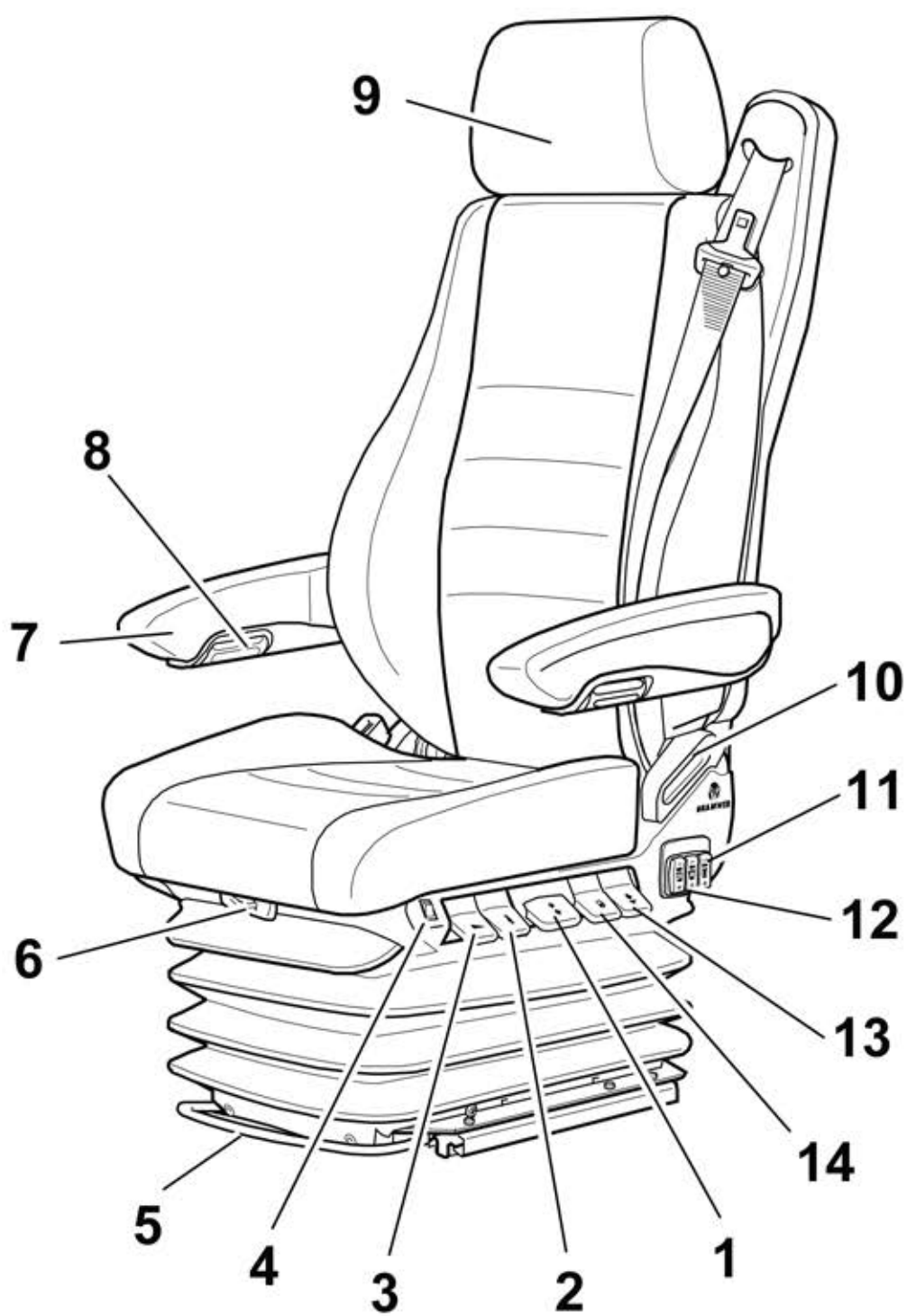


# MSG90.3

**ARIZONA / WYNONA / AMARILLO  
OKLAHOMA / CHICAGO**





## Contents

General instructions .....	20
Safety instructions .....	20
Connecting data .....	22
Guarantee .....	22
Seat functions and operation .....	23
1 Height adjustment .....	23
2 Vertical shock absorber adjustment * .....	23
3 Seat pan angle adjustment .....	23
4 Seat heater * .....	24
5 Fore/aft adjustment .....	24
6 Seat depth adjustment * .....	24
7 Armrests ** .....	25
8 Armrest adjustment * .....	25
9 Headrest .....	25
10 Backrest adjustment .....	26
11 Lateral support adjustment * .....	26
12 Lumbar support *** .....	26
13 Quick lowering * .....	27
14 Fore/aft isolator * .....	27
Maintenance .....	28

\* if fitted    \*\* optional extra    \*\*\* depending on model

# General instructions

- The operating instructions must be read in full before use.
- The operating instructions must be kept in the vehicle and always be at hand.
- The driver's seat may only be fitted, serviced and repaired by specialist personnel. The respective national regulations and the vehicle manufacturer's fitting instructions must be observed.  
The national fitting regulations can be obtained from **GRAMMER** or from agencies of the company, or from the vehicle manufacturer.
- A correctly functioning and individually adjusted driver's seat is essential to your health. Take adequate care of your seat and have it serviced regularly to ensure that it functions correctly.



The functional checks are to be carried out at least as regularly as vehicle services (see maintenance plan for vehicle).

- These operating instructions should always be kept with the driver's seat. If the seat is passed on to a third party, it must be accompanied by the relevant operating instructions.



## Safety instructions

- To prevent injury, **no objects should be placed within the moving area** of the driver's seat.
- **Before commissioning** of the driver's seat, possible **packaging material** has to be removed from the seat cushion and the backrest upholstery.
- To eliminate any risk of accident, the settings must be checked to ensure they are correctly engaged **before the vehicle is driven**.
- Adjustments must **not** be made **while driving**.
- **When the backrest cushion has been removed**, the backrest frame must be supported, for example held in place, before the backrest adjuster is operated. If you fail to do so, there is a danger that the backrest frame may jerk forward and **cause injury**.
- **Any changes to the series standard of the seat** (for example fitting parts which are not original **GRAMMER** parts) may impair the safety standard to which it has been tested. **Functions may be impaired**, threatening your **safety**. For this reason, **any change in design of the seat** must be approved by **GRAMMER**.
