NEW FEATURES

■ BRAKE

1. Brake Control System (Multi-terrain ABS with EBD, Brake Assist, A-TRC, VSC, Hill-start Assist Control, Downhill Assist Control and CRAWL)

General

- The CRAWL operation condition has been changed.
- The CRAWL has been made available on 1VD-FTV engine models. Due to this, the Downhill assist control is no longer used on these mode.

CRAWL Operation

1) General

- Vehicle speeds and braking (including the parking brake) have been eliminated from the CRAWL operation and termination conditions, and a condition in which the CRAWL stops while the vehicle is running has been added. This change has been implemented in order to avoid the control cancellation that occurs unintentionally when the driver brakes suddenly or the vehicle speed increases. Furthermore, by allowing the CRAWL to be activated even while the vehicle is running, ease of use has been improved.
- The CRAWL operation will now activate only the brake control when the 2nd start switch is on, and the warning indication by the indicator light and the multi-information display that were accompanied by the brake control have been discontinued, improving ease of use.
- The CRAWL termination conditions (engine control) have been changed. The 2nd start switch is now the only remaining condition.

2) CRAWL Operation Condition

When the CRAWL ON/OFF switch is pressed with all of the following conditions met, the CRAWL starts operating. The activation of the control causes the CRAWL indicator light to illuminate and the slip indicator light to blink.

CRAWL Operation Condition	Shift position is in any position other than P or N.
	Transfer is L4.
	2nd start switch is off.
	ATF temperature is not too high.
	Brake actuator temperature is not too high.
	VSC system is operating normally.
	Driver's door is closed.

NOTE: When the 2nd start switch is on, the CRAWL starts with only the brake control activated. In this case, the same operation indicator as that of the normal operation remains on.

3) CRAWL Suspending Condition

When the vehicle speed exceeds approximately 25 km/h (16 mph) while the CRAWL is operating, the CRAWL will be suspended and the CRAWL indicator light will flash. In this case, the CRAWL will resume when the vehicle speed decreases below the said vehicle speed.

4) CRAWL Operation Termination Condition (Brake and Engine Controls)

When any one of the following conditions is met, the skid control buzzer will sound, the CRAWL indicator light will start flashing, and the CRAWL will terminate. Also, when the operation is terminated through the CRAWL ON/OFF switch, the buzzer will not sound and the indicator light will go off.

CRAWL Operation Termination Condition	CRAWL ON/OFF switch is turned off.
	Shift position is in any position other than P or N.
	Transfer is changed to H4.
	Driver's door is opened.
	ATF temperature is too high.
	Brake actuator temperature is too high.
	VSC malfunctions. (If this happens, take appropriate actions such as stopping the vehicle.)
	Target vehicle speed cannot be reached and the skid control ECU determines that the CRAWL cannot operate.

5) CRAWL Operation Termination Condition (Engine Controls)

When the 2nd start switch is operated (turned on) while the CRAWL is operating, only the engine control is terminated, the brake control continues. In this case, the same operation indicator as that of the normal operation will remain on.

Combination Meter

- Do to the introduction of CRAWL on the 1VD-FTV engine models, the downhill assist control indicator light is no longer used in these models.
- Do to the CRAWL condition change, display conditions of the multi-information display have also been changed.

Multi-information Display Table (changes mode to the CRAWL operation condition)

Display	Details	CRAWL Indicator Light	VSC Warning Buzzer
CRAWL has been deactivated	Displayed when all the CRAWLs stop operating.	• CRAWL Indicator Light (Illuminates→Blinks→turns off) • Slip Indicator Light (Blinks→turns off*)	Sounds
CRAWL not available Check System operation conditions	Displayed when the CRAWL ON/OFF switch is turned on in any one of the following situations: – Engine is not running – Driver's door is open – Brake actuator temperature is too high – ATF temperature is too high – VSC malfunctions.	—*	—

NOTE: *: If the brake system is malfunctioning, the slip indicator light illuminates.

- When the control is canceled using the CRAWL switch, the buzzer will not sound and the CRAWL indicator light will go off.