

**February 24, 2018**

Version 1

## 2012-13 Odyssey: Judder from the Torque Converter Lock-Up Clutch (Snapshot Required)

### AFFECTED VEHICLES

Year	Model	Trim	VIN Range
2012	Odyssey	Touring, Touring Elite	5FNRL5H...CB054365 thru 5FNRL5H...CB148157
2013	Odyssey	Touring, Touring Elite	ALL

### 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 this and found that the torque converter is not causing the judder and the transmission is not damaged by it.

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 bulletins referring to this subject:

- 17-052, *2012–13 Odyssey: 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.
- 18-017, *2012–13 Odyssey: 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

There are two types of PCM's in the 2012-13 Odyssey (Keihin and Continental). The corrective action will be based on which PCM is in the vehicle. Check the program P/N in the **Transmission Data List**

If the program P/N starts with **37805** it is a Continental PCM, the software is not available for the Continental PCM at this time. Go to the VERIFICATION PROCEDURE.

If the program P/N starts with **37806** it is a Keihin PCM. Check if the software has been updated. If the software has not been updated, take an automatic transmission snapshot, and review the data, and confirm the judder is coming from the torque converter. If the snapshot indicates the judder is coming from the torque converter, update the PGM-FI or A/T system, then go to REPAIR PROCEDURE.

**CUSTOMER 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 Honda automobile dealer.

## PARTS INFORMATION

Part Name	Part Number	Quantity
Drain Plug Washer (18 mm)	90471-PX4-000	1
ATF Fill Sealing Washer (24 mm)	11107-PWA-300	1

## REQUIRED MATERIALS

Part Name	Part Number	Quantity
Honda ATF DW-1	08200-9008	10

## WARRANTY CLAIM INFORMATION

The warranty is 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 A/T software. (with Keihin PCM only)	0.2 hr	03214	03217	A17052A	37806-RV0-5050
A	Flush the ATF.	1.4 hrs				
2181BP	Flush the ATF. (with Continental PCM only)	1.4 hrs	01102	03505	A17052B	37806-RV0-5050

## 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 1.004.012 **or later**

J2534 Software Information:

- PC Application Version 1.1.0.5 **or later**
- Database update 22-DEC-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 DST-i interface in conjunction with the J2534 Rewrite PC application on the i-HDS.

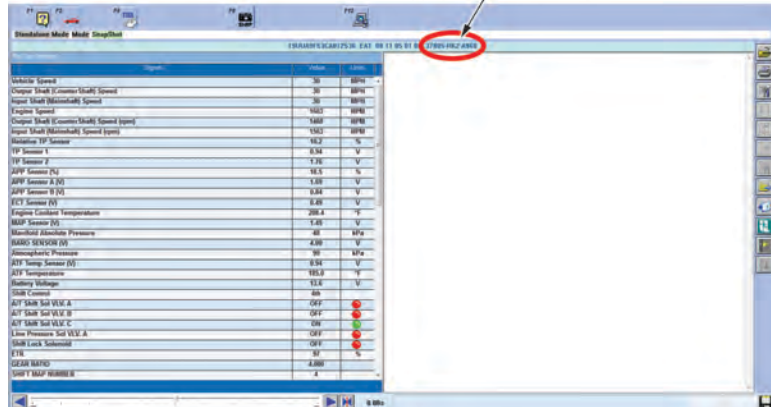
For more information about updating the i-HDS, MVCI or DST-i, and vehicle systems, refer to Service Bulletin 01-023, *Updating Control Units/Modules*.

Trim	Software System	Program ID (or later)	Program P/N (or later)
2012-13	Touring, Touring Elite (with Keihin PCM only)	V05050	37806-RV0-5050

## INSPECTION PROCEDURE

1. Connect the i-HDS, and go to the **A/T Data List**. Check the program P/N.
  - If the software program P/N starts with **37805**, it is a Continental PCM. There is no software available at this time. Go to VERIFICATION PROCEDURE.
  - If the software program P/N starts with **37806**, it is a Keihin PCM. Check if the PCM has been updated by comparing the program P/N against the table below.

