

## Diagnosis – Function Test

### Roadster Soft Top Opening Sequence

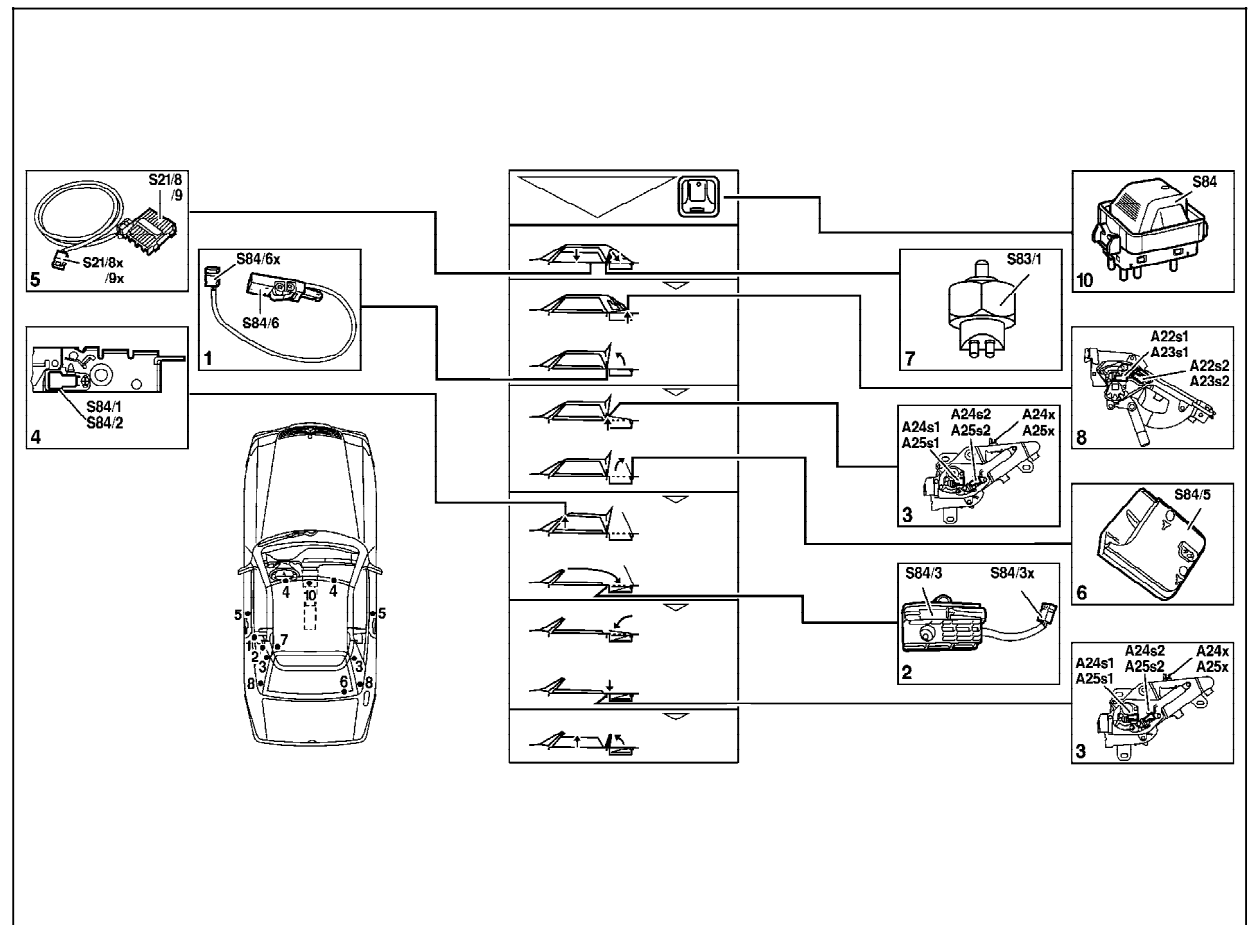
Initial stage: Roadster Soft Top closed.

Each frame (1-8, 10) in Figure 1 shows each opening sequence step (1-8) along with each component, with actuation of hydraulic actuators and window motors, that must be completed first before the next sequence step can be accomplished.

