

Repair Instructions

To replace the fan motor in Blanket Warmer TBW-360F 520F 1100F

To suit: TBW-360/520/1100



Approvals		
Written By:	Reviewed By:	Approved By:
Darren Assey	Duncan Smeaton	Duncan Smeaton

Safety Reminder

These instructions do not purport to address all potential safety issues, if any, associated with the product's use. It is the responsibility of the user of these instructions to establish appropriate safety and health practices and determine the applicability of regulatory limitations before use.

Before attempting any of the following, perform the actions listed below:

- Turn OFF power to the machine.
- Unplug the machine.

Summary

These instructions are for removing and replacing a fan motor in a Blanket Warmer. Please note that all electrical work must be performed by a suitably licensed and trained technician.

Tools Required	
Screw driver	Phillips Head
Screw driver	Large Flat head
Allen Key	5 mm
Spanner	7/8 th Open ended
Wire Snips	
Safety Step	

Kit Contents		
Item	Description	Quantity
WRA18217	Fan Motor to suit	1
Cable ties	To Suit fan cables	2

Section 1: Preparation

Turn off the power and remove the plug from the outlet and remove the top panel. In some cases you will need a safety step or step ladder to be able to remove this panel safely.



Slide the panel up which will free it from the locating blocks on the cabinet.



Pull the panel forward free of the blocks. This will allow you to access the enclosure that contains the evaporator fan



For 360 Cabinets only:

Remove the four screws (2 on either side) so you can remove the top cover of the fridge and gain access to the evaporator enclosure.

Section 2: Remove the Fan



Using a 5mm allen key, unscrew the allen bolts that is holding the cover of the blanket warmer fan enclosure.

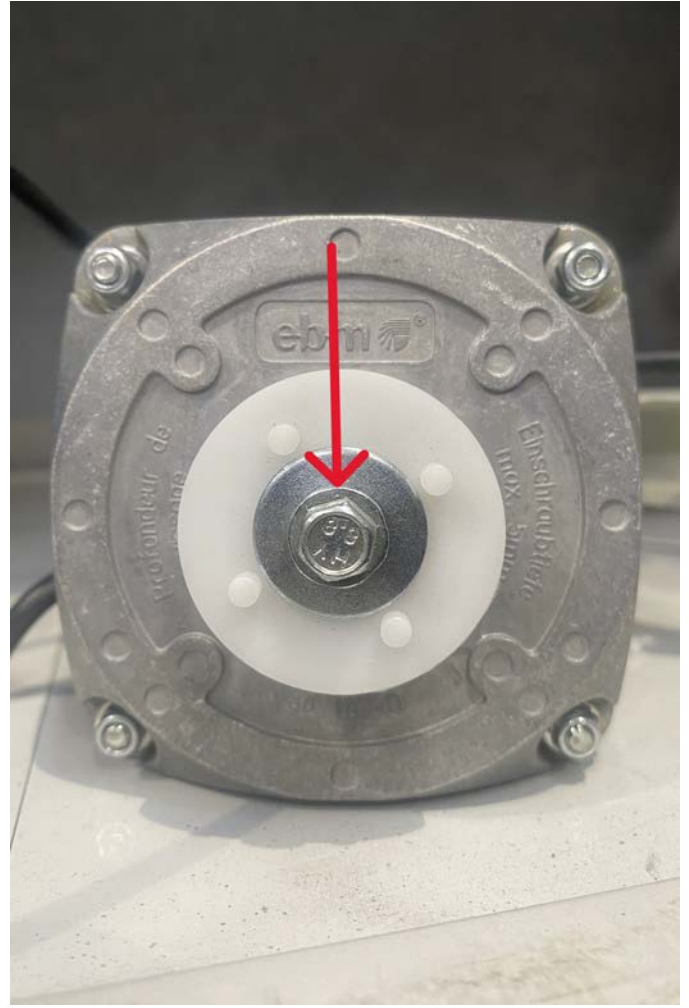
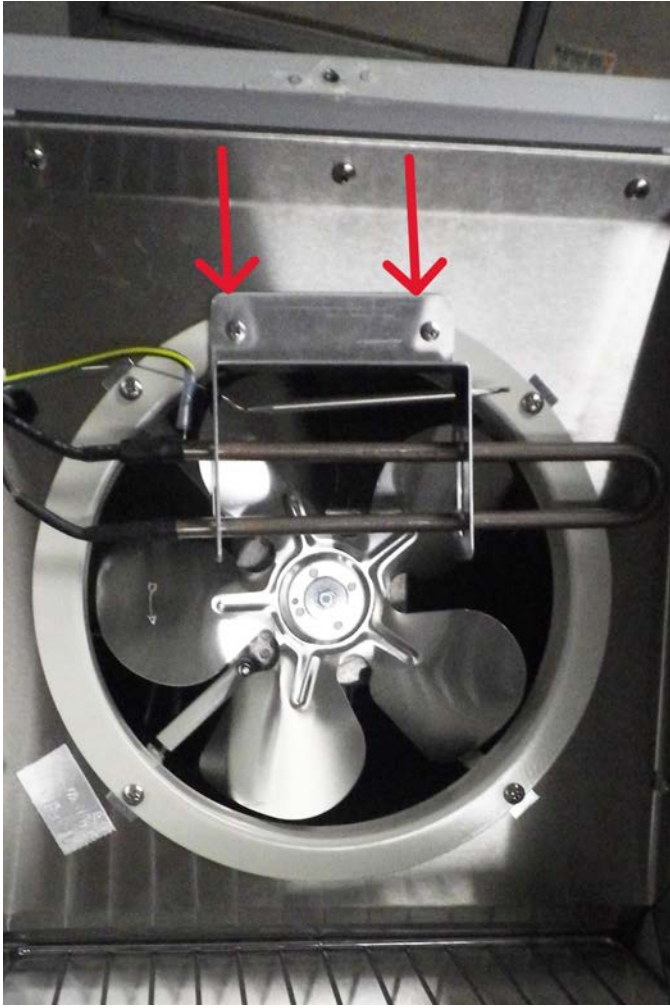
Note: Some fridges have the fan cover held on by a bolt. Undo this using a 7/8th Spanner.



