05NDU–01

FAIL–SAFE CHART

1. FAIL SAFE OPERATION

- If there is a problem with sensor signals or actuator systems, the skid control ECU prohibits power supply to the brake actuator and informs the ECM of VSC system failure.
  The brake actuator turns off each solenoid and the ECM shuts off VSC control (traction control signal) from the skid control ECU accordingly, which turns out to be as if the ABS, TRC and VSC systems were not installed.
  The ABS control will be prohibited, but EBD control continues as much as possible. If EBD control is impossible, the brake warning light comes on to warn the driver (see page 05–764).
- If system components have any malfunction before starting control, immediately stop the operation. If system components have any malfunction during control, gradually stop the control so as not to trigger a sudden change in vehicle conditions.
  If it is impossible to control the systems, the warning light comes on to inform the driver of termination of the systems (see page 05–764).

HINT:
If the hydraulic brake booster encounters a malfunction, brake performance is gradually lost and ABS, BA, TRC, A–TRC, VSC, DAC and HAC system is prohibited.

ABS & EBD & BA system:

HINT:
A malfunction in either the ABS or BA system will result in an identical operation, with ABS, BA, TRC, A–TRC, VSC, DAC and HAC system control prohibited.

Malfunction Area	Control Method
ABS system	ABS, BA, TRC, A–TRC, VSC, DAC and HAC control prohibited
BA system	ABS, BA, TRC, A–TRC, VSC, DAC and HAC control prohibited
EBD system	ABS, EBD, BA, TRC, A–TRC, VSC, DAC and HAC control prohibited

TRC & A–TRC & VSC & DAC & HAC system:

HINT:
As for the TRC, A–TRC, VSC, DAC and HAC systems, different systems prohibit different controls according to a malfunctioning part.

Malfunction Area	Control Method
Engine control system (TRC, A–TRC and VSC systems)	Before control: Disables control During control: Uses only the brakes to effect control
Brake control system (VSC system)	Before control: Disables control During control: Uses only the engine to effect control
Brake control system (TRC, A–TRC, DAC and HAC systems)	Before control: Disables control During control: Disables control (by gradually ending control)

2. SYSTEM TEMPERATURE PROTECTION OPERATION

If the TRC, A–TRC, DAC, or HAC system has been used constantly for a long time, the temperature of the brake actuator, built in the hydraulic brake booster, may excessively increase. If the temperature excessively increases, the skid control buzzer will sound intermittently. If the temperature increases more, the skid control buzzer sounds for 3 seconds and the indicator light either comes on or blinks.

System	IndicatorCondition
TRC, A–TRC and HAC systems	Slip indicator light comes on
DAC system	Slip indicator light comes on DAC indicator light blinks

HINT:

- If the slip indicator light goes off (as for the DAC system, the DAC indicator light also comes on), the systems automatically return to normal operating conditions.
- As this is not a malfunction, no DTC will be recorded.