

# **XM<sup>TM</sup> PFP**

## **Plural-Component Sprayer**

3A2989W

EN

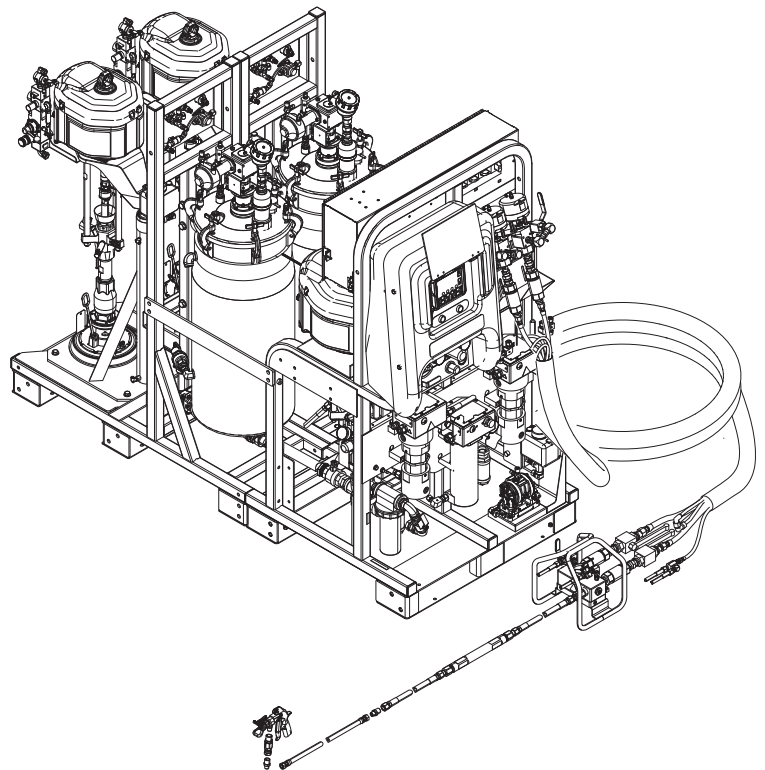
**For spraying two-component passive fire protection (PFP) intumescent epoxies. For professional use only.**



### **Important Safety Instructions**

Read all warnings and instructions in this manual and in all supplied manuals. Save all instructions.

*See page 3 for model information, including maximum working pressure and approvals.*



ti19926a

# Contents

|                                                  |           |
|--------------------------------------------------|-----------|
| <b>Related Manuals</b> .....                     | <b>2</b>  |
| <b>Models</b> .....                              | <b>3</b>  |
| <b>Warnings</b> .....                            | <b>4</b>  |
| Keep Components A and B Separate .....           | 6         |
| Changing Materials .....                         | 6         |
| Components A and B .....                         | 6         |
| <b>Component Identification</b> .....            | <b>6</b>  |
| <b>Grounding</b> .....                           | <b>6</b>  |
| <b>Pressure Relief Procedure</b> .....           | <b>7</b>  |
| <b>Flush Mixed Material</b> .....                | <b>9</b>  |
| <b>Troubleshooting</b> .....                     | <b>10</b> |
| <b>Repair</b> .....                              | <b>11</b> |
| Replace Air Filter Element .....                 | 11        |
| User Interface/Control Box .....                 | 13        |
| Junction Box .....                               | 17        |
| Purge Box .....                                  | 18        |
| Air Controls .....                               | 21        |
| Dosing Valve Assembly .....                      | 23        |
| Sensors .....                                    | 24        |
| Pump Assembly (System Module) .....              | 25        |
| Pail Feed RAM Pump Assembly (Feed Module) .....  | 26        |
| Flush Pump .....                                 | 26        |
| Heaters .....                                    | 27        |
| Replace Radar Level Sensor .....                 | 28        |
| Set Up a New Radar Level Sensor .....            | 29        |
| <b>Electrical Schematics</b> .....               | <b>31</b> |
| Non-Hazardous Location Schematic .....           | 31        |
| Hazardous Location Schematics .....              | 38        |
| <b>Parts</b> .....                               | <b>47</b> |
| XM PFP System Subassemblies .....                | 48        |
| Base System (262878, 262941) Subassemblies ..... | 61        |
| Feed Module Sub-Assemblies .....                 | 75        |
| Accessories .....                                | 81        |
| <b>Technical Data</b> .....                      | <b>82</b> |
| Dimensions .....                                 | 84        |
| <b>Graco Standard Warranty</b> .....             | <b>86</b> |
| <b>Graco Information</b> .....                   | <b>86</b> |

# Related Manuals

Manuals are available at [www.graco.com](http://www.graco.com). Component manuals in English:

| Manual                               | Description                                                          |
|--------------------------------------|----------------------------------------------------------------------|
| 3A2776                               | XM PFP Setup - Operation                                             |
| 3A2988                               | XM PFP Mix Manifold Instructions - Parts                             |
| 3A2799                               | XHF™ Spray Gun                                                       |
| <b>Heaters</b>                       |                                                                      |
| 309524                               | Viscon® HP High Pressure Fluid Heater Instructions - Parts           |
| 3A2954                               | Viscon HF High Flow, High Pressure Fluid Heater Instructions - Parts |
| <b>Pumps, Motors, Supply Systems</b> |                                                                      |
| 308652                               | Husky™ 205 Air-Operated Diaphragm Pumps Instructions - Parts         |
| 311238                               | NXT® Air Motor Instructions - Parts                                  |
| 311762                               | Xtreme® Lowers Instructions - Parts                                  |
| 312375                               | Check-Mate® Displacement Pumps Instructions - Parts                  |
| 312376                               | Check-Mate Pump Packages Instructions - Parts                        |
| 312792                               | Merkur® Pump Repair - Parts                                          |
| 312794                               | Merkur Pump Assembly Instructions - Parts                            |
| 312796                               | NXT Air Motor Instructions - Parts                                   |
| 313526                               | Supply Systems Operation                                             |
| 313527                               | Supply Systems Repair - Parts                                        |
| 312374                               | Air Control Instructions - Parts                                     |
| <b>Accessories</b>                   |                                                                      |
| 332073                               | Hot Water Flush Kit Instructions                                     |
| 3A2987                               | Air Dryer Kit Instructions                                           |
| 406691                               | Hose Rack Parts                                                      |
| 334931                               | Caster Kit Instructions                                              |
| <b>Other</b>                         |                                                                      |
| 313342                               | Dosing Valve Instructions - Parts                                    |
| 306861                               | Ball Valves Instructions - Parts                                     |
| 307005                               | High Pressure Swivel Instructions - Parts                            |
| 308169                               | Air Filters, Lubricators, and Kits Instructions - Parts              |
| 407061                               | Simulation XM PFP Display Module                                     |
| 3A1244                               | Graco Control Architecture Module Programming                        |
| 334939                               | 1:1 Ratio Adapter Kit Instructions                                   |
| 3A3072                               | Heater Upgrade Kit Instructions                                      |

# Models

| System | Series | Location      | Ratio Range  | Approvals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------|--------|---------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 24W626 | B      | Non-Hazardous | 1:1 to 1.5:1 | <div>Not for use in explosive atmospheres or hazardous locations.</div> <div></div> <div>Intertek<br/>9902471<br/>Certified to CAN/CSA C22.2 No. 88<br/>Conforms to UL 499</div>                                                                                                                                                                                                                                                                                                      |
| 262869 | B      |               | 1.5:1 to 4:1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 262945 | A      | Hazardous     | 1:1 to 1.5:1 | <div></div> <div>Intertek<br/>9902471<br/>Certified to CAN/CSA C22.2 No. 88<br/>Conforms to UL 499</div> <div>ATEX Ratings:  II 2 G Ex db ia pxb IIA T3 Gb<br/>ATEX Certificate No. ITS15ATEX18241X<br/><br/>IECEX Ratings Ex db ia pxb IIA T3 Gb<br/>IECEX Certificate No. IECEX ETL 15.0020X<br/>Ta = 0°C to 54°C</div> <div>See <b>Technical Data</b>, page 82, for additional information.</div> |
| 262943 | A      |               | 1.5:1 to 4:1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Maximum Fluid Working Pressure                                                                                                                                                         | Maximum Air Working Pressure                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <p><i>A and B Materials:</i><br/>6000 psi (41 MPa, 414 bar)</p> <p><i>Flushing Fluid:</i><br/>4500 psi (31 MPa, 310 bar)</p> <p><i>Heating Fluid:</i><br/>100 psi (0.7 MPa, 7 bar)</p> | <p><i>Supply:</i> 150 psi (1.0 MPa, 10.3 bar)<br/><i>Max. Setpoint:</i> 100 psi (0.7 MPa, 7 bar)</p> |

# 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 symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

|  <b>WARNING</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <b>SPECIAL CONDITIONS FOR SAFE USE</b> <ul style="list-style-type: none"> <li>• Potential risk of electrostatic discharge. See instructions for guidance to minimize the risk of electrostatic discharge.</li> <li>• The system must be earthed using copper conductors according to the installation instructions. All intrinsically safe circuits must be connected to ground at one point.</li> <li>• For information on the required dimensions of the flameproof joints contact the holder of this certificate (Graco Inc.). Flame-path joints are not intended to be repaired.</li> <li>• Special fasteners for securing equipments covers on the flameproof heaters shall have a minimum yield strength of 1,100 MPa and be corrosion resistant and sized M8 x 1.25 x 30.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                | <b>FIRE AND EXPLOSION HAZARD</b> <p>Flammable fumes, such as solvent and paint fumes, in <b>work area</b> can ignite or explode. Paint or solvent flowing through the equipment can cause static sparking. 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 sparking).</li> <li>• Ground all equipment in the work area. See <b>Grounding</b> instructions.</li> <li>• Never spray or flush solvent at high pressure.</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>• Use only grounded hoses.</li> <li>• Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are anti-static or conductive.</li> <li>• <b>Stop operation immediately</b> if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem.</li> <li>• Keep a working fire extinguisher in the work area.</li> </ul> |
|               | <b>ELECTRIC SHOCK HAZARD</b> <p>This equipment must be grounded. 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 or installing 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

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p><b>SKIN INJECTION HAZARD</b></p> <p>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. <b>Get immediate surgical treatment.</b></p> <ul style="list-style-type: none"> <li>• Do not spray without tip guard and trigger guard installed.</li> <li>• Engage trigger lock when not spraying.</li> <li>• Do not point gun at anyone or at any part of the body.</li> <li>• Do not put your hand over the spray tip.</li> <li>• Do not stop or deflect leaks with your hand, body, glove, or rag.</li> <li>• Follow the <b>Pressure Relief Procedure</b> when you stop spraying and before cleaning, checking, or servicing equipment.</li> <li>• Tighten all fluid connections before operating the equipment.</li> <li>• Check hoses and couplings daily. Replace worn or damaged parts immediately.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|    | <p><b>BURN HAZARD</b></p> <p>Equipment surfaces and fluid that's heated can become very hot during operation. To avoid severe burns:</p> <ul style="list-style-type: none"> <li>• Do not touch hot fluid or equipment.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|   | <p><b>MOVING PARTS HAZARD</b></p> <p>Moving parts can pinch, cut or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> <li>• Keep clear of moving parts.</li> <li>• Do not operate equipment with protective guards or covers removed.</li> <li>• Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the <b>Pressure Relief Procedure</b> and disconnect all power sources.</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 Technical Data in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheet (SDS) from distributor or retailer.</li> <li>• Do not leave the work area while equipment is energized or under pressure.</li> <li>• Turn off all equipment and follow the <b>Pressure Relief Procedure</b> when equipment is not in use.</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. Alterations or modifications may void agency approvals and create safety hazards.</li> <li>• Make sure all equipment is rated and approved for the environment in which you are using it.</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>TOXIC FLUID OR FUMES HAZARD</b></p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> <li>• Read Safety Data Sheet (SDS) to know the specific hazards of the fluids you are using.</li> <li>• Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

# WARNING

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>PERSONAL PROTECTIVE EQUIPMENT</b><br>Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. Protective equipment includes but is not limited to: <ul style="list-style-type: none"> <li>• Protective eyewear, and hearing protection.</li> <li>• Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.</li> </ul> |
|  | <b>SPLATTER HAZARD</b><br>Hot or toxic fluid can cause serious injury if splashed in the eyes or on skin. During blow off of platen, splatter may occur. <ul style="list-style-type: none"> <li>• Use minimum air pressure when removing platen from drum.</li> </ul>                                                                                                                                                                                                            |

## Keep Components A and B Separate

|                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|--|--|--|
|                                                                                                                                                                                                                                                                                       |  |  |  |  |  |  |
| Cross-contamination can result in cured material in fluid lines which could cause serious injury or damage equipment. To prevent cross-contamination: <ul style="list-style-type: none"> <li>• <b>Never</b> interchange component A and component B wetted parts.</li> <li>• Never use solvent on one side if it has been contaminated from the other side.</li> </ul> |                                                                                   |                                                                                   |  |  |  |  |

## Changing Materials

| NOTICE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Changing the material types used in your equipment requires special attention to avoid equipment damage and downtime. <ul style="list-style-type: none"> <li>• When changing materials, flush the equipment multiple times to ensure it is thoroughly clean.</li> <li>• Always clean any fluid inlet strainers after flushing.</li> <li>• Check with your material manufacturer for chemical compatibility.</li> <li>• When changing between epoxies and urethanes or polyureas, disassemble and clean all fluid components and change hoses. Epoxies often have amines on the B (hardener) side. Polyureas often have amines on the B (resin) side.</li> </ul> |  |

## Components A and B

### IMPORTANT!

Material suppliers can vary in how they refer to plural component materials.

