WRT60 Troubleshooting

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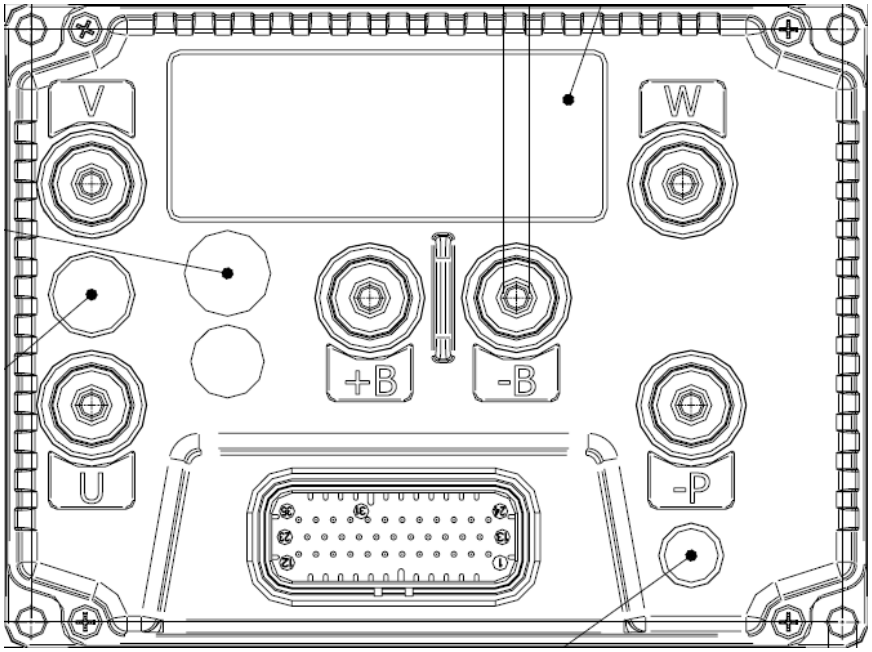
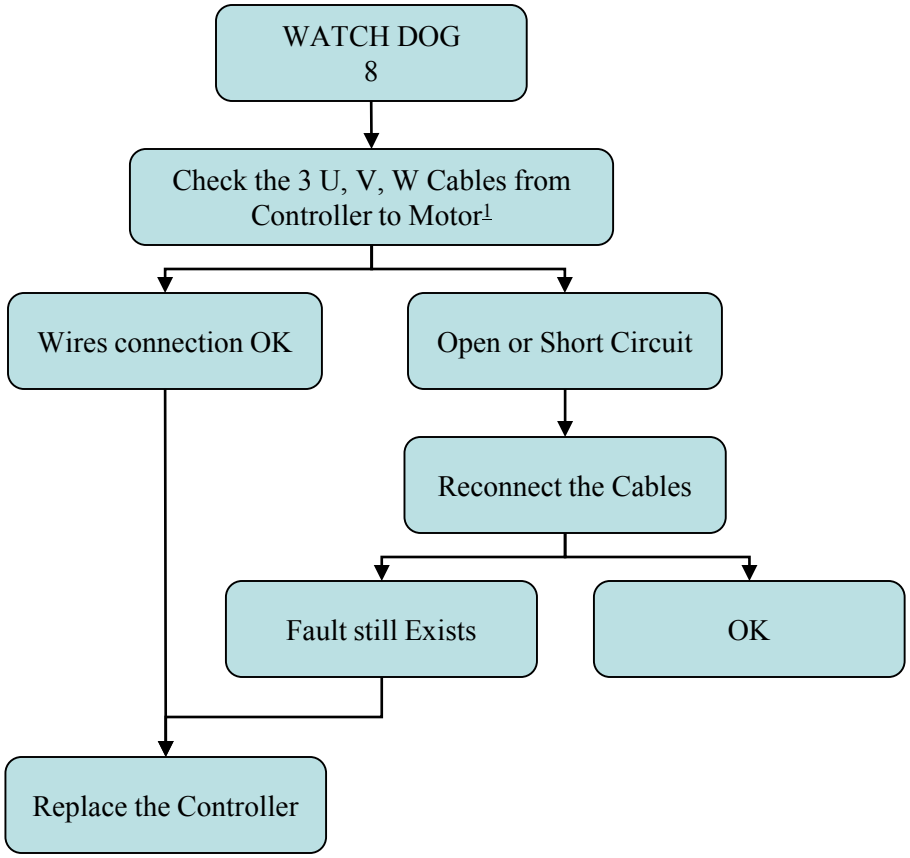
Appendix A: Check Wires and Cables detail---------- Page 46 --57

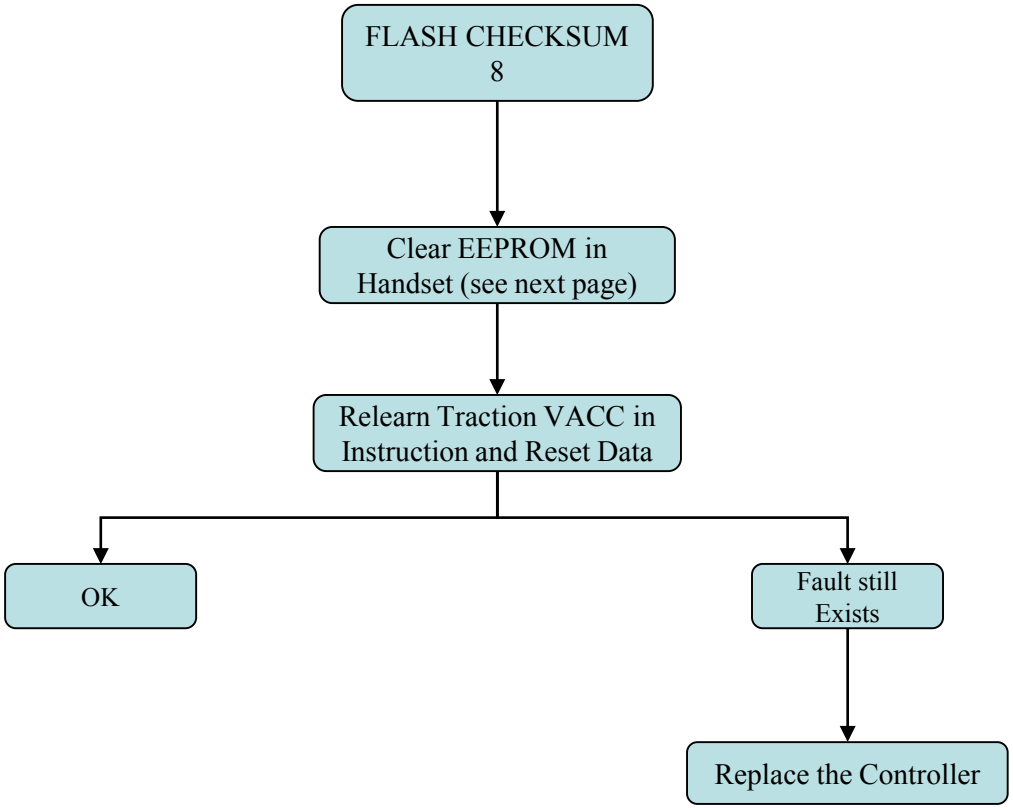
Main Controller



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:

AD0T2B WF6EP1.11
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

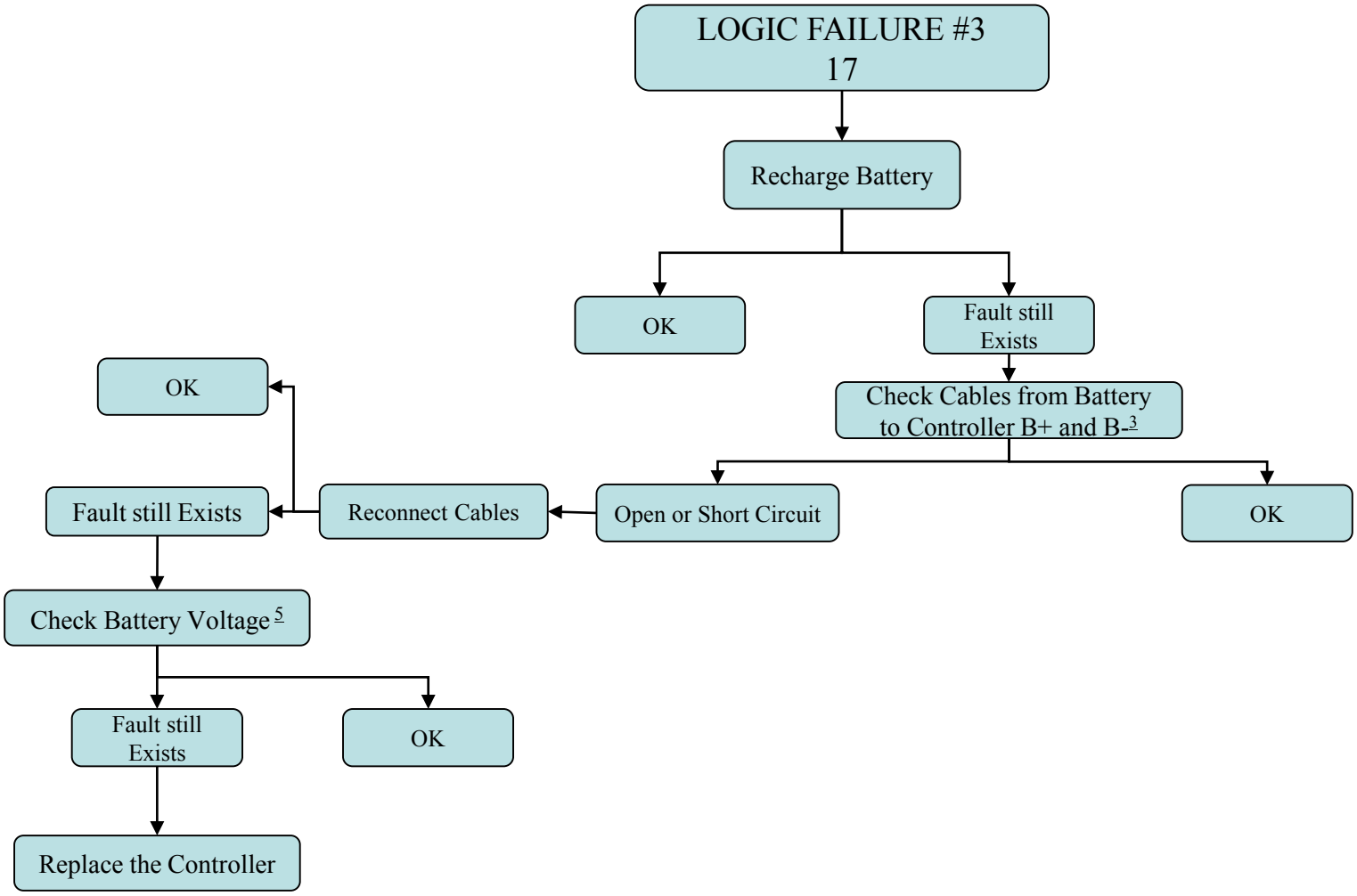
Press OK to CLEAR EEPROM

The display will show:

