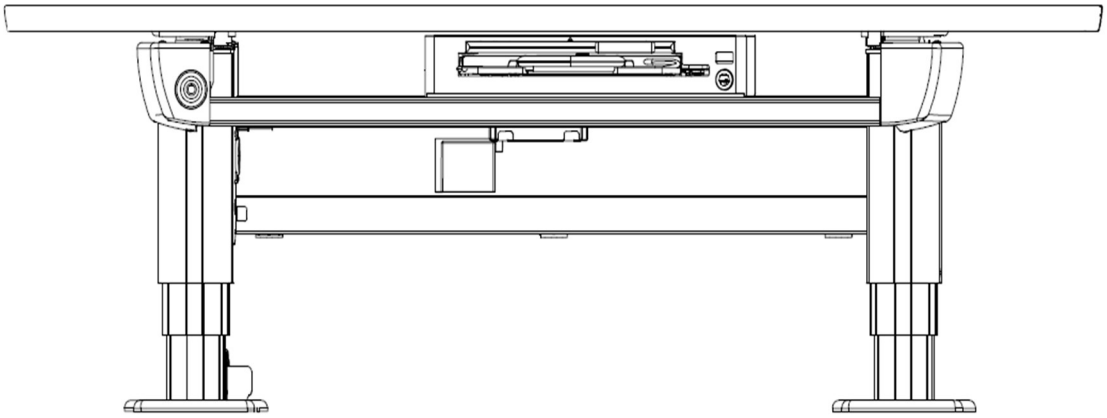
“TABLE Z NOT DRIVING”

APPLICABLE TO: All systems using this two column Table type named 0055:



ERROR MESSAGE: [No error message present]

INFORMATION: This instruction covers how you get Table to drive vertically (upwards/downwards) again in case it is stuck.

HOW THE AFFECTED FUNCTIONALITY IN THE SYSTEM *SHOULD* WORK:

When powered on it should always be possible to maneuver Table up and down from handle bar and foot pedal. It is not depending on certain modes or protocol settings.

SYMPTOMS OF THIS ERROR:

It is not possible to drive Table up or down.

There are no error messages appearing in the tube display or in the imaging system.

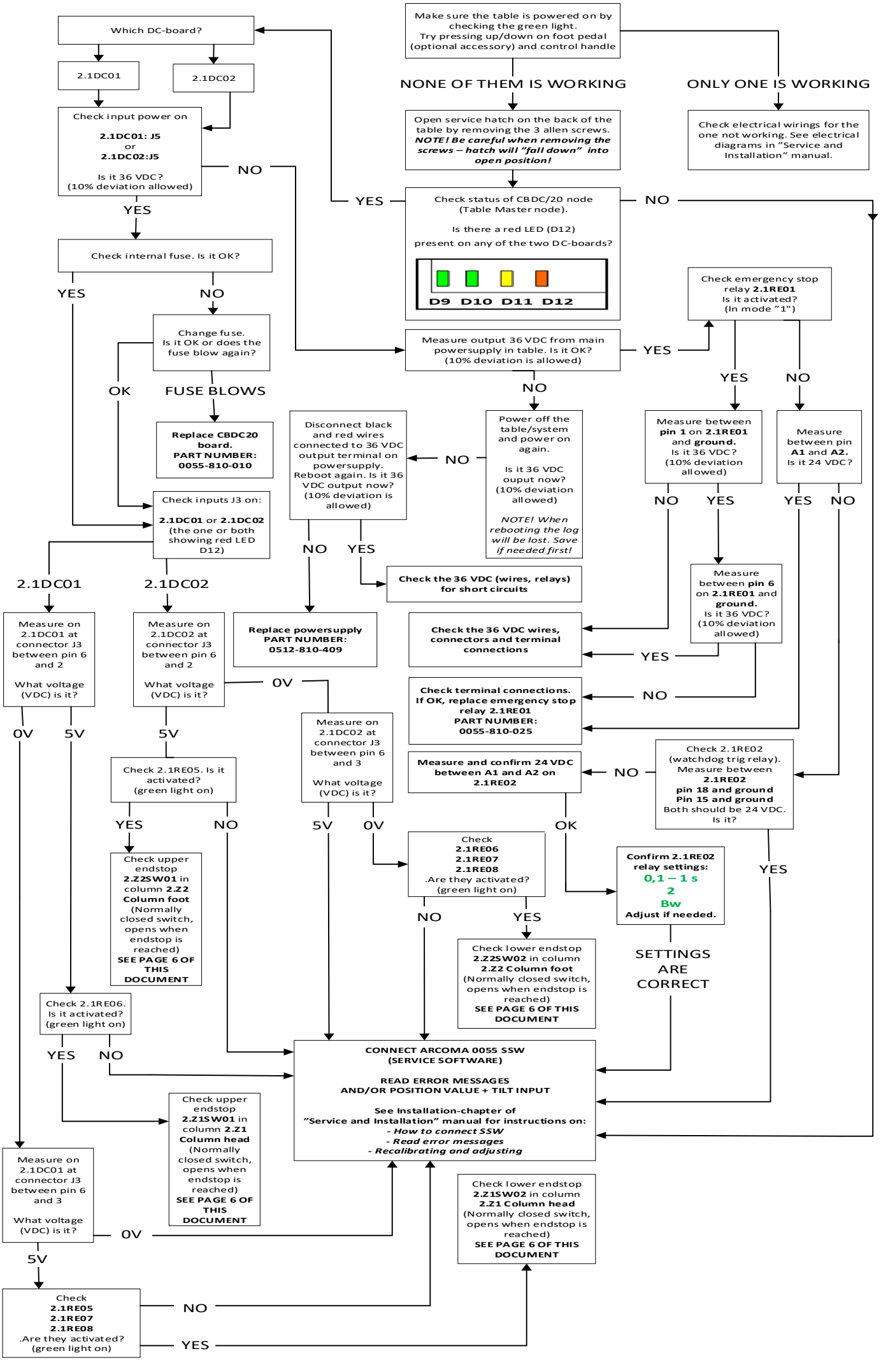
POSSIBLE CAUSES:

- Incorrect mechanical/electrical inputs or calibration
- Issue with control and drive nodes
- Power supply or motor power problems

ACTION STEPS:

See and follow the flow chart on next page to determine first steps and how to proceed.

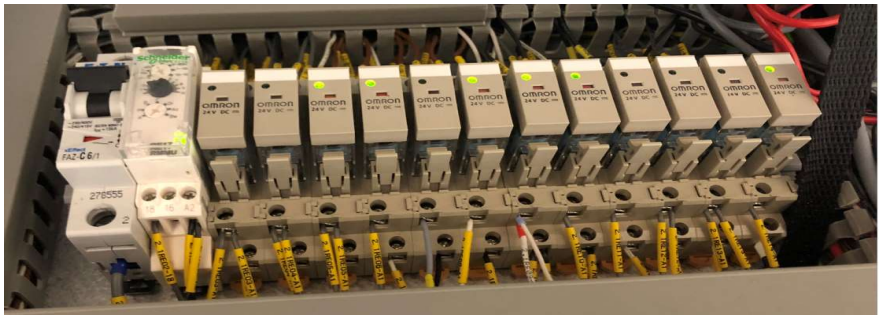
The flow chart is followed by reference pictures and explanations.


Make sure the table is powered on by checking the green light.
Try pressing up/down on foot pedal (optional accessory) and control handle
NONE OF THEM IS WORKING
ONLY ONE IS WORKING
Check electrical wirings for the one not working. See electrical diagrams in "Service and Installation" manual.
Open service hatch on the back of the table by removing the 3 allen screws.
NOTE! Be careful when removing the screws – hatch will "fall down" into open position!
Check status of CBDC/20 node (Table Master node).
Is there a red LED (D12) present on any of the two DC-boards?
D9 D10 D11 D12
YES
NO
Which DC-board?
2.1DC01
2.1DC02
Check input power on
2.1DC01: J5
or
2.1DC02:J5
Is it 36 VDC?
(10% deviation allowed)
NO
YES
Check internal fuse. Is it OK?
YES
NO
Change fuse.
Is it OK or does the fuse blow again?
OK
FUSE BLOWS
Replace CBDC20 board.
PART NUMBER:
0055-810-010
Measure output 36 VDC from main powersupply in table. Is it OK?
(10% deviation is allowed)
YES
NO
Check emergency stop relay 2.1RE01
Is it activated?
(In mode "1")
YES
NO
Power off the table/system and power on again.
Is it 36 VDC ouput now?
(10% deviation allowed)
NOTE! When rebooting the log will be lost. Save if needed first!
NO
Disconnect black and red wires connected to 36 VDC output terminal on powersupply. Reboot again. Is it 36 VDC output now?
(10% deviation is allowed)
NO
YES
Measure between pin 1 on 2.1RE01 and ground.
Is it 36 VDC?
(10% deviation allowed)
NO
YES
Measure between pin A1 and A2.
Is it 24 VDC?
YES
NO
Measure between pin 6 on 2.1RE01 and ground.
Is it 36 VDC?
(10% deviation allowed)
YES
Check inputs J3 on:
2.1DC01 or 2.1DC02
(the one or both showing red LED D12)
Check the 36 VDC (wires, relays) for short circuits
Check the 36 VDC wires, connectors and terminal connections
Check terminal connections. If OK, replace emergency stop relay 2.1RE01
PART NUMBER:
0055-810-025
NO
