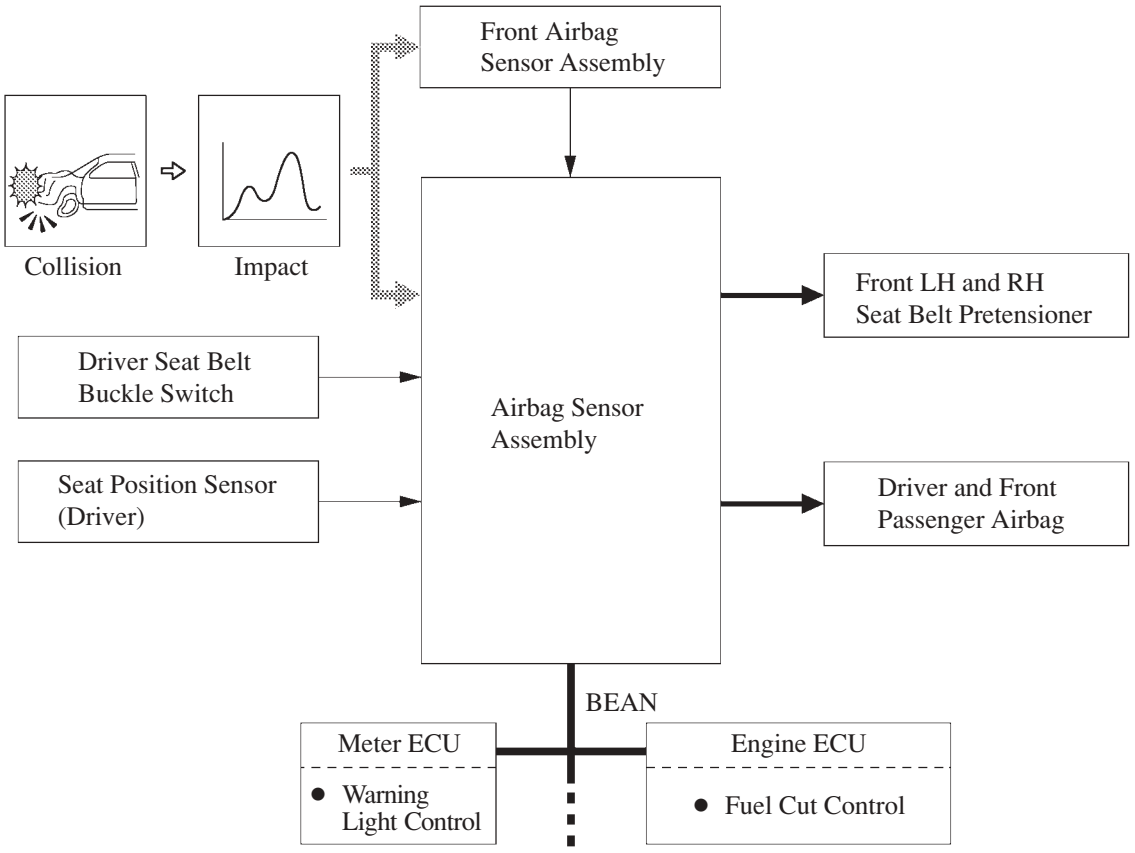
■AIRBAGS FOR FRONT COLLISION

1. General

- In conjunction with impact absorbing structure for front collision, the driver and front passenger dual-stage SRS airbags have been designed to help to reduce injuries to the head and chest in the event of a front collision. These airbags all deploy with the same timing, and are supplements to the seat belts.
- The electrical (deceleration sensor) type front airbag sensor has been adopted in the new Kluger.
- 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.

