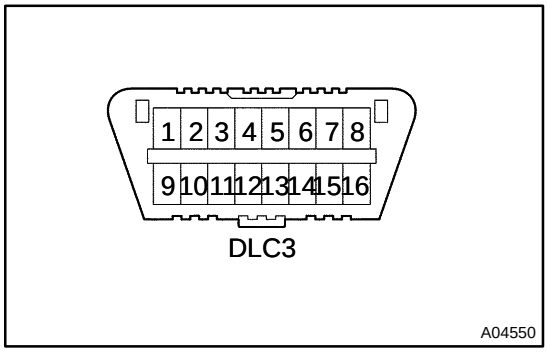
05CJI−09

DIAGNOSIS SYSTEM



1. CHECK DLC3

(a) The vehicle's ECM conforms to ISO 14230 and ISO 9141−2 for communication protocol. The terminal arrangement of the DLC3 complies with SAE J1962 and meets the ISO 14230 and ISO 9141−2 format.

Terminal No.	Connection/Voltage or Resistance	Condition
7	Bus + Line/Pulse generation	During Transmission
4	Chassis Ground ⇔ Body Ground/Below 1 Ω	Always
16	Battery Positive ⇔ Body Ground/10 to 14 V	Always

HINT:

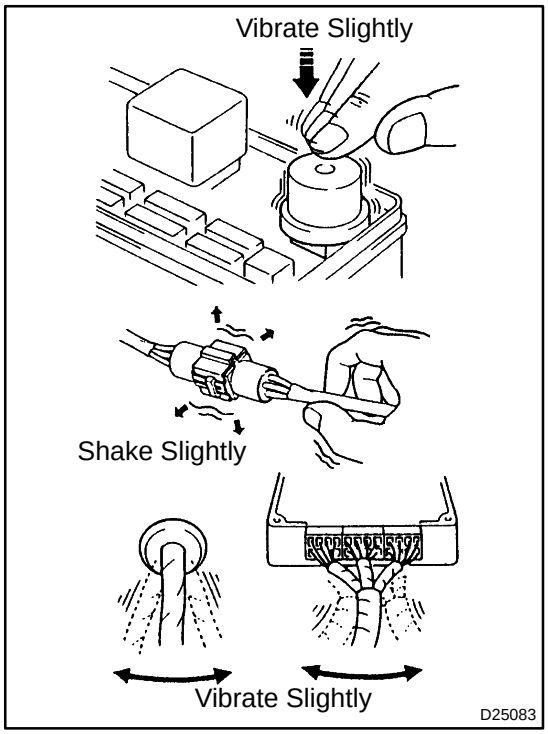
If the display shows UNABLE TO CONNECT TO VEHICLE when you connect the cable of the hand−held tester to the DLC3, turn the ignition switch to the ON position and operate the hand−held tester, there is a problem on the vehicle side or tool side.

- If communication is normal when the tool is connected to another vehicle, inspect the DLC3 on the original vehicle.
- If communication is still not possible when the tool is connected to another vehicle, the problem is probably in the tool itself. Consult the Service Department listed in the tool's instruction manual.

2. SYMPTOM SIMULATION

HINT:

The most difficult case in troubleshooting is when no symptoms occur. In such cases, a thorough customer problem analysis must be carried out. Then the same or similar conditions and environment in which the problem occurred in the customer's vehicle should be simulated. No matter how experienced or skilled a technician may be, if he proceeds to troubleshoot without confirming the problem symptoms, he will likely overlook something important and make a wrong guess at some points in the repair operation.
This leads to a standstill in troubleshooting.



(a) Vibration method: When vibration seems to be the major cause.

HINT:

Perform the simulation method only during the primary check period (for approximately 6 seconds after the ignition switch is turned to the ON position).

(1) Slightly vibrate the part of the sensor considered to be the problem cause with your fingers and check whether the malfunction occurs.

HINT:

Shaking the relays too strongly may result in open relays.

(2) Slightly shake the connector vertically and horizontally.

(3) Slightly shake the wire harness vertically and horizontally.
The connector joint and fulcrum of the vibration are the major areas to be checked thoroughly.

(b) w/ Manual seat (for passenger side):
Simulation method for DTC B1794: Turn the ignition switch from LOCK to ON, hold for 10 seconds, and back to LOCK again 50 times in a row.

HINT:

DTC B1794 is output if the occupant classification ECU receives the ignition switch LOCK−ON−LOCK signal 50 times in a row when a malfunction occurs in the power circuit for the occupant classification system.

