

Subject: MIL ON WITH DTC P2004	Bulletin No: 01-012/10
	Last Issued: 02/11/2010

BULLETIN NOTE

- This bulletin supersedes the previous bulletin 01-014/07, issued on 04/05/07. The REPAIR PROCEDURE has been revised.
- Changes are noted below in Red beside the change bar.

APPLICABLE MODEL(S)/VINS

2004 RX-8 (6-Speed MT) with VINs from JM1FE17**4* 100001 to JM1FE17**** 129580 (built from February 2003 through December 26, 2003)

DESCRIPTION

On some vehicles, the MIL may come on with P2004 stored in PCM memory.

- P2004: Auxiliary Port Valve (APV) stuck open

Because of excessive backlash in the APV gear, the APV fully closed position is misjudged by the PCM causing P2004 to set in PCM memory. As a mass production change, the positioning of APV shaft and gear have been changed.

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

CAUTION:

- Be sure to use the updated part only for the subject vehicles (from JM1FE17**4* 100001 to JM1FE17**** 129580), otherwise the MIL will come on again.

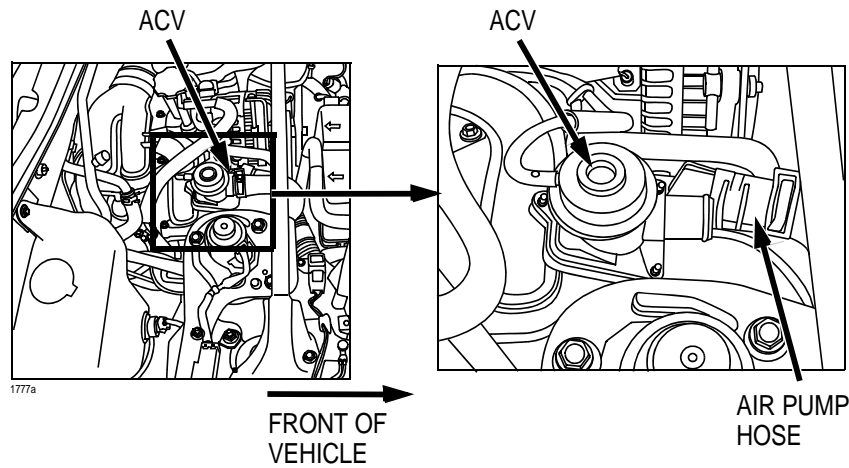
REPAIR PROCEDURE

WARNING: A hot engine and exhaust system can cause severe burns. Turn off the engine and wait until cool before repairing the APV gear.