Be aware that in this manual:

*Component A* refers to resin or major volume.

*Component B* refers to the hardener or minor volume.

This equipment doses the B component into the A component flow. An integration hose must always be used after the mix manifold and before the static mixer.

## Component Identification

See sprayer Setup - Operation manual for component identification.

## Grounding

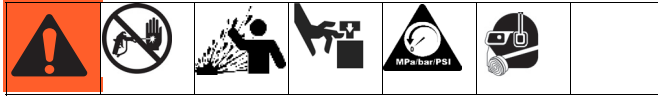
|                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                     |                                                                                      |                                                                                       |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|--|--|
|                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |  |
| The equipment must be grounded to reduce the risk of static sparking and electric shock. All internal earth grounding must use only copper wires. See <b>Electrical Schematics</b> , page 31, for wire size. Electric or static sparking can cause fumes to ignite or explode. Improper grounding can cause electric shock. Grounding provides an escape wire for the electric current. |                                                                                     |                                                                                      |                                                                                       |  |  |  |

All components shipped from the factory are electrically bonded through ground wires. Ground the electrical connection properly according to local codes.

# Pressure Relief Procedure

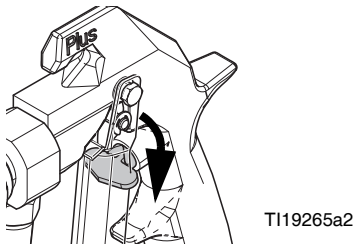


Follow the Pressure Relief Procedure whenever you see this symbol.



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.

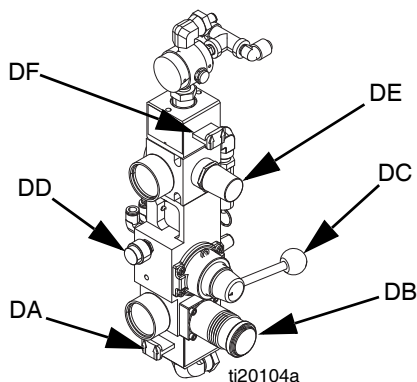
1. Engage trigger lock.



2. If the system will be shut down for more than a few hours, perform **Park Fluid Pump Rods** procedure in XM PFP Operation manual to prevent fluid hardening on the pump shaft.

3. Press  (Stop button).

4. Slide the feed pump air supply valve (DF) and director valve air supply valve (DA) to the OFF position.

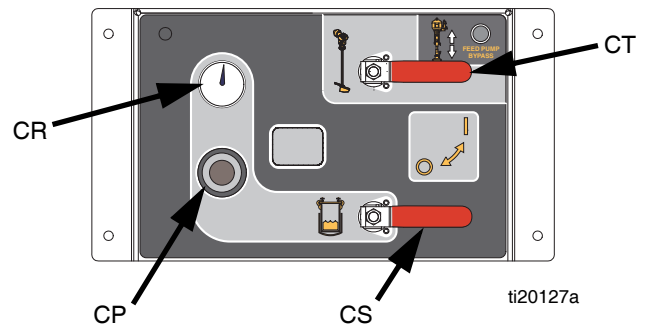


**FIG. 1: Feed Pump Controls**

## NOTICE

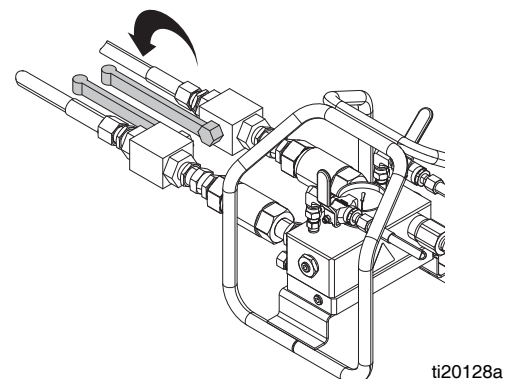
The material may expand when air pressure is removed. This can cause the tank to overfill and damage the parts attached to the tank lid. To prevent overfilling the tank, never relieve air pressure in the tank unless the tank is less than half full. Verify tank material level on the user interface **Supply Screen**.

5. If necessary to relieve tank air pressure: close both feed system air control ball valves (CT, CS) and back out the air pressure regulator (CP). Open the valves on the tank lids for full tank de-pressurization. Pressure gauge (CR) should read 0 psi.

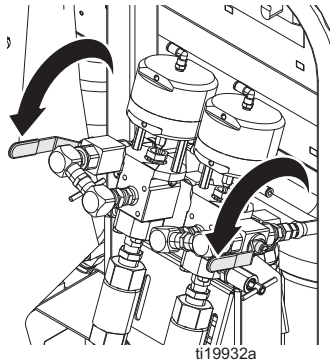


**FIG. 2**

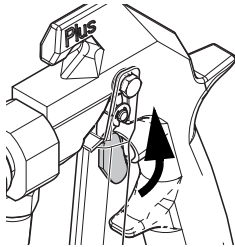
6. Open mix manifold ball valves.



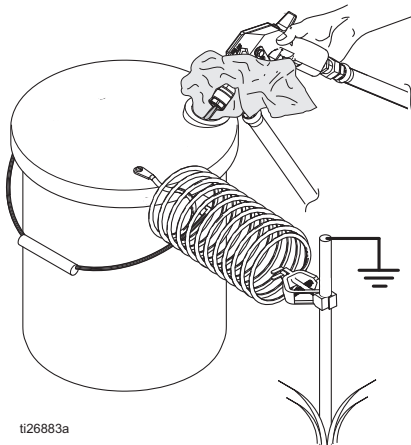
7. Open recirculation ball valves.



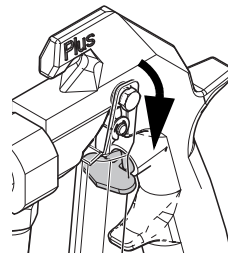
8. Disengage trigger lock.



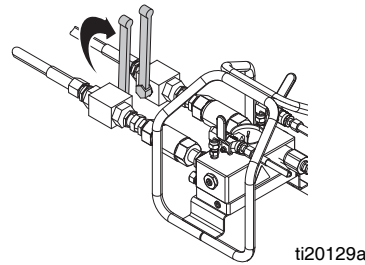
9. Hold a metal part of the gun firmly to a grounded metal pail. Trigger gun to relieve pressure in material hoses. Use a pail lid with a hole to dispense through. Seal around hole and gun with a rag to prevent splash back.



10. Engage trigger lock.



11. Close mix manifold material ball valves.



12. Perform **Flush Mixed Material** procedure in XM PFP Operation manual to prevent mixed material curing in the system and to relieve pressure in the solvent lines.
13. If the system will be shutdown for more than a few hours, fill pump A and B packing nuts with throat seal liquid (TSL™).

**NOTE:** Fluid pressure in the system is now relieved.

# Flush Mixed Material

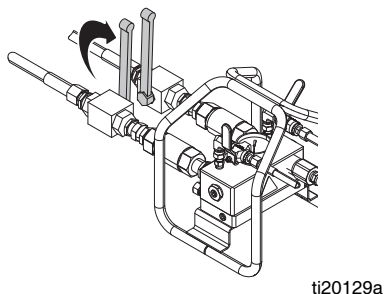
|                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
|                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |
| <p>To avoid fire and explosion:</p> <ul style="list-style-type: none"> <li>• Flush equipment only in a well-ventilated area.</li> <li>• Ensure main power is off and heater is cool before flushing.</li> <li>• Do not turn on heater until fluid lines are clear of solvent.</li> </ul> |  |  |  |  |  |  |

This procedure flushes out mixed material from system to prevent it from curing in the system.

**NOTE:** Pot life of the mixed materials in the system is much shorter than the dry time of dispensed epoxy because mixed material potlife or working time decreases with increased temperature.

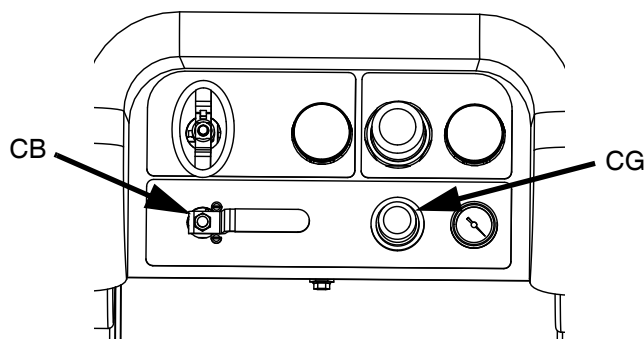
Follow this procedure when you are finished spraying if the potlife of the mixed materials in the system could expire before you spray again.

1. If necessary, **Prime Flush Pump**. See operation manual for instructions.
2. Press  to stop the metering pumps.
3. Trigger gun into a waste container to relieve pressure then engage trigger lock.
4. Remove spray tip.
5. Close mix manifold ball valves.

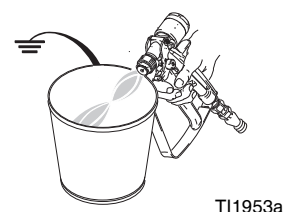
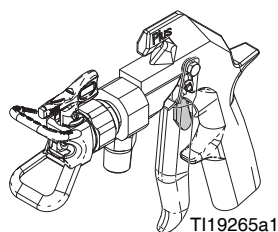


6. Open one of the flush ball valves on the mix manifold.

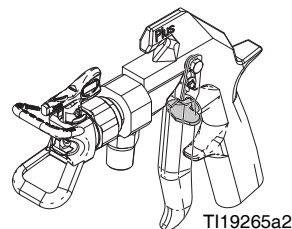
7. Disengage trigger lock and trigger gun into a grounded pail. Use a pail lid with a hole to dispense through. Seal around hole and gun with a rag to prevent splash back.
8. Open flush pump air supply valve (CB). Pull out and slowly turn flush pump air regulator (CG) clockwise to increase air pressure. Use lowest pressure needed to flush material out of hose.



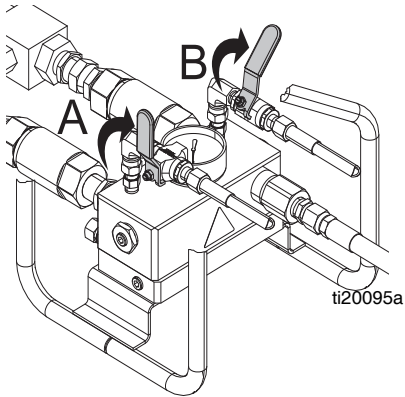
9. Continue dispensing until clean flushing fluid is dispensed.



10. Close the open flush valve. Open the other flush valve. Continue dispensing long enough for any remaining mixed material.
11. Close flush pump air supply valve.
12. Trigger gun to relieve pressure in flush lines then engage trigger lock.



13. Close flush ball valves.

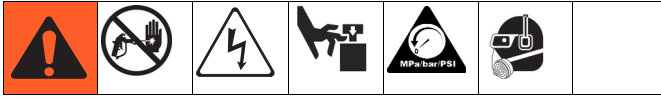


14. Use a rag and solvent to clean spray tip then re-install on gun.
15. Remove the static mixer. Clean the mix element then re-install the mixer.

## Troubleshooting

See sprayer Setup - Operation manual for troubleshooting details.

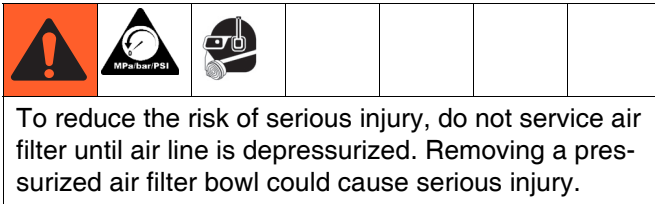
# Repair



Follow **Pressure Relief Procedure** on page 7 if service time may exceed pot life time, before servicing fluid components, and before transporting sprayer.

