## A/T Symptom Diagnosis

## Trouble Diagnosis 1 Electrical repair

S6RW0D5104017

Condition	Possible cause	Correction / Reference Item
Excessive shift shock	Shift solenoid valve-A and/or -B circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	Pressure control solenoid valve circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	Timing solenoid valve circuit faulty only	Inspect circuit for open, short and intermittent.
	when N $\rightarrow$ D or 3 $\leftrightarrow$ 4 shifting	If NG, repair.
	1	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	Input shaft speed sensor circuit faulty	Inspect circuit for open, short and intermittent.
	Transmission fluid temperature conser	If NG, repair.
	Transmission fluid temperature sensor	Inspect circuit for open, short and intermittent.
	circuit faulty  CAN communication circuit faulty	If NG, repair.
	CAN communication circuit faulty	Inspect circuit for open, short and intermittent.  If NG, repair.
	Throttle position sensor circuit faulty	In NG, repair. Inspect circuit for open, short and intermittent
	Trifottie position sensor circuit lauity	referring to "DTC P0122: Throttle Position
		Sensor (Main) Circuit Low in Section 1A" and/
		or "DTC P0123: Throttle Position Sensor
		(Main) Circuit High in Section 1A". If NG, repair.
	Crankshaft position sensor circuit faulty	Inspect circuit for open, short and intermittent
	,	referring to "DTC P0335: Crankshaft Position
		(CKP) Sensor Circuit in Section 1A". If NG,
		repair.
	TCM	Substitute a known-good TCM and recheck.
	ECM	Substitute a known-good ECM and recheck.
No gear shift as 3rd gear	Shift solenoid valve-A and/or -B circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	Pressure control solenoid valve circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	Timing solenoid valve circuit faulty	Inspect circuit for open, short and intermittent.
	TCM	If NG, repair.
Poor 1 → 2 shift	Shift solenoid valve-B circuit faulty	Substitute a known-good TCM and recheck.  Inspect circuit for open, short and intermittent.
Poor I → Z Siliit	Shift solehold valve-B circuit laulty	If NG, repair.
	Output shaft speed sensor (VSS) circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	Transmission range sensor circuit faulty	Inspect circuit for open, short and intermittent.
		If NG, repair.
	CAN communication circuit faulty	Inspect circuit for open, short and intermittent.
		If NG, repair.
	Throttle position sensor circuit faulty	Inspect circuit for open, short and intermittent
		referring to "DTC P0122: Throttle Position
		Sensor (Main) Circuit Low in Section 1A" and/
		or "DTC P0123: Throttle Position Sensor
	TOM	(Main) Circuit High in Section 1A". If NG, repair.
	TCM	Substitute a known-good TCM and recheck.
	ECM	Substitute a known-good ECM and recheck.

For Evaluation Only.		
Condition	Possible cause	Correction / Reference Item
Poor 2 → 3 shift	Shift solenoid valve-A circuit faulty	Inspect circuit for open, short and intermittent.
		If NG, repair.
	Output shaft speed sensor (VSS) circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	Transmission range sensor circuit faulty	Inspect circuit for open, short and intermittent.
		If NG, repair.
	CAN communication circuit faulty	Inspect circuit for open, short and intermittent.
	_	If NG, repair.
	Throttle position sensor circuit faulty	Inspect circuit for open, short and intermittent
		referring to "DTC P0122: Throttle Position
		Sensor (Main) Circuit Low in Section 1A" and/
		or "DTC P0123: Throttle Position Sensor
		(Main) Circuit High in Section 1A". If NG, repair.
	TCM	Substitute a known-good TCM and recheck.
	ECM	Substitute a known-good ECM and recheck.
Poor 3 → 4 shift	Shift solenoid valve-B circuit faulty	Inspect circuit for open, short and intermittent.
		If NG, repair.
	Pressure control solenoid valve circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	Timing solenoid valve circuit faulty	Inspect circuit for open, short and intermittent.
	g	If NG, repair.
	Output shaft speed sensor (VSS) circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	Input shaft speed sensor circuit faulty	Inspect circuit for open, short and intermittent.
		If NG, repair.
	Transmission range sensor circuit faulty	Inspect circuit for open, short and intermittent.
	,	If NG, repair.
	Transmission fluid temperature sensor	Inspect circuit for open, short and intermittent.
	circuit faulty	If NG, repair.
	CAN communication circuit faulty	Inspect circuit for open, short and intermittent.
		If NG, repair.
	Throttle position sensor circuit faulty	Inspect circuit for open, short and intermittent
		referring to "DTC P0122: Throttle Position
		Sensor (Main) Circuit Low in Section 1A" and/
		or "DTC P0123: Throttle Position Sensor
		(Main) Circuit High in Section 1A". If NG, repair.
	Engine coolant temperature sensor	Inspect circuit for open, short and intermittent
	circuit faulty	referring to "DTC P0117: Engine Coolant
		Temperature Circuit Low in Section 1A" and/or
		"DTC P0118: Engine Coolant Temperature
		Circuit High in Section 1A". If NG, repair.
	Crankshaft position sensor circuit faulty	Inspect circuit for open, short and intermittent
		referring to "DTC P0335: Crankshaft Position
		(CKP) Sensor Circuit in Section 1A". If NG,
		repair.
	"3" position switch circuit faulty	Inspect. If NG, repair.
	TCM	Substitute a known-good TCM and recheck.
	ECM	Substitute a known-good ECM and recheck.

