

2003-05 AUTOMATIC TRANSMISSIONS

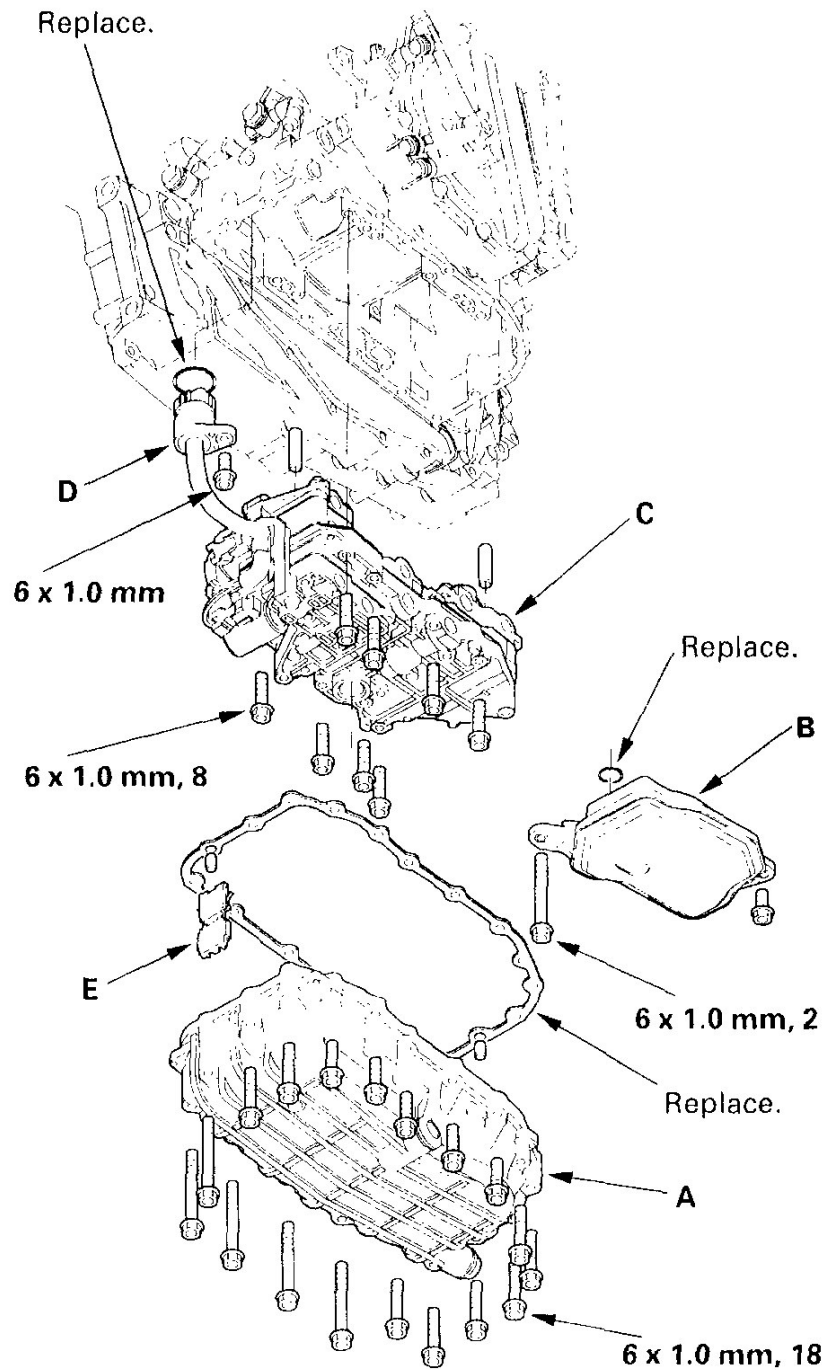
Overhaul - SZCA (CVT - Hybrid)

TRANSMISSION DISASSEMBLY

Special Tools Required

- Start clutch remover 07TAE-P4V0120
- Reverse brake spring compressor 07TAE-P4V0110

1. Remove the ATF pan (A) (18 bolts).



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Fig. 1: Removing ATF Pan

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the ATF strainer (B) (two bolts).
3. Remove the eight bolts securing the lower valve body (C), lower the lower valve body, and hold it.

4. Remove the bolt securing the solenoid harness connector (D), and remove the lower valve body and solenoid harness connector from the transmission housing.
5. Remove the ATF magnet (E), and clean it, then reinstall.
6. Clean the inlet opening (A) of the ATF strainer (B) thoroughly with compressed air, then check that it is in good condition, and that the inlet opening is not clogged.

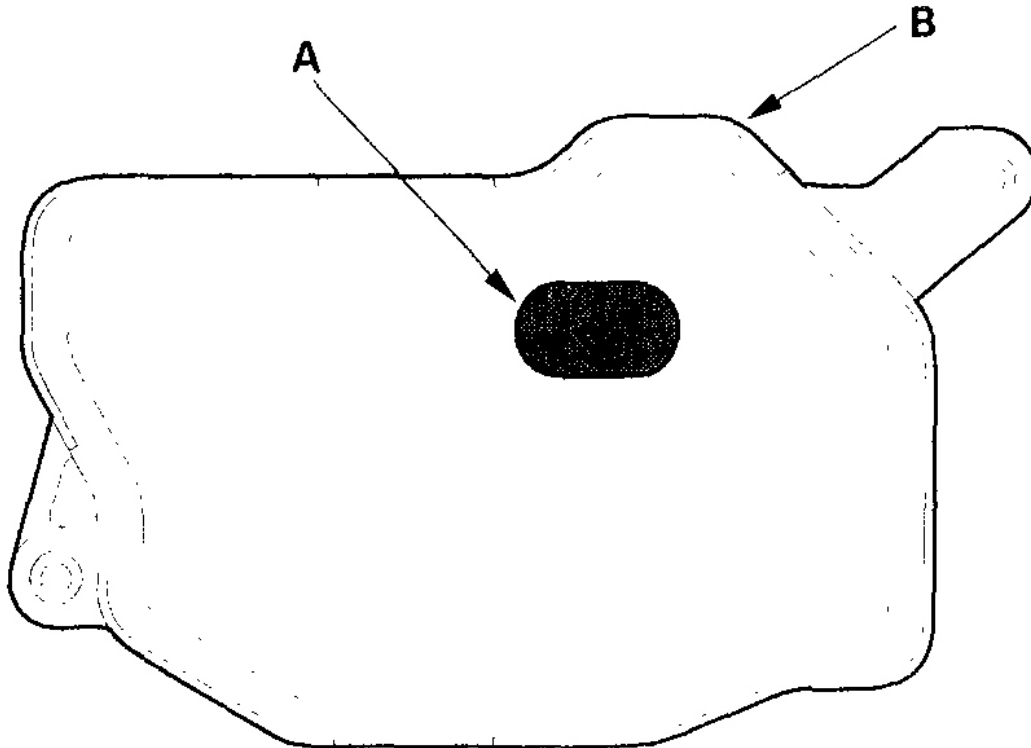
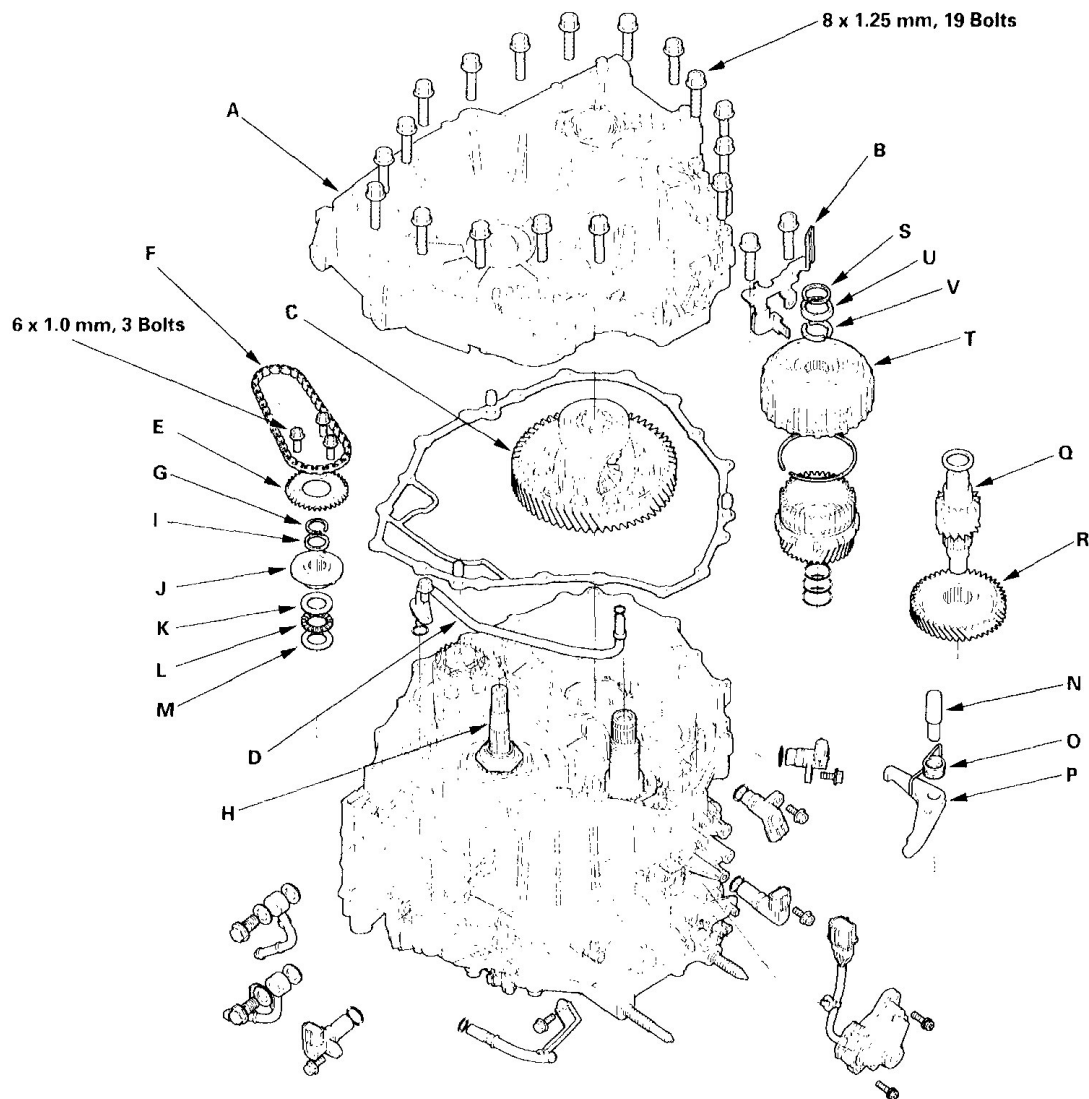
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Fig. 2: Cleaning Inlet Opening Of ATF Strainer Thoroughly With Compress Air
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Test the ATF strainer by pouring clean ATF through the inlet opening, and replace it if it is clogged or damaged.
8. Set the transmission with its end cover down.
9. Remove the flywheel housing (A) (19 bolts) and harness clamp bracket (B).



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Fig. 3: Removing Flywheel Housing & Harness Clamp Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Remove the differential assembly (C).
11. Remove the ATF passage pipe (D).
12. Remove the three bolts securing the ATF pump drive sprocket (E), then remove the ATF pump drive chain (F) and ATF pump drive sprocket.
13. Remove the snap ring (G) from the input shaft (H), and remove the thrust shim (I), ATF pump drive sprocket hub (J), thrust washer (K), thrust needle bearing (L), thrust washer (M) from the input shaft.
14. Remove the park pawl shaft (N), and remove the park pawl spring (O) and park pawl (P).
15. Remove the final drive shaft (Q), then remove the secondary driven gear (R).
16. Remove the snap ring (S) securing the start clutch (T), and remove the cotter retainer (U) and cotters (V).

17. Set the special tool on the start clutch (A), and attach the pawl (B) of the special tool to the park gear (C) securely. Do not place the pawl of the special tool on the start clutch guide. If the pawl contacts the start clutch guide, the clutch guide may be damaged. Be sure not to allow dust and other foreign particles to enter the driven pulley shaft.

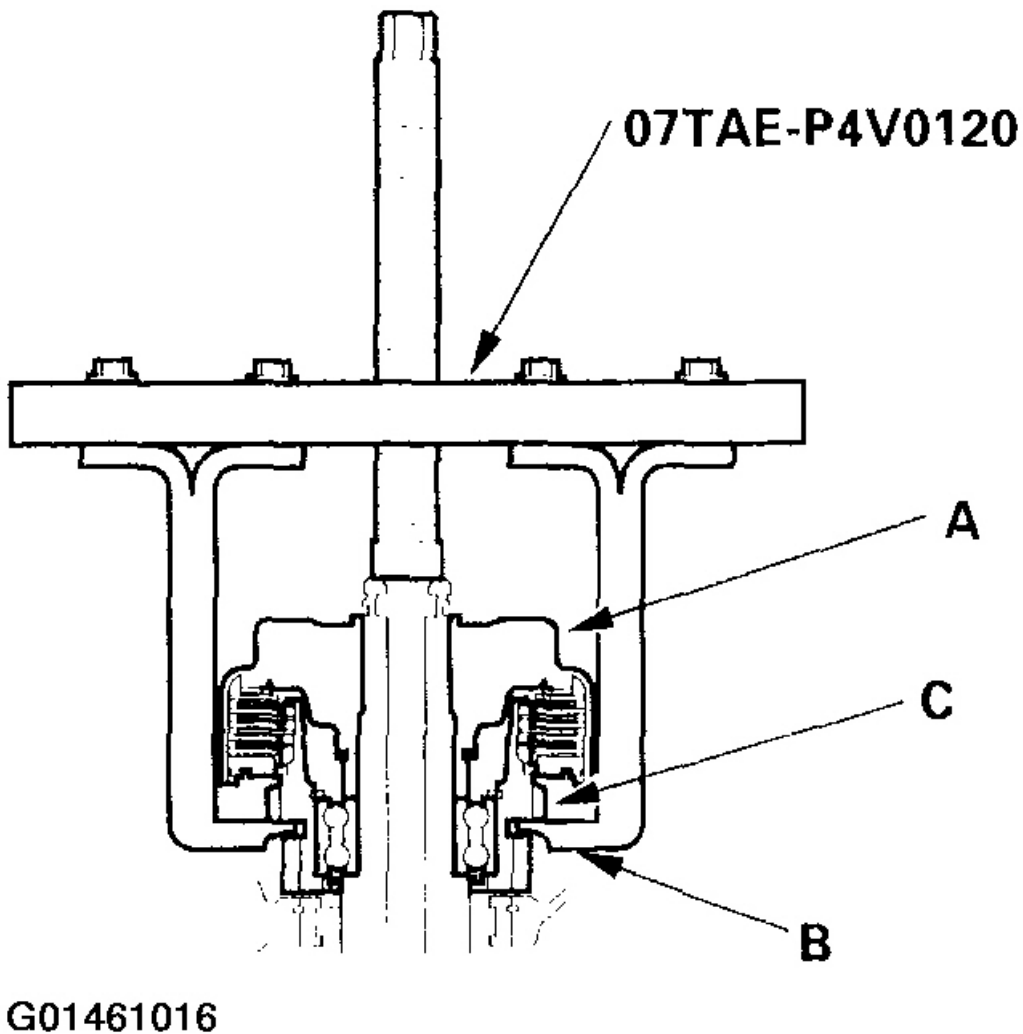
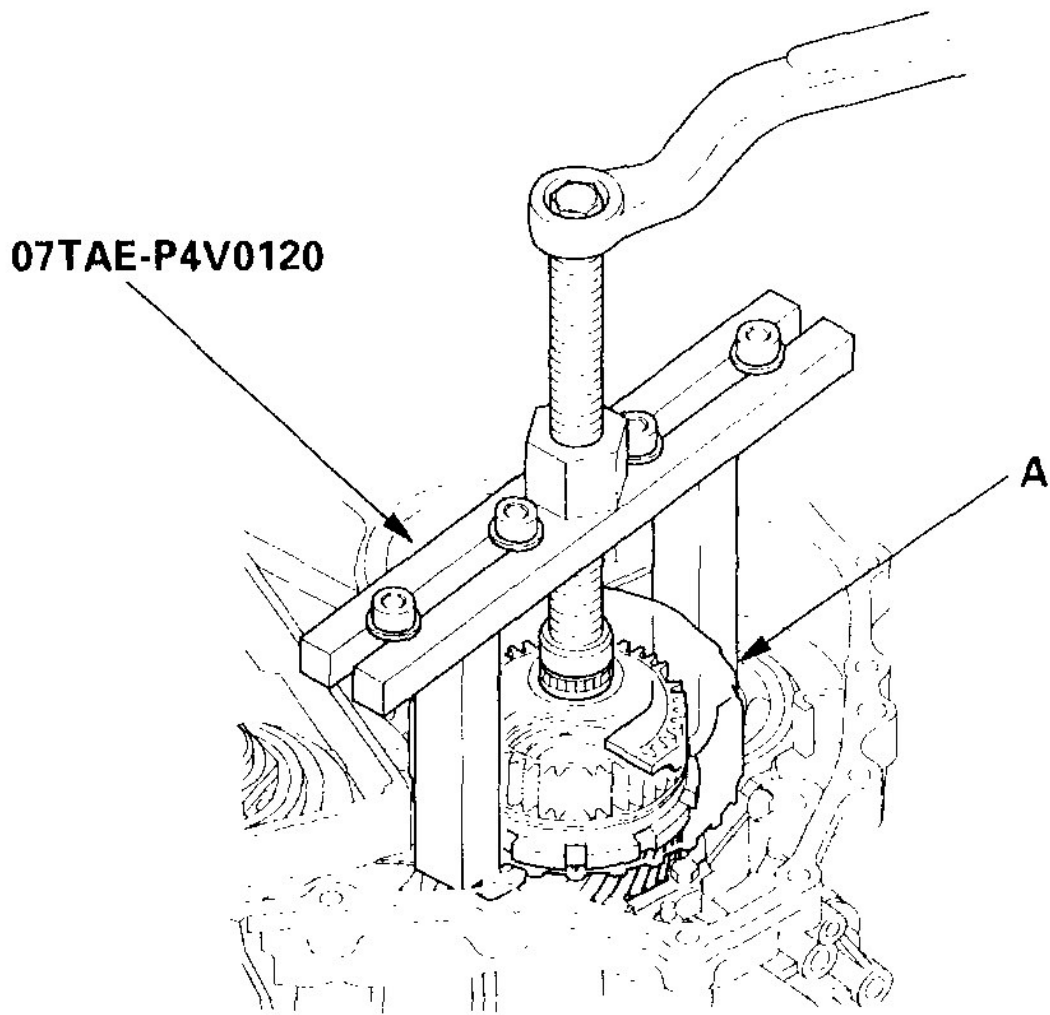


Fig. 4: Setting Special Tool On Start Clutch
Courtesy of AMERICAN HONDA MOTOR CO., INC.

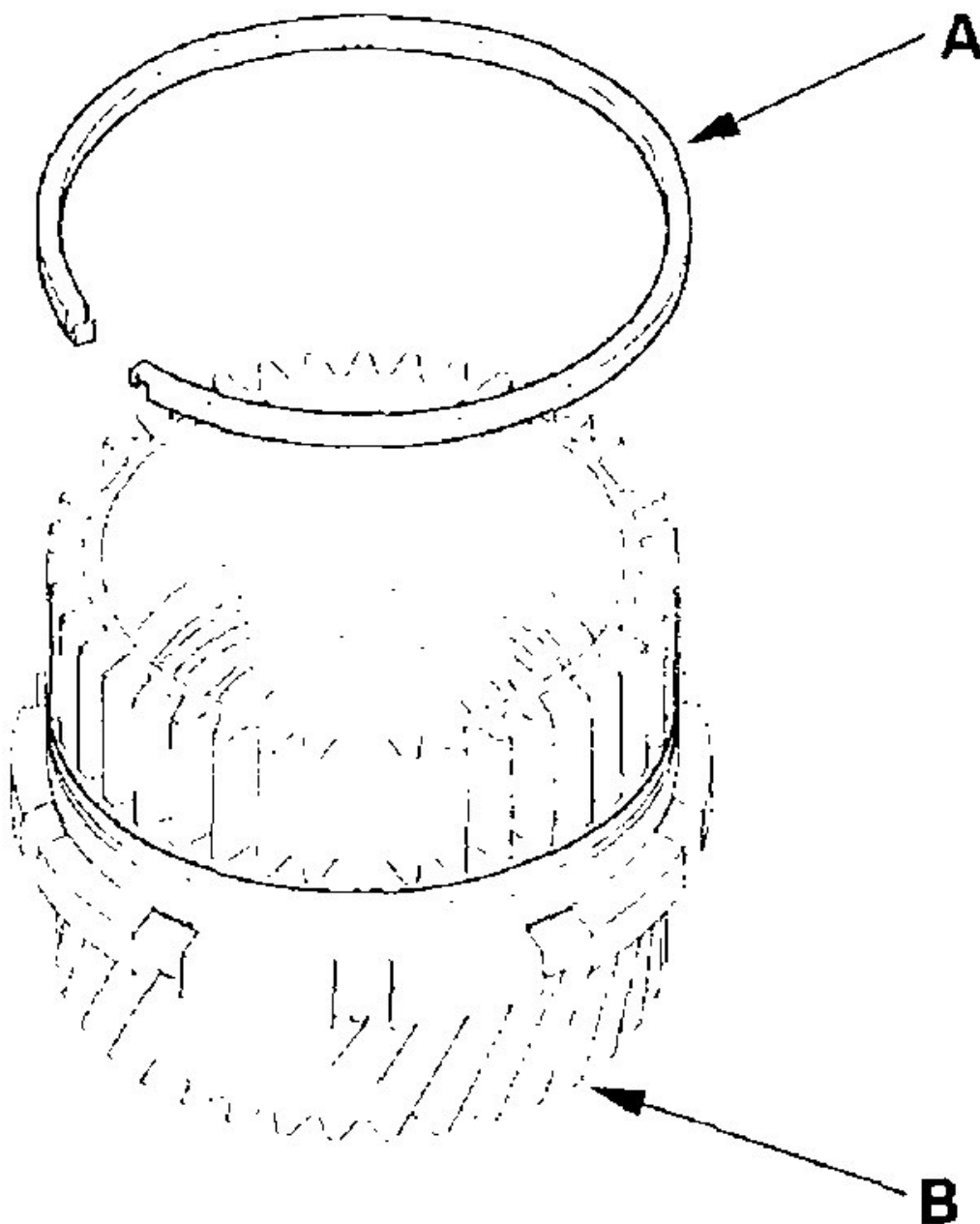
18. Remove the start clutch (A) from the driven pulley shaft.



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Fig. 5: Removing Start Clutch From Driven Pulley Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Remove the secondary drive gear from the start clutch.
20. Remove the sealing ring (A) from the secondary drive gear (B), and clean it; it is reinstalled on the new secondary drive gear when assembling the transmission.

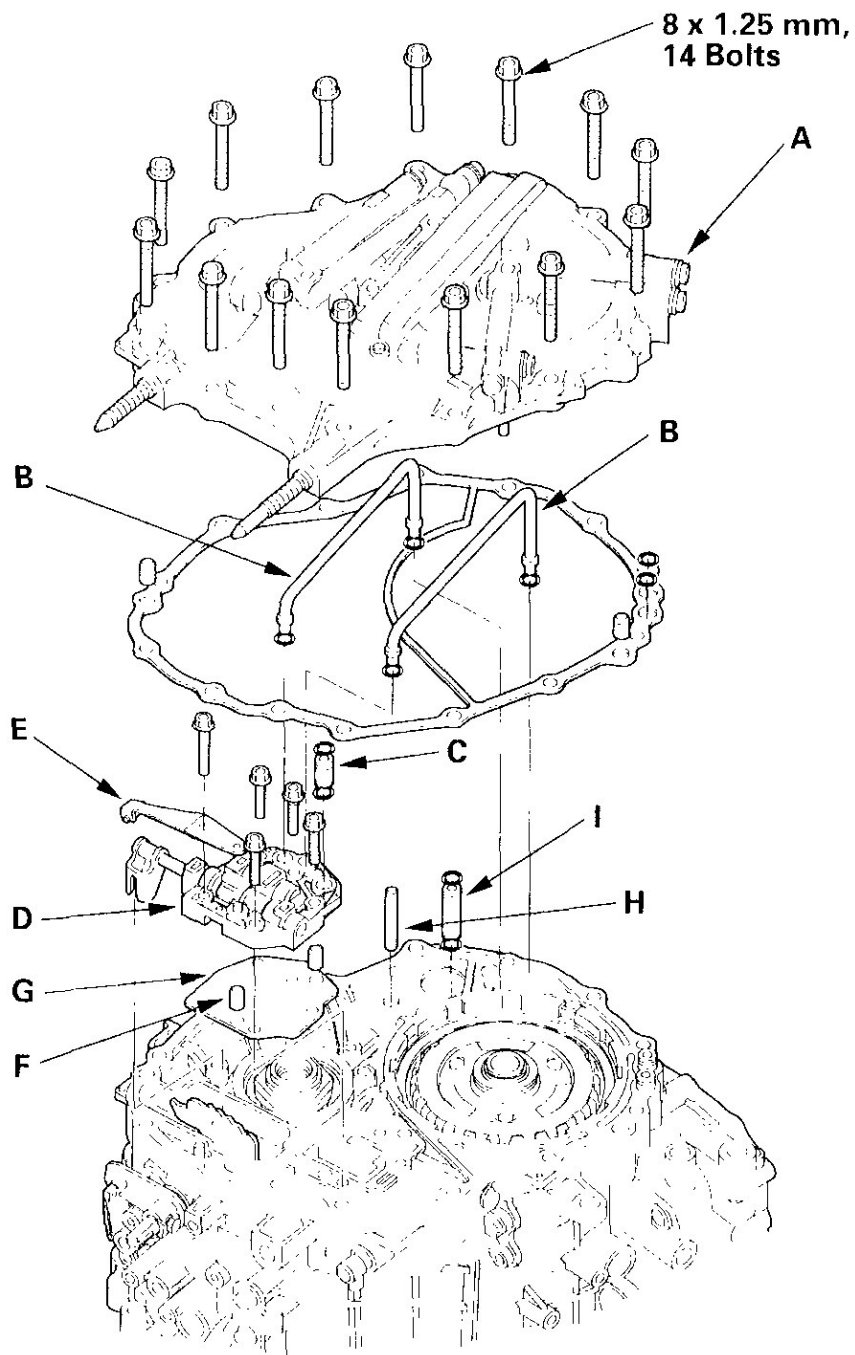


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Fig. 6: Removing Sealing Ring From Secondary Drive Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Remove the line bolts, then remove the ATF cooler lines.

22. Remove the ATF dipstick guide pipe.
23. Remove the transmission range switch.
24. Remove the CVT drive pulley speed sensor, CVT driven pulley speed sensor, CVT speed sensor, and CVT speed sensor (secondary).
25. Turn the transmission upside down, and set it on a workbench to prevent damaging to the input shaft and driven pulley shaft.
26. Remove the end cover (A) (14 bolts).



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Fig. 7: Removing End Cover

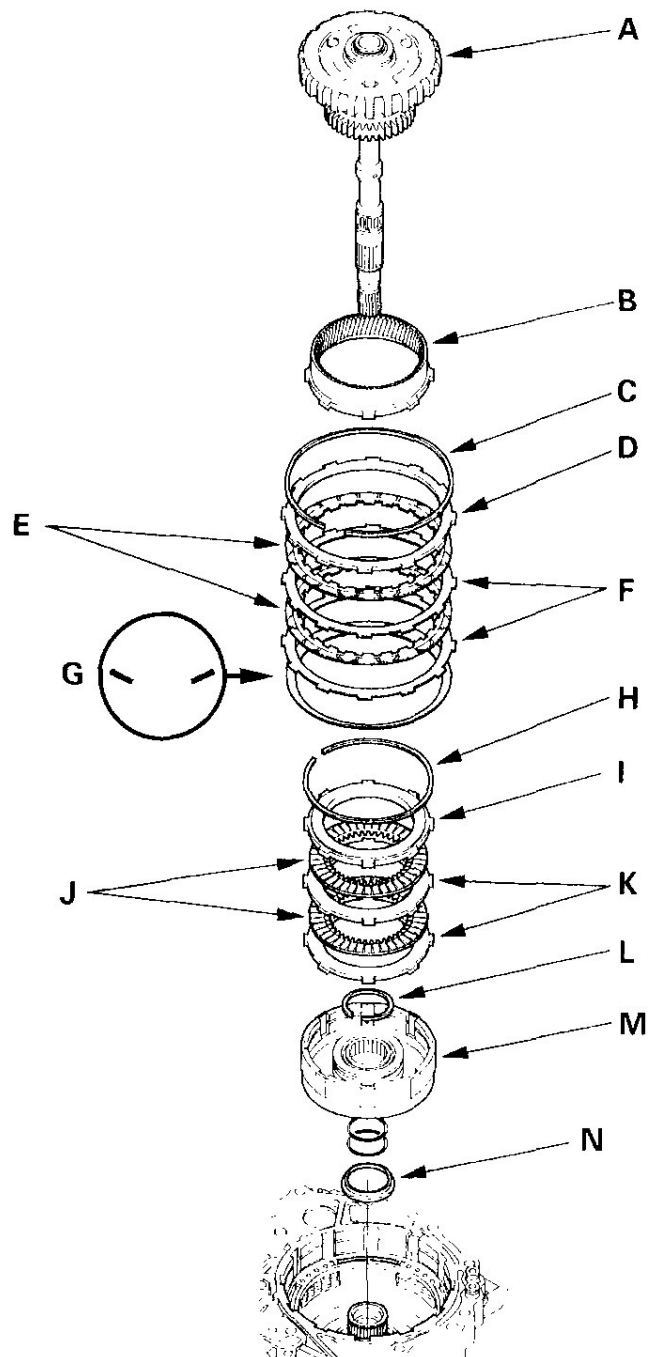
Courtesy of AMERICAN HONDA MOTOR CO., INC.

27. Remove the ATF feed pipes (B).

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2003-05 AUTOMATIC TRANSMISSIONS Overhaul - SZCA (CVT - Hybrid)

28. Remove the ATF feed pipe (10.9 x 18.6 mm) (C) from the manual valve body.
29. Remove the manual valve body (D), detent spring (E), dowel pins (F) (two), and separator plate (G).
30. Remove the 8 mm ATF pipe (H) and ATF feed pipe (10.9 x 39.6 mm) (I).
31. Remove the planetary carrier/input shaft assembly (A), then remove the ring gear (B).



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Fig. 8: Removing Planetary Carrier/Input Shaft Assembly
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

32. Remove the reverse brake snap ring (C), then remove the reverse brake end plate (D), brake discs (E), brake plates (F), and disc spring (G).

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33. Remove the snap ring (H) securing the forward clutch end plate (I), then remove the forward clutch end plate, clutch discs (J) and clutch plates (K).
34. Remove the snap ring (L) securing the forward clutch (M) to the drive pulley shaft, then remove the forward clutch and snap ring retainer (N).
35. Install the special tool to remove the snap ring securing the reverse brake return spring retainer.

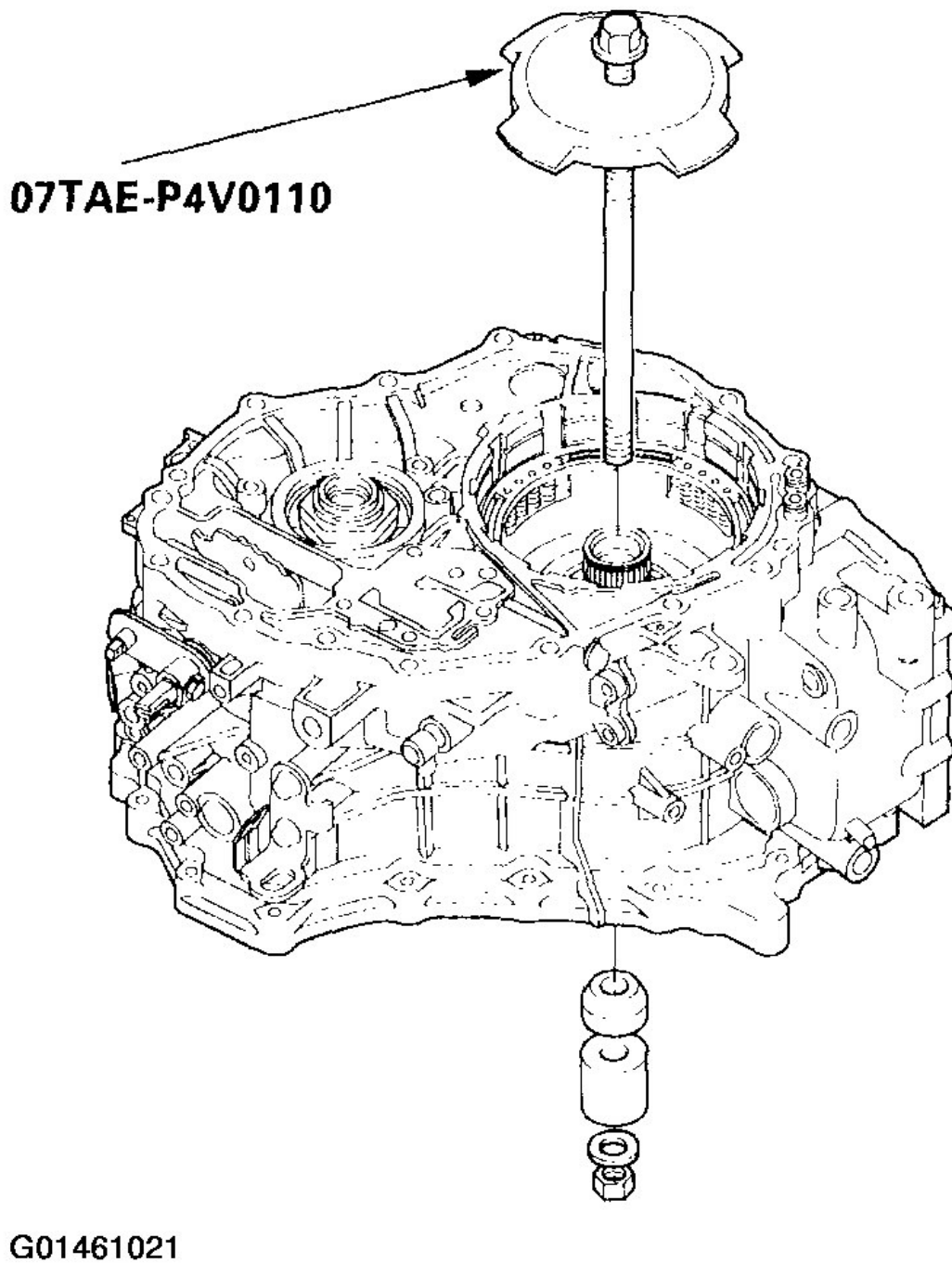
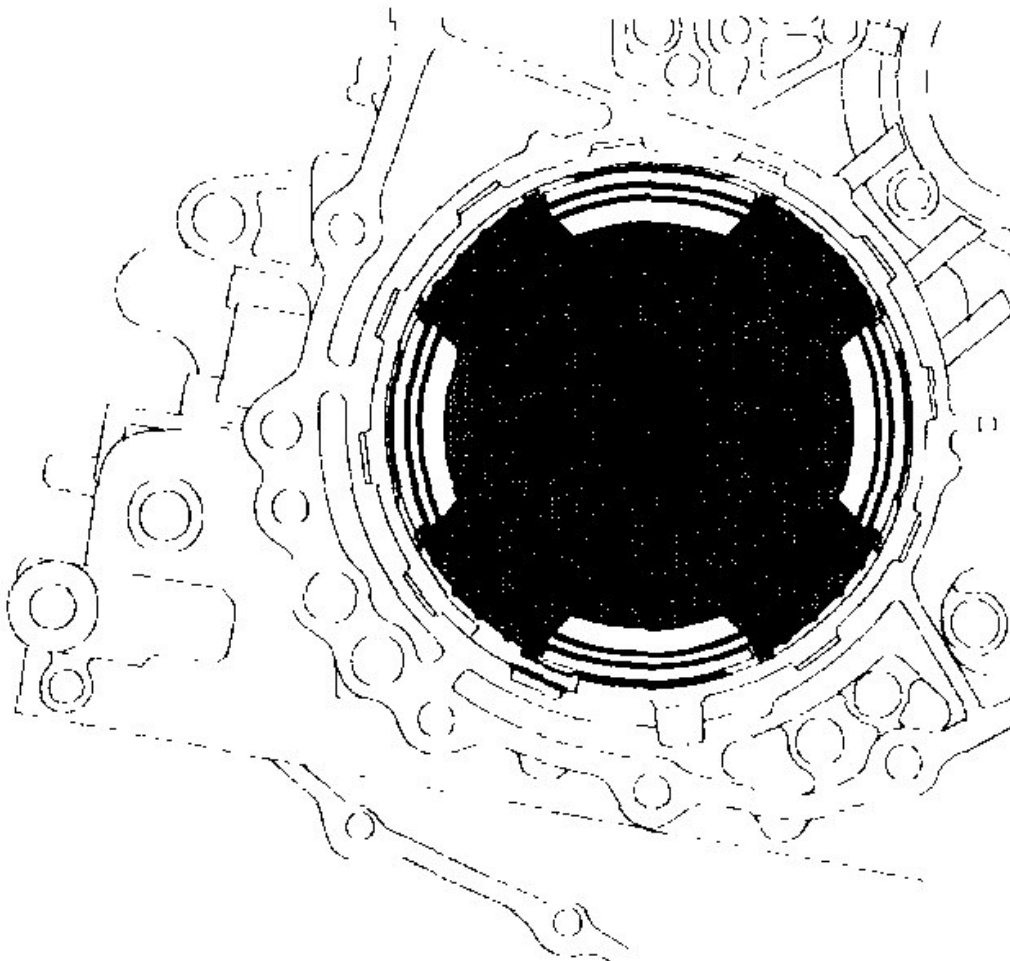


Fig. 9: Installing Special Tool To Remove Snap Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

36. Compress the return spring with the special tool. Be sure the special tool is set over the reverse brake

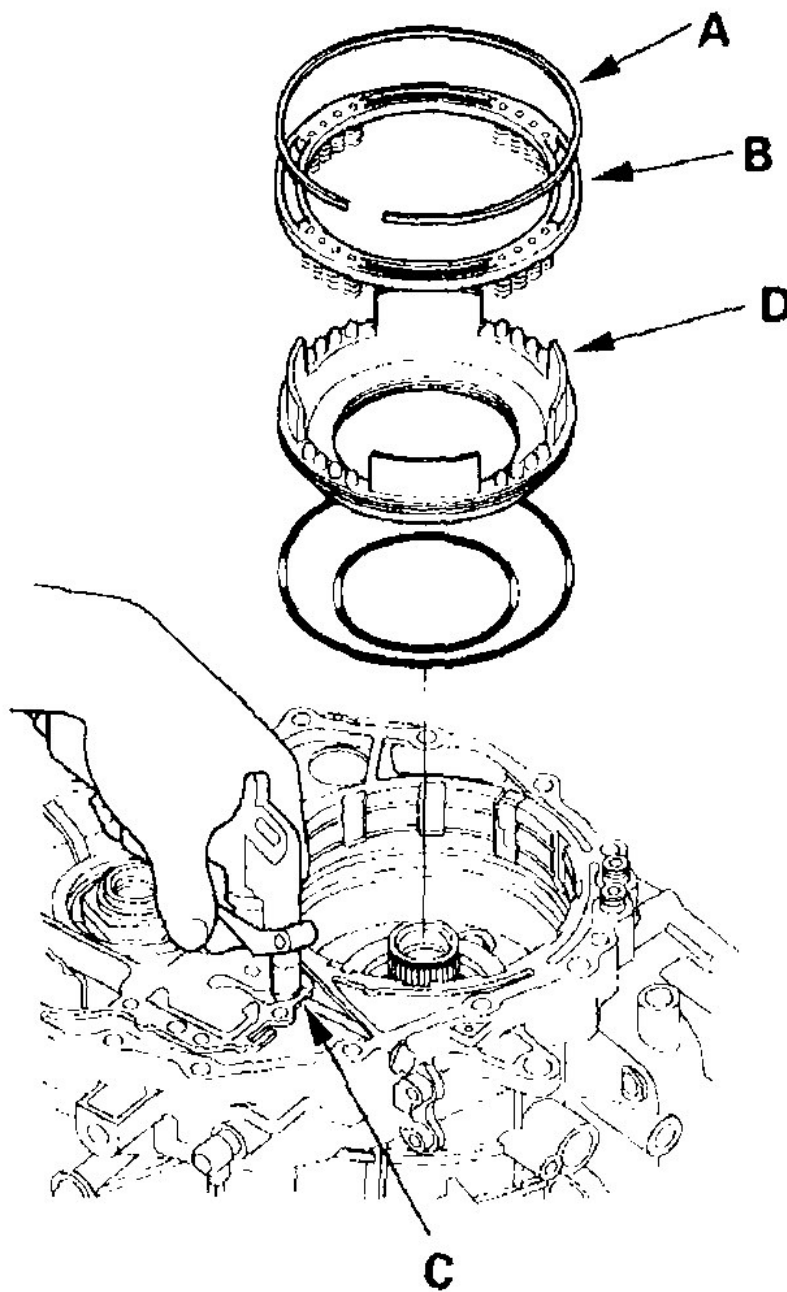
return springs.



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Fig. 10: Compressing Return Spring With Special Tool
Courtesy of AMERICAN HONDA MOTOR CO., INC.

37. Remove the snap ring (A) while compressing the return spring.

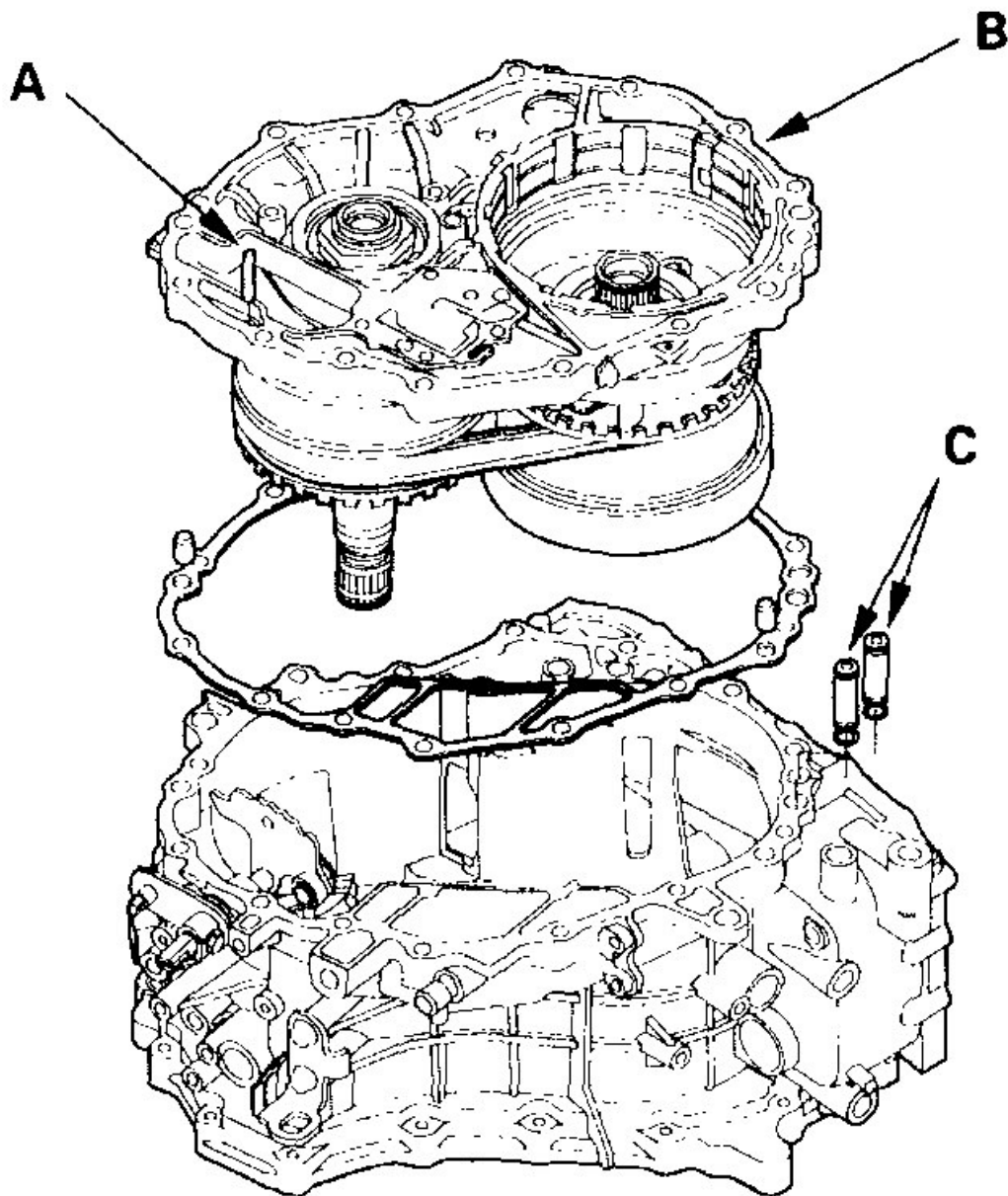


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Fig. 11: Removing Snap Ring While Compressing Return Spring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

38. Remove the special tool, then remove the spring retainer/return spring assembly (B).
39. Apply air pressure to reverse brake pressure circuit hole (C) to remove the reverse brake piston (D).

40. Remove the roller (A).



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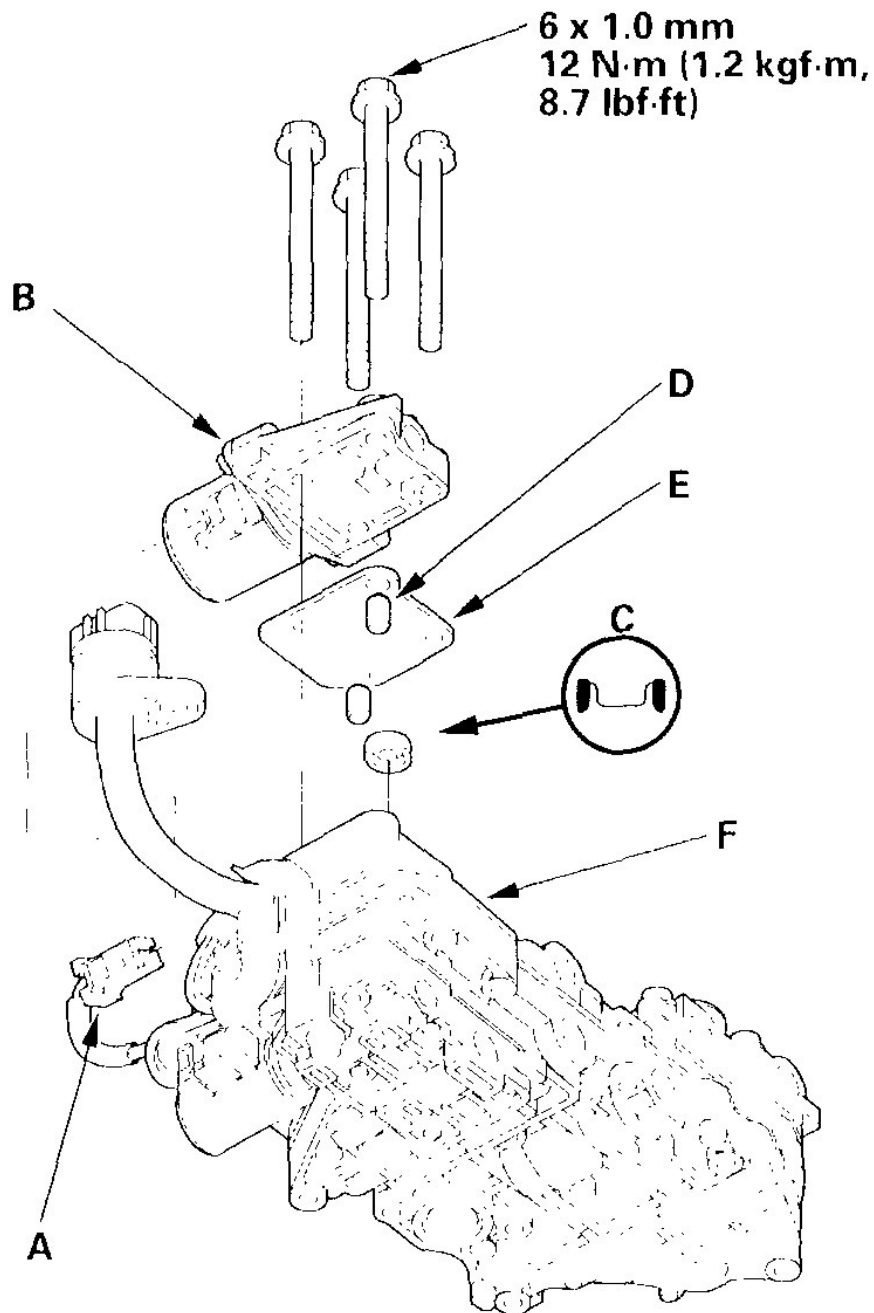
Fig. 12: Removing Roller
Courtesy of AMERICAN HONDA MOTOR CO., INC.

