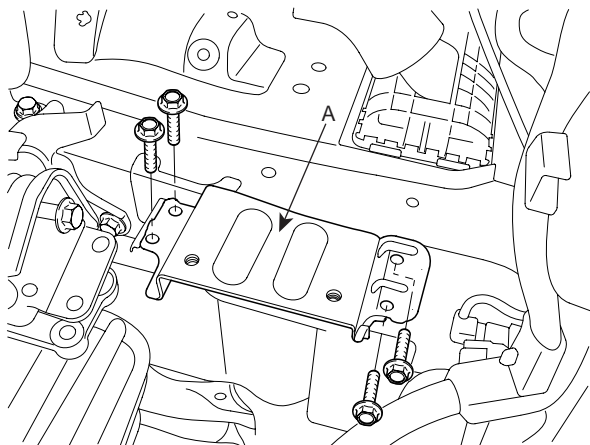
11. Disconnect the related connectors to transaxles.

12. After removing the clip(B) with clamping(A) the concentric slave cylinder tube, disconnect the tube(C).



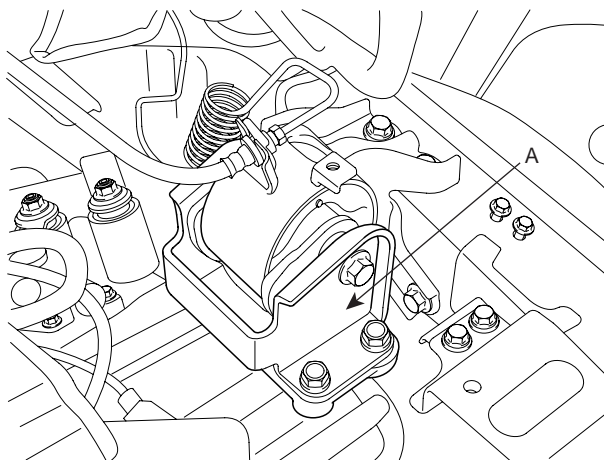
KMRE009F

13. Remove the transaxle upper mounting bolts.
14. Using the SST(09200-38001), support the engine transaxle assembly safely.
15. After removing the four bolts, take the battery tray(A) mounting bracket off.



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16. After removing the four bolts, take the transaxle insulator mounting bracket(A) off.



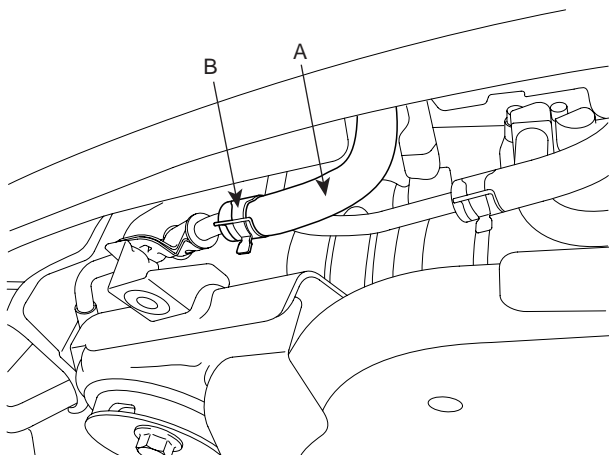
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17. Remove the front wheels & tires. (See 'SS' group)
18. Remove the steering joint assembly bolt. (See 'ST' group)
19. Lifting up the vehicle, remove the under shield cover.
20. Drain the manual transaxle fluid after removing the transaxle drain plug(A). It can be easier when the oil filler plug(B) is removed.



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21. Loosening the power steering return hose(A) clamp(B), disconnect the hose and drain the power steering fluid.