Replace powersupply
PART NUMBER:
0512-810-409
2.1DC01
2.1DC02
Measure on 2.1DC01 at connector J3 between pin 6 and 2
What voltage (VDC) is it?
0V
5V
Measure on 2.1DC02 at connector J3 between pin 6 and 2
What voltage (VDC) is it?
0V
5V
Measure on 2.1DC02 at connector J3 between pin 6 and 3
What voltage (VDC) is it?
5V
0V
Check 2.1RE05. Is it activated?
(green light on)
YES
NO
Check upper endstop 2.Z2SW01 in column 2.Z2 Column foot
(Normally closed switch, opens when endstop is reached)
SEE PAGE 6 OF THIS DOCUMENT
Measure and confirm 24 VDC between A1 and A2 on 2.1RE02
NO
Check 2.1RE02 (watchdog trig relay).
Measure between
2.1RE02
pin 18 and ground
Pin 15 and ground
Both should be 24 VDC.
Is it?
YES
OK
Check
2.1RE06
2.1RE07
2.1RE08
.Are they activated?
(green light on)
NO
YES
Check lower endstop 2.Z2SW02 in column 2.Z2 Column foot
(Normally closed switch, opens when endstop is reached)
SEE PAGE 6 OF THIS DOCUMENT
Confirm 2.1RE02 relay settings:
0,1 – 1 s
2
Bw
Adjust if needed.
SETTINGS ARE CORRECT
Check 2.1RE06.
Is it activated?
(green light on)
YES
NO
CONNECT ARCOMA 0055 SSW (SERVICE SOFTWARE)
READ ERROR MESSAGES AND/OR POSITION VALUE + TILT INPUT
See Installation-chapter of "Service and Installation" manual for instructions on:
- How to connect SSW
- Read error messages
- Recalibrating and adjusting
Check upper endstop 2.Z1SW01 in column 2.Z1 Column head
(Normally closed switch, opens when endstop is reached)
SEE PAGE 6 OF THIS DOCUMENT
Measure on 2.1DC01 at connector J3 between pin 6 and 3
What voltage (VDC) is it?
0V
5V
Check lower endstop 2.Z1SW02 in column 2.Z1 Column head
(Normally closed switch, opens when endstop is reached)
SEE PAGE 6 OF THIS DOCUMENT
Check
2.1RE05
2.1RE07
2.1RE08
.Are they activated?
(green light on)
NO
YES

RELAY OVERVIEW – normal behavior when table is working OK:

NOTE! ***2.1RE02*** *is always flashing (indicating received watchdog/pulse messages from CBDC node).*

WHEN IN IDLE:



Relays ON:

5, 6, 8, 9, 10, 14

Relays OFF:

3, 4, 7, 11, 12, 13

WHEN DRIVING UPWARDS:

Relays ON:

5, 6, 7, 8, 9, 10, 12, 13, 14

Relays OFF:

3, 4

WHEN DRIVING DOWNWARDS:

Relays ON:

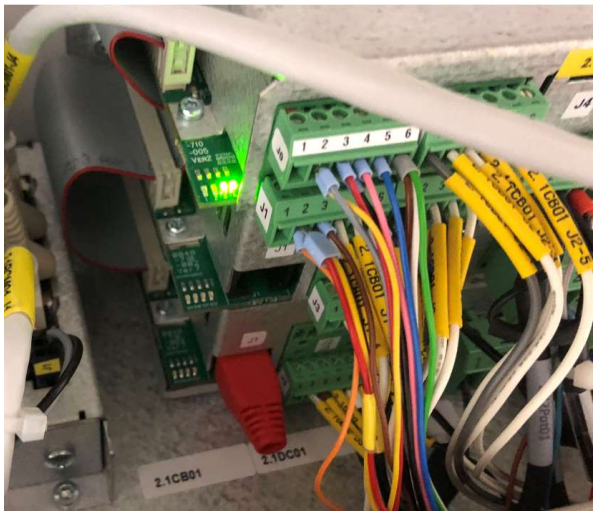
5, 6, 7, 8, 9, 10, 12, 13, 14

Relays OFF:

3, 4

CBDC (Table master node) LED OVERVIEW – normal behavior when table is working OK:

WHEN IN IDLE:

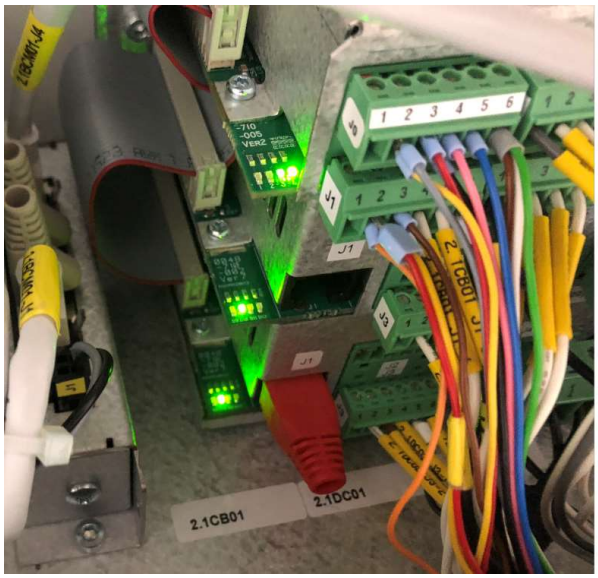


CB01 LEDS: *D1=OFF, D2=OFF, D3=FLASHING, D4=ON*

DC01 LEDS*:* *ALL OFF*

DC02 LEDS: *ALL OFF*

WHEN DRIVING UPWARDS / DOWNWARDS:



CB01 LEDS: *D1=OFF, D2=OFF, D3=FLASHING, D4=ON*

DC01 LEDS: *D10 ON*

DC02 LEDS: *D10 ON*

COLUMNT HEAD/FOOT – CHECK THE ENDS STOP MICROSWITCHES

COLUMN HEAD

Measure 2.Z1SW01 and 2.Z1SW02 by unplugging connector 2.ZJ02 and check continuity between pin 3 and 4 and 3 and 5. It should be closed circuits when table is in a normal state.

See below drawing for reference.

COLUMN FOOT

Measure 2.Z2SW01 and 2.Z2SW02 by unplugging connector 2.ZJ02 and check continuity between pin 3 and 4 and 3 and 5. It should be closed circuits when table is in a normal state.

See below drawing for reference.

REPLACING A COLUMN

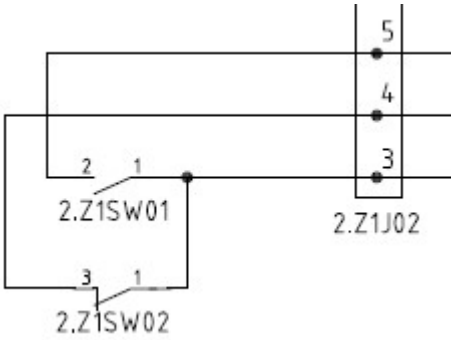
The microswitches should never be activated during normal operation.
This since the software endstops should be calibrated to stop movement before they are reached.

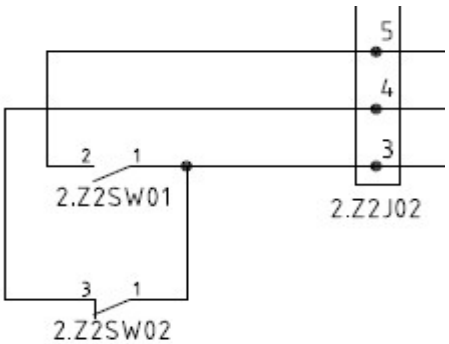
To exclude the possibility that it is a damaged cable or connector causing the open circuit, try jumper between pin 3 and 4 or 5 on connector 2.Z1J02 or 2.Z2J02 depending on which column and microswitch you suspect. If you then can drive the column you know for sure the switch inside is causing the issue = you will have to replace the column.

NOTE! *Be cautious when using a jumper to override safety circuit of the column.*
If you find the column in a position near the upper endstop, drive downwards and vice versa.

Part number for Column "Foot" is 0055-810-201 (Table Column Right).

Part number for column "Head" is 0055-810-205 (Table Column Left).





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