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Condition	Possible cause	Correction / Reference Item
Poor 4 → 3 shift	Shift solenoid valve-B circuit faulty	Inspect circuit for open, short and intermittent.
		If NG, repair.
	Pressure control solenoid valve circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	Timing solenoid valve circuit faulty	Inspect circuit for open, short and intermittent.
	,	If NG, repair.
	Output shaft speed sensor (VSS) circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	Input shaft speed sensor circuit faulty	Inspect circuit for open, short and intermittent.
	imput offait opeca ochoor offait faulty	If NG, repair.
	CAN communication circuit faulty	Inspect circuit for open, short and intermittent.
	CAN communication circuit raulty	
	The state of a state of a second singuity facility	If NG, repair.
	Throttle position sensor circuit faulty	Inspect circuit for open, short and intermittent
		referring to "DTC P0122: Throttle Position
		Sensor (Main) Circuit Low in Section 1A" and/
		or "DTC P0123: Throttle Position Sensor
		(Main) Circuit High in Section 1A". If NG, repair.
	"3" position switch circuit faulty	Inspect. If NG, repair.
	TCM	Substitute a known-good TCM and recheck.
	ECM	Substitute a known-good ECM and recheck.
Poor 3 → 2 shift	Shift solenoid valve-A circuit faulty	Inspect circuit for open, short and intermittent.
	<u> </u>	If NG, repair.
	Output shaft speed sensor (VSS) circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	CAN communication circuit faulty	Inspect circuit for open, short and intermittent.
	or at communication or care radity	If NG, repair.
	Throttle position sensor circuit faulty	Inspect circuit for open, short and intermittent
	Throttle position sensor circuit radity	referring to "DTC P0122: Throttle Position
		Sensor (Main) Circuit Low in Section 1A" and/
		or "DTC P0123: Throttle Position Sensor
		(Main) Circuit High in Section 1A". If NG, repair.
	TCM	Substitute a known-good TCM and recheck.
	ECM	Substitute a known-good ECM and recheck.
Poor 2 → 1 shift	Shift solenoid valve-A circuit faulty	Inspect circuit for open, short and intermittent.
		If NG, repair.
	Output shaft speed sensor (VSS) circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	CAN communication circuit faulty	Inspect circuit for open, short and intermittent.
		If NG, repair.
	Throttle position sensor circuit faulty	Inspect circuit for open, short and intermittent
		referring to "DTC P0122: Throttle Position
		Sensor (Main) Circuit Low in Section 1A" and/
		or "DTC P0123: Throttle Position Sensor
		(Main) Circuit High in Section 1A". If NG, repair.
	TCM	Substitute a known-good TCM and recheck.
	ECM	Substitute a known-good FCM and recheck.
Incorrect gear shift point		Inspect circuit for open, short and intermittent.
moorreet gear sinit point	faulty	If NG, repair.
	Pressure control solenoid valve circuit	Inspect circuit for open, short and intermittent.
	faulty	If NG, repair.
	CAN communication circuit faulty	Inspect circuit for open, short and intermittent.
	Through a political and a life of the life	If NG, repair.
	Throttle position sensor circuit faulty	Inspect circuit for open, short and intermittent
		referring to "DTC P0122: Throttle Position
		Sensor (Main) Circuit Low in Section 1A" and/
		or "DTC P0123: Throttle Position Sensor
		(Main) Circuit High in Section 1A". If NG, repair.
	TCM	Substitute a known-good TCM and recheck.
	ECM	Substitute a known-good ECM and recheck.
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## Trouble Diagnosis 2 On-vehicle repair

