



Applies To: **2001–05 Civic GX With CVT – ALL**
2001–05 Civic HX With CVT – ALL
2003–05 Civic Hybrid With CVT – ALL
2001–05 Insight With CVT – ALL

February 5, 2008

Warranty Extension: CVT Start Clutch Judder

(Supersedes 07-049, dated August 24, 2007, to update the information marked by the black bar)

BACKGROUND

NOTE: Because of a class action settlement, the warranty extension coverage for CVT start clutch judder on 2002–05 Civic GXs and HXs with CVT, 2003–05 Civic Hybrids with CVT, and 2002–05 Insights with CVT purchased or leased between April 13, 2002, and November 7, 2006, is 7 years or **105,000 miles**, whichever occurs first. For more information, refer to Service Bulletin 06-085, *Warranty Extension: Vehicle Warranty Mileage*.

On affected vehicles, a momentary judder may be felt after accelerating from a stop, *but only up to about 15 mph*. The most likely cause of the judder is a worn start clutch in the CVT (continuously variable transmission). To increase customer confidence, American Honda is extending the warranty for this potential problem to 7 years or 100,000 miles, whichever comes first. This extended warranty covers **only** CVT start clutch judder below 15 mph and CVT drive belt slippage (see Service Bulletin 07-050, *Warranty Extension: CVT Drive Belt Slippage*). Any other customer complaints with the CVT are covered by the normal 3-year, 36,000-mile new vehicle limited warranty.

This warranty extension does not apply to any vehicle that has ever been declared a total loss, or any that has been issued a salvage, branded, or similar title under any state's law. **To check for vehicle eligibility, you must do a VIN status inquiry.**

CUSTOMER NOTIFICATION

All owners of affected vehicles were sent a notification of this warranty extension. An example of the customer notification is at the end of this service bulletin.

Before beginning work on a vehicle, verify its eligibility by doing a VIN status inquiry and by making sure the customer has a notification letter.

CORRECTIVE ACTION

Do the diagnosis in this service bulletin. Then, *only if needed*, burnish the start clutch or replace it.

PARTS INFORMATION

Civic GX Start Clutch Kit:
P/N 06221-PLY-307, H/C 8610768

Civic HX Start Clutch Kit:
P/N 06221-PLY-305, H/C 8610776

Civic Hybrid Start Clutch Kit:
P/N 06221-PZC-305, H/C 8610784

Insight Start Clutch Kit:
P/N 06221-PHT-305, H/C 8610792

REQUIRED SPECIAL TOOLS

Start Clutch Remover: T/N 07TAE-P4VA120
Start Clutch Installer: T/N 07TAE-P4VA130

REQUIRED MATERIALS

Honda Genuine CVT Fluid:
P/N 08200-9006, H/C 8031437

NOTE: Depending on the repair, 3 to 13 quarts per vehicle may be needed.

WARRANTY CLAIM INFORMATION

OP#	Description	FRT
218511	Diagnose the CVT for judder.	0.5
A	Add one start clutch burnishing procedure.	0.3
B	Add two start clutch burnishing procedures.	0.5
C	Add start clutch burnishing procedures and start clutch replacement.	5.5

Failed Part: P/N 22020-PZC-315
H/C 7101546

Defect Code: 5JD00

Symptom Code: Q5200

Skill Level: Repair Technician

Out of warranty: Any repair performed after warranty expiration may be eligible for goodwill consideration by the District Parts and Service Manager or your Zone Office. You must request consideration, and get a decision, before starting work.



DIAGNOSIS

NOTE: You must complete the diagnosis before attempting any CVT repairs.

1. Check the CVT fluid level; add fluid if needed.
2. Check the engine and transmission mounts for damage. Replace any damaged mounts.
NOTE: Engine and transmission mounts are not covered by the CVT extended warranty.
3. Remove the flywheel inspection cover, and inspect the flywheel for excessive grease on its surface. If you find excessive grease, replace the flywheel.
NOTE: The flywheel is not covered by the CVT extended warranty.
4. *Civic Hybrid and Insight only:* Make sure the IMA battery level gauge shows at least three-quarters charged. If you need to increase the IMA charge, do this:
 - *Insight only:* Remove the EPS (electronic power steering) fuse from the under-hood fuse/relay box.
 - Start the engine, and run it at 3,500 rpm until the battery level gauge shows at least three-quarters charged.
 - *Insight only:* Reinstall the EPS fuse.
5. With the engine fully warmed up, test-drive the vehicle by accelerating from a stop several times.
 - If you feel a judder below 15 mph, go to step 6.
 - If you do not feel a judder below 15 mph, ask the customer additional questions to figure out what is wrong, then troubleshoot as needed.
6. Disconnect the EGR valve.
7. Do another test-drive, accelerating from a stop several times.
 - If you feel a judder below 15 mph, reconnect the EGR valve, then go to REPAIR PROCEDURE.
 - If you do not feel a judder below 15 mph, reconnect the EGR valve, then troubleshoot the EGR system.

