# Service mode LED +

**1. To enter service mode, push 3 buttons simultaneously until binary code is visible**

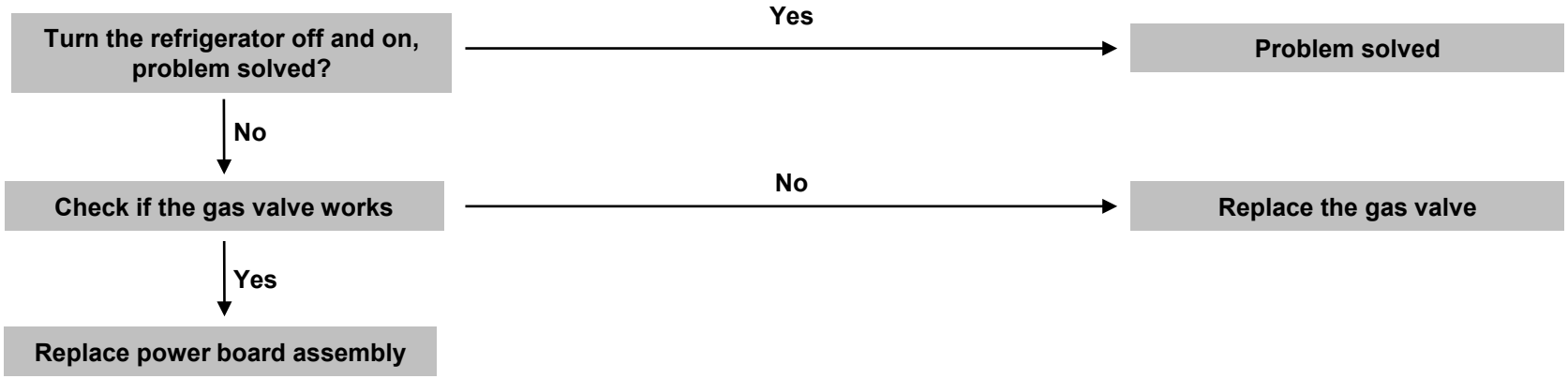
**2. Then calculate or read in the table which error you see.**



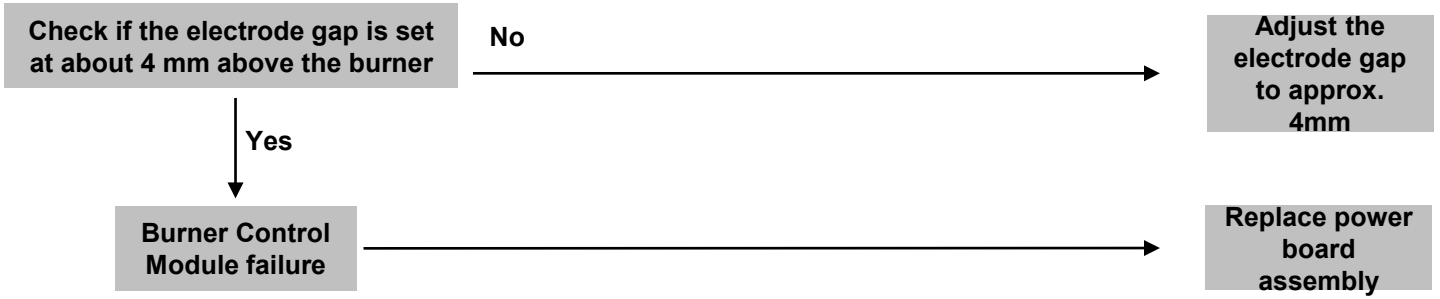

| Readout Code - LED Display | Error Code |
|---|---|
| | No Error Code |
| | 1 |
| | 2 |
| | 3 |
| | 4 |
| | 5 |
| | 6 |
| | 7 |
| | 8 |
| | 9 |
| | 10 |
| | 11 |
| | 12 |
| | 13 |

**!!! Note : When supply voltage 12 VDC (low current voltage) is not available, no error code will be given. When 12VDC is available the green power LED will be on. If battery pack is empty you can see a red light !!!**

