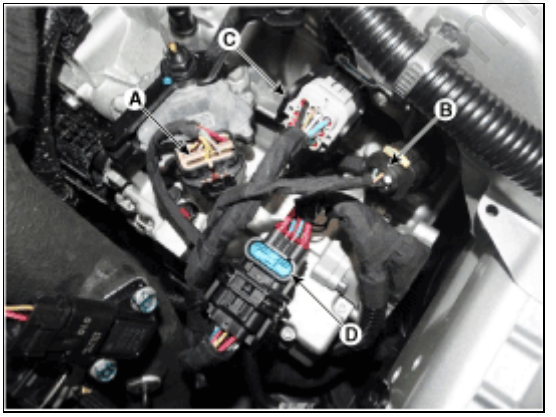
Hyundai Kona: Dual Clutch Transmission Assembly / DCT (Dual Clutch Transmission) Repair procedures

Removal

1. Remove the air cleaner assembly and air duct.
   (Refer to Engine Mechanical System - "Air Cleaner")
2. Remove the battery and battery tray.
   (Refer to Engine Electrical System - " Battery")
3. Remove the ECM.
   (Refere to Engine Control System - "ECM")
4. Disconnect the connectors in the illustration below.
   A. Inhibitor switch connector
   B. Input shaft speed sensor connector
   C. Gear actuator solenoid connector
   D. Clutch actuator connector



5. Disconnect the gear actuator motor connector (A).

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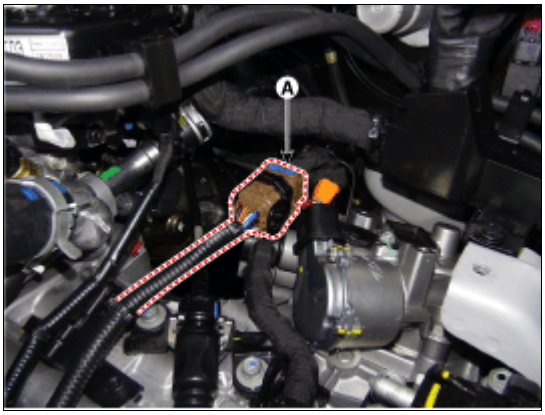
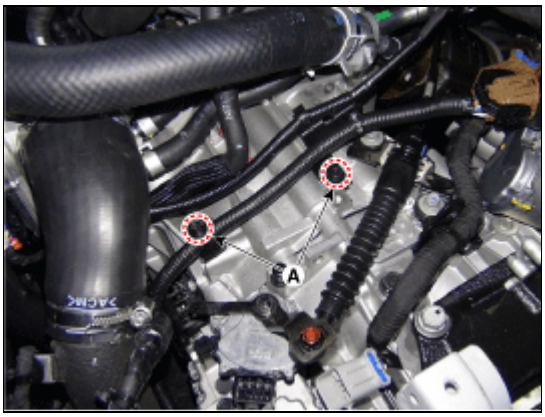
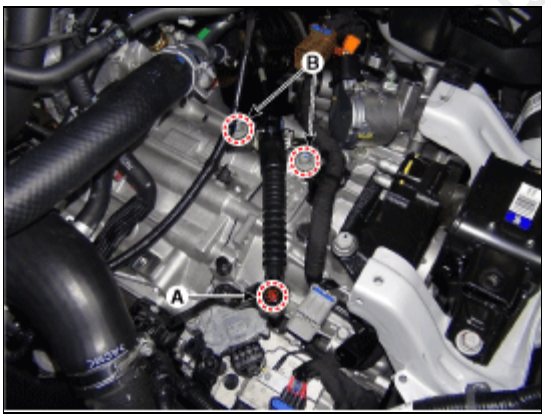


6. Remove the wiring braket bolt (A-2ea).
   Tightening torque :
   (A) 9.8 - 11.7 N.m (1.0 - 1.2 kgf.m, 7.2 - 8.6 lb-ft)



7. Remove the nut (A) and shift cable braket bolt (B-2ea).
   Tightening torque :
   (A) 9.8 - 13.7 N.m (1.0 - 1.4 kgf.m, 7.2 - 10.8 lb-ft)
   (B) 19.6 - 26.5 N.m (2.0 - 2.7 kgf.m, 14.5 - 19.5 lb-ft)