NOTE: EGR system troubleshooting is not covered by the CVT extended warranty.

REPAIR PROCEDURE

NOTE: Some steps in this procedure are model-specific. If the vehicle you're working on isn't listed in a model-specific step, go to the next step.

1. Replace the fluid in the CVT with Honda Genuine CVT fluid, **not** ATF-Z1:
 - Refer to the CVT section of the appropriate service manual, or
 - Online, enter keyword **CVT FLUID** or **ATF**, and select **CVT Fluid Replacement (CVT)** or **ATF Replacement (CVT)** from the list.

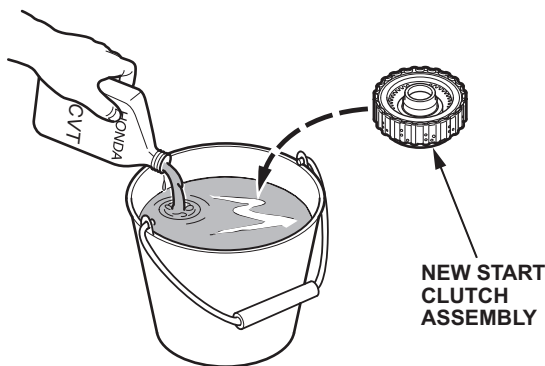
NOTE:

 - Fuzzy metal particles on the drain plug magnet are normal. Remove the particles before you reinstall the plug.
 - To prevent contamination when you refill the CVT, clean the area around the fill hole, and use a clean funnel.
2. Raise the vehicle on a lift until the wheels are off the ground.
3. Start the engine, shift to D, and accelerate to 40 mph.
4. Release the accelerator pedal, and lightly apply the brakes until the wheels stop. Lower the vehicle.
5. Turn the ignition switch to LOCK (0), then check the CVT fluid level within 90 seconds; it should be between the upper and lower HOT marks. Add fluid if needed.
6. Set the parking brake, and block the front wheels.
7. Start the engine, and shift to D. Make sure the A/C is off.
8. With the brake pedal held firmly, press the accelerator pedal to the floor, and release it after 3 seconds. Do not move the shift lever during this step.
9. Shift to N, and release the brake pedal. Increase the engine speed to 3,000 rpm, and hold it for 15 seconds. This allows the start clutch to cool.
10. Repeat steps 8 and 9 with the shift lever in D, then repeat with the shift lever in R.

11. Test-drive the vehicle for 1 mile or more, accelerating from a stop several times. During the drive, calibrate the start clutch by turning on the headlights, and then decelerating from 40 to 20 mph without using the brakes.
 - If the judder is gone, return the vehicle to the customer.
 - If the judder is still there, repeat steps 1 thru 11. If the judder remains after you repeat steps 1 thru 10, go to step 12.

NOTE: If you can't do the start clutch calibration during the test-drive, do it in the shop using the HDS or the SCS method. The start clutch on 2003 Civic Hybrids can be calibrated only with the driving method and the SCS method.

- Refer to the CVT section of the appropriate service manual, or
 - Online, enter keyword **START**, and select **CVT Start Clutch Pressure Control Calibration Procedures** from the list.
12. Soak a new start clutch assembly in Honda Genuine CVT Fluid for at least 30 minutes prior to installation.