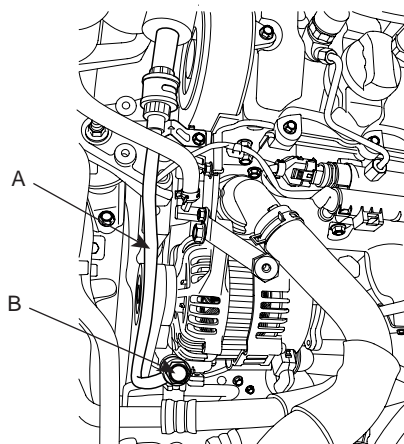
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22. Disconnect the power steering pressure hose(A) bolt(B). (Refer to 'ST'-group)



CAUTION

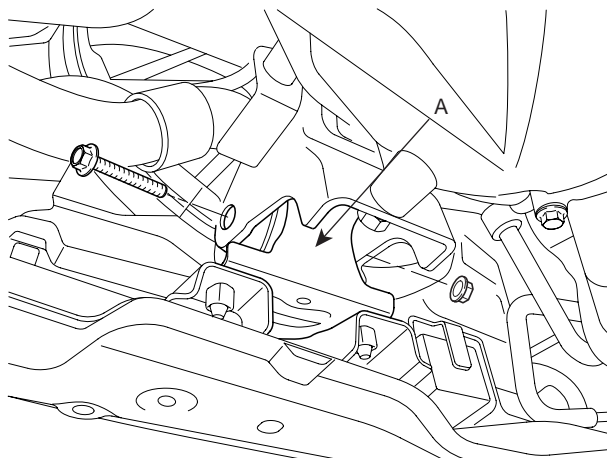
Be careful not to lose the washers.



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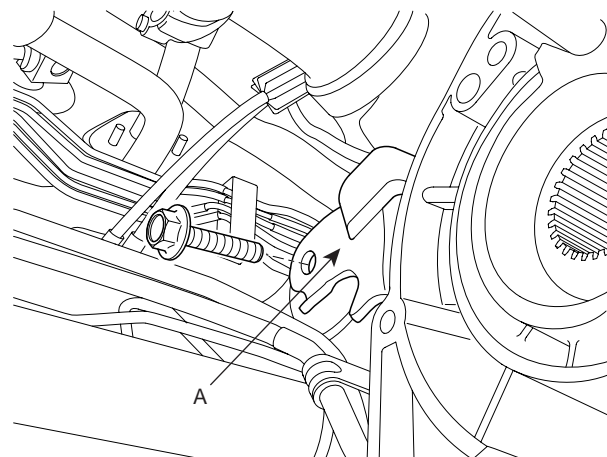
23. Remove the lower arm ball joint assembly mounting bolts. (Refer to 'SS'-group)
24. Remove the stabilizer bar link mounting bolts. (Refer to 'SS'-group)
25. After removing a split pin and nut from the steering bar tie rod, disconnect it. (Refer to 'ST'-group)
26. Remove the front exhaust pipe. (See 'EM' group)
27. Disconnect the RH driveshaft from the transfer case. (See 'DS' group)
28. Remove the transfer assembly.

29. Disconnect the bracket from the front roll stopper(A).



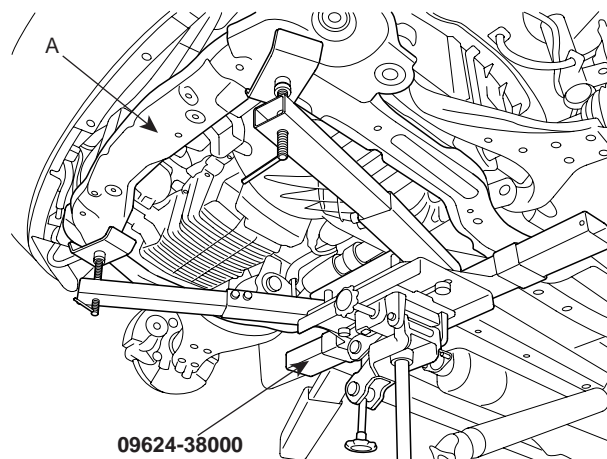
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30. Disconnect the bracket from the rear roll stopper(A).