1. Verify customer concern.

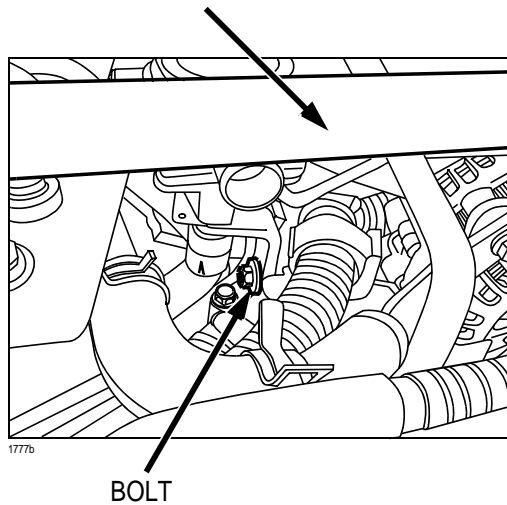
Auxiliary Port Valve (APV) Gear Removal

2. Disconnect the air pump hose from the Air Control Valve (ACV).

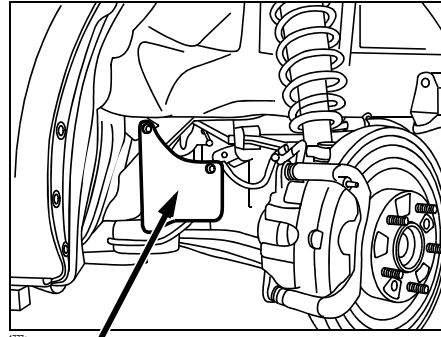


3. Remove the bolt from the ACV bracket below the ACV.

FRONT SUSPENSION TOWER BAR

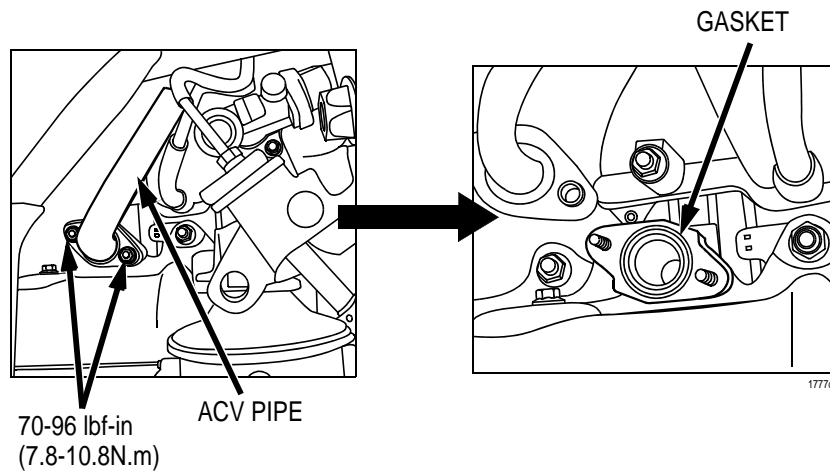


4. Raise and support the vehicle. Remove the right front wheel and the cover.



COVER

5. Remove the bolts attaching the ACV pipe to the engine, then remove and discard the gasket as a new one will be used. Position the ACV pipe toward rear of the engine.

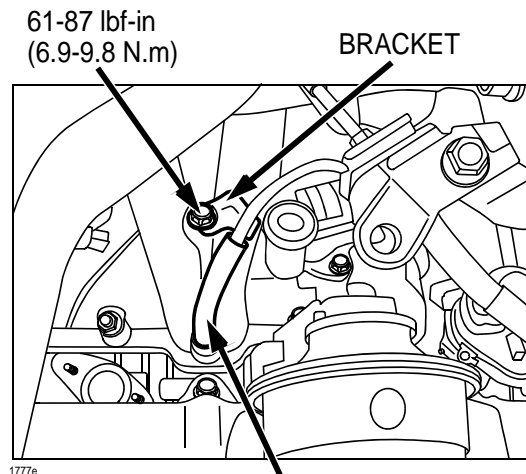


70-96 lbf-in
(7.8-10.8N.m)

ACV PIPE

GASKET

6. Remove the bolt for the Port Air Bleed (PAB) pipe bracket, then remove the PAB pipe from the manifold.



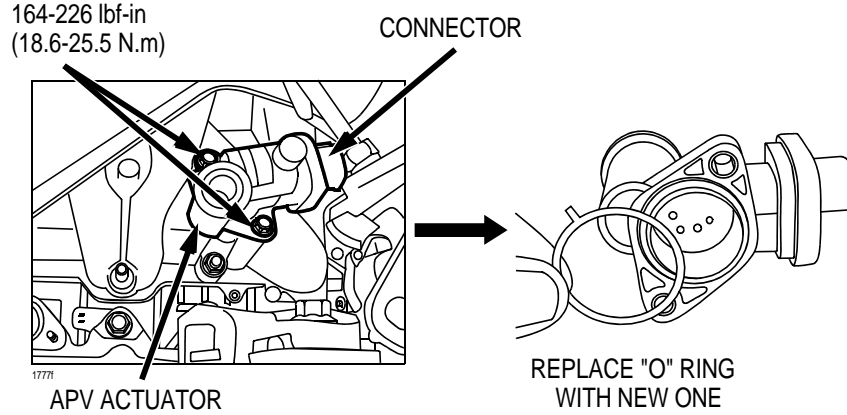
61-87 lbf-in
(6.9-9.8 N.m)

BRACKET

PAB PIPE

7. Disconnect and remove the APV actuator, then remove and discard the "O" ring on APV actuator as a new one will be used.

CAUTION: Handle the APV actuator with care. DO NOT drop it to prevent damage.