(c) w/ Power seat (for passenger side):
Simulation method for DTC B1795: Turn the ignition switch from the LOCK to ON, hold for 10 seconds, and back to LOCK again 50 times in a row.

HINT:

DTC B1795 is output if the occupant classification ECU receives the ignition switch LOCK−ON−LOCK signal 50 times in a row when a malfunction occurs in the power circuit for the occupant classification system.

3. FUNCTION OF SRS WARNING LIGHT

(a) Primary check.

(1) Turn the ignition switch to the LOCK position. Wait for at least 2 seconds, then turn the ignition switch to the ON position. The SRS warning light comes on for approximately 6 seconds and the SRS airbag system diagnosis (including the seat belt pretensioner and occupant classification system) is performed.

HINT:

If trouble is detected during the primary check, the SRS warning light remains on even after the primary check period (for approximately 6 seconds) has elapsed.

(b) Constant check.

(1) After the primary check, the airbag sensor assy center constantly monitors the SRS airbag system for trouble.

HINT:

If trouble is detected during the constant check, the airbag sensor assy center functions as follows:

- The SRS warning light comes on.
- The SRS warning light goes off, and then comes on. This blinking pattern indicates the source voltage drop. The SRS warning light goes off 10 seconds after the source voltage returns to normal.

(c) Review.

(1) When the airbag system is normal:
The SRS warning light comes on only during the primary check period (for approximately 6 seconds after the ignition switch is turned to the ON position).

(2) When the airbag system has trouble:

- The SRS warning light remains on even after the primary check period has elapsed.
- The SRS warning light goes off after the primary check, but comes on again during the constant check.
- The SRS warning light does not come on when turning the ignition switch from the LOCK to ON position.

HINT:

The airbag sensor assy center keeps the SRS warning light on if the airbag has been deployed.

4. FUNCTION OF PASSENGER AIRBAG ON/OFF INDICATOR

(a) Initial check.

(1) Turn the ignition switch to the ON position.

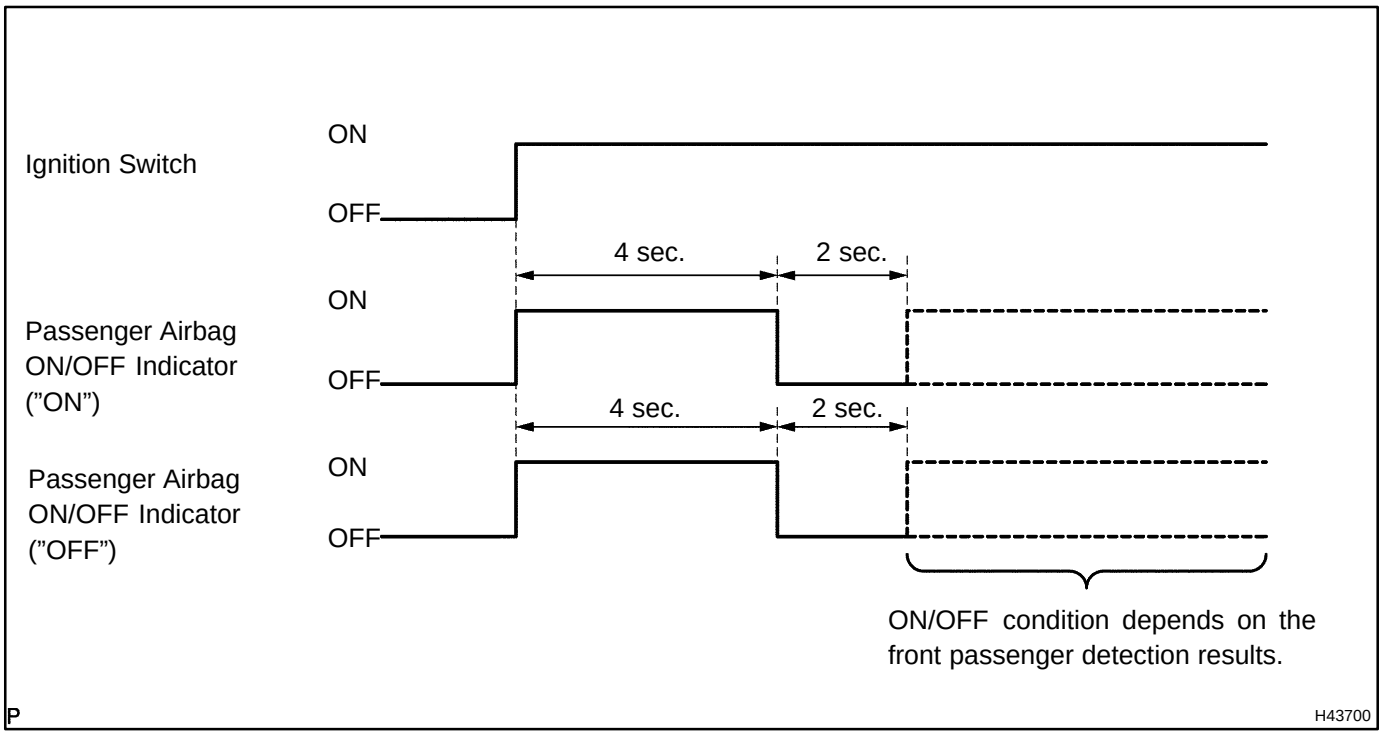
(2) The passenger airbag ON/OFF indicator (”ON” and ”OFF”) comes on for approximately 4 seconds, then goes off for approximately 2 seconds.

