

March 09, 2018

08470 Version 2

2012–13 ZDX: Judder from the Torque Converter Lock-Up Clutch (Snapshot Upload Required)

Supersedes 17-005, 2012–13 ZDX: Judder from the Torque Converter Lock-Up Clutch, dated January 26, 2017, to revise the information highlighted in **yellow**

AFFECTED VEHICLES

Year	Model	Trim	VIN Range
2012	ZDX	ALL	2HNYB1H...CH500541 thru 2HNYB1H...CH501142
2013	ZDX	ALL	ALL

REVISION SUMMARY

Added additional information under **CORRECTIVE ACTION**.

BACKGROUND

A judder from the torque converter lock-up clutch may be felt while driving between 20 and 60 mph. The problem is typically diagnosed as a bad torque converter. American Honda investigated the judder and found that the torque converter was not causing the judder and the transmission is not damaged by this judder.

The judder was caused by deteriorated transmission fluid. The transmission fluid deteriorates quicker than expected when it is exposed to intermittent high heat loads under specific driving conditions. A software update is available to maintain the transmission fluid temperature within the desirable range under all driving conditions and eliminate the potential for this judder.

There are two service bulletins referring to this subject:

- 17-005, 2012–13 ZDX: *Judder from the Torque Converter Lock-Up Clutch*. **Do this bulletin first to apply the software and flush the transmission as indicated in the REPAIR PROCEDURE.**
- 17-007, 2012–13 ZDX: *Judder from the Torque Converter Lock-Up Clutch After Software Update*. Some vehicles based on how they are driven may still experience ATF deterioration after updating the PGM-FI or A/T system. In these cases, do the inspection and, if necessary, flush the transmission as indicated in the REPAIR PROCEDURE.

CORRECTIVE ACTION

Check if the software has been updated. **If the software has not been updated**, take an automatic transmission snapshot, review the data, and confirm that the judder is coming from the torque converter. **Send the snapshot to Tech Line.** **If the snapshot does not indicate the judder is coming from the torque converter, this service bulletin does not apply.** If the snapshot indicates the judder is coming from the torque converter, update the PGM-FI or A/T system, then flush the transmission as indicated in the REPAIR PROCEDURE.

PARTS INFORMATION

Part Name	Part Number	Quantity
Drain Plug Washer (18 mm)	90471-PX4-000	1
ATF Fill Sealing Washer (24 mm)	90441-PK4-000	1

CLIENT INFORMATION: The information in this bulletin is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely maintain your vehicle. These procedures should not be attempted by "do-it-yourselfers," and you should not assume this bulletin applies to your vehicle, or that your vehicle has the condition described. To determine whether this information applies, contact an authorized Acura automobile dealer.

REQUIRED MATERIALS

Part Name	Part Number	Quantity
Acura ATF DW-1	08200-9008A	10

WARRANTY CLAIM INFORMATION

This warranty is for 8 years or 80,000 miles, whichever comes first.

Operation Number	Description	Flat Rate Time	Defect Code	Symptom Code	Template ID	Failed Part Number
1255E4	Update the PGM-FI or A/T software.	0.2 hr	03214	03217	17-005N	37806-RP6-4060
A	Flush the ATF.	1.4 hrs				

SOFTWARE INFORMATION

NOTE: Unnecessary or incorrect repairs resulting from a failure to update the i-HDS or MVCI are not covered under warranty.

i-HDS Software Version: **1.002.017 or later**

J2534 Software Information:

PC Application Version **1.0.1.15 or later**

Database update **19-JAN-2017 or later**

Before beginning the repair, make sure that both the i-HDS and J2534 software are updated as listed above.

Do only the update listed in this service bulletin.

You cannot apply the updates with the MVCI as a standalone tool. To update the vehicle you must use the MVCI or the DST-i interface in conjunction with the J2534 Rewrite PC application on the i-HDS.

For more information about updating the i-HDS, the MVCI or DST-i, and vehicle systems, refer to Service Bulletin 01-026, *Updating Control Units/Modules*.

Trim	Software System	Program ID (or later)	Program P/N (or later)
12 ZDX Base and Technology	A/T	P63080	37806-RP6-3080
12 ZDX ADVANCED	A/T	P63090	37806-RP6-3090
13 ZDX ALL	A/T	P64060	37806-RP6-4060

INSPECTION PROCEDURE

1. Connect the i-HDS, and go to the **AT Data List**. Check to see if the software has been updated by comparing the program P/N against the table below.

PROGRAM PART NUMBER

The screenshot shows the i-HDS software interface with the AT Data List displayed. The program part number 37805-RK2-A960 is circled in red and pointed to by an arrow labeled 'PROGRAM PART NUMBER'. The data list includes various signals and their values and units.

