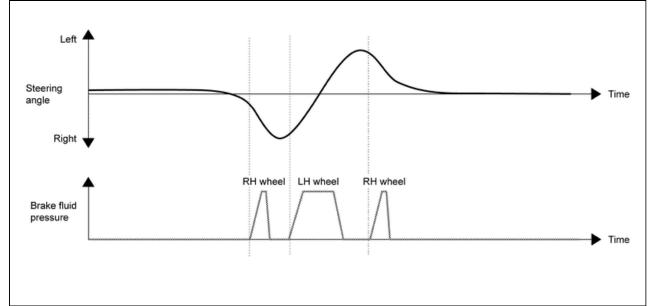


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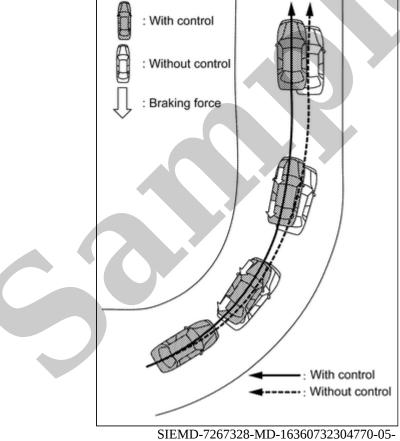
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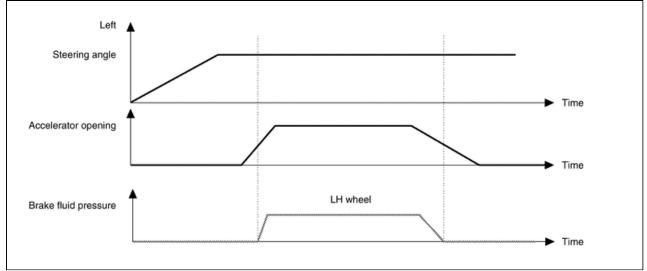
SIEMD-7267328-MD-16360732304770-04-000283986On-9829E732-000283986

• Acceleration at corners - Restrains understeer by applying the necessary amount of brake pressure to the inner wheels.



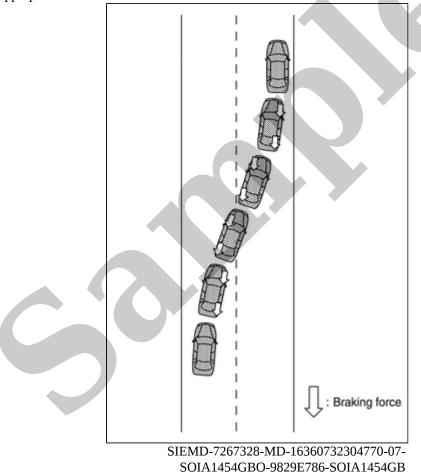
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• The brake is controlled according to the steering operation condition of the driver and the cornering condition of the vehicle.



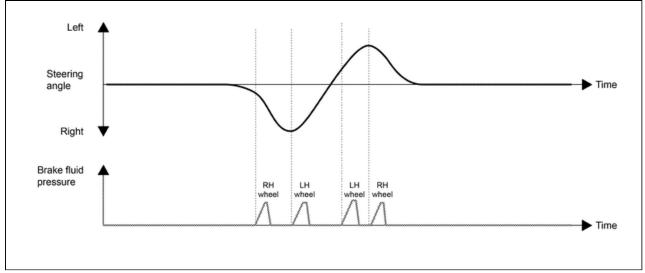
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• Quick lane change - achieves stable vehicle behavior at quick steering operation by applying the necessary amount of brake pressure to the appropriate wheels



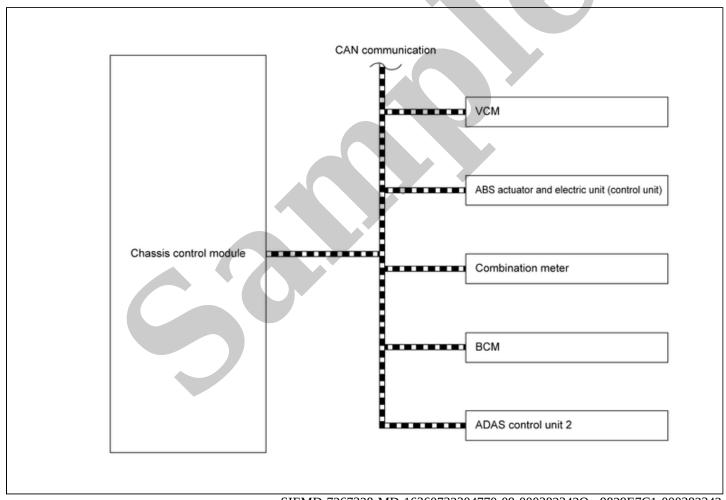
vehicle.