(3) Approximately 6 seconds after the ignition switch is turned to the ON position, the passenger airbag ON/OFF indicator will be ON/OFF depending on the conditions listed below.

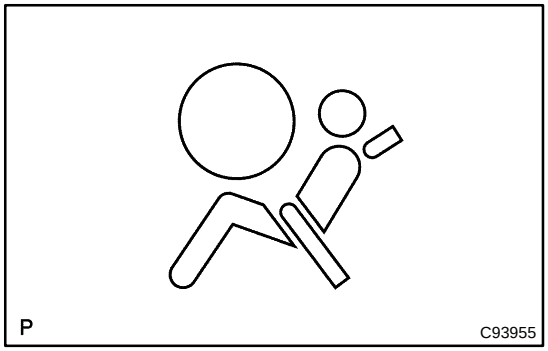
Condition	”ON” indicator	”OFF” indicator
Vacant	OFF	OFF
Adult is seated.	ON	OFF
Child is seated.	OFF	ON
Child restraint system is set.	OFF	ON
Front passenger occupant classification system failure	OFF	ON

HINT:

- The passenger airbag ON/OFF indicator is based on the timing chart below in order to check the indicator light circuit.



- When the occupant classification system has trouble, both the SRS warning light and the passenger airbag ON/OFF indicator ("OFF") come on. In this case, check the DTCs in the supplemental restraint system first. Then troubleshoot the occupant classification system if DTC B1650/32 is indicated and troubleshoot the passenger airbag ON/OFF indicator if DTC B1660/43 is detected.



5. SRS WARNING LIGHT CHECK

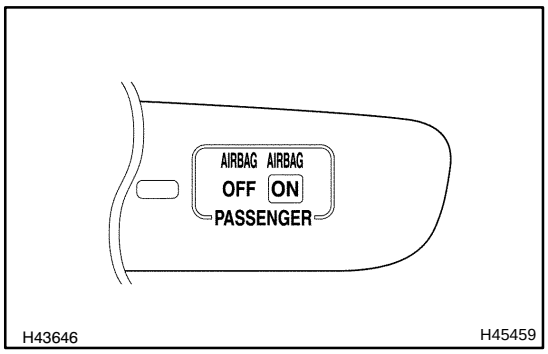
(a) Turn the ignition switch to the ON position, and check that the SRS warning light comes on for approximately 6 seconds (primary check).

(b) Check that the SRS warning light goes off approximately 6 seconds after the ignition switch is turned to the ON position (constant check).

HINT:

When any of the following symptoms occur, refer to the "Problem Symptoms Table" (see page 05−1477).

- The SRS warning light comes on occasionally, after the primary check period has elapsed.
- The SRS warning light comes on, but DTC is not output.
- The ignition switch is turned from the LOCK to ON position, but the SRS warning light does not come on.



6. PASSENGER AIRBAG ON/OFF INDICATOR CHECK

(a) Turn the ignition switch to the ON position.

(b) Check that the passenger airbag ON/OFF indicator (”ON” and ”OFF”) comes on for approximately 4 seconds, then goes off for approximately 2 seconds.

HINT:

Refer to the table in step 4 regarding the passenger airbag ON/OFF indicator when the ignition switch is turned to the ON position and approximately 6 seconds pass.