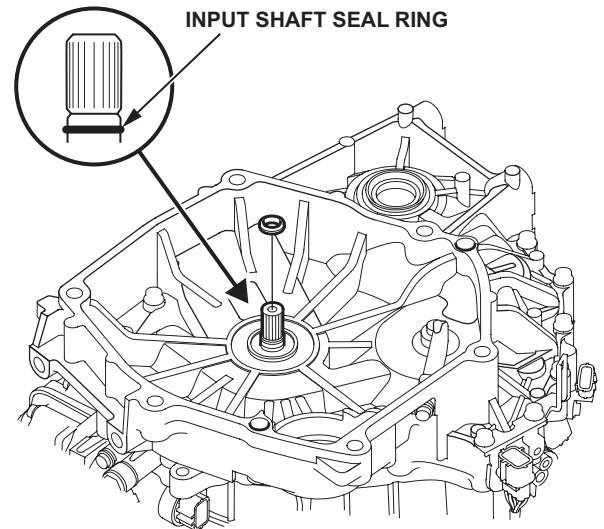


13. Remove the CVT from the vehicle:
 - Refer to Section 14 of the appropriate service manual, or
 - Online, enter keyword **TRANS**, and select **CVT Transmission Removal** from the list.
14. With clean shop towels, cover all of the openings in the CVT and anything else that might get damaged by water and cleaning chemicals (axle openings, breather, and electrical connectors). Clean all dirt and grease off the CVT before you disassemble it.
15. Place the CVT on a workbench with the flywheel housing upward.

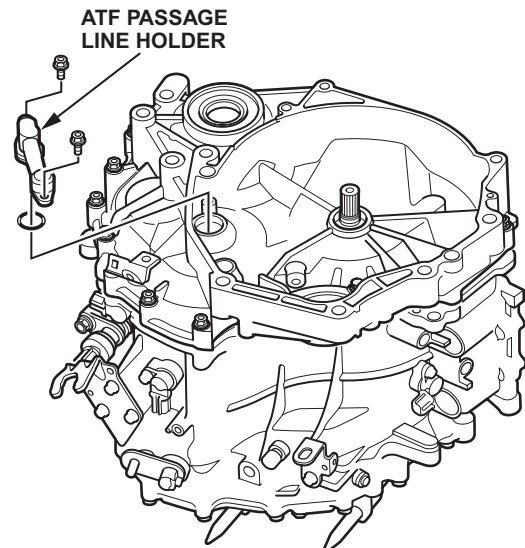
NOTE:

- Make sure to keep the CVT and your work surface clean.
- Use lint-free towels and a clean, dedicated solvent tank to clean CVT parts.
- If you don't keep everything clean, your repair may not be successful.

16. To avoid input shaft oil seal damage, remove the input shaft seal ring.

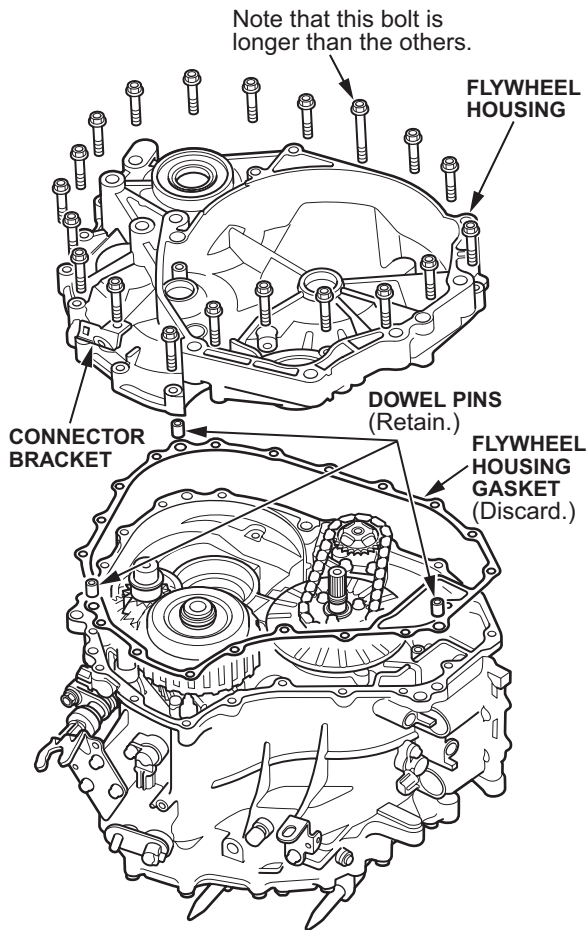


17. *Civic GX and HX only:* Remove the ATF passage line holder from the flywheel housing.