41. Remove the intermediate housing (B).
42. Remove the ATF feed pipes (10.9 x 39.6 mm) (C).

LOWER VALVE BODY

CVT START CLUTCH PRESSURE CONTROL VALVE REMOVAL AND INSTALLATION

1. Disconnect the CVT start clutch pressure control valve connector (A).



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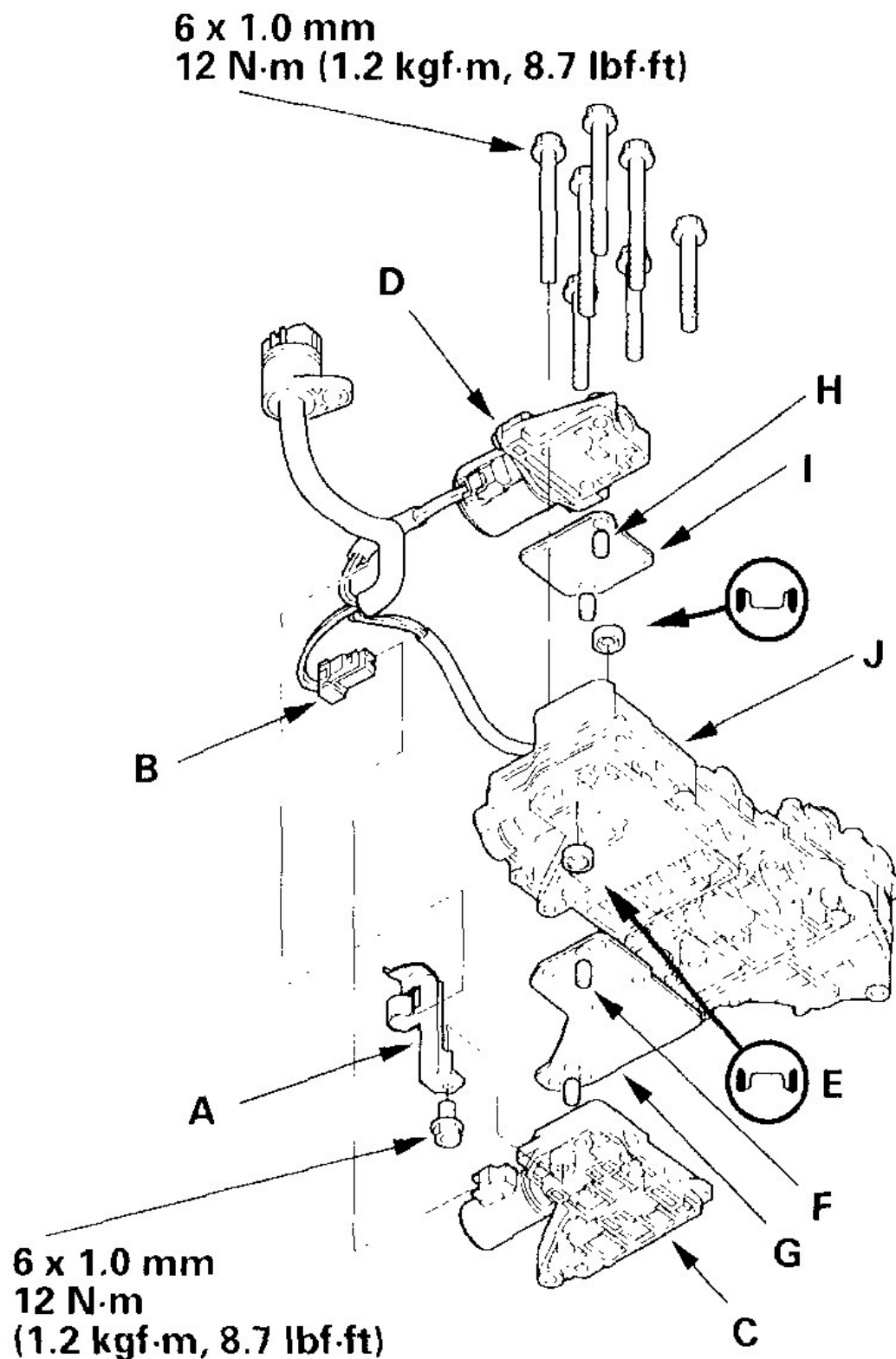
Fig. 13: Disconnecting CVT Start Clutch Pressure Control Valve Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the CVT start clutch pressure control valve (B).
3. Check that the filter (C) is in good condition, replace it if it is clogged or damaged.

4. Install the CVT start clutch pressure control valve with the dowel pins (D) and separator plate (E) on the lower valve body (F).
5. Connect the CVT start clutch pressure control valve connector.

CVT DRIVE PULLEY PRESSURE CONTROL VALVE REMOVAL AND INSTALLATION

1. Remove the solenoid harness clamp (A).



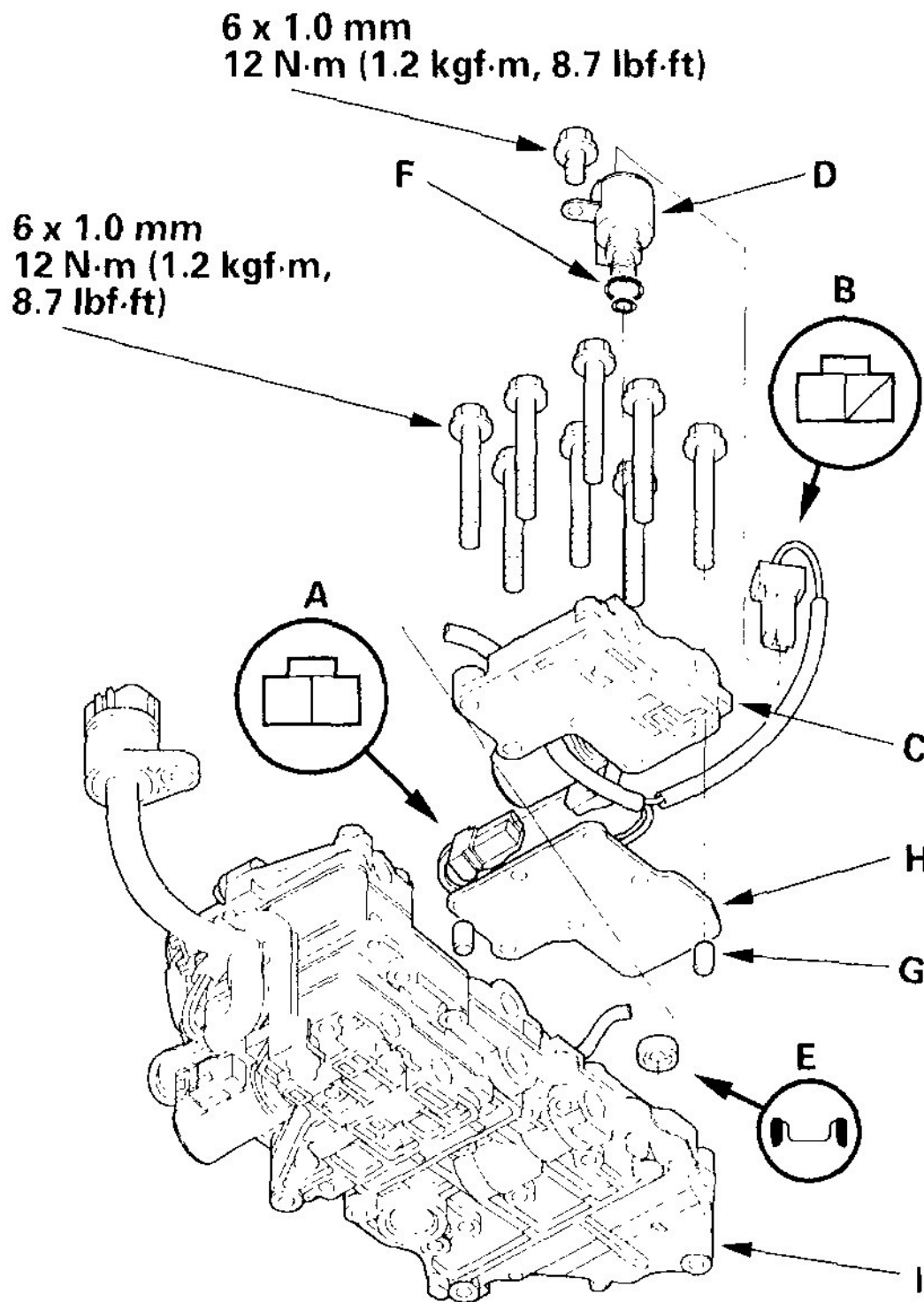
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Fig. 14: Removing Solenoid Harness Clamp**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

2. Disconnect the CVT drive pulley pressure control valve connector (B).
3. Remove the seven bolts, and remove the CVT drive pulley pressure control valve (C). The CVT start clutch pressure control valve (D) can also be removed.
4. Check that the filter (E) is in good condition, replace it if it is clogged or damaged.
5. Install the CVT drive pulley pressure control valve with the dowel pins (F) and separator plate (G), and CVT start clutch pressure control valve with the dowel pins (H) and separator plate (I) on the lower valve body (J).
6. Connect the CVT drive pulley pressure control valve connector.
7. Install the solenoid harness clamp.

CVT DRIVEN PULLEY PRESSURE CONTROL VALVE REMOVAL AND INSTALLATION

1. Disconnect the CVT driven pulley pressure control valve connector (A) and inhibitor solenoid connector (B).



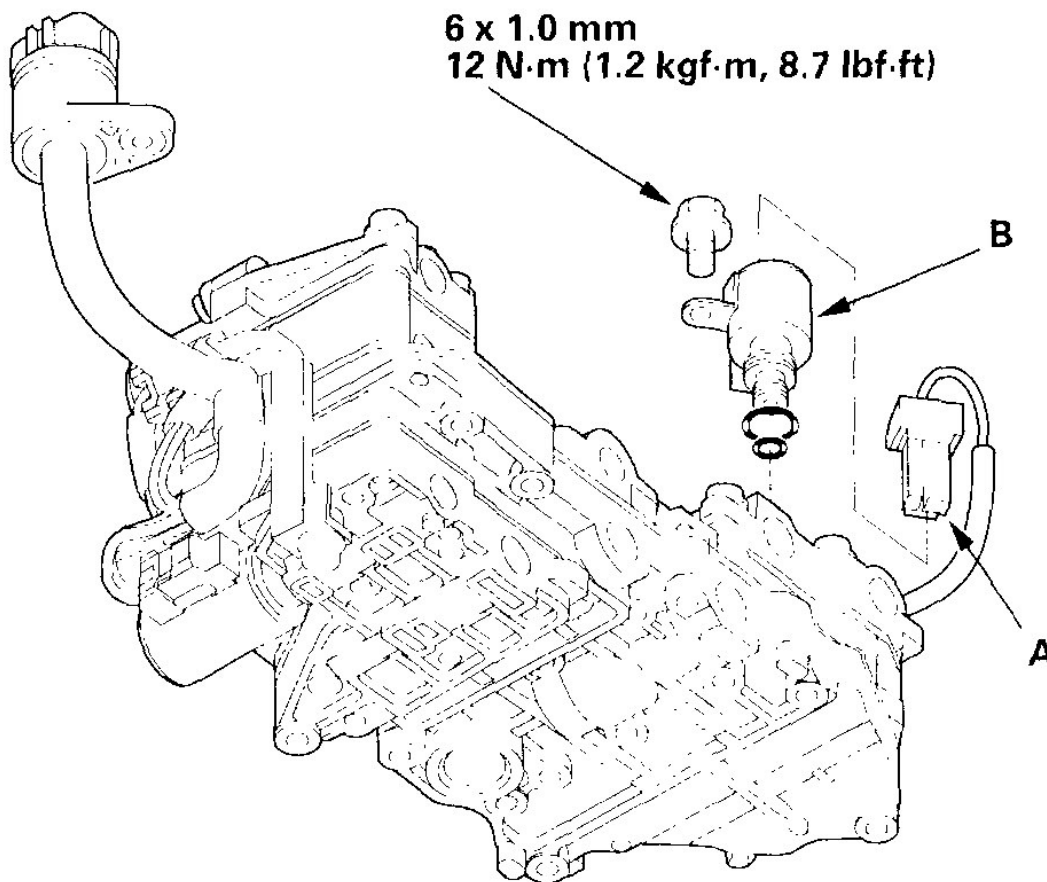
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Fig. 15: Disconnecting CVT Driven Pulley Pressure Control Valve Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the CVT driven pulley pressure control valve (C), and remove the inhibitor solenoid (D) from the CVT driven pulley pressure control valve.
3. Check that the filter (E) is in good condition, replace it if it is clogged or damaged.
4. Replace the O-rings (F) on the inhibitor solenoid, if necessary.
5. Install the inhibitor solenoid on the CVT driven pulley pressure control valve.
6. Install the CVT driven pulley pressure control valve with the dowel pins (G) and separator plate (H) on the lower valve body (I).
7. Connect the CVT driven pulley pressure control valve connector and inhibitor solenoid connector.

INHIBITOR SOLENOID REMOVAL AND INSTALLATION

1. Disconnect the inhibitor solenoid connector (A).



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Fig. 16: Disconnecting Inhibitor Solenoid Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

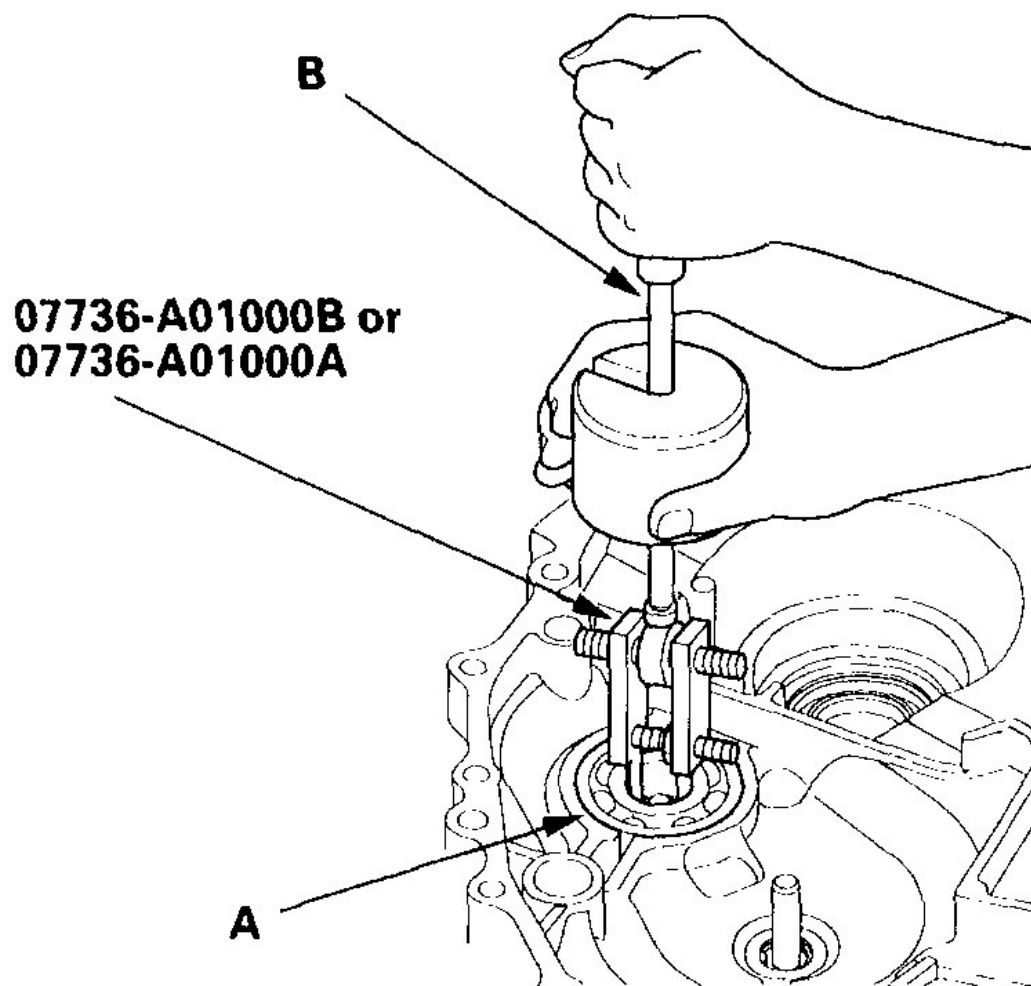
2. Remove the inhibitor solenoid (B).
3. Install the inhibitor solenoid on the CVT driven pulley pressure control valve.
4. Connect the inhibitor solenoid connector.

FLYWHEEL HOUSING

FINAL DRIVE SHAFT BEARING REPLACEMENT

Special Tools Required

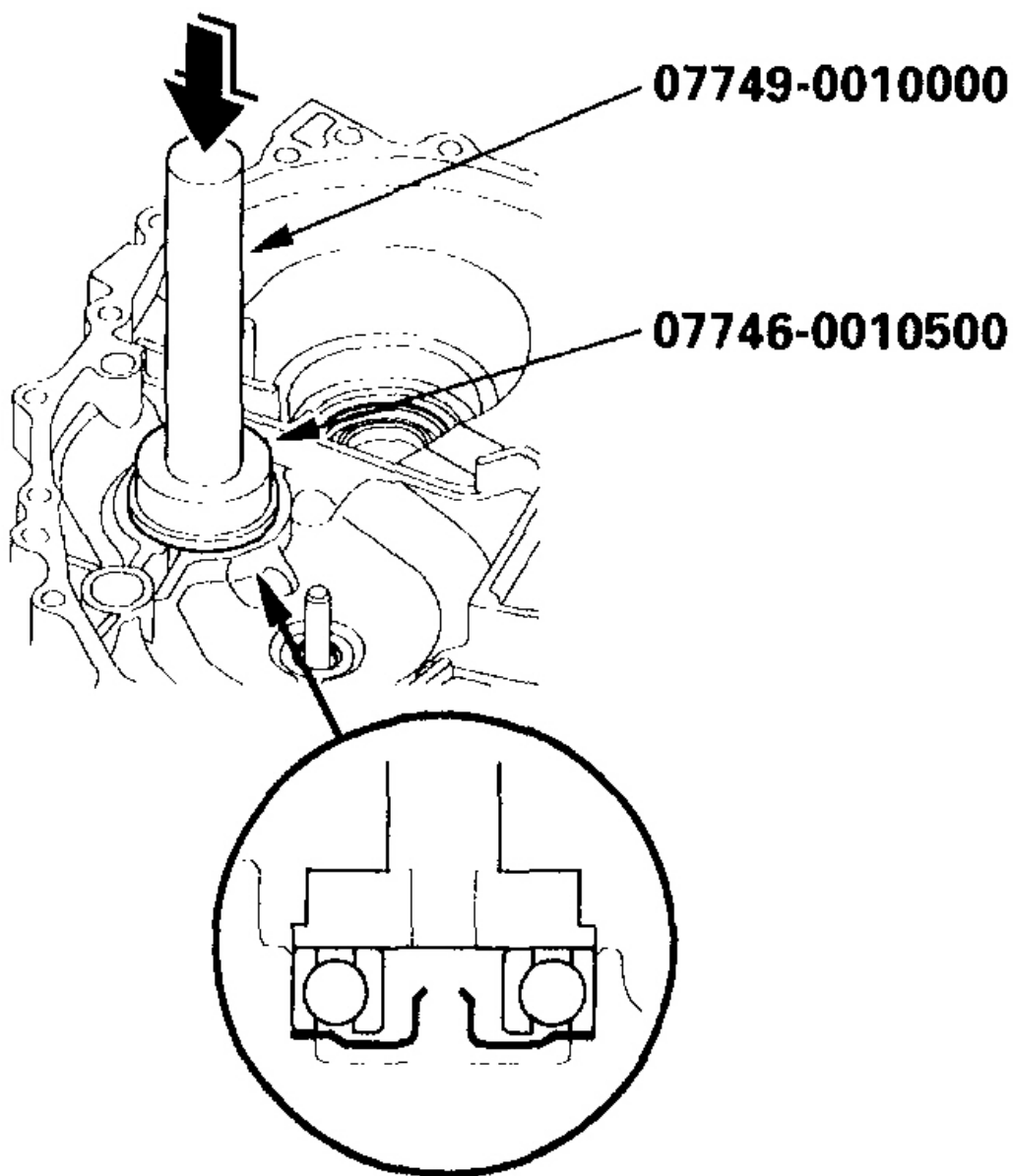
- Adjustable bearing puller, 25 -40 mm 07736-A01000B or 07736-A01000A
 - Driver 07749-0010000
 - Attachment, 62 x 68 mm 07746-0010500
1. Remove the final drive shaft bearing (A) with the special tool and a commercially available 3/8"-16 slide hammer (B).



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Fig. 17: Removing Final Drive Shaft Bearing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the new bearing into the flywheel housing with the special tools.



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Fig. 18: Installing Bearing Into Flywheel Housing With Special Tools
Courtesy of AMERICAN HONDA MOTOR CO., INC.

INPUT SHAFT OIL SEAL REPLACEMENT

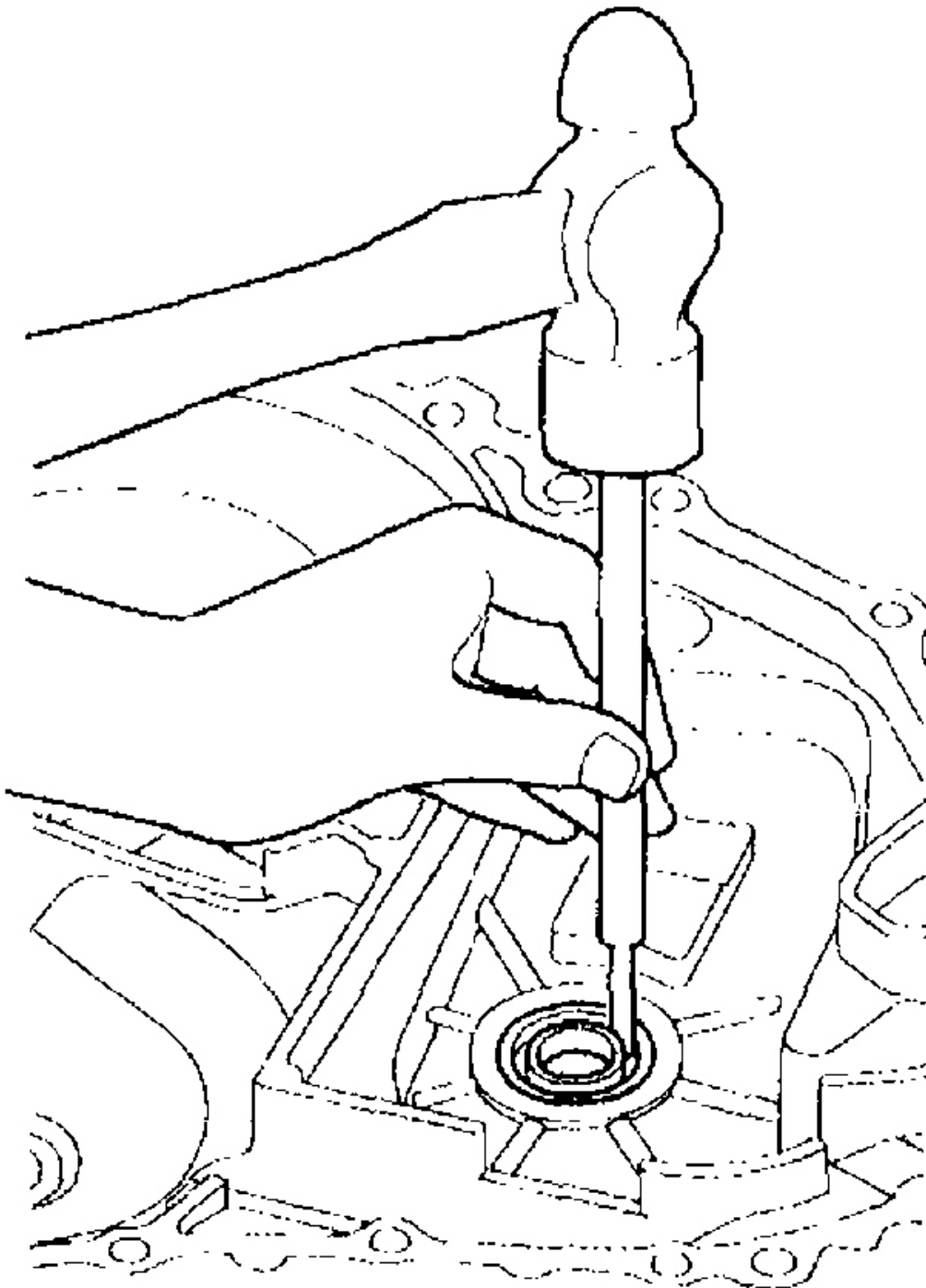
Special Tools Required

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- Driver 07749-0010000
- Attachment, 37 x 42 mm 07746-0010200

1. Remove the input shaft oil seal from the flywheel housing.



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Fig. 19: Removing Input Shaft Oil Seal From Flywheel Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the new oil seal flush with 3+/-0.5 mm (+/-0.02 in.) (A) flywheel housing level.

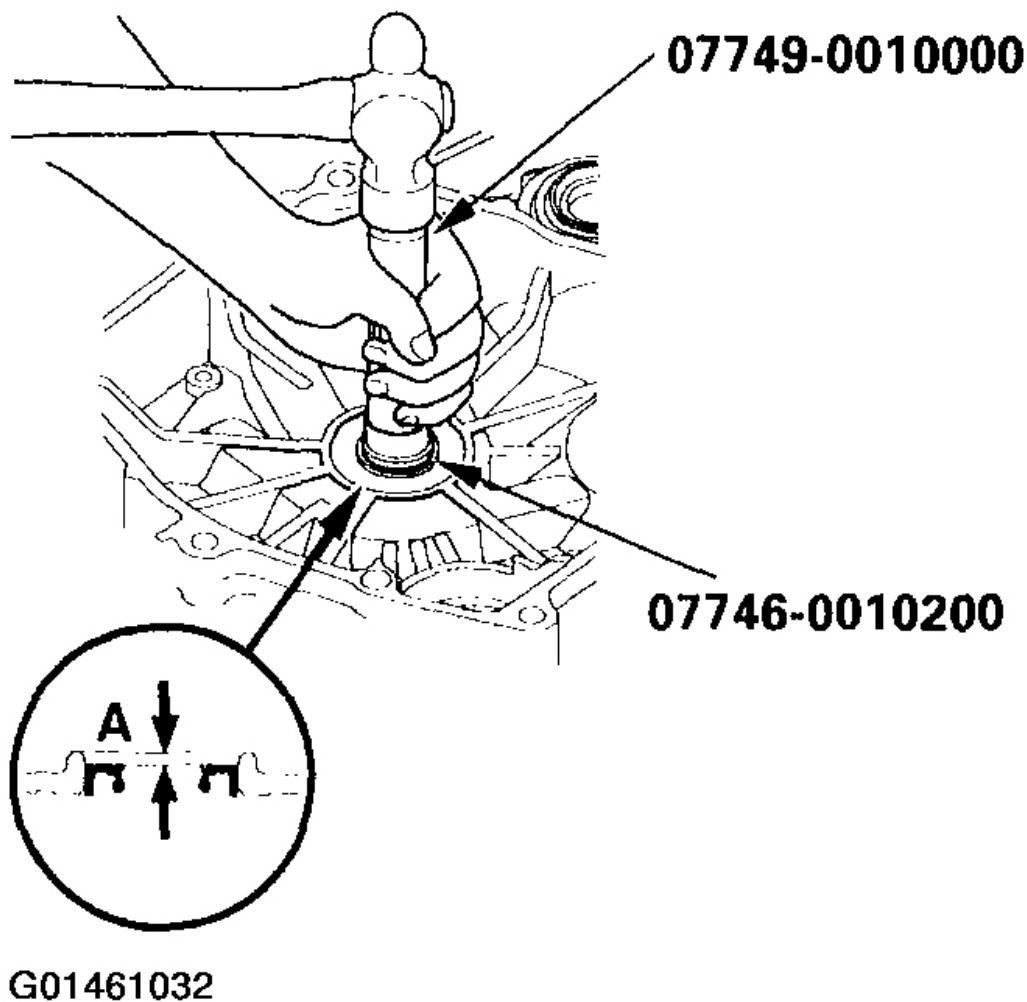


Fig. 20: Installing New Oil Seal Flush With Flywheel Housing Level
Courtesy of AMERICAN HONDA MOTOR CO., INC.

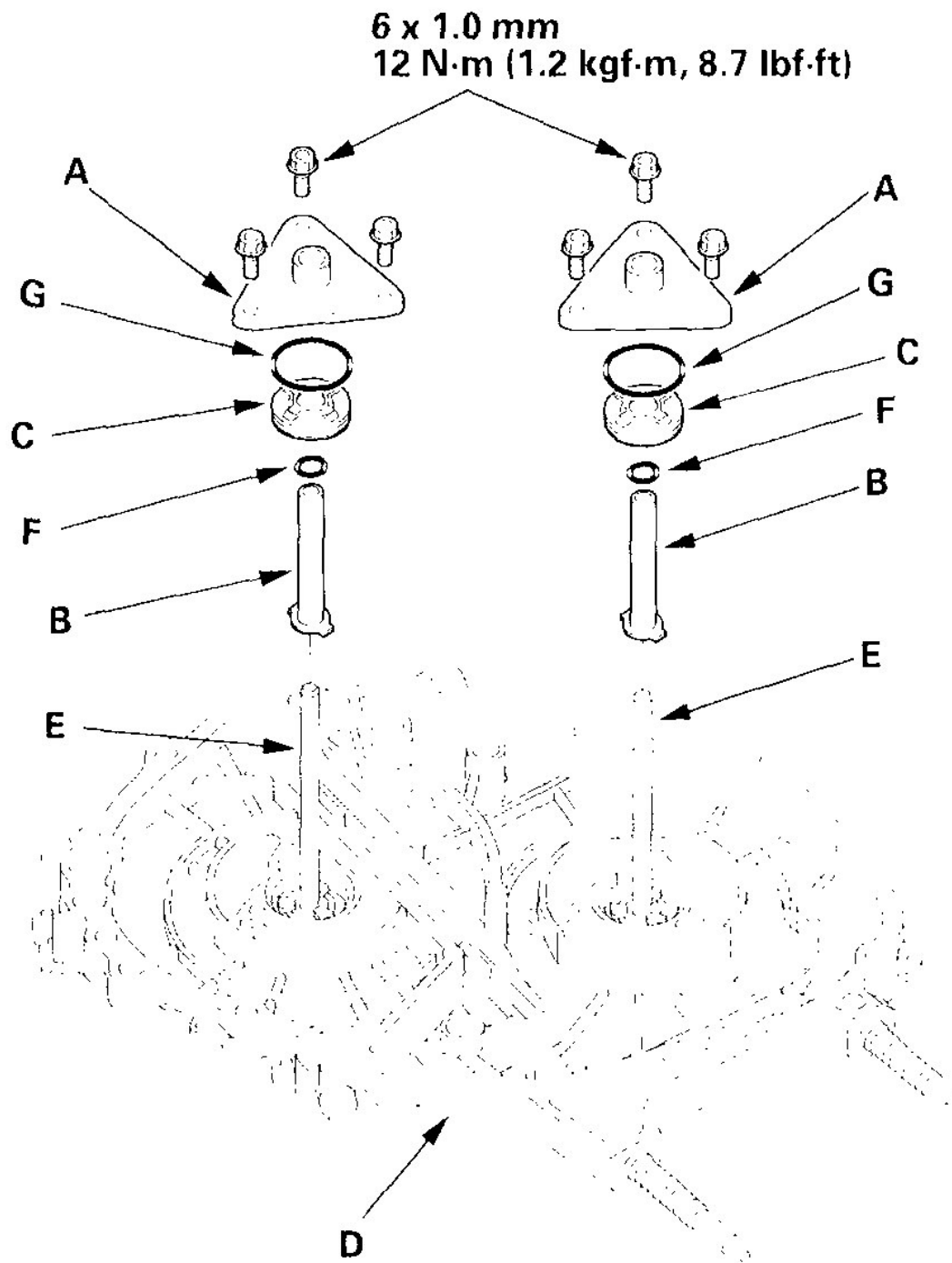
END COVER

ATF FEED PIPE REPLACEMENT

1. Remove feed pipe flange plate (A), then remove the feed pipe (B) and feed pipe flange (C) from the end

cover (D).

NOTE: **Replace the end cover, if the undetectable ATF feed pipes (E) replacement is required.**



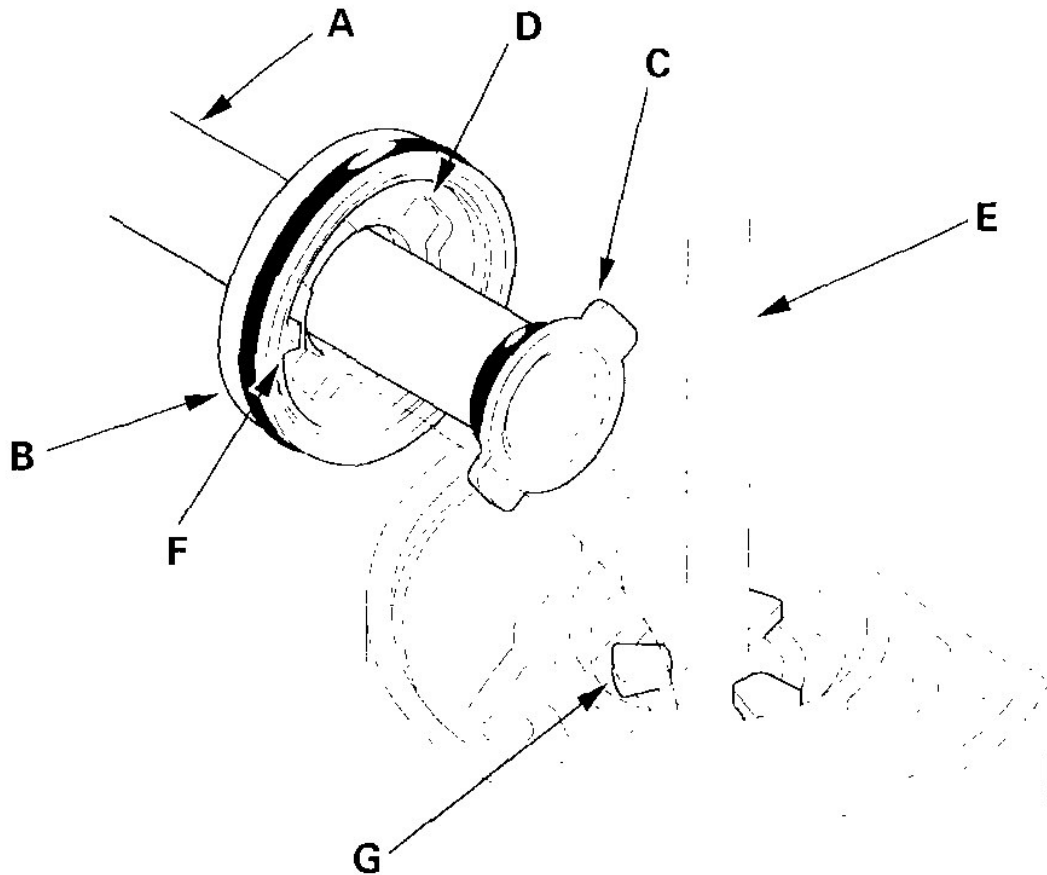
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Fig. 21: Removing Feed Pipe Flange Plate

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the new O-ring (F) over the ATF feed pipe.
3. Install the new O-ring (G) on the feed pipe flange.
4. Install the feed pipe (A) through the feed pipe flange (B) by aligning the feed pipe tab (C) with the guide (D) on the flange.

NOTE: The illustration shows the tabs and guides for sake of clarity.



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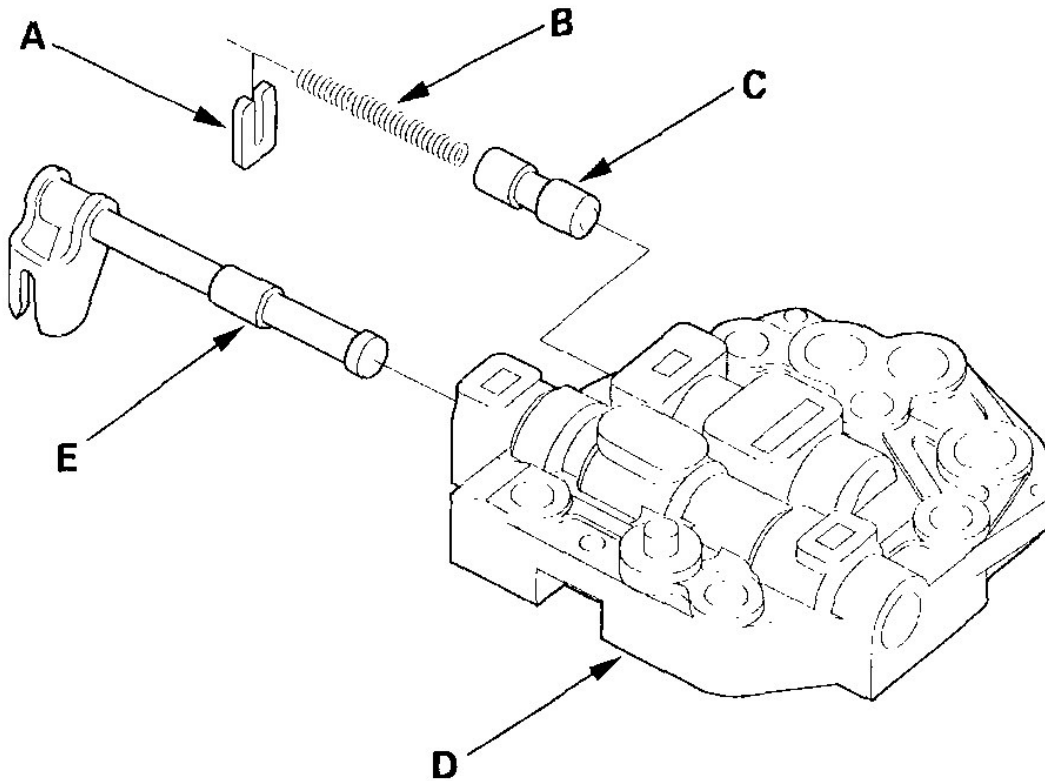
Fig. 22: Installing Feed Pipe Through Feed Pipe Flange
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the ATF feed pipe over the undetectable feed pipe (E), and align the tab (F) of the feed pipe flange with the guide (G) on the end cover.
6. Install the feed pipe flange plate.

INTERMEDIATE HOUSING

MANUAL VALVE BODY DISASSEMBLY, INSPECTION, AND REASSEMBLY

1. Remove the spring seat (A), valve spring (B), and reverse inhibitor valve (C) from the manual valve body (D).



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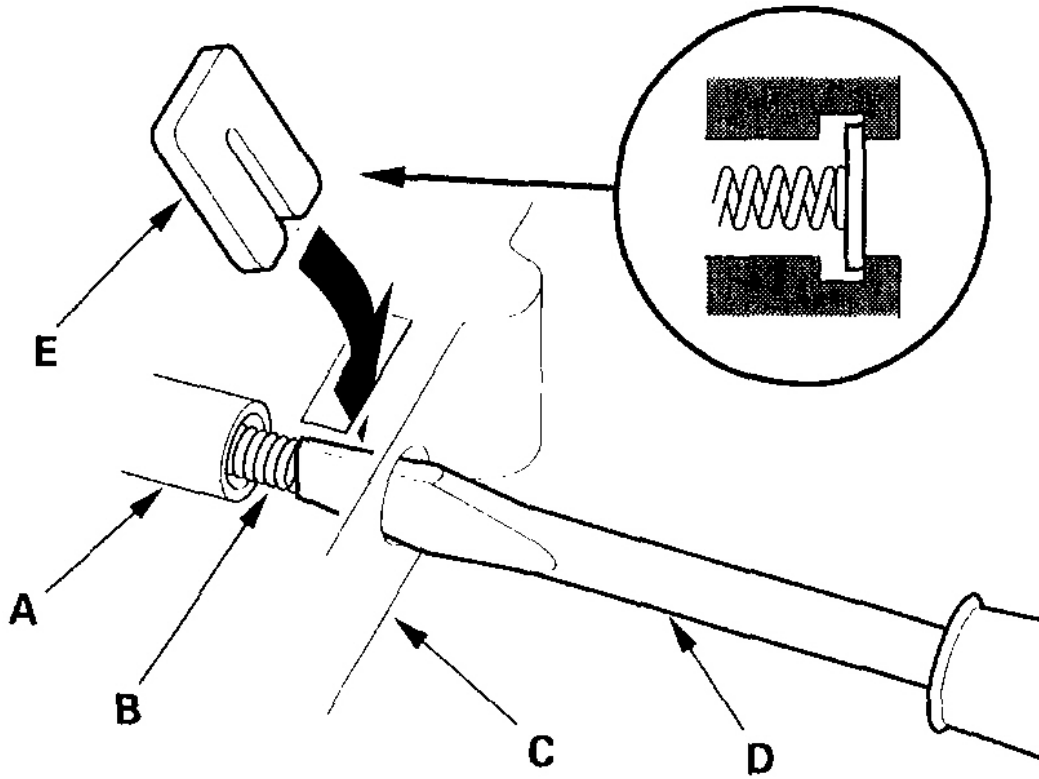
Fig. 23: Removing Spring Seat

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Reverse Inhibitor Valve Spring Specifications (Standards)**Wire diameter:** 0.9 mm (0.035 in.)**Outside diameter:** 7.0 mm (0.276 in.)**Free length:** 47.1 mm (1.854 in.)**Number of coil:** 16.9

2. Remove the manual valve (E).
3. Check all parts for wear and damage.
4. Clean all parts thoroughly in solvent or carburetor cleaner, and dry with compressed air. Blow out all passages.

5. Coat all parts with ATF during assembly.
6. Install the reverse inhibitor valve (A) and valve spring (B) in the manual valve body (C). Push the valve spring in with a screwdriver (D), then install the spring seat (E).



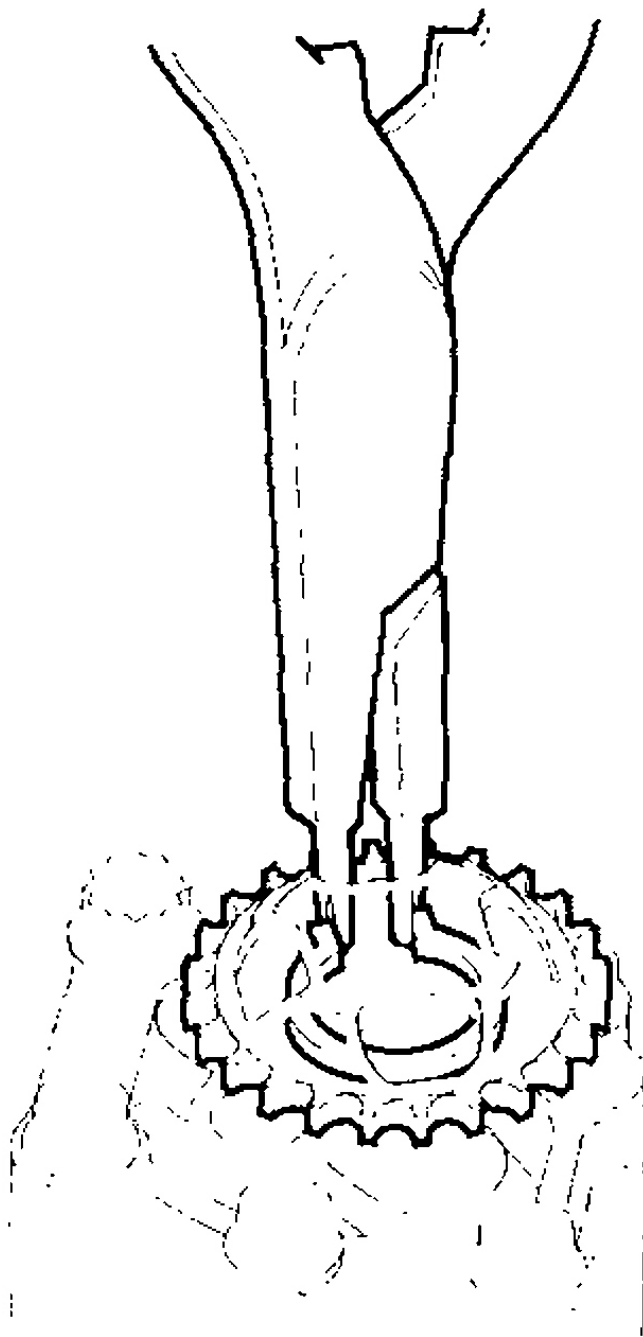
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Fig. 24: Installing Reverse Inhibitor Valve & Valve Spring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

TRANSMISSION HOUSING

ATF PUMP REPLACEMENT

1. Remove the bolts securing the ATF pump drive sprocket, then remove the ATF pump drive chain and ATF pump drive sprocket.
2. Expand the snap ring under the ATF driven sprocket, and remove the ATF pump driven sprocket from the ATF pump.

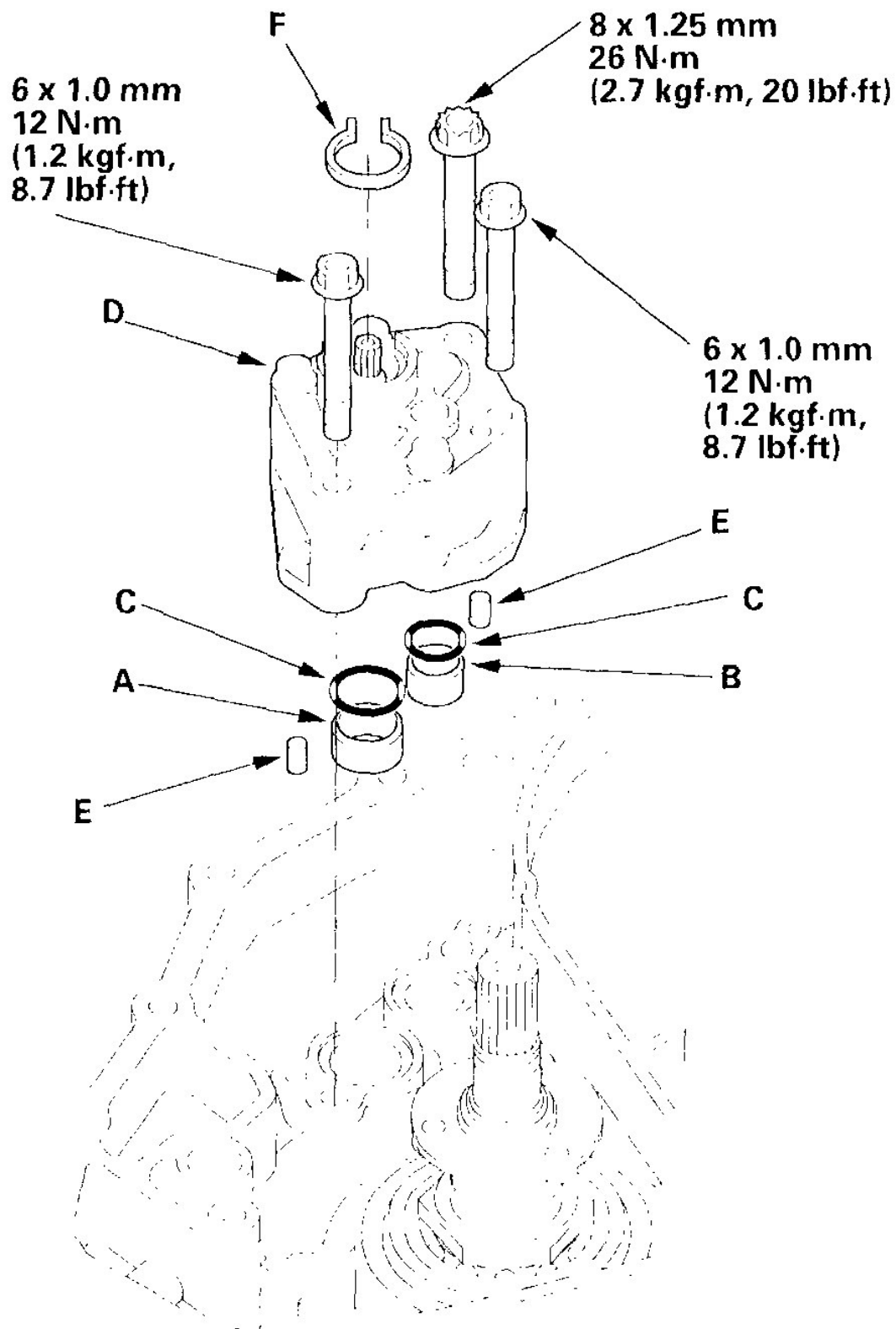


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Fig. 25: Removing ATF Pump Driven Sprocket From ATF Pump
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the snap ring from the ATF pump.

4. Remove the ATF pump from the transmission housing.



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Fig. 26: Removing ATF Pump From Transmission Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the 22 x 10 mm ATF pipe (A) and the 18 x 10 mm ATF pipe (B) in the transmission housing, then install the new O-rings (C) over the ATF pipes.
6. Install the new ATF pump body (D) with dowel pins (E). Do not pinch the O-rings.
7. Install the snap ring (F) in the snap ring groove.
8. Install the ATF pump driven sprocket.
9. Install the ATF pump chain and ATF pump drive sprocket.

DRIVEN PULLEY SHAFT BEARING REMOVAL AND INSTALLATION

Special Tools Required

- Driver 07749-0010000
 - Oil seal driver attachment, 64 x 72 mm
 - 07JAD-PN00100
1. Expand the snap ring with snap ring pliers, then push the driven pulley shaft bearing out with the special tools. Do not remove the snap ring unless it's necessary to clean the groove in the housing.