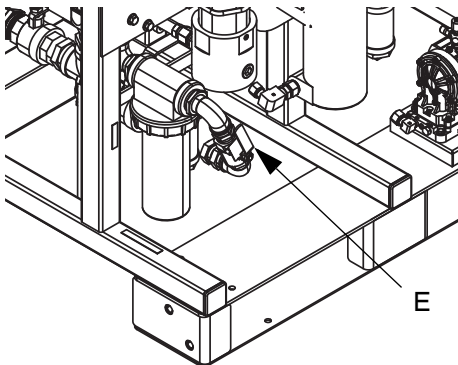
## Replace Air Filter Element

There are two air filters on all systems: the inlet air regulator filter on the air controls and the main air inlet manifold filter. Hazardous location systems also have a purge box air filter. Check filters weekly and replace element as needed.



### All Filters

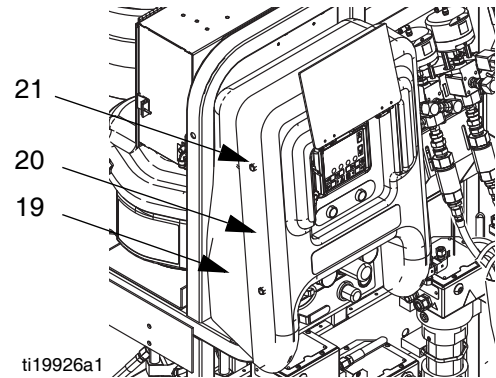
1. Close main air shutoff valve on air supply line and the main air shutoff valve (E).



ti199526a1

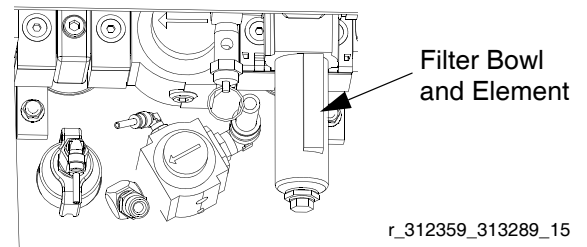
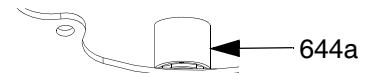
### Control Air Regulator Filter

2. Remove four nuts (21) and then remove front and rear shrouds (19, 20).



ti19926a1

3. Unscrew filter bowl from inlet air regulator (601d).
4. Remove and replace element.

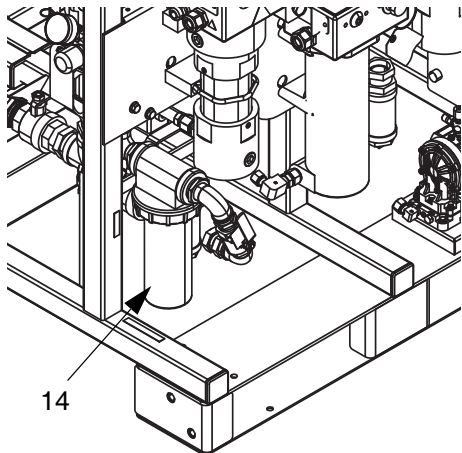


r\_312359\_313289\_15

5. Screw filter bowl on securely.
6. Replace front and rear shrouds (19, 20) using four nuts (21).

## Main Air Inlet Manifold Filter

2. Unscrew filter bowl collar from main air inlet filter (14).

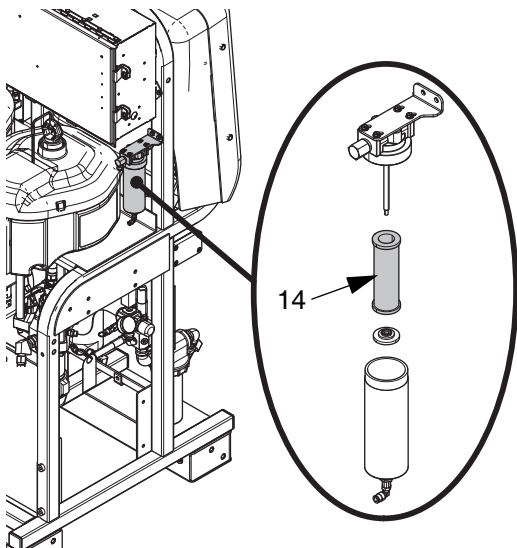


ti199526a1

3. Remove and replace filter element (701a). See **Air Filter (24P899)**, page 73.
4. Reassemble filter bowl.

## Purge Box Air Inlet Filter

1. Unscrew filter bowl collar from main air inlet filter (14).

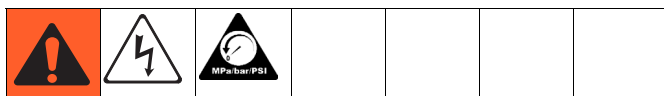


ti25946a

2. Remove and replace filter element.
3. Reassemble filter bowl.

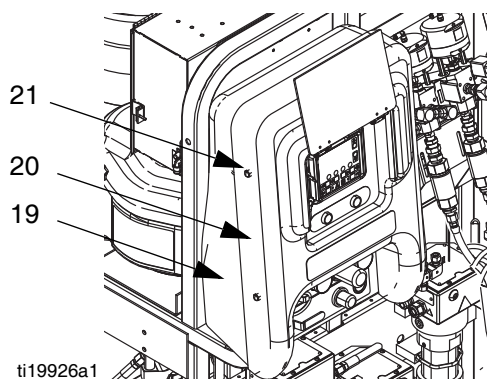


## User Interface/Control Box



### Remove Shroud and Front Panel of Control Box

1. Close main air shutoff valve on air supply line and on system. Depressurize air line.
2. Disconnect power.
3. Remove four nuts (21) and then remove front and rear shrouds (19, 20).



4. Remove four nuts (17); leave two nuts on left side of panel tight. Open front panel of control box (16). See FIG. 3.

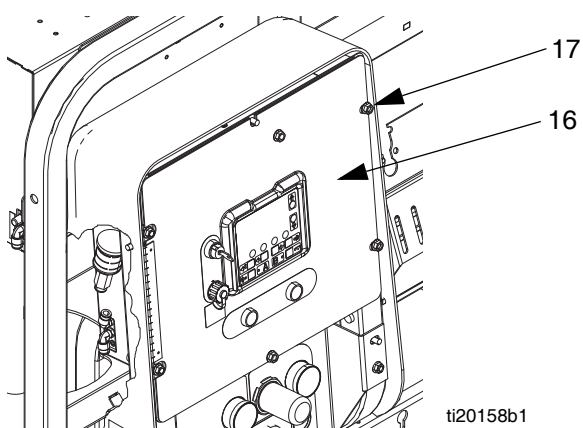


FIG. 3

### Replace Single Solenoid Module

1. Remove Shroud and Front Panel of Control Box, see page 13.
2. Disconnect solenoid cable connector (542) from the solenoid (509a) being replaced. See **Electrical Schematics** if necessary. For hazardous location systems see **Sensors Schematic Control Box** on page 43. For non-hazardous location systems see **Sensors Schematic Control Box** on page 35.
3. Remove two screws (509b) from the solenoid being replaced then remove solenoid (509a). See FIG. 4.

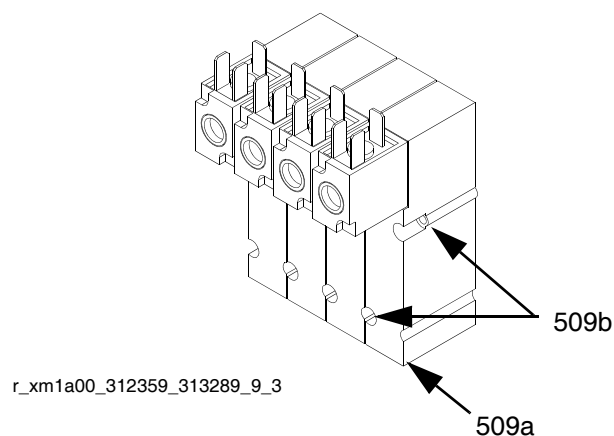
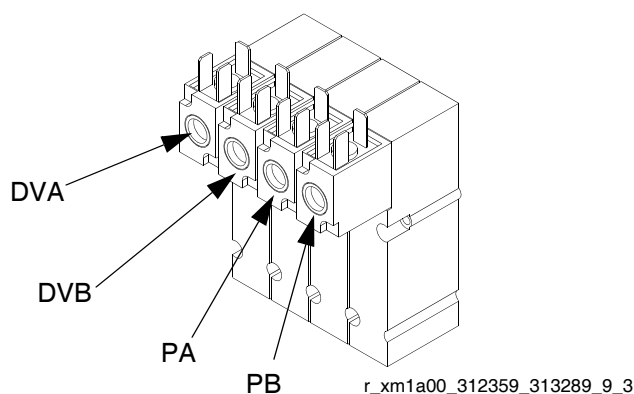


FIG. 4

4. Use screws (509b) to install new solenoid (509a).
5. Reconnect solenoid cable connectors (542).

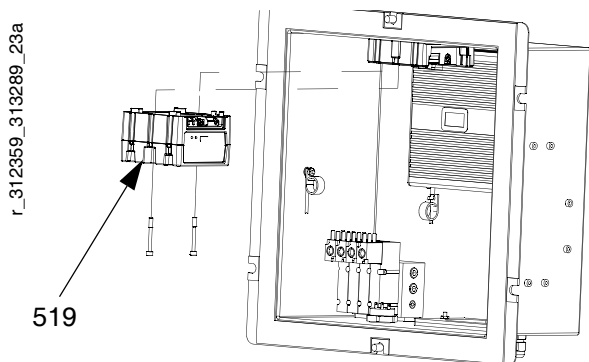
**NOTE:** From left to right, solenoid functions are as follows:

- Dosing valve A (DVA) (normally open)
- Dosing valve B (DVB) (normally open)
- Pump A (PA) (normally closed)
- Pump B (PB) (normally closed)



## Replace USB Module

1. **Remove Shroud and Front Panel of Control Box**, see page 13.
2. Disconnect CAN cables and USB cable from USB module (519).
3. Remove two mounting screws from USB module and remove module from base.

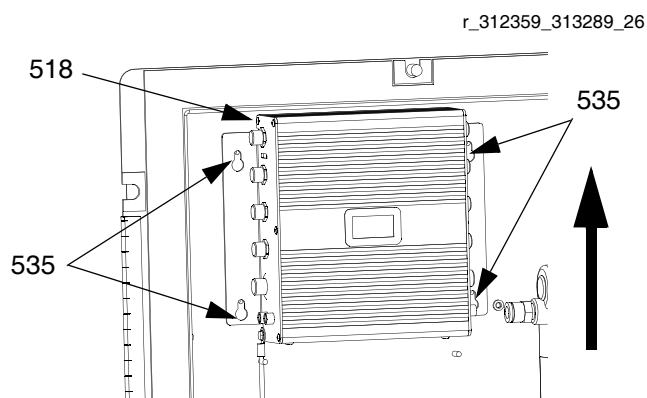


4. Follow steps in reverse order to install new USB module.
5. Load software. See **Replace USB Module**.

## Replace Fluid Control Module (FCM)

**NOTE:** The USB module does not need to be removed prior to replacing the FCM.

1. **Remove Shroud and Front Panel of Control Box**, see page 13.
2. Remove all cables from FCM (518). Take note of cable locations.
3. Loosen four mounting screws (535).

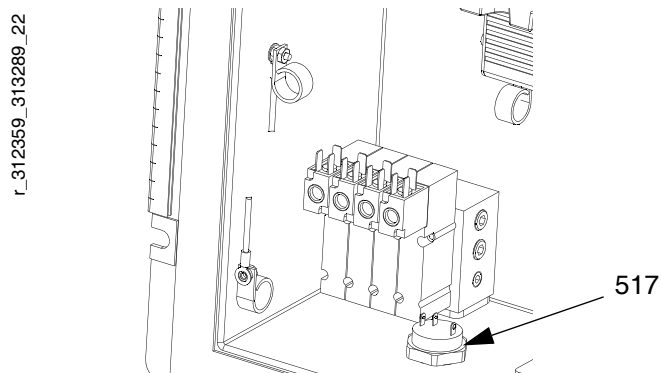


4. Slide FCM up and out of keyhole slots.
5. Follow steps in reverse order to install new FCM.

6. Load software. See **Load software**. See **Replace USB Module**.
7. Most of the system configuration is stored in the FCM. Use the display to change the configuration to the values in the old FCM. See XM PFP operation manual for instructions.

