Electrical Test Program – Component Locations

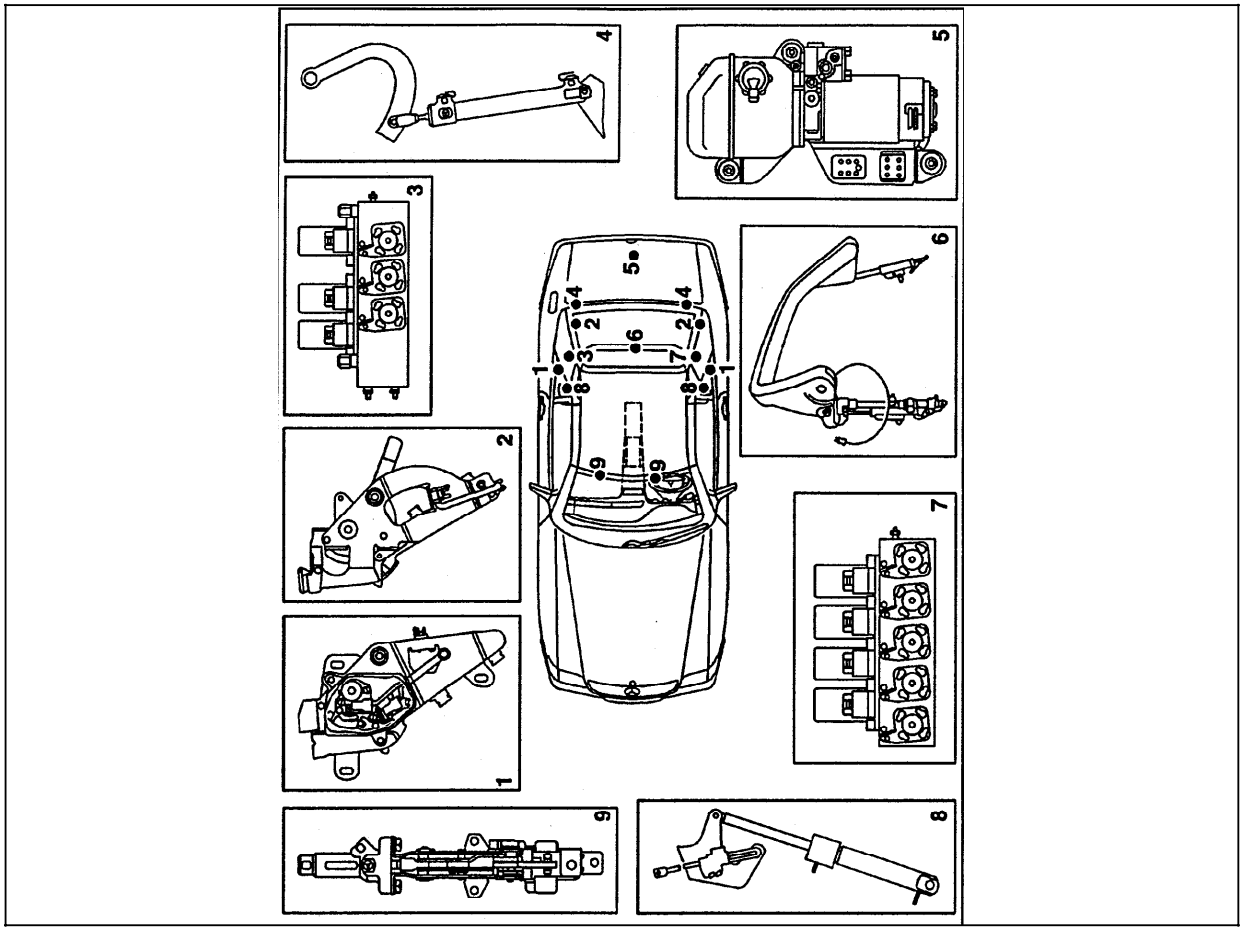

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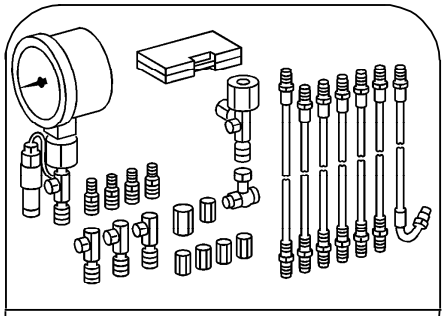
Figure 1

1	Center latches
2	Rear latches
3	Right power soft top valve block (Y56/1) (3 connections)
4	Soft top compartment cover hydraulic cylinder 5RST/RB hydraulic unit
6	Roll bar complete
7	Left power soft top valve block (Y55/1) (4 connections)
8	Soft top and fabric bow hydraulic cylinder
9	Front latches

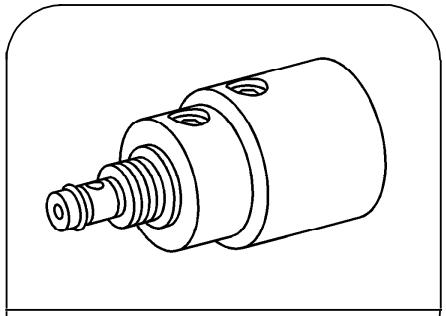
Hydraulic Test Program – Preparation for Test

Special Tools



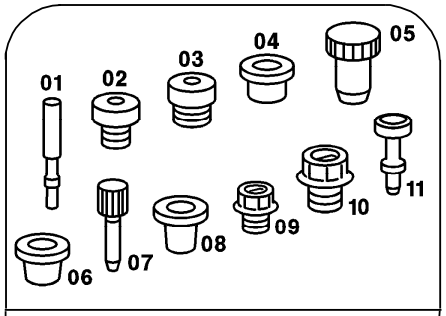
126 589 14 21 00

Tester



129 589 08 63 00

Check valve



129 589 00 91 00

Set of plugs

Conventional tools, test equipment

Description	Brand, model, etc.
Graduated beaker (0.5 liter, 10 ml graduations)	local purchase

1) Available through the MBUSA Standard Equipment Program.

Before beginning the test, check the oil level in the hydraulic unit reservoir and top up if needed (Refer to Maintenance Manual job no. 7710).

Brief description:

In order to make an accurate visual inspection for oil loss from the hydraulic system, the windscreen or other personal belongings should be removed from the vehicle.

The hydraulic circuits and components for each soft top operation can be tested separately.

The soft top can be placed in all required positions either by the power soft top switch or (if needed, with ignition: **OFF**) by hand.

All of the locks can be locked or unlocked with the soft top wrench.

⚠ **WARNING**

Keep clear of the soft top linkage, upper part of the windshield and soft top compartment during soft top locking or unlocking operations (risk of personal injury).

Hydraulic Test Program – Test

Notes for Hydraulic Test:

The following jobs are the same for all test steps:

A. Connection of test equipment to hydraulic unit (Figure 4).
Torque check valve 129 589 08 63 00 to 5 Nm.

B. Build up and release test pressure (example).

C. Test hydraulic cylinder only at end position of piston (Observe soft top positions).

D. If hydraulic lines need to be disconnected from the valve blocks during pressure tests, the appropriate soft top position (end position of the hydraulic cylinder) must first be ensured.

Example: Building up and releasing test pressure.

Soft top

⇒ 1.0 to 16.0	**Ignition ON:** Activate power soft top switch (toward lower if the soft top is down, toward raise if the soft top is up) for 5 seconds. Have a second technician disconnect relay (A7/5k1, Figure 4). Hold power soft top switch for 5 additional seconds. Read and record test pressure.
Release test pressure:	Briefly activate power soft top switch several more times.

⚠ CAUTION!
Release established test pressure before beginning the next test step.

⚠ WARNING
Disconnected hydraulic lines should be held in a container (connect a transparent hose such as windshield washer hose).
Hydraulic components that leak should be replaced. During pressure tests, the valve block connections **must** be plugged with threaded plug 129 589 00 91 01.

If hydraulic components need to be replaced, the disconnected hydraulic lines must be plugged with plug 129 589 00 91 07, while the connections of valve blocks, hydraulic cylinders and hydraulic manifolds must be plugged **immediately** using plug 129 589 00 91 11 to prevent the possible entry of dirt.

Roll bar

⇒ 17.0 to 18.0	**Ignition ON:** Activate RB switch (toward lower if the roll bar is lowered, toward raise if it is raised) for 5 seconds. Have a second technician disconnect relay (A7/5k1, Figure 4). Hold roll bar switch for 5 additional seconds. Read and record test pressure.
Release test pressure:	Briefly activate power soft top switch several more times.

Electrical Test Program – Component Locations

Y55/1 Left power soft top valve block (4 connections)

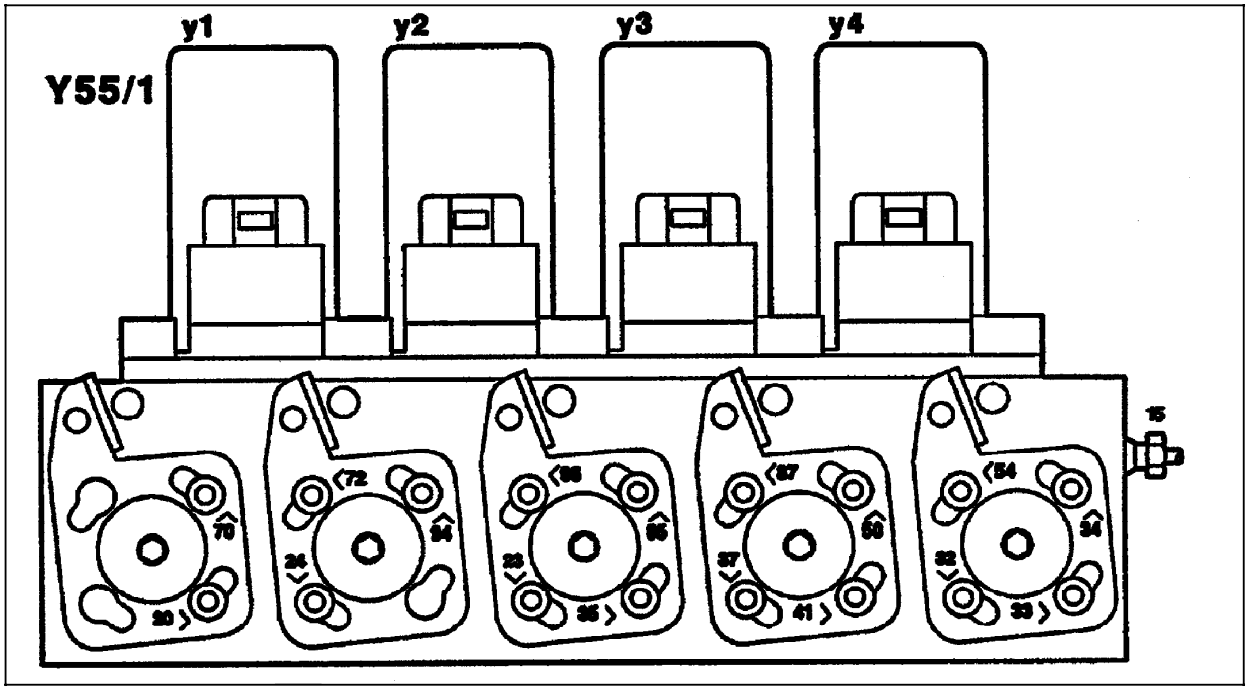


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Figure 2

y1	Soft top “closed”/fabric bow lock “open” valve
y2	Fabric bow “closed” valve
y3	Fabric bow “open”/soft top compartment cover “closed” valve
y4	Soft top compartment cover “open”/soft top compartment cover lock “open” valve

Electrical Test Program – Component Locations

Y56/1 **Right power soft top valve block (3 connections)**

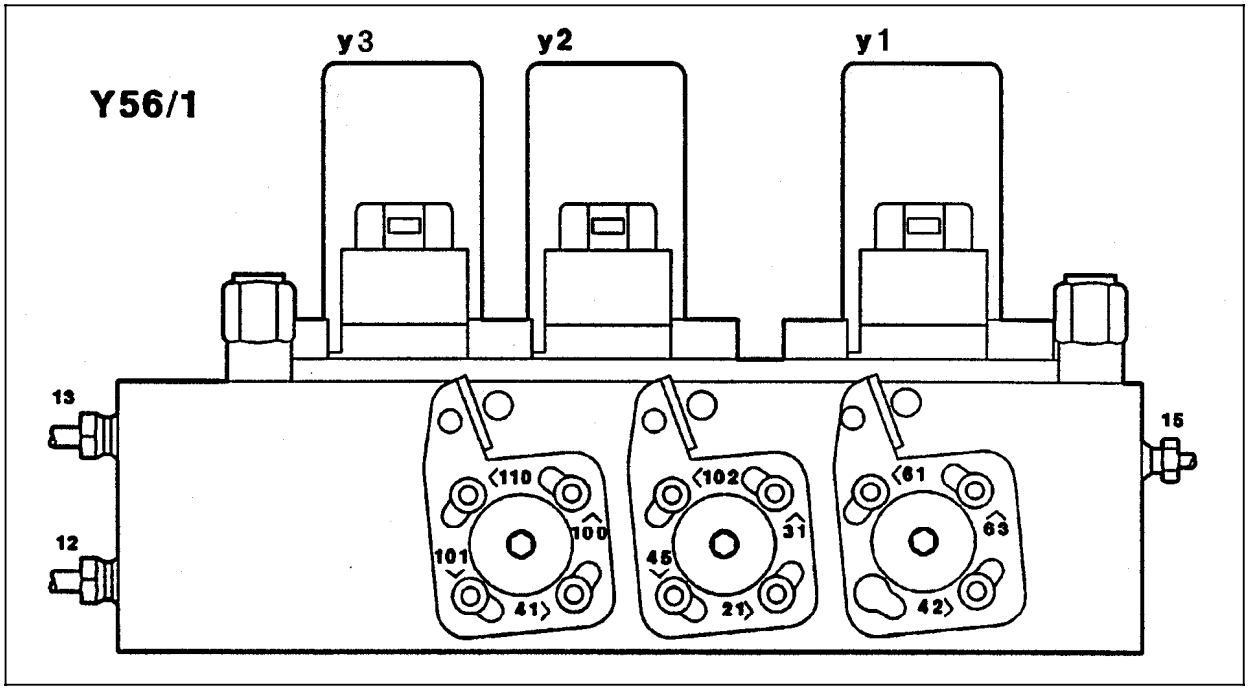

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Figure 3

y1	Soft top “open”/front lock “open” valve
y2	Roll bar “lower” valve
y3	Roll bar “raise” valve

Electrical Test Program – Component Locations

Connection Diagram - Check valve and Pressure Gauge to Hydraulic Unit

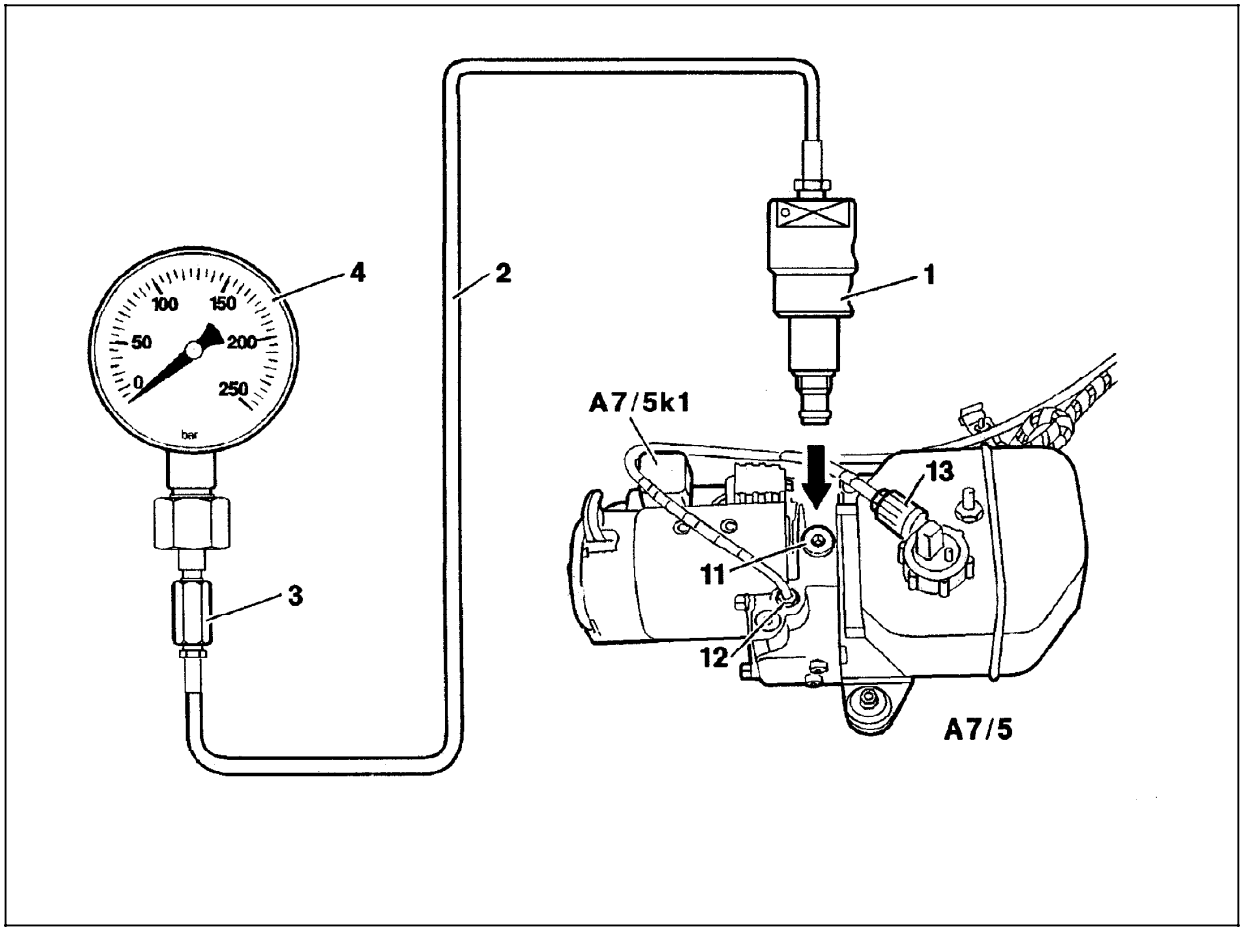

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Figure 4

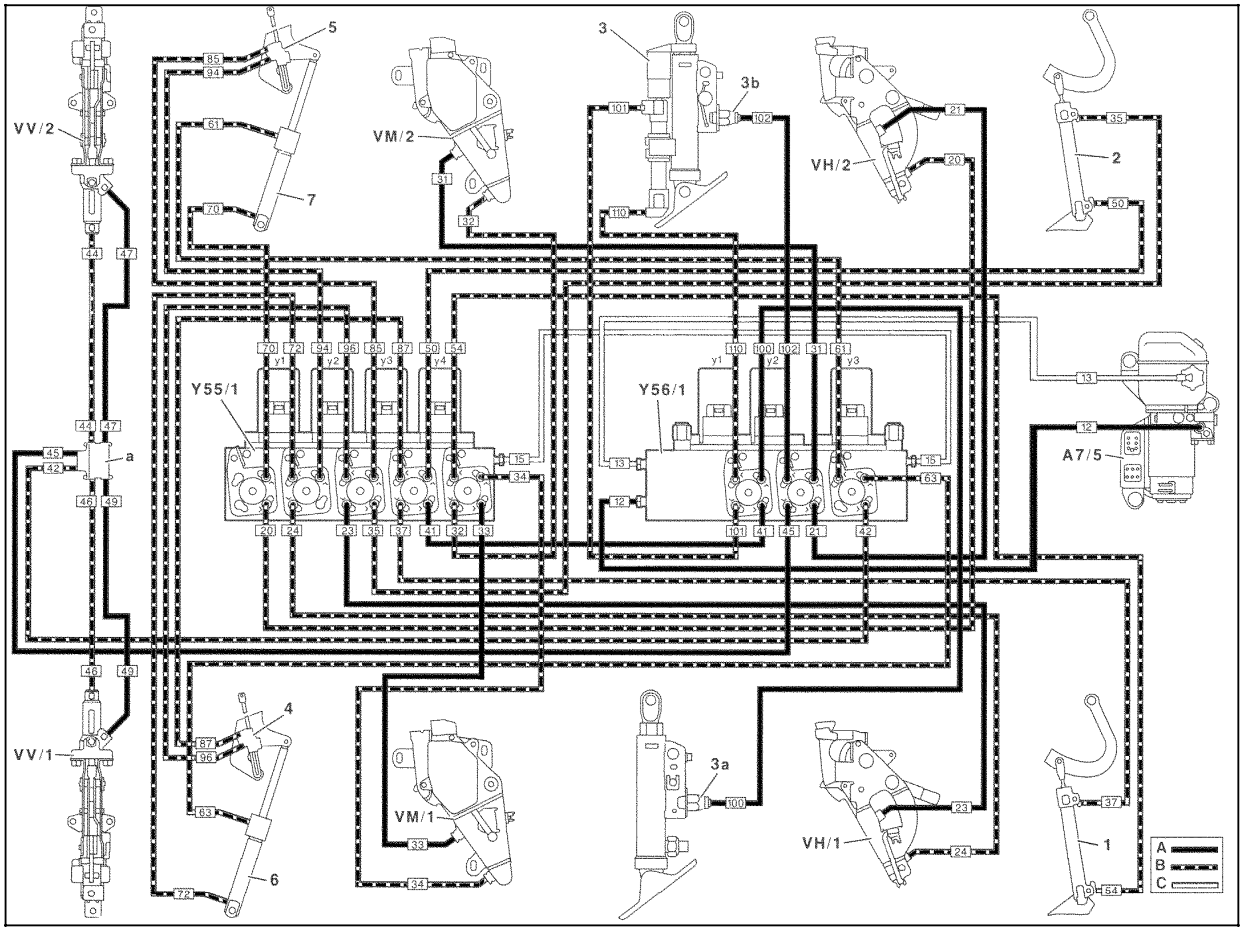
1	Check valve	129 589 08 63 00
	Adaptor kit	129 589 14 21 00
2	Test pressure line	
3	Connector piece	
4	Pressure gauge	
11	Test connection	
12	Soft top/roll bar operation hydraulic line	
13	Return line	
A7/5	RST/RB hydraulic unit	
A7/5k1	Relay	

