

# EXCESSIVE SHIFT SHOCK FROM N TO D OR N TO R POSITION [FW6A-EL, FW6AX-EL]

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| TROUBLESHOOTING ITEM | Excessive shift shock from N to D or N to R position  |
|----------------------|---|
| DESCRIPTION          | <ul style="list-style-type: none"> <li>Strong shock is felt when shifting from N to D or N to R position at idle.</li> </ul>  |
| POSSIBLE CAUSE       | <ol style="list-style-type: none"> <li>Insufficient TCM learning (Insufficient learning in N to D position or N to R position)</li> <li>Not within idle speed specification</li> <li>Signal malfunction <ul style="list-style-type: none"> <li>APP sensor malfunction</li> <li>CKP sensor malfunction</li> </ul> </li> <li>Poor installation or worn of engine mount, suspension</li> </ol> |

## Diagnostic procedure

| STEP | INSPECTION  | ACTION |   |
|------|---|--------|---|
| 1    | <b>VERIFY MALFUNCTION SYMPTOM</b> <ul style="list-style-type: none"> <li>Is the malfunction symptom (shift shock/shifting time) at the same level compared to a vehicle of the same model?</li> </ul>   | Yes    | Symptom troubleshooting is completed.   |
|      |   | No     | Go to the next step.  |
| 2    | <b>PERFORM ON-BOARD DIAGNOSTIC TO VERIFY HYDRAULIC PRESSURE SWITCH OPERATION PRESSURE</b> <ul style="list-style-type: none"> <li>Is the operation pressure normal?</li> </ul>   | Yes    | Go to the next step.  |
|      |   | No     | Replace the control valve body.<br>(See CONTROL VALVE BODY REMOVAL/INSTALLATION [FW6A-EL, FW6AX-EL].) |
| 3    | <b>PERFORM INITIAL LEARNING, N TO D POSITION LEARNING, AND N TO R POSITION LEARNING</b> <p>Perform the Initial Learning.<br/>(See INITIAL LEARNING [FW6A-EL, FW6AX-EL].)</p> <p>Perform N to D position learning using the following procedure:</p> <ol style="list-style-type: none"> <li>The ATF temperature is <b>30 °C {86 °F} or more</b>.</li> <li>Shift the selector lever from P position to N position.</li> <li>Shift the selector lever from N position to D position and wait for <b>5 s or more</b> while holding the lever in the D position.</li> <li>Shift the selector lever from D position to N position and wait for <b>5 s or more</b> while holding the lever in the N position.</li> <li>Perform the procedures (3) to (4) above ten times.</li> </ol> <p>Perform N to R position learning using the following procedure:</p> <ol style="list-style-type: none"> <li>The ATF temperature is <b>60 °C {140 °F} or more</b>.</li> <li>Shift the selector lever from P position to N position.</li> <li>Shift the selector lever from N position to R position and wait for <b>5 s or more</b> while holding the lever in the R position.</li> <li>Shift the selector lever from R position to N position and wait for <b>5 s or more</b> while holding the lever in the N position.</li> <li>Perform the procedures (3) to (4) above ten times.</li> </ol> <ul style="list-style-type: none"> <li>Does the symptom disappear?</li> </ul> | Yes    | Symptom troubleshooting is completed.   |
|      |   | No     | Go to the next step.  |
| 4    | <b>INSPECT ENGINE CONTROL SYSTEM FOR MALFUNCTION</b> <ul style="list-style-type: none"> <li>Perform the symptom troubleshooting "NO.9 FAST IDLE/RUNS ON".<br/>(See NO.9 FAST IDLE/RUNS ON [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)</li> <li>Is there any malfunction?</li> </ul>  | Yes    | Repair or replace any malfunctioning parts according to the inspection result.                        |
|      |   | No     | Go to the next step.  |

| STEP | INSPECTION   |     | ACTION  |
|------|--|-----|---|
| 5    | <b>INSPECT SIGNAL PARTS FOR MALFUNCTION</b> <ul style="list-style-type: none"> <li>Inspect the value at the following PCM PIDs using the M-MDS.<br/>(See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)<br/>— APP (APP sensor)<br/>— RPM (CKP sensor)</li> <li>Is there any malfunction?</li> </ul> | Yes | Repair or replace any malfunctioning parts according to the inspection result.  |
|      |  | No  | Go to the next step.  |
| 6    | <b>INSPECT ENGINE MOUNT/SUSPENSION FOR POOR TIGHTENING</b> <ul style="list-style-type: none"> <li>Is there any malfunction?</li> </ul>   | Yes | Repair or replace any malfunctioning parts according to the inspection result.<br>(See ENGINE REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) |
|      |  | No  | Symptom troubleshooting is completed.   |