

EXCESSIVE SHIFT SHOCK FROM N TO D OR N TO R POSITION [GW6A-EL, GW6AX-EL]

id050320102000

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

Diagnostic procedure

STEP	INSPECTION	ACTION	
1	VERIFY MALFUNCTION SYMPTOM <ul style="list-style-type: none"> Is the malfunction symptom (shift shock/shifting time) at the same level compared to a vehicle of the same model? 	Yes	Symptom troubleshooting is completed.
		No	Go to the next step.
2	PERFORM ON-BOARD DIAGNOSTIC TO VERIFY HYDRAULIC PRESSURE SWITCH OPERATION PRESSURE <ul style="list-style-type: none"> Is the operation pressure normal? 	Yes	Go to the next step.
		No	Replace the control valve body. (See CONTROL VALVE BODY REMOVAL/INSTALLATION [GW6A-EL, GW6AX-EL].)
3	PERFORM INITIAL LEARNING, N TO D POSITION LEARNING, AND N TO R POSITION LEARNING Perform the Initial Learning. (See INITIAL LEARNING [GW6A-EL, GW6AX-EL].) Perform N to D position learning using the following procedure: (1) The ATF temperature is 30 °C {86 °F} or more . (2) Shift the selector lever from P position to N position. (3) Shift the selector lever from N position to D position and wait for 5 s or more while holding the lever in the D position. (4) Shift the selector lever from D position to N position and wait for 5 s or more while holding the lever in the N position. (5) Perform the procedures (3) to (4) above ten times. Perform N to R position leaning using the following procedure: (1) The ATF temperature is 60 °C {140 °F} or more . (2) Shift the selector lever from P position to N position. (3) Shift the selector lever from N position to R position and wait for 5 s or more while holding the lever in the R position. (4) Shift the selector lever from R position to N position and wait for 5 s or more while holding the lever in the N position. (5) Perform the procedures (3) to (4) above ten times. <ul style="list-style-type: none"> Does the symptom disappear? 	Yes	Symptom troubleshooting is completed.
		No	Go to the next step.
4	INSPECT ENGINE CONTROL SYSTEM FOR MALFUNCTION <ul style="list-style-type: none"> Perform the symptom troubleshooting "NO.14 FAST IDLE/RUNS ON". (See NO.14 FAST IDLE/RUNS ON [SKYACTIV-D 2.2].) Is there any malfunction? 	Yes	Repair or replace any malfunctioning parts according to the inspection result.
		No	Go to the next step.

STEP	INSPECTION	ACTION	
5	INSPECT SIGNAL PARTS FOR MALFUNCTION • Inspect the value at the following PCM PIDs using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) — APP (APP sensor) — RPM (CKP sensor) • Is there any malfunction?	Yes	Repair or replace any malfunctioning parts according to the inspection result.
		No	Go to the next step.
6	INSPECT ENGINE MOUNT/SUSPENSION FOR POOR TIGHTENING • Is there any malfunction?	Yes	Repair or replace any malfunctioning parts according to the inspection result. (See ENGINE REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)
		No	Symptom troubleshooting is completed.