

Therm-O-Flow[®] RTD Harness Repair Kit

3A3656B

EN

For replacing a platen or pump resistive thermostat detector (RTD) on 5 gallon (20 liter) and 55 gallon (200 liter) Therm-O-Flow models. For professional use only.

Kit Numbers:

24Z093

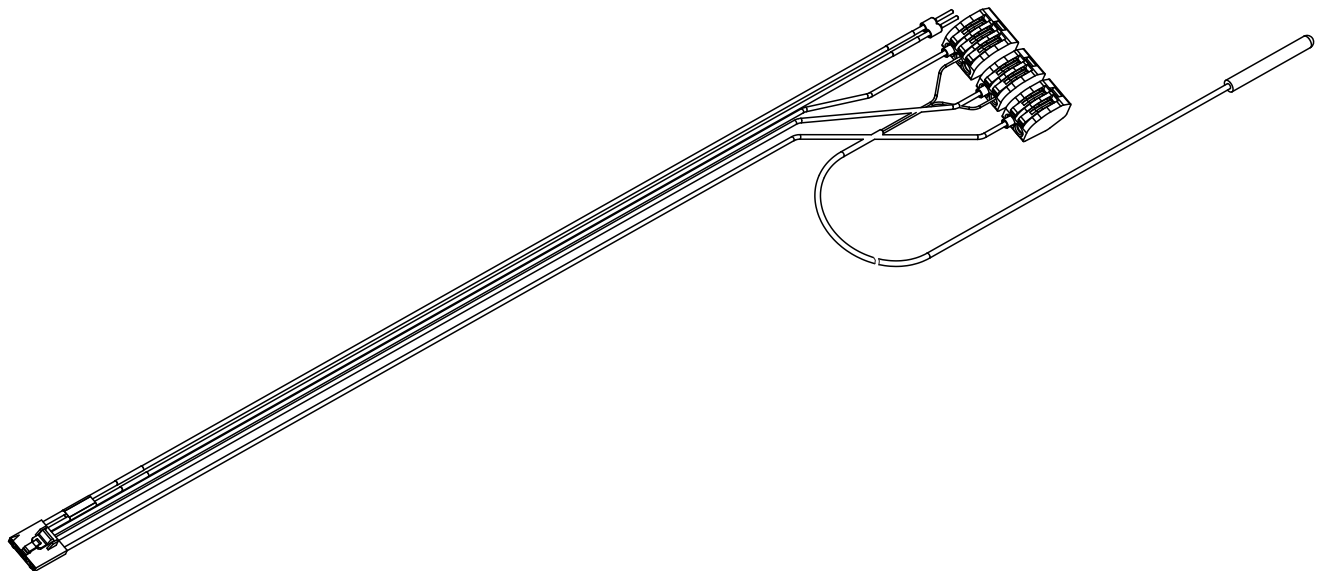
24Z094

24Z095



Important Safety Instructions

Read all warnings and instructions in the main system manual. Save all instructions.



Contents

Related Manuals 2
Kit Part Numbers 3
Overview 3
Component Identification 4
Installation 5
 Shutdown 5
 Remove the Existing RTD Harness 5
 Connect the New RTD Harness 6

Related Manuals

Manuals	
Part	Description
334129	Therm-O-Flow® 20 Instructions - Parts
334130	Therm-O-Flow® 200 Instructions - Parts

Kit Part Numbers

Part	Description	Used To
24Z093	KIT, repair to pump RTD	Replace the pump RTD on the Therm-O-Flow.
24Z094	KIT, repair to 20 platen RTD	Replace the platen RTD on the 20 liter (5 gallon) Therm-O-Flow.
24Z095	KIT, repair to 200 platen RTD	Replace the platen RTD on the 200 liter (55 gallon) Therm-O-Flow.

Overview

These kits are used for the pump and the platen RTD sensors on the Therm-O-Flow 20 and 200 models. The appropriate kit number referenced in **Kit Part Numbers** on this page should be ordered when a pump or platen RTD fails and needs to be replaced.

Each kit contains a new harness with lever locking connectors and a new RTD sensor. These instructions describe how to:

- Disconnect the original harness and RTD sensor.
- Connect the harness and replacement RTD sensor to the electronic enclosure and pump area of the Therm-O-Flow.
- Remove the other original RTD that is not being replaced from the existing harness and connect it to the new harness.

NOTE: The new harness is different from the harness that was included originally with the Therm-O-Flow machine because of the use of the lever locking connectors. Both RTDs need to be connected to the new harness using these lever locking connectors.

