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On-Site Repair Guide for Warmup USDW Model Heaters

Warranty Disclaimer: This guide and the repair kit included have been provided by Warmup Inc to aid in the repair of a Warmup USDW system damaged on-site. Warmup cannot warranty the repair or guarantee the proper function of the heating system following a repair. Warmup recommends that all repair work be carried out by a qualified electrician in accordance with the National Electrical Code. For further assistance, please contact Warmup on 888-927-6333.

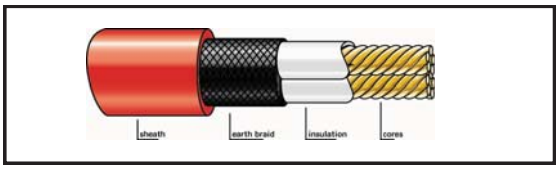
CAUTION: Before commencing with the repair, ensure that the heating system has been completely disconnected from the power source.

Tools & Items Required for Repair

1x Warmup Repair Kit
which consists of:
1 x Large piece of heat shrink
4 x small pieces of heat shrink
4 x butt Crimp connectors
1 x length of red bridge wire

Side Cutters
Wire Strippers
Heat Gun
Crimping Tool
Multi- meter

HEATING WIRE CONSTRUCTION



TESTING OF THE HEATER DURING & AFTER REPAIR

Do not tile if the heater does not pass all the above tests. There may be a problem with new joint or additional wire breaks. Actual value should be +/- 10%. Contact Warmup on 0845 345 2288 for further assistance.

Model	Wire Color	Resistance
USDW-360-120	Gray	40.2
USDW-480120	Red	30.2
USDW-720-120	Orange/Black	20.1
USDW-950-120	Gray/Black	15.2
USDWM-140-120	Blue	100.1
USDWM-210-120	Natural	67.7
USDWM-280-120	Gray	51.6
USDWM-350-120	Red	40.8
USDWM-420-120	Red	34.6
USDWM-840-120	Black/gray	17.1
USDW-330-240	Blue	176.0
USDW-420-240	Natural	136.0
USDW-650-240	Gray	88.0
USDW-900-240	Red	64.0
USDW-1342-240	Black/Yellow	42.9
USDW-1680-240	Black/Gray	34.3
USDW-1810-240	Black/Blue	31.8
USDWM-430-240	Natural	136.0
USDWM-570-240	Gray	102.0
USDWM-720-240	Red	80.0
USDWM-870-240	Red	66.7
USDWM-1400-240	Black/Yellow	41.1
USDWM-1810-240	Black/Blue	31.8

1

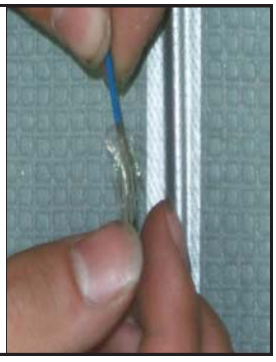
Use side cutters to remove any damaged heating wire.

2

Use the wire strippers or Stanley knife to carefully remove approximately 2” of the outer sheath to expose the earth braid on both ends of the wire cut.

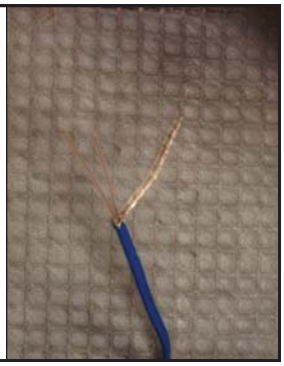
3

Unravel the earth braid on both ends of the wire.



4

Twist the earth braid.



5

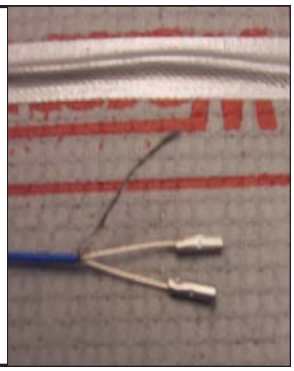
Slide one piece of the large black heat shrink over one end of the wire.

6

On both ends of the cut wire, use the wire strippers or Stanley knife to very carefully strip off approximately 0.27” of the insulation covering the both the heater cores.
It is critical not to damage the heating wire core.

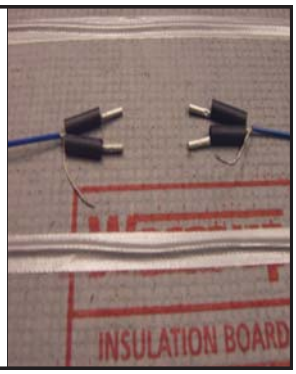
7

Attach a butt crimp to either end of the heater cores using a crimping tool.



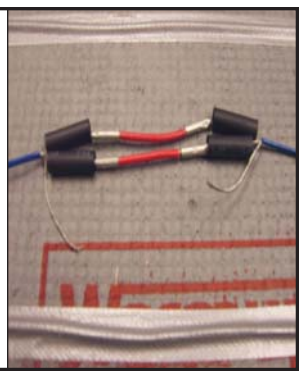
8

Slide one piece of the small heat shrink over each end of the heating elements up to the earth braid.



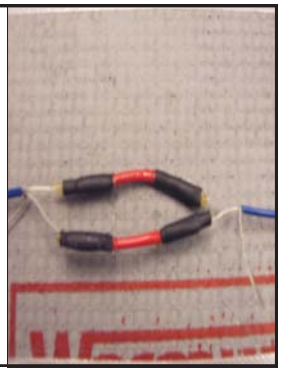
9

Cut a section of the “bridge” wire provided to a length suitable to replace the wire removed from the heating elements. Strip 0.4” from either end of this wire and fit these ends into the butt crimps located on the ends of the core wire and crimp using the crimping tool. Test the resistance of the heater



10

Slide the pieces of small heat shrink over the butt crimps so that any bare metal is covered. Shrink the heat shrink using a heat gun.

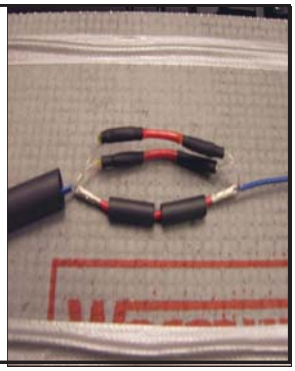


11

Attach a butt crimp to either end of the earth braid using a crimping tool.

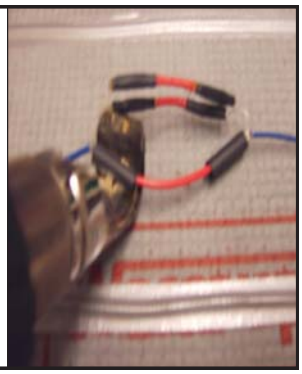
12

Slide one small piece of heat shrink over both sections of exposed earth braid. Cut a section of the “bridge” wire provided to a length suitable to replace the wire removed from the heating element. Strip approx 0.4” from either end of this wire into the butt crimps located on the ends of the earth braid and crimp using the crimping tool.



13

Slide the pieces of small heat shrink over the butt crimps so that the entire crimp is covered. Shrink the heat shrink using a heat gun.



14

Slide the large pieces of heat shrink over the small heat shrink and apply the heat gun.
Allow the new joints to cool, test resistance of the heater and then tile as normal.