



Technical Service Information

TOYOTA U150/250 DOWNSHIFT CLUNK FROM 5TH OR 4TH GEAR

COMPLAINT: After overhaul, vehicles equipped with the U150/250 transaxle may exhibit a complaint of a downshift clunk coming out of 5th or 4th gear as the C1 Clutch is coming back on. This complaint is usually more prevalent when hot.

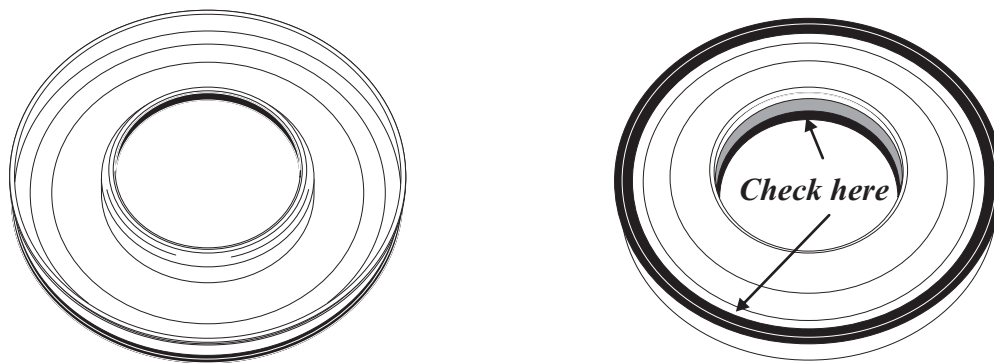
CAUSE: The cause may be that the C1 bonded piston is “de-bonding” the rubber lip seal area from the metal piston, as shown in the areas in Figure 1. This can be easily seen with the evidence of air bubbles in this area. The reason for the harsh re-application when hot is that the air bubbles are swelling the rubber area of the piston causing it to hang up in the drum which can cause the harsh re-application. The cause to the de-bonding is because of glycol contamination.

CORRECTION: To correct this condition, make sure that you replace all rubber seals and bonded pistons. Refer to Figure 2 for a breakdown of the complete C1 clutch assembly for assembly purposes. Another method for repairing this problem is using a U140 C1 clutch drum complete with the aluminum piston and return spring. Figure 3 shows an illustration of the earlier components next to the bonded piston assembly. Refer to Figure 4 for clearance specs for the C1 clutch as this can also cause engagement issues. If there is evidence of de-bonding it may be necessary to use a glycol test kit to verify. See service information for availability. If glycol is evident it will be necessary to replace the radiator.

SERVICE INFORMATION:

NELCO GLY-TEK TEST KIT available from- <http://www.intergarten.com/nelco/testkit.htm>