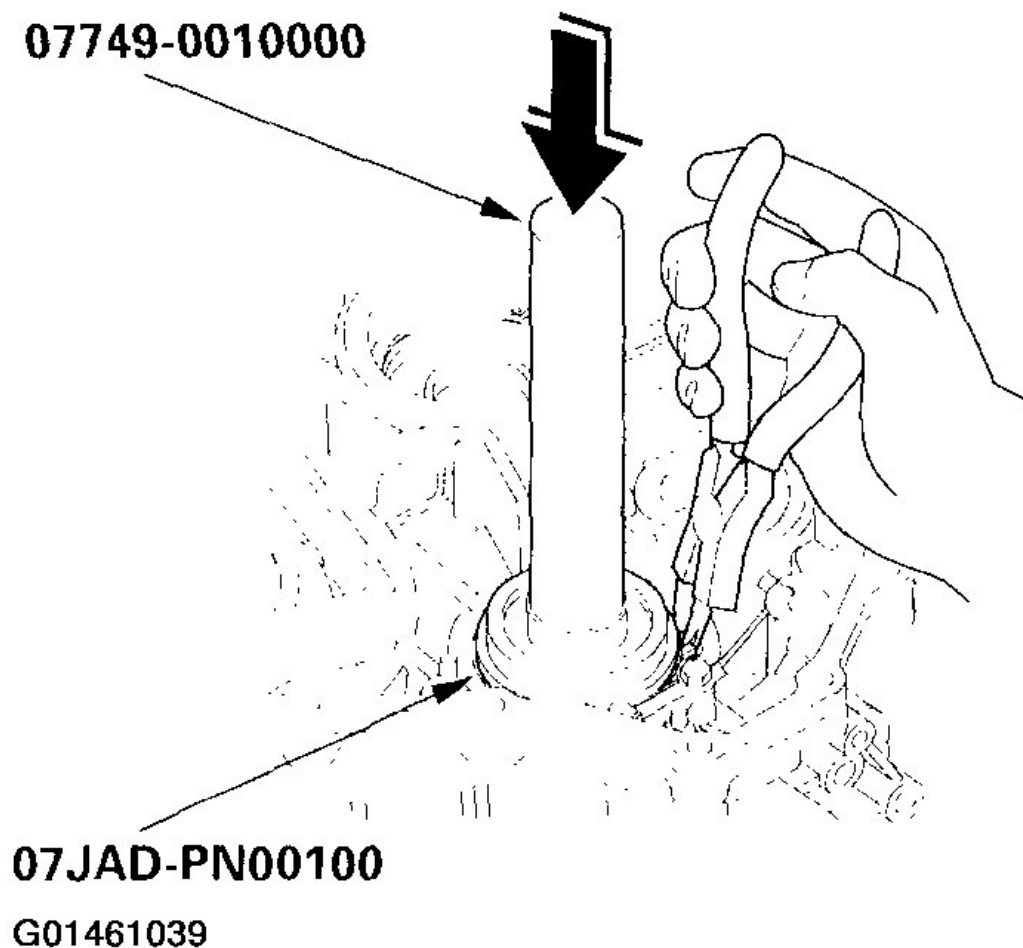
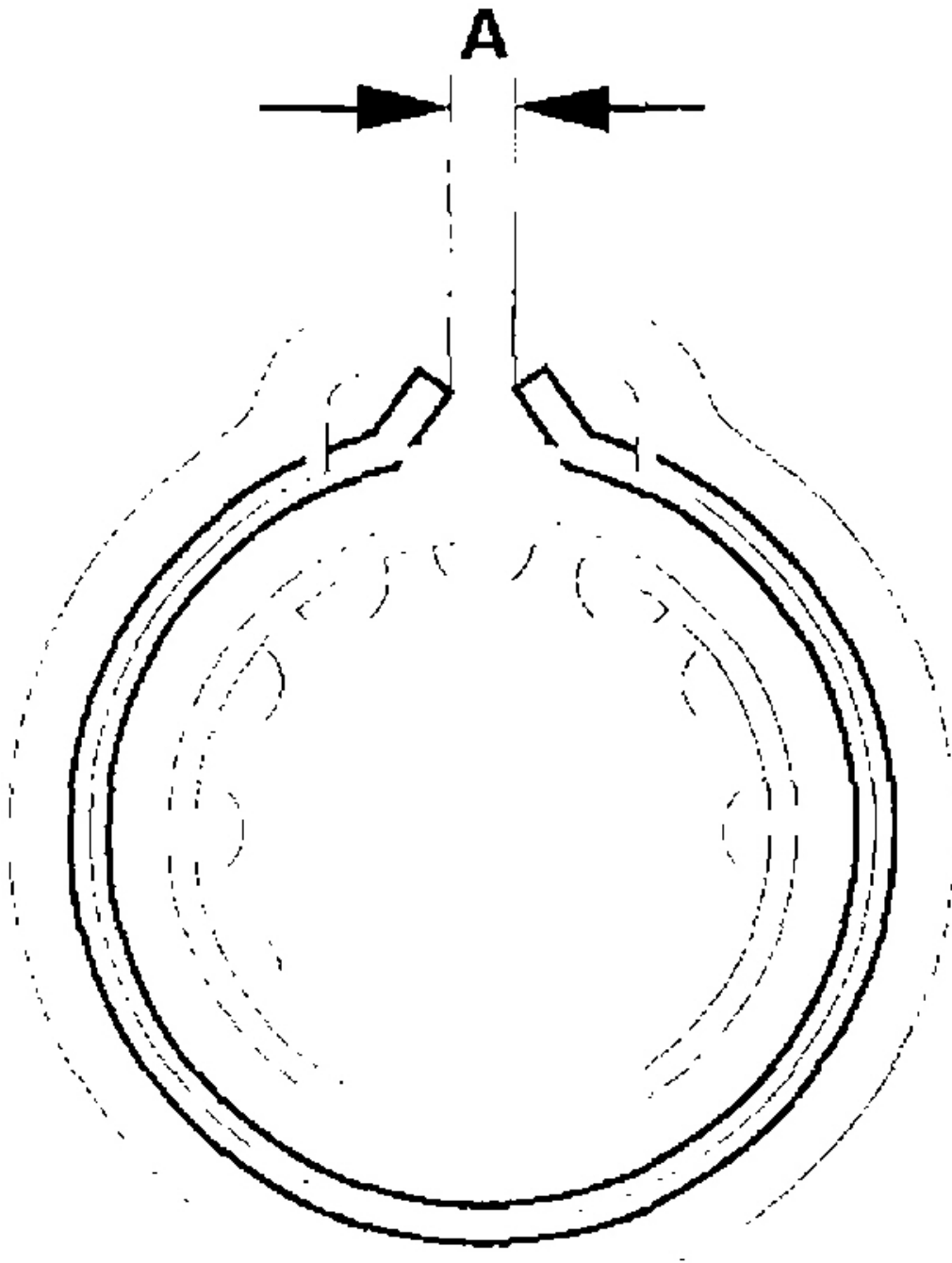


Fig. 27: Expanding Snap Ring With Snap Ring Pliers
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Expand the snap ring with the snap ring pliers, and install the bearing part-way into the housing.
3. Release the pliers, then push the bearing down into the housing until the snap ring snaps in place around it.
4. After installing the bearing, verify that the snap ring is seated in the bearing and housing groove, and that the ring end gap (A) is 0-9 mm (0-0.35 in.)



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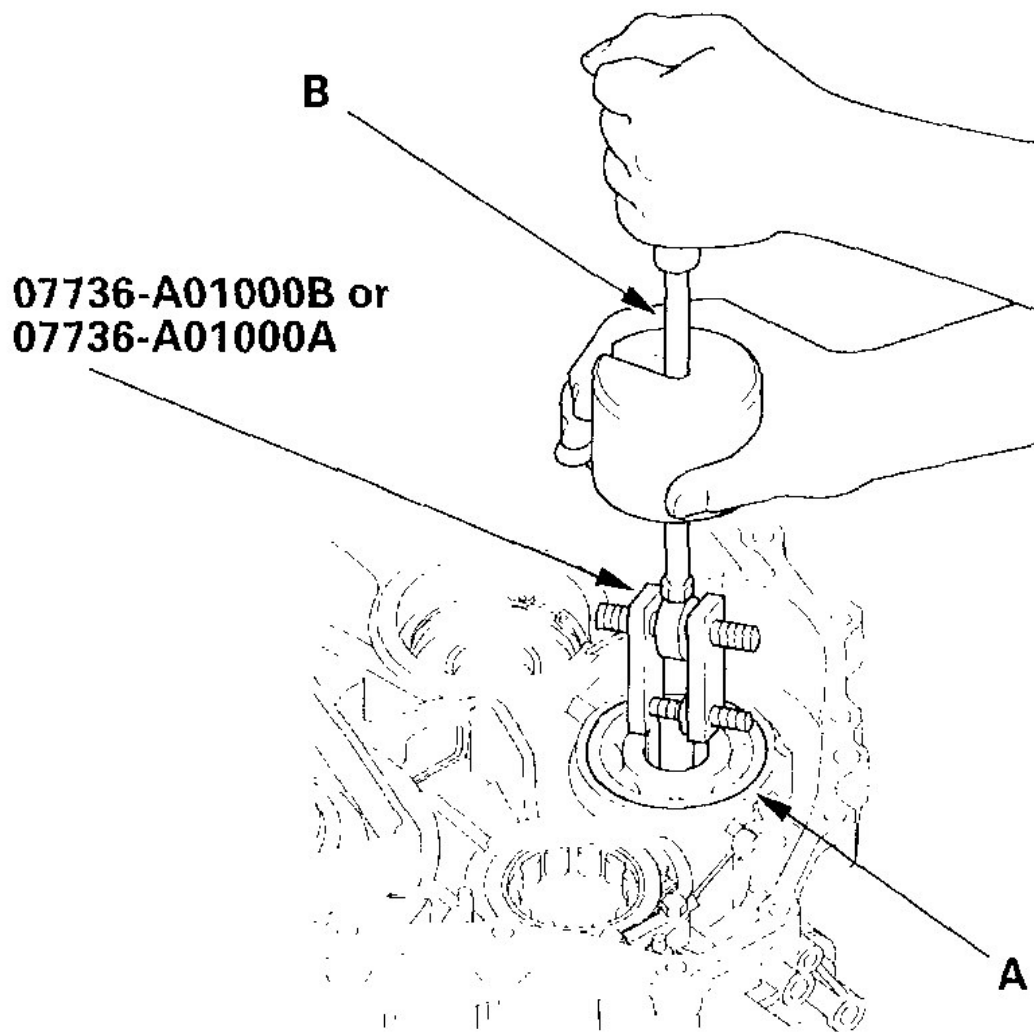
Fig. 28: Verifying Snap Ring Is Seated In Bearing & Housing Groove

Courtesy of AMERICAN HONDA MOTOR CO., INC.

FINAL DRIVE SHAFT BEARING REMOVAL AND INSTALLATION

Special Tools Required

- Adjustable bearing puller, 25-40 mm 07736-A01000B or 07736-A01000A
 - Driver 07749-0010000
 - Attachment, 72 x 75 mm 07746-0010600
1. Remove the final drive shaft bearing (A) with the special tool and a commercially available 3/8"-16 slide hammer (B).



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Fig. 29: Removing Final Drive Shaft Bearing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the new bearing into the transmission housing with the special tools.

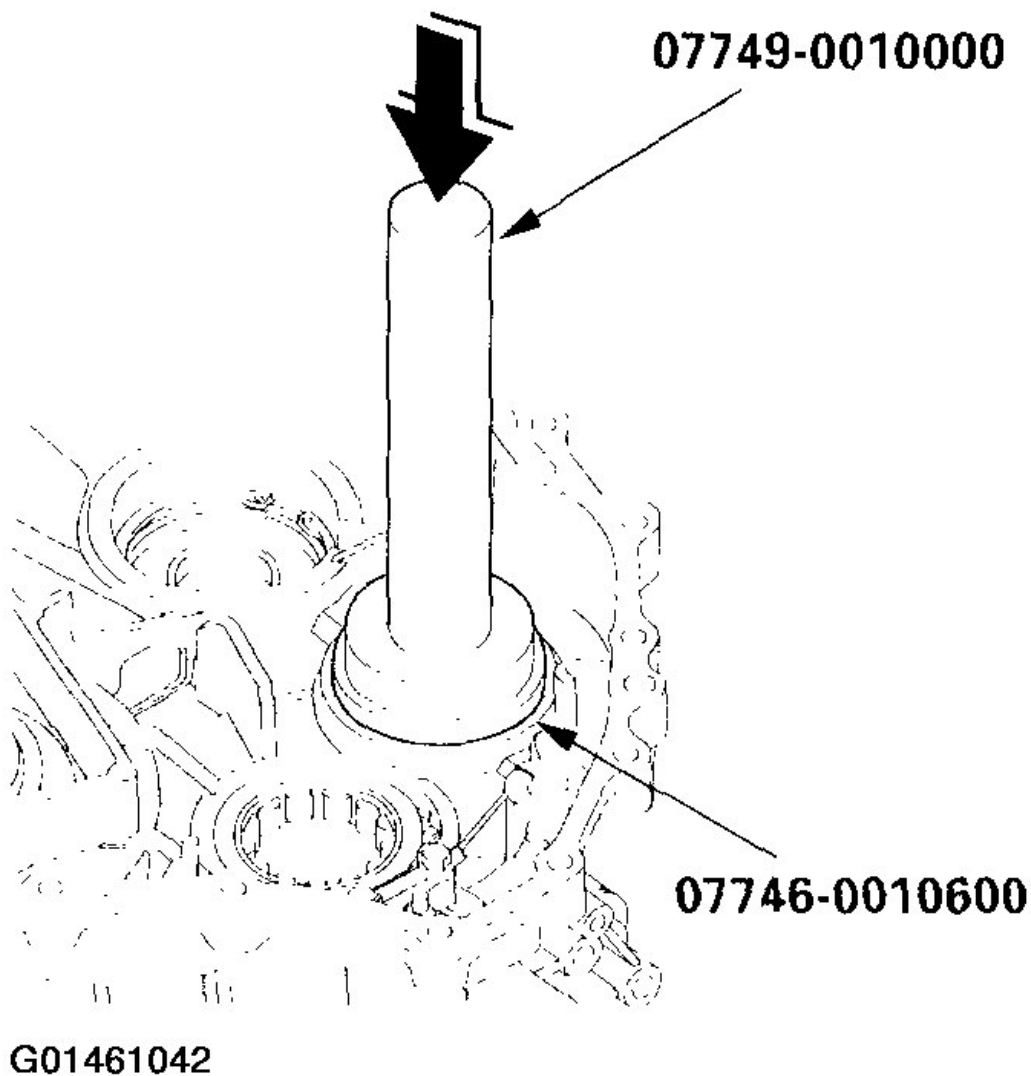
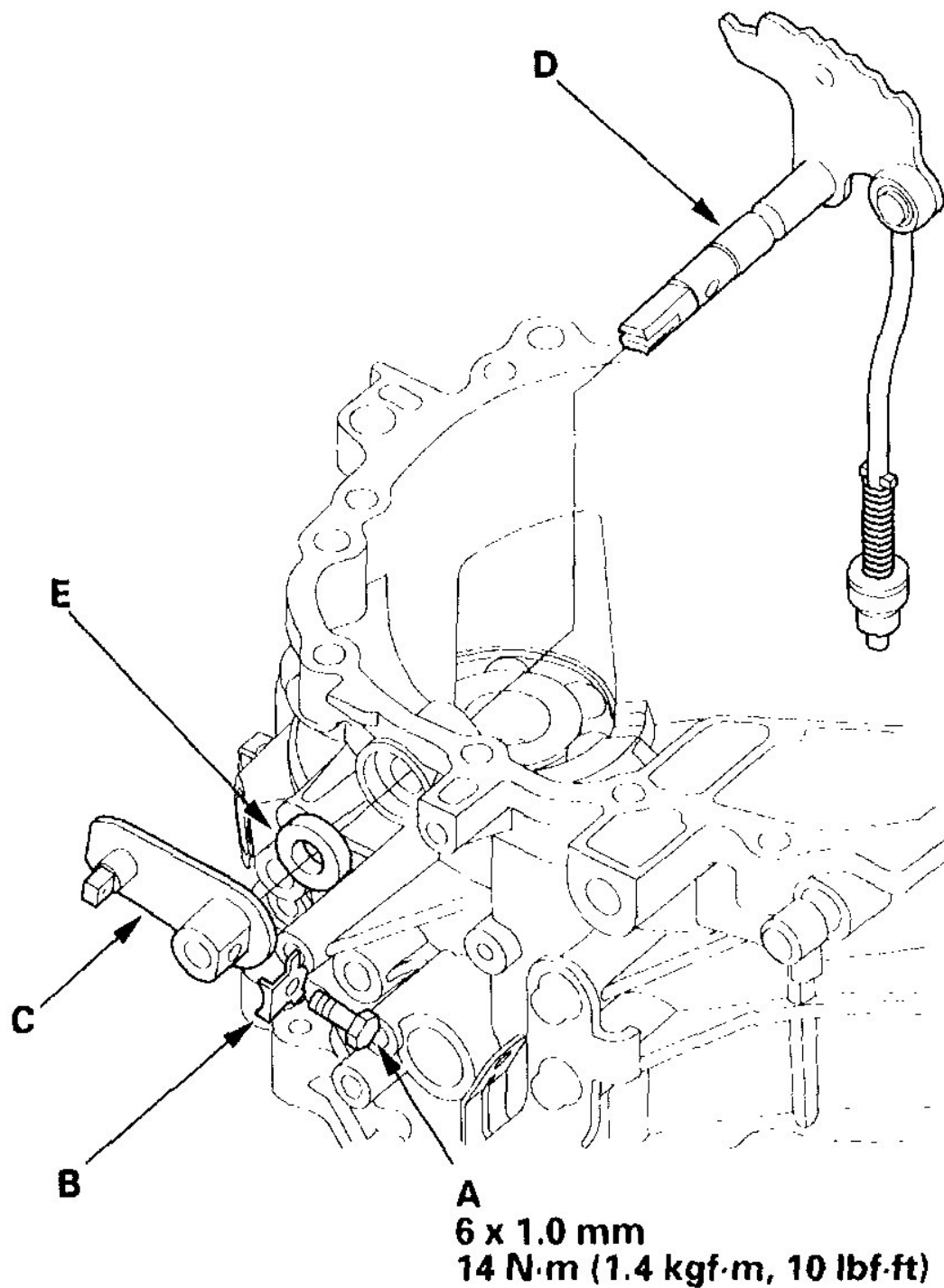


Fig. 30: Installing New Bearing Into Transmission Housing With Special Tools
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CONTROL SHAFT REMOVAL AND INSTALLATION

1. Remove the bolt (A) and lock washer (B), then remove the control lever (C) from the control shaft (D).



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Fig. 31: Removing Bolt & Lock Washer

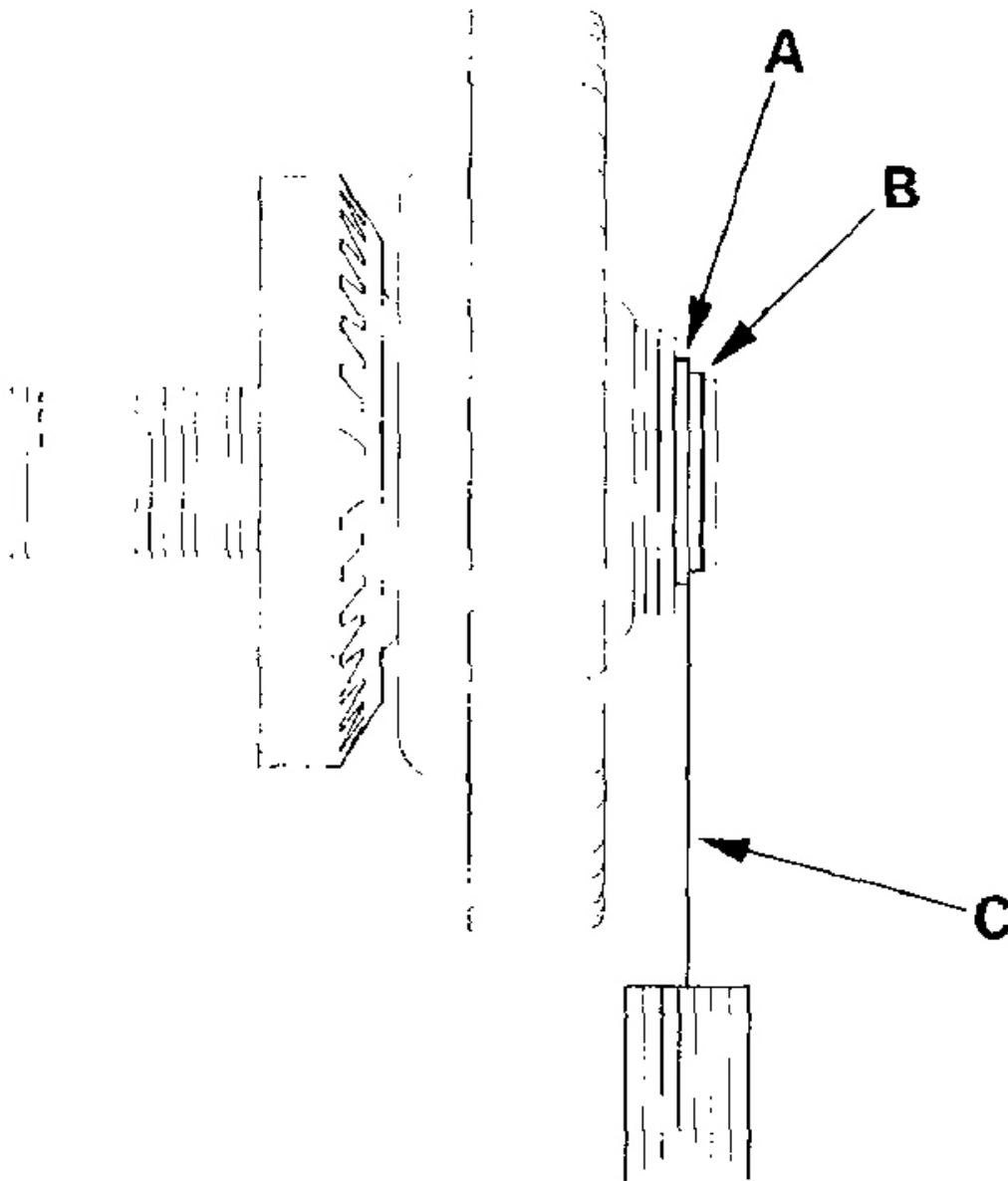
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the control shaft from the transmission housing.
3. Check for fluid leaks between the housing and oil seal (E). If there is a fluid leak, replace the oil seal with a new one.
4. Install the control shaft in the transmission housing, and install the control lever on the control shaft.
5. Install the lock bolt with the new lock washer.

INPUT SHAFT

PLANETARY CARRIER CLEARANCE INSPECTION

1. Measure the clearance between the 25 x 31 mm thrust shim (A) and the snap ring (B) with a feeler gauge (C), in at least three places. Use the average as the actual clearance.



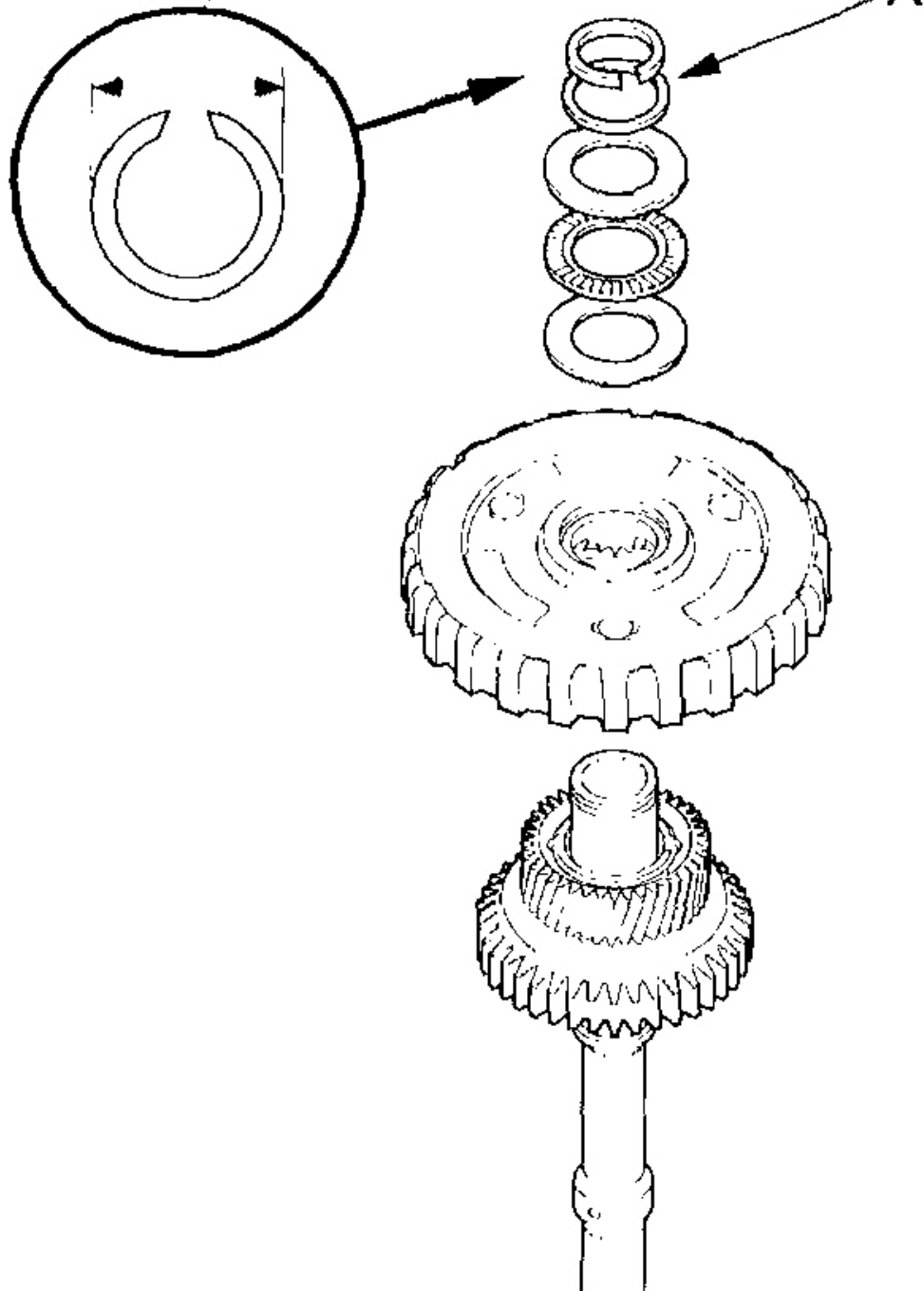
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Fig. 32: Measuring Clearance Between Thrust Shim & Snap Ring With Feeler Gauge (Standard: 0.05-0.115 mm (0.018-0.030 in.))

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. If the clearance is out of standard, remove the 25 x 31 mm thrust shim (A) and measure its thickness.

30.7 mm (1.21 in.)



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Fig. 33: Removing Thrust Shim & Measuring Thickness**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

3. Select and install the new thrust shim, and secure them with the snap ring, then recheck.

No.	Part Number	Thickness
A	90451-P4V-000	1.05 mm (0.041 in.)
B	90452-P4V-000	1.12 mm (0.044 in.)
C	90453-P4V-000	1.19 mm (0.047 in.)
D	90454-P4V-000	1.26 mm (0.050 in.)
E	90455-P4V-000	1.33 mm (0.052 in.)
F	90456-P4V-000	1.40 mm (0.055 in.)
G	90457-P4V-000	1.47 mm (0.058 in.)
H	90458-P4V-000	1.54 mm (0.061 in.)
I	90459-P4V-000	1.61 mm (0.063 in.)
J	90460-P4V-000	1.68 mm (0.066 in.)
K	90461-P4V-000	1.75 mm (0.069 in.)
L	90462-P4V-000	1.82 mm (0.072 in.)
M	90480-P4V-000	1.085 mm (0.0427 in.)
N	90481-P4V-000	1.155 mm (0.0454 in.)
O	90482-P4V-000	1.225 mm (0.0482 in.)
P	90483-P4V-000	1.295 mm (0.0510 in.)
Q	90484-P4V-000	1.365 mm (0.0537 in.)
R	90485-P4V-000	1.435 mm (0.0565 in.)
S	90486-P4V-000	1.505 mm (0.0593 in.)
T	90487-P4V-000	1.575 mm (0.0620 in.)
U	90488-P4V-000	1.645 mm (0.0648 in.)
V	90489-P4V-000	1.715 mm (0.0675 in.)
W	90490-P4V-000	1.785 mm (0.0703 in.)

G01461046

Fig. 34: Selecting New Thrust Shim Table

Courtesy of AMERICAN HONDA MOTOR CO., INC.

- After replacing the 25 x 31 mm thrust shim, make sure that the clearance is within the standard.

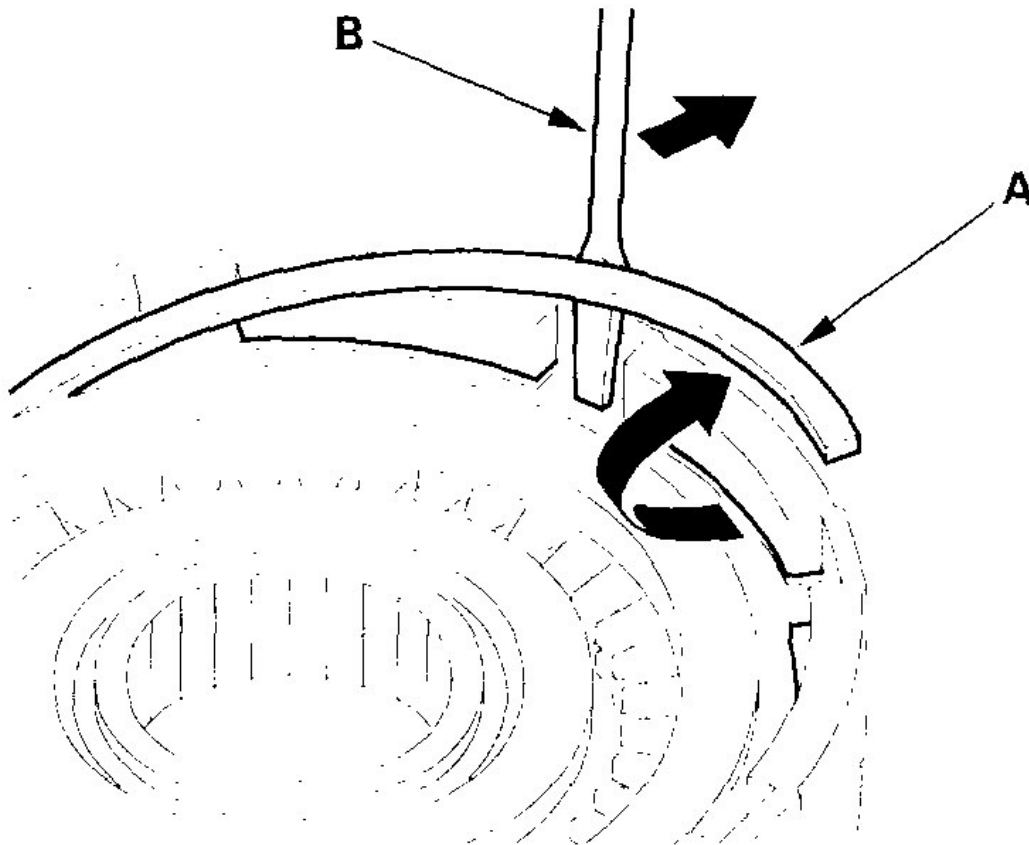
5. Verify that the snap ring outside diameter is 30.7 mm (1.21 in.) or less.

FORWARD CLUTCH

CLUTCH DISASSEMBLY

Special Tools Required

- Clutch spring compressor attachment 07LAE-PX40100
 - Clutch spring compressor attachment 07HAE-PL50100
 - Clutch spring compressor bolt assembly 07GAE-PG40200 or 07GAE-PG4020A
1. Remove the snap ring (A), then remove the clutch end plate, the clutch discs, and the plates with a screwdriver (B).

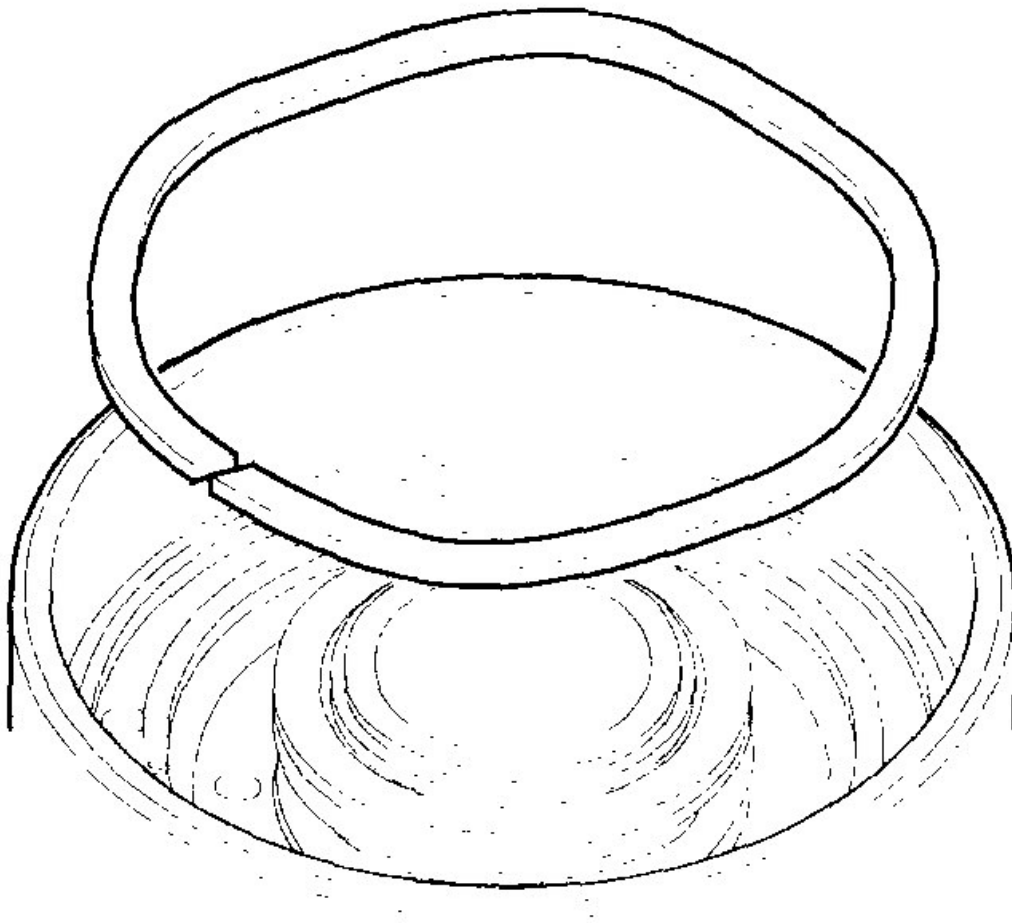


G01461047

Fig. 35: Removing Snap Ring

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the disc spring.



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Fig. 36: Removing Disc Spring

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the special tool on the clutch assembly.

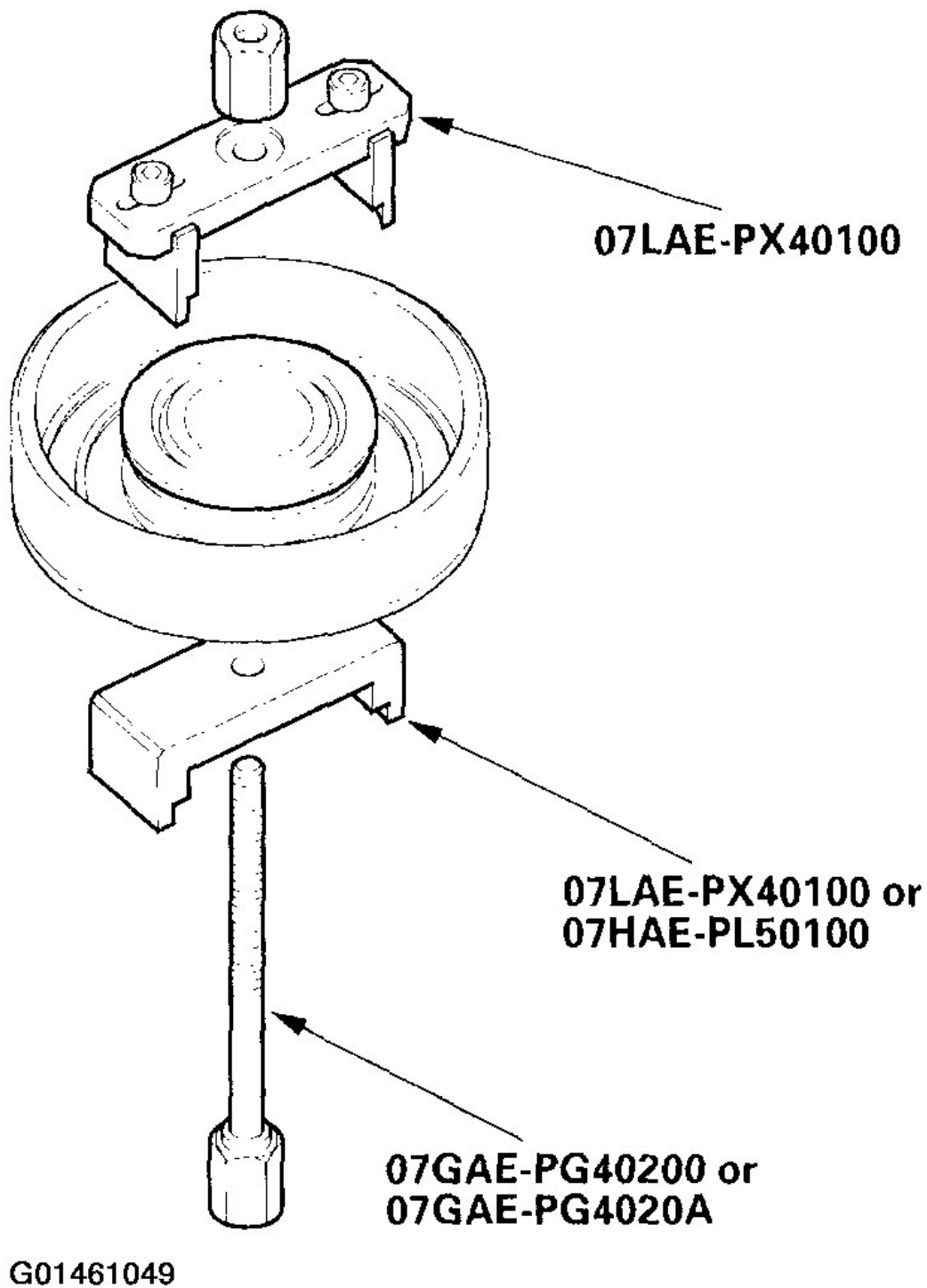
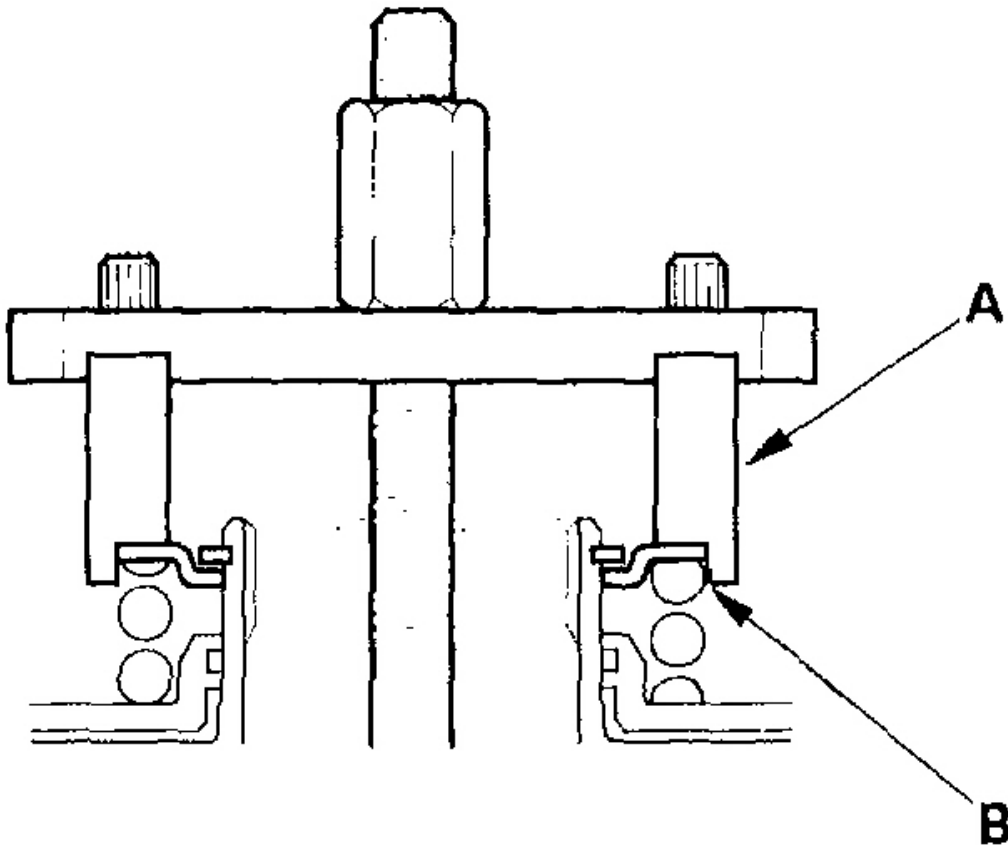


Fig. 37: Installing Special Tool On Clutch Assembly
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Be sure the special tool (A) is adjusted to have full contact with the spring retainer (B) on the clutch.

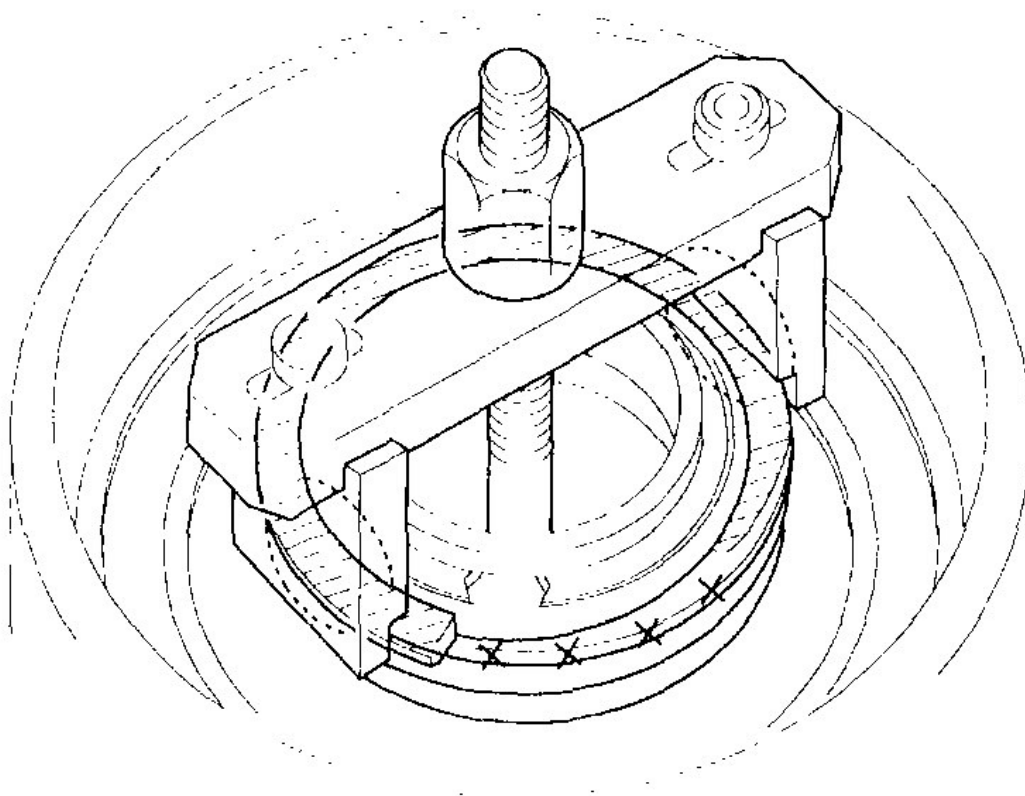


G01461050

Fig. 38: Making Sure Special Tool Is Adjusted To Have Full Contact With Spring Retainer On Clutch

Courtesy of AMERICAN HONDA MOTOR CO., INC.

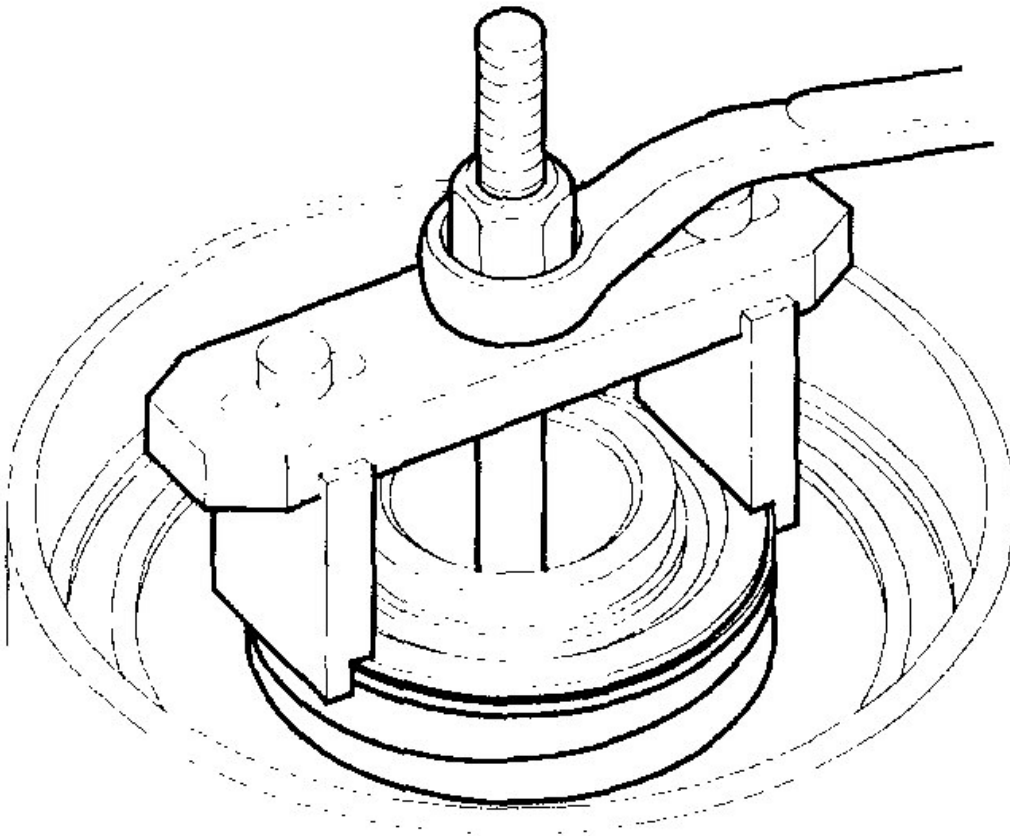
5. If either end of the special tool is set over an area of the spring retainer which is unsupported by the return spring, the retainer may be damaged.



G01461051

Fig. 39: Checking End Of Special Tool Is Over An Area Of Spring Retainer
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Compress the spring until the snap ring can be removed.



G01461052

Fig. 40: Compressing Spring Until Snap Ring Can Be Removed
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Remove the snap ring (A). Then remove the special tools (B), spring retainer (C), and return spring.

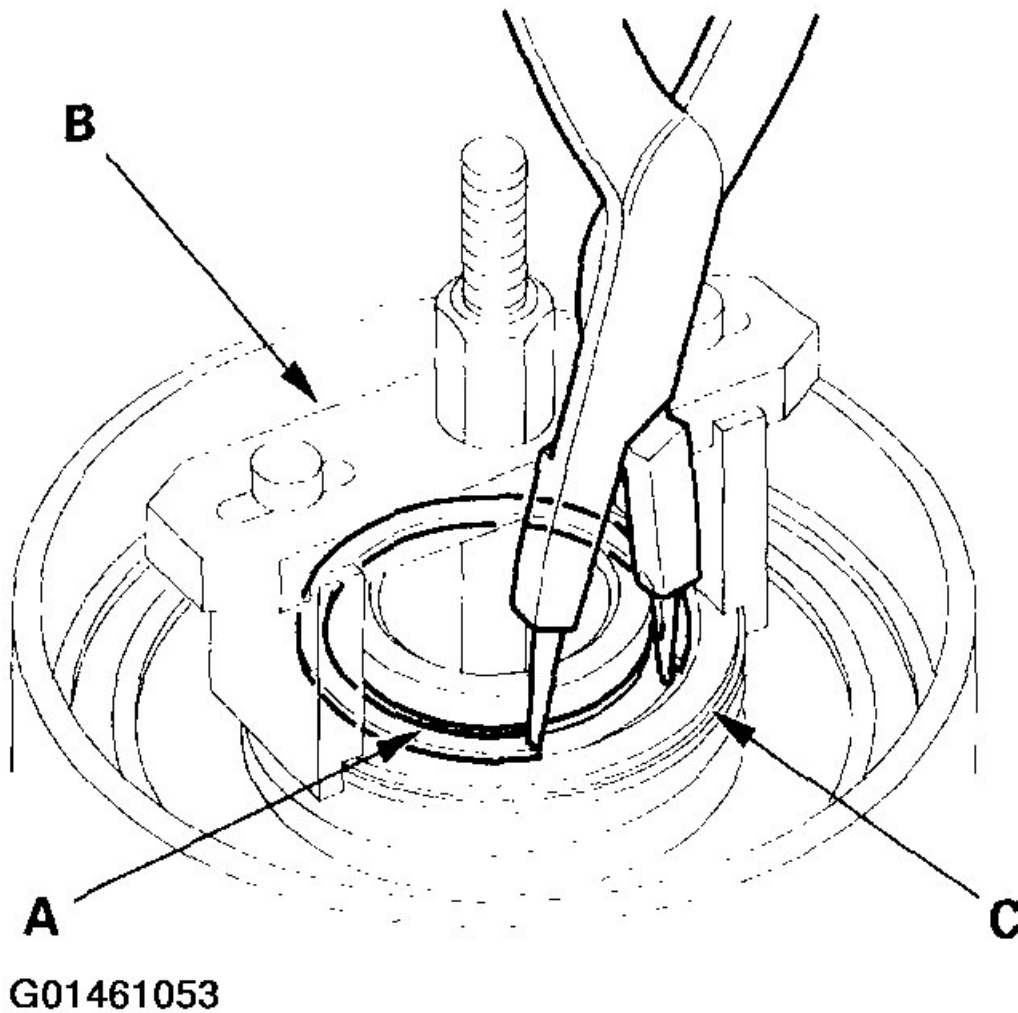


Fig. 41: Removing Snap Ring

Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Wrap a shop rag around the clutch drum (A), and apply air pressure to the fluid passage to remove the piston (B). Place a finger tip on the other end while applying air pressure.