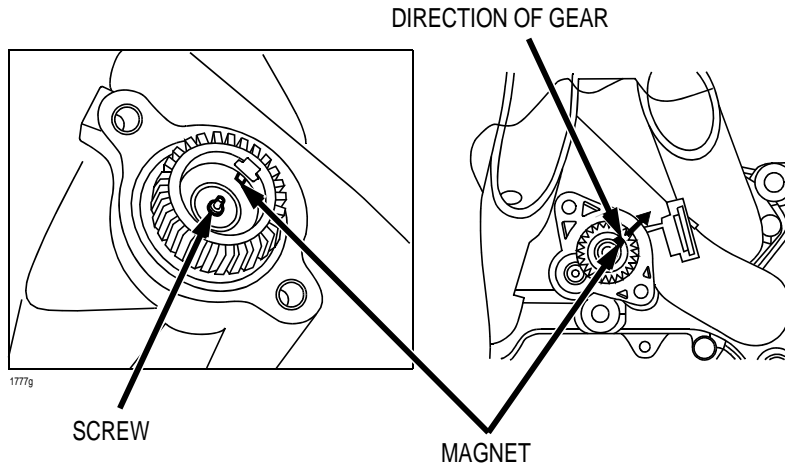


8. Rotate the APV gear counterclockwise until it stops, then carefully remove and discard the APV screw as a new one will be used.

CAUTION: The screw may be hard to loosen due to screw lock. Only use a phillips screwdriver - DO NOT use impact driver/air tools as this could break the APV.

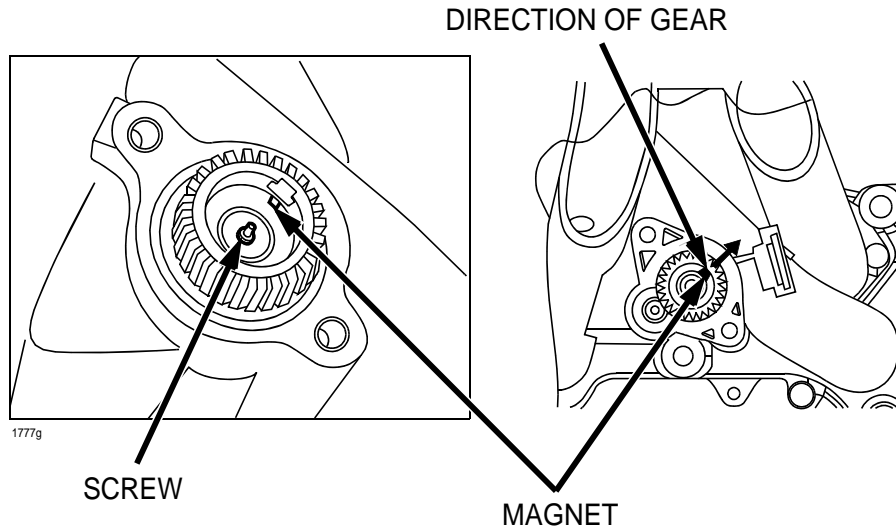
9. Rotate the APV gear fully clockwise until it stops, then remove the APV gear.

CAUTION: Use care not to rotate the APV gear shaft while the gear is removed.