Hydraulic Test Program - Test

Soft top/roll bar

Figure 5

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	Pressure control lines
C	Return flow lines
a	Hydraulic manifold at A-pillar 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
Y55/1	Left power soft top valve block (4 connections)
Y56/1	Right power soft top valve block (3 connections)



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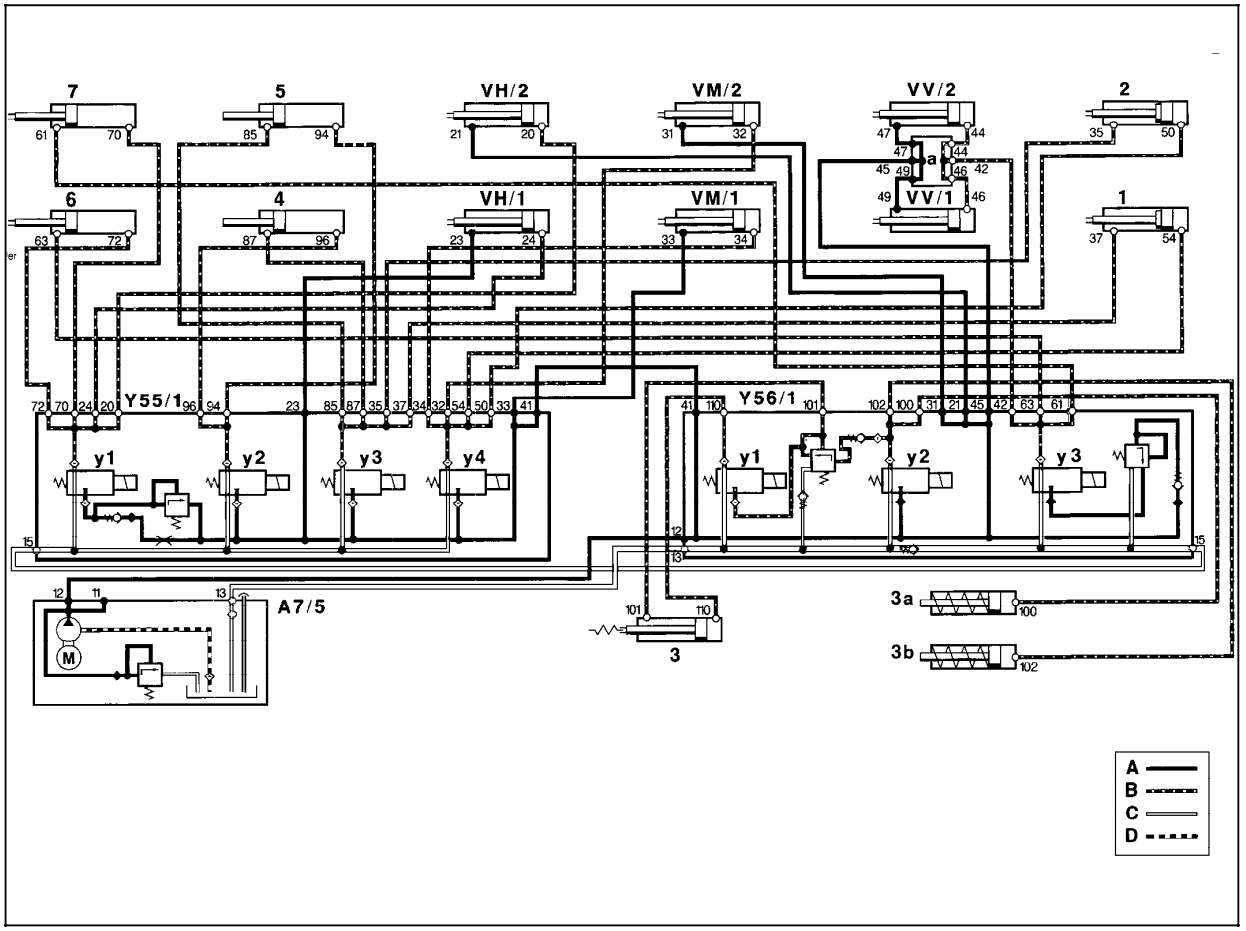
Hydraulic Test Program - Test

Soft top/roll bar

Figure 6

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	Pressure control lines
C	Return flow lines
D	Suction line
a	Hydraulic manifold at A-pillar 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
Y55/1	Left power soft top valve block (4 connections)
Y56/1	Right power soft top valve block (3 connections)



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Hydraulic Test Program – Test – This Page Left Blank Intentionally

Hydraulic Test Program – Test

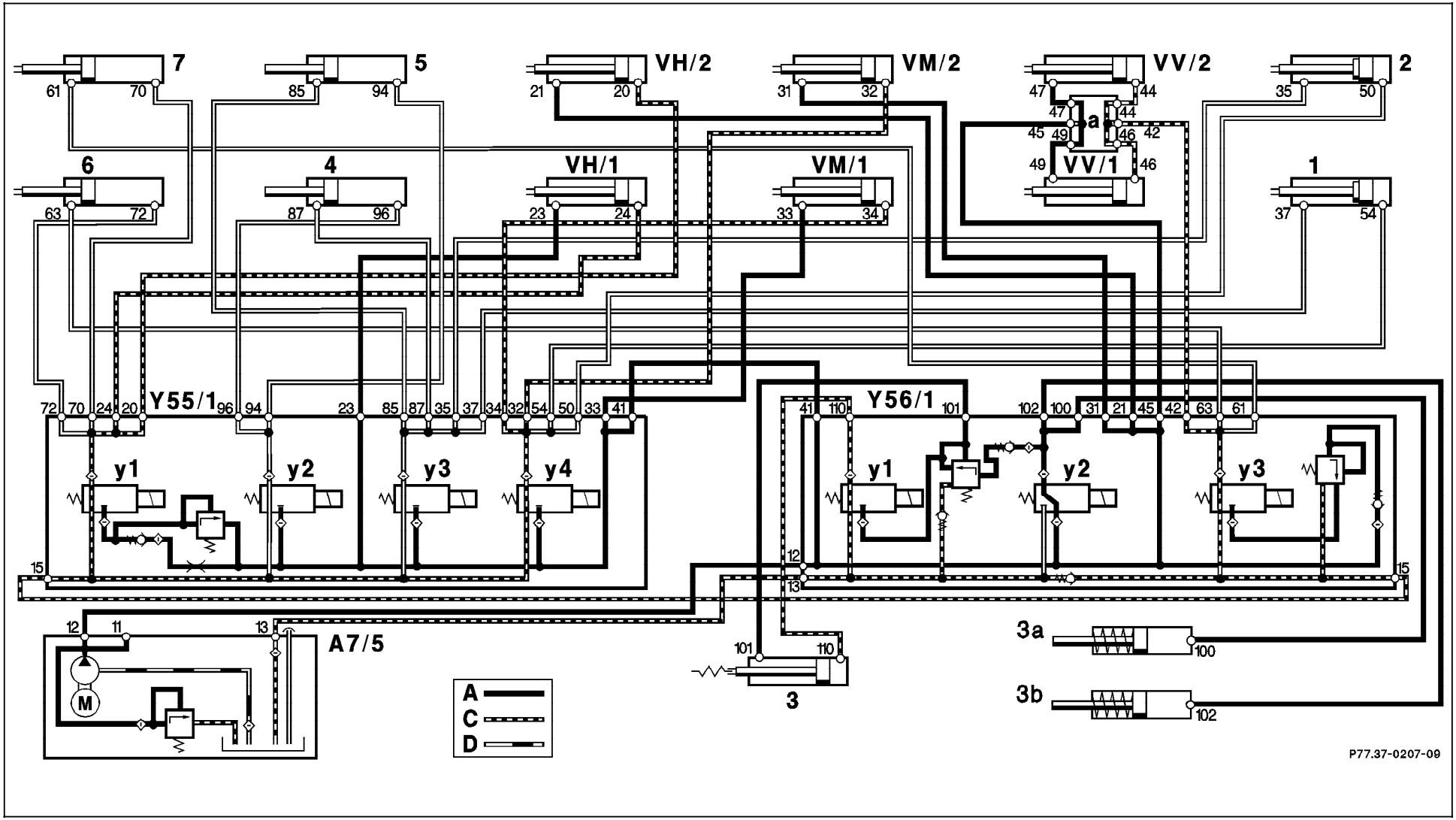

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Figure 7

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0		**Checking system pressure** (Figure 7)	Connect pressure gauge according to connection diagram (Figure 4).	**Starting point: soft top completely closed** Ignition: **ON** Press and hold RB switch to retract roll bar. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**<120 bar:** ⇒ 2.0

Hydraulic Test Program – Test

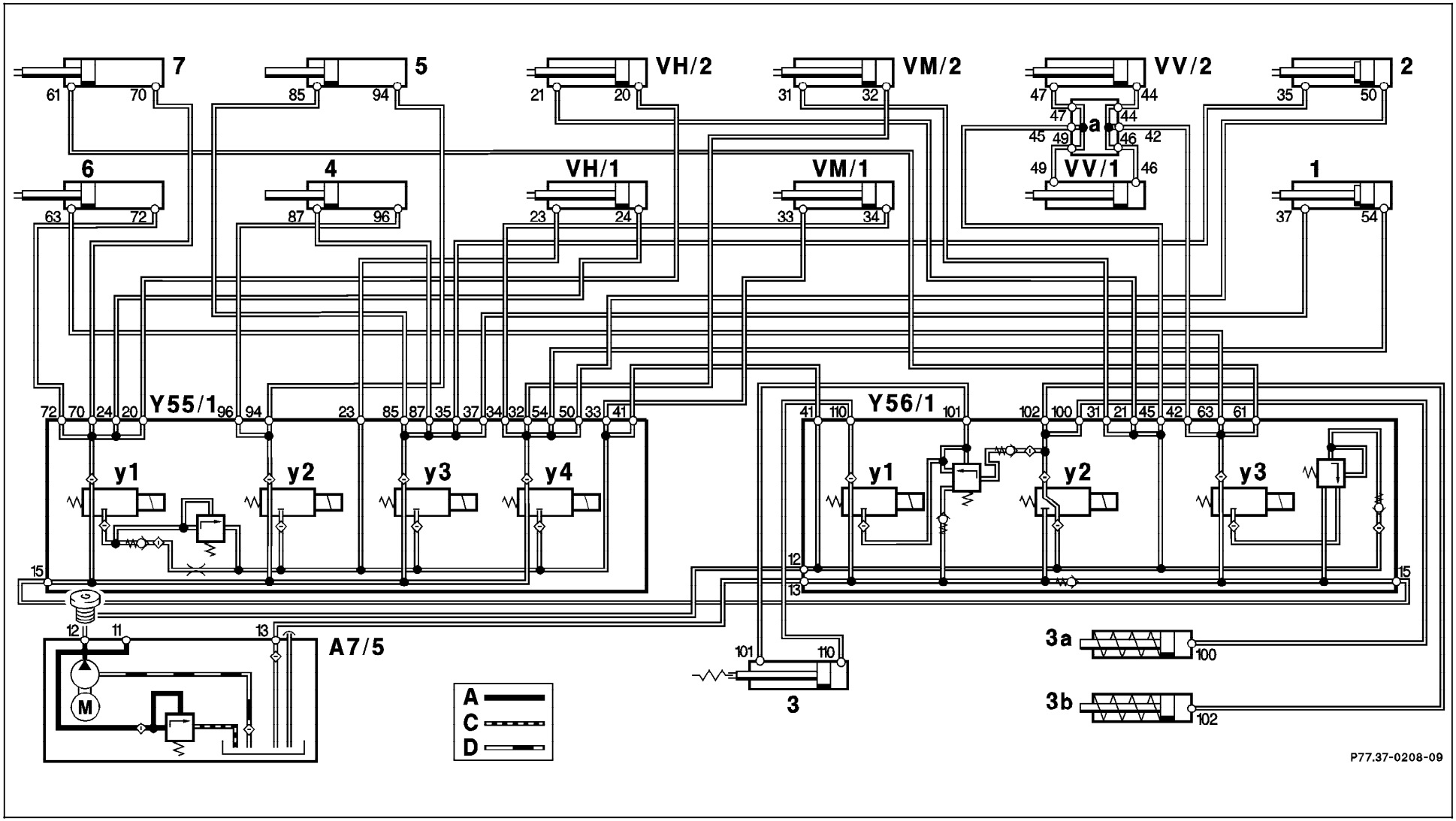

Figure 8

P77.37-0208-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
2.0		**Testing RST/RB hydraulic unit (A7/5)** (Figure 8)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 12 from hydraulic unit (Figure 4). Seal connection with threaded plug 129 589 00 91 03.	**Soft top completely closed** Ignition: **ON** Press and hold RB switch to retract roll bar. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	180 – 200 bar	**Nominal values ok:** ⇒ 3.0. **< 180 bar:** Replace hydraulic unit (A7/5) (SMS, Job No. 77-350).

Hydraulic Test Program – Test

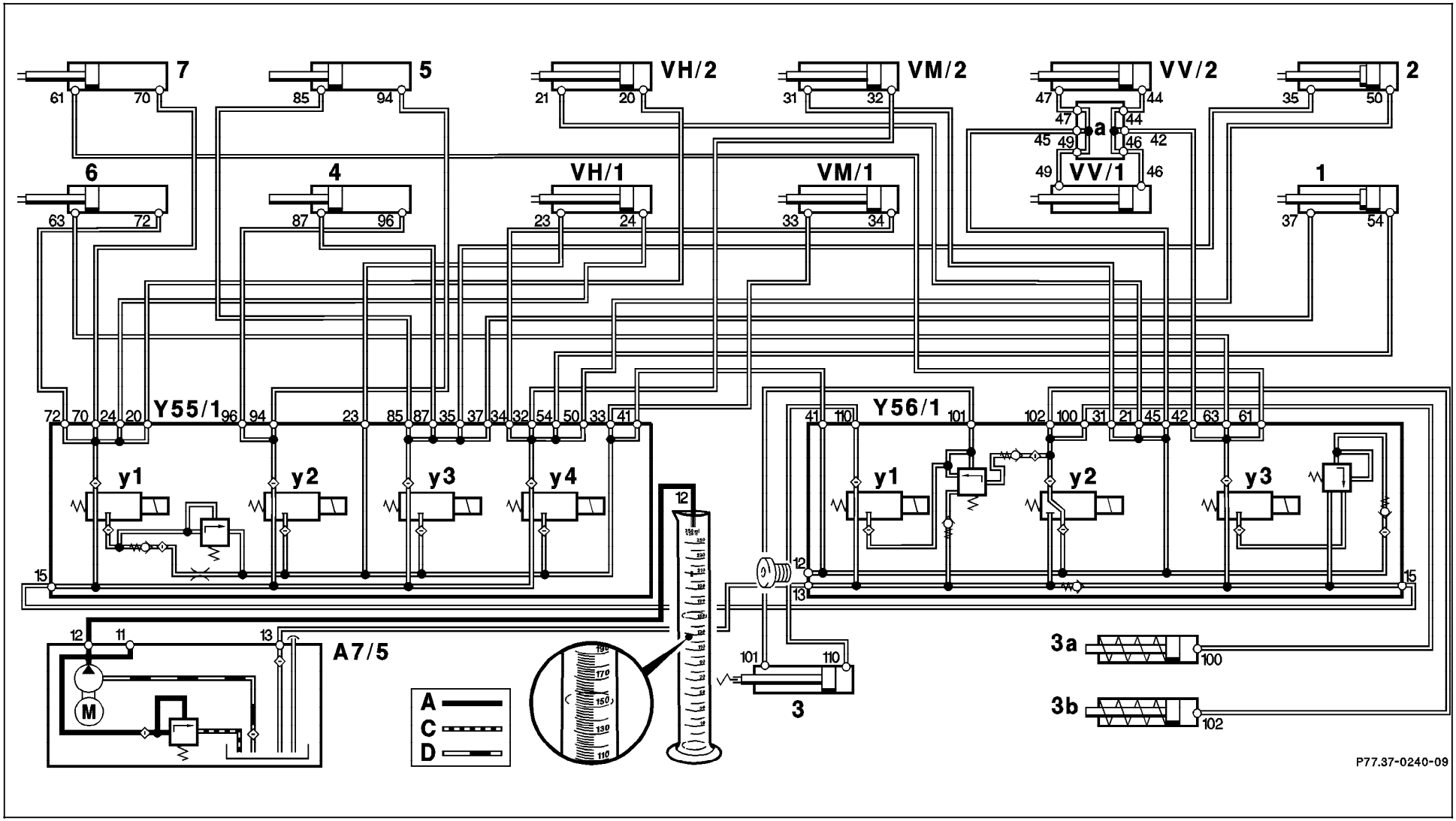

Figure 9

P77.37-0240-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
3.0		**Checking hydraulic fluid volume output of hydraulic unit (A7/5)** (Figure 9) **Note:** Room temperature not to be <70˚ F.	Note: Room temperature must not be < 70ºF (18º C). Disconnect hydraulic line no. 12 from valve block (Y56/1). Seal connection with threaded plug 129 589 00 91 10. Insert hydraulic line into a graduated beaker.	**Soft top completely open, roll bar lowered.** Ignition: **ON** Press and hold RB switch for 15 seconds to retract. **Read and note hydraulic fluid volume output in graduated beaker:**	>0.15 liter (150 ml).	**Nominal values ok:** ⇒ 4.0. **<0.15 liter:** Replace hydraulic unit (A7/5) (SMS, Job No. 77-350).

Hydraulic Test Program – Test

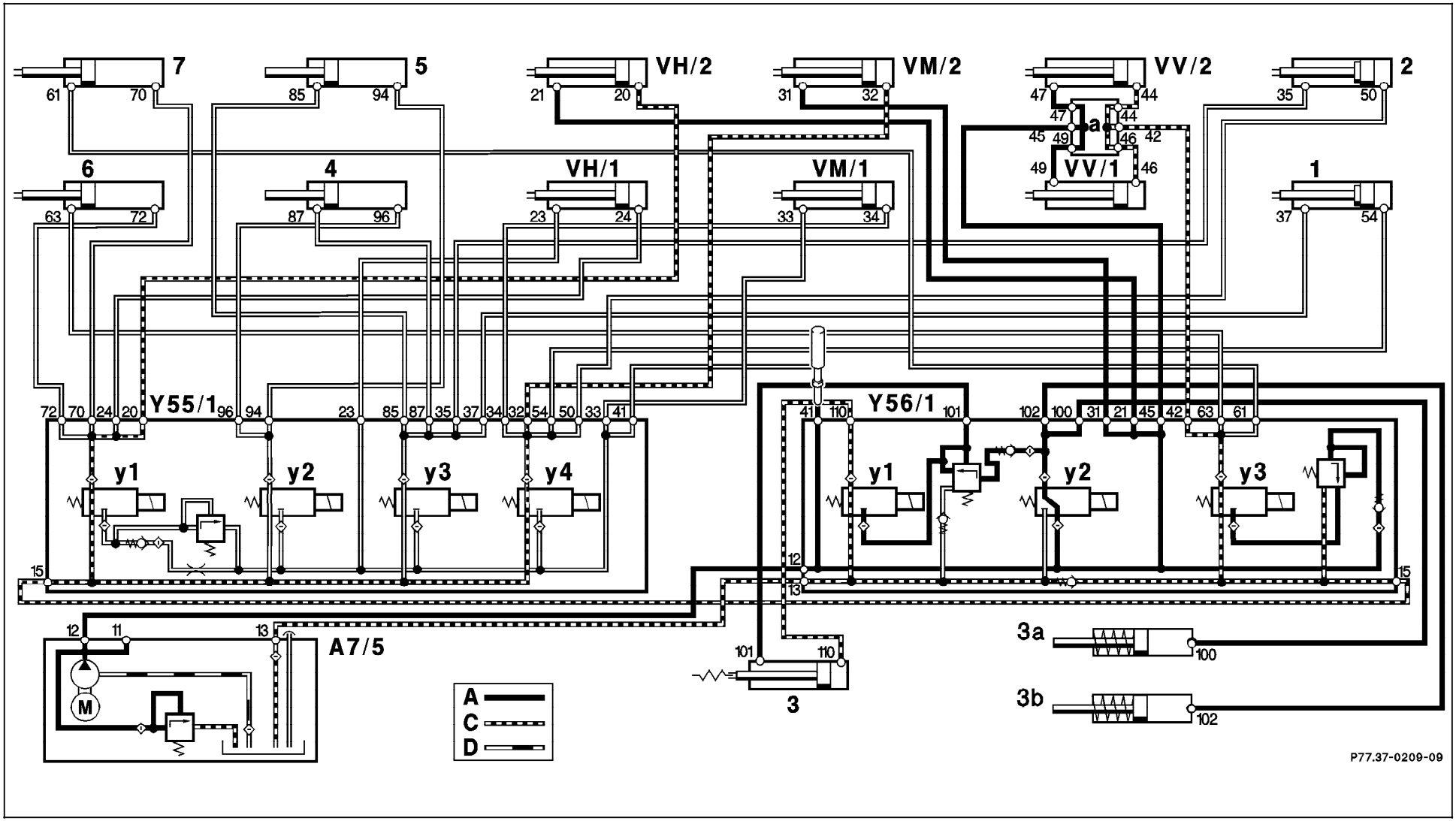

Figure 10

P77.37-0209-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.0		**Checking locks** (Figure 10)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 41 from valve block (Y56/1). Seal connection with threaded plug 129 589 00 91 01.	**Soft top completely closed** Ignition: **ON** Press and hold RB switch to retract roll bar. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	 120 – 200 bar	**Nominal values ok:** ⇒ 4.6 **<120 bar:** ⇒ 4.1