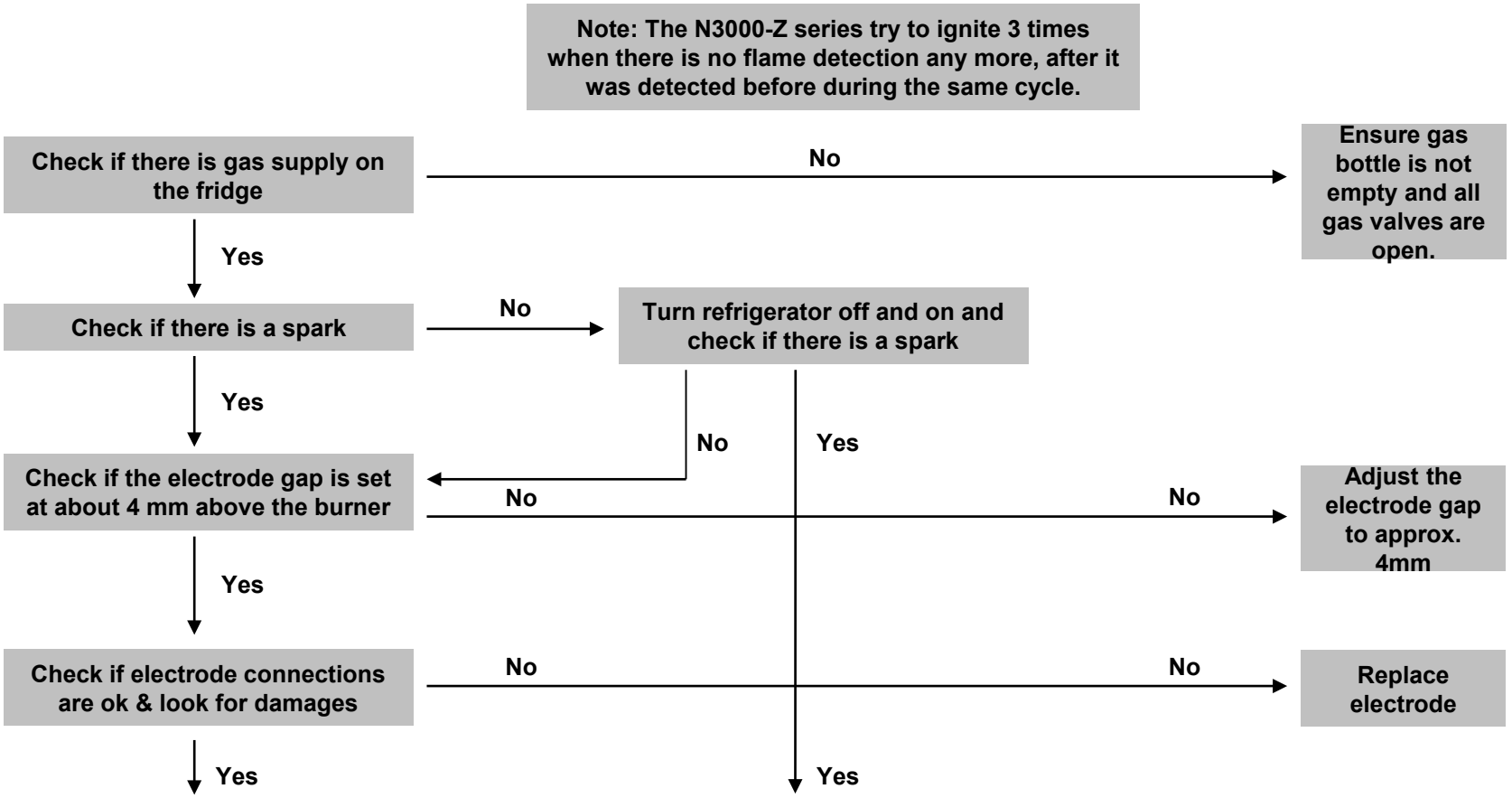
# Error code 1: Senses flame when gas should be off



