

Instructions - Parts



# Electric Heated Hose Power Supply Kit 256876

313258C

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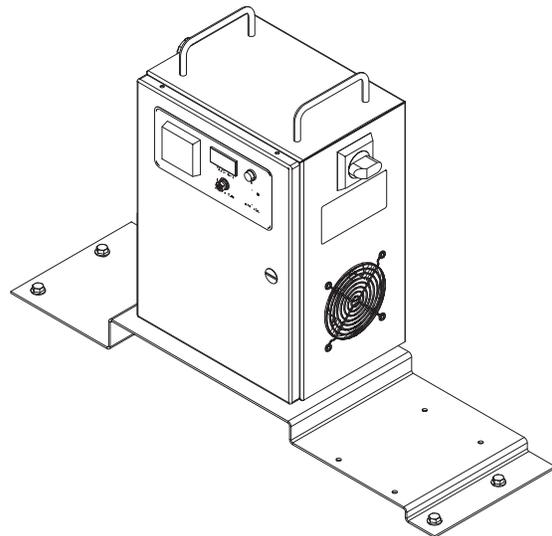
***Monitor and control fluid temperature in a low voltage heated hose for XM plural-component sprayers feeding a remote XM mix manifold.  
Not for use in explosive atmospheres.***



**Important Safety Instructions**

Read all warnings and instructions in this manual.  
Save these instructions.

See page 2 for a list of components included in the kit and maximum working pressures.



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# Related Manuals

Manual No.	Description
312359	XM Operation
313289	XM Repair - Parts
313292	XM OEM, Instructions
312749	XM Mix Manifold Kits
3A2980	24P616 Hose Heat Control Kit
309572	Power-Lock™ Heated Hose

# Components

The electric heated hose power supply kit 256876 comes with the following components.

## Hose Heat Control (24P616)

Input Power Requirements: 230 Vac, 1 phase, 50/60 Hz, 15A  
 Output Power: 20-62 Vac, 45 A

## Fluid Temperature Sensor (FTS) Kit (24M943)

Maximum Fluid Working Pressure: 5000 psi (34.5 MPa, 345 bar); 1/2 in. npt(f). See heated hose manual 309572.

## Optional Heated Hose (Order Separately)

Maximum Fluid Working Pressure: 5000 psi (34.5 MPa, 345 bar)  
 Maximum Air Working Pressure: 130 psi (0.9 MPa, 9 bar)  
 Maximum Hose Operating Temperature: 180°F (82°C)  
 Length: 50 ft (15.2 m) sections; maximum length 200 ft (61 m)

**Table 1: Optional Heated Hose**

Part No.	Hose ID x Hose ID	Red	Blue
		inlet (f) outlet (m)	inlet (f) outlet (m)
248907	1/4 x 3/8	-5 JIC	-6 JIC

**Table 1: Optional Heated Hose**

Part No.	Hose ID x Hose ID	Red	Blue
		inlet (f) outlet (m)	inlet (f) outlet (m)
248908	3/8 x 3/8	-5 JIC	-6 JIC
262727	1/2 x 1/4	-8 JIC	-6 JIC
262728	1/2 x 3/8	-8 JIC	-6 JIC
262730	1/2 x 1/2	-8 JIC	-10 JIC

## Hose Selection for Feeding a Remote Mix Manifold

Hoses should be sized to match the hose volume ratio to the mix ratio. The hose size should also allow for minimum pressure drop on the major volume side to meet your flow requirements. See manual 312749 for more information.

**Table 2: Volume Ratio of “A” to “B” Hose**

Mix Ratio	Hose Selection “A” x “B”	Volume Ratio
1:1	1/2 x 1/2	1.0:1
	3/8 x 3/8	
2:1	1/2 x 3/8	1.78:1
	3/8 x 1/4	2.25:1
3:1	3/8 x 1/4	2.25:1
4:1 to 6:1	1/2 x 1/4	4.0:1
6:1 to 10:1	1/2 x 3/16	7:1

# Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

 <b>WARNING</b>	
	<p><b>FIRE AND EXPLOSION HAZARD</b></p> <p>Flammable fumes, such as solvent and paint fumes, in <b>work area</b> can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> <li>• Use equipment only in well ventilated area.</li> <li>• Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).</li> <li>• Keep work area free of debris, including solvent, rags and gasoline.</li> <li>• Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.</li> <li>• Ground all equipment in the work area. See <b>Grounding</b> instructions.</li> <li>• Use only grounded hoses.</li> <li>• Hold gun firmly to side of grounded pail when triggering into pail.</li> <li>• If there is static sparking or you feel a shock, <b>stop operation immediately</b>. Do not use equipment until you identify and correct the problem.</li> <li>• Keep a working fire extinguisher in the work area.</li> </ul>
	<p><b>EQUIPMENT MISUSE HAZARD</b></p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> <li>• Do not operate the unit when fatigued or under the influence of drugs or alcohol.</li> <li>• Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See <b>Technical Data</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. See <b>Technical Data</b> in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS forms from distributor or retailer.</li> <li>• Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.</li> <li>• Do not alter or modify equipment.</li> <li>• Use equipment only for its intended purpose. Call your distributor for information.</li> <li>• Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>• Do not kink or over bend hoses or use hoses to pull equipment.</li> <li>• Keep children and animals away from work area.</li> <li>• Comply with all applicable safety regulations.</li> </ul>
	<p><b>ELECTRIC SHOCK HAZARD</b></p> <p>Improper grounding, setup, or usage of the system can cause electric shock.</p> <ul style="list-style-type: none"> <li>• Turn off and disconnect power at main switch before disconnecting any cables and before servicing equipment.</li> <li>• Connect only to grounded power source.</li> <li>• All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.</li> </ul>

# WARNING



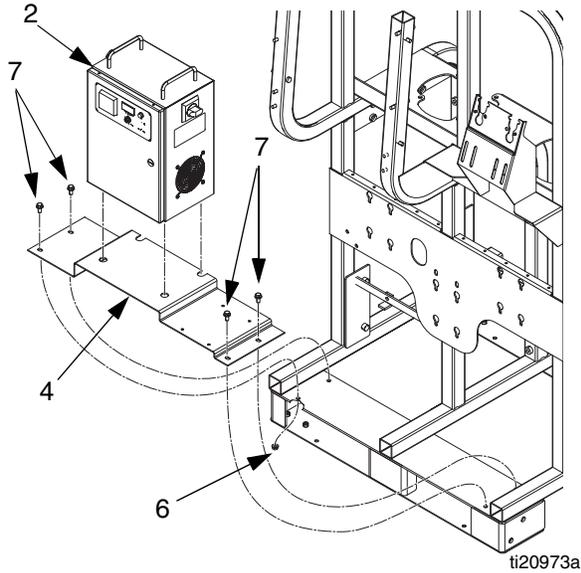
## SKIN INJECTION HAZARD

High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.**

- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Do not spray without tip guard and trigger guard installed.
- Engage trigger lock when not spraying.
- Follow **Pressure Relief Procedure** in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.

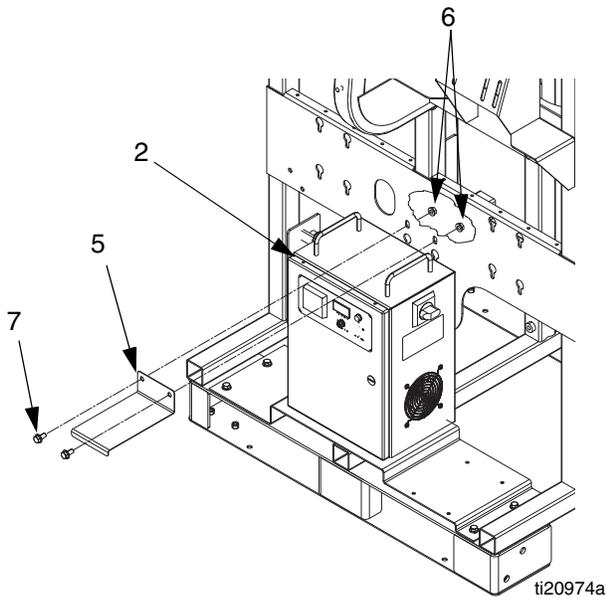
# Installation

1. Insert rubber feet of control box through holes in plate (4). Mount control box (2) on the XM frame using plate (4), bolts (7), and nuts (6).