• The brake is controlled according to the steering operation condition of the driver and the cornering condition of the



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# **SYSTEM DIAGRAM**



## INPUT SIGNAL AND OUTPUT SIGNAL

Major signal transmission between each unit via communication lines is shown in the following table.

Component parts	Signal description
VCM	Mainly transmits the following signals to chassis control module via CAN communication.
	Accelerator pedal position signal
	Estimate drive torque signal
ABS actuator and electric unit (control unit)	Mainly transmits the following signals to chassis control module via CAN communication.
	Vehicle speed signal
	Rear LH wheel speed signal
	Front LH wheel speed signal
	Rear RH wheel speed signal
	Front RH wheel speed signal
	Steering angle sensor signal
	Side G sensor signal
	Brake fluid pressure signal
	Regenerative brake signal
	VDC status signal
	VDC operation signal
	TCS operation signal
	Driver brake signal
	VDC OFF signal
	ABS malfunction signal
	TCS malfunction signal
	VDC malfunction signal
	Mainly receives the following signals from chassis control module via CAN communication.
	Brake torque request signal
	Yaw moment request signal
	Stop lamp cancel request signal
Combination meter	Mainly transmits the following signals to chassis control module via CAN communication.
	Intelligent trace control setting signal
	Mainly receives the following signals from chassis control module via CAN communication.
	Meter display signal
BCM	Mainly transmits the following signals to chassis control module via CAN communication.

Component parts	Signal description
	Stop lamp malfunction signal
	Mainly transmits the following signals to chassis control module via CAN communication.
ADAS control unit 2	Brake torque request signal
	Yaw moment request signal

### AWD MODELS

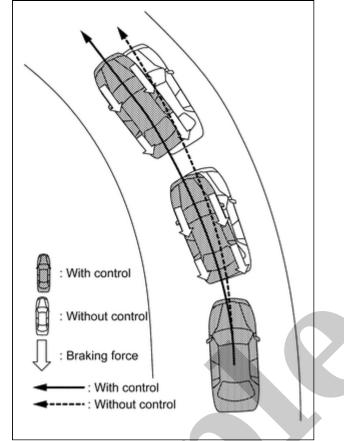
- This function senses driving based on the driver's steering and acceleration/braking patterns, and controls brake pressure, driving torque control, and driving torque distribution control at individual wheels to aid tracing at corners and help smooth vehicle response.
- When cornering, driver operation is reduced and vehicle behavior is smoothened.
- The intelligent trace control function can be turned ON/OFF by operating the steering switch. (Even if the intelligent trace
  control function is turned OFF, driving torque distribution control will not be turned OFF. This ON/OFF function is for the
  customers who feel control is unnecessary, but driving torque distribution control cannot be felt unnecessary.)
- Amount of brake control is changed based on drive mode select switch.
- When the turn OFF the VDC function, intelligent trace control function is also turned OFF. (Even if the VDC is turned OFF to escape muddy or snowy roads, driving torque distribution control will not be turned OFF to ensure traction.)
- When intelligent trace control function is not functioning properly, the master warning lamp illuminates, and warning message will also appear on information display.



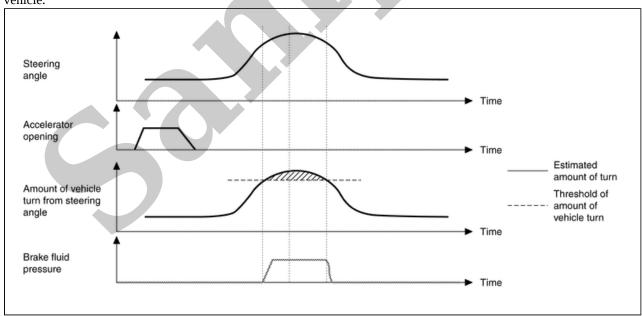
- Intelligent trace control function is not always activated in any driving conditions.
- When the intelligent trace control function is activated, the driver may feel some vibration on the brake pedal, hear operating sound, or have feel of the deceleration. This is not a malfunction because it is caused by intelligent trace control function that is normally operated.

