

Werkstattinformationssystem Display Document

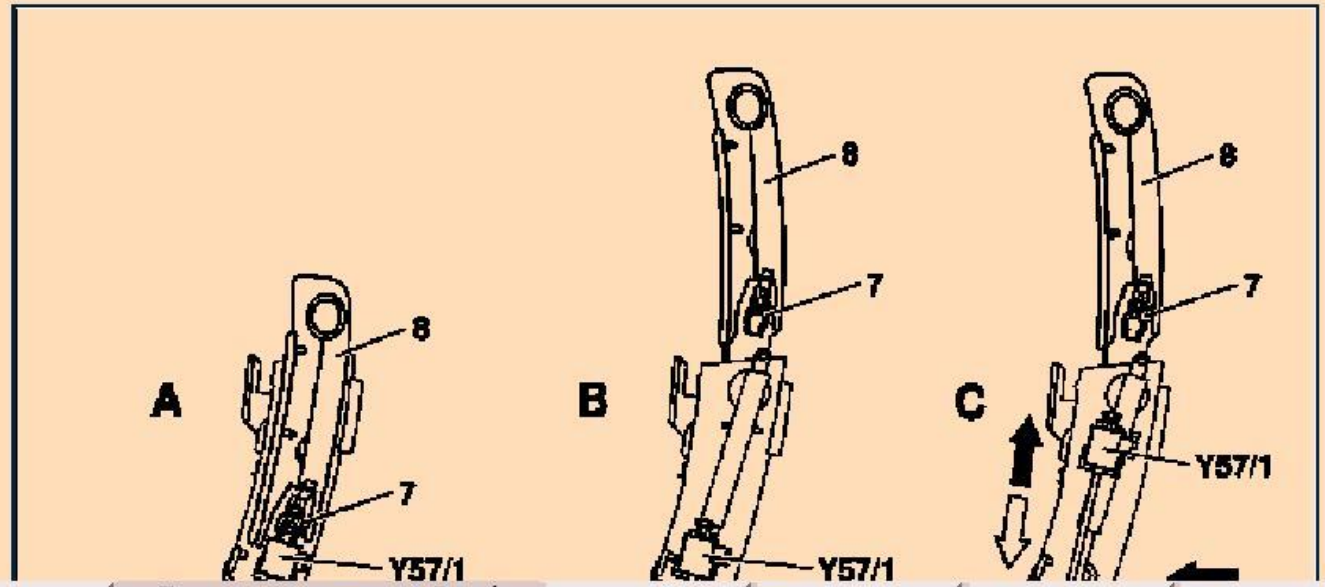
Sales designation:	Vehicle ident. number:	Engine number:	Automatic transmission:	Gr.:	Entrv. Mod.Y.:	Op. no.:
CLK 430 Cabriolet	WDB208470*	113.943	722623	91.59		
GF91.59-P-2001KA		Roll bar crash deployment, function		Full-size view	validity OFF	Page: 2 / 5

GF91.59-P-2001KA	Roll bar crash deployment, function	4.2.98
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Models 208.435 /444 /445 /447 /448 /465 /470