▶ Front Airbag Operation ◀



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2. Dual-stage SRS Airbag System

General

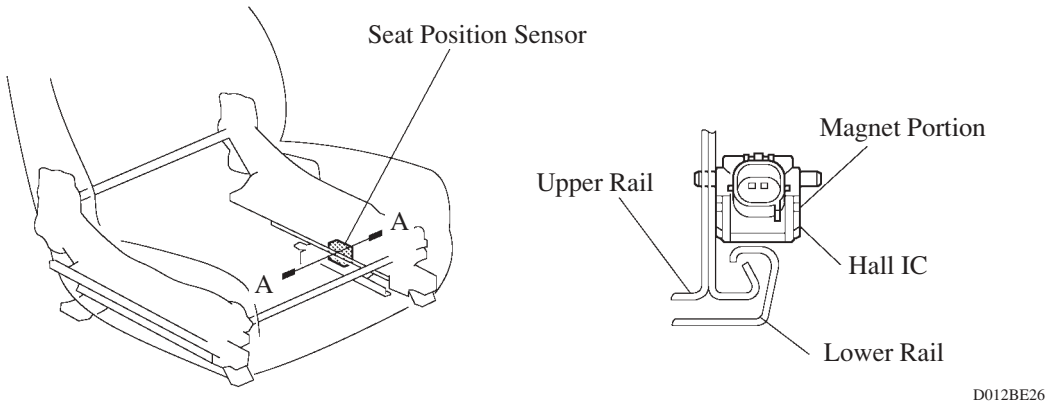
In this system, when the front airbag sensors and airbag sensor assembly detect the front collision, the airbag sensor assembly judges the extent of impact, seat position and whether or not the seat belt is fasten, thus making the airbag inflating output optimum by delaying the inflating timing of the 2nd initiator and the 1st initiator.

Service Tip

In accordance with the adoption of dual-stage type structure of the driver and front passenger inflators on the new Kluger, the SST (09082-00802) used for scrapping driver and front passenger airbag assemblies of the vehicle has been established.

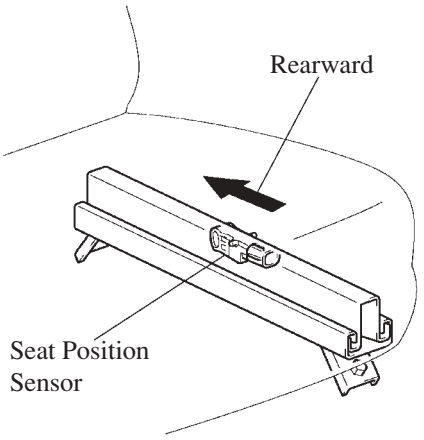
Seat Position Sensor

- The seat position sensor, which is attached to the seat rail of the driver seat, detects the sliding position of the seat.
- The seat position sensor uses a Hall IC for its sensor and has magnet portion on its opposite side.

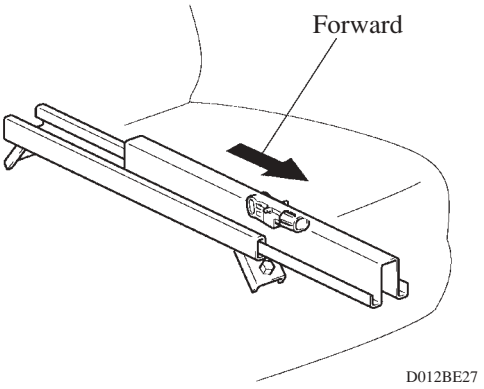


- The seat position detection by the seat position sensor judges that the seat position is rearward if the sensor is rearward, and that the seat position is forward if the sensor is forward.