- During the removal and installation of the driver's seat, the corresponding instructions by the specific vehicle manufacturer must be strictly observed!
- Do not hold onto the covers for lifting the driver's seats. Disregard **increases the risk of injury due to loosening or breaking the covers**.

## Safety instructions

- Before you remove the driver's seat, disconnect all plug-in connections between the seat and the vehicle supply network. When you replace the plug-in connectors, make sure they are tight (dust, water).
- Screw connections must be **checked regularly for tight seat**. If the seat wobbles, there may be loose bolts or other faults.
- If the seat is equipped with seatbelts, check them for correct function.
- Seatbelts must be fastened **before driving**.  
**The seatbelts must be replaced** after an accident.  
Where seatbelts are fitted to the driver's seat, the **seat** and **seat mounting** must be checked **additionally** by specialist personnel after an accident has occurred.
- Retrofitting of driver's seats with integrated seatbelts is only admissible after consulting the vehicle manufacturer and with proper fitting by authorized workshops.
- If you find that the seat does not function correctly (for example a defective suspension of the driver's seat; improper curvature of the lumbar support or damaged bellows), **contact a specialist workshop immediately** to arrange for repairs to be carried out.  
If you fail to do so, your health may be affected and the **risk of accident increased**.
- Do not indent the bellows while there is load on the driver's seat.  
**–RISK OF CRUSHING –**
- Make sure that the **interior of the driver's seat** remains free of **foreign particles or liquids**.
- The driver's seat is **not watertight** and must be protected against splashes of water!
- Any conversion or refitting work on a **GRAMMER** driver's seat must be performed exclusively in **authorized workshops** by **trained** or **suitably qualified personnel** and in adherence with the applicable operating, maintenance and installation instructions and in compliance with all relevant national regulations.
- **Improper installation and assembly** bear the risk of **bodily injury** or **property damage** and the proper function of the driver's seat or mounted parts can no longer be guaranteed.
- The driver's seat is free of maintenance. Worn parts such as rollers, absorbers and the fixation must be checked from time to time. If the driver's seat is not adjusted to the medium position in case of load, the system pressure at the supply line or the function of the control valve for medium position adjustment have to be checked.
- Correct functioning of the driver's seat is essential to your health. Therefore, take adequate care of your seat to ensure that it functions correctly.

