Instruction Sheet
P/N 1615400–01

Rhino® Heated Crossover Manifolds

Description

See Figure 1. A Rhino heated crossover manifold is used in heated bulk unloader systems. Two versions are available:

- Single crossover manifold:
  One inlet for use in single systems
- Dual crossover manifold:
  Two inlets for use in dual systems

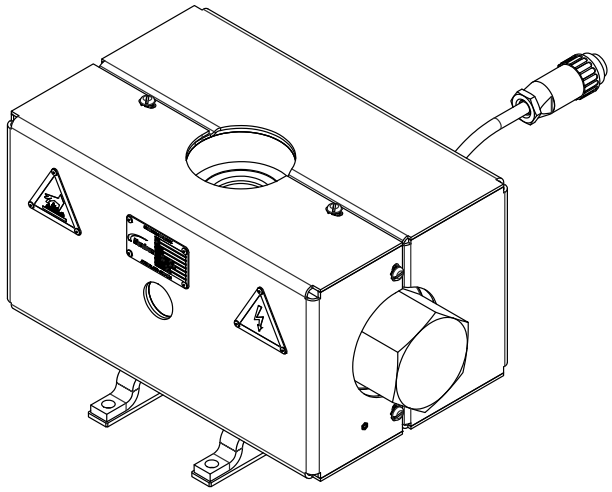

Figure 1 Heated Crossover Manifold

Specifications

Maximum material pressure	5000 psi (345 bar)
Heater Cartridges	240 V, 175 W

Safety Labels

Table 1 lists the safety labels on this equipment. The safety labels are provided to help you operate and maintain this equipment safely. See Figure 2 for the location of the safety labels.

Table 1 Safety Labels

Item	Description
1	 **WARNING:** Hot surface hazard
2	 **WARNING:** Electrical hazard

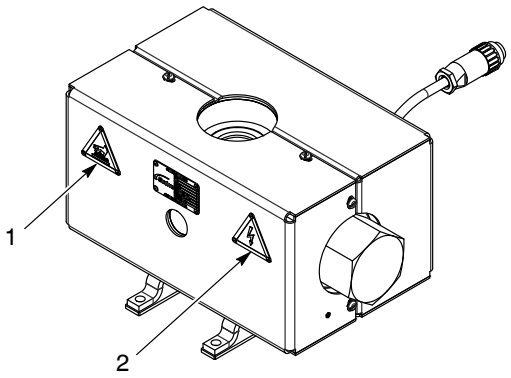

Figure 2 Safety Labels

Installation

Refer to the applicable system documentation that shipped with the system for specific installation data.

Operation

Operation is dependent upon the system application requirements and the material delivery system. Refer to the applicable system documentation that shipped with the system for detailed operating procedures.

Repair

WARNING: Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

WARNING: Shut off the ball valves to the pump and relieve material and air pressure before performing any repairs.

Refer to Table 2 for items required to perform the following procedures.

Table 2 Required Items

Item	Use
Heatsink compound	Apply to heater cartridges, RTD, and thermostat.
Applicable ferrules	Crimp onto heater cartridges and RTD wires.

Manifold Enclosure

When making repairs, use the following procedure to remove and reinstall the manifold enclosure.

1. See Figure 3. If installed, disconnect the material hose from the manifold.
2. Disconnect the cordset (4) from the power source.
3. Remove the screws (3) and lock washers (2) securing the manifold enclosure (1). Make the necessary repairs.
4. After repairs are made, install the manifold enclosure (1) using the lock washers (2) and screws (3). Tighten the screws securely.
5. Connect the cordset (4) to the power source.
6. If removed, connect the material hose to the manifold.