▶ Seat Position is Rearward ◀

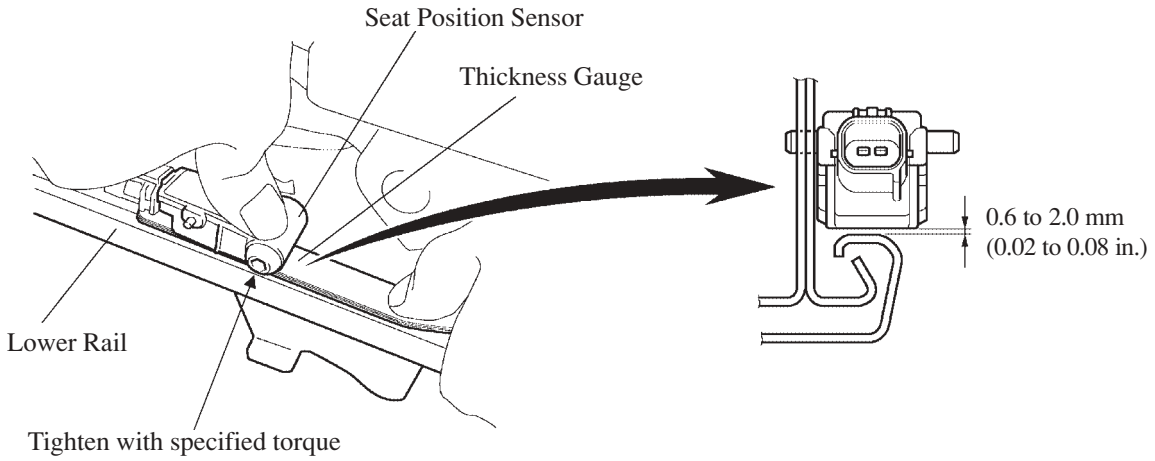


▶ Seat Position is Forward ◀



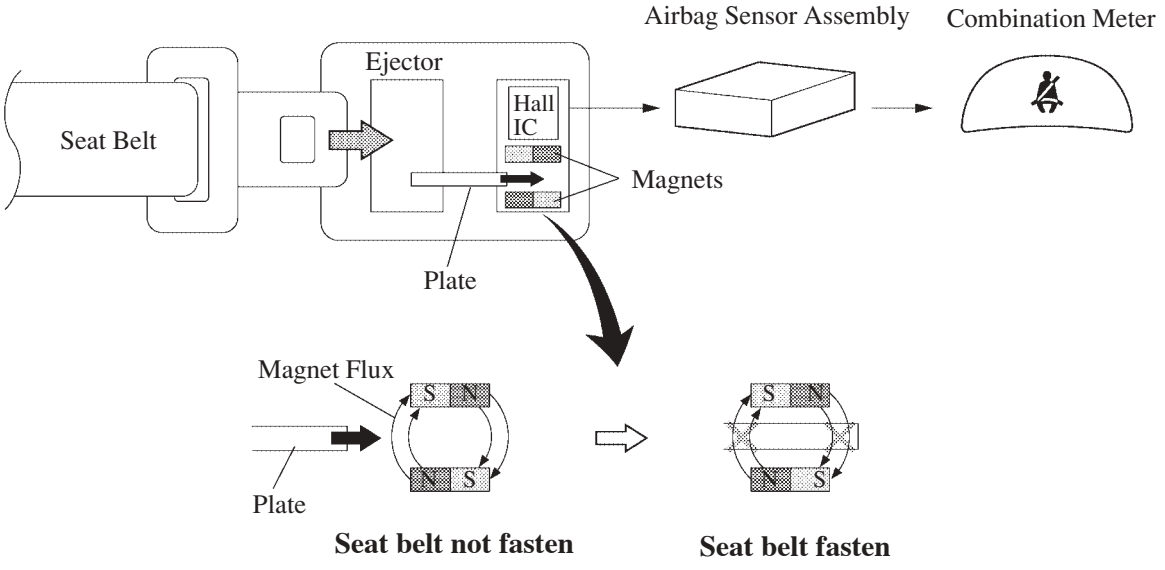
Service Tip

When installing the seat position sensor, first insert a 1 mm (0.4 in.) thickness gauge between the seat position sensor and the lower rail portion. And then, tighten the mounting bolt to the specified torque with the seat position sensor pushed down as shown.
For details, refer to the Kluger Repair Manual (Pub. No. RM1087E).



Seat Belt Buckle Switch

- On the new Kluger, the no-contact type seat belt buckle switches using a Hall IC are adopted for the driver and passenger seat belt buckles.
- The seat belt buckle switch comprises a Hall IC and 2 magnets, installed into the front seat inner belt assembly.
- The ejector inside the front seat inner belt assembly and the plate installed to the ejector move when the seat belt is removed or applied. The movement of the plate cuts off the magnetic flux density of the seat belt buckle switch magnet. The Hall IC detects the changes in the magnetic flux density as seat belt removal or application, and outputs the signal to the airbag sensor assembly (for driver seat) and body ECU (for passenger seat).



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