Hydraulic Test Program – Test

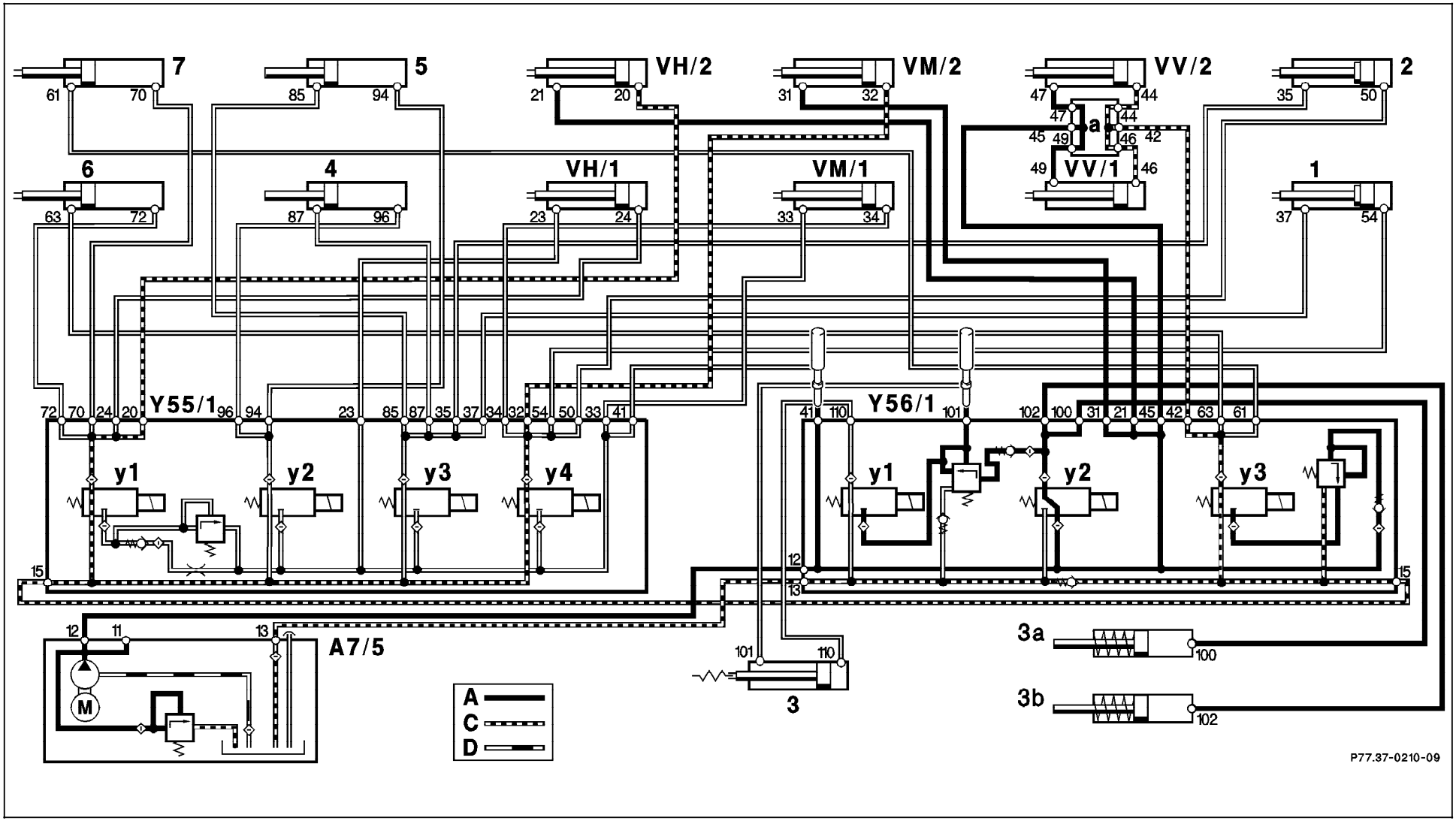

Figure 11

P77.37-0210-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.1		Checking locks (Figure 11)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 101 from valve block (Y56/1). Seal connection with threaded plug 129 589 00 91 01. ⚠ **WARNING** Hydraulic line no. 101 has residual pressure (hydraulic cylinder in pos. 3). Wrap hydraulic line and fitting with a shop towel when it is removed. Hydraulic line no. 41 remains disconnected.	**Soft top completely closed** Ignition: **ON** Press and hold RB switch to retract roll bar. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Hydraulic cylinder in support element for roll bar (3) leaking. Replace support element (SMS, Job No. 91-920). **<120 bar:** ⇒ 4.2

Hydraulic Test Program – Test

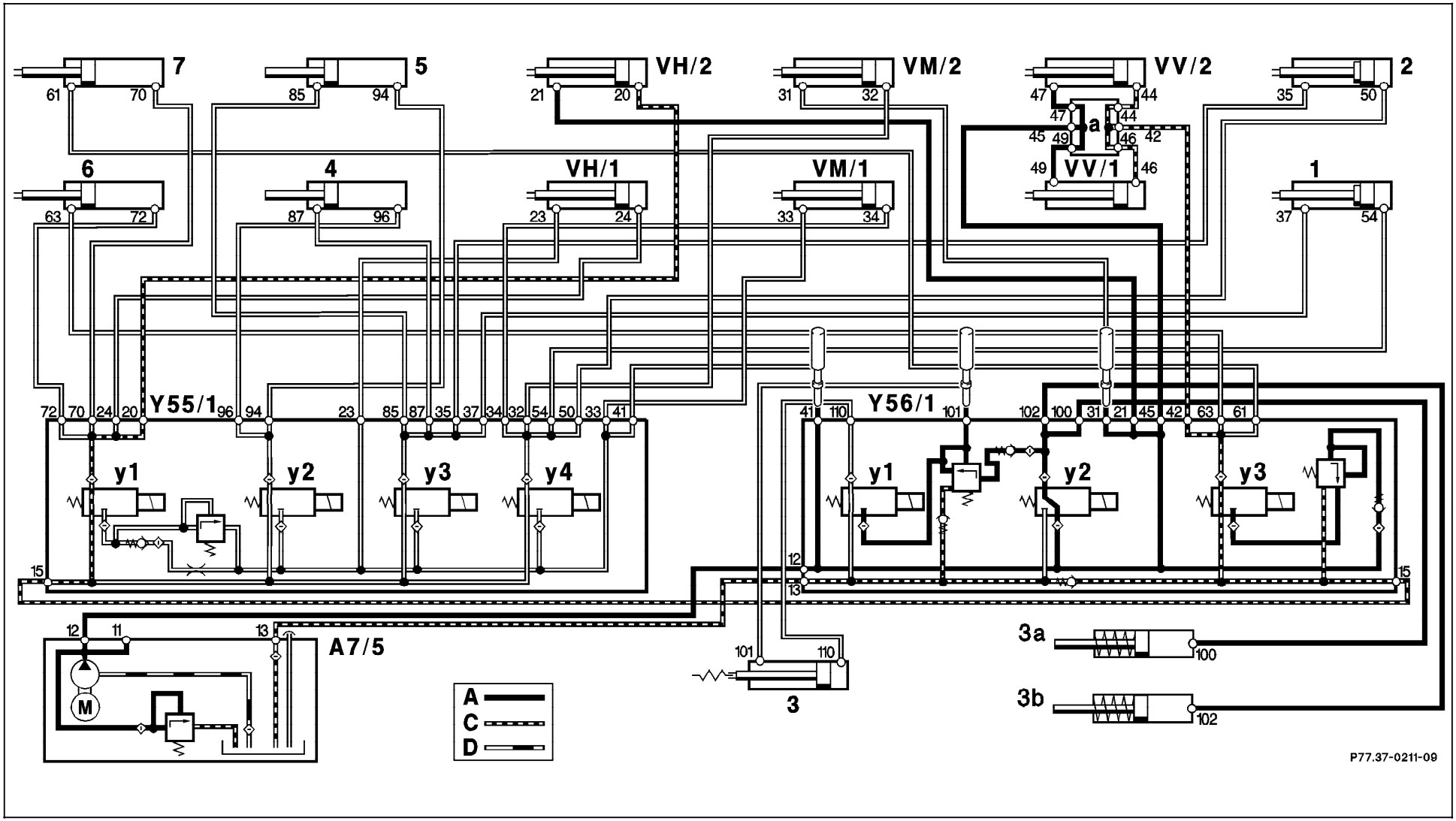

Figure 12

P77.37-0211-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.2		Checking locks (Figure 12)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 31 from valve block (Y56/1). Seal connection with threaded plug 129 589 00 91 01. Hydraulic lines no. 41 and no. 101 to remain disconnected.	**Soft top completely closed** Ignition: **ON** Press and hold RB switch to retract roll bar. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Hydraulic cylinder of right center lock (VM/2) leaking. Replace hydraulic cylinder (SMS, Job No. 77-324). **>120 bar**: ⇒ 4.3

Hydraulic Test Program – Test

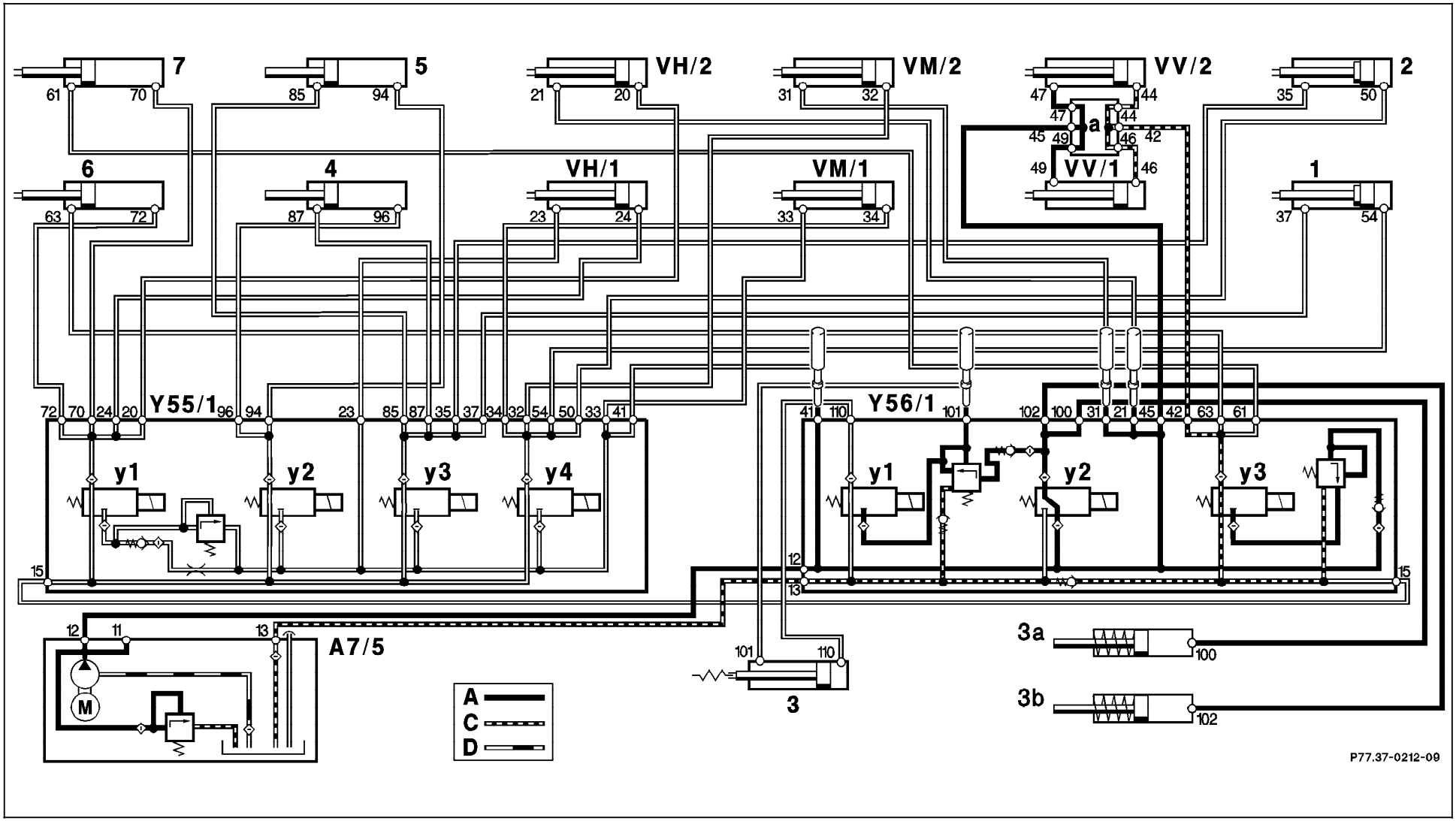

Figure 13

P77.37-0212-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.3		Checking locks (Figure 13)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 21 from valve block (Y56/1). Seal connection with threaded plug 129 589 00 91 01. Hydraulic lines no. 41, no. 101 and no. 31 to remain disconnected.	**Soft top completely closed** Ignition: **ON** Press and hold RB switch to retract roll bar. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Hydraulic cylinder of right center lock (VH/2) leaking. Replace hydraulic cylinder (SMS, Job No. 77-328). **<120 bar**: ⇒ 4.4

Hydraulic Test Program – Test

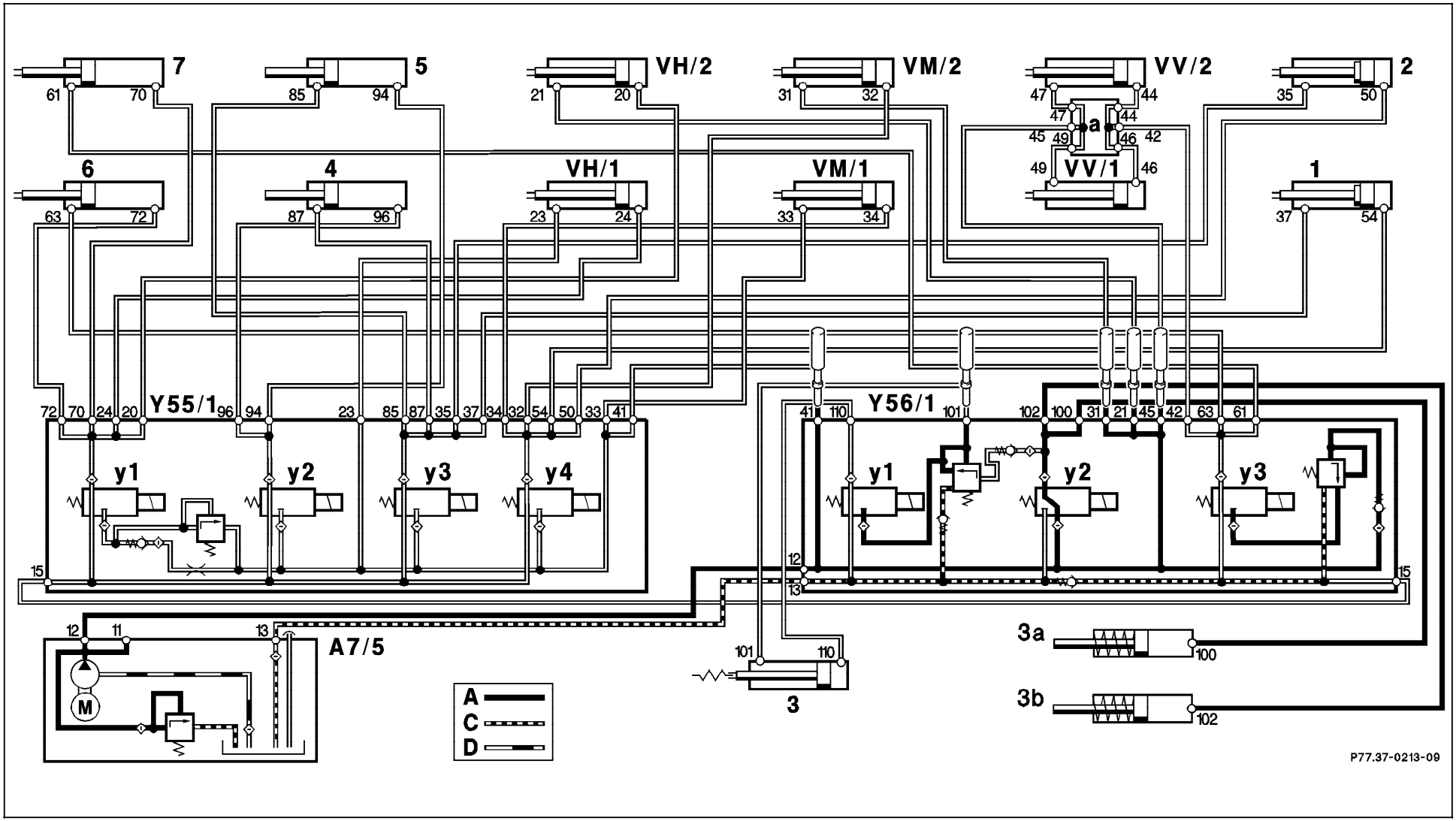

Figure 14

P77.37-0213-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.4		Checking locks (Figure 14)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 45 from valve block (Y56/1). Seal connection with threaded plug 129 589 00 91 01. Hydraulic lines no. 41, no. 101, no. 31 and no. 21 to remain disconnected.	**Soft top completely closed** Ignition: **ON** Press and hold RB switch to retract roll bar. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	 120 – 200 bar	**Nominal values ok:** Hydraulic cylinder of left front lock or right front lock (VV/1, VV/2) leaking. ⇒ 4.5 **<120 bar**: Replace Y56/1 (SMS, Job No. 77-380).

Hydraulic Test Program – Test

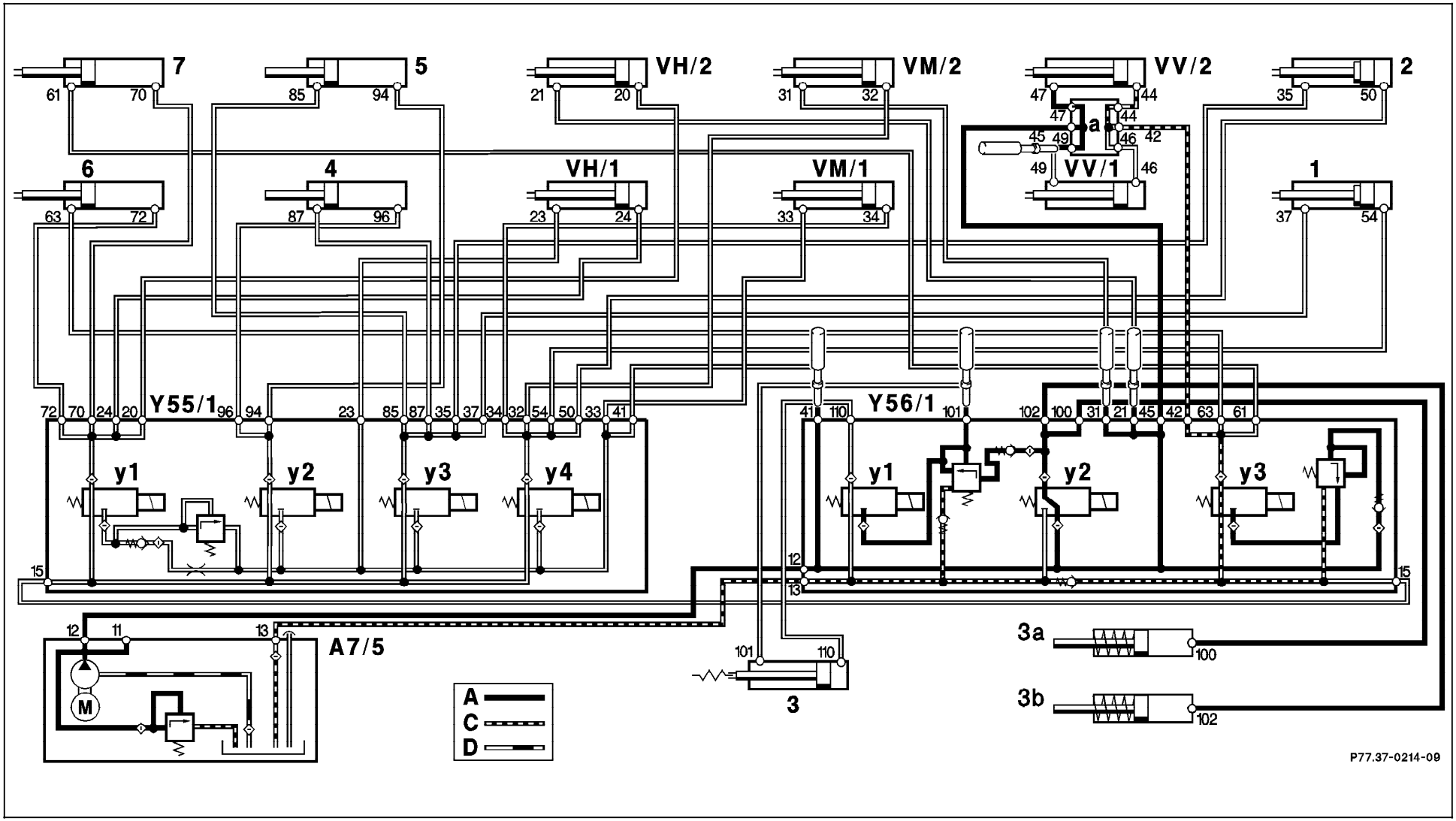

Figure 15

P77.37-0214-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.5		Checking locks (Figure 15)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 49 from hydraulic manifold (a) at A-pillar cross member. Seal connection with threaded plug 129 589 00 91 01. Reconnect hydraulic line no. 45 to valve block (Y56/1). Hydraulic lines no. 41, no. 101, no. 31 and no. 21 to remain disconnected.	**Soft top completely closed** Ignition: **ON** Press and hold RB switch to retract roll bar. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal vales ok:** Hydraulic cylinder of left front lock (VV/1) leaking. Replace hydraulic cylinder (SMS, Job No. 77-335). **<120 bar**: Hydraulic cylinder of right front lock (VV/2) leaking. Replace hydraulic cylinder (SMS, Job No. 77-335).