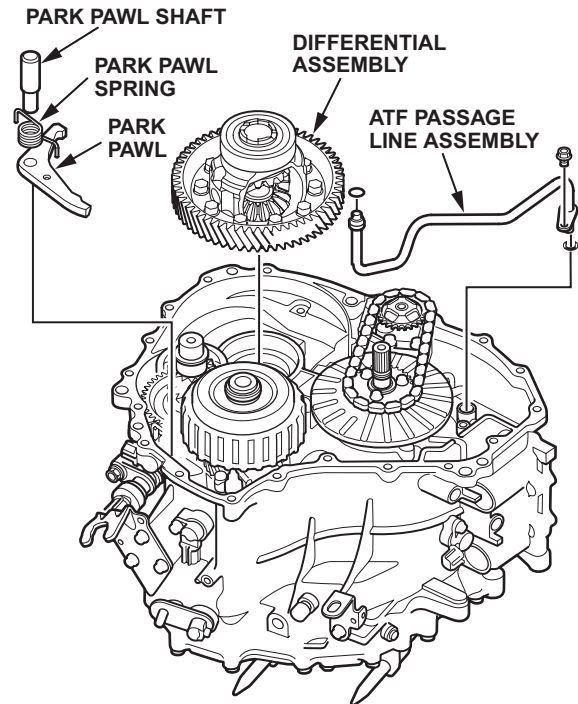
18. Remove the flywheel housing, the dowel pins, and the flywheel housing gasket.

NOTE: The Civic GX, Civic HX, and Civic Hybrid CVT is shown. The Insight CVT is similar.



19. Remove the differential assembly from the transmission case.

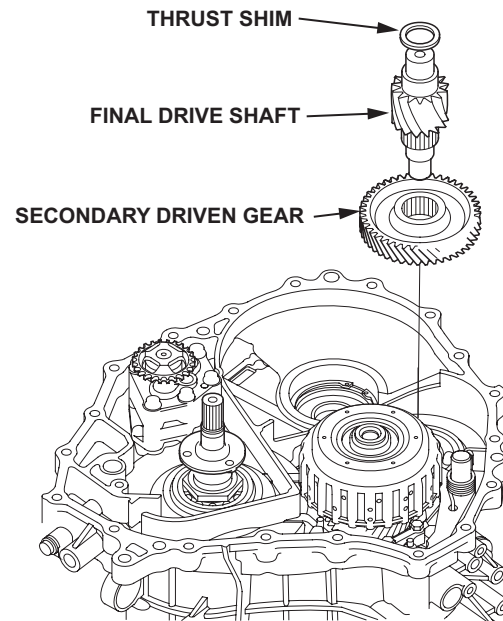
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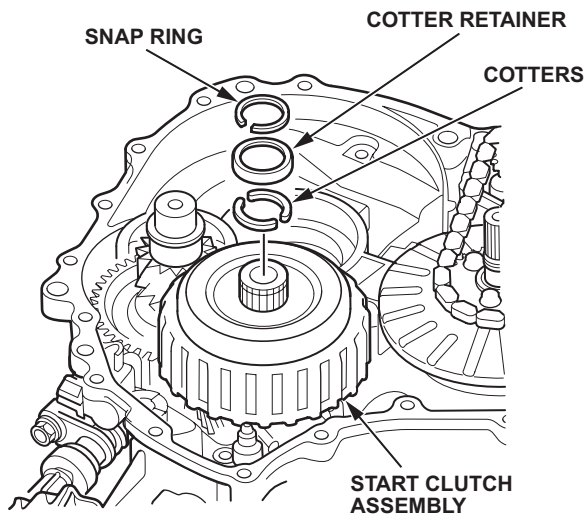
20. Remove the park pawl shaft, the park pawl, and the park pawl spring.

21. *All models except Insight:* Remove the ATF passage line assembly, and discard the two O-rings.

22. *Civic Hybrid only:* Remove the final drive shaft, the secondary driven gear, and the thrust shim.