## Replace Alarm

1. **Remove Shroud and Front Panel of Control Box**, see page 13.
2. Disconnect alarm wires from alarm (517).
3. Unscrew alarm (517) and replace.



4. Screw in new alarm. Reconnect alarm wires.
5. Reinstall front panel of control box and reinstall shrouds.

## Display

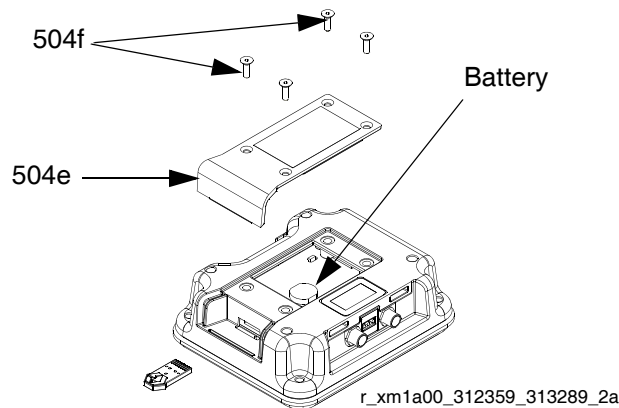
### Replace Display Battery

|                                                                                             |                                                                                   |  |  |  |  |  |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|--|--|--|--|
|            |  |  |  |  |  |  |
| To prevent fire and explosions, do not replace the display battery in a hazardous location. |                                                                                   |  |  |  |  |  |

#### NOTICE

To avoid damaging circuit board, wear a grounding strap.

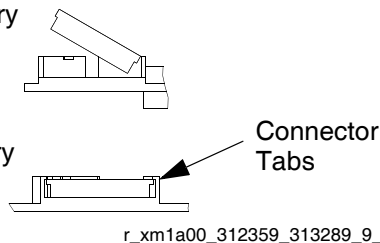
1. Remove four screws (504f) then remove access cover (504e).



2. Use a flat head screwdriver to pry out old battery.

Remove Old Battery

Insert New Battery



3. Replace with new battery. Ensure battery fits under connector tabs before snapping other end in place.

**NOTE:** Use only Panasonic CR2032 batteries for replacement.

4. Use screws (504f) to install access cover (504e).

### Replace Display

|                                                                                     |                                                                                    |  |  |  |  |  |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--|--|--|--|--|
|    |  |  |  |  |  |  |
| To prevent fire and explosions, do not replace the display in a hazardous location. |                                                                                    |  |  |  |  |  |

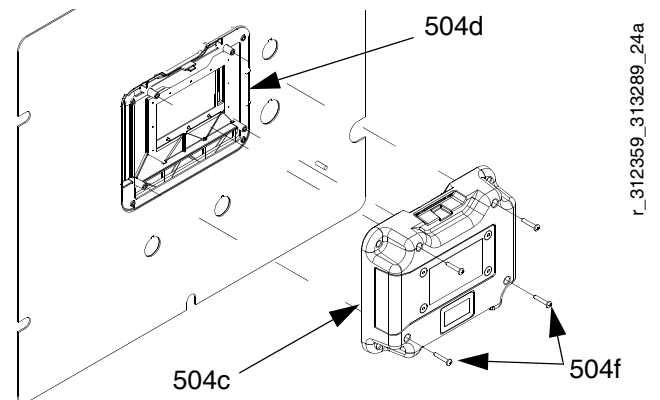
**NOTE:** Order display kit (504) for replacement.

#### NOTICE

To avoid damaging circuit board, wear a grounding strap.

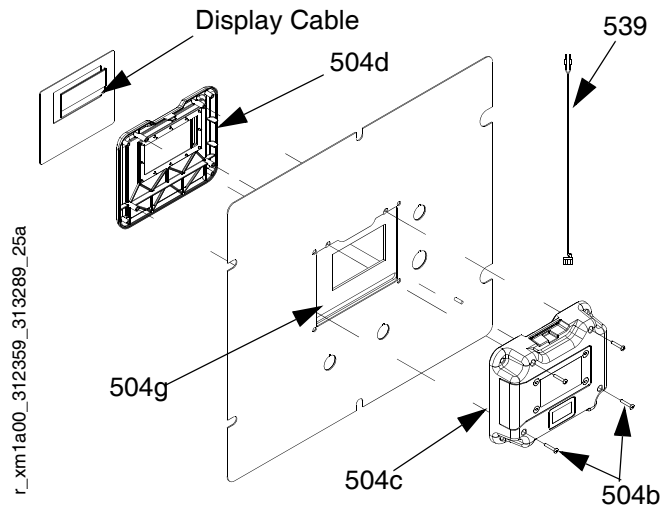
1. Disconnect power.
2. **Remove Control Box Shrouds**, see page 21.
3. Disconnect CAN cable from display module.
4. Remove four screws (504f) from rear display panel (504c) while holding front display panel (504d) in place.

**NOTE:** To ease removal use clear tape to hold front display panel (504d) in place.



5. Remove rear display panel (504c) and disconnect display cable and key switch cable (539) from circuit board.

6. Remove front display panel (504d) and gasket (504g).



7. Discard old display assembly.
8. Place new front display panel (504d) and gasket (504g) on front panel of control box (16).

**NOTE:** To ease installation use clear tape to hold front display panel in place.

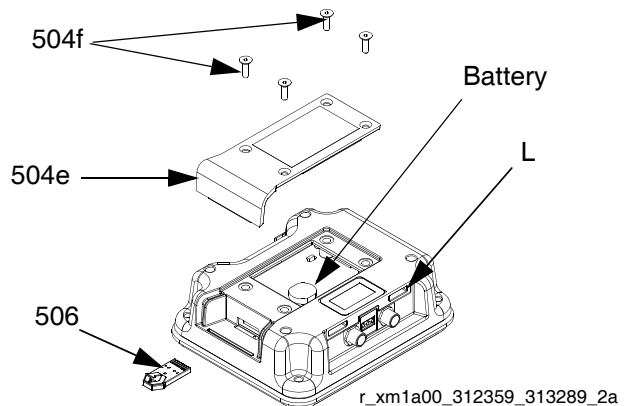
9. Carefully connect display cables and key switch cable to new circuit board.
10. Install new rear display panel (504c) and secure with four screws (504f). Ensure key switch cable protrudes from opening in top of display module.
11. Install access cover and screws.
12. Reconnect CAN cable to display module.
13. Reconnect power.
14. Load software. See **Upgrade Software**, page 16.
15. Replace shroud.
16. Configure system settings as they were set on old display. See XM PFP Operation manual for instructions.

### Replace Front Panel

See **Replace Display**, page 15, for instructions.

## Upgrade Software

1. Download all USB logs. The new software will erase the USB logs. See operation manual for instructions to Download Data from USB.
2. Turn off power to the system.
3. **Remove Shroud and Front Panel of Control Box**, see page 13.
4. Remove four screws (504f) then remove access cover (504e).

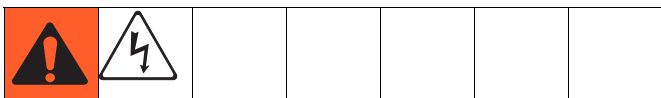


5. Insert and press token (506) firmly into slot.

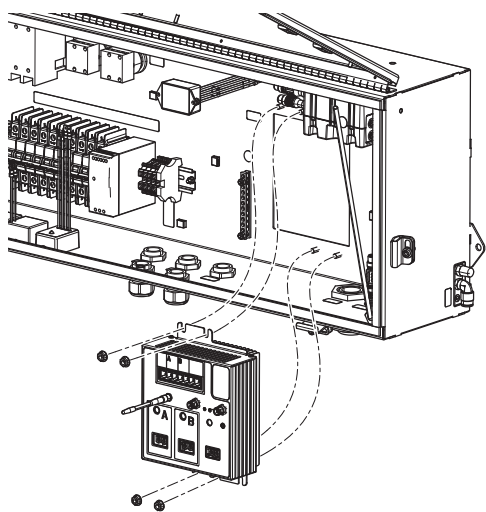
**NOTE:** There is no preferred orientation of token.

6. Turn power on.
7. The red indicator light (L) will flash until new software is loaded on the display module.
8. All system modules will be automatically updated. See Graco Control Architecture Module Programming manual for details.
9. Remove token.
10. Reinstall shrouds and front panel.

## Junction Box



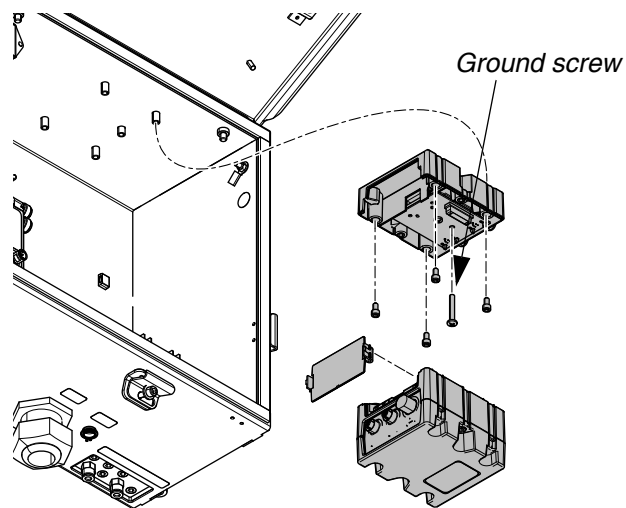
### Replace High Power Temperature Control Module (HPTCM, ref. 435)



ti26762a

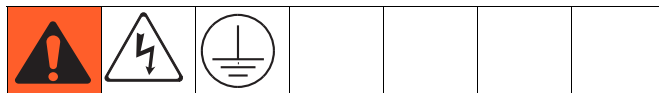
1. Turn system main power switch OFF.
2. Open junction box.
3. Unplug all connections on the HPTCM.
4. Remove screws securing HPTCM then remove HPTCM.
5. Install HPTCM and reattach HPTCM connections.
6. Close junction box.

### Replace Fluid Control Module Cube (FCM3, ref. 408)



ti2676:

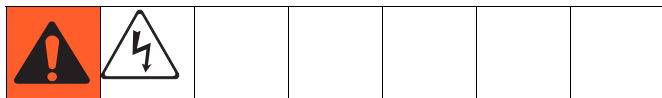
1. Turn system main power switch OFF.
2. Open junction box.
3. Unplug all connections on the FCM3.
4. Remove two screws securing FCM3 then remove FCM3.



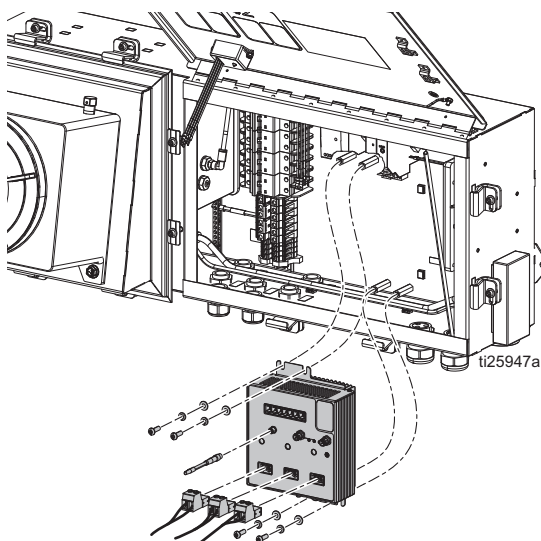
Center ground screw in the Fluid Control Module Cube must be used to avoid serious injury due to electric shock.

5. Use screws to install FCM3.
6. Reattach FCM3 connections.
7. Close junction box.

## Purge Box

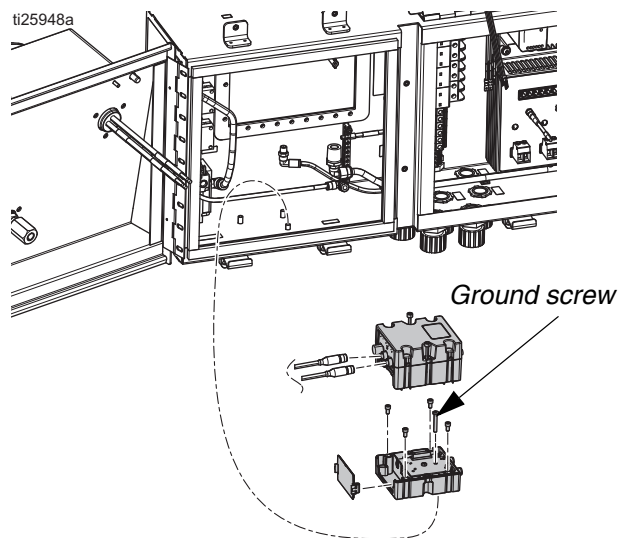


### Replace High Power Temperature Control Module (HPTCM, ref. 1535)

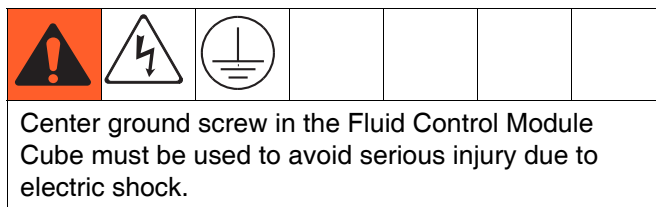


1. Turn system main power switch OFF.
2. Open purge box.
3. Unplug all connections on the HPTCM (1535).
4. Remove screws (1537) and washers (1536, 1537) securing HPTCM then remove HPTCM.
5. Install HPTCM (1535) and reattach HPTCM connections. See **Electrical Schematics**, page 31.
6. Close purge box.