Figure 1

### Roadster Soft Top Opening Sequence

- A22s1 Bow "closed" switch (8)
- A22s2 Bow "locked" switch (8)
- A23s1 Bow "closed" switch (8)
- A23s2 Bow "locked" switch (8)
- A24s1 Cover "closed" switch (3)
- A24s2 Cover "locked" switch (3)
- A25s1 Cover "closed" switch (3)
- A25s2 Cover "locked" switch (3)
- S21/8 Right front door "window down" limit switch (5)
- S21/9 Left front door "window down" limit switch (5)
- S83/1 RB "retracted" switch (7)
- S84 Power soft top switch (10)
- S84/1 Left front soft top "locked" switch (4)
- S84/2 Right front soft top "locked" switch (4)
- S84/3 Soft top "open" switch (soft top in storage compartment) (2)
- S84/5 Soft top compartment "open" switch (6)
- S84/6 Soft top fabric bow "raised" switch (1)



P77.39-0265-09

## Diagnosis – Function Test

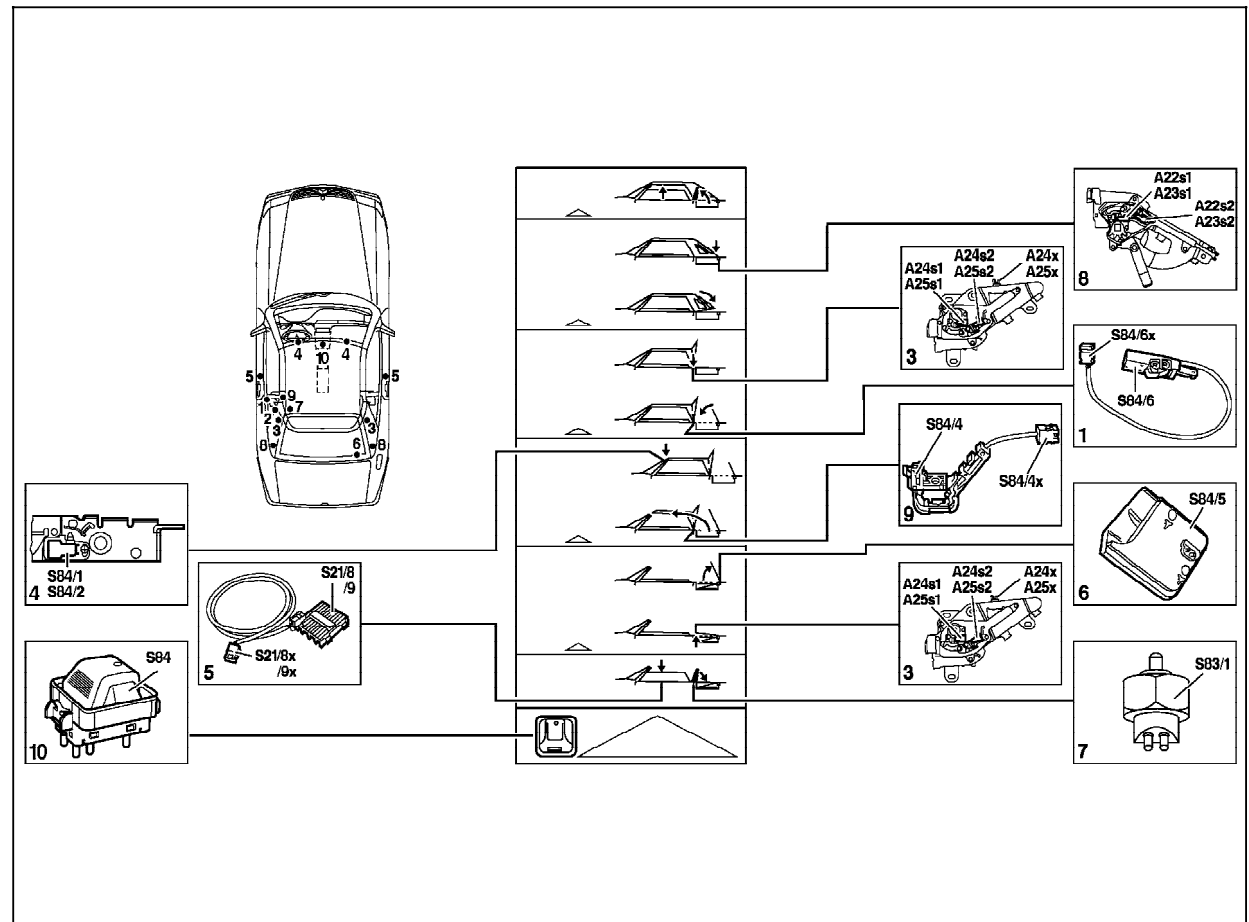
### Roadster Soft Top Closing Sequence

Each frame (1, 3, 4-8,10) in Figure 2 shows each closing sequence step (1-10) along with each component, with actuation of hydraulic actuators and window motors, that must be completed first before the next sequence step can be accomplished.

