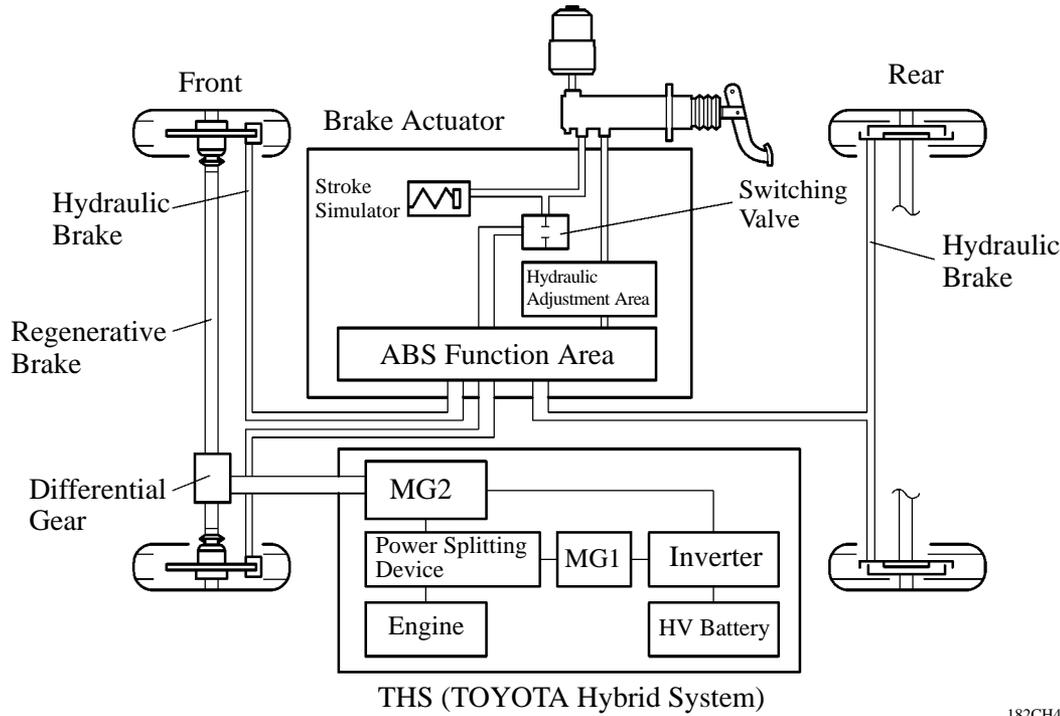


**■ BRAKE SYSTEM**

**1. General**

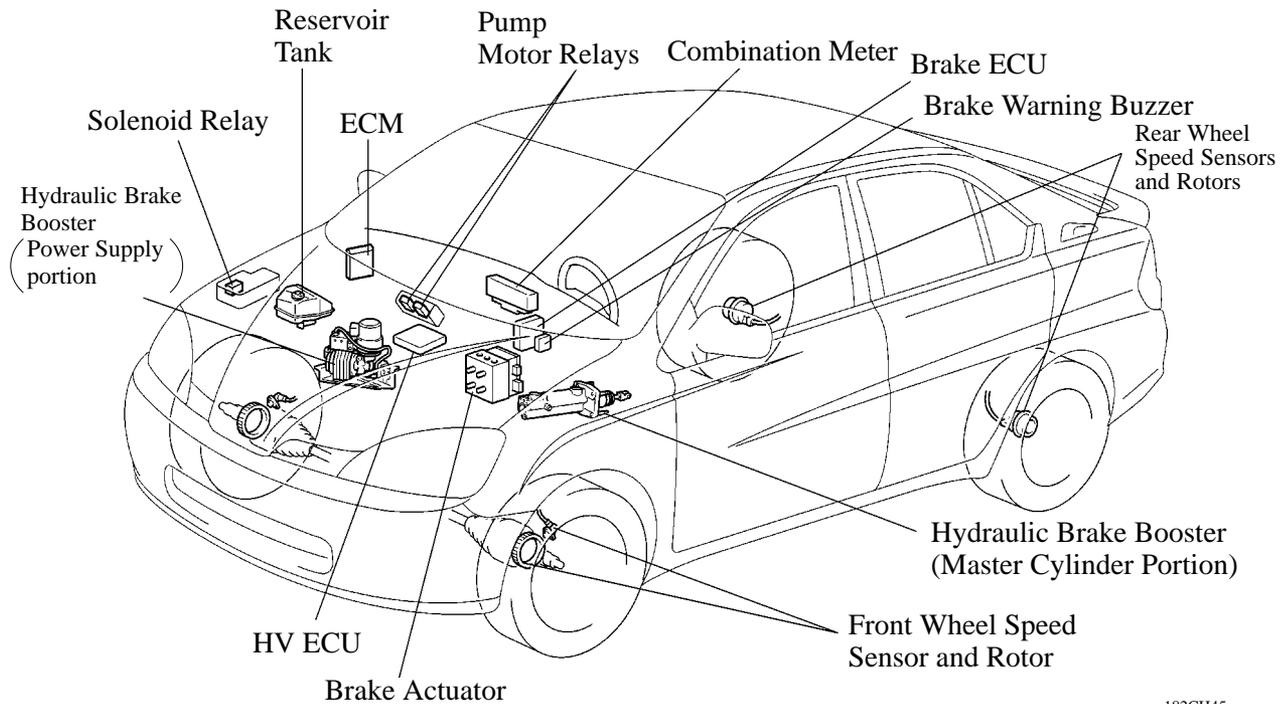
- A brake system, which uses brake fluid that is stored under high pressure to assist the brake pedal effort and to operate the ABS with EBD control and the regenerative brake cooperative control, has been adopted.
- A regenerative brake system, which uses the MG2 that is used for driving the vehicle as a generator to efficiently convert the energy that is created during braking, has been adopted. This system enables to collect more driving energy by having the control to cooperate the hydraulic brake and the regenerative brake.

**2. System Diagram**



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**3. Layout of Main Components**

