Technical procedure

Troubleshooting | **Alpha™ iQ**

Cleaner and control box diagnostics

- **Alpha®iQ cleaners are not compatible with:**
  - **the "Diag Box" diagnostic unit;**
  - **the "Full Test Diag" diagnostic software;**
- **The diagnosis described in this procedure is available using a masked function from the control box delivered with the cleaner.**

1. Cleaner diagnostics

- ***Test to be conducted out of the water.***
- ***Connect the cleaner to the control box delivered with the cleaner.***
- ***Connect the control box's power cable.***
- ***Turn the cleaner on its back (wheels facing upwards) when rotating the wheels forwards and backwards (traction test)***

- On the control box, press MODE and hold for 10 seconds.

- Quick mode (floor only) flashes by default . For control boxes with a screen, the message "diAG" is displayed at the same time.

- Press to start the **cleaner's diagnostics.** The diagnostics process will review the following 5 points in the given order and will stop as soon as an error is identified:

- **During the cleaner's diagnostics sequence, do not look directly at the light beam coming from the motor unit.**

COM (Communication)
tr1 (Traction 1)
tr2 (Traction 2)
PMP (Pump Motor)
SEnS (Sensor Unit) (depending on the model)

"Wait for the test to automatically end"

During the test:

- All of the control box's LEDs are flashing.
- The motor unit's LEDs are lit.
- The sensor unit's LED flashes green and turns orange when testing the sensor unit.

- Follow the instructions, see **"2. Cleaner diagnostics results".**

2. Cleaner diagnostics results

- **Only a person qualified in the technical fields concerned (electricity, hydraulics or refrigeration) is authorised to carry out maintenance or repair work on the appliance. The qualified technician working on the appliance must use/wear personal protective equipment (such as safety goggles and protective gloves, etc.) in order to reduce the risk of injury occurring when working on the appliance.**
- **Before handling the appliance, check that it is switched off and isolated.**

"GOOD" message or POWER **lit steadily** = Test OK

"Com FAIL" message or 1s → 1s → 1s →

Problems	Possible origins	Solutions
Communication error	Unit connection to the cleaner	Disconnect and reconnect the unit to the cleaner
	Condition of the floating cable	Check the condition of the floating cable. For a more accurate diagnosis of the floating cable; Perform the test by connecting another floating cable between the control box and the motor unit. *Use the "E-BOX" connector and not "SENSOR" when connecting the cable to the motor unit (risk of damage to components)*
	Faulty motor unit*	Replace the motor unit
	Water in the motor unit*	Replace the motor unit

"tr1 FAIL"/"tr2 FAIL" message or POWER **flashing** 1s → 1s →

Problems	Possible origins	Solutions
Traction 1 short circuit	Motor blocked	Check whether there is any debris blocking the wheels, turn the wheels (¼ turn)
Traction 2 short circuit	Water in the motor unit*	Change the motor unit
	Motor at end of life*	Change the 2 traction motors**
Traction 1 overload	Motor blocked	Check whether there is any debris blocking the wheels, turn the wheels (¼ turn)
Traction 2 overload	Motor at end of life*	Change the 2 traction motors**

"Pump FAIL" message or POWER **flashing** 1s → 1s →

Problems	Possible origins	Solutions
Pump short-circuit	Motor blocked	Check the flow guide and the propeller
	Water in the motor unit*	Change the motor unit
	Motor at end of life*	Change the pump motor
Pump overload	Debris or hair stuck in the pump	Check the flow guide and the propeller
	Water in the motor unit*	Change the motor unit
Pump underload	Faulty pump motor*	Change the pump motor

"Sens FAIL" message or POWER **flashing** 1s → 1s →

Problems	Possible origins	Solutions
Sensor unit malfunction	Connection of the sensor connector	Check the connection
	Water in the sensor connector	Replace the sensor
	Sensor cable wear	Check the condition of the sensor cable

** Information intended for use by professionals.*
*** We recommend changing both traction motors at the same time, because tests have shown that end of life-level wear occurs more or less at the same time in both.*

- Once the error has been resolved, it is recommended you start a new cleaner diagnostics sequence, see **"1. Cleaner diagnostics".**
- To exit diagnostics mode, press ▶■.

3. Control box diagnosis (delivered with the cleaner)

- ***Connect the control box's power cable.***

- On the control box, press MODE and hold for 10 seconds.
- Quick mode (floor only) flashes by default . For control boxes with a screen, the message "diAG" is displayed at the same time.
- Press and release MODE, Smart mode (floor, walls, water line) starts to flash . For control boxes with a screen, the message "diAG" is displayed at the same time.
- Press ▶■ to start **manual diagnostics of the control box**, in 2 steps:

1. LED test: all LEDs should be flashing.

==> This is used to detect whether an LED is defective; replace the control box where necessary.

2. Button test: press and release the buttons shown below. All LEDs should be steadily lit for 2 seconds. For control boxes with a screen, the message "GOOD" is displayed at the same time.

==> This is used to detect whether a button is defective; replace the control box where necessary.

Example of a control box with the buttons to be tested (buttons may differ depending on the model)

- To exit diagnostics mode, press ▶■.

All Alpha™ iQ control boxes can be used to perform Cleaner Diagnostics for any Alpha™ iQ model.