

- Model** all (CAR)
with code 399 (Front multicontour seat with massage function)
- Model** all (CAR)
with code 406 (Multicontour rear seat)
- Model** all (CAR)
with code 409 (Left and right front multicontour seat)
- Model** all (CAR)
with code 432 (Dynamic seats left and right)

Overview

This document contains information on:

- General
- Function requirements
- Pressure setting of air cushions
- Local air supply
- Central air supply
- Dynamic function (depending on equipment)
- Simplified massage function (depending on equipment)
- Massage function (depending on equipment)
- Actuation by other systems

General

The multicontour seat enables individual contour adjustment of the seat backrest to the vehicle occupants. To do this, the air cushions can be inflated independently of each other. The air supply can be provided either via a local pneumatic pump in the respective seat or via a central pneumatic pump.

The following air cushions are installed in the multicontour seat:

Pressure setting of air cushions

A pneumatic pump provides the air supply that is required to inflate the air cushion.

The distribution of air supply is performed via integrated valves in the multicontour seat control unit.

Pressure setting of the air cushions takes place in 2 phases:

- **Short-term control:** Short-term control compensates for overpressure deviations in the air cushions. It activates following every adjustment procedure and only remains active for a short parameterizable period of time. This function is used among others to compensate for sitting down or leaning back immediately and in a comfort-oriented fashion.
- **Long-term control:** After the short-term control, the long-term control becomes active. The long-term control function regulates the pressure supply such that the specified pressure is always achieved. This is done almost without the driver or front passenger noticing.

Adjustment of the air cushions is canceled under the following conditions:

- Overvoltage or undervoltage
- Inflating or deflating timeout
- Leak in one or more air cushions
- No information on speed, turn rate or lateral acceleration (with dynamic seat)
- Memory adjustment request (with dynamic seat)

Simplified massage function (depending on equipment)

In order to implement the massage function, the multicontour seat control unit actuates the air cushions in the lumbar area with a pulsating/undulating inflation and deflation action. This provides a massage effect in the lumbar spine area.

The multicontour seat pneumatic pump provides the air supply that is required to inflate the air cushions. The respective multicontour seat control unit controls the air supply to the air cushions via the integrated valves and thus implements the massage function.

The respective multicontour seat control unit stores the current specified pressure of the air cushions when the function is started. At the end of the massage, the multicontour seat control unit restores the previously stored specified pressures.

The massage function is operated via the multimedia system.

Massage function (depending on equipment)

To implement the different massage programs, there are 14 individual massage bladders in each seat backrest and four individual massage bladders in each seat cushion (depending on the equipment installed). The massage function inflates and deflates these independently of each other.

- Left and right seat side bolsters of the backrest
- in the upper lumbar area
- In the lower lumbar support area
- In shoulder area (depending on equipment and model)

In addition, equipment-dependent massage and/or dynamic functions are available on the multicontour seat.

The massage functions are implemented in various ways:

- By inflating and deflating the air cushions in the lumbar area
- By inflating and deflating air cushions (massage bladders) in the seat backrest
- By inflating and deflating air cushions (massage bladders) in the seat cushion

The system is operated through the multimedia system.

Function requirements

- Circuit 15 or circuit 15R ON
- No on-board electrical system limp-home mode

- Adjustment request via PRE-SAFE®

Local air supply

The local multicontour seat pneumatic pump is located in the seat and provides the air supply for the air cushions in this seat.

Central air supply

The multicontour seat central pneumatic pump is located outside the seats in the vehicle and provides the air supply for several seats. To enable communication with the multicontour seat control units, the multicontour seat central pneumatic pump is connected to the network architecture of the vehicle.

i Mixed mode consisting of local and central air supply is also possible, e.g. local pneumatic pumps in the front seats and a central pneumatic pump for the rear seats.

Dynamic function (depending on equipment)

The dynamic function improves lateral support during cornering by briefly applying pressure in the respective outer air cushion in the seat side bolster. This essentially happens as a function of the current vehicle speed, the turn rate and the lateral acceleration. The function's intensity can be adjusted in two stages:

- Dominant: The pressure is applied to the outside air cushion in the seat side bolster more quickly and heavily.
- Discreet: The pressure is applied to the outside air cushion in the seat side bolster more slowly and faintly.

i In case of a inflating or deflating timeout, the function is blocked for the active driving cycle.

- "Undulating massage"
- "Mobilizing massage"
- "Active backrest workout"
- "Active cushion workout"

With the massage programs "hot relaxing massage for back" and "hot relaxing massage for shoulders", the seat heating also switches on the seat backrest heater.

The massage function is interrupted when the following settings are made:

- Manual adjustment of air cushions
- Memory adjustment request

After the interruption, the massage starts in its sequential control system with the next upcoming massage step.

The massage function is canceled under the following conditions:

- Overvoltage or undervoltage
- Overloading of multicontour seat pneumatic pump in combination with active dynamic function
- Adjustment request via PRE-SAFE®

The multicontour seat pneumatic pump provides the air supply that is required to inflate the massage bladders. The respective massage function control unit controls the air supply to the massage bladders via the integrated valves and therefore implements the selected massage program. The massage function control units are each networked with the multicontour seat control unit.

The massage function is operated via the multimedia system. Depending on the equipment installed, the following massage programs are available:

- "Hot relaxing massage for back"
- "Hot relaxing massage for shoulders"
- "Activating massage"
- "Classic massage"

Actuation by other systems

The multicontour seats can also be actuated by the following systems:

- Revitalization
- Preventive occupant protection system

	Function schematics		
	Function schematic for actuating front multicontour seat	Model 118, 177, 247 with code 409 (Left and right front multicontour seat) Model 167 with code 399 (Front multicontour seat with massage function) Model 213, 257 as of model year 2021 with code 432 (Dynamic seats left and right) Model 238 as of model year 2021 with code 399 (Front multicontour seat with massage function) Model 290 as of model year 2021 with code 409 (Left and right front multicontour seat) Model 290 as of model year 2021 with code 432 (Dynamic seats left and right) Model 293 with code 409 (Left and right front multicontour seat)	PE91.25-P-2501-97A PE91.25-P-2501-97B PE91.25-P-2501-97E PE91.25-P-2501-97F PE91.25-P-2501-97G PE91.25-P-2501-97C
	Function schematic for actuation of rear passenger compartment multicontour seat	Model 167 with code 406 (Multicontour rear seat) Model 213 as of model year 2021 with code 406 (Multicontour rear seat)	PE91.25-P-2502-97B PE91.25-P-2502-97C
	Control units		
	Multicontour seat control unit, basic function		GF91.25-P-9890A
	Massage function control unit, basic function	Model all (CAR) with code 399 (Front multicontour seat with massage function) Model all (CAR) with code 406 (Multicontour rear seat) Model all (CAR) with code 432 (Dynamic seats left and right)	GF91.25-P-9891A
	Components		
	Multicontour seat pneumatic pump, basic function		GF91.25-P-2005A