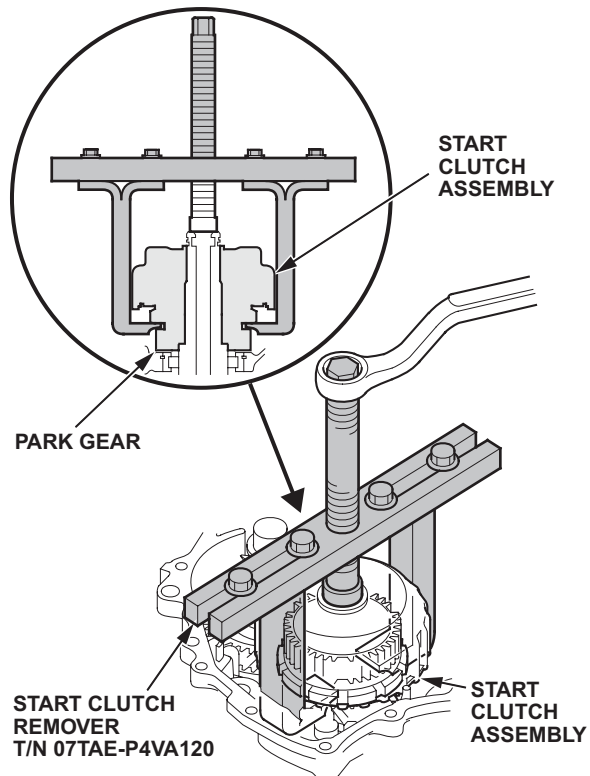


23. Remove the snap ring, the cotter retainer, and the cotters from the start clutch assembly.

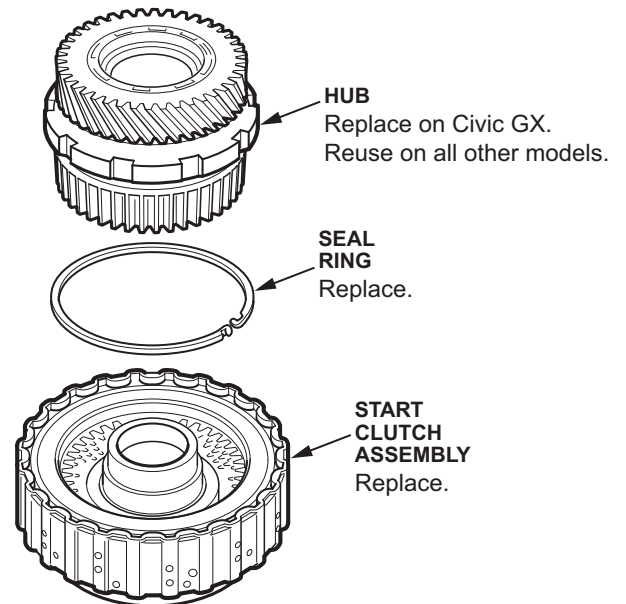


24. Remove the start clutch assembly with the special tool.

NOTE: Make sure the jaws of the special tool engage the park gear, **not** the start clutch assembly.



25. Remove the hub from the start clutch assembly. Discard the start clutch assembly.

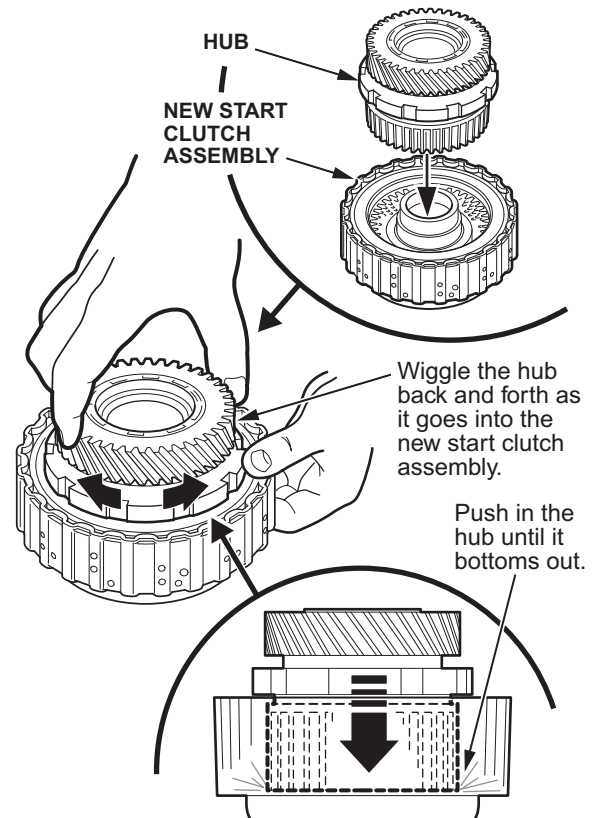


26. *All models except Civic GX:* Clean the hub, lubricate it with CVT fluid, then install a new seal ring on it.

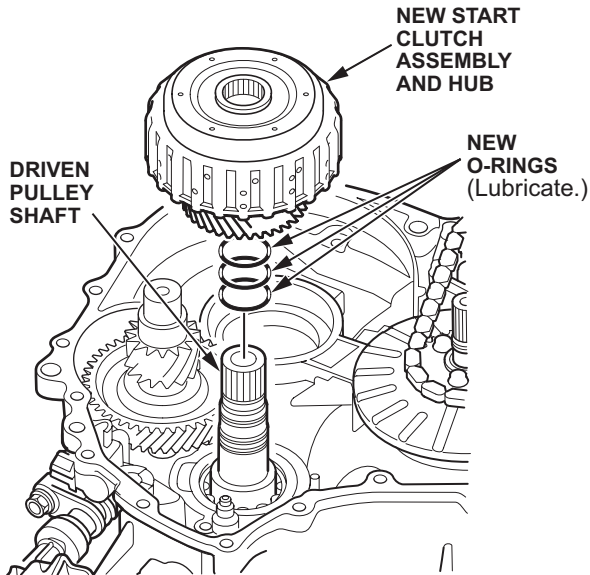
27. *Civic GX only:* Discard the hub, lubricate a new hub with CVT fluid, then install a new seal ring on it.

