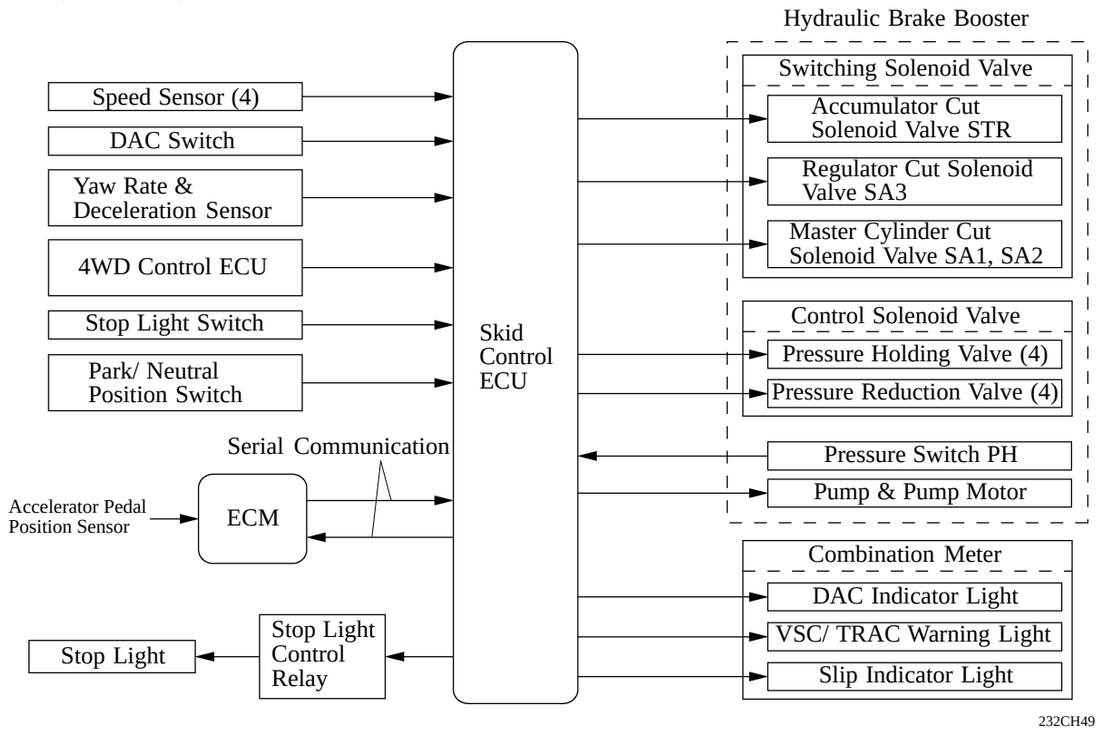
DAC Operation

- Based on the information provided by various sensors, switches, and the ECM, the skid control ECU determines the conditions that enable a DAC operation. Then, the skid control ECU controls the fluid pressure that is generated by the pump & pump motor and applies it by way of the solenoid valves to the brake wheel cylinder of each wheel in the following 3 modes: pressure reduction, pressure hold, and pressure increase modes.
- The skid control ECU computes the vehicle speed, travel direction, and the gradient of the hill in accordance with the signals that are input by the speed sensor and the yaw rate & deceleration sensor, and effects brake control to attain the target vehicle speed. The target vehicle speed determines in accordance with the travel direction.

Travel Direction	Target Vehicle Speed
Forward	5 – 7 km/h (3 – 4 mph)
Backward	3 – 5 km/h (2 – 3 mph)

- During a DAC operation, the skid control ECU outputs signals to the stop light control relay and the combination meter to cause the stop light to turn ON and the slip indicator light to blink.
- If the accumulator pressure drops during this operation, the skid control ECU receives the signals from the pressure switch PH and actuates the pump & pump motor to ensure the proper accumulator pressure.
- Furthermore, when the DAC is operating continuously while the vehicle is being driven on a slippery surface, the temperature of the brake actuator in the hydraulic brake booster increases. After a prescribed length of time elapses, the skid control ECU alerts the driver of this condition by causing the VSC/TRAC warning light to illuminate and the DAC indicator light to blink. Also, the DAC operation is momentarily interrupted to protect the brake actuator.
  When the temperature of the brake actuator decreases, the VSC/TRAC warning light turns OFF, and the DAC is automatically restored to an operating state.