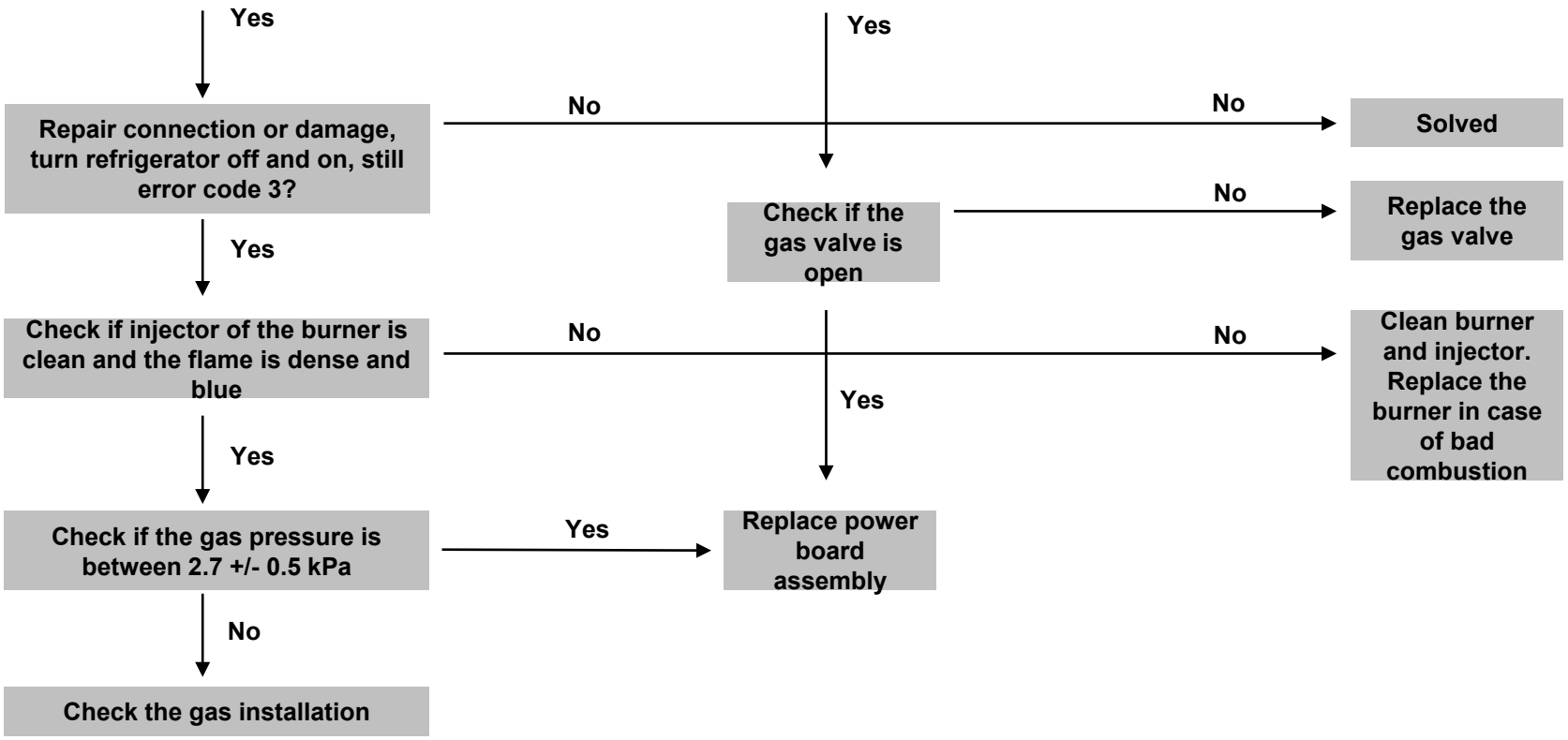
# Error code 2: Burner control module returns incorrect feedback