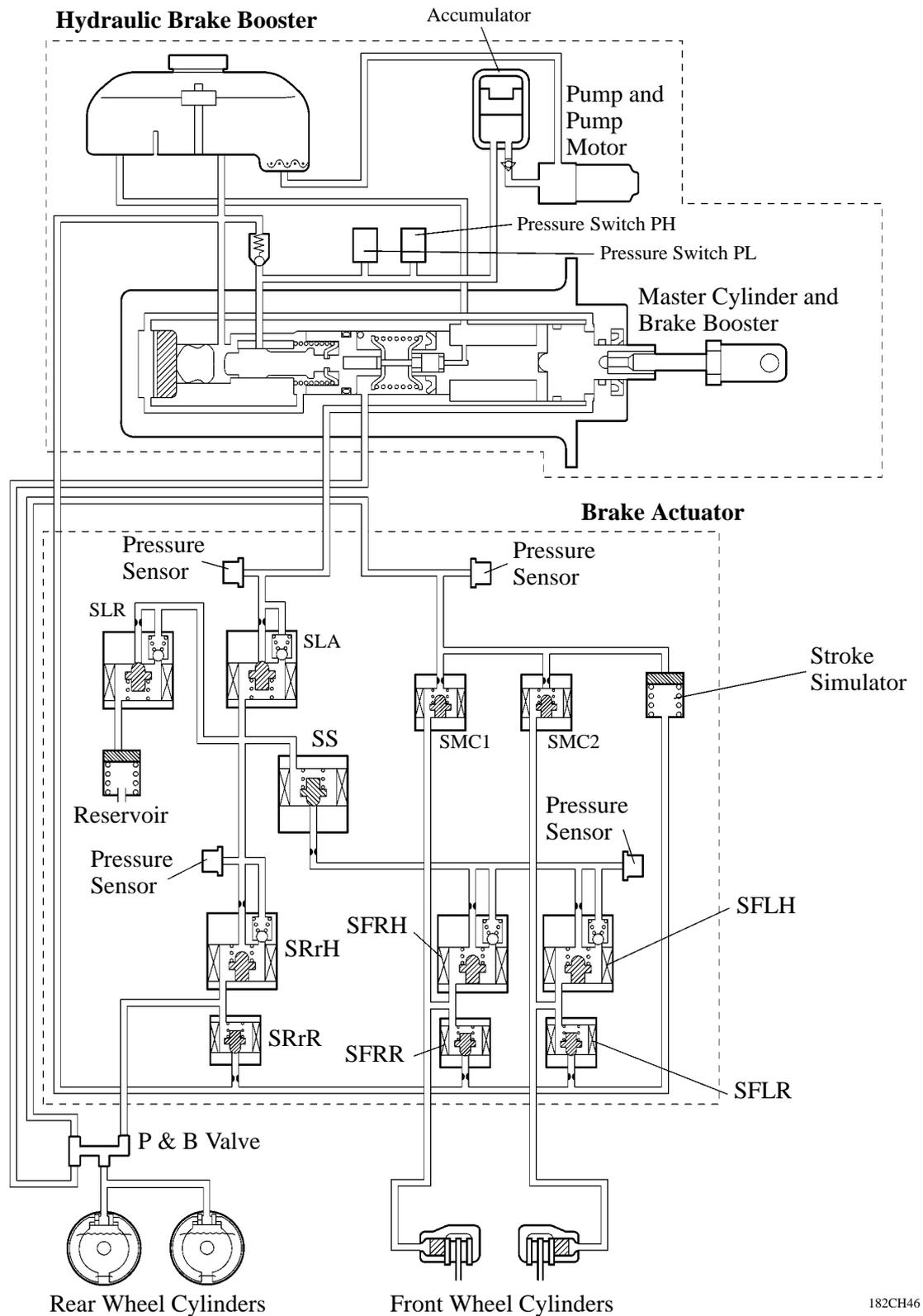


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#### 4. Function of Main Components

Components		Function
Combination Meter	ABS Warning Light	Lights up to alert the driver when the brake ECU detects the malfunction in the ABS.
	Brake System Warning Light	<ul style="list-style-type: none"> <li>● Lights up together with the ABS warning light to alert the driver when the brake ECU detects the malfunction not only in the ABS but also in the EBD control.</li> <li>● Lights up to alert the driver when the malfunction occurs in the brake system.</li> </ul>
Stop Light Switch		Detects the brake depressing signal.
Brake Warning Buzzer		Emits a continuous sound to inform the driver that the ABS ECU detects the malfunction in the hydraulic brake booster.
Speed Sensors		Detect the wheel speed of each of the four wheels.
Brake ECU		<ul style="list-style-type: none"> <li>● Processes various sensor signals, regenerative brake signals, to execute control of the ABS control, EBD control, regenerative coordination control and hydraulic brake booster.</li> <li>● Communicates control data with the HV ECU.</li> </ul>
HV ECU		Maintains serial communication with the brake ECU to exchange regenerative coordination control signals.
Hydraulic Brake Booster		<ul style="list-style-type: none"> <li>● Assists with the pedal effort applied to the brake pedal.</li> <li>● Supplies hydraulic pressure.</li> </ul>
Brake Actuator		Controls the brake fluid pressure to each brake wheel cylinder by signals from the brake ECU.
Solenoid Relay		Supplies power to the ABS's solenoid valve's in the brake actuator.
Pump Motor Relays		Control the pump motor operation in the hydraulic brake booster.

5. Hydraulic Circuit



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- |      |                             |      |                       |
|------|-----------------------------|------|-----------------------|
| SMC1 | } Switching Solenoid Valves | SFRH | } ABS Solenoid Valves |
| SMC2 |                             | SFRR |                       |
| SS   |                             | SFLH |                       |
| SLA  | } Linear Solenoid Valves    | SFLR |                       |
| SLR  |                             | SRrH |                       |
|      |                             | SRrR |                       |