

4. Construction and Operation

Front Airbag Sensor

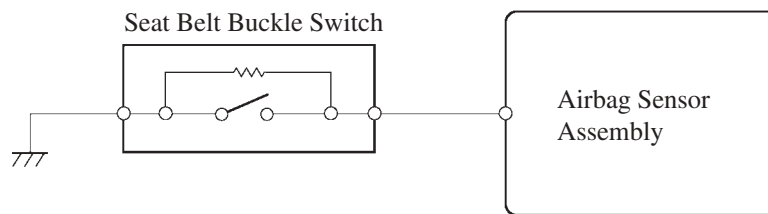
- On the '03 Avalon, the previous mechanical type front airbag sensor (consisting of movable and stationary contact points) has been changed to an electrical (deceleration sensor) type front airbag sensor.
- The deceleration sensor is enclosed in the front airbag sensor. Based on the deceleration of the vehicle during a front collision, a distortion is created in the sensor and converted into an electrical signal. Accordingly, the extent of the initial collision can be detected in detail.

2

Seat Belt Buckle Switch (Driver)

This switch consists of a contact switch and a resistor. The contact switch detects whether the seat belt is ON or OFF, and the resistor is provided to enable the airbag sensor assembly to detect a malfunction in the switch circuit.

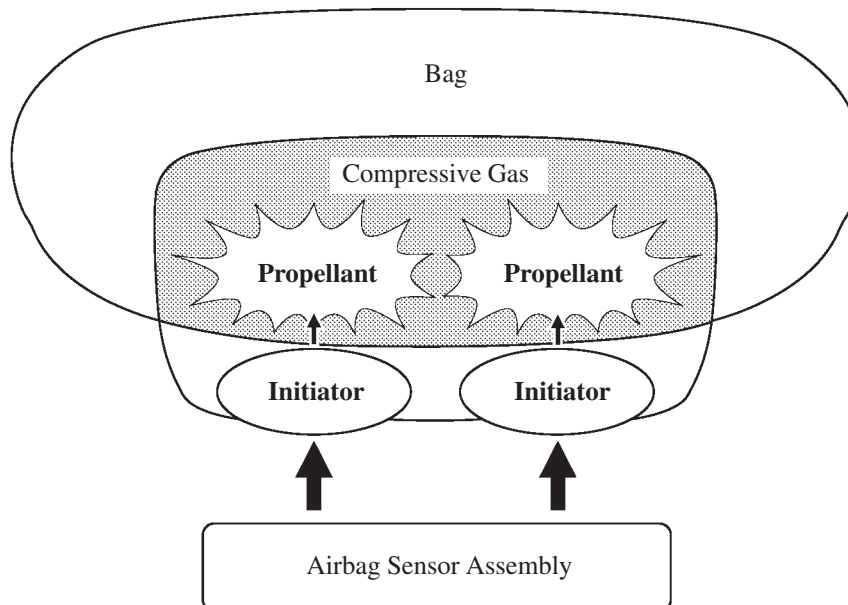
► Circuit Diagram ◀



228AV14

Driver and Front Passenger Airbag Assemblies

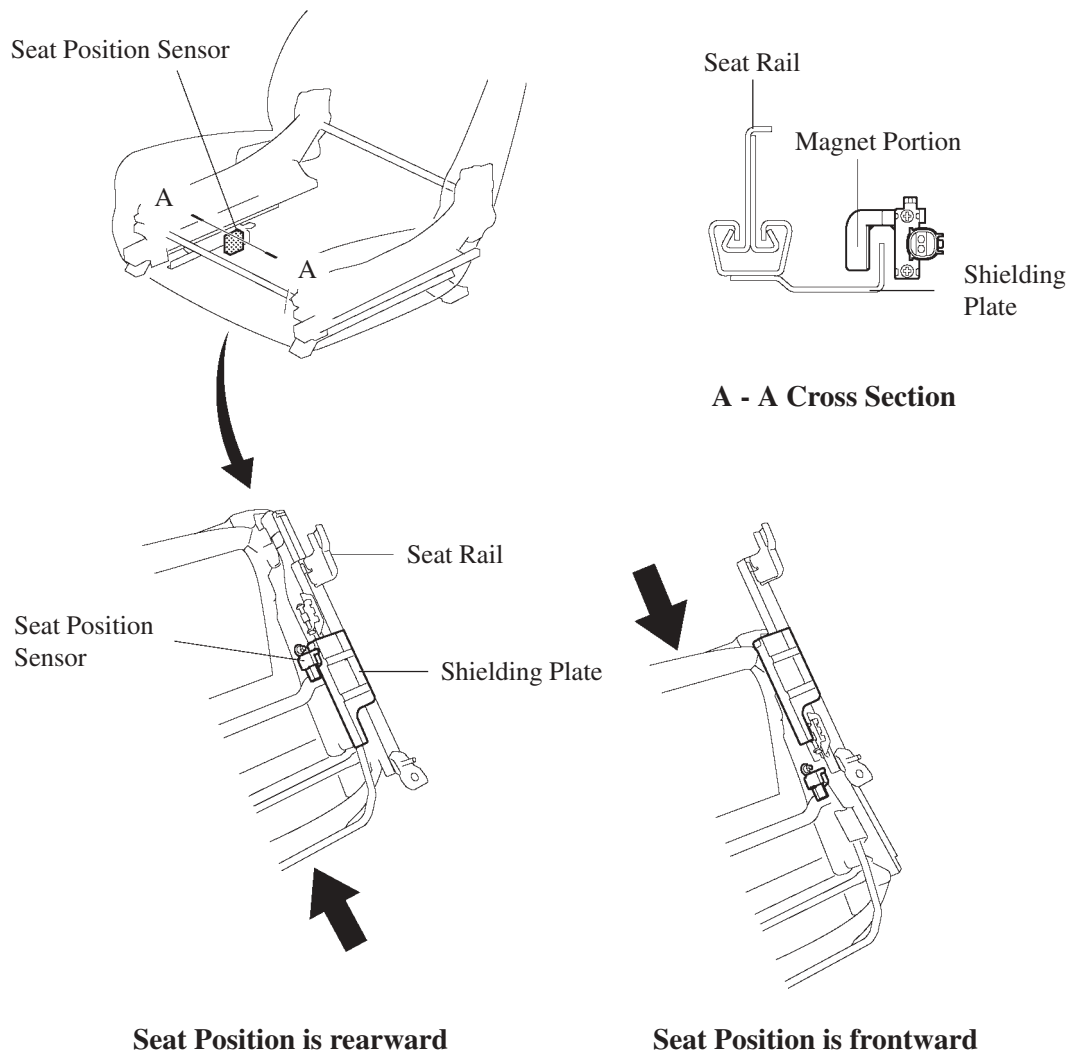
To support the dual-stage control, these airbag assemblies contain 2 sets of initiators and propellants. The airbag sensor assemblies optimize the airbag inflation output by delaying the inflation timing of these initiators.