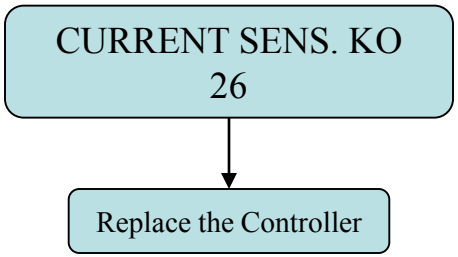
EEPROM CLEARED!
KEY OFF, PLEASE

Rekey truck, and restart handset

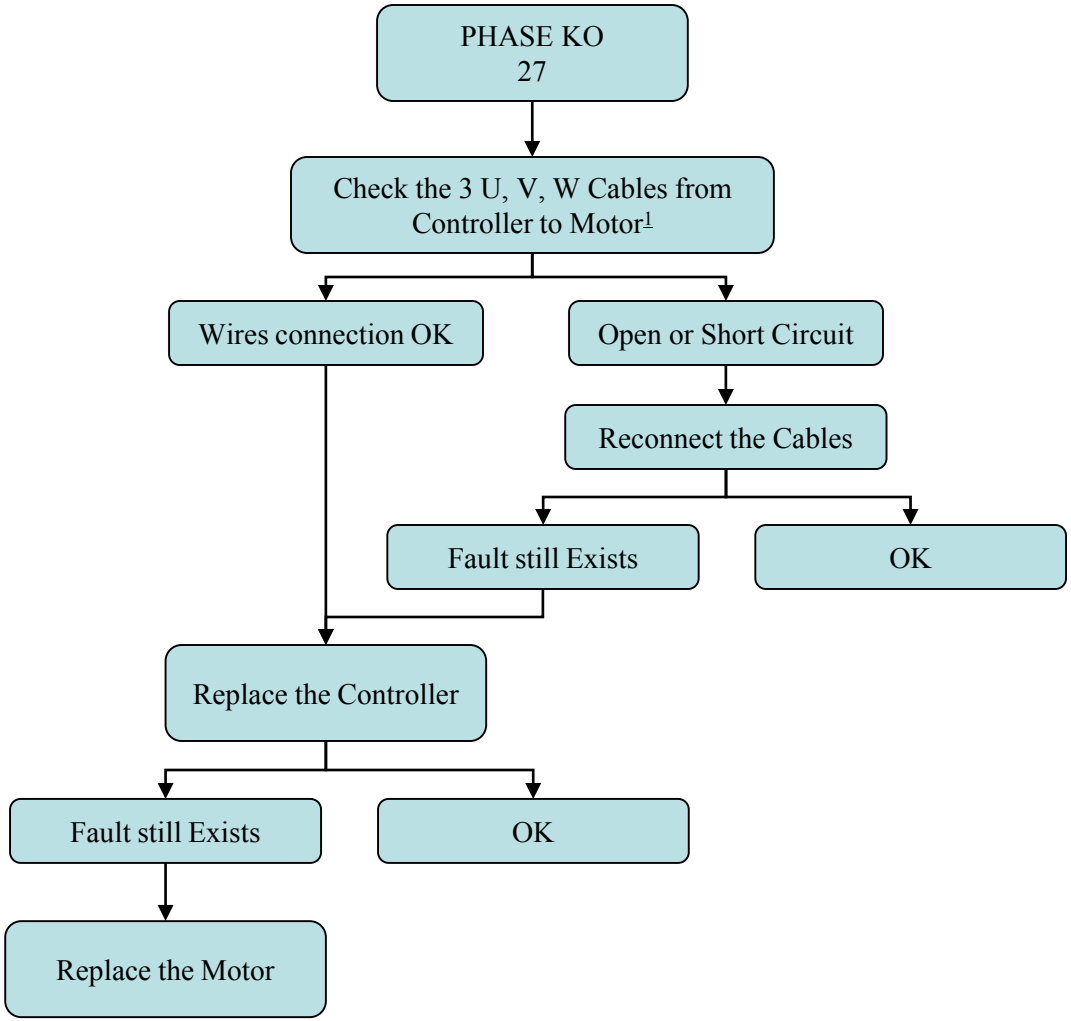
ALARM #17 on NODE #2 LOGIC FAILURE #3



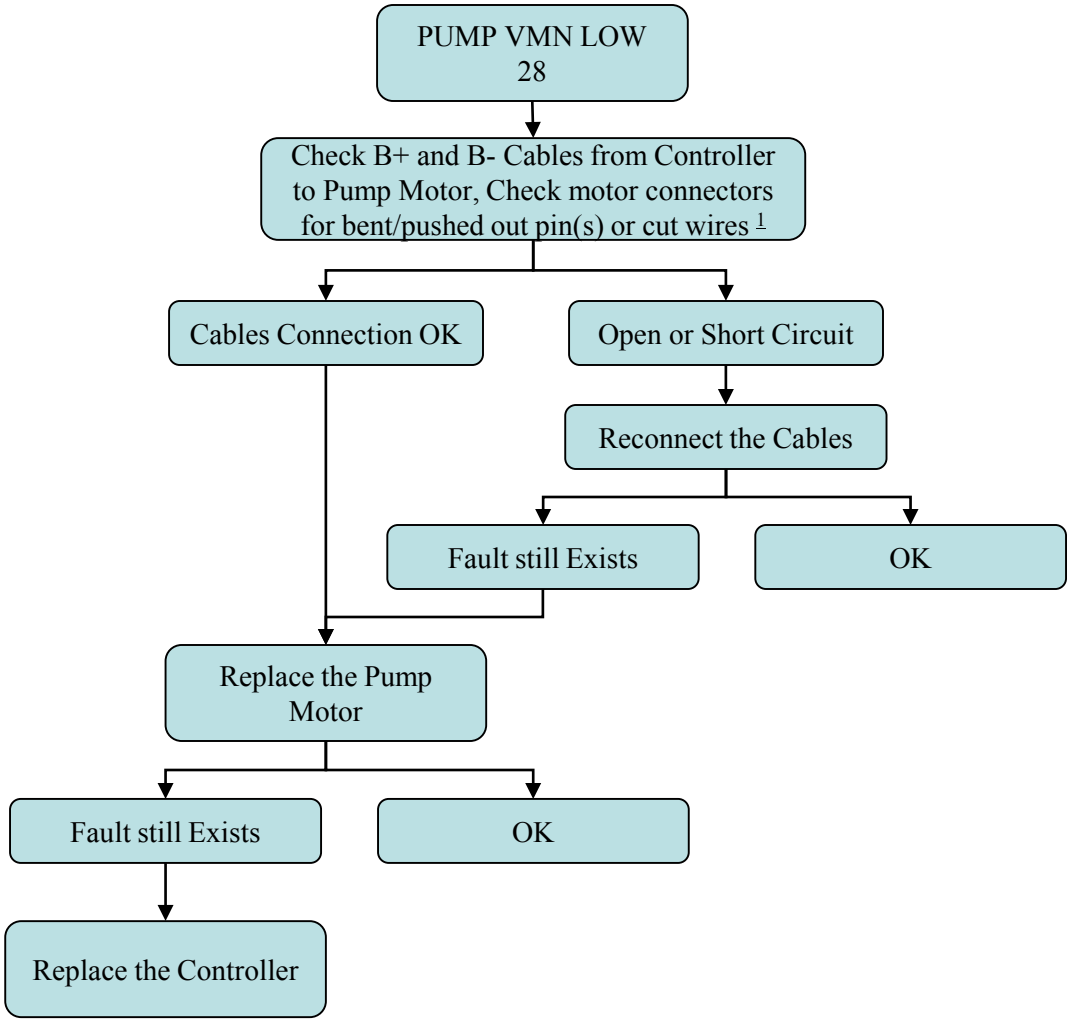
ALARM #26 on NODE #2 CURRENT SENS. KO



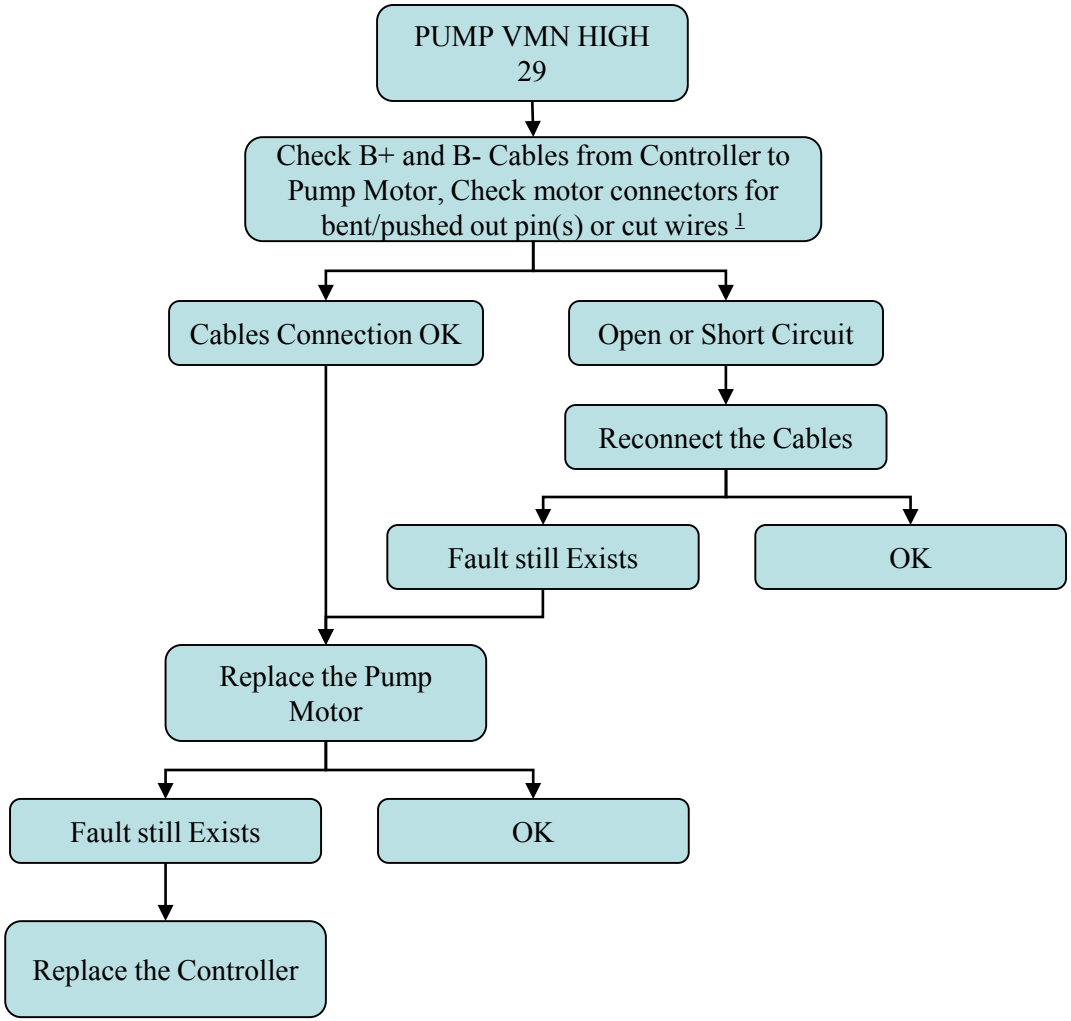
ALARM #27 on NODE #2 PHASE KO



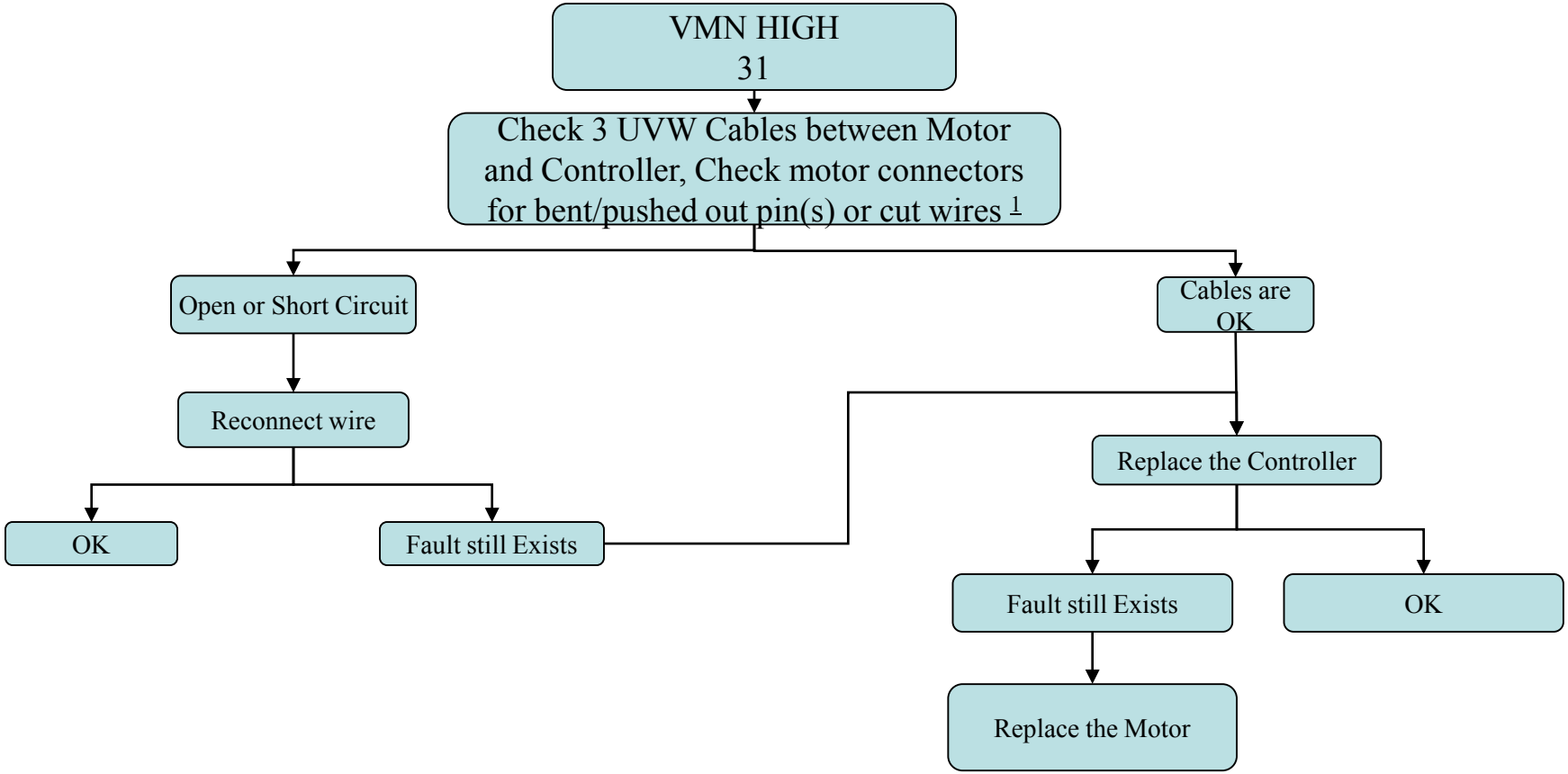
ALARM #28 on NODE #2 PUMP VMN LOW



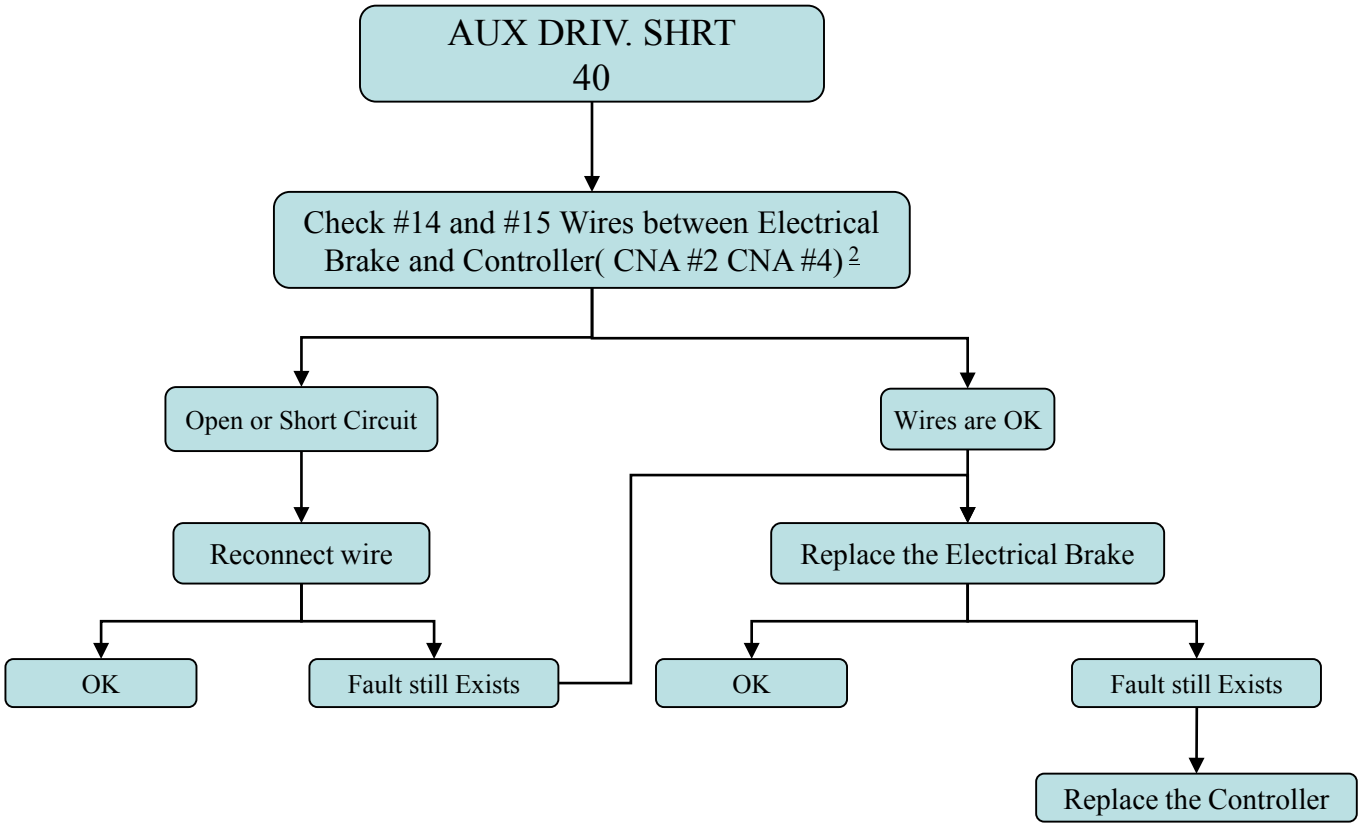
ALARM #29 on NODE #2 PUMP VMN HIGH



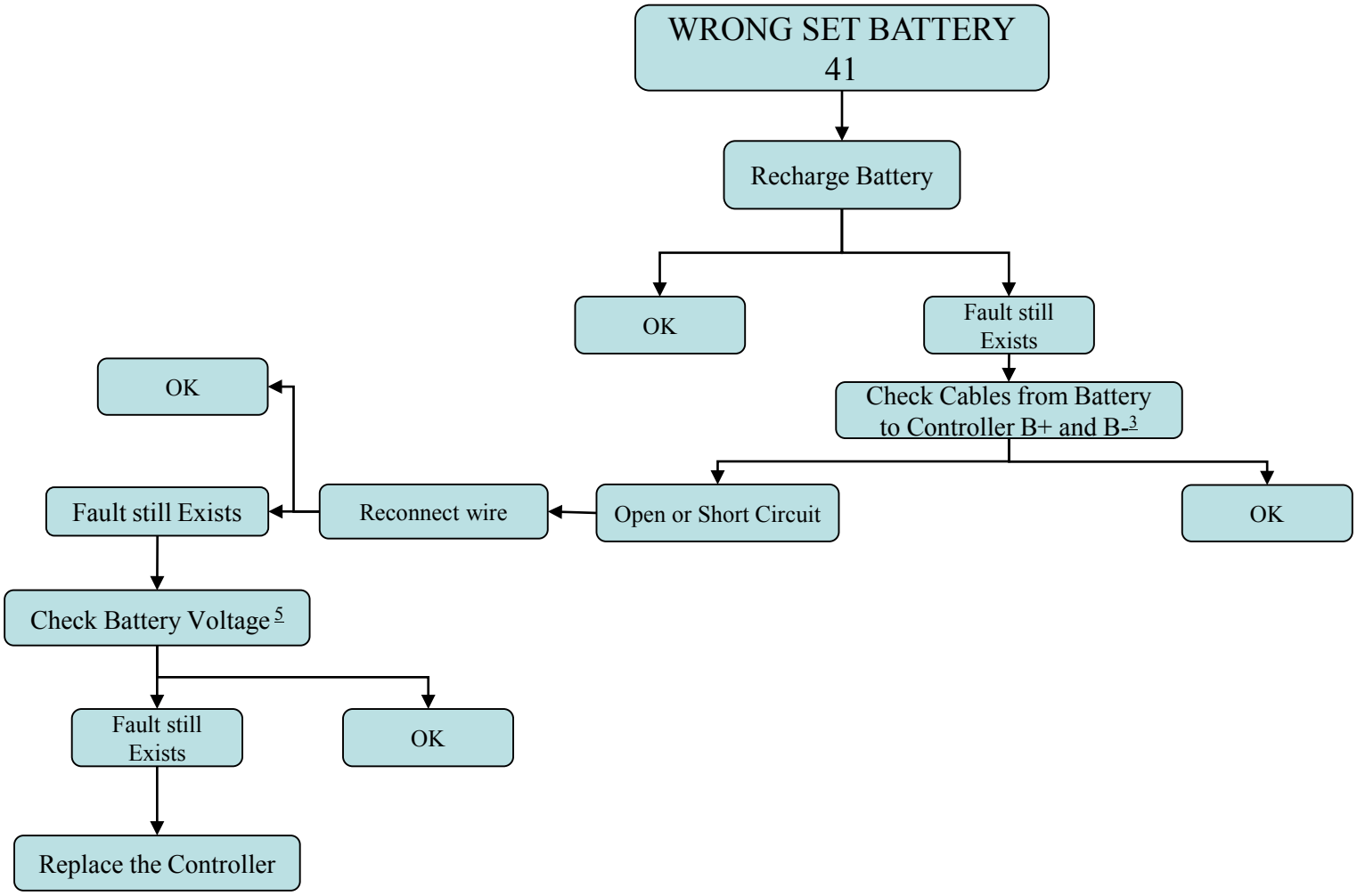
ALARM #31 on NODE #2 VMN HIGH



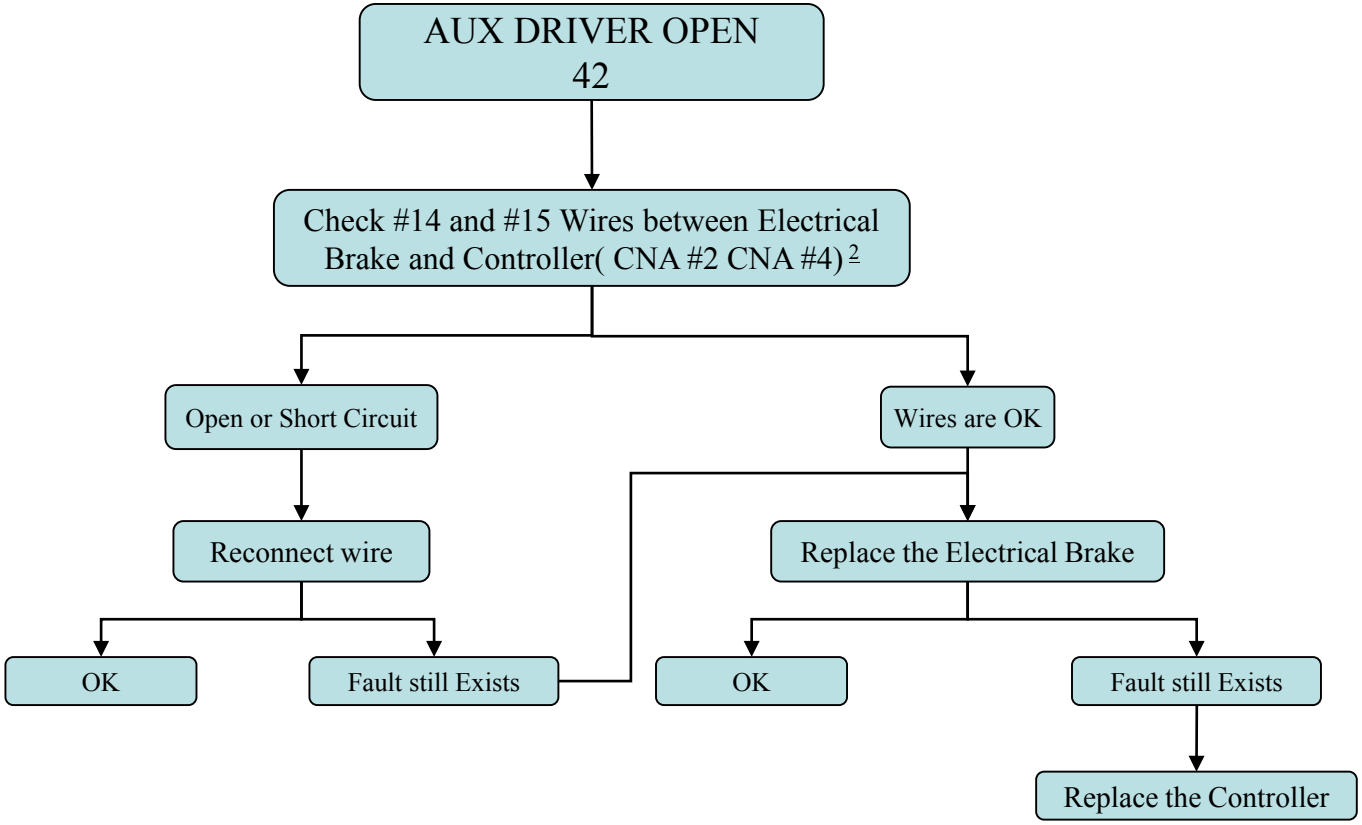
ALARM #40 on NODE #2 AUX DRIV. SHRT.