28. Insert the hub into the new start clutch, making sure the hub fully engages all of the clutch discs.

NOTE: If the hub is not engaged with all of the clutch discs, the start clutch will bind.



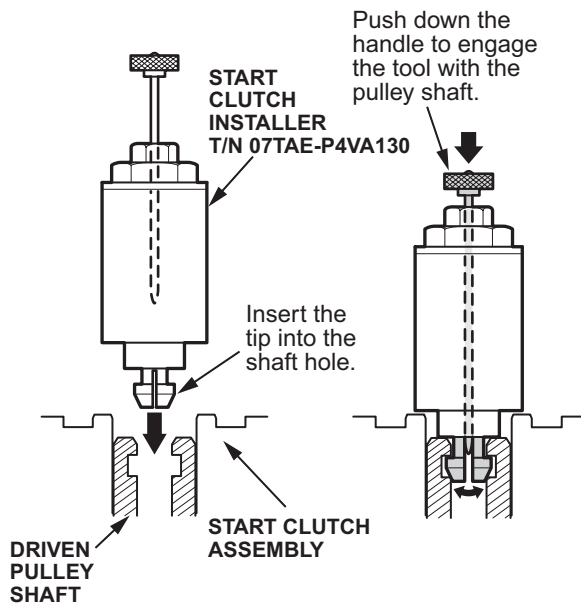
29. Use CVT fluid to lubricate the new O-rings for the driven pulley shaft, then install the O-rings on the shaft.



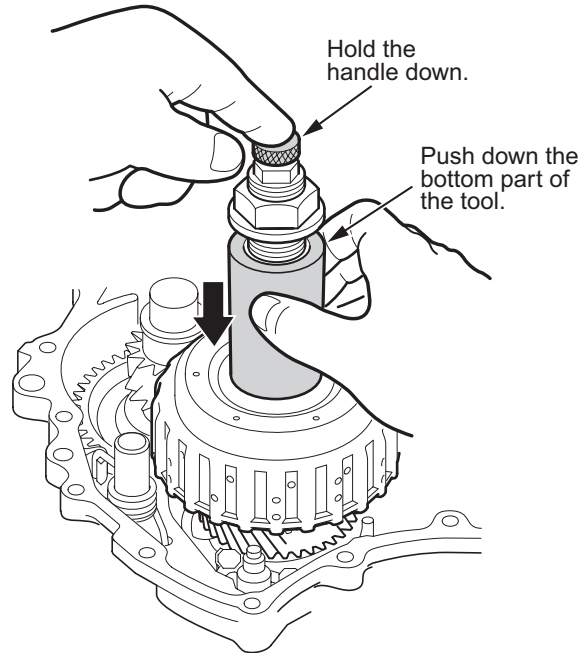
30. Place the new start clutch assembly and hub onto the driven pulley shaft.

NOTE: Make sure to hold the gear engaged into the clutch assembly when you install the clutch assembly and hub onto the driven pulley shaft.

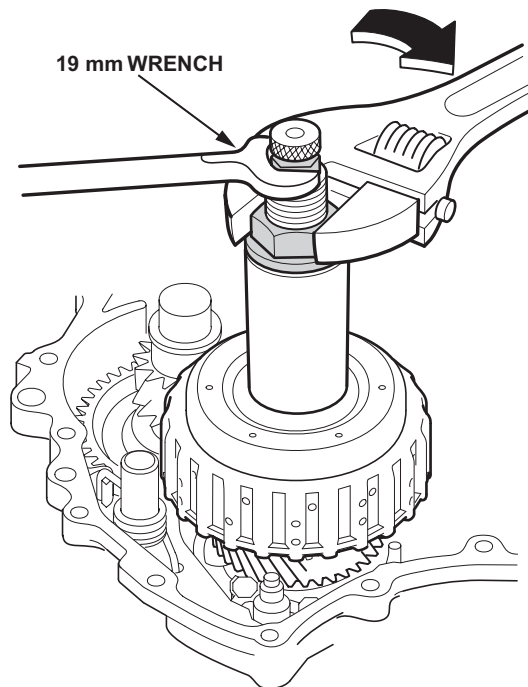
31. Seat the start clutch assembly by aligning the tip of the special tool with the shaft hole and then pushing down the handle.