Signal	Value	Units
Vehicle Speed	30	MPH
Output Shaft (CounterShaft) Speed	30	MPH
Input Shaft (Mainshaft) Speed	30	MPH
Engine Speed	1603	RPM
Output Shaft (CounterShaft) Speed (rpm)	1468	RPM
Input Shaft (Mainshaft) Speed (rpm)	1563	RPM
Relative TP Sensor	10.2	%
TP Sensor 1	0.94	V
TP Sensor 2	1.76	V
APP Sensor (%)	18.5	%
APP Sensor A (V)	1.69	V
APP Sensor B (V)	0.84	V
ECT Sensor (V)	0.49	V
Engine Coolant Temperature	208.4	°F
MAP Sensor (V)	1.45	V
Manifold Absolute Pressure	48	kPa
BARO SENSOR (V)	4.00	V
Atmospheric Pressure	99	kPa
ATF Temp Sensor (V)	0.94	V
ATF Temperature	185.0	°F
Battery Voltage	13.6	V
Shift Control	4th	
A/T Shift Sol VLV. A	OFF	●
A/T Shift Sol VLV. B	OFF	●
A/T Shift Sol VLV. C	ON	●
Line Pressure Sol VLV. A	OFF	●
Shift Lock Solenoid	OFF	●
ETR	97	%
GEAR RATIO	4.000	
SHIFT MAP NUMBER	4	

- If the program P/N is listed below (or later), the vehicle has been updated. Go to service bulletin 17-007, 2012–13 ZDX: Judder from the Torque Converter Lock-Up Clutch After Software Update.

Program P/N (or later)
37806-RP6-3080
37806-RP6-3090
37806-RP6-4060

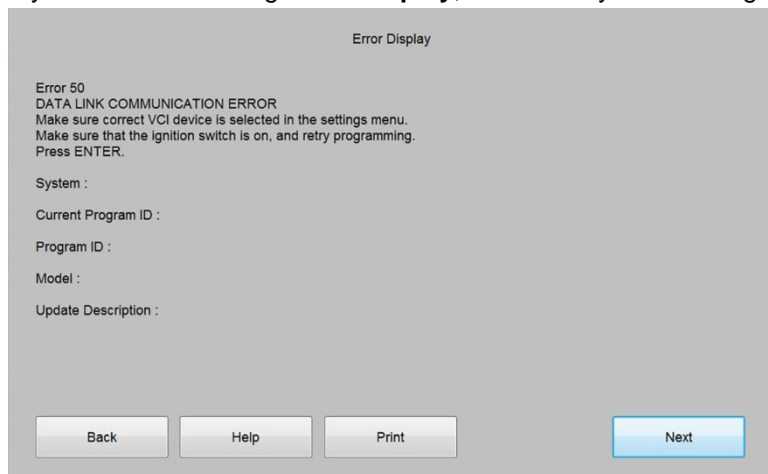
- If the program P/N is not listed, the vehicle has not been updated. Go to step 2.
2. Take an automatic transmission snapshot, and forward it to Tech Line using the RO number. For more information about capturing and interpreting the data, refer to the job aid *Torque Converter Clutch Shudder and Vibration* and the *Tech2Tech®* video “Interpreting Torque Converter Judder Snapshot Data.”
 - If the snapshot indicates there is a judder, go to the REPAIR PROCEDURE.
 - If the snapshot does not indicate a judder, this bulletin does not apply. Continue with normal troubleshooting.

NOTE: You do not need to contact Tech Line after sending the snapshot. However, if you do not send a snapshot, your claim may be subject to debit.

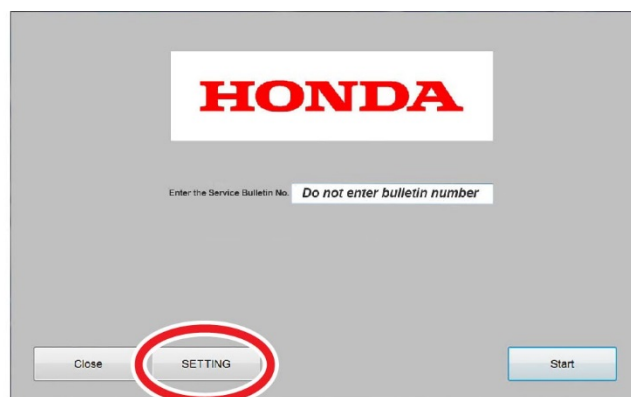
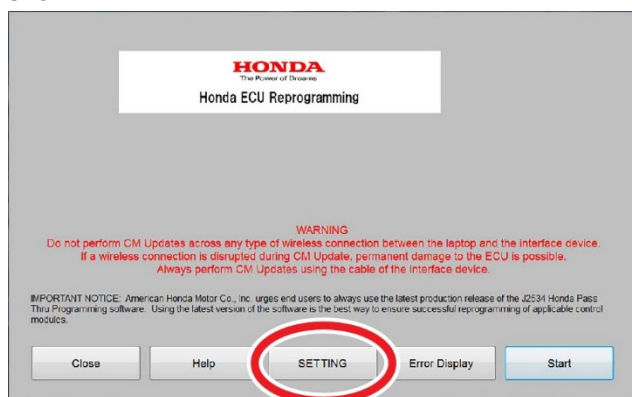
REPAIR PROCEDURE