C1 BONDED PISTON

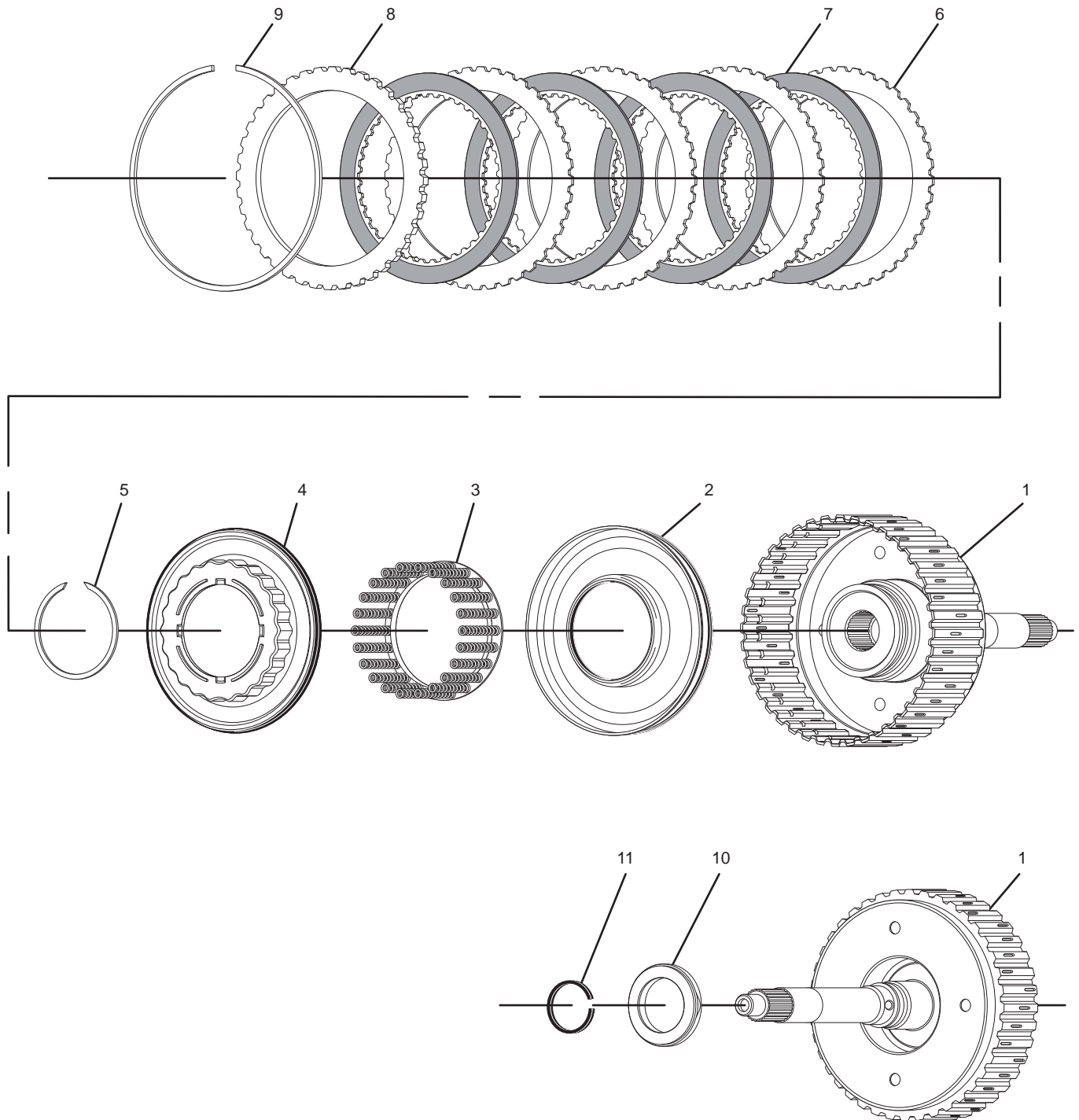


Inspect the lip seal area on the piston for air bubbles or evidence of de-bonding because of glycol contamination. Do not reuse pistons or rubber products when evident.

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Figure 1

FORWARD (C1) CLUTCH ASSEMBLY EXPLODED VIEW



1. FORWARD (C1) CLUTCH DRUM ASSEMBLY
2. FORWARD (C1) CLUTCH PISTON
3. FORWARD (C1) CLUTCH PISTON RETURN SPRING
4. FORWARD (C1) CLUTCH BALANCE PISTON
5. FORWARD (C1) CLUTCH PISTON RETAINING SNAP RING
6. FORWARD (C1) CLUTCH STEEL PLATE (4 REQUIRED)

7. FORWARD (C1) CLUTCH LINED PLATE (4 REQUIRED)
8. FORWARD (C1) CLUTCH BACKING PLATE
9. FORWARD (C1) CLUTCH DRUM RETAINING SNAP RING
10. FORWARD (C1) CLUTCH THRUST BEARING
11. FORWARD (C1) CLUTCH SEALING RING

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U140/U150 C1 PISTON ASSEMBLIES