8. Remove the ground bolt (A).
   Tightening torque :
   9.8 - 11.8 N.m (1.0 - 1.2kgf.m, 7.2 - 8.7 lb-ft)

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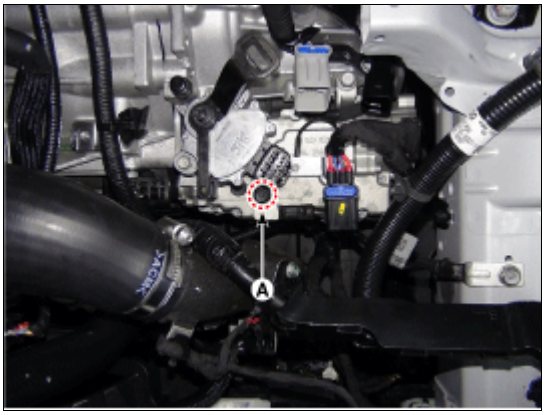
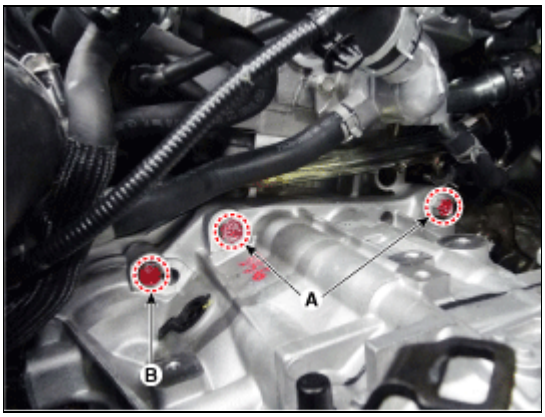
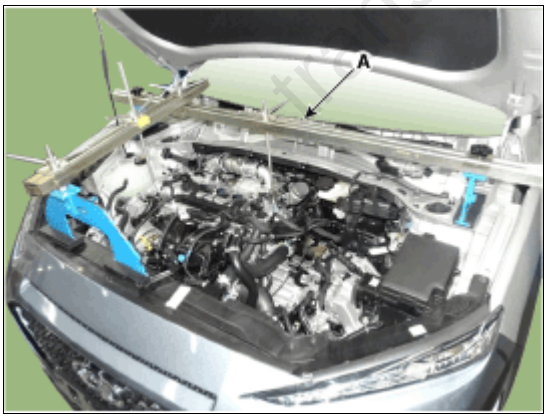


9. Remove the transmission upper mounting bolt (A-2ea) and starter mounting bolt (B).
   Tightening torque :
   42.1 - 44.1 N.m (4.3 - 4.5kgf.m, 31.1 - 32.5 lb-ft)



10. Remove the cowl top cover.
    (Refer to Body - "Cowl Top Cover")
11. Assemble the engine support fixture (beam No.: 09200-38001 or 09200-3N000, supporter No.: 09200-2S000).
    (Refer to Special Service Tools - "Engine support fixture special tool assembly drawing")
12. Using the engine support fixture (A), hold the engine and transaxle assembly safely.



13. Remove the dust cover (A).

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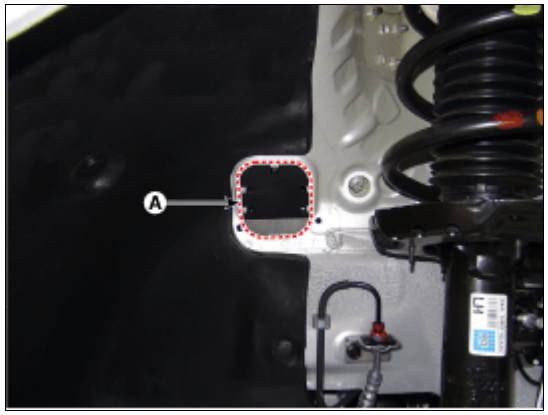
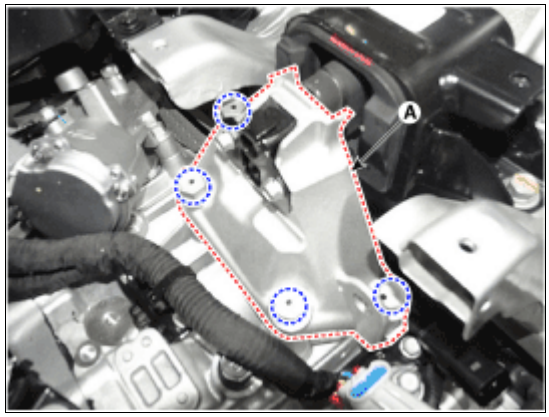