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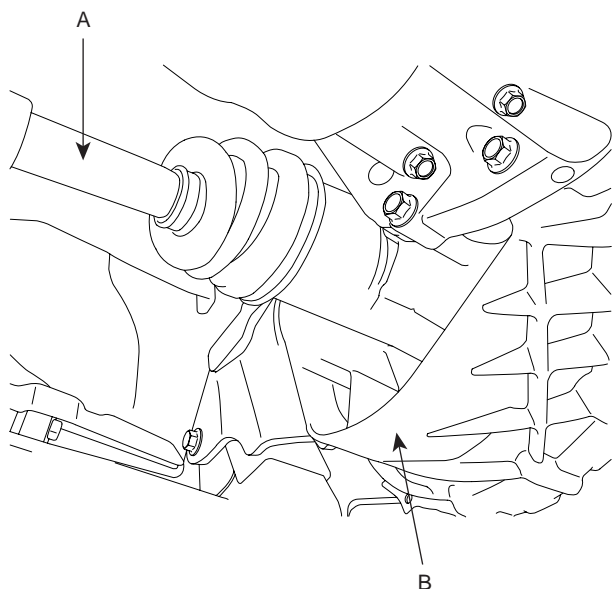
31. Supporting the cross member(A) with a jack and the SST(09624-38000), remove the mounting bolts.



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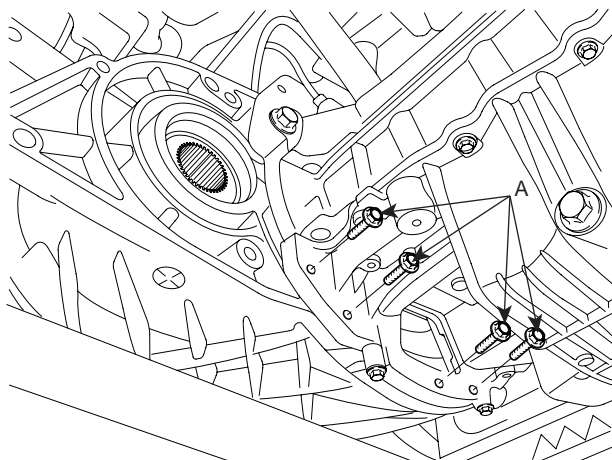
32. Remove the silencer between the engine and the transaxle. (See 'EM' group)

33. Disconnect the LH driveshaft(A) from the transaxle(B) (refer to 'DS'-group).

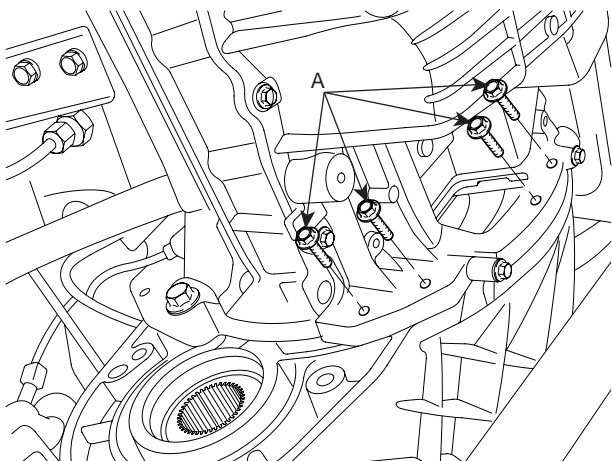


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34. Supporting the transaxle with a jack, remove the transaxle lower mounting bolts(A).



