CB33 Troubleshooting

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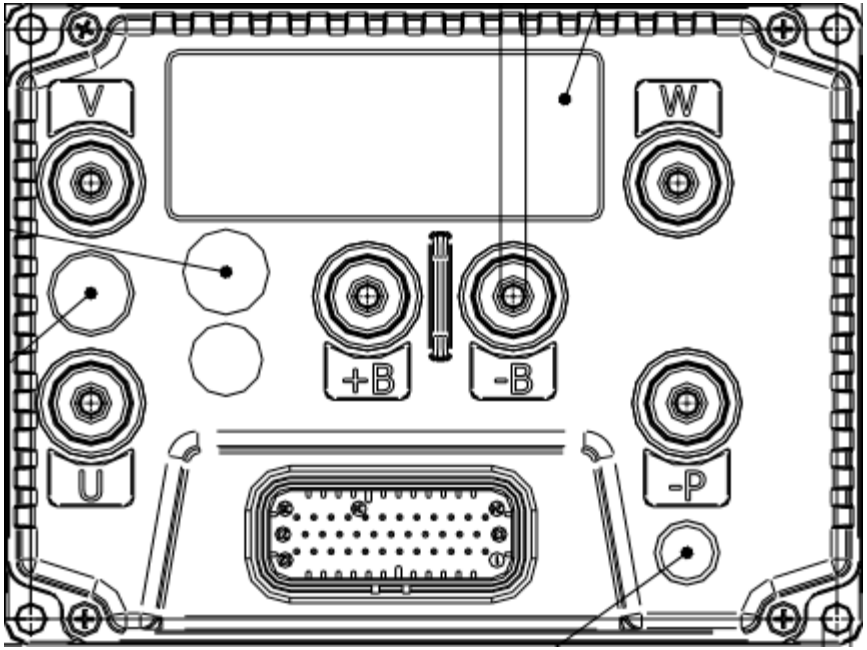
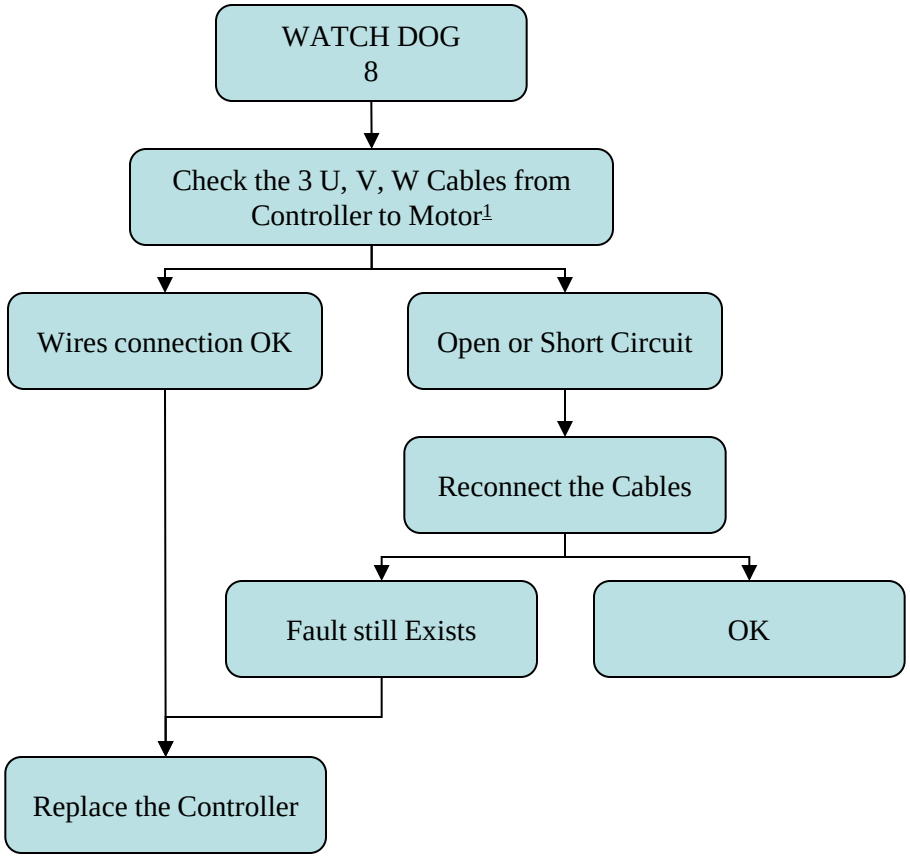
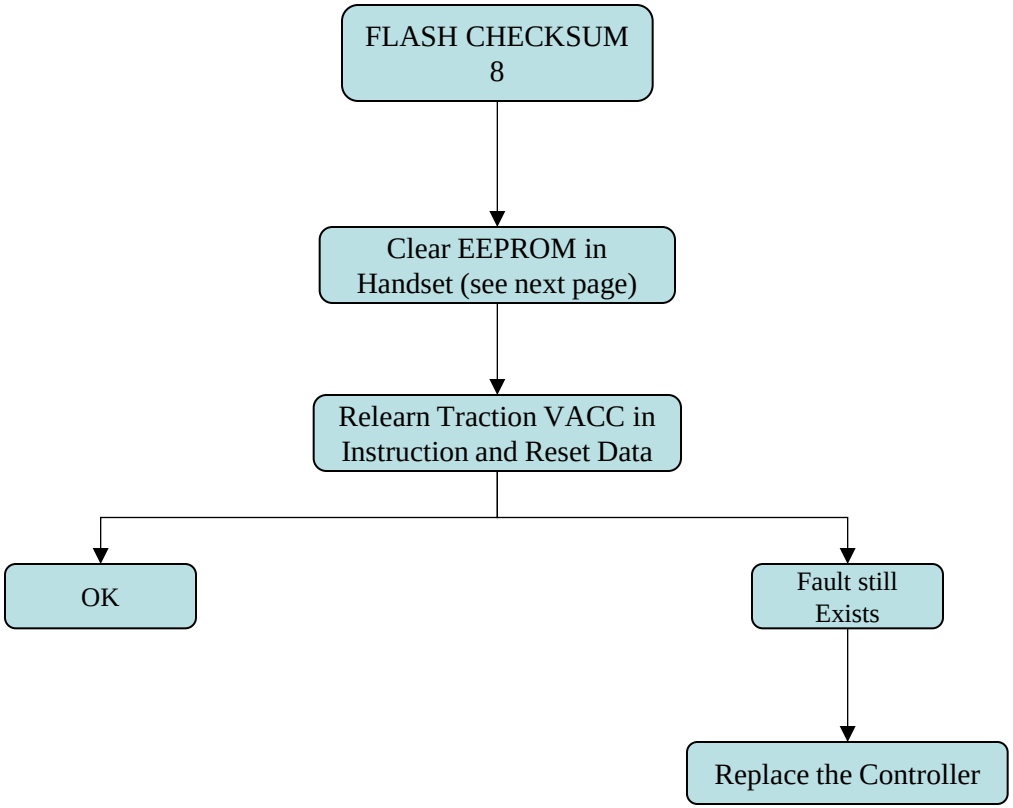
Main Controller



ALARM #8 on NODE #2 WATCH DOG



ALARM #8 on NODE #2 FLASH CHECKSUM



Clear Eeprom in Handset

Turn on ZAPI Handset

Push and hold the power button for 3s

Cons AFG ZP021*

The Display will show:

Press ^ or v button until CAN CONSOLE shows on the display

Cons AFG ZP021*
CAN CONSOLE

The Display will show :

Press OK to go into the CANCONSOLE Menu

The Display will show:

CANCONSOLE
SELECT NODE

Push 》, or 《
To select Node 2

The Display will show:

SELECT NODE
NODE 2

Press OK to go into the
Traction controller

The Display will show:

AD0S2B F6EP0.15
24V 320A 0H

Press OK to go into the
Main Menu

The Display will show:

Main Menu

Press ^ or v button until CLEAR EEPROM on the display

The Display will show:

MAIN MENU
CLEAR EEPROM

Press OK to go into the CLEAR EEPROM function

The Display will ask:
ARE YOU SURE?

ARE YOU SURE?
YES= OK NO=ESC

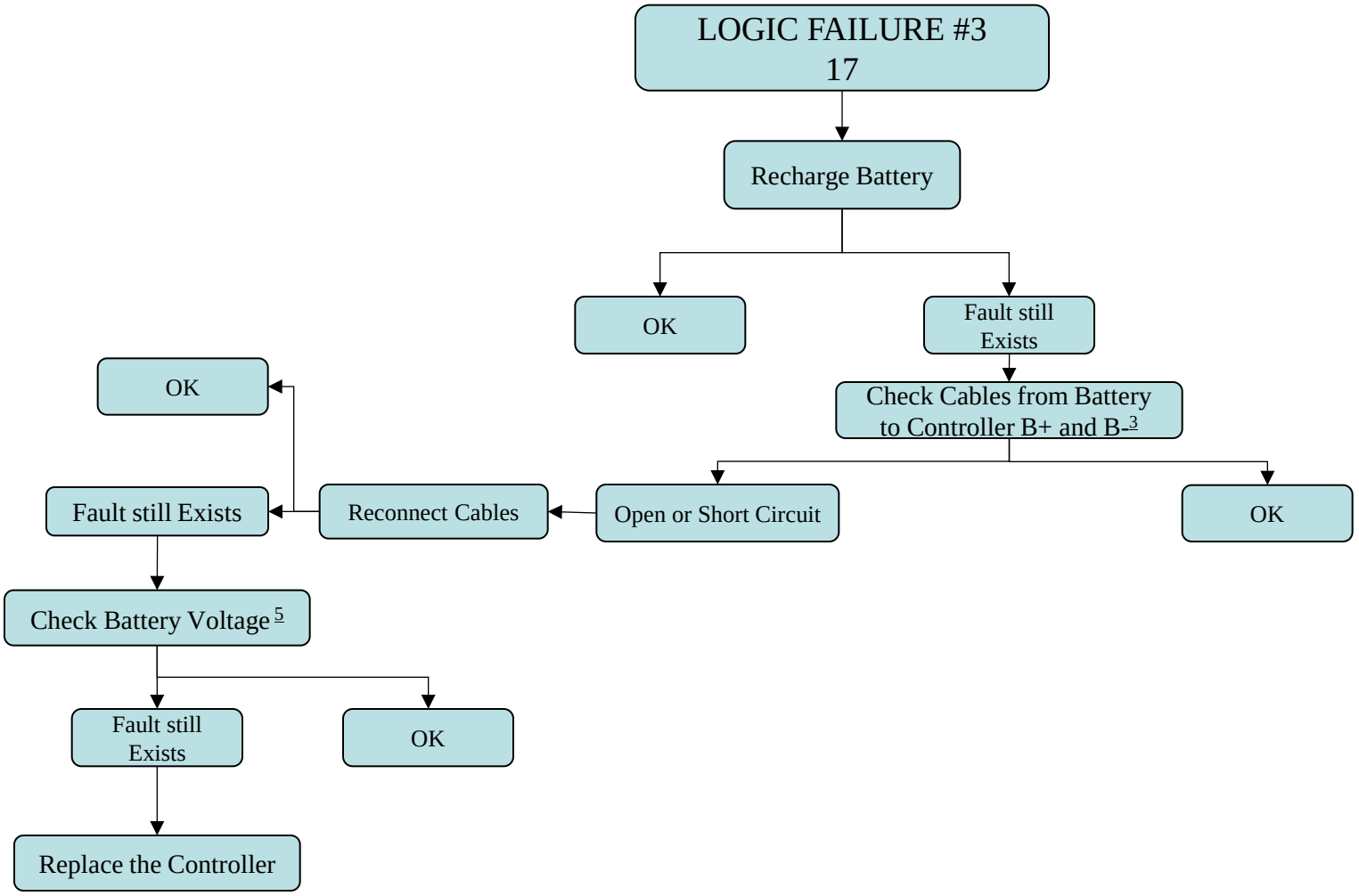
Press OK to CLEAR EEPROM

The display will show:

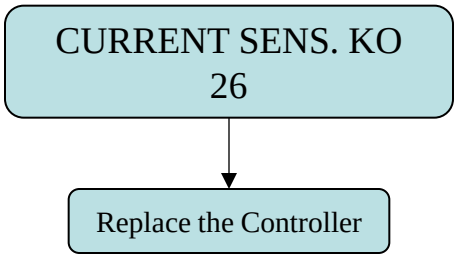
EEPROM CLEARED!
KEY OFF, PLEASE

Rekey truck, and restart handset

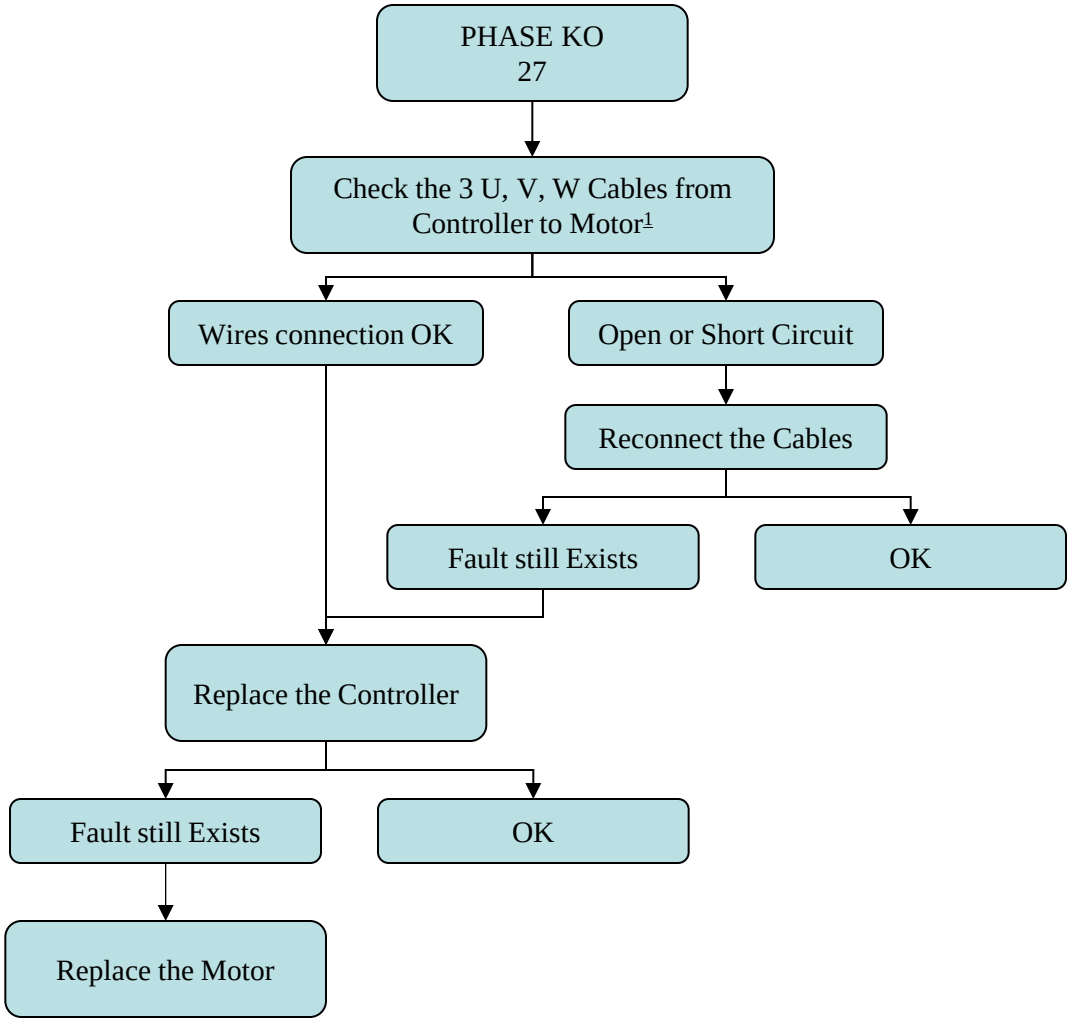
ALARM #17 on NODE #2 LOGIC FAILURE #3



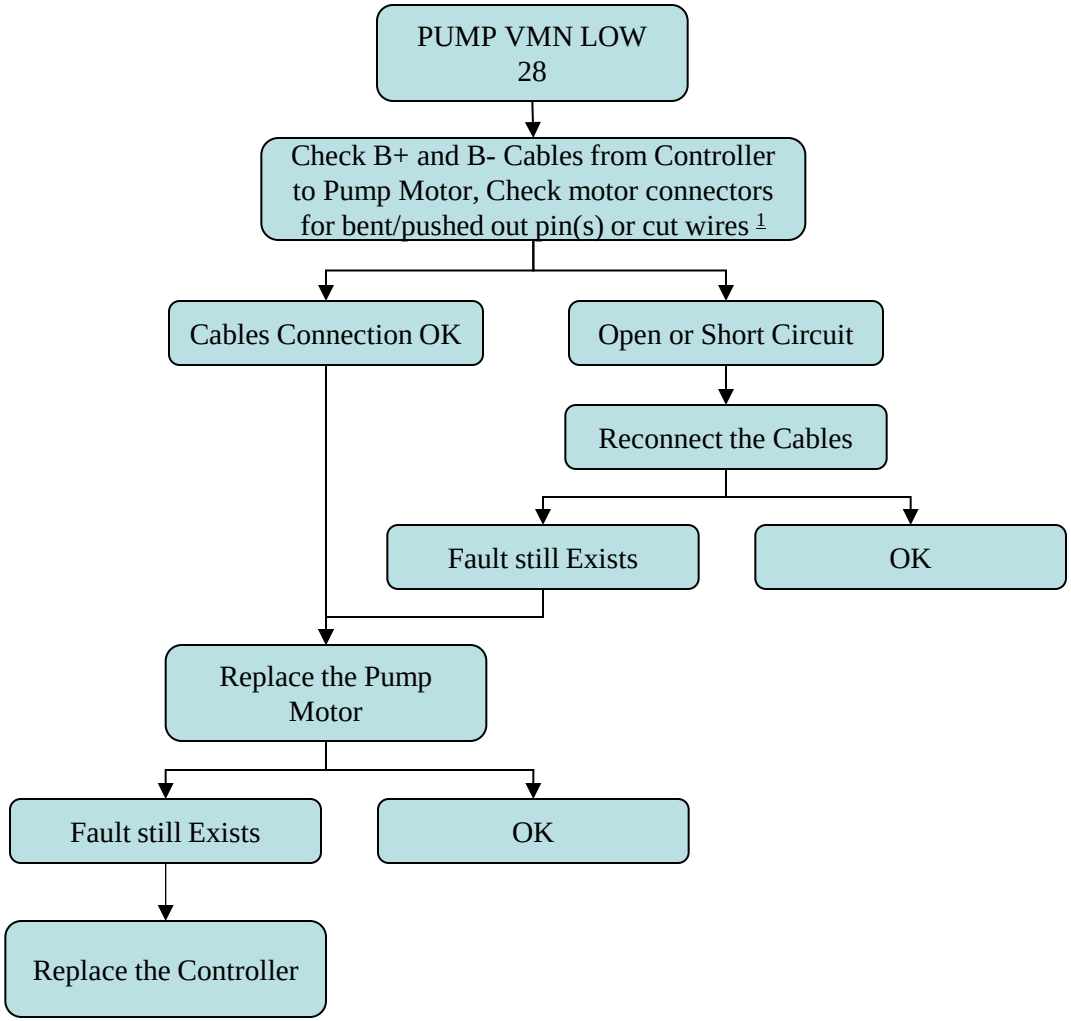
ALARM #26 on NODE #2 CURRENT SENS. KO



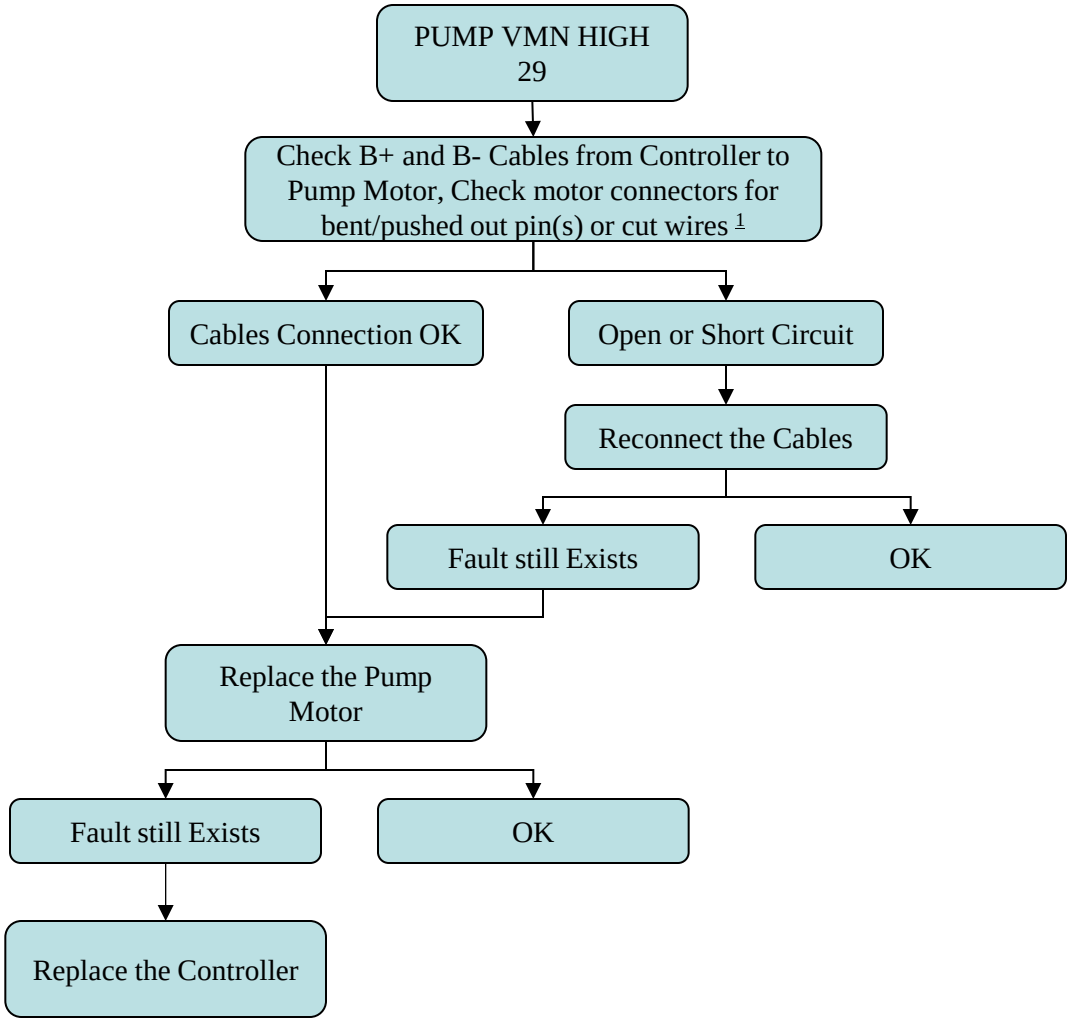
ALARM #27 on NODE #2 PHASE KO



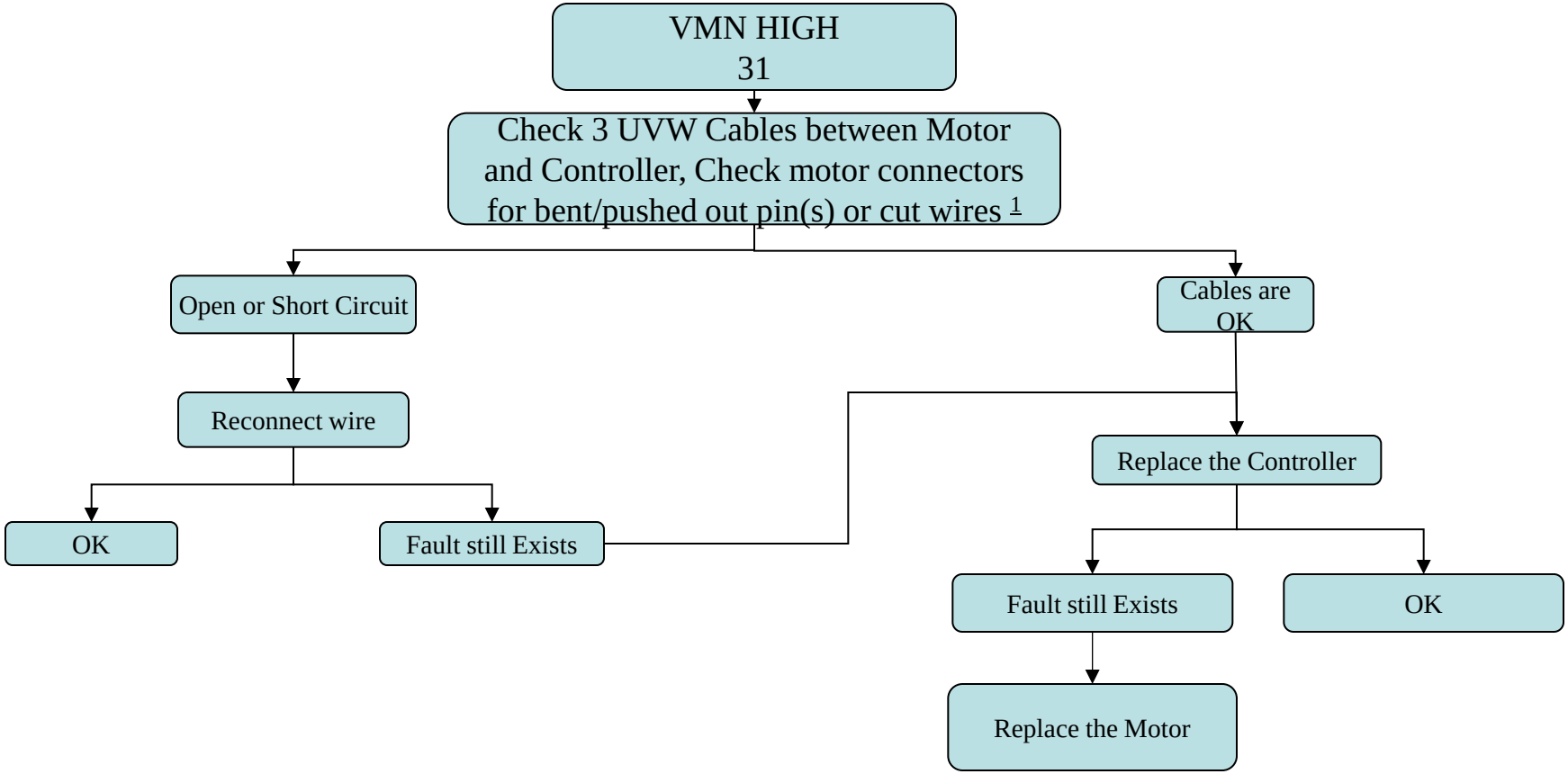
ALARM #28 on NODE #2 PUMP VMN LOW



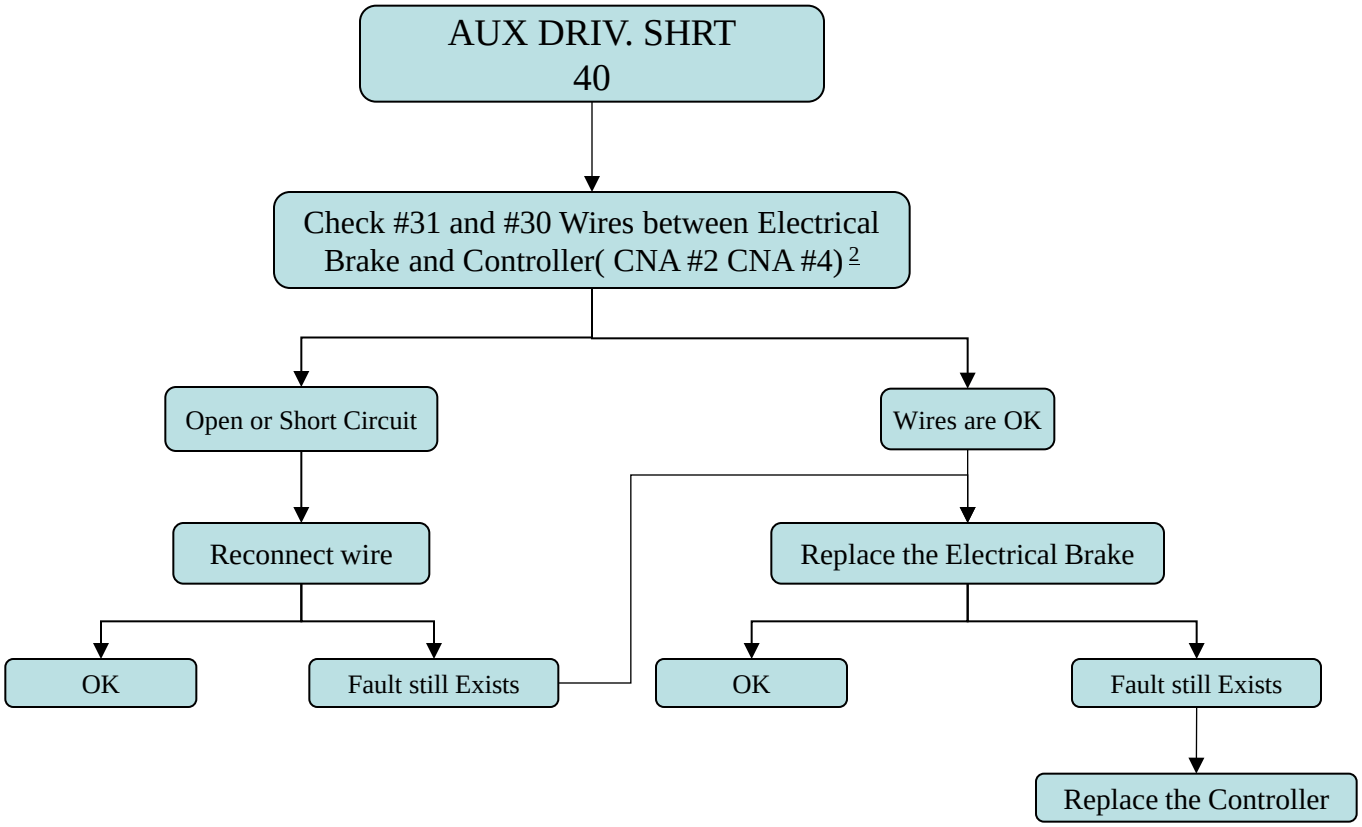
ALARM #29 on NODE #2 PUMP VMN HIGH



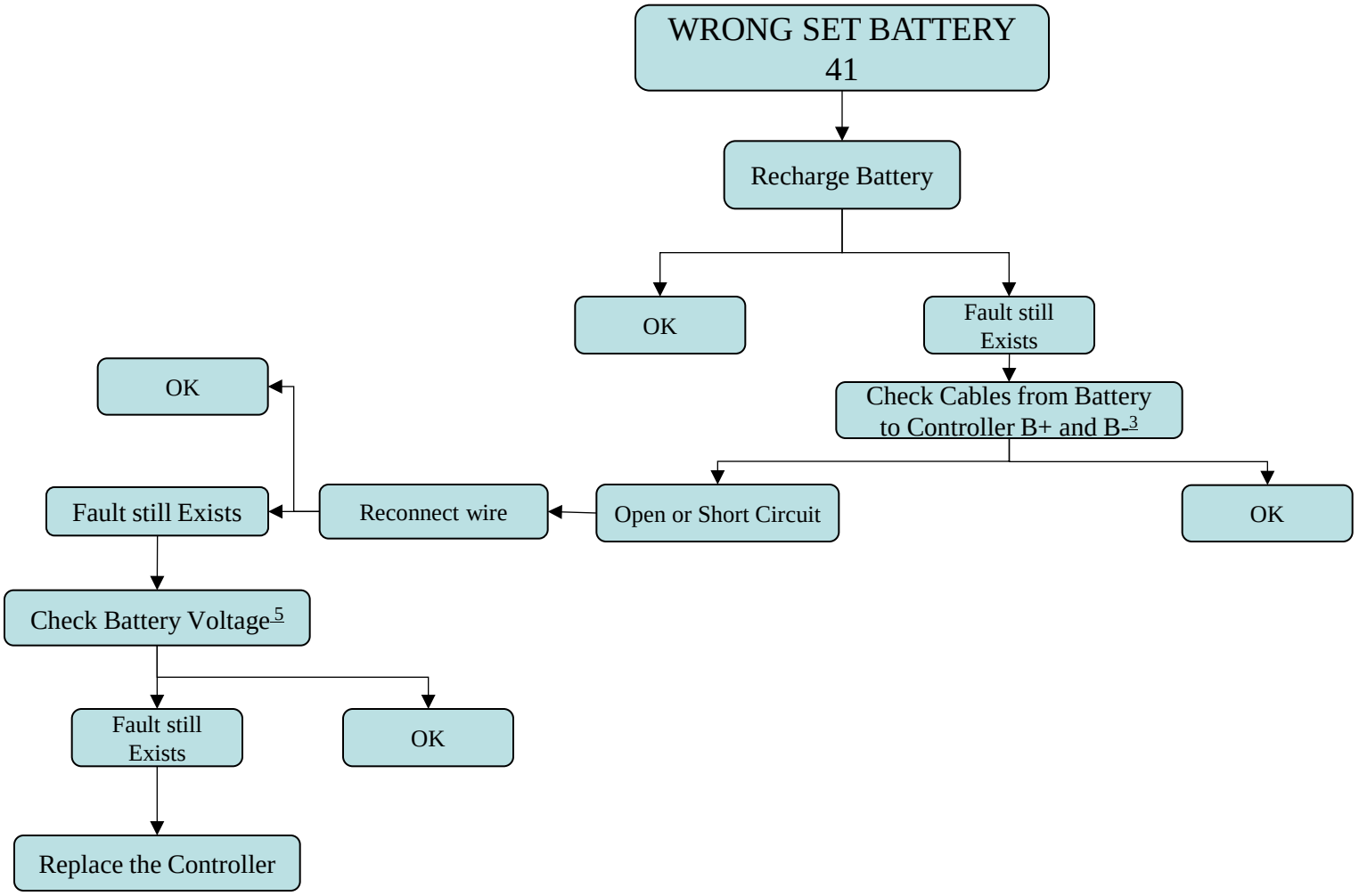
ALARM #31 on NODE #2 VMN HIGH



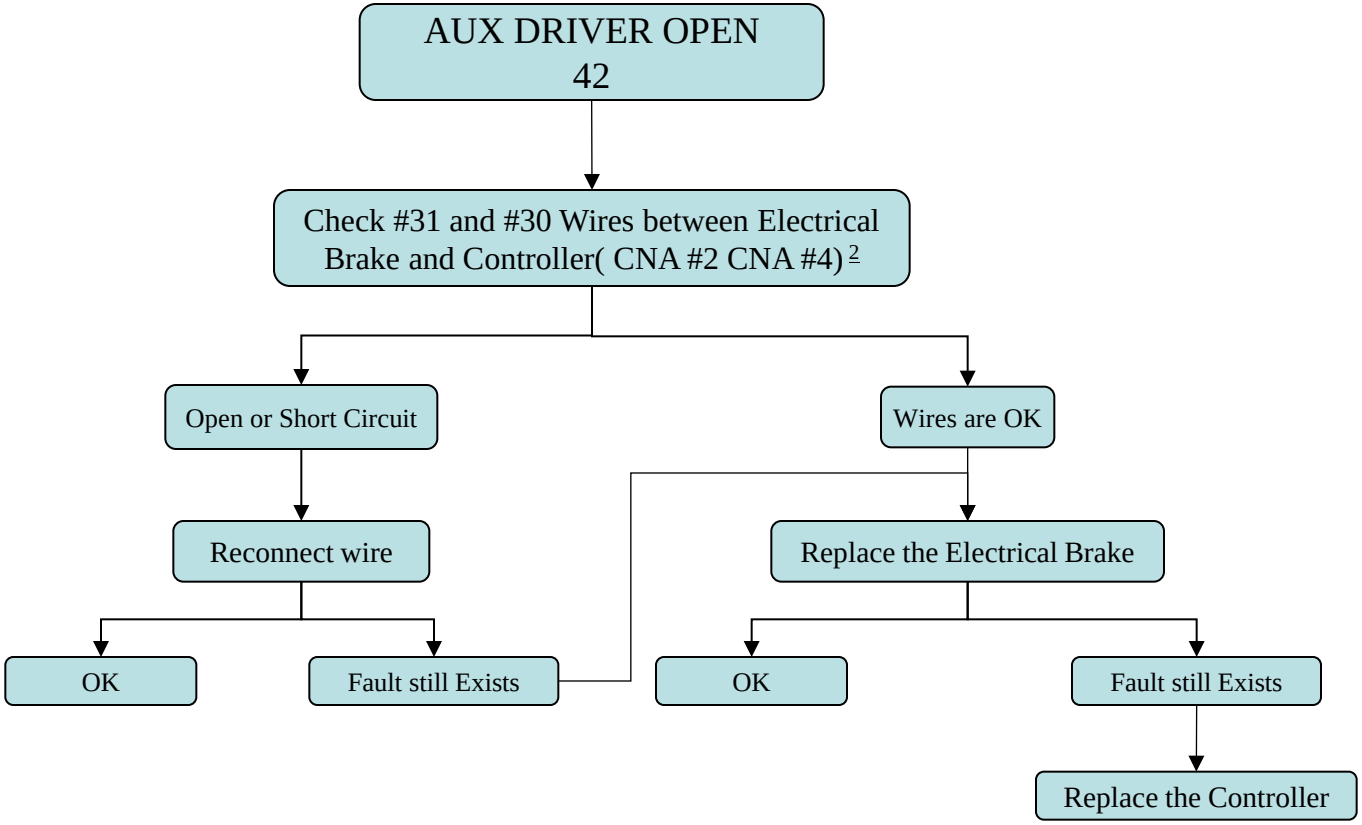
ALARM #40 on NODE #2 AUX DRIV. SHRT.