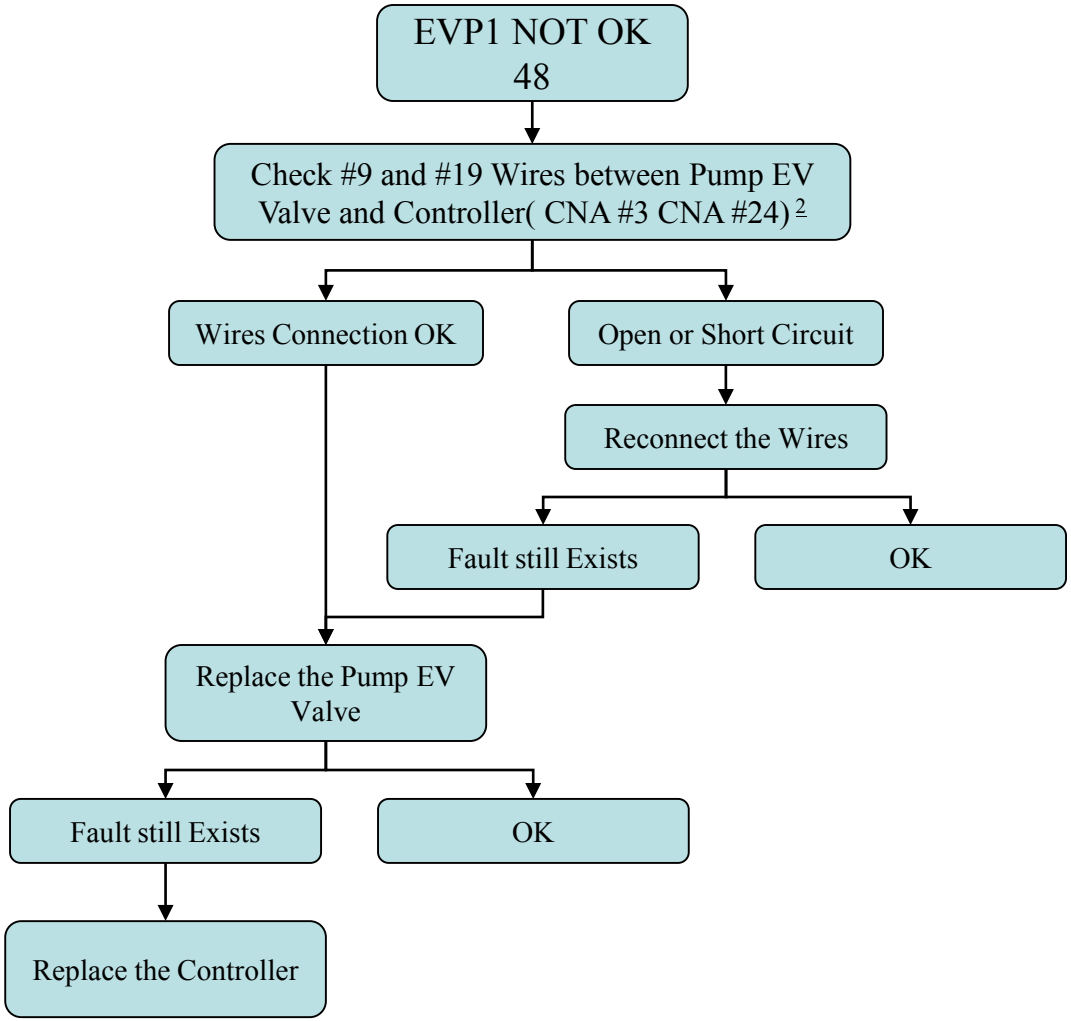
ALARM #41 on NODE #2 WRONG SET BATTERY



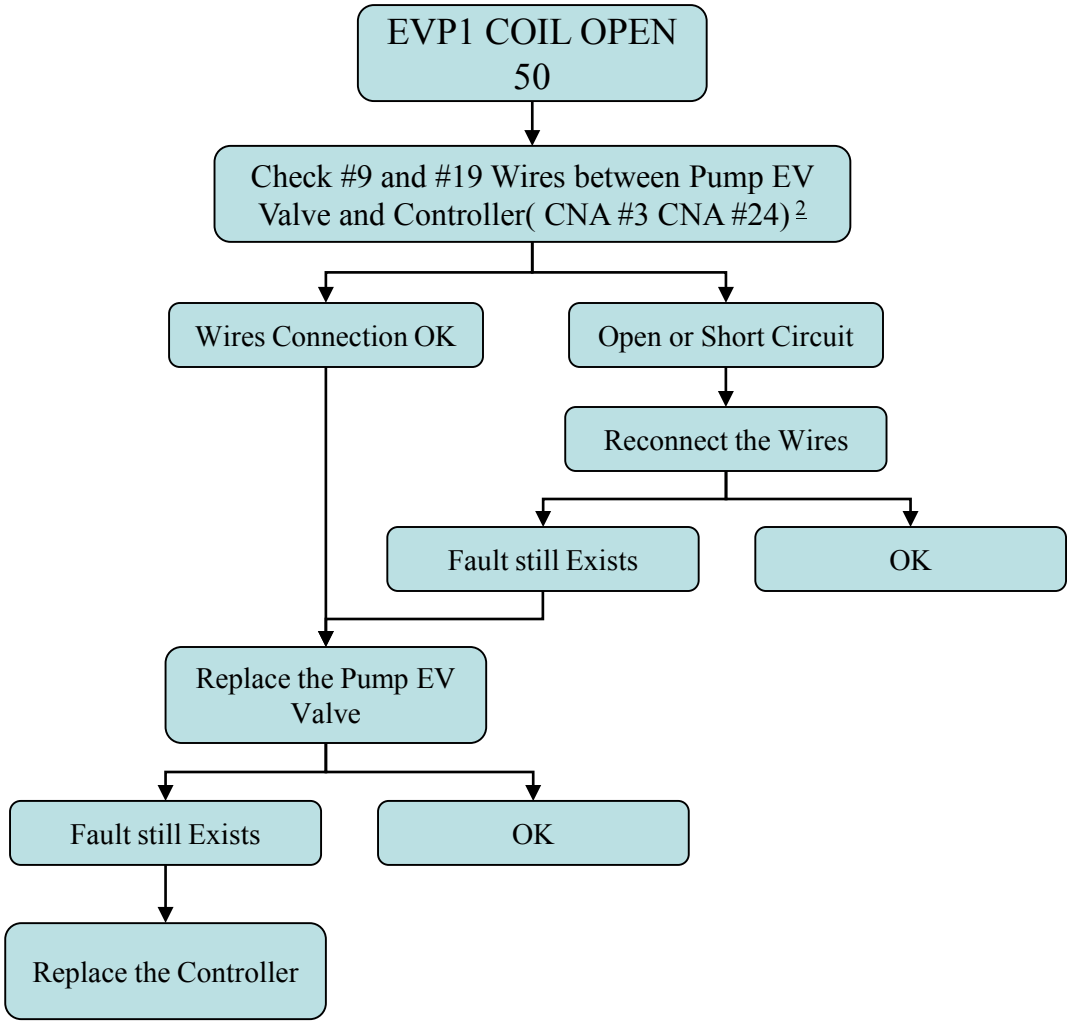
ALARM #42 on NODE #2 AUX DRIVER OPEN



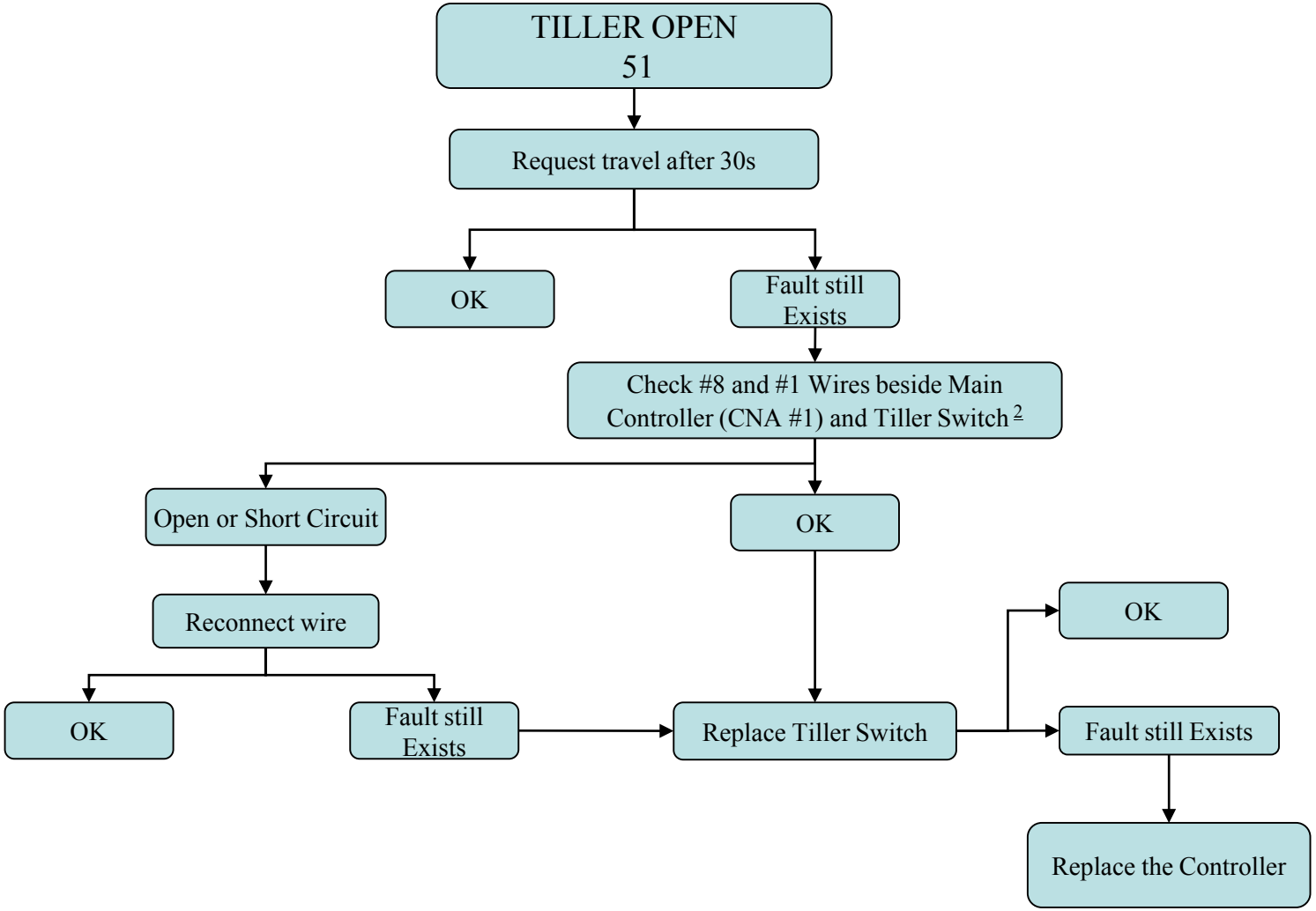
ALARM #48 on NODE #2 EVP1 NOT OK



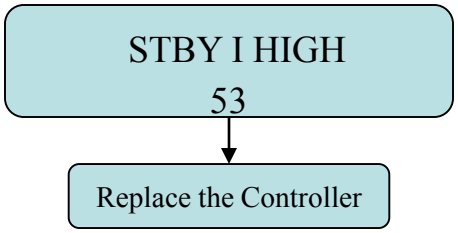
ALARM #50 on NODE #2 EVP1 COIL OPEN



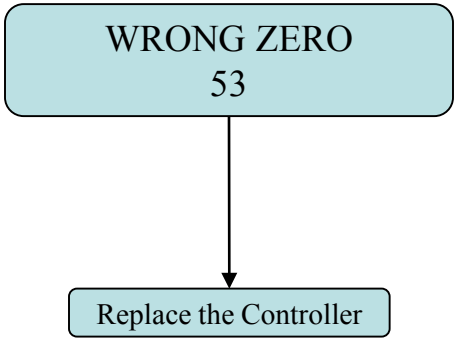
ALARM #51 on NODE #2 TILLER OPEN



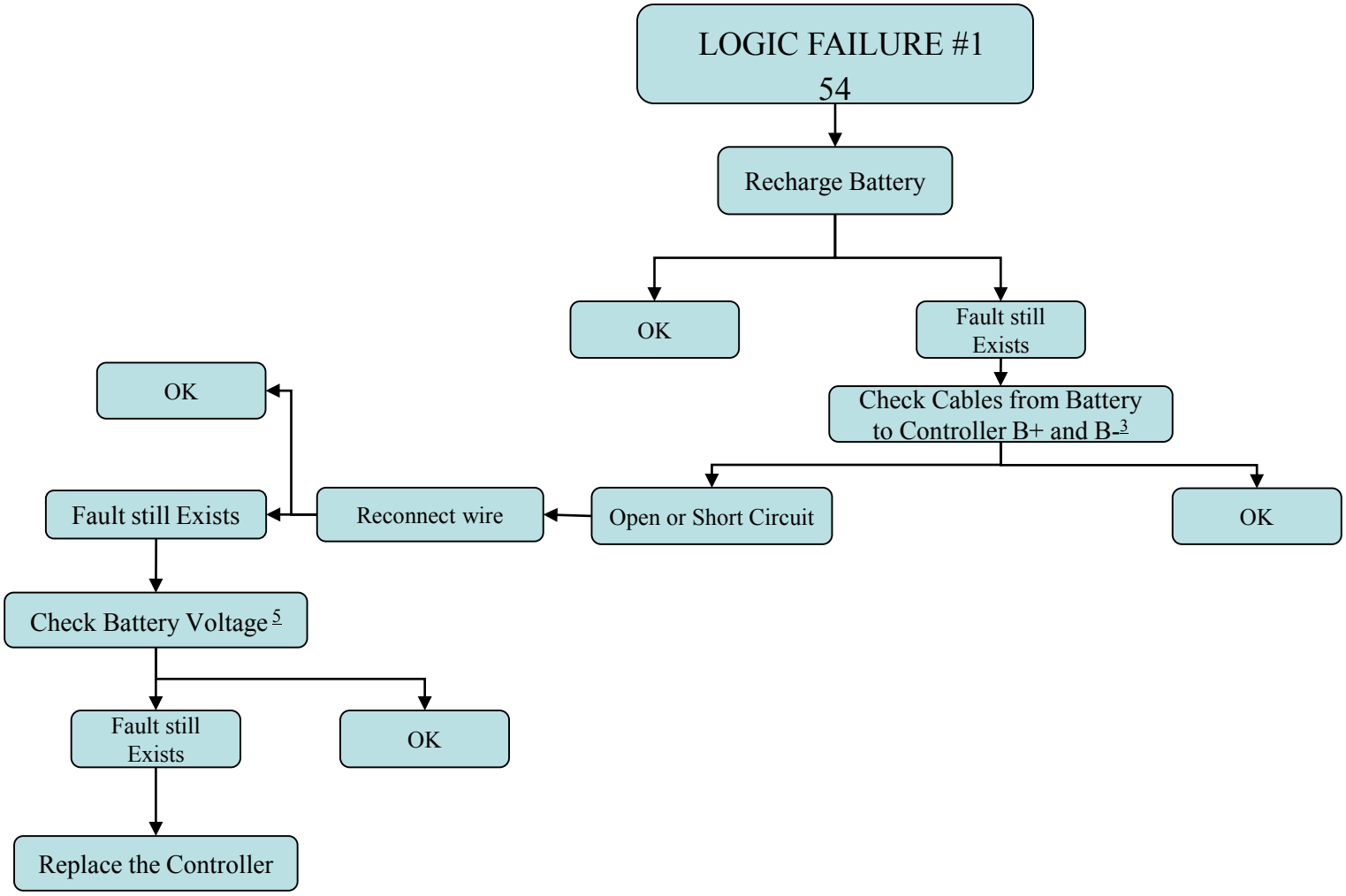
ALARM #53 on NODE #2 STBY I HIGH



