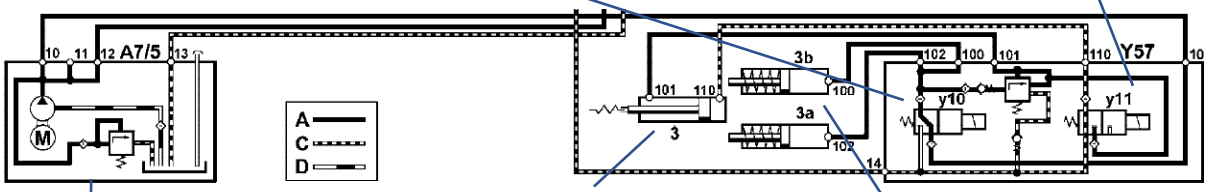
- lowering the roll bar
- Y10 is roll bar lower valve, supplies pressure to rod side of piston(101), also supplies pressure to latching pawls to retract them and enable lowering the roll bar

- Y11 is the roll bar raise valve, supplies pressure to the piston side (port 110), shown in release fluid position, roll bar lower



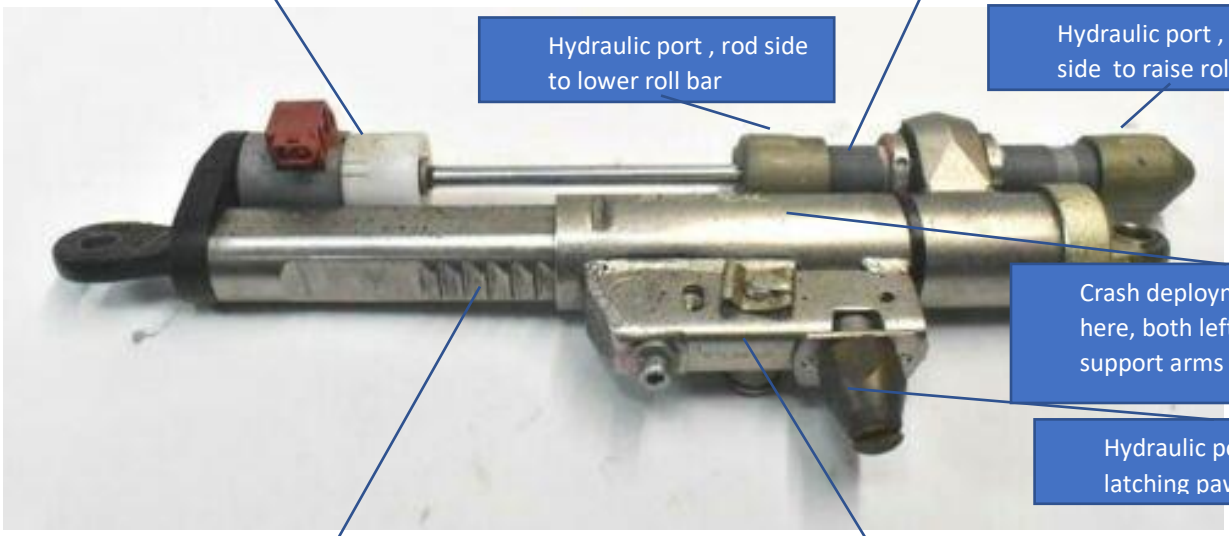
- Pump
- A hydraulic pressure
- C return flow
- D suction

- Roll bar hydraulic cylinder (3), moves roll bar up and down with switch, shown in roll bar lowered position, one hydraulic cylinder only, on passenger side
- Hydraulic cylinder disconnects from spring loaded roll bar support arms during crash deployment of roll bar , spring loaded support arms snap the roll bar in the up position when hydraulic cylinder is released, latching pawls prevent the roll bar from compressing the springs and lowering the roll bar

- 3a and 3b are latching pawls to lock roll bar in up position during a crash deployment.
- During roll bar lowering using the RB switch the latching pawls are retracted when hydraulic pressure is applied, this enables lowering the roll bar and compressing the crash deployment spring

- Solenoid controlled release, during crash deployment of roll bar the hydraulic cylinder rod end is released from the spring loaded support arm allowing roll bar to snap up
- Shown, cylinder rod is in extended position, raised roll bar, rod attached, not in crash deployment mode
- If crash deployed, rod can be reconnected using roll bar switch, up for 5 seconds to reconnect then down to re-compress springs in support arms

- Hydraulic cylinder to raise and lower the roll bar with the switch
- One hydraulic cylinder on the right side support arm, left side support arm does not have a hydraulic cylinder



Hydraulic port , rod side to lower roll bar

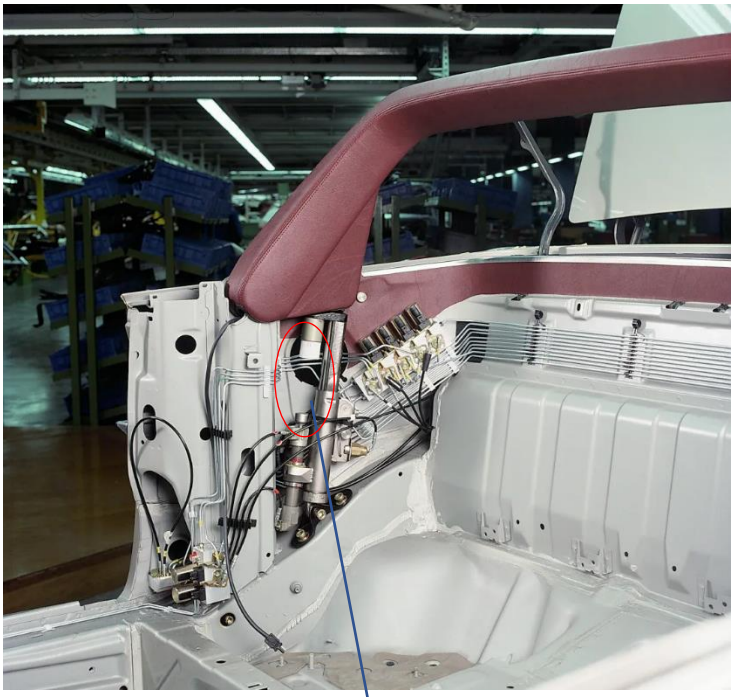
Hydraulic port , piston side to raise roll bar

Crash deployment spring in here, both left and right side support arms

Hydraulic port to latching pawl

- Spring loaded roll bar support arm, note ratchet steps in arm, latch pawl engages in these steps to lock roll back in up position
- During crash deployment support arm is separated from hydraulic cylinder, latch pawl locks roll bar and prevent compression of deployment spring from weight of car on roll bar

- Latch pawl inside here, controlled by hydraulic pressure
- When RB switch is activated pressure is applied to the locking pawl to retract it from the steps in the arm and allow the arm to be lowered with the hydraulic cylinder, which also compresses the spring



- Roll bar in crash deployed condition, hydraulic cylinder rod end is no longer attached to roll bar support arm, white cup is rod end to support arm attachment point
- Roll bar is raised by spring loaded support arms and locked in up position by latching pawl
- Hydraulic cylinder is in lower position, to reset and reconnect with support arm, raise/extend cylinder using the roll bar switch until rod end connects with support arm solenoid, lower to compress springs in support arms