32. While holding the handle down, push down the bottom part of the tool until it contacts the seating surface of the start clutch assembly.

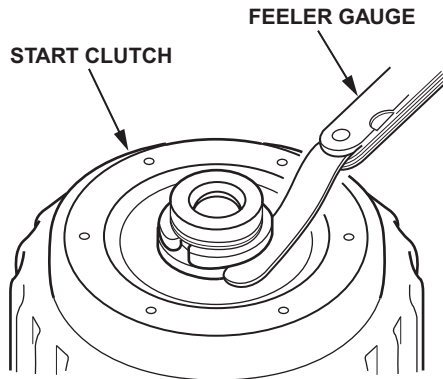


33. Hold the upper hex section of the special tool with a 19 mm wrench, then use an adjustable wrench to tighten the tool's lower nut until the start clutch assembly seats.



34. Remove the special tool.
35. Reach under the start clutch to confirm that the clutch end plate can move up and down slightly (less than 1 mm).

36. Assemble the cotters into the channel in the driven pulley shaft, then measure the clearance between the cotters and the start clutch guide. Measure the clearance at three locations.
- If the average clearance is 0 to 0.13 mm, go to step 38.
 - If the average clearance is more than 0.13 mm, go to step 37.



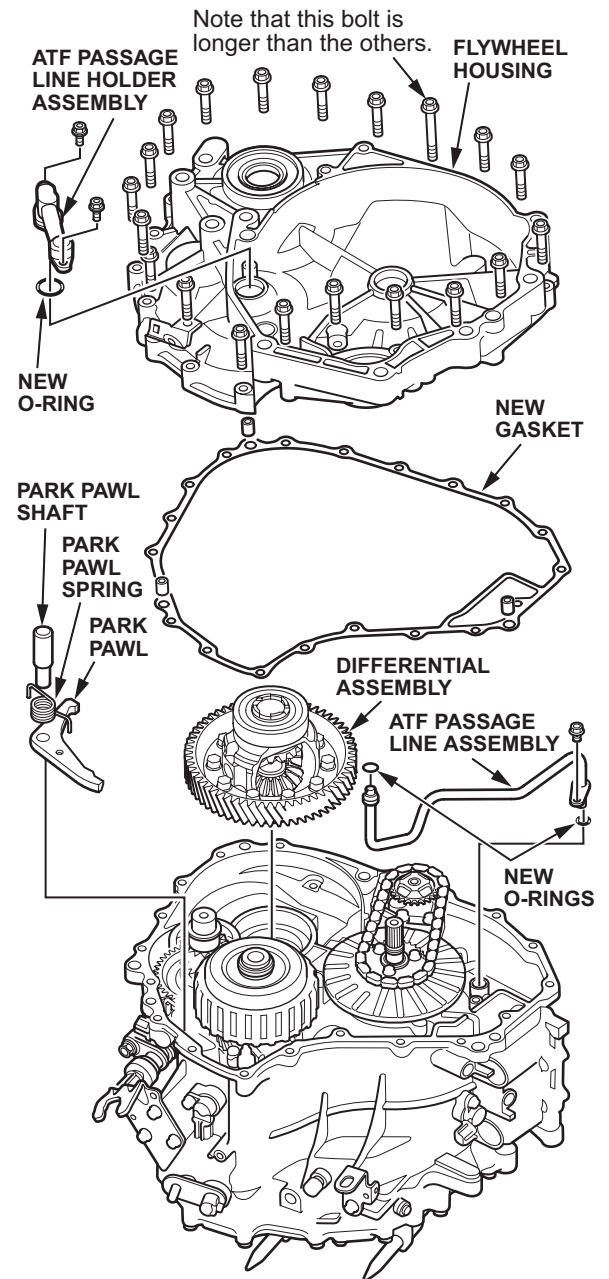
37. Remove the cotters, and measure their thicknesses. Then adjust the clearance by selecting additional cotters from the table below.