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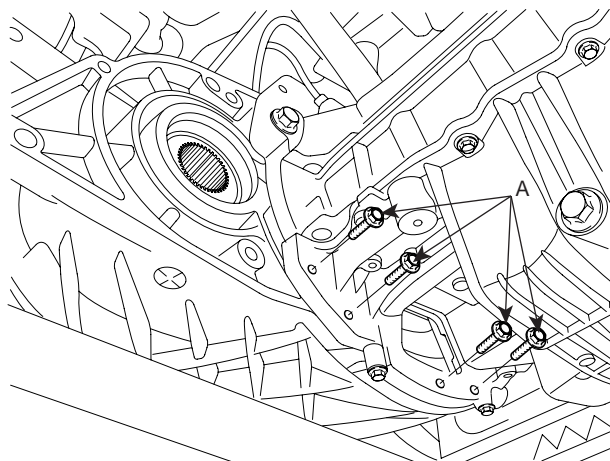
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35. Lowering the jack slowly, remove the transaxle.

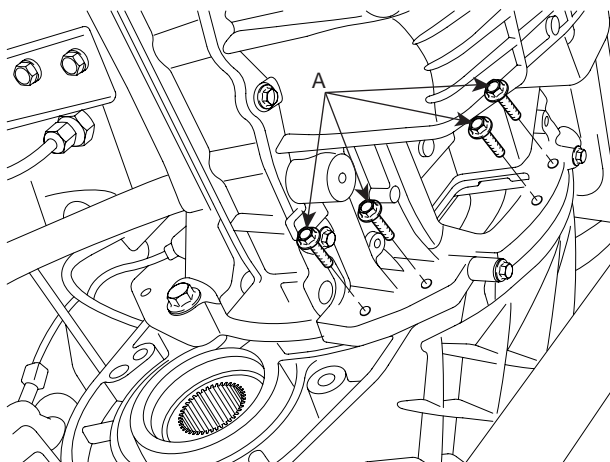
INSTALLATION

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1. Raising the jack slowly, tighten the transaxle lower mounting bolts(A).

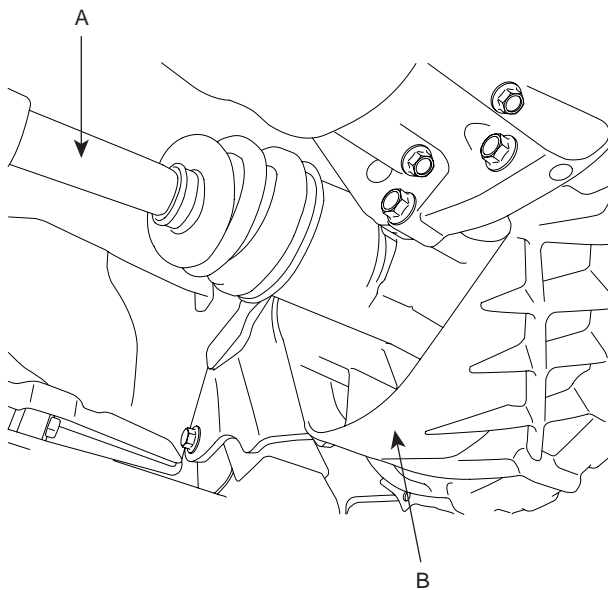


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2. Install the LH driveshaft(A) (Refer to 'DS'-group) and the silencer.



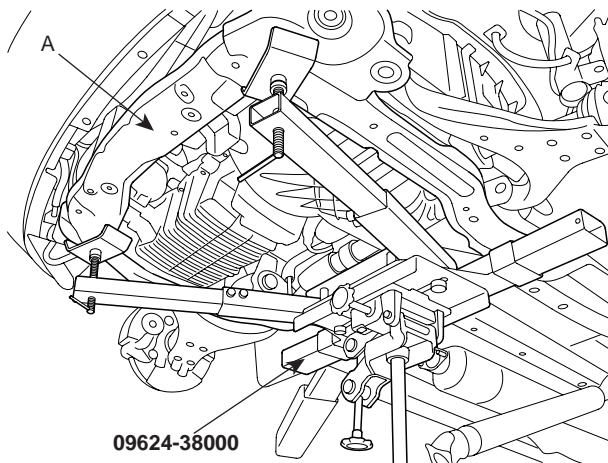
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3. Lifting the cross member up with the jack and the SST(09624-38000) slowly, tighten the mounting bolts.