Hydraulic Test Program – Test

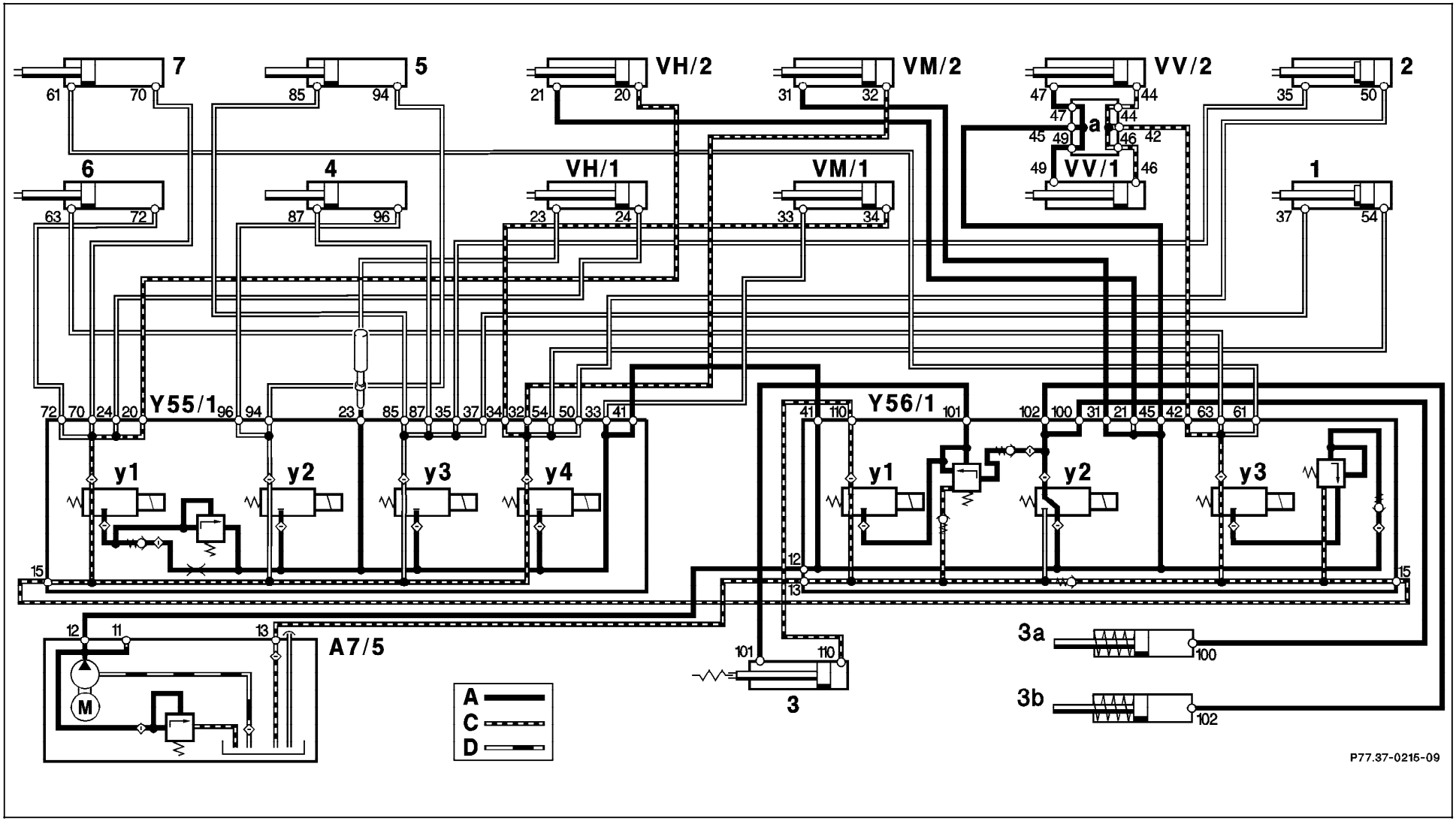

Figure 16

P77.37-0215-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.6		Checking locks (Figure 16)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 23 from valve block (Y55/1). Seal connection with threaded plug 129 589 00 91 01. Reconnect hydraulic lines no. 21, no. 31, no. 41 and no.101 to connections on valve block (Y56/1). ⚠ **WARNING** Hydraulic line no. 101 has residual pressure. Wrap hydraulic line and threaded plug (129 589 00 91 01) with a shop towel when removing threaded plug.	**Soft top completely closed** Ignition: **ON** Press and hold RB switch to retract roll bar. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Hydraulic cylinder of left rear lock (VH/1) leaking. Replace hydraulic cylinder (SMS, Job No. 77-328). **<120 bar**: ⇒ 4.7

Hydraulic Test Program – Test

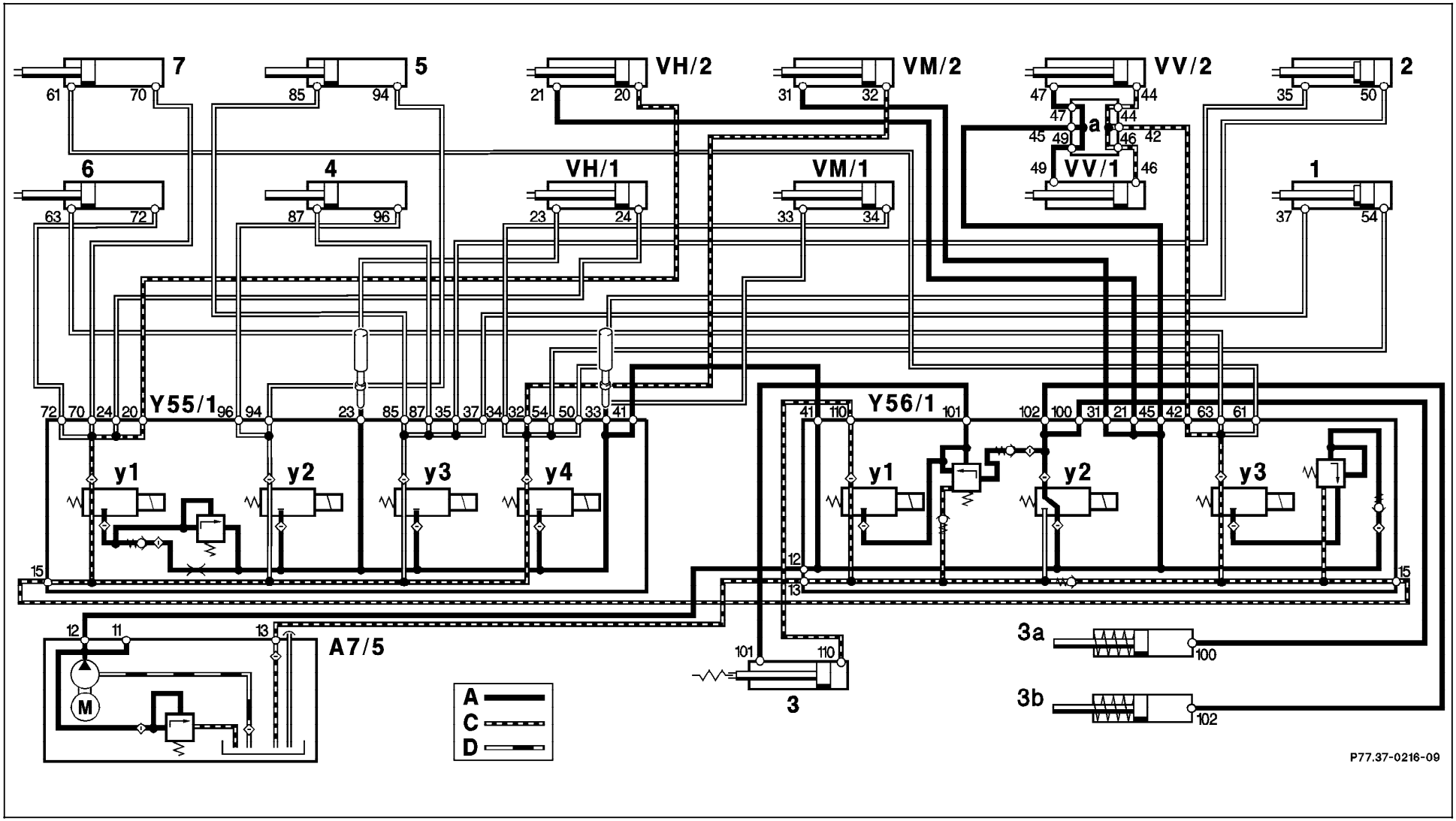

Figure 17

P77.37-0216-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.7		Checking locks (Figure 17)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 33 from valve block (Y55/1). Seal connection with threaded plug 129 589 00 91 01 Hydraulic line no. 23, to remain disconnected.	**Soft top completely closed** Ignition: **ON** Press and hold RB switch to retract roll bar. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Hydraulic cylinder of left center lock (VM/1) leaking. Replace hydraulic cylinder (SMS, Job No. 77-324). **<120 bar**: Replace Y55/1 (SMS, Job No. 77-380).

Hydraulic Test Program – Test

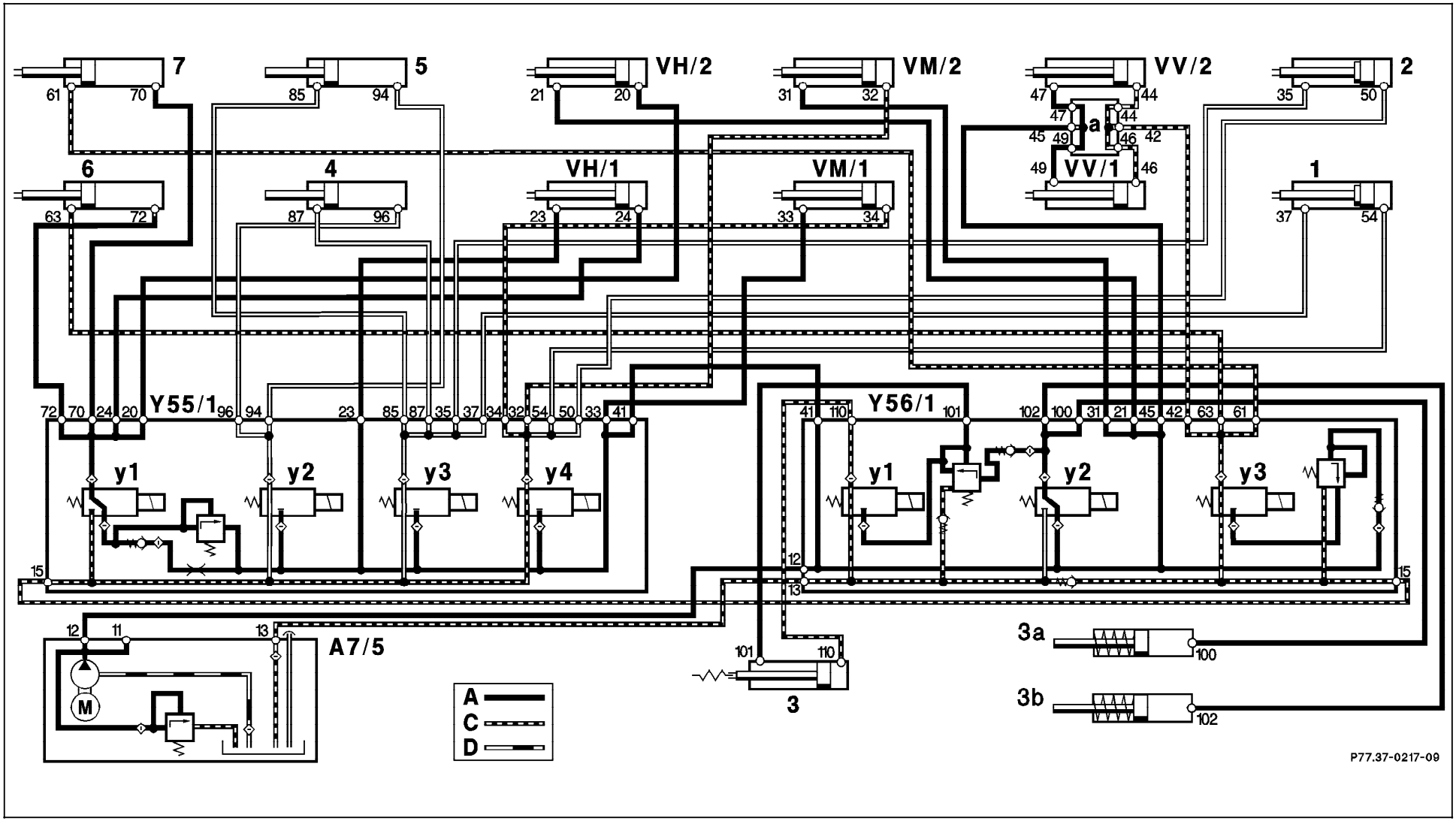

Figure 18

P77.37-0217-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
5.0		**Open rear locks (VH/1, VH/2)** (Figure 18)	Connect pressure gauge according to connection diagram (Figure 4).	**Soft top completely closed** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Should the rear locks (VH/1, VH/2) not open, check adjustment of fabric bow latch pins. Also check for mechanical fault in one or both of the locks. Check adjustment of latch pins (SMS, Job No. 77-303). Replace the rear locks, if above remedies are without effect (SMS, Job No. 77-325). **<120 bar:** ⇒ 5.1

Hydraulic Test Program – Test

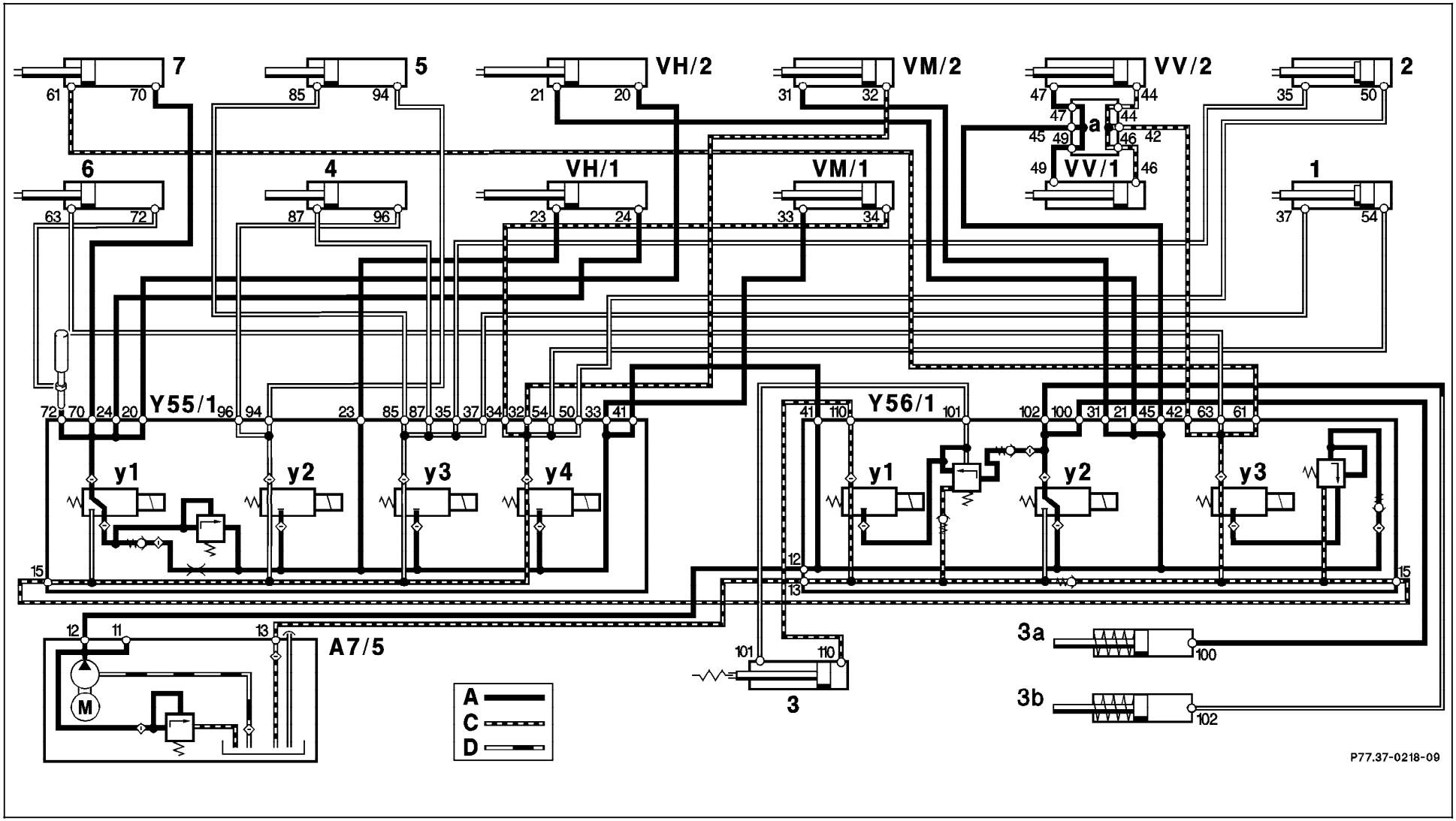

Figure 19

P77.37-0218-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
5.1		Open rear locks (VH/1, VH/2) (Figure 19)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect connector at valve block (Y55/1y3). Disconnect hydraulic line no. 72 from valve block (Y55/1). Seal connection with threaded plug 129 589 00 91 01.	**Mechanically unlock left/right rear locks (VH/1, VH/2) (see owner's manual)** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Left Hydraulic cylinder (6) for soft top actuation leaking. Replace hydraulic cylinder (SMS, Job No. 77-355). **<120 bar**: ⇒ 5.2

Hydraulic Test Program – Test

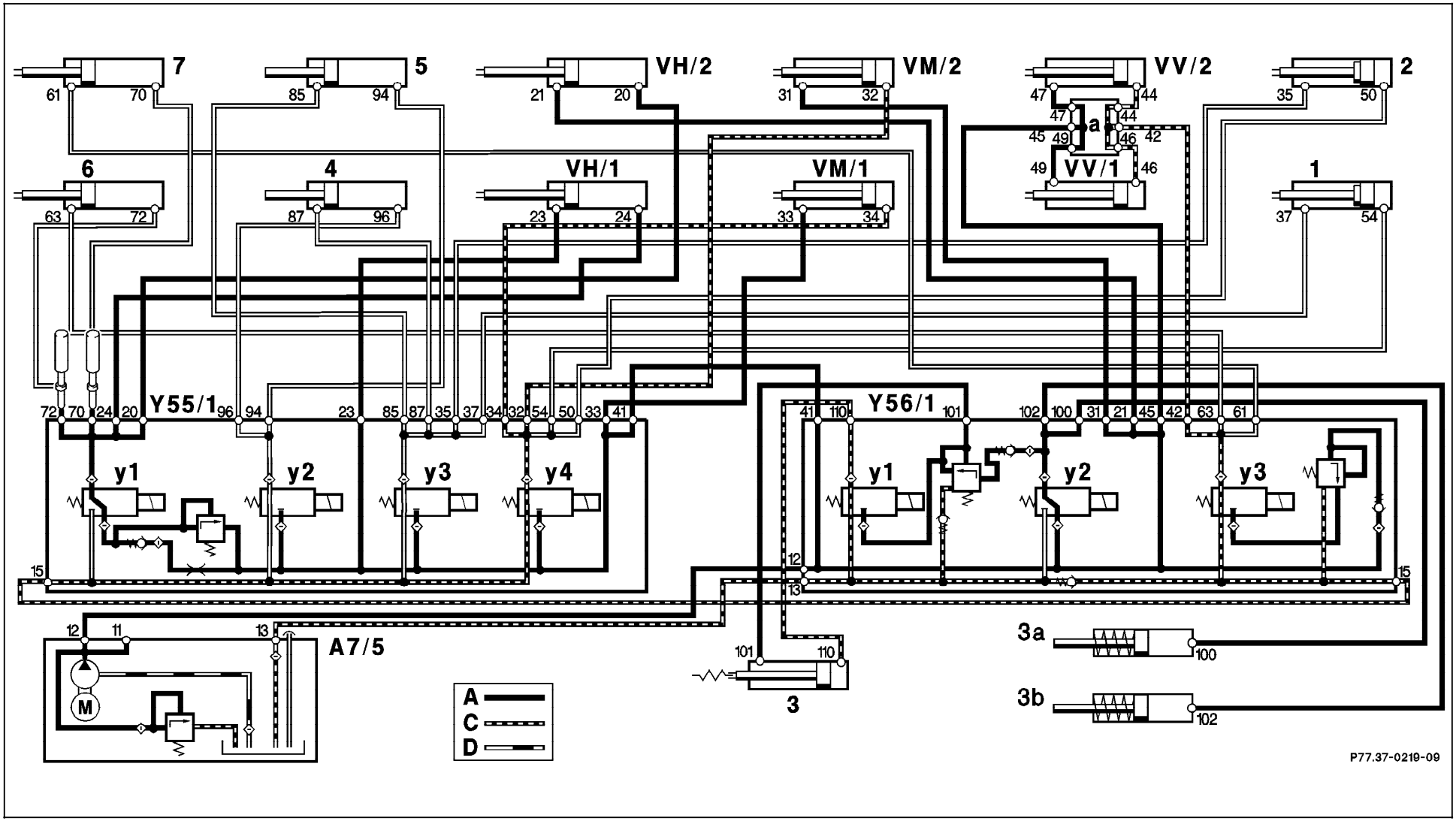

Figure 20

P77.37-0219-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
5.2		Open rear locks (VH/1, VH/2) (Figure 20)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 70 from valve block (Y55/1). Seal connection with threaded plug 129 589 00 91 01. Connector at valve block (Y55/1y3) to remain disconnected. Hydraulic line no. 72 to remain disconnected.	**Rear locks (VH/1, VH/2) unlocked** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Briefly activate power soft top switch several times.	120 – 200 bar	**Nominal values ok:** Right Hydraulic cylinder(7) for soft top actuation leaking. Replace hydraulic cylinder (SMS, Job No. 77-355). **<120 bar**: ⇒ 4.0