After removing the fixings, you might need to use a large flathead screwdriver to gently pry the cover upwards and remove the lid from the fan enclosure.

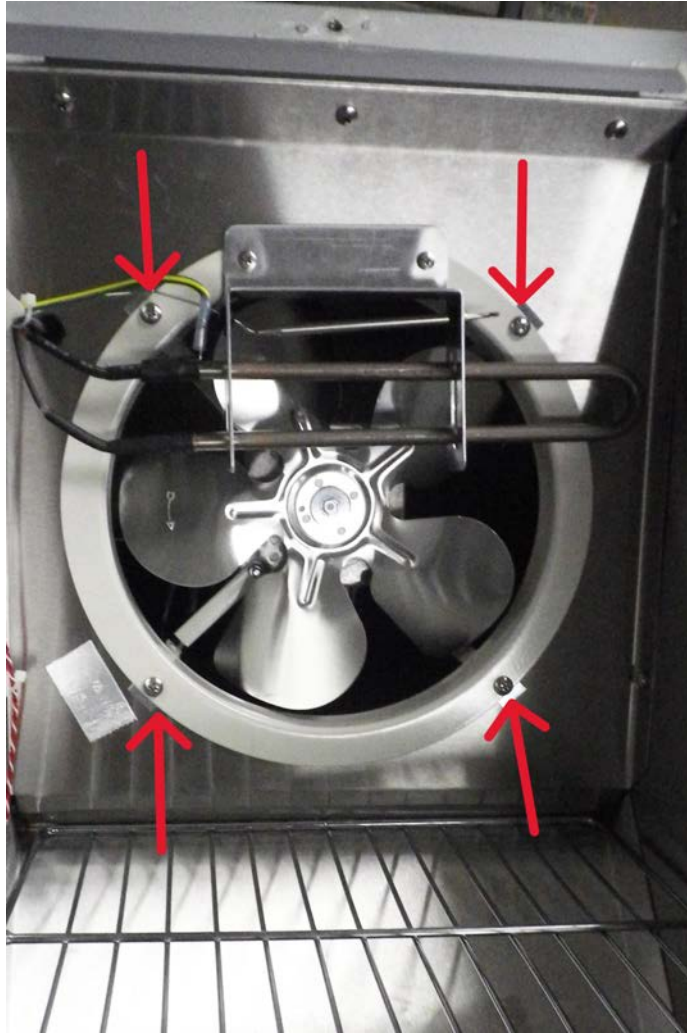


When you remove the cover, you will see the fan motor behind, with the heating element and temperature sensor attached to the front of it.