PROGRAM PART NUMBER



Parameter	Value	Unit
Vehicle Speed	30	MPH
Change Switch (Continental Lock) Speed	30	MPH
Input Shift (Keihin/Continental) Speed	30	MPH
Engine Speed	1020	MPH
Change Switch (Continental Lock) Speed (Input)	1020	MPH
Input Shift (Keihin/Continental) Speed (Input)	1020	MPH
Maximum T/P Sensor	16.2	V
T/P Sensor 1	5.36	V
T/P Sensor 2	5.28	V
JWP Sensor (S)	16.5	V
JWP Sensor (R)	5.85	V
JWP Sensor (D)	5.84	V
JCT Sensor (S)	2.49	V
Engine Coolant Temperature	206.4	V
MAP Sensor (S)	1.81	V
Manifold Absolute Pressure	48	MPa
BAROS SENSOR (S)	4.88	V
Atmospheric Pressure	98	MPa
JTF Voltage Sensor (S)	5.96	V
JTF Temperature	165.9	V
Battery Voltage	13.3	V
GM Control	06	
A/T Shift Sol VLV A	OFF	
A/T Shift Sol VLV B	OFF	
A/T Shift Sol VLV C	ON	
Lock Pressure Sol VLV A	OFF	
Shift Lock Solenoid	OFF	
ETM	87	
GEAR MATES	4.880	
GM V MAP SENSOR	1	

- If the program P/N (or later) is listed below, the vehicle has been updated. Go to Service Bulletin 18-017, 2012–13 Odyssey: Judder from the Torque Converter Lock-Up Clutch After Software Update.

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- If the program P/N is not the same as above or higher, 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.** To ensure you are getting the correct data, compare your snapshot to the one in 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 REPAIR PROCEDURE.
    - If the snapshot does not indicate a judder, this bulletin does not apply. Continue with normal system 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.**

## VERIFICATION PROCEDURE

1. **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 does not indicate a judder, this bulletin does not apply. Continue with normal system 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.

- If the snapshot indicates there is a torque converter judder, go to the ATF FLUSH PROCEDURE.

## 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.



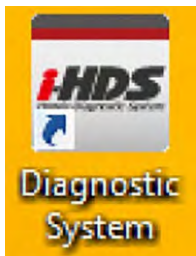
To change this, click on either of the **SETTING** selection buttons at the bottom of the J2534 initial screens as shown.



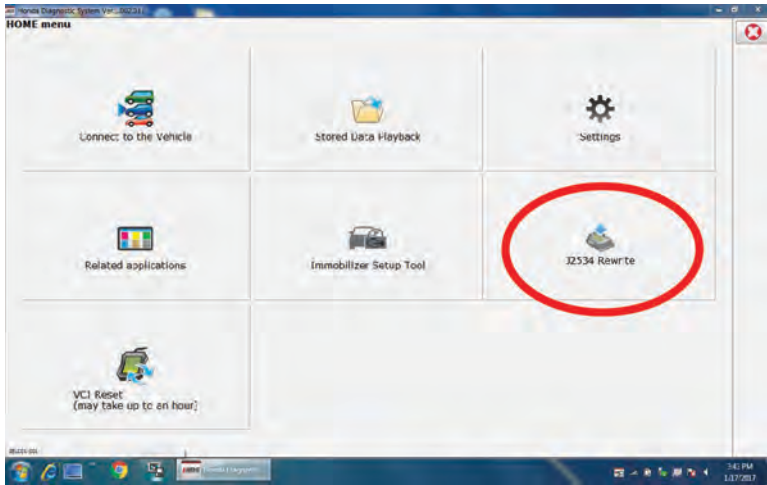
1. Update the A/T software by selecting the **i-HDS Diagnostic System** icon. Refer to Service Bulletin 01-023, *Updating Control Units/ Modules*.