Condition	Possible cause	Correction / Reference Item
Unable to run in all range	Faulty valve body component	Replace valve body assembly.
Excessive shift shock	Engine abnormal condition	Inspect and repair engine.
	Malfunction of shift solenoid valve-A	Inspect. If NG, replace.
	and/or -B	
	Malfunction of output shaft speed	Inspect. If NG, replace.
	sensor (VSS)	
	Malfunction of input shaft speed sensor	Inspect. If NG, replace.
	Malfunction of transmission range	Inspect. If NG, replace.
	sensor	
	Malfunction of transmission fluid	Inspect. If NG, replace.
	temperature sensor	
	Malfunction of timing solenoid valve only	Inspect. If NG, replace.
	when N $\rightarrow$ D or 3 $\leftrightarrow$ 4 shifting	
	Malfunction of pressure control solenoid	Inspect. If NG, replace valve body assembly.
	valve	
	Malfunction of brake light switch except	Inspect referring to "Brake Light Switch
	$N \rightarrow D$ or $N \rightarrow R$ shifting	Inspection in Section 9B". If NG, replace.
	Malfunction of crankshaft position	Inspect referring to "Camshaft Position (CMP)
	sensor	Sensor Inspection in Section 1C". If NG,
		replace.
	Malfunction of Accelerator pedal	Inspect referring to "Accelerator Pedal Position
	position (APP) sensor	(APP) Sensor Assembly On-Vehicle Inspection
		in Section 1C". If NG, replace.
	Faulty valve body component	Replace valve body assembly.
Poor 1 $\rightarrow$ 2 shift	Malfunction of shift solenoid valve-B	Inspect. If NG, replace.
	Malfunction of output shaft speed	Inspect. If NG, replace.
	sensor (VSS)	
	Malfunction of transmission range	Inspect. If NG, replace.
	sensor	
	Malfunction of Accelerator pedal	Inspect referring to "Accelerator Pedal Position
	position (APP) sensor	(APP) Sensor Assembly On-Vehicle Inspection
		in Section 1C". If NG, replace.
	Faulty valve body component	Replace valve body assembly.
Poor 2 → 3 shift	Malfunction of shift solenoid valve-A	Inspect. If NG, replace.
	Malfunction of output shaft speed	Inspect. If NG, replace.
	sensor (VSS)	
	Malfunction of transmission range	Inspect. If NG, replace.
	sensor	
	Malfunction of Accelerator pedal	Inspect referring to "Accelerator Pedal Position
	position (APP) sensor	(APP) Sensor Assembly On-Vehicle Inspection
		in Section 1C". If NG, replace.
	Faulty valve body component	Replace valve body assembly.

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Condition	Possible cause	Correction / Reference Item
Poor 3 → 4 shift	Malfunction of shift solenoid valve-B	Inspect. If NG, replace.
	Malfunction of timing solenoid valve	Inspect. If NG, replace.
	Malfunction of output shaft speed	Inspect. If NG, replace.
	sensor (VSS)	
	Malfunction of input shaft speed sensor	Inspect. If NG, replace.
	Malfunction of transmission range	Inspect. If NG, replace.
	sensor	language IF NO manifes a
	Malfunction of transmission fluid	Inspect. If NG, replace.
	temperature sensor	Inchest If NO venions
	Malfunction of "3" position switch	Inspect. If NG, replace. Inspect referring to "Engine Coolant
	Malfunction of engine coolant	
	temperature sensor	Temperature (ECT) Sensor Inspection in Section 1C". If NG, replace.
	Malfunction of Accelerator pedal	Inspect referring to "Accelerator Pedal Position
	position (APP) sensor	(APP) Sensor Assembly On-Vehicle Inspection
	position (AFF) sensor	in Section 1C". If NG, replace.
	Malfunction of pressure control solenoid	Inspect. If NG, replace valve body assembly.
	valve	Inspect. If IVG, replace valve body assembly.
	Faulty valve body component	Replace valve body assembly.
Poor 4 → 3 shift	Malfunction of shift solenoid valve-B	Inspect. If NG, replace.
,	Malfunction of timing solenoid valve	Inspect. If NG, replace.
	Malfunction of output shaft speed	Inspect. If NG, replace.
	sensor (VSS)	
	Malfunction of input shaft speed sensor	Inspect. If NG, replace.
	Malfunction of "3" position off switch	Inspect. If NG, replace.
	Malfunction of Accelerator pedal	Inspect referring to "Accelerator Pedal Position
	position (APP) sensor	(APP) Sensor Assembly On-Vehicle Inspection
	, ,	in Section 1C". If NG, replace.
	Malfunction of pressure control solenoid	Inspect. If NG, replace valve body assembly.
	valve	
	Faulty valve body component	Replace valve body assembly.
Poor 3 → 2 shift	Malfunction of shift solenoid valve-A	Inspect. If NG, replace.
	Malfunction of output shaft speed	Inspect. If NG, replace.
	sensor (VSS)	
	Malfunction of Accelerator pedal	Inspect referring to "Accelerator Pedal Position
	position (APP) sensor	(APP) Sensor Assembly On-Vehicle Inspection
		in Section 1C". If NG, replace.
	Faulty valve body component	Replace valve body assembly.
Poor 2 → 1 shift	Malfunction of shift solenoid valve-B	Inspect. If NG, replace.
	Malfunction of output shaft speed	Inspect. If NG, replace.
	sensor (VSS)	
	Malfunction of Accelerator pedal	Inspect referring to "Accelerator Pedal Position
	position (APP) sensor	(APP) Sensor Assembly On-Vehicle Inspection
	Fault and a back as a section	in Section 1C". If NG, replace.
In a sum of a biff maint	Faulty valve body component	Replace valve body assembly.
Incorrect shift point	Engine abnormal condition	Inspect and repair engine.
	Malfunction of output shaft speed	Inspect. If NG, replace.
	sensor (VSS)	Inchest vote value to "A acale vote v De del De d'Union
	Malfunction of Accelerator pedal	Inspect referring to "Accelerator Pedal Position
	position (APP) sensor	(APP) Sensor Assembly On-Vehicle Inspection
		in Section 1C". If NG, replace.