Hydraulic Test Program – Test

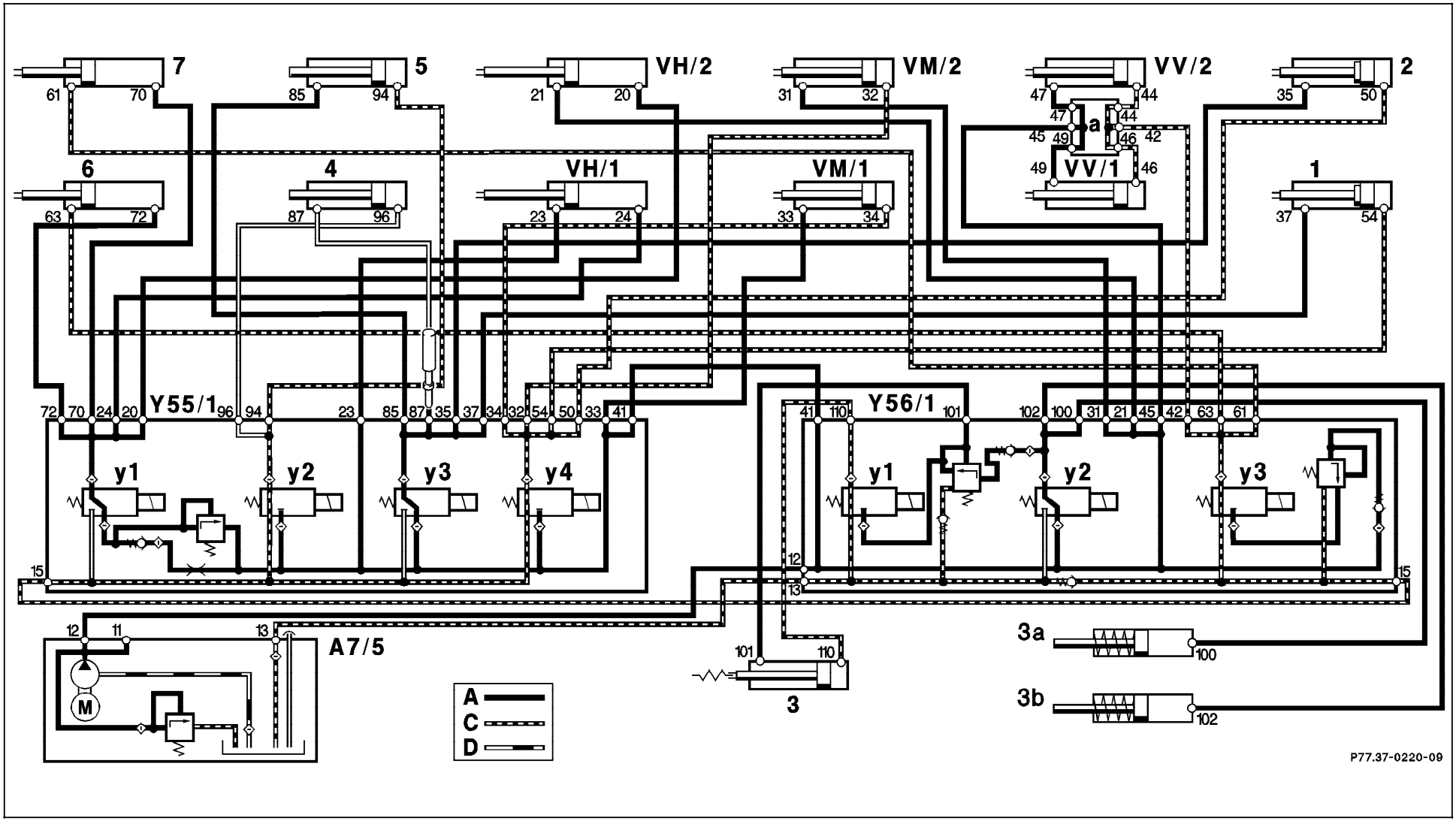

Figure 21

P77.37-0220-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
6.0		**Raise fabric bow** (Figure 21)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect connector at valve block (Y55/1y4). Disconnect hydraulic line no. 87 from valve block (Y55/1). Seal connection with threaded plug 129 589 00 91 01.	**Fabric bow up** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Briefly activate power soft top switch several times.	 120 – 200 bar	**Nominal values ok:** Left hydraulic cylinder (4) for fabric bow leaking. Replace hydraulic cylinder (SMS, Job No. 77-360). **<120 bar**: ⇒ 6.1

Hydraulic Test Program – Test

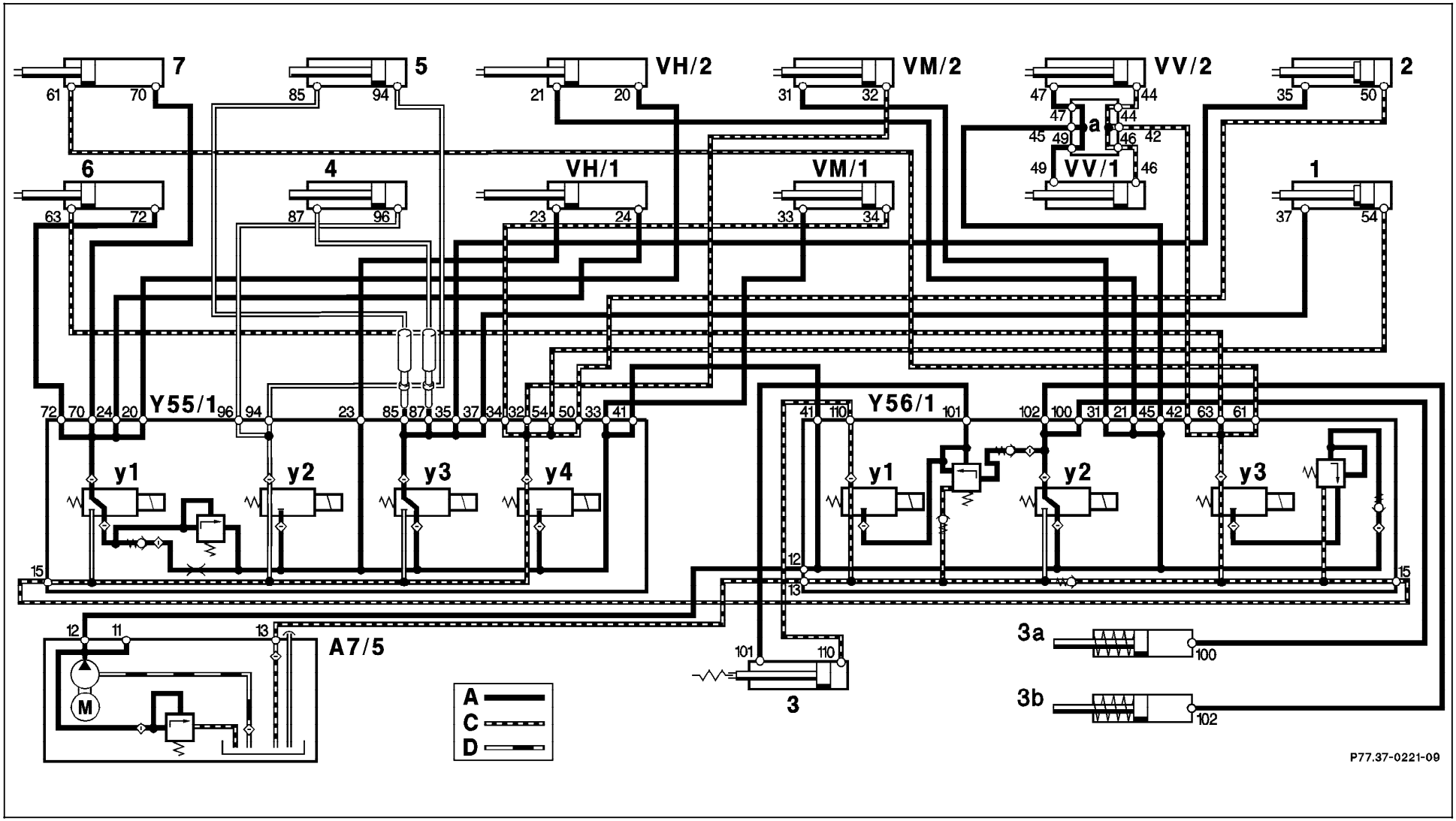

Figure 22

P77.37-0221-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
6.1		Raise fabric bow (Figure 22)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 85 from valve block (Y55/1). Seal connection with threaded plug 129 589 00 91 01. Connector at valve block (Y55/1y4) to remain disconnected. Hydraulic line no. 87 to remain disconnected.	**Fabric bow up** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal value ok:** Right hydraulic cylinder (5) for fabric bow leaking. Replace hydraulic cylinder (SMS, Job No. 77-360). **<120 bar**: ⇒ 6.2

Hydraulic Test Program – Test

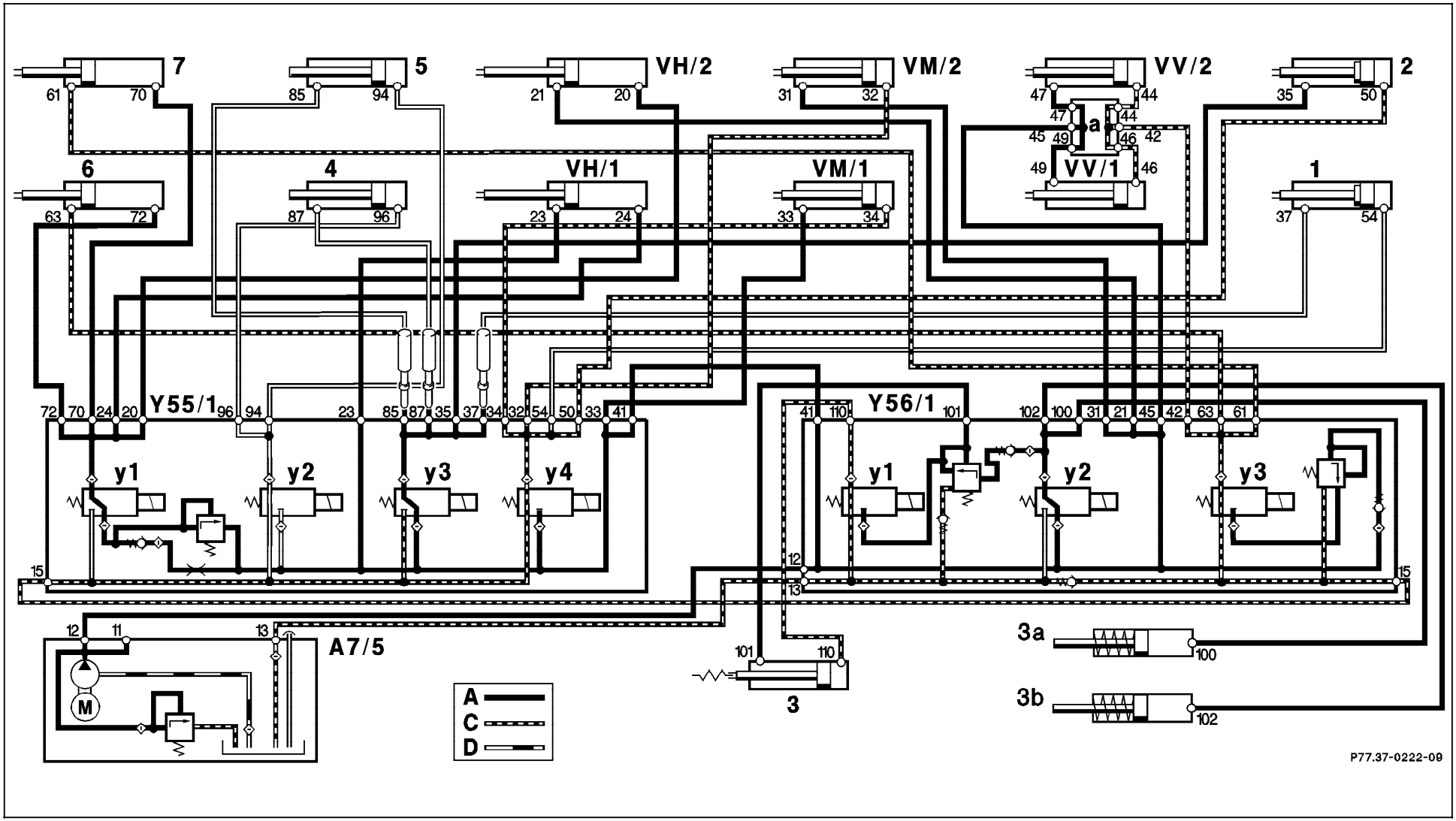

Figure 23

P77.37-0222-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
6.2		Raise fabric bow (Figure 23)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 37 from valve block (Y55/1). Seal connection with threaded plug 129 589 00 91 01. Connector at valve block (Y55/1y4) to remain disconnected. Hydraulic lines no. 85, no. 87 to remain disconnected.	**Fabric bow up** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal value ok:** Left hydraulic cylinder (1) for soft top compartment cover leaking. Replace hydraulic cylinder (SMS, Job No. 77-370). **<120 bar**: ⇒ 6.3

Hydraulic Test Program – Test

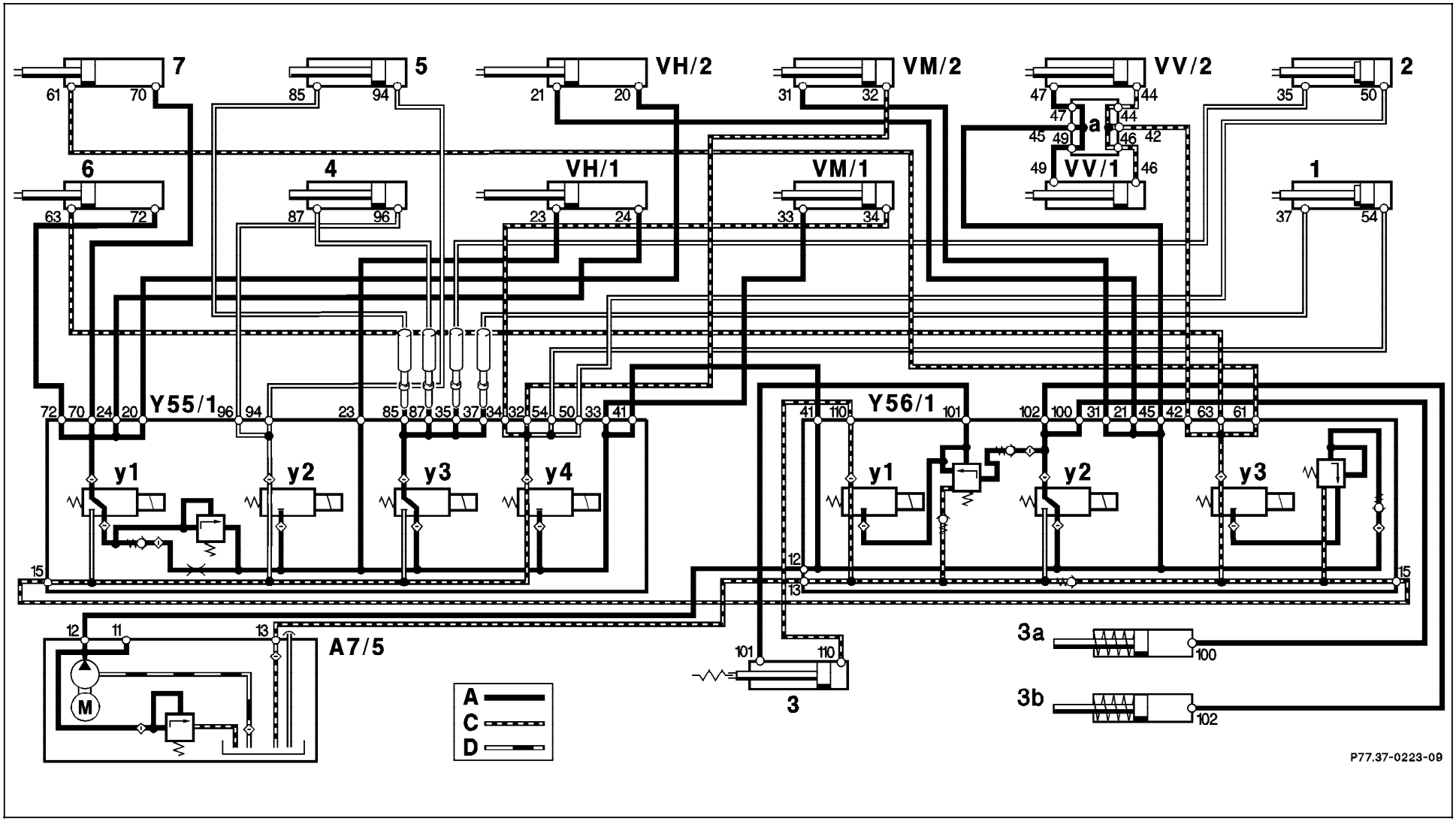

Figure 24

P77.37-0223-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
6.3		Raise fabric bow (Figure 24)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 35 from valve block (Y55/1). Seal connection with threaded plug 129 589 00 91 01. Connector at valve block (Y55/1y4) to remain disconnected. Hydraulic lines no. 37, no. 85 and no. 87 to remain disconnected.	**Fabric bow up** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal value ok:** Right hydraulic cylinder (2) for soft top compartment cover leaking. Replace hydraulic cylinder (SMS, Job No. 77-370). **<120 bar**: ⇒ 5.1

Hydraulic Test Program – Test

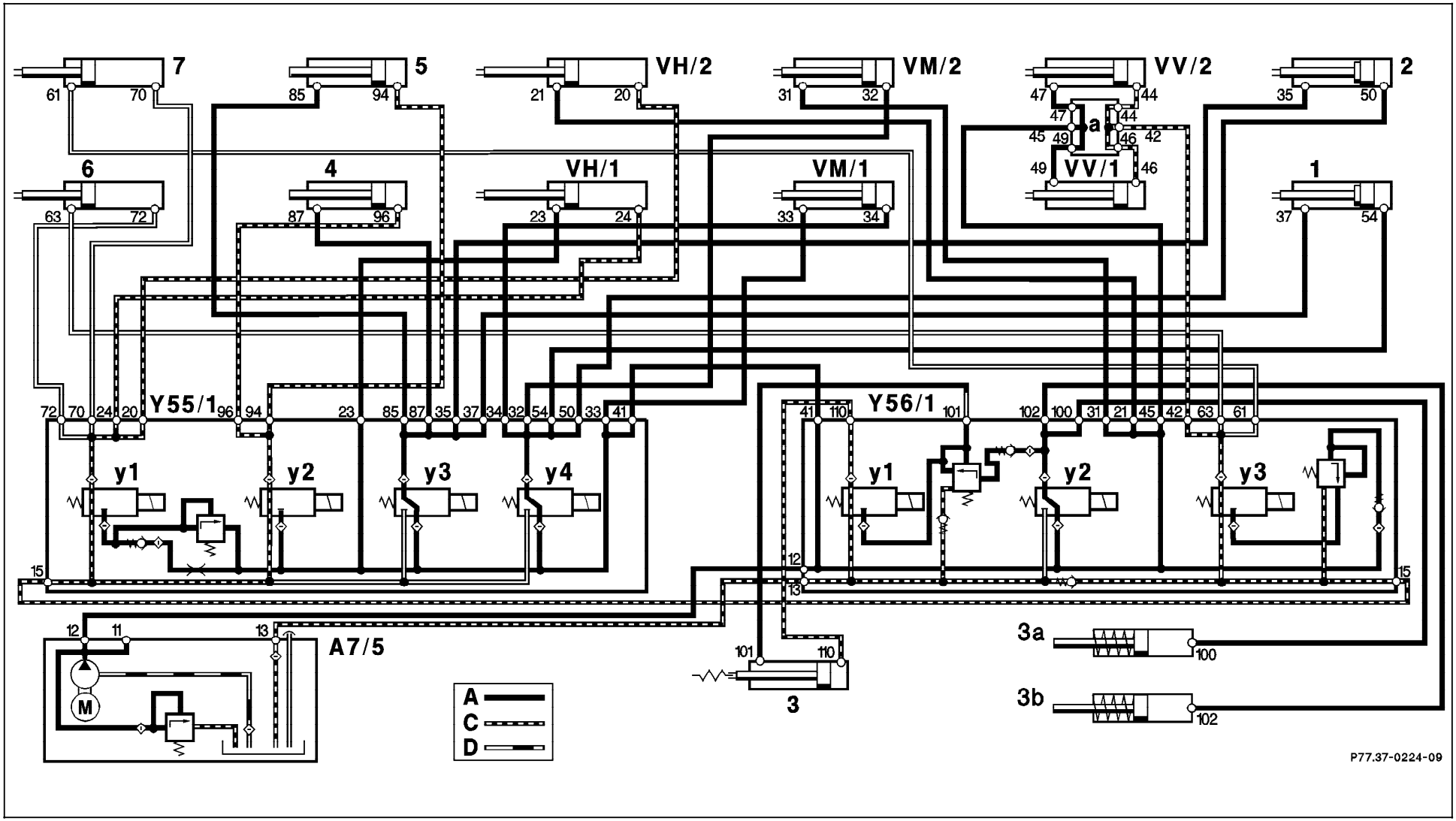

Figure 25

P77.37-0224-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
7.0		**Opening center locks (VM/1, VM/2)** (Figure 25) **Raise soft top compartment cover** (Figure 25)	Connect pressure gauge according to connection diagram (Figure 4).	**Fabric bow up** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Should center locks (VM/1, VM/2) not open, check adjustment of soft top compartment cover latch pin. Also check for mechanical fault in one or both center locks. Check adjustment of center locking pins. Replace center locks, if locks do not open with above remedies when using soft top switch (SMS, Job No. 77-320). Additionally check soft top compartment hinges or gas pressure shock if soft top cover does not raise and all remedies are without effect. **<120 bar:** ⇒ 6.0