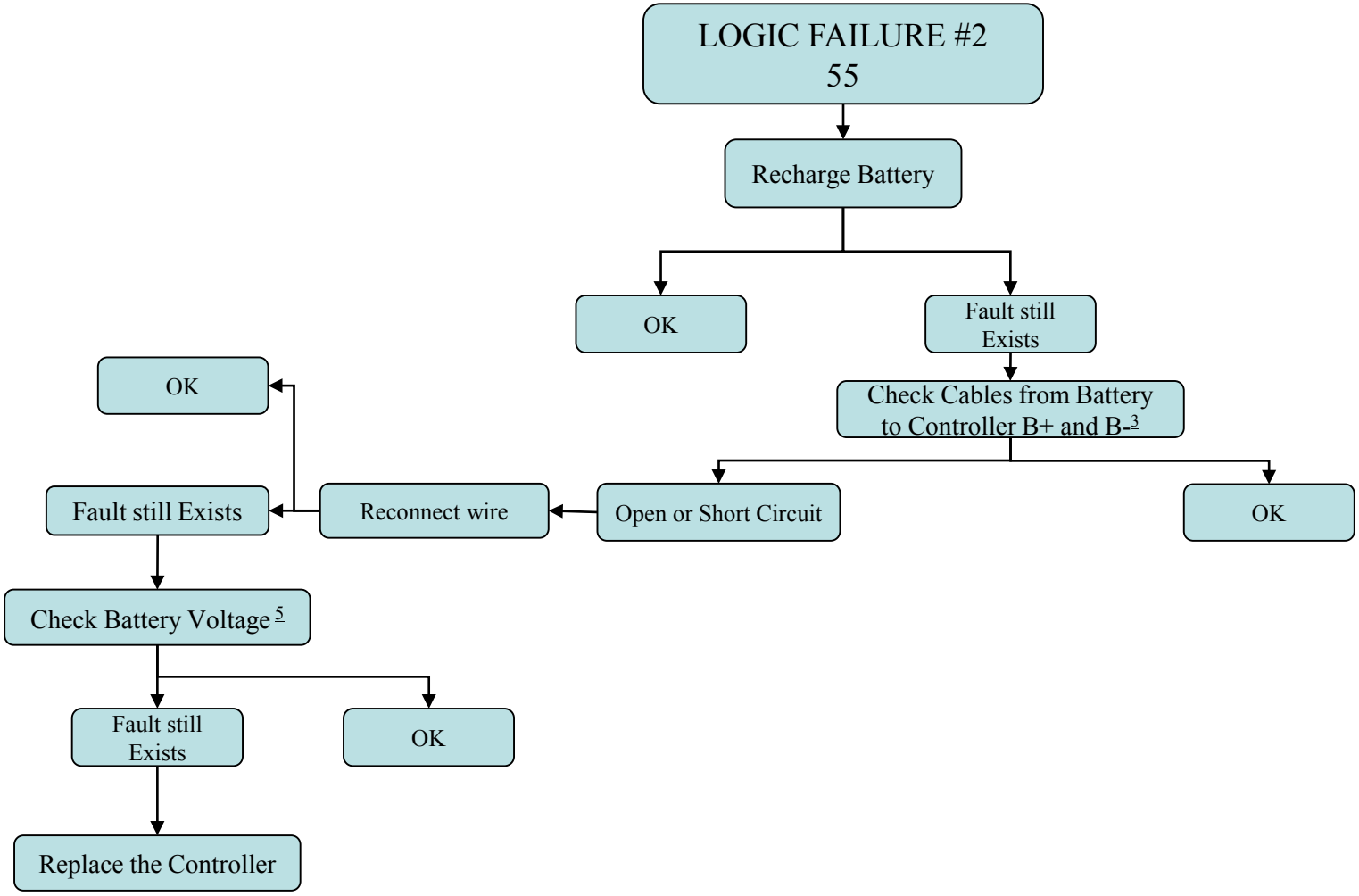
ALARM 53 on NODE #2 WRONG ZERO



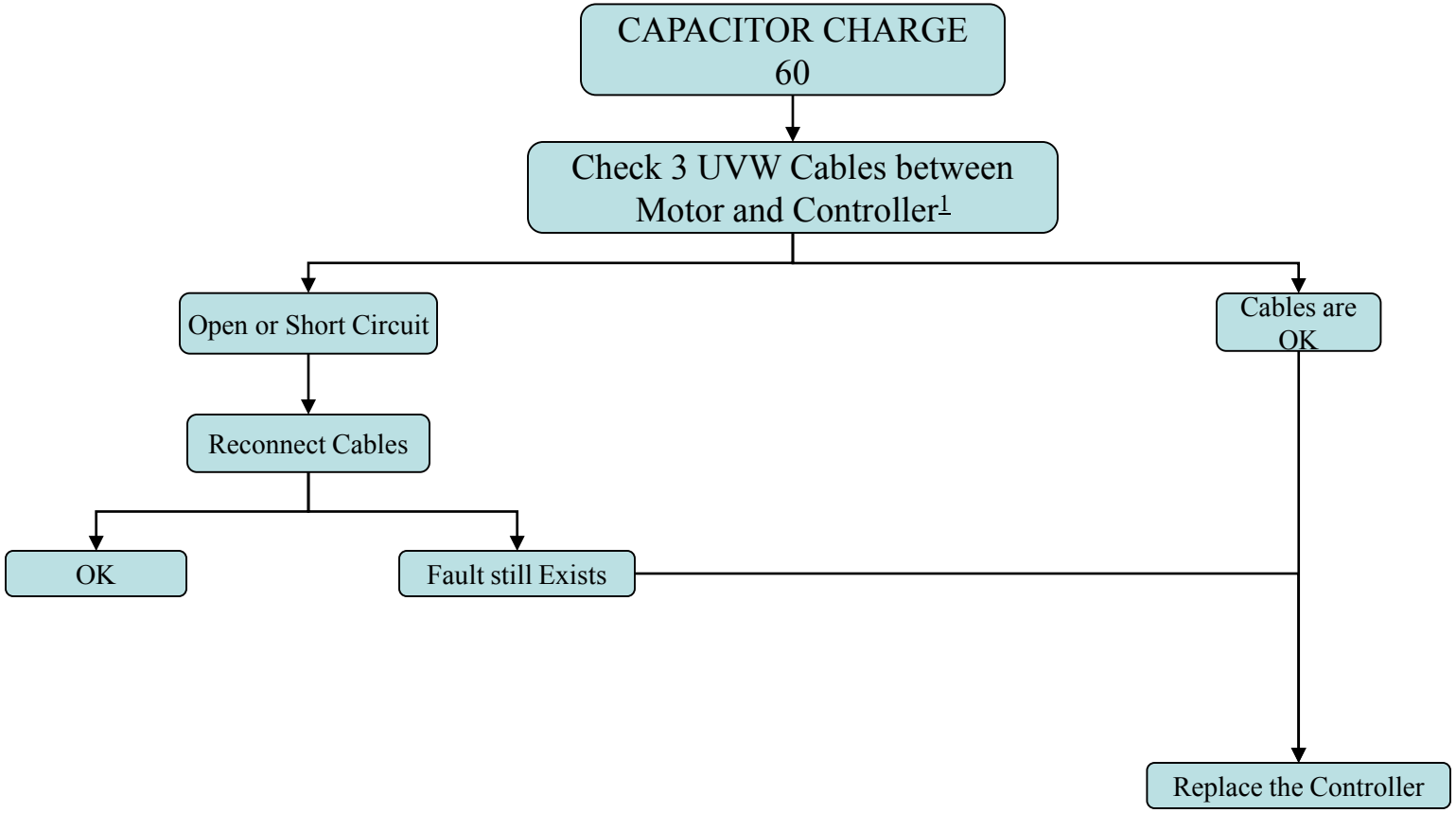
ALARM #54 on NODE #2 LOGIC FAILURE #1



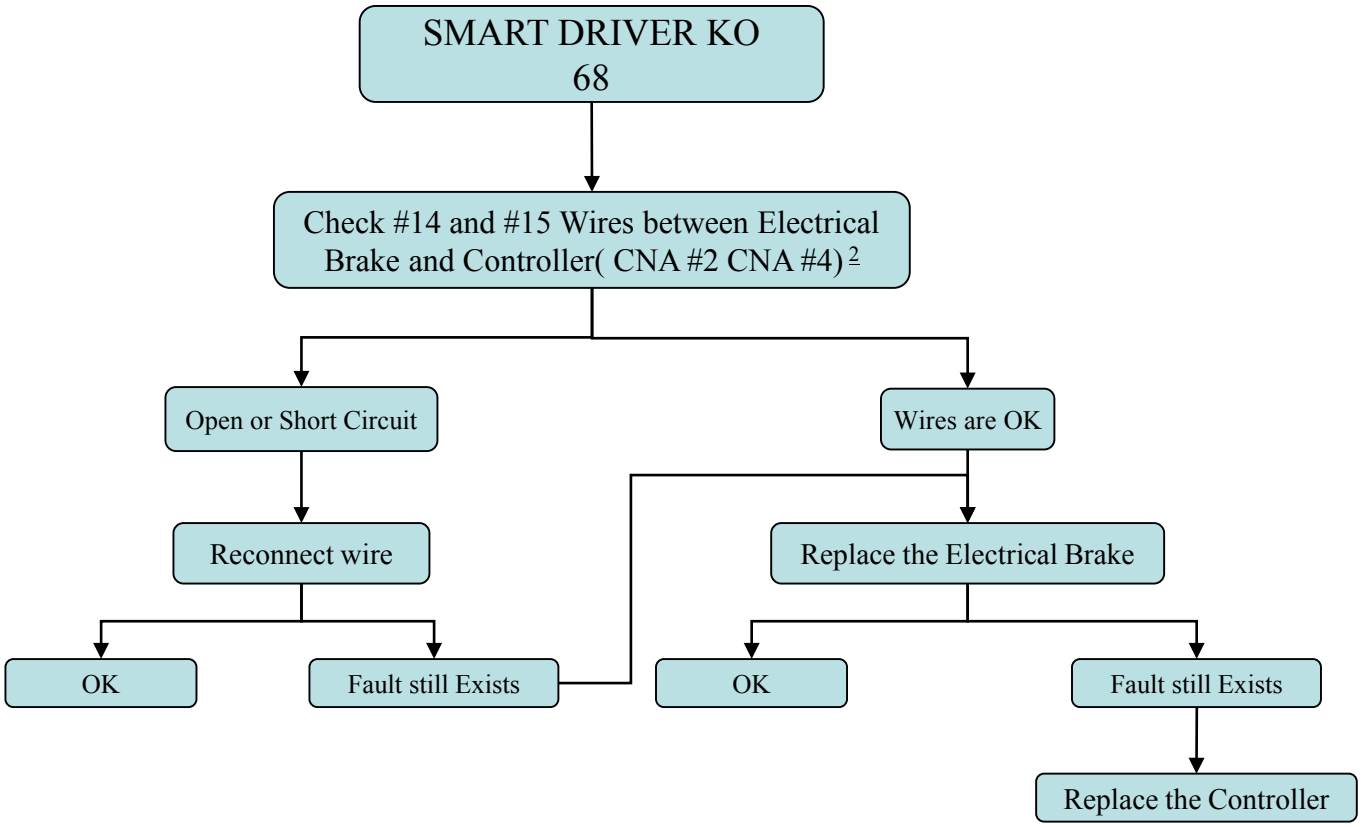
ALARM #55 on NODE #2 LOGIC FAILURE #2



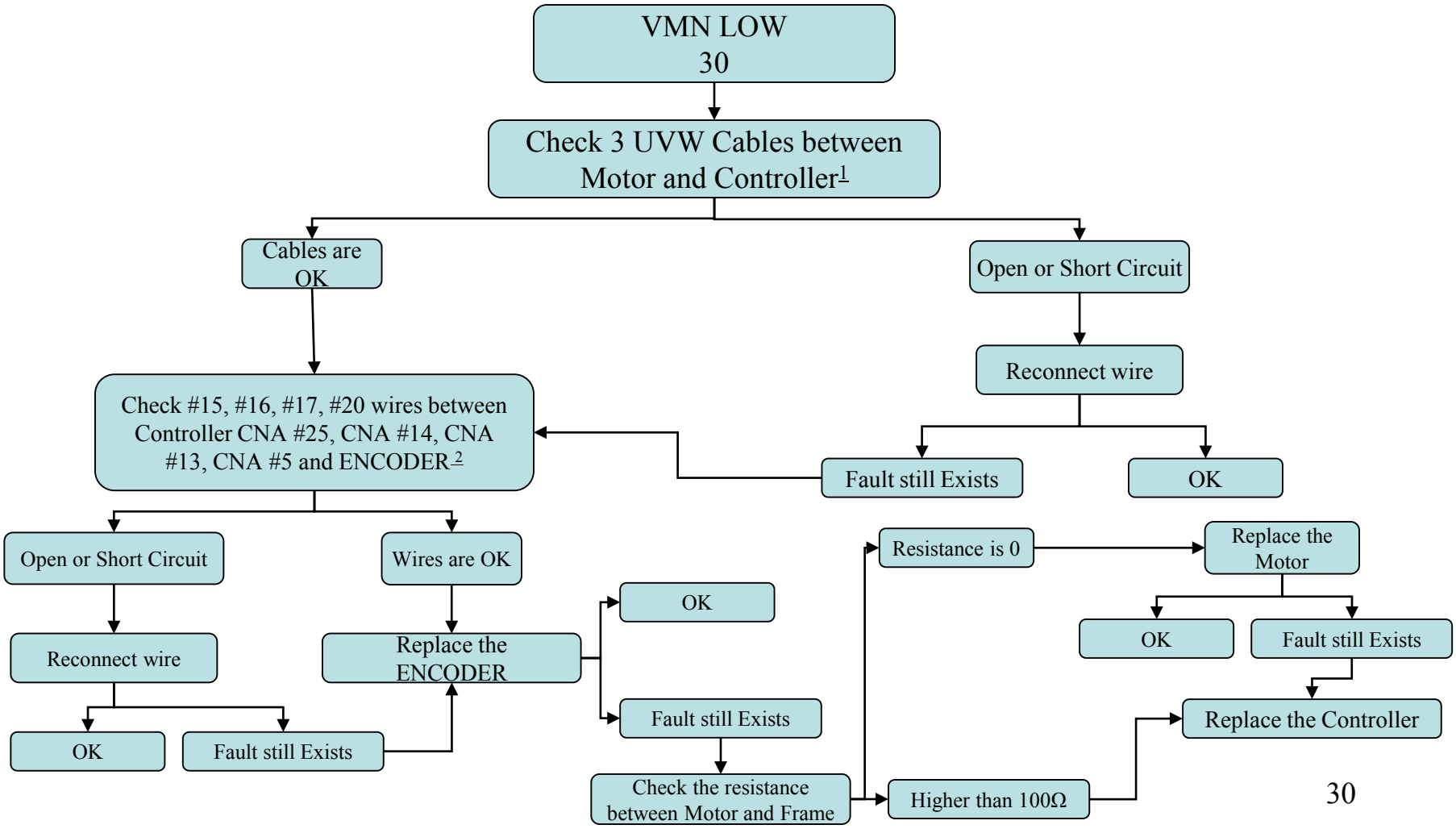
ALARM #60 on NODE #2 CAPACITOR CHARGE



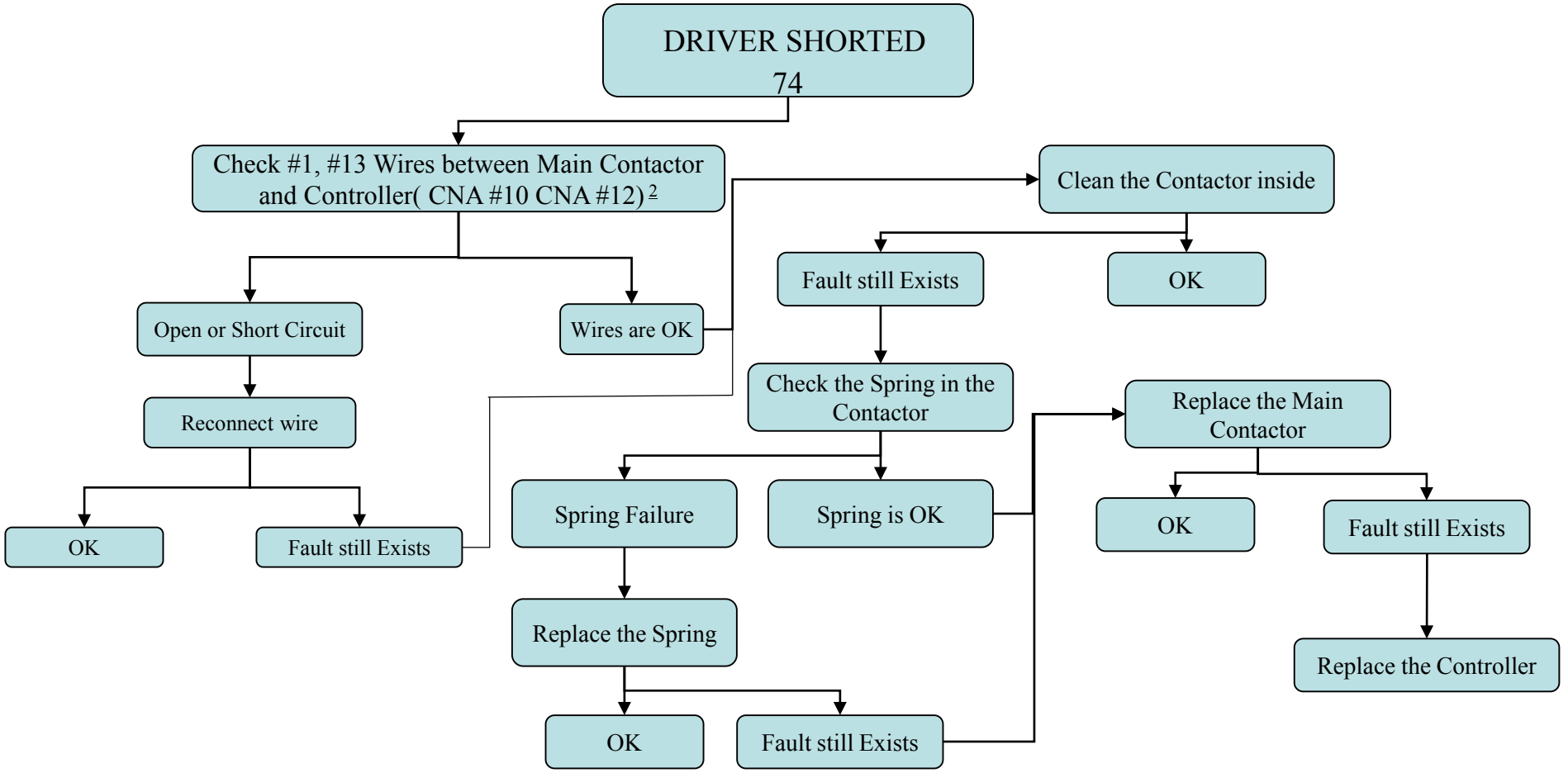
ALARM #68 on NODE #2 SMART DEIVER KO



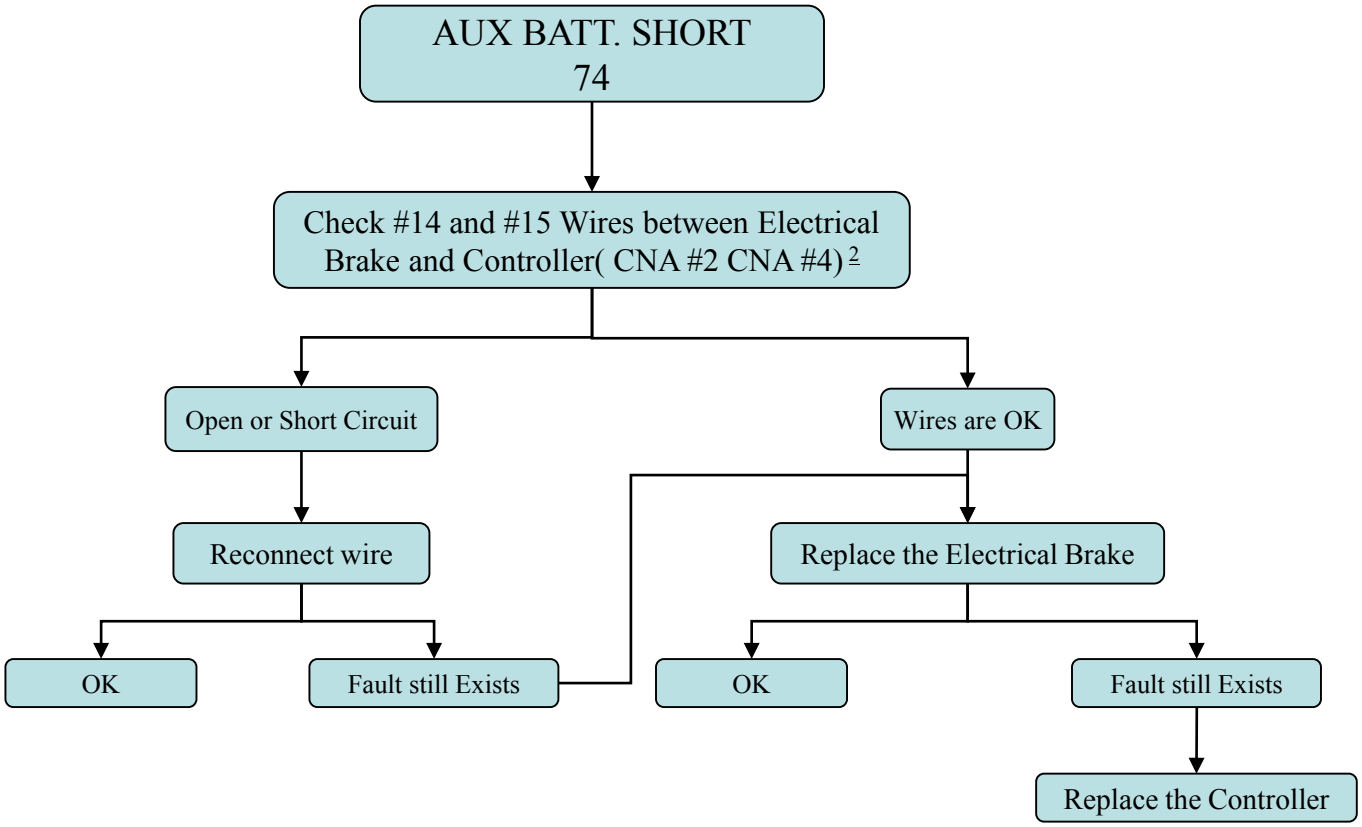