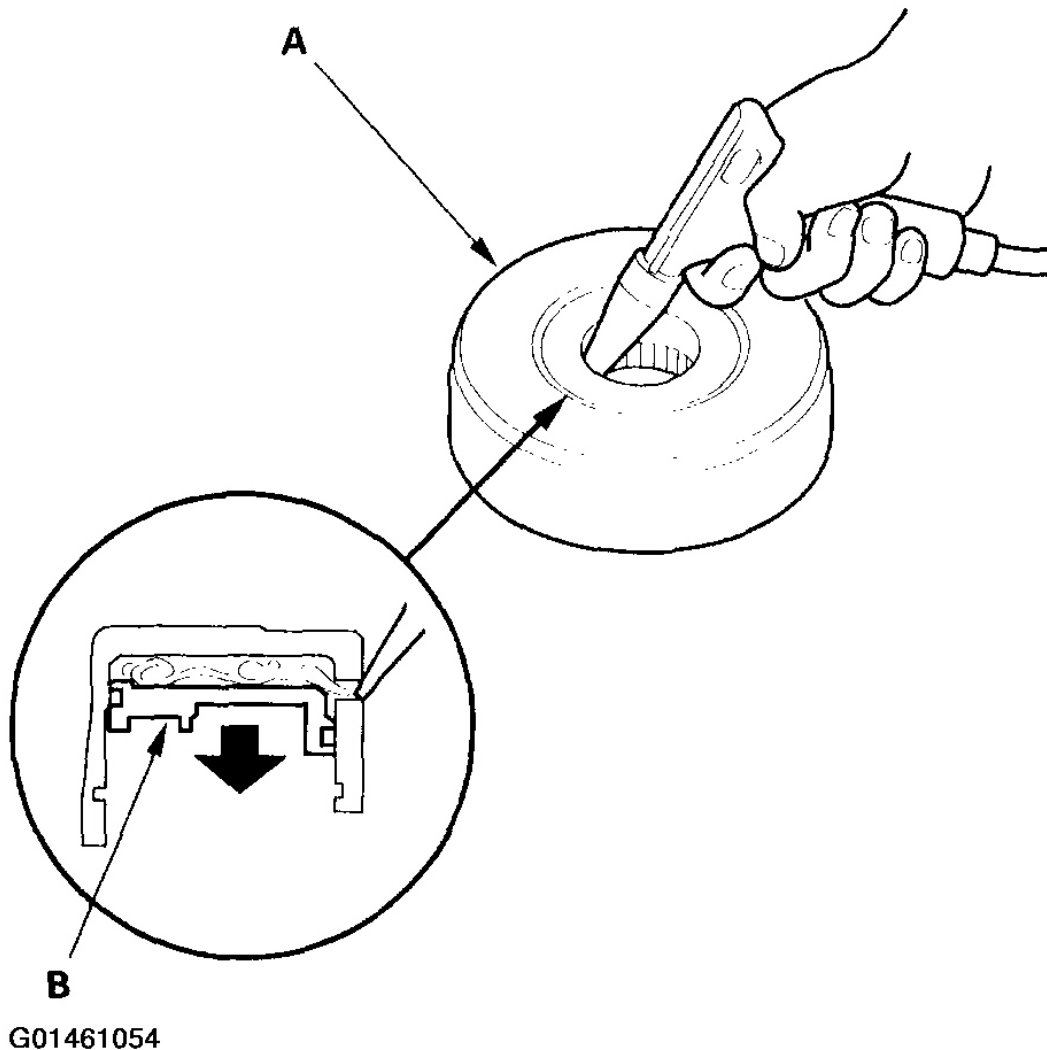


Fig. 42: Wrapping Shop Rag Around Clutch Drum
Courtesy of AMERICAN HONDA MOTOR CO., INC.

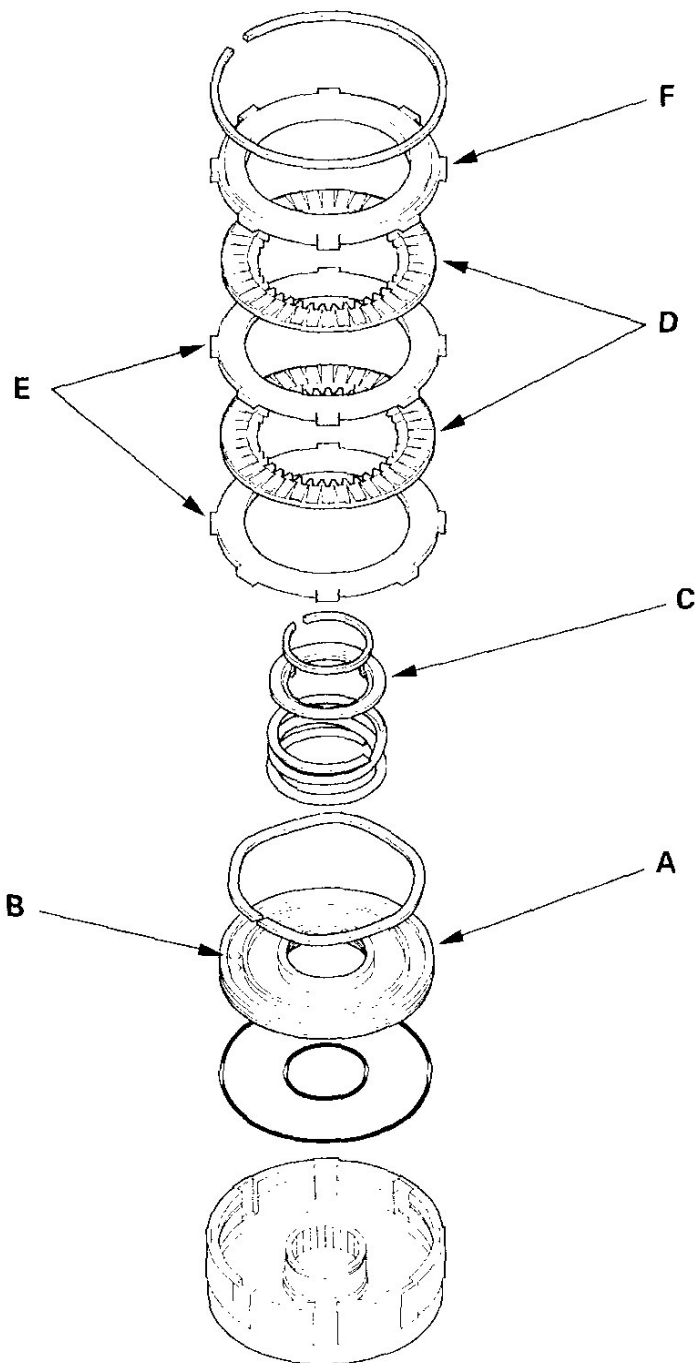
CLUTCH REASSEMBLY

Special Tools Required

- Clutch spring compressor attachment 07LAE-PX40100
- Clutch spring compressor attachment 07HAE-PL50100
- Clutch spring compressor bolt assembly 07GAE-PG40200 or 07GAE-PG4020A
- Clutch compressor attachment 07ZAE-PRP0100

1. Inspect the clutch piston (A) and clutch piston check valve (B). If the clutch check valve is loose or

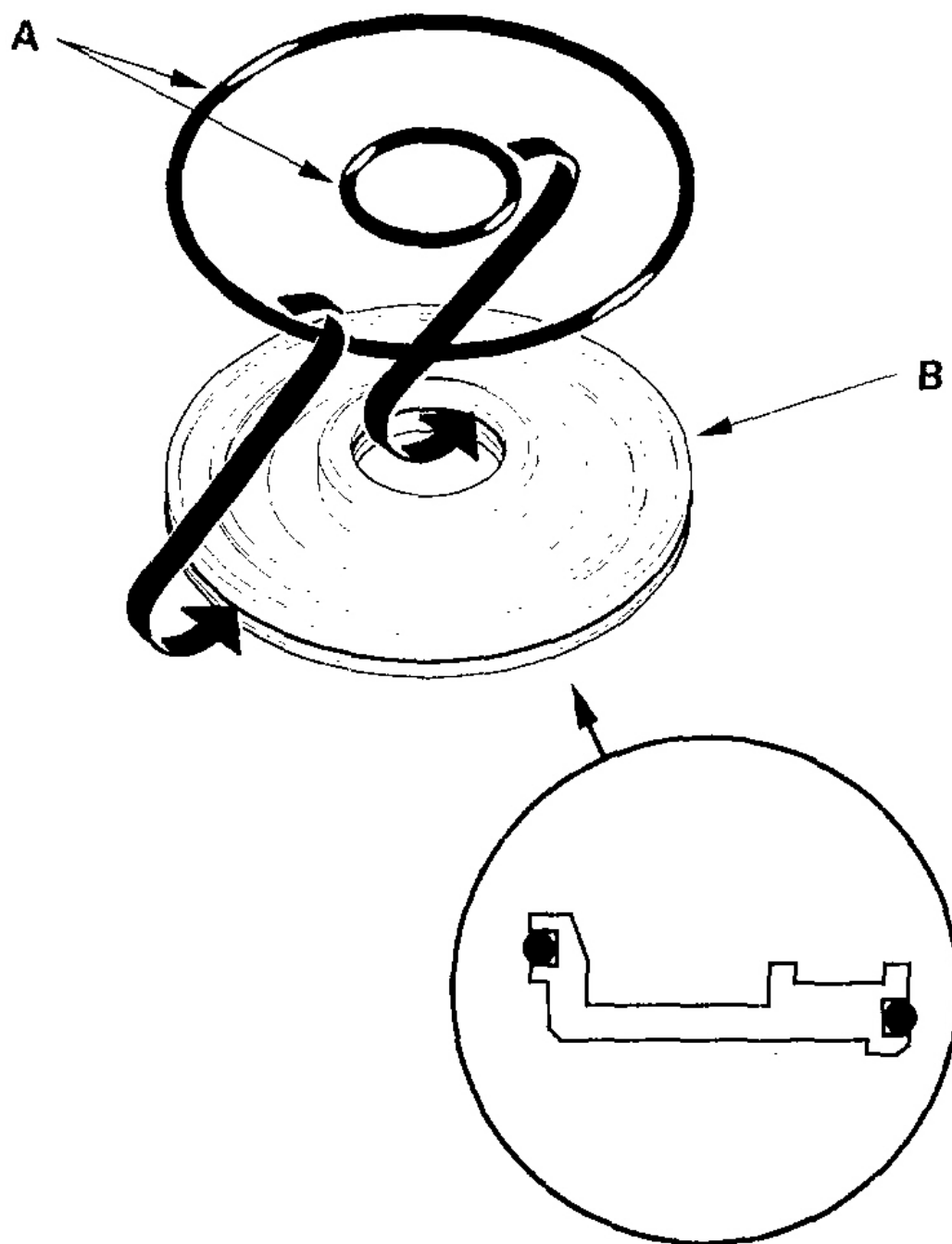
damaged, replace the clutch piston.



G01461055

Fig. 43: Inspecting Clutch Piston & Clutch Piston Check Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

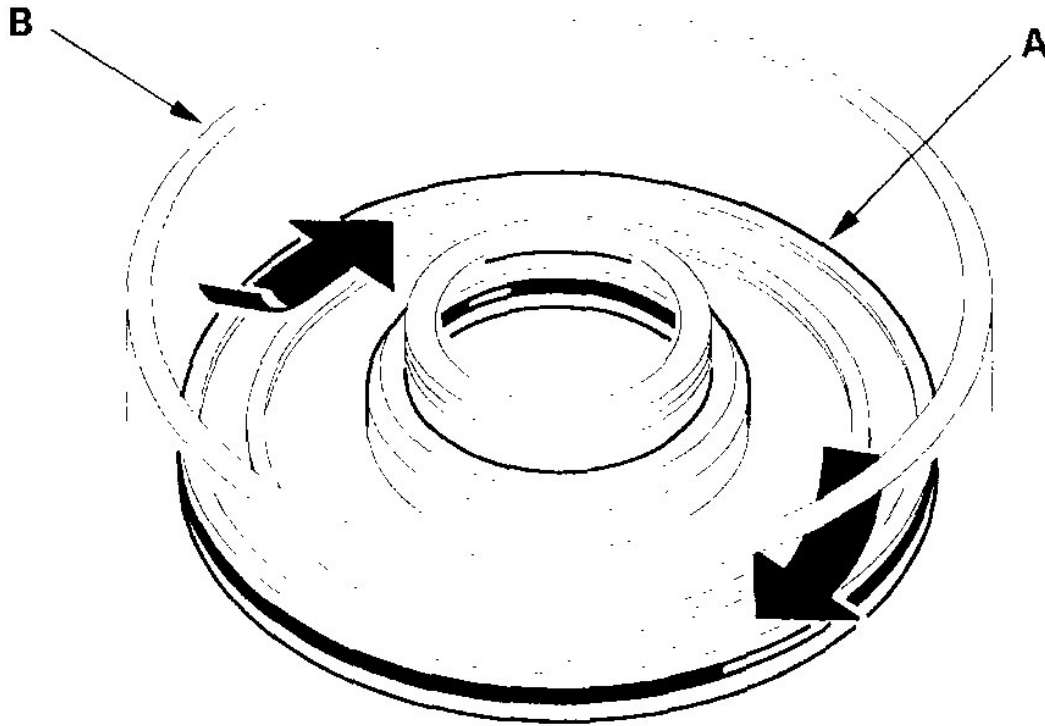
2. Check the spring retainer (C) for wear and damage.
3. Inspect the clutch discs (D), clutch plates (E), and clutch end plate (F) for wear, damage, and discoloration.
 - If the clutch discs are worn or damaged, replace the discs as a set.
 - If the clutch plates are worn, damaged, or discolored, replace the plates as a set.
 - If the clutch end plate is worn, damaged, or discolored, inspect the clutch end plate-to-top disc clearance, then replace the clutch end plate.
4. Soak the clutch discs thoroughly in ATF for a minimum of 30 minutes.
5. Install the new O-rings (A) on the clutch piston (B).



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Fig. 44: Installing New O-Rings On Clutch Piston
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the piston (A) in the clutch drum (B). Apply pressure and rotate to ensure proper seating. Lubricate the piston O-ring with ATF before installing. Do not pinch the O-ring by installing the piston with excessive force.

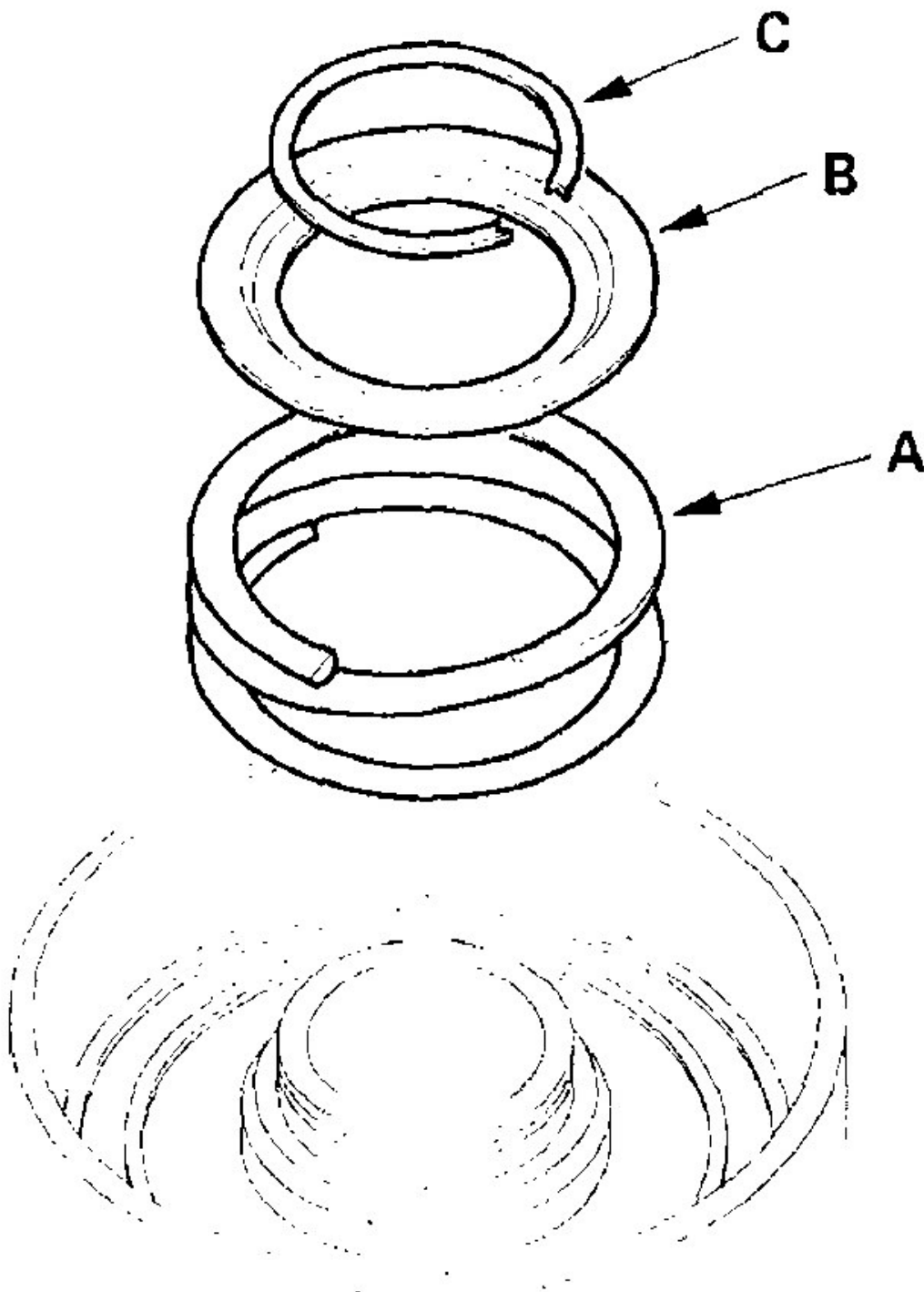


G01461057

Fig. 45: Installing Piston In Clutch Drum

Courtesy of AMERICAN HONDA MOTOR CO., INC.

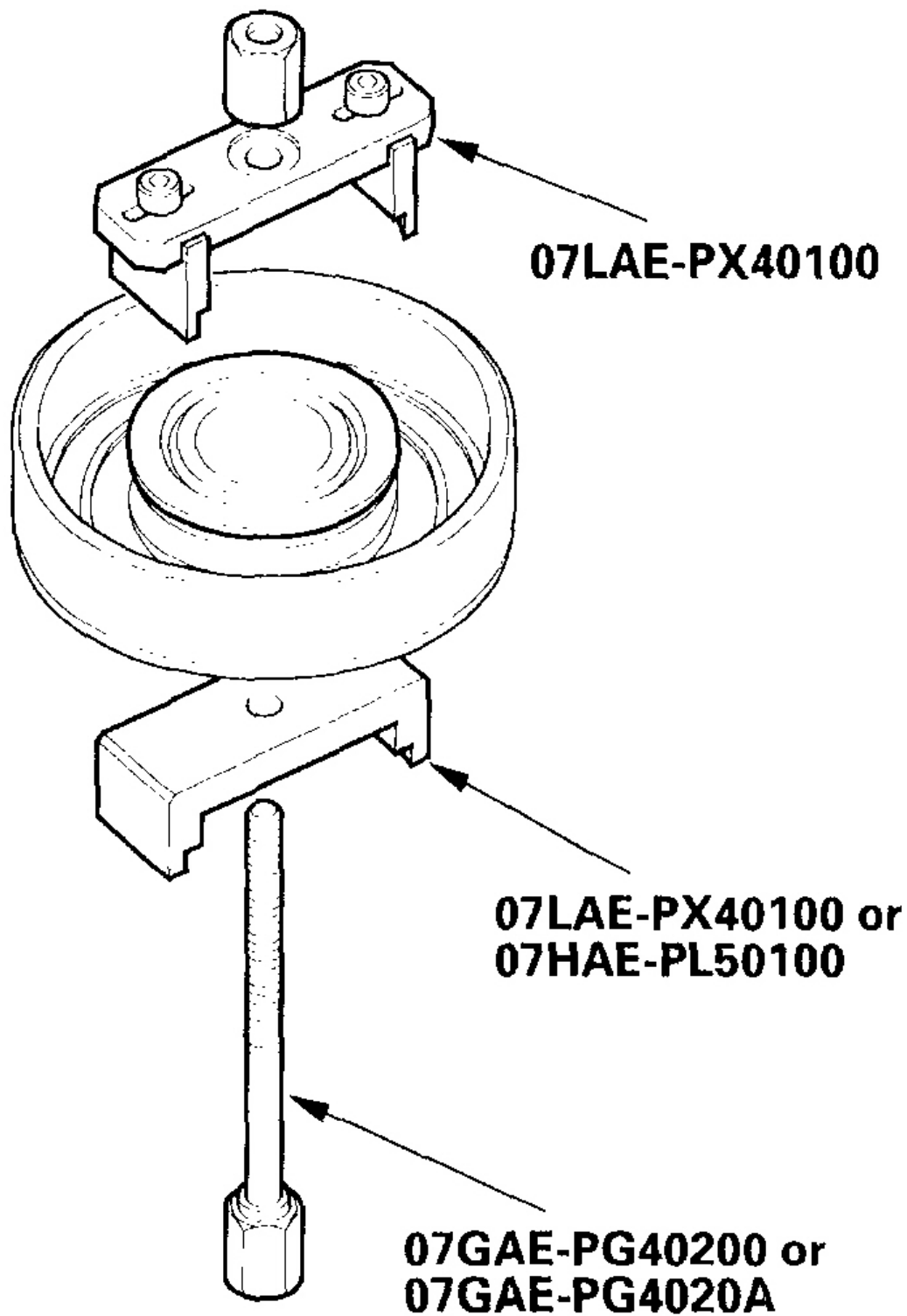
7. Install the return spring (A) and spring retainer (B), and position the snap ring (C) on the retainer.



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Fig. 46: Installing Return Spring & Spring Retainer
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Install the special tool.

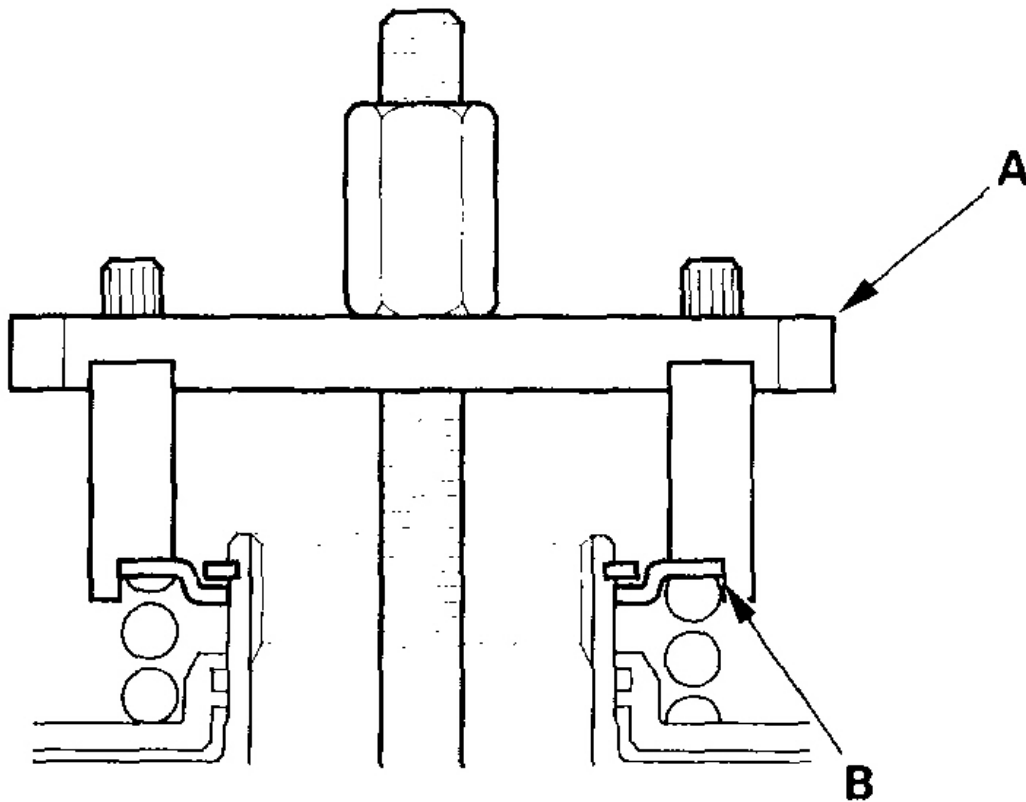


G01461059

Fig. 47: Installing Special Tool

Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Be sure the special tool (A) is adjusted to have full contact with the spring retainer (B) on the clutch.

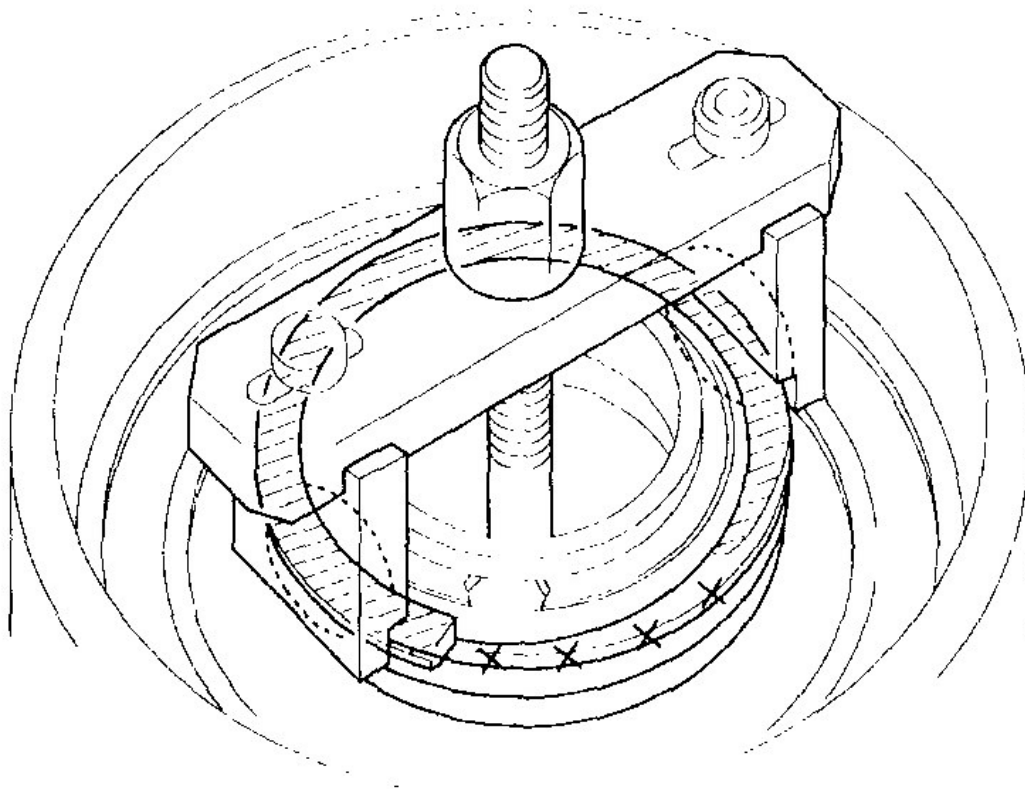


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Fig. 48: Making Sure Special Tool Is Adjusted To Have Full Contact With Retainer

Courtesy of AMERICAN HONDA MOTOR CO., INC.

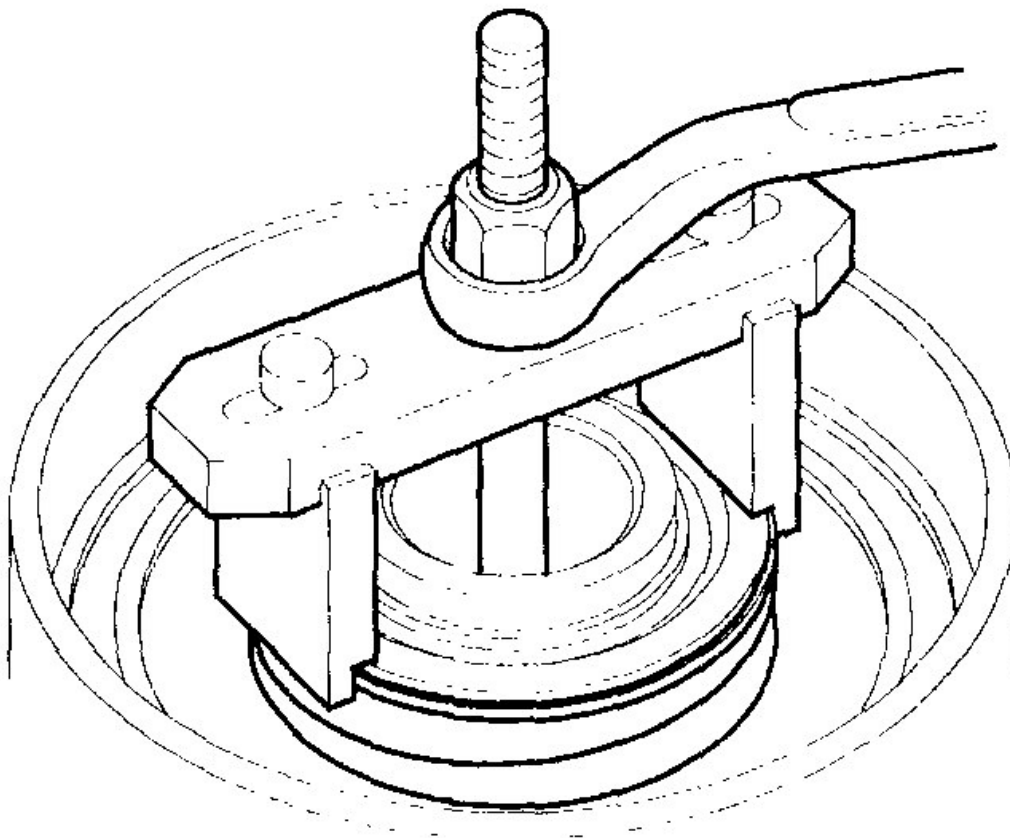
10. If either end of the special tool is set over an area of the spring retainer which is unsupported by the return spring, the retainer may be damaged.



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Fig. 49: Checking Special Tool Is Set Over An Area Of Spring Retainer Which Is Unsupported By Return Spring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Compress the return spring.



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Fig. 50: Compressing Return Spring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Install the snap ring (A).

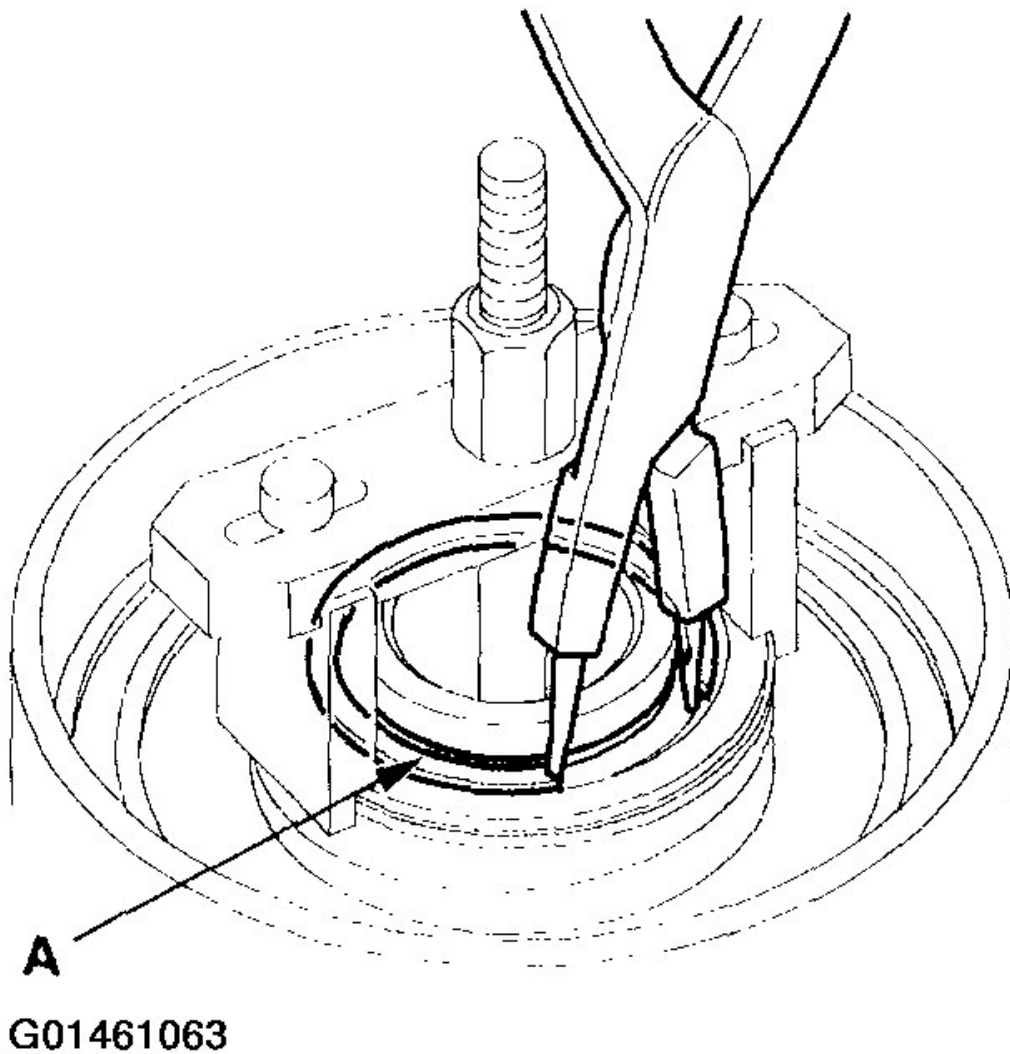


Fig. 51: Installing Snap Ring

Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Remove the special tool.
14. Install the waved spring.

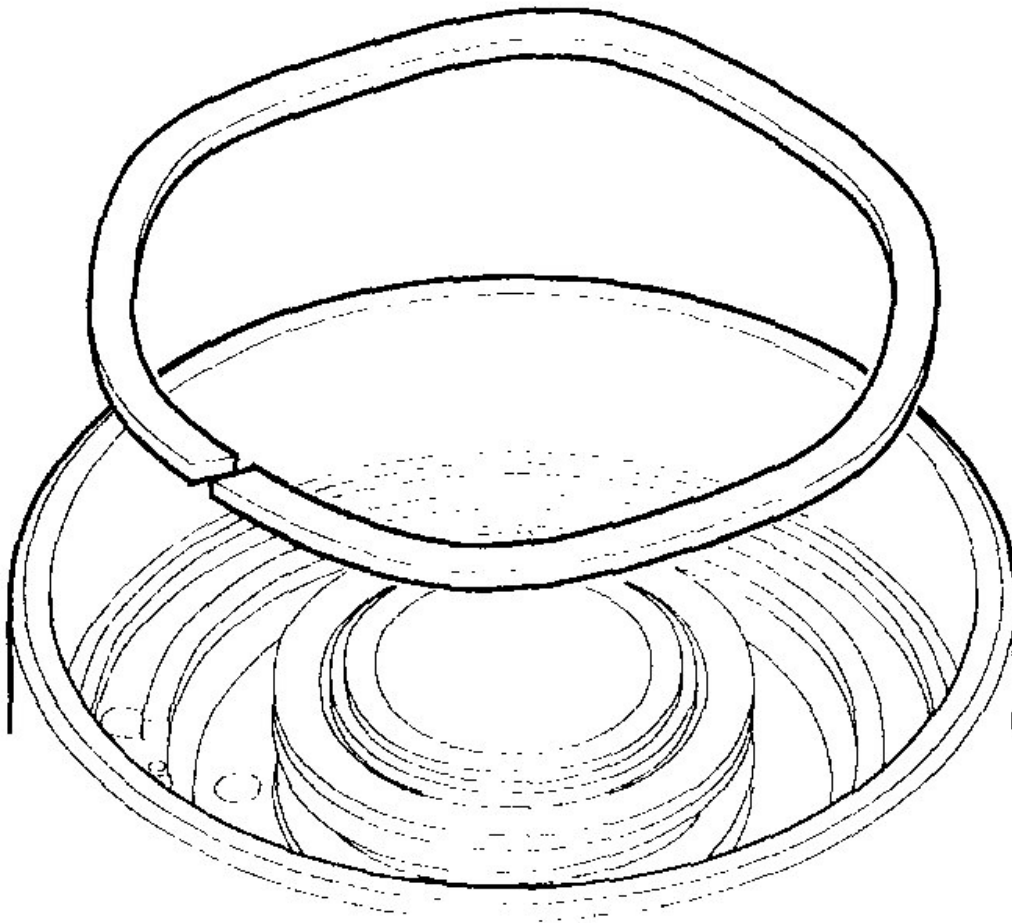
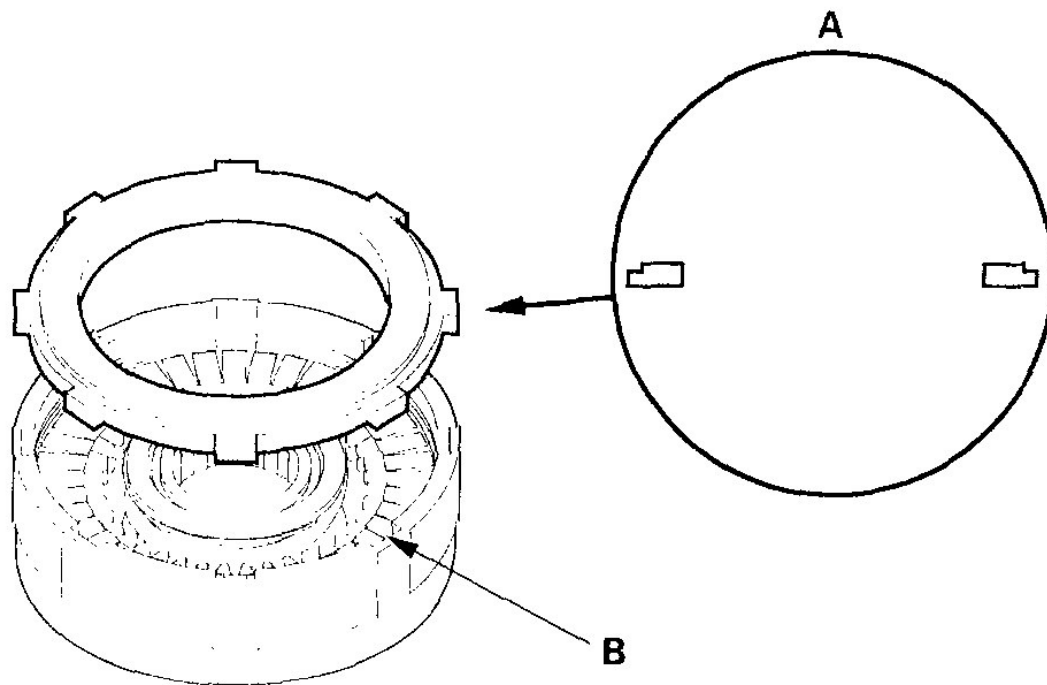
**G01461064**

Fig. 52: Installing Waved Spring

Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Starting with a clutch plate, alternately install the clutch plates and discs. Install the clutch end plate (A) with the flat side toward the disc (B).

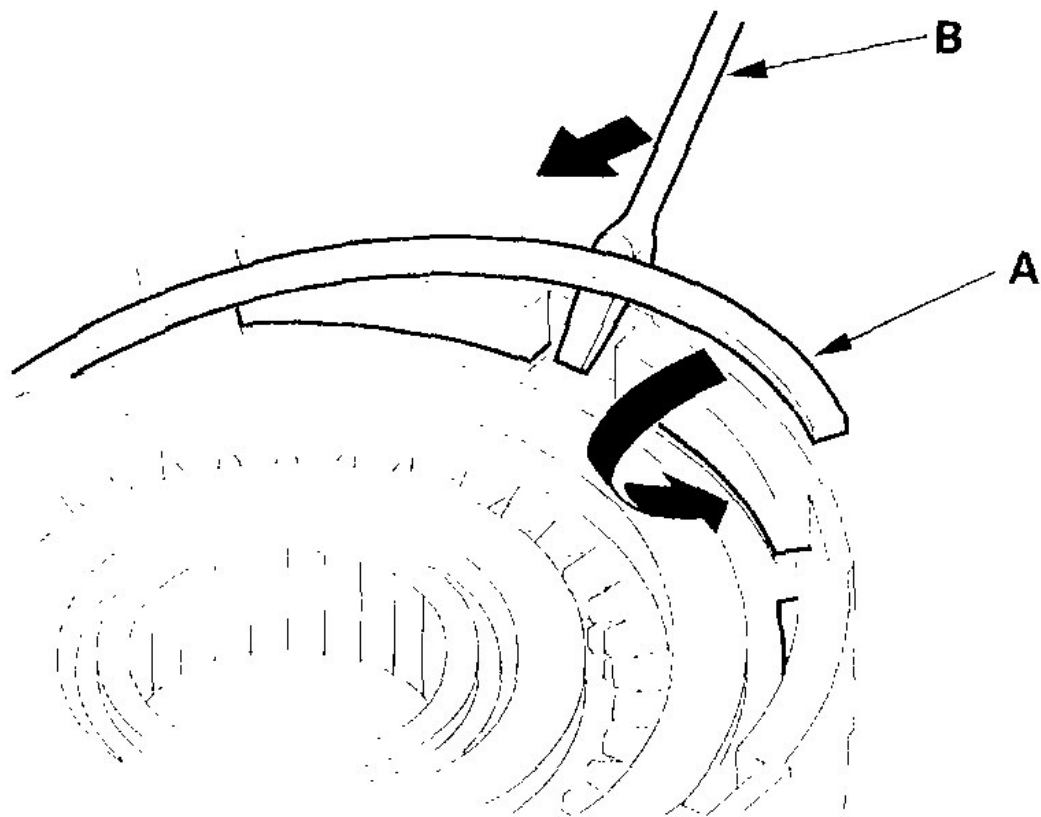


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Fig. 53: Installing Clutch End Plate

Courtesy of AMERICAN HONDA MOTOR CO., INC.

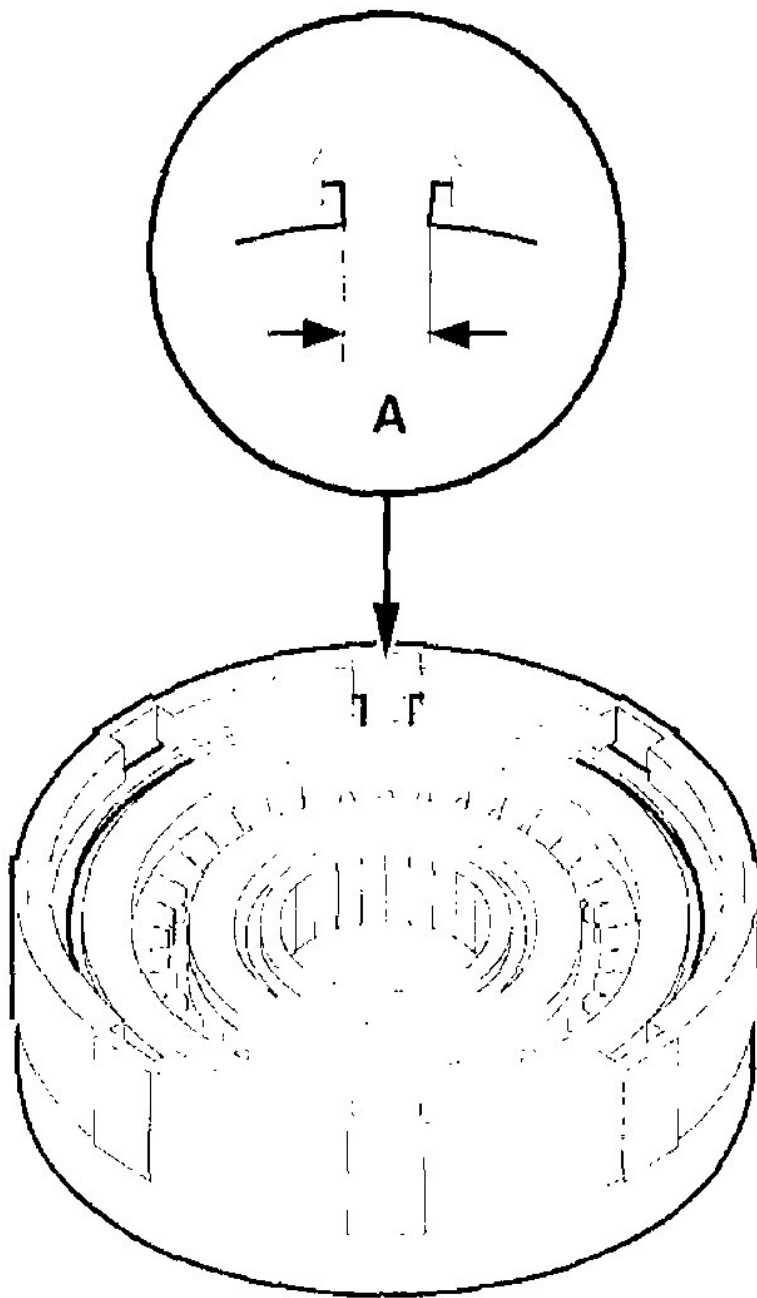
16. Install the snap ring (A) with a screwdriver (B).



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Fig. 54: Installing Snap Ring With Screwdriver
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Verify that the snap ring end gap (A) is 7.9 mm (0.311 in.) and above.



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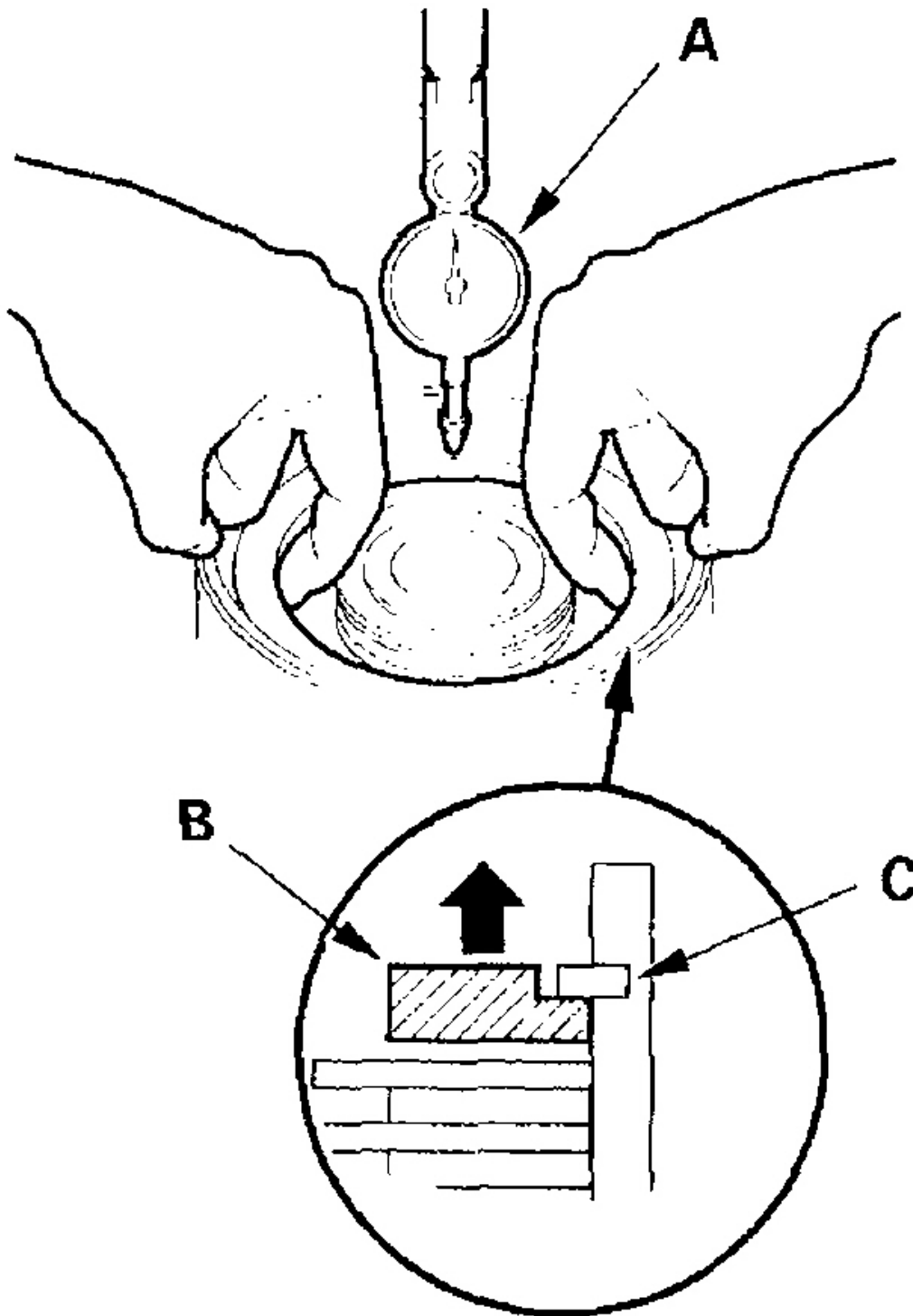
Fig. 55: Verifying Snap Ring End Gap
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Check that the clutch piston engages by applying air pressure to the fluid passage, and also check that the piston releases when air pressure is released.