14. Remove the transmission support bracket bolt (A-2ea).
    Tightening torque :
    107.9 - 127.5 N.m (11.0 - 13.0 kgf.m, 79.6 - 94.0 lb-ft)



15. Remove the under cover.
    (Refer to Engine Mechanical System - "Engine Room Under Cover")
16. Remove the sub frame.
    (Refer to Suspention System - "Sub Frame")
17. Remove the front drive shaft.
    (Refer to Driveshaft and axle - " Front Driveshaft")
18. Remove the vacuum pump.
    (Refere to Brake System - "Vacuum Pump")
19. Remove the transmission support bracket (A).
    Tightening torque :
    58.8 - 78.5 N.m (6.0 - 8.0 kgf.m, 43.4 - 57.9 lb-ft)



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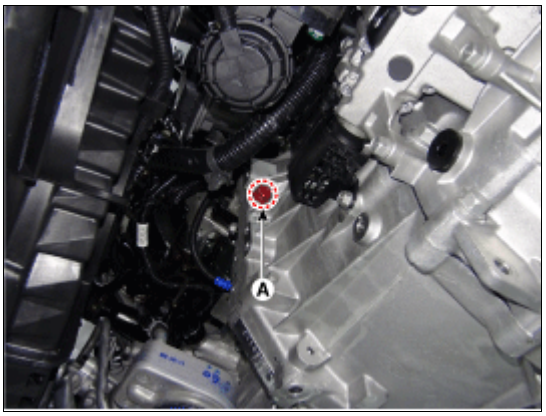
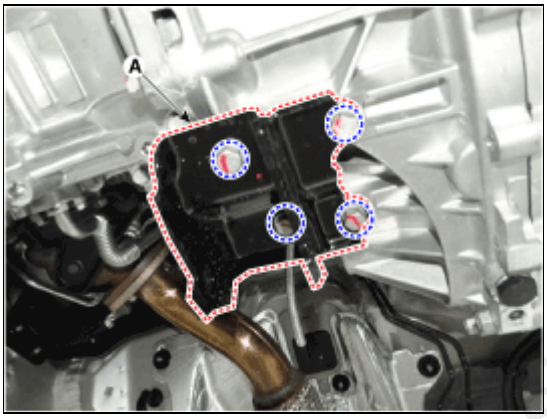
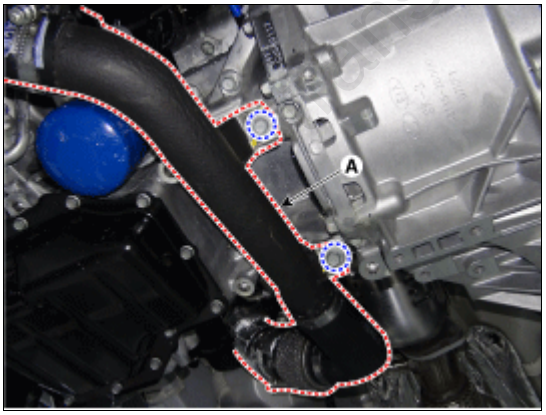
20. Remove the starter mounting bolt (A).
    Tightening torque :
    42.1 - 44.1 N.m (4.3 - 4.5 kgf.m, 31.1 - 32.5 lb-ft)



21. Remove the roll rod support braket (A).
    Tightening torque :
    49.0 - 68.6 N.m (5.0 - 7.0 kgf.m, 36.2 - 50.6 lb-ft)



22. Remove the intercooler inlet pipe (A).
    Tightening torque :
    19.6 - 26.4 N.m (2.0 - 2.7 kgf.m, 14.4 - 19.5 lb-ft)



23. Remove the transmission lower mounting bolts (A-3ea, B-2ea).
    Tightening torque :
    42.2 - 53.9 N.m (4.3 - 5.5 kgf.m, 31.1 - 39.8 lb-ft)

⚠ CAUTION

- Be careful not to damage other system or parts near by when removing the transmission

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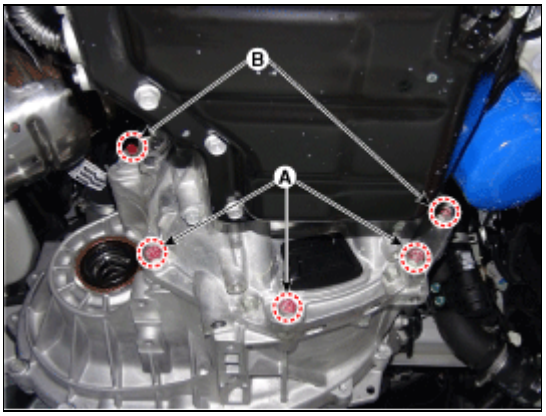
assembly.