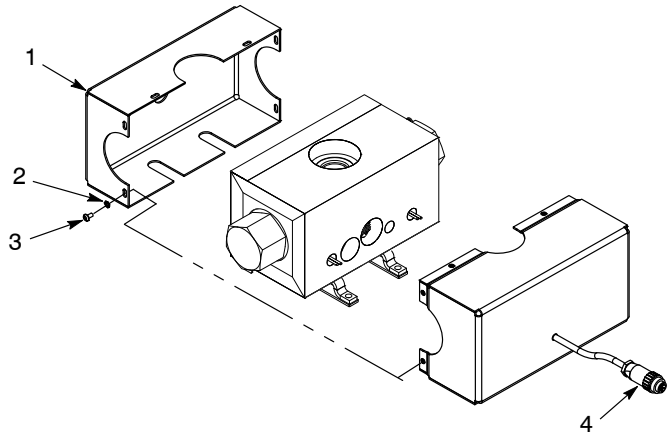

Figure 3 Manifold Enclosure

Heater Cartridge

1. Refer to the *Manifold Enclosure* procedure to remove the manifold enclosure.
2. See Figure 4. Disconnect the heater cartridge (2) wires from the wire connectors (3). Remove the heater cartridge from the manifold (1).
3. Crimp ferrules onto the new heater cartridge (2) wires. Coat the new heater cartridge with heat sink compound and insert it into the manifold (1). Make sure that the heater cartridge bottoms out in the manifold.
4. Connect the heater cartridge (2) to the wire connectors (3) as shown on the wiring diagram.
5. Refer to the *Manifold Enclosure* procedure to install the manifold enclosure.

RTD

1. Refer to the *Manifold Enclosure* procedure to remove the manifold enclosure.
2. See Figure 4. Disconnect the RTD (4) wires from the wire connector (3). Remove the RTD from the manifold (1).
3. Coat the new RTD (4) with heat sink compound and insert it into the manifold (1). Make sure that the RTD bottoms out in the manifold.
4. Crimp ferrules onto the RTD (4) wires. Connect the RTD to the wire connector (3) as shown on the wiring diagram.
5. Refer to the *Manifold Enclosure* procedure to install the manifold enclosure.

Thermostat

1. Refer to the *Manifold Enclosure* procedure to remove the manifold enclosure.
2. See Figure 4. Remove the screws (6) and lock washers (7) securing the thermostat (8) to the manifold (1). Disconnect the wires (5).
3. Apply heat sink compound onto the new thermostat (8) as shown. Connect the wires (5) to the thermostat.
4. Install the thermostat (8) into the manifold and secure using the lock washers (7) and screws (6). Tighten the screws securely.
5. Refer to the *Manifold Enclosure* procedure to install the manifold enclosure.