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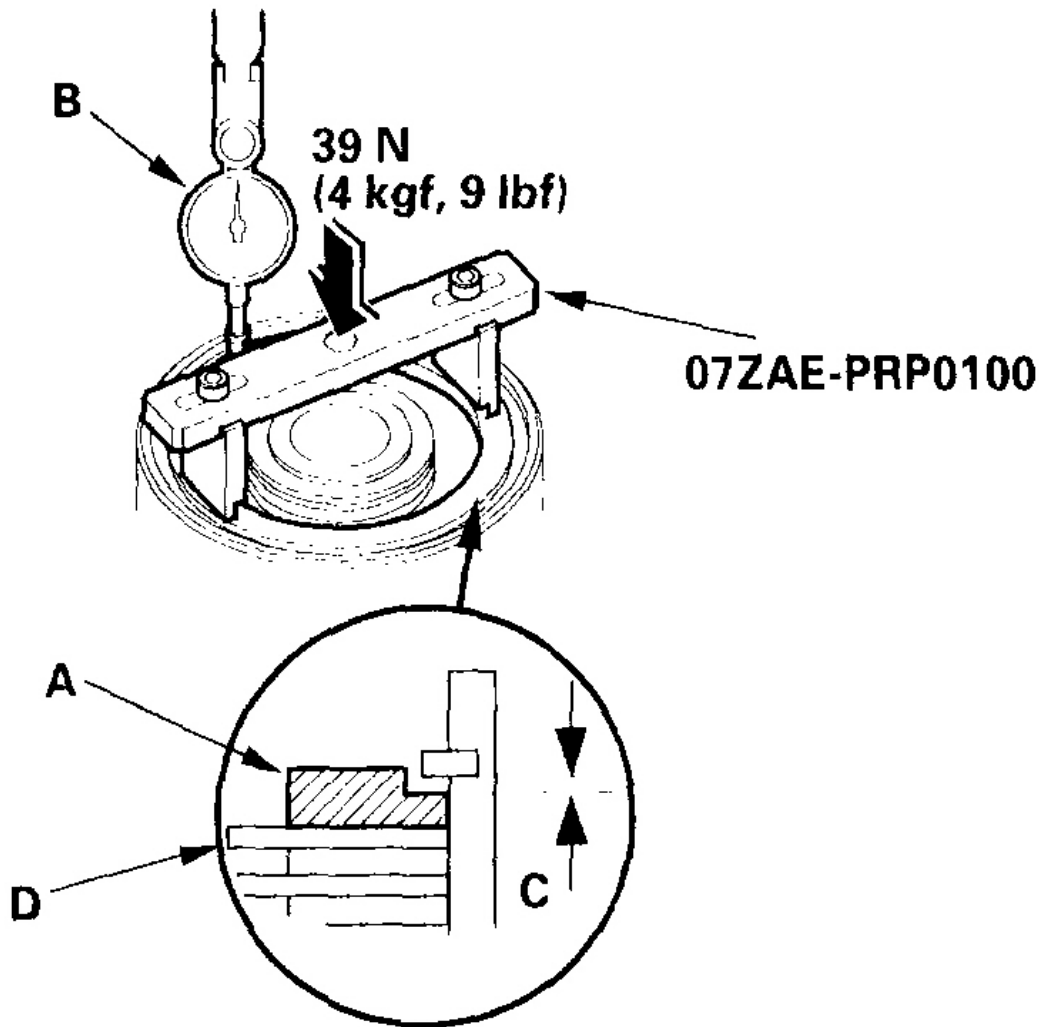
19. Set a dial indicator (A) on the clutch end plate (B).



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Fig. 56: Setting Dial Indicator On Clutch End Plate
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Zero the dial indicator with the clutch end plate lifted up to the snap ring (C).
21. Release the clutch end plate to lower the clutch end plate, then put the special tool on the end plate (A).



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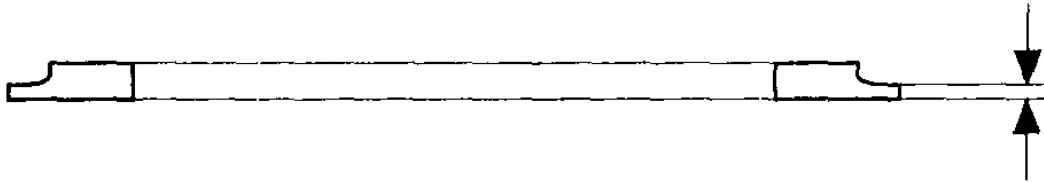
Fig. 57: Putting Special Tool On End Plate
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Press the special tool down with 39 N (4 kgf, 9 lbf) using a force gauge, and read the dial indicator (B). The dial indicator reads the clearance (C) between the clutch end plate and top disc (D). Take

measurements in at least three places, and use the average as the actual clearance.

Clutch End-Plate-to-Top-Disc Clearance Service Limit: 0.6-0.8 mm (0.024-0.031 in.)

23. If the clearance is out of service limit, select a new clutch end plate from the following table.



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Fig. 58: Selecting New Clutch End Plate Table (1 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Mark	Part Number	Thickness
14	22574-P4V-003	3.4 mm (0.134 in.)
15	22561-P4V-003	3.5 mm (0.138 in.)
16	22562-P4V-003	3.6 mm (0.142 in.)
17	22563-P4V-003	3.7 mm (0.146 in.)
18	22564-P4V-003	3.8 mm (0.150 in.)
19	22565-P4V-003	3.9 mm (0.154 in.)
20	22566-P4V-003	4.0 mm (0.157 in.)
21	22567-P4V-003	4.1 mm (0.161 in.)
22	22568-P4V-003	4.2 mm (0.165 in.)
23	22569-P4V-003	4.3 mm (0.169 in.)
24	22570-P4V-003	4.4 mm (0.173 in.)
25	22571-P4V-003	4.5 mm (0.177 in.)
26	22572-P4V-003	4.6 mm (0.181 in.)
27	22573-P4V-003	4.7 mm (0.185 in.)

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Fig. 59: Selecting New Clutch End Plate Table (2 Of 2)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

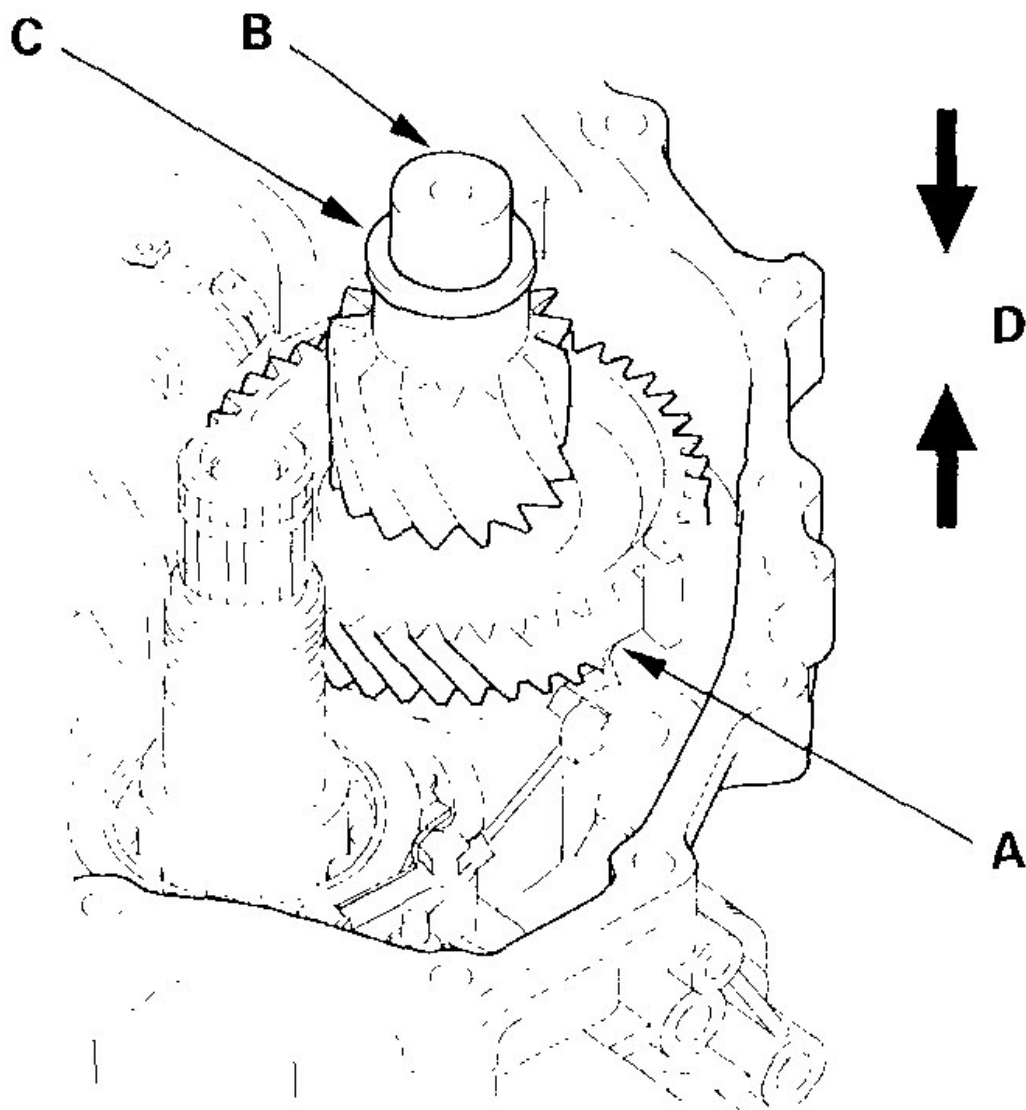
24. Install the new clutch end plate, then recheck the clearance. If the thickest clutch end plate is installed, but the clearance still over the service limit, replace the clutch discs and plates.

FINAL DRIVE SHAFT

THRUST CLEARANCE INSPECTION

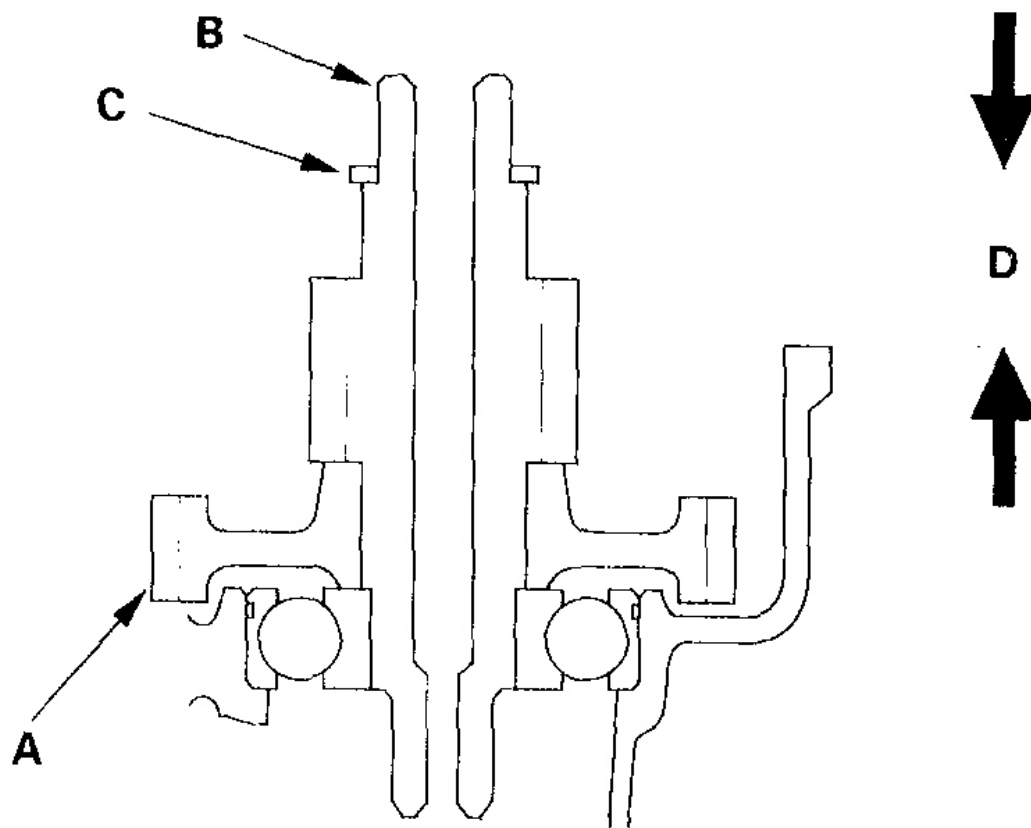
NOTE: If the transmission housing, flywheel housing, final drive shaft, secondary driven gear, or final drive shaft bearing is replaced, the final drive shaft thrust clearance must be adjusted with a 25 x 35 mm thrust shim.

1. Install the secondary driven gear (A) on the final drive shaft (B), then install the final drive shaft in the transmission housing. Install the existing 25 x 35 mm thrust washer (C).
2. Measure the distance (D) between the transmission housing surface and the thrust shim surface on the final drive shaft, then note the measurement (Measurement D).



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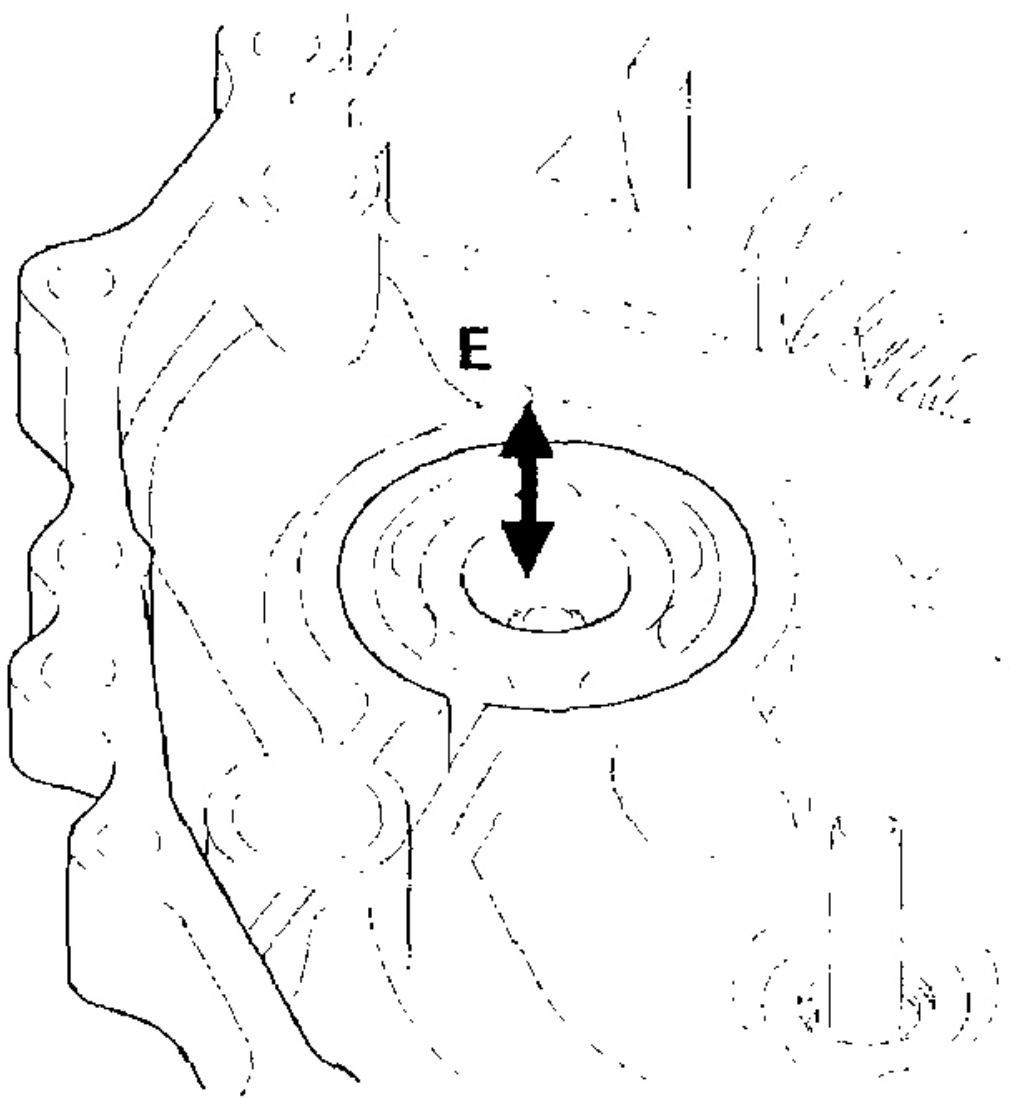
Fig. 60: Installing Secondary Driven Gear On Final Drive Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.



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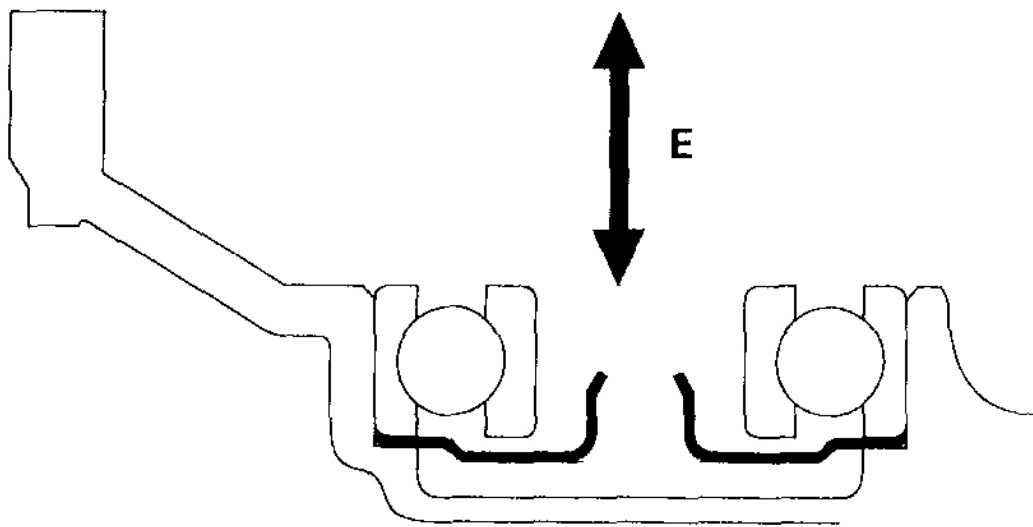
Fig. 61: Installing Existing Thrust Washer (Sectional View)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Measure the distance (E) between the flywheel housing surface and bearing inner race surface, then note the measurement (Measurement E).



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Fig. 62: Measuring Distance Between Flywheel Housing Surface & Bearing Inner Race Surface
Courtesy of AMERICAN HONDA MOTOR CO., INC.



G01461075

Fig. 63: Measuring Distance Between Flywheel Housing Surface & Bearing Inner Race Surface (Section View)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Calculate the final drive shaft thrust clearance using the formula:

$$\text{Clearance} = \text{Measurement D} - \text{Measurement E} + \text{Flywheel housing gasket thickness (0.5 mm)}$$

Standard: 0.15 mm (0.006 in.)

NOTE: The standard of the clearance includes thickness of the flywheel housing gasket (0.5 mm, 0.02 in.)

5. If the clearance is out of standard, select a 25 x 35 mm thrust shim from the following table.

No.	Part Number	Thickness
A	90551-P4V-000	2.8 mm (0.110 in.)
B	90552-P4V-000	2.9 mm (0.114 in.)
C	90553-P4V-000	3.0 mm (0.118 in.)
D	90554-P4V-000	3.1 mm (0.122 in.)
E	90555-P4V-000	3.2 mm (0.126 in.)
F	90556-P4V-000	3.3 mm (0.130 in.)
G	90557-P4V-000	3.4 mm (0.134 in.)
H	90558-P4V-000	3.5 mm (0.138 in.)
I	90559-P4V-000	3.6 mm (0.142 in.)
J	90560-P4V-000	3.7 mm (0.146 in.)
K	90561-P4V-000	3.8 mm (0.150 in.)
L	90562-PWR-000	3.9 mm (0.154 in.)
M	90563-PWR-000	4.0 mm (0.157 in.)

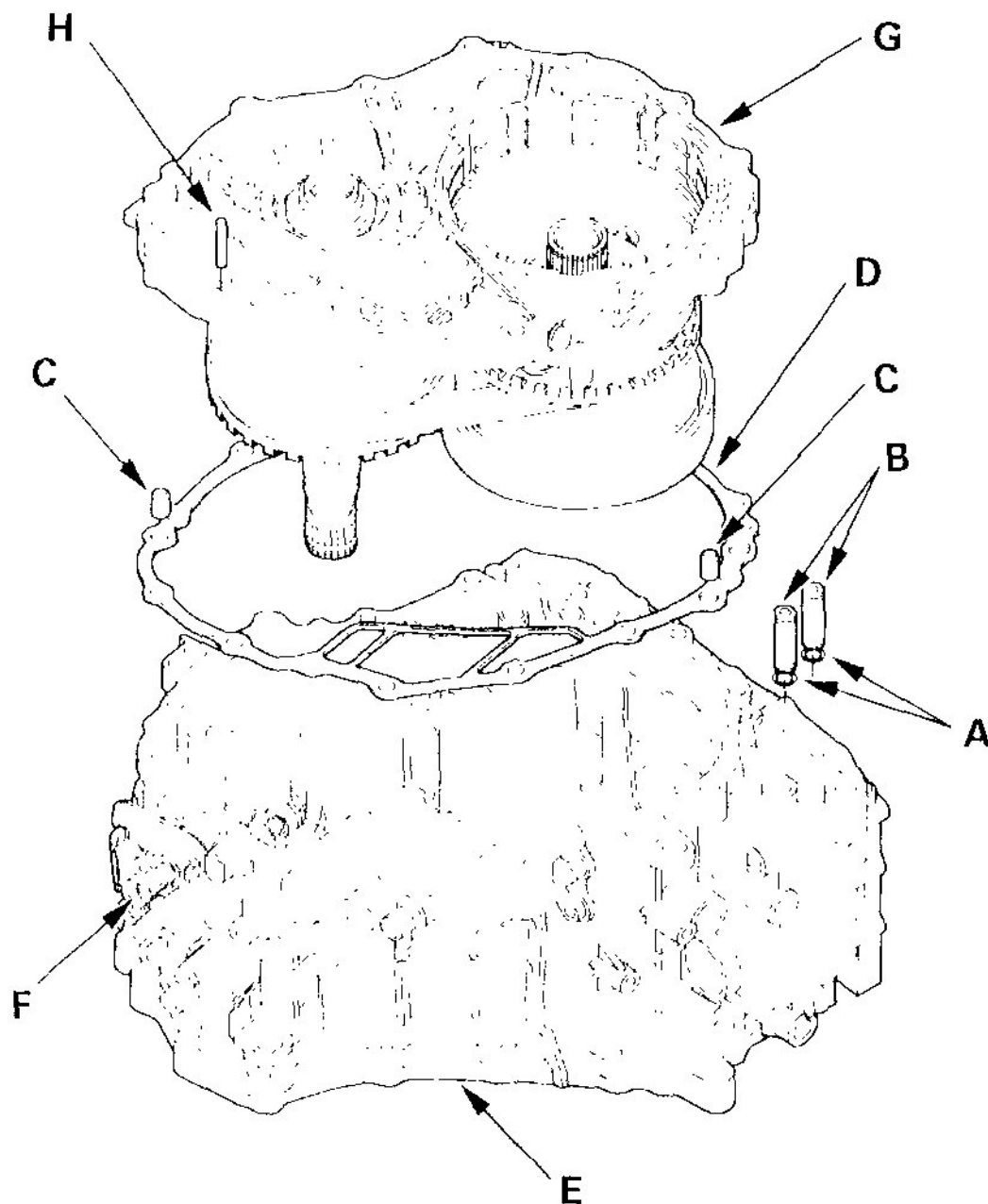
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Fig. 64: Selecting Thrust Shim Table

Courtesy of AMERICAN HONDA MOTOR CO., INC.

TRANSMISSION REASSEMBLY**Special Tools Required**

- Reverse brake spring compressor 07TAE-P4V0110
 - Start clutch installer 07TAE-P4V0130
1. Soak the reverse brake discs thoroughly in ATF for a minimum of 30 minutes.
 2. Install the new O-rings (A) on the either side of the ATF feed pipes (10.9 x 39.6 mm) (B), then install them with O-ring side into the housing.
 3. Install the dowel pins (C) (two) and the new gasket (D) on the transmission housing (E).



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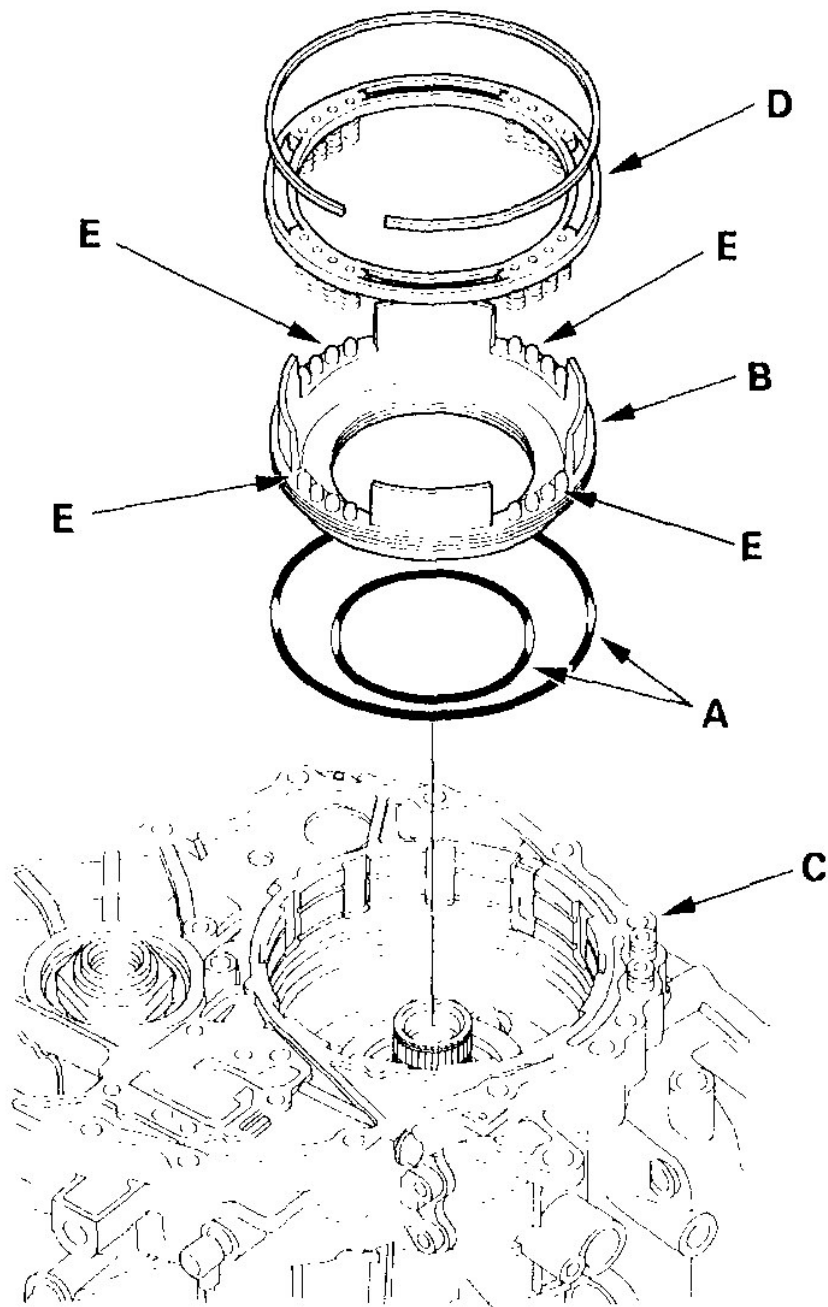
Fig. 65: Installing New O-Rings On Either Side Of ATF Feed Pipes
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Push the control shaft (F) toward the outside of the transmission housing, then install the intermediate housing (G).

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5. Put the control shaft back, then install the roller (H) in the intermediate housing by aligning the groove on the control shaft.
6. Install the new O-rings (A) on the reverse brake piston (B), then install the piston in the intermediate housing (C).

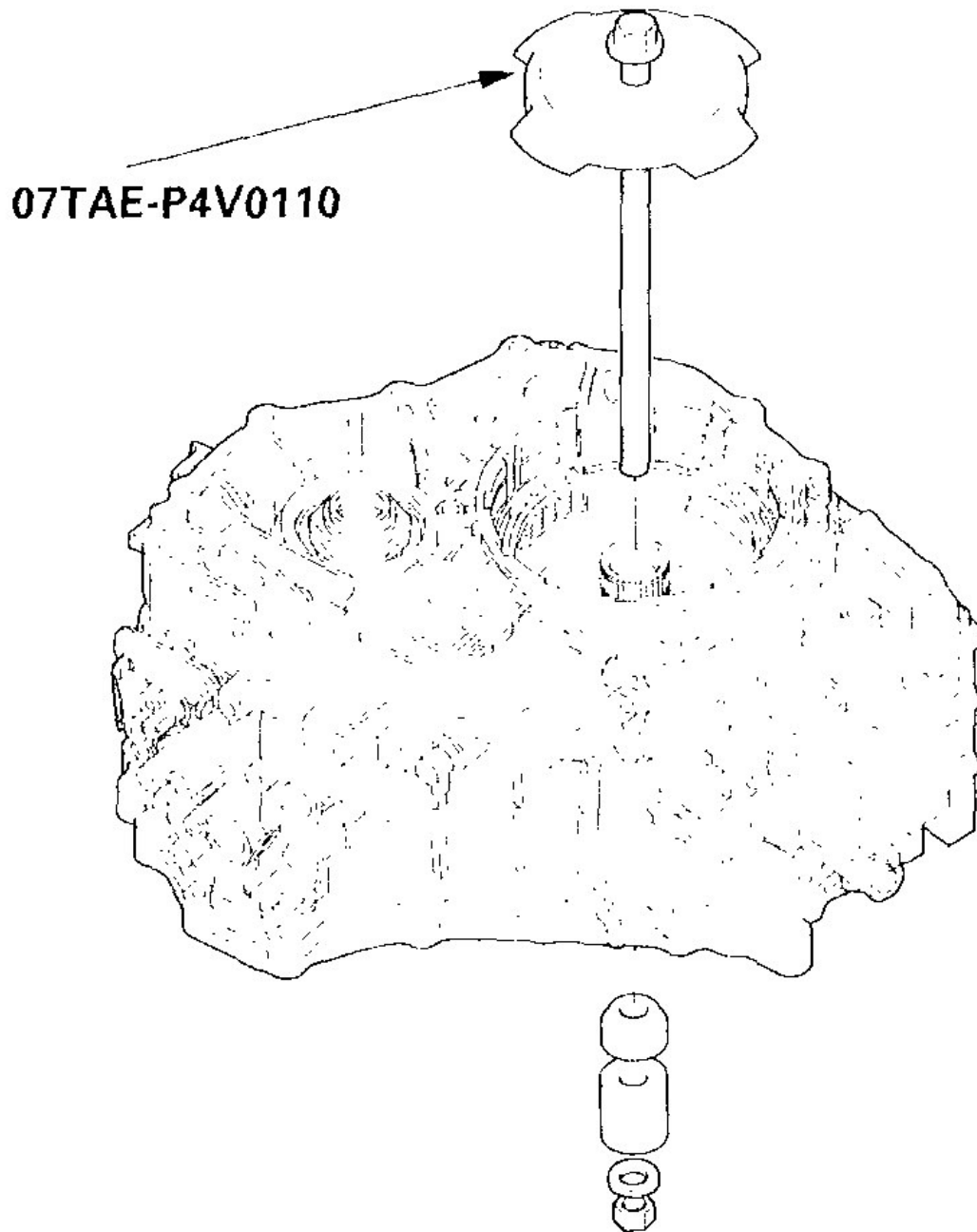


G01461078

Fig. 66: Installing New O-Rings On Reverse Brake Piston
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Install the spring retainer/return spring assembly (D); Install the return springs on the spring guide (E) on the reverse brake piston.

8. Install the special tool through the drive pulley shaft to compress the return spring. Be sure the special tool (spring compressor attachment) is set over the return springs, not over the reverse brake piston.

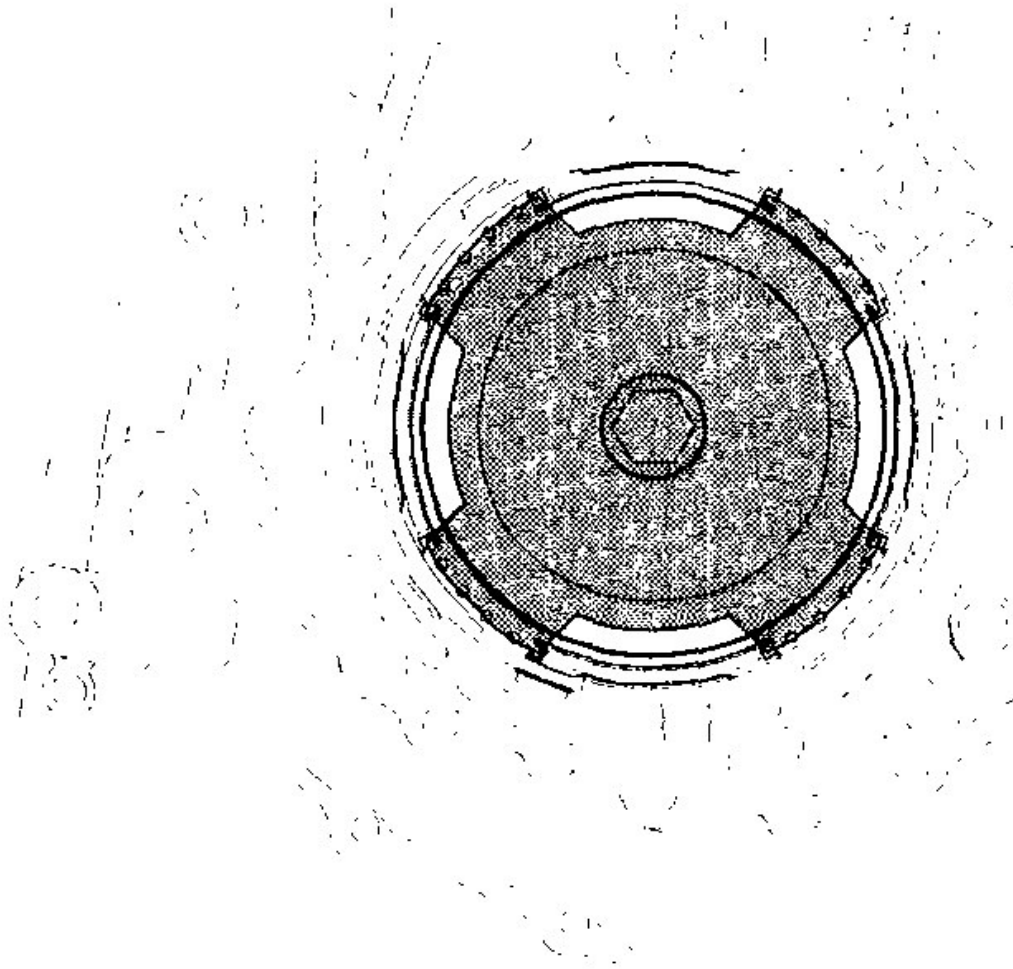


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Fig. 67: Installing Special Tool Through Drive Pulley Shaft To Compress Return Spring

Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Compress the return springs and make sure that the special tool is set over the return springs and the spring retainer tabs does not ride on the reverse brake piston.

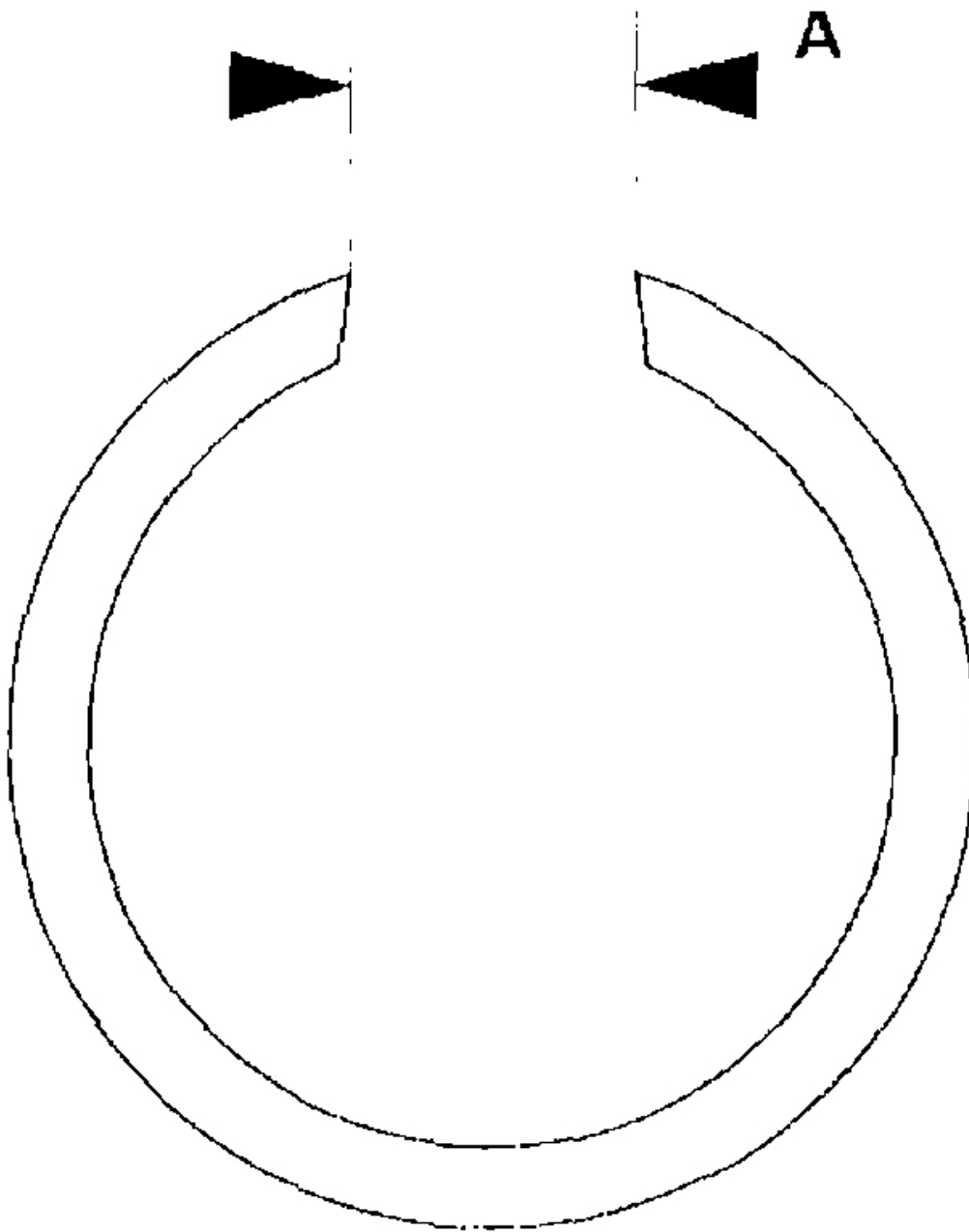


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Fig. 68: Compressing Return Springs

Courtesy of AMERICAN HONDA MOTOR CO., INC.

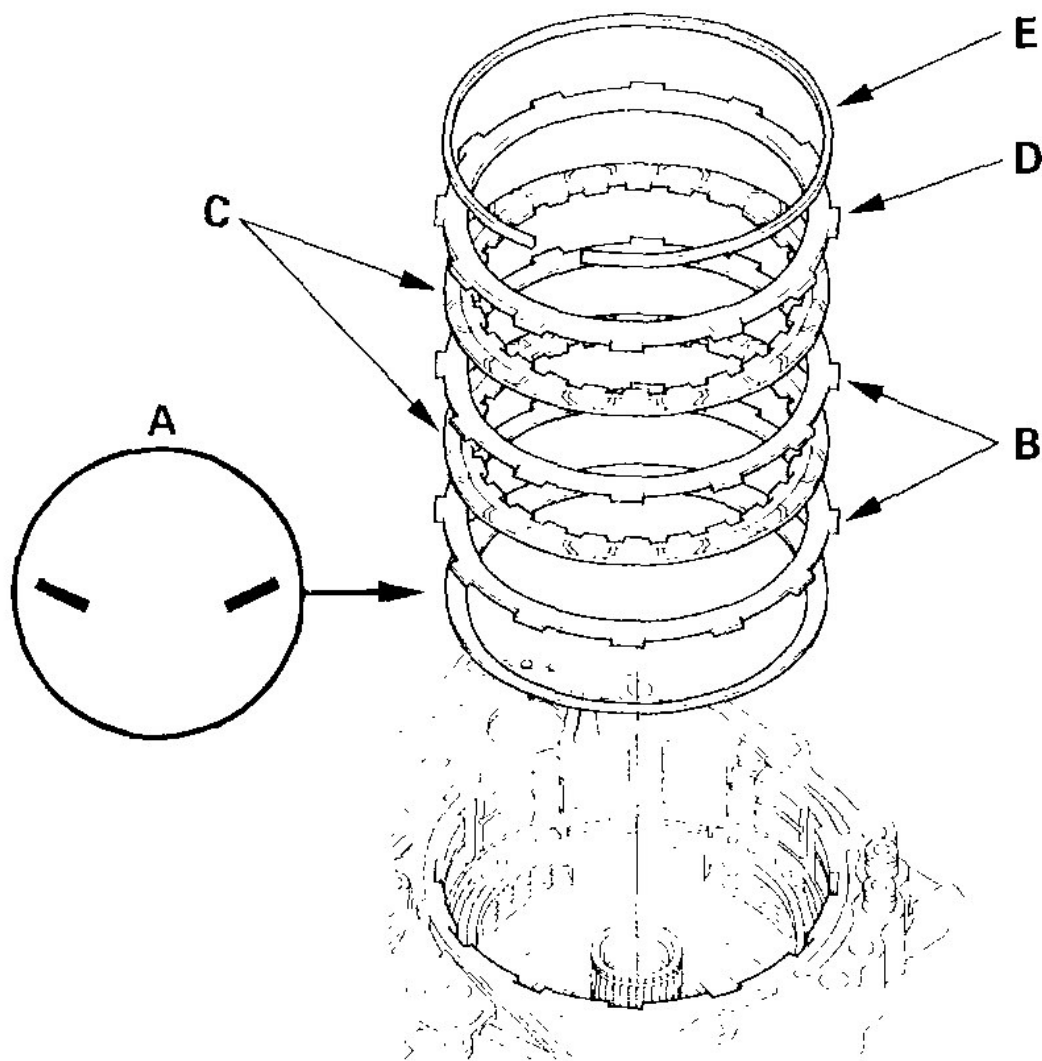
10. Install the snap ring in the intermediate housing above the spring retainer, and remove the special tool.
11. Verify that the snap ring end gap (A) is 15 mm (0.59 in.) and above.



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Fig. 69: Verifying Snap Ring End Gap
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Install the disc spring (A) on the reverse brake piston in the direction shown.

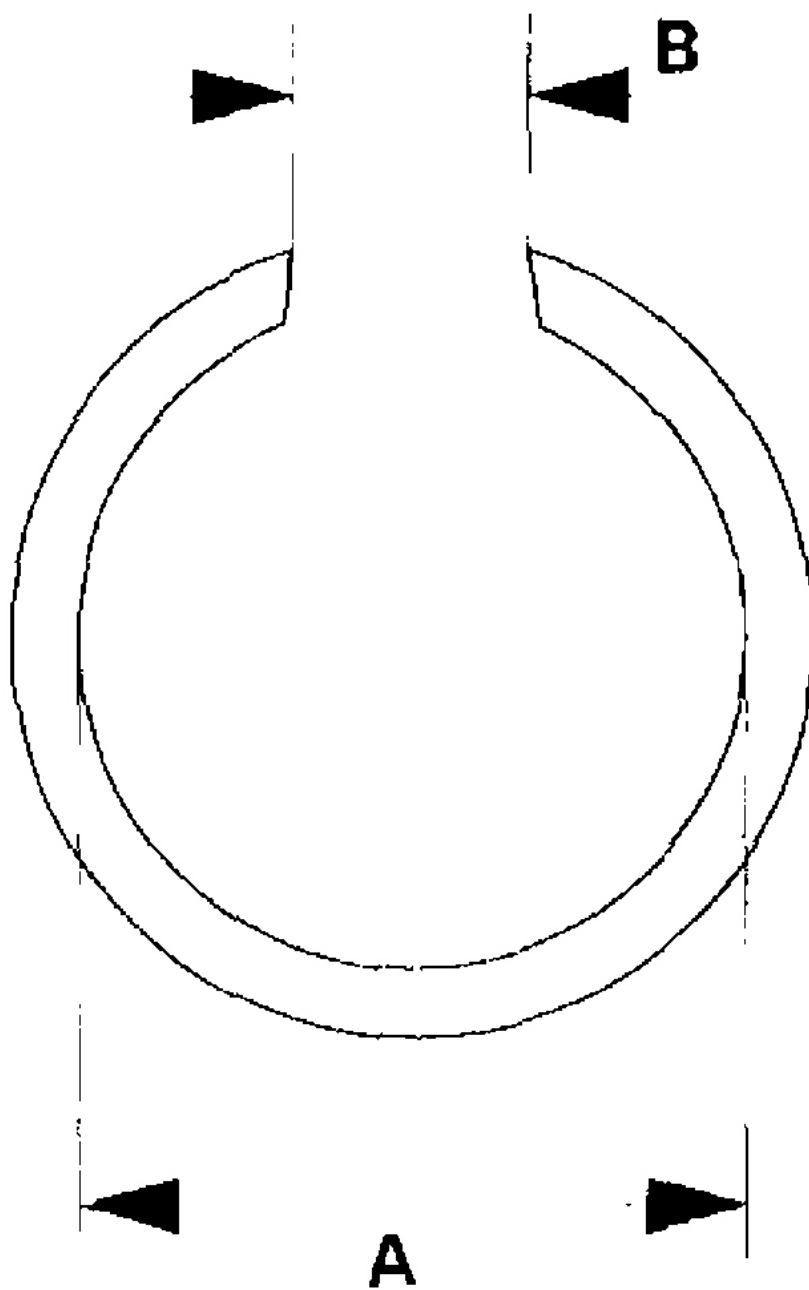


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Fig. 70: Installing Disc Spring

Courtesy of AMERICAN HONDA MOTOR CO., INC.