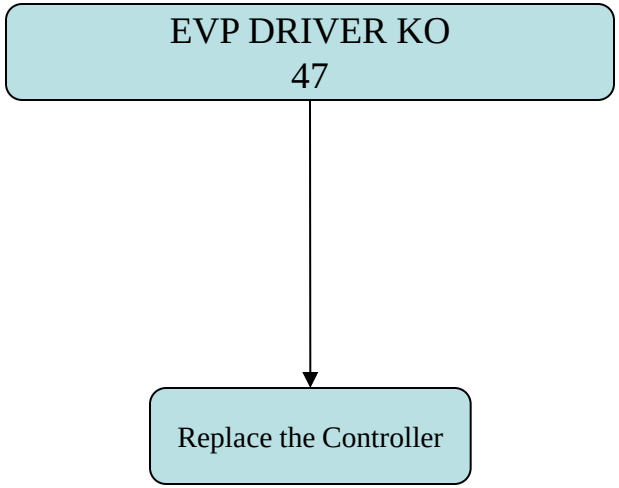
ALARM #41 on NODE #2 WRONG SET BATTERY



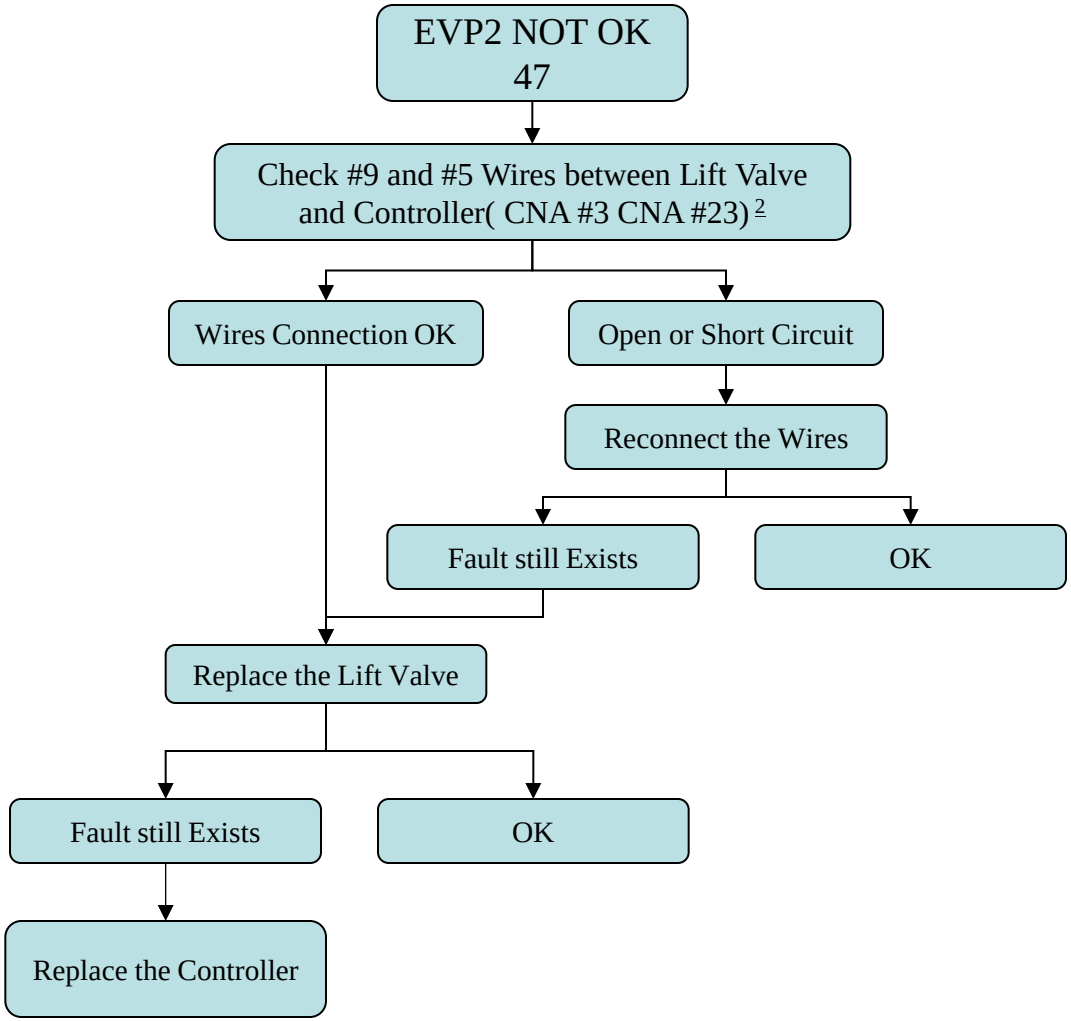
ALARM #42 on NODE #2 AUX DRIVER OPEN



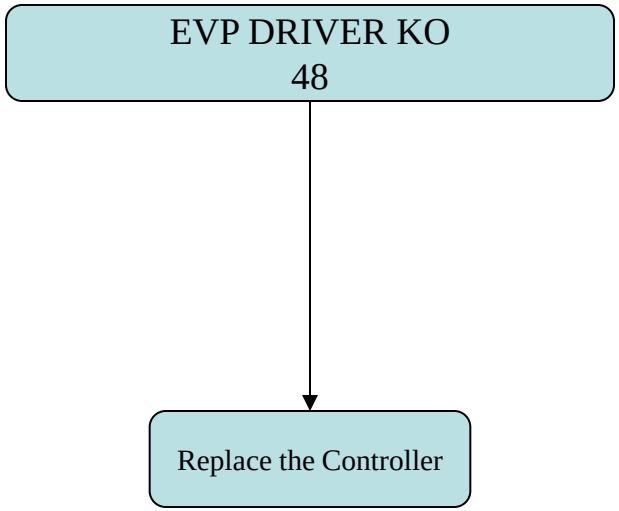
ALARM #47 on NODE #2 EVP2 DRIVER KO



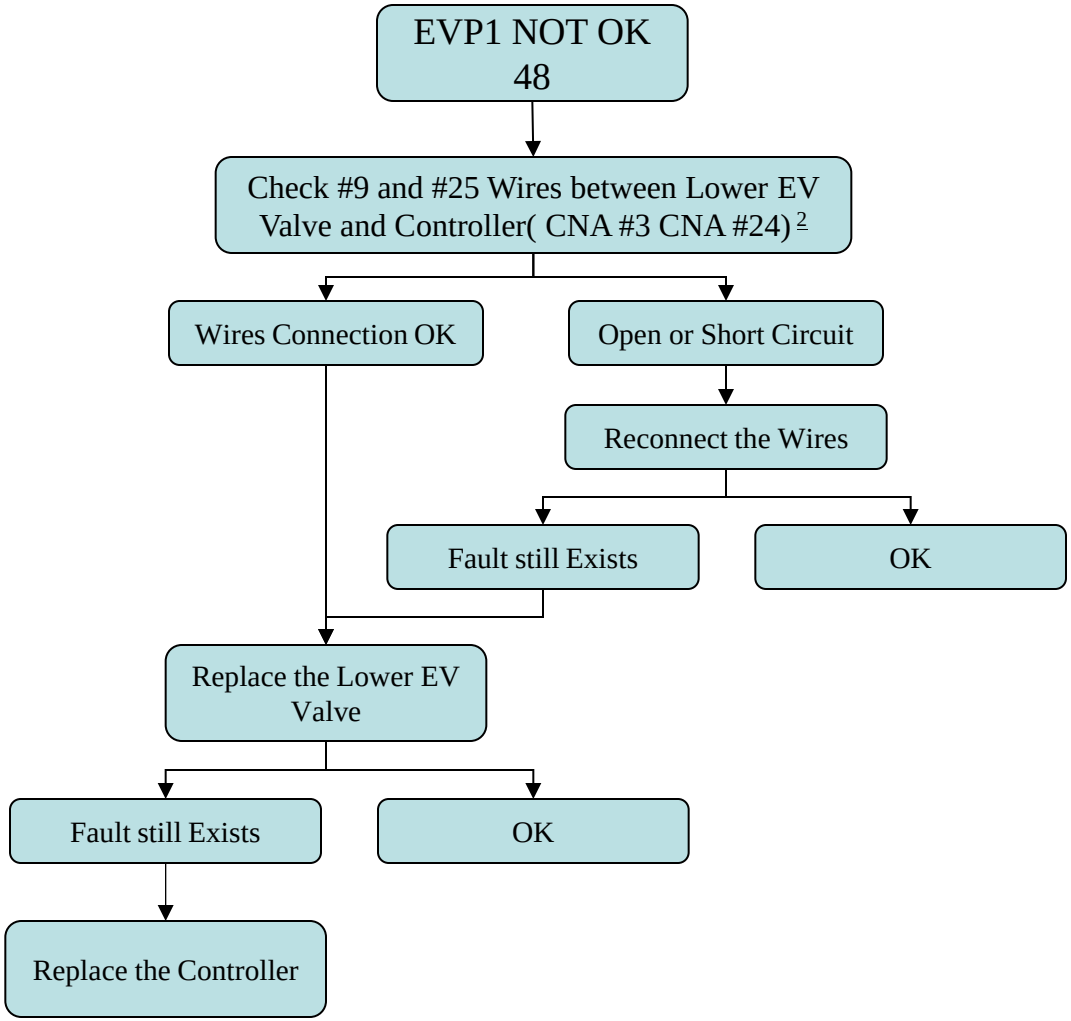
ALARM #47 on NODE #2 EVP2 NOT OK



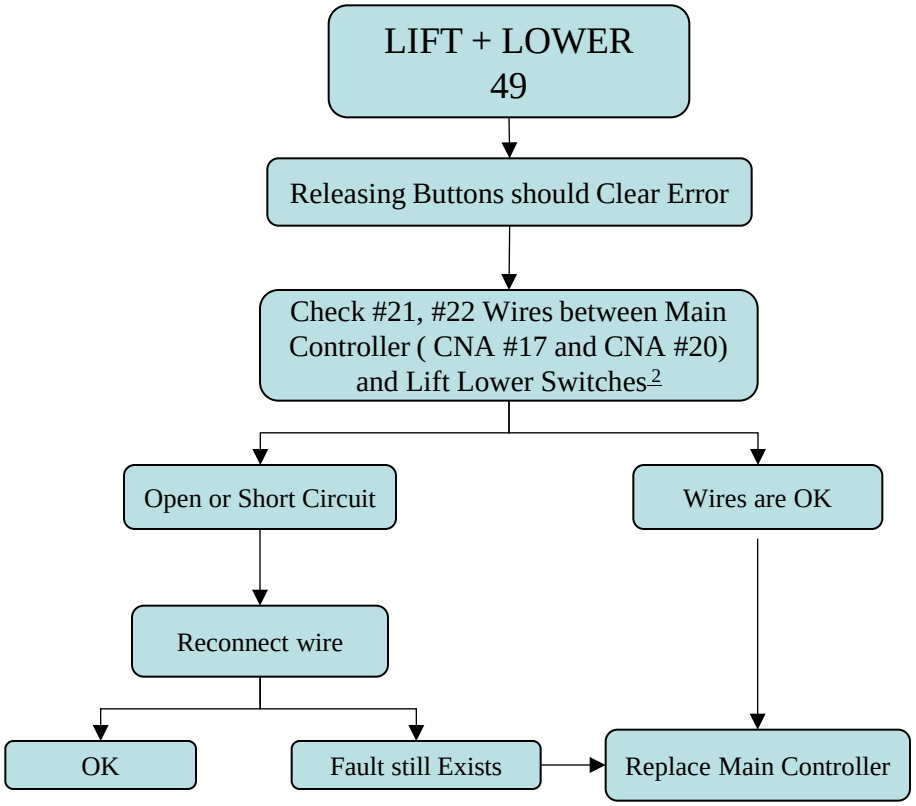
ALARM #48 on NODE #2 EVP DRIVER KO



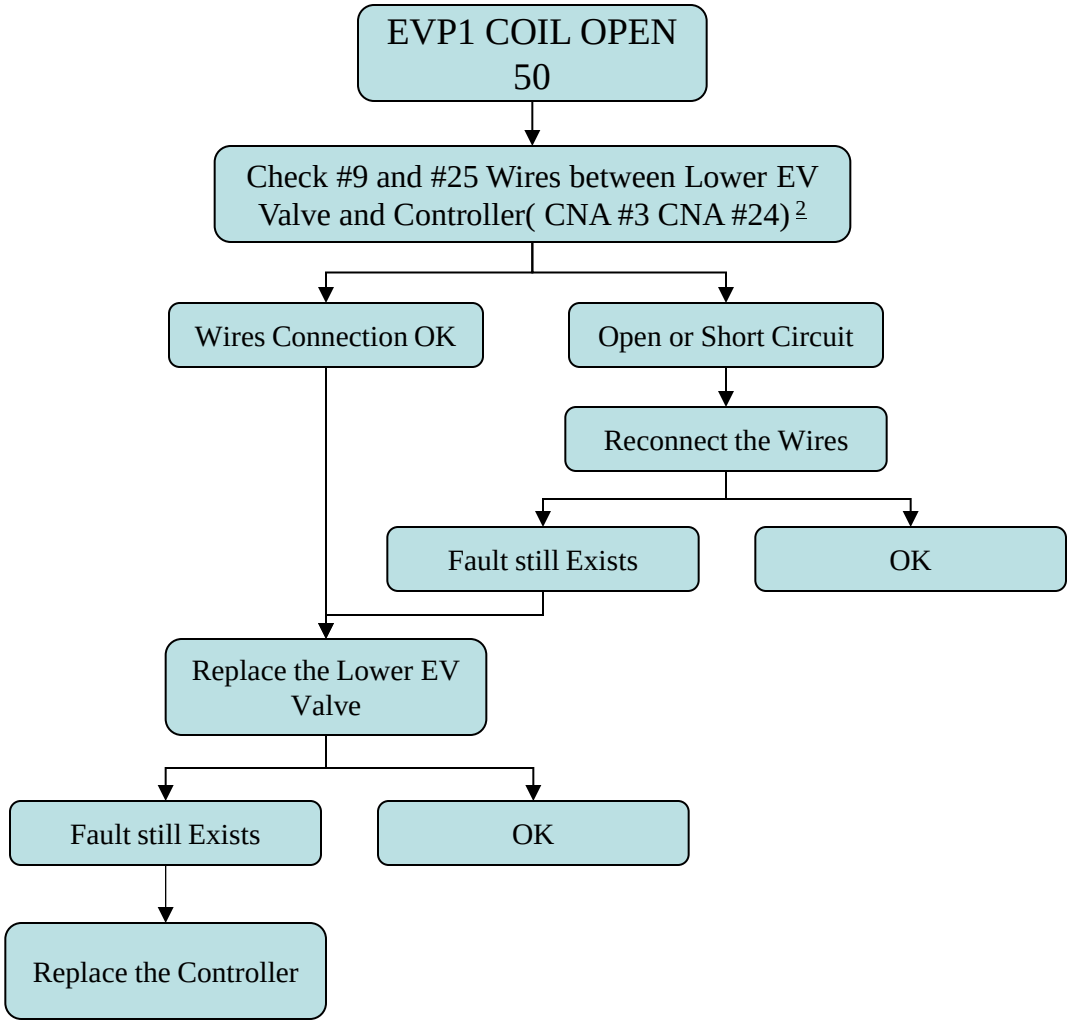
ALARM #48 on NODE #2 EVP1 NOT OK



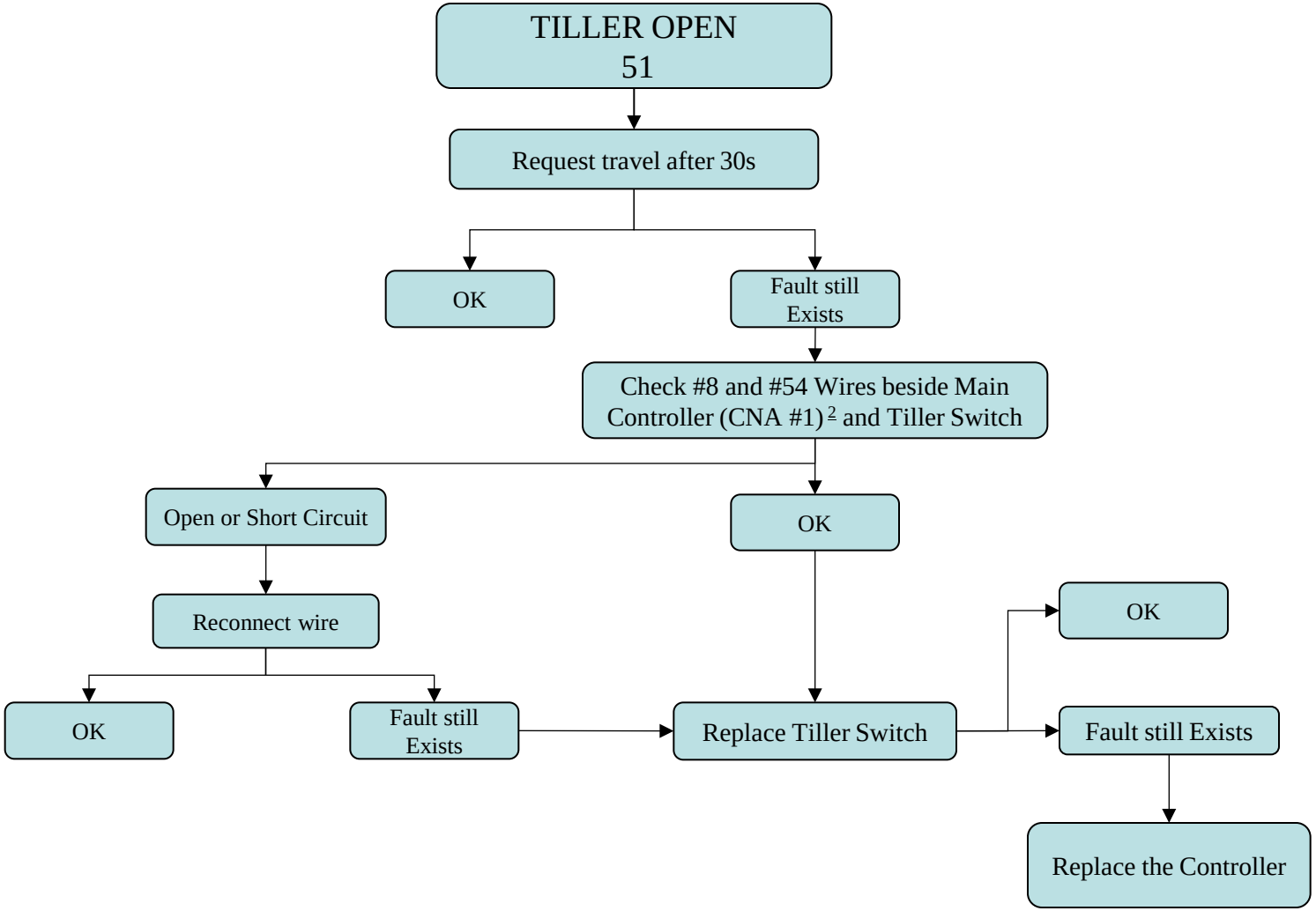
ALARM #49 on NODE #2 LIFT + LOWER



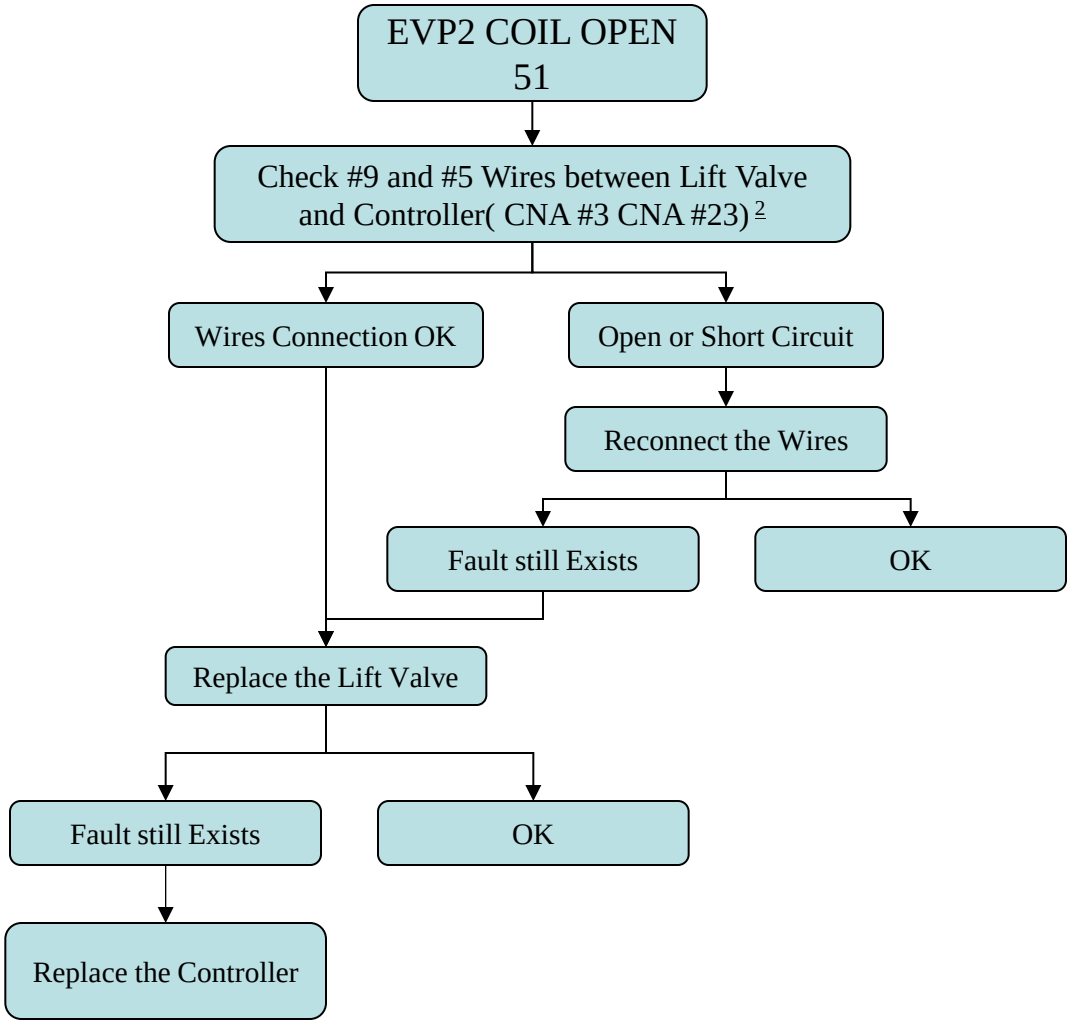
ALARM #50 on NODE #2 EVP1 COIL OPEN



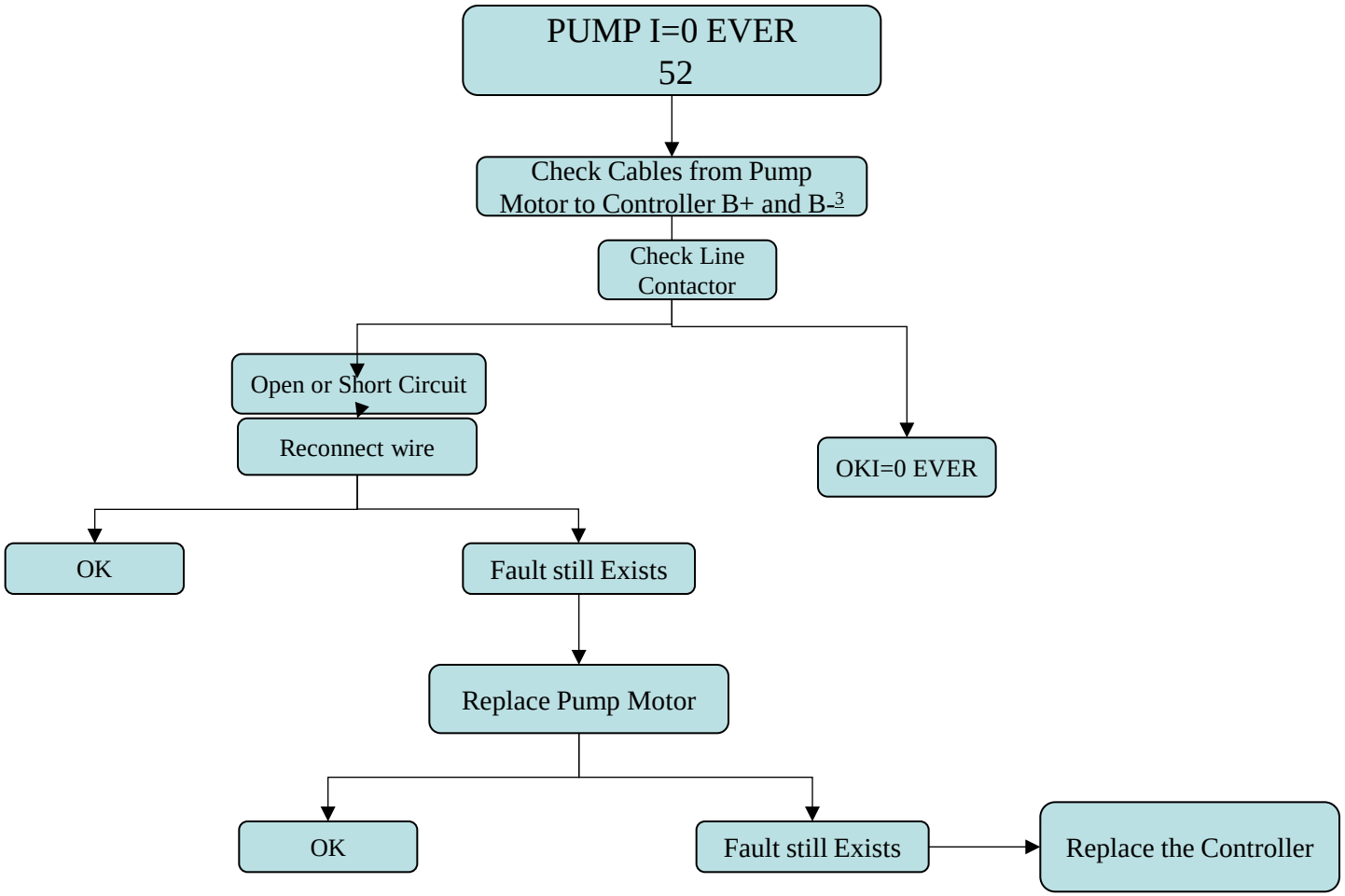
ALARM #51 on NODE #2 TILLER OPEN



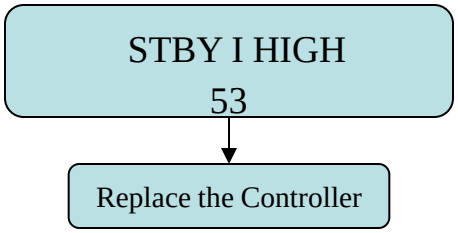
ALARM #51 on NODE #2 EVP2 COIL OPEN



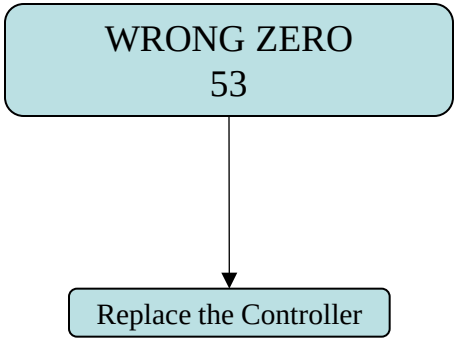
ALARM #52 on NODE #2 PUMP I=0 EVER



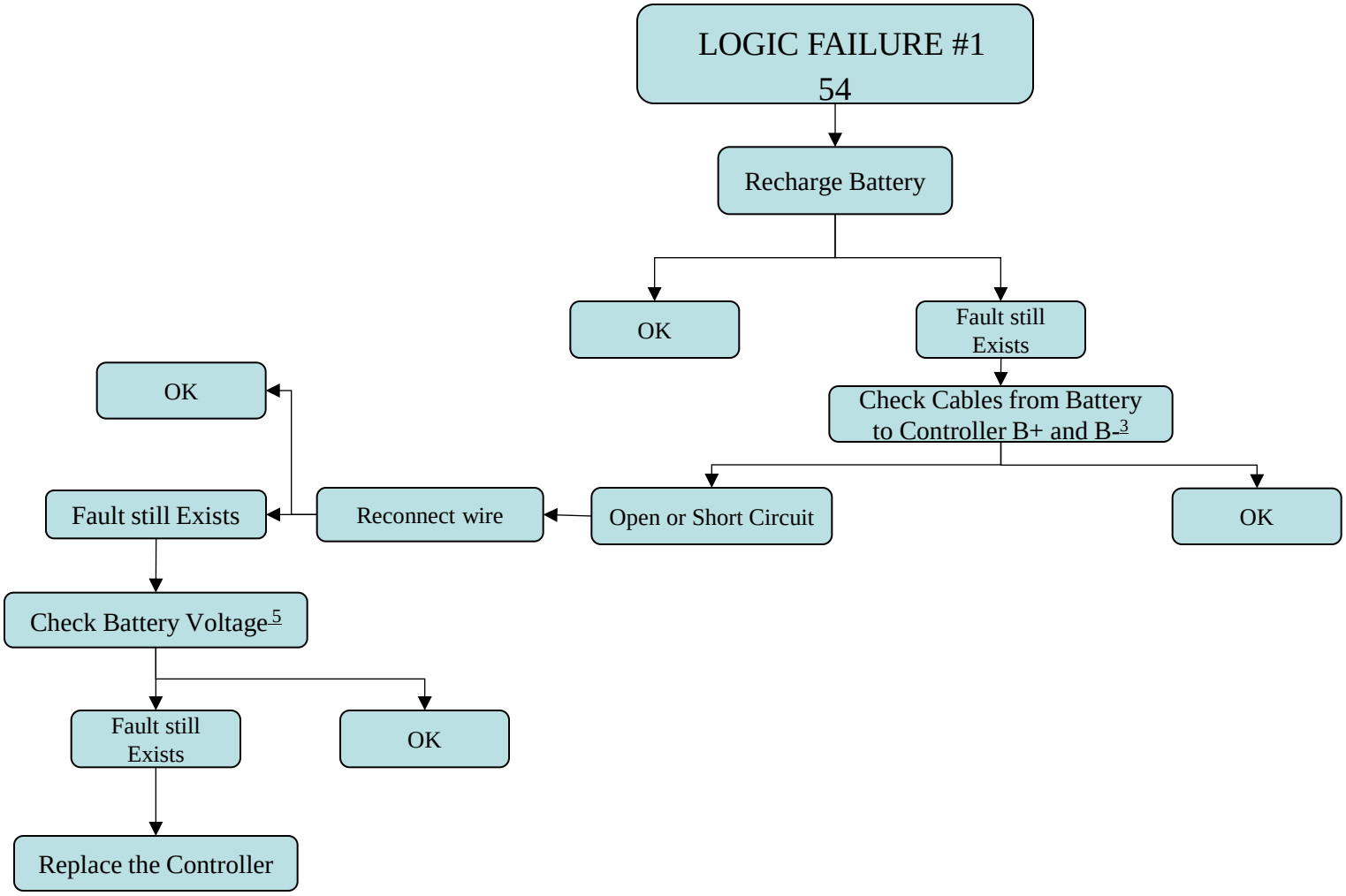
ALARM #53 on NODE #2 STBY I HIGH



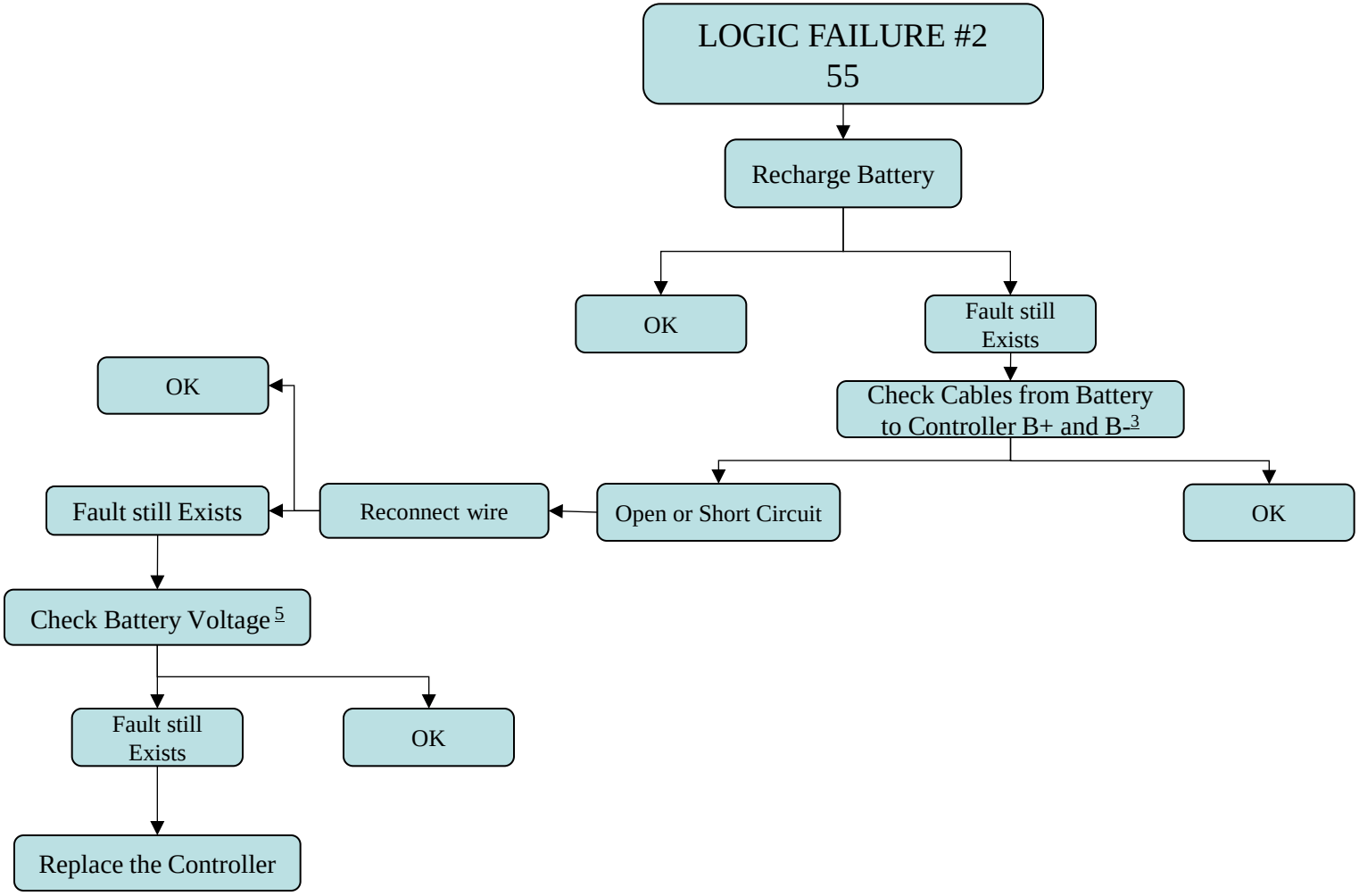
ALARM 53 on NODE #2 WRONG ZERO



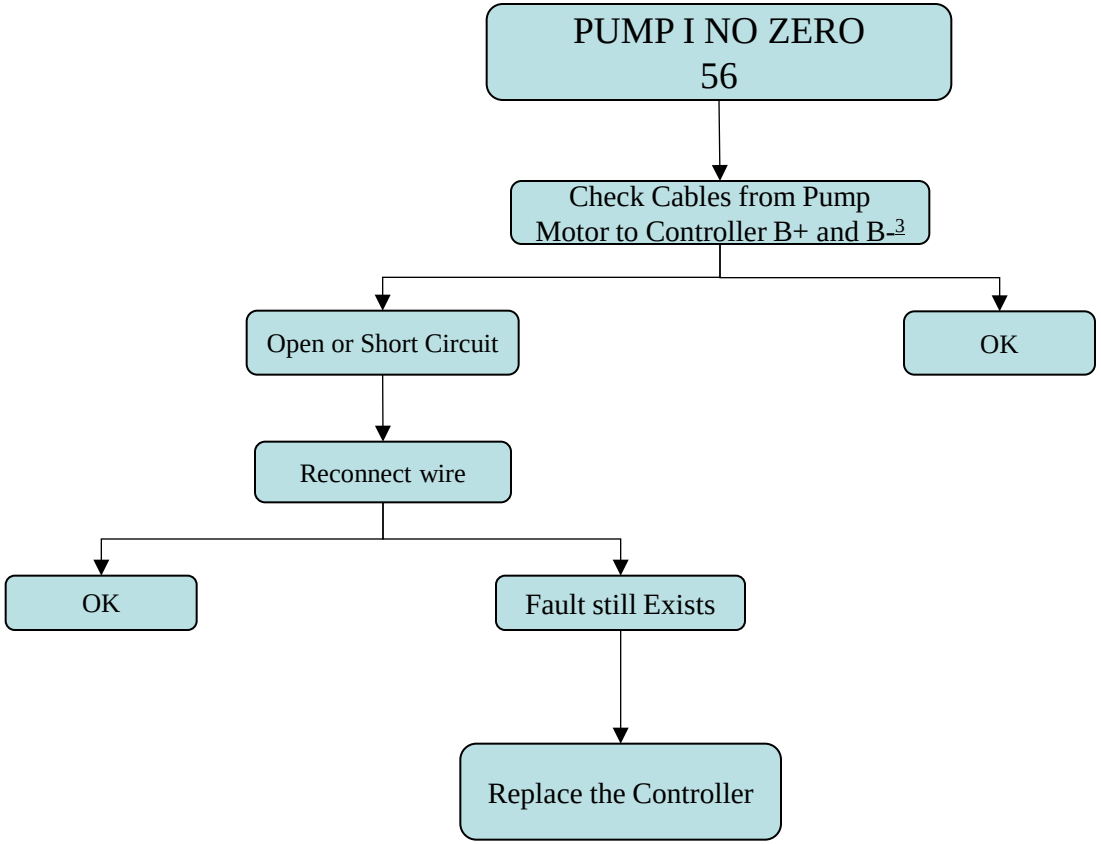