ALARM #72 on NODE #2 VMN LOW



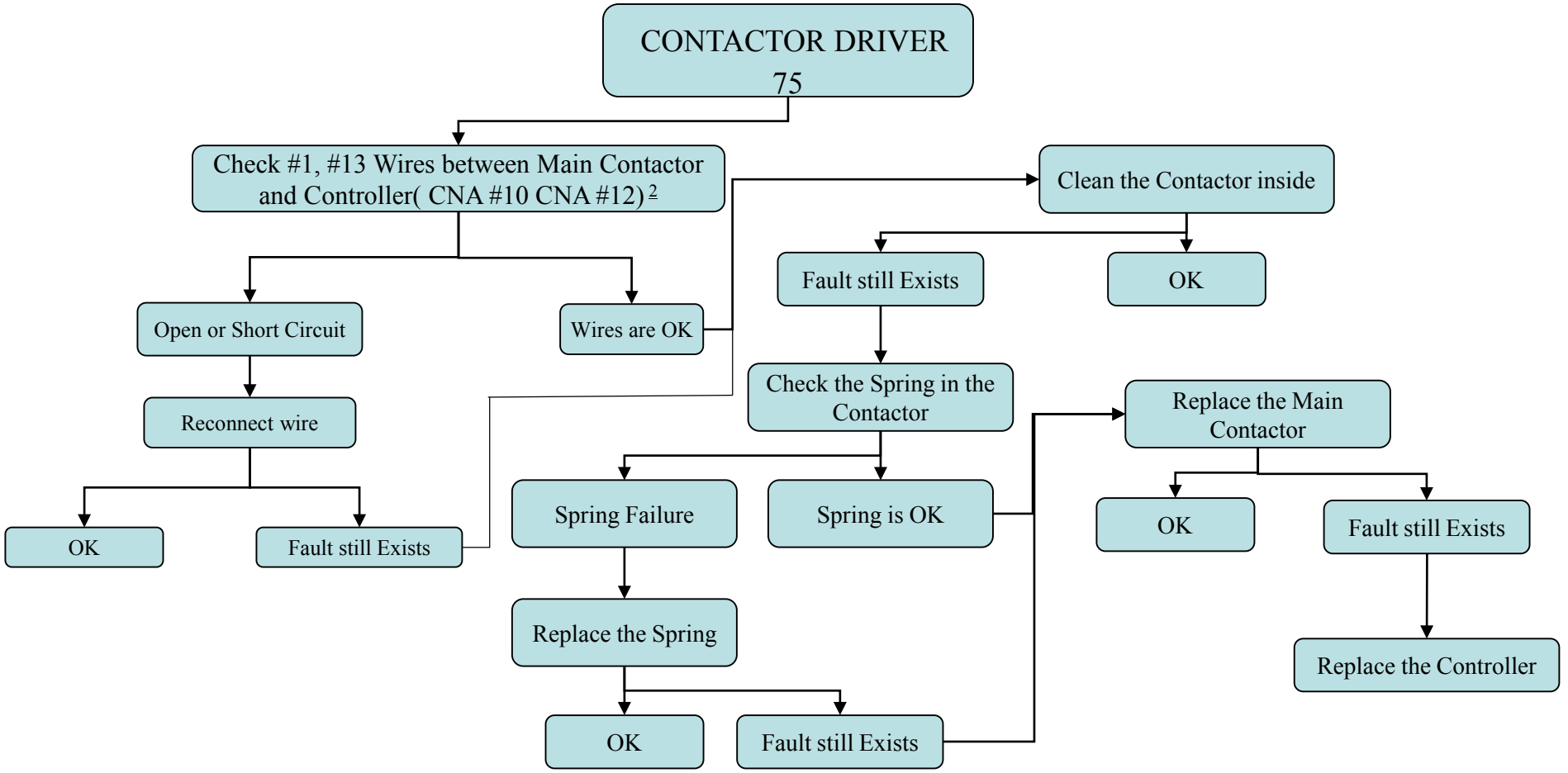
ALARM #74 on NODE #2 DRIVER SHORTED



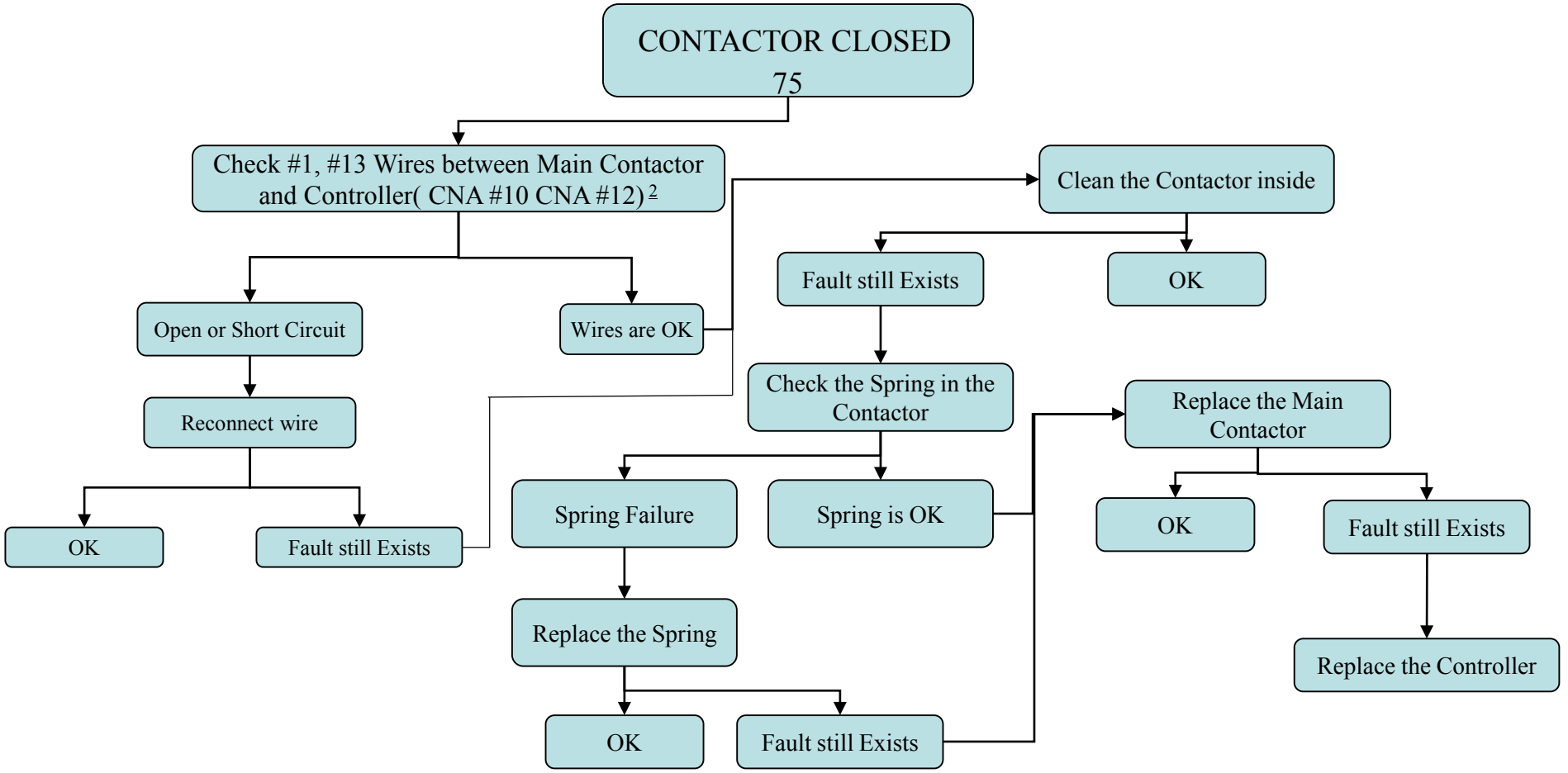
ALARM #74 on NODE #2 AUX BATT. SHORT



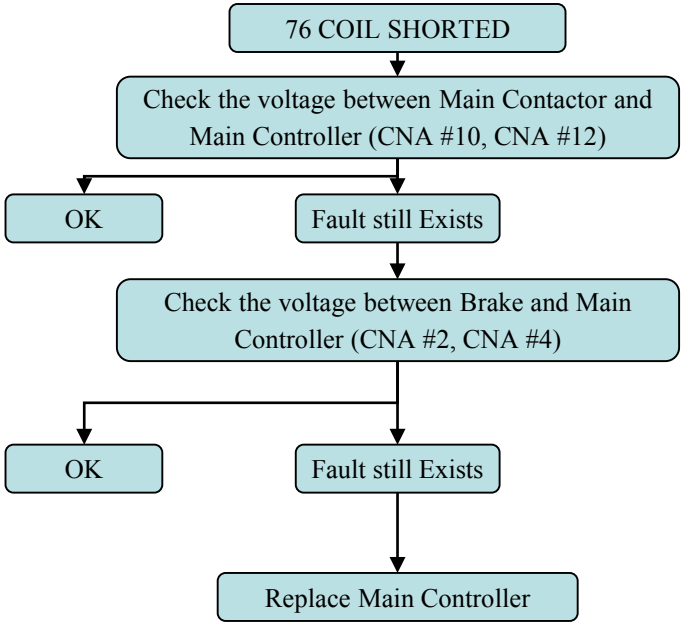
ALARM #75 on NODE #2 CONTACTOR DRIVER

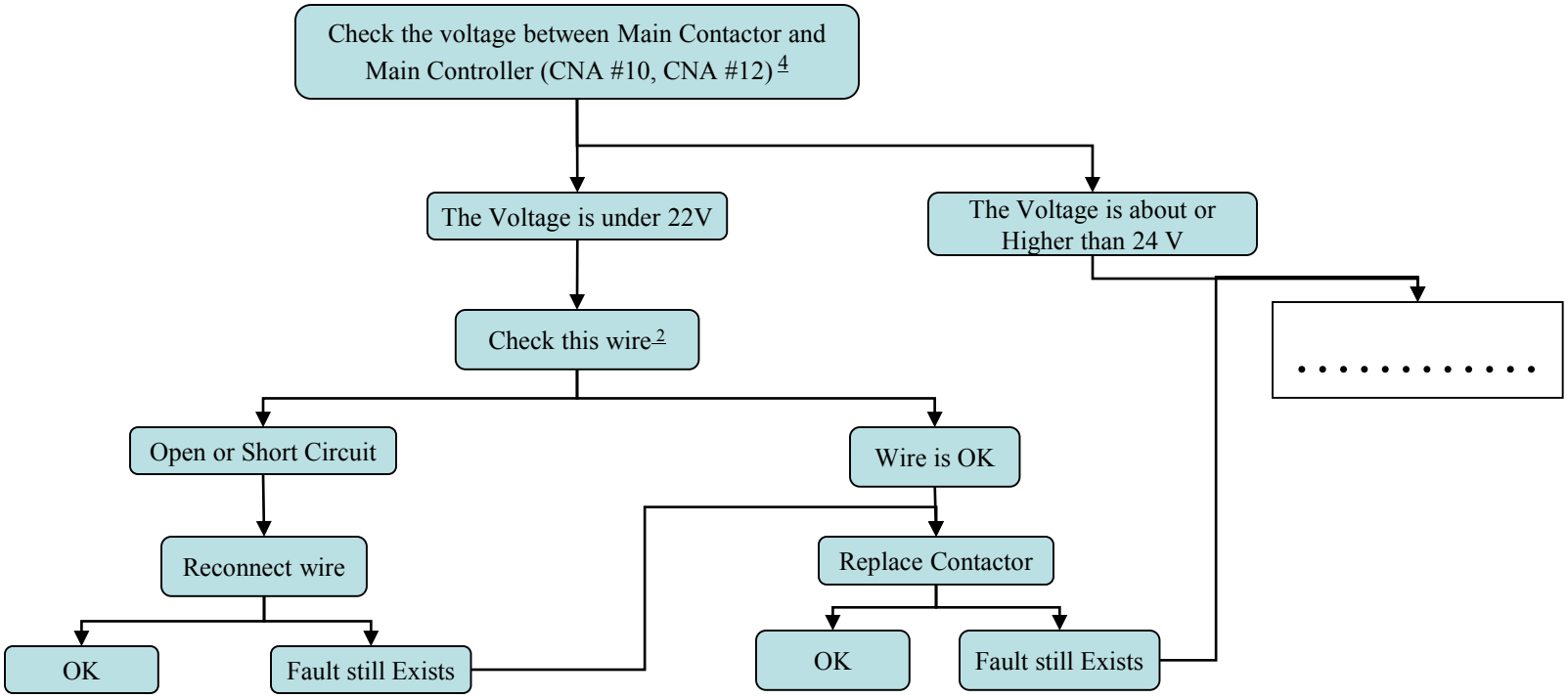


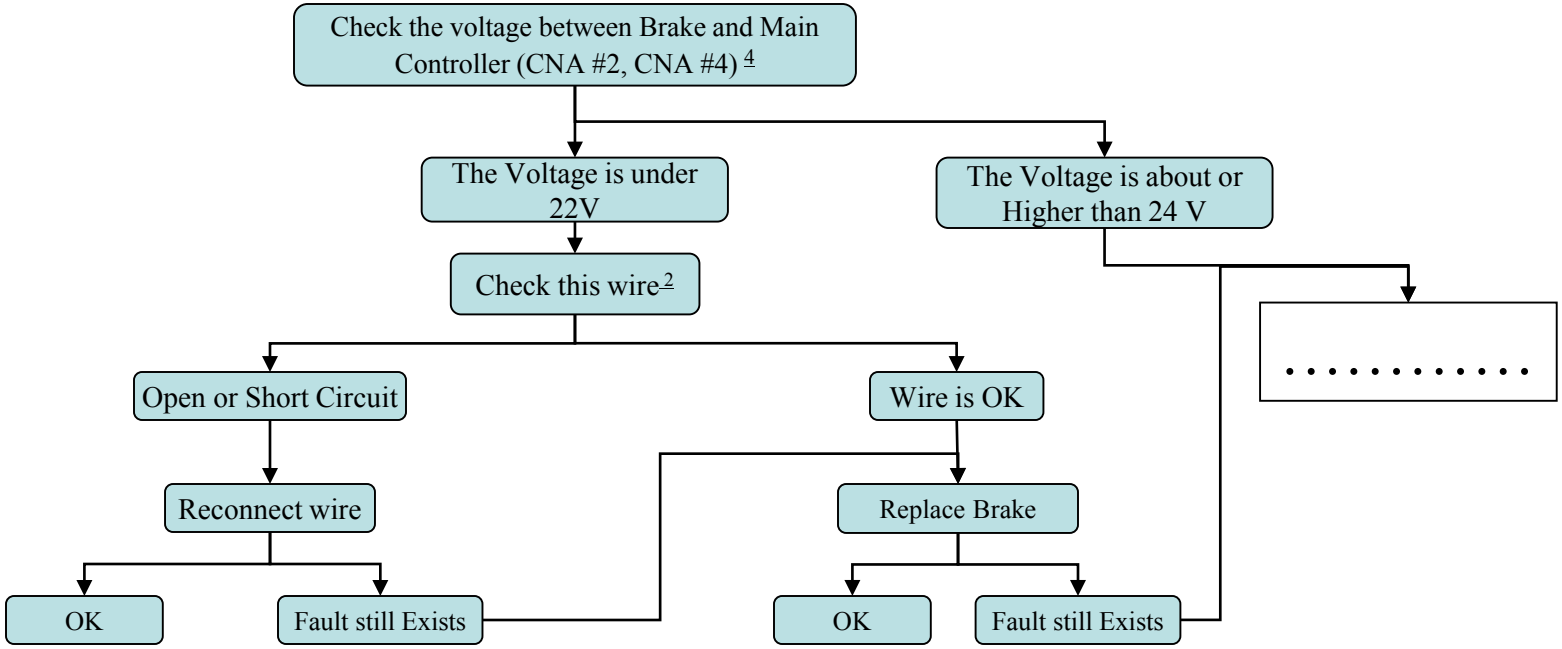
ALARM #75 on NODE #2 CONTACTOR CLOSED



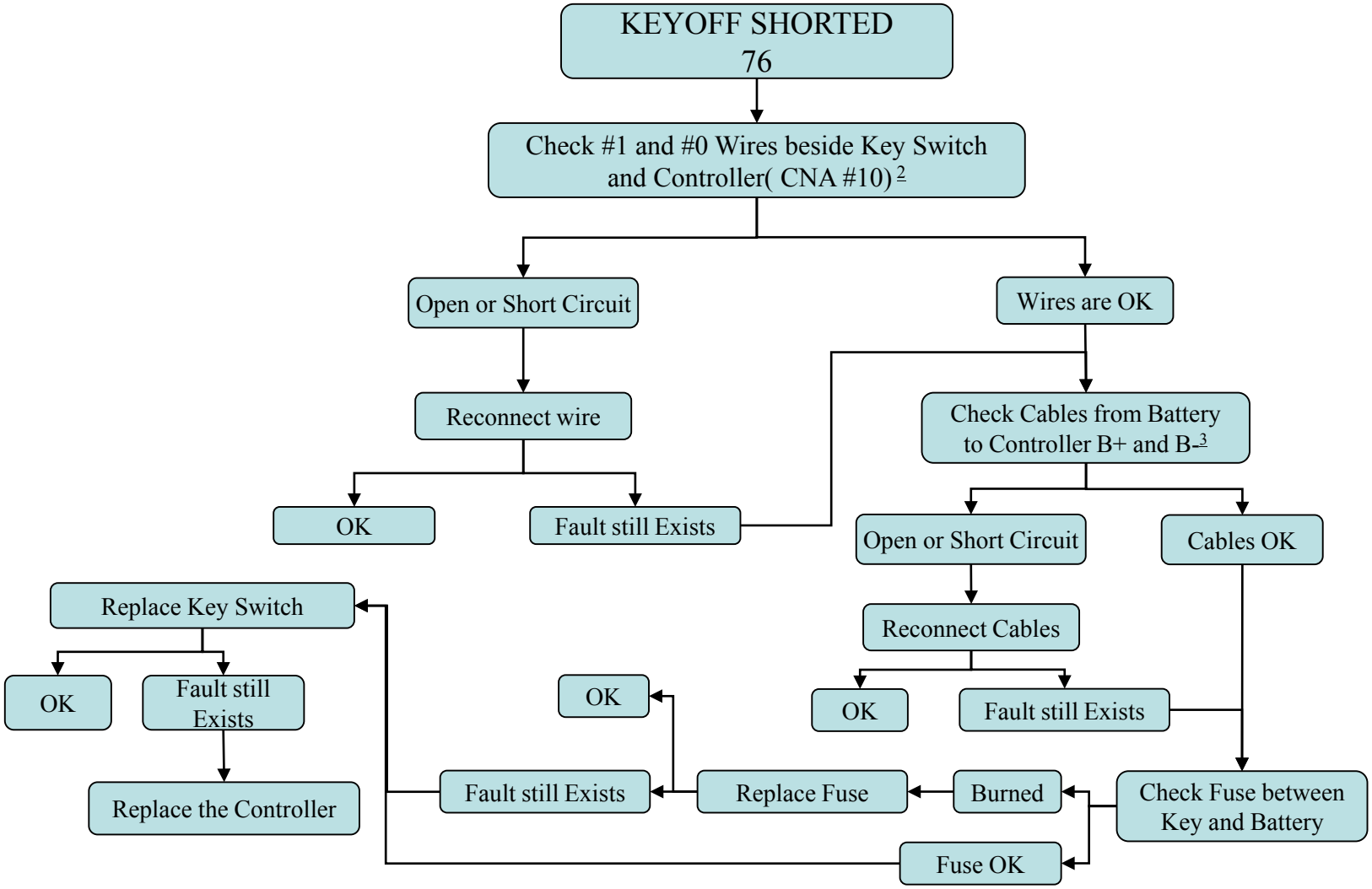
ALARM #76 on NODE #2 COIL SHORTED