Figure 2

### Roadster Soft Top Closing Sequence

- A22s1 Bow "closed" switch (8)
- A22s2 Bow "locked" switch (8)
- A23s1 Bow "closed" switch (8)
- A23s2 Bow "locked" switch (8)
- A24s1 Cover "closed" switch (3)
- A24s2 Cover "locked" switch (3)
- A25s1 Cover "closed" switch (3)
- A25s2 Cover "locked" switch (3)
- S21/8 Right front door "window down" limit switch (5)
- S21/9 Left front door "window down" limit switch (5)
- S83/1 RB "retracted" switch (7)
- S84 Power soft top switch (10)
- S84/1 Left front soft top "locked" switch (4)
- S84/2 Right front soft top "locked" switch (4)
- S84/4 Soft top "raised" switch (9)
- S84/5 Soft top compartment "open" switch (6)
- S84/6 Soft top fabric bow "raised" switch (1)



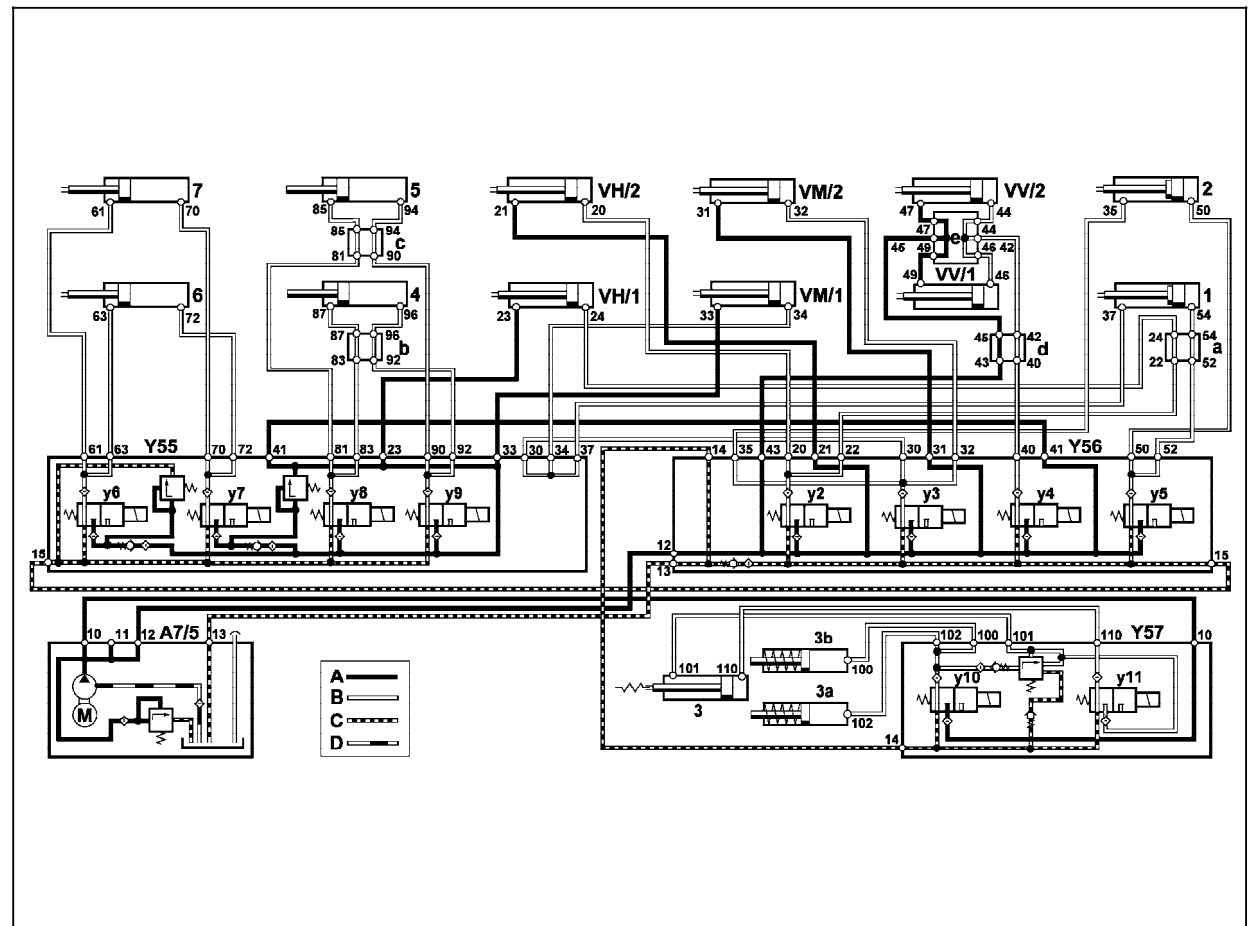
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## Diagnosis – Function Test