# Error code 3: Gas lockout because flame fails to ignite within 30 sec.



# Error code 3: Gas lockout because flame fails to ignite within 30 sec.



# Error code 4: DC heater is off when it should be on

**!!! Note: put fridge off when measuring the impedance off the heater !!!**

**Check if all the connections are OK**
- No → **Restore the connections**
- Yes ↓

**Check if the heater is using current (+/- 15 Amps)**
- No → No → **Replace the DC heater**
- Yes ↓

**Check the resistance of the heater, is this between min and max?**
- No → No → **Replace the DC heater**
- Yes ↓

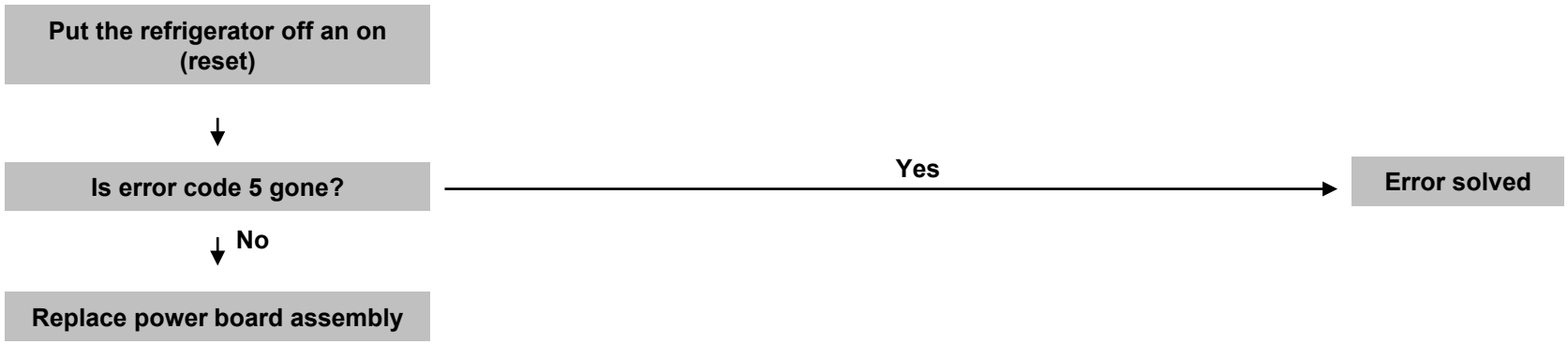
**Heater resistance:**

| *Type* | *Min*Ω | *Max*Ω |
|---|---|---|
| N3104 | 0.67 | 0.85 |
| N3185 | 0.62 | 0.78 |

**Check if the 20A fuse is OK**
- No → No → **Change fuse**
- Yes ↓

**Replace power board assembly**

# Error code 5: DC heater is ON when it should be OFF



# Error code 6: DC high voltage is out of range (lower than 10.5 V or higher than 14.5 V)

**!!! If DC mode has been selected manually, the refrigerator is not switching automatically to another source of energy when the engine is off !!!**

**Input high current voltage supplied at the fridge is stable between 10.5V- 14.5V when the fridge is switched on**

**No** → **DC input issue non fridge related**

↓ **Yes**

**If RV is equipped with a solar panel, disconnect it. Is code 6 gone?**

**No** → **Replace power board assembly**

↓ **Yes**

**Issue with the solar panel regulator or solar panel.**

# Error code 7: No “engine run” signal present and control is in Manual DC mode

**!!! To know if D+ polarity is good, select manually DC mode and engine off. If no error code occurs, that means that the D+ input is reversed. Ensure power supply is capable to supply correct amperage !!!**

**Input D+ voltage supplied at the fridge is stable between 10.5V-14.5 V**

**No** → **D+ input issue non fridge related**

↓ **Yes**

**Replace power board assembly**

# Error code 8: AC heater current is measured to be 75% below nominal current

**!!!Note: put fridge off when measuring resistance off the heater!!!**

**Input AC voltage is between 200 VAC and 260 VAC**

→ **No** → **AC input issue non fridge related**

↓ **Yes**

**Check if the heater is using current (+/- 1 Amps)**

→ **No** → **No** → **Replace the AC heater**

↓ **Yes**

**Check the resistance of the heater, is this between min and max?**

→ **No**

**Heater resistance:**

| *Type* | *Min*Ω | *Max*Ω |
|---|---|---|
| N3104 | 211 | 269 |
| N3185 | 155 | 197 |