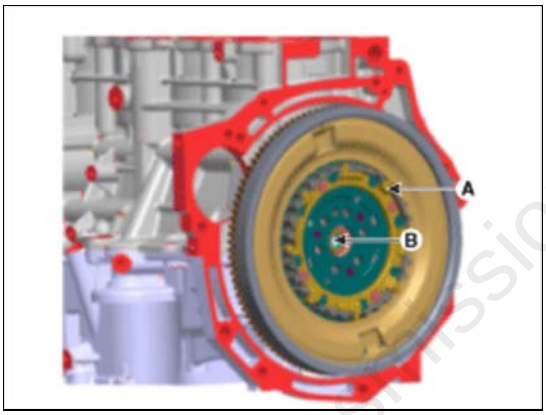
Installation

1. To install, reverse the removal procedure.

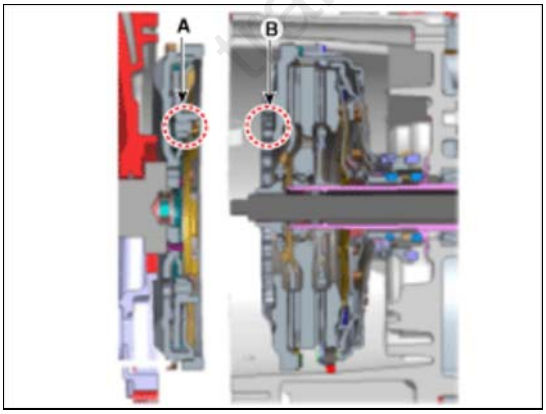
Information

Matters that require attention when installing the dual clutch transmission (DCT) to engine

1) Check the pilot bearing (B) and external damper (A) on the side of engine for any dents, damages and deformations before installing the DCT.



2) Align the external damper spline (A) with the dual clutch spline (B).



3) Assemble the DCT to the knock bushing on the engine side and then insert the input shaft (A) to the engine pilot bearing (B).

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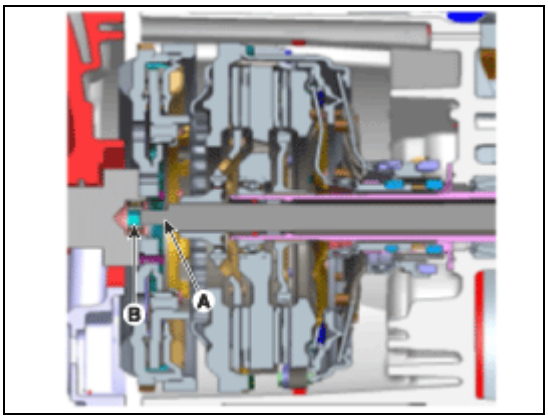
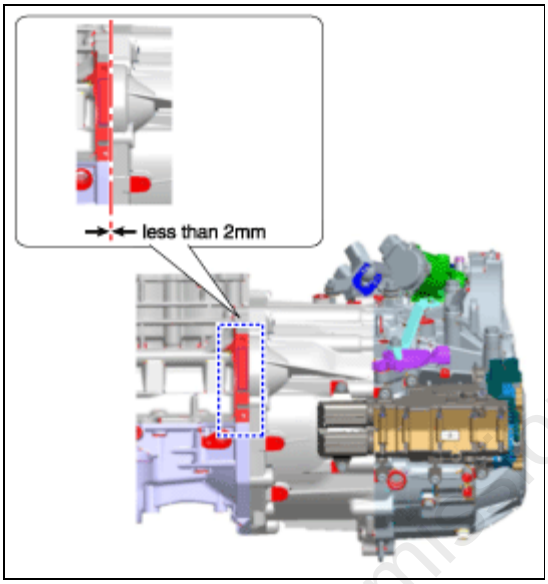


4) After adhering the DCT with engine by pushing the DCT, tighten the mounting bolts after checking that there is no gap (less than 2mm) between the clutch housing and the engine block. (If the bolt is tightened while there is a gap, then the spline of external damper or clutch will be damaged or broken.)