## Safety instructions

- To ensure proper function of the driver's seat and to prevent damages of the pneumatic spring, adjust the loaded driver's seat to the highest height position (see "Height adjustment") after it has been fitted into the vehicle. Please make sure that the normal working pressure is available in the vehicle's air supply system. In case of non-observance, the guarantee will expire.

## Connecting data

- If you need to connect cables to the vehicle supply network, strictly observe the following instructions:

Before you connect a seat heater, you must obtain the relevant electrical data for the respective vehicle with reference to voltage, protection and the kind of connections from the manufacturer, from **GRAMMER** or the company's agencies.

For safety reasons, the installation and connection to the vehicle supply network must be carried out by authorized specialist personnel only.

The seat connections must be protected independently of other vehicle components.

Seat heater	
12V DC	10A
24V DC	10A

- For pneumatic connection of Arizona, Wynona, Amarillo and Oklahoma seat models, the following data have to be observed:

Working pressure
Max. 10 bar / min. 8 bar

Air connection
Air input = black / air output = grey

- For electric connection of the Chicago seat model, the following data have to be observed:

Compressor		Compressor / seat heater	
12V DC	10A	12V DC	20A

## Guarantee

- **GRAMMER** does not disclaim any guaranty or liability for damage resulting from incorrect assembly, use or repair of the driver's seats.
- Further details on the guarantee granted by GRAMMER are stated on the invoice or the delivery note. Warranty claims against **GRAMMER** beyond the guarantee obligations described there are excluded.

Subject to design, technical and equipment modifications as well as homologation regulations.



# Seat functions and operation

## Height adjustment

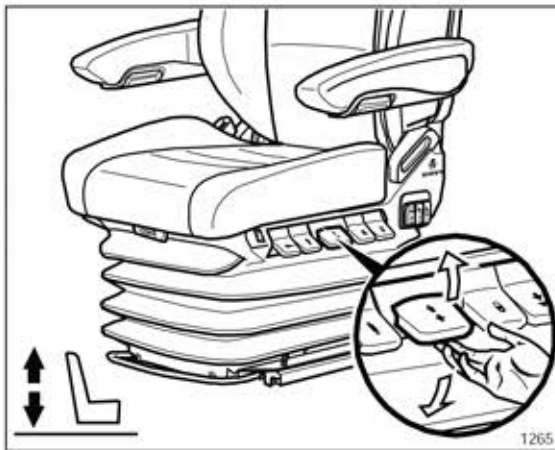
If load is applied to the seat, the seat height adjustment made before is automatically adjusted.

Pull or press the lever for height adjustment to move the seat upwards or downwards.

In the case of the Chicago model, the loaded seat must necessarily be adjusted for height by pulling or pressing the lever.

☞ In order to avoid compressor damage in the Chicago seat model, operate the lever no longer than 1 minute.

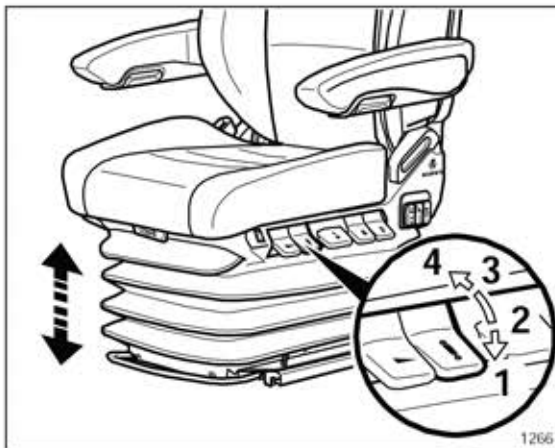
☞ Always release the lever after reaching the upper or lower end stop.