ALARM #54 on NODE #2 LOGIC FAILURE #1



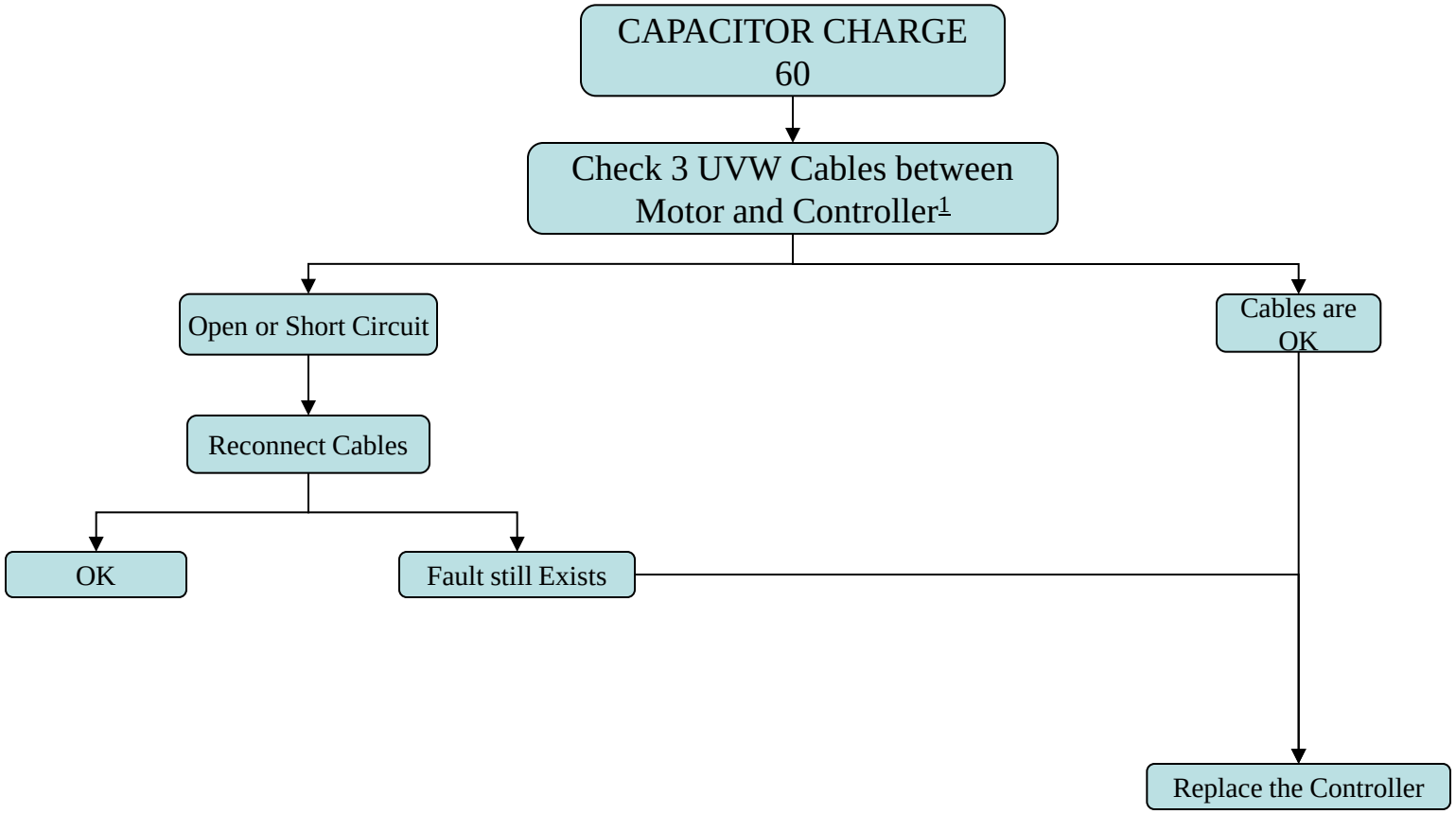
ALARM #55 on NODE #2 LOGIC FAILURE #2



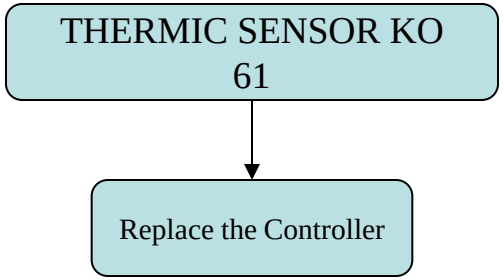
ALARM #56 on NODE #2 PUMP I NO ZERO



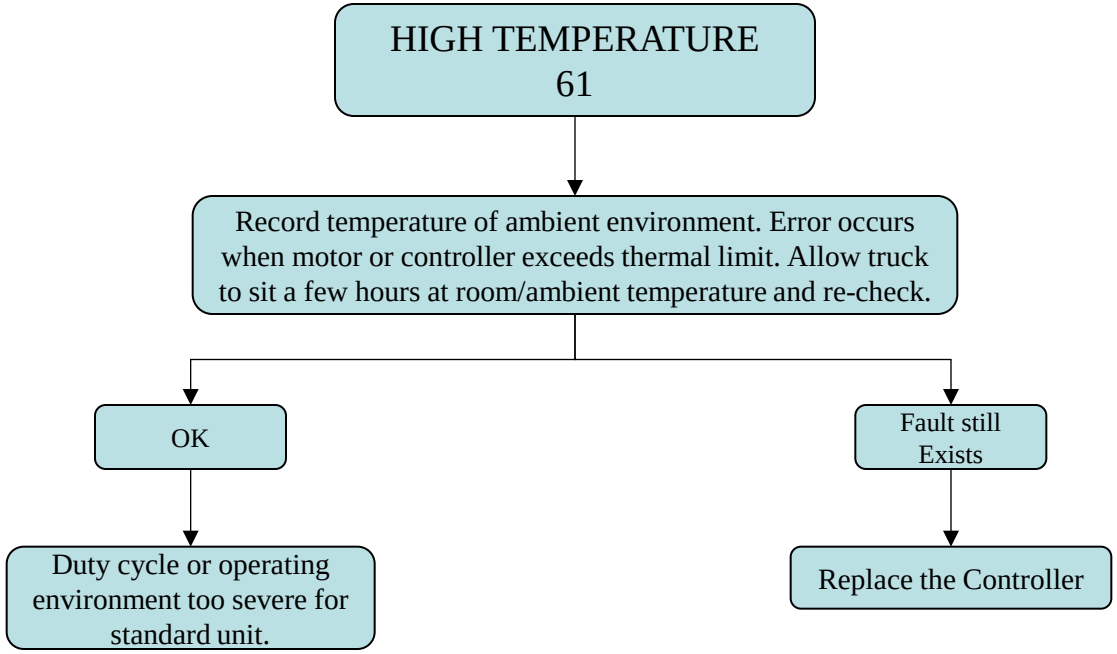
ALARM #60 on NODE #2 CAPACITOR CHARGE



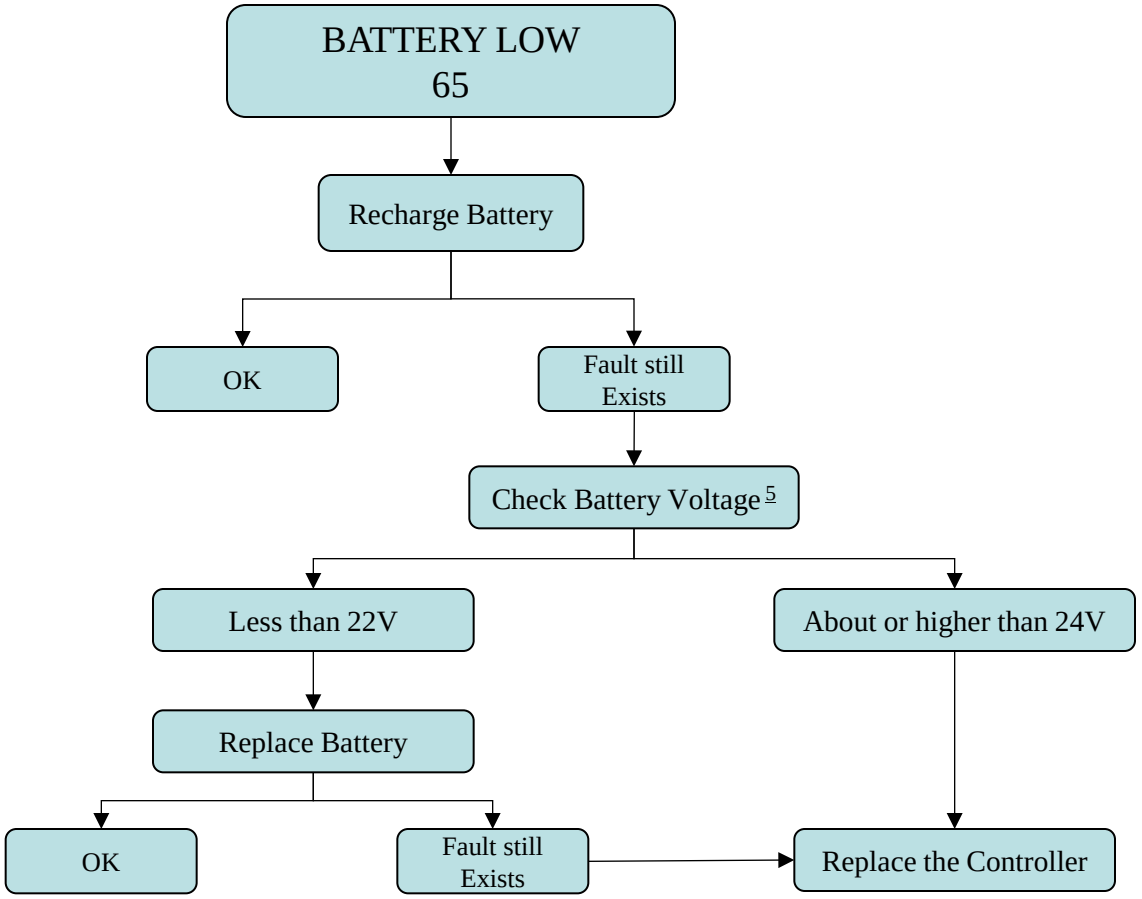
ALARM #61 on NODE #2 THERMIC SENSOR KO



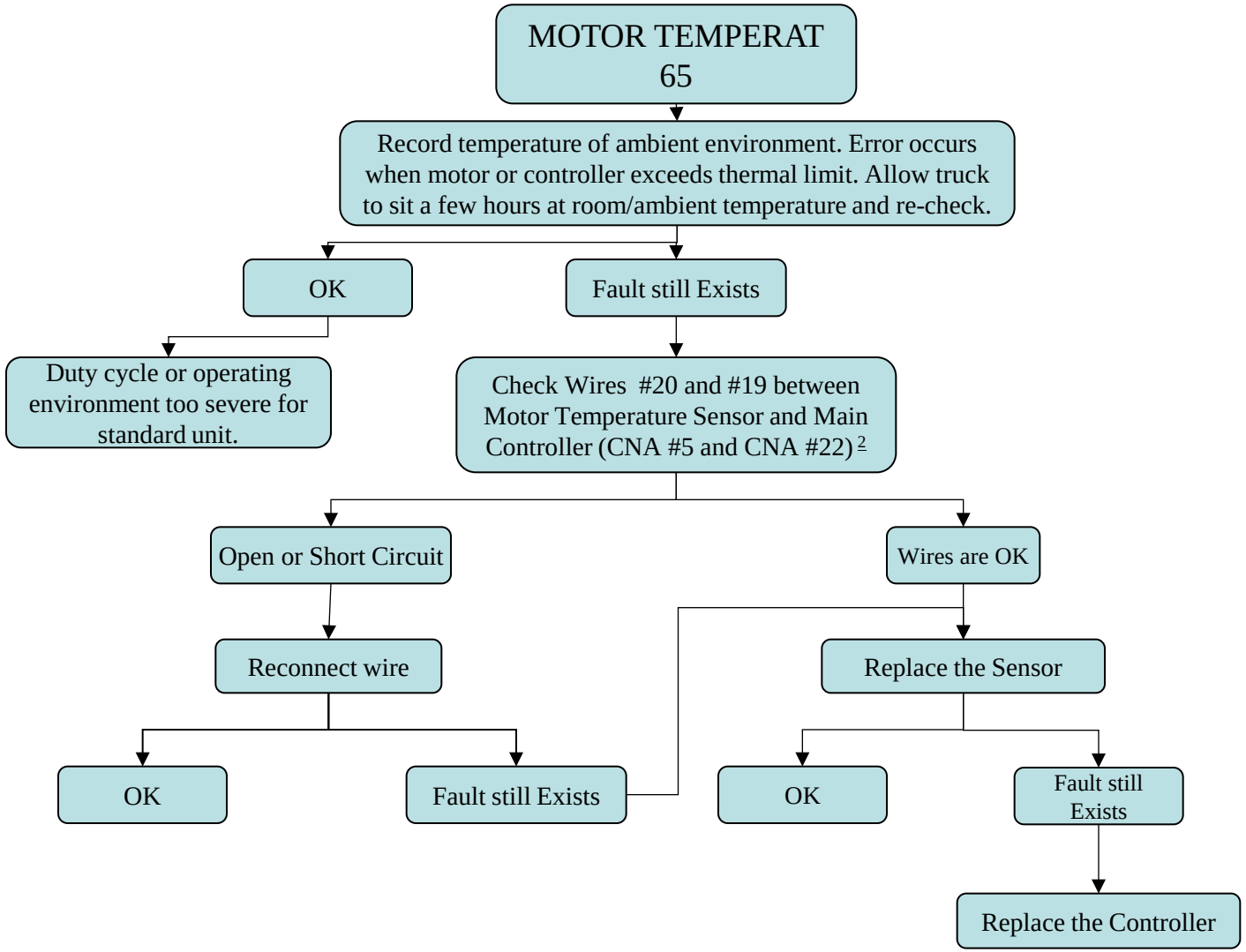
ALARM #61 on NODE #2 HIGH TEMPERATURE



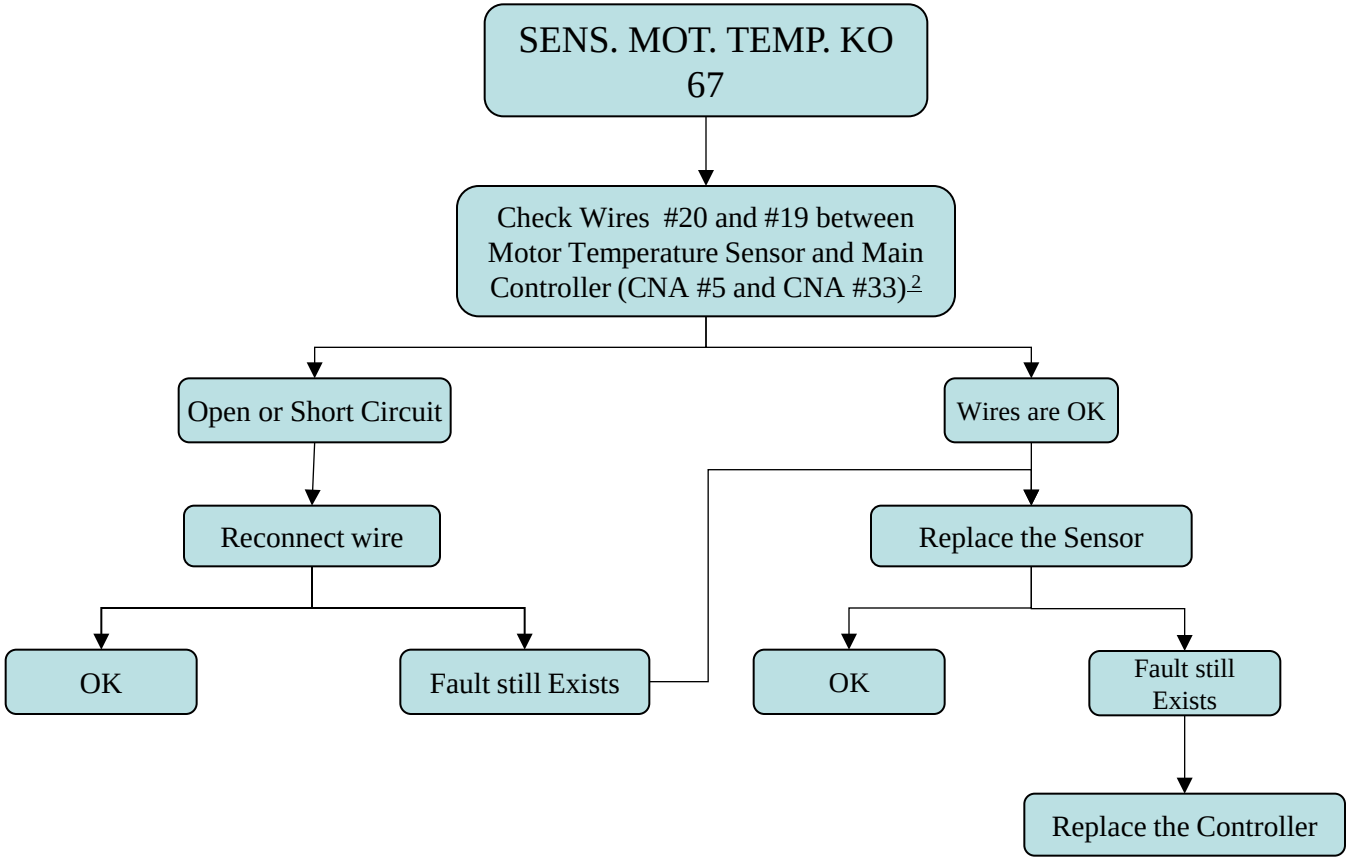
ALARM #65 on NODE #2 BATTERY LOW



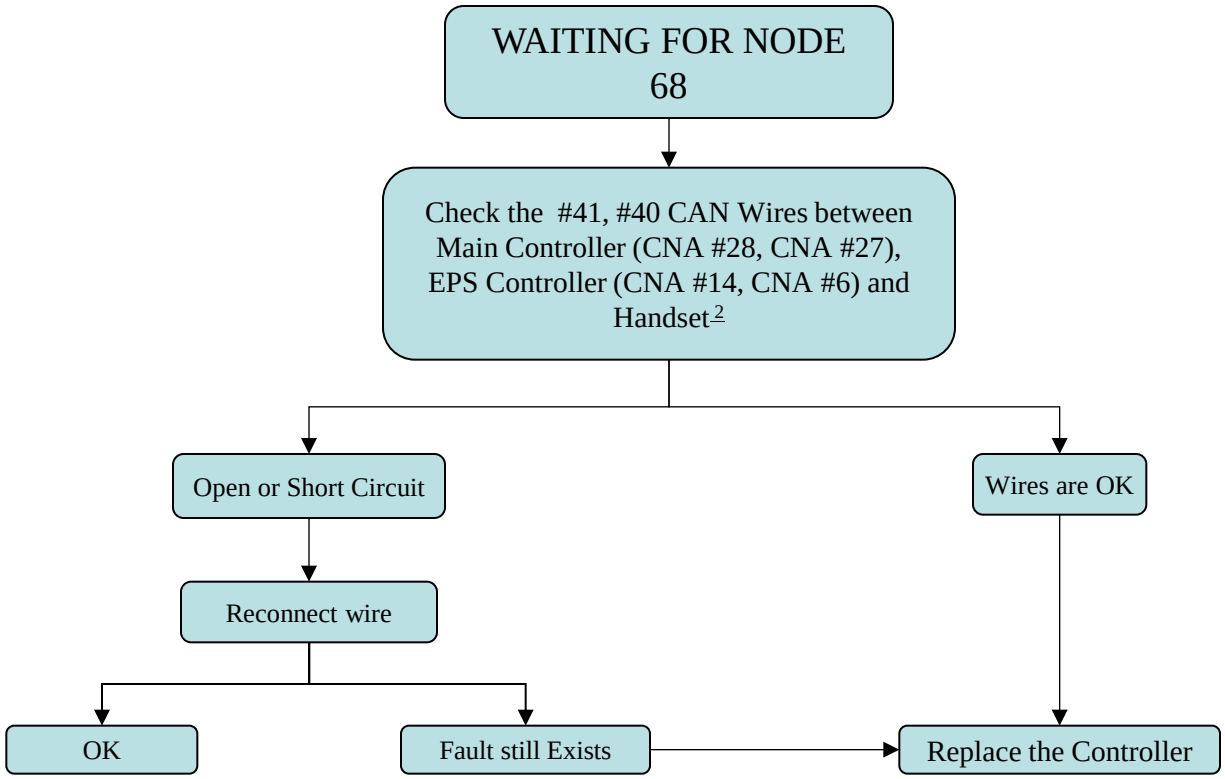
ALARM #65 on NODE #2 MOTOR TEMPERAT



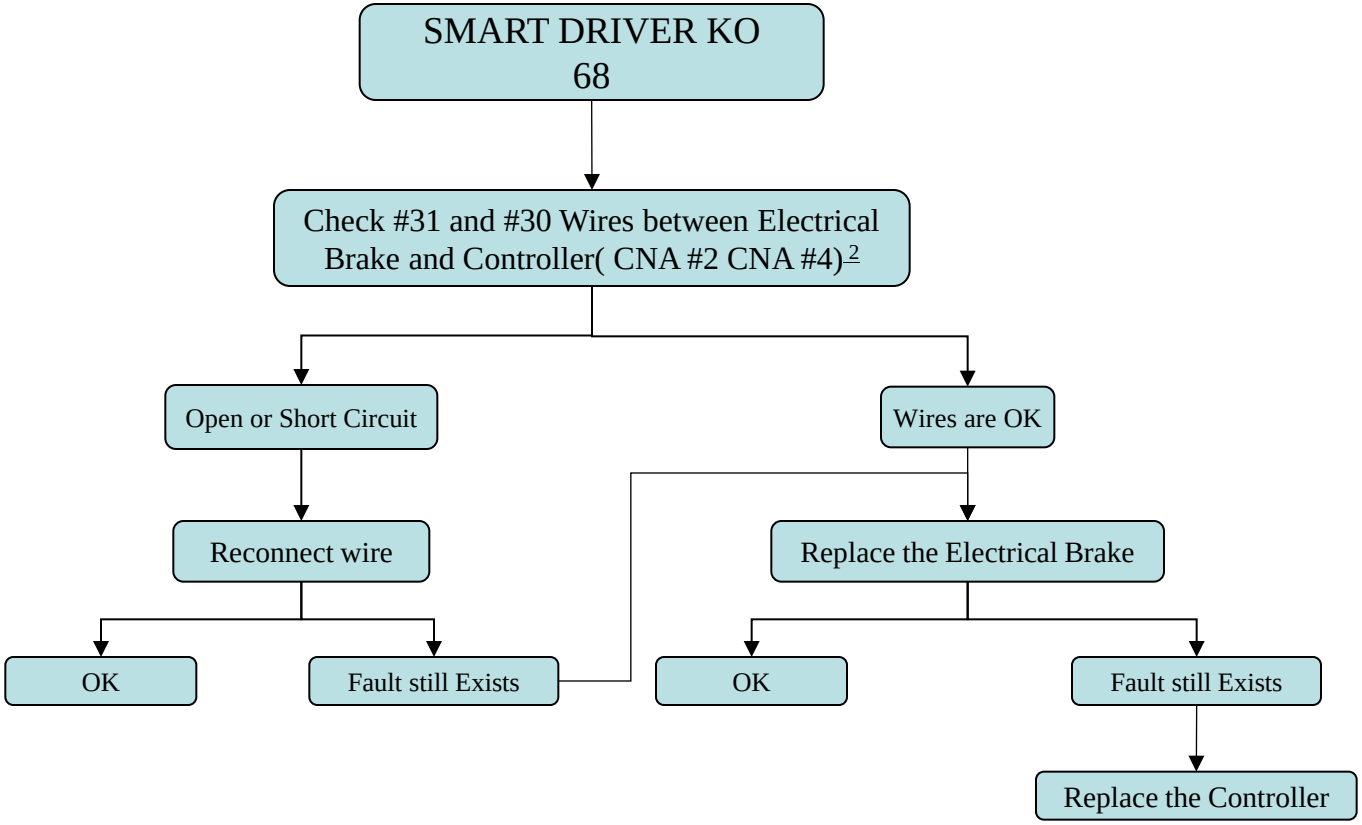
ALARM #67 on NODE #2 SENS. MOT. TEMP. KO



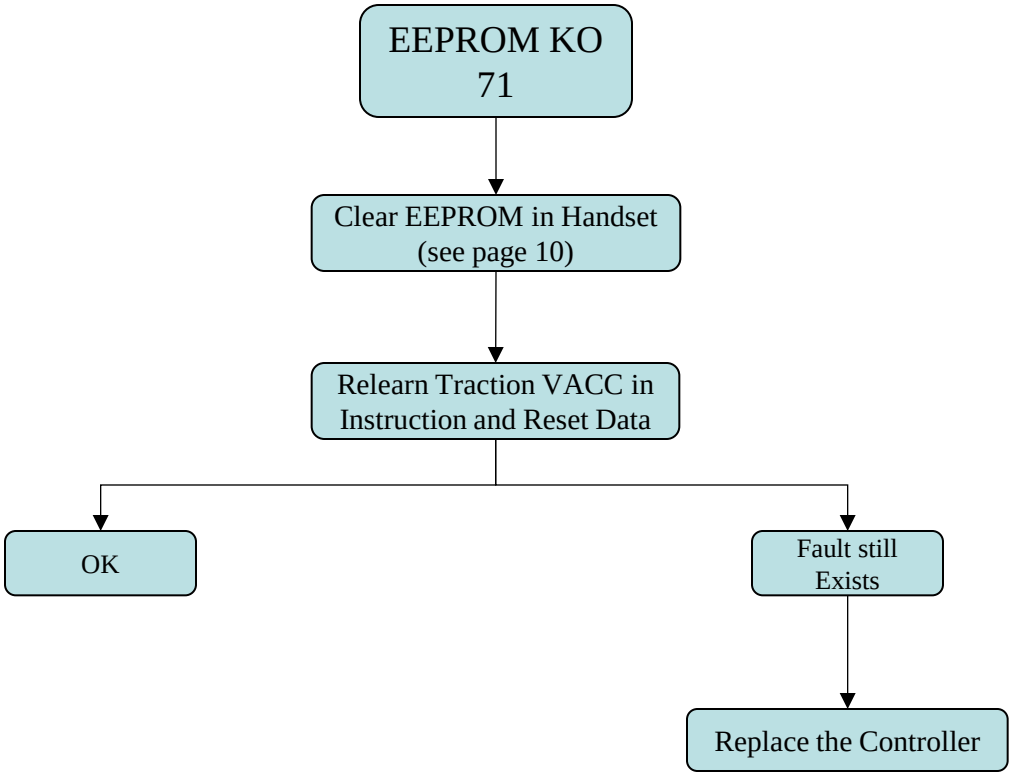
ALARM #68 on NODE #2 WAITING FOR NODE



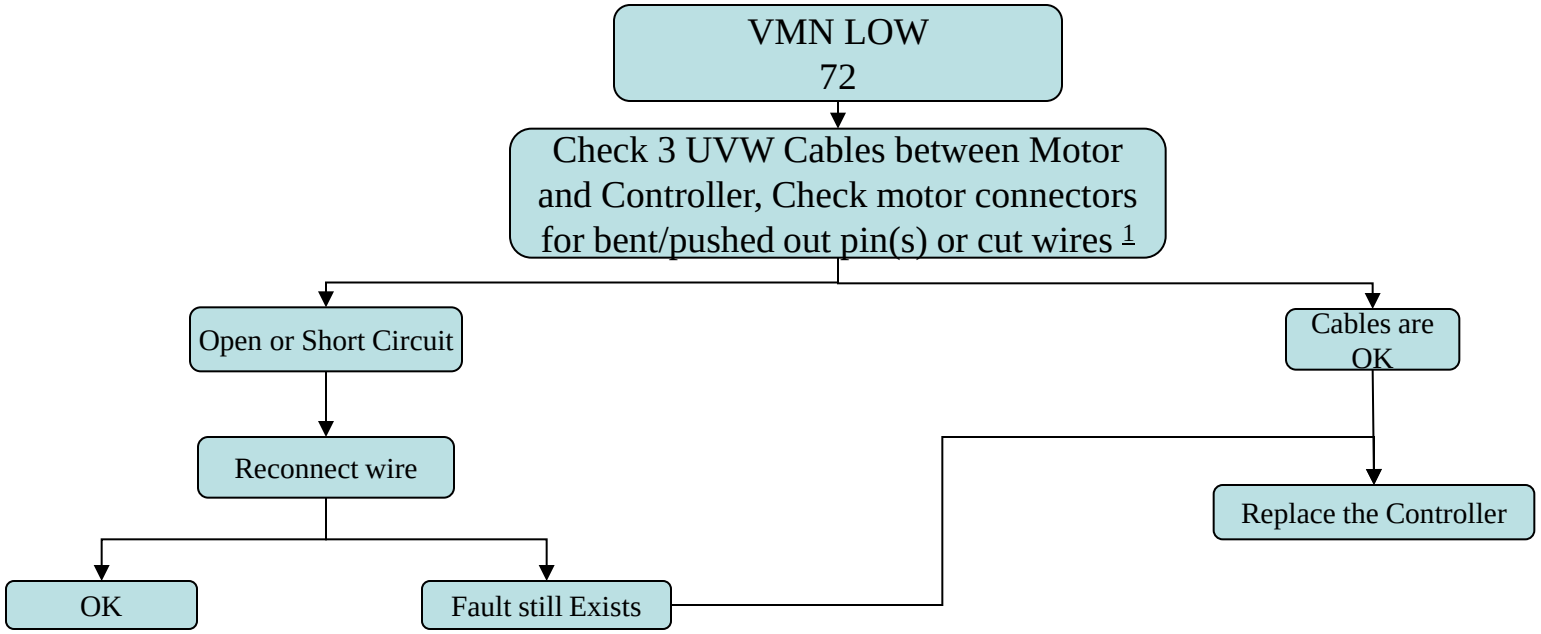
ALARM #68 on NODE #2 SMART DRIVER KO



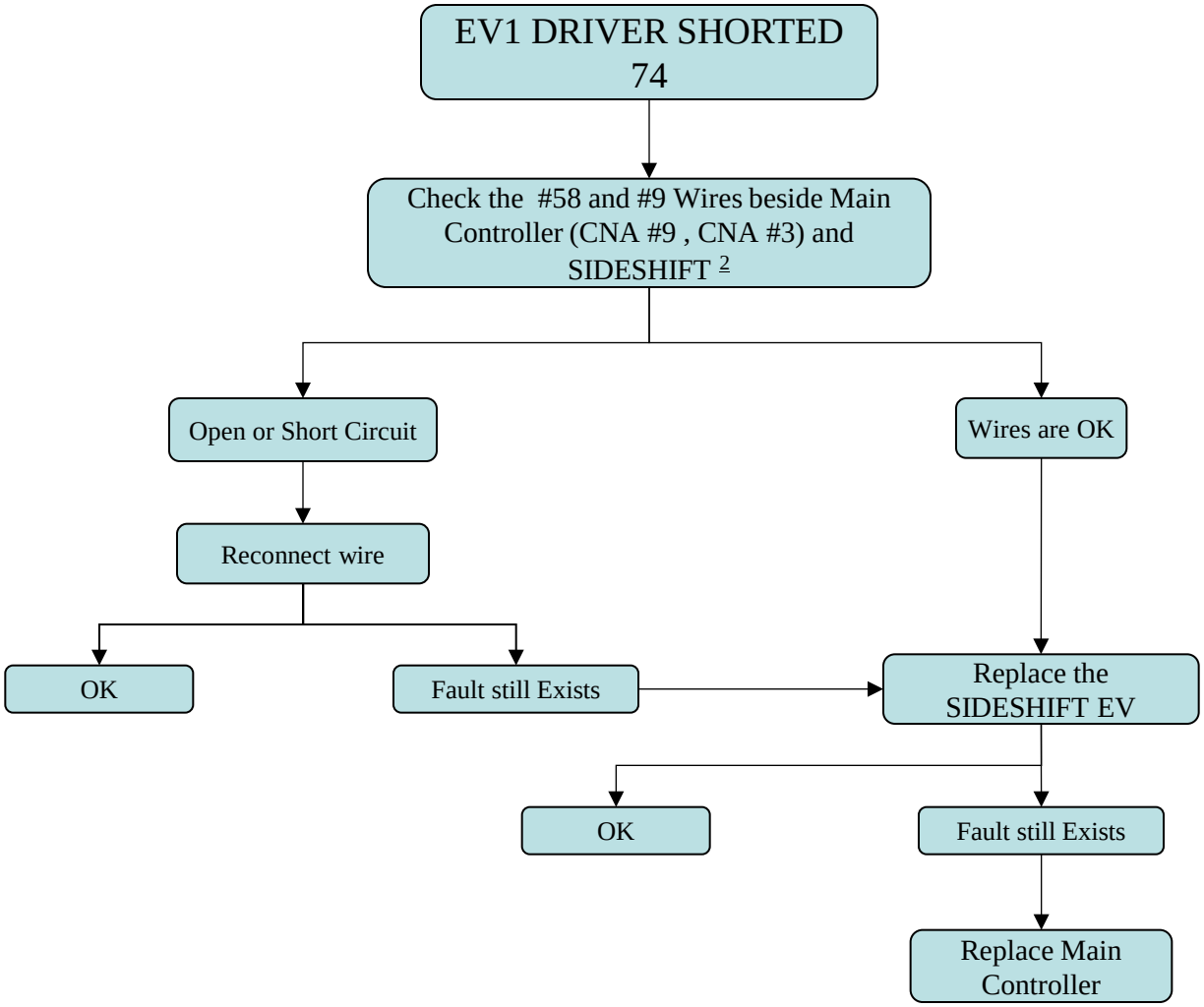
ALARM #71 on NODE #2 EEPROM KO



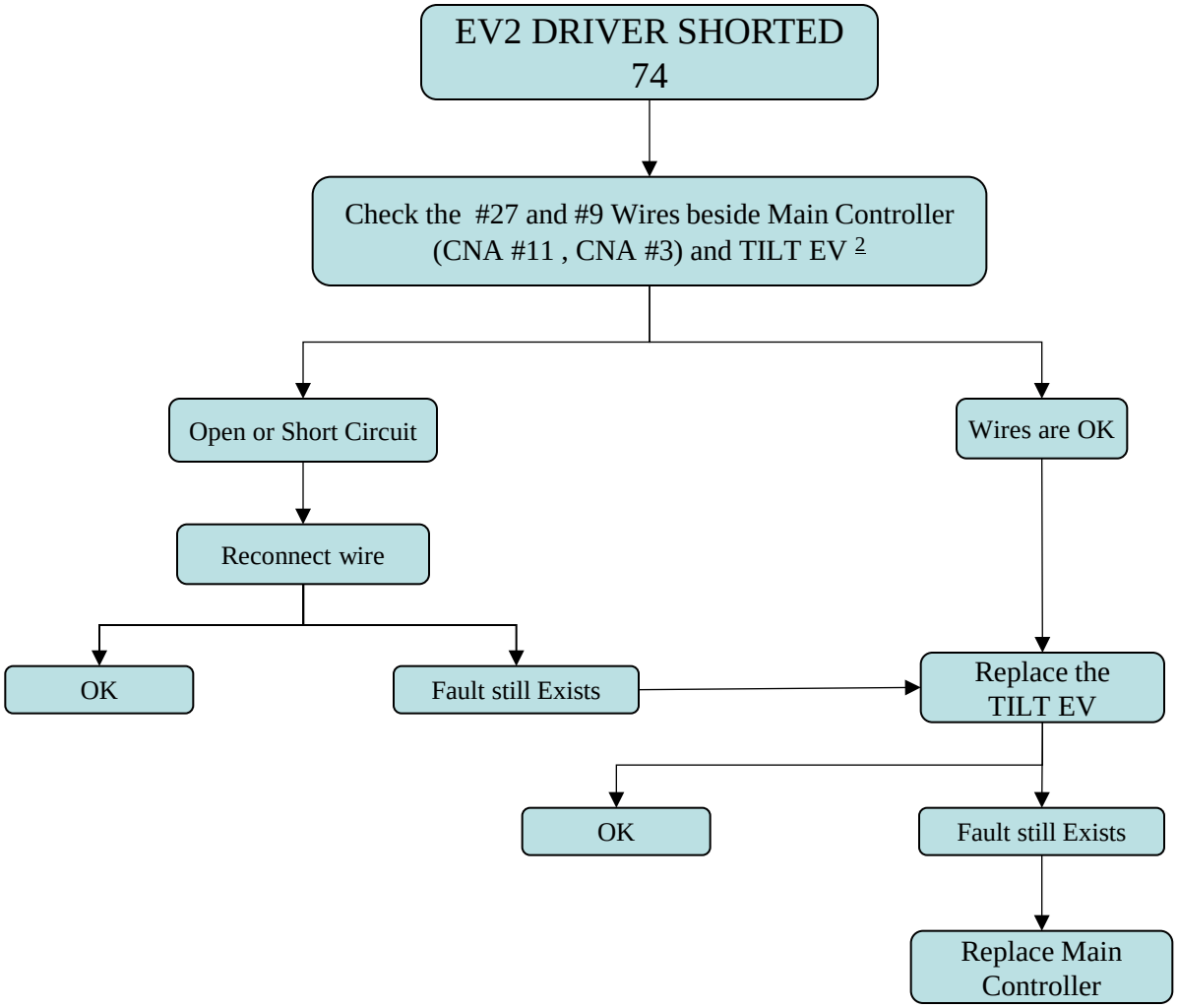
ALARM #72 on NODE #2 VMN LOW



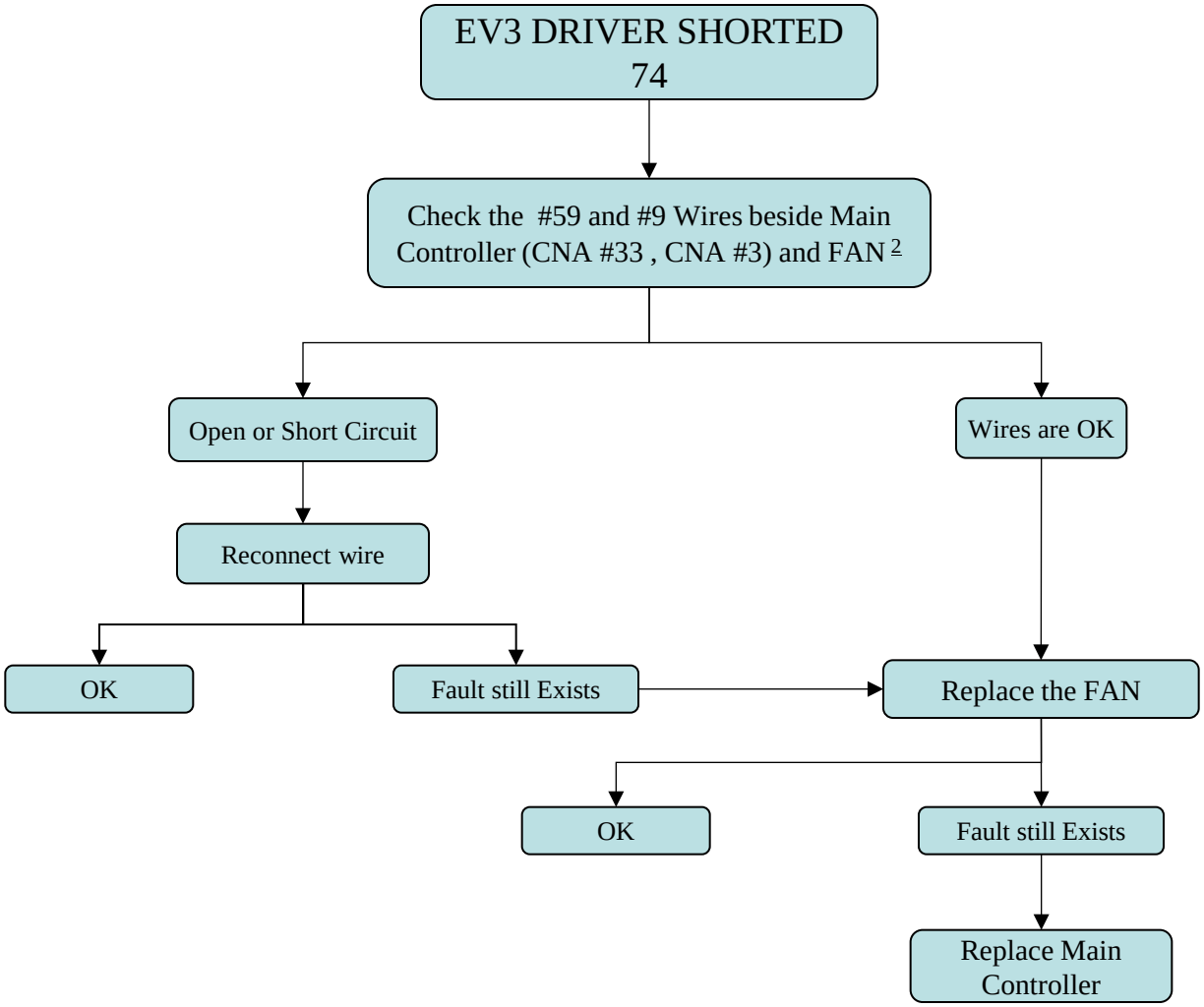
ALARM #74 on NODE #2 EV1/5 DRIVER SHORTED