NOTE:

- You cannot update the vehicle using the MVCI as a standalone tool.
- **Do not** use the MongoosePro VCI tool.
- Make sure the 12-volt battery is fully charged before starting an update.
- Connect a fully charged jumper battery to the vehicle, and leave it connected during the entire procedure to maintain steady voltage.
- Never turn the ignition to OFF or ACCESSORY during the update. If there is a problem with the update, leave the ignition turned to ON.
- To prevent PCM damage, do not operate anything electrical (headlights, audio system, brakes, A/C, power windows, door locks, etc.) during the update.
- If you see the following **Error Display**, check that you are using the correct tool (MVCI or DST-i) with the i-HDS.

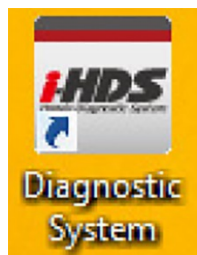


To change this, click on either of the **SETTING** selection buttons at the bottom of the J2534 initial screens as shown.

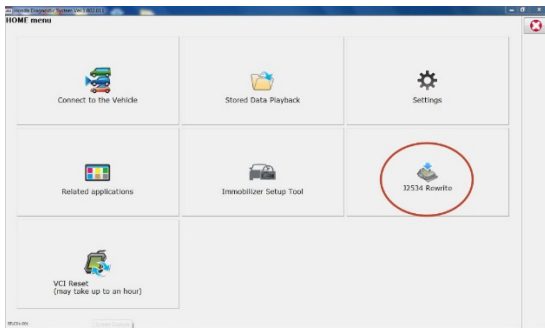


1. Update the PGM-FI or A/T software by selecting the **i-HDS Diagnostic System** icon. Refer to service bulletin 01-026, *Updating Control Units/Modules*.

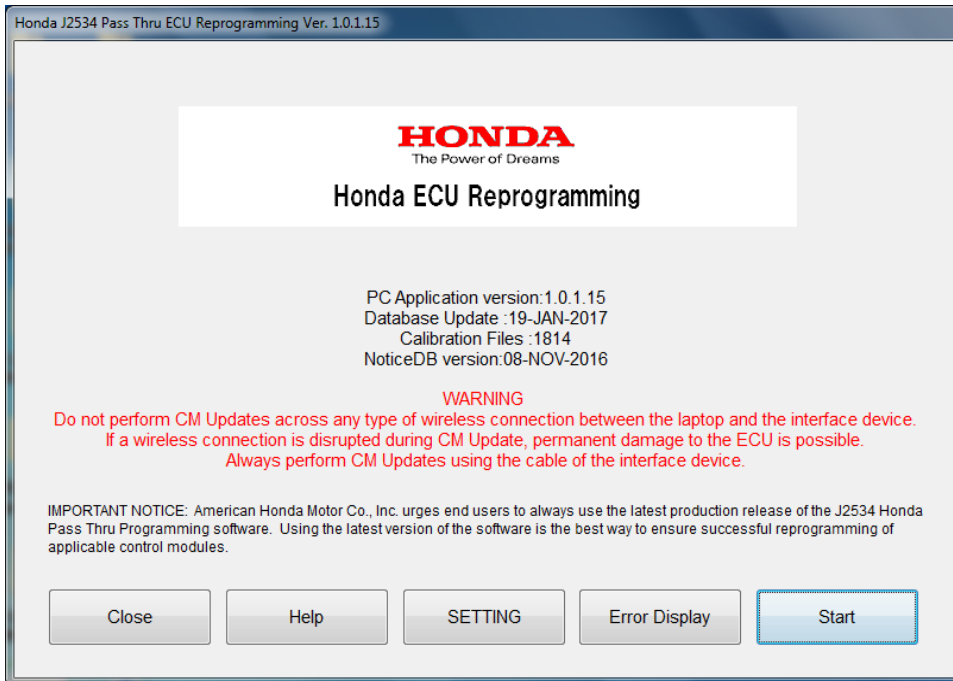
NOTE: Do not use the **Rewrite** icon on your desktop.