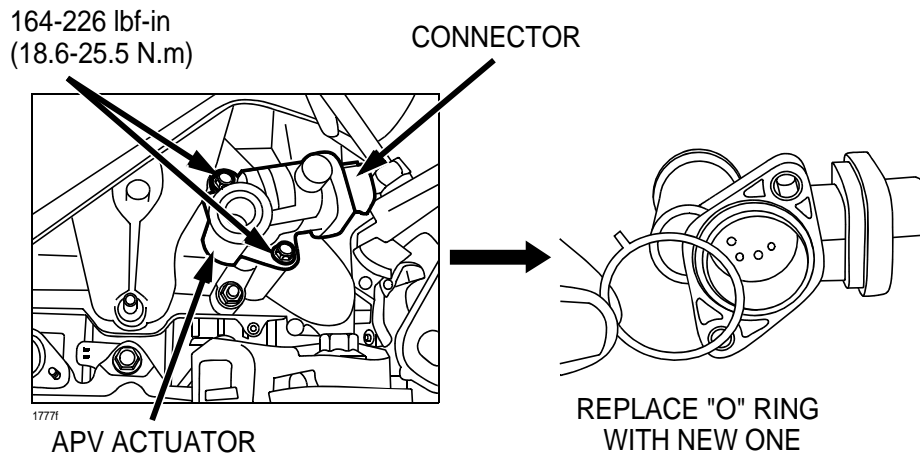


Auxiliary Port Valve (APV) Gear Installation

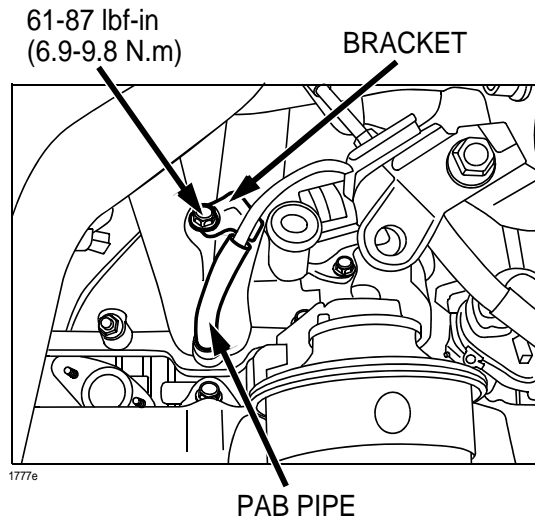
10. Using the new screw, install the APV gear. Installation position will have the magnet pointing to approximately the 1 o'clock position as shown.



11. Install new "O" ring to APV actuator and install APV actuator.



12. Install PAB pipe bracket and install PAB pipe to manifold.



13. Using new gasket, install ACV pipe.

14. Install cover and right front tire.

15. Lower vehicle.

16. Install ACV bracket and hose.

Verify Operation of APV After Repair

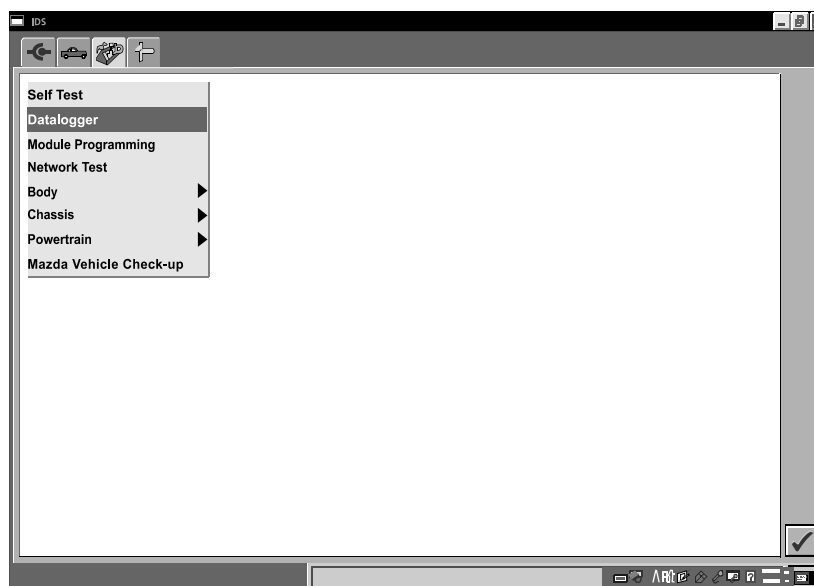
17. Connect M-MDS to the vehicle.

18. Cycle the ignition switch off, then to the ON position (engine is off).

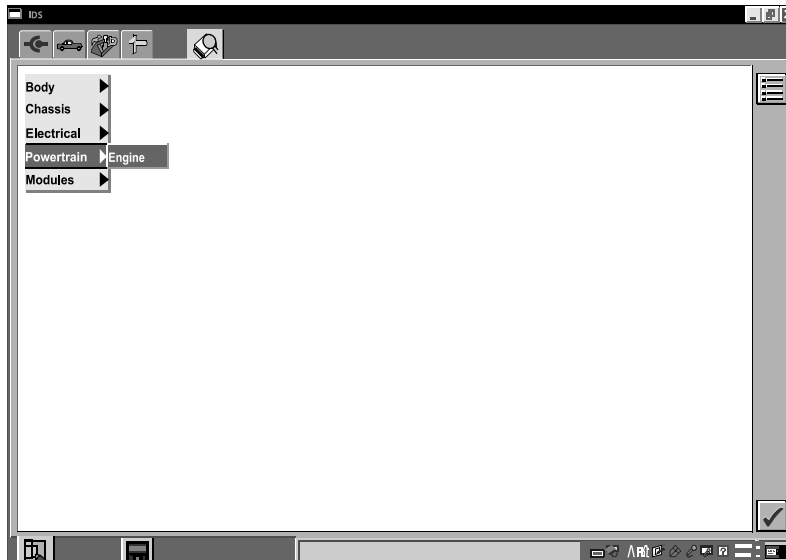
19. Check for DTCs.