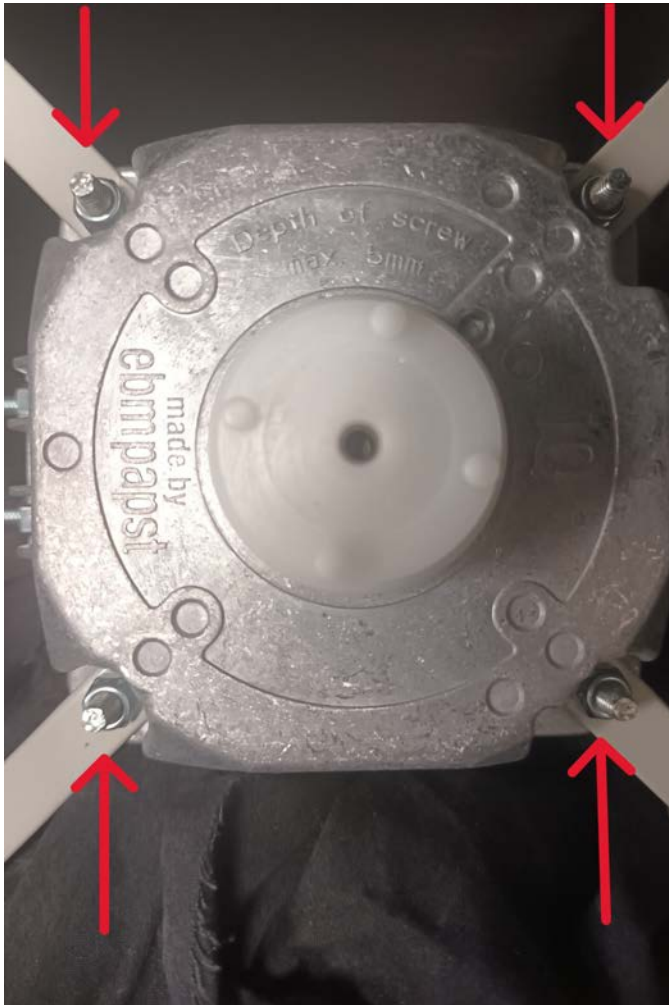


Use a Phillips-head screwdriver to remove the bracket holding the element and temperature sensor, and set it aside.

Undo the central nut on the motor to remove the fan blades.



Once the fan blades have been removed, use a Phillips head screwdriver to take out the 4 screws securing the fan motor bracket inside the enclosure.



Remove the fan bracket from the motor by unscrewing the 4 bolts at each corner. You may need a 6mm spanner to hold the nuts in place while using the screwdriver to remove the brackets.

Because the fan is hard wired in, you will need to cut the wires with sufficient length to allow connection with the new fan.