→ **No** → **Replace the AC heater**

↓ **Yes**

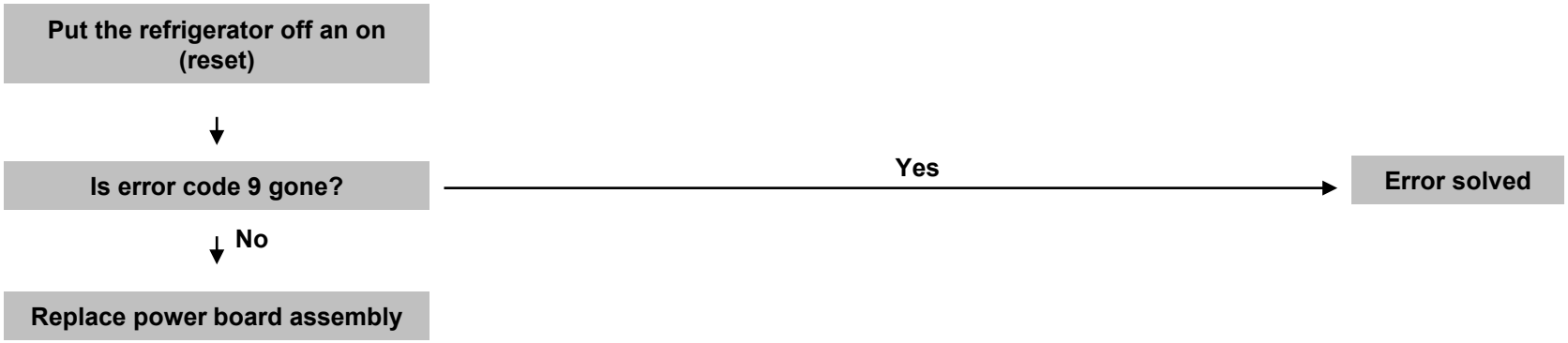
**Check if the 2A fuse is OK**

→ **No** → **No** → **Change fuse**

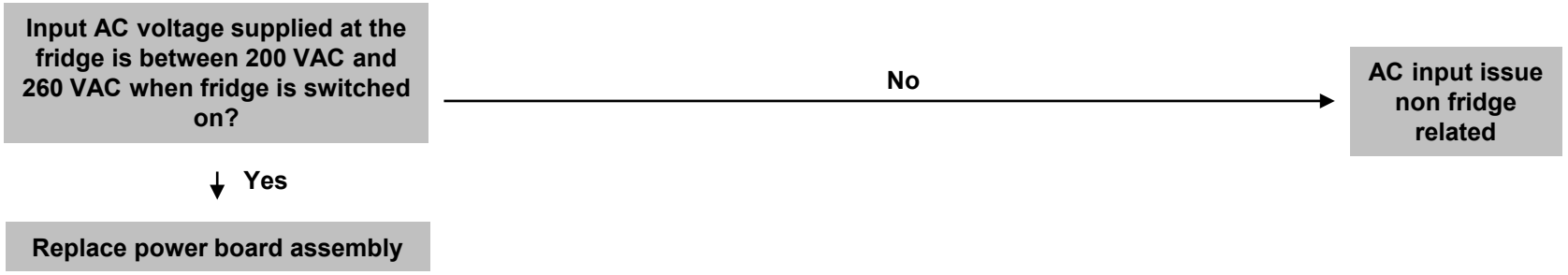
↓ **Yes**

**Replace power board assembly**

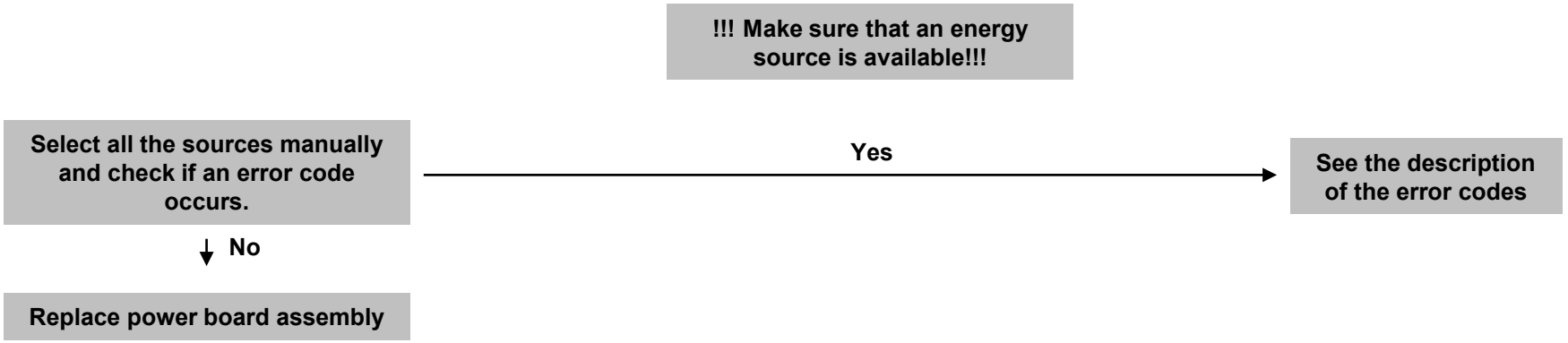
# Error code 9: AC heater is ON when it should be OFF