Component Identification

24Z093 Shown

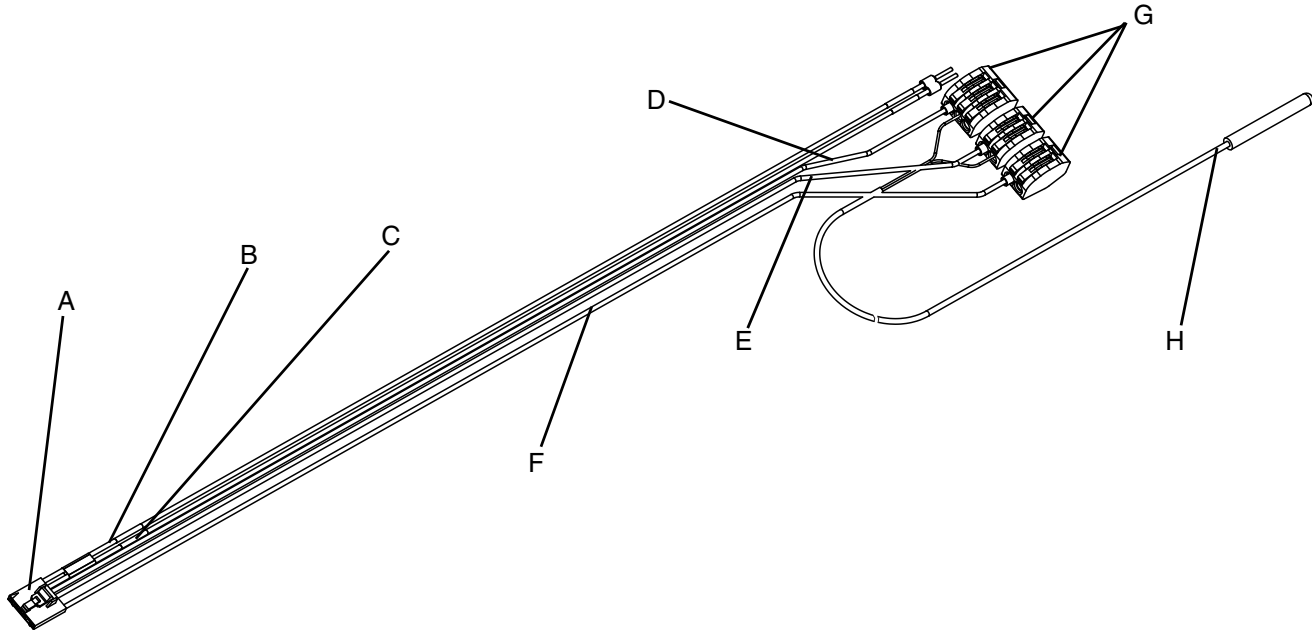


FIG. 1: RTD Harness Kit Component Identification

Key:

- A Harness Black Input Connector
- B Pin 1 Red Wire 2730
- C Pin 2 Blue Wire 2740
- D Pin 3 Brown Common 2760
- E Pin 4 Blue Pump 2770
- F Pin 6 Blue Platen 2790
- G Lever Locking Connectors
- H RTD Sensor

Installation

WARNING

SKIN INJECTION HAZARD

High pressure fluid from dispensing devices, hose leaks, or ruptured components will pierce skin. Follow the Pressure Relief Procedure in the main system manual.

PERSONAL PROTECTIVE EQUIPMENT

Wear appropriate equipment when in the work area to help prevent serious injury.

Shutdown

Perform the following steps to shut down the Therm-O-Flow machine before proceeding with installation of this repair kit.

1. Turn the power switch on the electronic enclosure to the off position.

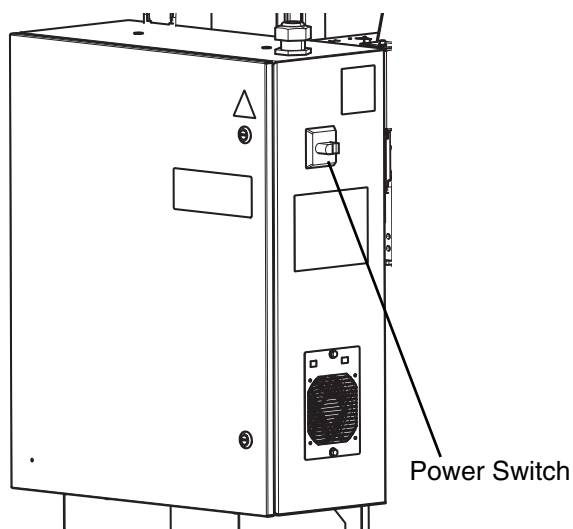


FIG. 2: Power Switch on Electronic Enclosure

2. Turn off the main electrical disconnect.
3. Perform the **Pressure Relief Procedure** to relieve pressure to the Therm-O-Flow machine. Refer to the system manuals for the appropriate Pressure Relief Procedure. See **Related Manuals** on page 2.