7. RELEASE METHOD OF ACTIVATION PREVENTION MECHANISM

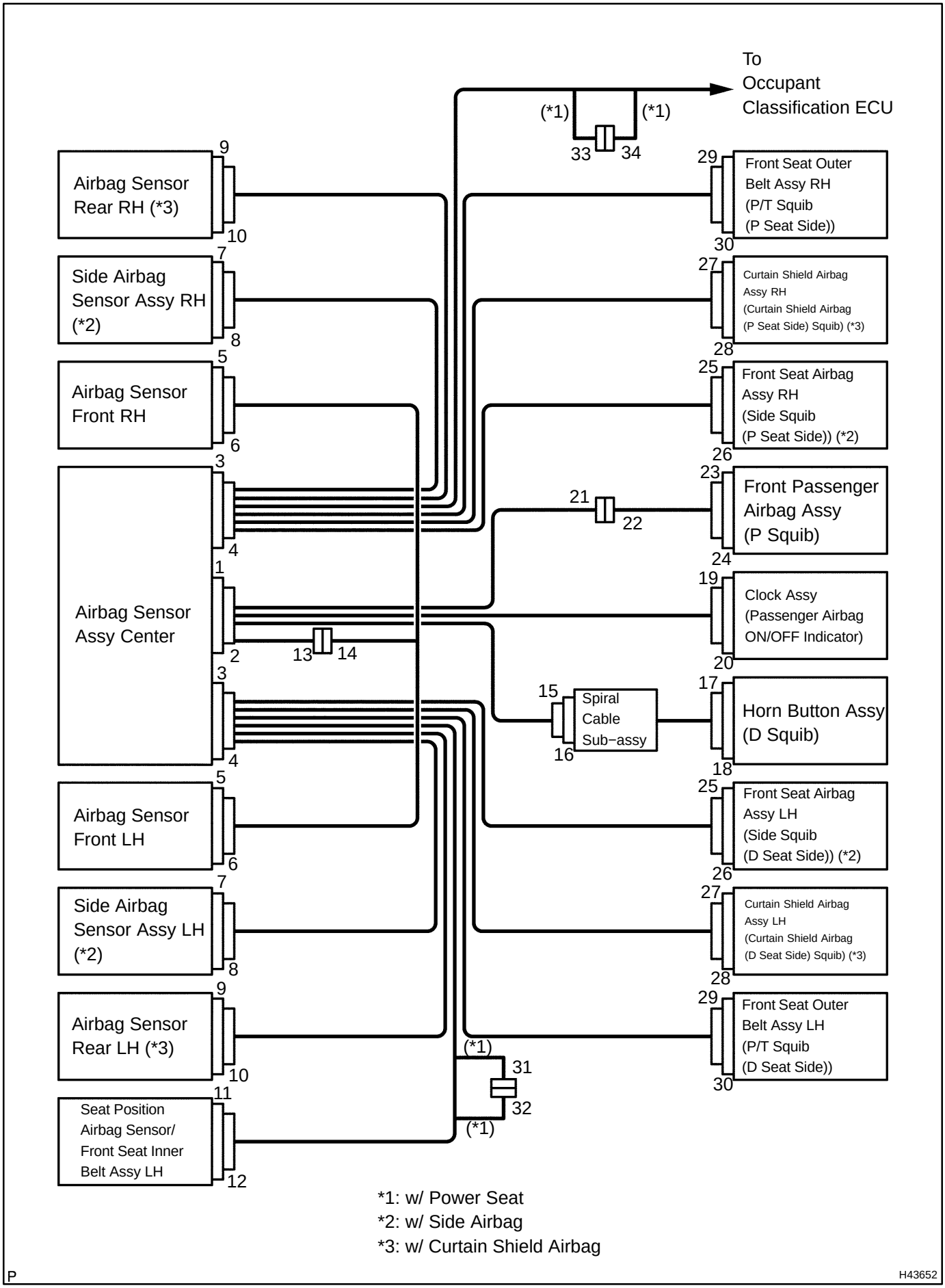
(a) The activation prevention mechanism is built into the connector for the squib circuit of the SRS. As explained in the troubleshooting section, insert a piece of paper that is the same thickness as the male terminal between the terminal and the short spring to release it (Refer to the illustrations on the next 3 pages).

CAUTION:

Never release the activation prevention mechanism on the squib connector even when inspecting with the squib disconnected.