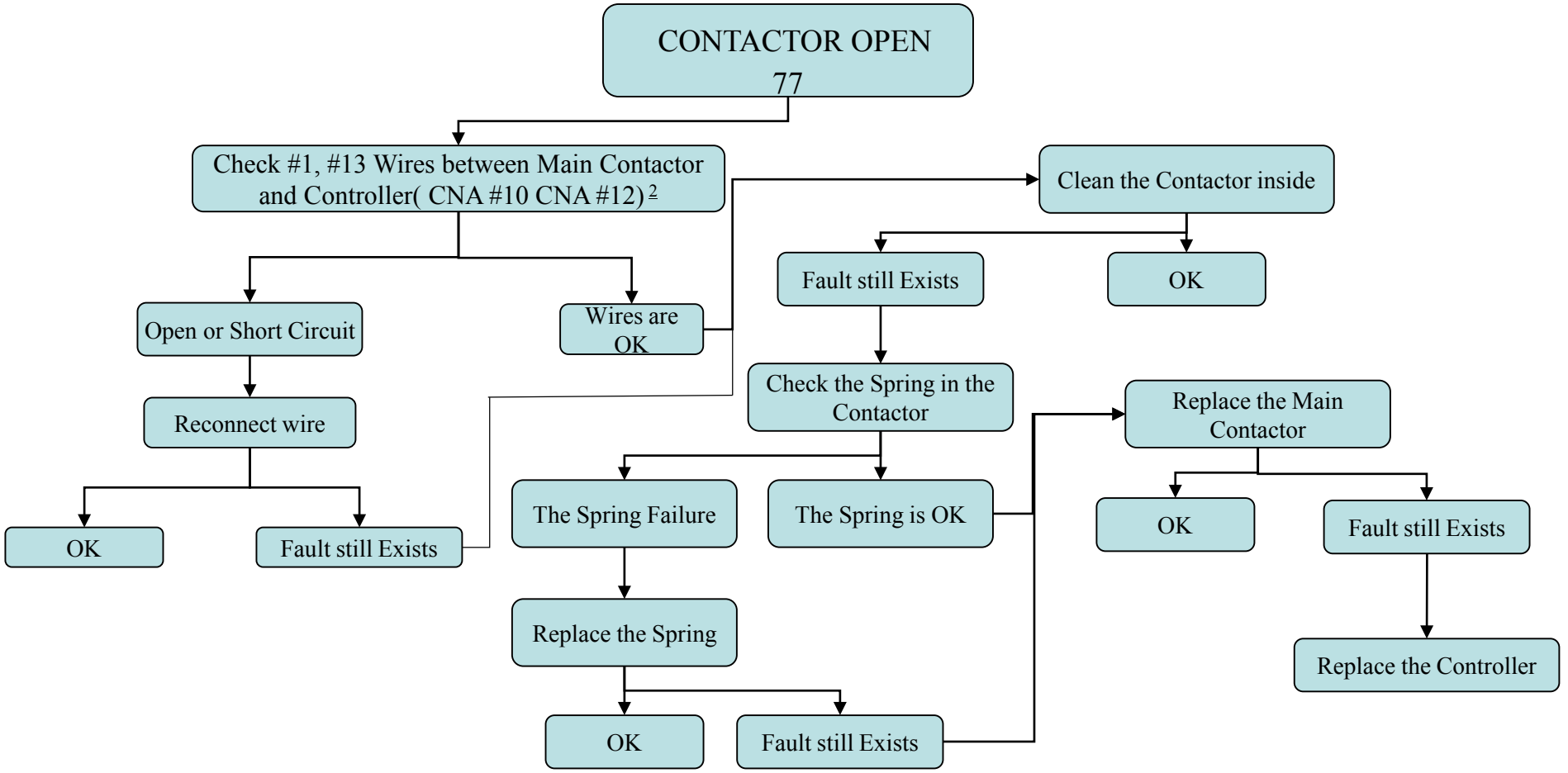

Check the voltage between Main Contactor and Main Controller (CNA #10, CNA #12) 4
The Voltage is under 22V
The Voltage is about or Higher than 24 V
Check this wire 2
. . . . . .
Open or Short Circuit
Wire is OK
Reconnect wire
Replace Contactor
OK
Fault still Exists
OK
Fault still Exists


Check the voltage between Brake and Main Controller (CNA #2, CNA #4) 4
The Voltage is 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

