

<b>Subject:</b> <b>AT - VIBRATION AT 45-60 MPH DURING LIGHT ACCELERATION</b>	<b>Bulletin No:</b> 05-007/08
	<b>Last Issued:</b> 5/22/2008

## APPLICABLE MODEL(S)/VINS

2006-2008 RX-8 vehicles equipped with 6-Speed AT

## DESCRIPTION

Some customers may complain of body vibration occurring during light acceleration between 45-60 MPH (1600-1900 RPM). This symptom is caused by resonance between the engine and the transmission and occurs during 6th gear lock-up.

- As a mass-production change, PCM programming has been revised on vehicles with VIN JM1 FE\*\*\*\* \*\* 215479 and higher (built November 12, 2007 and after).
- A revised torque converter with damper has been established to prevent vibration transfer to the transmission and body.

Customers having this concern should have their vehicle repaired using the following repair procedure.

## REPAIR PROCEDURE

### NOTE:

- Before performing the repair procedure, ensure service bulletin 5-010/06 - AT - SLIGHT SURGE WHILE DRIVING AT 40-55MPH has been completed if applicable.

1. Verify customer concern.
2. Verify vehicle VIN.
  - If VIN is lower than JM1 FE\*\*\*\* \*\* 215479 (built before November 12, 2007), go to STEP 3.
  - If VIN is JM1 FE\*\*\*\* \*\* 215479 or higher (built November 12, 2007 or after), go to STEP 6.
3. Reboot the IDS to clear memory before reprogramming.
4. Using IDS 51.6 or later software, reprogram the PCM to the latest calibration (refer to "Calibration Information" table) by following the "Module Reprogramming" procedure.

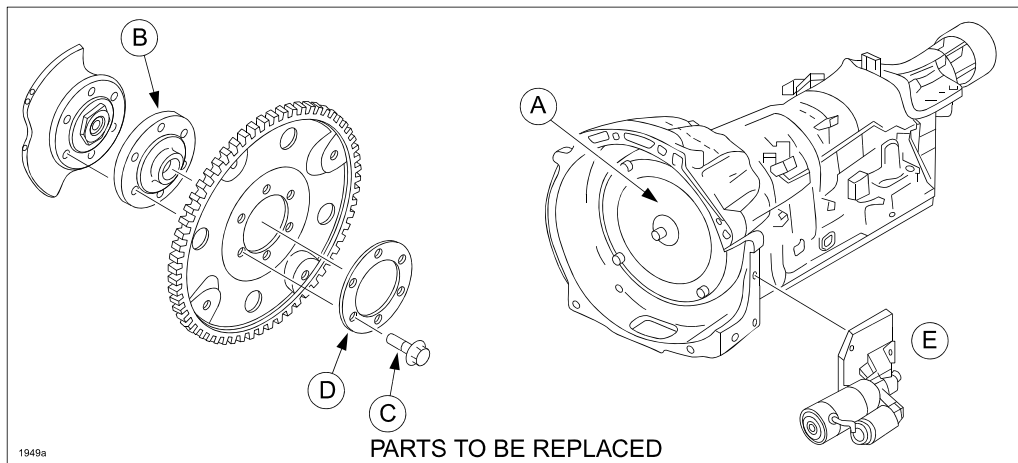
### NOTE:

- Always update the IDS tool first, then follow on-screen instructions to download the needed calibration file for PCM reprogramming.
- It is not necessary to remove any fuses or relays during PCM reprogramming when the IDS screen prompts you to do so. You may accidentally stop power to one of the PCM terminals and cause the PCM to be blanked, or you may receive error messages during the IDS reprogramming procedure.
- IDS shows the calibration part numbers after programming the PCM.
- Please be aware that PCM calibration part numbers and file names listed in any Service Bulletin may change due to future releases of IDS software, and additional revisions made to those calibrations for service related concerns.

- When reprogramming a PCM, IDS will always display the “latest” calibration P/N available for that vehicle. If any calibration has been revised/updated to contain new information for a new service concern/issue, it will also contain all previously released calibrations.
  - **When performing this procedure, we recommend that a battery charger be installed on the vehicle battery and turned ON to a maximum charge of no more than 20 AMPS to keep the vehicle battery up to capacity. If you exceed 20 AMPS, it could damage the VCM.**
5. After performing the PCM reprogramming procedure, verify the repair by starting the engine and making sure there are no MIL illumination or abnormal warning lights present.

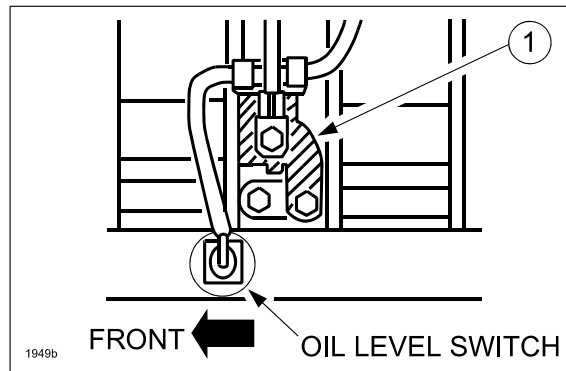
**NOTE:**

- If any DTCs should remain after performing DTC erase, diagnose the DTCs according to the appropriate Troubleshooting section of the Workshop Manual.
  - After PCM reprogramming, it is no longer necessary to road test the vehicle to “relearn” KAM (Keep Alive Memory).
6. The following steps will outline replacement of the following components:
- A. Torque converter
  - B. Adapter
  - C. Bolts
  - D. Backing plate
  - E. Starter



7. Replace the torque converter with a modified one (A). Refer to Workshop Manual section 05-13B - TORQUE CONVERTER REMOVAL / INSTALLATION [SJ6A-EL].
8. Replace the adapter (B) with a modified one with new backing plate (D) and modified bolts (C). Refer to Workshop Manual section 05-13B DRIVE PLATE REMOVAL / INSTALLATION [SJ6A-EL].
9. Install transmission. Refer to Workshop Manual section 05-13B AUTOMATIC TRANSMISSION REMOVAL / INSTALLATION [SJ6A-EL].