Hydraulic Test Program – Test

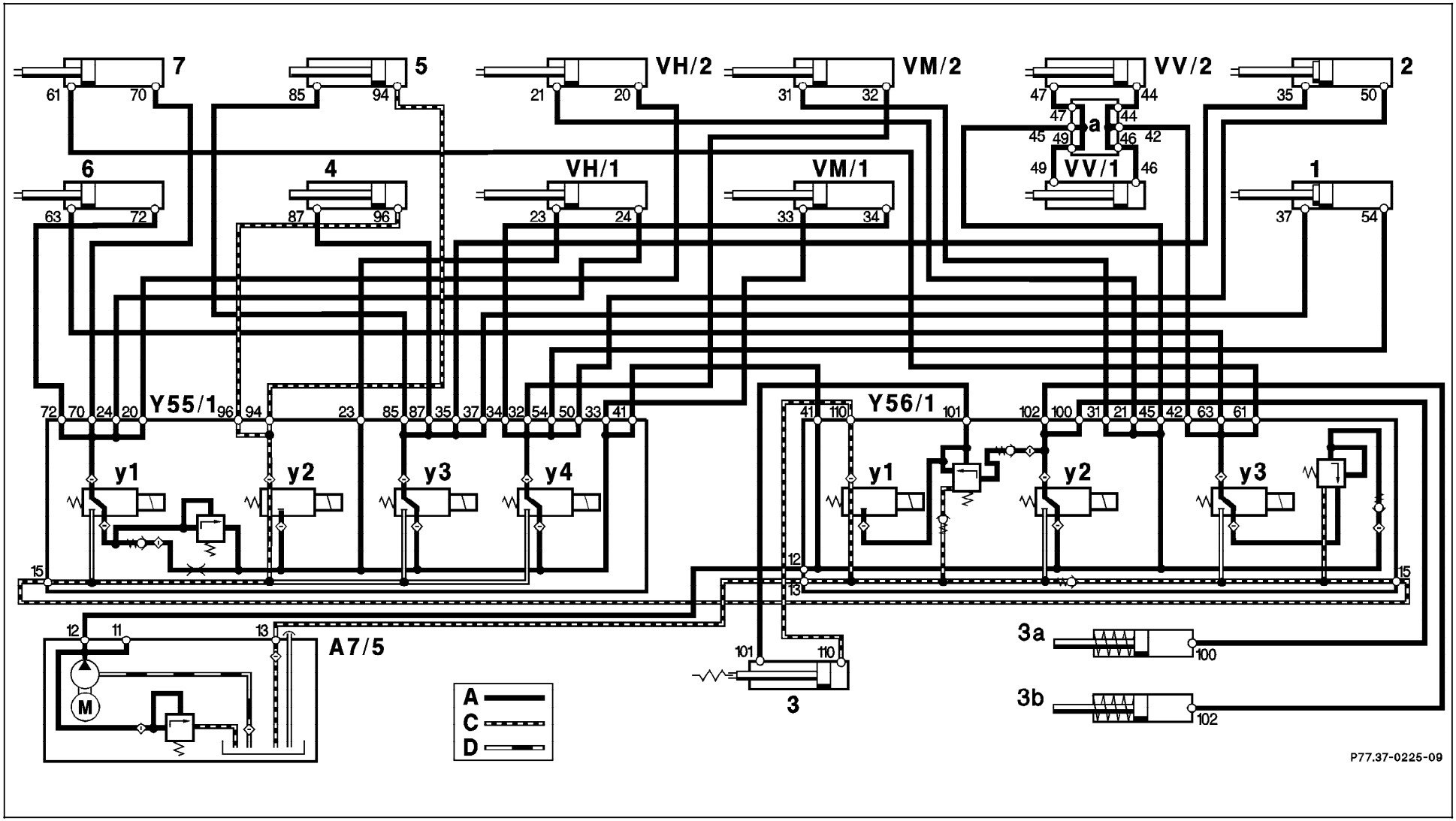

Figure 26

P77.37-0225-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
8.0		**Open front locks (VV/1, VV/2)** (Figure 26)	Connect pressure gauge according to connection diagram (Figure 4).	**Fabric bow up, soft top compartment cover up** Ignition: **ON** Press soft top switch: **“lower“.** **Read test pressure while pressing the soft top switch**	180 – 200 bar	**Nominal values ok:** Should front locks (VV/1, VV/2) not open, check adjustment of soft top latch pins. Also check for mechanical fault in one or both front locks. Check the adjustment of latch pins (SMS, Job No. 77-303). Replace the locks, if nominal values are met but locks still do not open (SMS, Job No. 77-330). **<180 bar**: ⇒ 6.0

Hydraulic Test Program – Test

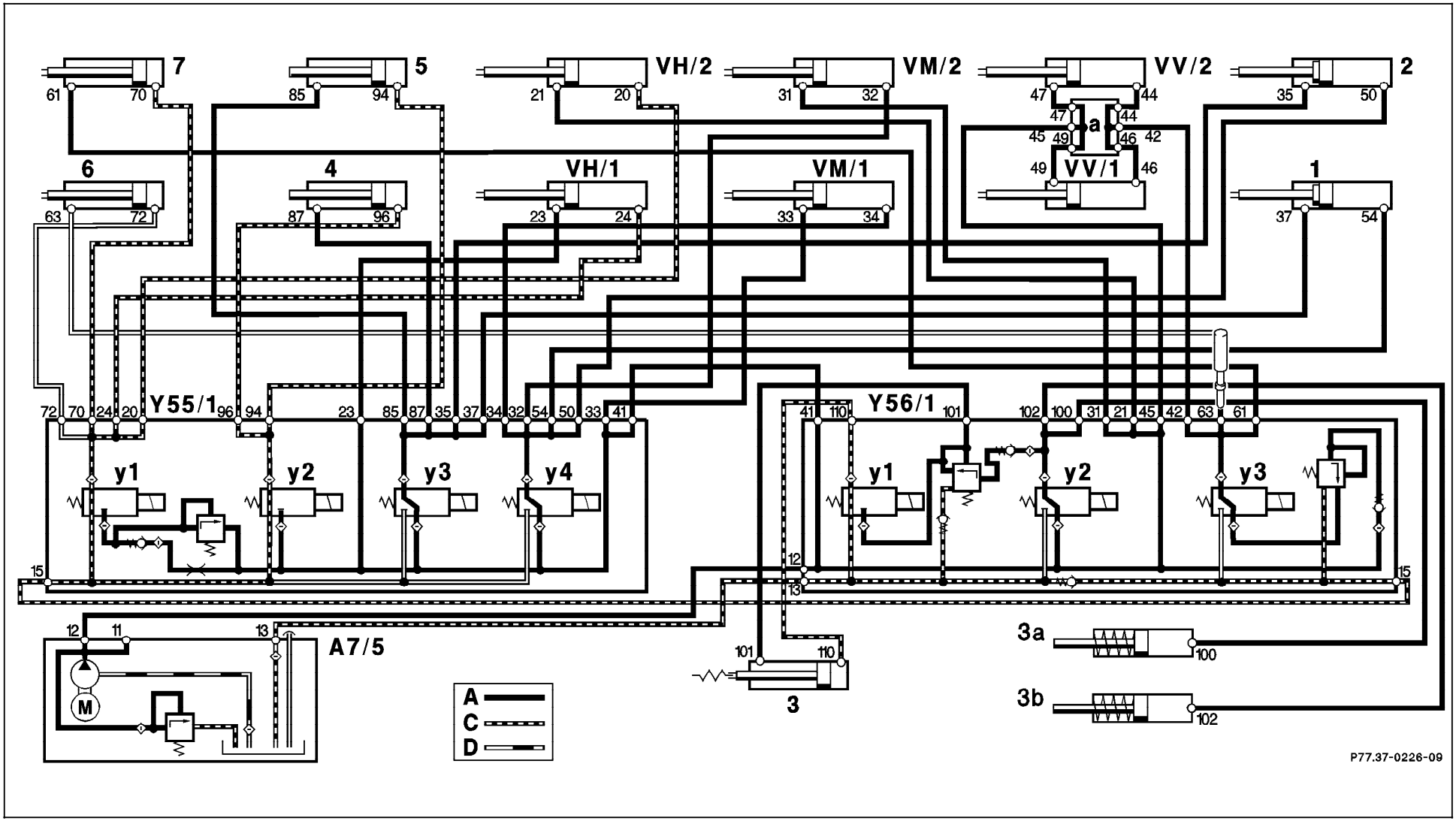

Figure 27

P77.37-0226-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
9.0		**Open soft top** (Figure 27)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect connector S84/3x (see 11/1; Pos. 2, Figure 1). Disconnect hydraulic line no. 63 from valve block (Y56/1). Seal connection with threaded plug 129 589 00 91 01.	**Soft top retracted in soft top compartment, soft top compartment cover up** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Left hydraulic cylinder (6) for soft top actuation leaking. Replace hydraulic cylinder (SMS, Job No. 77-355). **<120 bar**: ⇒ 9.1

Hydraulic Test Program – Test

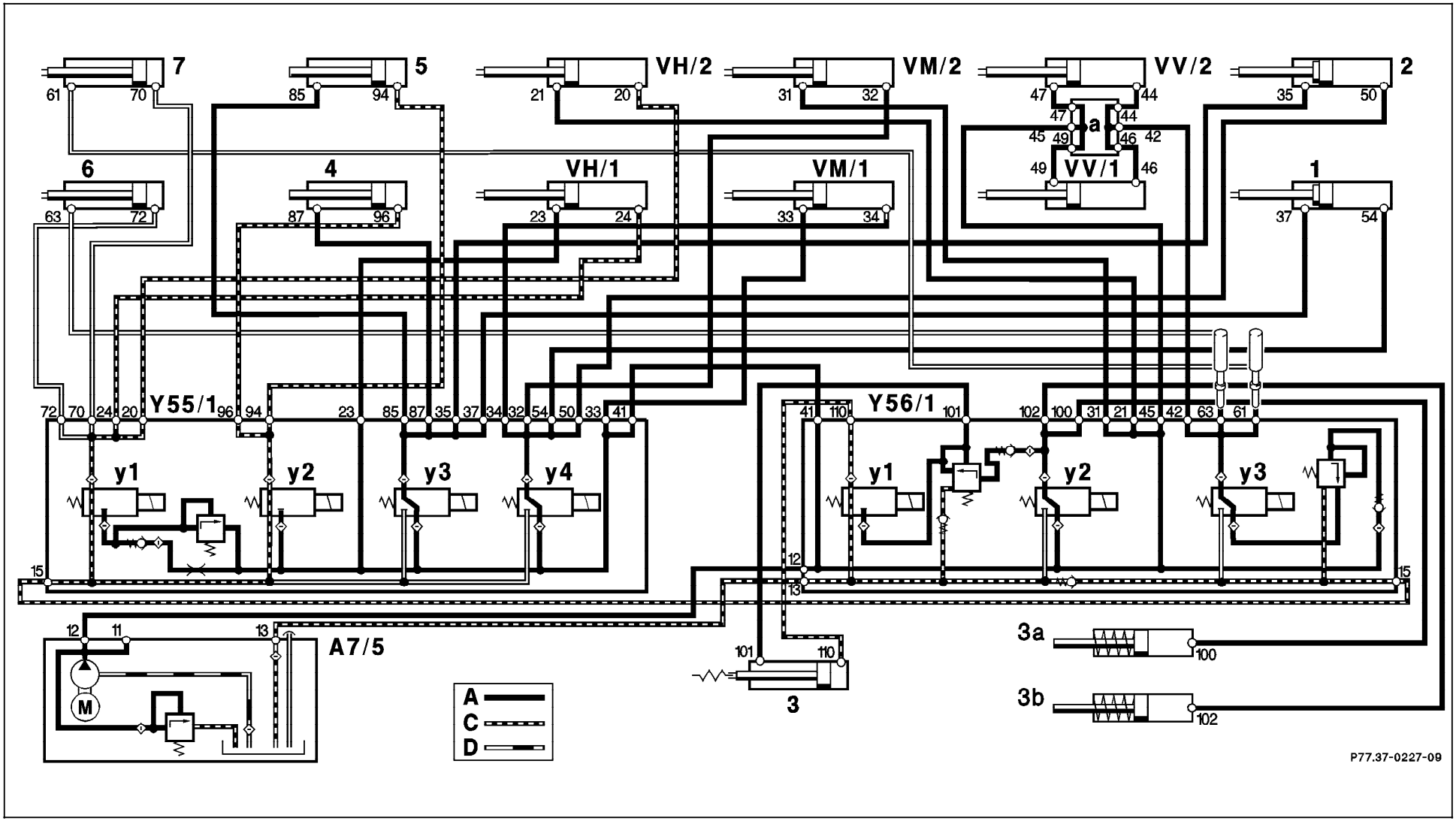

Figure 28

P77.37-0227-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
9.1		Open soft top (Figure 28)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 61 from valve block (Y56/1). Seal connection with threaded plug 129 589 00 91 01. Connector S84/3x (see 11/1; 2, Figure 1) to remain disconnected. Hydraulic line no. 63 to remain disconnected.	**Soft top inside soft top compartment,** **soft top compartment cover up** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Right hydraulic cylinder (7) for soft top actuation leaking. Replace hydraulic cylinder (SMS, Job No. 77-355). **<120 bar**: ⇒ 9.2

Hydraulic Test Program – Test

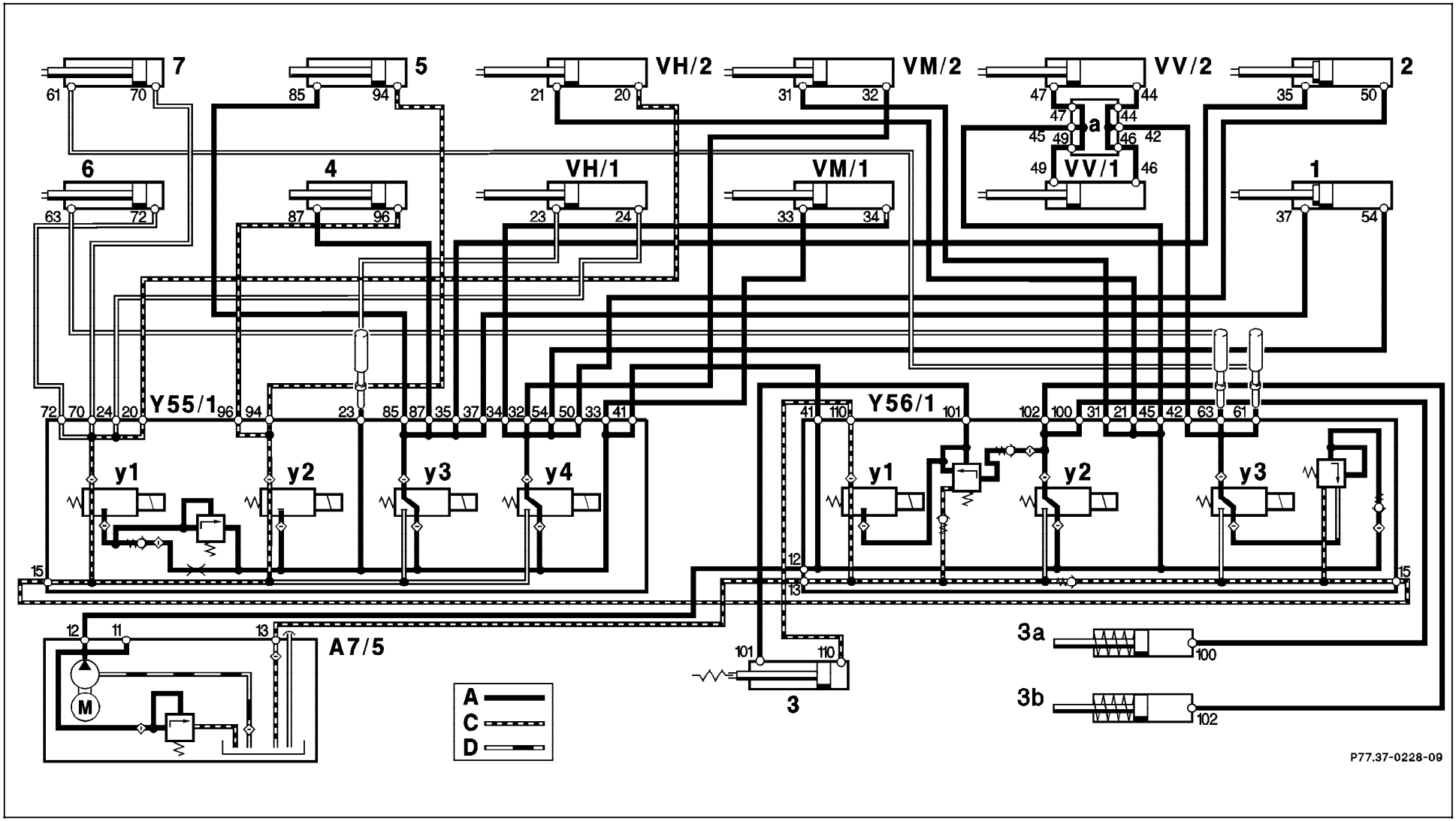

Figure 29

P77.37-0228-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
9.2		Open soft top (Figure 29)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 23 from valve block (Y55/1). Seal connection with threaded plug 129 589 00 91 01. Connector S84/3x (see 11/1; 2, Figure 1) to remain disconnected. Hydraulic lines no. 61 and no. 63 to remain disconnected.	**Soft top retracted in soft top compartment, soft top compartment cover up** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	 120 – 200 bar	**Nominal values ok:** Hydraulic cylinder in left rear lock (VH/1) leaking. Replace hydraulic cylinder (SMS, Job No. 77-328). **<120 bar**: ⇒ 9.3

Hydraulic Test Program – Test

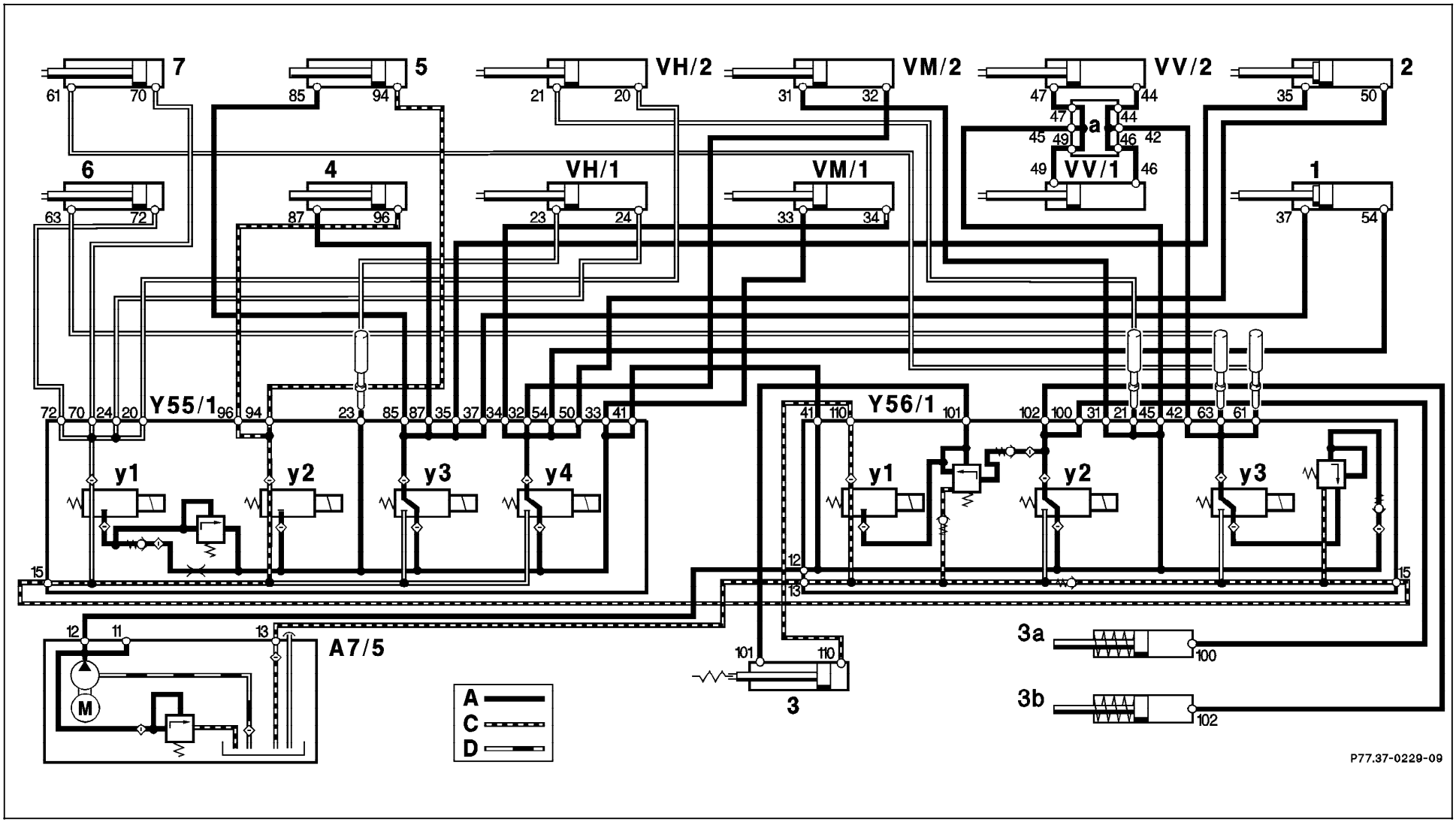

Figure 30

P77.37-0229-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
9.3		Open soft top (Figure 30)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 21 from valve block (Y56/1). Seal connection with threaded plug 129 589 00 91 01. Connector S84/3x (see 11/1; 2, Figure 1) to remain disconnected. Hydraulic lines no. 23, no. 61 and no. 63 to remain disconnected.	**Soft top inside soft top compartment,** **soft top compartment cover up** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	 120 – 200 bar	**Nominal values ok:** Hydraulic cylinder in the right rear lock (VH/2) leaking. Replace hydraulic cylinder (SMS, Job No. 77-328). **<120 bar**: ⇒ 6.0