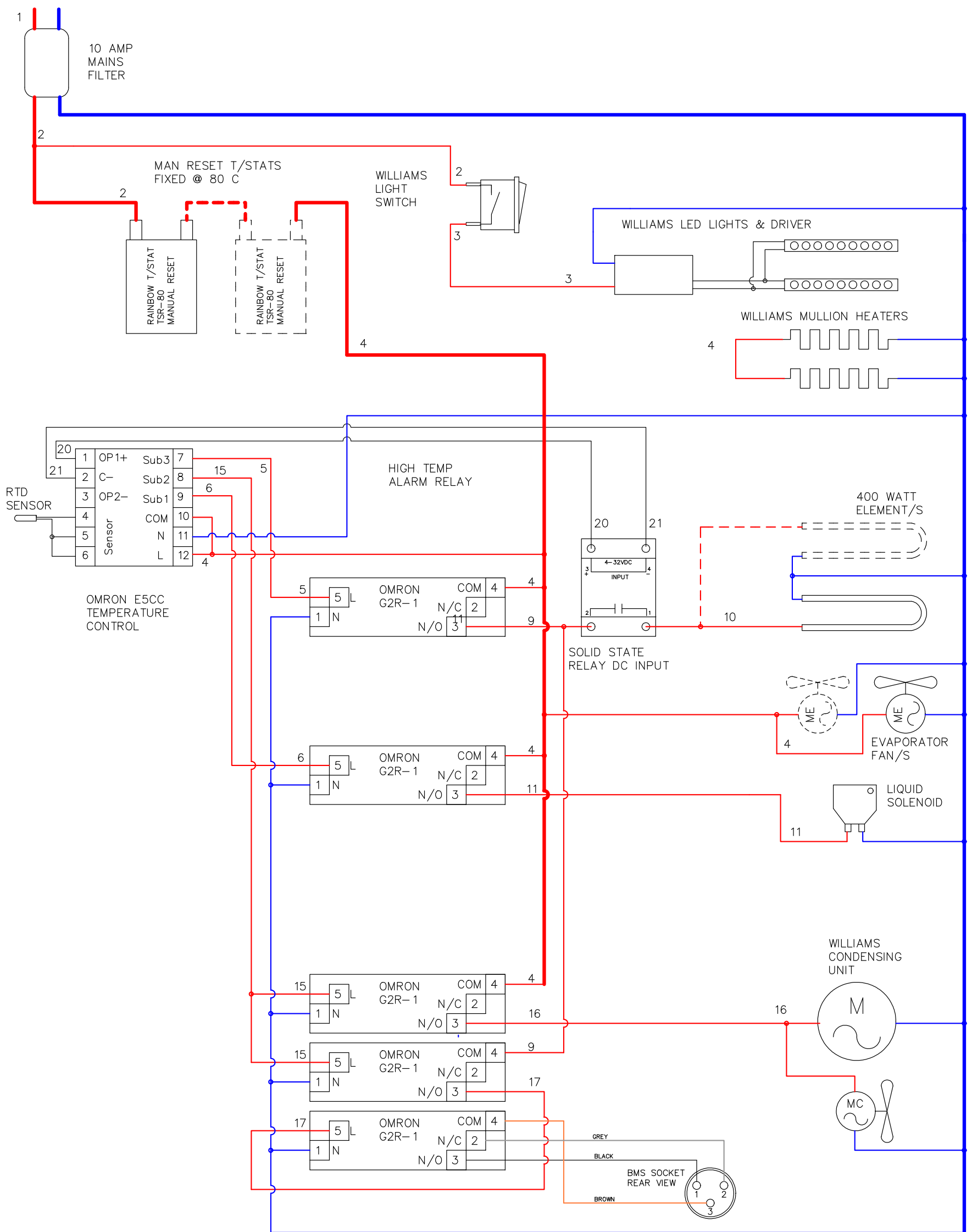
Section 3: Installation



To install the new fan, you will need to connect the new fan motor to the wires that were cut from the old motor. Please refer to the electrical diagram provided.

Please note:

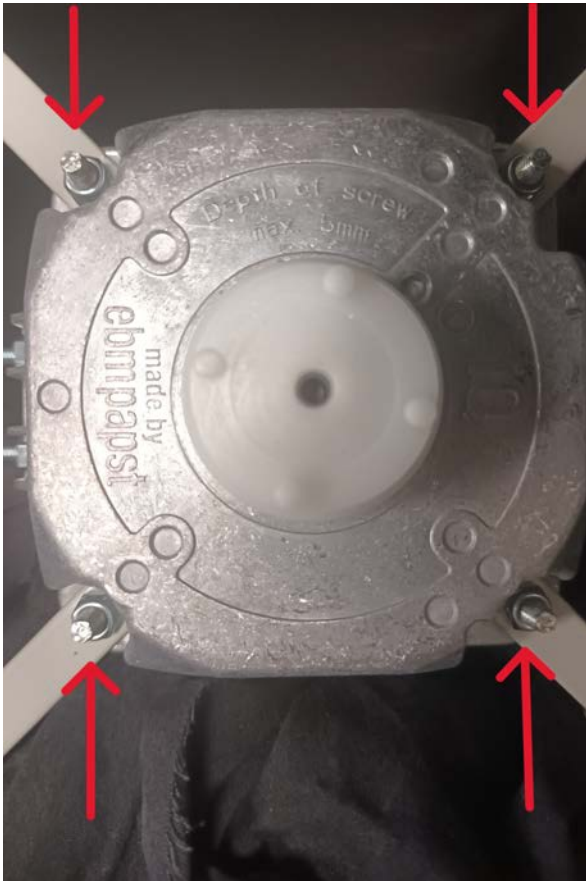
The electrical diagram shown is for the Thermoline incubator series. Please ignore all reference to the refrigeration circuit as this is only relevant to the Thermoline TRI models and not the Thermoline blanket warmer. The rest of the electrical diagram is relevant to the Thermoline blanket warmer including the no longer available 360 litre model.