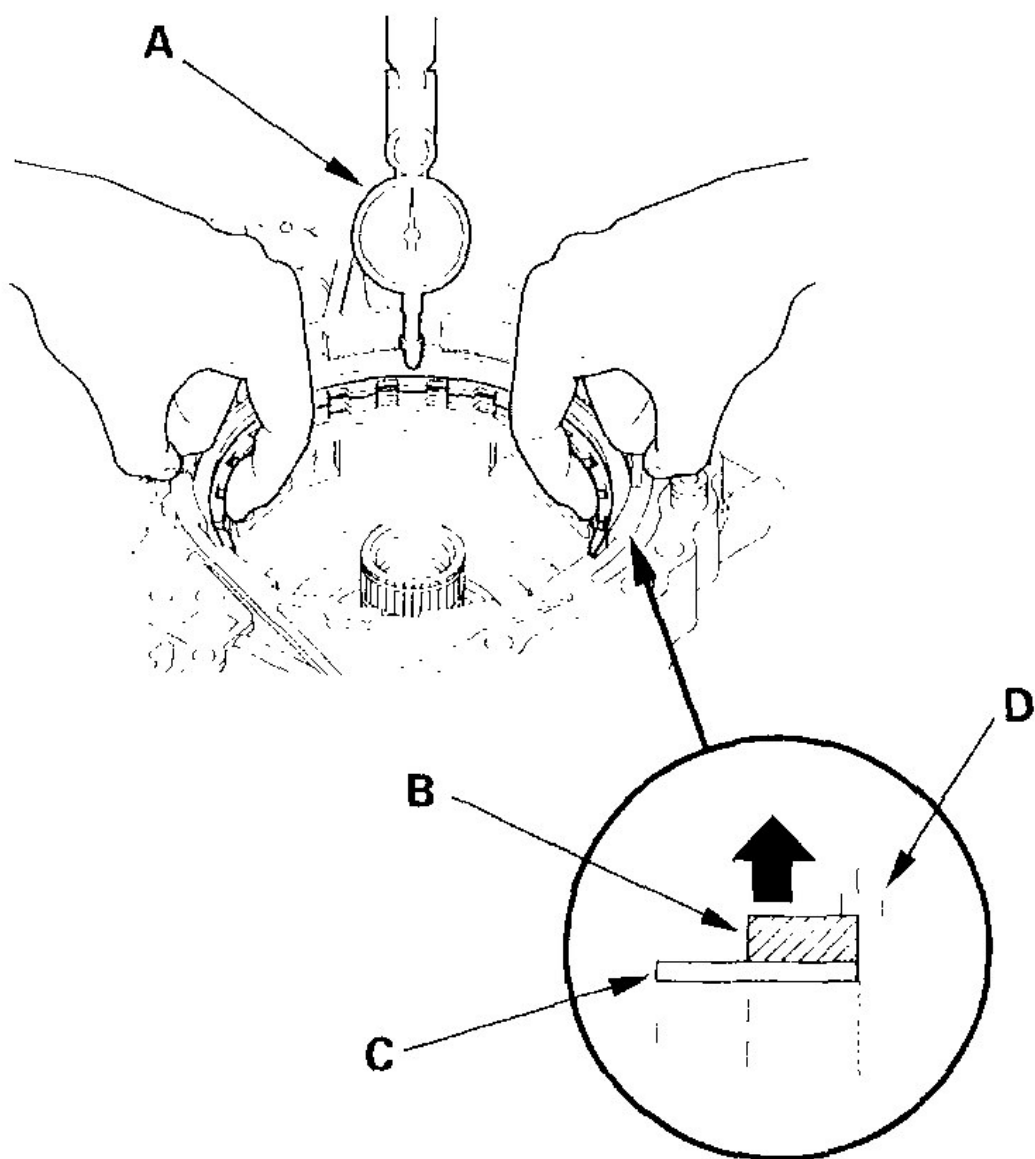
13. Starting with the reverse brake plate (B), alternately install the plates and discs (C). Install the reverse brake end plate (D), then install the snap ring (E).
14. Verify that the snap ring inside diameter (A) is 143.5 mm (5.65 in.) and above, and also the snap ring end gap (B) is 18 mm (0.71 in.) and above.



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Fig. 71: Verifying Snap Ring Inside Diameter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Set a dial indicator (A) on the reverse brake end plate (B).

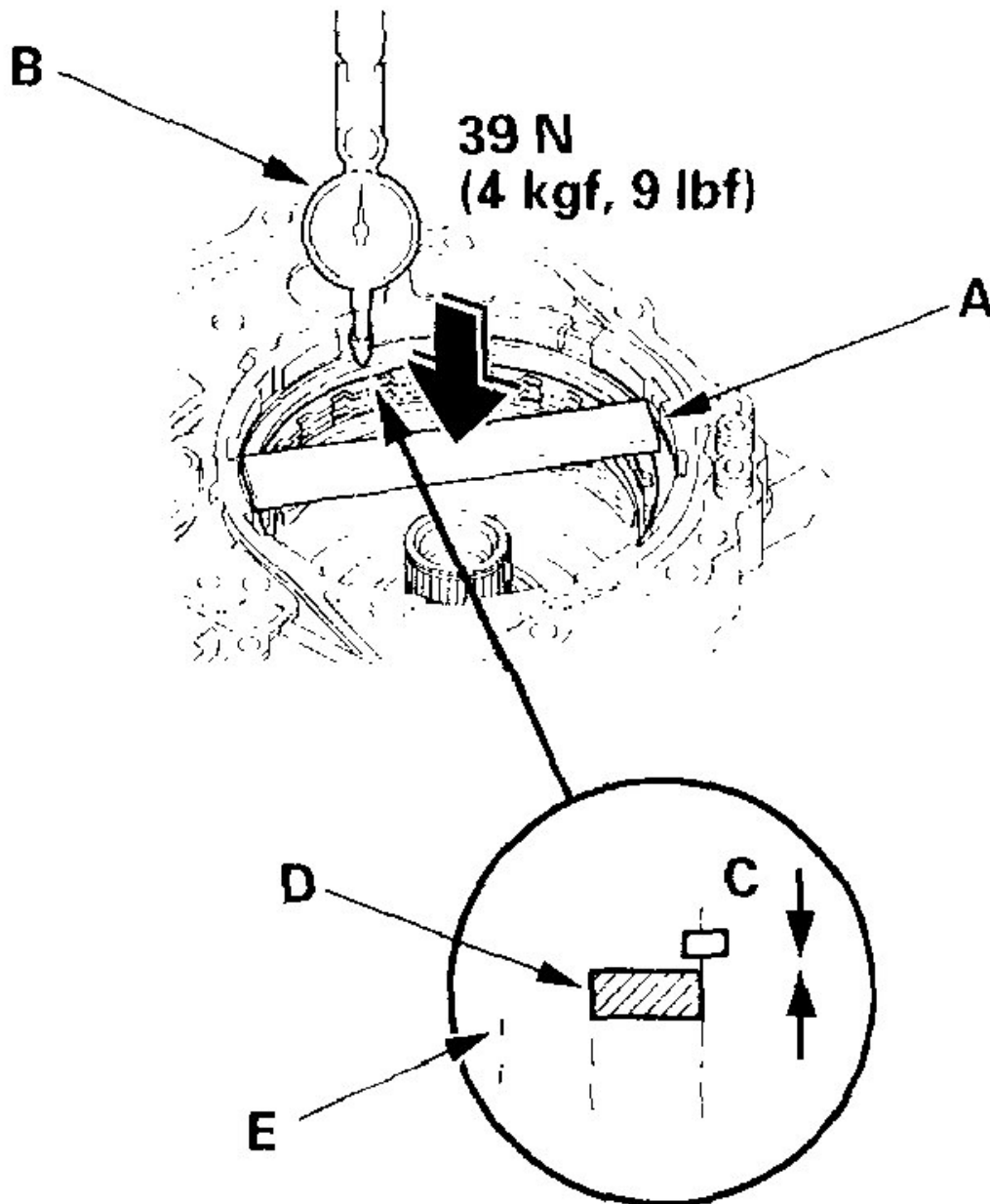


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Fig. 72: Setting Dial Indicator On Reverse Brake End Plate
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Zero the dial indicator by lifting the top disc (C) up against the reverse brake end plate and the end plate up against the snap ring (D).
17. Release the end plate to lower the end plate, and place a steel plate across width of the reverse brake end plate.

18. Press the steel plate (A) down with 39 N (4 kgf, 9 lbf) using a force gauge, and read the dial indicator (B). The dial indicator reads the clearance (C) between the reverse brake end plate (D) and top disc (E). Take measurements in at least three places, and use the average as the actual clearance.



G01461085

Fig. 73: Pressing Steel Plate Down With Using Force Gauge (Standard: 0.55-0.70 mm (0.22-0.028 in.))

Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. If the clearance is out of standard, select a new reverse brake end plate from the following table.

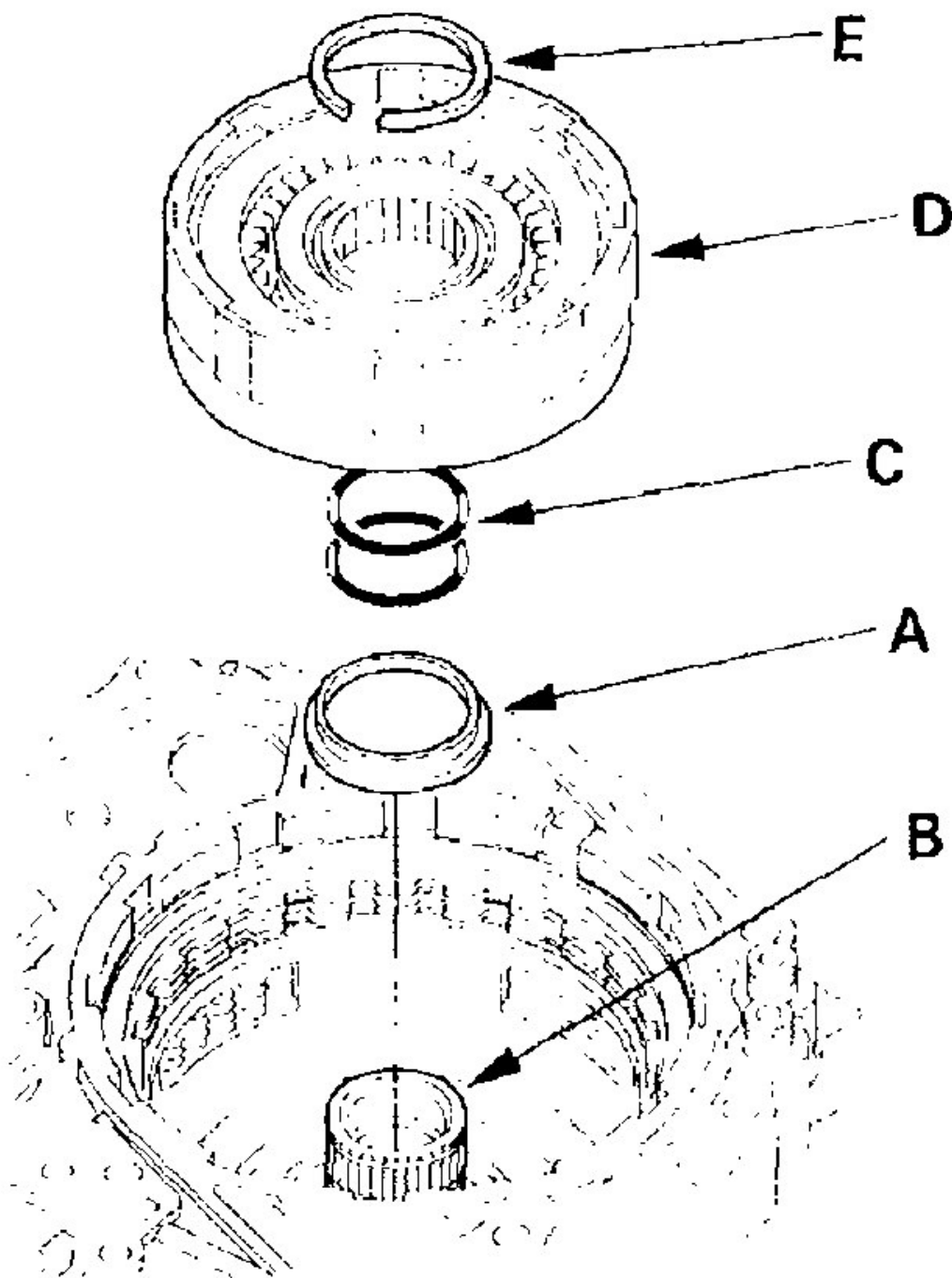
No.	Part Number	Thickness
1	22551-P4V-003	3.6 mm (0.142 in.)
A	22551-PWR-000	3.7 mm (0.146 in.)
2	22552-P4V-003	3.8 mm (0.150 in.)
B	22553-PWR-000	3.9 mm (0.154 in.)
3	22553-P4V-003	4.0 mm (0.157 in.)
C	22553-PWR-000	4.1 mm (0.161 in.)
4	22554-P4V-003	4.2 mm (0.165 in.)
D	22554-PWR-000	4.3 mm (0.169 in.)
5	22555-P4V-003	4.4 mm (0.173 in.)
E	22555-PWR-000	4.5 mm (0.177 in.)
6	22556-P4V-003	4.6 mm (0.181 in.)
F	22556-PWR-000	4.7 mm (0.185 in.)
7	22557-P4V-003	4.8 mm (0.189 in.)
8	22558-P4V-003	5.0 mm (0.200 in.)

G01461086

Fig. 74: Selecting Reverse Brake End Plate Table

Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. If replacing the reverse brake end plate, make sure that the clearance is within the tolerance.
 21. Install the snap ring retainer (A) over the drive pulley shaft (B).

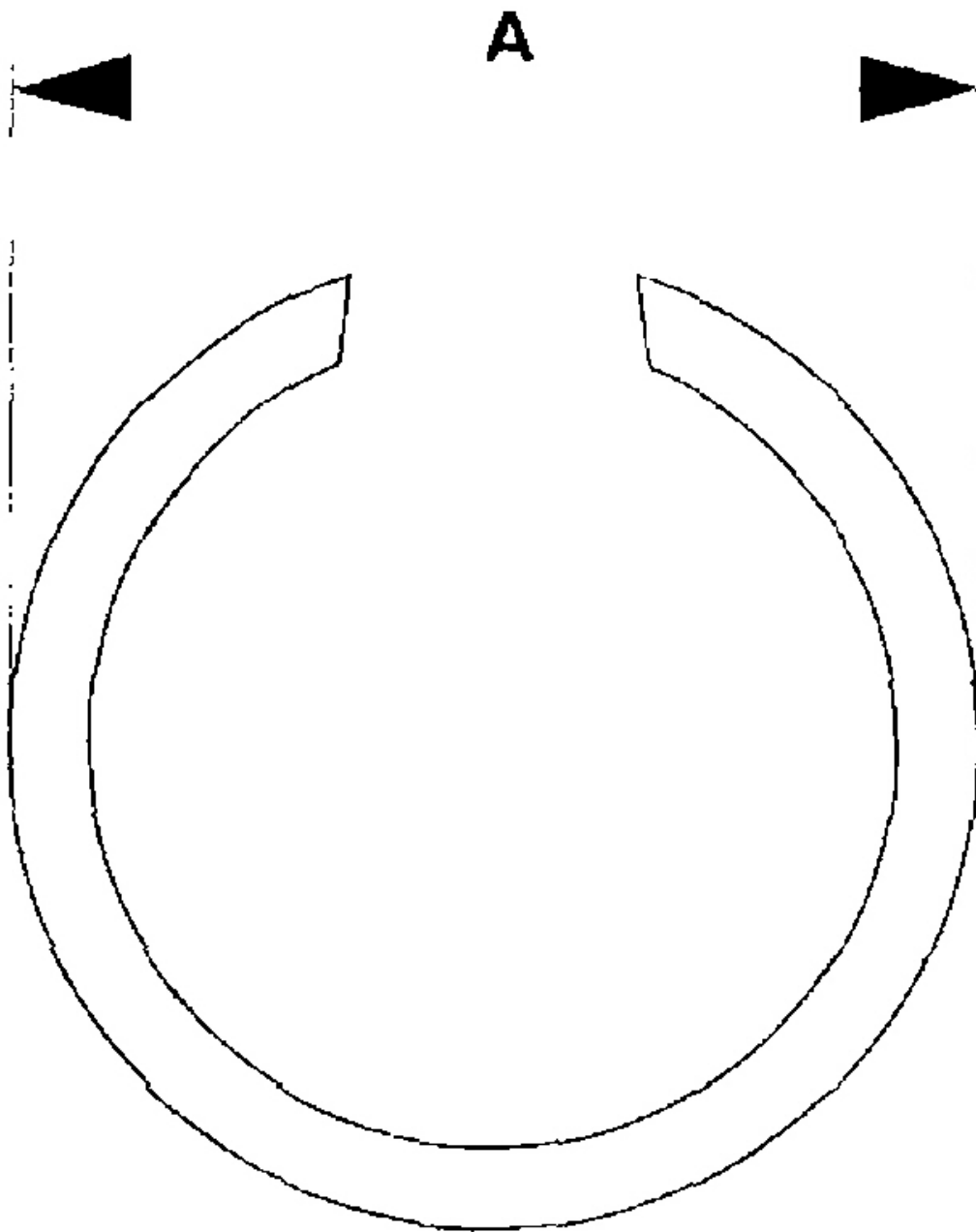


G01461087

Fig. 75: Installing Snap Ring Retainer Over Drive Pulley Shaft

Courtesy of AMERICAN HONDA MOTOR CO., INC.

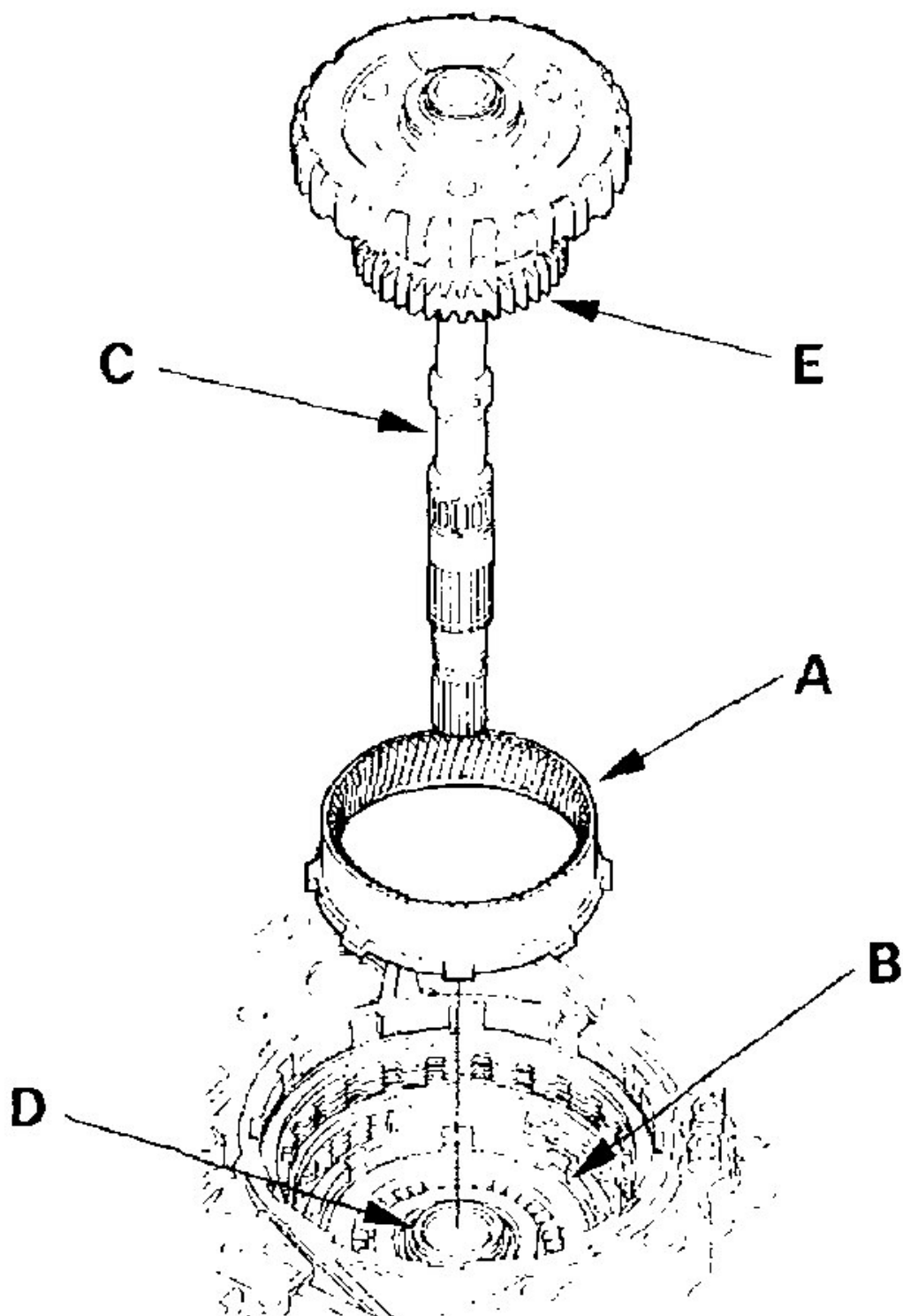
22. Wrap the drive pulley shaft splines with tape to prevent O-ring damage. Install the new O-rings (C) in the drive pulley shaft O-ring grooves, then remove the tape.
23. Install the forward clutch (D) on the drive pulley shaft, then install the snap ring (E) to secure the forward clutch.
24. Verify that the snap ring outside diameter (A) is 41.4 mm (1.63 in.) or less.



G01461088

Fig. 76: Verifying Snap Ring Outside Diameter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Install the ring gear (A) on the forward clutch (B).

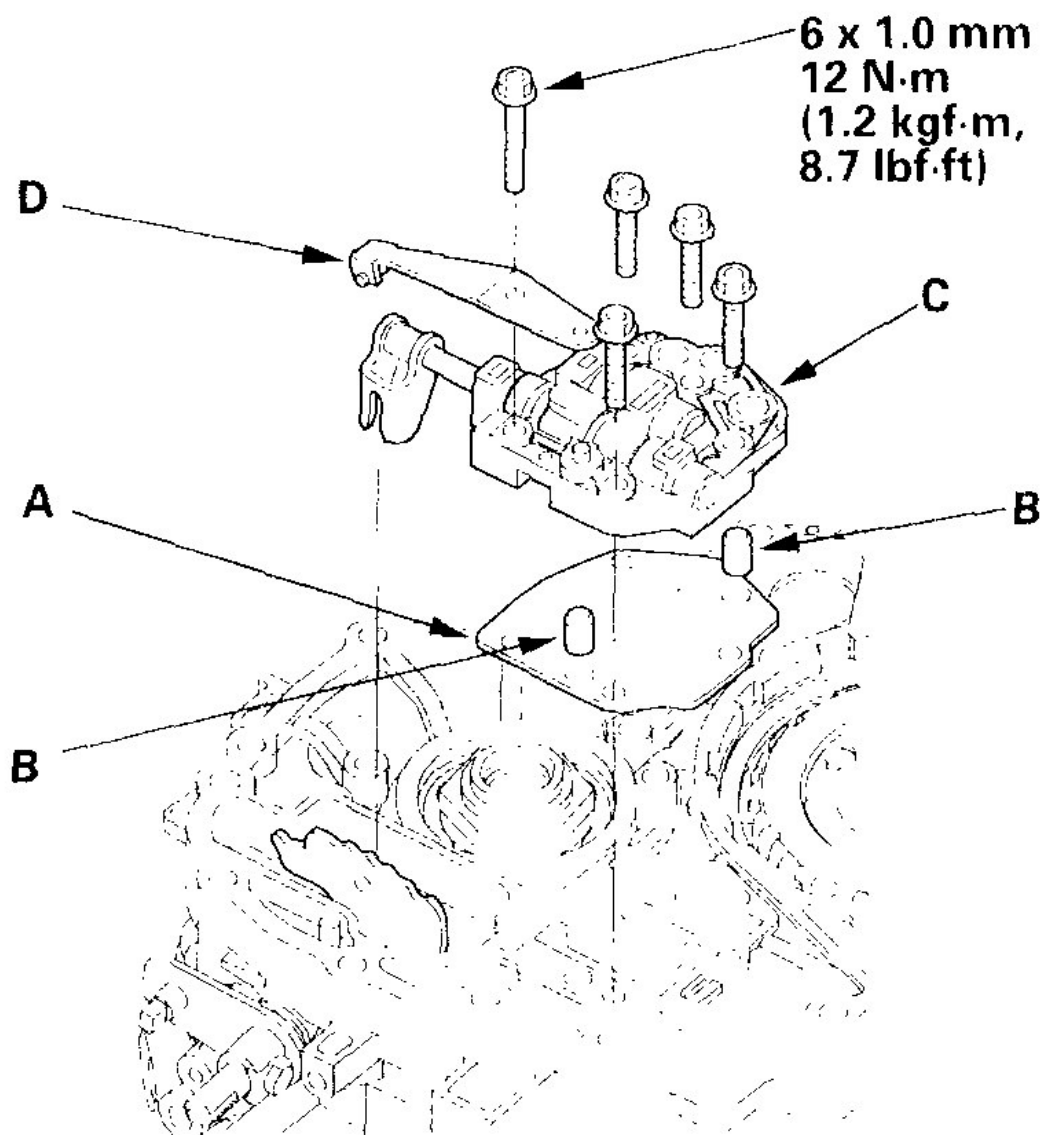


G01461089

Fig. 77: Installing Ring Gear On Forward Clutch

Courtesy of AMERICAN HONDA MOTOR CO., INC.

26. Install the input shaft/planetary carrier assembly (C) through the drive pulley shaft (D) by aligning the sun gear (E) with the forward clutch discs and aligning the planetary carrier with the reverse brake discs.
27. Install the manual valve body separator plate (A) and dowel pins (B) (two) on the intermediate housing, then install the manual valve body (C) and detent spring (D).

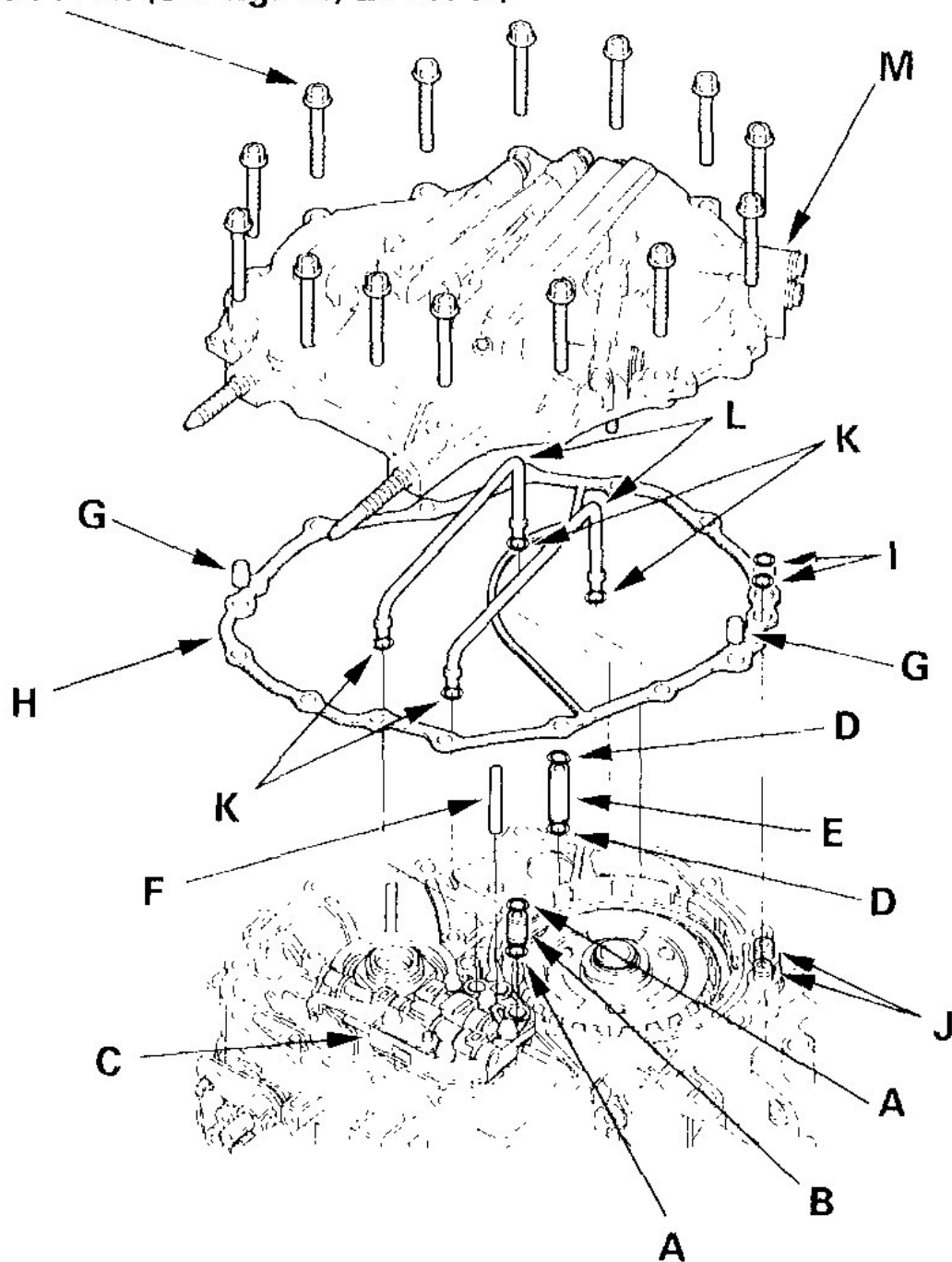


G01461090

Fig. 78: Installing Manual Valve Body Separator Plate
Courtesy of AMERICAN HONDA MOTOR CO., INC.

28. Install the new O-rings (A) on the 10.9 x 18.6 mm ATF feed pipe (B), then install it on the manual valve body (C).

8 x 1.25 mm
34 N·m (3.5 kgf·m, 25 lbf·ft)



G01461091

Fig. 79: Installing New O-Rings On ATF Feed Pipe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

29. Install the O-rings (D) on the 10.9 x 39.6 mm ATF feed pipe (E), then install it and 8 mm ATF pipe (F) in the intermediate housing.
30. Install the two dowel pins (G) and the new gasket (H) on the intermediate housing, then install the new O-rings (I) on the top of the 10.9 x 39.6 mm ATF feed pipes (J).
31. Install the new O-rings (K) on the ATF feed pipes (L), then install them on the manual valve body and intermediate housing.
32. Install the end cover (M) (14 bolts).
33. Turn the transmission end cover down.
34. Install the sealing ring (A) on the new secondary drive/park gear (B).

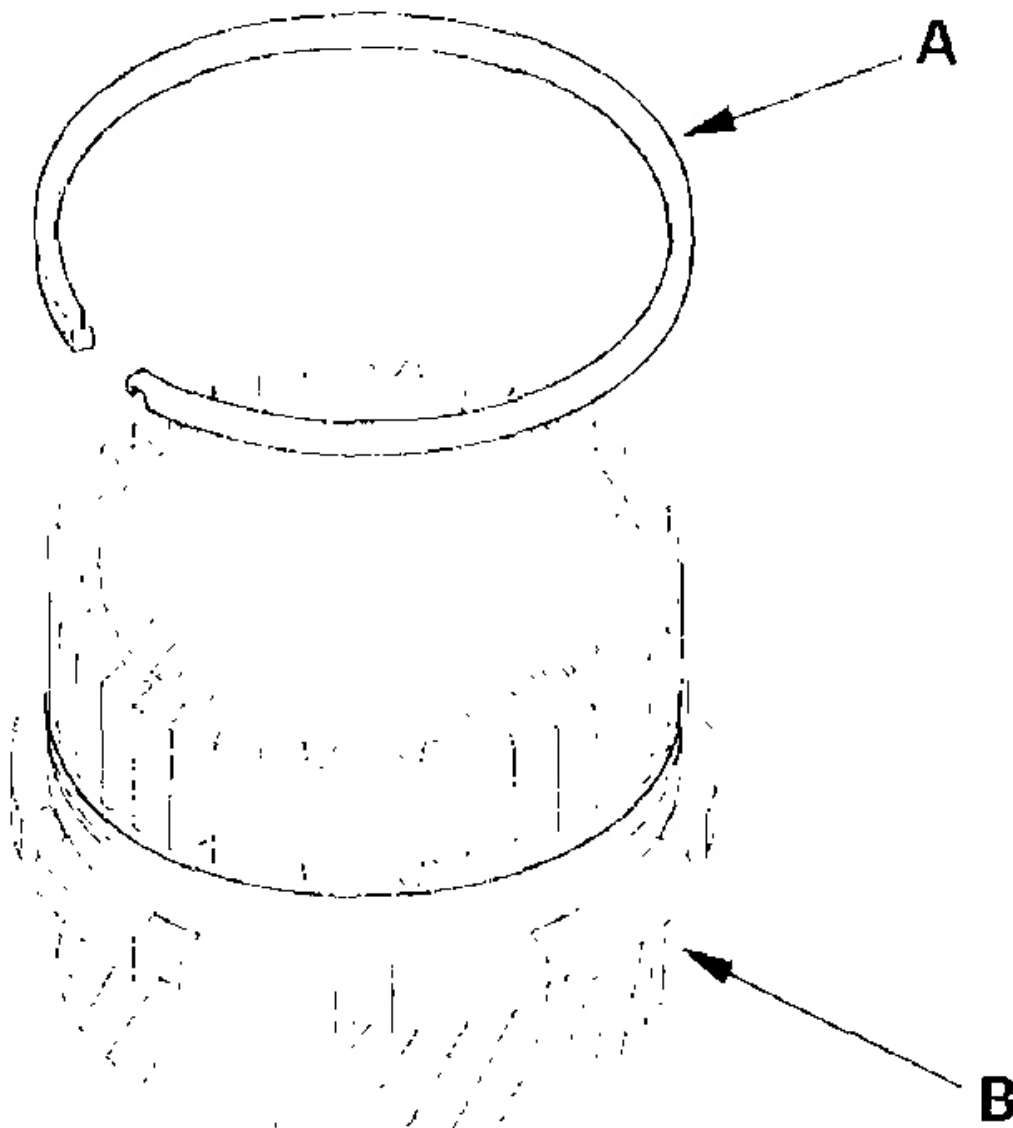
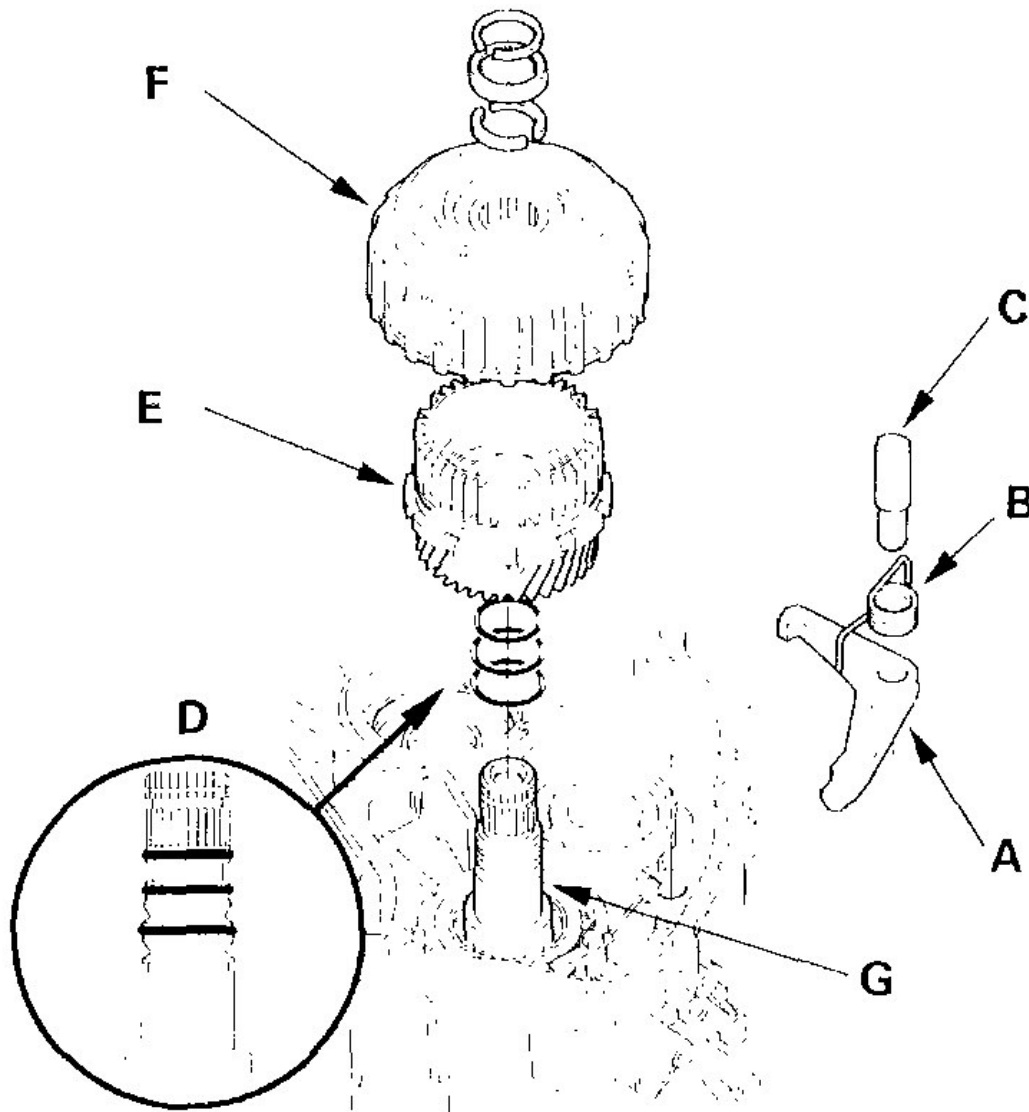
**G01461092**

Fig. 80: Installing Sealing Ring On New Secondary Drive/Park Gear
Courtesy of AMERICAN HONDA MOTOR CO., INC.

35. Install the park pawl (A), pawl spring (B), and pawl shaft (C) on the transmission housing, then move the control lever to any position other than P.



G01461093

Fig. 81: Installing Park Pawl

Courtesy of AMERICAN HONDA MOTOR CO., INC.

36. Wrap the driven pulley shaft splines to prevent O-ring damage, install the new O-rings (D) in the shaft O-ring grooves, and remove the tape.
37. Install the secondary drive/park gear (E) in the start clutch (F), then install them on the driven pulley shaft (G).
38. Pull the handle (A) of the special tool up, then install the tip of it into the driven pulley shaft feed pipe

hole, and set the special tool on the start clutch. Do not allow dirt or other particles to enter into the transmission.

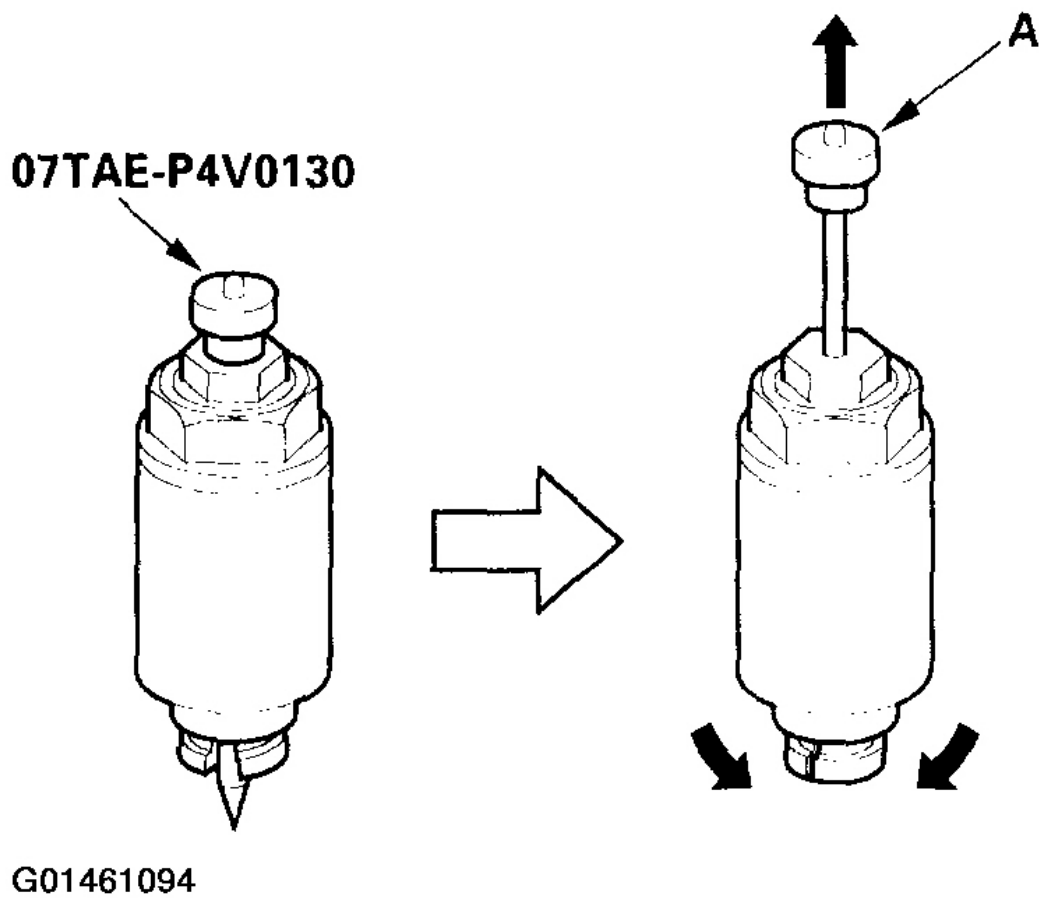
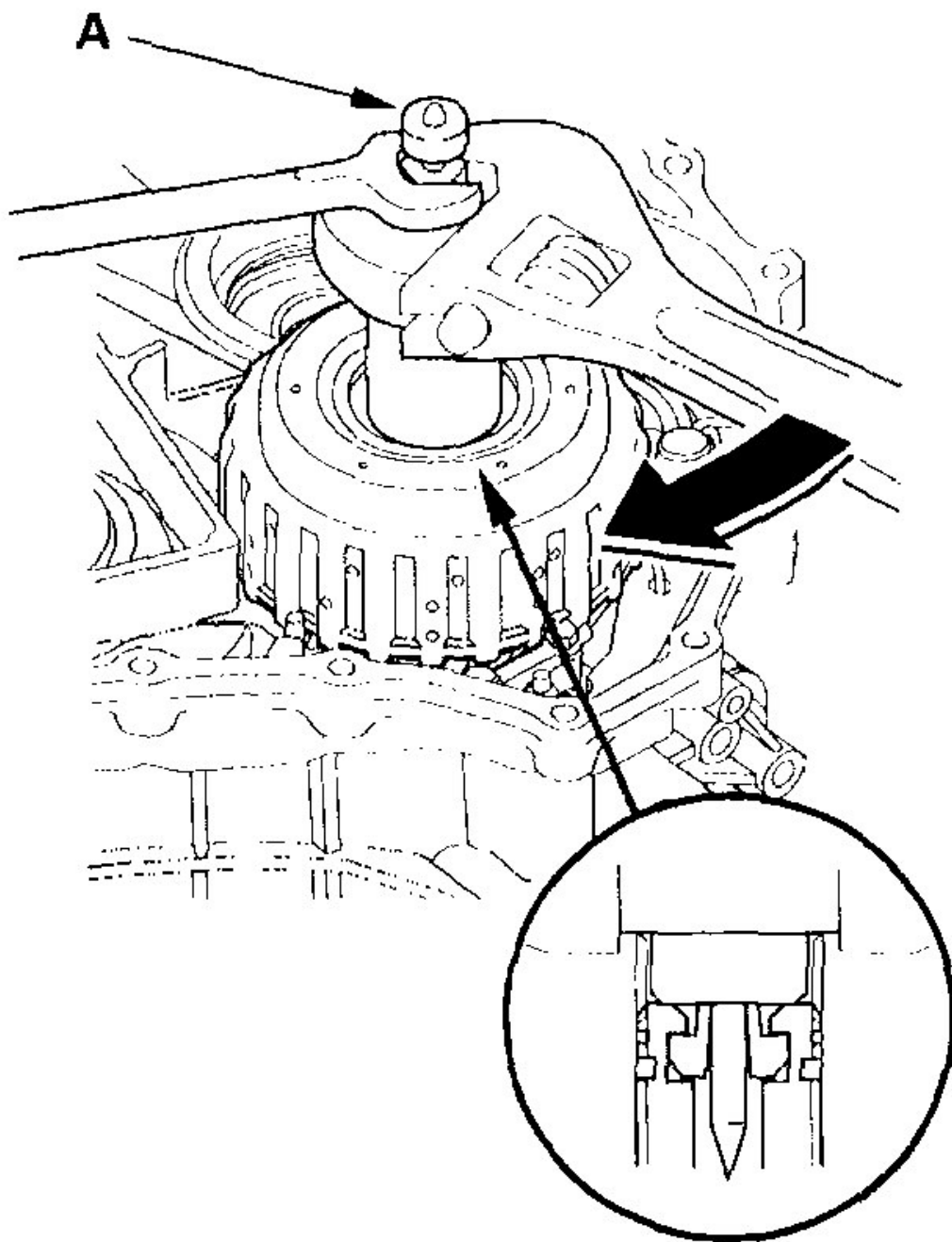


Fig. 82: Pulling Handle On Special Tool Up
Courtesy of AMERICAN HONDA MOTOR CO., INC.

39. Push the handle (A) of the special tool, then tighten the nut to seat the secondary drive/park gear on the drive pulley shaft.



G01461095

Fig. 83: Pushing Handle Of Special Tool
Courtesy of AMERICAN HONDA MOTOR CO., INC.

40. Pull the handle of the special tool up, and remove the special tool.
41. Install the 25.5 mm cotters to the cotter groove on the driven pulley shaft, then measure the clearance between the cotters (A) and the start clutch guide (B) with a feeler gauge (C). Take measurements in at least three places, and use the average as the actual clearance.

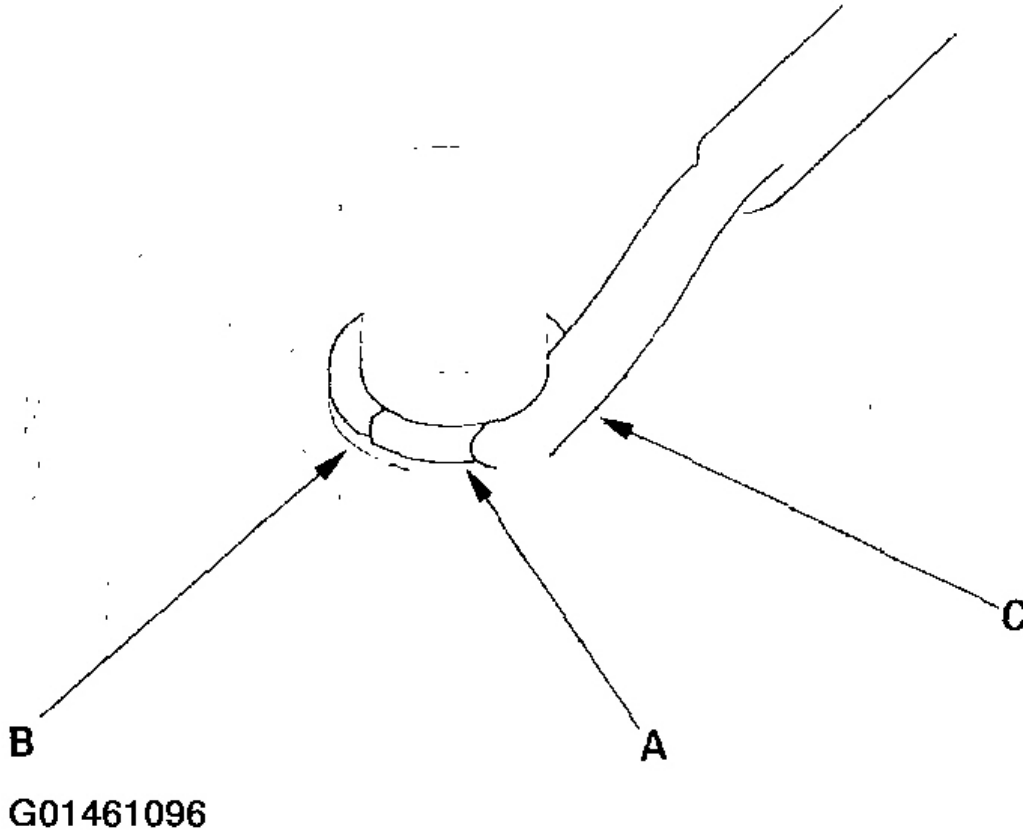


Fig. 84: Measuring Clearance Between Cotters & Start Clutch Guide (Standard: 0-0.13 mm (0-0.005 in.))

Courtesy of AMERICAN HONDA MOTOR CO., INC.

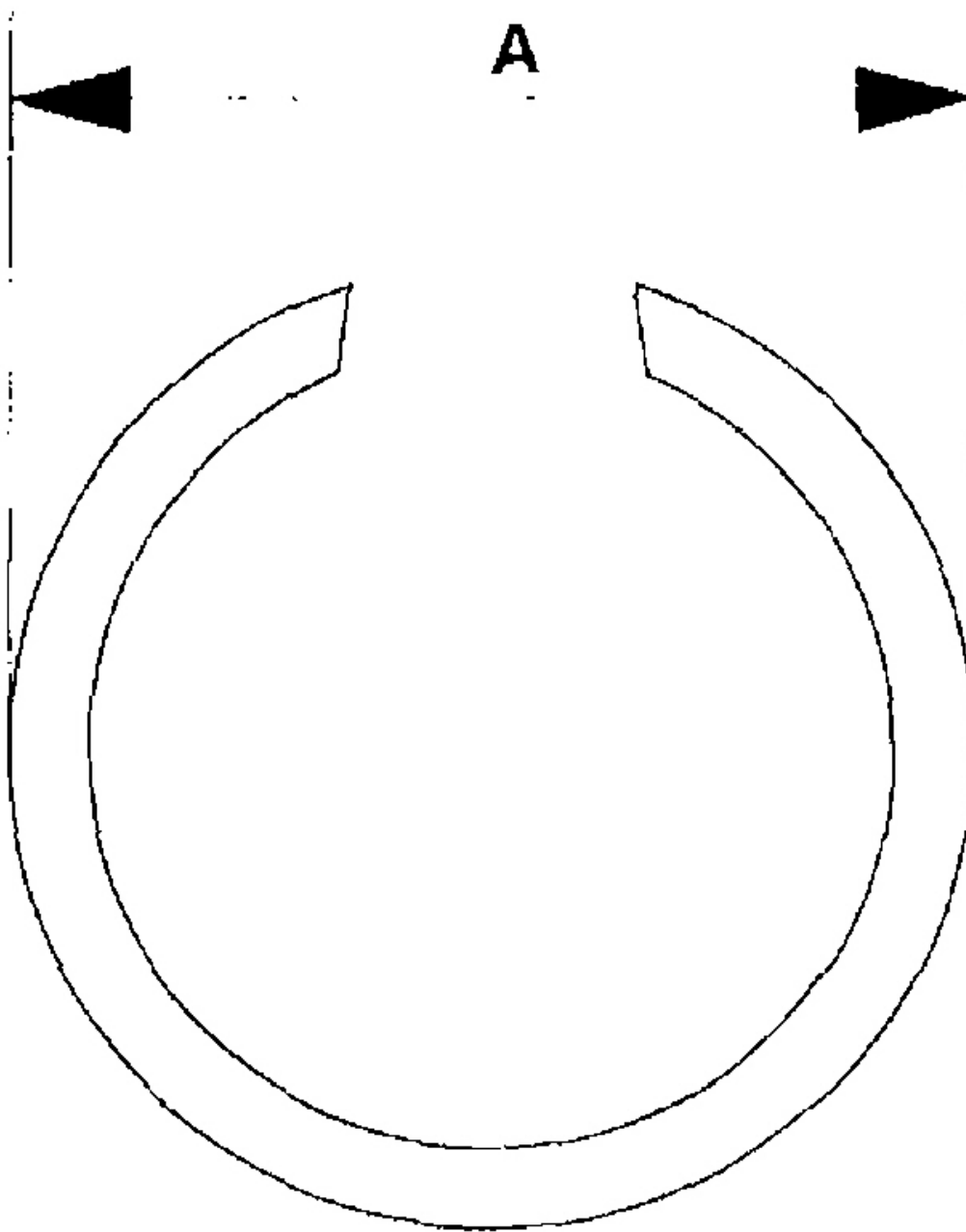
42. If the clearance is out of standard, remove the cotteners, and measure its thickness.
43. Select and install the new 25.5 mm cotteners as a set, then recheck that the clearance is within the standard.