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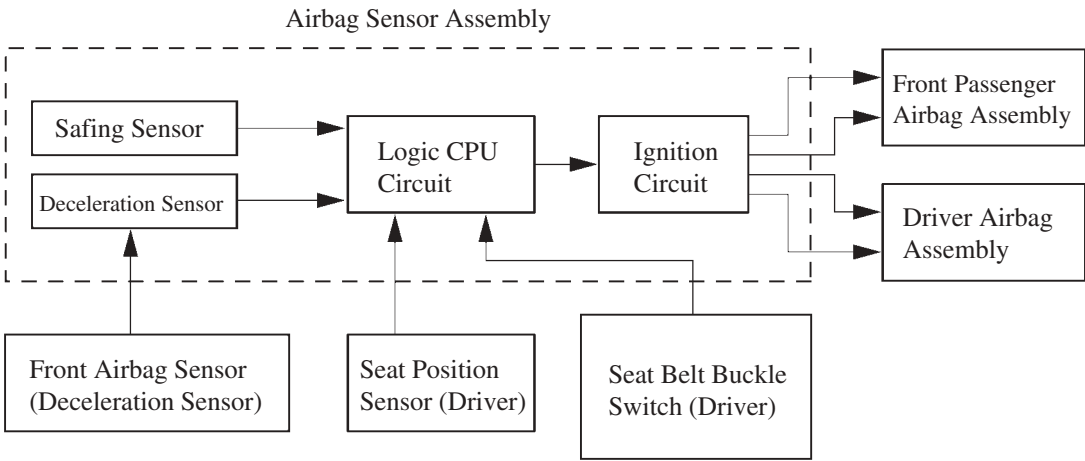
Seat Position Sensor

- The seat position sensor, which is attached to the seat rail of the driver seat, detects the sliding position of the seat.
- This sensor uses a Hall IC for its sensor and has the magnetic portion on its opposite side.
- The shielding plate to make the seat position sensor judge the seat position is installed on the seat rail.
- The seat position is judged to be rearward if the shielding plate is between the sensor, and forward if the shielding plate is not between the sensor.



Airbag Sensor Assembly

The front airbag control circuit of the airbag sensor assembly has been changed in order to effect dual-stage control.

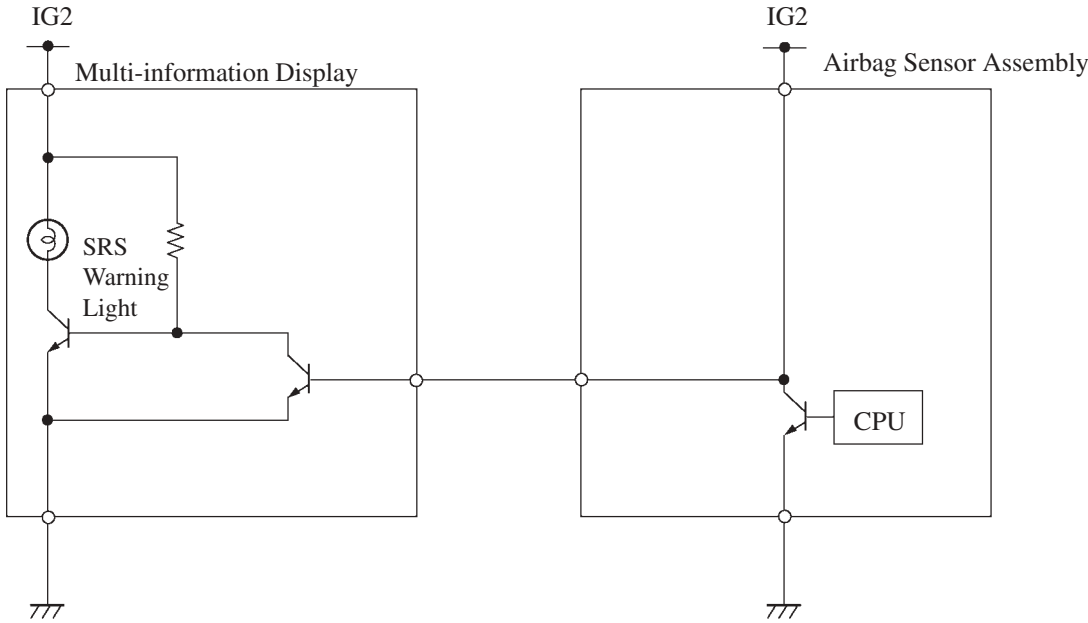


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SRS Warning Light

An active circuit is used in the SRS warning light circuit in order to illuminate the light when there is an open or short circuit in the wiring harness. Thus, the malfunction detection area has been expanded.

► Circuit Diagram ◀



228AV18