

2022 CHEVROLET CORVETTE SERVICE MANUAL

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Lumbar Support Description and Operation

The memory lumbar/bolster system uses air bladders to adjust various aspects of the seat configuration to meet an occupant's preference. It also allows these adjustments to be stored to a memory position along with the seat position data.

Some vehicles may also be equipped with dynamic mode control which gives the chassis subsystem the ability to request an automatic adjustment to the seat's bolster support depending on vehicle driving conditions.

The various seat adjustments and functionality which may be possible include:

- Lumbar support "forward and rearward"
- Seat back side bolster

The components of the system include:

- LIN based seat switch
- Driver Seat Adjuster Memory Module
- Front Seat Bolster Memory Module - Driver
- Air bladders

LIN Seat Switch

The seat switch communicates all customer requests for seat movement or adjustment via the LIN serial data bus to the seat adjuster memory module. The seat switch may consist of the following controls:

- Seat adjuster switch similar to the typical discrete seat switch
- 2-way lumbar switch which can be activated Forward/Rearward
- 2-way bolster switch which can be activated Up/Down

Manipulating the seat cushion and seat back control bar results in the seat memory control module responding in the same way as it would if the resultant requests were made by discrete signals instead of the LIN messaging this switch employs.

Lumbar/Bolster Operation

Once the lumbar/bolster feature has been activated, the Driver Seat Adjuster Memory Module will command the Front Seat Bolster Memory Module - Driver to perform the required pneumatic movements via LIN serial data messages.

The Front Seat Bolster Memory Module - Driver contains the electronic circuitry for executing the commanded pneumatic seat adjustments, air direction solenoids, pressure sensors for storing air bladder pressures, and an output which supplies battery power to the internal seat air pump motor when any of the air bladders require inflating.

Based on the LIN command from the Driver Seat Adjuster Memory Module, the Front Seat Bolster Memory Module - Driver the appropriate air solenoids and activates or deactivates the internal air pump in order to inflate or deflate the air bladders in the correct combination. When an air bladder needs inflating its solenoid opens and the pump motor is activated pumping air into the bladder. When an air bladder needs deflating its solenoid opens the release valve and air is allowed to bleed out of the bladder into the vehicle cabin.

To support memory recall, the Front Seat Bolster Memory Module - Driver uses internal air pressure sensors to track, store and recall the positions of all the air bladders under its control.