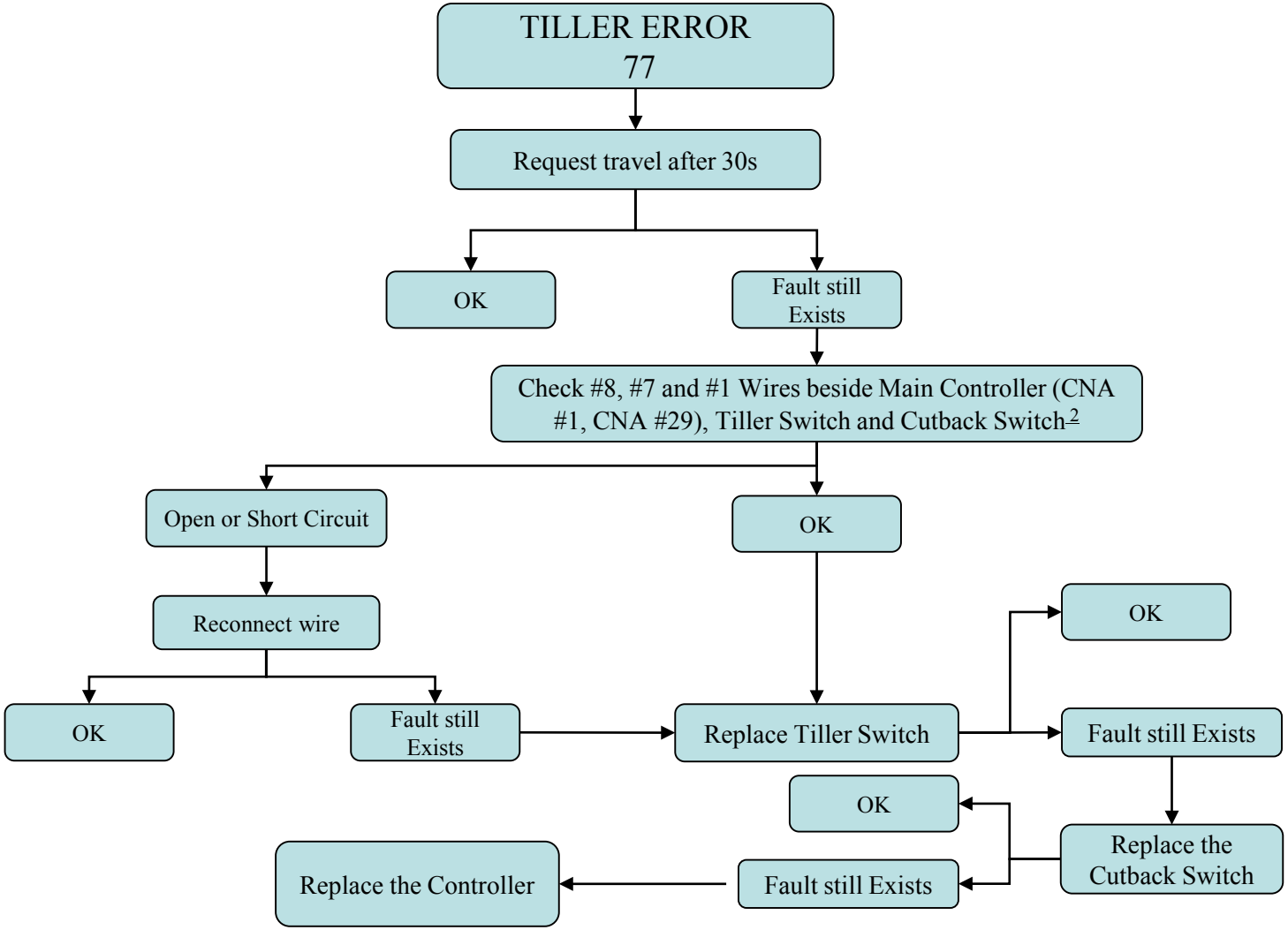
ALARM #76 on NODE #2 KEYOFF SHORTED



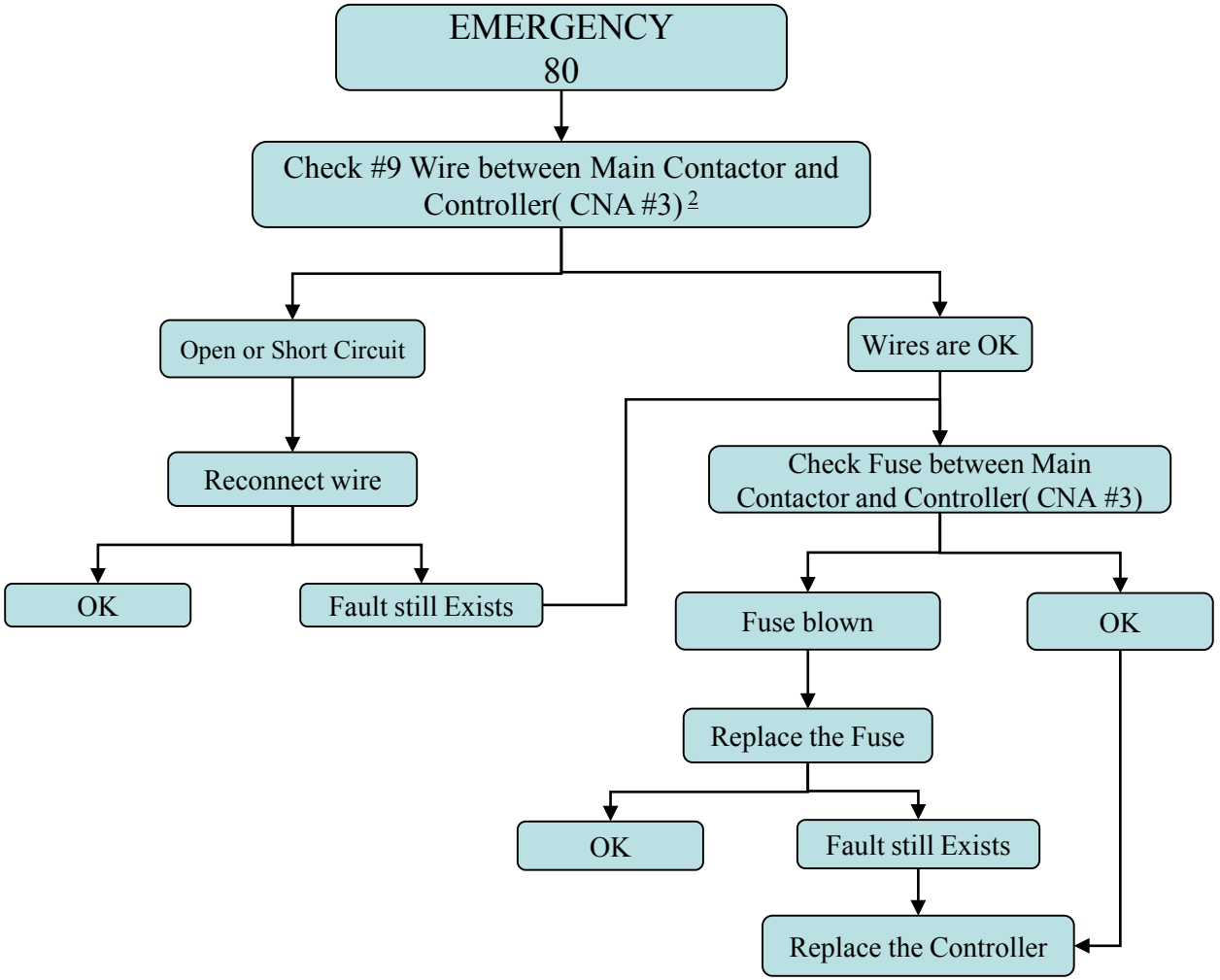
ALARM #77 on NODE #2 CONTACTOR OPEN



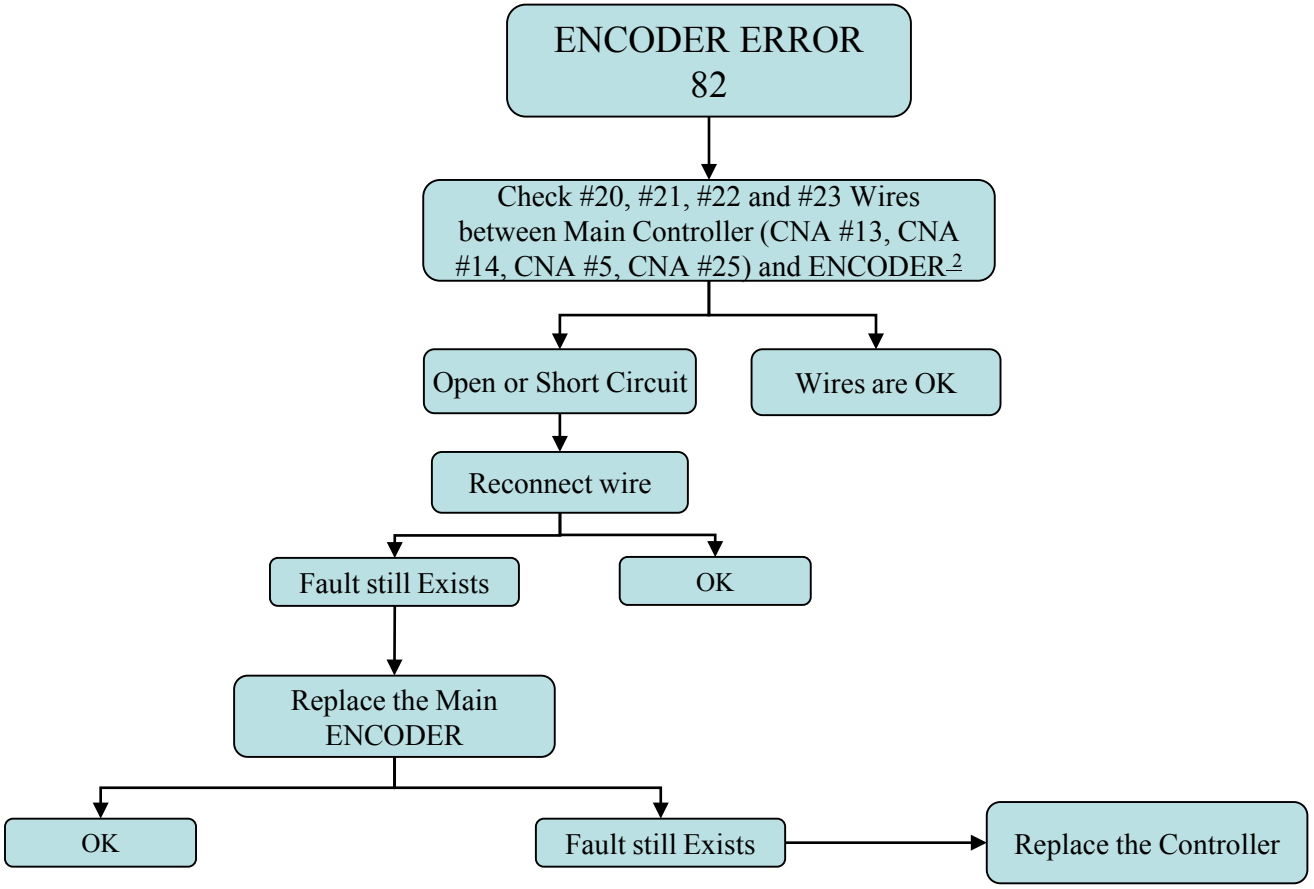
ALARM #77 on NODE #2 TILLER ERROR



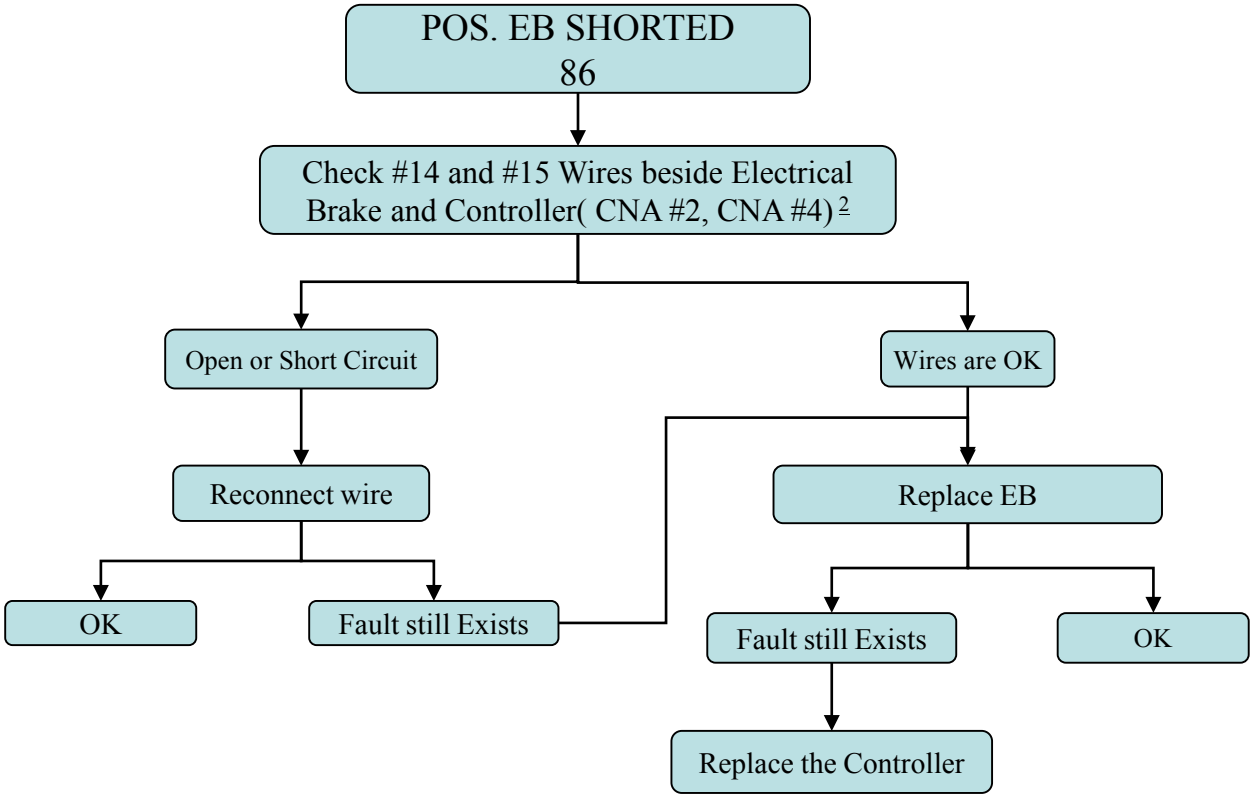
ALARM #80 on NODE #2 EMERGENCY



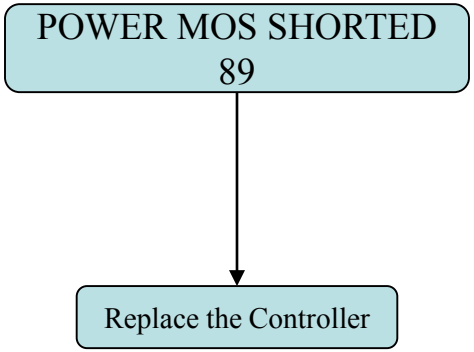
ALARM #82 on NODE #2 ENCODER ERROR



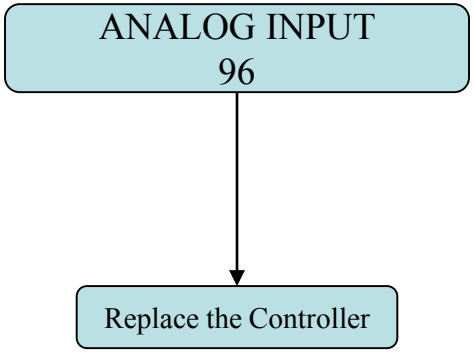
ALARM #86 on NODE #2 POS. EB SHORTED



ALARM #89 on NODE #2 POWER MOS SHORTED

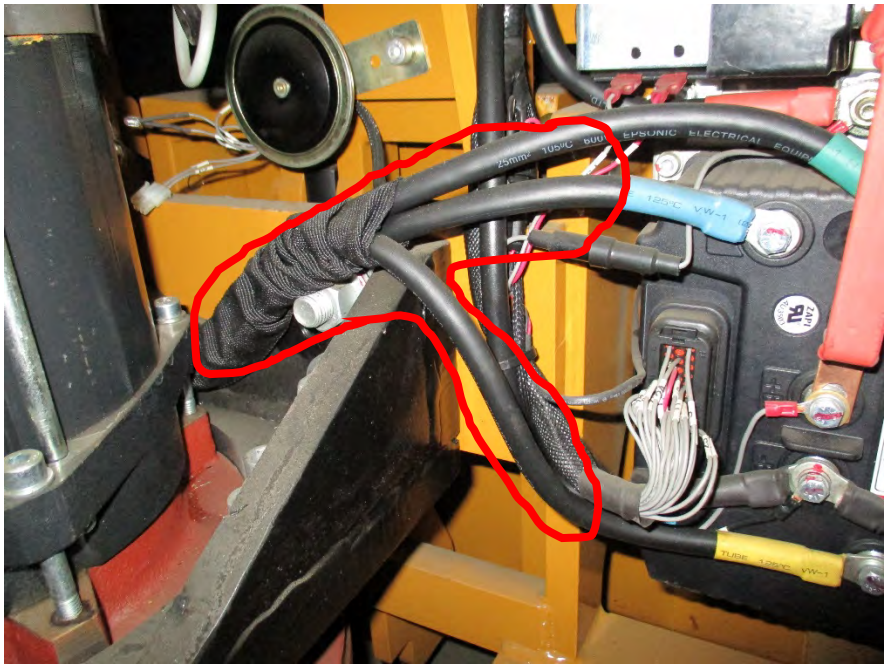


ALARM #96 on NODE #2 ANALOG INPUT

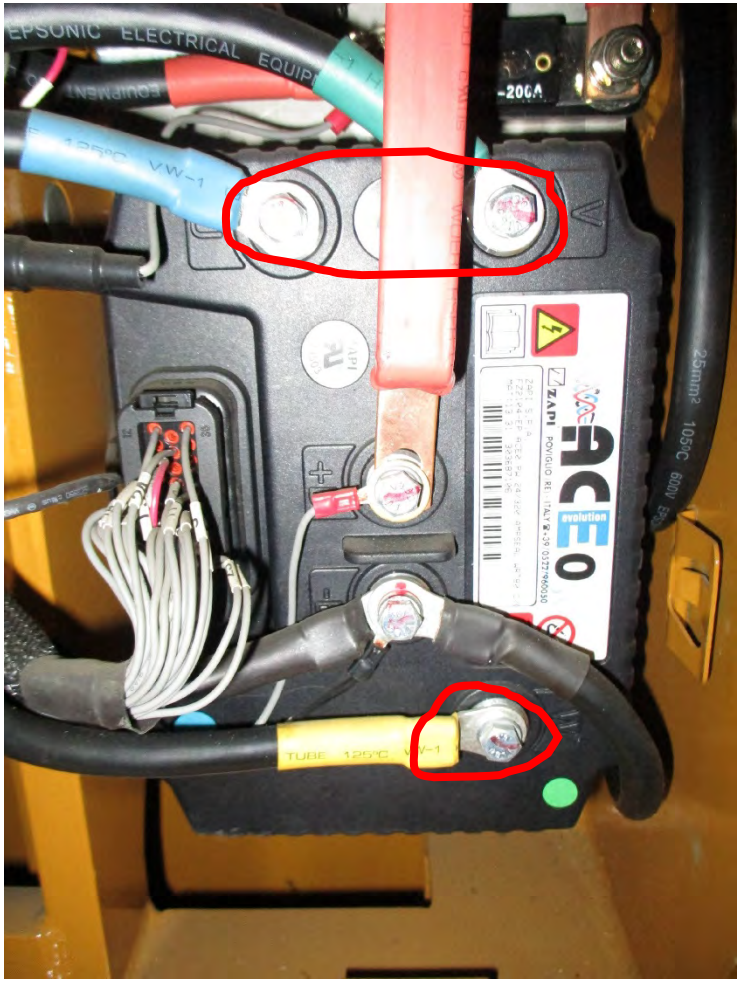


Appendix A

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.



