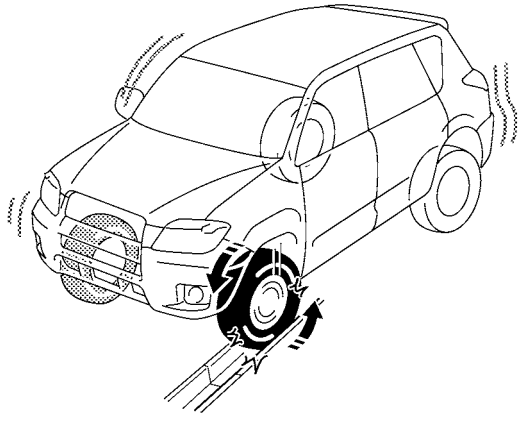
■AUTO LSD (2WD MODELS)

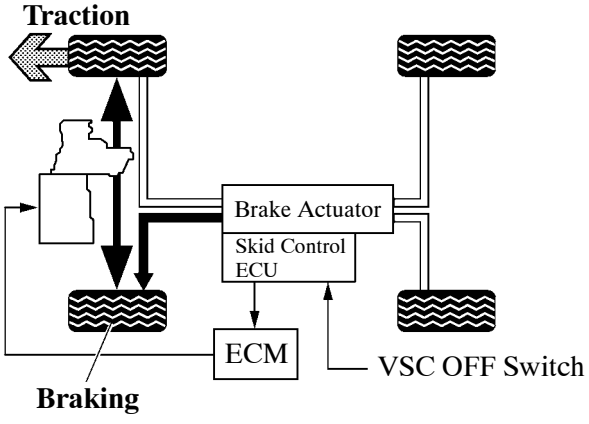
1. Outline of Auto LSD

- The Auto LSD achieves the equivalent functions of an LSD (Limited Slip Differential) through the use of a traction control function. For this reason, the contents of the brake control are the same in both the Auto LSD and TRC. When the driver presses the Auto LSD switch, this function 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.
- TRC 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 when it is in contact with the ground. Thus, this function helps the vehicle to become unstuck if a wheel loses its grip, and enhances the vehicle's start-off performance on high-resistance surface conditions such as gravel roads.
- The following conditions are required for operating the Auto LSD function:

VSC OFF Switch	TRC OFF Mode (Auto LSD On)
Accelerator Pedal	On

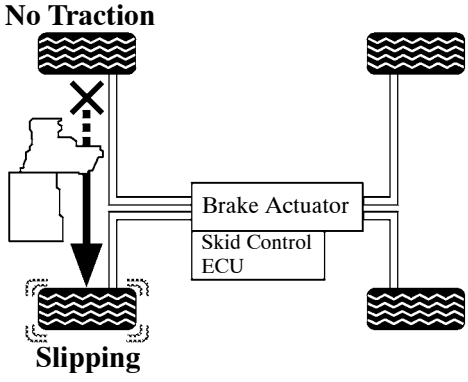


01NCH135Y



With Auto LSD

01NCH136Y



Without Auto LSD

01NCH137Y

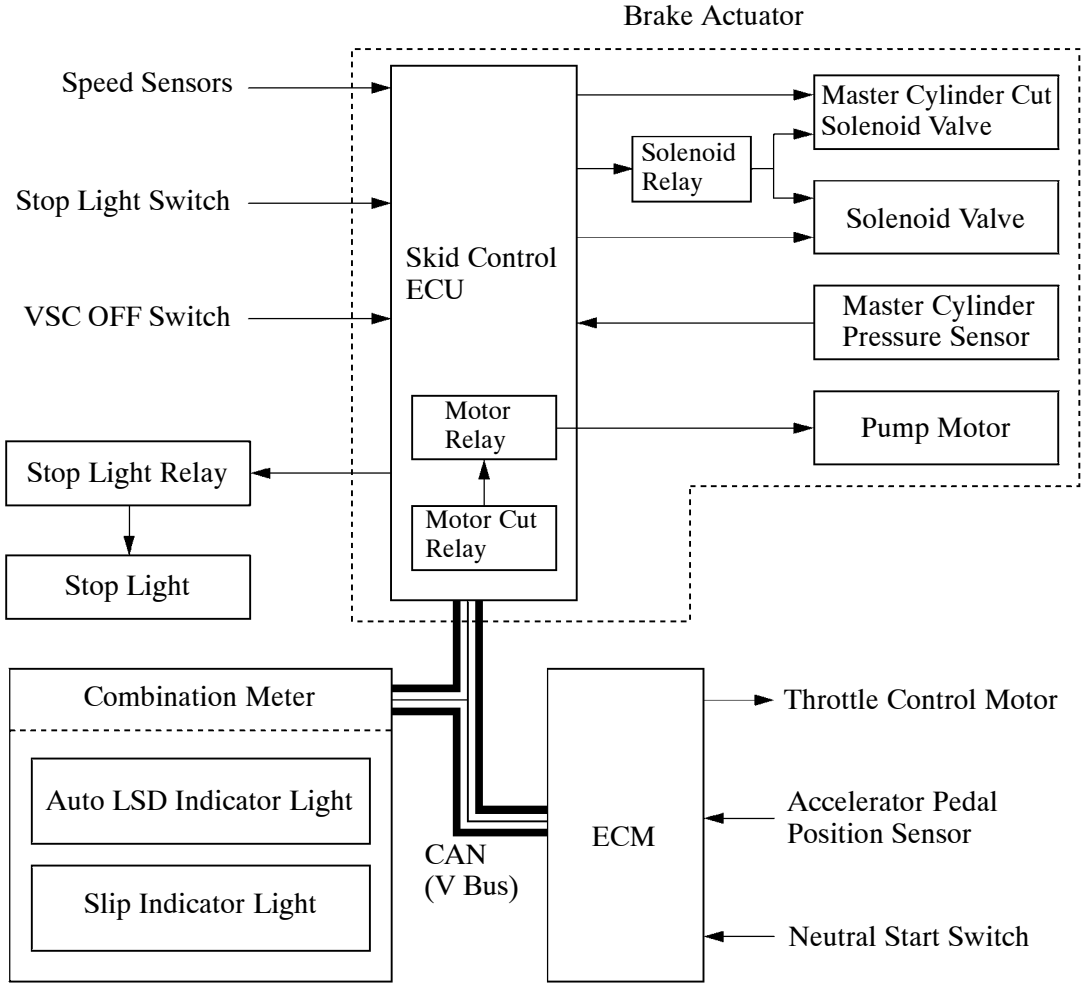
2. Auto LSD Operation

- The skid control ECU determines that the vehicle is in a state in which the Auto LSD can operate, by using various sensors and switches to detect the operating conditions of the VSC OFF switch, shift position, accelerator pedal, and brake pedal.
- When the vehicle is in a state in which the Auto LSD can operate, the skid control ECU effects hydraulic pressure control of the wheel cylinder in the wheel with the faster wheel speed, so that the wheel speeds of the right and left drive wheels will become equal.
- The Auto LSD indicator light illuminates when the vehicle is in a state in which the Auto LSD can operate, and the slip indicator light flashes during Auto LSD control.
- If the Auto LSD function operates due to the slippage of the left drive wheel, see the next page for the operation of the solenoid valves.