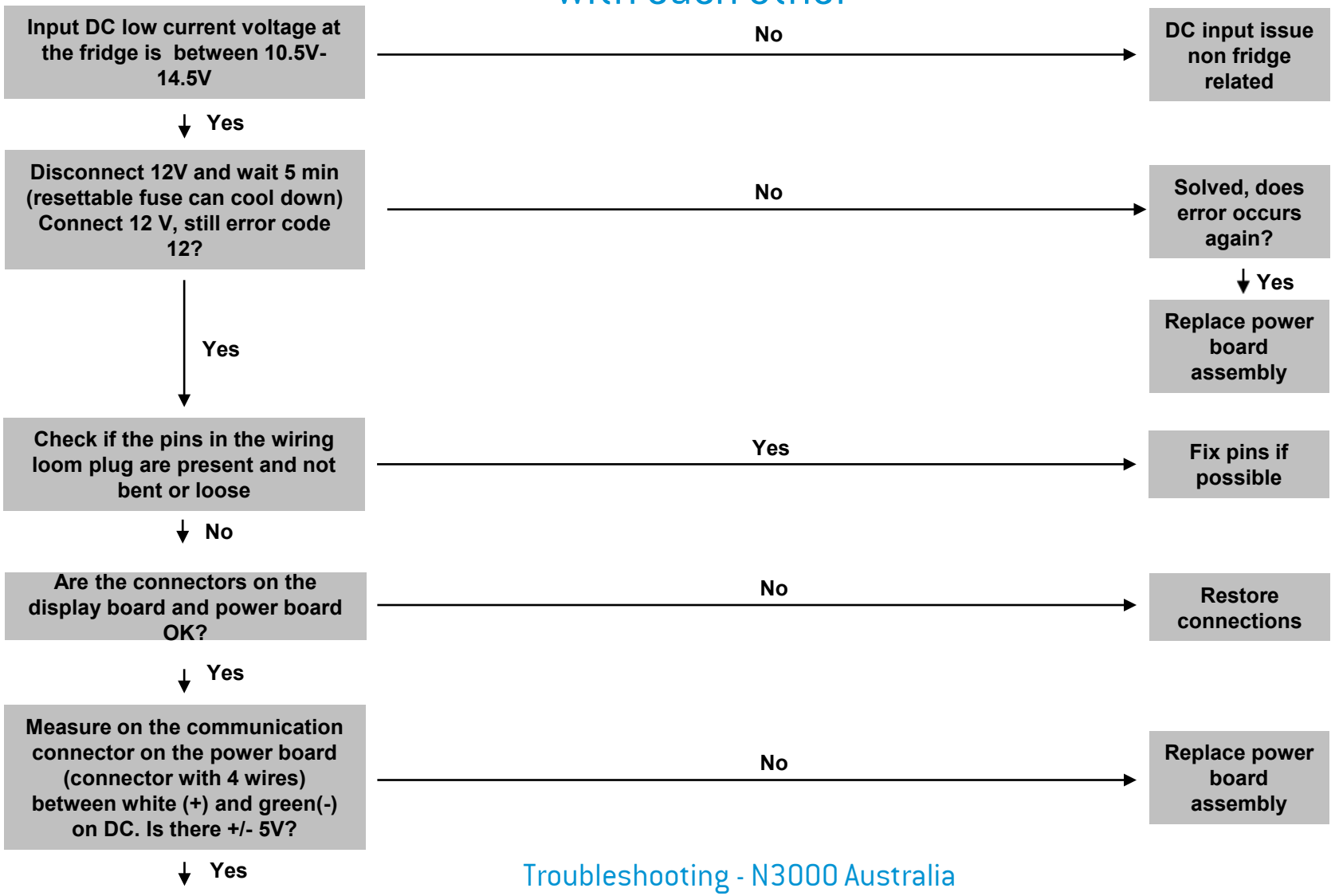
# Error code 10: AC mains supply is out of range