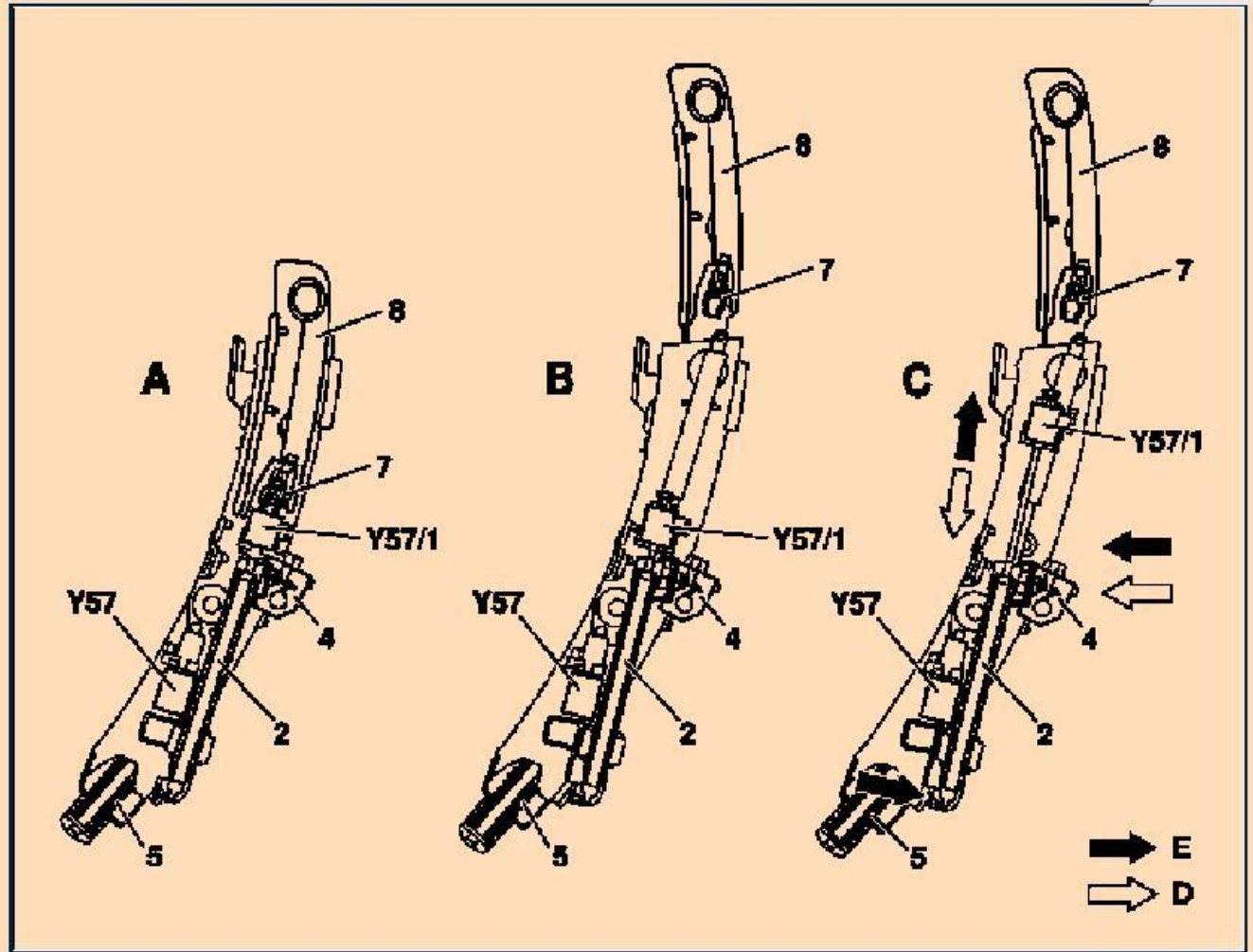
- 2 Hydraulic cylinder roll bar on support and control element
- 4 Locking pawl
- 5 Spring for crash deployment
- 7 Lock (coupling)
- 8 Head restraint

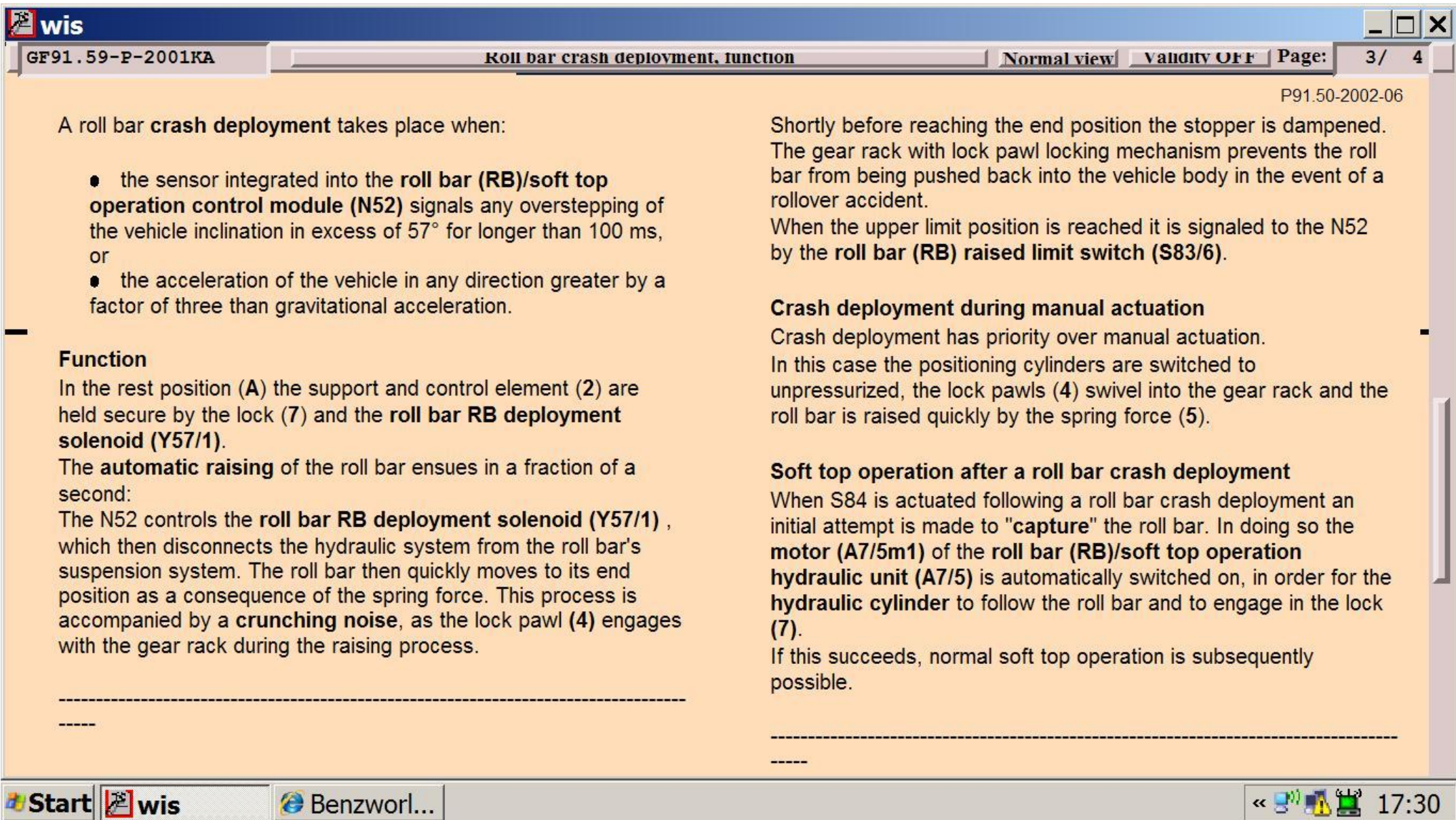
- A Roll bar lowered
- B Roll bar crash deployment
- C Roll bar lowered after crash deployment
- D Hydraulic system applied with pressure (for raising)