Condition	Possible cause	Correction / Reference Item
Non operate TCC (lock-	Malfunction of TCC solenoid valve	Inspect. If NG, replace.
up) system	Malfunction of shift solenoid valve-A	Inspect. If NG, replace.
	and/or -B	
	Malfunction of output shaft speed	Inspect. If NG, replace.
	sensor (VSS)	
	Malfunction of input shaft speed sensor	Inspect. If NG, replace.
	Malfunction of transmission range	Inspect. If NG, replace.
	sensor	
	Malfunction of transmission fluid	Inspect. If NG, replace.
	temperature sensor	
	Malfunction of pressure control solenoid	Inspect. If NG, replace valve body assembly.
	valve	
	Malfunction of Accelerator pedal	Inspect referring to "Accelerator Pedal Position
	position (APP) sensor	(APP) Sensor Assembly On-Vehicle Inspection
		in Section 1C". If NG, replace.
	Malfunction of engine coolant	Inspect referring to "Engine Coolant
	temperature sensor	Temperature (ECT) Sensor Inspection in
		Section 1C". If NG, replace.
	Malfunction of brake light switch	Inspect referring to "Brake Light Switch
		Inspection in Section 9B". If NG, replace.
	Faulty valve body component	Replace valve body assembly.
Excessive "N" → "D" or	Malfunction of transmission fluid	Inspect. If NG, replace.
"N" → "R" time lag	temperature sensor	
	Pressure control solenoid valve circuit	Inspect. If NG, replace valve body assembly.
	faulty	
	Clogged oil strainer	Replace.
	Faulty valve body component	Replace valve body assembly.

## Trouble Diagnosis 3 Off-vehicle repair

Condition	Possible cause	Correction / Reference Item
Unable to run in all range	Faulty oil pump	Inspect. If NG, replace.
	Seized or broken planetary gear	Inspect. If NG, replace.
	Faulty one-way No.2 clutch	Inspect. If NG, replace.
	Damaged drive plate	Inspect. If NG, replace.
	Faulty forward clutch	Inspect. If NG, replace.
	Faulty reverse clutch	Inspect. If NG, replace.
	Faulty 1st and reverse brake	Inspect. If NG, replace.
	Faulty torque converter	Replace.
Excessive "N" $\rightarrow$ "D" shift	Faulty forward clutch	Inspect. If NG, replace.
shock		
Excessive "N" $\rightarrow$ "R" shift		Inspect. If NG, replace.
shock	Faulty 1st and reverse brake	Inspect. If NG, replace.
Poor 1 $\rightarrow$ 2 shift,	Faulty 2nd brake	Inspect. If NG, replace.
excessive shock or	Faulty one-way No.1 clutch	Inspect. If NG, replace.
slippage		
Poor 2 $\rightarrow$ 3 shift,	Faulty direct clutch	Inspect. If NG, replace.
excessive shock or		
slippage		
Poor 3 ↔ O/D shift,	Faulty forward clutch	Inspect. If NG, replace.
excessive shock or	Faulty O/D and 2nd coast brake	Inspect. If NG, replace.
slippage		
Poor 3 $\rightarrow$ 2 shift,	Faulty direct clutch	Inspect. If NG, replace.
excessive shock or	Faulty one-way No.1 clutch	Inspect. If NG, replace.
slippage		
Poor 2 $\rightarrow$ 1 shift,	Faulty 2nd brake	Inspect. If NG, replace.
excessive shock or	Faulty one-way No.2 clutch	Inspect. If NG, replace.
slippage		