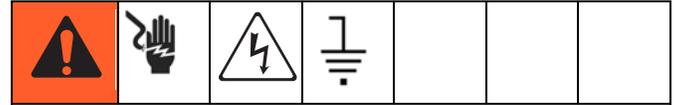
**FIG. 1: Mount Control Box**

2. Place bracket (5) on top of the control box (2) and mount to the XM frame using screws (7) and nuts (6).



**FIG. 2: Mount Plate**

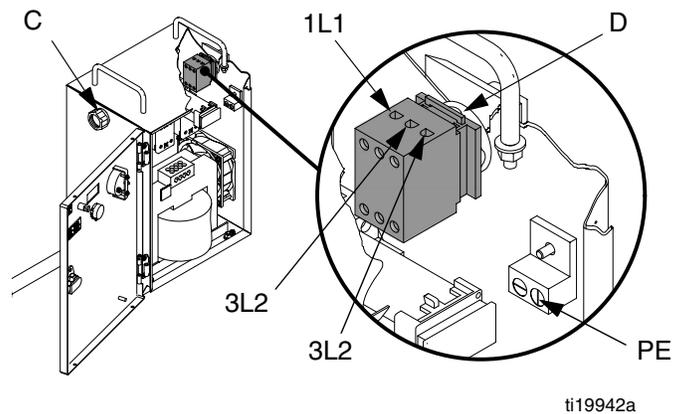
# Setup



Installing this equipment requires access to parts that may cause electric shock or other serious injury if work is not performed properly. Have a qualified electrician connect power and ground to power switch terminals; see manual 3A2980 and FIG. 4 on page 6. Be sure your installation complies with all national, state, and local safety and fire codes.

## Connect Power Cable Wires

1. Turn off power to junction box (J).
2. Replace the supplied liquid-tight conduit connector (C) with cord restraint fitting (8). Thread the three wires of the power cord to the opposite side of the cabinet for connection to the power inlet at the main disconnect (D). See FIG. 3.
3. Secure the service wires to 1L1 and 3L2 using a #2 Phillips or Pozidriv M3,5 Form 2 screwdriver. Tighten to 7 in-lb (0.8 N•m).
4. Connect the external ground bond wire (Green or Green/Yellow) to the protective earth lug (PE). Secure with a 3/8 or 7/16 flat-bladed screwdriver. Tighten to 35 in-lb (4 N•m).