Cotter	Part Number	H/C	Thickness (mm)
A	90429-P4V-000	4905576	2.9
B	90430-P4V-000	4905584	3.0
C	90431-P4V-000	4905592	3.1
D	90432-P4V-000	4905600	3.2

38. Install the cotter retainer and a new snap ring.
39. Remove the CVT case magnets, clean them, then reinstall them.
40. *Civic Hybrid only:* Reinstall the final drive shaft, the secondary driven gear, and the thrust shim.

41. Reinstall the park pawl shaft, the park pawl, and the park pawl spring.

NOTE: The Civic GX, Civic HX, and Civic Hybrid CVT is shown. The Insight CVT is similar.



42. *All models except Insight:* Reinstall the ATF passage line assembly with two new O-rings.
43. Reinstall the differential assembly.

Summer 2007

Warranty Extension: Transmission Judder or Slippage

Dear Civic GX, Civic HX, Civic Hybrid, or Insight Owner:

This letter is to notify you of a warranty extension for two potential problems in your vehicle's continuously variable transmission (CVT).

Warranty extension details

On some vehicles, a hesitation or judder may be felt when you begin moving from a stop. You may also feel a hesitation or slipping during acceleration. To ensure that you have adequate warranty coverage for these potential problems, the CVT is now covered for judder or slippage for 7 years or 100,000 miles, whichever comes first.

If your vehicle has one of the symptoms described above, take it to any Honda dealer for an inspection. If the dealer finds a judder or slippage problem in the CVT, and your vehicle is within the extended warranty time/mileage limits, they will repair the CVT, *free of charge*. This extended warranty covers **only** CVT judder or slippage. Any other CVT problems are covered by the normal 3-year, 36,000-mile new vehicle limited warranty.

If CVT repair for judder or slippage is needed, your dealer will order all needed parts, and then schedule an appointment time that is convenient for you. Please plan to leave your vehicle at the dealership for at least a full day to allow them flexibility in scheduling.

NOTE: The last page of this notification contains updated CVT information for your vehicle owner's manual. Please update the owner's manual with this information.

What to do if you feel this notice is in error.

Our records show that you are the current owner or lessee of a 2001–05 Civic GX, Civic HX, or Insight, or a 2003–05 Civic Hybrid with a CVT. If this is not the case, or the name/address information is not correct, please fill out and return the enclosed, postage-paid *Information Change Card*. We will then update our records.

If you paid to have the CVT repaired for judder or slippage sometime in the past, you may be eligible for reimbursement. Refer to the attached *Instructions for Reimbursement* for eligibility requirements and the reimbursement procedure.

If you have questions.

If you have questions about this notice, or need help contacting a Honda dealer, please call Honda Automobile Customer Service at (800) 999-1009.

Sincerely,

American Honda Motor Co., Inc.
Honda Automobile Division

44. Reinstall the flywheel housing dowel pins, then reinstall the flywheel housing with a new gasket. Torque the housing bolts to the correct spec below.
 - *All models except Insight:* Torque the housing bolts to **29 N·m (22 lb-ft)**.
 - *Insight only:* Torque the housing bolts to **27 N·m (20 lb-ft)**.

NOTE: Do not reuse the old gasket or apply any gasket sealer.
45. *Civic GX and HX only:* Reinstall the ATF passage line holder to the flywheel housing with a new O-ring.
46. Make sure the input shaft seal is not damaged, then install a new input shaft seal ring. Apply super high-temp urea grease to the input shaft splines.
47. Reinstall the CVT:
 - Refer to the CVT section of the appropriate service manual, or
 - Online, enter keyword **TRANS**, and select **Transmission Installation** from the list.
48. Fill the CVT with the correct amount of Honda Genuine CVT Fluid:
 - *Civic GX and HX:* 6 quarts
 - *Civic Hybrid:* 5.3 quarts
 - *Insight:* 5.8 quarts
49. *Civic Hybrid and Insight only:* Make sure the IMA battery level gauge shows at least three-quarters charged. If you need to increase the IMA charge, do this:
 - *Insight only:* Remove the EPS (electronic power steering) fuse from the under-hood fuse/relay box.
 - Start the engine, and run it at 3,500 rpm until the battery level gauge shows at least three-quarters charged.
 - *Insight only:* Reinstall the EPS fuse.
50. With the engine fully warmed up, test-drive the vehicle to make sure the judder is gone. During the drive, calibrate the start clutch by turning on the headlights, and decelerating from 40 to 20 mph without using the brakes.
51. When you are finished with your test-drive, turn the ignition switch to LOCK (0), then check the CVT fluid level within 90 seconds; it should be between the upper and lower HOT marks. Add fluid if needed.