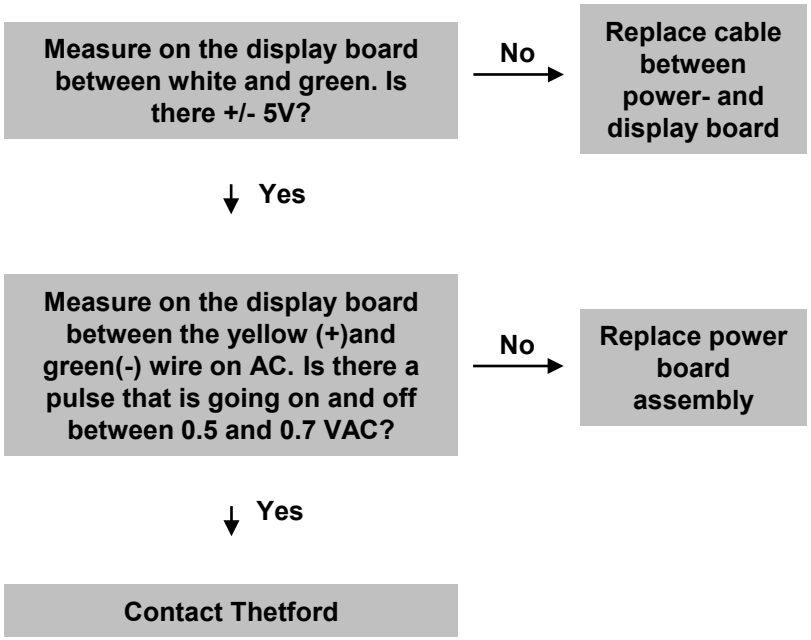
# Error code 11: No energy source is available and control is in AUTO mode



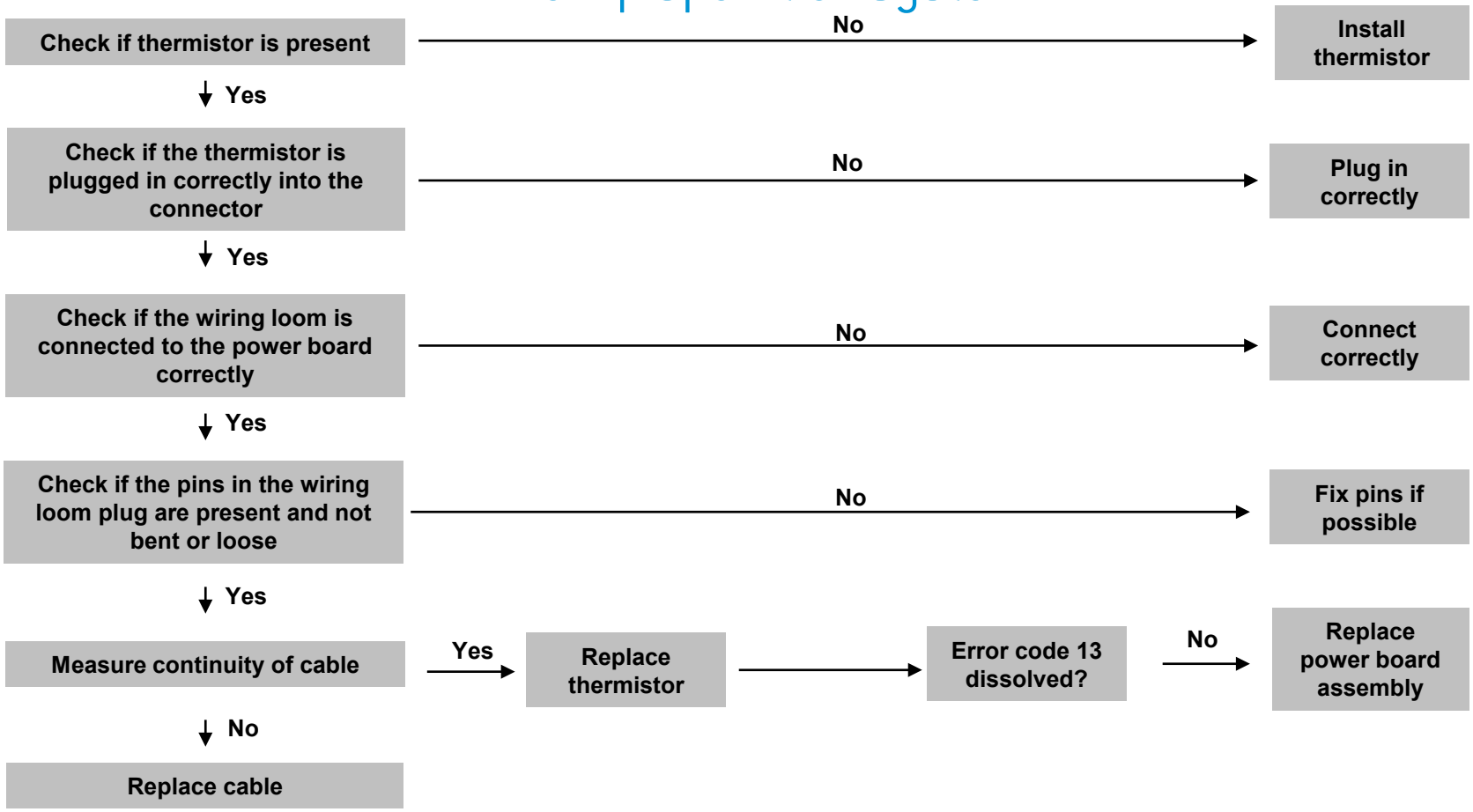
# Error code 12: Display board and power board lose communication with each other