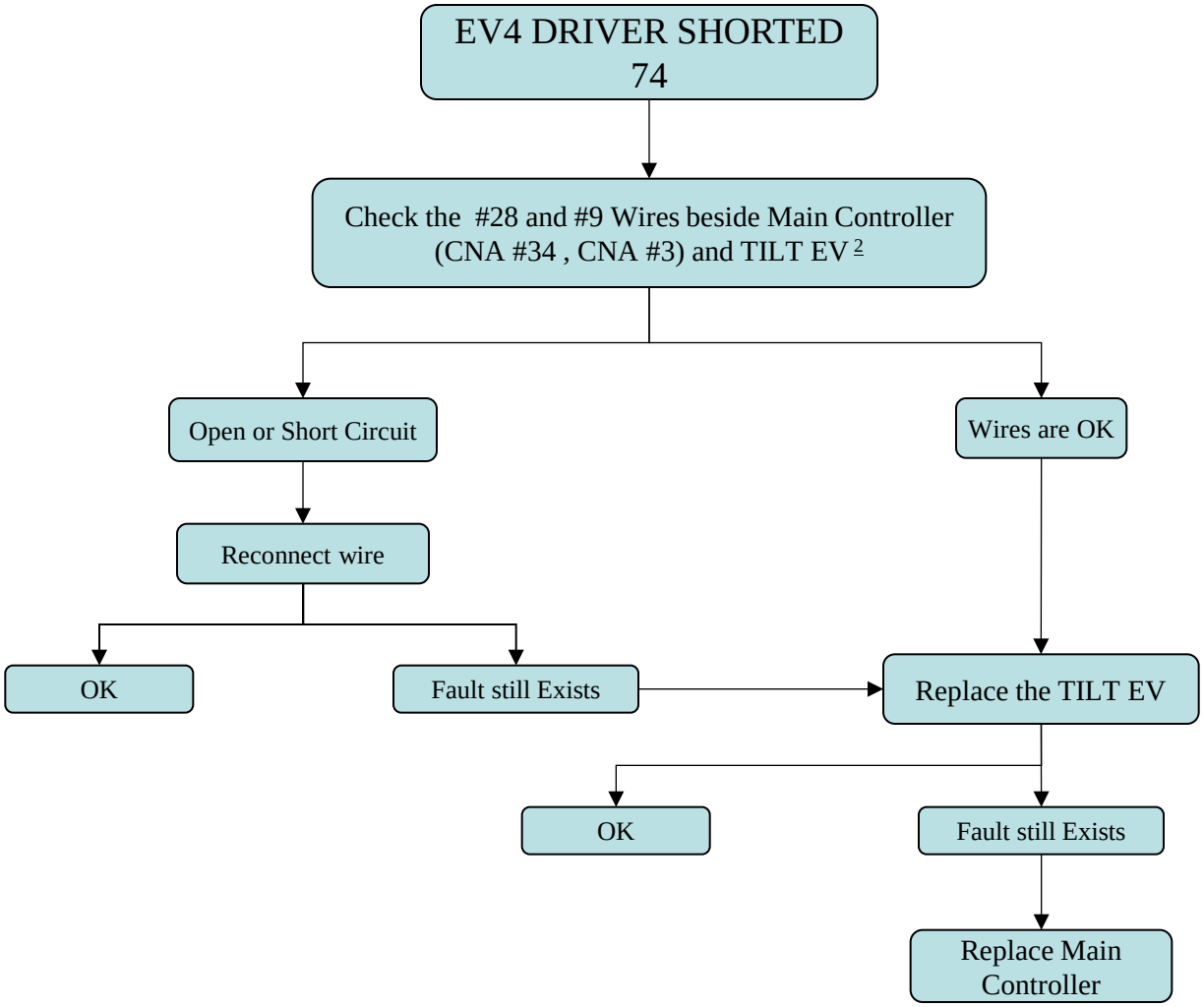
ALARM #74 on NODE #2 EV2 DRIVER SHORTED



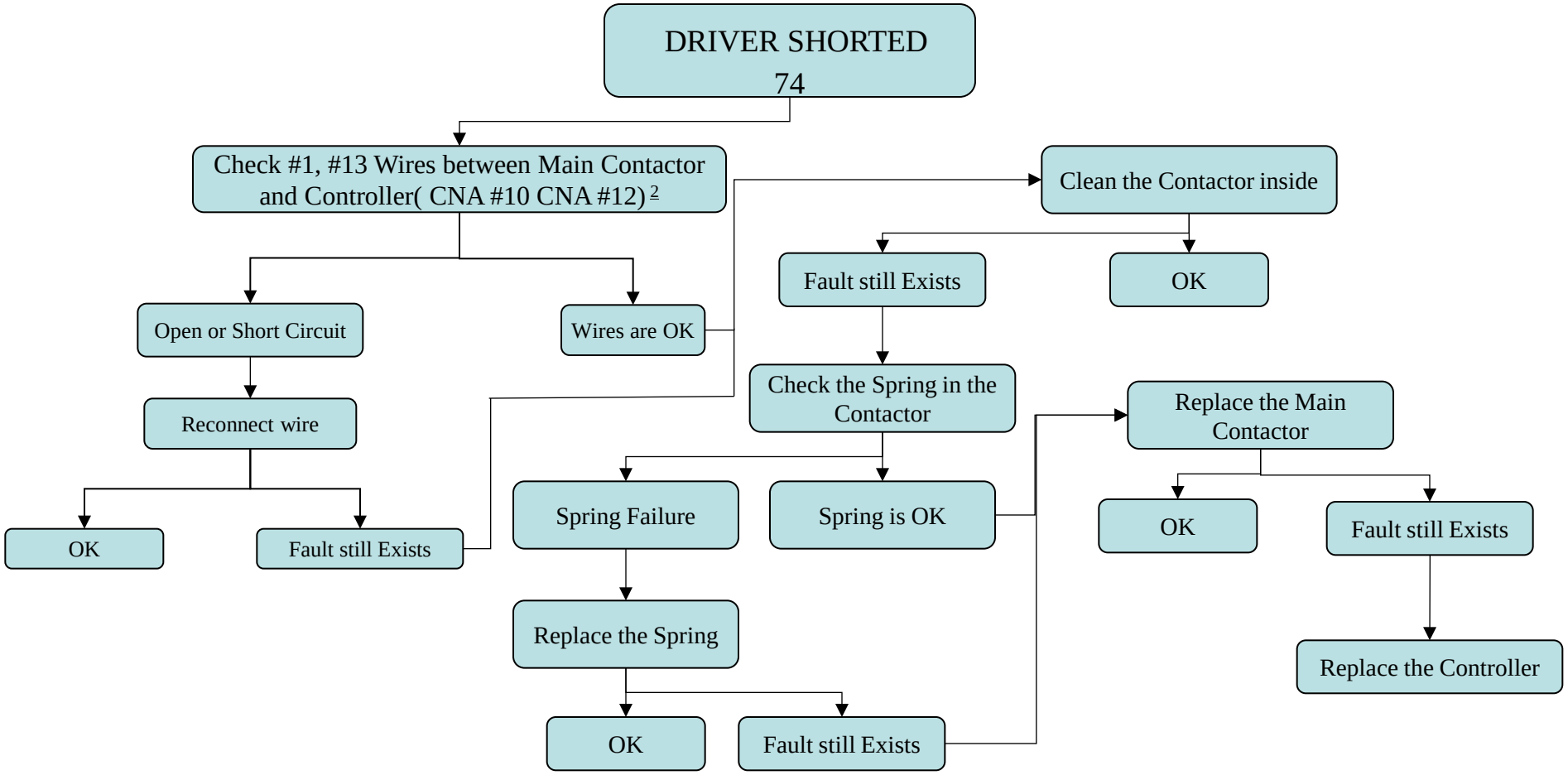
ALARM #74 on NODE #2 EV3 DRIVER SHORTED



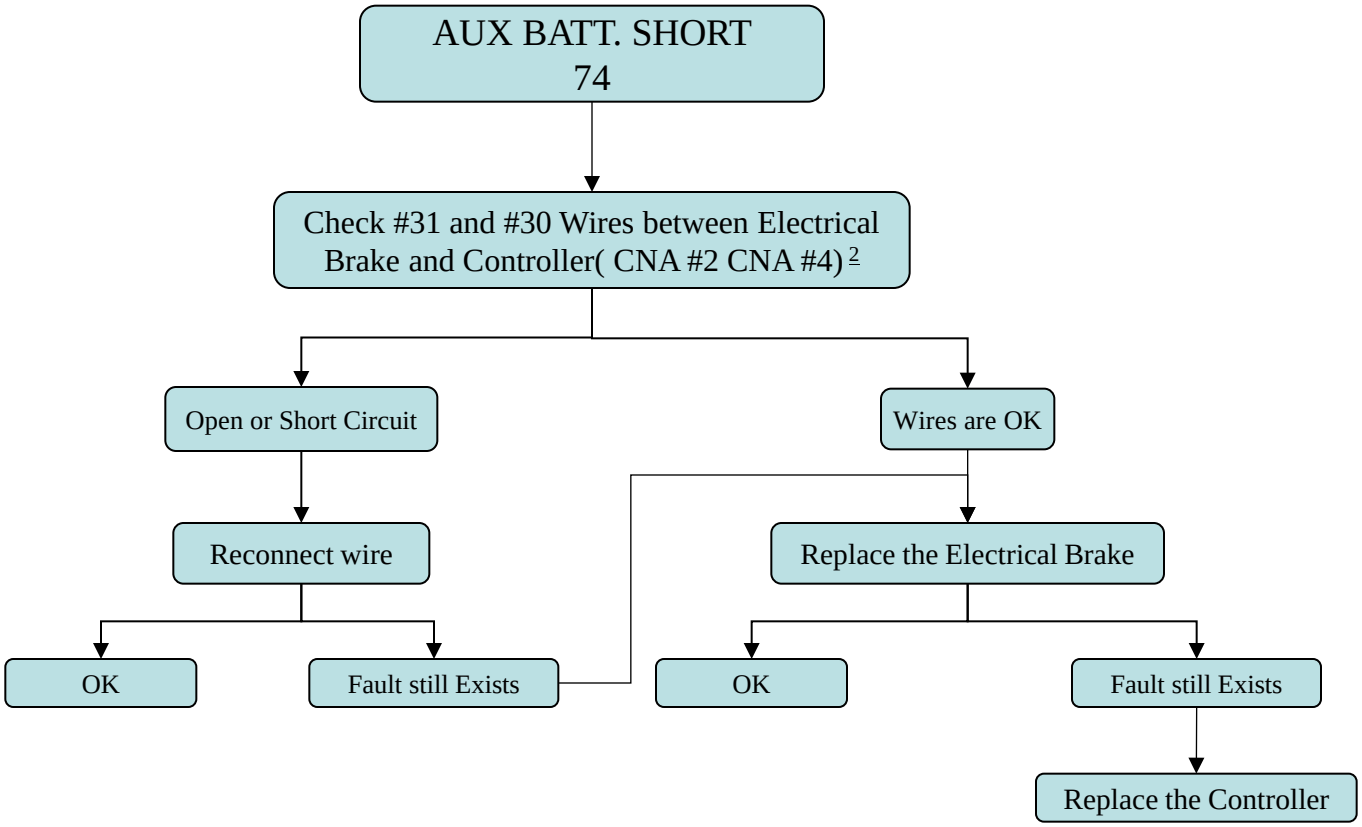
ALARM #74 on NODE #2 EV4 DRIVER SHORTED



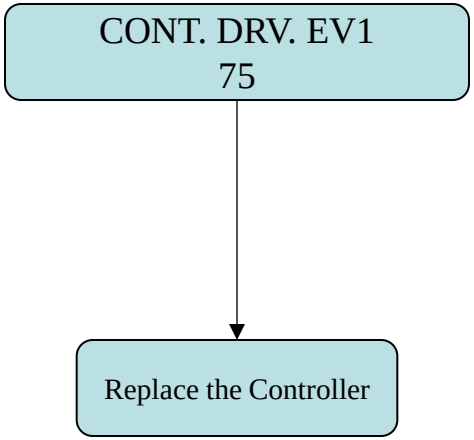
ALARM #74 on NODE #2 DRIVER SHORTED



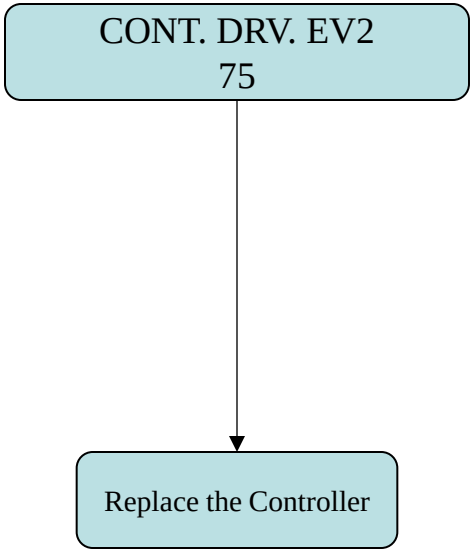
ALARM #74 on NODE #2 AUX BATT. SHORT



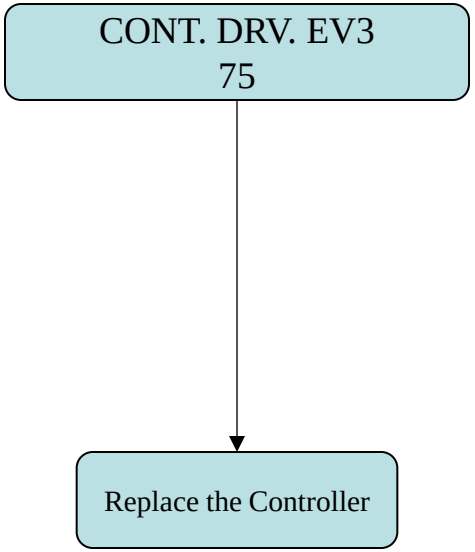
ALARM #75 on NODE #2 CONT. DRV. EV1



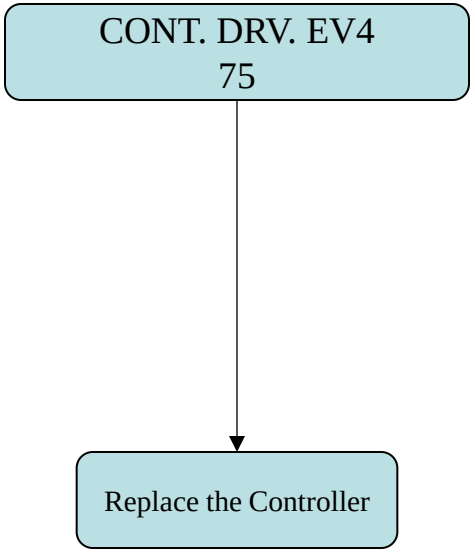
ALARM #75 on NODE #2 CONT. DRV. EV2



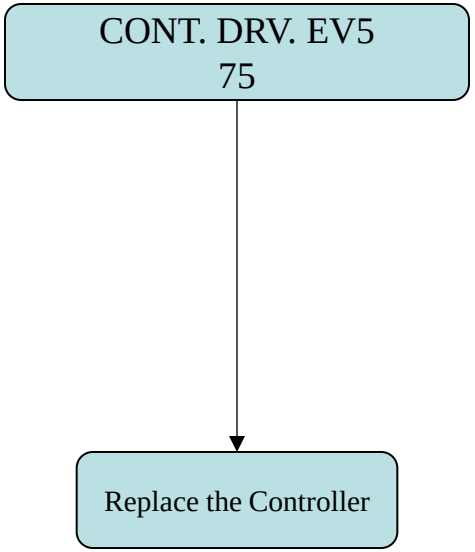
ALARM #75 on NODE #2 CONT. DRV. EV3



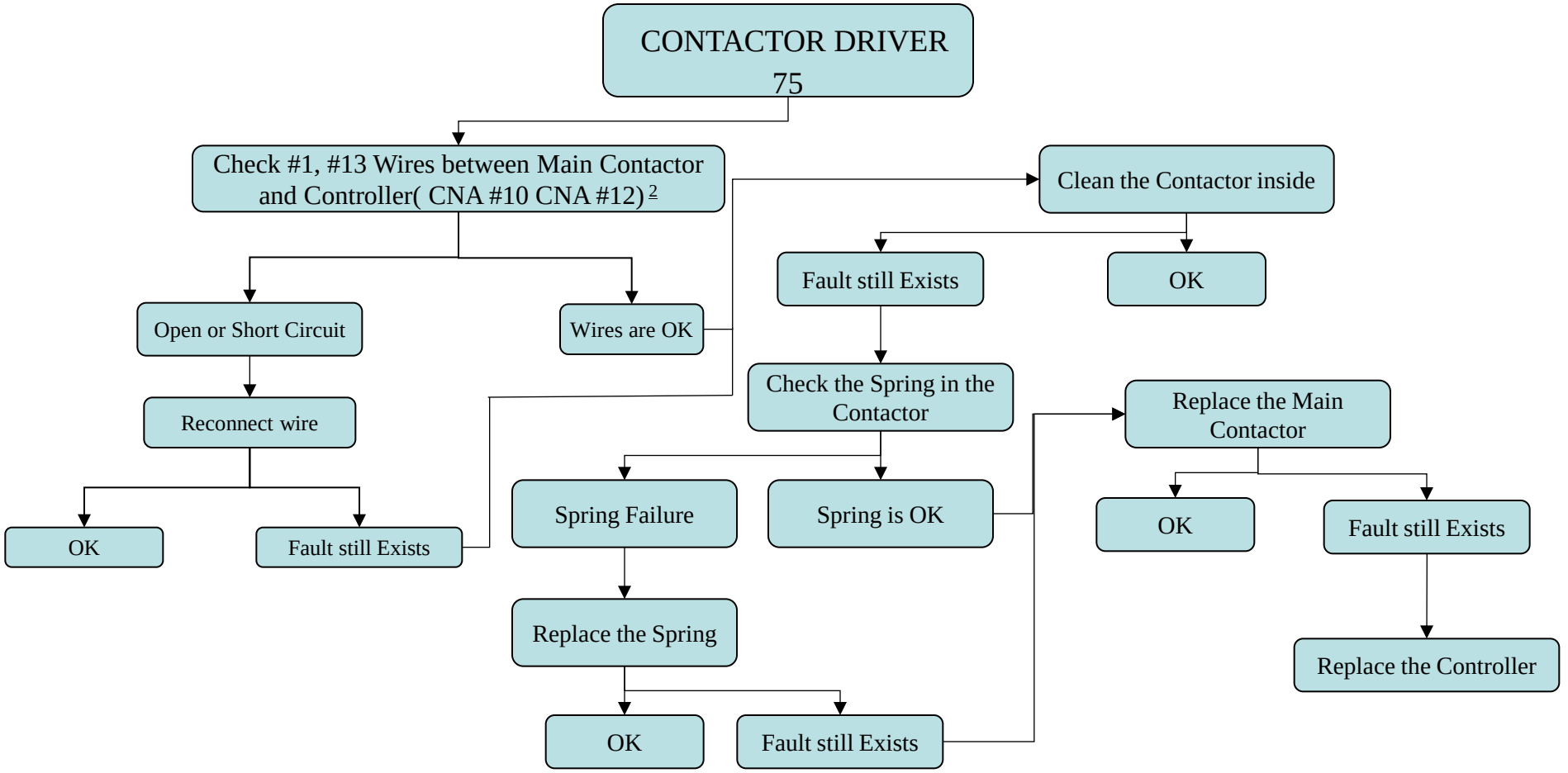
ALARM #75 on NODE #2 CONT. DRV. EV4



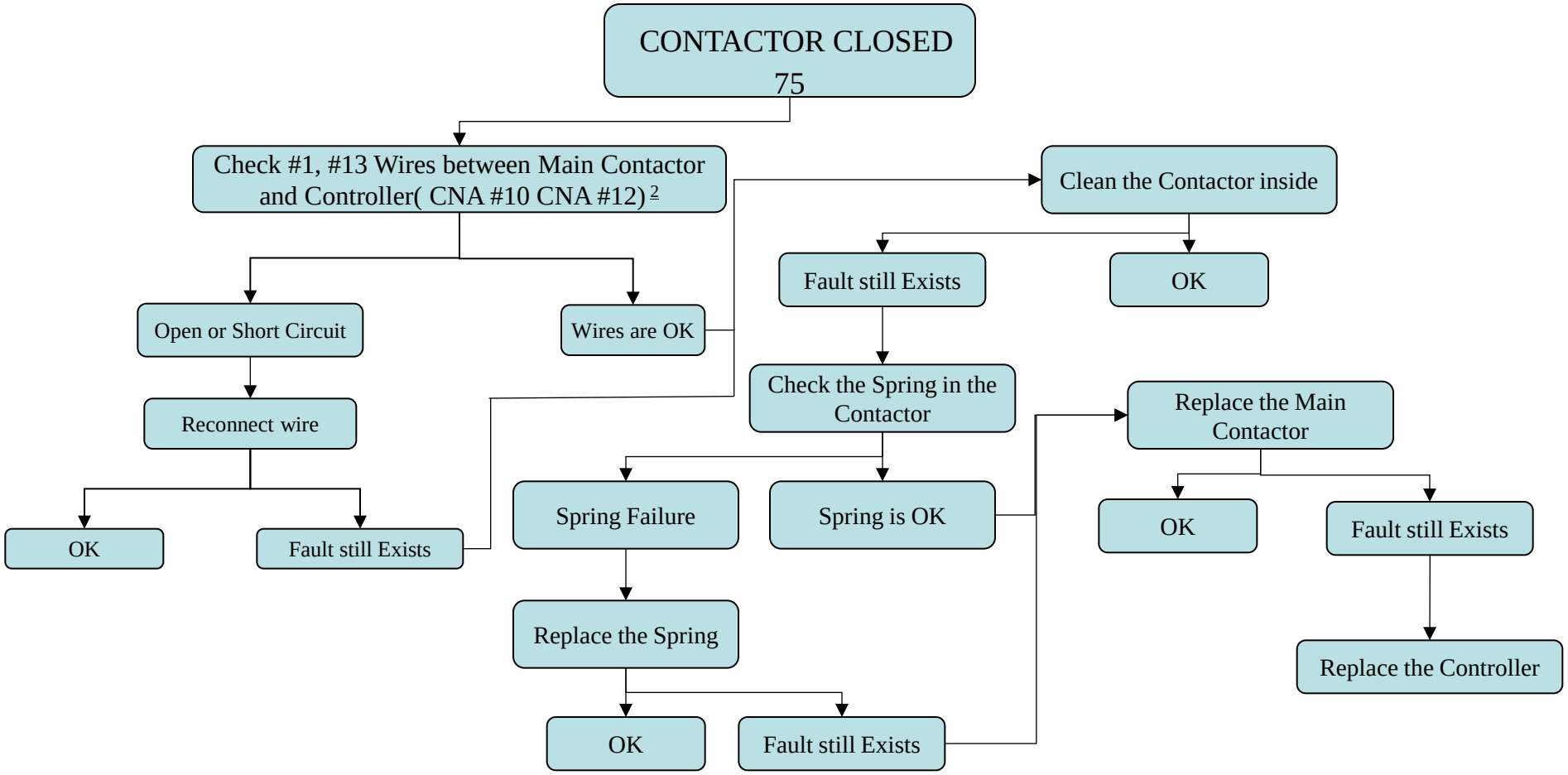
ALARM #75 on NODE #2 CONT. DRV. EV5



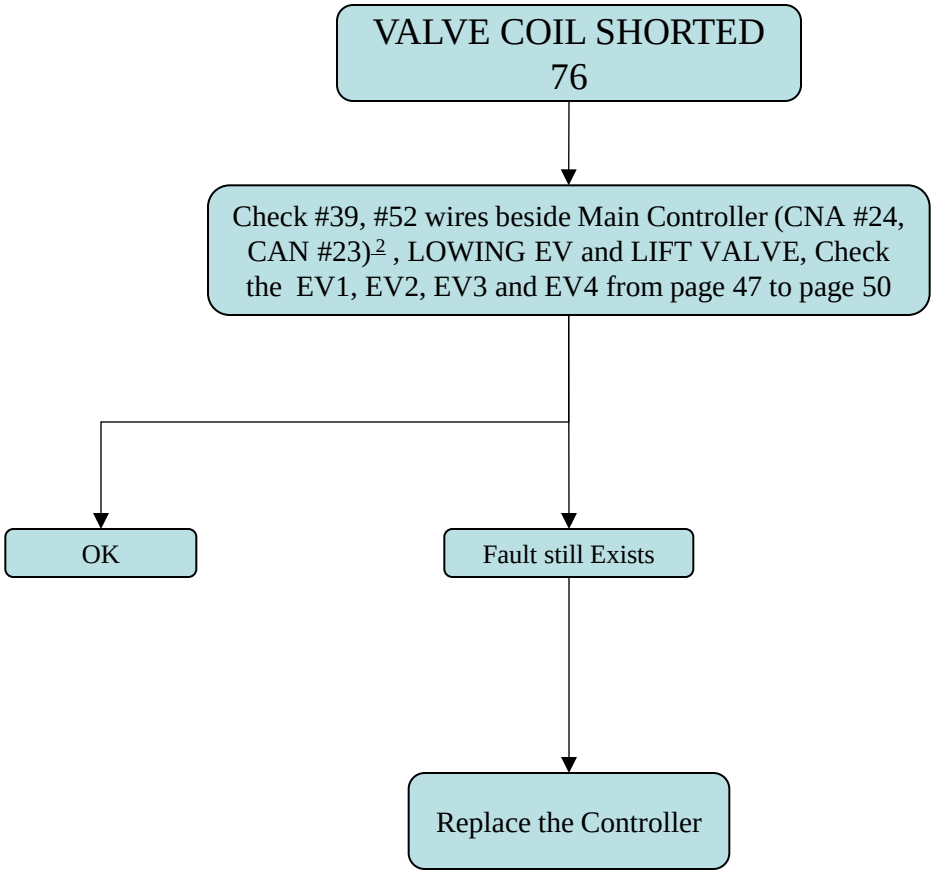
ALARM #75 on NODE #2 CONTACTOR DRIVER



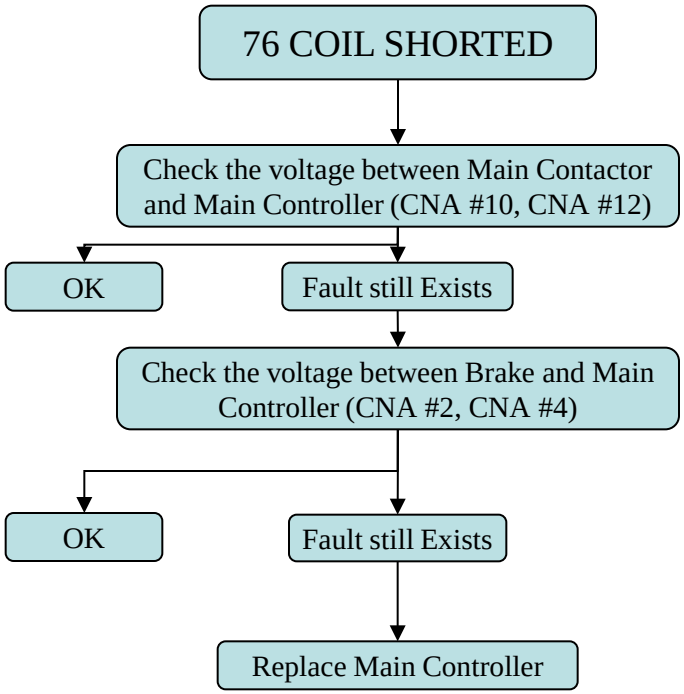
ALARM #75 on NODE #2 CONTACTOR CLOSED

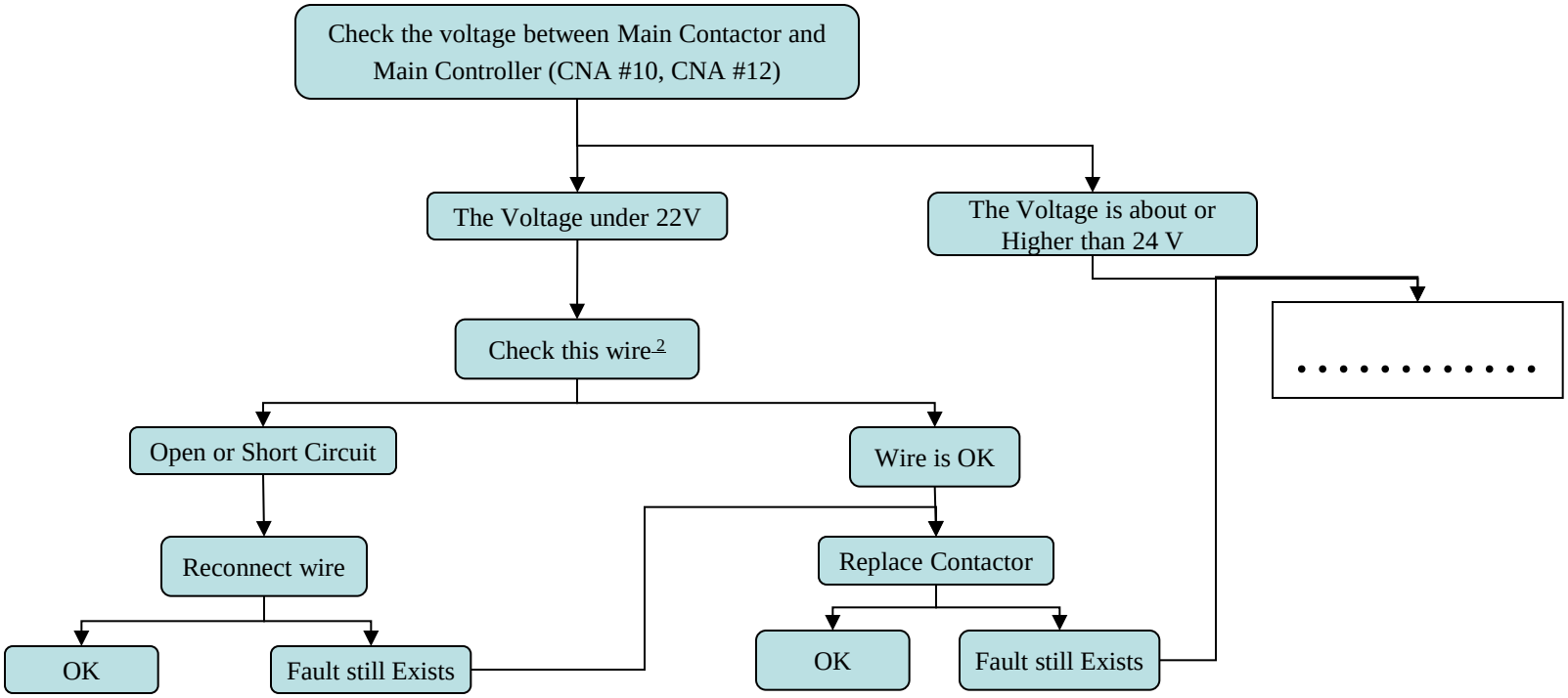


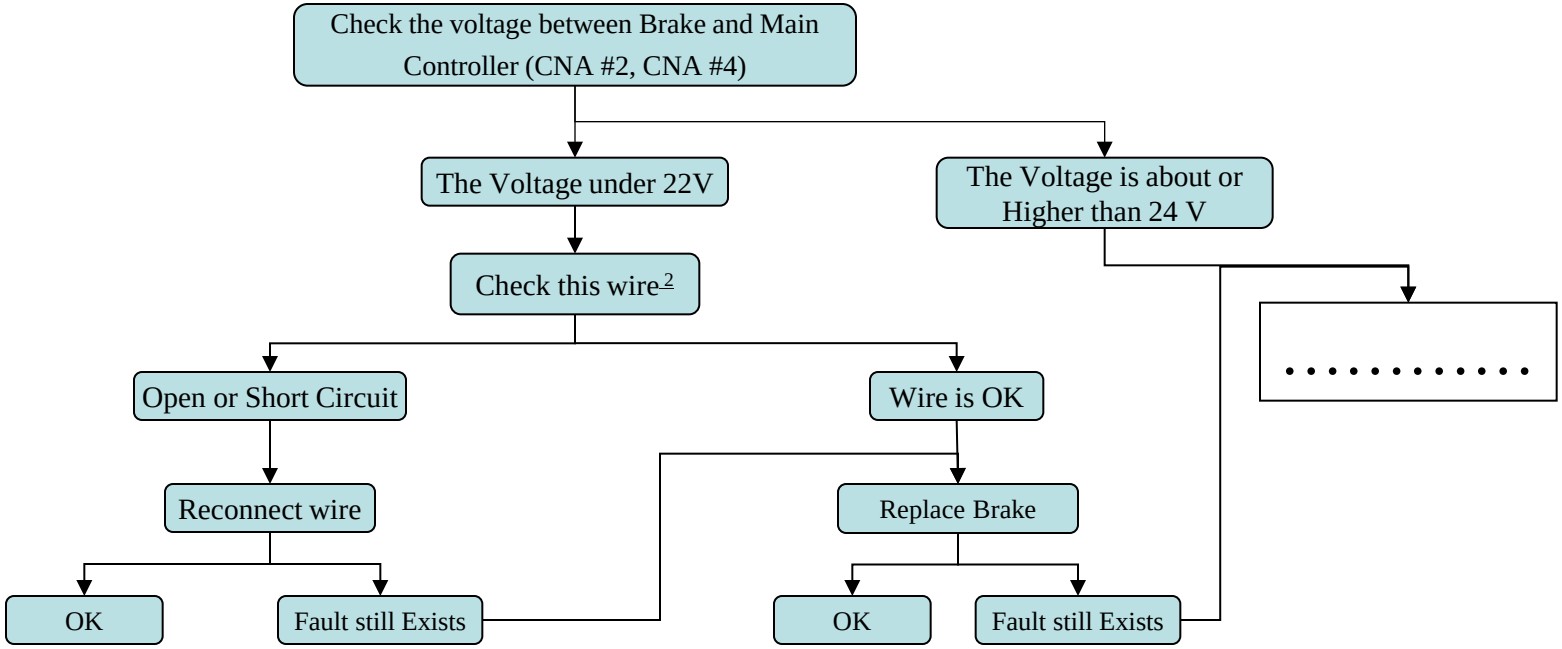
ALARM #76 on NODE #2 VALVE COIL SHORTED



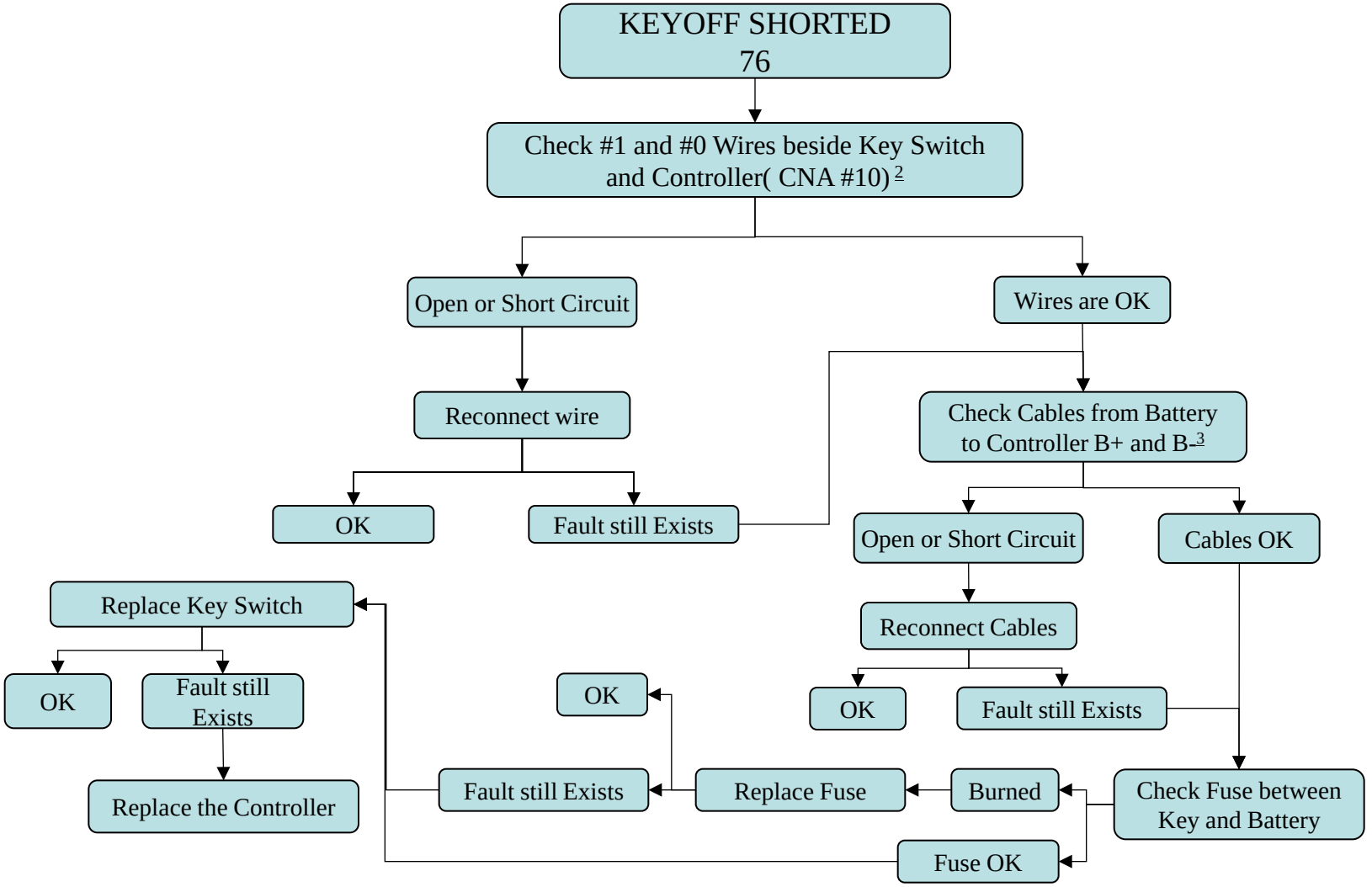
ALARM #76 on NODE #2 COIL SHORTED



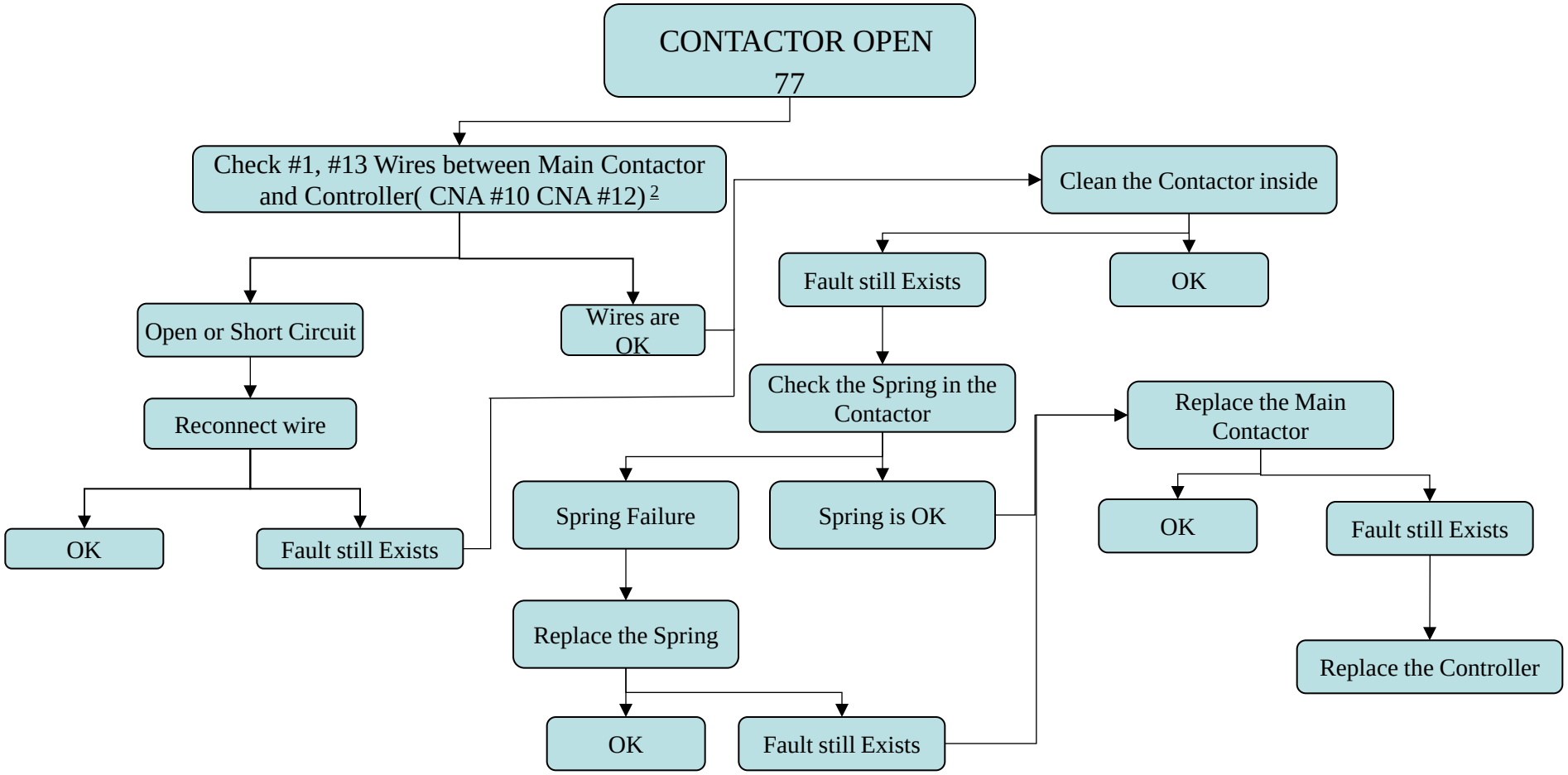

Check the voltage between Main Contactor and Main Controller (CNA #10, CNA #12)
The Voltage under 22V
The Voltage is about or Higher than 24 V
Check this wire-2
Open or Short Circuit
Wire is OK
Reconnect wire
Replace Contactor
OK
Fault still Exists
OK
Fault still Exists


