
Clutch (08.00)

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Clutch (08.00)

Clutch Assembly (08.01)

Description

The clutch assembly is a balanced unit consisting of a flywheel, clutch friction plates and clutch cover.

The clutch is a twin plate, diaphragm spring type assembly. A concentric clutch slave cylinder is mounted around the first motion shaft in the torque tube bell housing.

The clutch master cylinder is mounted on the engine bulkhead and is operated directly by the clutch pedal.

A hydraulic connection from the master cylinder feeds pressurised fluid to the slave cylinder. The slave cylinder has an extension tube and bleed nipple extending from the left side of the bell housing for bleeding the system after any major work.

Specifications

Clutch Fluid		
Castrol/Girling Universal Brake and Clutch fluid.		
Clutch Assembly		
Balanced assembly with alignment marks		
Clutch Plate		
Twin friction plates		
Torque Figures		
Description	Nm	lb / ft.
Flywheel Bolts	75-81	55.5-60
Tighten the bolts in sequence. Loosen the bolts and then torque, in even stages, in the same sequence.		
Clutch Bolts	29-35	21.5-26
Tighten x3 equally-spaced bolts, in-turn, to pull-down the clutch evenly. Then torque all bolts in sequence.		
Starter Motor Bolts.	30-35	22.5-26

Maintenance

Clutch Assembly

Repair Operation Time (ROT)	
Item	Code
Clutch Renew	TBA

Remove

Note alignment marks on clutch cover.

- 1. Disconnect the vehicle battery.

Warning

If rasing vehicle on a 'two post' ramp (vehicle supported by underbody), ensurethat the rear end of the vehicle is securly strapped to the ramp. Faliure to strap the rear of vehicle down may lead to the vehicle falling off the ramp.

- 2. Raise the vehicle and make safe.

- 3. Remove the rear road wheel(s) and road wheel arch liners.
- 4. Remove the front and rear undertrays and the shear plate.

Lower the front undertray to reveal the air intake for the alternator. Release the spring clip and part the flex pipe from the undertray.

- 5. Remove the transaxle and the torque tube.
 - (Refer to 'Manual Transmission (07.03)', page 7-3-1)
 - (Refer to 'Torque Tube', page 5-1-2).

Warning

The clutch assembly is heavy. Ensure the clutch assembly is supported before removing final bolts.

- 6. Install the crankshaft holding tool (Refer to '303-1047 (Crankshaft Holding)', page 20-1-6) to prevent crankshaft turning.



- 7. Remove bolts (x6) and lock washers. Withdraw the clutch cover and plates.

Caution

The clutch is replaced as a complete assembly (flywheel, clutch plate and clutch cover). Replacing only the clutch plates will result in clutch non-release.

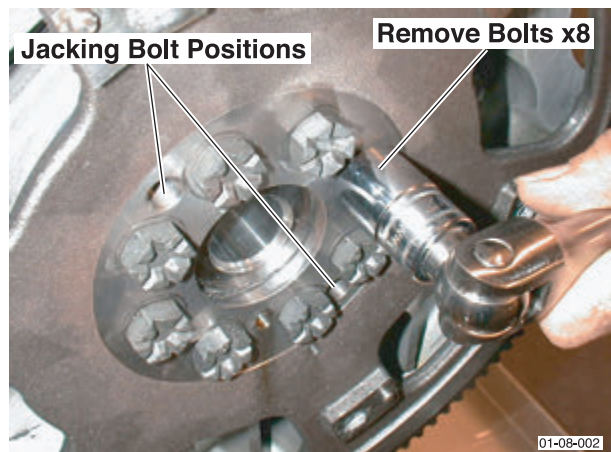
Image to Follow

8. Remove the flywheel.

⚠ Warning ⚠

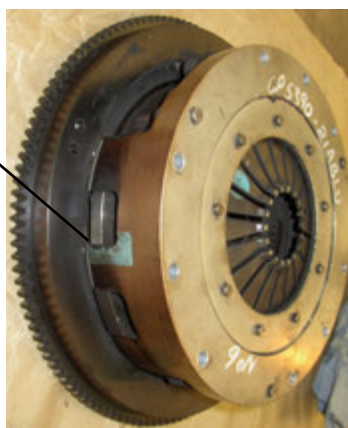
The flywheel is heavy. Ensure flywheel is supported before removing.

- 8.1 Insert bolts into the bolt holes (x2) provided.
- 8.2 Remove bolts (x6).
- 8.3 Using the inserted bolts 'Jack' the flywheel off the crankshaft.
- 8.4 Discard the bolts.