20. Clear all diagnostic data.

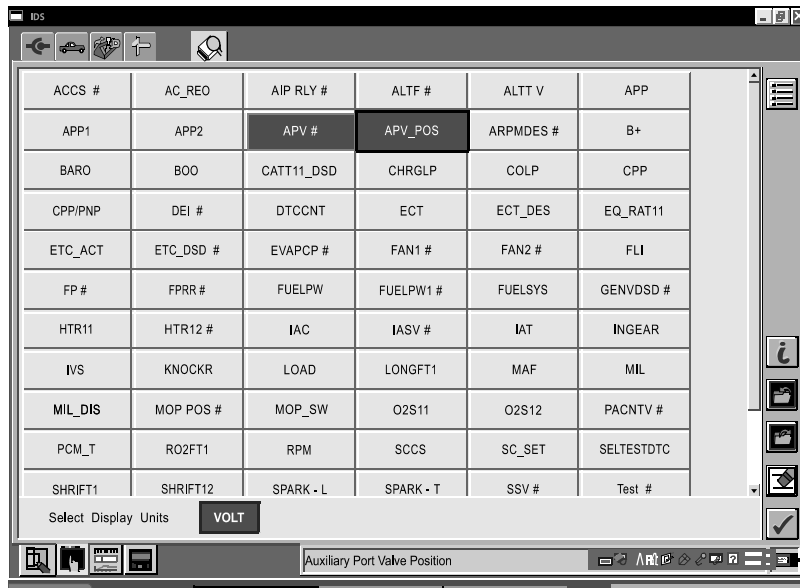
21. Select "Toolbox" and "Datalogger". Press tick.



22. Select "Powertrain" and "Engine". Press tick.



23. Select "APV#" and "APV-POS". Press tick.

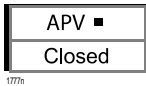


24. Check the operation of the APV as follows:

a. Press



and



b. Press



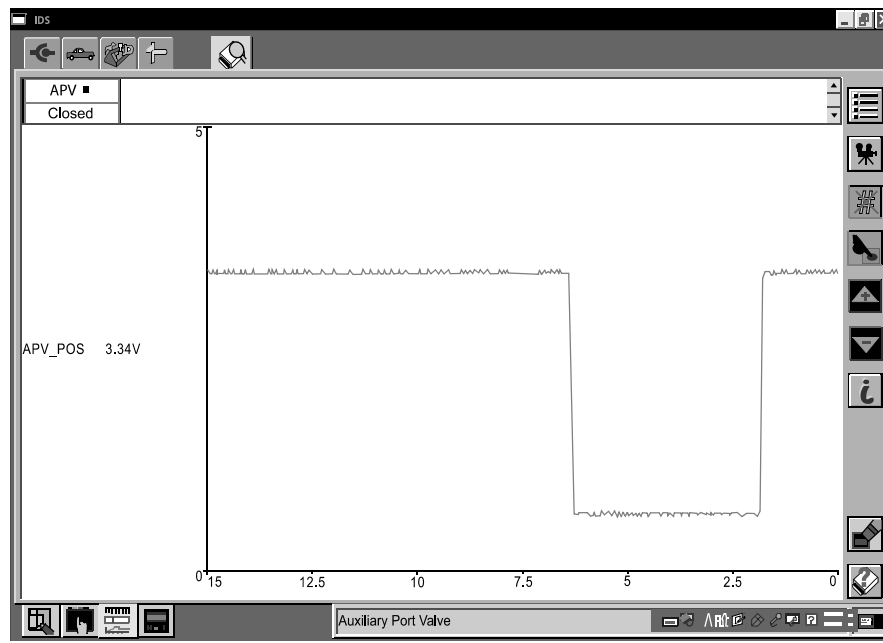
c. Press



or



“APV Opened” or “APV Closed” will be displayed on the screen and you may hear the operation of the APV while commanding the APV open/closed.



25. Verify repair.

PART(S) INFORMATION

Part Number	Description	Qty.	Notes
N3Y1-13-S90	APV Gear set	1	The APV gear set includes the following component parts: <ul style="list-style-type: none">- APV gear- Screw for APV gear- Gasket for ACV pipe- "O" ring for APV Actuator

WARRANTY INFORMATION

NOTE:

- This warranty information applies only to verified customer complaints on vehicles eligible for warranty repair. Refer to the Warranty Wizard for warranty term information.
- Additional diagnostic time cannot be claimed for this repair.

Warranty Type	A
Symptom Code	6X
Damage Code	9G
Part Number Main Cause	N3Y1-13-S90
Quantity	1
Operation Number / Labor Hours:	XXC019RX / 0.7 Hrs