TORQUE

Front mounting(A) :

137.3~156.9Nm (1400~1600kgf.cm, 101.3~115.7lb-ft)

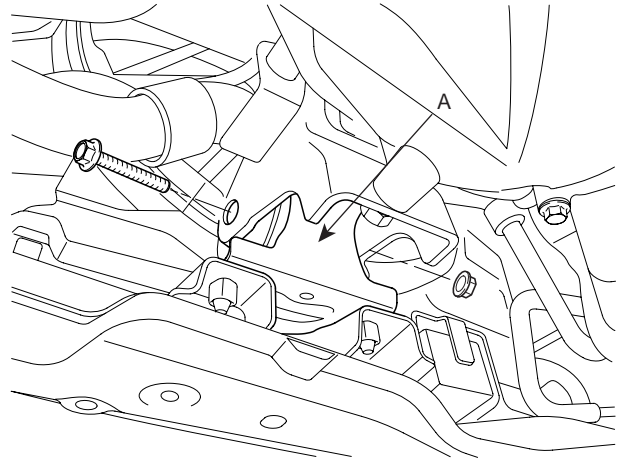


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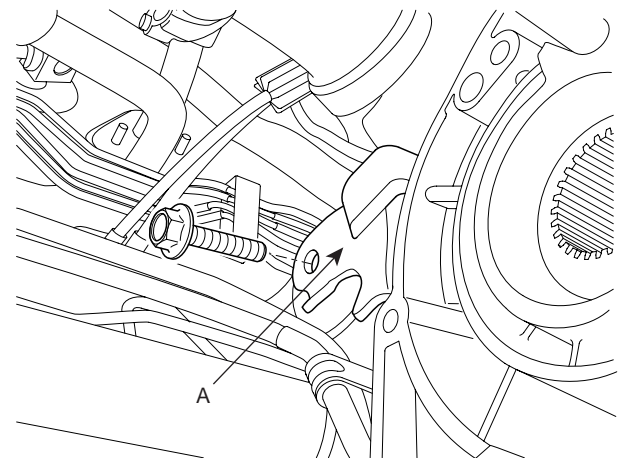
4. Fix the front/rear roll stopper(A) to brackets with the mounting bolts.

TORQUE :

49.0~63.7Nm (500~650kgf.cm, 36.2~47.0lb-ft)

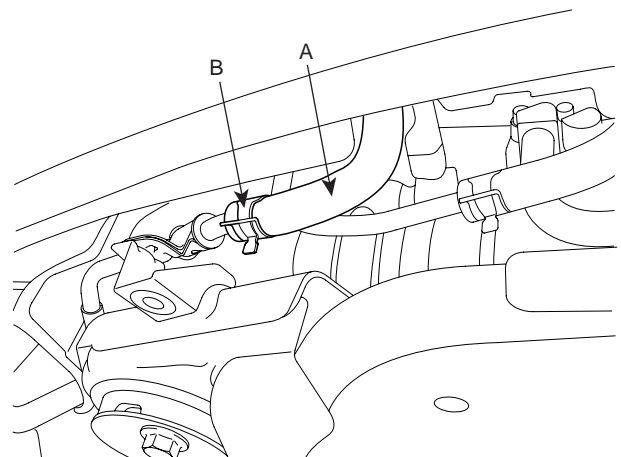


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5. Install the transfer assembly.
6. Insert the RH driveshaft into the transfer case. (See 'DS' group)
7. Install the front exhaust pipe. (See 'EM' group)
8. Inserting the power steering return hose(A), fix it with a clamp(B).