## Vertical shock absorber adjustment \*

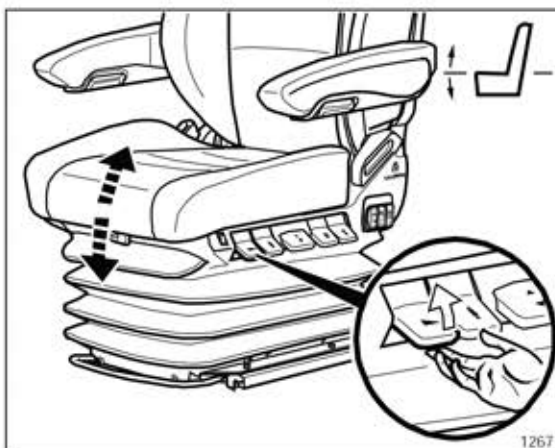
The vertical vibration behavior of the seat can be adjusted in four increments from hard (down) to soft (up) using the lever.

- 1 = Hard shock absorption
- 2 = Medium hard shock absorption
- 3 = Medium soft shock absorption
- 4 = Soft shock absorption



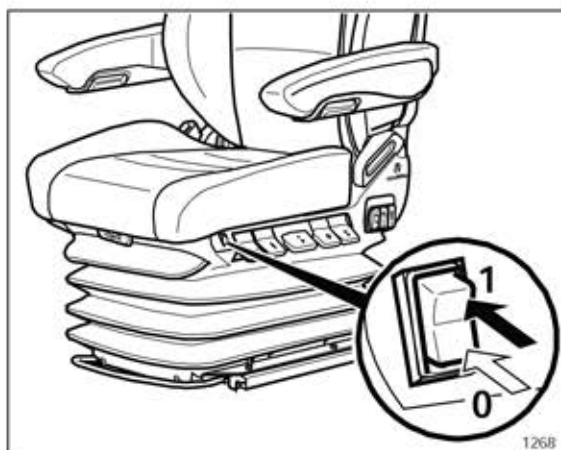
## Seat pan angle adjustment

To adjust the angle of the seat pan, pull the lever upwards. By exerting pressure on or off the front or rear part of the seat pan it can be moved to the desired angle position.



\* if fitted

# Seat functions and operation

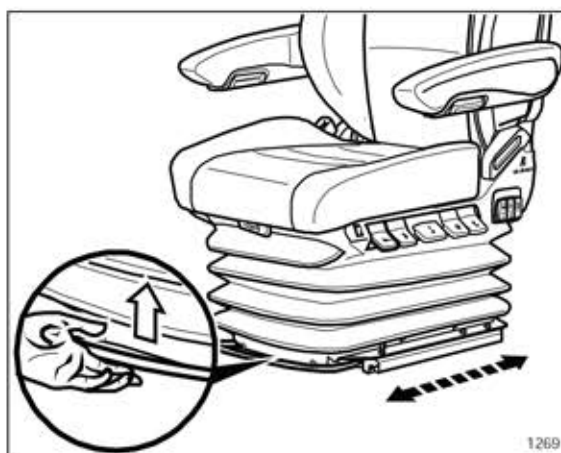


## Seat heater \*

By operating the seat heater switch, the heating mats in backrest and seat cushion can be heated.