NOTICE:

- **Do not release the activation prevention mechanism unless specially directed by the troubleshooting procedure.**
- **To prevent the terminal and the short spring from being damaged, always use a piece of paper that is the same thickness as the male terminal.**



*1: w/ Power Seat
*2: w/ Side Airbag
*3: w/ Curtain Shield Airbag

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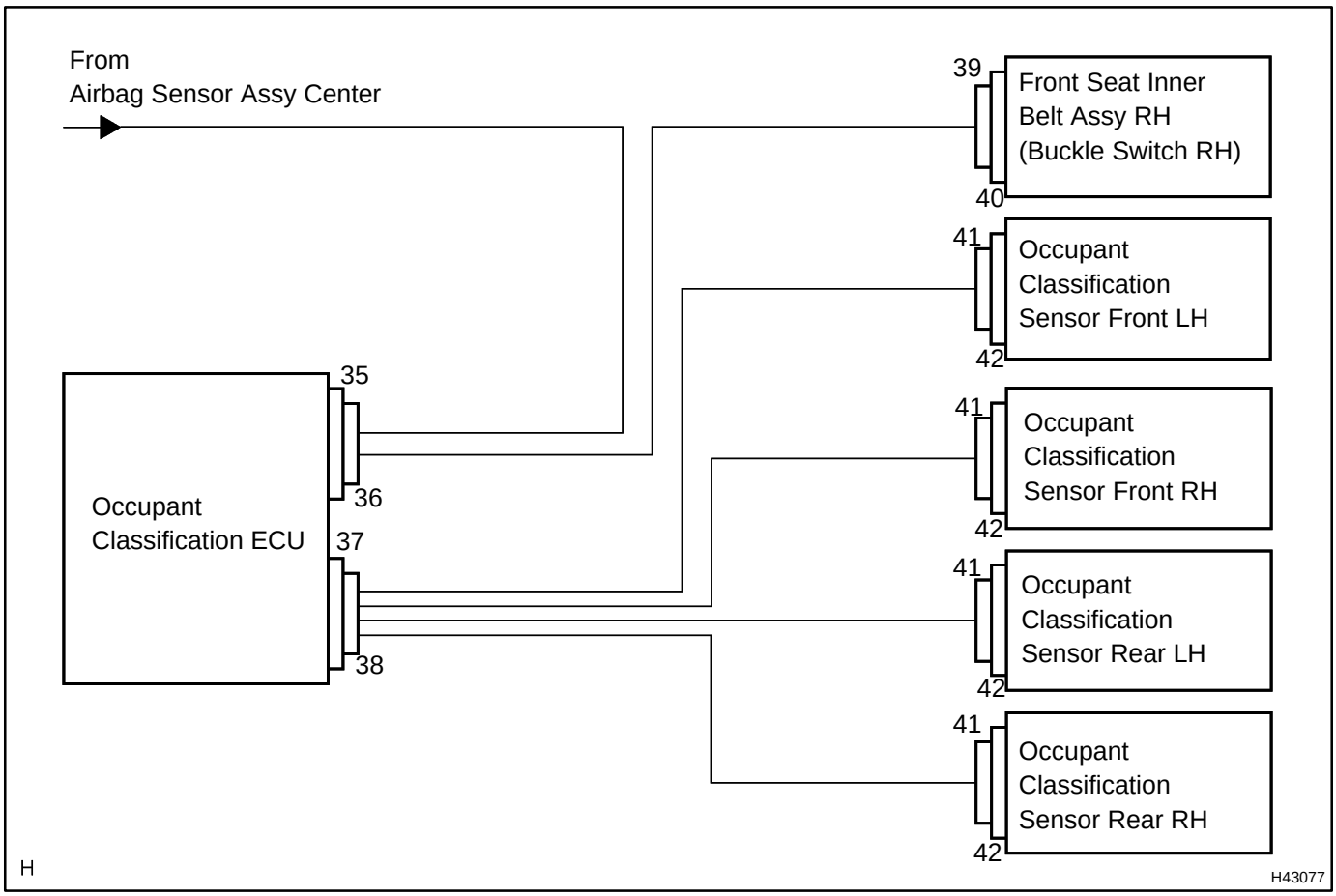
From
Airbag Sensor Assy Center
Occupant
Classification ECU
35
36
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38
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41
42
Front Seat Inner
Belt Assy RH
(Buckle Switch RH)
Occupant
Classification
Sensor Front LH
Occupant
Classification
Sensor Front RH