### Replace Fluid Control Module Cube (FCM3, ref.1547)



1. Turn system main power switch OFF.
2. Open the purge box and remove the purge controller (not shown) to access the FCM mounting screws. For removal instructions, see **Replace Purge Controller**, page 19.
3. Unplug all connections on the FCM3.
4. Loosen two screws securing FCM3 then remove FCM3.



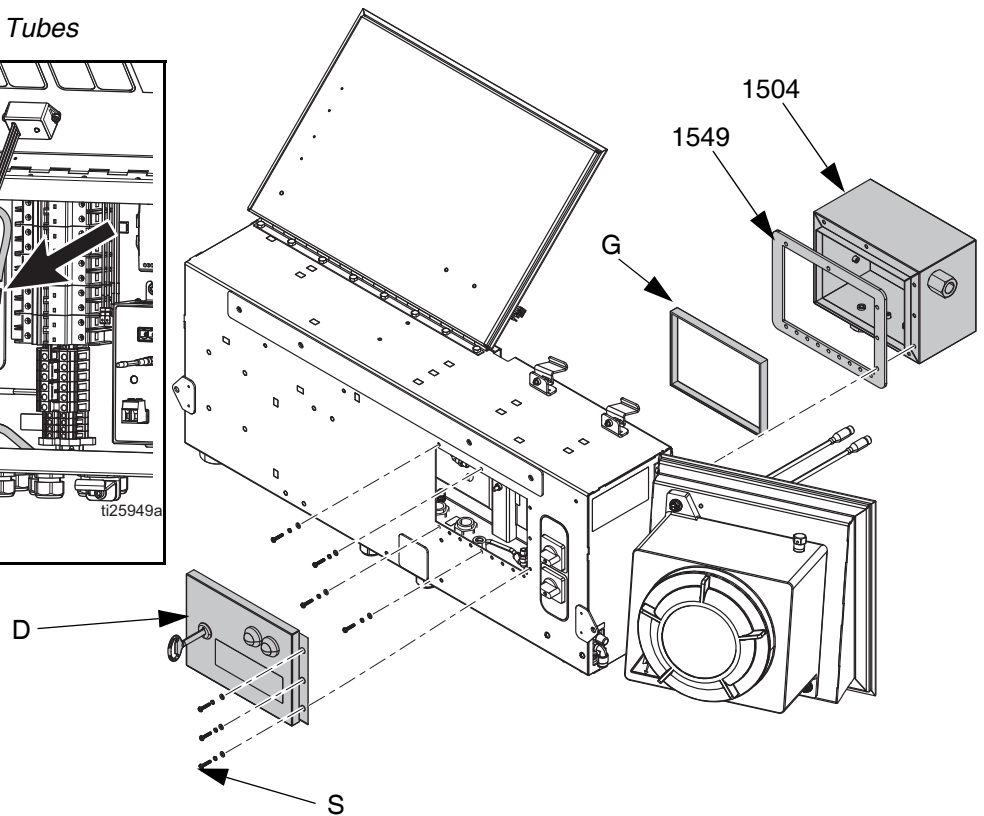
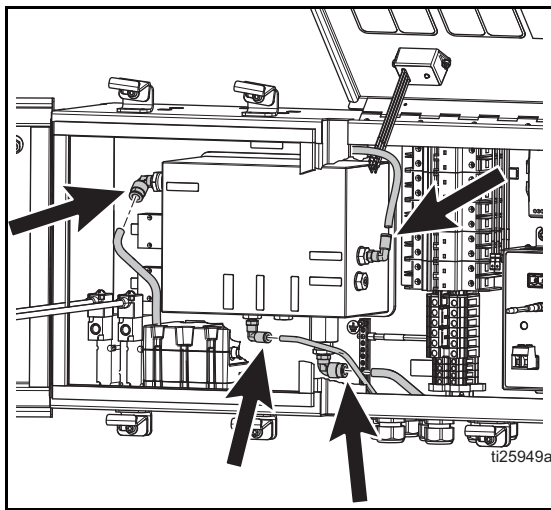
5. Use screws to install FCM3.
6. Reattach FCM3 connections.
7. Reinstall purge controller. See **Replace Purge Controller**, page 19.
8. Close purge box.

## Replace Purge Controller

For hazardous location systems only.

1. Turn system main power switch OFF.
2. Disconnect four air tubes from the purge controller (1504).
3. Remove seven mounting screws (S), door (D), and door gasket (G). Remove the purge controller (1504) and gasket (1549) from the back of the purge box.
4. Install new gasket (1549) on purge controller (1504), then insert the purge controller (1504) and new gasket (1549) from the back of the purge box. Connect to frame with mounting screws (S).
5. Connect air tubes to purge controller (1504) fittings.

Purge Controller (1504) Air Tubes

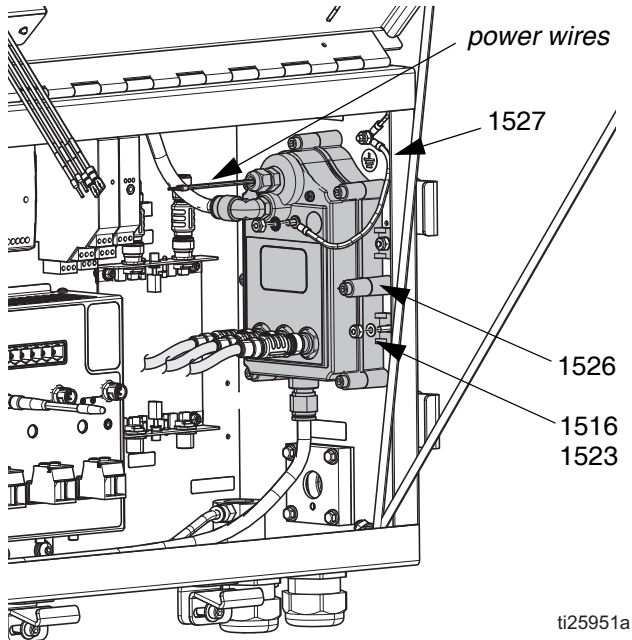


ti25950a



## Multi-zone 3 Channel Barrier

1. Turn main power off.
2. Open purge box.
3. Disconnect CAN cables, ground wire (1527), and air tubing from fittings.



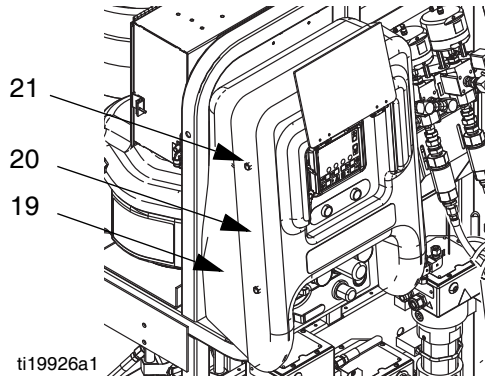
4. Disconnect red and black power wires from terminal blocks. See **CAN Network and DC Power Schematic**, page 41.
5. Remove nuts (1516) and washers (1523) and multi-zone 3 channel barrier module (1526).
6. Secure a new multi-zone 3 channel barrier module (1526) in purge box with nuts (1516) and washers (1523).
7. Reconnect the CAN cables, air tubing, ground wire, and power wiring.
8. Close purge box.



## Air Controls

### Remove Control Box Shrouds

1. Close main air shutoff valve on air supply line and on system. Depressurize air line.
2. Remove four nuts (21) and then remove front and rear shrouds (19, 20).



### Remove Air Control Assembly (18)

1. **Remove Control Box Shrouds.**
2. Disconnect air motor air lines and system air line.
3. Remove four nuts (17) from front of air controls (18). See FIG. 5, page 22.
4. Pull out assembly (18).
5. Follow steps in reverse order to reinstall air control assembly.

### Replace Flush Pump Air Ball Valve (626)

1. **Remove Air Control Assembly (18).**
2. Remove two nuts (630) from front of air control bracket (619). See FIG. 5, page 22.
3. Disconnect air line (632) running to ball valve assembly (626).
4. Replace with new ball valve assembly. See part number shown in the **System Air Controls Module (255761)** section beginning on page 61.
5. Follow steps in reverse order to reassemble.

### Replace Flush Pump Air Regulator (625)

1. **Remove Air Control Assembly (18).**
2. Remove regulator nut (631), and disconnect air lines (632, 633) running to regulator (625). See FIG. 5 on page 22.
3. Remove regulator assembly and replace with new. See part number shown in the **System Air Controls Module (255761)** section beginning on page 61.
4. Follow steps in reverse order to reassemble.

### Replace System Air Regulator (645)

1. **Remove Air Control Assembly (18).**
2. Remove regulator nut and disconnect system air line. See FIG. 5, page 22.
3. Remove screws from quick clamps and open clamps (642) at hinge.
4. Remove regulator assembly (645) and replace with new.
5. Follow steps in reverse order to reassemble.

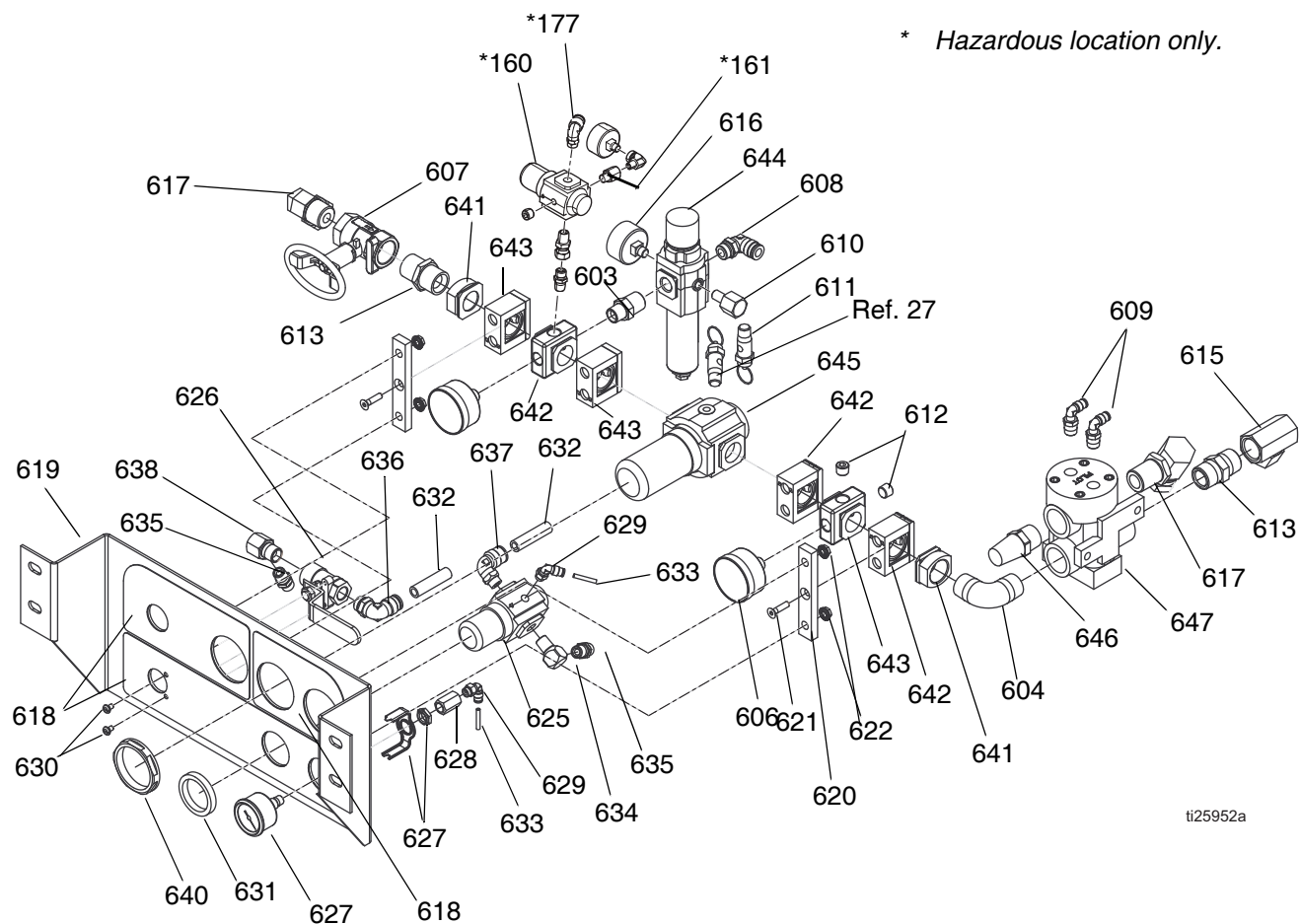
## Replace Solenoid Inlet Air Regulator (644)

1. **Remove Control Box Shrouds.**
2. **Remove Air Control Assembly (18).**
3. Disconnect air line from air regulator (644).
4. Remove gauge (616) from block (643).
5. Remove screws from quick clamps (642) holding air regulator assembly (644) in place.
6. Open clamps (642) at hinge and pull apart from block (643).
7. Remove regulator assembly (644) and replace with new.