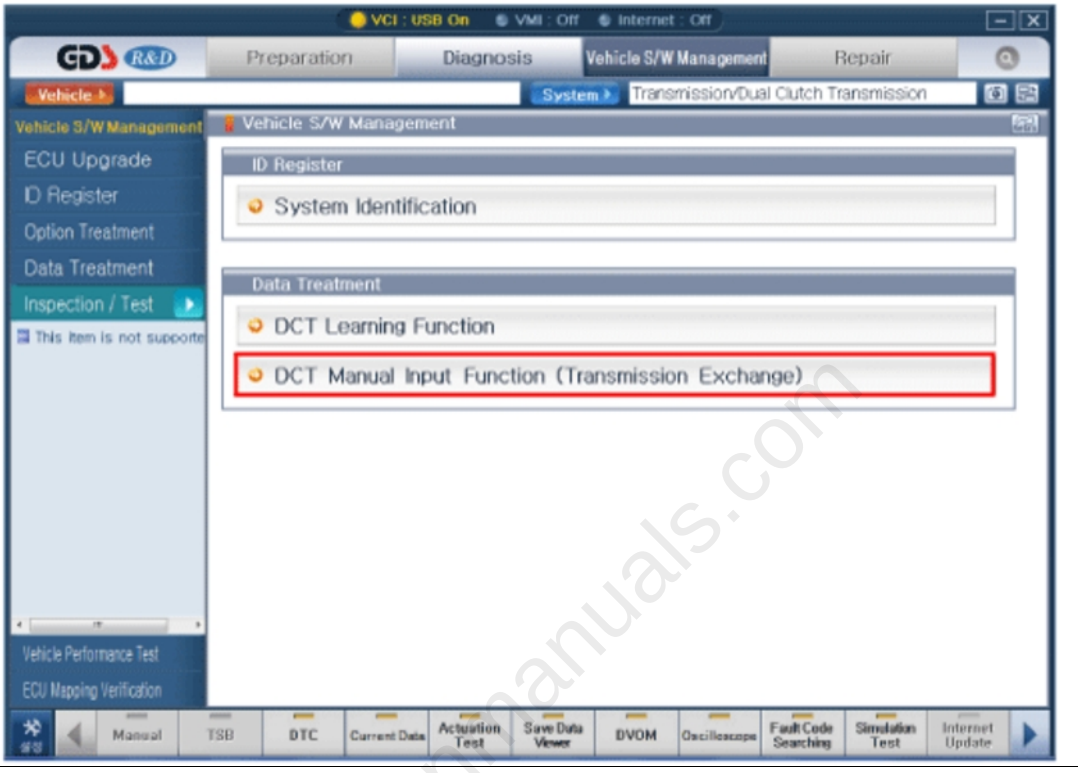


Follow the separated each procedure as below according to reinstallation or replacing with a new dual clutch transmission.

1. In case of the reinstallation
   1) If the differential oil seal is damaged and oil is leaking, replace the oil seal with a new one. When installing the new oil seal, use the special tool.
      – 2WD transmission case side, clutch housing side: 09430-C1190
      – 4WD transmission case side, clutch housing side: 09431-39000
      – Driven gear oil seal (in case of the 4WD vehicle) : 09473-D3500
   2) After installing the DCT, check the oil level after refilling the DCT with oil.
      (Refere to Transmission Gear Oil - "Rapair procedures")
   3) Clear the diagnostic trouble codes (DTC) using the GDS. Even though disconnecting the battery negative terminal, the DTCs will not be cleared. So, be sure be sure to clear the DTCs using the GDS.
2. In case of the replacing with a new dual clutch transmission.
   1) After replacing the new DCT, it need not oil refill & level check procedure because oil is already filled w specified quantity inside new DCT.
   2) Clear the diagnostic trouble codes (DTC) using the GDS. Even though disconnecting the battery negative terminal, the DTCs will not be cleared. So, be sure to clear the DTCs using the GDS.

3) Perform clutch characteristics input procedure using the GDS. (One of two procedure must be performed.

• Clutch characteristics input (Manual Teaching)



• Clutch touch point learning