### **OPERATION CHARACTERISTICS**

• Steady cornering - The change of forward and lateral acceleration is smoothened by applying the necessary amount of brake pressure.

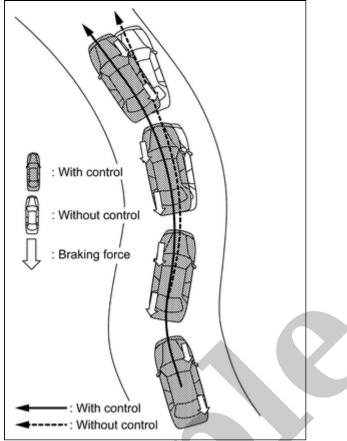


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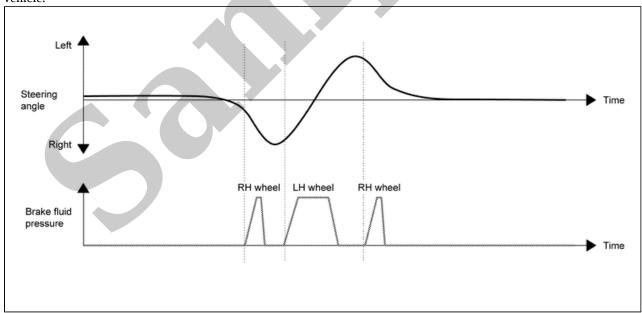


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• Transient steering input - Reduces lag of yaw rate against steering operation.

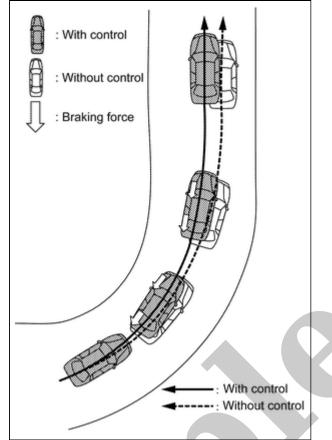


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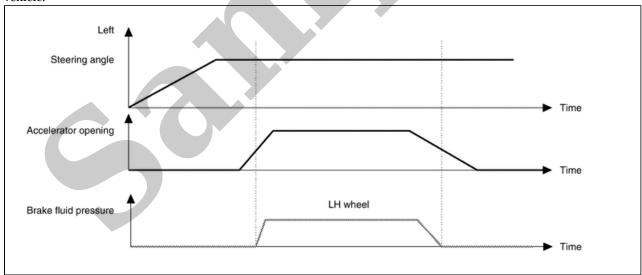


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Acceleration at corners - Restrains understeer by applying the necessary amount of brake pressure to the inner wheels.

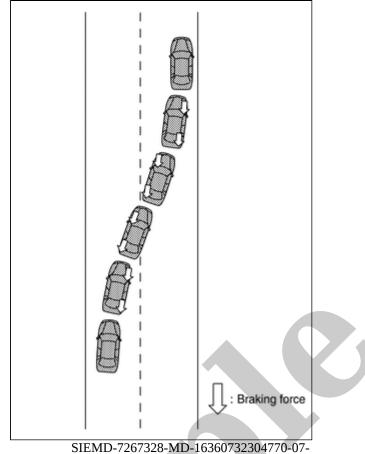


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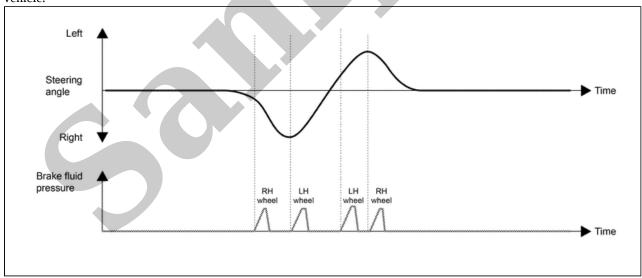


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• Quick lane change - achieves stable vehicle behavior at quick steering operation by applying the necessary amount of brake pressure to the appropriate wheels.



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• Stable cornering at slippery road - Suppress the sudden vehicle behavior change due to tire slip by estimating tire friction circle and the reducing driving torque before tire slip.