Occupant
Classification
Sensor Rear LH
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Sensor Rear RH
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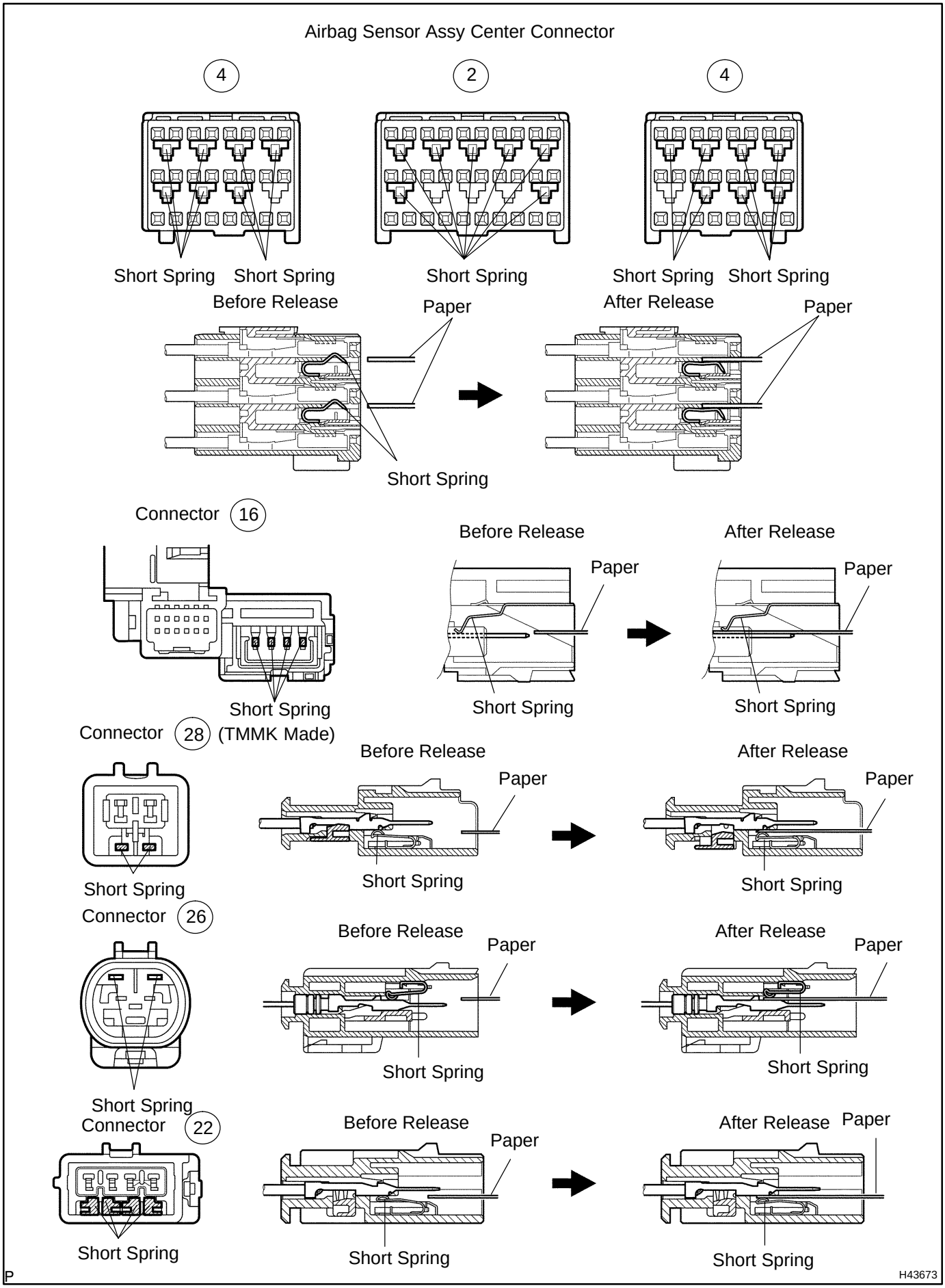
Airbag Sensor Assy Center Connector
4
2
4
Short Spring
Short Spring
Short Spring
Short Spring
Short Spring
Before Release
After Release
Paper
Paper
Short Spring
Connector 16
Short Spring
Connector 28 (TMMK Made)
Before Release
After Release
Paper
Paper
Short Spring
Short Spring
Short Spring
Connector 26
Before Release
After Release
Paper
Paper
Short Spring
Short Spring
Short Spring
Connector 22
Before Release
After Release
Paper
Paper
Short Spring
Short Spring
Short Spring
P
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