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- 2 Hydraulic cylinder roll bar on support and control element
 - 4 Locking pawl
 - 5 Spring for crash deployment
 - 7 Lock (coupling)
 - 8 Head restraint
-
- A Roll bar lowered
 - B Roll bar crash deployment
 - C Roll bar lowered after crash deployment
 - D Hydraulic system applied with pressure (for raising)
 - E Hydraulic system applied with pressure (for lowering)
-
- Y57 Roll bar (RB) valve block
 - Y57/1 Roll bar (RB) deployment solenoid





A roll bar **crash deployment** takes place when:

- the sensor integrated into the **roll bar (RB)/soft top operation control module (N52)** signals any overstepping of the vehicle inclination in excess of 57° for longer than 100 ms, or
- the acceleration of the vehicle in any direction greater by a factor of three than gravitational acceleration.

Function

In the rest position (**A**) the support and control element (**2**) are held secure by the lock (**7**) and the **roll bar RB deployment solenoid (Y57/1)**.

The **automatic raising** of the roll bar ensues in a fraction of a second:

The N52 controls the **roll bar RB deployment solenoid (Y57/1)**, which then disconnects the hydraulic system from the roll bar's suspension system. The roll bar then quickly moves to its end position as a consequence of the spring force. This process is accompanied by a **crunching noise**, as the lock pawl (**4**) engages with the gear rack during the raising process.

Shortly before reaching the end position the stopper is dampened. The gear rack with lock pawl locking mechanism prevents the roll bar from being pushed back into the vehicle body in the event of a rollover accident.

When the upper limit position is reached it is signaled to the N52 by the **roll bar (RB) raised limit switch (S83/6)**.

Crash deployment during manual actuation

Crash deployment has priority over manual actuation.

In this case the positioning cylinders are switched to unpressurized, the lock pawls (**4**) swivel into the gear rack and the roll bar is raised quickly by the spring force (**5**).

Soft top operation after a roll bar crash deployment

When S84 is actuated following a roll bar crash deployment an initial attempt is made to "capture" the roll bar. In doing so the **motor (A7/5m1)** of the **roll bar (RB)/soft top operation hydraulic unit (A7/5)** is automatically switched on, in order for the **hydraulic cylinder** to follow the roll bar and to engage in the lock (**7**).

If this succeeds, normal soft top operation is subsequently possible.

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GF91.59-P-2001KA Roll bar crash deployment, function Normal view validity OFF Page: 3/ 4

Function

In the rest position (A) the support and control element (2) are held secure by the lock (7) and the **roll bar RB deployment solenoid (Y57/1)**.
The **automatic raising** of the roll bar ensues in a fraction of a second:
The N52 controls the **roll bar RB deployment solenoid (Y57/1)**, which then disconnects the hydraulic system from the roll bar's suspension system. The roll bar then quickly moves to its end position as a consequence of the spring force. This process is accompanied by a **crunching noise**, as the lock pawl (4) engages with the gear rack during the raising process.

Crash memory

After a roll bar crash deployment the N52's crash memory records various trigger parameters. A maximum of 3 triggerings (within 65 s) is recorded; each additional triggering is ignored until the roll bar is

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If this succeeds, normal soft top operation is subsequently possible.

"recaptured". The first crash after "recapturing" the roll bar overwrites the first data record.

Start wis Benzworl... << 17:33