# Error code 12: Display board and power board lose communication with each other



# Error code 13: Thermistor fails; control automatically switches to Backup Operation System



# Inadequate performance on 12 VDC source and no error code

**!!! Do the testing of the fridges on the manual mode of this source !!!**

**Check if the fans are working**
- No → **Fan issue**
- Yes ↓

**Check if the thermistor is properly fitted on the 5th fin from the right inside the cooling cabinet.**
- No → **Install thermistor on the right place**
- Yes ↓

**Check if the input at the DC HC poles of the power board is >12V when the 12V heater is enabled**
- No → **DC HC input issue**
- Yes ↓

**Check if the input at the heater connection to the power board is > 12V**
- No → **Replace power board assembly**
- Yes ↓

**Check if the heater impedance is correct in Ohm (see table error code 4)**
- No → **Replace DC heater**
- Yes ↓

**Check if the DC heater is properly installed.**
- No → **Install the DC heater properly**
- Yes ↓

**Contact Thetford**

# Inadequate performance on 240 V source and no error code

**!!! Do the testing of the fridges on the manual mode of this source !!!**

**Check if the fans are working**
- No → **Fan issue**
- Yes ↓

**Check if the thermistor is properly fitted on the 5th fin from the right inside the cooling cabinet.**
- No → **Install thermistor on the right place**
- Yes ↓

**Check if the input between the (L) and the (N) at the power board is more then 240V when heater is enabled.**
- No → **AC input issue**
- Yes ↓

**Check if the input at the heater connection to the power board is > 240V**
- No → **Replace power board assembly**
- Yes ↓

**Check if the heater impedance is correct in Ohm (see table error code 8)**
- No → **Replace the AC heater**
- Yes ↓

**Check if the AC heater is properly installed.**
- No → **Install the AC heater properly**
- Yes ↓

**Contact Thetford**

# Inadequate performance on gas source and no error code

**!!! Do the testing of the fridges on the manual mode of this source !!!**

**Check if the fans are working**

**No** → **Fan issue**

**Yes** ↓

**Check injector of the burner is clean. Flame is dense and blue. Gas pressure is 2.7 +/- 0.5 kPa**

**No** → **Clean the burner or replace the burner in case of bad combustion and check pressure**

**Yes** ↓

**Check if the thermistor is properly fitted on the 5th fin from the right inside the cooling cabinet.**

**No** → **Install thermistor on the right place**

**Yes** ↓

**Check if the flame diffuser is in the pipe.**

**No** → **Install a flame diffuser**

**Yes** ↓

**Check if the burner is aligned properly in front of the pipe.**

**No** → **Align burner**

**Yes** ↓

**Contact Thetford**

# Appendix: Wiring diagram