Hydraulic Test Program – Test

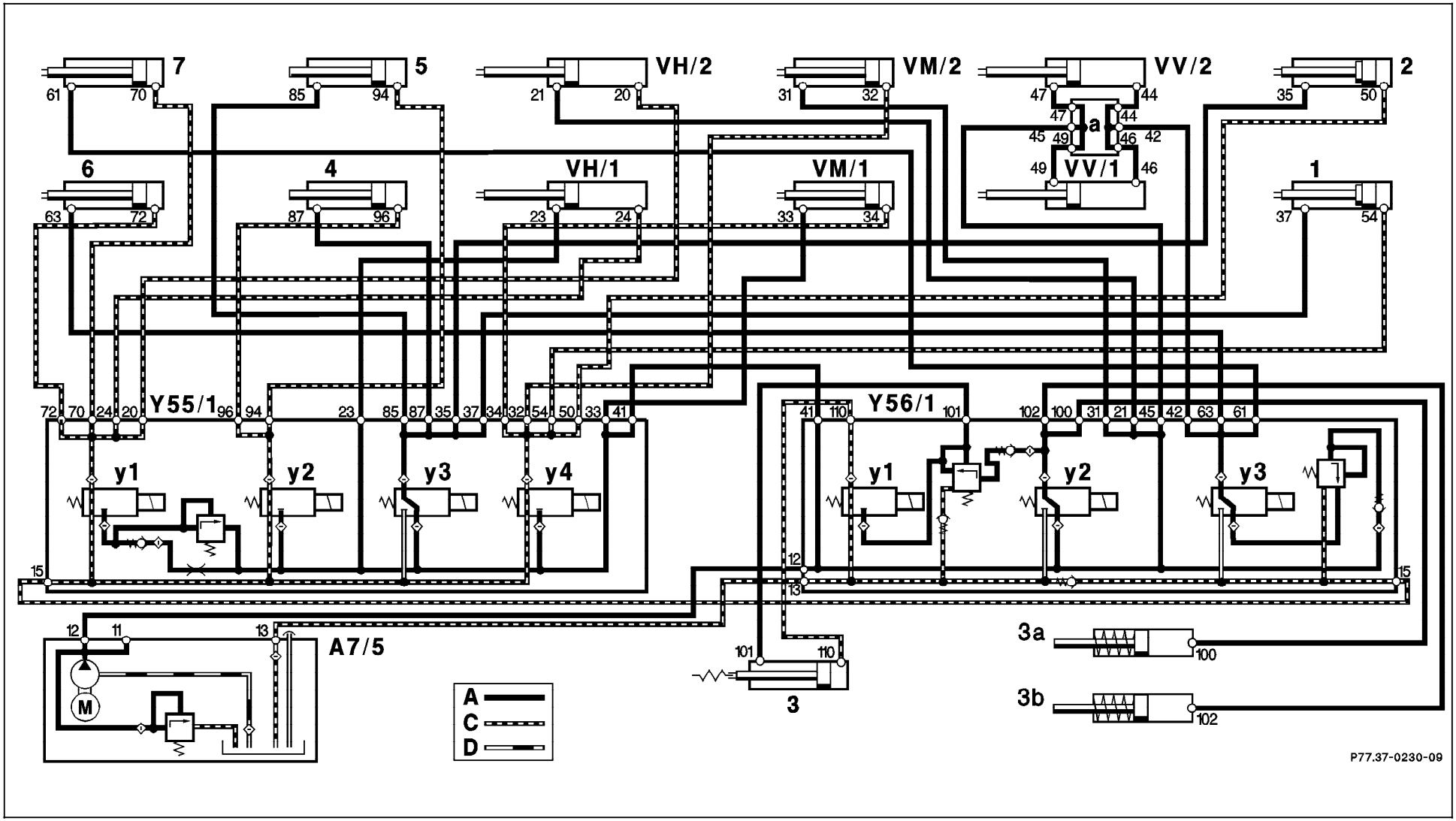

Figure 31

P77.37-0230-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
10.0		**Close soft top compartment cover** (Figure 31) **Lock center latches (VM/1, VM/2)** (Figure 31)	Connect pressure gauge according to connection diagram (Figure 4).	**Soft top inside soft top compartment, soft top compartment cover closed (see owner's manual)** Ignition: **ON** Press and hold soft top switch: **"lower"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	 120 – 200 bar	**Nominal values ok:** Check adjustment of latch pins for soft top compartment cover. Center latches (VM/1, VM/2) have mechanical fault. Replace center latches (SMS, Job No. 77-320). **<120 bar**: ⇒ 9.0, ⇒ 6.2, ⇒ 4.0.

Hydraulic Test Program – Test

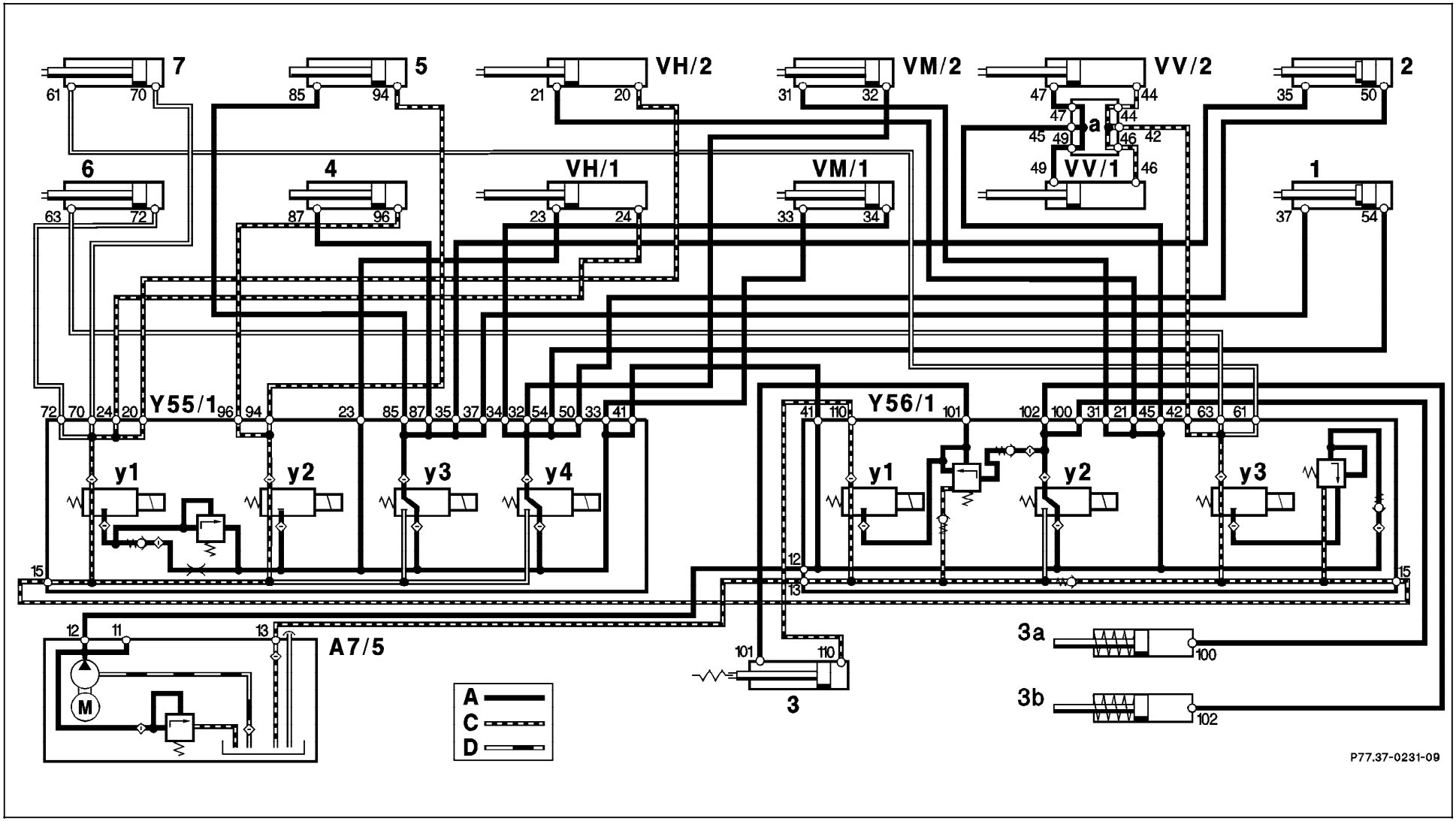

Figure 32

P77.37-0231-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
11.0		**Open center latches (VM/1, VM/2)** (Figure 32) **Raise soft top compartment cover** (Figure 32)	Connect pressure gauge according to connection diagram (Figure 4).	**Starting point:** **Soft top completely up** Ignition: **ON** Press and hold soft top switch: **"close"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Should center latches (VM/1,VM/2) not open, check adjustment of latch pins for soft top compartment cover. Also check both center latches for mechanical fault. Check the adjustment of latch pins. Replace center locks, if locks do not open when using soft top switch (SMS, Job No. 77-320). Additionally check soft top compartment hinges or gas pressure shock, if soft top cover does not raise and above remedies are without effect. **<120 bar**: ⇒ 9.2, ⇒ 6.0, ⇒ 11.1.

Hydraulic Test Program – Test

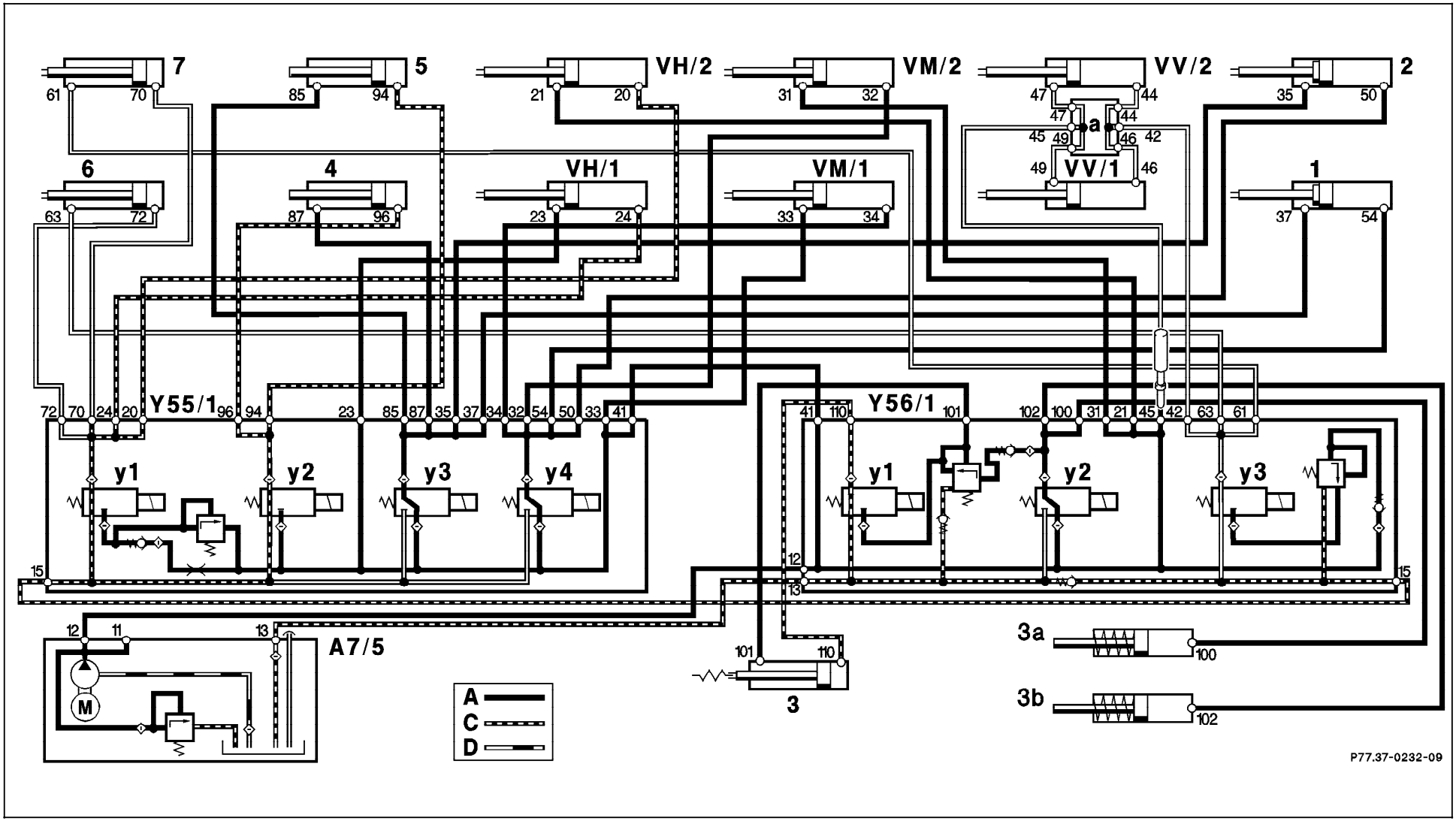

Figure 33

P77.37-0232-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
11.1		Open center latches (VM/1, VM/2) (Figure 33)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 45 from valve block (Y56/1). Seal connection with threaded plug 129 589 00 91 01. Disconnect connector at valve block (Y55/1y1).	**Soft top compartment cover raised, soft top in soft top compartment** Ignition: **ON** Press and hold soft top switch: **"close"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** ⇒ 11.2. **<120 bar**: ⇒ 6.0, ⇒ 9.2.

Hydraulic Test Program – Test

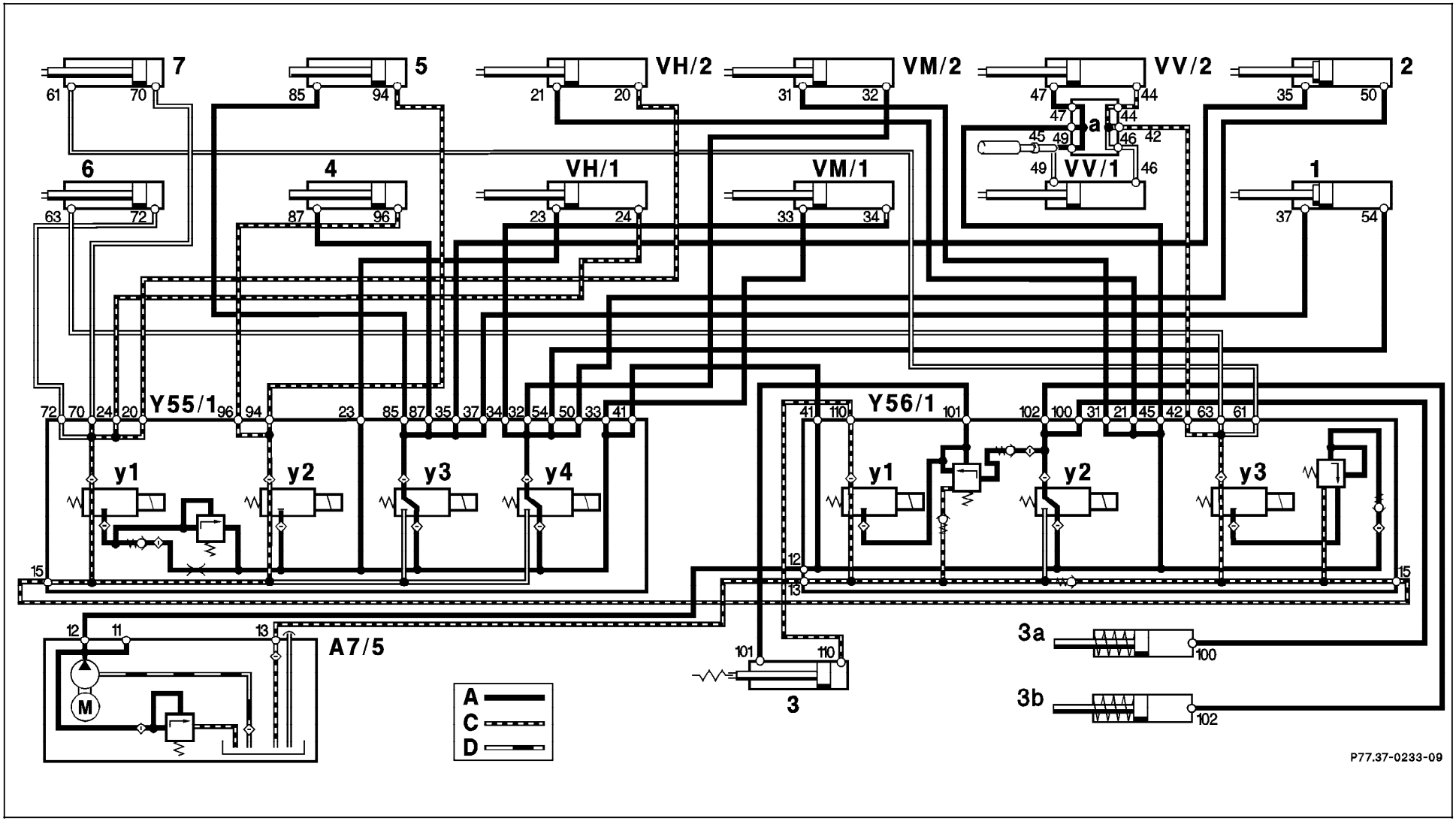

Figure 34

P77.37-0233-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
11.2		Open center latches (VM/1, VM/2) (Figure 34)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 49 from hydraulic manifold (a) at A-pillar crossmember. Reconnect hydraulic line no. 45. Connector at valve block (Y55/1y1) to remain disconnected.	**Soft top compartment cover raised, soft top in soft top compartment** Ignition: **ON** Press and hold soft top switch: **"close"**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Hydraulic cylinder in left front lock (VV/1) leaking. Replace hydraulic cylinder (SMS, Job No. 77-335). **<120 bar**: Hydraulic cylinder in right front lock (VV/2) leaking. Replace hydraulic cylinder (SMS, Job No. 77-335).

Hydraulic Test Program – Test

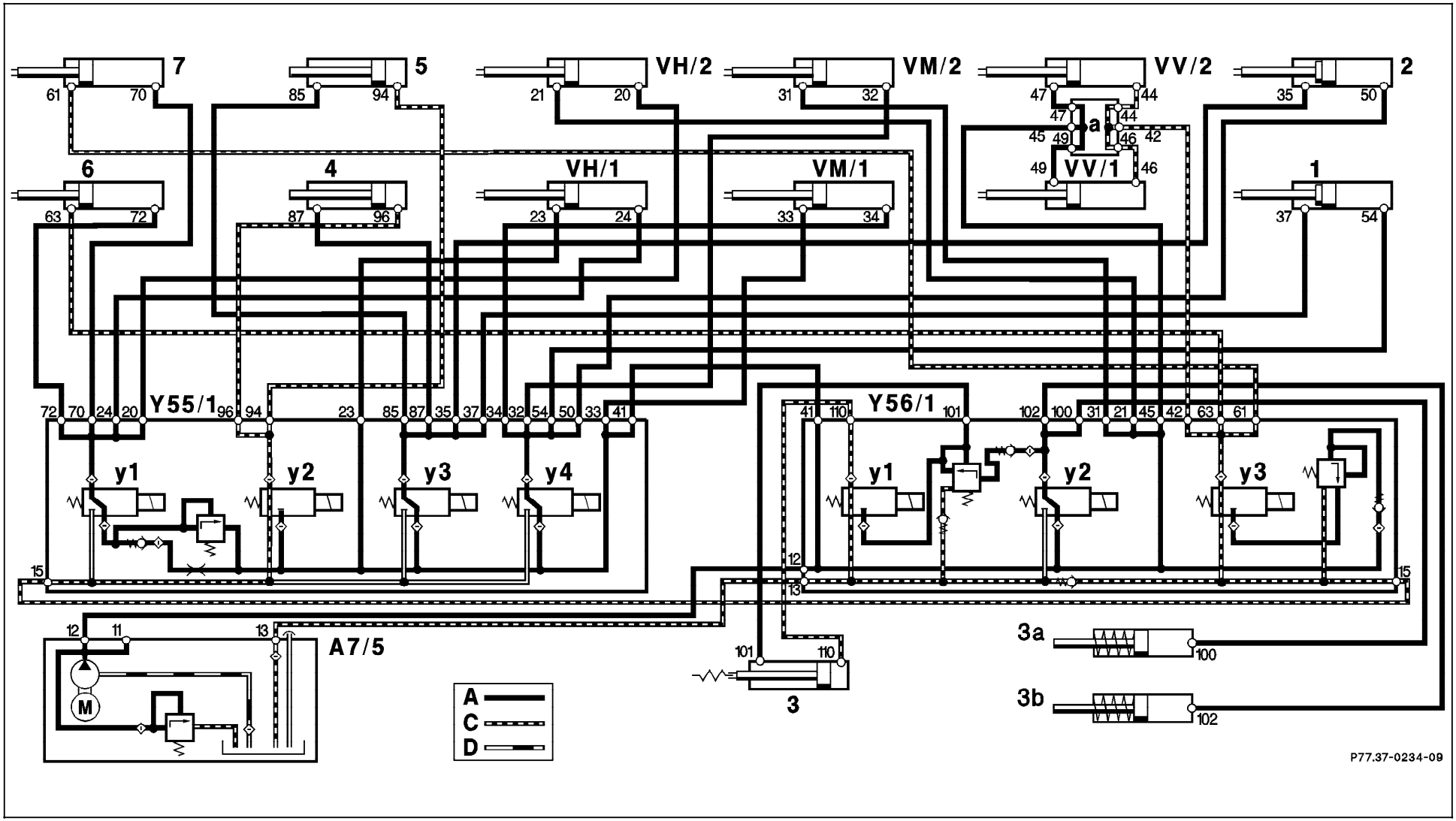

Figure 35

P77.37-0234-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
12.0		**Close soft top** (Figure 35)	Connect pressure gauge according to connection diagram (Figure 4). Install shim between windshield crossmember and soft top so that latch pins do not engage into left and right front latches (VV/1, VV/2). Disconnect connector at valve block (Y56/1y3).	**Close soft top, soft top compartment cover raised, fabric bow raised** Ignition: **ON** Press soft top switch: **"Close".** **Read test pressure while pressing soft top switch** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Mechanical fault in soft top frame assembly. **<120 bar**: ⇒ 5.1, ⇒ 6.0, ⇒ 11.1.

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
13.0		**Lock front locks (VV/1, VV/2)**	Connect pressure gauge according to connection diagram (Figure 4). Remove shim between windshield crossmember and soft top. Insert latch pins into front latches (VV/1, VV/2).	**Soft top lowered unto winshield crossmember, soft top compartment cover up, fabric bow raised** Ignition: **ON** Press soft top switch: **"Close".** **Read test pressure while pressing soft top switch**	180 – 200 bar	**Nominal values ok:** Check the adjustment of front latch pins on soft top frame (SMS, Job No. 77-303). Replace front locks if nominal values are met but locks still do not lock (SMS, Job No. 77-330). **<180 bar**: ⇒ 5.1, ⇒ 6.0, ⇒ 11.1.

