**Version 10:** When 12 has to be opened first, close 0,1,9, then open 2 seconds and recheck P4 to determine whether 0,1 should open or stay closed.

Block keys 12 and 9 temporarily to prevent operator interference.

If 7 set ON manually or by Labview, 7 stays ON until switched OFF. Manually or by Labview.

If NC Timer is SET ON by He4 Mode, MC is SET ON for 10 minutes, pressure checks are reactivated afterwards.

**Version 11:** P5 > 1100mB > 6 ON added

P5 > 1100mB > 6 ON added

Start NC

Unlock, close and lock: A10, A9.

On: 2, 5, 6, 16, 7, 7.

Off: 6, 5, 4, 51


Version 11: P5 > 1100mB > 6 ON added.

Start Automatic

UN_block keys 12, 9

On: A10, A9

Off: 8, 13, 15, 16, 17, 7.

Check P5

P4 > 1100mB

P4 < 500

NCTimer = ON?

K_7 = man?

NC Timer = ON AND NC Timer = On?

K_7 set to OFF?

P5_3

K_7 set to ON?

P5_4

Rel_12 = On

Set K_7_man flag

K_12 set to ON?

P4_Timer = 0?

UN_Block keys 12, 9

ON: Mixt Comp

OFF: Mixt Comp

Reset all valves, Manual mode

Exit Normal Circulation

Exit to Rec. Mode

Start P4 Check

Keys Blocked?

P4 < 17mB

P4 > 20mB

P4 > 20mB

End P4 Check

K_12 set to On?

P4_Timer = 0?

NCTimer = ON?

Start P4 Check

P4 > 20mB

P4 < 17mB

P4 > 20mB

End P4 Check

K_12 set to OFF?

P4_Timer = 0?

NCTimer = ON?

Start P4 Check

P4 > 20mB

P4 < 17mB

P4 > 20mB

End P4 Check

K_12 set to OFF?

P4_Timer = 0?

NCTimer = ON?

Start P4 Check

P4 > 20mB

P4 < 17mB

P4 > 20mB

End P4 Check

K_12 set to OFF?

P4_Timer = 0?

NCTimer = ON?

Start P4 Check

P4 > 20mB

P4 < 17mB

P4 > 20mB

End P4 Check

K_12 set to OFF?

P4_Timer = 0?

NCTimer = ON?

Start P4 Check

P4 > 20mB

P4 < 17mB

P4 > 20mB

End P4 Check

K_12 set to OFF?

P4_Timer = 0?

NCTimer = ON?

Start P4 Check

P4 > 20mB

P4 < 17mB

P4 > 20mB

End P4 Check

K_12 set to OFF?

P4_Timer = 0?

NCTimer = ON?

Start P4 Check

P4 > 20mB

P4 < 17mB

P4 > 20mB

End P4 Check

K_12 set to OFF?

P4_Timer = 0?

NCTimer = ON?

Start P4 Check

P4 > 20mB

P4 < 17mB

P4 > 20mB

End P4 Check

K_12 set to OFF?

P4_Timer = 0?

NCTimer = ON?