05FYB−02

SYSTEM DESCRIPTION

1. DESCRIPTION OF SUPPLEMENTAL RESTRAINT SYSTEM

(a) General description.

(1) In this system, the airbag sensor assy center installed on the floor under the A/C unit determines whether or not to activate the SRS airbags (driver airbag, passenger airbag, front seat airbags and curtain shield airbags) and seat belt pretensioners by receiving the collision signal from each sensor (excluding the airbag sensor assy center). When there is trouble in the system, the airbag sensor assy center turns on the SRS warning light on the combination meter assy to inform the driver.

(b) Description of the dual stage control.

(1) The airbag sensor assy center controls the dual stage deployment of the driver airbag in the horn button assy and the passenger airbag on the instrument panel. The airbag sensor assy center controls the dual stage deployment of the driver airbag according to the collision impact, seat position and seat belt ON/OFF state. It also controls the dual stage deployment of the passenger airbag according to the collision impact and seat belt ON/OFF state.

(c) Description of check mode (signal check).

(1) This airbag sensor assy center is operable using the check mode of the hand−held tester function. Check mode can detect and output DTC by using a hand−held tester to switch the airbag sensor assy center to the check mode.

A simulation method is used, if the malfunction cannot be reproduced during troubleshooting (the malfunction is temporarily solved, etc.). In this case, joggling each connector, or driving on a city or rough road with the airbag sensor assy center in check mode makes it possible to obtain a more accurate malfunction condition.

2. IGNITION JUDGEMENT AND CONDITIONS

(a) Operation in case of front collision.

(1) When the vehicle collides in the hatched area (Fig.1) and shock is larger than a predetermined level, the airbags (driver and front passenger) are activated automatically. The deceleration sensor of the airbag sensor assy center determines the need for ignition in response to collisions within the hatched area based on the signal from the deceleration sensor of the front airbag sensor.

(2) Safing sensor of the airbag sensor assy center is designed to activate at by a smaller deceleration rate than the deceleration sensor. As illustrated in Fig.2 below, when both the safing sensor and deceleration sensor go on simultaneously, current flows to the squib and ignition occurs.

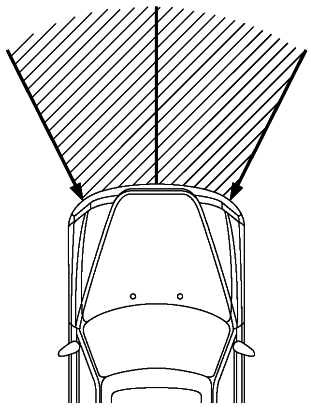

Fig.1

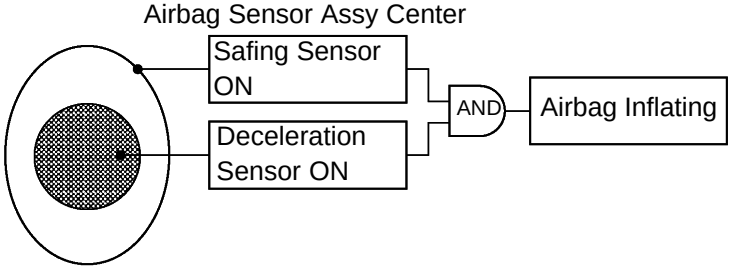

Fig.2

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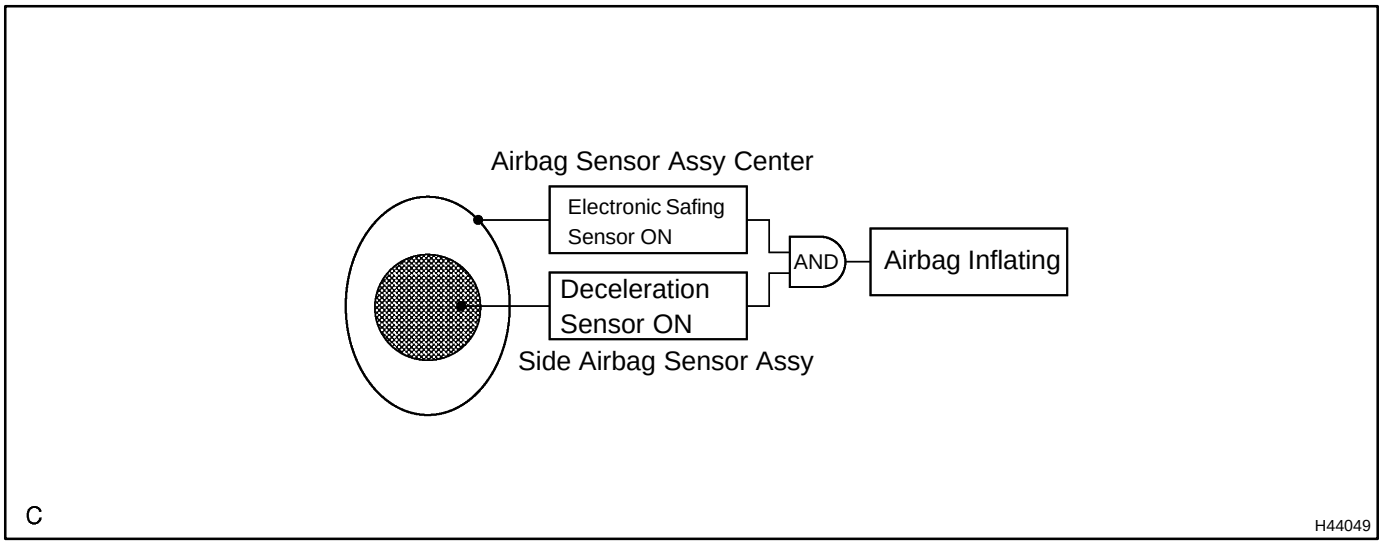
(b) w/ Side airbag:

Operation in case of front side collision.

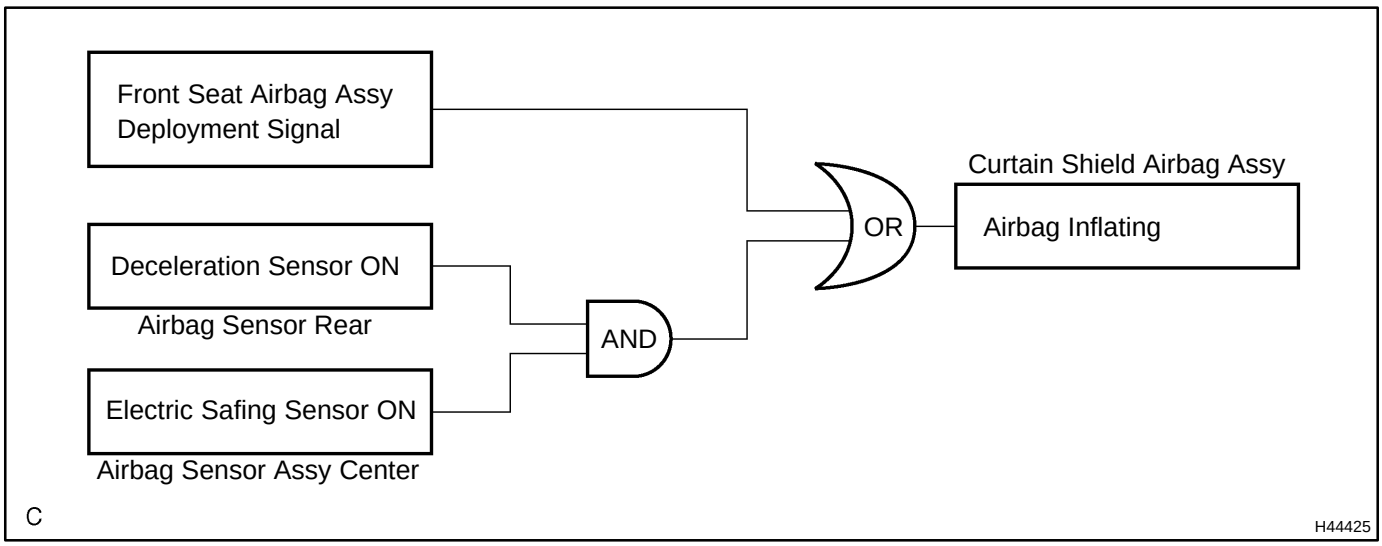
(1) Electronic safing sensor of the side airbag sensor assy is designed to activate at a smaller deceleration rate than the deceleration sensor of the side airbag sensor assy. As illustrated below, when both the safing sensor and deceleration sensor go on simultaneously, current flows to the squib and ignition occurs.



(c) w/ Curtain shield airbag:

Operation in case of rear side collision.

(1) Electronic safing sensor of the airbag sensor assy center is designed to activate at a smaller deceleration rate than the deceleration sensor of the airbag sensor rear. As illustrated below, when both the safing sensor and deceleration sensor go on simultaneously, current flows to the squib and ignition occurs.



3. DESCRIPTION OF OCCUPANT CLASSIFICATION SYSTEM

(a) GENERAL DESCRIPTION.

(1) In the occupant classification system, the occupant classification ECU calculates the weight of the occupant based on a signal from the occupant classification sensor. This system recognizes the occupant to be a child if it detects a weight of less than 36 kg (79.37 lb), and disables the front and side airbags.

(2) This system is mainly comprised of 4 occupant classification sensors that detect the load on the front passenger seat. The occupant classification ECU controls the system, and the passenger airbag ON/OFF indicator indicates the ON/OFF condition of the front passenger airbag and front seat airbag assy (passenger side).

(b) OCCUPANT CLASSIFICATION SENSOR.

(1) The occupant classification sensors are installed on 4 brackets connecting the seat rail and seat frame. Accordingly, when load is applied to the passenger seat by an occupant sitting in it, the occupant classification sensors register a distortion.