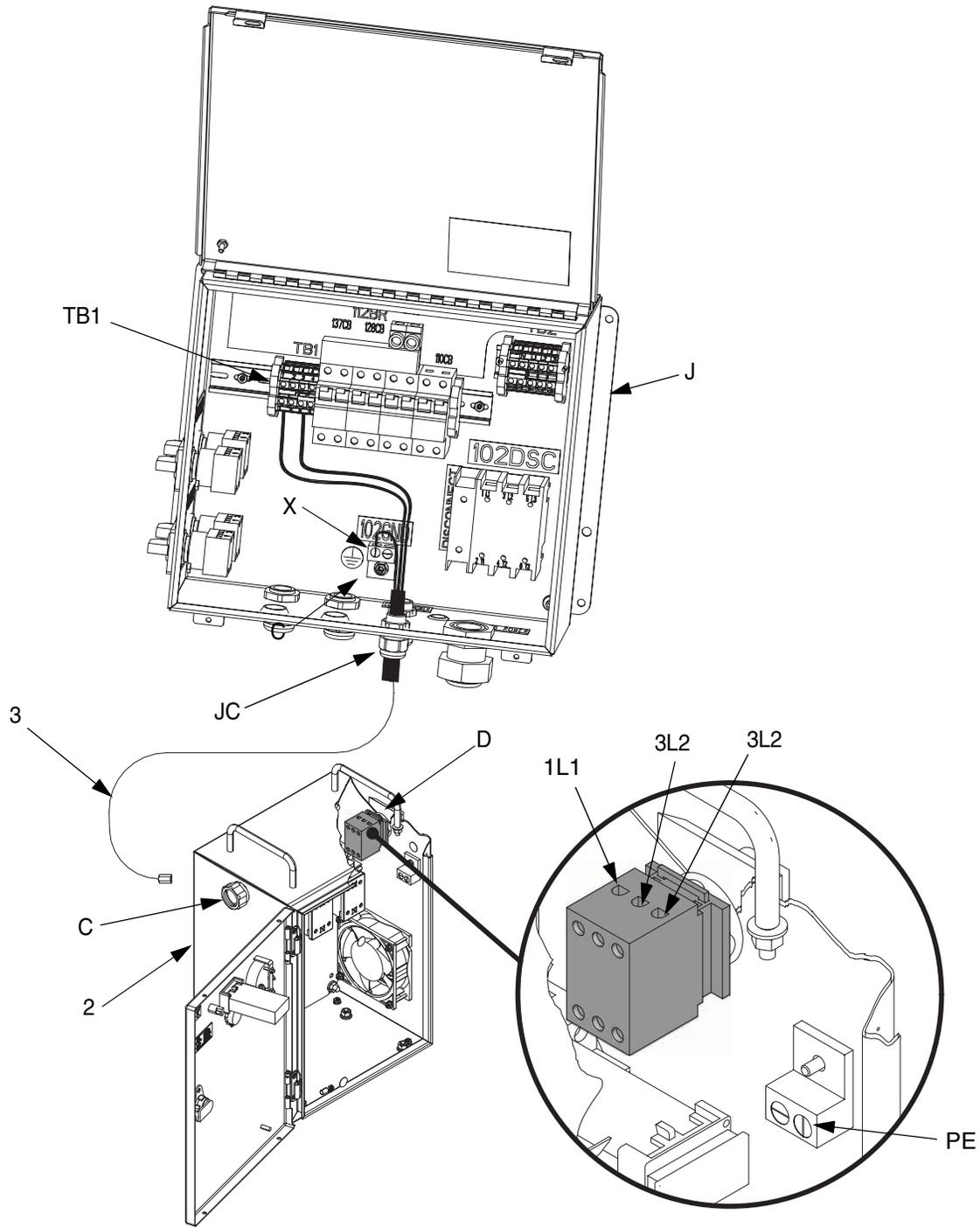


**FIG. 3: Main Disconnect Electrical Connections**

**NOTICE**  
Route power cable (3) to avoid interference with moving parts. See FIG. 4.

Setup

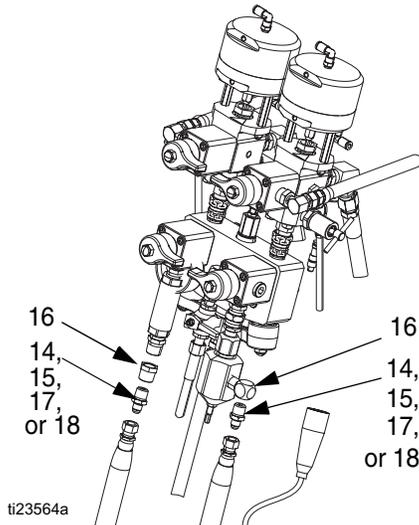
5. Route power cable (3) up through cord grip (JC).
6. Connect other end of grounding wire to grounding lug nut (X) inside junction box (J).
7. Connect power wiring from 1L1 and 3L2 to terminal blocks 1 and 3 in TB1.



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FIG. 4: Heat Control Box Cable Connections

8. Set transformer wire taps in hose heat control box (2). See manual 3A2980 to verify tap wire connection.
9. Install adapters (16) in dosing valve blocks and use fittings (14, 15, 17, or 18) to connect heated hose (1) fluid inlets.

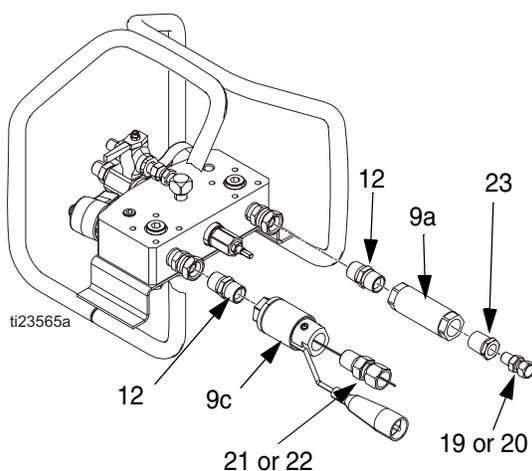


**FIG. 5: Dosing Valves**

**NOTE:**

To connect additional hoses see manual 309572.

