

MODEL 220

The AIRmatic at the front and rear axle is a fully supporting suspension system. It keeps the vehicle level constant when the engine is running irrespective of the load. At the same time air from the air compressor is delivered to the spring struts via the valve unit until the vehicle level has been adjusted. The vehicle level at the front axle is recorded by two level sensors at the rear axle and conveyed to the AIRmatic with ADS control module. The level at the individual spring struts is controlled by four level valves in the valve unit and a pressure relief valve on the AIRmatic compressor unit.

An AIRmatic central reservoir for compressed air also enables the vehicle level to be controlled when the engine is not running. In addition the adjustment of the vehicle level is decoupled from the air compressor.

Shut-off position function

If the unloading of all the wheels when the vehicle is stationary is recognized by the control module, the spring strut valves are closed. The vehicle therefore remains at the current level. This is required when changing a wheel or for repair work (hoist) for example.

Wake-up function (operating period approx. 1 minute)

The AIRmatic with ADS control module is "woken up" using the remote control, door contact switches or trunk illumination switch in order to check the current vehicle level for critical conditions (level too low) and if necessary to raise the vehicle or lower it when unloading.

If the vehicle level is lowered by more than 30 mm, it is raised to the normal level by the reservoir (only with a reservoir pressure > 11 bar).

At a vehicle level of < -65 mm and even at a reservoir pressure of < 11 bar it is raised out of the "critical range" by the compressor to -63 mm (condition: battery voltage > 12.4 V).

If the vehicle level is raised by more than 10 mm when unloading, it is lowered to the normal level by relieving the pressure.

Normal function (engine running)

When the vehicle is stationary the level is readjusted if there is a difference of more than +/- 10 mm after a door or the trunk lid is opened.

While driving the level is readjusted if there is a difference of more than +/- 20 mm. The level is adjusted to +/- 10 mm every 15 minutes.

Depending on the situation, pressure can be generated by the compressor or the pressure supply of the AIRmatic central reservoir can be used to raise the vehicle. When the vehicle is stationary the pressure from the reservoir is used for noise reasons. Pressure can also be supplied from the compressor and AIRmatic central reservoir at the same time when there is a particularly high pressure demand.

The lowering of the vehicle level is recognized by the control module from the level sensors when loading the vehicle. By actuating solenoid valves air is delivered to the spring struts of the particular front wheel or rear axle until the vehicle has reached its specified value.

In addition the pressure relief valve is opened to actuate the respective wheel valve when unloading the vehicle.

The vehicle cannot be raised by the level control switch.

Function in vehicle condition "Ignition ON"

The same function as for the wake-up function, but without time limit.

Run-on function (operating period approx. 1 minute)

After "ignition OFF" the control module performs changes in the level in order to be able to readjust the vehicle level (raise or lower) during any loading or unloading operations. (The same function as for the wake-up function).

	AIRmatic pressure supply, function		GF32.22-P-4010A
	AIRmatic with ADS control module, location/ task/function		GF32.22-P-4200B