Check the voltage between Brake and Main Controller (CNA #2, CNA #4)
The Voltage under 22V
The Voltage is about or Higher than 24 V
Check this wire-2
. . . . . .
Open or Short Circuit
Wire is OK
Reconnect wire
Replace Brake
OK
Fault still Exists
OK
Fault still Exists

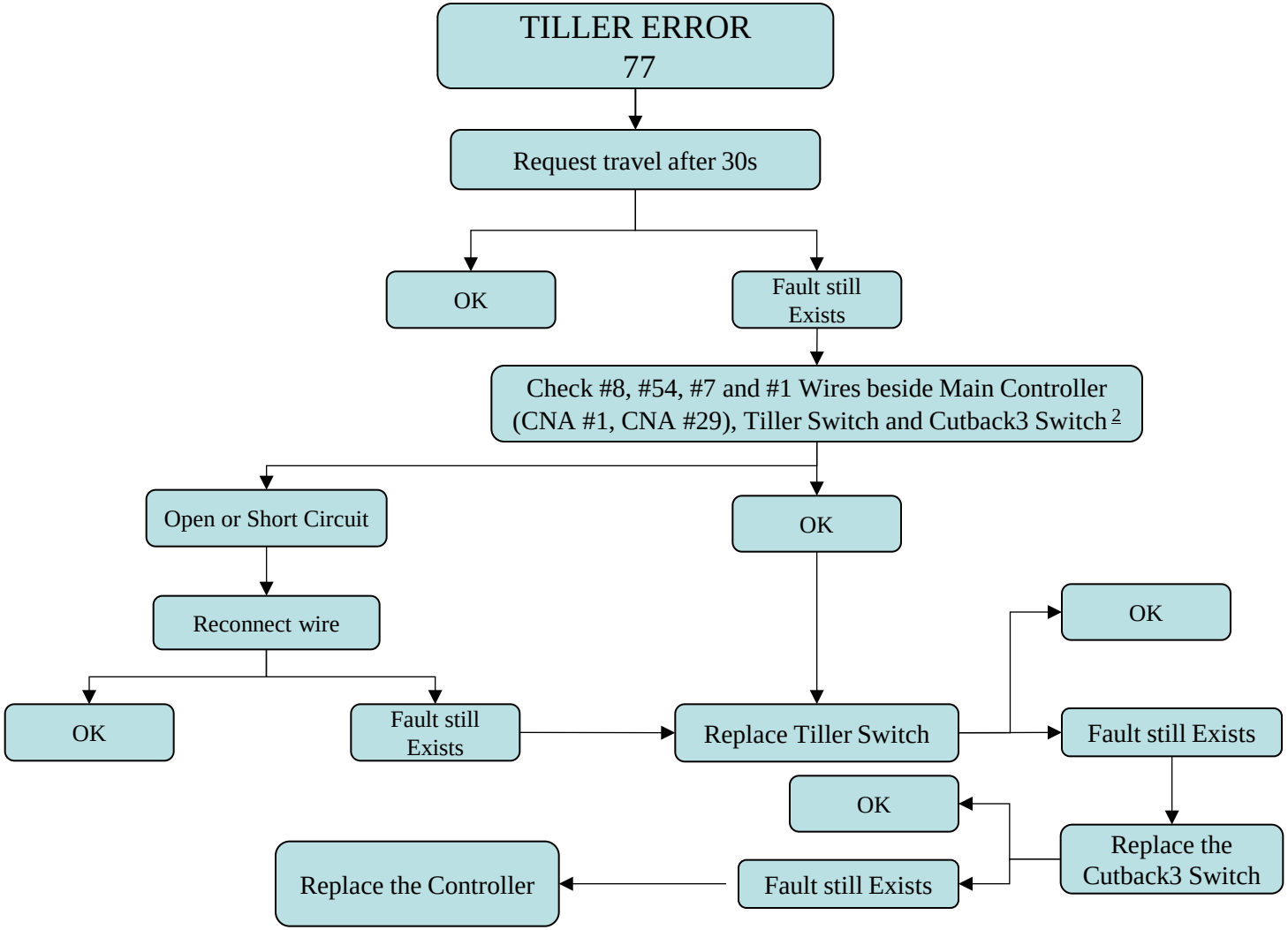
ALARM #76 on NODE #2 KEYOFF SHORTED



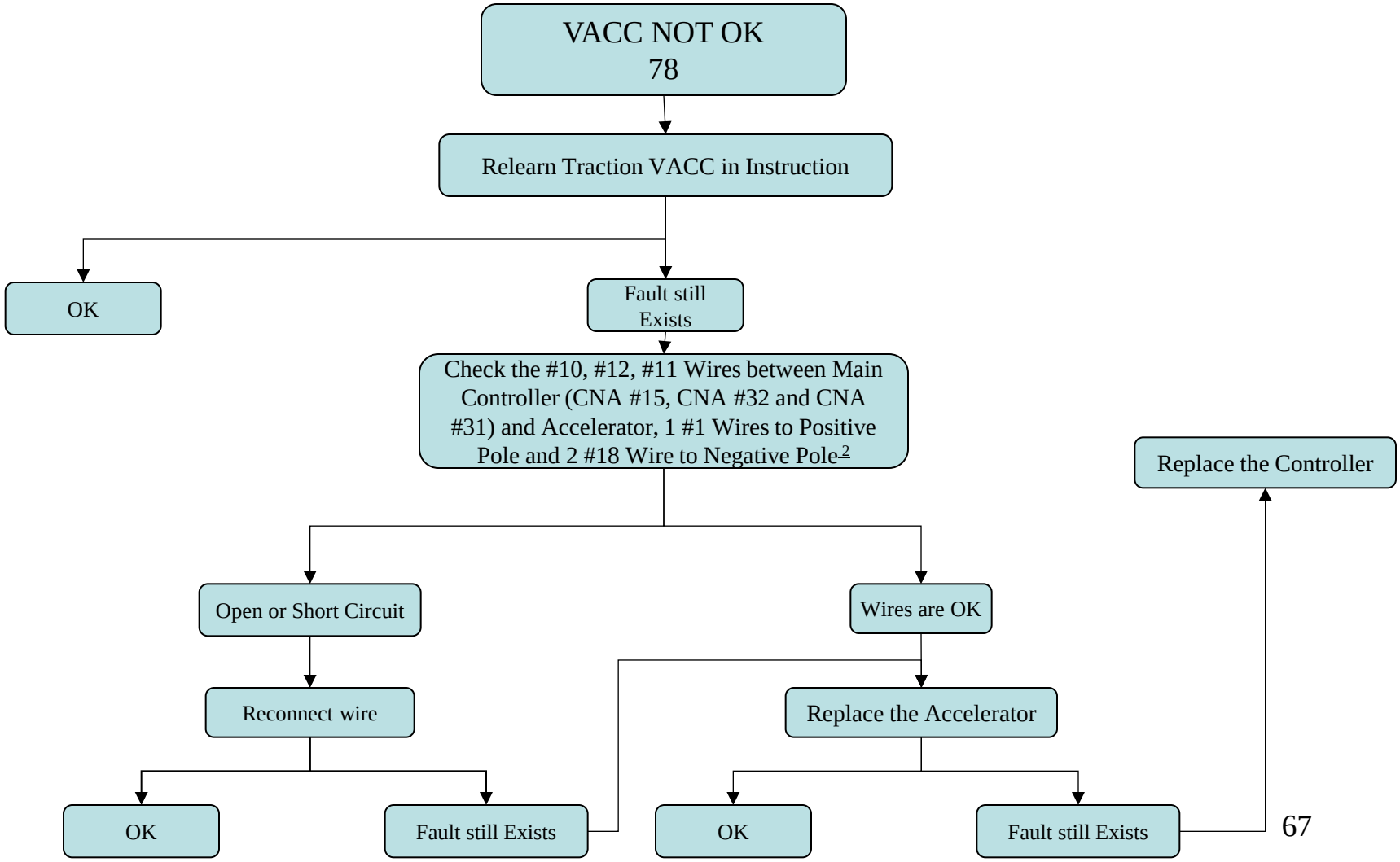
ALARM #77 on NODE #2 CONTACTOR OPEN



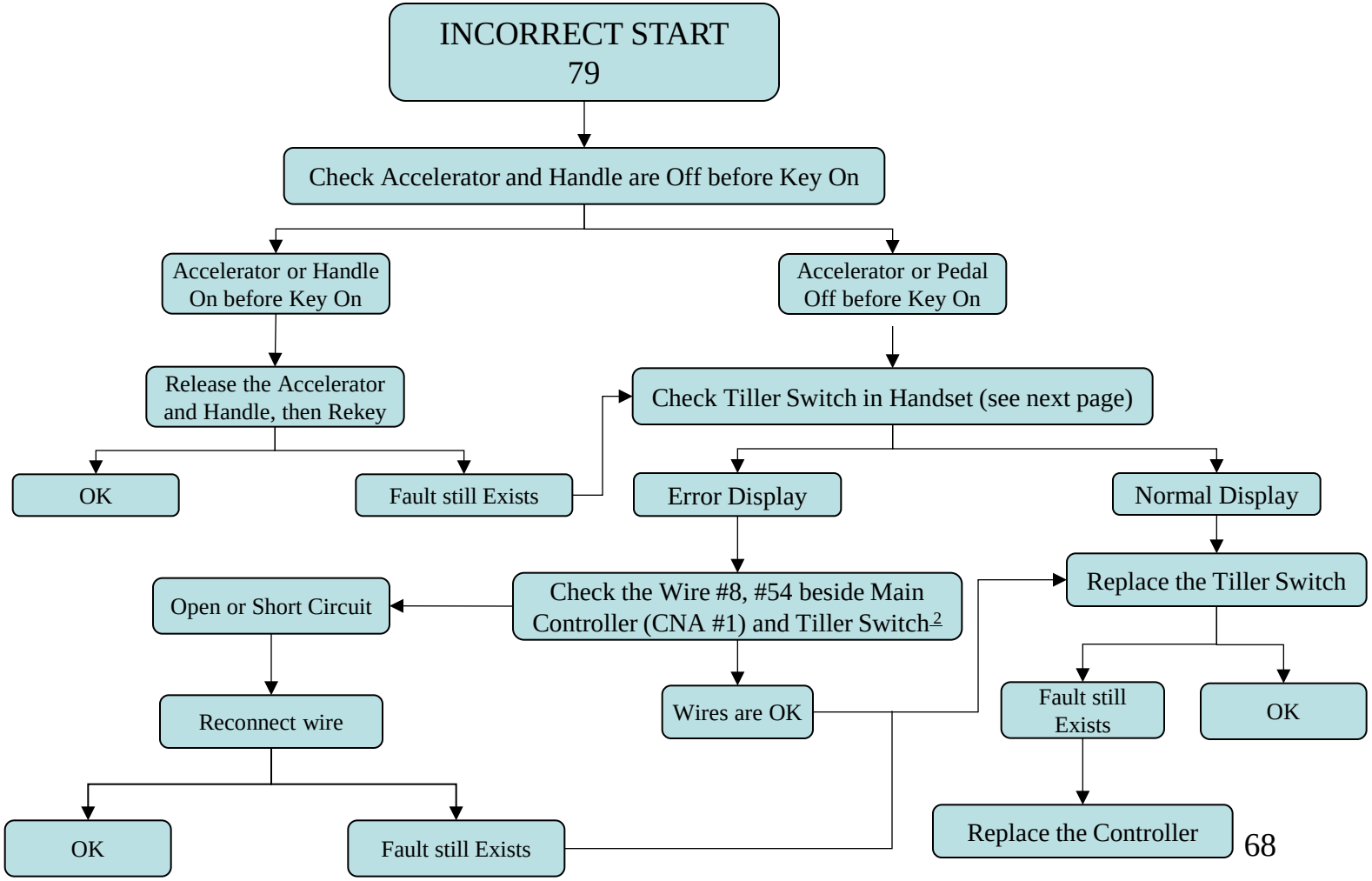
ALARM #77 on NODE #2 TILLER ERROR



ALARM #78 on NODE #2 VACC NOT OK



ALARM #79 on NODE #2 INCORRECT START



Check Tiller Switch in Handset

Turn on ZAPI Handset

Push and hold the power button for 3s

The Display will show:

Cons AFG ZP021*

Press ^ or v button until CAN CONSOLE shows on the display

The Display will show :

Cons AFG ZP021*
CAN CONSOLE

Press OK to go into the CANCONSOLE Menu

The Display will show:

Push 》, or 《
To select Node 2

The Display will show:

Press OK to go into the
Traction controller

The Display will show:

Press OK to go into the
Main Menu

CANCONSOLE
SELECT NODE

SELECT NODE
NODE 2

AD0S2B F6EP0.15
24V 320A 0H

The Display will show:

Main Menu

Press ^ or v button until TEST shows on the display

The Display will show:

MAIN MENU
TEST

Press OK to go into the TEST function

The Display will show:

TEST

Press ^ or v button until HANDLE/ SEAT SW shows on the display

The display will show:

HANDLE/ SEAT SW OFF

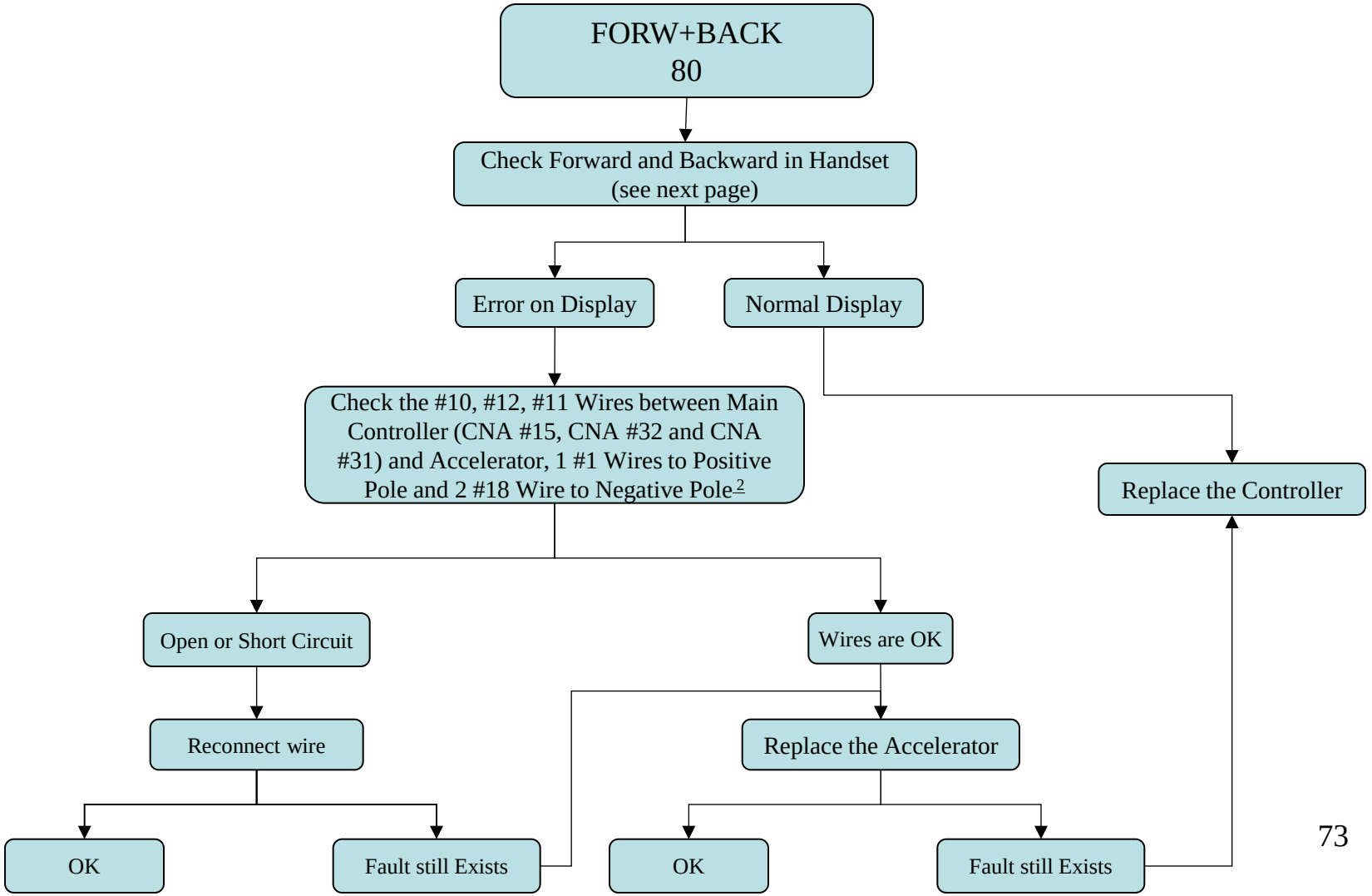
Pull down the handle, Push the accelerator and hold on

The display will show:

HANDLE/ SEAT SW ON

When finished , press and hold power button for 3s to turn off the Console

ALARM #80 on NODE #2 FORW+BACK



Check Forward and Backward in Handset

Turn on ZAPI Handset

Push and hold the power button for 3s

Cons AFG ZP021*

The Display will show:

Press ^ or v button until CAN CONSOLE shows on the display

Cons AFG ZP021*
CAN CONSOLE

The Display will show :

Press OK to go into the CANCONSOLE Menu

The Display will show:

Push 》, or 《
To select Node 2

CANCONSOLE
SELECT NODE

The Display will show:

SELECT NODE
NODE 2

Press OK to go into the
Traction controller

The Display will show:

AD0S2B F6EP0.15
24V 320A 0H

Press OK to go into the
Main Menu

The Display will show:

Main Menu

Press ^ or v button until TEST shows on the display

The Display will show:

MAIN MENU
TEST

Press OK to go into the TEST function

The Display will show:

TEST

Press ^ or v button until FORWARD shows on the display

The display will show:

FORWARD OFF

Push the accelerator forward and hold on

The display will show:

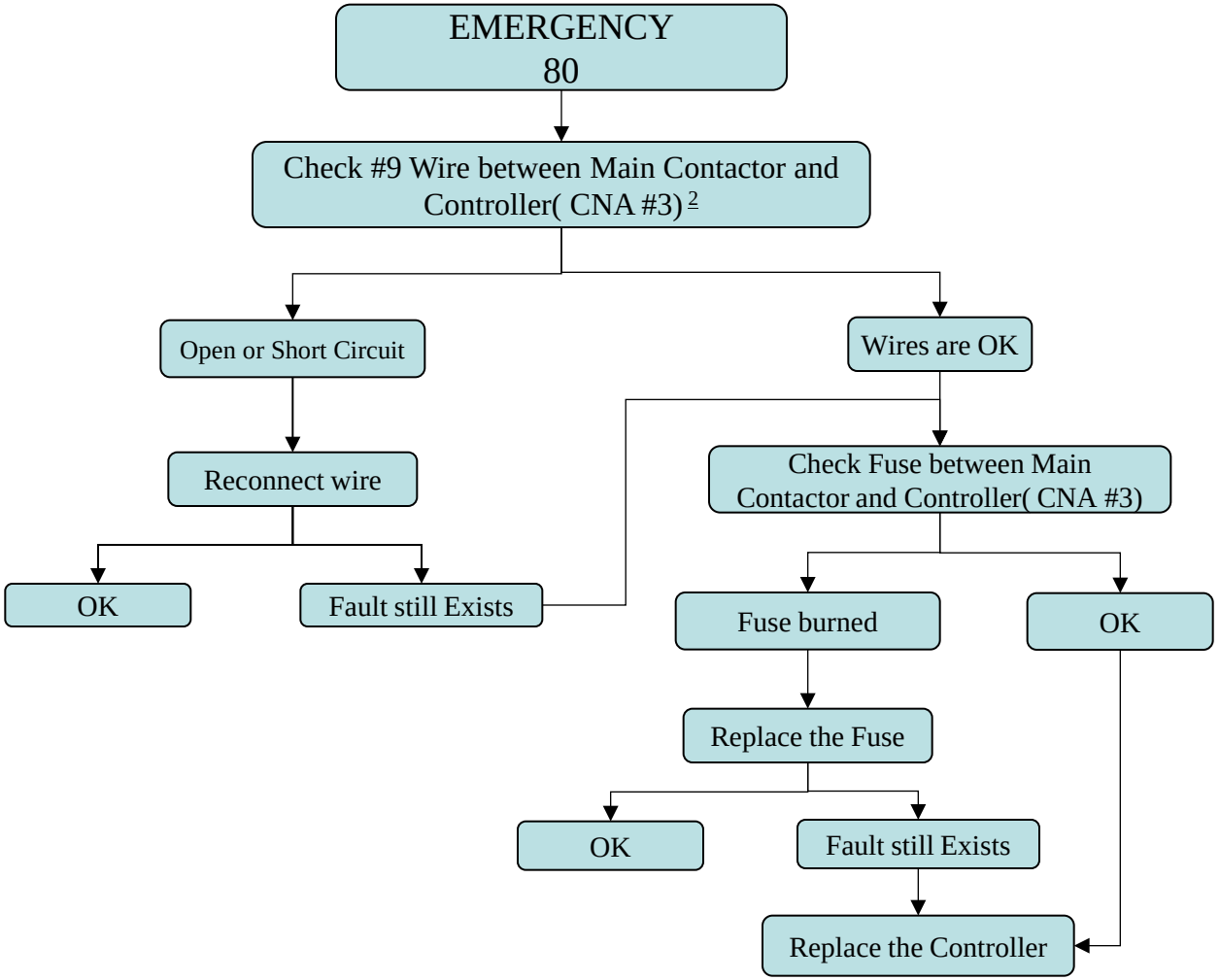
FORWARD ON

Repeat step for reverse direction

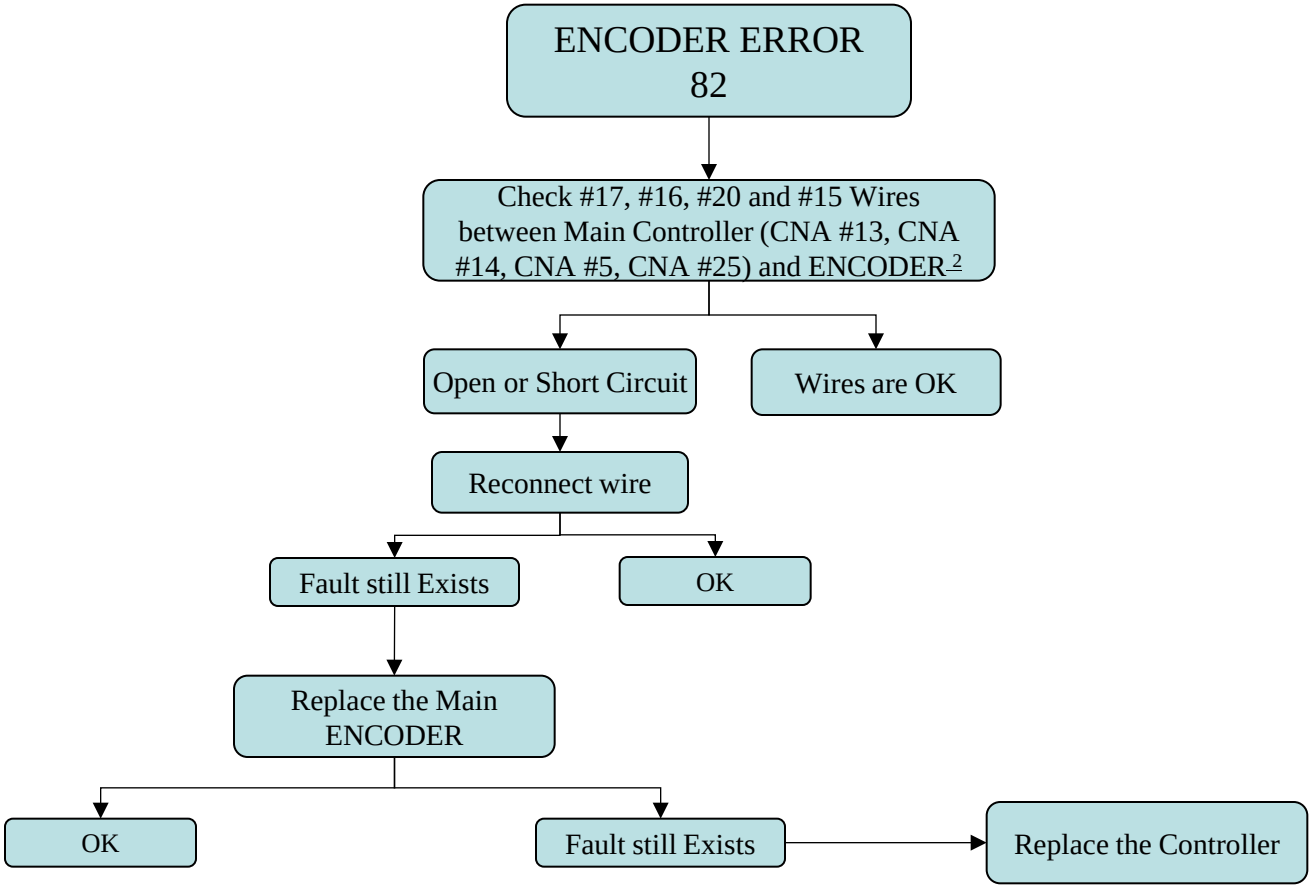
BACKWARD OFF
BACKWARD ON

When finished , press and hold power button for 3s to turn off the Console

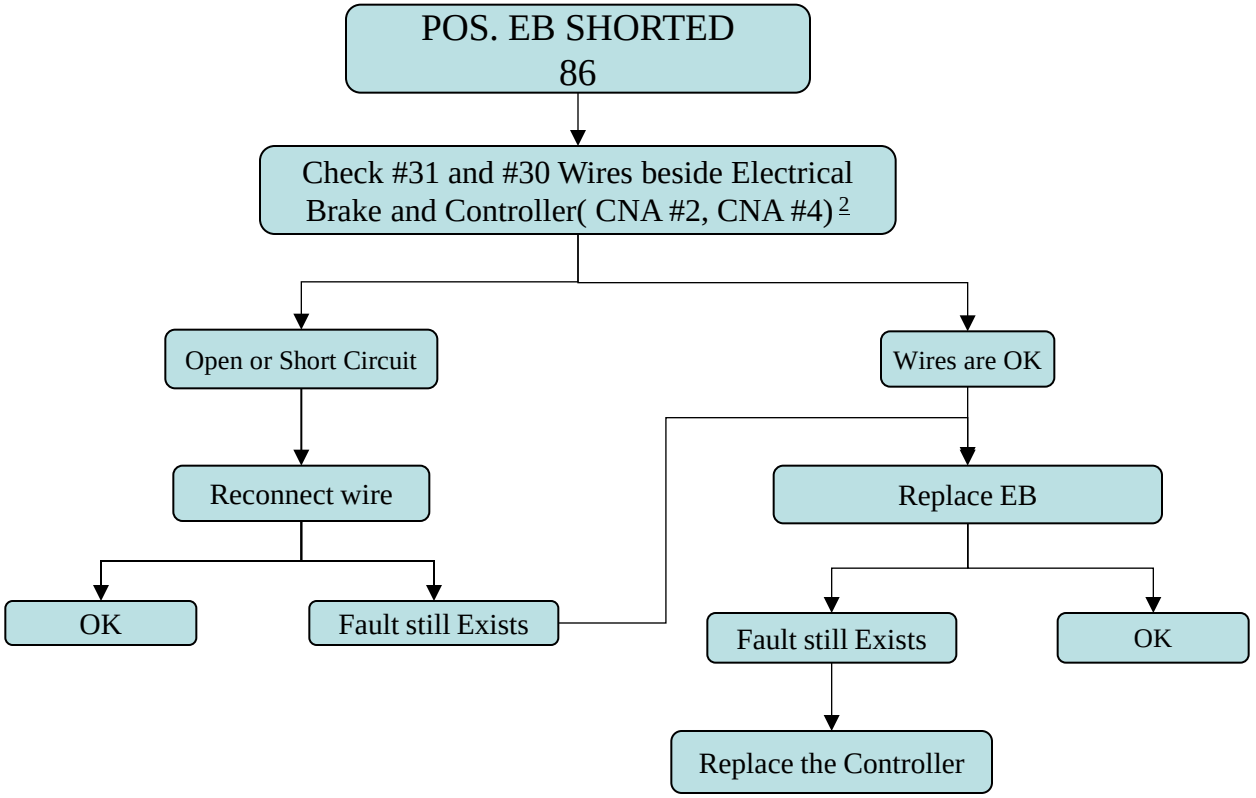
ALARM #80 on NODE #2 EMERGENCY



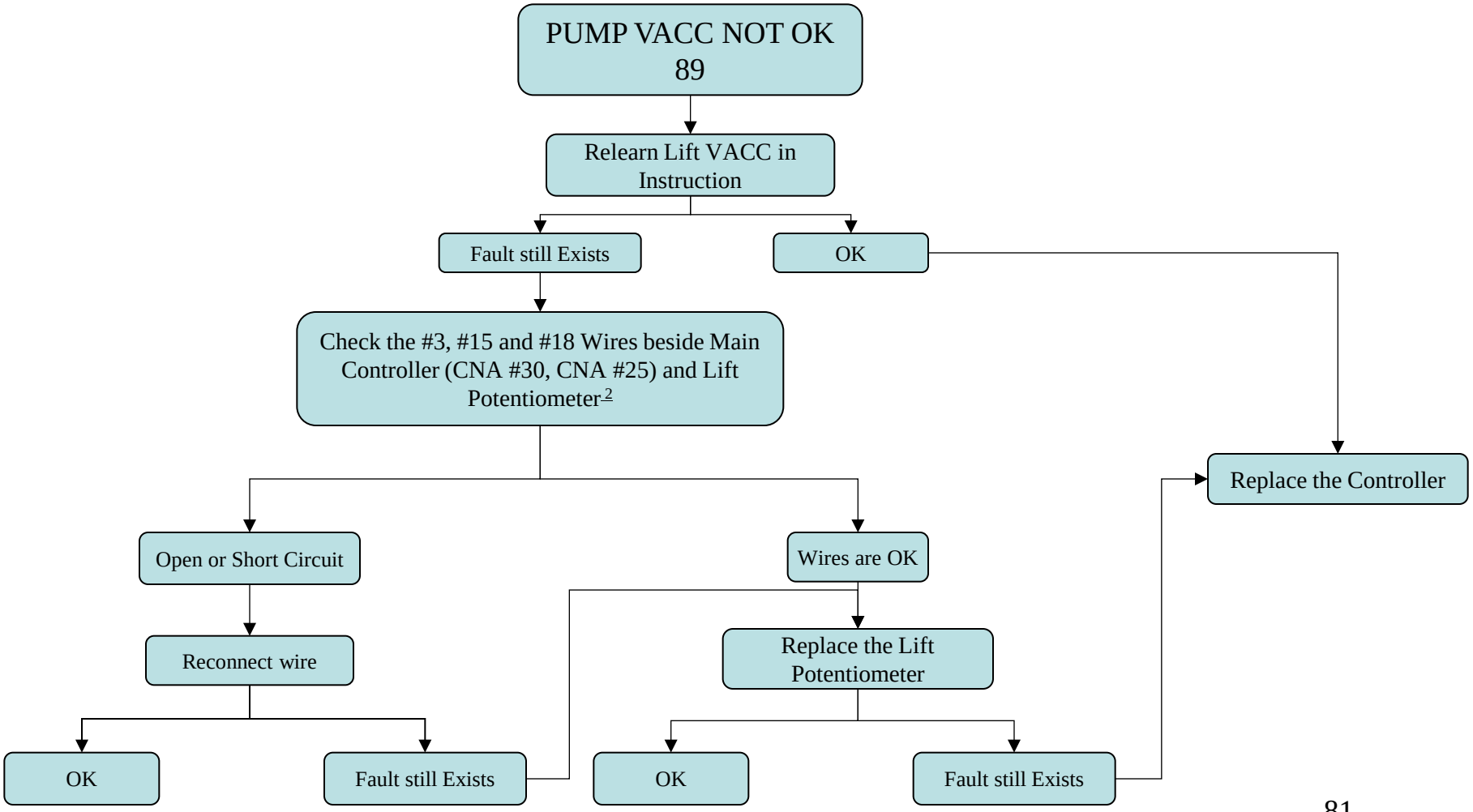
ALARM #82 on NODE #2 ENCODER ERROR



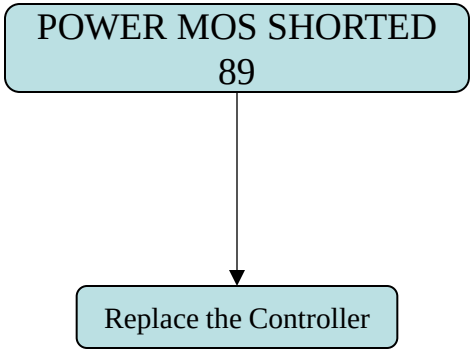
ALARM #86 on NODE #2 POS. EB SHORTED



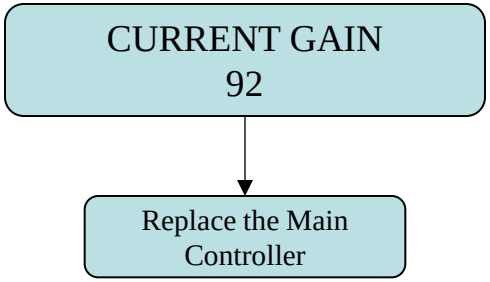
ALARM #89 on NODE #2 PUMP VACC NOT OK



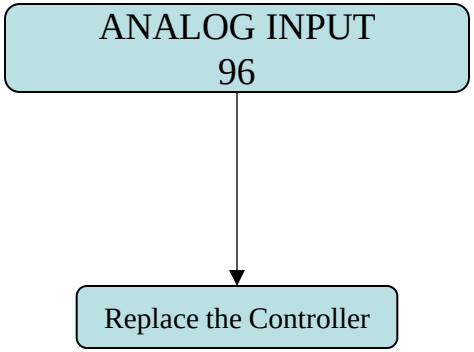
ALARM #89 on NODE #2 POWER MOS SHORTED



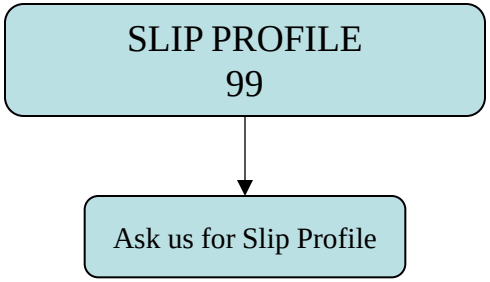
ALARM #92 on NODE #2 CURRENT GAIN



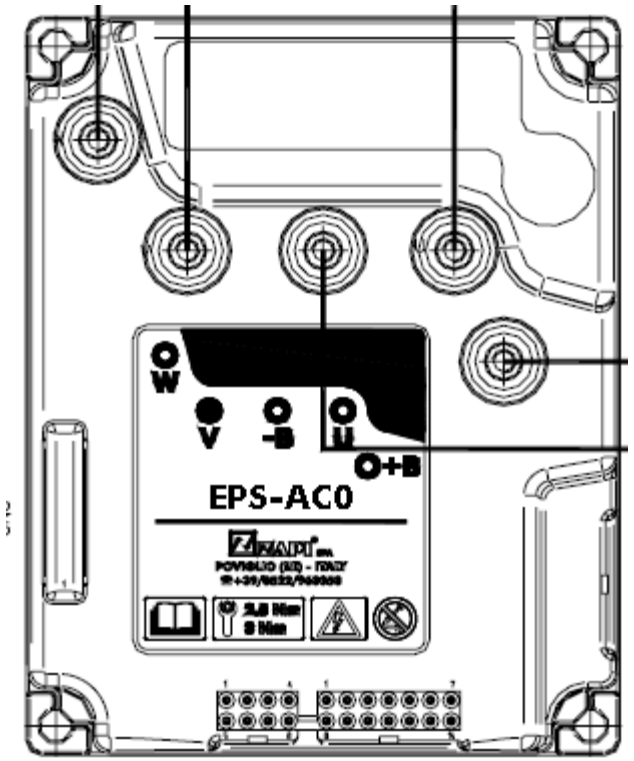
ALARM #96 on NODE #2 ANALOG INPUT



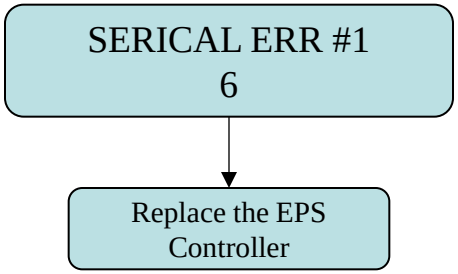
ALARM #99 on NODE #2 SLIP PROFILE



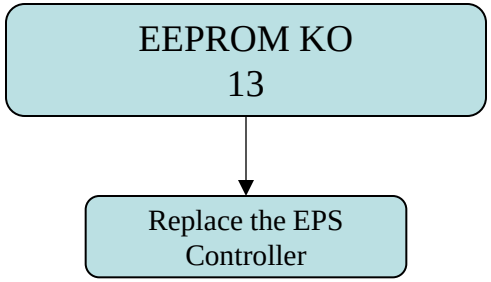
EPS Controller



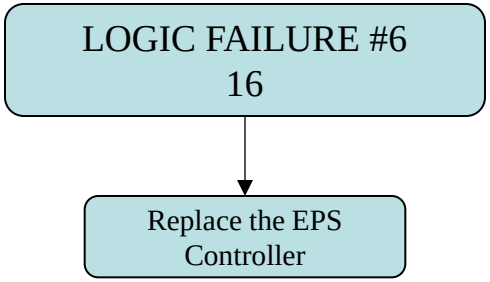
ALARM #6 on NODE #6 SERIAL ERR #1



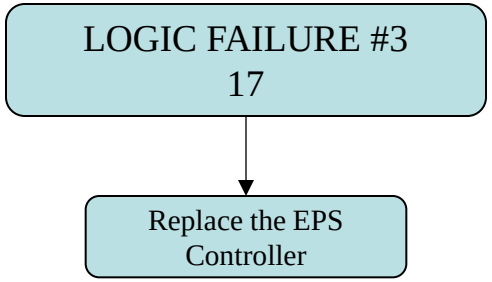
ALARM #13 on NODE #6 EEPROM KO



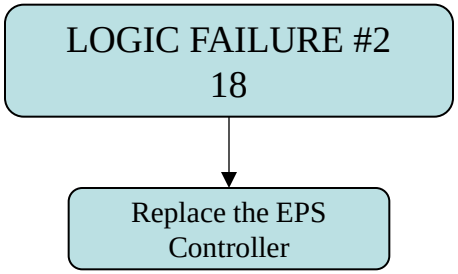
ALARM #16 on NODE #6 LOGIC FAILURE #4



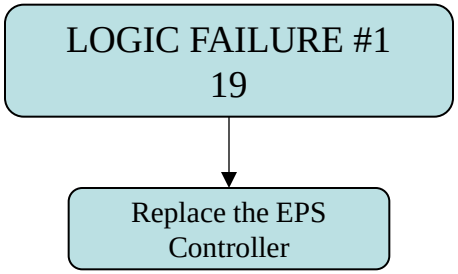
ALARM #17 on NODE #6 LOGIC FAILURE #3



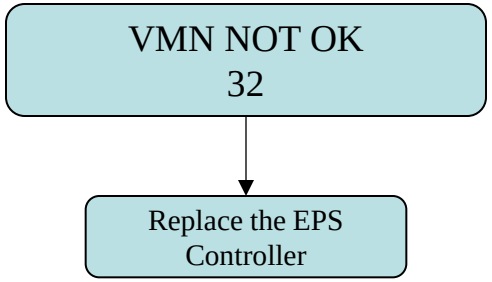
ALARM #18 on NODE #6 LOGIC FAILURE #2



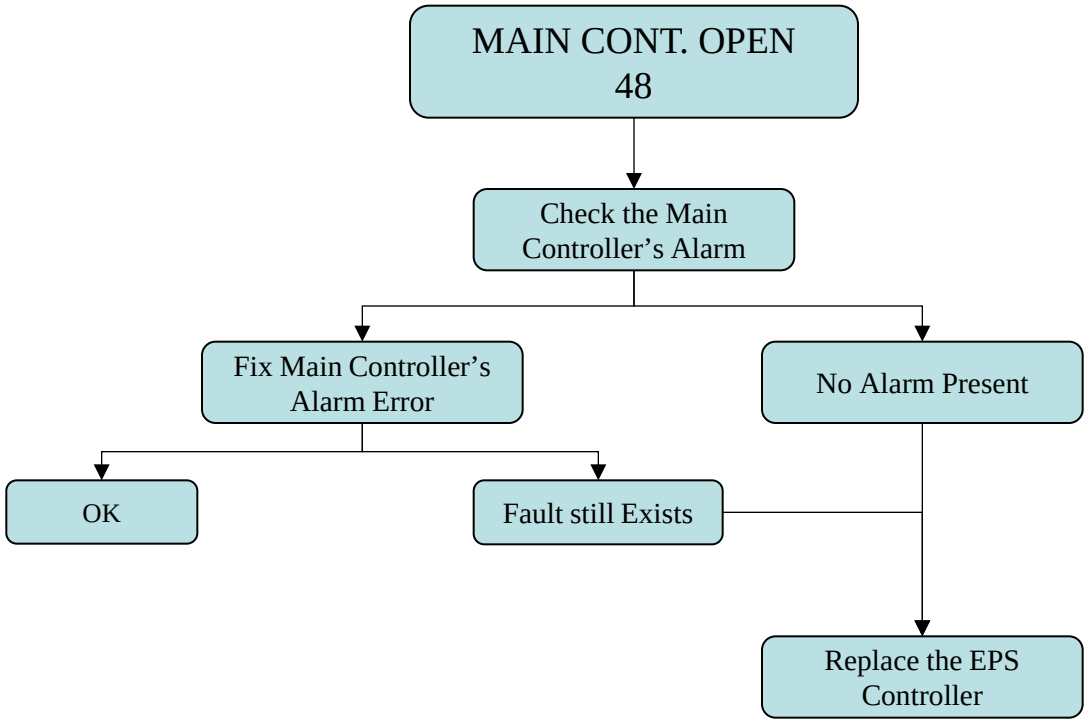
ALARM #19 on NODE #6 LOGIC FAILURE #1



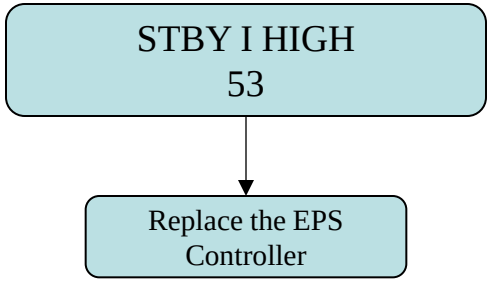
ALARM #32 on NODE #6 VMN NOT OK



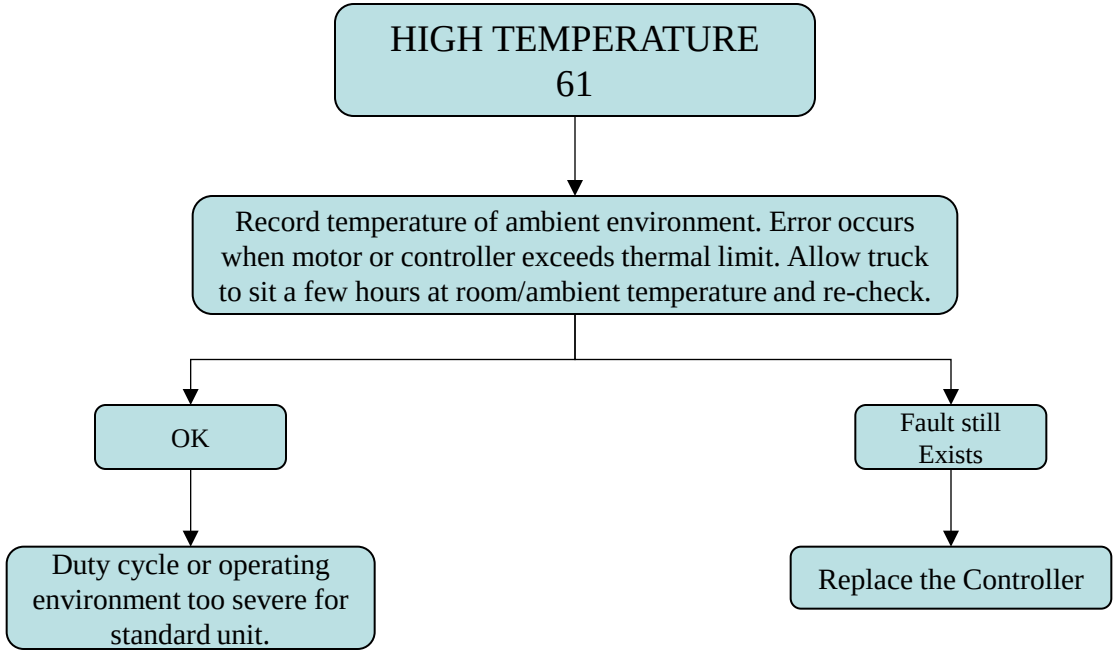
ALARM #48 on NODE #6 MAIN CONT. OPEN



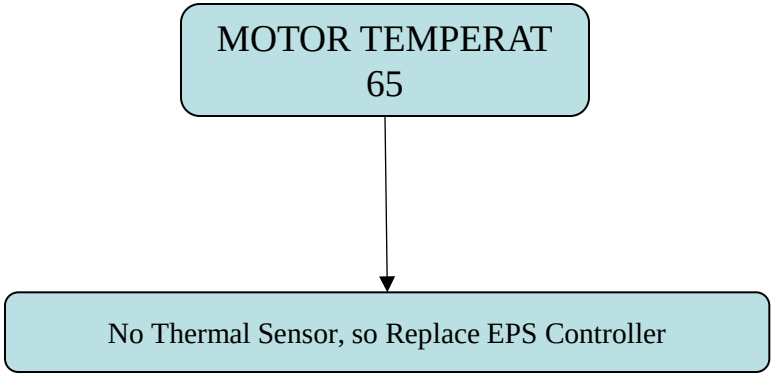
ALARM #53 on NODE #6 STBY I HIGH



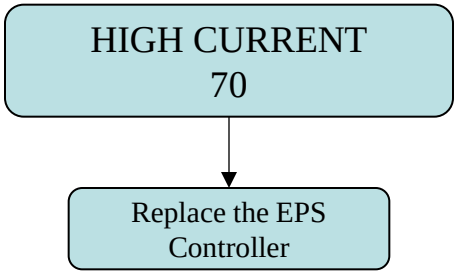
ALARM #61 on NODE #6 HIGH TEMPERATURE



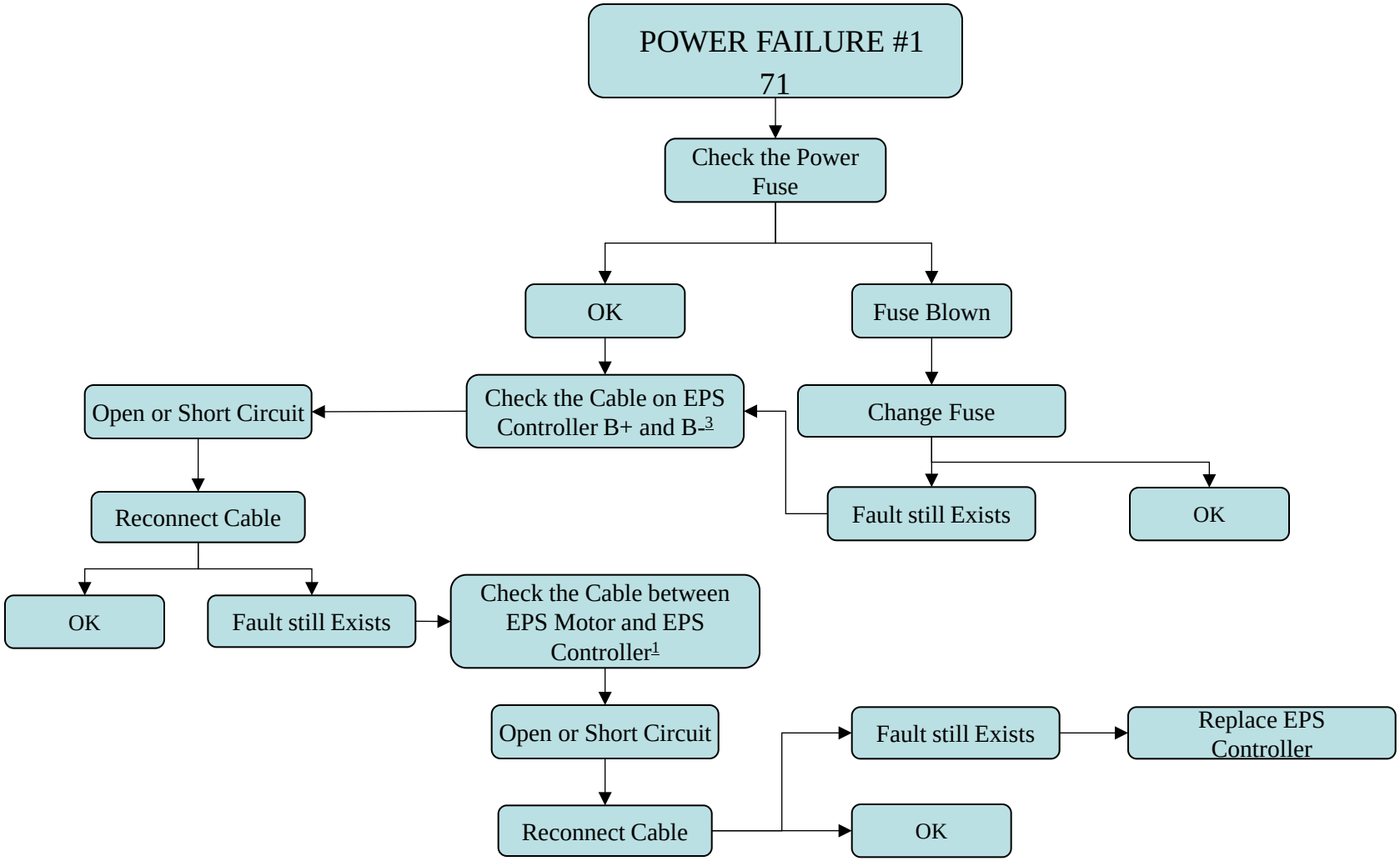
ALARM #65 on NODE #6 MOTOR TEMPERAT



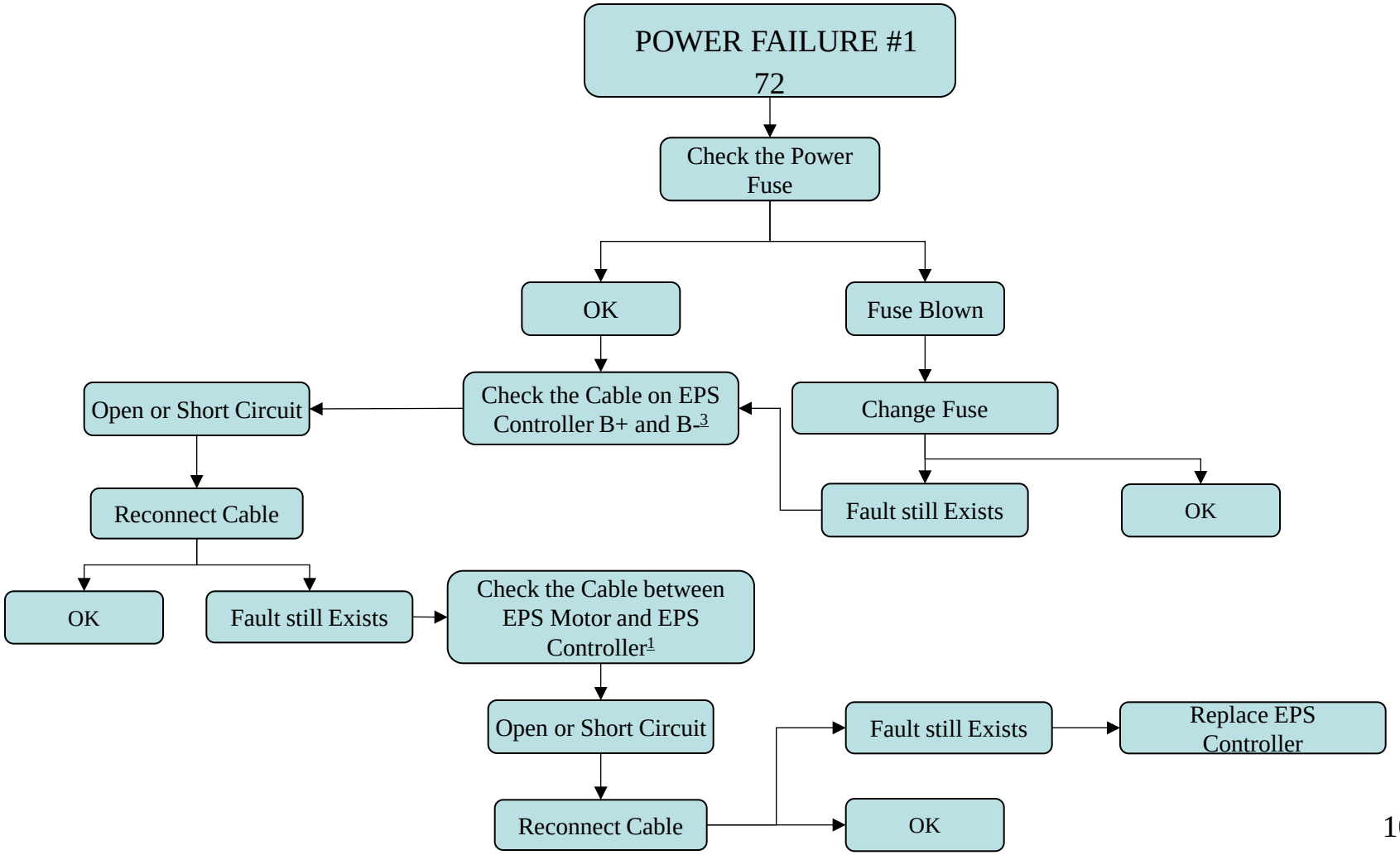
ALARM #70 on NODE #6 HIGH CURRENT



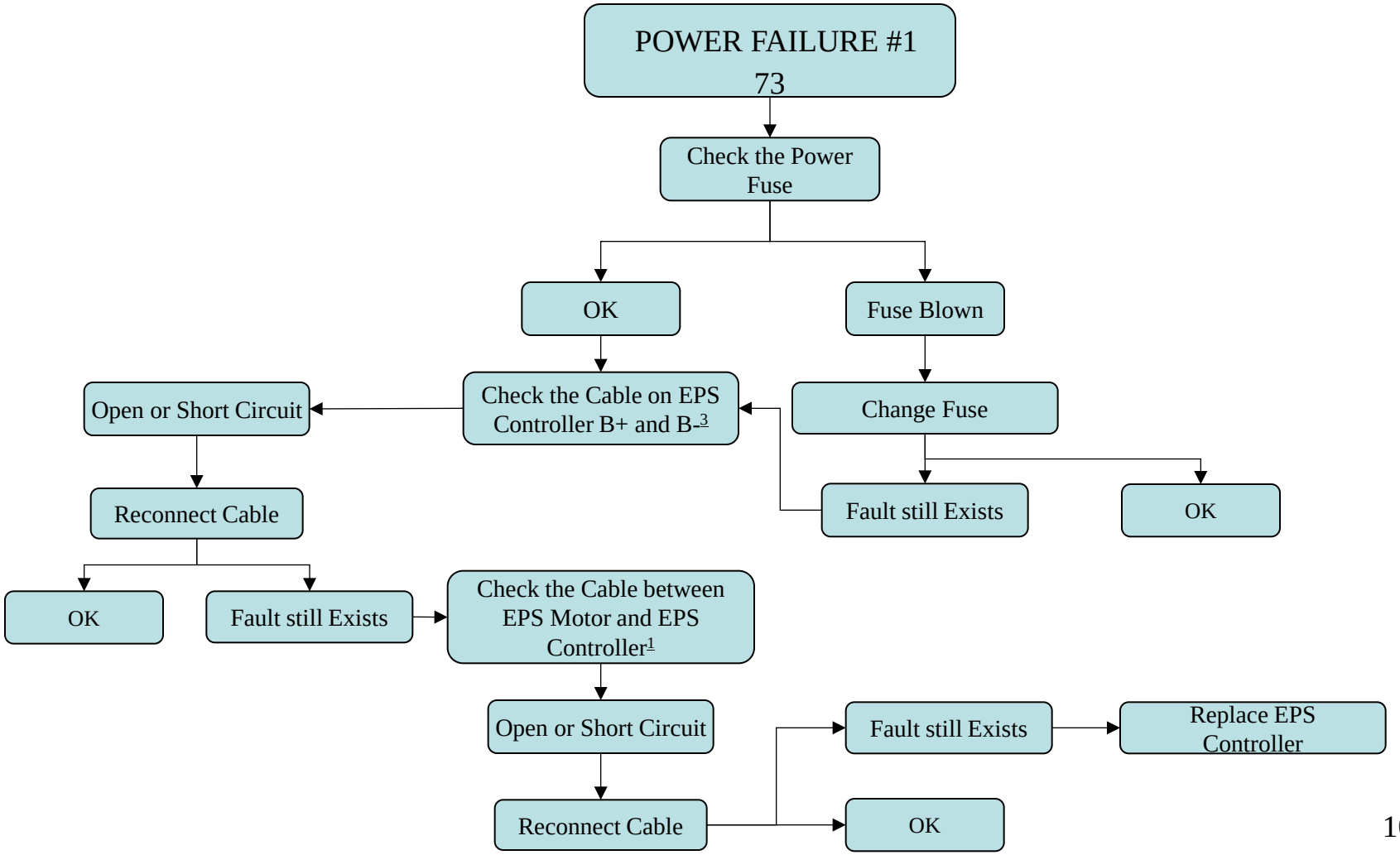
ALARM #71 on NODE #6 POWER FAILURE #3



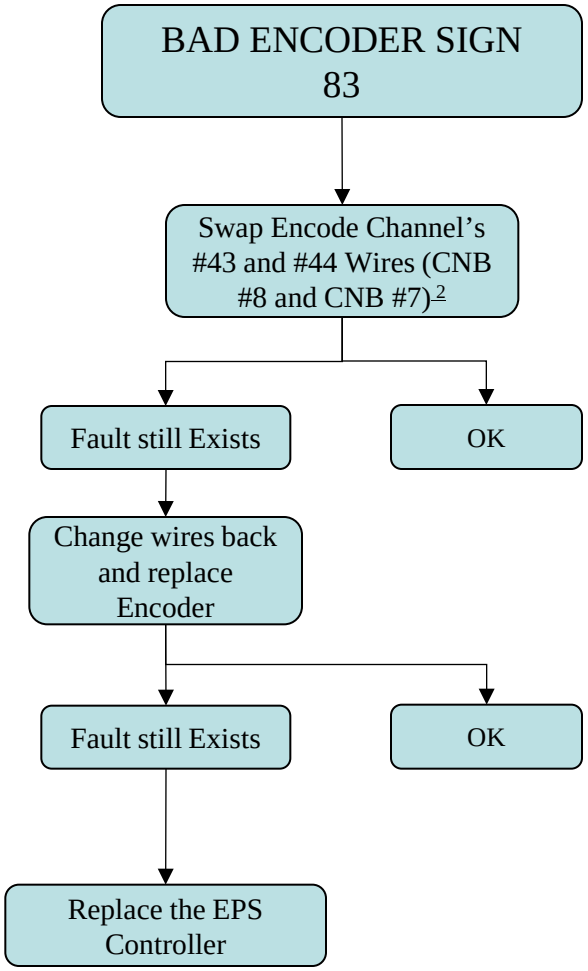
ALARM #72 on NODE #6 POWER FAILURE #2



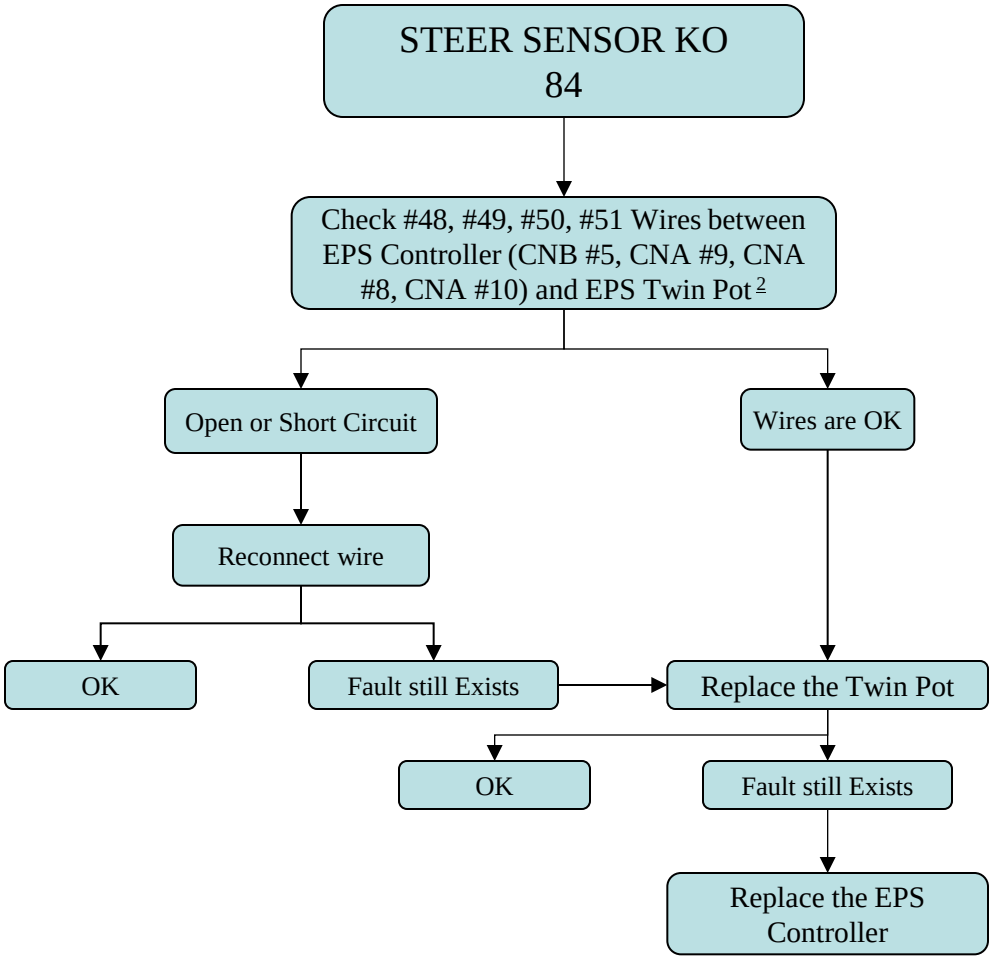
ALARM #73 on NODE #6 POWER FAILURE #1



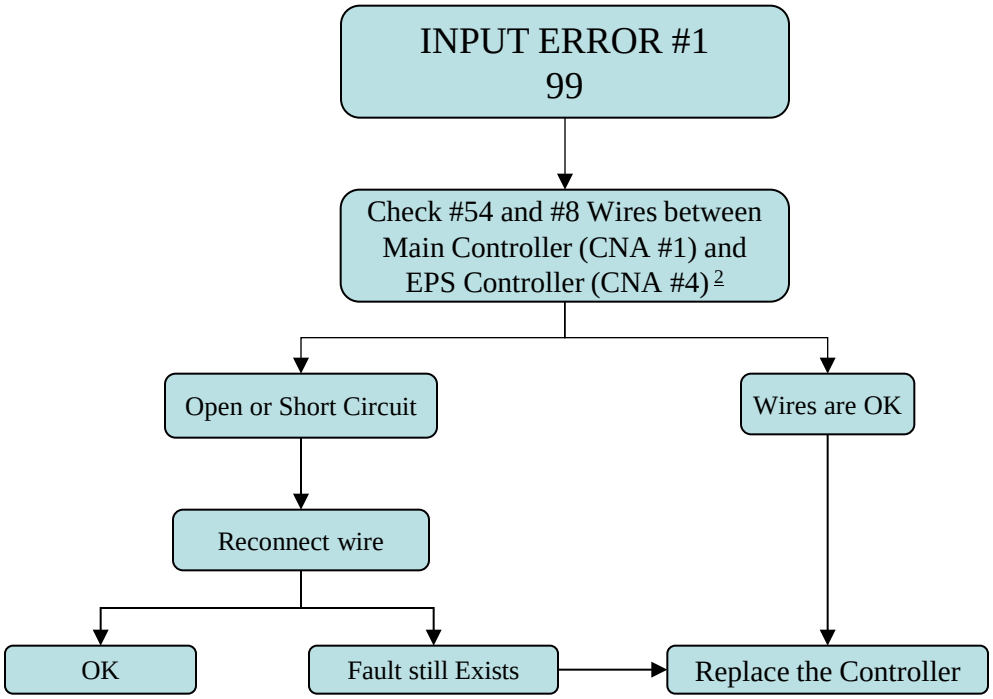
ALARM #83 on NODE #6 BAD ENCODER SIGN



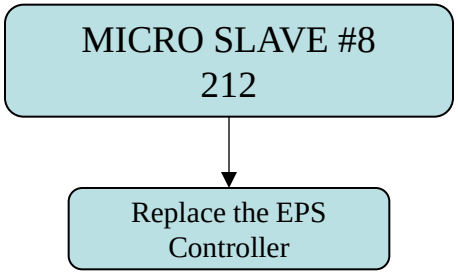
ALARM #84 on NODE #6 STEER SENSOR KO



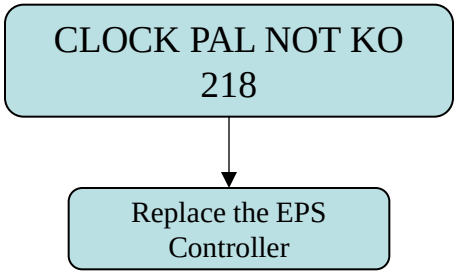
ALARM #99 on NODE #6 INPUT ERROR #1



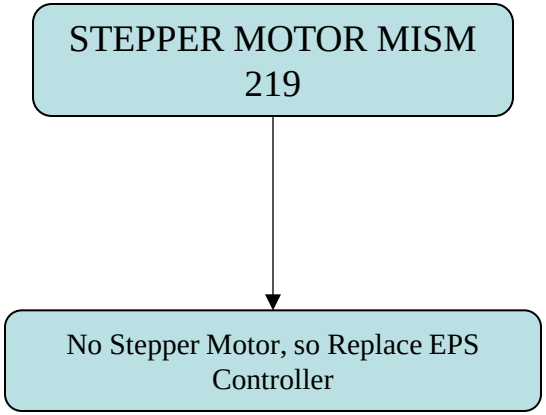
ALARM #212 on NODE #6 MICRO SLAVE #8



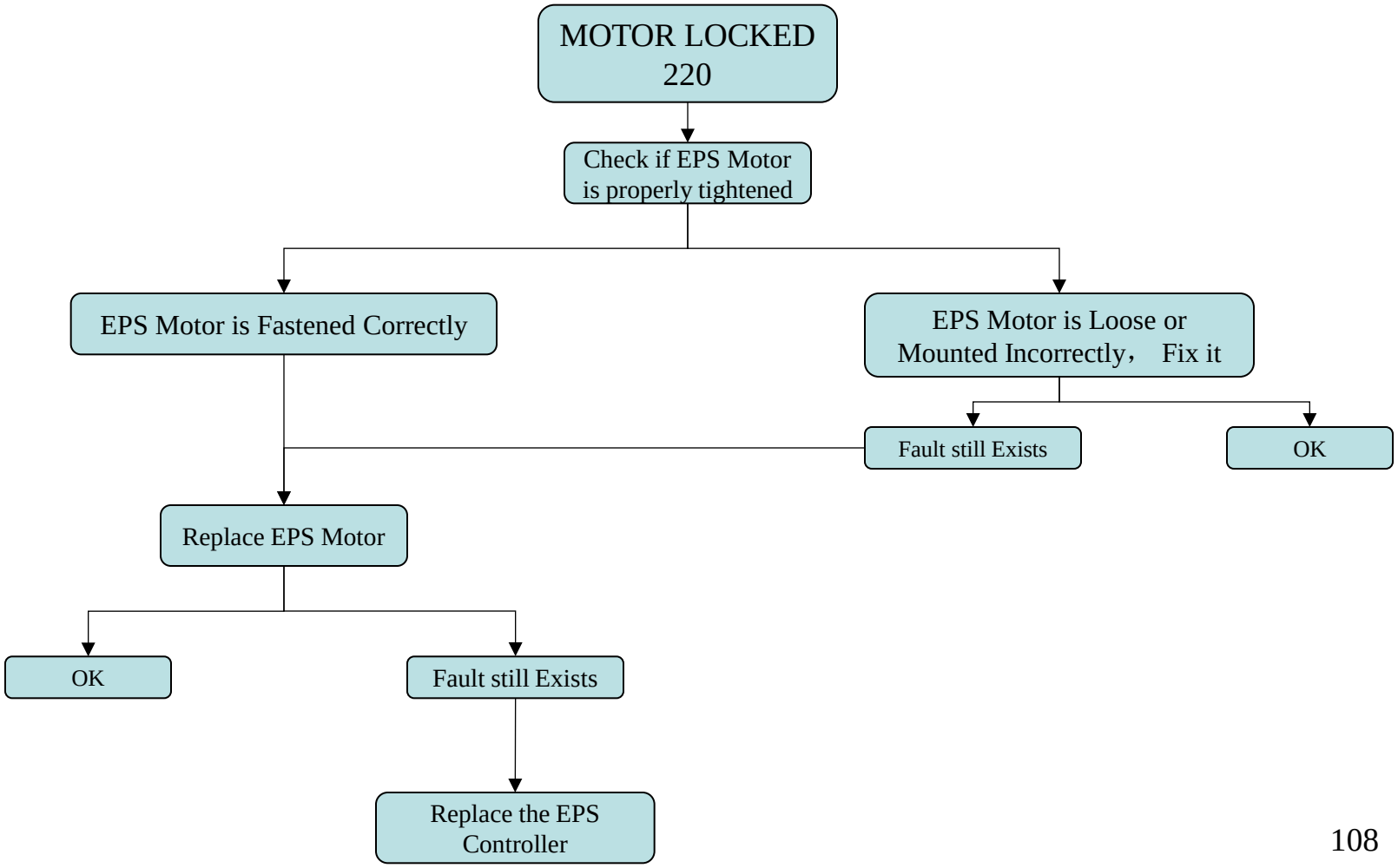
ALARM #218 on NODE #6 CLOCK PAL NOT KO



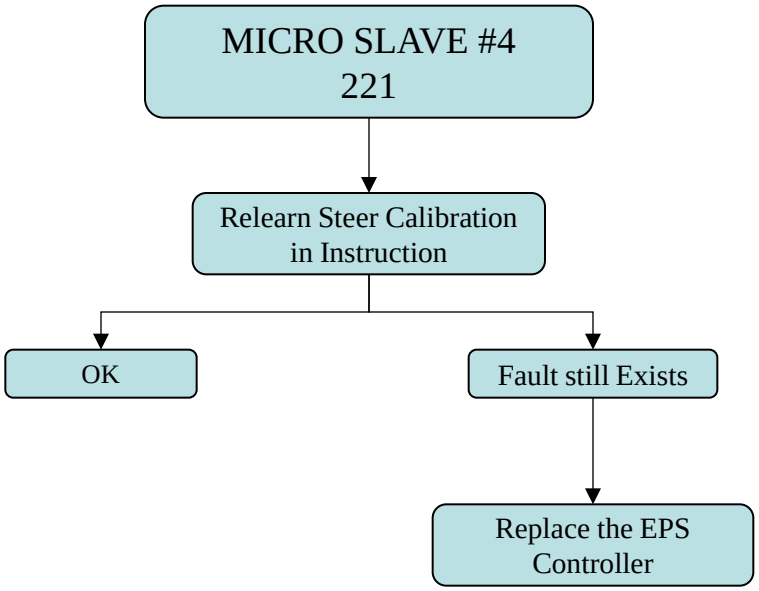
ALARM #219 on NODE #6 STEPPER MOTOR MISM