8. Follow steps in reverse order to reassemble.
9. Set new air pressure regulator to at least 80-85 psi (0.55-0.58 MPa, 5.5-5.8 bar).

## Replace Purge Box Inlet Air Regulator (160)

1. **Remove Control Box Shrouds.**
2. Disconnect air line from regulator (160).
3. Remove fittings (177, 161). Remove regulator assembly (160).
4. Follow steps in reverse order to reassemble.



**FIG. 5: Air Control Assembly (18)**

## Dosing Valve Assembly



1. Follow **Pressure Relief Procedure**, page 7.
2. Disconnect all fluid lines from dosing valves (28 or 29). See FIG. 6.
3. Remove two bolts (31) securing dosing valve to bracket.
4. Unscrew dosing valve nipple fitting (36 or 37) from dosing valve outlet.
5. Disconnect pressure sensor (831) from dosing valve. See page 74.
6. Remove dosing valves.
7. See **Ratio Control Valve Assemblies (28, 29)** on page 74 for disassembly illustration.
8. Follow steps in reverse order to reassemble dosing valve assembly. See **Ratio Control Valve Assemblies (28, 29)** on page 74 for assembly illustration and specifications.

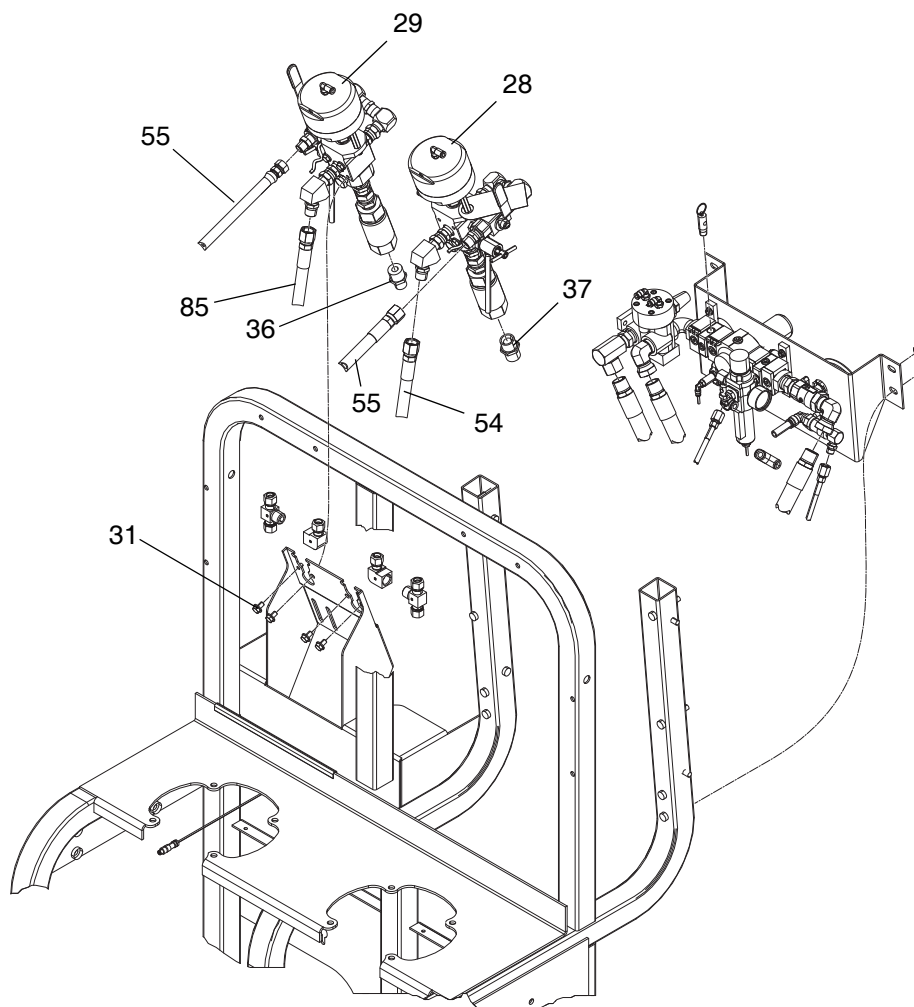


FIG. 6

## Sensors

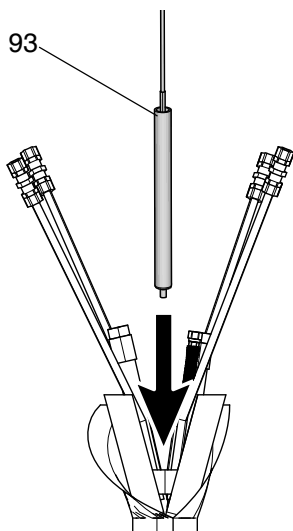


### Replace Fluid Pressure Sensor

1. Close main air shutoff valve on air supply line and on system.
2. Follow **Pressure Relief Procedure**, page 7.
3. Open control box cover. See **User Interface/Control Box**, page 13.
4. Disconnect pressure sensor (831) from dosing valve. See **Ratio Control Valve Assemblies (28, 29)** on page 74.
5. Disconnect other end of pressure sensor (831) from FCM (507). See **Control Box (16)** on page 71.
6. Replace with new fluid pressure sensor, and reconnect pressure sensor to FCM and dosing valve.

### Hose Bundle Temperature Sensor (93)

1. Disconnect the M8 cable connection going into the hose bundle.
2. Open up the hose bundle wrap and insulation until sensor (93) can be removed easily without pulling on cable.
3. Remove sensor (93).



4. Push new sensor fully into insulated portion of hose bundle.

5. Close insulation and hose bundle wrap and re-tape. Ensure there is no stress on the cable.
6. Reconnect M8 connector.

### Replace Temperature (RTD) Sensors

This procedure applies to:

- Tank sensors mounted in the side of each tank near the bottom (209). See parts illustration on page 56.
- Glycol heater for hose outlet manifold sensor (100). See parts illustration on page 52.

1. Close main air shutoff valve on air supply line and on system.
2. Follow **Pressure Relief Procedure**, page 7.
3. Disconnect the M8 cable connection.
4. Loosen the compression nut. Pull sensor straight out of fitting (82 or 208).
5. Remove fitting (82 or 208).

**NOTE:** The compressed ferrule cannot be removed from the sensor. A new compression fitting must be used.

6. Apply thread sealant then replace compression fitting (82 or 208). Tighten fitting in place.
7. Position sensor (100 or 209):
  - **Tank:** Insert sensor, leaving 5/8 in. (15.8 mm) sheath outside fitting.
  - **Heater manifold:** Insert sensor, leaving 1/8 in. (3.2 mm) sheath outside fitting.
8. Install compression nut on sheath hand-tight then tighten an additional 3/4 turn.

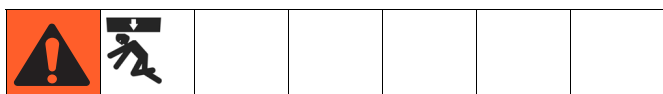
## Pump Assembly (System Module)



Prior to servicing the pump assembly you must first remove either the entire pump assembly or the displacement pump and air motor individually.

### Remove Pump Assembly

1. Follow **Pressure Relief Procedure**, page 7.
2. Close ball valve at metering pump inlet.
3. Disconnect fluid inlet line from the displacement pump. Leave line connected to the tank.
4. Disconnect air motor.
  - a. Disconnect sensor cable, air line, and ground wire from air motor.
  - b. Remove mounting screws (5) and washers (4) holding air motor (2 or 3) to mounting bracket. See FIG. 7 on page 26.
5. Use lift ring on air motor to remove pump assembly.



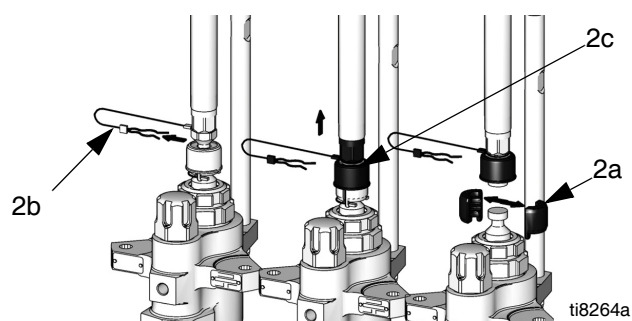
To avoid serious injury from falling objects caused by the lift ring breaking, do not lift pump assembly by the lift ring when the total weight of the pump assembly exceeds 550 lb (250 kg).

6. Refer to Xtreme Displacement Pump manual 311762 to service or repair the displacement pump. Refer to NXT Air Motor manual 311238 to service or repair the air motor.
7. Reconnect ground wire and sensor cable. Follow steps in reverse order to reinstall pump assembly.

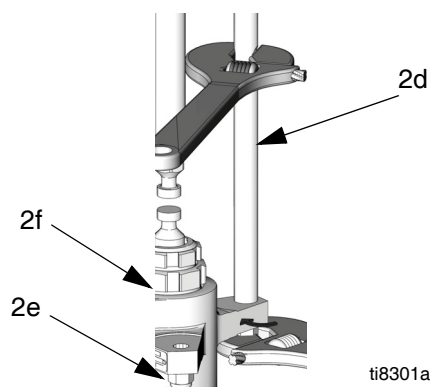
### Remove Displacement Pump

Follow these instructions for removing only the displacement pump; the air motor will remain installed.

1. Follow **Pressure Relief Procedure**, page 7.
2. Close ball valve on tank outlet.
3. Disconnect fluid inlet line from the displacement pump. Leave line connected to the tank.
4. Remove clip (2b), and slide coupling cover (2c) up to remove coupling (2a).



5. Use a wrench to hold the tie rod flats to keep the rods from turning. Unscrew the nuts (2e) from the tie rods (2d) and carefully remove the displacement pump (2f).



6. Refer to the Xtreme Displacement Pump manual 311762 to service or repair the displacement pump.
7. Follow steps in reverse order to reinstall displacement pump.

## Remove Air Motor

1. Follow **Pressure Relief Procedure**, page 7.
2. Disconnect displacement pump from air motor. See steps 2 and 3 under **Remove Displacement Pump**, page 25.
3. Disconnect sensor cable, air line, and ground wire from air motor.
4. Remove mounting screws (5) and washers (4) holding air motor (2 or 3) to mounting bracket.

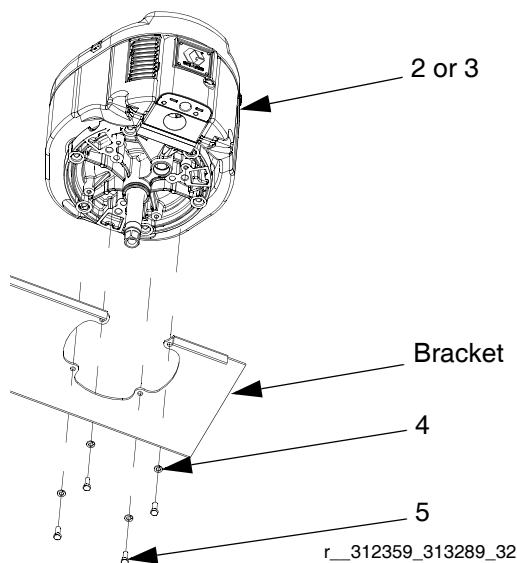


FIG. 7

5. Refer to NXT Air Motor manual 311238 to service or repair the air motor.
6. Reconnect ground wire and sensor cable. Follow steps in reverse order to reinstall air motor.