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9. Tightening the steering bar tie rod mounting nut, insert a new split pin. (Refer to 'ST'-group)

TORQUE :
23.5~33.3Nm (240~340kgf.cm, 17.4~24.6lb-ft)

10. Tighten the stabilizer bar link mounting bolt. (Refer to 'SS'-group)

TORQUE :
98.1~117.7Nm (1000~1200kgf.cm, 72.3~86.8lb-ft)

11. Tighten the lower arm ball joint and folk mounting bolt. (Refer to 'SS'-group)

TORQUE :
98.1~117.7Nm (1000~1200kgf.cm, 72.3~86.8lb-ft)

12. After tightening the transaxle drain plug and filling the manual transaxle fluid, tighten the oil filler plug.

TORQUE :
29.4~34.3Nm (300~350kgf.cm, 21.7~25.3lb-ft)

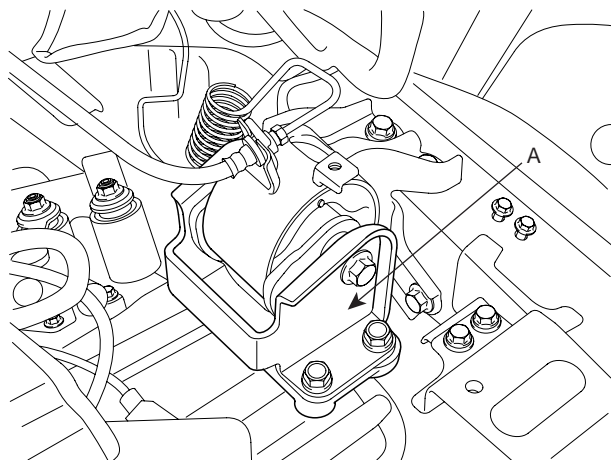
Manual transaxle fluid: SAE 75W/85

13. Tighten the steering joint assembly bolt. (Refer to 'ST'-group)

TORQUE :
17.7~24.5Nm (180~250kgf.cm, 13.0~18.1lb-ft)

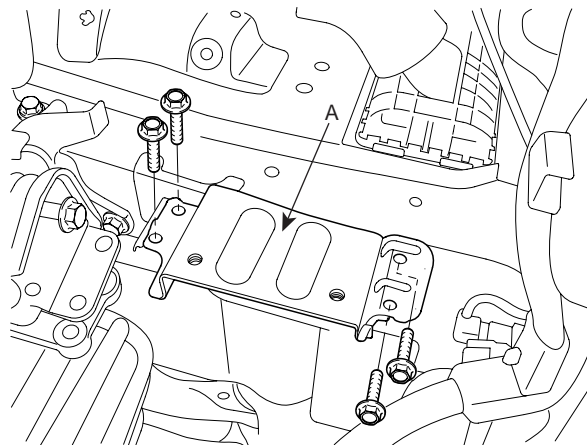
14. Install the front wheel & tires. (See 'SS' group)

15. Install the transaxle insulator mounting bracket(A).



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16. Install the battery tray(A) mounting bracket.



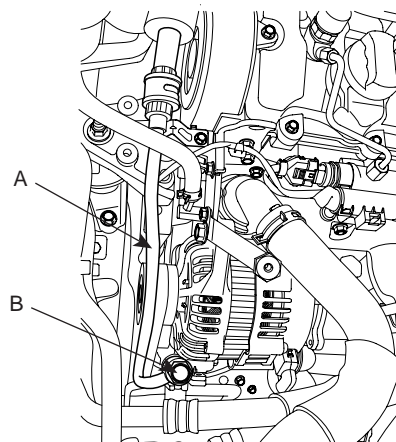
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17. Remove the SST(09200-38001).