0 = Heater OFF

1 = Heater ON

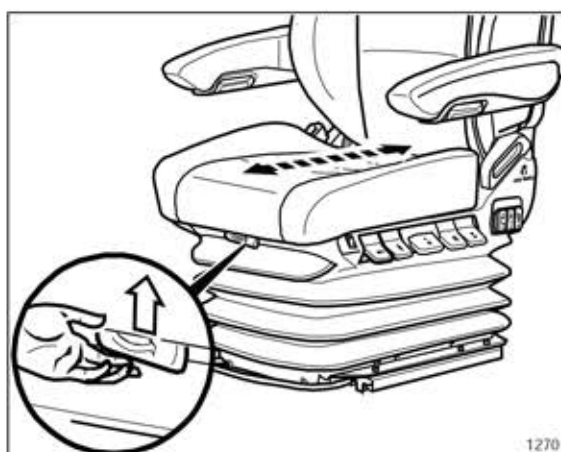


## Fore/aft adjustment

The fore/aft adjustment can be adjusted by pulling the locking lever and by simultaneously sliding the seat forwards or backwards. The seat must lock into place with an audible click when the lever is released.



**WARNING! Risk of accident!**  
Do not operate the locking lever while driving.



## Seat depth adjustment \*

To adjust the depth of the seat cushion, pull the handle upwards. By moving the seat cushion backwards or forwards the desired seating position can be reached.

\* if fitted



# Seat functions and operation

## Armrests \*\*

The armrests can be folded up if required.



## Armrest adjustment \*

The inclination of the armrests can be modified by turning the adjustment knob.

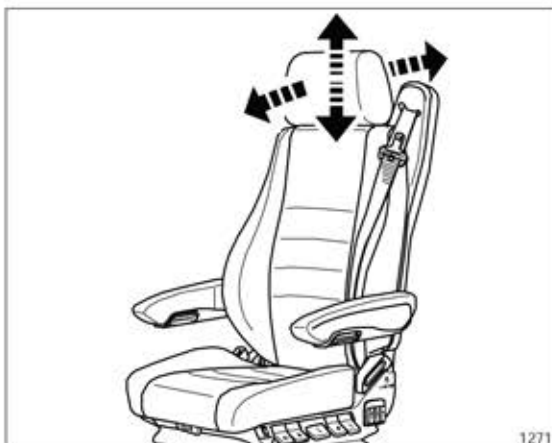
When turning the knob to the outside (+) the front part of the armrest will be lifted, when turning the knob to inside (-) it will be lowered.



## Headrest

The headrest can be individually adjusted for height by pulling it upwards or pushing it downwards over the various locking increments up to the end stop. The angle of the headrest can be adjusted by pushing forwards or rearwards.

To remove the headrest, pull it upwards over the end stop.



\* if fitted    \*\* optional extra

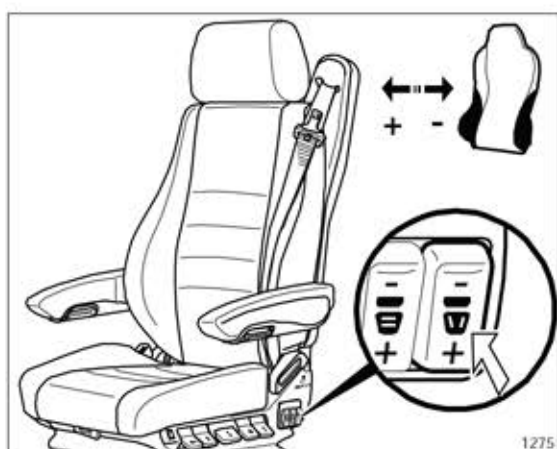
## Seat functions and operation



### Backrest adjustment

Pull up the locking lever to release the backrest catch. By exerting pressure on or off the front or rear part of the seat pan it can be moved to the desired position. Release the locking lever to lock the backrest.

☞ It should not be possible to move the backrest into another position after it has been locked.