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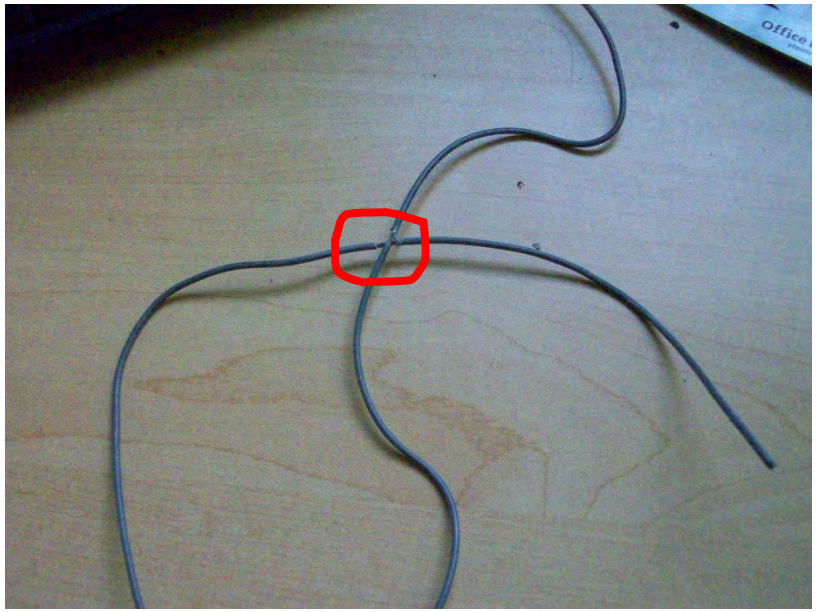
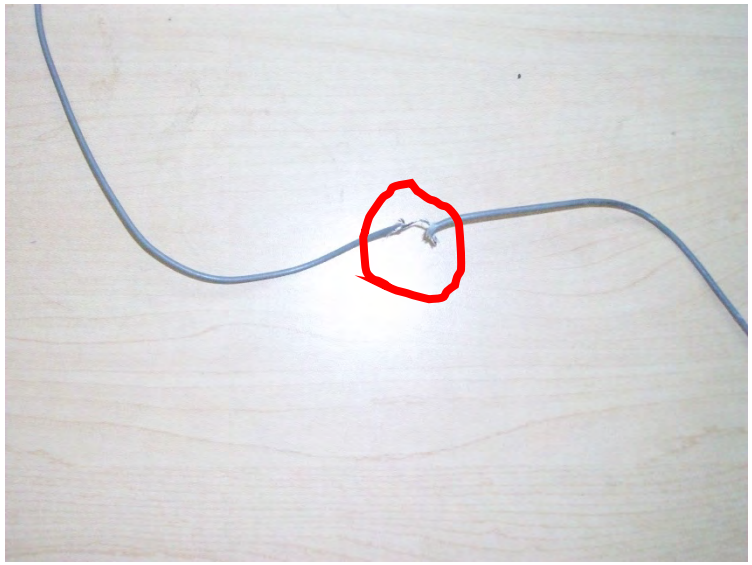
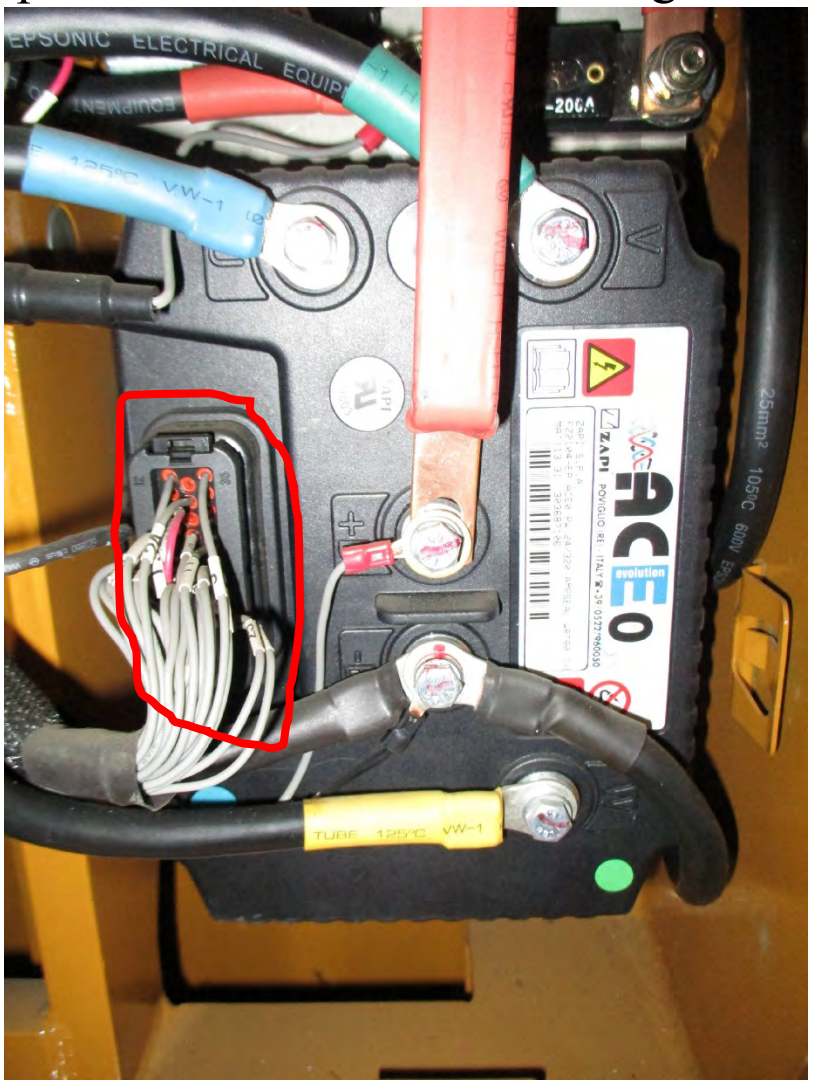


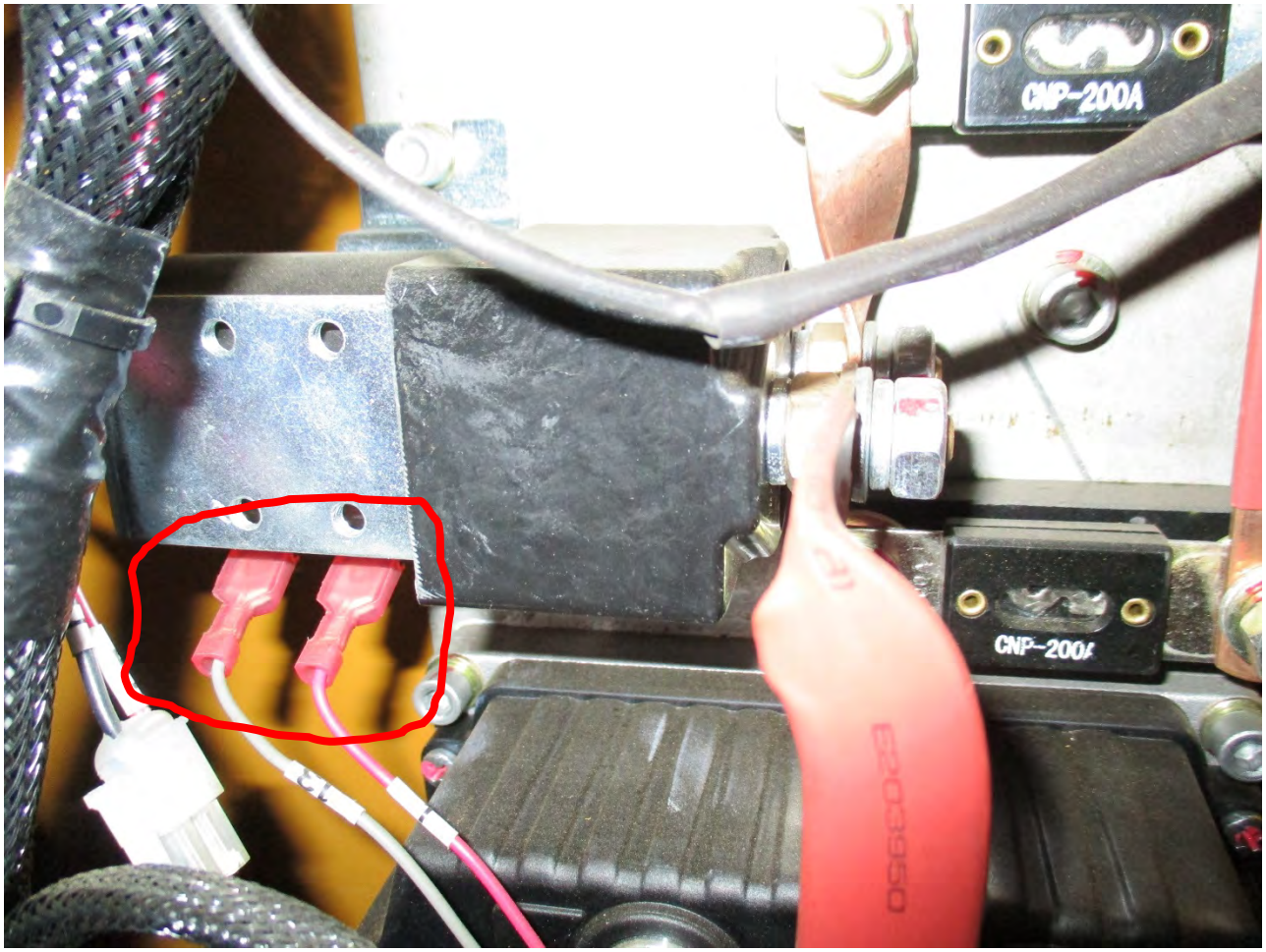


Check the connectors and pins on the Controller. Ensure connector locks are not damaged and no pins are broken or pushed out of the connector. Ensure no wires at pin terminations are cut/damaged



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.



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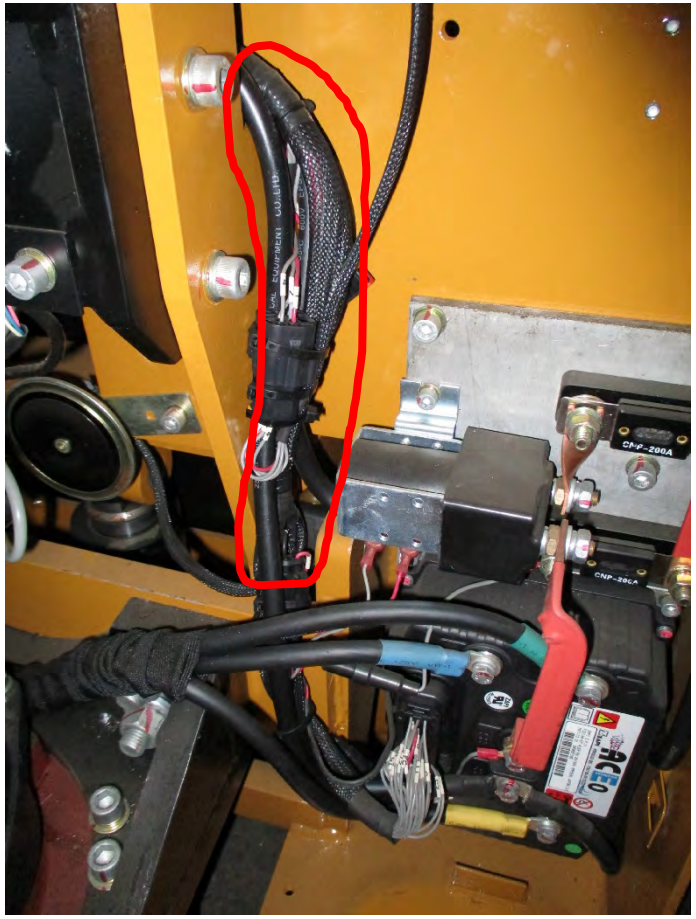
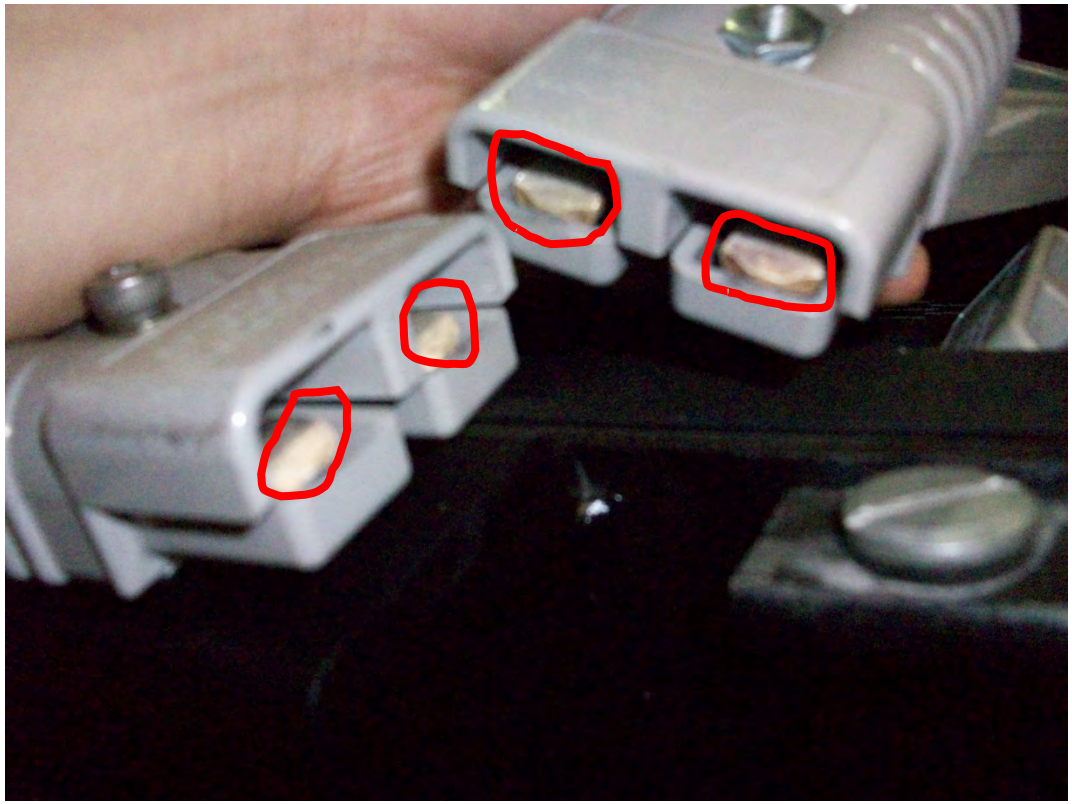
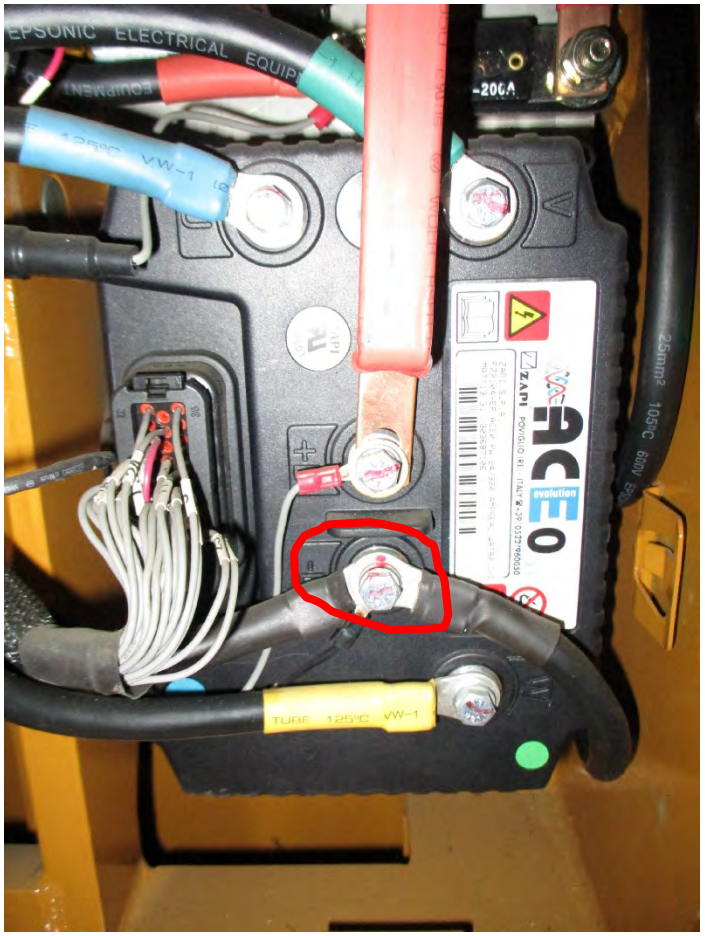


Check the Connectors between Battery and truck to see if they fit loose or are burned (Concentrate on the inside of the connector). If they do not fit correctly, replace cable lugs and/or connector housing to correct the issue.



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 or cell.
- 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.