### Roadster Soft Top Hydraulic Flow Schematic

Figure 3

- 1/2 Left/right soft top compartment cover hydraulic cylinder
- 3 Right roll bar support element
- 3a/3b Left/right locking pawl hydraulic cylinder
- 4/5 Left/right fabric bow hydraulic cylinder
- 6/7 Left/right power soft top hydraulic cylinder
- A7/5 RST/RB hydraulic unit
- A Soft top/roll bar operation hydraulic circuit
- B Control pressure lines
- C Return flow lines
- D Suction lines
- a Hydraulic distributor at left rear wall
- b Hydraulic distributor at lower left center pillar
- c Hydraulic distributor at lower right center pillar
- d Hydraulic distributor at right front pillar before crossmember
- e Hydraulic distributor at upper windshield cross member
- VV/1 Left front lock
- VV/2 Right front lock
- VM/1 Left center lock
- VM/2 Right center lock
- VH/1 Left rear lock
- VH/2 Right rear lock
- Y55 Left RST valve block (4 connections)
- Y56 Right RST valve block (4 connections)
- Y57 RB valve block (2 connections)



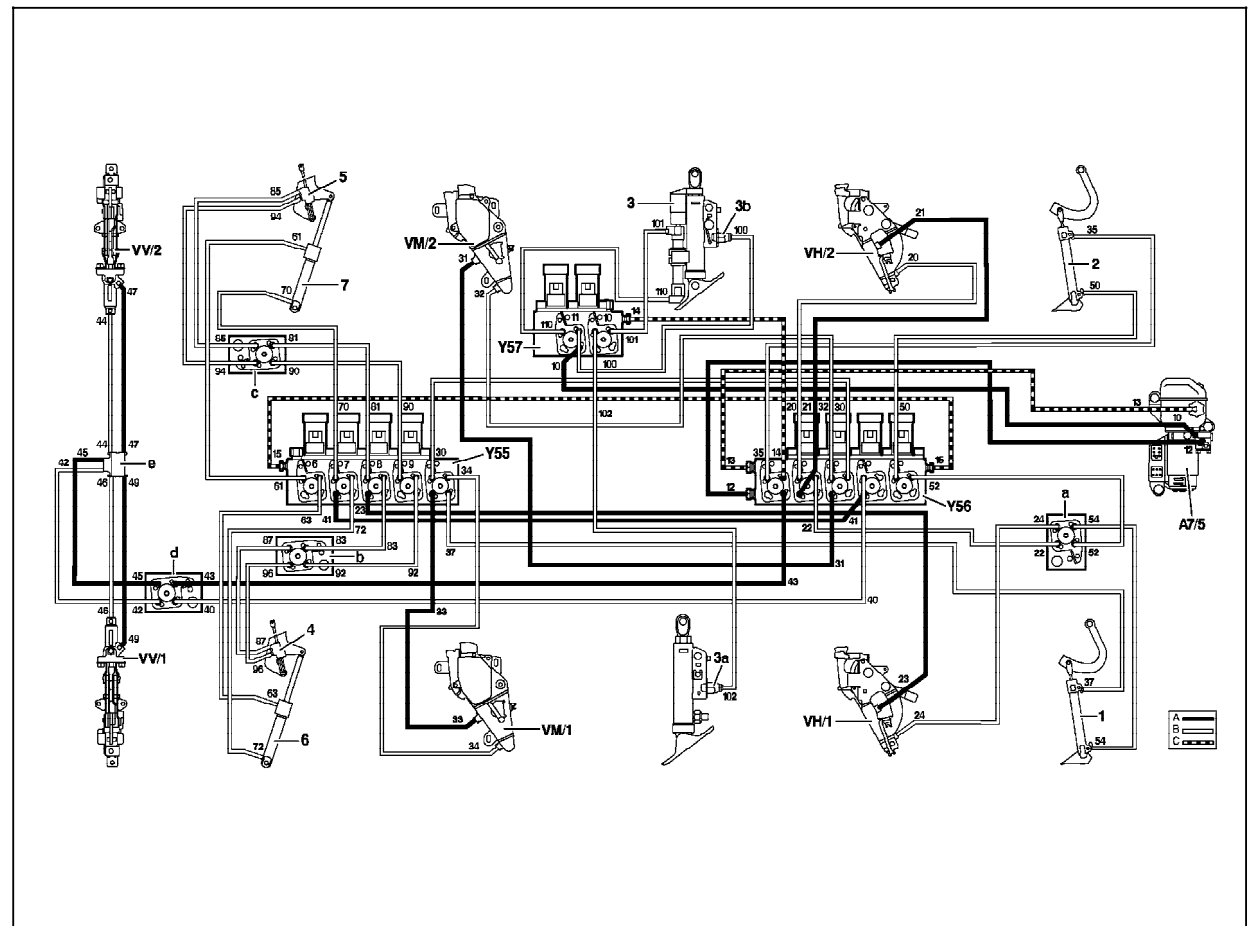
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## Diagnosis – Function Test

