

Design and Operation of Central Interlock

The central interlock permits the simultaneous locking and unlocking of all doors, of trunk lid and of flap for tank filler neck. Normal opening or closing of lefthand driver's door by means of key or interlocking knob is required. A vacuum switch on lock of driver's door serves to activate the vacuum required to operate the interlocking devices of the remaining doors, the trunk lid and the flap of the tank filler neck.

When the righthand driver's door of a centrally interlocked vehicle is opened with the key, this door is only mechanically unlocked and is still subject to central interlock upon closing.

On all USA vehicle models the righthand driver's door or one of the rear doors can be separately opened from inside the passenger compartment only when the respective door has first been mechanically released by means of the door safety knob. The righthand driver's door and both rear doors of all other versions can be opened without previous mechanical release of door safety knob.

The trunk lid, as well as the righthand driver's door of a centrally interlocked vehicle can be separately unlocked by means of the key.

If the trunk lid of a centrally interlocked vehicle is closed, opening of lid requires turning locking cylinder by means of key for approx. 60° from center position in counterclockwise direction (in this position, the key **cannot** be pulled out). The lid will be opened by simultaneously pushing locking cylinder. When the key is released, it will immediately snap back into center position.

When the lid is slammed closed, it is again in interlocked position. When the trunk lid is centrally interlocked and additionally mechanically locked, the lid can also be opened by turning the lid approx. 150° to the left and then pushing against locking cylinder without removing the key.

The vacuum supply tank permits closing a stopped vehicle approx. 8 to 10 times. When the vacuum is no longer available, the vehicle can be mechanically closed and interlocked.

The vacuum in the intake manifold (1) of the engine will evacuate the line system in vehicle including the vacuum supply tank (3) by means of check valve (2) to approx. 20% of its air capacity.

The vacuum switch (5), installed in driver's door is connected both to door safety knob and to lock of driver's door.

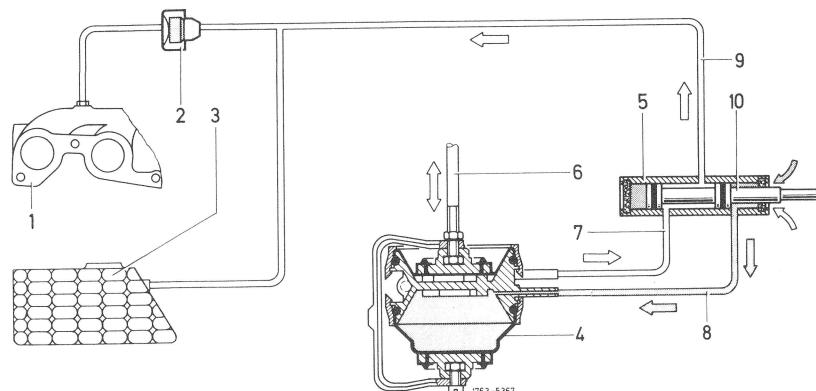


Fig. 1

Diagram of central interlocking system (interlocked condition)

1 Intake manifold of engine	5 Vacuum switch	9 Vacuum line
2 Check valve	6 Actuating rod	10 Control valve
3 Vacuum supply tank	7 Evacuating line	
4 Operating element	8 Charging line	

When the door safety knob is actuated or the door is opened or locked from outside by means of key, the control valve (10) in vacuum switch (5) will move along; this will establish a vacuum in one chamber of the operating element (4), while the other chamber will be charged with air (Fig. 1). The resulting differential pressure will reverse the direction of operation. The control rods of the diaphragm pistons will engage the door safety knobs of the remaining doors and the interlocking devices of the trunk lid and the flap of the tank filler neck for the desired joint pneumatic operation. For safety reasons, the mechanical actuation of the door safety knob (1) interlock is given priority in relation to vacuum actuation. For this purpose, the control rod is provided with a snap spring mechanism (3) which permits the separate mechanical release of each lock with the central interlocking system engaged. During the next central interlocking step, the snap spring mechanism will return automatically to its starting position (Fig. 2).

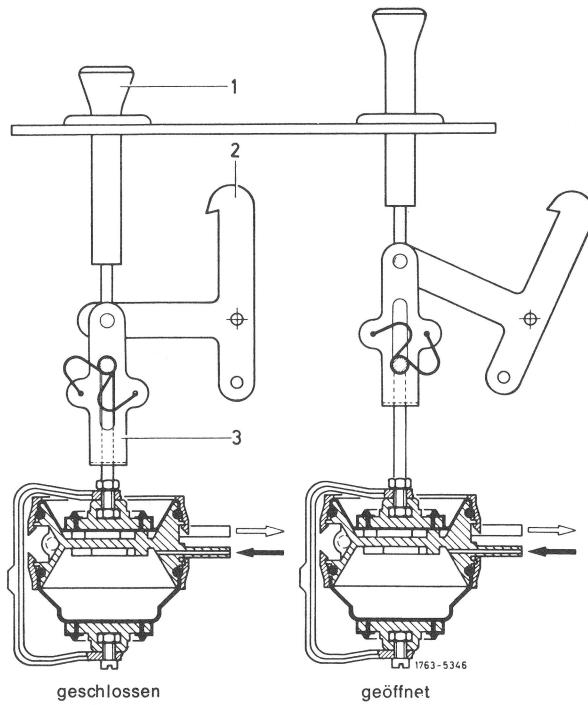


Fig. 2

1 Door safety knob
2 Bolt
3 Snap lock mechanism

geschlossen = closed

geöffnet = released