▶ System Diagram ◀



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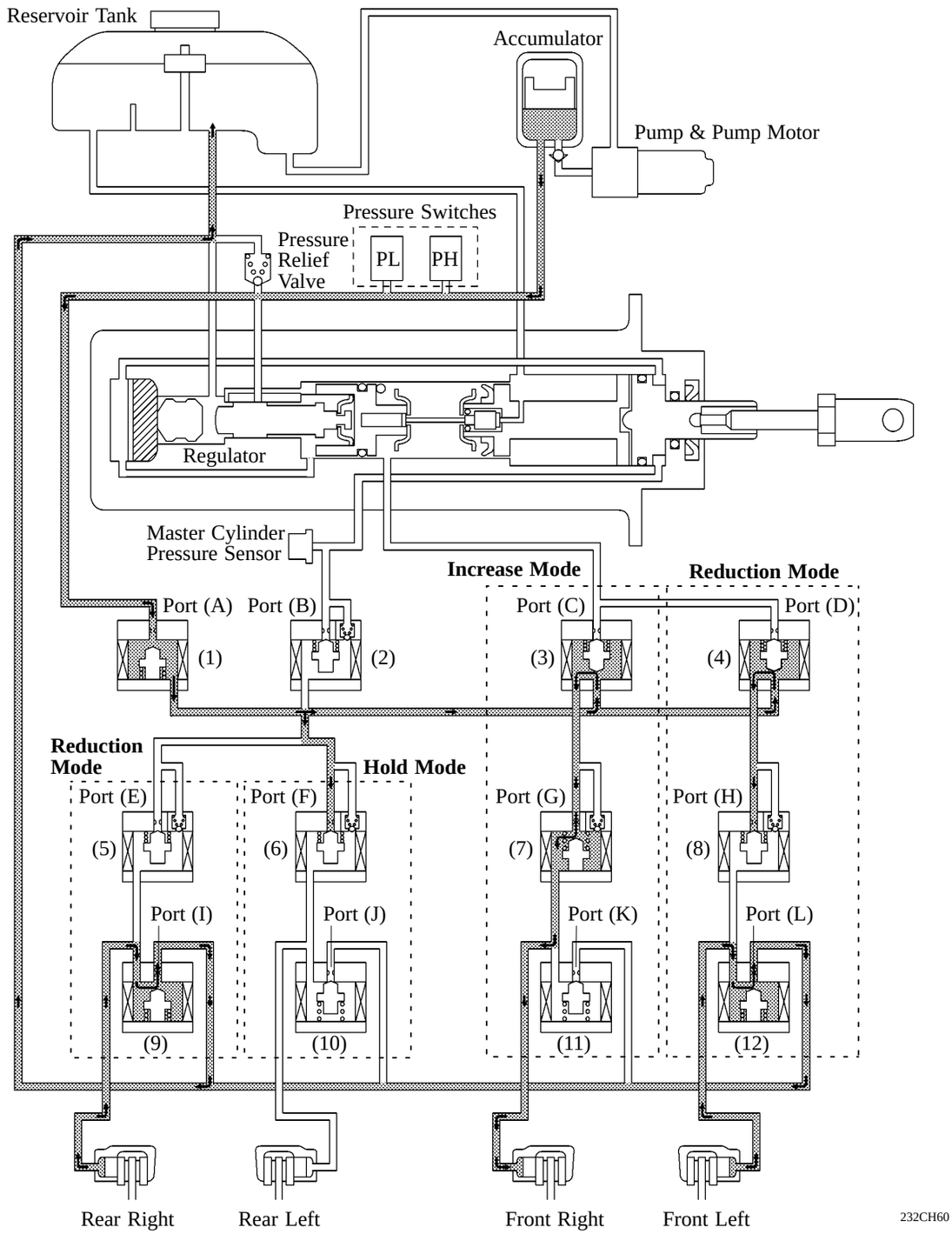
The DAC operates in the condition described below; however, the DAC indicator light blinks to alert the driver.

- When shift lever is N position.
- If the DAC switch is turned OFF during a DAC operation, the hydraulic pressure decreases gradually to end the DAC operation.
- Transfer is H4 range.
- Driving at a vehicle speed of 25 km/h (16 mph) higher.



Item				DAC not Activated	DAC Activated		
					Increase Mode	Hold Mode	Reduction Mode
Switching Solenoid Valve		(1)	Accumulator Cut Solenoid Valve STR	OFF (Close)	ON*1 (Open)	←	←
			Port (A)				
		(2)	Regulator Cut Solenoid Valve SA3	OFF (Open)	ON*1 (Close)	←	←
			Port (B)				
		(3)	Master Cylinder Cut Solenoid Valve SA1	OFF (Open)	ON*2 (Close)	←	←
			Port (C)				
		(4)	Master Cylinder Cut Solenoid Valve SA2	OFF (Open)	ON*3 (Close)	←	←
			Port (D)				
Control Solenoid Valve	Front Brake	(7), (8)	Pressure Holding Valve	OFF (Open)	←	ON (Close)	←
			Port: (G), (H)				
		(11), (12)	Pressure Reduction Valve	OFF (Close)	←	←	ON (Open)
			Port: (K), (L)				
		Wheel Cylinder Pressure		—	Increase	Hold	Reduction
	Rear Brake	(5), (6)	Pressure Holding Valve	OFF (Open)	←	ON (Close)	←
			Port: (E), (F)				
		(9), (10)	Pressure Reduction Valve	OFF (Close)	←	←	ON (Open)
			Port: (I), (J)				
		Wheel Cylinder Pressure		—	Increase	Hold	Reduction

*1: When either wheel is under brake control (DAC), STR and SA3 are ON.

*2: When the front right wheel is under brake control (DAC), SA1 is ON.

*3: When the front left wheel is under brake control (DAC), SA2 is ON.