10. Install fittings (12) in remote XM mix manifold.



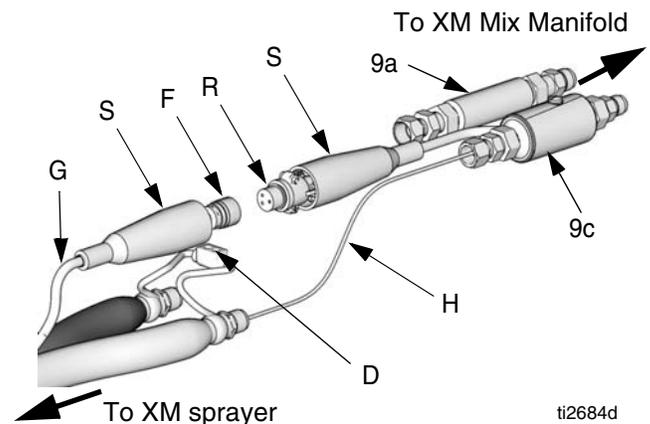
**FIG. 6: XM Mix Manifold**

## Connect 24M943 FTS and Power Wires

**NOTICE**

Do not coil hose tighter than the minimum bend radius of 3 ft (0.9 m). Do not subject hose to excessive weight, impact, or other abuse.

1. Carefully extend FTS probe (H) into the hose section from the hose heat control. Do not bend or kink probe. **Insert probe in major volume resin side on systems which are not 1:1 mix ratio.**
2. Connect FTS (9) to fittings (12) on remote XM mix manifold. See FIG. 6.
3. Connect fitting (23) to FTS coupler (9a) and fitting (19 or 20). Connect fittings (21 or 22) to FTS sensor (9c). Connect fluid hoses to FTS (9).
4. Install one connector (D) between wires. Refer to **Connect Heated Hoses** in manual 309572 for instructions.
5. Connect hose assembly cable (F) to FTS cable (R). Slide insulator sleeves (S) over connection. Leave slack (G) in cables as stress relief, to prevent cable failure.



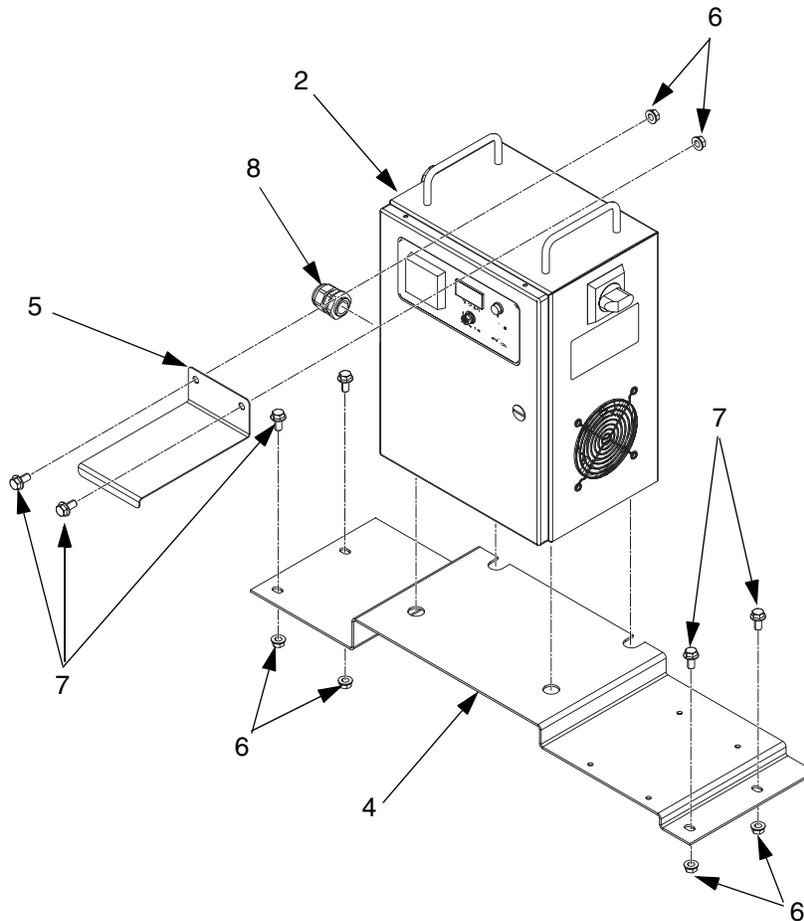
**FIG. 7: 261670 FTS Kit**

6. Connect two black power wires from the hose heat control box (2) to heated hose (1). Refer to **Connect Fluid Hose** in manual 3A2980 for instructions.
7. Connect FTS cable from control box (2) to FTS cable connection of first length of heated hose from XM sprayer. See illustrations on page 9.