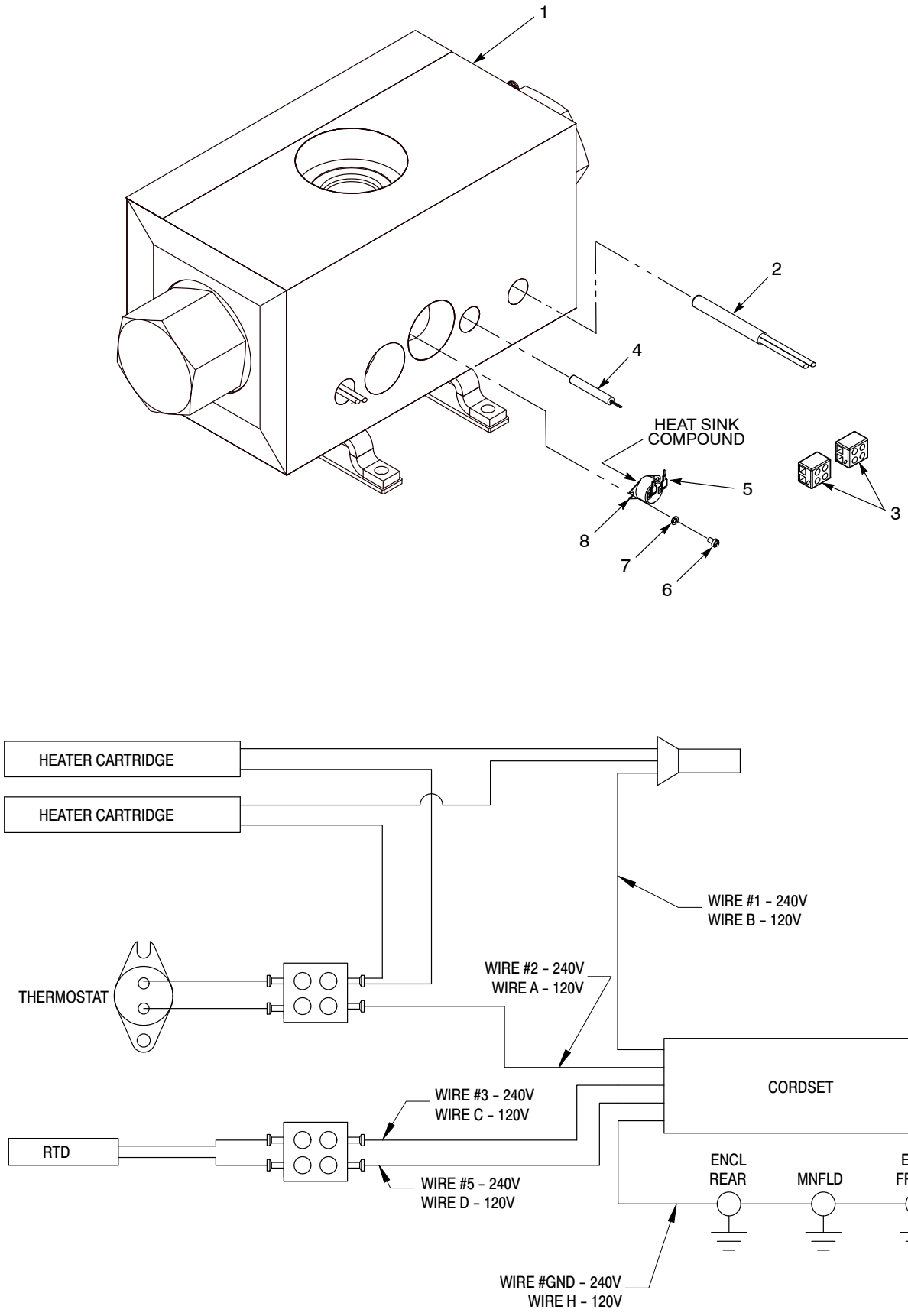

Figure 4 Replacing Parts

Parts

See Figure 5 and the following parts list.

To order parts, call the Nordson Industrial Coating Systems Customer Support Center at (800) 433-9319 or contact your local Nordson representative.

