

## FAIL-SAFE CHART

### 1. FAIL SAFE OPERATION

- If there is a problem with any sensor signals or hydraulic brake booster systems, the skid control ECU prohibits the power supply to the actuator in the hydraulic brake booster and informs the ECM of VSC system failure.

The hydraulic brake booster turns off solenoids and the ECM shuts off the VSC control (traction control signal) from the skid control ECU accordingly, the result of which is as if the ABS, TRAC and VSC systems were not installed.

ABS control is prohibited, but EBD control continues as far as possible. If EBD control is impossible, the BRAKE warning light comes on to warn the driver (See page [BC-41](#)).

- If system components have any malfunctions before starting control, the operation stops immediately. If system components have any malfunctions during control, the control stops gradually 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 the malfunction in the systems (See page [BC-41](#)).

#### HINT:

- If the ABS, BA, TRAC, A-TRAC, VSC and AUTO LSD systems malfunction, the brake system will operate normally without ABS, BA, TRAC, VSC and AUTO LSD controls.
- If the hydraulic brake booster malfunctions, a gradual loss of brake performance is expected, and ABS, BA, TRAC, A-TRAC, VSC and AUTO LSD system controls are prohibited.

#### (a) ABS, EBD and BA systems:

##### HINT:

If the ABS, BA or EBD system malfunctions, the following controls are prohibited as shown in the table below.

Malfunction Area	Fail-Safe Operation
ABS system	ABS, BA, TRAC, A-TRAC, VSC and AUTO LSD control prohibited
BA system	ABS, BA, TRAC, A-TRAC, VSC and AUTO LSD control prohibited
EBD system	ABS, BA, EBD, TRAC, A-TRAC, VSC and EBD control prohibited

#### (b) TRAC, A-TRAC, VSC and AUTO LSD systems:

##### HINT:

If TRAC, A-TRAC, VSC and/or AUTO LSD malfunction, the following controls are prohibited as shown in the table below.

Malfunction Area	Fail-Safe Operation
Engine control system (TRAC, A-TRAC and VSC systems)	Before control: Disables control During control: Uses only brakes to effect control
Brake control system (VSC system)	Before control Disables control During control Uses only brakes to effect control

Malfunction Area	Fail-Safe Operation
Brake control system (TRAC, A-TRAC and AUTO LSD systems)	Before control: Disables control During control: Disables control (by gradually ending control)

## 2. SYSTEM TEMPERATURE PROTECTION OPERATION

If the TRAC, A-TRAC or AUTO LSD system has been used constantly for a long time, the temperature of the hydraulic brake booster may increase excessively. If the temperature increases excessively, the skid control buzzer sounds intermittently. If the temperature increases further, the skid control buzzer sounds for 3 seconds repeatedly and the indicator light either comes on or blinks.

System	Indicator Condition
TRAC or A-TRAC system	SLIP indicator light comes on
AUTO LSD system	SLIP indicator light comes on AUTO LSD indicator light stays on