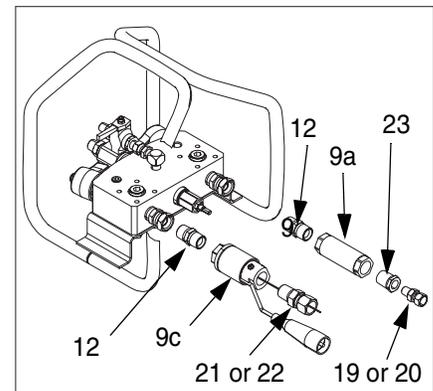
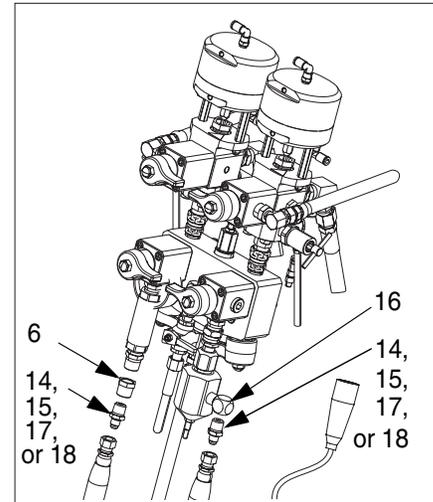
## **Troubleshooting/Repair**

See supplied hose heat control manual 3A2980 and power-lock heated hose manual 309572 for troubleshooting and repair procedures.

# Parts



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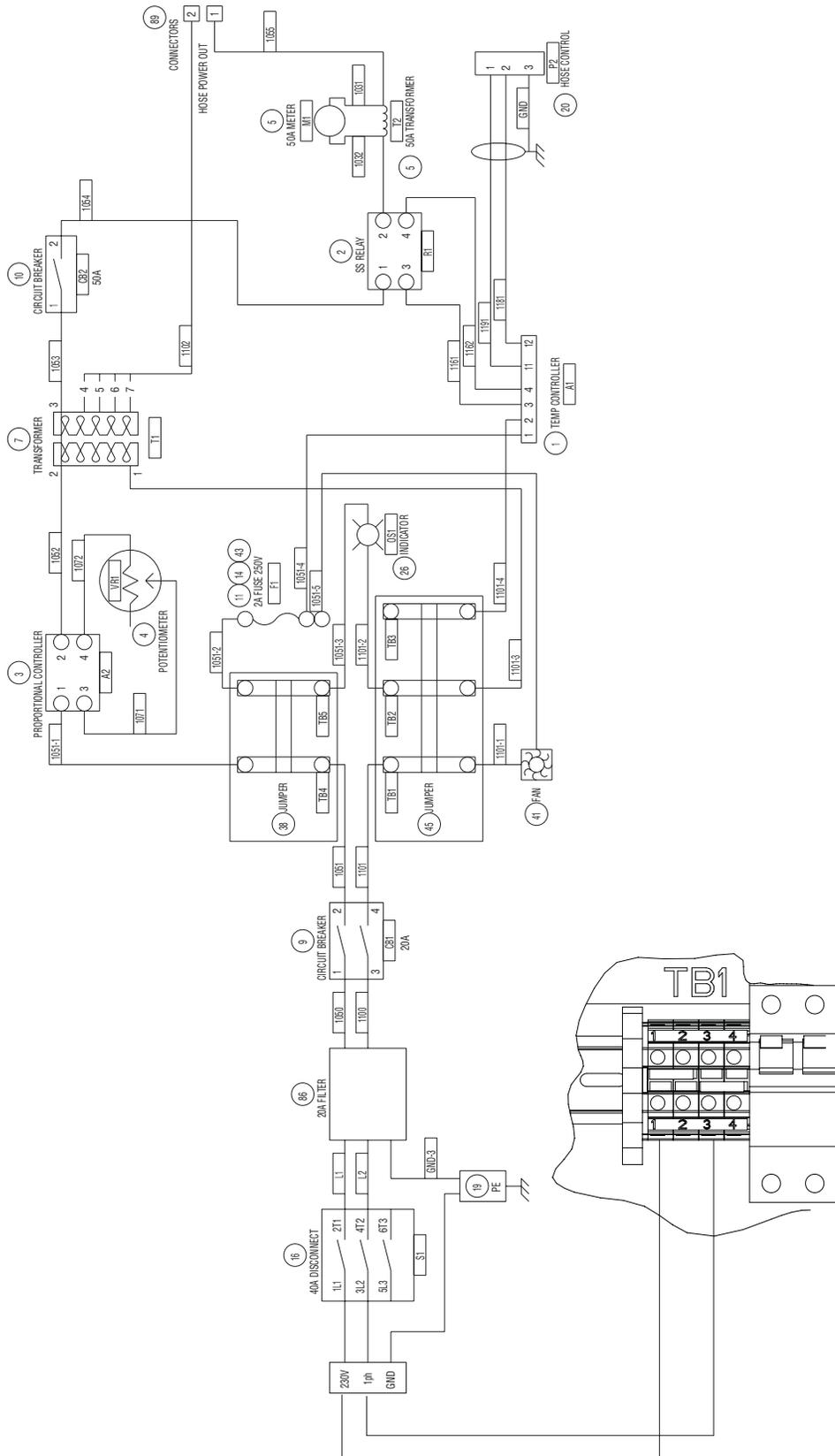