18. Tighten the transaxle upper mounting bolts.

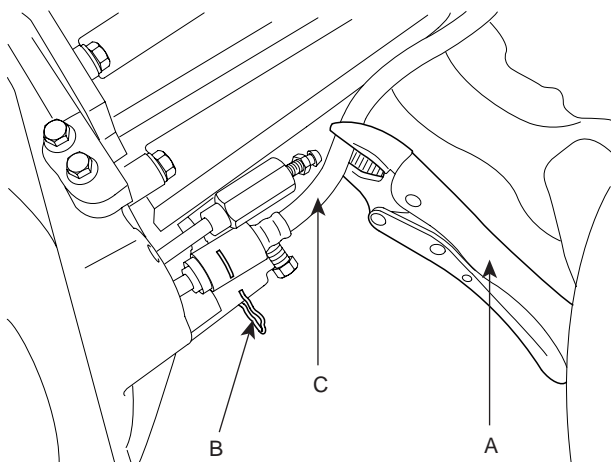
19. Tightening the power steering pressure hose(A) bolt(B), refill the power steering fluid.

TORQUE:
63.7~73.5Nm (650~750kgf.cm, 47.0~54.2lb-ft)



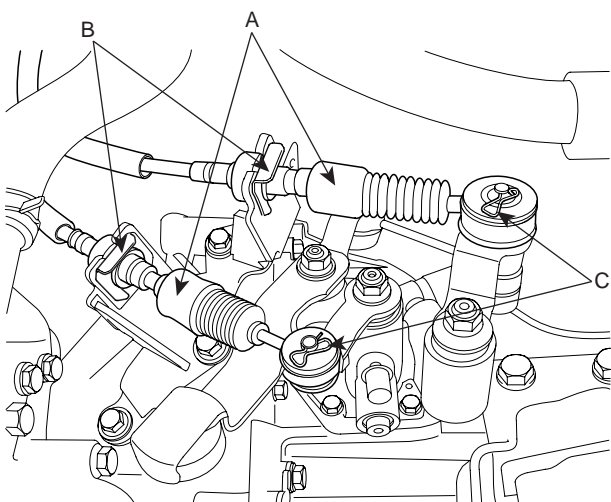
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20. Connect the C.S.C tube(C) and install the clip (B) and loosen the clamping(A).



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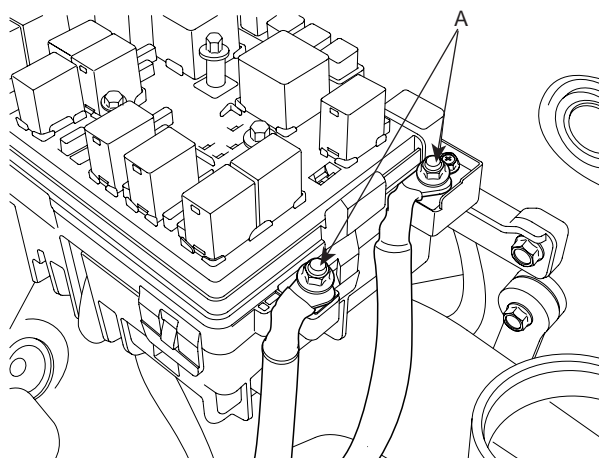
21. Install the shift cable assembly (A) with the clips(B) and pins(C).



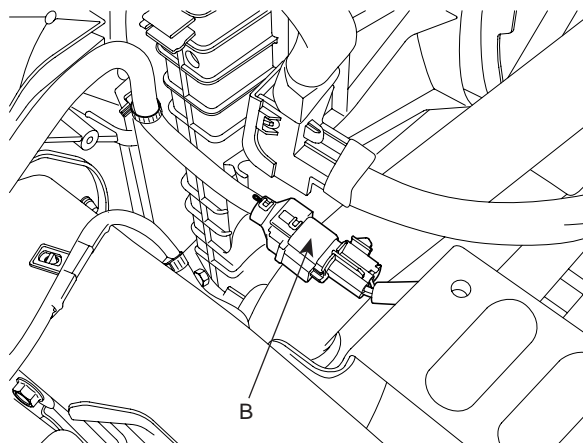
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22. Install the intake hose and the vehicle speed sensor connector.