Remove the Existing RTD Harness

1. Open the door to the electronic enclosure.
2. Remove the black input connector from the J5 slot on the MZLP1 board. See Figure 3.

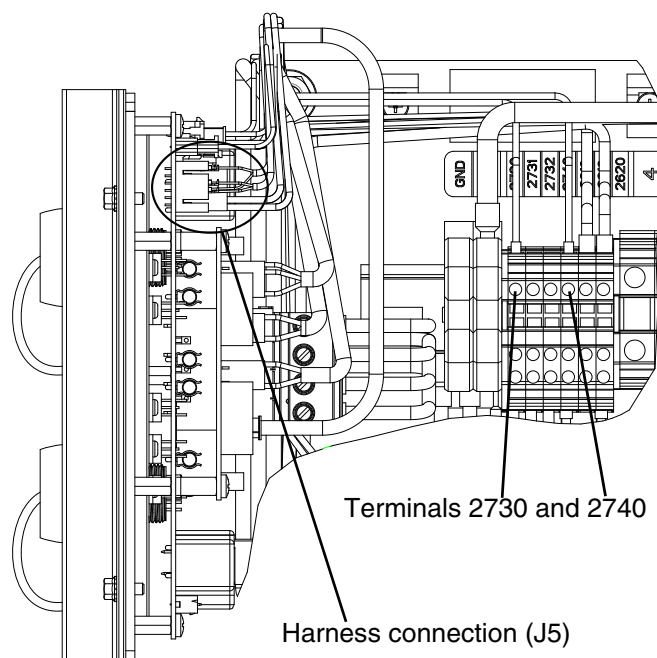


FIG. 3: Electronic Enclosure Connections

3. Loosen the screws at terminals 2730 and 2740 and remove the wires from the terminals.

4. The RTD that is not being replaced also needs to be connected to the new RTD harness. Refer to Figure 4 and cut the wires of this RTD at the original input connector.

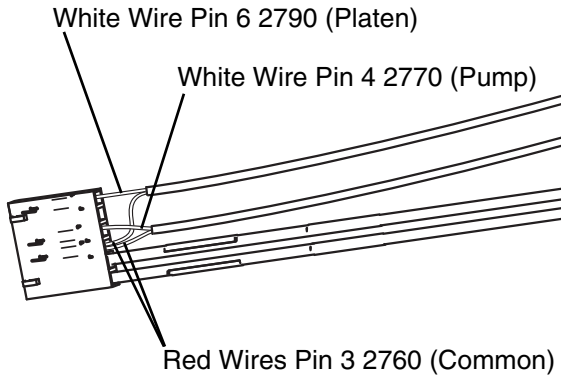


FIG. 4: Original Harness Wiring

5. Remove the front and right side pump cover to gain access to the RTD that is being replaced.

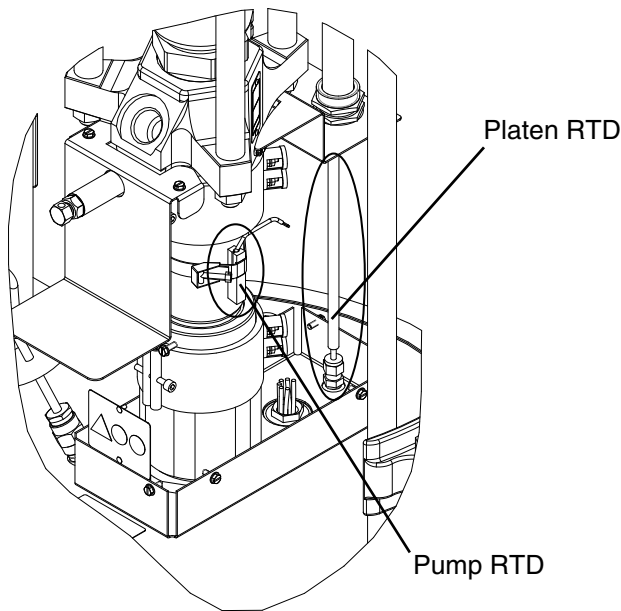


FIG. 5: Location of the RTDs

6. Remove the defective platen or pump RTD, depending on which one is being replaced. See Figure 6.
 - a. For the platen RTD, loosen the compression fitting. Then loosen the sensor's 1/4 in. npt fitting and remove the RTD from the platen.

- b. For the pump RTD, loosen the screw on the worm gear clamp until you are able to remove the RTD from the sensor block.