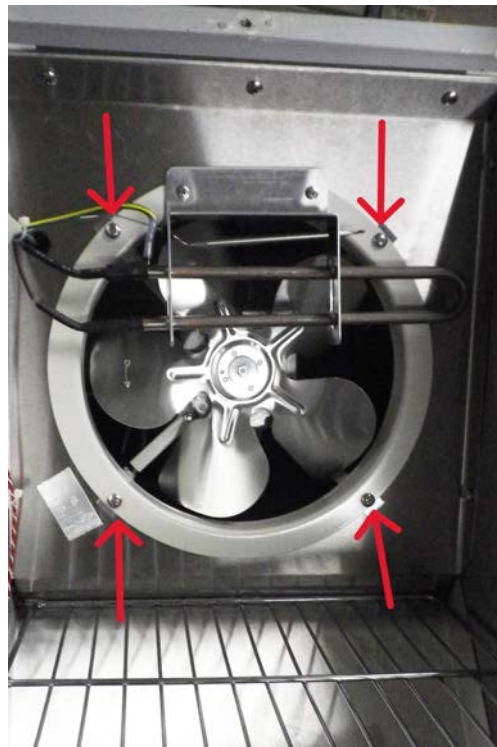
2-CORE FLEX FROM BOX TO FRONT CONTROL:
 20 = SSR +Ve
 21 = SSR -Ve

NOTE: COMPONENTS IN DOTTED LINES ARE TRI-1100 MODEL ONLY.
 7-CORE FLEX FROM BOX TO FRONT CONTROL:
 1 = NEUTRAL
 2 = 2 LIGHT SWITCH COMMON
 3 = 15 LOW ALARM RELAY
 4 = 4 ACTIVE
 5 = 5 HIGH ALARM RELAY
 6 = 6 SOLENOID RELAY
 E = EARTH

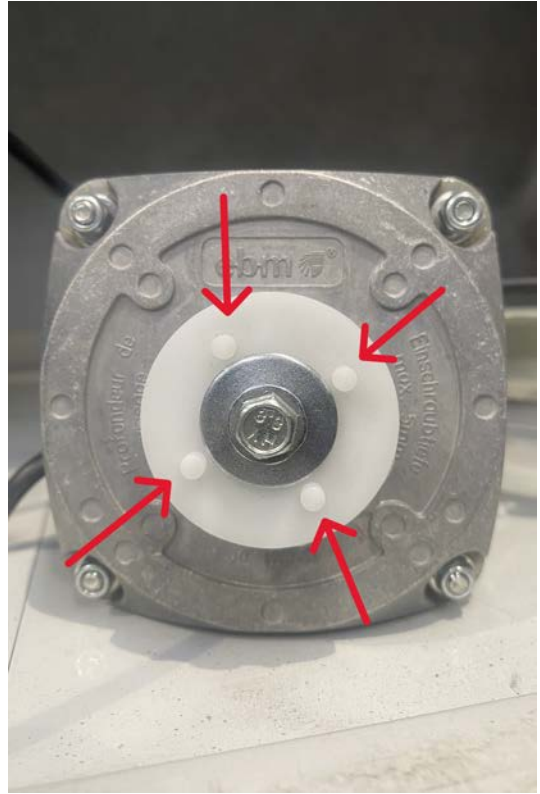
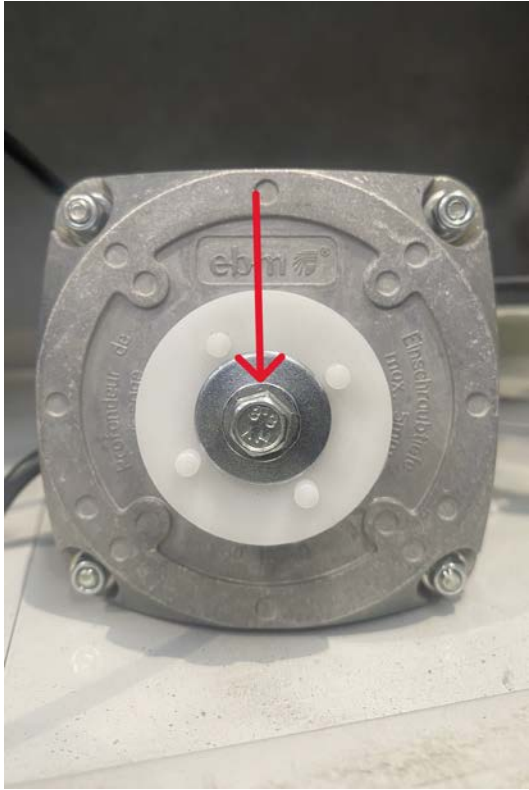
REFRIGERATED INCUBATORS	01-04-20: Changed to Omron G2R Relays.
MODELS: TRI-520 & TRI-1100	10-12-19: Changed BMS Socket
DRAWING NO: TRI 520 & 1100-ELEC	06-11-18: Disconnection of Mullion Heater.
DESCRIPTION: WIRING DIAGRAM FOR WILLIAMS REFRIGERATED INCUBATORS	6-10-17: Suppressors on relay coils, changes to wire numbers.
ISSUE DATE: 01-04-20	29-07-15: Removed Liquid Inject T/Stat, Sol and Hot Gas Sol.