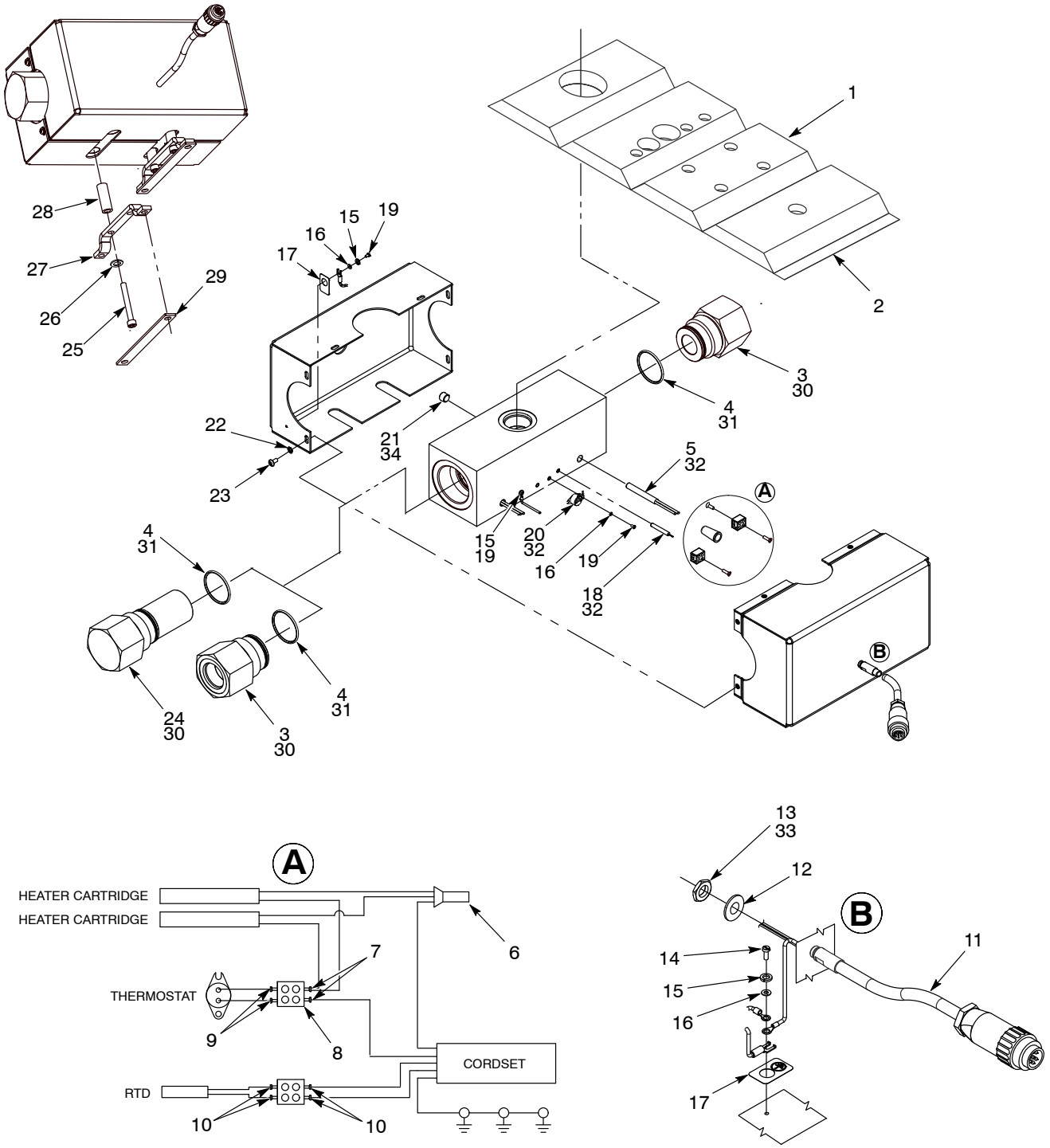

Figure 5 Heated Crossover Manifold Parts

Item	Part	Part	Description	Quantity	Note
—	1615394	—	MANIFOLD assembly, single crossover, 240 V, low wattage	1	
	—	1614602	MANIFOLD assembly, dual crossover, 240 V, low wattage	1	
1	– – – – –	– – – – –	• INSULATION, manifold, crossover, heated	1	
2	– – – – –	– – – – –	• INSULATION, tape, fiberglass, 1.375 in. wide	AR	
3	1081679	1081679	• SEAT, ball, dual check valve	1/2	A
4	1059783	1059783	• O-RING, –136, Viton, 1.987, 0.103 wide, 90 Duro	2	
5	– – – – –	– – – – –	• HEATER cartridge, 0.38 D X 3.25 LG, 240 V, 175 watts	2	
6	– – – – –	– – – – –	• CONNECTOR, crimp wire, 22–14 AWG	1	
7	– – – – –	– – – – –	• FERRULE, wire, non-insulated, 17 AWG	2	
8	– – – – –	– – – – –	• CONNECTOR, plastic, 2-station	2	
9	– – – – –	– – – – –	• FERRULE, wire, non-insulated, 18 AWG	2	
10	– – – – –	– – – – –	• FERRULE, wire, non-insulated, 20 AWG	4	
11	1060683	1060683	• CORDSET, automatic, SDS 240 V	1	
12	– – – – –	– – – – –	• WASHER, lock, external tooth, ⅜, steel, zinc, DIN 127	1	
13	– – – – –	– – – – –	• NUT, panel mounting	1	
14	– – – – –	– – – – –	• SCREW. cheese head, slotted, M3 x 8, zinc ISO 1207	1	
15	– – – – –	– – – – –	• WASHER, lock, M3, steel, zinc, DIN127	5	
16	– – – – –	– – – – –	• WASHER, flat, M3, steel, zinc, ISO 7089	2	
17	– – – – –	– – – – –	• TAG, ground	2	
18	186199	186199	• RTD SENSOR, nickel, temperature, 13332	1	
19	– – – – –	– – – – –	• SCREW. cheese head, slotted, M3 x 5, zinc, ISO 1207	4	
20	937290	937290	• THERMOSTAT, open on rise, 200 °F	1	
21	– – – – –	– – – – –	• PLUG, pipe, socket, flush, R ¼	1	
22	– – – – –	– – – – –	• WASHER, lock, M5, steel zinc, DIN 127	6	
23	– – – – –	– – – – –	• SCREW, pan head, M5 x 10 zinc, ISO 7045	6	
24	– – – – –	– – – – –	• PLUG, manifold, crossover, heated	1	B
25	– – – – –	– – – – –	• SCREW, socket, M8 x 65, black, ISO 4762	4	
26	– – – – –	– – – – –	• WASHER, lock, M8, steel zinc, DIN 127	4	
27	114902	114902	• MOUNT manifold, changeover	2	
28	803541	803541	• SPACER, manifold mount	4	
29	– – – – –	– – – – –	• PLATE, insulator, crossover manifold	2	C
30	900334	900334	• LUBRICANT, Never-Seez	AR	
31	1612251	1612251	• LUBRICANT, O-ring, Parker	AR	
32	900298	900298	• COMPOUND, heat sink, 11281	AR	
33	900200	900200	• ADHESIVE, Loctite® 242, blue, removable	AR	
34	900236	900236	• SEALANT, paste, NSF-H1, food grade	AR	

NOTE A: Check valve manifold 1615394 only uses one.

B: Only used on single crossover manifold 1615394.

C: This part is shipped loose.

AR: As Required

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