### Roadster Soft Top Hydraulic Flow Schematic

Figure 4

- 1/2 Left/right soft top compartment cover hydraulic cylinder
- 3 Right roll bar support element
- 3a/3b Left/right locking pawl hydraulic cylinder
- 4/5 Left/right fabric bow hydraulic cylinder
- 6/7 Left/right power soft top hydraulic cylinder
- A7/5 RST/RB hydraulic unit
- A Soft top/roll bar operation hydraulic circuit
- B Control pressure lines
- C Return flow lines
- a Hydraulic distributor at left rear wall
- b Hydraulic distributor at lower left center pillar
- c Hydraulic distributor at lower right center pillar
- d Hydraulic distributor at right front pillar before crossmember
- e Hydraulic distributor at upper windshield cross member
- VV/1 Left front lock
- VV/2 Right front lock
- VM/1 Left center lock
- VM/2 Right center lock
- VH/1 Left rear lock
- VH/2 Right rear lock
- Y55 Left RST valve block (4 connections)
- Y56 Right RST valve block (4 connections)
- Y57 RB valve block (2 connections)



P77.37-0433-79

### Diagnosis – Function Test

 **CAUTION!**

Injury hazard from pinching and crushing, in extreme cases extremities can even be severed when caught in the mechanism.

Do not allow any body parts to be in the general area of the moving components.

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy <sup>1) 2)</sup>
⇒ 1.0 Power soft top switch (S84) indicator lamp	Ignition: <b>ON</b>	Indicator lamp within power soft top switch must illuminate 1X	S84, Open circuit, Power soft top control module (N52)
⇒ 2.0 Hard top safety test	Ignition: <b>ON</b> After a time period of more than 10 seconds, push power soft top switch (S84) to <b>OPEN</b> for approx. 10 seconds.	Hard top must <b>not unlock</b> .	Power soft top control module (N52) See SMS, Job number 77-0450
⇒ 3.0 Lock hard top	Hard top set in place, unlocked. Ignition: <b>ON</b> Push power soft top switch (S84) to <b>CLOSE</b> .	Locking begins immediately, Once the locking procedure is completed the indicator lamp in switch goes out.	13, see complaint No. 1
⇒ 4.0 Unlock hard top	Ignition: <b>ON</b> Within 10 seconds push power soft top switch (S84) to OPEN.	After 2 to 4 seconds the unlocking procedure begins first at front and then the rear.	13, see complaint No. 1

1) Observe Preparation for Test, see 22.

### Diagnosis – Function Test

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy <sup>1) 2)</sup>
⇒ 5.0 Raise Roll bar using RB switch (S83)	Ignition: <b>ON</b> Push RB switch (S83) to <b>Raise</b> .	Roll bar raises.	13, see complaint No. 5
⇒ 6.0 Close power soft top using power soft top switch (S84)	Ignition: <b>ON</b> Hard top removed from vehicle. Push power soft top switch (S84) to <b>CLOSE</b> .	Roll bar retracts, side windows open, soft top closes, roll bar is raised, side windows close.	13, see complaint No. 10-19
⇒ 7.0 Open power soft top using power soft top switch (S84)	Ignition: <b>ON</b> Roll bar raised, push power soft top switch (S84) to <b>OPEN</b> .	Roll bar retracts, side windows open, power soft top opens, roll bar raises, side windows close.	13, see complaint No. 20-29

1) Observe Preparation for Test, see 22.

### Diagnosis – Function Test

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy <sup>1) 2)</sup>
⇒ 8.0 Lower roll bar using RB switch (S83)	Ignition: <b>ON</b> Press RB switch (S83) to <b>lower</b> .	Roll bar retracts.	13, see complaint No. 7
⇒ 9.0 Gong in dome lamp	With the soft top unlocked, drive vehicle a short distance.	Gong in dome lamp must sound.	13, see complaint No. 3, 4
⇒ 10.0 Side window convenience feature function	Side windows open. Lock vehicle from driver's door, passenger door and trunk lid lock, while holding pressed (key in trunk lock at 60 degrees).	Side windows close.	13, see complaint No. 32

1) Observe Preparation for Test, see 22.