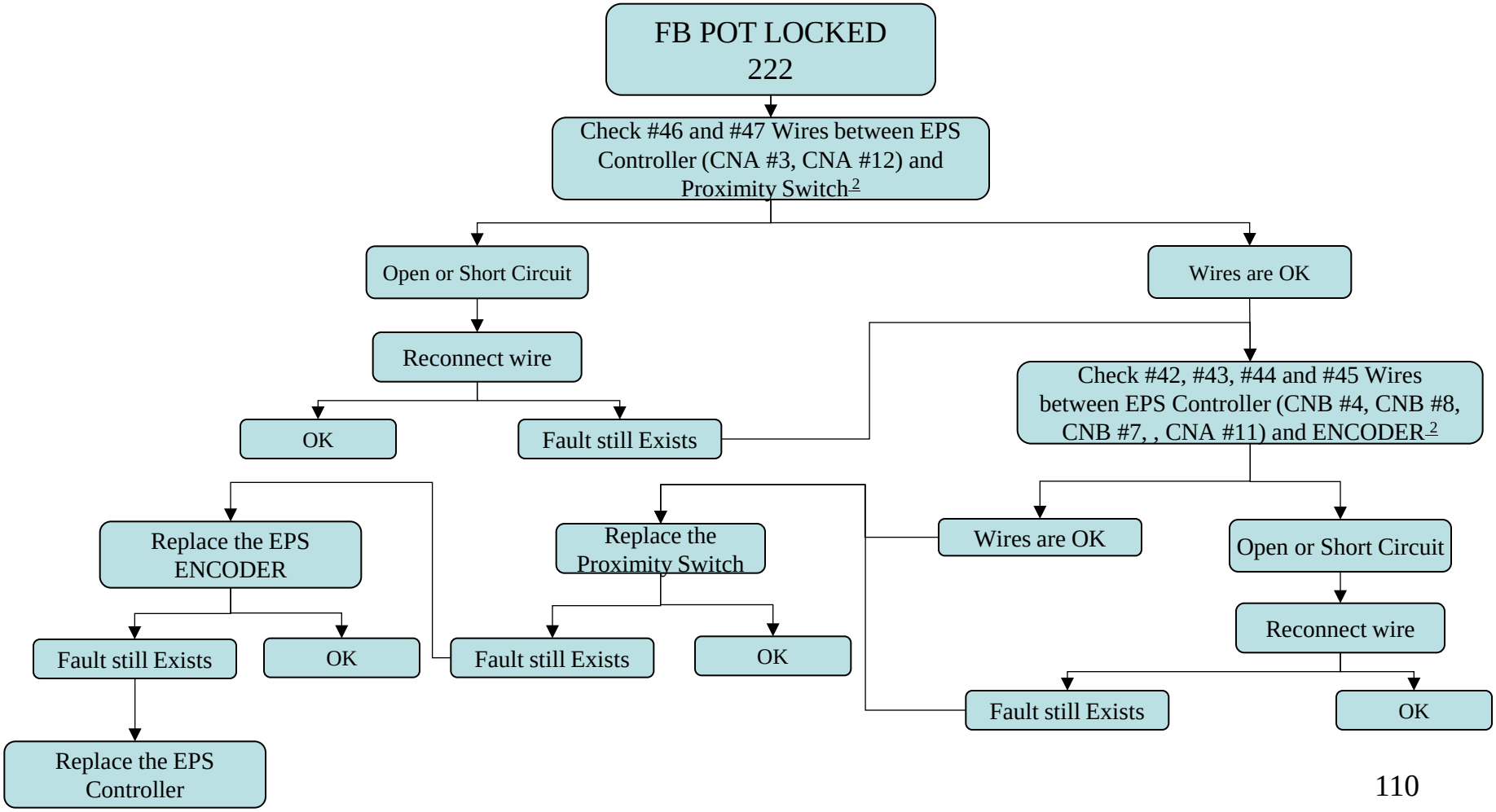
ALARM #220 on NODE #6 MOTOR LOCKED



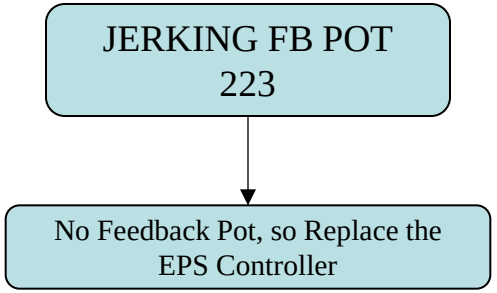
ALARM #221 on NODE #6 MICRO SLAVE #4



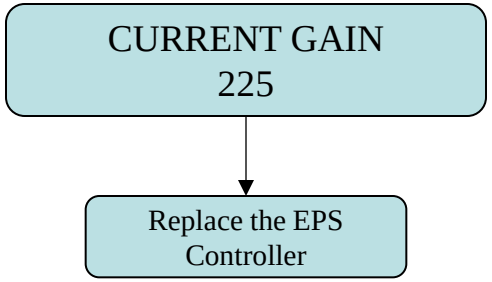
ALARM #222 on NODE #6 FB POT LOCKED



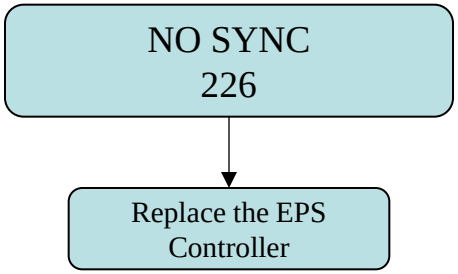
ALARM #223 on NODE #6 JERKING FB POT



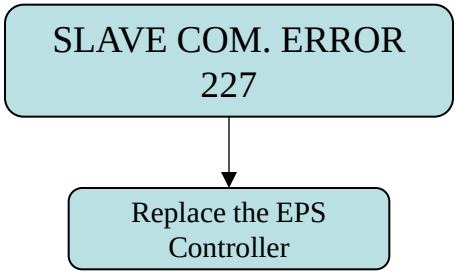
ALARM #225 on NODE #6 CURRENT GAIN



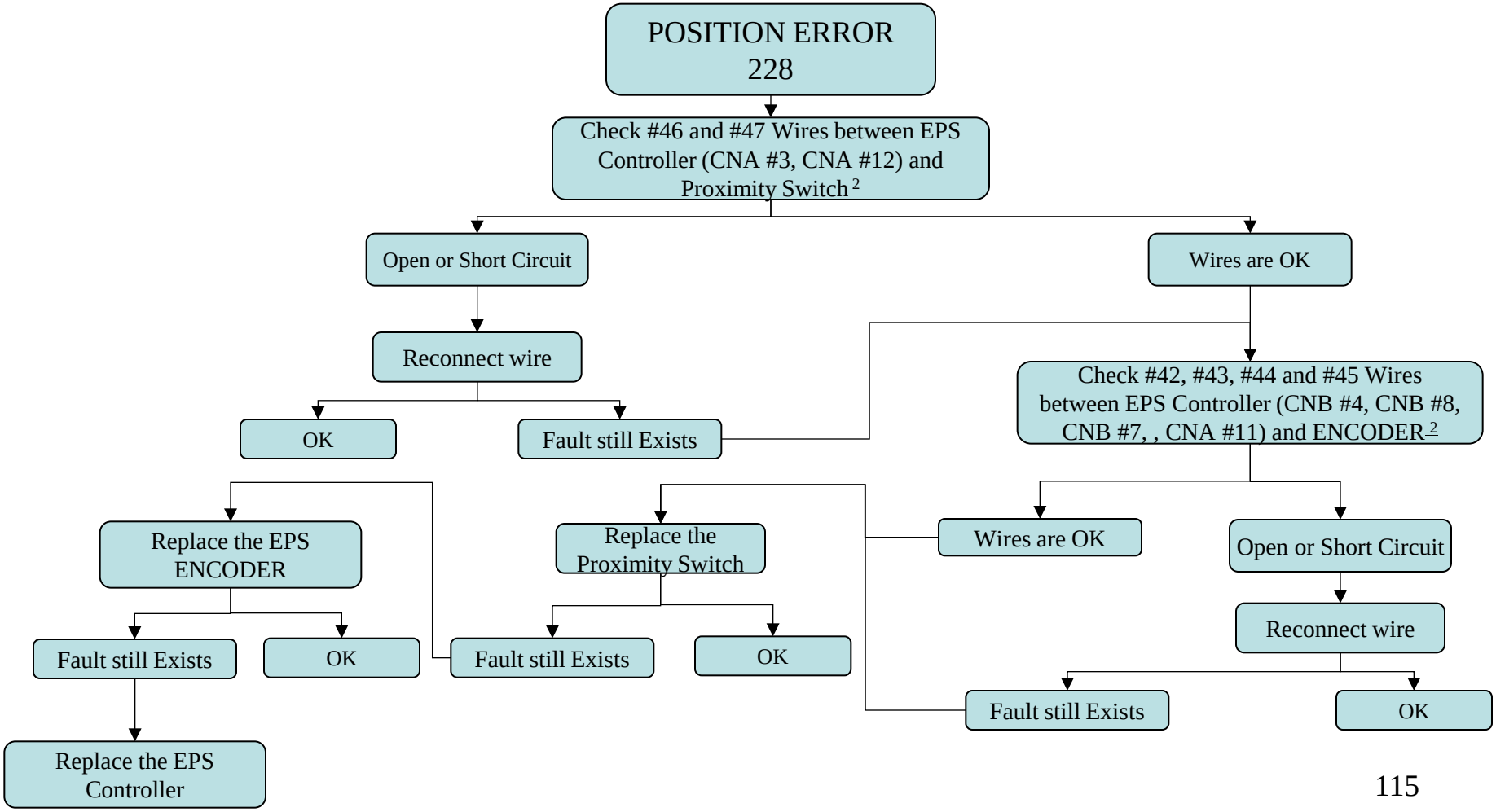
ALARM #226 on NODE #6 NO SYNC



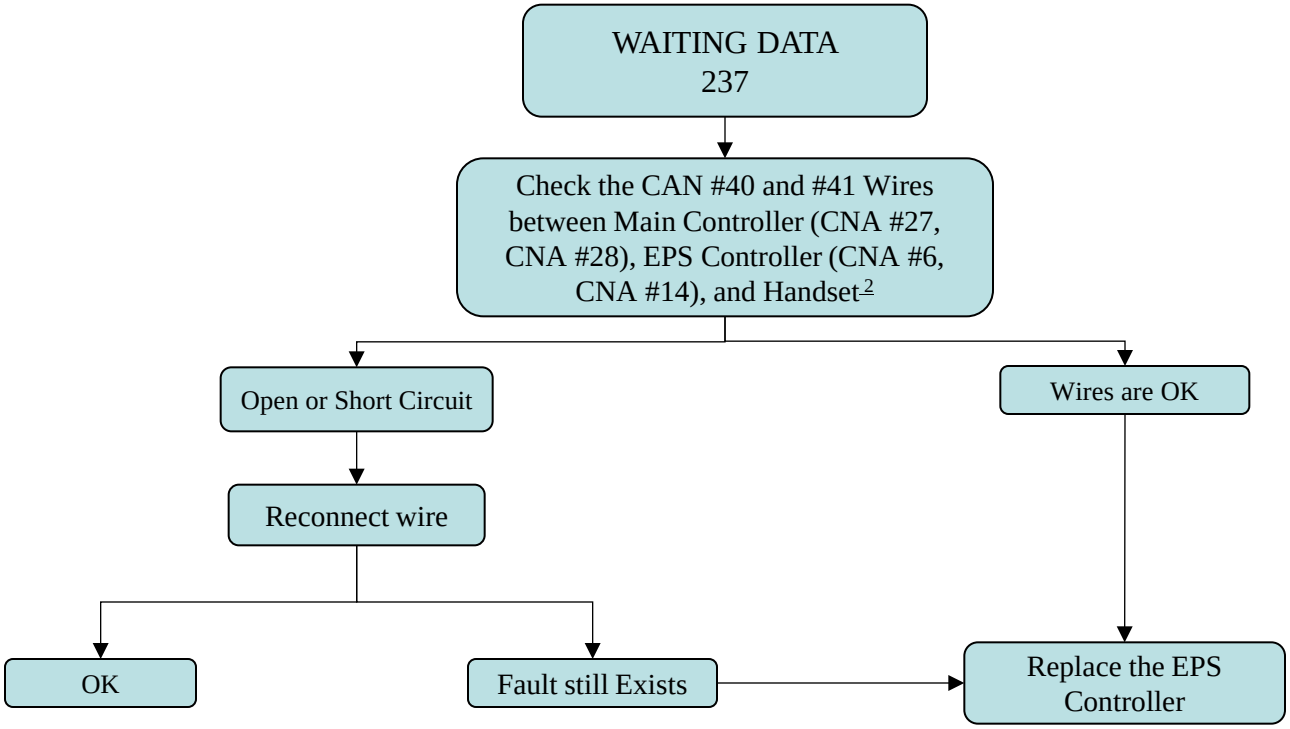
ALARM #227 on NODE #6 SLAVE COM. ERROR



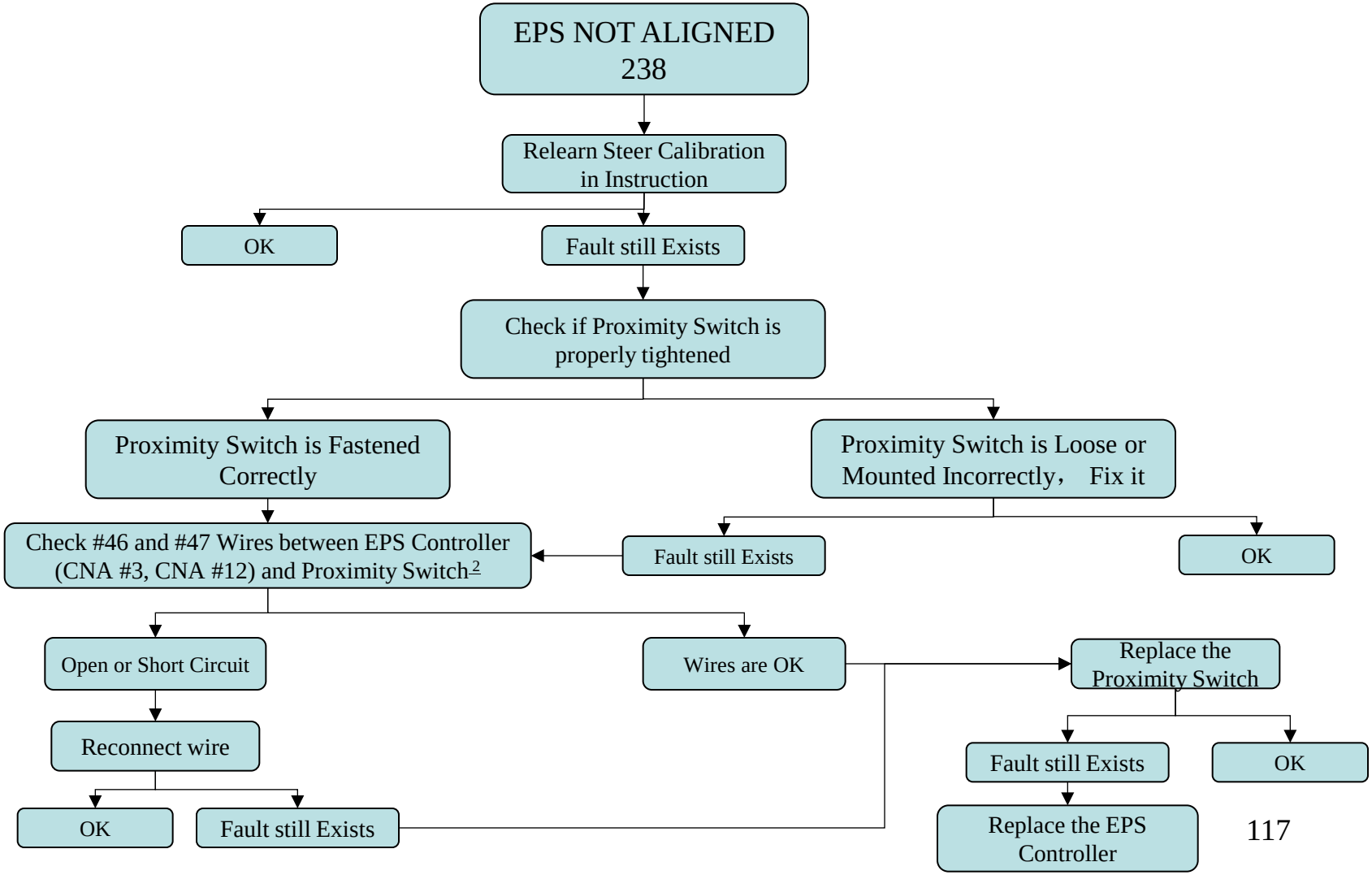
ALARM #228 on NODE #6 POSITION ERROR



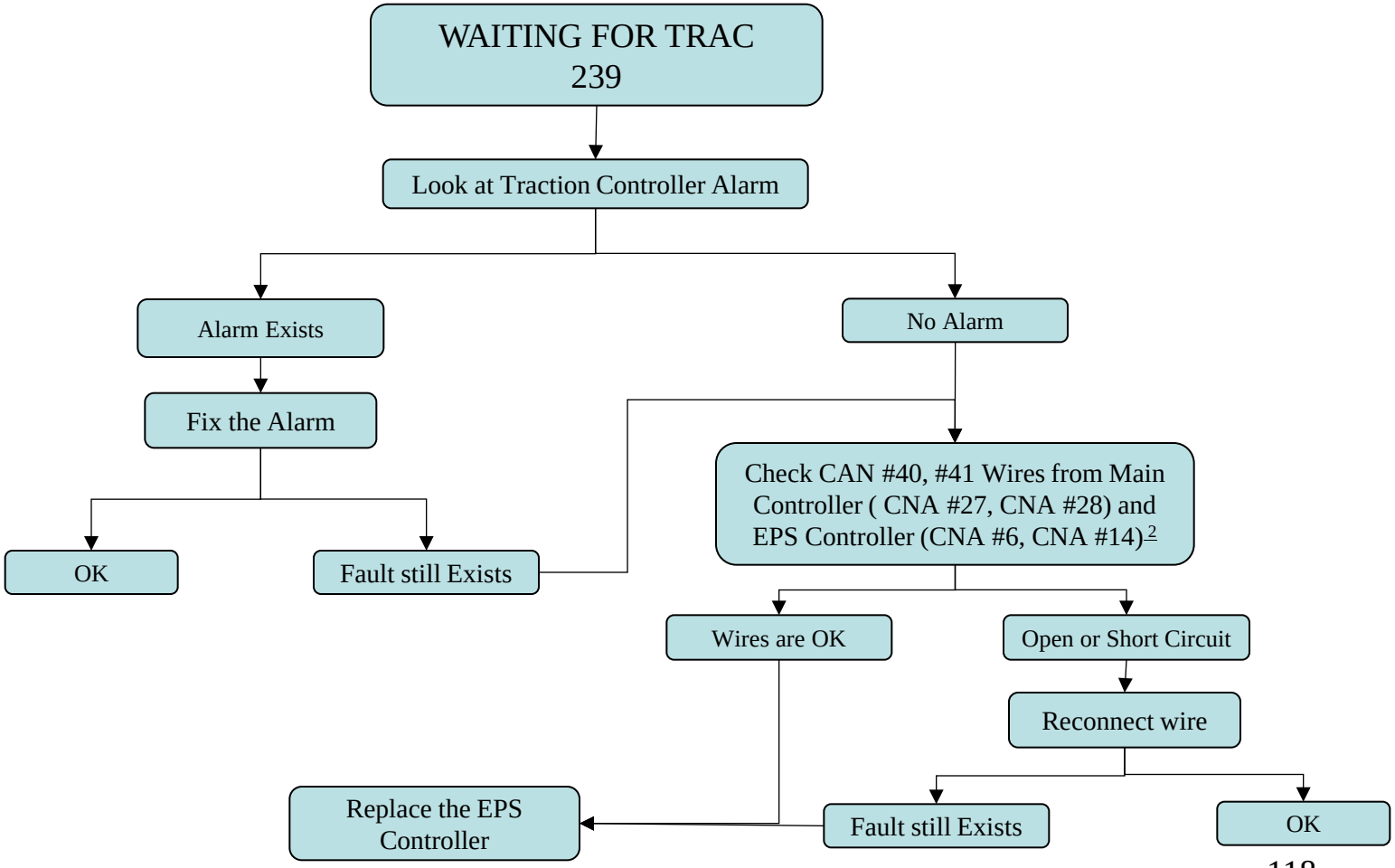
ALARM #237 on NODE #6 WAITING DATA



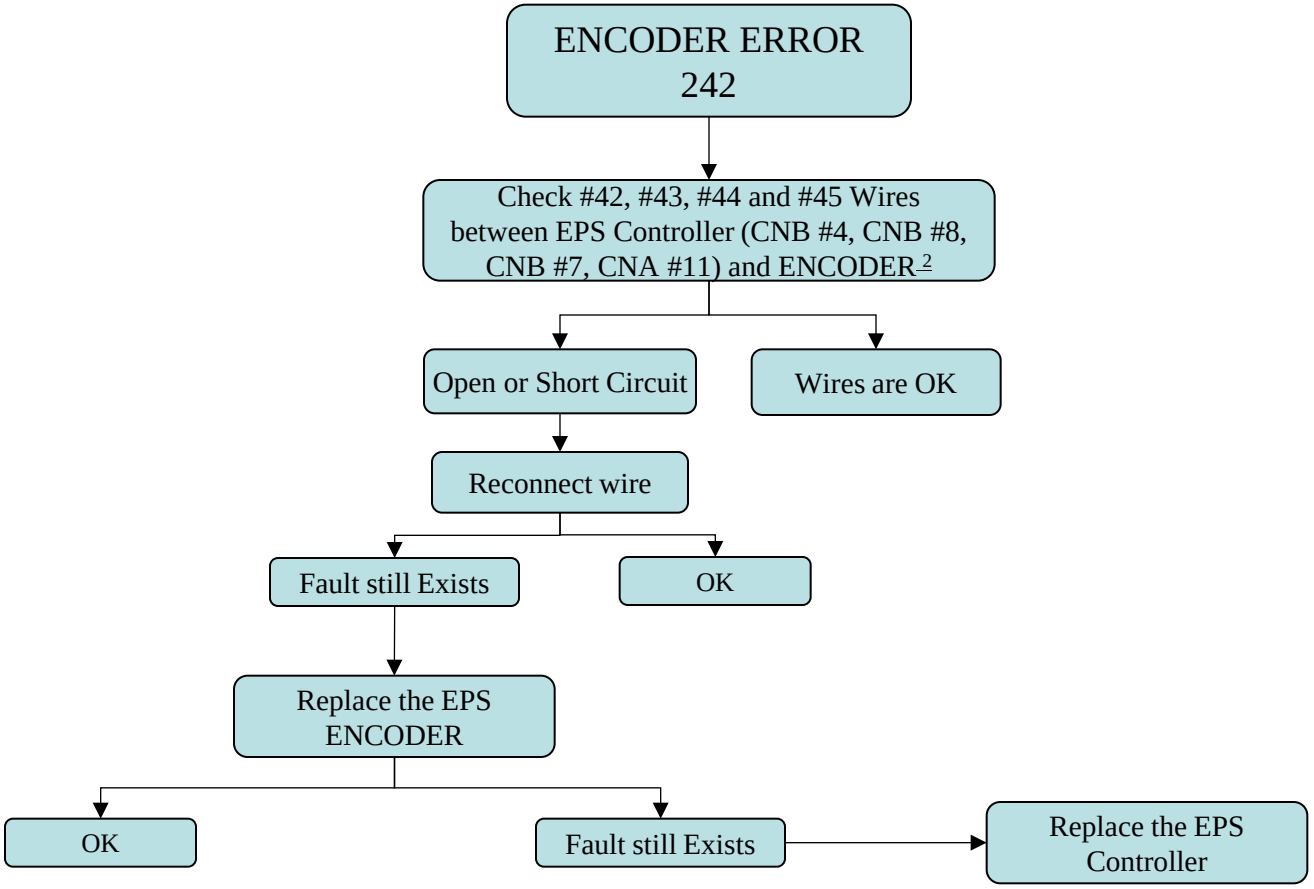
ALARM #238 on NODE #6 EPS NOT ALIGNED



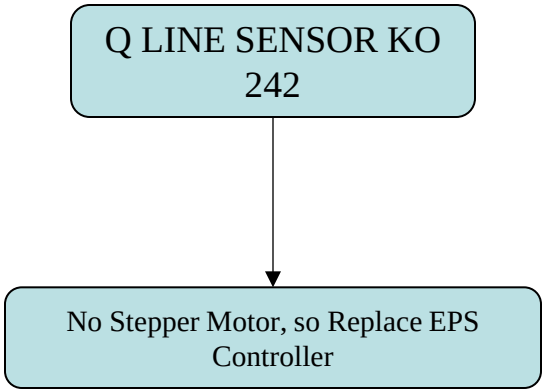
ALARM #239 on NODE #6 WAITING FOR TRAC



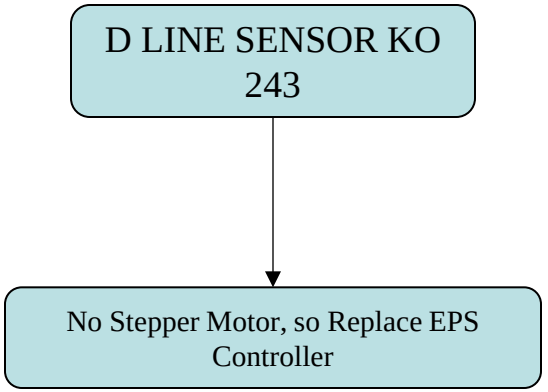
ALARM #241 on NODE #6 ENCODER ERROR



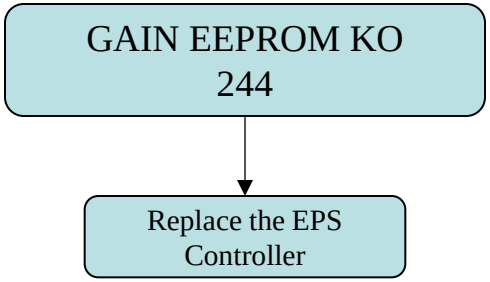
ALARM #242 on NODE #6 Q LINE SENSOR KO



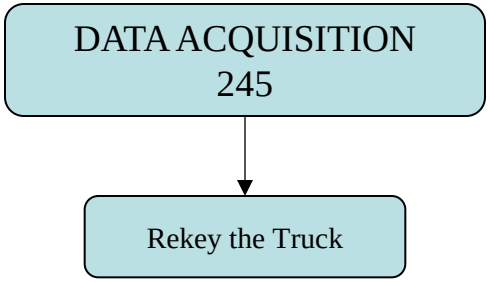
ALARM #243 on NODE #6 D LINE SENSOR KO



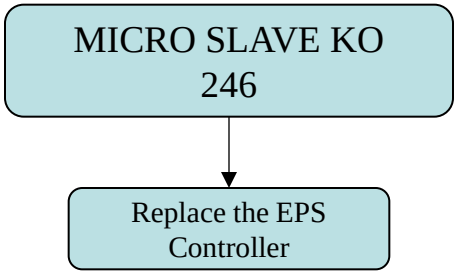
ALARM #244 on NODE #6 GAIN EEPROM KO



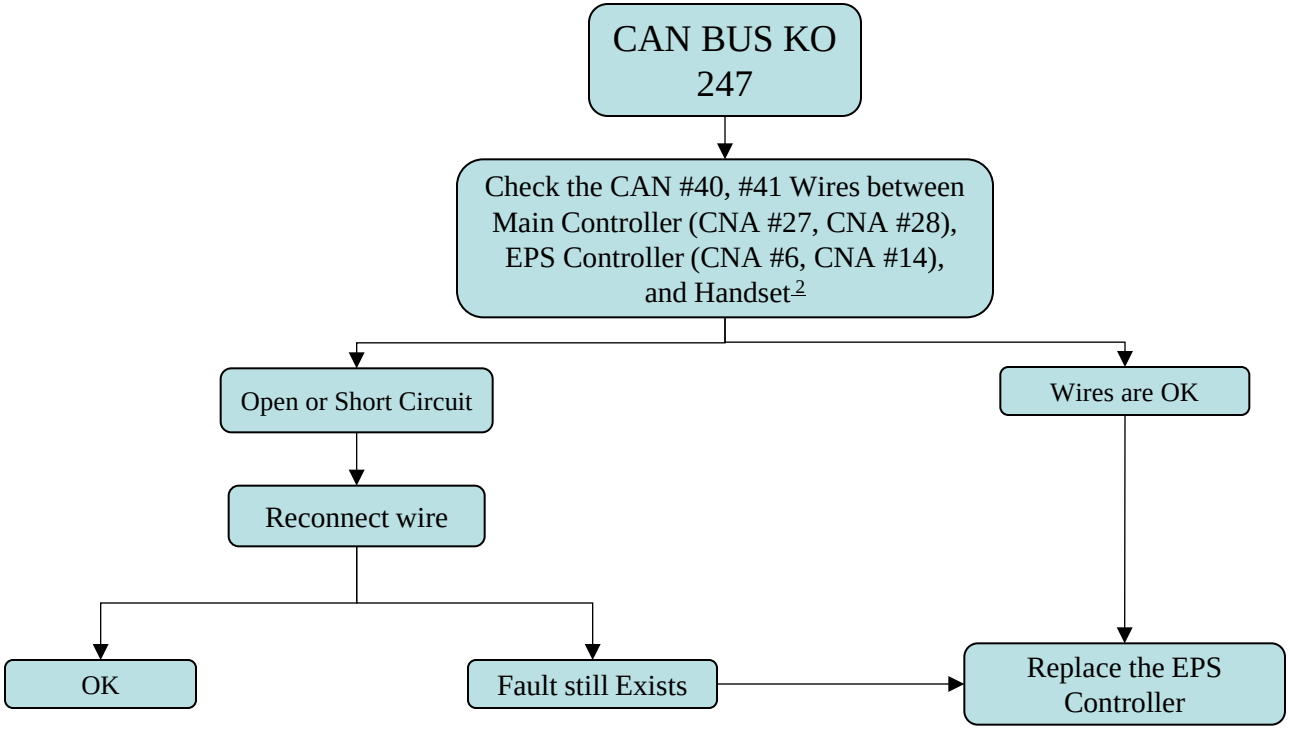
ALARM #245 on NODE #6 DATA ACQUISITION



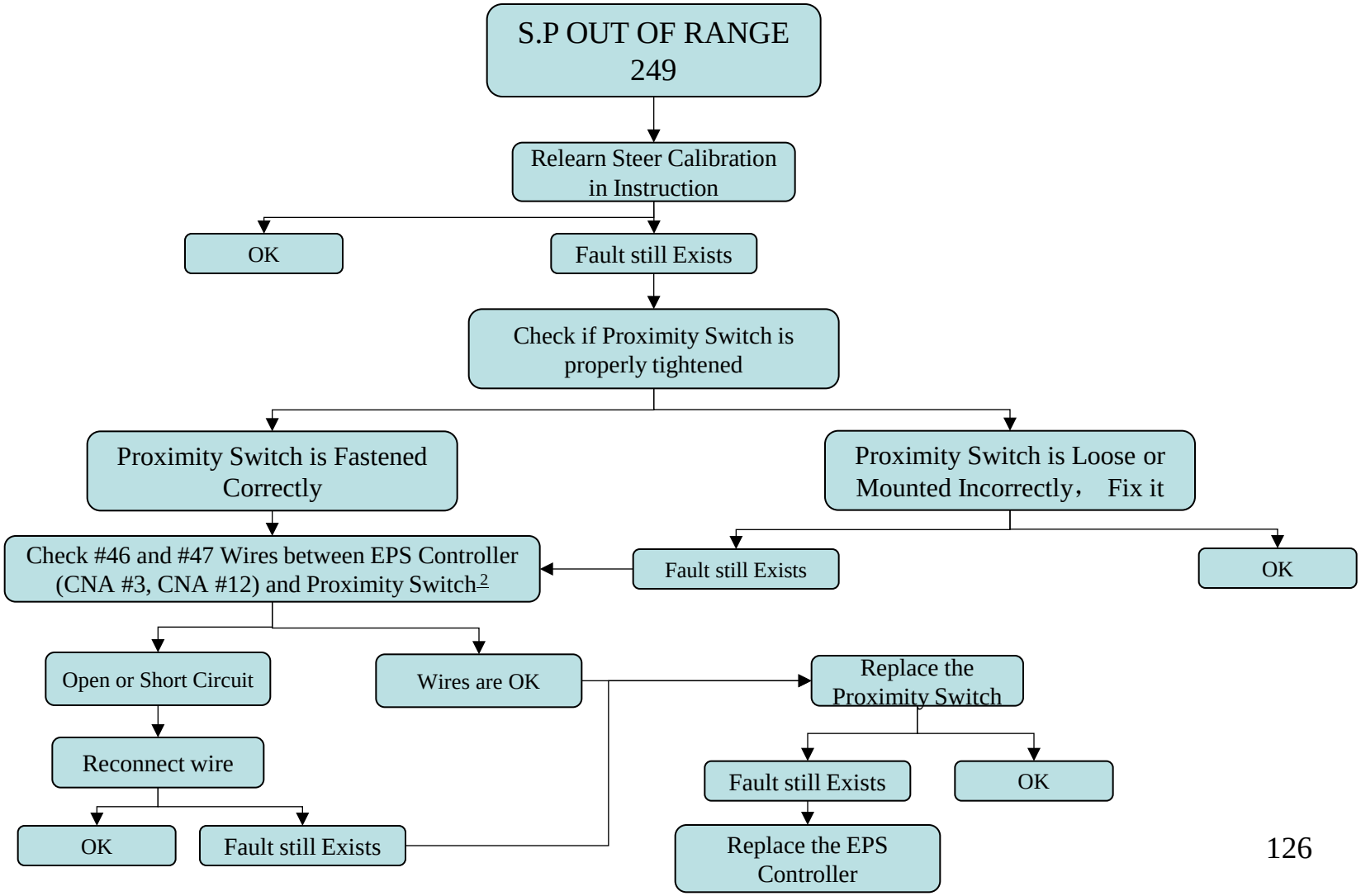
ALARM #246 on NODE #6 MICRO SLAVE KO



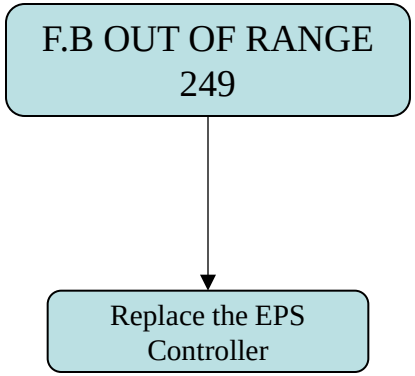
ALARM #247 on NODE #6 CAN BUS KO



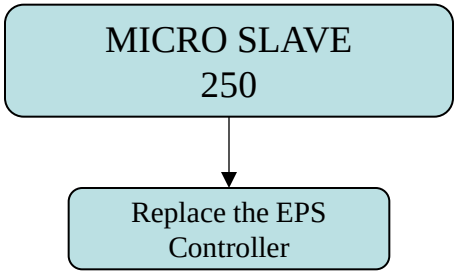
ALARM #248 on NODE #6 S.P OUT OF RANGE



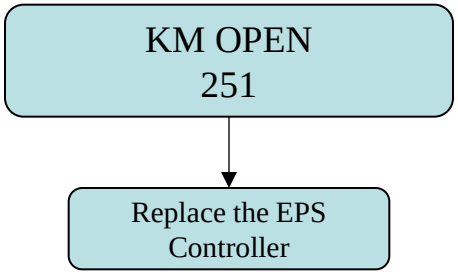
ALARM #249 on NODE #6 F.B OUT OF RANGE



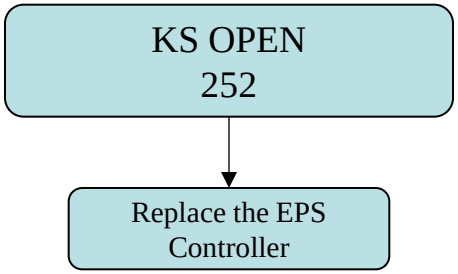
ALARM #250 on NODE #6 MICRO SLAVE



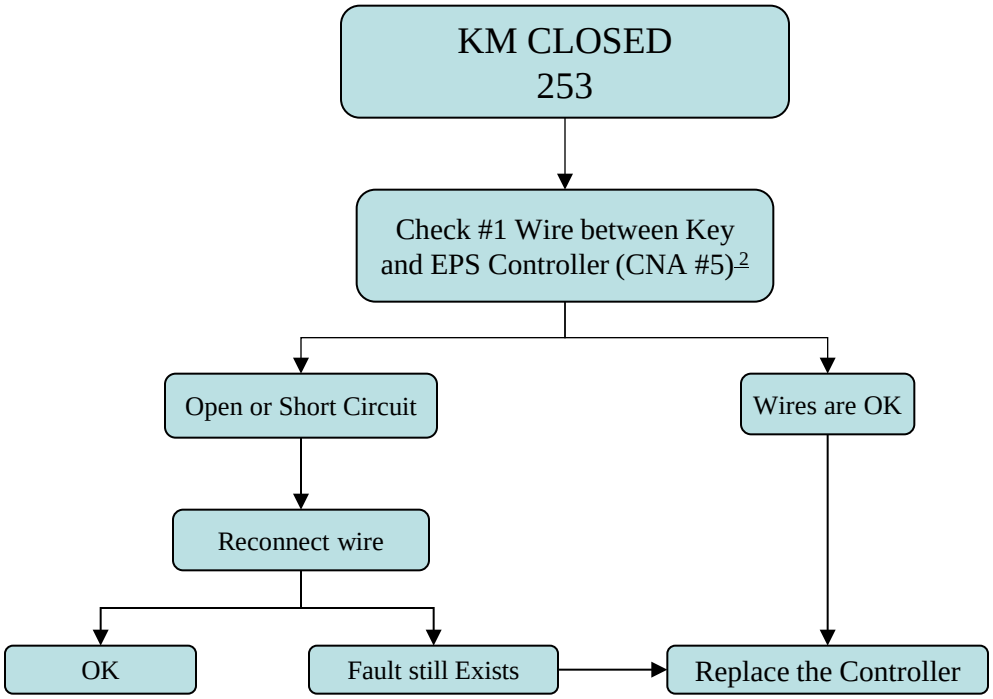
ALARM #251 on NODE #6 KM OPEN



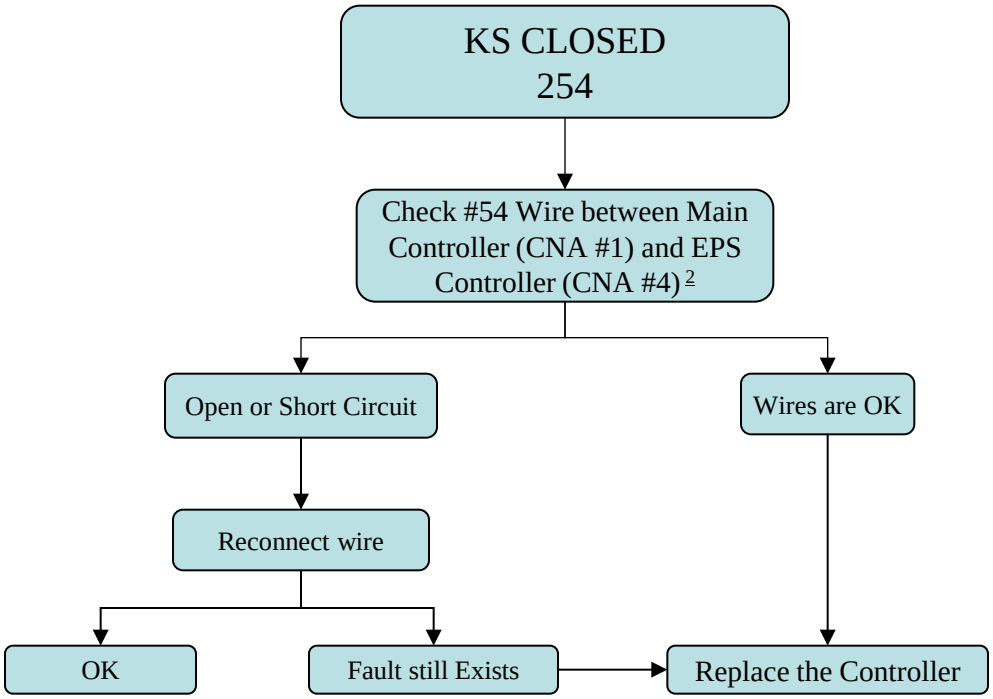
ALARM #252 on NODE #6 KS OPEN



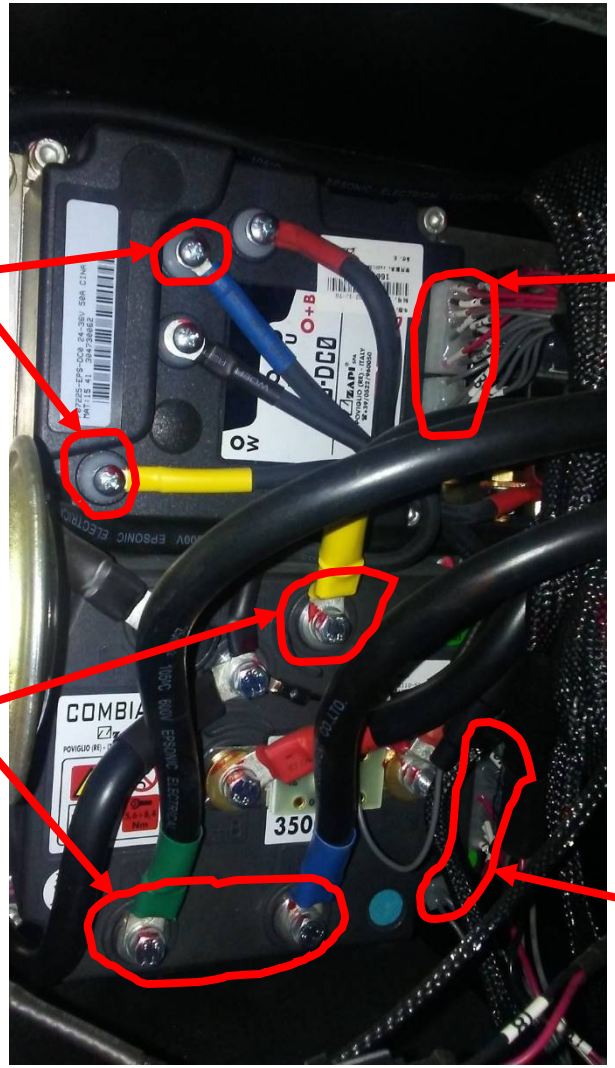
ALARM #253 on NODE #6 KM CLOSED

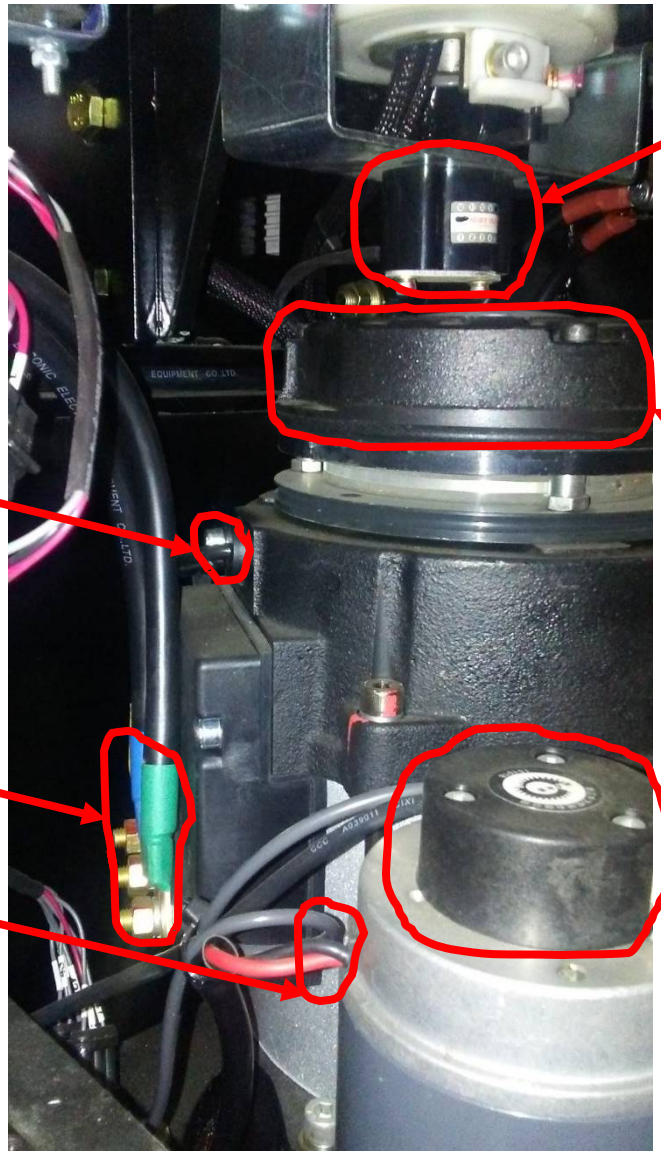


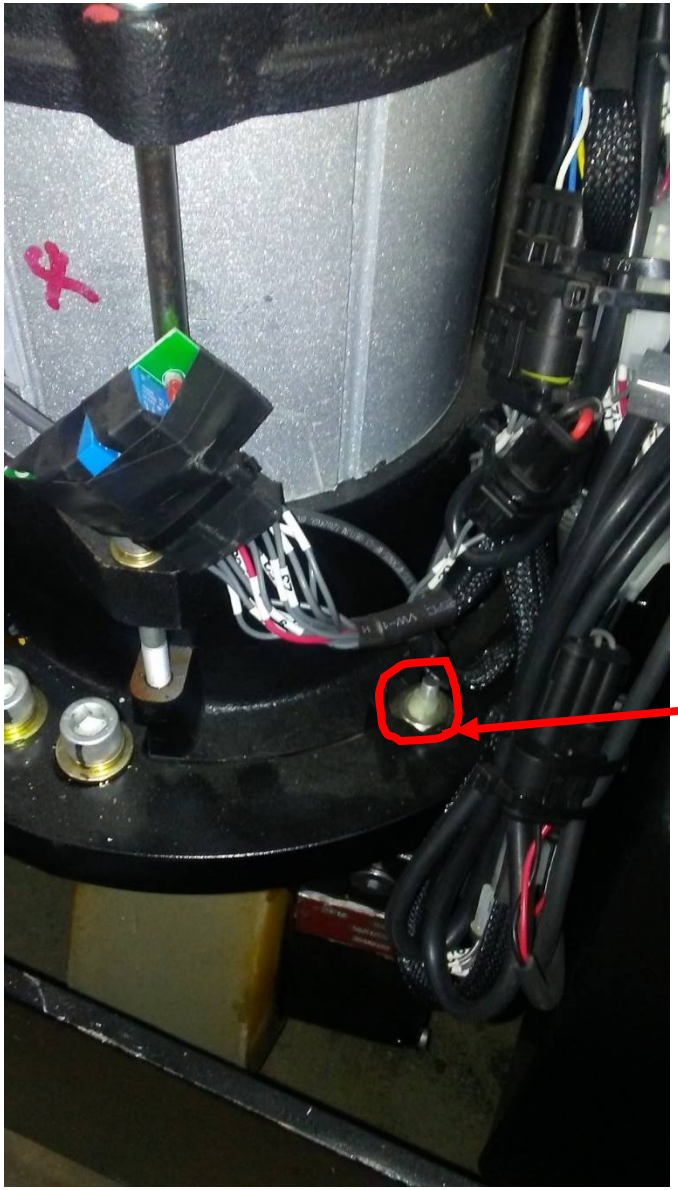
ALARM #254 on NODE #6 KS CLOSED



Appendix A


EPS Controller UVW Cables
EPS Controller Wires
Main Controller UVW Cables
Main Controller Wires

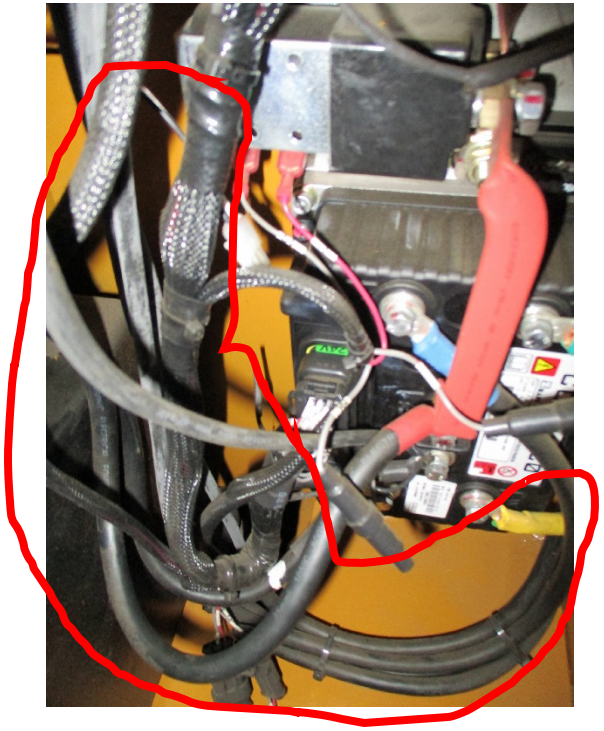

Twin Potentiometer
Electrical Brake
Traction Motor Temperature Sensor and Encoder
Traction Motor UVW Cables
EPS Motor Cables
EPS Motor Encode


Proximity sensor

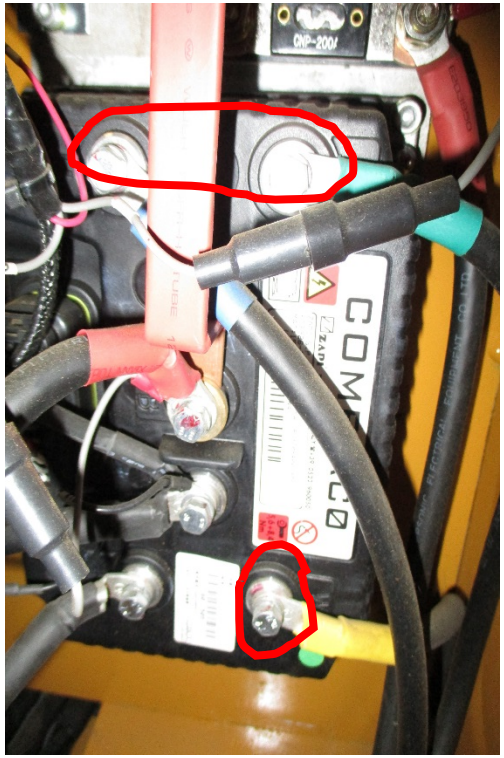
Tilting Button
Forward and Reverse Switch
Accelerator
Side Shift Button
Lift and Lower Switch
Horn
Belly button switch

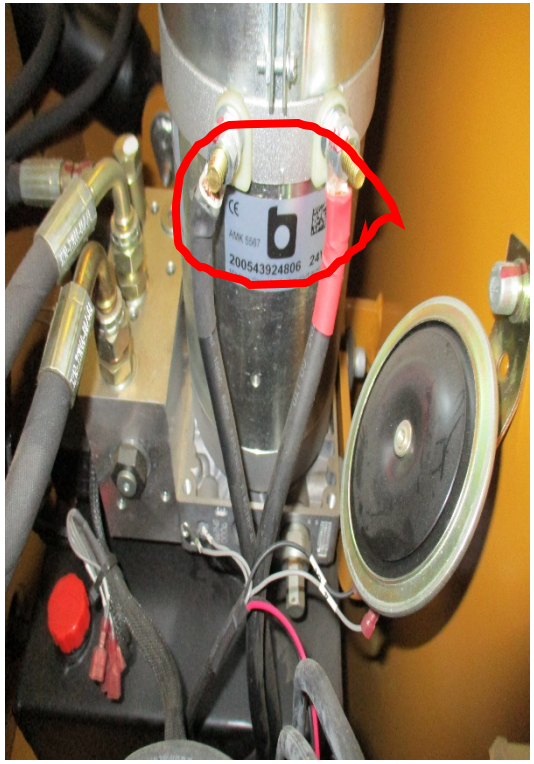
Appendix B