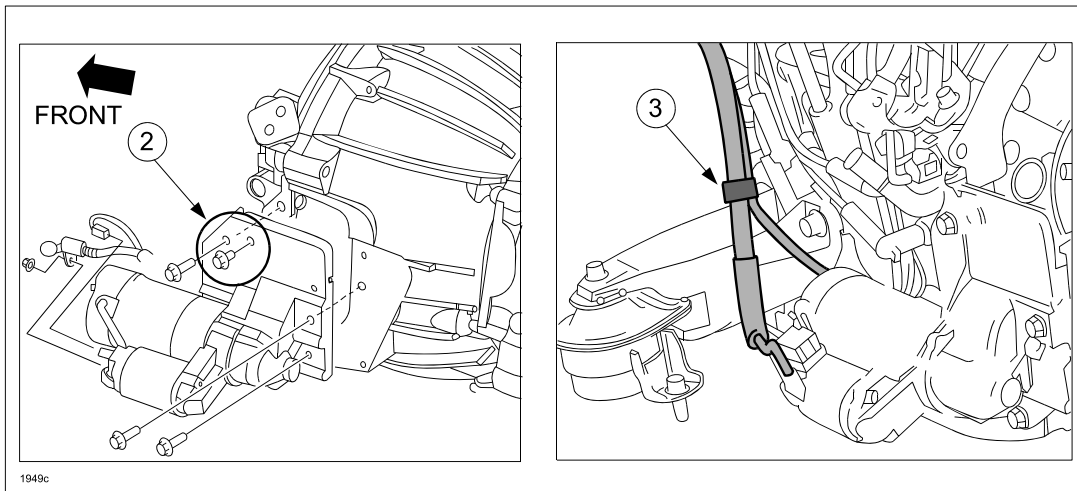
10. Replace wire bracket (1) on intermediate housing with modified one.  
**Tightening torque: 14-18 ft. lbf (19-25 N.m)**



11. Install modified starter in place of original starter removed from vehicle.

**NOTE:**

- Install supplied bolt (9979-60-812) into the extra mounting hole (2) using teflon tape or silicone sealant on the threads.  
**Tightening torque: 14-18 ft. lbf (19-25 N.m)**
- Use electrical tape to secure the ground wire to the starter wiring harness (3).



12. Add ATF fluid JWS3309 (0000-77-114E-01) until full (approx. 8.4 Q). No ATF flushing is required. Refer to Workshop Manual section 05-13B AUTOMATIC TRANSMISSION FLUID (ATF) REPLACEMENT [SJ6A-EL] and AUTOMATIC TRANSMISSION FLUID (ATF) INSPECTION [SJ6A-EL].
13. Inspect selector lever operation. Refer to Workshop Manual section 05-14 SELECTOR LEVER INSPECTION.
14. Inspect for ATF leakage. Repair as necessary.
15. Perform mechanical system test. Refer to Workshop Manual section 05-13B MECHANICAL SYSTEM TEST [SJ6A-EL].
16. Perform road test. Refer to Workshop Manual section 05-13B ROAD TEST [SJ6A-EL].
17. Verify repair.

## CALIBRATION INFORMATION

Spec	New PCM Calibration Part Number	File Name
California	N3M2-18-881M	SW-N3M2EM000
Federal	N3M6-18-881M	SW-N3M6EM000

**NOTE:**

- The PCM Calibration Part Numbers listed above are provided for PCM reprogramming purposes only. These are not necessarily the same Mazda part numbers used to order an actual PCM through the Mazda Parts System. It is not necessary to order a PCM as part of this repair procedure.

## PART(S) INFORMATION

Part Number	Description	Qty.	Notes
SJ62-19-100	Torque Converter	1	---
SJ62-19-025	Adapter	1	---
9975-61-025	Bolt	6	For adapter and backing plate
9979-60-812	Bolt	1	For starter
N3R2-18-400	Starter	1	---
N3R1-18-0FY	Bracket	1	---
BW60-19-063	Backing Plate	1	---
0000-77-114E-01	ATX Fluid JWS3309 (Case)	1	12 - 1 Quart bottles - Approx. 8.4 to fill transmission

## WARRANTY INFORMATION

**NOTE:**

- This warranty information applies only to verified customer complaints on vehicles eligible for warranty repair.
- This repair will be covered under Mazda's Powertrain Warranty term.
- Additional diagnostic time cannot be claimed for this repair.

	Lower than VIN 215479 PCM Reprogram + Parts Replacement	VIN 215479 or higher Parts Replacement Only
Warranty Type	A	A
Symptom Code	08	08
Damage Code	97	97
Part Number Main Cause	SJ62-19-100	SJ62-19-100
Quantity	1	1
Operation Number / Labor Hours:	XXD12ARX / 5.1 Hrs.	XXD12XRX / 4.8 Hrs.