Ref.	Part	Description	Qty	Ref.	Part	Description	Qty
1✘	---	HOSE SET, heated, order separately; see manual 309572	1	12	158491	NIPPLE; 1/2 X 1/2 npt	2
2	24P616	KIT, heated hose control; see manual 3A2980	1	13	159239	NIPPLE; 1/2 x 3/8 npt	1
3✘	15T969	CABLE, hose heat, 3 cond, 12GA; see manual 3A2980	1	14	122406	ADAPTER, (-5) 1/2-20 JIC x 3/8 npt	1
4	256196	PLATE, mounting to XM	1	15	117832	ADAPTER, (-6) 9/16-18 JIC x 3/8 npt	1
5	256326	BRACKET, control bo to XMx, heated hose	1	16	100081	BUSHING, pipe; 1/2 x 3/8	1
6	112958	NUT, HEX, flanged	2	17	117833	ADAPTER; (-8) JIC x 3/8 npt	1
7	112395	SCREW, cap, flng hd	6	18	116765	ADAPTER, (-10) JIC x 3/8 npt	1
8	116171	BUSHING, strain relief	1	19	117595	UNION, 1/4 npt x (-5) swivel	1
9	24M943	KIT, fluid temperature sensor, coupler: see manual 309572	1	20	117506	UNION, 1/4 npt x (-6) swivel	1
9a	16N637	COUPLER, 1/2 fbe; 3.5 in.		21	126329	UNION, 1/2 npt x (-8) swivel	1
9b	24H320	HOSE, air; 3.75 in.		22	126330	UNION, 1/2 npt x (-10) swivel	1
9c	---	SENSOR 1/2 in. FTS		23	100206	BUSHING, 1/2 x 1/4 npt	1

✘ Not shown.

--- Not available for purchase.

# Electrical Schematic



# Technical Data

## Hose Heat Control 24P616

Input Power Requirements . . . . . 230 Vac, 1 phase, 50/60 Hz, 15A  
Output Power . . . . . 20-62 Vac, 45 A  
Weight . . . . . 85 lb (39 kg)

## Heated Hose 248908, 248907, 262727, 262728, 262730

Maximum working fluid pressure . . . . . 5000 psi (34.5 MPa, 345 bar)  
Maximum air working pressure . . . . . 130 psi (0.9 MPa, 9 bar)  
Maximum hose operating temperature . . . . . 180°F (82°C)

## FTS Sensor Kit 24M943

Maximum working fluid pressure . . . . . 5000 psi (34.5 MPa, 345 bar)  
Fluid Connection Size . . . . . 1/2 in npt(f) both ends

# Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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

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*For patent information, see [www.graco.com/patents](http://www.graco.com/patents).*

Original instructions. *This manual contains English. MM 313258*

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