## Pail Feed RAM Pump Assembly (Feed Module)

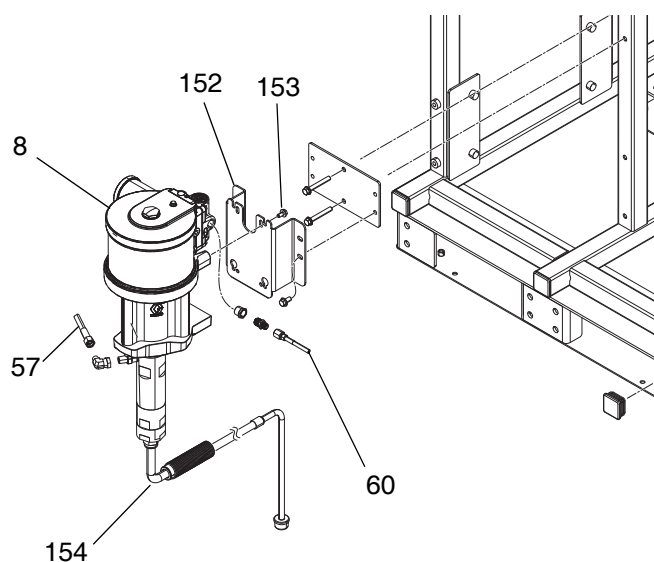
**NOTE:** See Pail Feed RAM Pump assembly (227) in parts breakdown beginning on page 56.

See Supply Systems manual 313527 for service and repair instructions and parts.

## Flush Pump



1. Follow **Pressure Relief Procedure**, page 7.
2. Disconnect pump inlet line (154) and air lines (57, 60) from flush pump.
3. Disconnect fluid outlet line.
4. Remove four screws (153) that attach flush pump (8) to bracket (152) and remove flush pump.



5. Refer to Merkur Pump Assembly manual 312794 to service or repair flush pump 257463.
6. Follow steps in reverse order to reinstall flush pump.

## Heaters



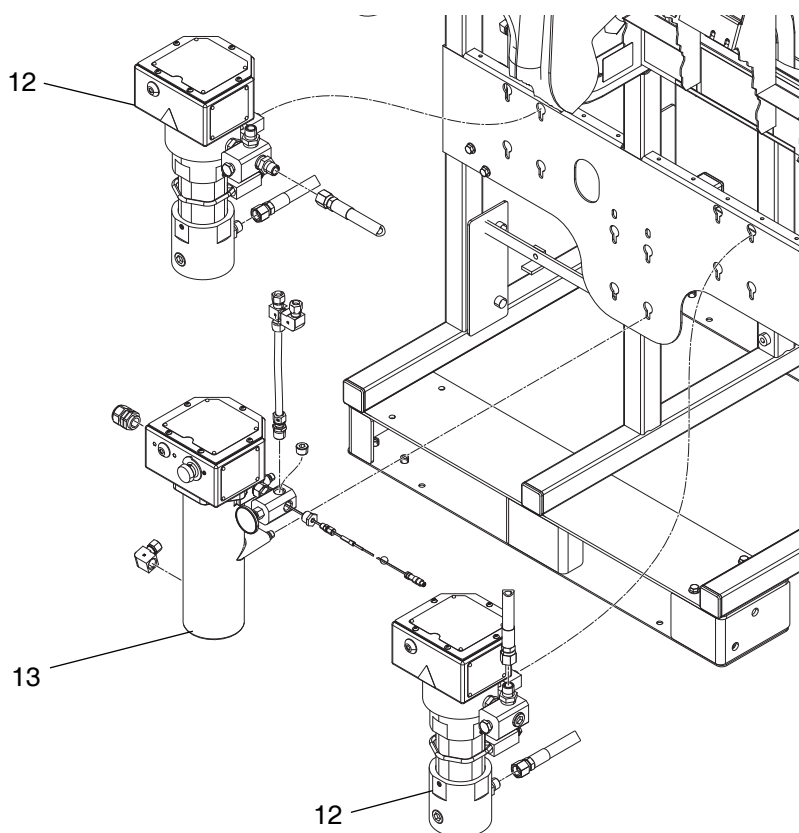
**NOTE:** See applicable heater manual for wiring, repair, and parts information. See **Warnings** on page 4.

### Service and Repair

1. Wait for heaters to cool before beginning to repair the heaters.
2. Follow **Pressure Relief Procedure**, page 7.
3. Turn off power.
4. Disconnect fluid lines and electrical wiring from fluid heater.
5. Refer to heater manual to service or repair heater.
6. Reconnect fluid lines and electrical wiring.

### Replace

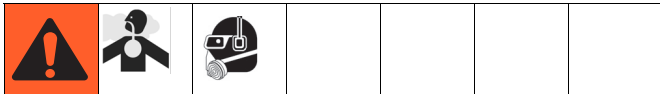
1. Wait for heaters to cool before replacing the heaters.
2. Follow **Pressure Relief Procedure**, page 7.
3. Turn off power.
4. Disconnect fluid lines and electrical wiring from fluid heater.
5. *System Module Heaters:* See FIG. 8. Loosen four mounting screws, lock washers, and plain washers on back of heater (12 or 13) that secure it to the system frame. Slide heater up and remove from mounting plate.
6. *Feed Module Heaters:* See page 57. Remove 2 screws (224) then remove heater (226) from feed module frame.
7. Replace heater. Follow steps in reverse order to install new heater.



**FIG. 8: Heaters on System Module**



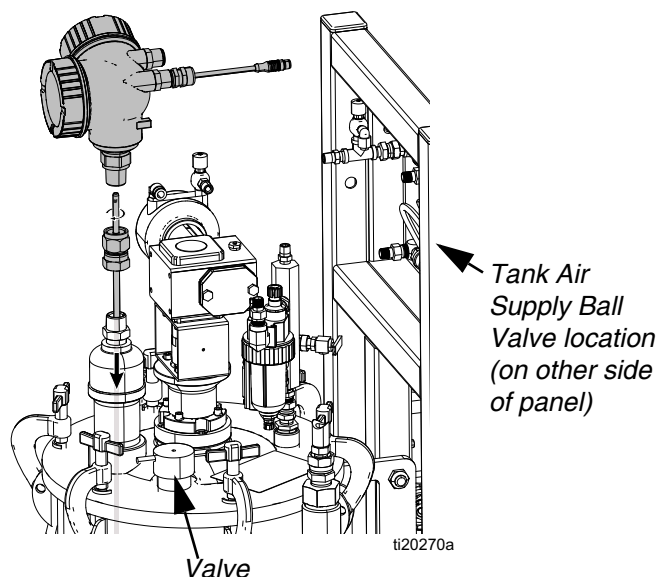
## Replace Radar Level Sensor



**NOTE:** Order radar level sensor kit 24X090. See **Feed Modules** on page 56 for kit contents.

**NOTE:** Tank level sensors changed in 2014. The old sensors were red. The new sensors are blue. The blue sensors can be used as direct replacements for the red sensors.

1. With the tank empty, close the tank air supply ball valve then open the valve on the tank lid to de-pressurize the tank. See FIG. 9.



**FIG. 9: Level Sensor Installation**

2. Disconnect cable at the bottom of the feed module.

**NOTE:** Always use the new cable supplied with the sensor. It has different connections than the old sensor.

3. Disconnect 3/4 in. union that holds the level sensor on top of the tank.
4. Pull the old sensor straight up out of the tank.
5. Remove plugs from new sensor and discard plugs. Move fittings from old sensor to new sensor.
6. If the sensor rod was removed for shipping, apply blue thread-lock to the threads in the end of the rod.

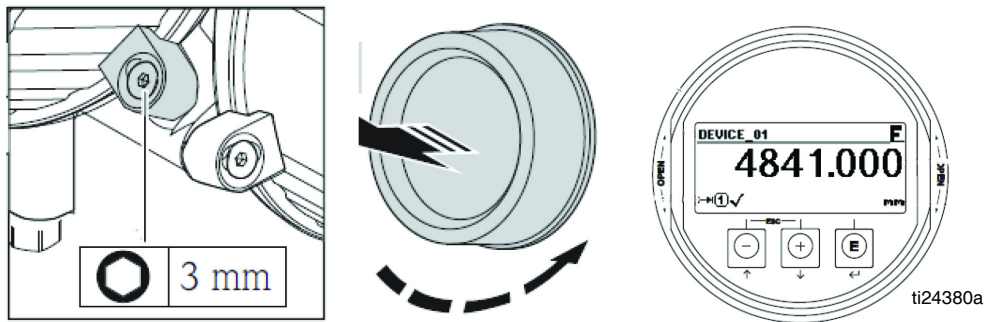
7. Feed the rod into the sensor head and screw the threaded end into the sensor head.
8. Use a wrench to hold the 3/8 in. flats on the sensor rod.
9. Tighten to approximately 25 - 30 in-lb (2.8 - 3.4 N•m). Do not over-tighten.
10. Reconnect sensor cable.
11. See **Set Up a New Radar Level Sensor**, page 29.



## Set Up a New Radar Level Sensor

Level sensors need to have three settings setup after installing on the tank of the PFP machine. The tank must be empty, or the level needs to be at least below the bottom of the installed probe with the tank cover closed.

1. Open the sensor head cover over the display:
  - a. Loosen the securing clamp with an Allen wrench (if clamp is present).
  - b. Unscrew the round cover and pull away.

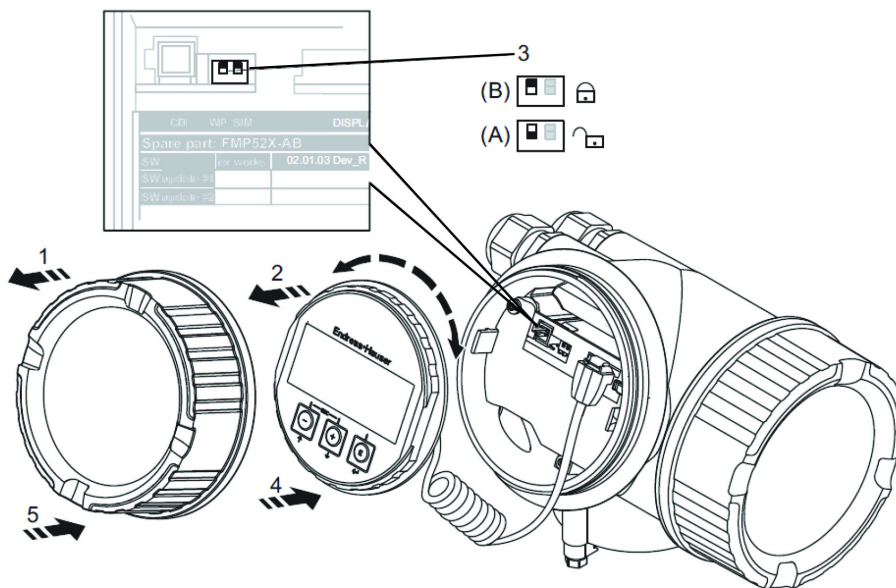


Use the operating keys to navigate within the operating menu and to select options from a list.

| Key | Meaning                                                                                                                                                                                                                                     |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | <b>“Minus” Key</b> <ul style="list-style-type: none"> <li>In a selection list, this key will move the selection bar upward.</li> <li>In an input matrix, this key will move the selection bar backward.</li> </ul>                          |
|     | <b>“Plus” Key</b> <ul style="list-style-type: none"> <li>In a selection list, this key will move the selection bar downward.</li> <li>In an input matrix, this key will move the selection bar forward.</li> </ul>                          |
|     | <b>“Enter” Key</b> <ul style="list-style-type: none"> <li>Opens the marked sub-menu or parameter.</li> <li>Confirms a changed parameter value.</li> </ul>                                                                                   |
|     | <b>“Escape” Key combination (press keys simultaneously)</b> <ul style="list-style-type: none"> <li>Closes a parameter without accepting the changes.</li> <li>Quits the current menu layer and returns to the next higher layer.</li> </ul> |

2. Turn power on the machine. Set **EMPTY CAL**, then **FULL CAL**, then do a mapping of the Empty Tank.
3. Set **EMPTY CAL** to .939 meters:
  - a. Press **E**, then **+**, **+**, to get to **Set Up**. Then press **E** to get to **EMPTY CAL**, then press **E**.
  - b. Press **+** until decimal point (.) appears, then press **E**.
  - c. Press **+** until 9 appears, then press **E**.
  - d. Press **+** until 3 appears, then press **E**.
  - e. Press **+** until 9 appears, then press **E**.
  - f. Press and hold **E** until the hourglass appears, then release.