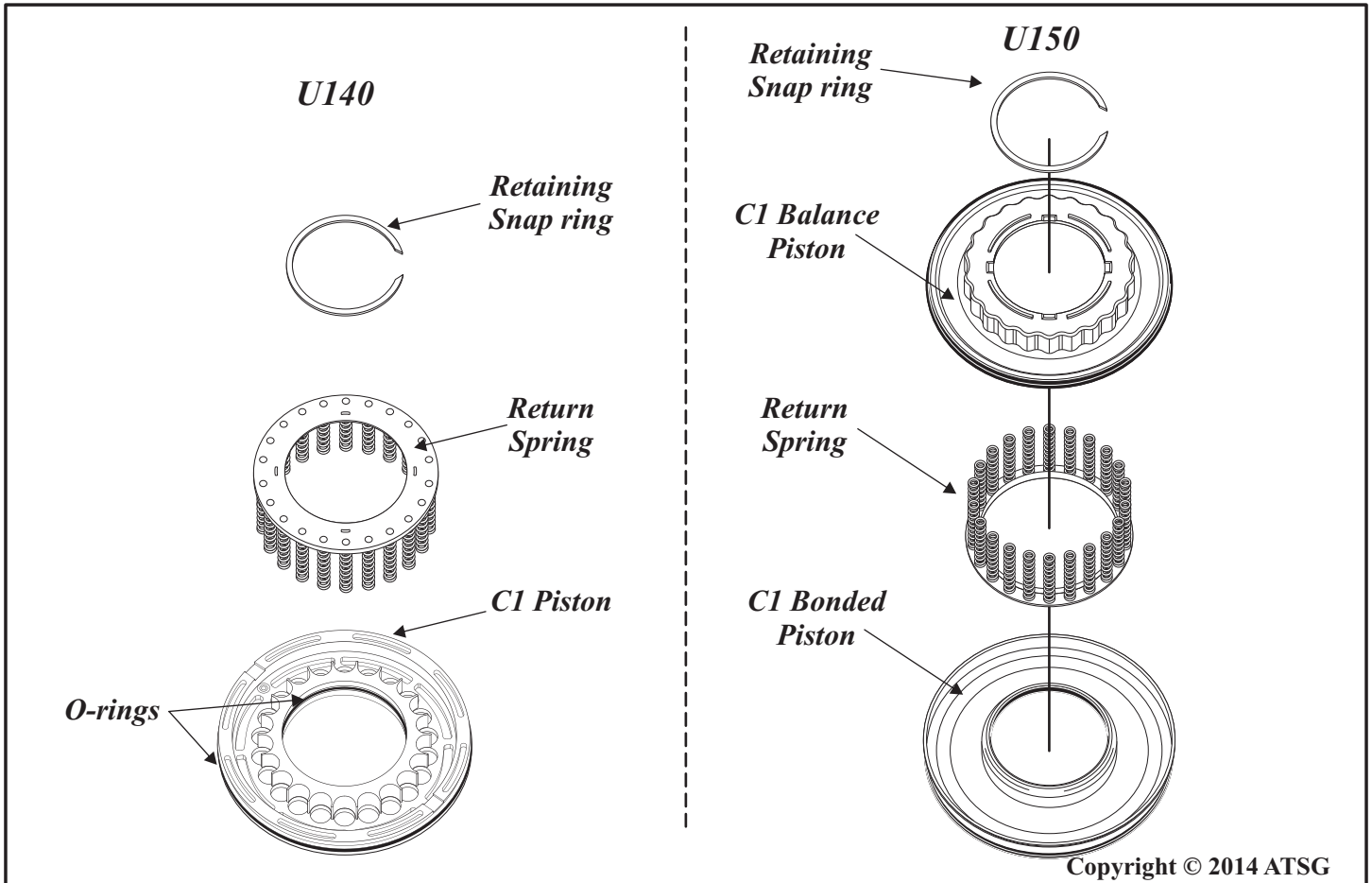


Figure 3

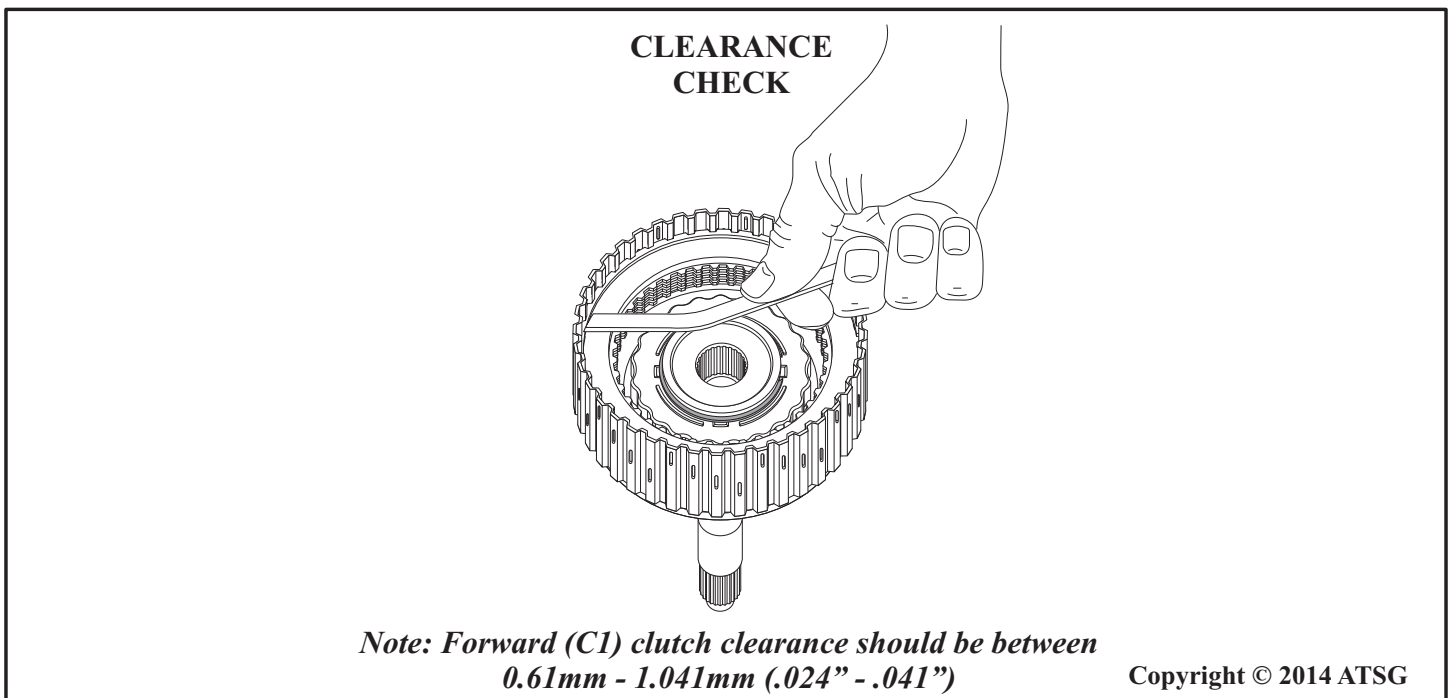


Figure 4