2. Select **J2534 Rewrite**.



3. Confirm the software is the same **or later** as listed in SOFTWARE INFORMATION.

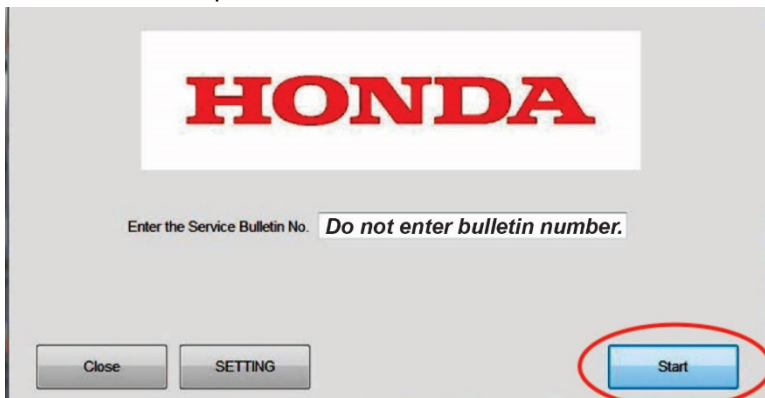


4. Select **Start**, then follow the screen prompts.

NOTE:

- **Do not enter a bulletin number.**
- If you receive a message that the vehicle has been already updated or that no update is available, check the transmission data list. The header should indicate one of the following numbers (or later):

37806-RP6-3080	37806-RP6-3090	37806-RP6-4060
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- If the program part numbers do not match those listed above, the i-HDS software needs to be reinstalled. Contact the Special Tools Hotline at **800-346-6327** for assistance.



5. Go to the ATF Flush Procedure.

ATF Flush Procedure

NOTE: The term “flushing” refers to repeatedly draining and filling the transmission with Acura Genuine ATF-DW1. **Other aftermarket flush systems are available, but American Honda strongly recommends that you avoid using them on any Acura vehicles.**

1. Start the engine. Hold the engine speed at 3,000 rpm without load (in Park or Neutral) until the radiator fan comes on, then let it idle.
2. Position the vehicle on a lift and turn off the engine.
3. Remove the ATF filler bolt and sealing washer.
4. Raise the vehicle and make sure it is securely supported.
5. Remove the drain plug and drain the ATF.
6. Install the drain plug and original washer and torque it to **49 N·m (36 lb-ft)**.
7. Lower the vehicle and fill the transmission with **3.3 US qts (3.1 L)** of ATF-DW1 through the filler hole.

NOTE: Do not use non-Acura ATF because it can affect shift quality.

8. Install the ATF filler bolt and original sealing washer and torque it to **44 N·m (32 lb-ft)**.
9. Check that the fluid is filled to the proper level.
10. Raise the vehicle and make sure it is securely supported.
11. Start the engine.
12. Press the VSA Off button.
13. Press the brake pedal and shift to Drive.
14. Release the brake pedal. Press the accelerator pedal and bring the speedometer up to 50 mph. Make sure the transmission shifts through the first three lower gears and into fourth gear and the torque converter is locking up.
15. Apply the brakes to stop the front wheels.
16. Shift to Reverse, then Neutral.
17. Repeat the shifting procedure (steps 13 through 16) four more times.
18. Turn off the engine.
19. Lower the vehicle, then repeat the above drain, fill, and shifting procedure (steps 3 through 18) one more time.
20. After the second refill and drive cycle, drain the transmission.
21. Install the drain bolt with a new washer and torque to **49 N·m (36 lb-ft)**.
22. Fill the transmission with **3.3 US qts (3.1 L)** of ATF-DW1.

Automatic Transmission Fluid Capacity

AWD: 3.3 US qts (3.1 L) at change

2WD: 3.3 US qts (3.1 L) at change

NOTE: Do not use non-Acura ATF because it can affect shift quality.

23. Install the ATF filler bolt with a new sealing washer and torque the bolt to **44 N·m (32 lb-ft)**.
24. Confirm the judder is gone and clear any DTCs that were set while driving on the lift.
25. If the Maintenance Minder did not indicate the ATF needed replacement, reset the Maintenance Minder with the i-HDS. For more information about resetting individual maintenance items, refer to the service information. If the Maintenance Minder indicated the ATF needed replacement and a full service was done, reset the Maintenance Minder with the multi-information display.

END