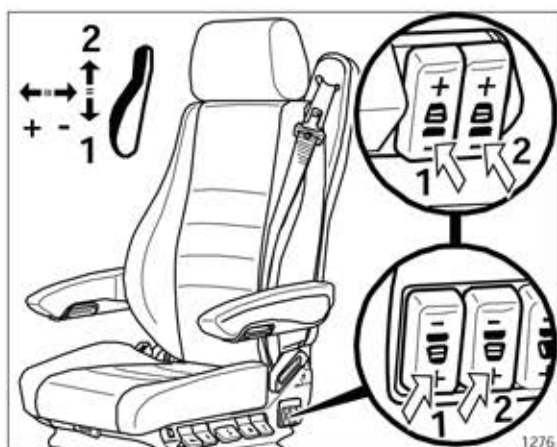


### Lateral support adjustment \*

By actuating the switch, the curvature of the lateral guide right and left of the backrest can be adjusted individually by means of compressed air.

By setting the switch to "+", the air compartments will be filled. By setting it to "-", they will be emptied.

When the backrest cushion does no longer react to pressing "+", the maximum curvature of the lateral guide has been reached and the switch should be released.



### Lumbar support \*\*\*

With the front (1) and back (2) switch the curvature in the upper and lower area of the backrest cushion can be adjusted individually.

By setting the respective switch to "+", the air compartments will be filled. By setting it to "-", they will be emptied.

When the backrest cushion does no longer respond to pressing "+", the maximum curvature has been reached and the switch should be released.

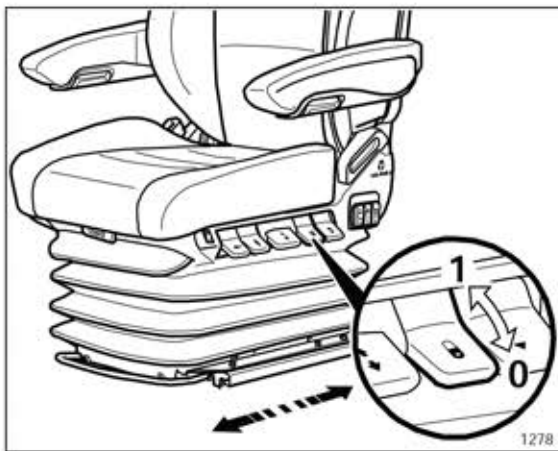
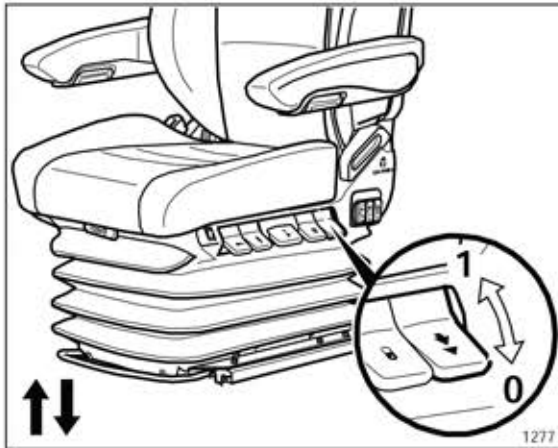
\* if fitted    \*\*\* depending on model

## Seat functions and operation

### Quick lowering \*

By pulling the lever upwards and locking it (1), the seat can be adjusted (before exiting the vehicle) to its lowest position.

By pressing the lever downwards and releasing it (0), the seat will be lifted back to the driving position (after getting into the vehicle).



### Fore/aft isolator \*

Under certain driving conditions, it is useful to activate the fore/aft isolator. This means that shock impacts in the driving direction can be better absorbed by the driver's seat.

- 1 = Fore/aft isolator ON
- 0 = Fore/aft isolator OFF

\* if fitted

## Maintenance



Dirt can impair the function of the seat, so make sure you keep your seat clean!

Upholstery does not need to be removed from the seat frame for cleaning.



**Caution: take care with the backrest - it may jerk forward and cause injury!**

**When cleaning the backrest cushion, the backrest must be held in place when operating the backrest lever.**

**ATTENTION:** Do not clean the seat with a pressure washer!

When cleaning the upholstery, make sure the upholstery is not soaked.

Use standard commercially available **upholstery or plastics cleaning agent**. **Test first for compatibility** on a small, concealed area.