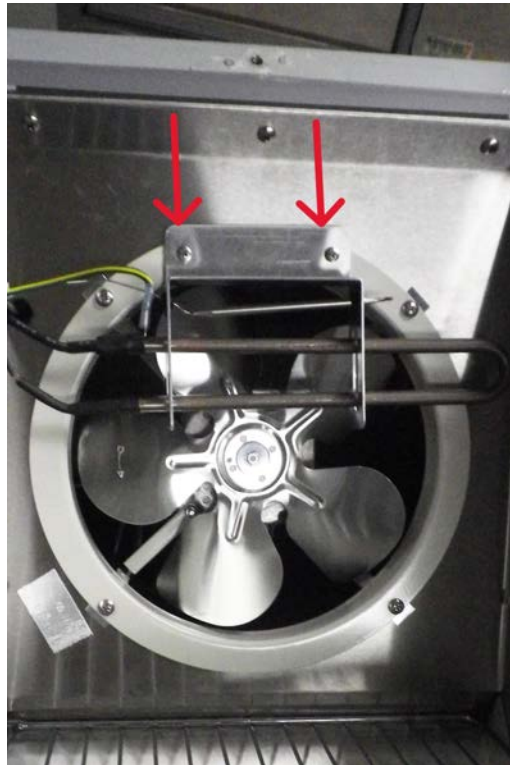
Once the fan motor is connected to the original wires, reattach it to the bracket using the four bolts in the corner of the motor. Then replace the motor into the shroud by installing the four fixing screws as shown below.



Please Note: Reattach the fan blades after fixing the motor into the shroud in the blanket warmer.



To reattach the fan blades, first remove the central screw cap in the middle of the motor. Then, place the fan blades over the four plastic locating pins on the central spindle. Once the fan blades are in place, screw the central screw cap back into place.



Once the fan motor and fan blade are in position, reattach the bracket containing the heating element and temperature sensor.



Place the fan enclosure lid back over the fan enclosure and secure it in place.



For 360L cabinets please attach the cover on top of the fridge and replace the screws.



You can reinstall the front panel. Place the panel slightly above it's final position matching the rectangular holes with the locating blocks.



Push the panel forward onto the blocks then slide it down to lock into place.

The panel should now be in place and even on all edges.



Section 4: Power ON

Plug the cabinet back in and turn on the power. Before using the fridge please make sure that the fridge is tested and does not need further calibration.

Section 5: Support and Contact

Repair and Support is available over the telephone Monday through Thursday from 8:30am to 4pm and Friday 8:30am to 2pm. Please contact service@thermoline.com.au for email technical support.

You can also visit our website at www.thermoline.com.au for access to additional useful troubleshooting guides, operating manuals, and technical information.

Thermoline Scientific Equipment
10-12 Ross Place
Wetherill Park NSW 2164
Ph: 02 9604 3911
Email: hello@thermoline.com.au
Web: www.thermoline.com.au