Hydraulic Test Program – Test – This Page Left Blank Intentionally

Hydraulic Test Program – Test

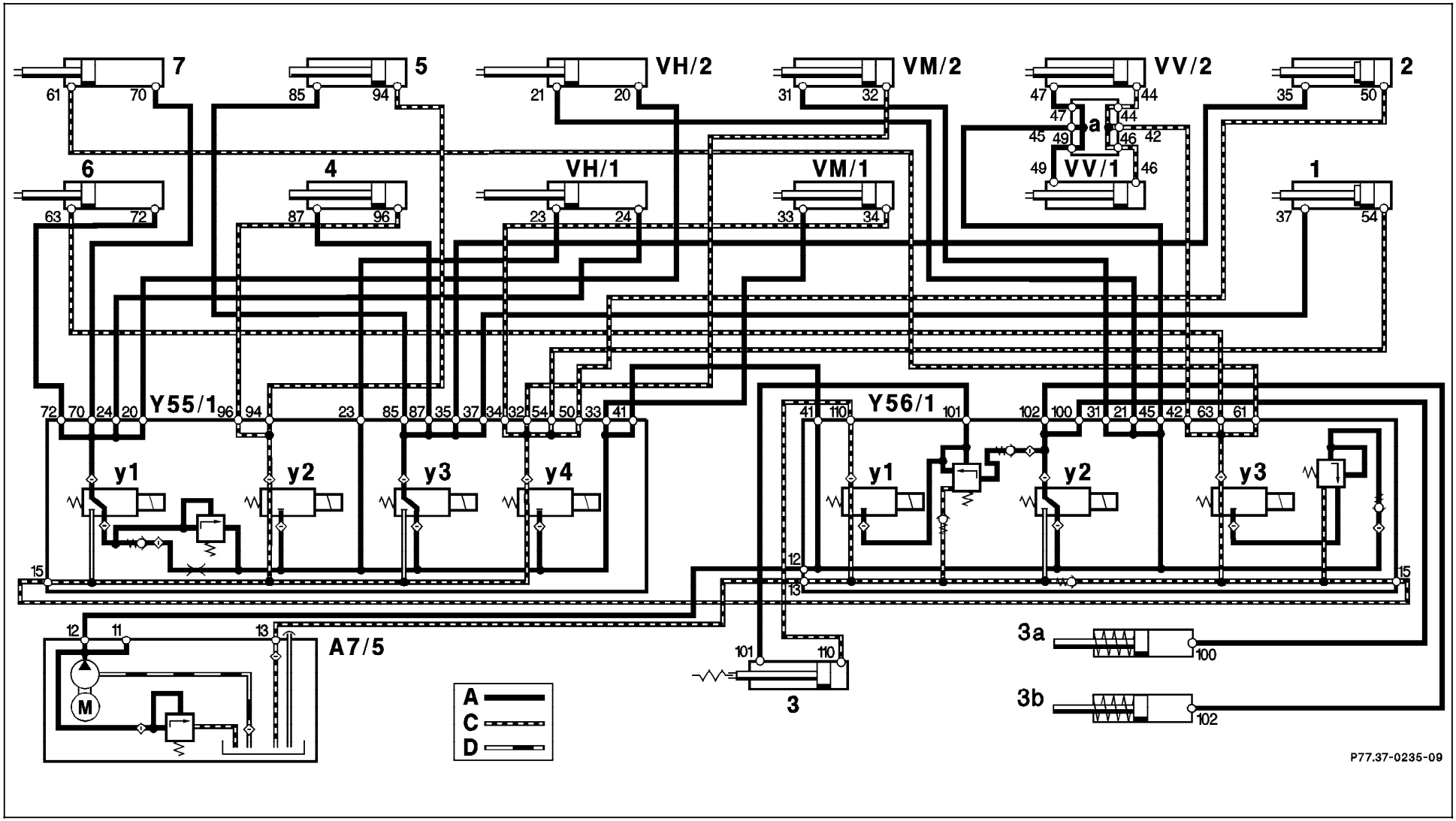

Figure 36

P77.37-0235-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
14.0		**Close soft top compartment cover** (Figure 36) **Lock center locks (VM/1, VM/2)** (Figure 36)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect connector at valve block (Y55/1y2).	**Front of soft top locked, fabric bow raised, soft top compartment cover closed and center locks (VM/1, VM/2) locked** Ignition: **ON** Press and hold soft top switch: **"close". ** Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Check adjustment of soft top compartment cover latch pins. Replace center locks, if locks do not lock when using the soft top switch (SMS, Job No. 77-320). **<120 bar**: ⇒ 4.0, ⇒ 6.2, ⇒ 9.0.

Hydraulic Test Program – Test

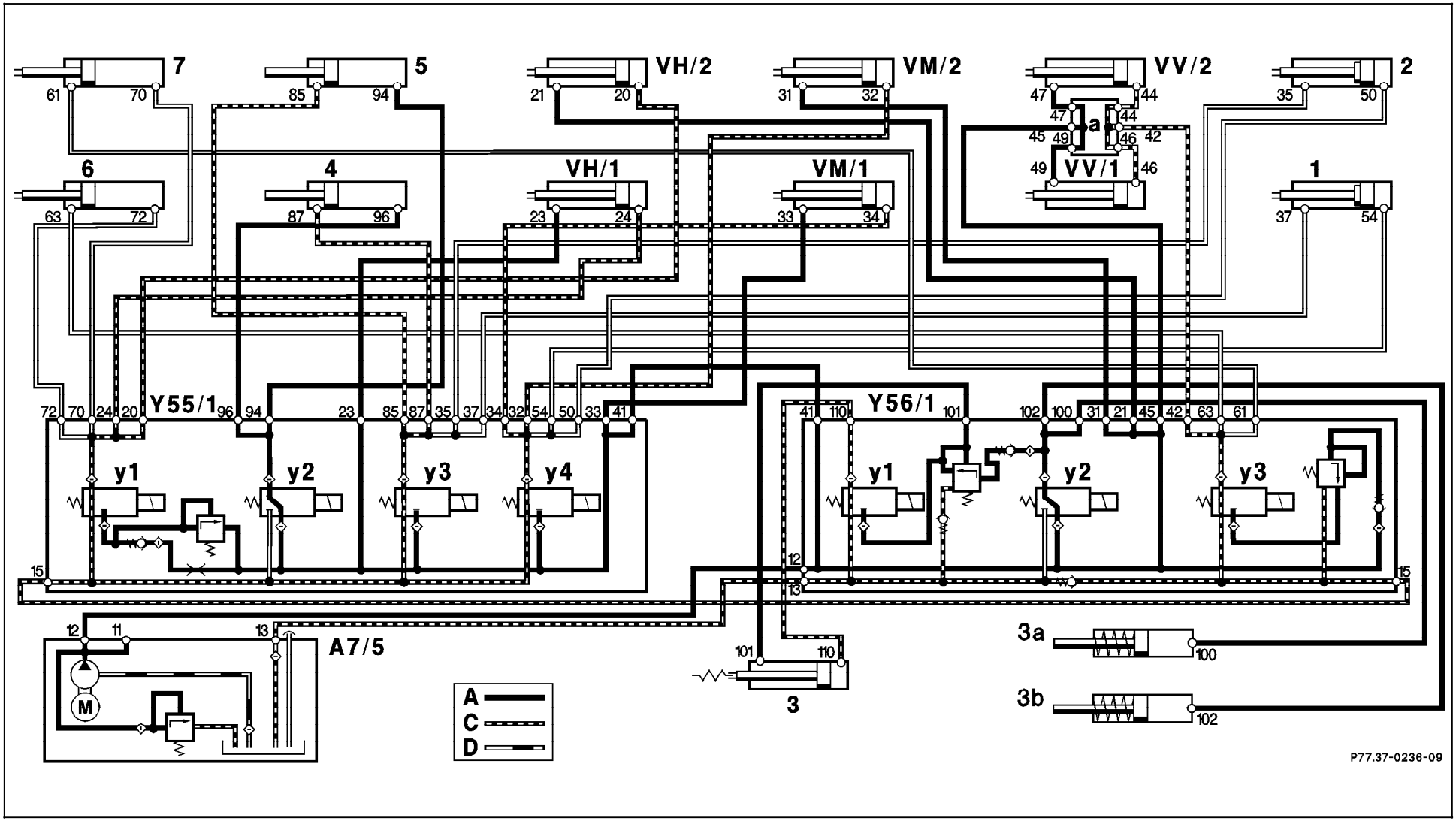

Figure 37

P77.37-0236-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
15.0		**Retract fabric bow** (Figure 37)	Connect pressure gauge according to connection diagram (Figure 4).	**Soft top completely closed** Ignition: **ON** Press and hold soft top switch: **"close".** Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	 120 – 200 bar	**Nominal values ok:** Mechanical fault in soft top frame assembly. **<120 bar**: ⇒ 4.0, ⇒ 15.1.

Hydraulic Test Program – Test

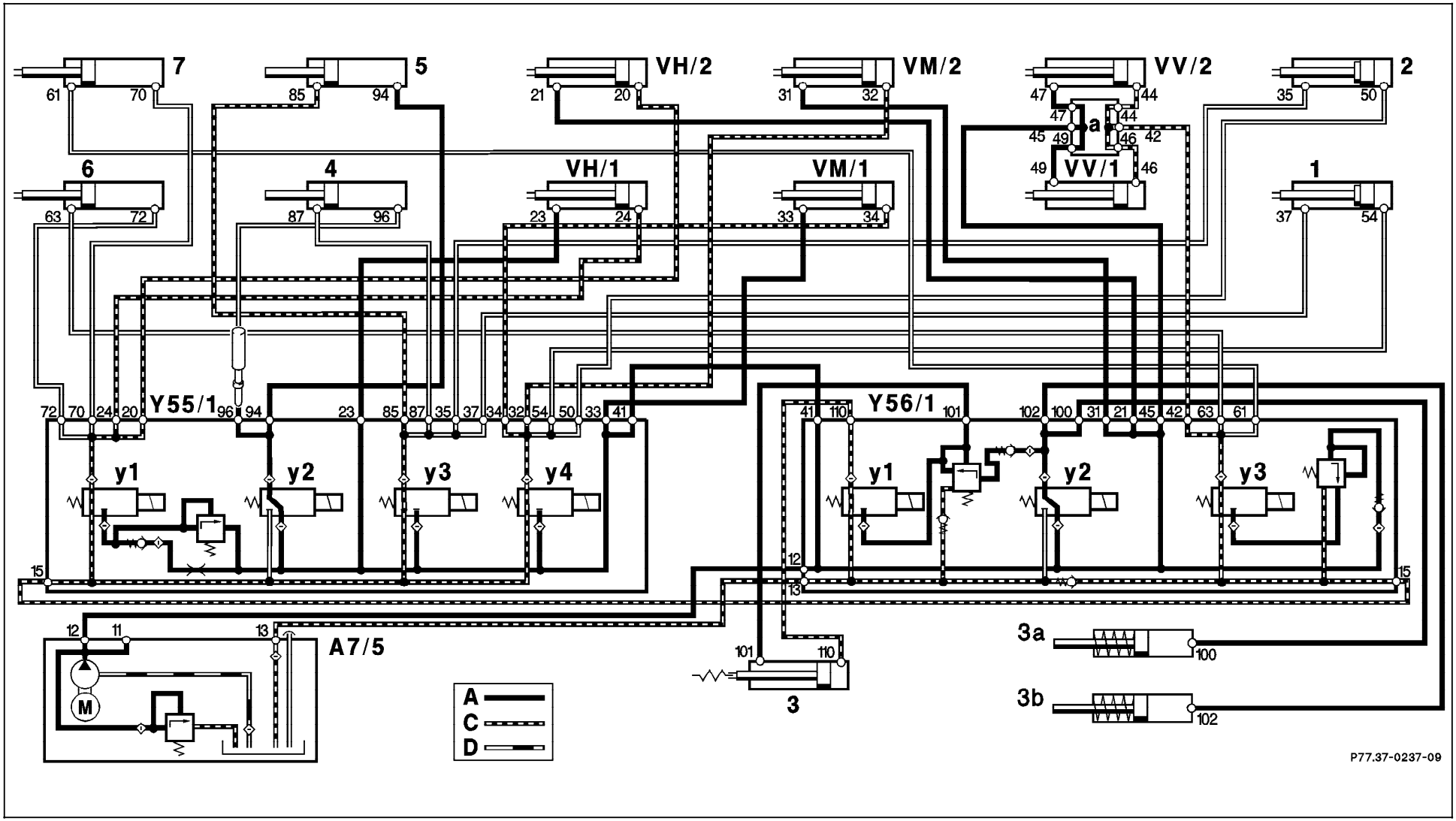

Figure 38

P77.37-0237-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
15.1		Retract fabric bow (Figure 38)	Connect pressure gauge according to connection diagram (Figure 4). Disconnect hydraulic line no. 96 from valve block (Y55/1). Seal connection with threaded plug 129 589 00 91 01.	**Soft top completely closed** Ignition: **ON** Press and hold soft top switch: **close**. Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Hydraulic cylinder of left fabric bow (4) leaking. Replace hydraulic cylinder (SMS, Job No. 77-360). **<120 bar**: Hydraulic cylinder of right fabric bow (5) leaking. Replace hydraulic cylinder (SMS, Job No. 77-360).

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
16.0		**Lock rear locks (VH/1, VH/2)**	Connect pressure gauge according to connection diagram (Figure 4).	**Soft top completely closed** Ignition: **ON** Press and hold soft top switch: **"close".** Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	 120 – 200 bar	**Nominal values ok:** Check adjustment of latch pins on fabric bow (SMS, Job No. 77-303). Replace rear latches if locking is not possible and nominal values are met (SMS, Job No. 77-328). **<120 bar**: ⇒ 4.0.

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Hydraulic Test Program – Test

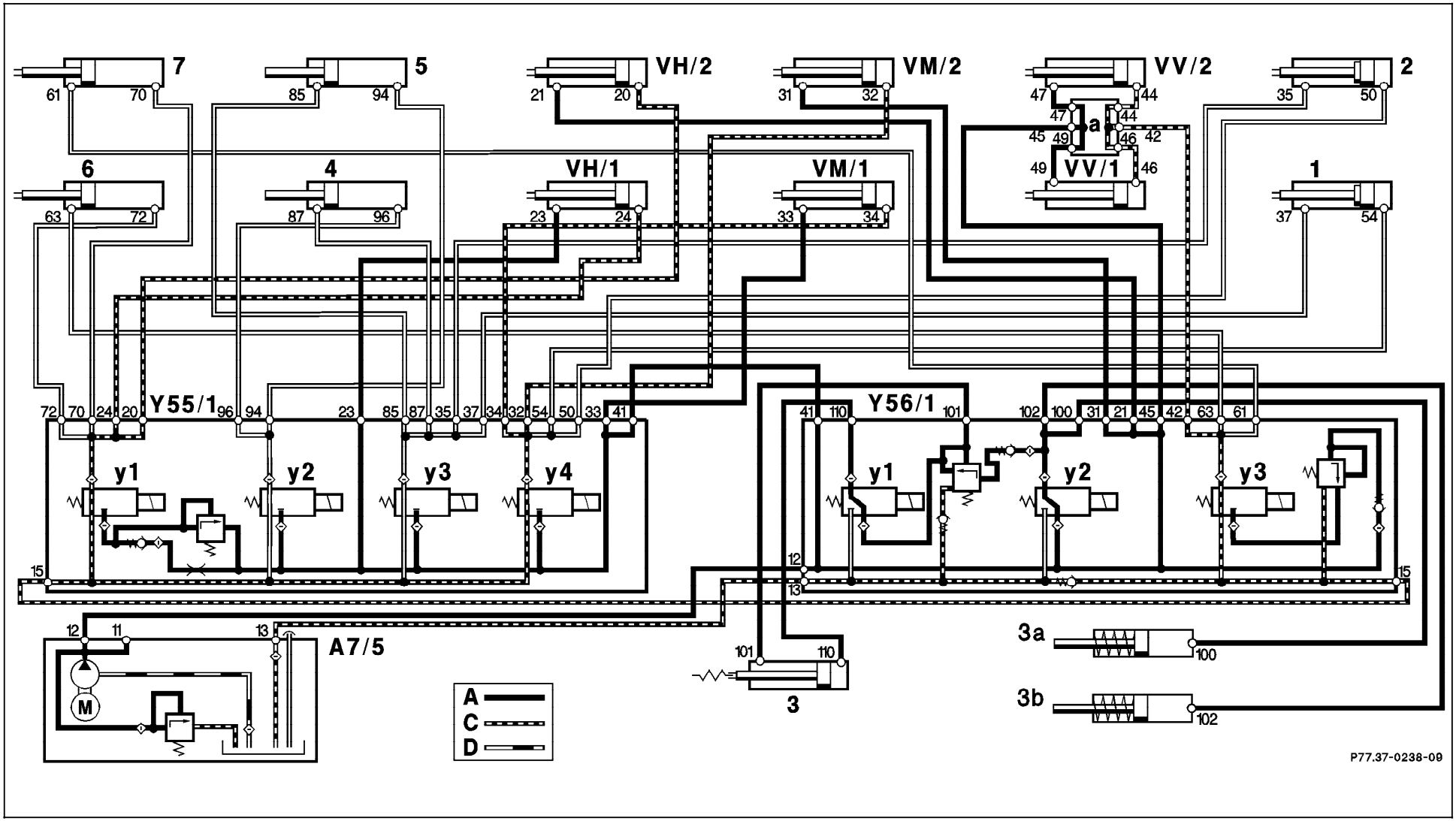

Figure 39

P77.37-0238-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
17.0		**Raise roll bar** (Figure 39)	Connect pressure gauge according to connection diagram (Figure 4).	**Roll bar lowered** Ignition: **ON** Press and hold RB switch: **"raise".** Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	 120 – 200 bar	**Nominal values ok:** Hydraulic cylinder lock in roll bar support element (3) does not unlock. Replace support element (SMS, Job No. 91-920). **<120 bar**: ⇒ 4.0.

Hydraulic Test Program – Test

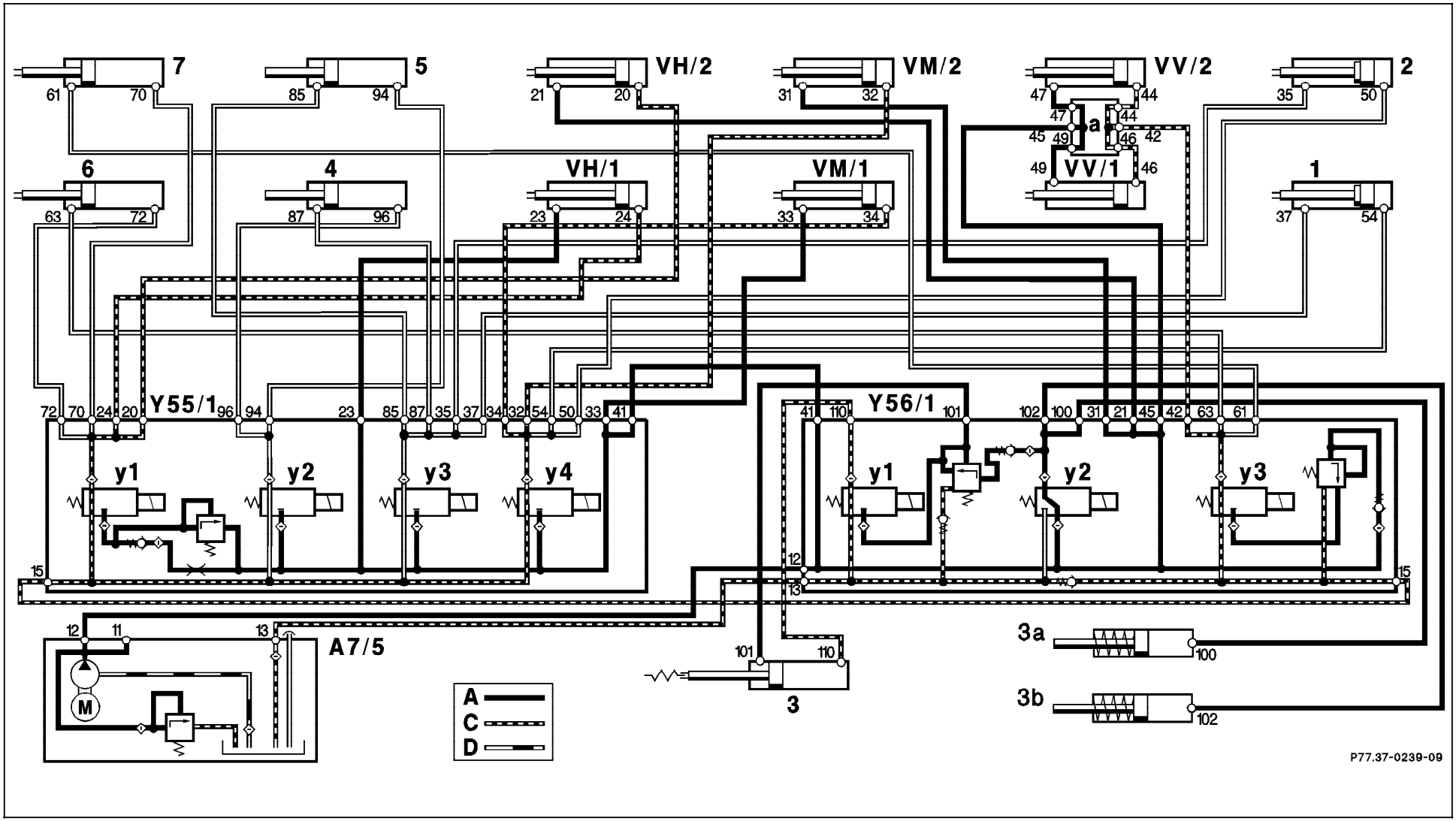

Figure 40

P77.37-0239-09

Hydraulic Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
18.0		**Lower roll bar** (Figure 40)	Connect pressure gauge according to connection diagram (Figure 4).	**Roll bar raised** Ignition: **ON** Press and hold RB switch: **"lower".** Have a second technician unplug relay (A7/5k1, Figure 4) **after 5 sec.** Keep switch depressed an **additional 5 sec.** **Read test pressure:** **Release test pressure:** Press soft top switch briefly several times.	120 – 200 bar	**Nominal values ok:** Left/right locking pawls (3a/3b) do not release. Replace locking pawls. Mechanical fault in support element (3). Replace support element (SMS, Job No. 91-920). **<120 bar**: ⇒ 4.0.