No.	Part Number	Thickness
A	90429-P4V-000	2.9 mm (0.114 in.)
B	90430-P4V-000	3.0 mm (0.118 in.)
C	90431-P4V-000	3.1 mm (0.122 in.)
D	90432-P4V-000	3.2 mm (0.126 in.)

G01461097

Fig. 85: Selecting New Cotters Table**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

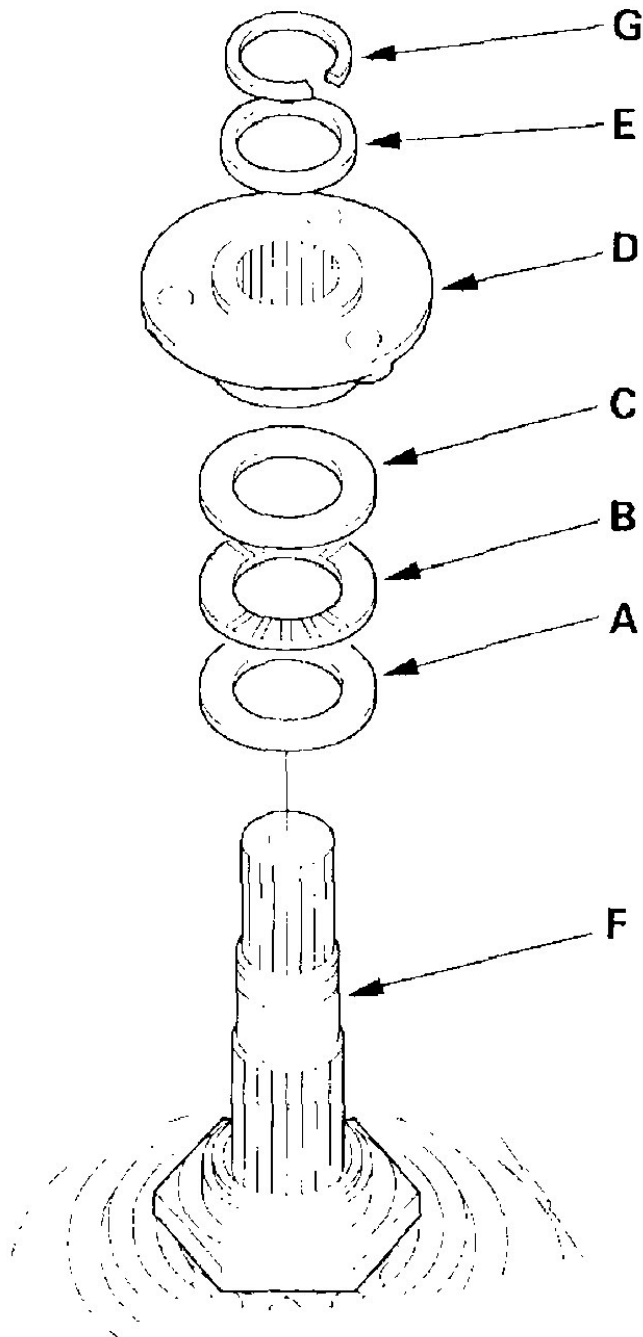
44. Install the cotter retainer and snap ring.
45. Verify that the snap ring outside diameter (A) is 33.9 mm (1.33 in.) or less.



G01461098

Fig. 86: Verifying Snap Ring Outside Diameter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

46. Install the thrust washer (A), thrust needle bearing (B), thrust washer (C), ATF pump drive sprocket hub (D), and 22 x 28 mm thrust shim (E) on the input shaft (F), and install the snap ring (G) to secure them.

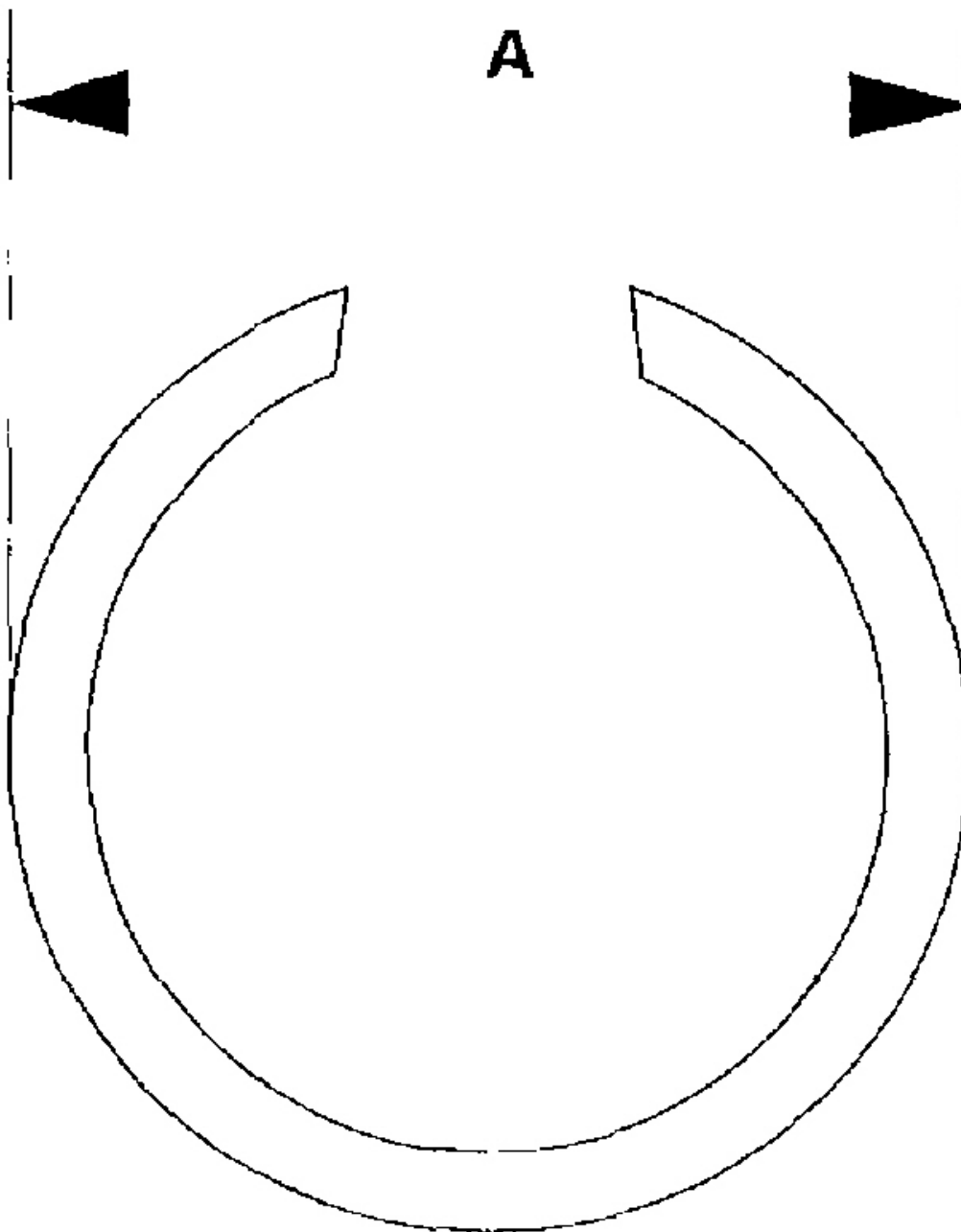


G01461099

Fig. 87: Installing Thrust Washer

Courtesy of AMERICAN HONDA MOTOR CO., INC.

47. Verify that the snap ring outside diameter (A) is 26.3 mm (1.04 in.) or less.

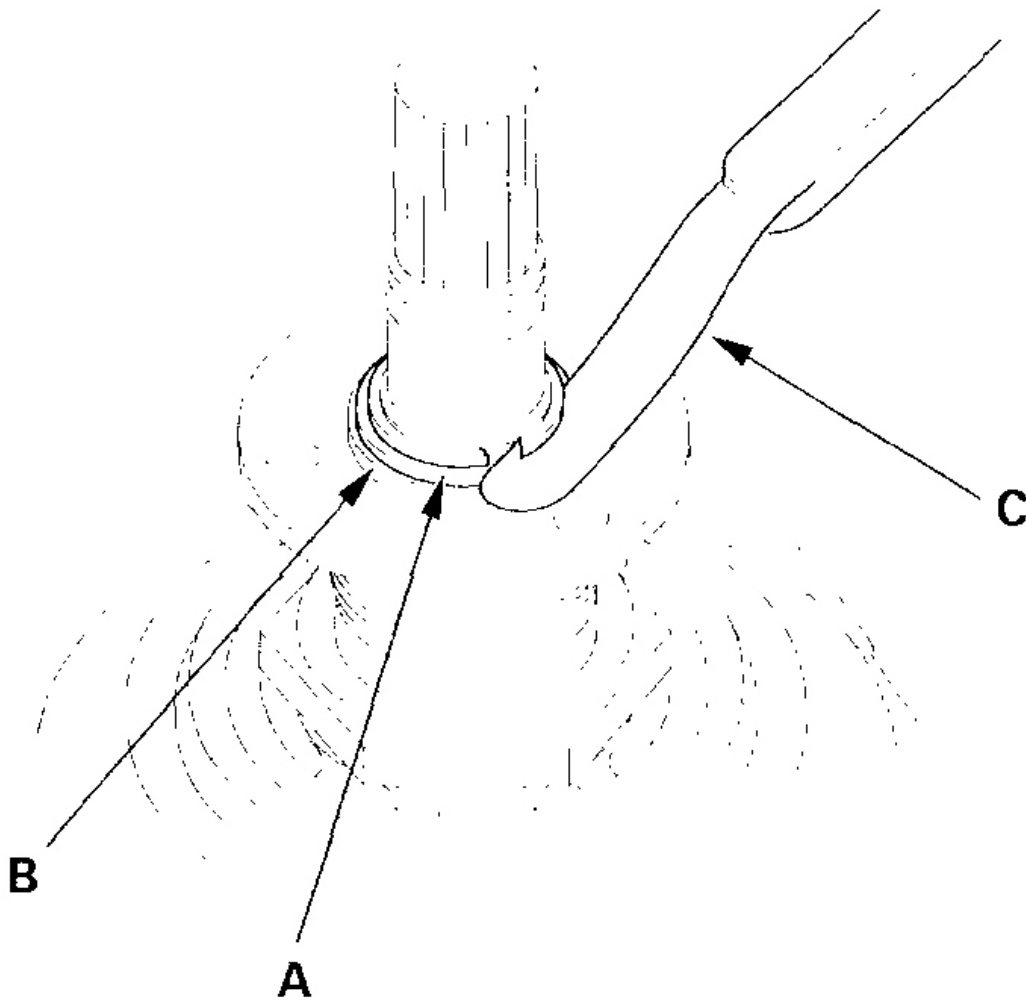


G01461100

Fig. 88: Verifying Snap Ring Outside Diameter

Courtesy of AMERICAN HONDA MOTOR CO., INC.

48. Measure the clearance between the 22 x 28 mm thrust shim (A) and the snap ring (B) with a feeler gauge (C). Take measurements in at least three places, and use the average as the actual clearance.



G01461101

Fig. 89: Measuring Clearance Between Shim & Snap Ring With Feeler Gauge (Standard: 0.37-0.65 mm (0.015-0.026 in.))

Courtesy of AMERICAN HONDA MOTOR CO., INC.

49. If the clearance is out of standard, remove the 22 x 28 mm thrust shim, and measure its thickness.
50. Select and install the new 22 x 28 thrust shim, then recheck that the clearance is within the standard.

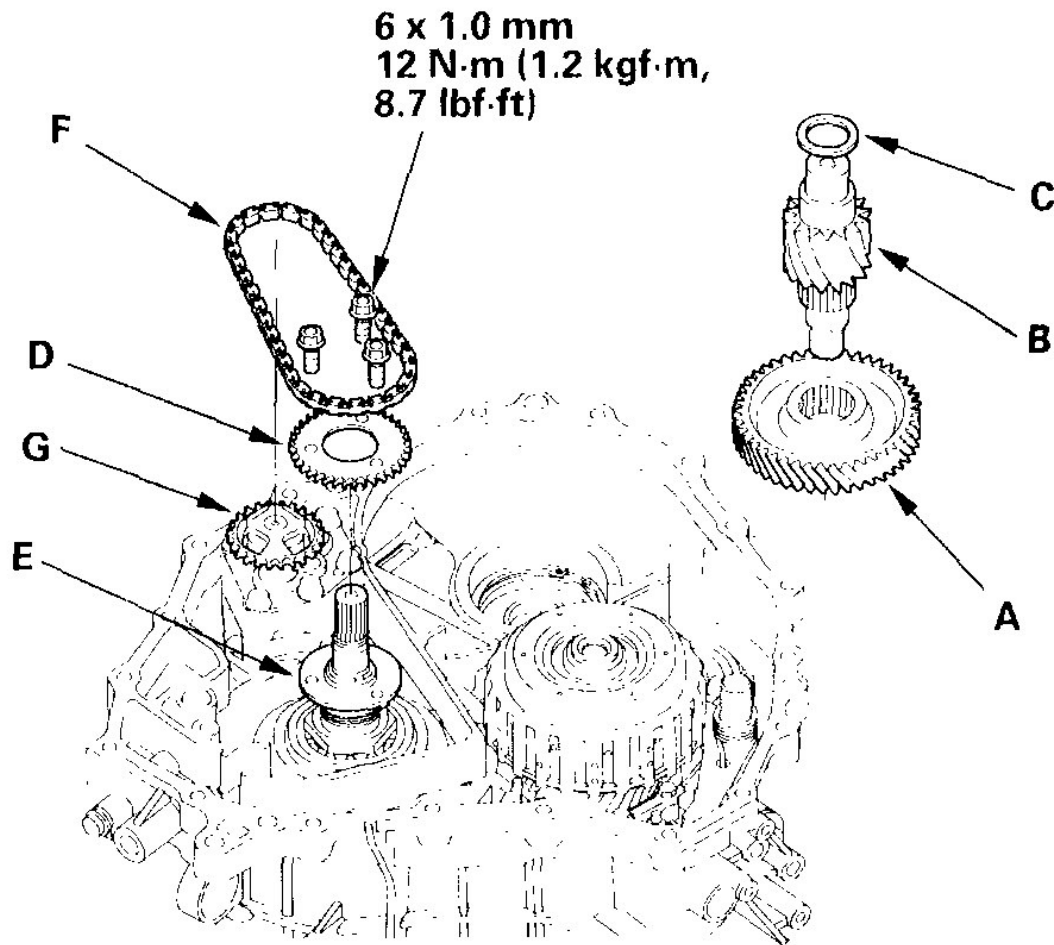
No.	Part Number	Thickness
C	90573-P4V-000	1.15 mm (0.045 in.)
D	90574-P4V-000	1.40 mm (0.055 in.)
E	90575-P4V-000	1.65 mm (0.065 in.)
F	90576-P4V-000	1.90 mm (0.075 in.)
G	90577-P4V-000	2.15 mm (0.085 in.)
H	90578-P4V-000	2.40 mm (0.095 in.)

G01461102

Fig. 90: Selecting New Thrust Shim Table

Courtesy of AMERICAN HONDA MOTOR CO., INC.

51. If the 22 x 28 mm thrust shim is replaced, install the snap ring, and verify that the snap ring outside diameter is within the tolerance.
52. Place the secondary driven gear (A) on the transmission housing by aligning it with the secondary drive gear, then install the final drive shaft (B) through the secondary driven gear into the transmission housing.

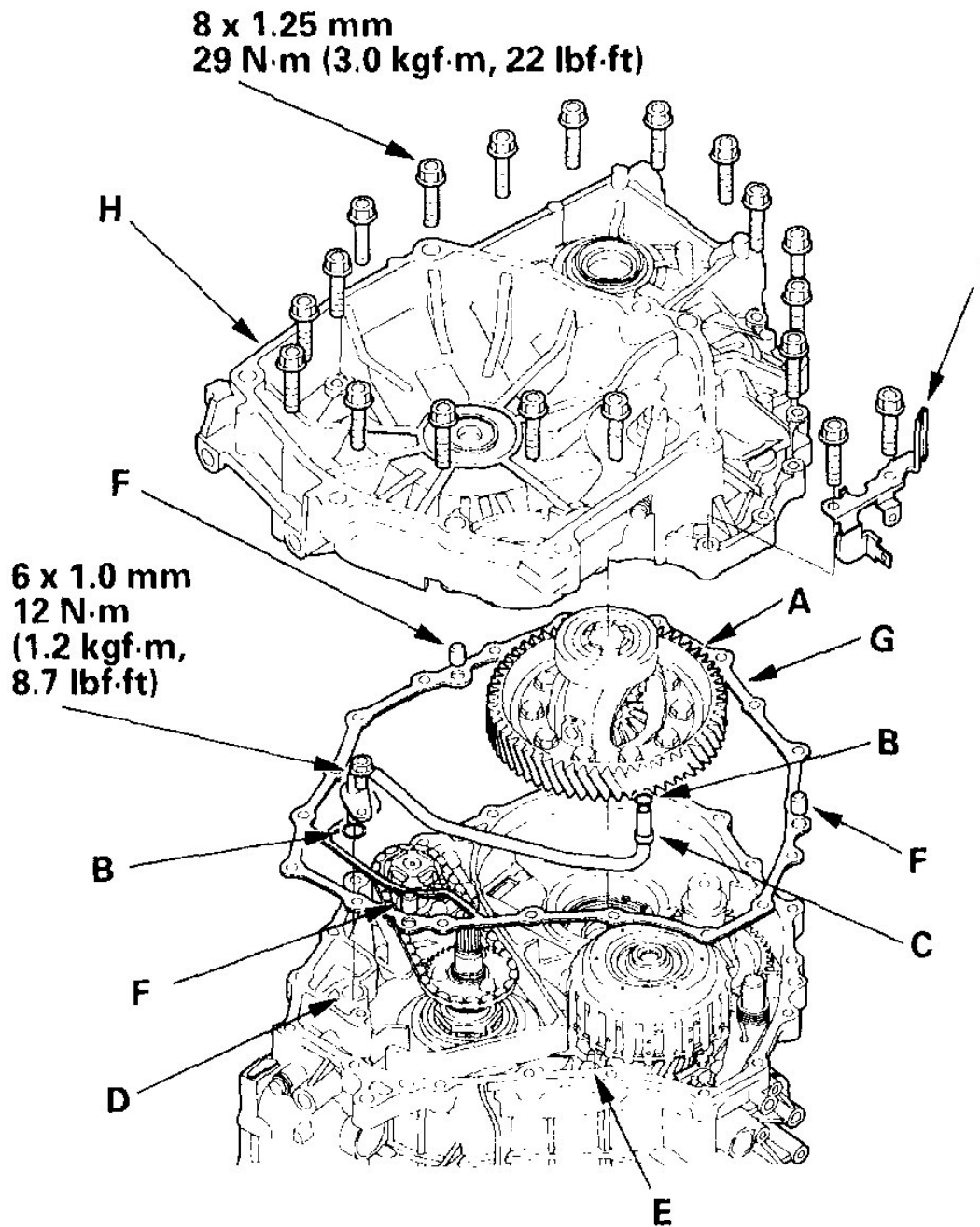


G01461103

Fig. 91: Placing Secondary Driven Gear On Transmission Housing By Aligning With Secondary Drive Gear

Courtesy of AMERICAN HONDA MOTOR CO., INC.

53. Install the 25 x 35 mm thrust shim (C) on the final drive shaft.



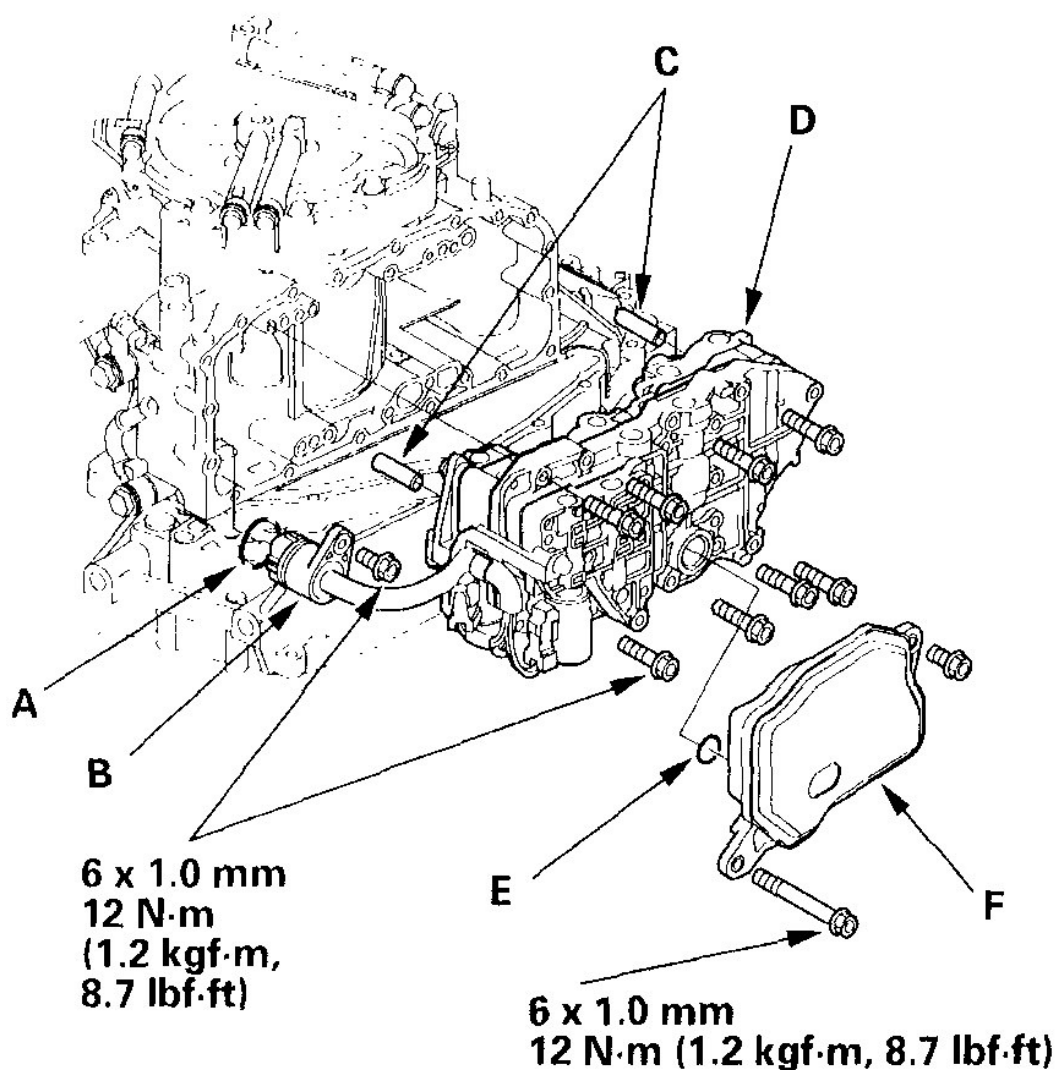
G01461104

Fig. 92: Installing thrust Shim On Final Drive Shaft
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

54. Position the ATF pump drive sprocket (D) on the sprocket hub (E), and put the ATF pump drive chain (F) on the ATF pump drive sprocket and ATF pump driven sprocket (G), then secure the ATF pump drive

sprocket with the three bolts.

55. Install the differential assembly (A).
56. Install the new O-rings (B) on both ends of the ATF passage pipe (C), then install the pipe in the pipe joint (D) of the transmission housing, and put the other end on the pipe guide (E).
57. Install the dowel pins (F) (three) and the new gasket (G) on the transmission housing.
58. Install the flywheel housing (H) on the transmission housing, and tighten the mounting bolts (19) with the harness clamp bracket (I).
59. Install the new O-ring (A) on the solenoid harness connector (B).

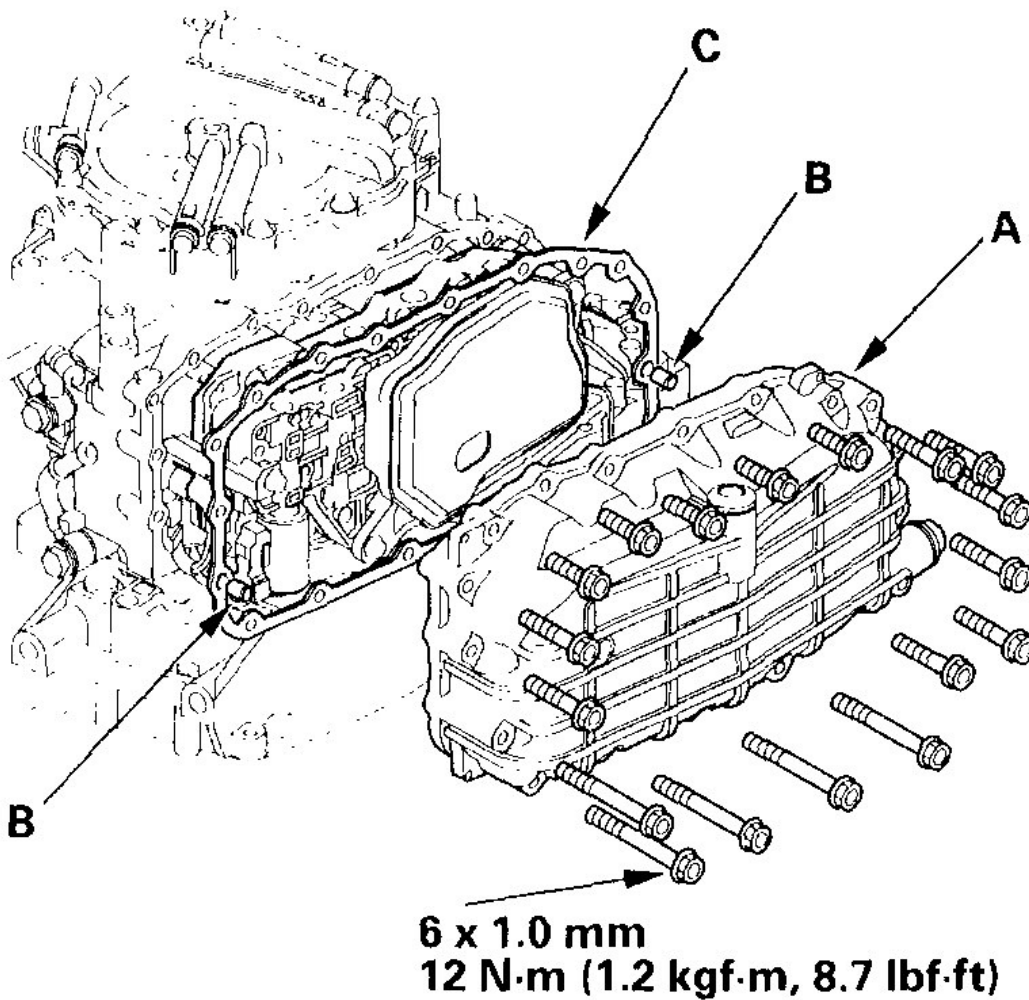


G01461105

Fig. 93: Installing New O-Ring On Solenoid Harness Connector

Courtesy of AMERICAN HONDA MOTOR CO., INC.

60. Install the ATF pipes (C) on the lower valve body (D), then install the solenoid harness connector and the lower valve body in the transmission housing.
61. Install the new O-ring (E) on the ATF strainer (F), then install the ATF strainer on the lower valve body.
62. Install the ATF pan (A) with the two dowel pins (B) and the new gasket (C).

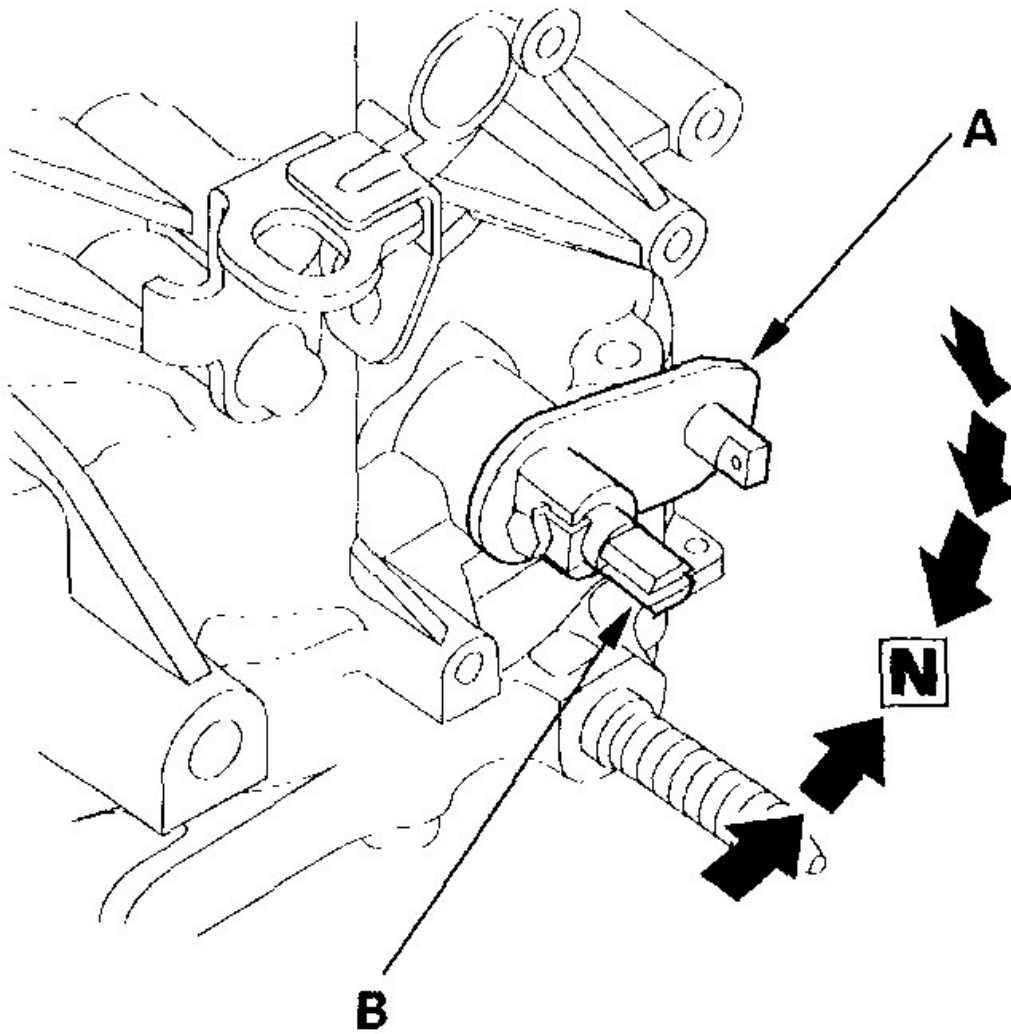


G01461106

Fig. 94: Installing ATF Pan With Two Dowel Pins
Courtesy of AMERICAN HONDA MOTOR CO., INC.

63. Shift the transmission to the N position by turning the control lever (A). Do not squeeze the end (B) of the control shaft tips together when turning. If the tips are squeezed together it will cause a faulty control

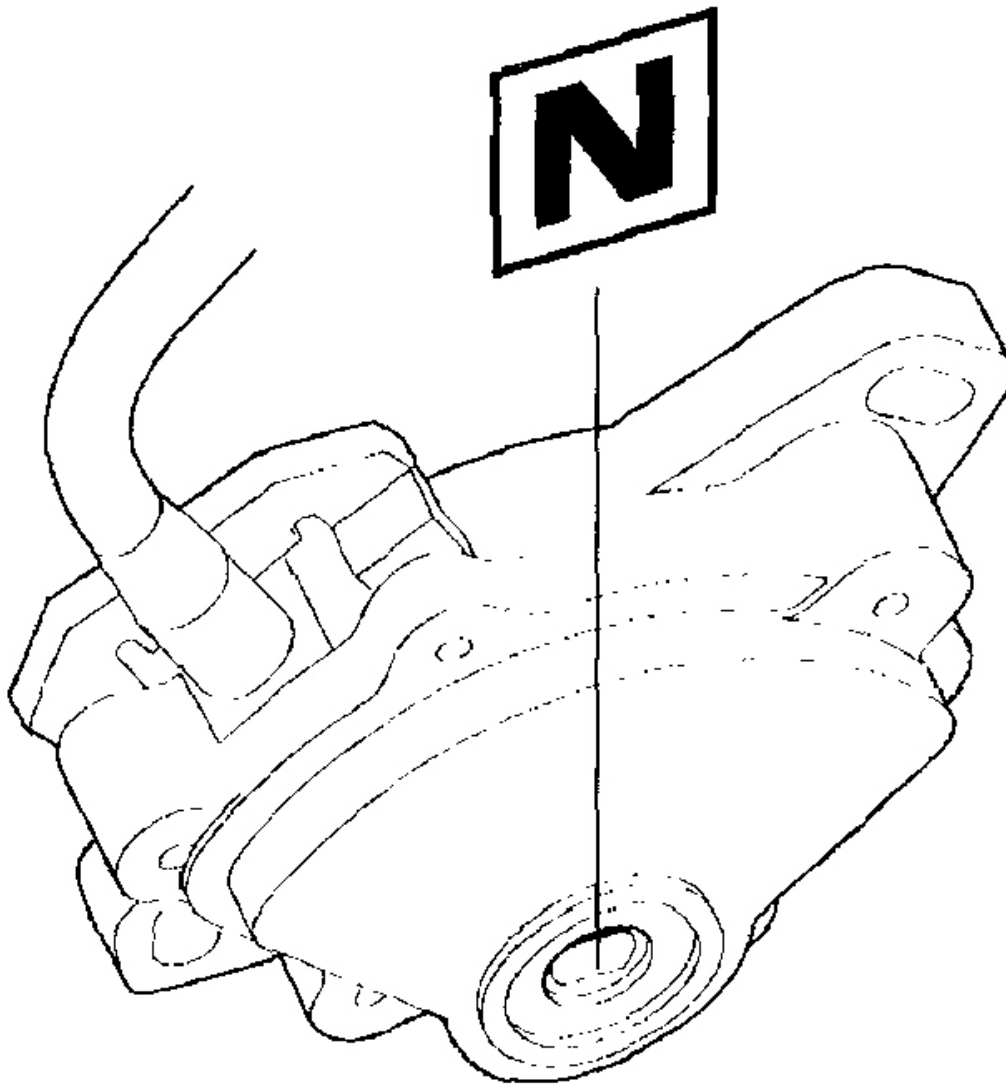
signal or position due to the play between the control shaft and the switch.



G01461107

Fig. 95: Shifting Transmission To N Position By Turning Control Lever
Courtesy of AMERICAN HONDA MOTOR CO., INC.

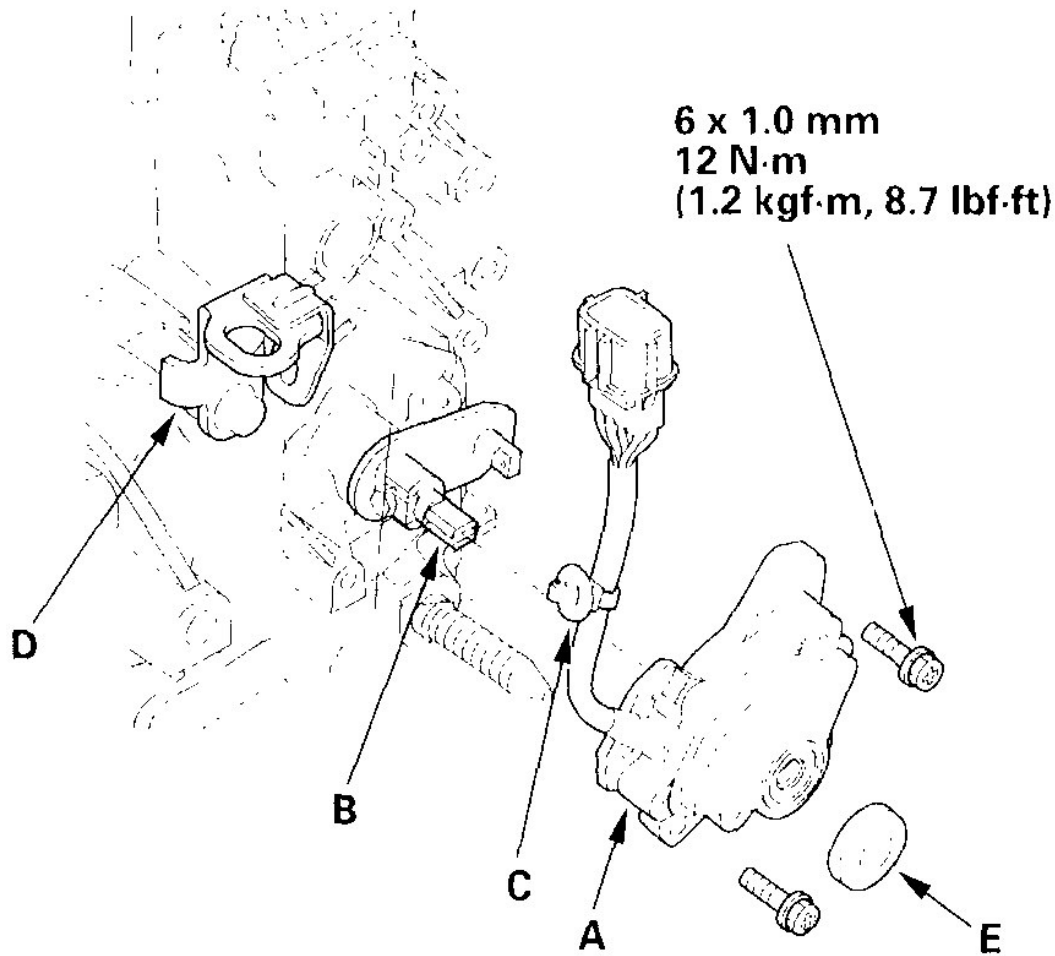
64. Set the transmission range switch to the N position. The switch clicks in the N position.



G01461108

Fig. 96: Setting Transmission Range Switch To N Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

65. Install the transmission range switch (A) gently on the control shaft (B), then tighten the bolts. Do not move the switch when tightening the bolts.



G01461109

Fig. 97: Installing Transmission Range Switch Gently On Control Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

66. Install the harness clamp (C) on the clamp bracket (D).
67. Install the control shaft cover (F).
68. Install the breather cap (A) on the breather pipe (B) so its arrow (C) points to the flywheel housing.

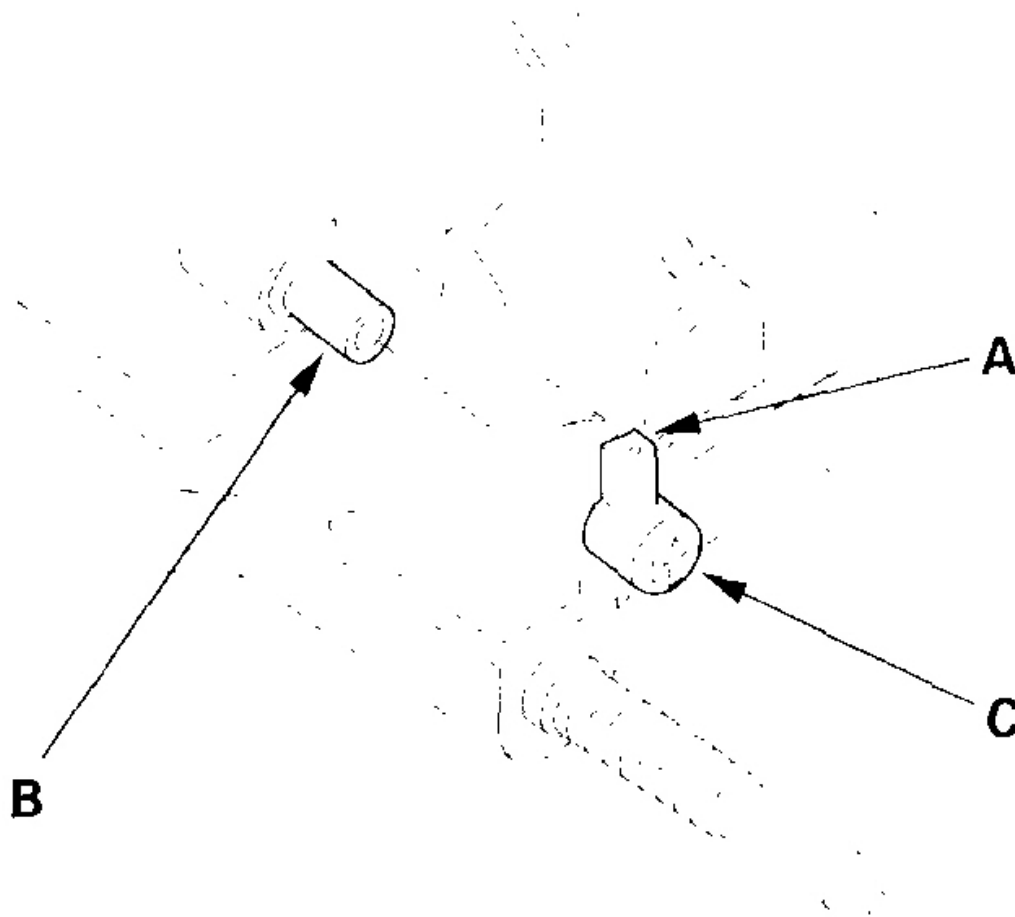
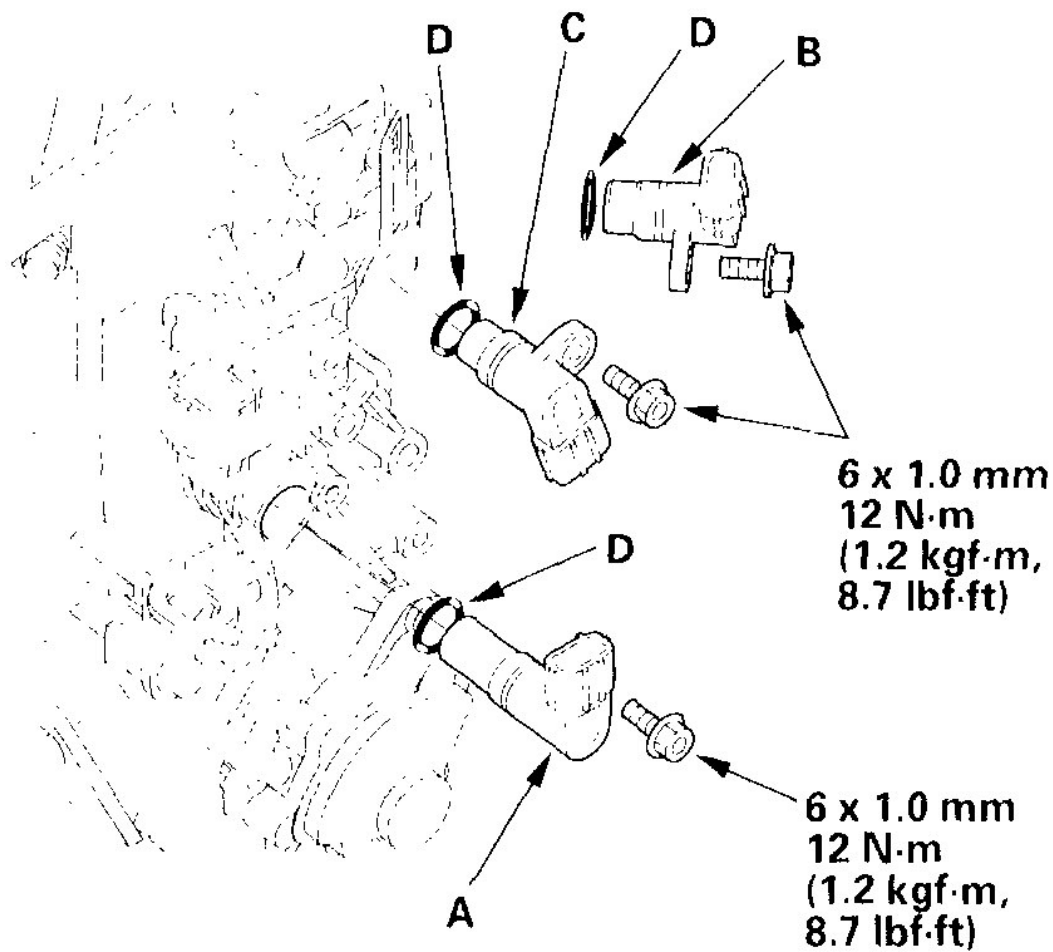
**G01461110**

Fig. 98: Installing Breather Cap

Courtesy of AMERICAN HONDA MOTOR CO., INC.

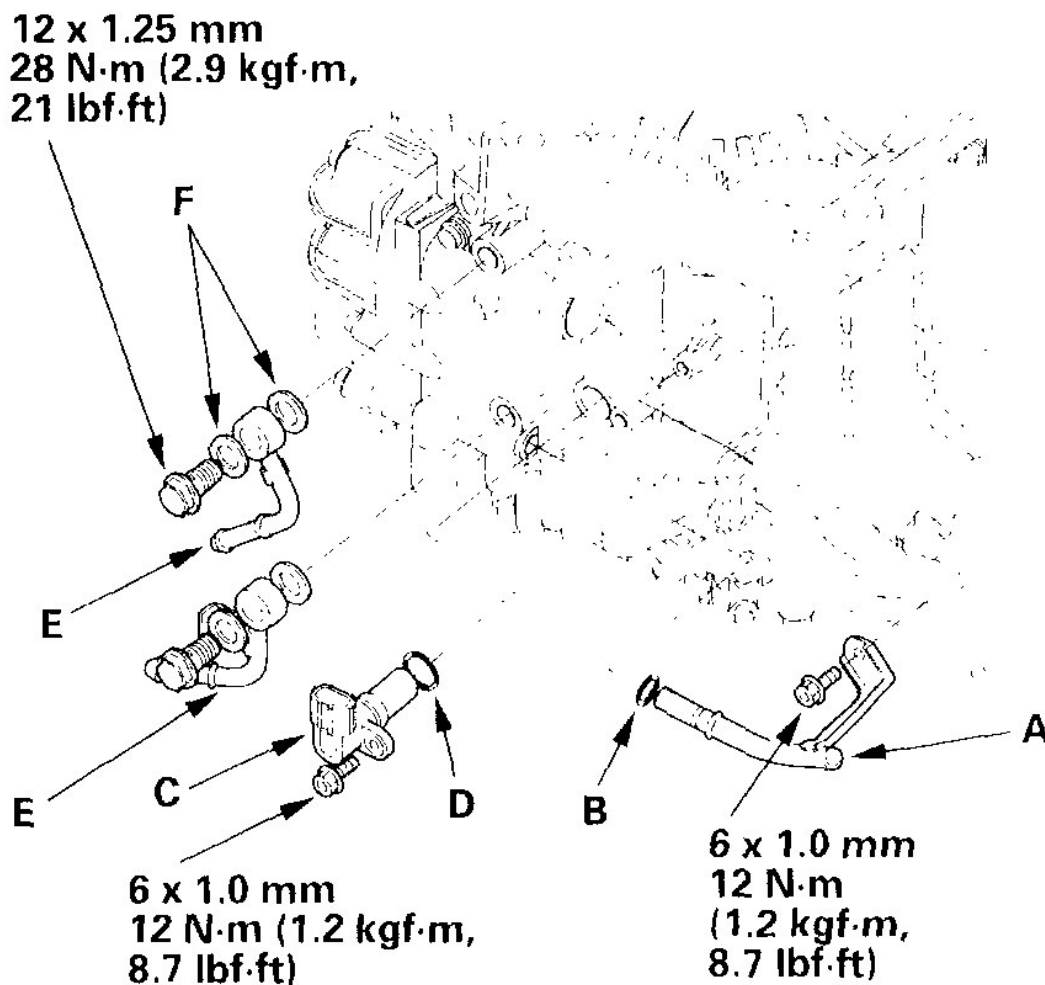
69. Install the CVT driven pulley speed sensor (A), CVT speed sensor (B), and CVT speed sensor (secondary) (C) with new O-rings (D).



