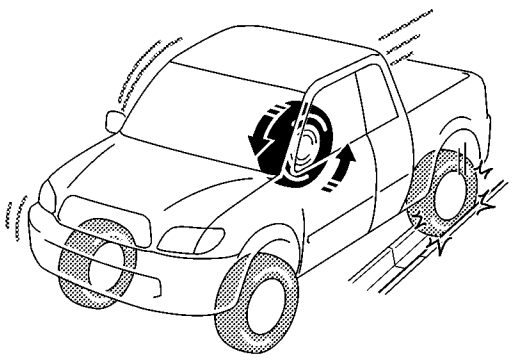
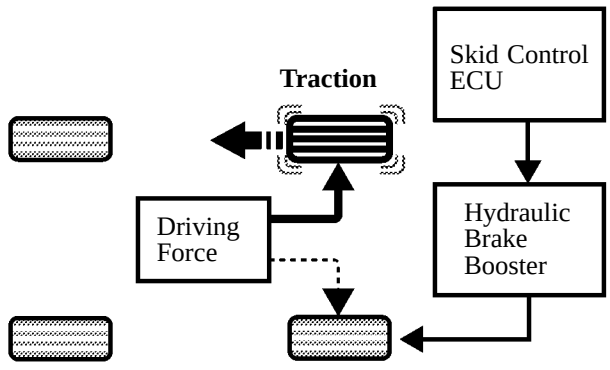
3. Outline of Auto LSD System (Only for 2WD Models)

General

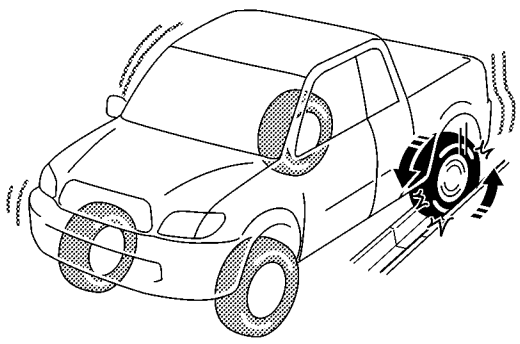
The Auto LSD achieves the equivalent functions of an LSD (Limited Slip Differential) through the use of a traction control system. When the driver presses the Auto LSD switch, this system achieves the LSD effect by regulating the hydraulic pressure that acts on the drive wheels and controlling the engine output in accordance with the amount of pedal effort applied on the accelerator.
The TRAC enhances the start off performance of the vehicle during low-resistance surface conditions, such as snow or mud, by restricting the acceleration effort during a start off in order to prevent the wheels from spinning.
On the other hand, the Auto LSD tends to enhance the acceleration effort somewhat in order to apply greater drive torque to the wheel that is making contact with the ground. Thus, this function helps the vehicle get unstuck if a wheel loses its grip, and enhances the vehicle's start off performance on high-resistance surface conditions such as gravel roads.

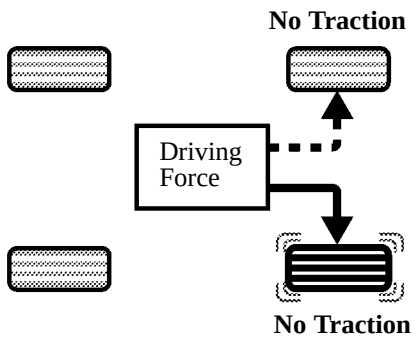
▶ with Auto LSD System ◀





▶ without Auto LSD System ◀





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Handling Precautions

Precautions for Operating the Auto LSD:

- Operate the Auto LSD control only when the wheels are susceptible to spinning, such as when driving on a grooved, slippery, or rough surface.
- Make sure the vehicle is stopped before turning ON the Auto LSD function.
- To prevent unstable driving conditions, do not continue driving the vehicle with the Auto LSD function turned ON.
- The following conditions must be met to operate the Auto LSD system.
  Auto LSD indicator light turns on when the operation is activated.
  i) With the vehicle stopped, the Auto LSD switch has been pressed.
  ii) The accelerator pedal has been pressed and the vehicle is accelerating.
  (Depressing the brake pedal prohibits the system operation so as not to prevent the braking operation.)
- The slip indicator on the combination meter panel will blink when the Auto LSD function is operating.
- If the brake control of the Auto LSD is operated continuously, the temperature of the actuator in the hydraulic brake booster will rise.
  The skid control ECU, which monitors* the temperature of the brake actuator, alerts the driver by sounding the buzzer intermittently if the brake actuator becomes overheated. In this case, the Auto LSD will momentarily stop its operation in order to protect the system.
  *: Skid control ECU calculates the temperature of the brake actuator depending on the energizing time.
- The Auto LSD applies brakes to the drive wheels, and controls the extent of the brake application in order to achieve the function of an LSD. However, it might not be able to achieve this function on a steep incline or on an extremely slippery surface such as a frozen snow surface.

4. Drive Modes

The following indicates the drive modes and the control states of the functions:

▶ MULTI MODE (PART TIME & FULL TIME) 4WD Model ◀

Item		Function					
		ABS, EBD BA	VSC	TRAC	A-TRAC	DAC	HAC
2WD		○	○	○	-	-	○
4WD	H4F	○	○	-	○	-	○
	H4L	○	-	-	○	-	○
	L4F	○	○	-	○	○	○
	L4L	○	-	-	○	○	○

○: Operate

▶ 2WD Model ◀

Item	Function				
	ABS, EBD BA	VSC	TRAC	Auto LSD	HAC
2WD	○	○	○ (Auto LSD Switch OFF)	○ (Auto LSD Switch ON)	○

○: Operate