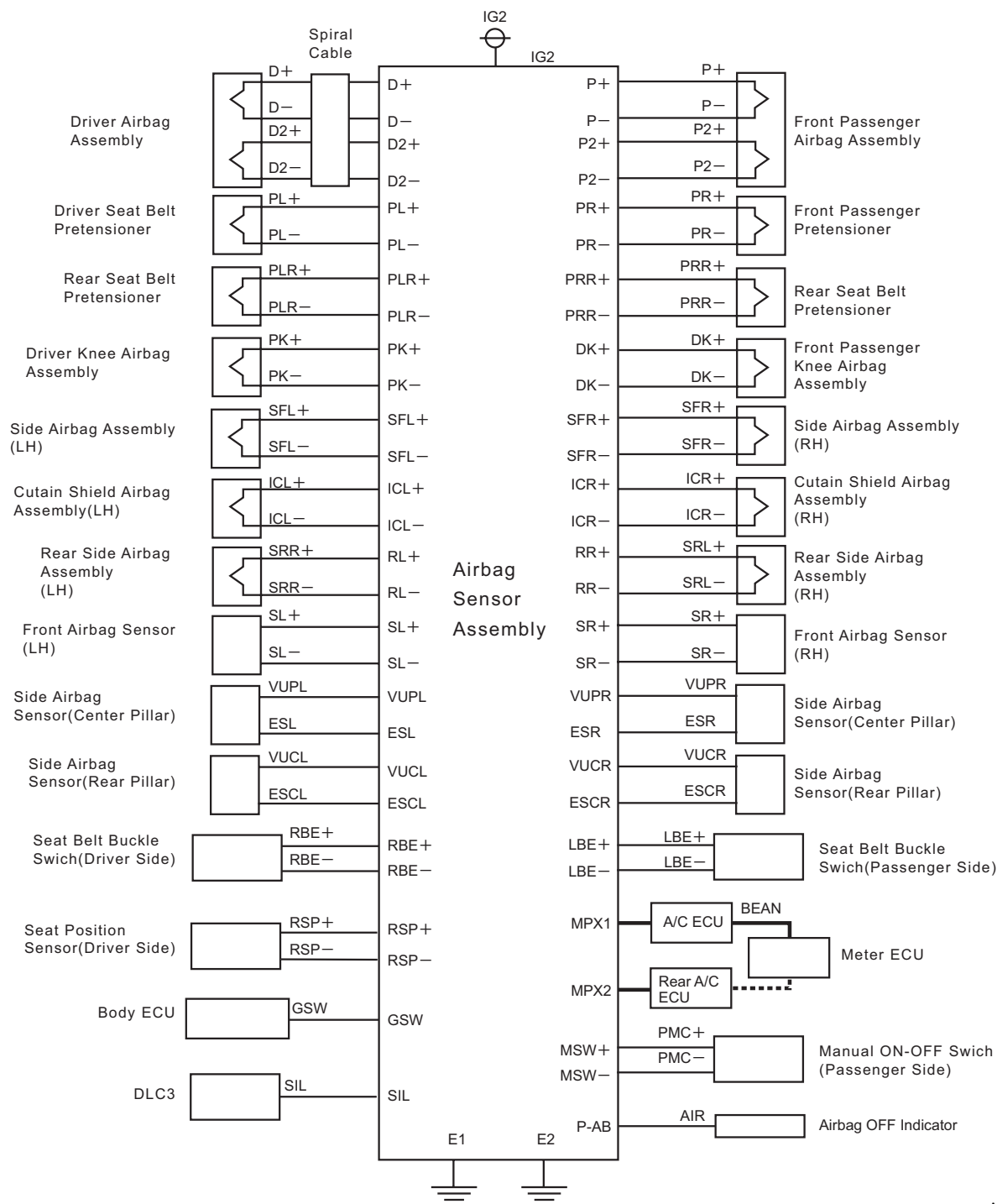


Airbag Sensor Assembly

- The Airbag Sensor Assembly consists of a deceleration sensor, ignition judgment circuit, backup power supply, etc.
- It reaches an ignition judgment to deploy the dual stage (two-step control type) driver's and front passenger's airbags, driver's and front passenger's knee airbags, and pretensioner based on the signals received from the front airbag sensor and deceleration sensor. In addition, it reaches an ignition judgment to deploy the SRS side airbags and SRS curtain shield airbags based on the signals received from the side airbag sensor and rear side airbag sensor. Furthermore, it is equipped with a diagnosis function to perform self-diagnosis in case of a system malfunction.



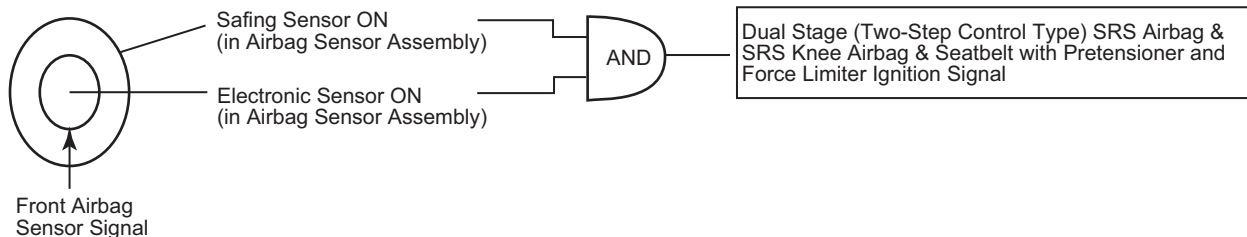
Components and Functions

Components	Functions
Deceleration Sensor	Outputs a signal that is linear to the deceleration when deceleration is applied to the vehicle as the result of a collision.
Backup Power Supply	Consists of a backup condenser that supplies power to the system in case of a collision or a malfunction in the power supply system, and a booster circuit that boosts the voltage.
Ignition Judgment Circuit	Performs a prescribed calculation in accordance with a signal received from the Airbag ECU and the front airbag sensor. If the calculated value exceeds a predetermined value, the ECU sends an ignition signal. Also, it uses a malfunction diagnostic circuit to diagnose whether a malfunction exists in the entire system. If there is a malfunction, the ECU informs the driver of the failure in the system, and uses the diagnostic function to diagnose the section of the system failure.