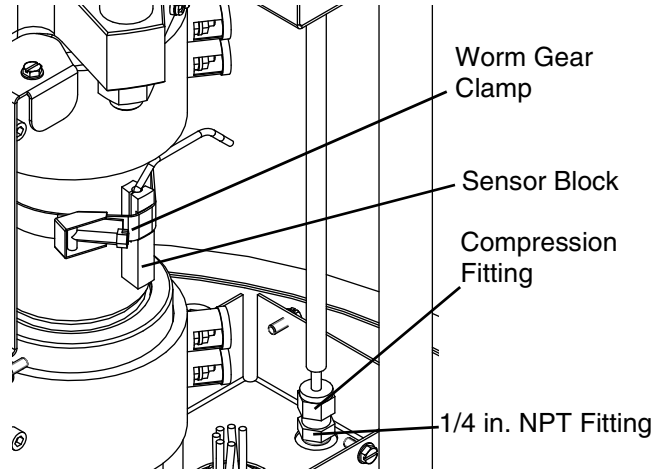


FIG. 6: Disconnecting the RTDs

Connect the New RTD Harness

1. After you have removed the RTD that is being replaced from the platen or pump, cut the wire and tape the original RTD lead wires to the leads of the new RTD.
2. In the electronic enclosure, gently pull the wire from the RTD that is being replaced through the conduit until the wire from the new RTD has been pulled into the enclosure.

NOTE: Use caution when pulling the RTD wires through the conduit to avoid catching the wires on any equipment.

3. Install the new RTD.
 - a. For the platen RTD, install the new sensor into the platen where the other one was removed. Tighten the sensor's 1/4 in. npt fitting and then tighten the compression fitting to secure the RTD.
 - b. For the pump RTD, insert the sensor into the block approximately 30 degrees counter clock-wise from the pump outlet. Tighten the clamp until it is secure.

3. Connect the black input connector of the new harness to the J5 slot on the MZLP1 board.
4. Connect the red wire from Pin 1 on the harness to terminal 2730 and connect the blue wire from Pin 2 on the harness to terminal 2740 on the terminal block. See Figure 3.

The new harness has three lever locking connectors labeled Common, Pump, and Platen. The corresponding wires running from the black input connector are already attached to the lever locking connectors.

To connect the RTD wires, lift the orange handles as shown in Figure 7. Insert a lead into the connector and push the handle down to lock it.

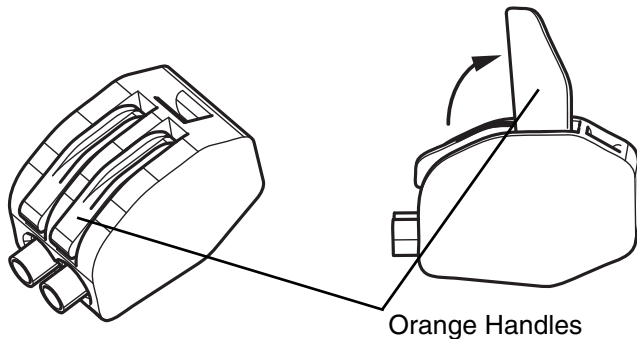


FIG. 7: Lever Locking Connectors

NOTE: You need to connect the wires from both the platen and the pump RTDs to the lever locking connectors.

5. On the RTD that was cut from the original harness, strip back the leads approximately 3/8 in. (10 mm).

6. Connect the leads from both RTDs as shown in Figure 8.

NOTE: Make sure that you are matching the pump and platen RTDs to the correct connectors.

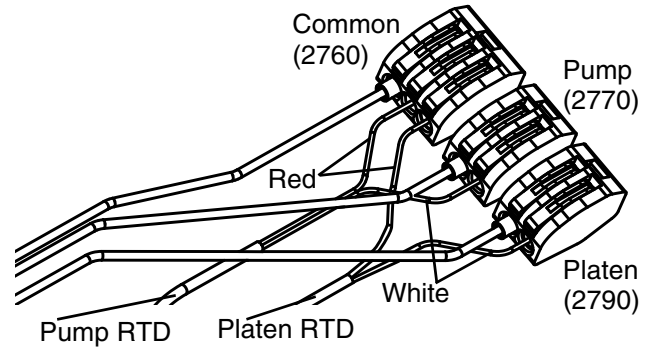


FIG. 8: Connecting the Harness Wires

7. Ensure that all connections are secure.
8. Reattach the pump covers.
9. Supply power to the machine and turn the power switch at the electronic enclosure to on.

Graco Information

For the latest information about Graco products, visit www.graco.com.

For patent information, see www.graco.com/patents.

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.

Phone: 612-623-6921 or Toll Free: 1-800-746-1334 Fax: 330-966-3006

*All written and visual data contained in this document reflects the latest product information available at the time of publication.
Graco reserves the right to make changes at any time without notice.*

Original instructions. This manual contains English. MM 3A3656

Graco Headquarters: Minneapolis

International Offices: Belgium, China, Japan, Korea

GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA
Copyright 2016, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.

www.graco.com

Revision B, April 2019