G01461111

Fig. 99: Installing CVT Driven Pulley Speed Sensor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

70. Install the ATF dipstick guide pipe (A) with the new O-ring (B).



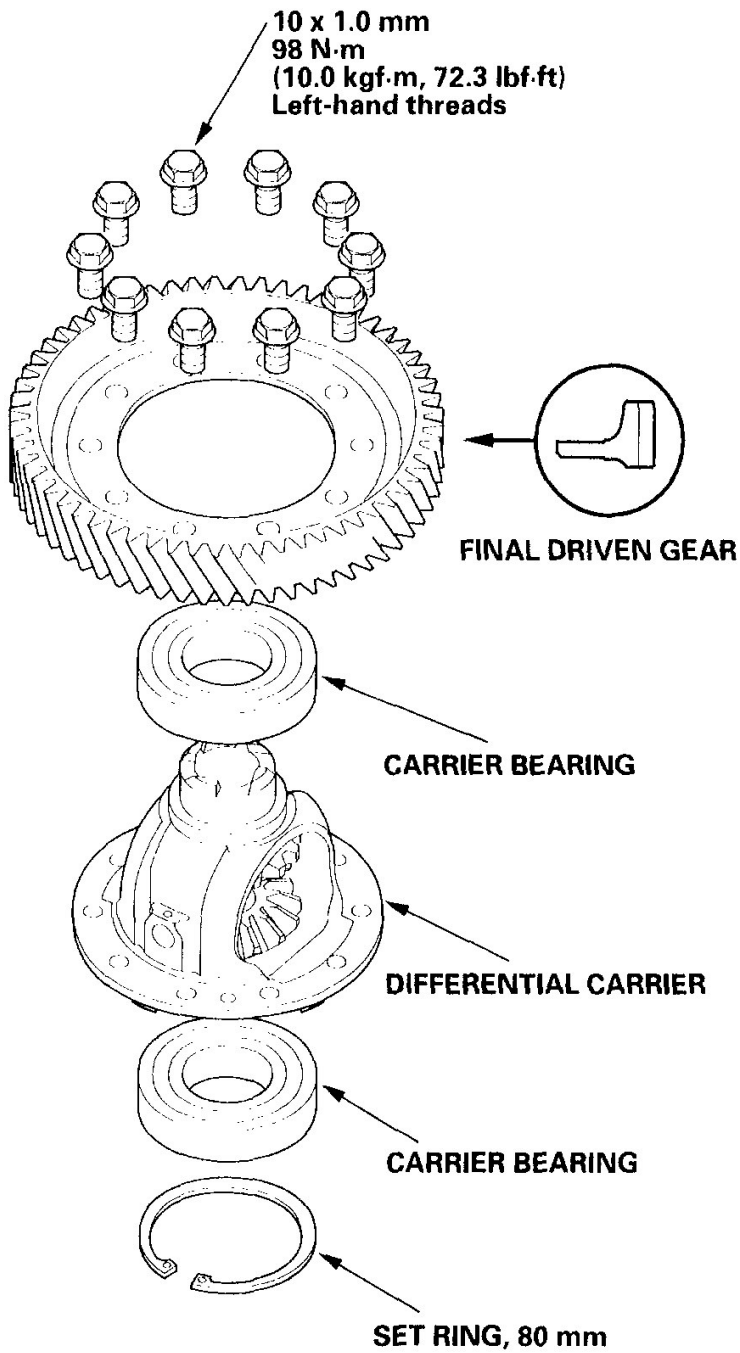
G01461112

Fig. 100: Installing ATF Dipstick Guide Pipe With New O-Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

71. Install the CVT drive pulley speed sensor (C) with the new O-ring (D).
72. Install the ATF cooler lines (E) with the new sealing washers (F).

CVT DIFFERENTIAL

COMPONENT LOCATION INDEX

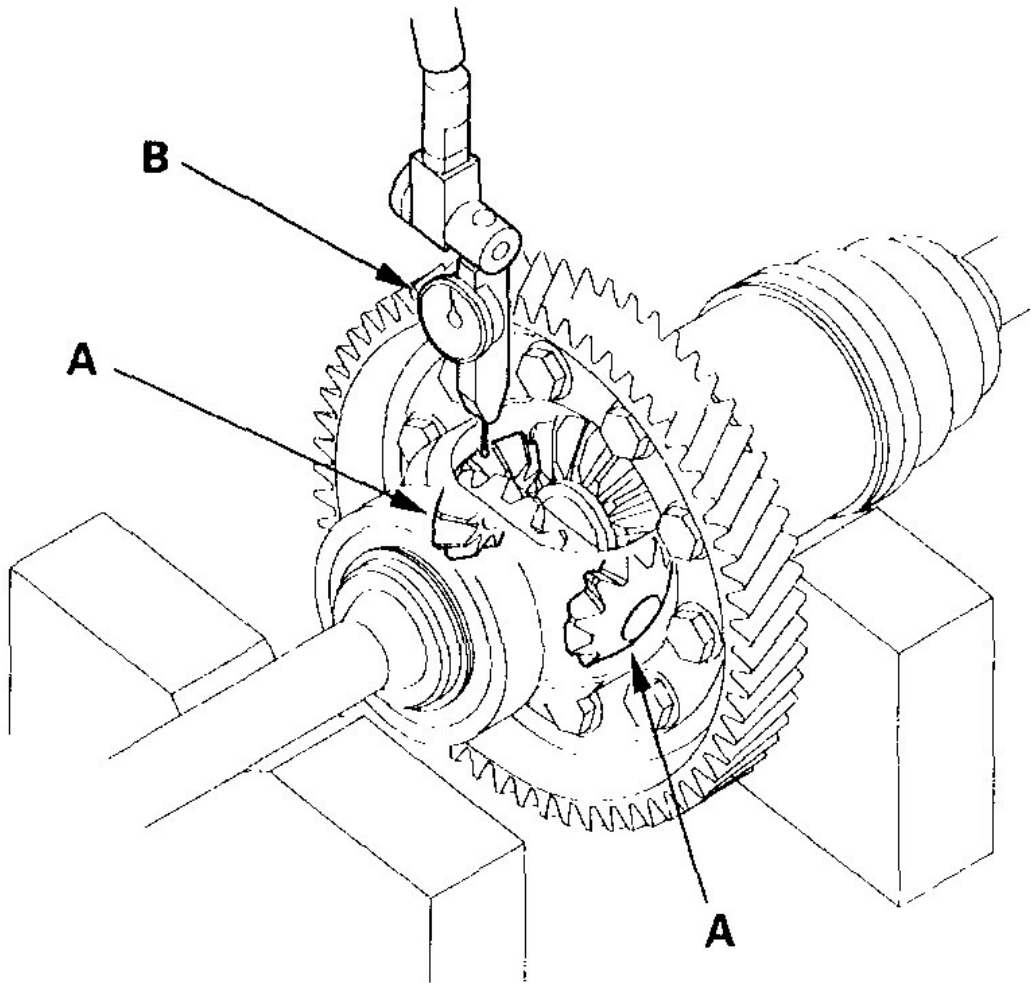


G01461113

Fig. 101: Identifying CVT Differential Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.

BACKLASH INSPECTION

1. Install the driveshaft and intermediate shaft on the differential, then place the axles on V-blocks.



G01461114

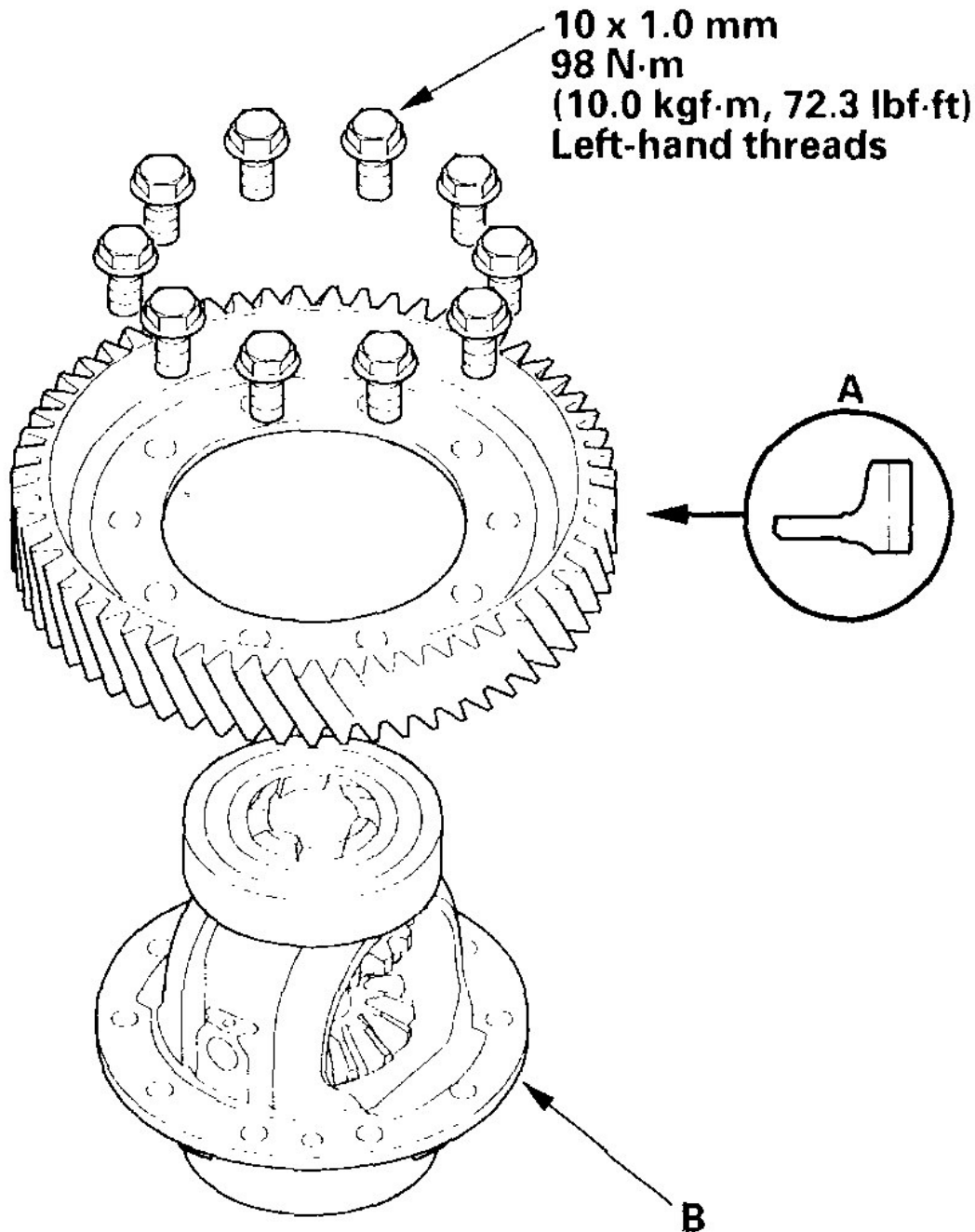
Fig. 102: Installing Driveshaft & Intermediate Shaft On Differential
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Check the backlash of the pinion gears (A) with a dial indicator (B).
Standard: 0.05-0.15 mm (0.002-0.006 in.)
3. If the backlash is out of standard, replace the differential carrier.

DIFFERENTIAL CARRIER/FINAL DRIVEN GEAR REPLACEMENT

1. Remove the final driven gear from the differential carrier, and replace the differential carrier or final

driven gear. The final driven gear bolts have left-hand threads.



G01461115

Fig. 103: Removing Final Driven Gear From Differential Carrier
Courtesy of AMERICAN HONDA MOTOR CO., INC.

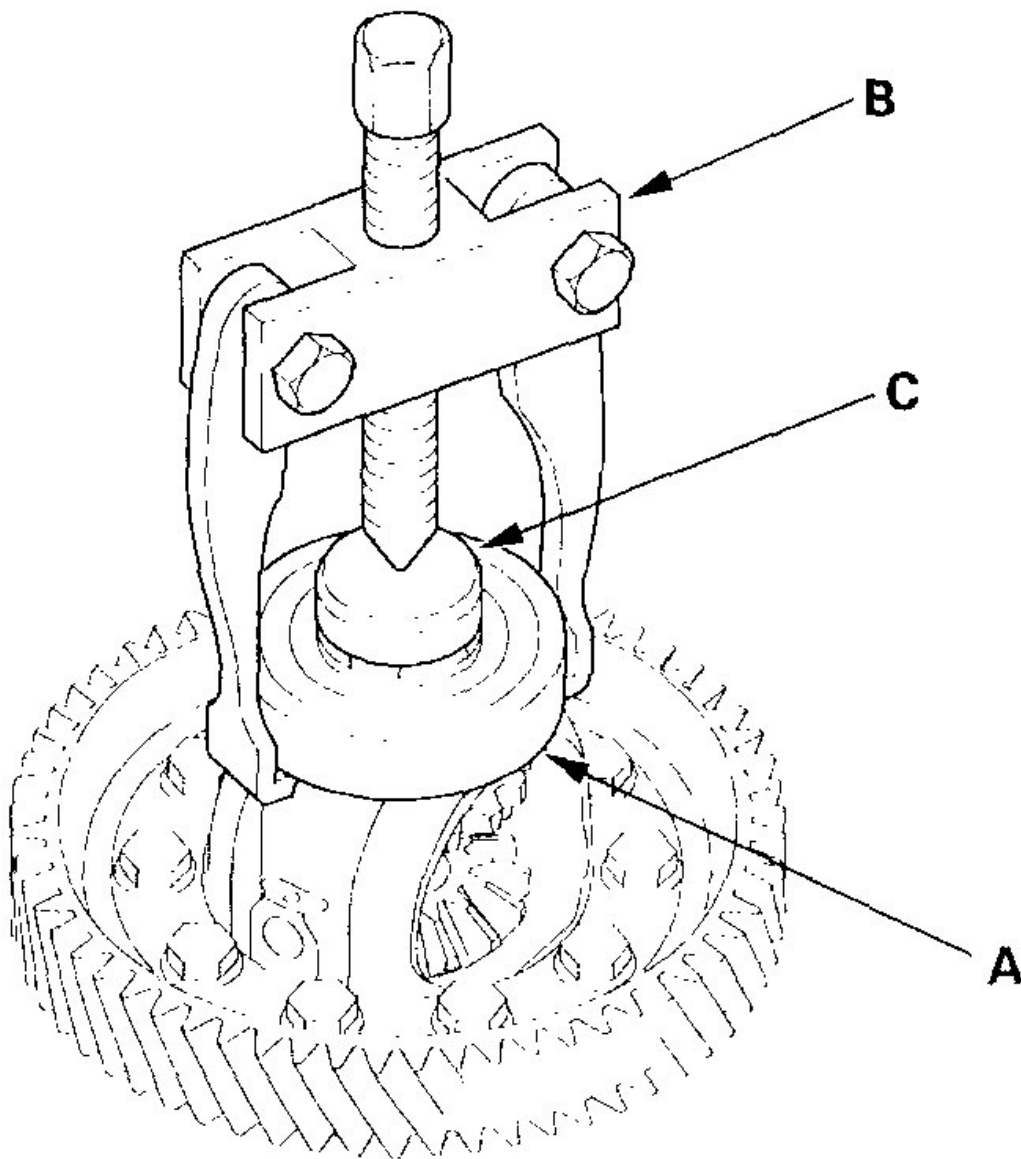
2. Install the final driven gear (A) in the direction shown on the differential carrier (B).

CARRIER BEARING REPLACEMENT

Special Tools Required

Driver, 40 mm I.D. 07746-0030100

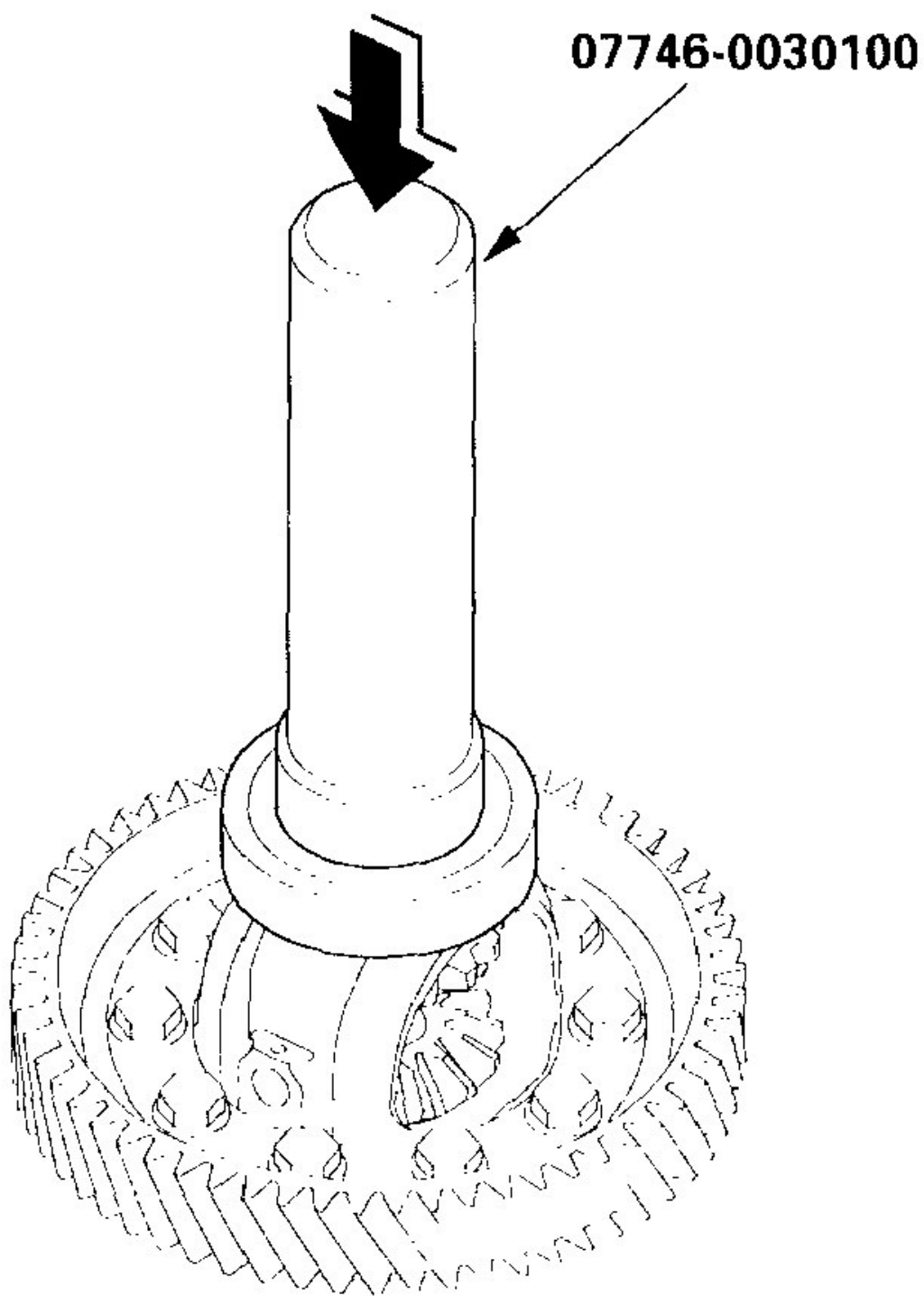
1. Remove the carrier bearing (A) with a commercially available puller (B) and shaft protector (C).



G01461116

Fig. 104: Removing Carrier Bearing With Commercially Available Puller
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the bearing with the special tool and a press. Press the bearing on until it bottoms.



G01461117

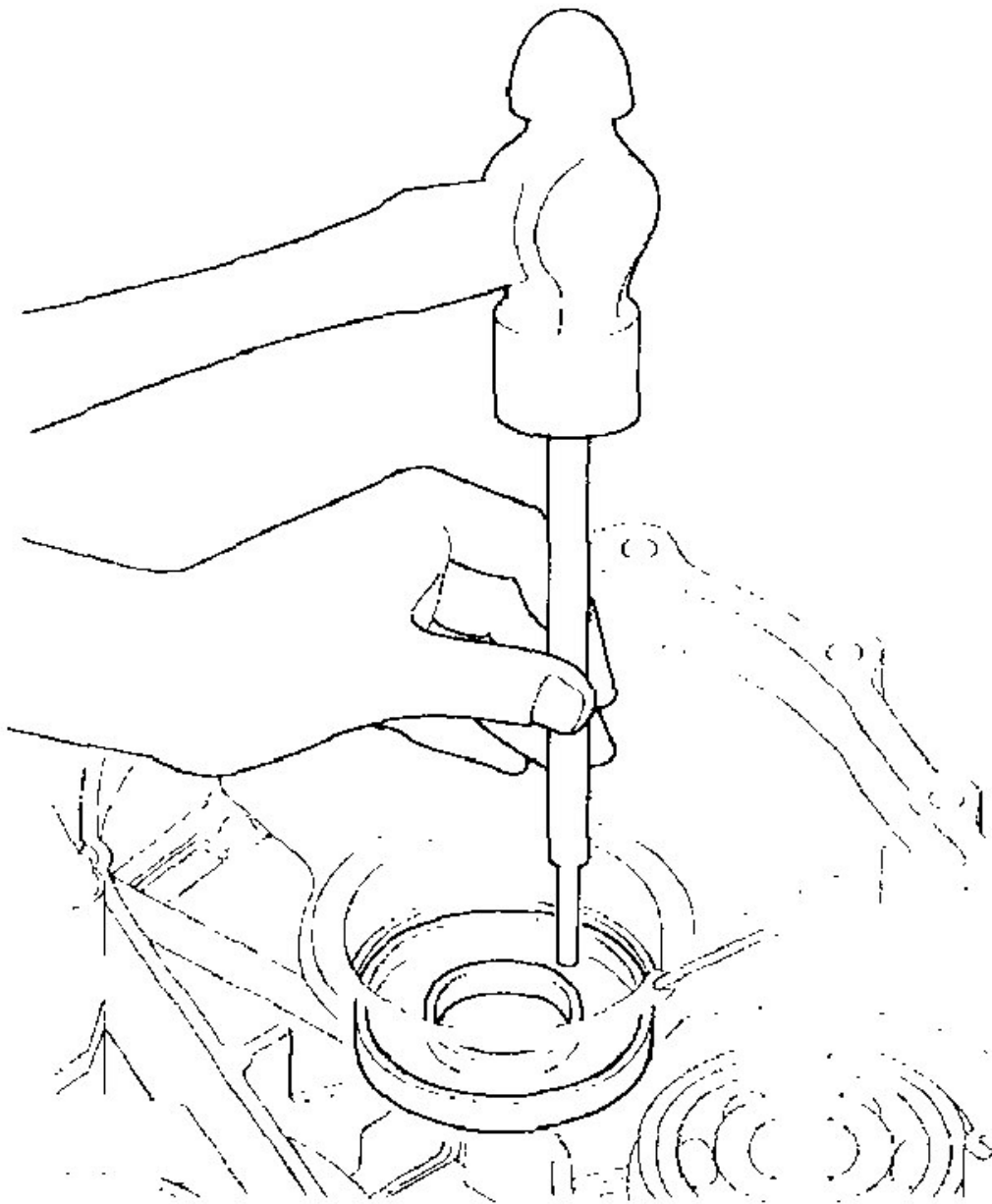
Fig. 105: Installing Bearing With Special Tool & Press
Courtesy of AMERICAN HONDA MOTOR CO., INC.

OIL SEAL REPLACEMENT

Special Tools Required

- Driver 07749-0010000
- Driver attachment, 78 x 80 mm 07NAD-PX40100
- Driver attachment, 58 mm 07JAD-PH80101

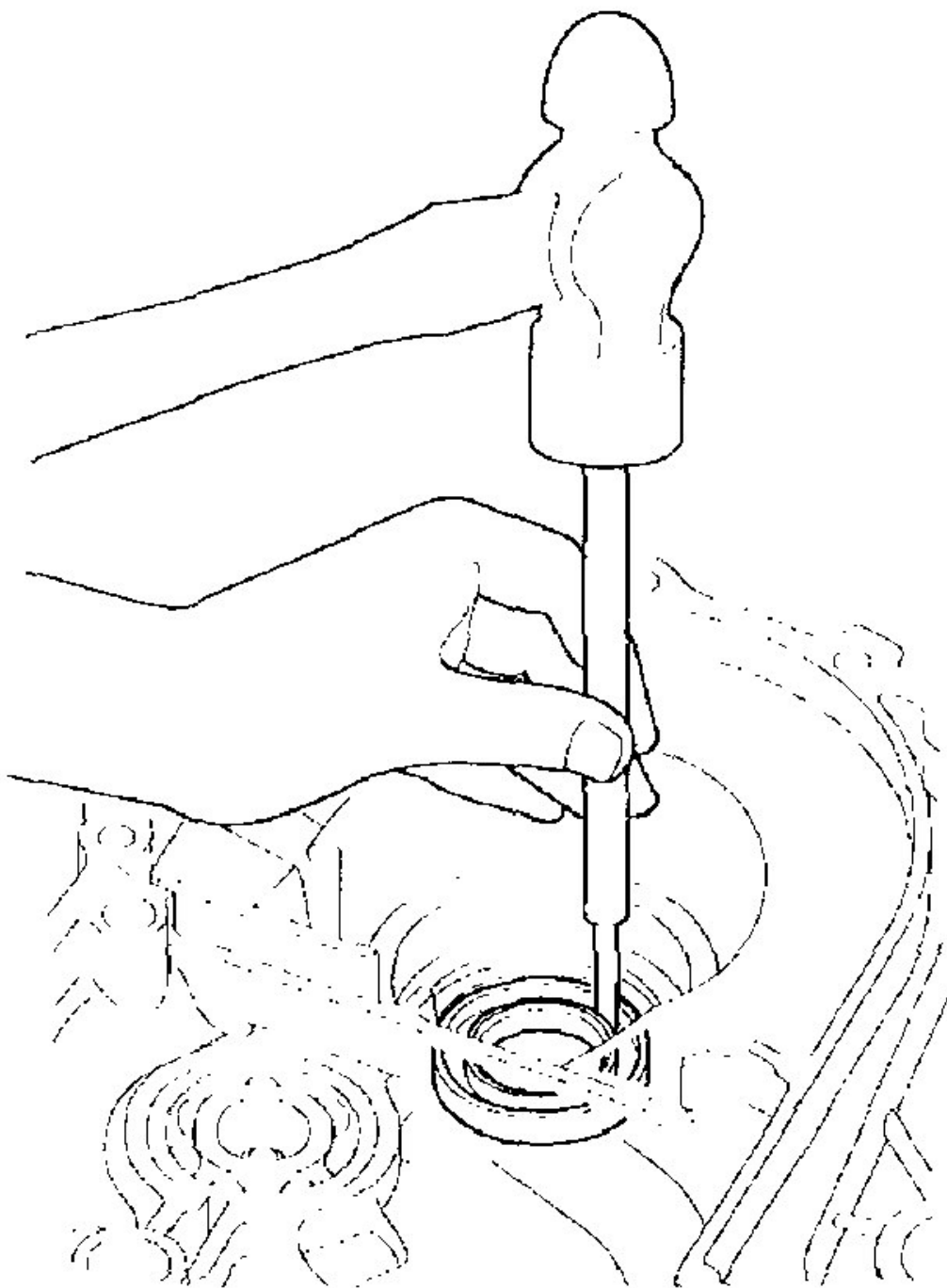
1. Remove the oil seal from the transmission housing.



G01461118

Fig. 106: Removing Oil Seal From Transmission Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the oil seal from the flywheel housing.



G01461119

Fig. 107: Removing Oil Seal From Flywheel Housing

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the new oil seal flush with the transmission housing with the special tools.

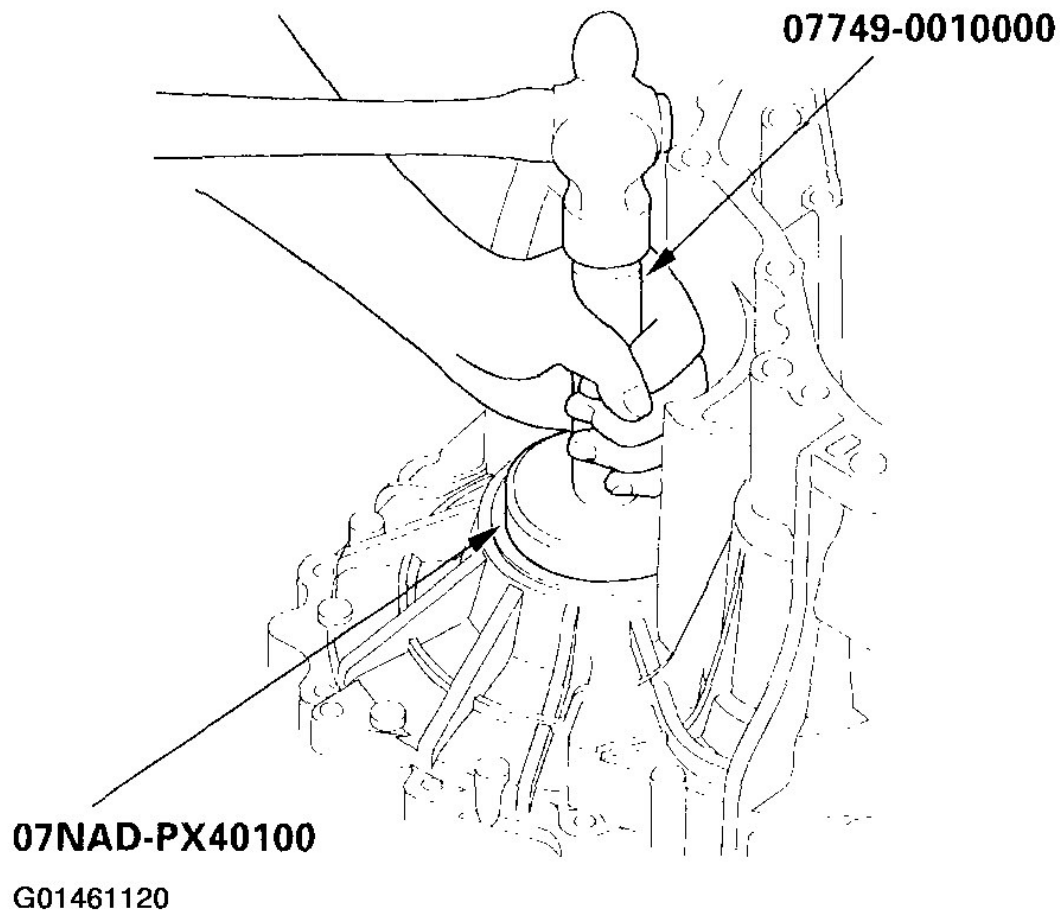


Fig. 108: Installing New Oil Seal Flush With Transmission Housing With Special Tools
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the new oil seal flush with the flywheel housing with the special tools.

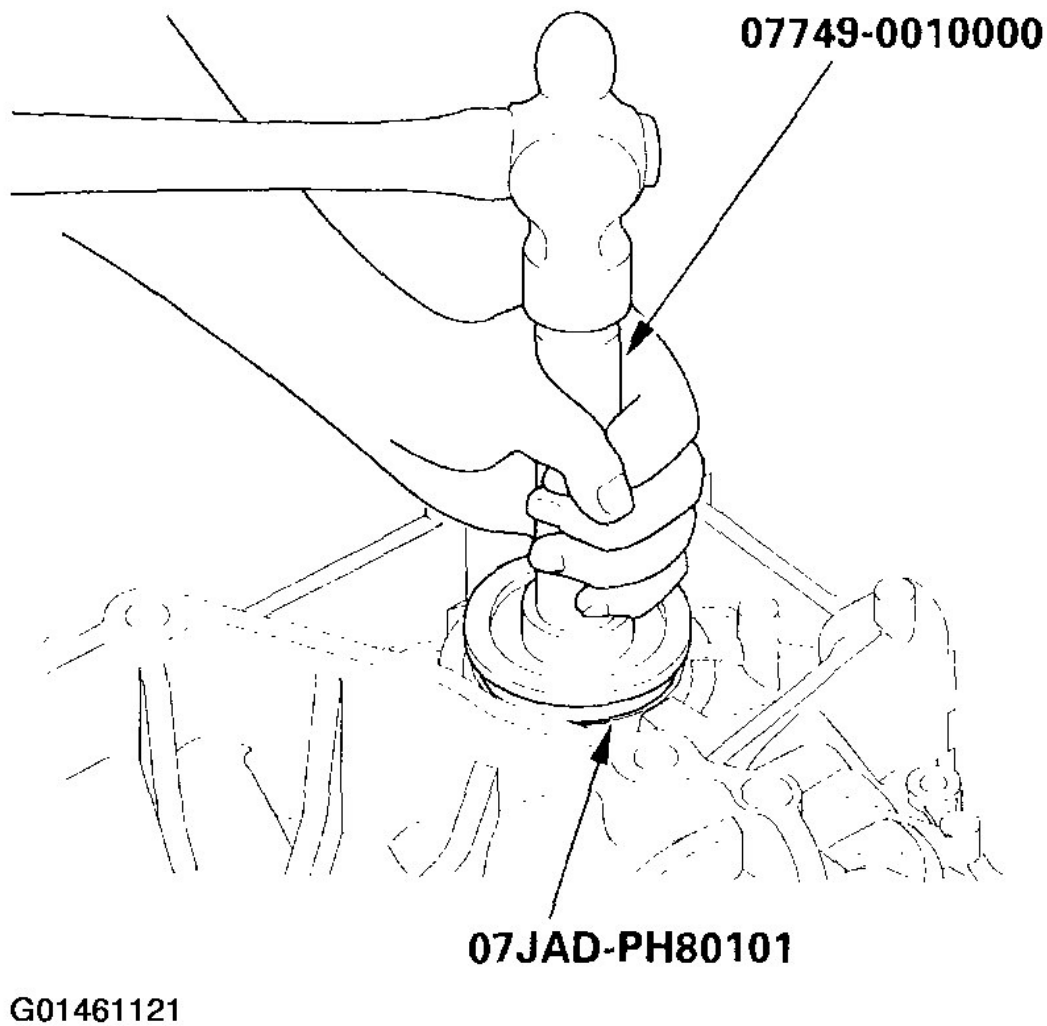


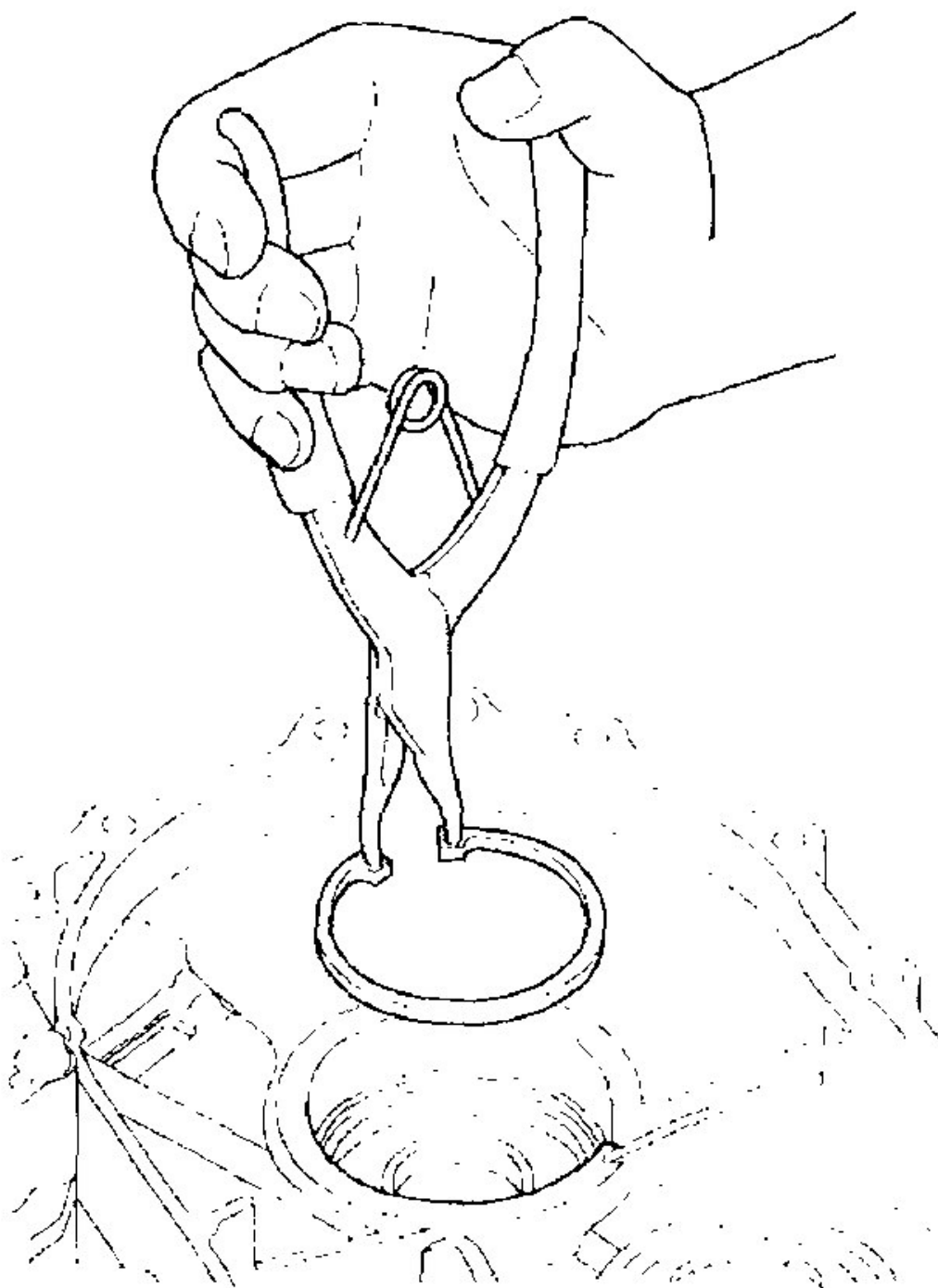
Fig. 109: Installing New Oil Seal Flush With Flywheel Housing With Special Tools
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CARRIER BEARING SIDE CLEARANCE INSPECTION

Special Tools Required

Driver, 40 mm I.D. 07746-0030100

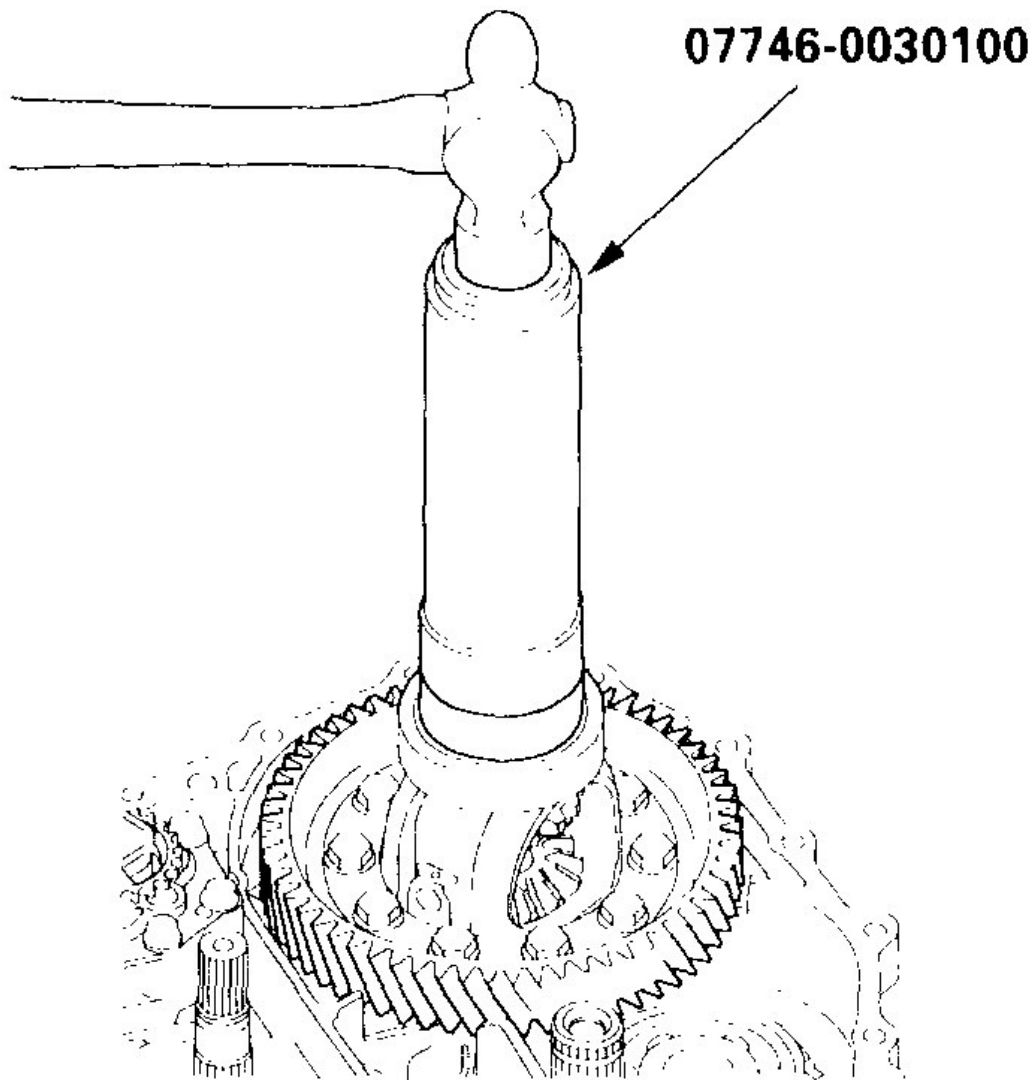
1. Install the set ring in the transmission housing.



G01461122

Fig. 110: Installing Set Ring In Transmission Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

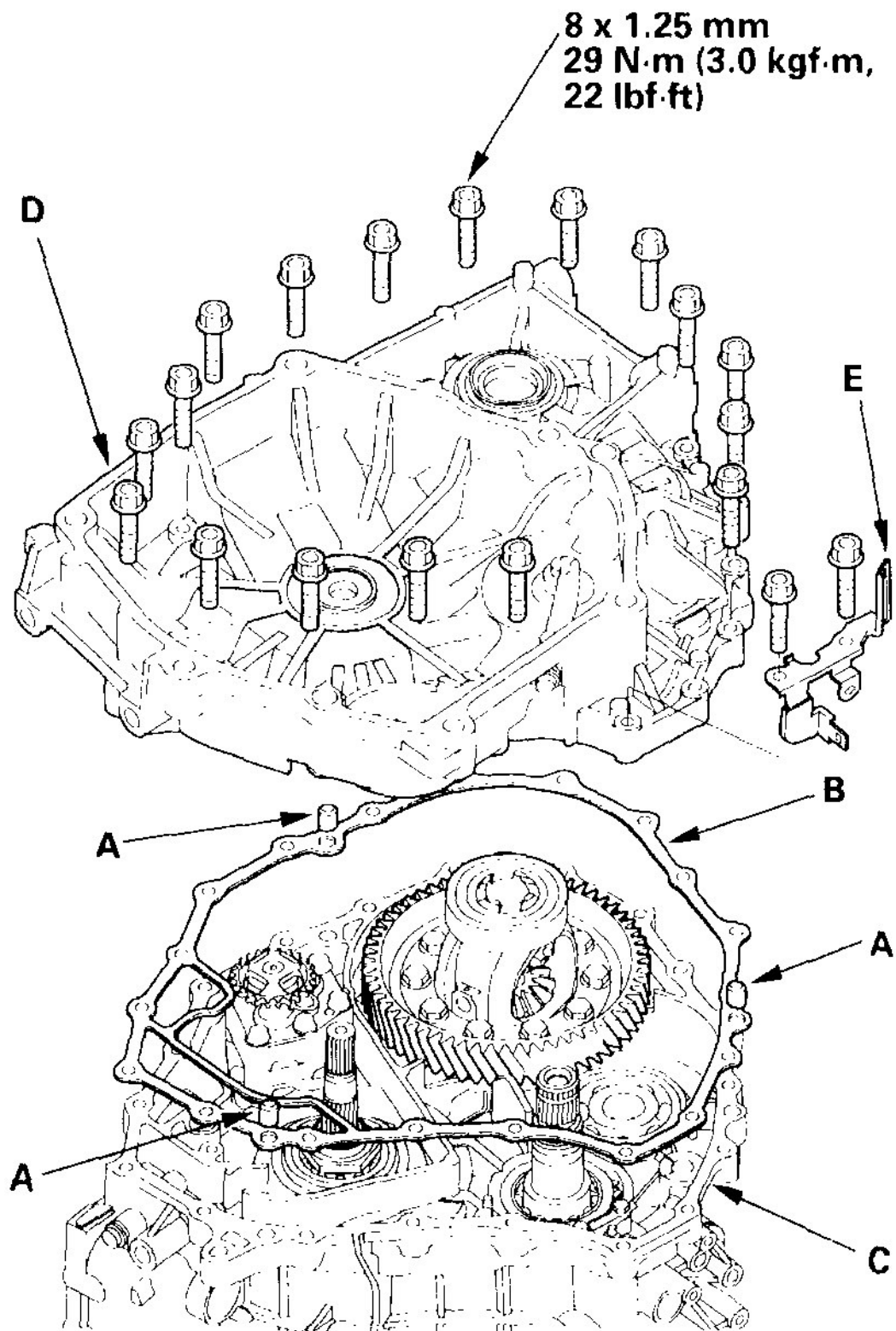
2. Install the differential assembly in the transmission housing, then drive the differential to seat in the housing.



G01461123

Fig. 111: Installing Differential Assembly In Transmission Housing
Courtesy of AMERICAN HONDA MOTOR CO., INC.

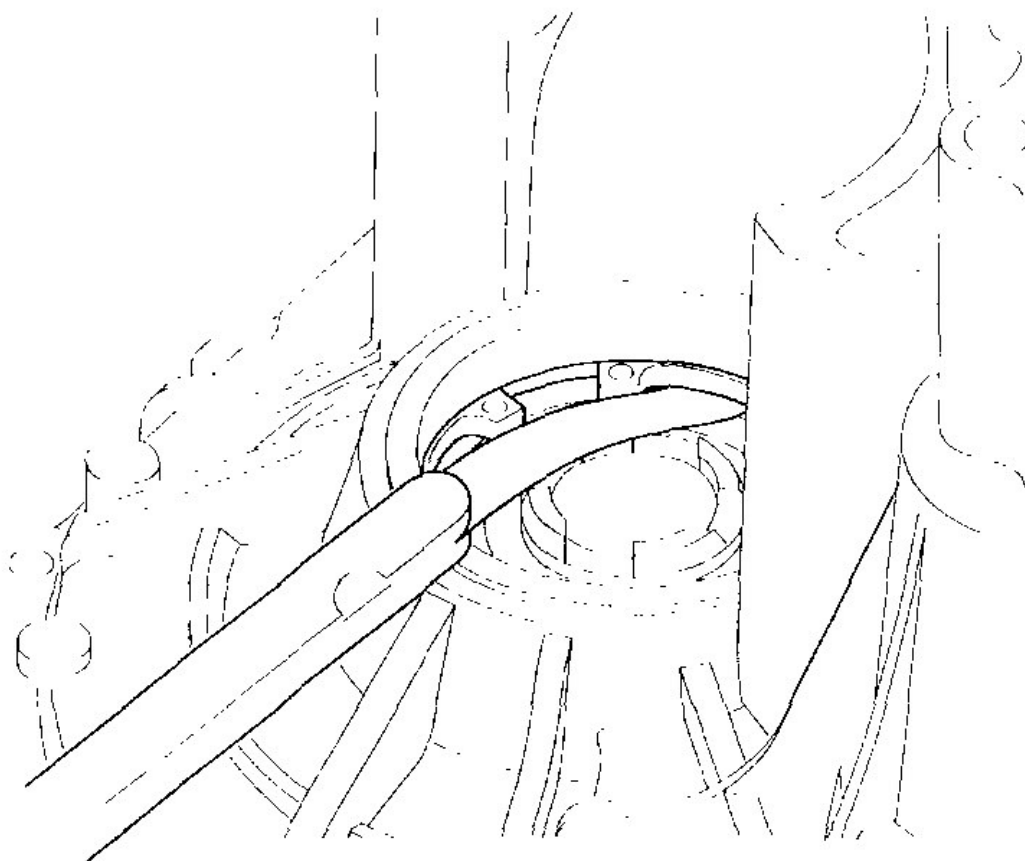
3. Install the three dowel pins (A) and new gasket (B) on the transmission housing (C).



G01461124

Fig. 112: Installing Three Dowel Pins & New Gasket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Place the flywheel housing (D) on the transmission housing.
5. Install the housing bolts with the harness clamp bracket (E), and tighten them in a crisscross pattern in two or more steps.
6. Measure the clearance between the set ring and carrier bearing outer race with a feeler gauge.



G01461125

Fig. 113: Measuring Clearance Between Set Ring & Carrier Bearing Outer Race With Feeler Gauge (Standard: 0-0.15 mm (0-0.006 in.))
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. If the clearance is out of standard, remove the set ring, and measure its thickness.
8. Select a new set ring from the following table.

No.	Part Number	Thickness
1	90414-689-000	2.5 mm (0.098 in.)
2	90415-689-000	2.6 mm (0.102 in.)
3	90416-689-000	2.7 mm (0.106 in.)
4	90417-689-000	2.8 mm (0.110 in.)
5	90418-689-000	2.9 mm (0.114 in.)
6	90419-PH8-000	3.0 mm (0.118 in.)

G01461126

Fig. 114: Selecting New Set Ring Table (Set Ring, 80 mm)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the new set ring, and recheck the clearance and make sure it is within the standard.