23. After connecting the front lamp connector (B) install the terminals, the grounds(A), and the fuse & relay box.

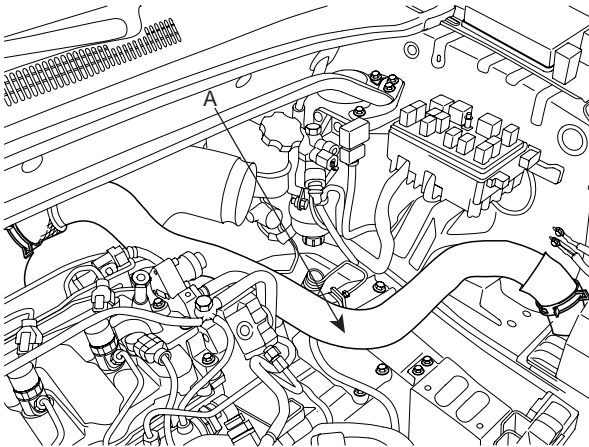


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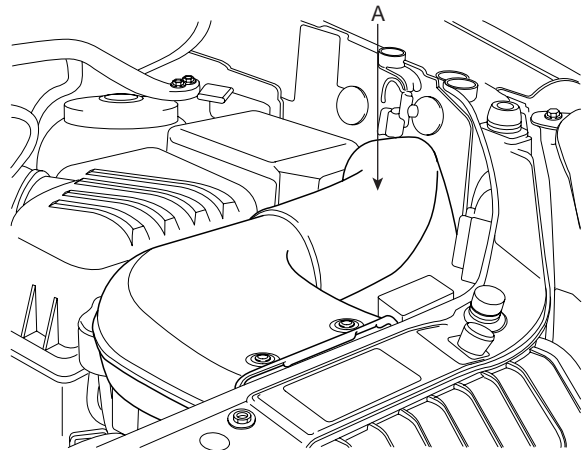
LMIG002F

24. Install the intercooler tube(A) and air duct(B).

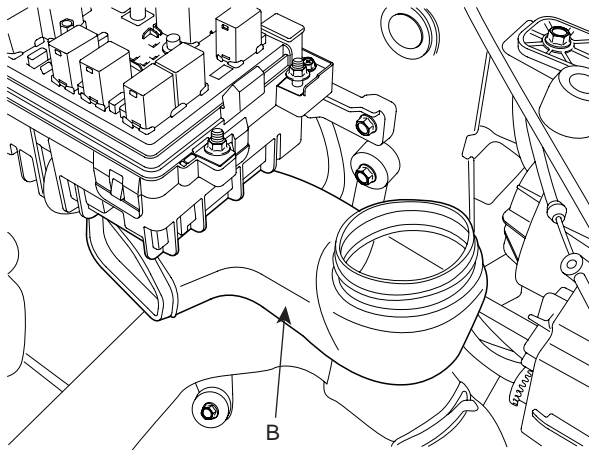


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28. Install the air duct(A).



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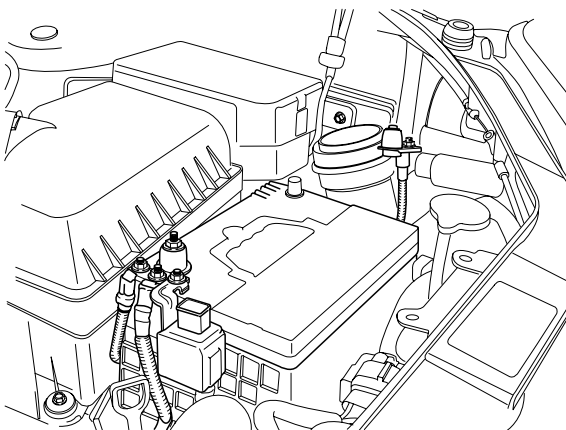


LMIG002D

25. Install the battery tray and air cleaner.

26. Install the air duct cover and air flow sensor.

27. Install the battery.



LMIG002B