

SEAT WEIGHT BLADDER & PRESSURE SENSOR

DESCRIPTION

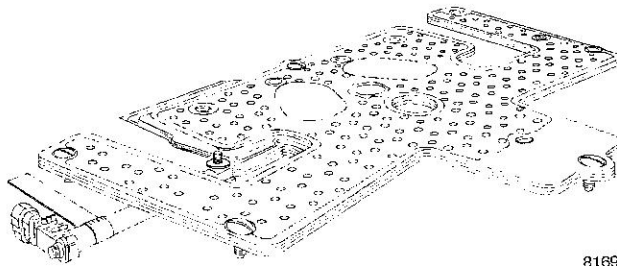


Fig. 53 SEAT WEIGHT Bladder & Pressure Sensor

Vehicles equipped with the Occupant Classification System (OCS) have a seat weight bladder and pressure sensor unit (Fig. 53) that is integral to the passenger front seat cushion. The bladder is sandwiched between the seat cushion pan and seat cushion foam.

The bladder consists of two sheets of an elastomeric material and a molded plastic elbow fitting. The two sheets of material are sealed together around their perimeter and heat staked to each other at numerous regular points within their field. The elbow fitting passes through a clearance hole in the seat cushion pan. The bladder is then filled with a silicone fluid to become a pliable, quilted membrane.

Under the seat cushion a short tube is securely clamped at one end to the bladder nipple, and at the other end to a nipple on the electronic pressure sensor. The sensor mounts on a clip attached to the seat cushion pan.

WARNING: These components are not replaceable separately from the seat cushion foam. When replaced as an assembly, the complete service kit (seat cushion, bladder/sensor, OCM, and new wiring harness) MUST be used (Refer to 23 - BODY/SEATS/ SEAT CUSHION - REMOVAL).

OPERATION

The seat weight bladder and pressure sensor unit is designed to sense the relative weight of a load applied to the passenger front seat cushion, which provides a logic input to the microprocessor of the Occupant Classification Module (OCM). When a load is applied to the seat cushion, fluid within the bladder becomes pressurized. These changes in bladder fluid pressure are measured by the pressure sensor under the seat cushion through the bladder tube. As the pressure within the bladder changes, the circuitry of the pressure sensor changes the output voltage of the sensor.

The pressure sensor receives a nominal five volts and a ground through hard wired circuits from the

OCM. The OCM then monitors the pressure output voltage on the Programmable Communication Interface (PCI) data bus circuit.

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To properly diagnose the seat weight bladder and pressure sensor, its communication with/between the OCM, and all other components within the OCS, use a scan tool and the appropriate diagnostic information.