**NOTE**

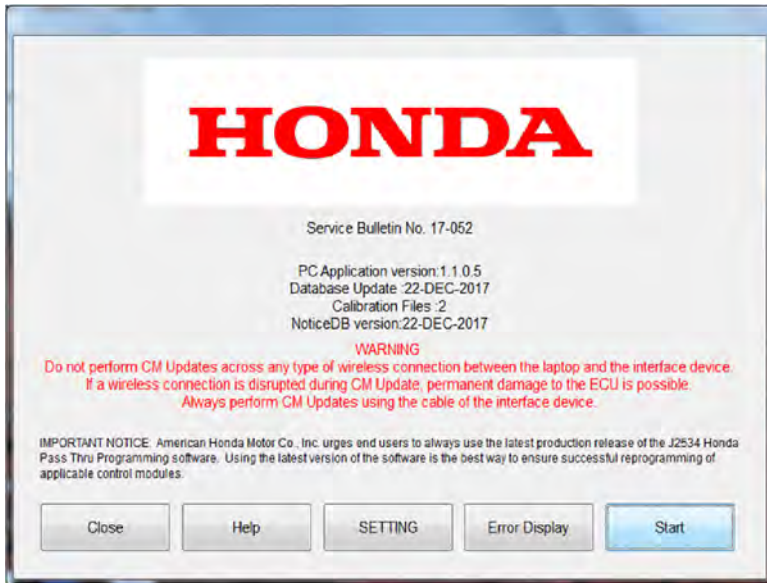
Do not use **Rewrite** icon on your desktop.



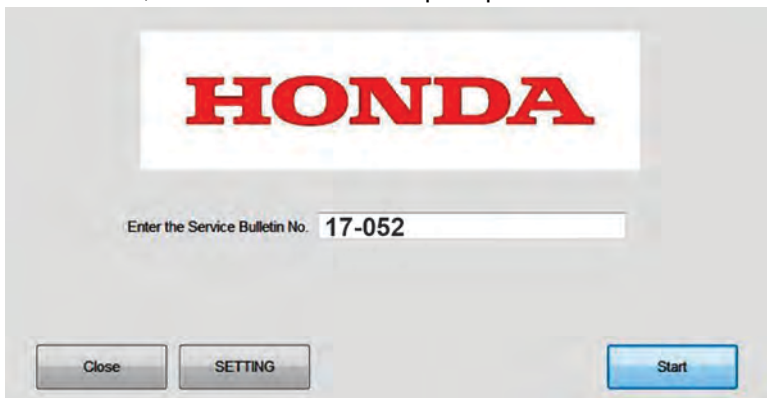
2. Select **J2534 Rewrite**.



3. Confirm the software is the same or later as listed in SOFTWARE INFORMATION, then select **Start**.



4. Enter the bulletin number **17-052**.
5. Select Start, then follow the screen prompts.



**NOTES**

- 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).

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- If the program part number does not match the one listed above, the i-HDS software needs to be reinstalled. Contact the Special Tools Hotline at **800-346-6327** for assistance.

6. Go to the ATF FLUSH PROCEDURE.

## ATF FLUSH PROCEDURE

### NOTE

The term “flushing” refers to repeatedly draining and filling the transmission with Honda Genuine ATF-DW1. Other aftermarket flush systems are available, but American Honda strongly recommends that you avoid using them on any Honda 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 **3.6 US qts (3.4 L)** of ATF-DW1 through the filler hole.

### NOTE

Do not use non-Honda 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 4th gear and the torque converter is locking up.
15. Apply the brakes to stop the front wheels.
16. Shift to Reverse, then to Neutral.
17. Repeat the shifting procedure (steps 13 through 16) four more times.
18. Turn off the engine.
19. 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 it to **49 N·m (36 lb-ft)**.
22. Fill the transmission with **3.6 US qts (3.4 L)** of ATF-DW1.

### NOTE

The automatic fluid capacity is **3.6 US qts (3.4 L)** Do not use non-Honda 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 it 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, reset the maintenance minder with the multi-information display.

END