05JP8–01

FAIL–SAFE CHART

1. FAIL–SAFE

This function minimizes the loss of the ECT functions when any malfunction occurs in each sensor or solenoid.

(a) ATF (Automatic Transmission Fluid) temperature sensor:
When the ATF temperature sensor has a malfunction, 5th upshift is prohibited.

(b) Counter gear speed sensor NC (Speed sensor NC):
When the counter gear speed sensor has a malfunction, 5th upshift is prohibited.

(c) Shift solenoid valve DSL:
When the solenoid valve DSL has a malfunction, the current to the solenoid valve is stopped. This stops lock–up control, then fuel economy decreases.

(d) Shift solenoid valve SL1, SL2, SL3 and S4:

Fail safe function:

If either of the shift solenoid valve circuits develops an open or short, the ECM turns the other shift solenoid "ON" and "OFF" in order to shift into the gear positions shown in the table below.

Manual shifting as shown in the following table must be done (In case of a short circuit, the ECM stops sending the current to the short circuit solenoid).

Even if starting the engine in the fail–safe mode, the gear position remain in the same position.

○ : ON △ : According to Flex Lock–up × : OFF

→ : Condition in the normal operation is shown on the left of "→".
Condition in the fail–safe mode is shown on the right of "→".

Normal	Solenoid Valve	SL1	○	×	○	×	×
		SL2	○	○	×	△	△
		SL3	×	×	×	○	○
		S4	×	×	×	×	○
	Gear Position		1st	2nd	3rd	4th	5th
SL1 Malfunction (During driving at 1st or 2nd)	Solenoid Valve	SL1	×				
		SL2	○	○	×→○	△→○	△→○
		SL3	×	×	×	○→×	○→×
		S4	×	×	×	×	○→×
	Gear Position		1st → 2nd	2nd	3rd → 2nd	4th → 2nd	5th → 2nd
SL1 Malfunction (During driving at 3rd)	Solenoid Valve	SL1	×				
		SL2	○→△	○→△	×→△	△	△
		SL3	×	×	×	○→×	○→×
		S4	×→○	×→○	×→○	×→○	○
	Gear Position		1st → 4th	2nd→ 4th	3rd → 4th	4th	5th → 4th
SL1 Malfunction (During driving at 4th or 5th)	Solenoid Valve	SL1	×				
		SL2	○→△	○→△	×→△	△	△
		SL3	×→○	×→○	×→○	○	○
		S4	×	×	×	×	○
	Gear Position		1st → 4th	2nd→ 4th	3rd → 4th	4th	5th → 4th
SL2 Malfunction	Solenoid Valve	SL1	○	×→○	○	×→○	×→○
		SL2	×				
		SL3	×	×	×	○→×	○→×
		S4	×→○	×→○	×→○	×→○	○
	Gear Position		1st → 4th	2nd→ 4th	3rd → 4th	4th	5th → 4th
SL3 Malfunction	Solenoid Valve	SL1	○	×	○	×→○	×→○
		SL2	○	○	×	△	△
		SL3	×				
		S4	×	×	×	×→○	○
	Gear Position		1st	2nd	3rd	4th	5th → 4th
S4 Malfunction	Solenoid Valve	SL1	○	×	○	×	×
		SL2	○	○	×	△	△
		SL3	×	×	×	○	○
		S4	×				
	Gear Position		1st	2nd	3rd	4th	5th → 4th
SL1, SL2, SL3, and S4 Malfunction	Solenoid Valve	SL1	×				
		SL2	×				
		SL3	×				
		S4	×				
	Gear Position		1st → 4th	2nd→ 4th	3rd → 4th	4th	5th → 4th