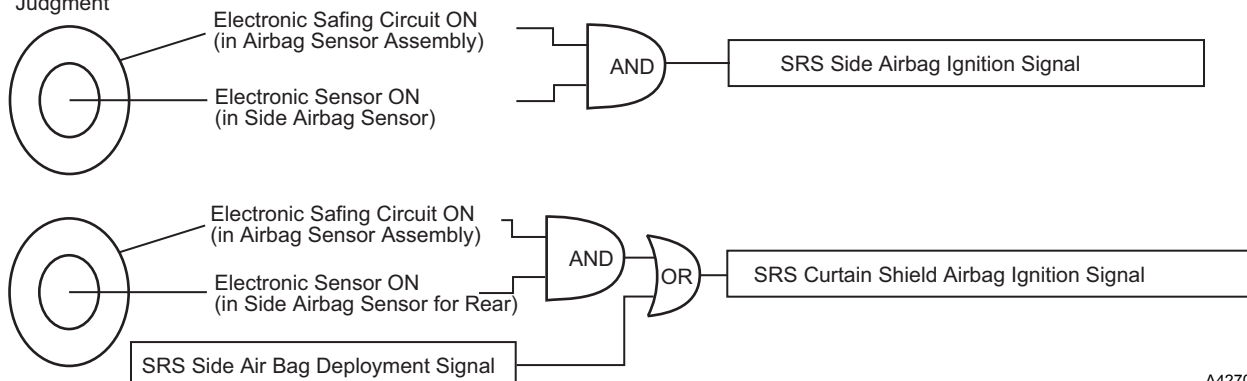
Operation Judgment

- The dual stage (two-step control type) SRS airbag & SRS knee airbag & seatbelt with pretensioner and force limiter are ignited by the impact of a frontal collision. The system reaches this judgment based on the signals from the front airbag sensor, electronic sensor in the airbag sensor assembly, and the safing sensor.
- The SRS side airbag is ignited when both the electronic sensor in the side airbag sensor and the electronic safing circuit in the airbag sensor assembly are turned ON by the impact of a side collision.
- The SRS curtain shield airbag is ignited upon receiving an ignition signal from the SRS side airbag that has met the aforementioned conditions; or, if both the electronic sensor in the rear side airbag sensor and the electronic safing circuit in the airbag sensor assembly are turned ON.
- To indicate that the airbags have operated, the airbag sensor assembly keeps the airbag warning light illuminated even after the primary check. This warning light cannot be turned OFF.

Frontal Collision Judgment

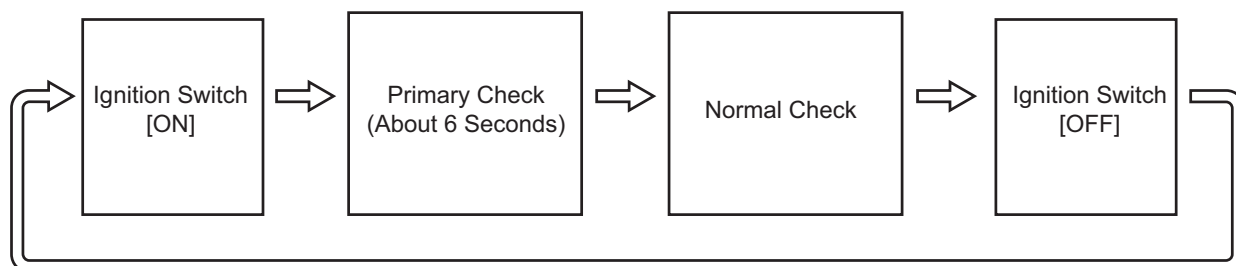


Side Collision Judgment



The Operation of a Diagnostic Circuit

- The warning light in the combination meter indicates the operation of the diagnostic circuit. The operation of the diagnostic circuit separates into two periods: the primary check and the regular check.



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Primary Check

- when the ignition switch is turned ON, the airbag warning light illuminates for approximately 6 seconds to perform a primary check. During this period, in which the ignition of the airbags is disabled, the system diagnoses the operation of the airbag sensor assembly. If a failure is detected during the primary check, the airbag warning light will not turn OFF, but will remain ON even after 6 seconds have elapsed.
- Once the airbag sensor assembly has been deployed, the warning light will remain ON after the primary check, regardless of whether or not a malfunction exists.

Normal Check

- After the primary check is completed and the airbag warning light turns OFF, the ignition of the airbags is enabled. The diagnostic circuit performs a regular check to determine whether a failure exists in the system. If a malfunction is detected during the regular check, the airbag warning light illuminates. (The warning that indicates a drop in the power supply voltage will turn OFF after the power supply voltage is restored to normal.)

Diagnosis

- When the system is switched to the diagnostic mode, the indicator light outputs the results of the diagnosis of a failed section by way of the frequency of the blinking. Also, because a new diagnostic function is used, a diagnostic tool can be connected to the DLC3 connector to read the DTC (Diagnostic Trouble Code) of the section with a malfunction. For details on the diagnostic mode, refer to the repair manual.