NOTICE

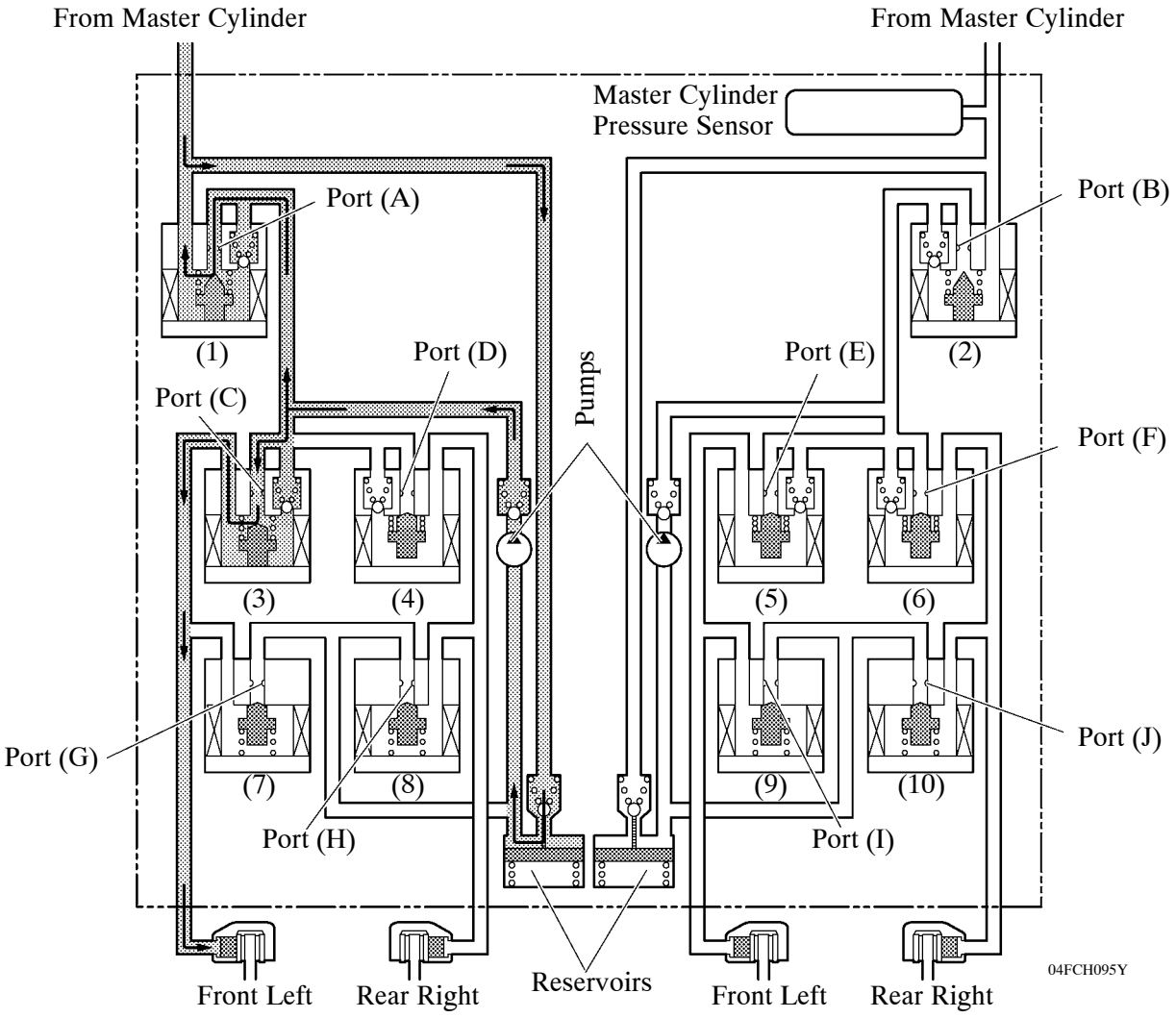
- Use the Auto LSD only if a wheel comes off or while driving on a road surface with high driving resistance such as sand or mud. Do not use it for normal driving. After using the Auto LSD, make sure the Auto LSD indicator light is off before resuming driving.
- To operate the VSC OFF switch, make sure the wheels are not spinning.

▶ System Diagram ◀



01NCH1192I

▶ Auto LSD Operation (Left Drive Wheel Slipping) ◀



Item			Port	Auto LSD Not Activated	Auto LSD Activated		
					Increase Mode	Holding Mode	Reduction Mode
(1)		Master Cylinder Cut Solenoid Valve	(A)	Off (Open)	On*	←	←
(2)			(B)	Off (Open)	←	←	←
Front Brake	(3)	Pressure Holding Solenoid Valve	(C)	Off (Open)	←	On (Closed)	←
	(6)		(F)	Off (Open)	On (Closed)	←	←
	(7)	Pressure Reduction Solenoid Valve	(G)	Off (Closed)	←	←	On (Open)
	(10)		(J)	Off (Closed)	←	←	←
	Wheel Cylinder Pressure	Right	—	—	—	—	—
		Left	—	—	Increase	Hold	Reduce
Rear Brake	(4)	Pressure Holding Solenoid Valve	(D)	Off (Open)	On (Closed)	←	←
	(5)		(E)	Off (Open)	On (Closed)	←	←
	(8)	Pressure Reduction Solenoid Valve	(H)	Off (Closed)	←	←	←
	(9)		(I)	Off (Closed)	←	←	←
	Wheel Cylinder Pressure	Right	—	—	—	—	—
		Left	—	—	—	—	—
Pump				Off	On	←	←

*: The solenoid valve controls the hydraulic pressure between "open" and "closed" according to the operating condition by adjusting continually.

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