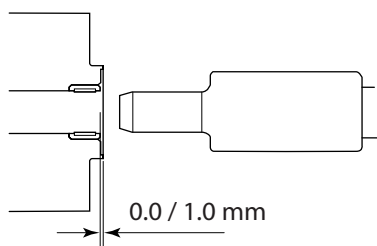


Installation

- If the new clutch assembly is bolted to the flywheel, remove the new clutch assembly from flywheel. Note position of clutch assembly to flywheel.
- If the new clutch assembly is not assembled - assemble with paint marks in alignment:



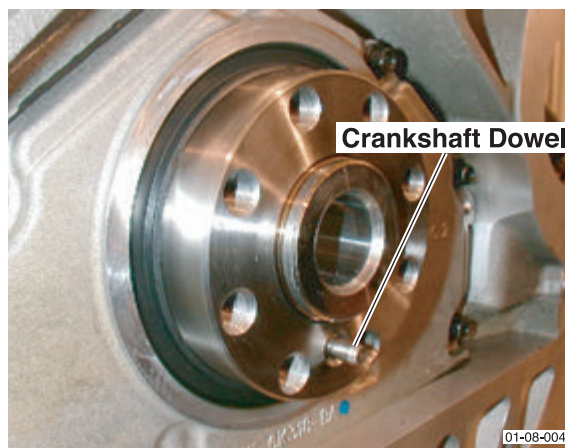
1. Check that pilot bearing in the rear end of the crankshaft is 0.0-1.0 mm below the crankshaft end face.



2. Install the crankshaft holding tool (Refer to '303-1047 (Crankshaft Holding)', page 20-1-6) to prevent crankshaft turning.

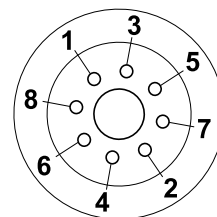
3. Install the flywheel.

- 3.1 Using a suitable support surface under the flywheel, offer the flywheel to the crankshaft. Locate the flywheel onto the crankshaft dowel.

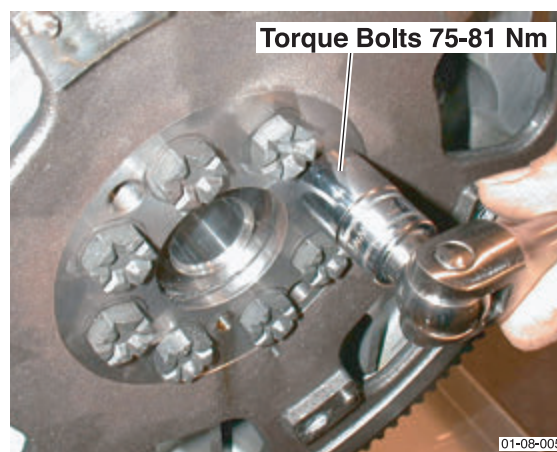


- 3.2 Loosely install new flywheel mounting bolts (x8) and hand tighten.

- 3.3 Tighten the bolts in the sequence illustrated. Continue until the flywheel face is in full contact with the crankshaft flange.



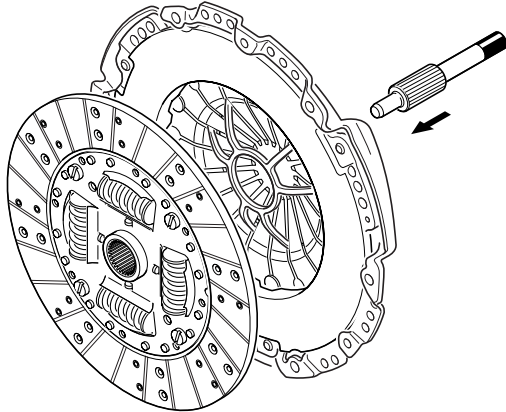
- 3.4 Loosen the bolts and then torque, in even stages, to **75-81 Nm** in the same sequence.



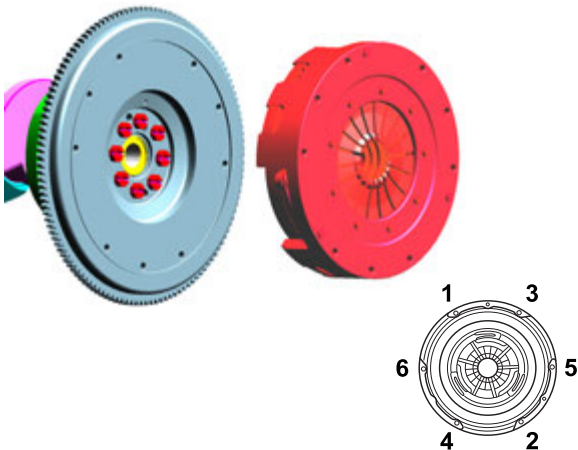
4. Insert the clutch alignment tool (Refer to '303-667 (Clutch Alignment)', page 20-1-5) through the clutch assembly. Offer this assembly to the flywheel and insert the alignment tool into the crankshaft pilot bearing.

Caution

The flywheel and pressure plate are a balanced assembly. Ensure alignment marks are aligned.



5. Insert new bolts (x9). Tighten x3 equally-spaced bolts in-turn to pull-down the clutch evenly.
Torque all bolts, in sequence, to **29-35 Nm**.



6. Visually check that marks between the clutch and the flywheel are correctly aligned. If not, the clutch must be removed and installed correctly.
7. Remove the alignment tool.
8. Remove the crankshaft holding tool.
9. Install the torque tube and the transaxle.
 - (Refer to 'Torque Tube', page 5-1-2)
 - (Refer to 'Manual Transmission (07.03)', page 7-3-1)
10. Install the starter motor. Torque the starter motor bolts to **30-35 Nm**.
11. Install the front and rear undertrays.
12. Install the road wheel arch liners.
13. Install the road wheels (Refer to 'Road Wheel Nut Torque Tightening', page 4-5-7).
14. Remove the vehicle securing strap, if installed.
15. Connect vehicle battery.