1. Check if cables are opened or shorted. A shorted cable means the cable jacketing is damaged and it is shorting to another cable or it is in contact with a metal object like the frame. An open cable means one of the inside metal wires are cut/damaged. If you are not sure, pleasure measure the resistance of the individual wire or cable. If the resistance is more than 1 ohm, it is open.

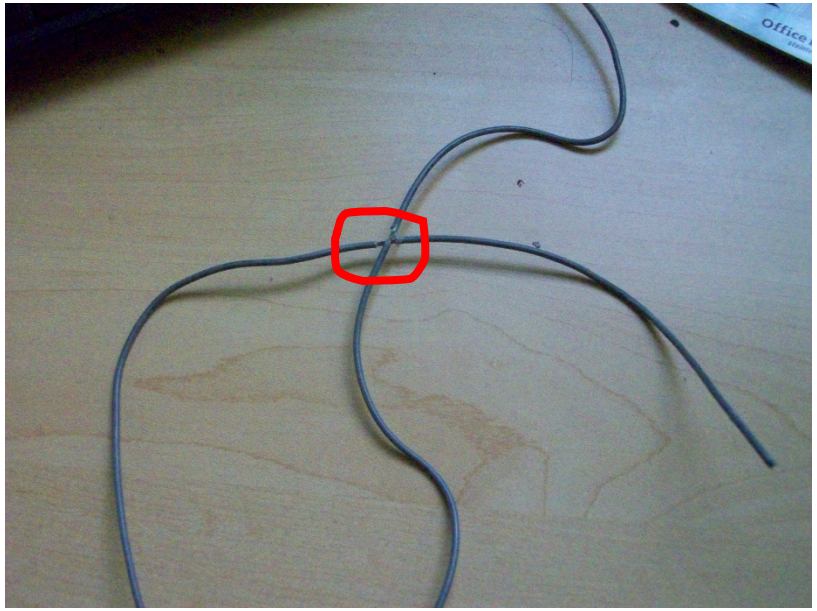


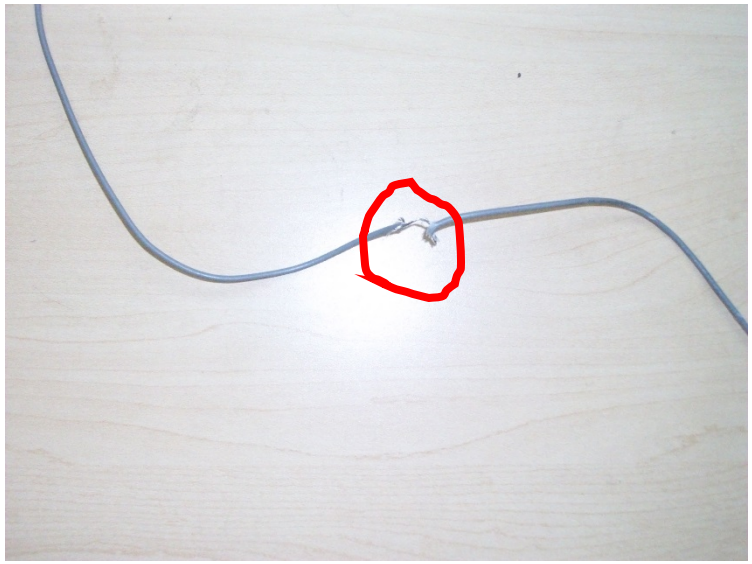
Check the connection points of the motor cables, and controller cables. Check the cable terminals for burn marks. Check if hardware is loose or burned. Ensure connections re tightened properly.



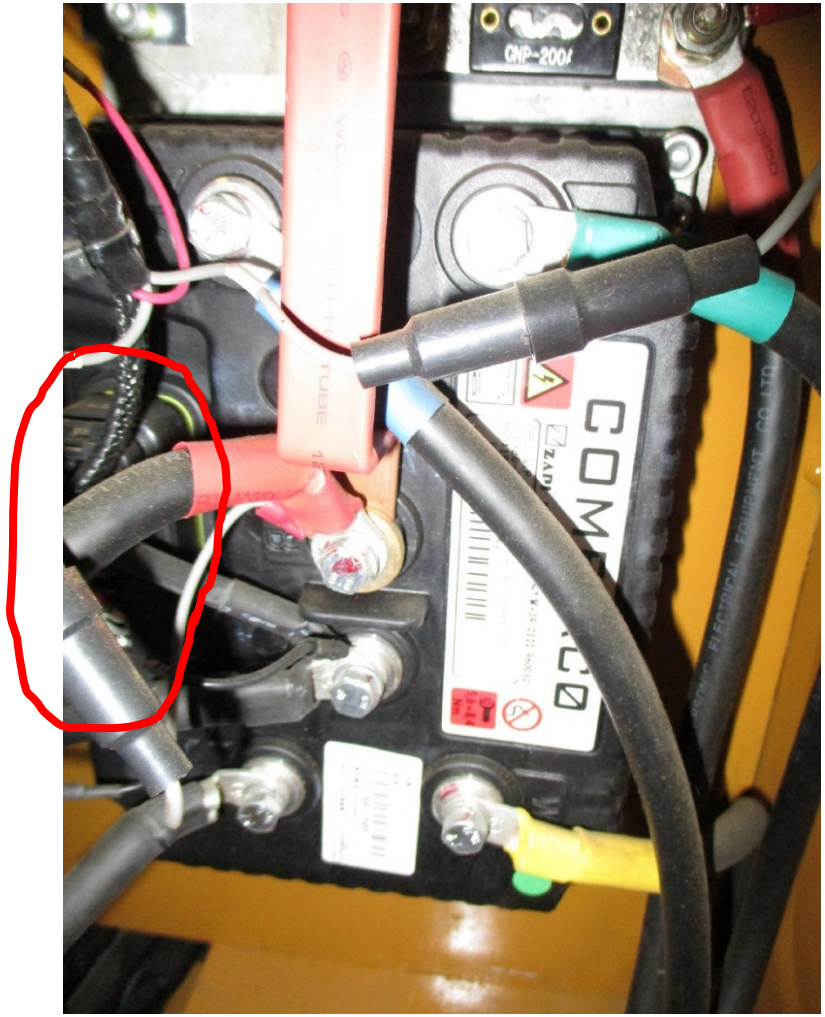


2. Check if cables are opened or shorted. A shorted cable means the cable jacketing is damaged and it is shorting to another cable or it is in contact with a metal object like the frame. An open cable means one of the inside metal wires are cut/damaged. If you are not sure, pleasure measure the resistance of the individual wire or cable. If the resistance is more than 1 ohm, it is open.

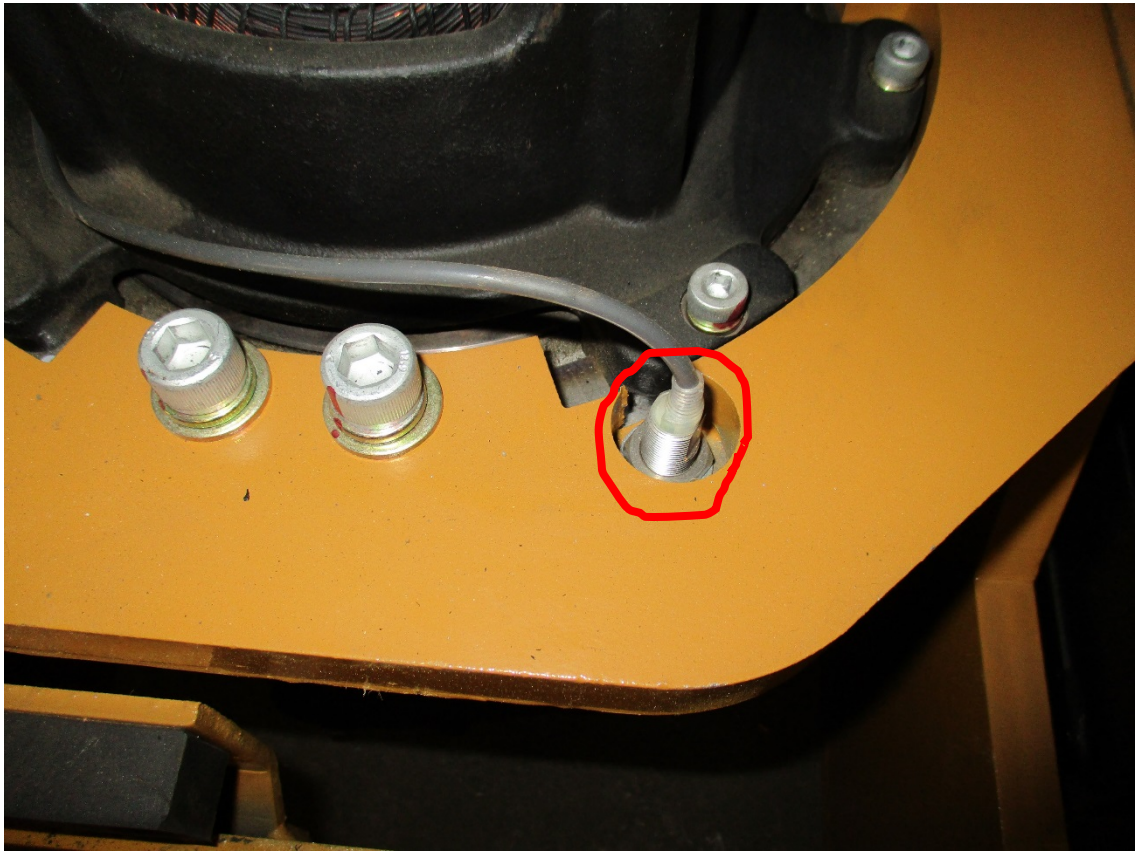




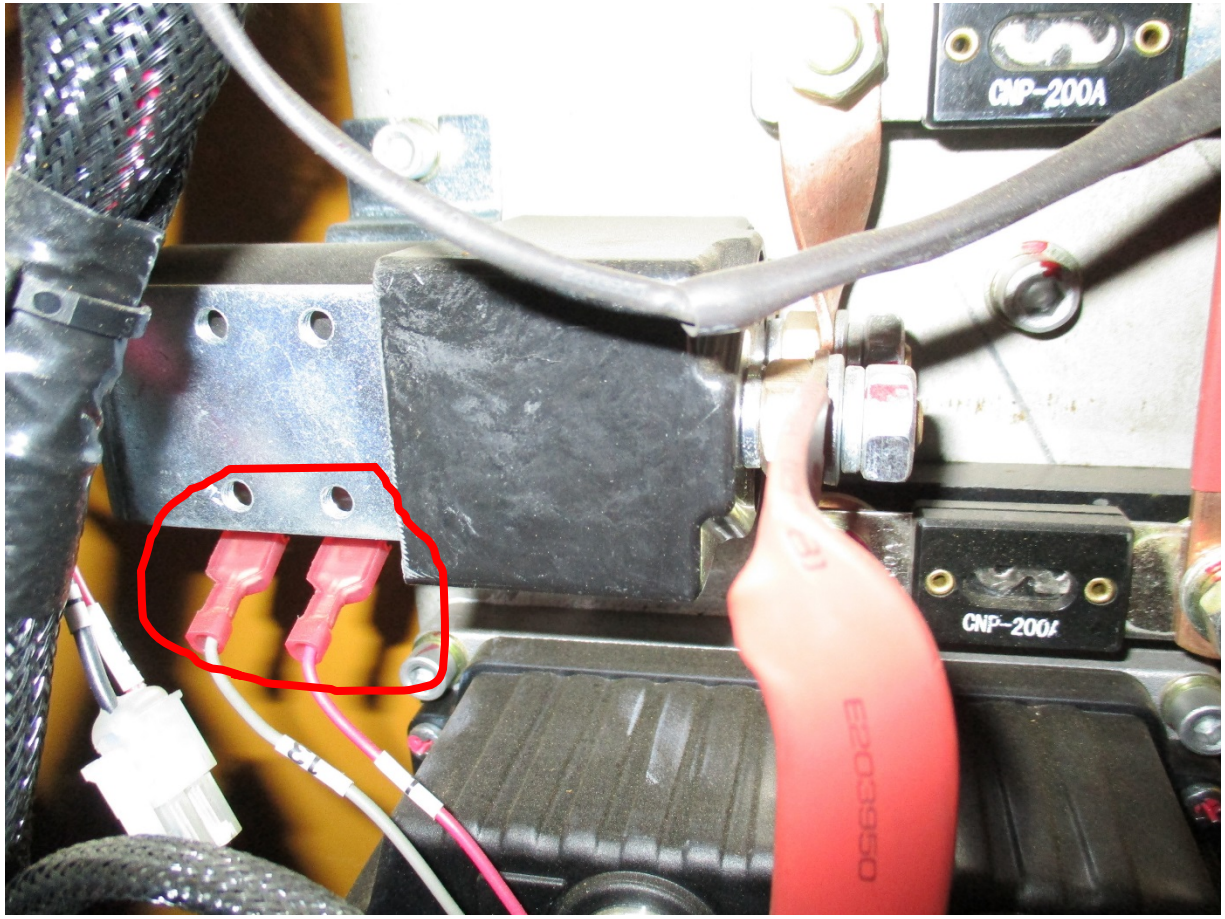
Check the connectors and pins on the Controller. Ensure connector locks are not damaged and no pins are broken or pushed out of the connector. Ensure no wires at pin terminations are cut/damaged



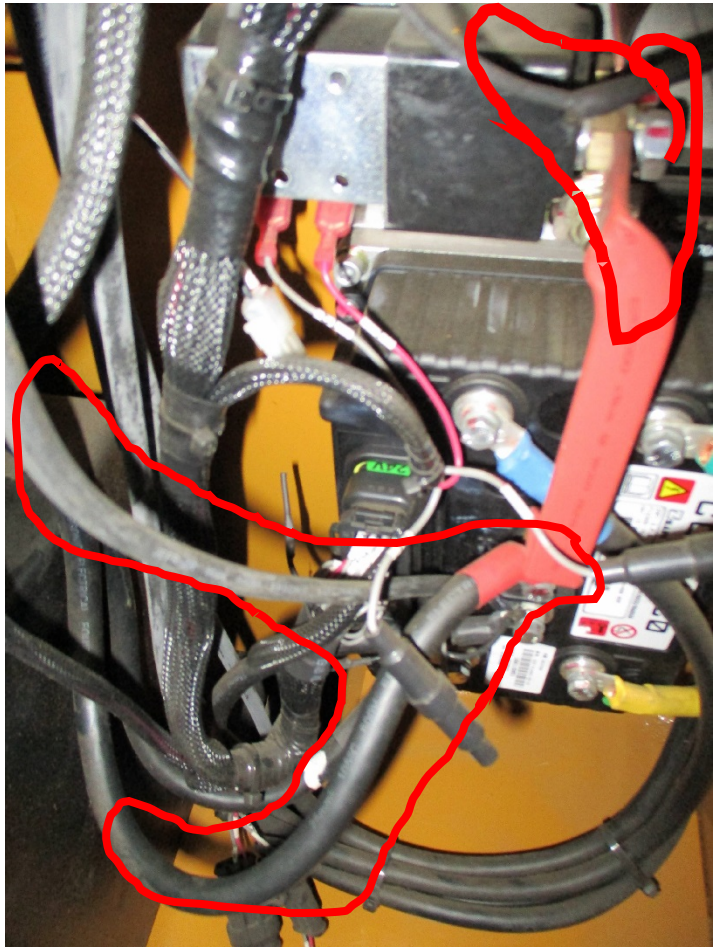
Check the connections between Controller wires and switches/sensors. Ensure wires are not cut or damaged.



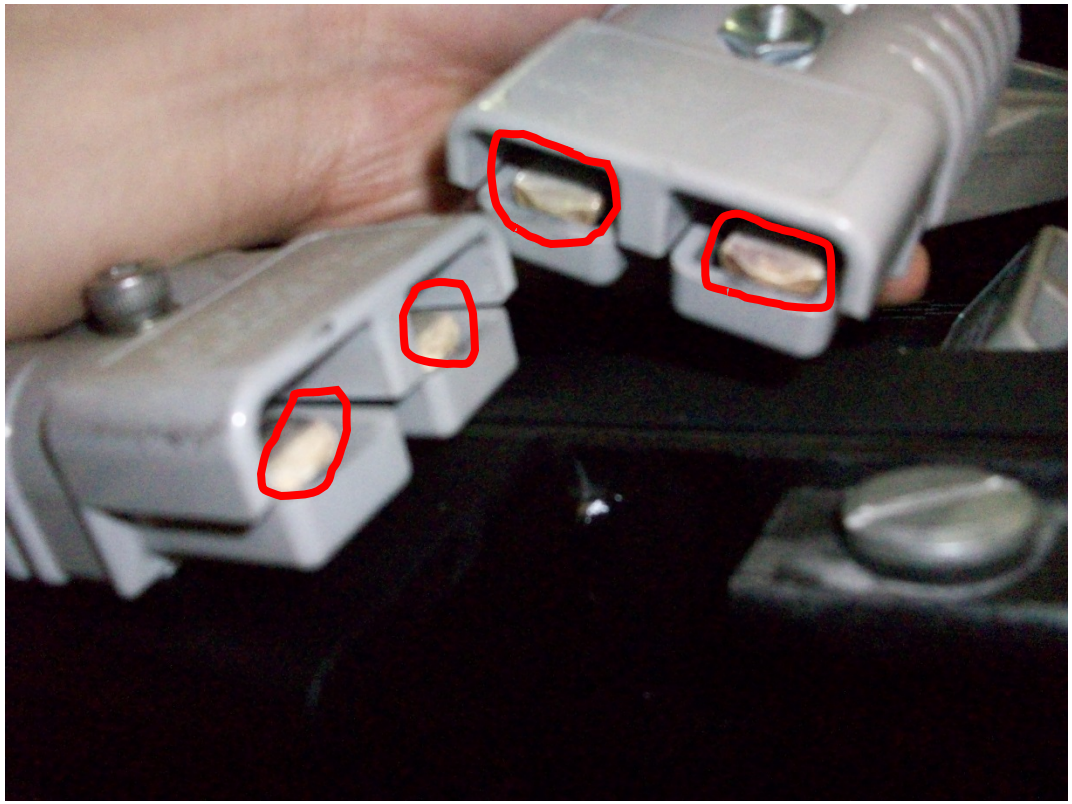
Check if connectors are loose or burned (such as the 2 pin connectors on the Main Contact). Ensure the parts are properly tightened.



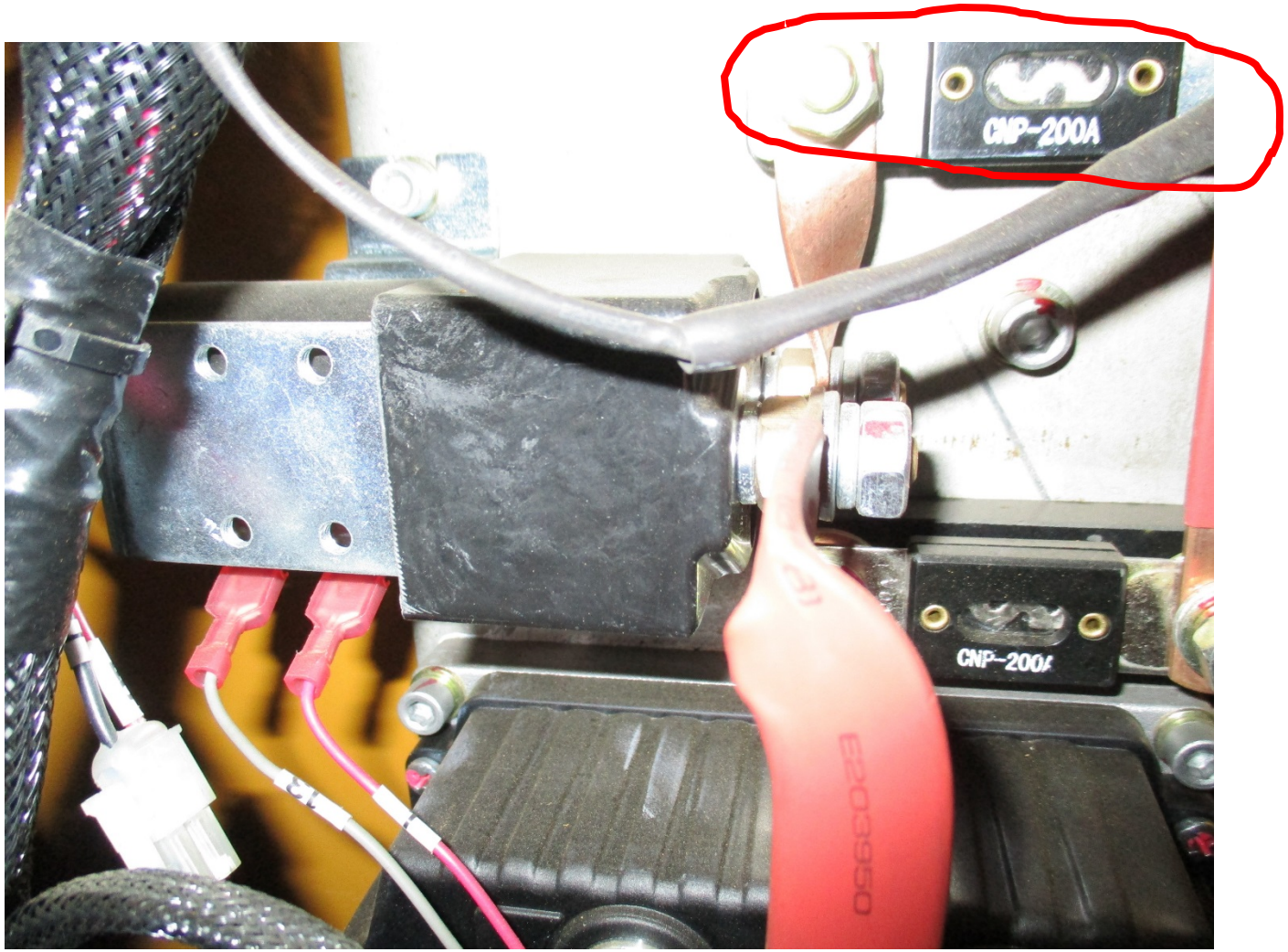
3. Check if cables are opened or shorted. A shorted cable means the cable jacketing is damaged and it is shorting to another cable or it is in contact with a metal object like the frame. An open cable means one of the inside metal wires are cut/damaged. If you are not sure, pleasure measure the resistance of the individual wire or cable. If the resistance is more than 1 ohm, it is open



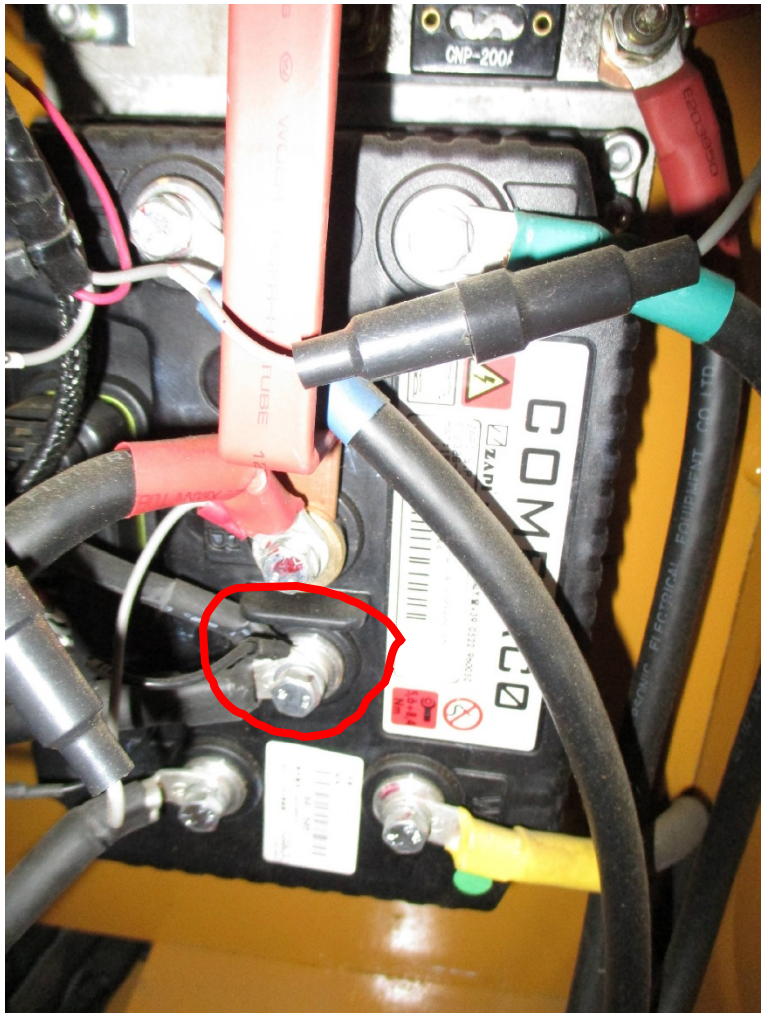
Check the Connectors between Battery and truck to see if they fit loose or are burned (Concentrate on the inside of the connector). If they do not fit correctly, replace cable lugs and/or connector housing to correct the issue.



Check if the fuses are blown out or not.



4. Check the voltage from the wire you want to check to the Controller negative (red circled).



5. Open the battery case.

Check the no load battery voltage for every battery.

- Check the load voltage when the truck is lifting empty.
- Then check the load voltage when the truck is lifting with a load (red circled load, load should be no more than 2000 pound). If the voltage difference between the empty lifting and loaded lifting is more than 5V. Please replace battery.