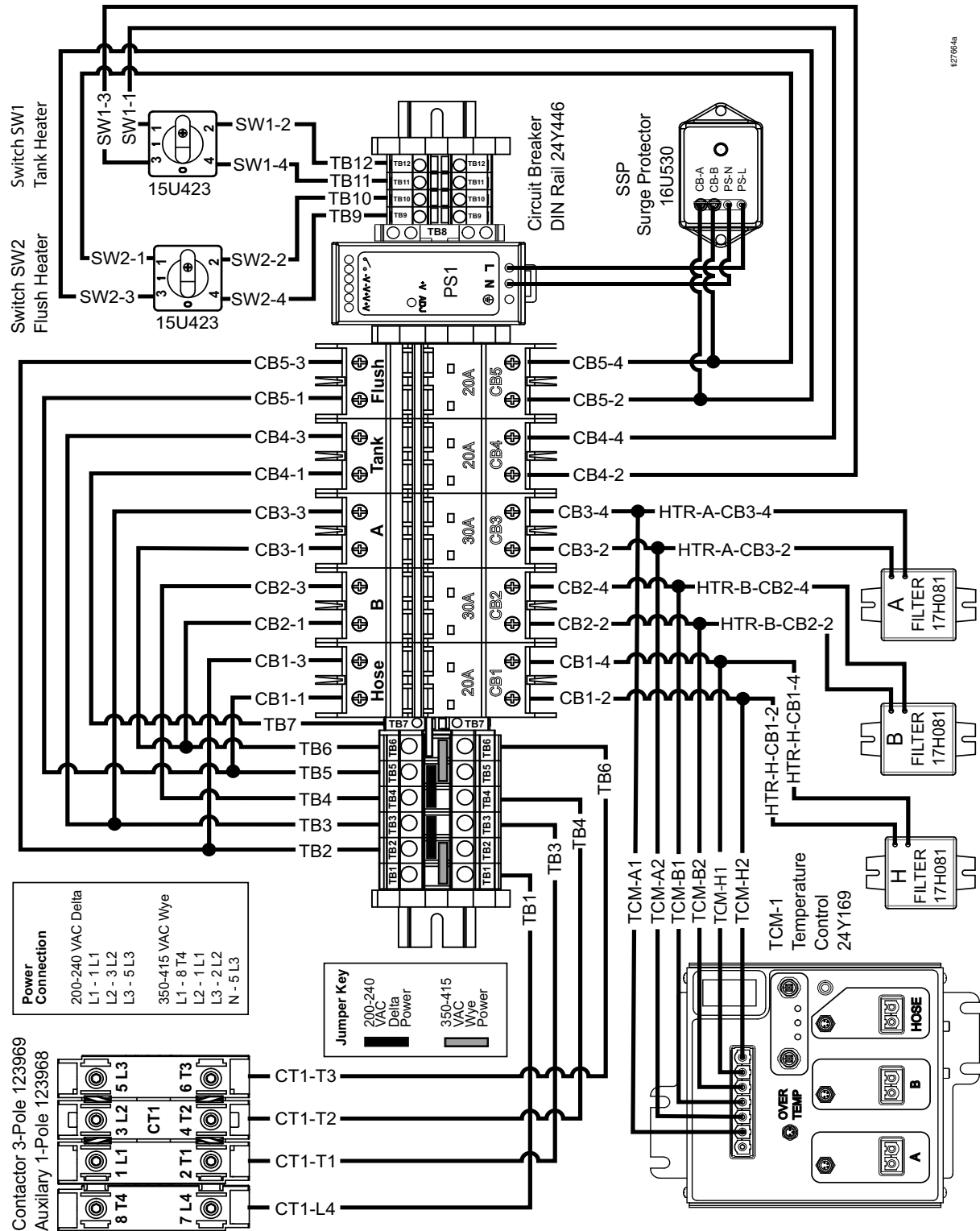
4. Set **FULL CAL** to .691 meters.
  - a. Press **+** to get to **FULL CAL**, then press **E**.
  - b. Press **+** until decimal point (.) appears, then press **E**.
  - c. Press **+** until 6 appears, then press **E**.
  - d. Press **+** until 9 appears, then press **E**.
  - e. Press **+** until 1 appears, then press **E**.
  - f. Press and hold **E** until the hourglass appears, then release.
5. Map **EMPTY TANK**.
  - a. Press **+** to get to **MAPPING**, then press **E**.
  - b. Press **E** to get to **CONFIRM DISTANCE**.
  - c. Press **+** until **TANK EMPTY** appears, then press **E**.
  - d. Press **+** under the check mark to confirm, **END OF SEQUENCE** will appear. Press and hold **E** until the hourglass appears, then release.
  - e. You are now finished. Press **+** and **-** together until the hourglass appears, then release.
6. The transmitter display should show nothing in the tank. Check the level display on the PFP machine control. It should also show the tank as empty.
7. These settings can now be locked from display control so they will not be inadvertently changed.
8. Set display to lock ON:
  - a. Turn display counter-clockwise to release it as shown below (2).
  - b. Set the dip switch to the lock position as shown below (3).
  - c. Replace display (4).
  - d. Replace screw on lid (5).
  - e. Engage cover securing clamp.



# Electrical Schematics

## Non-Hazardous Location Schematic

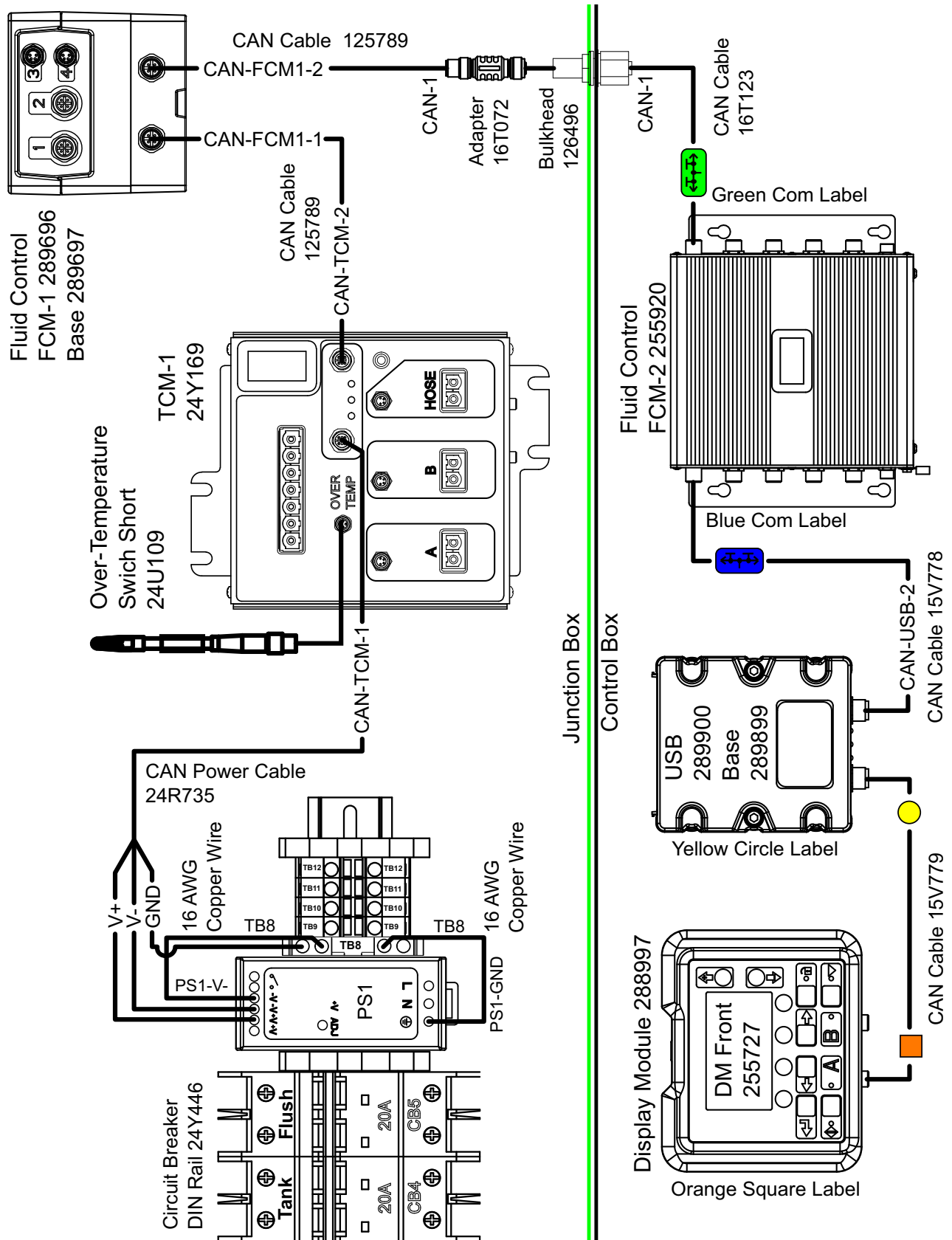
### AC Power Schematic



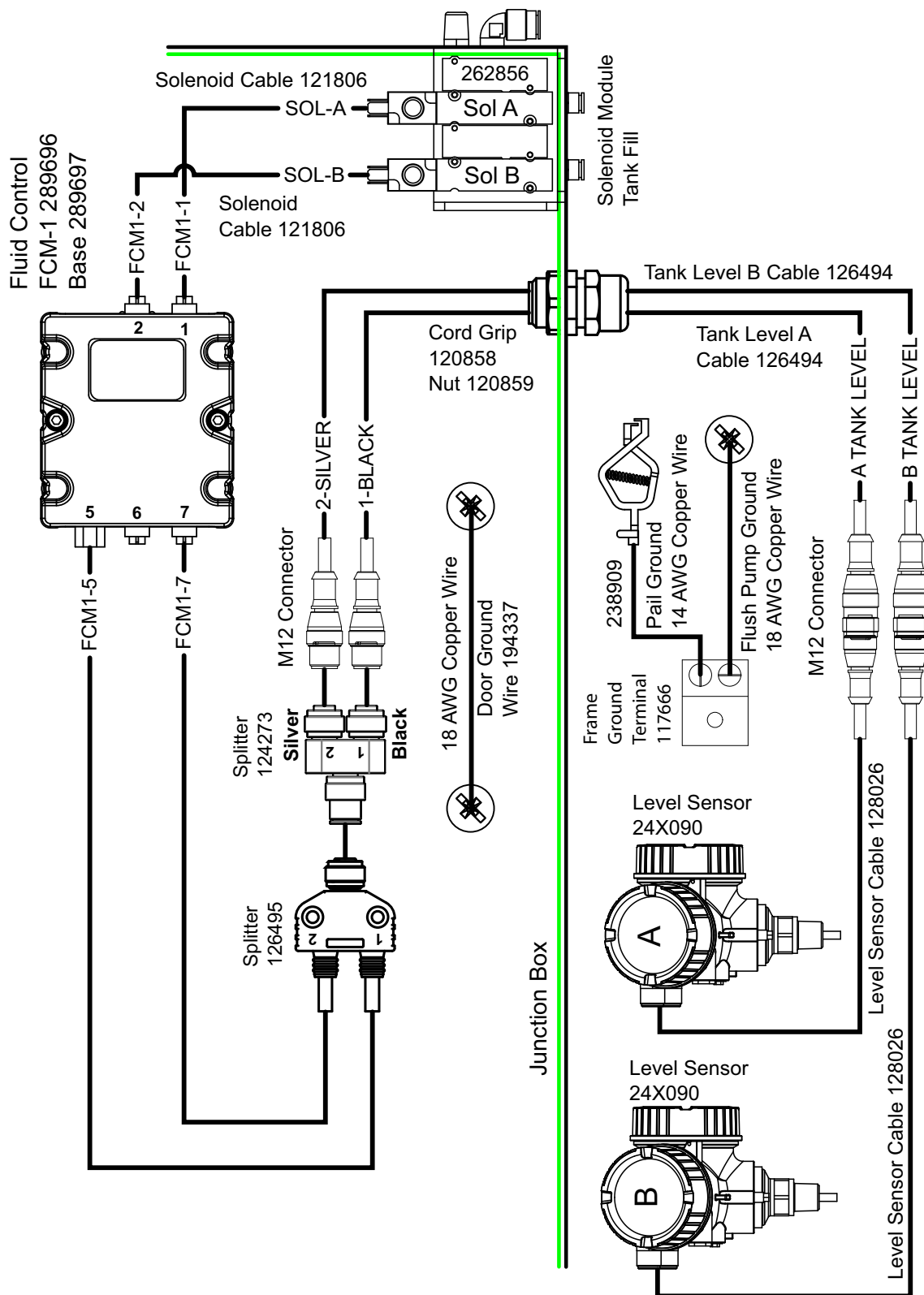
127664a



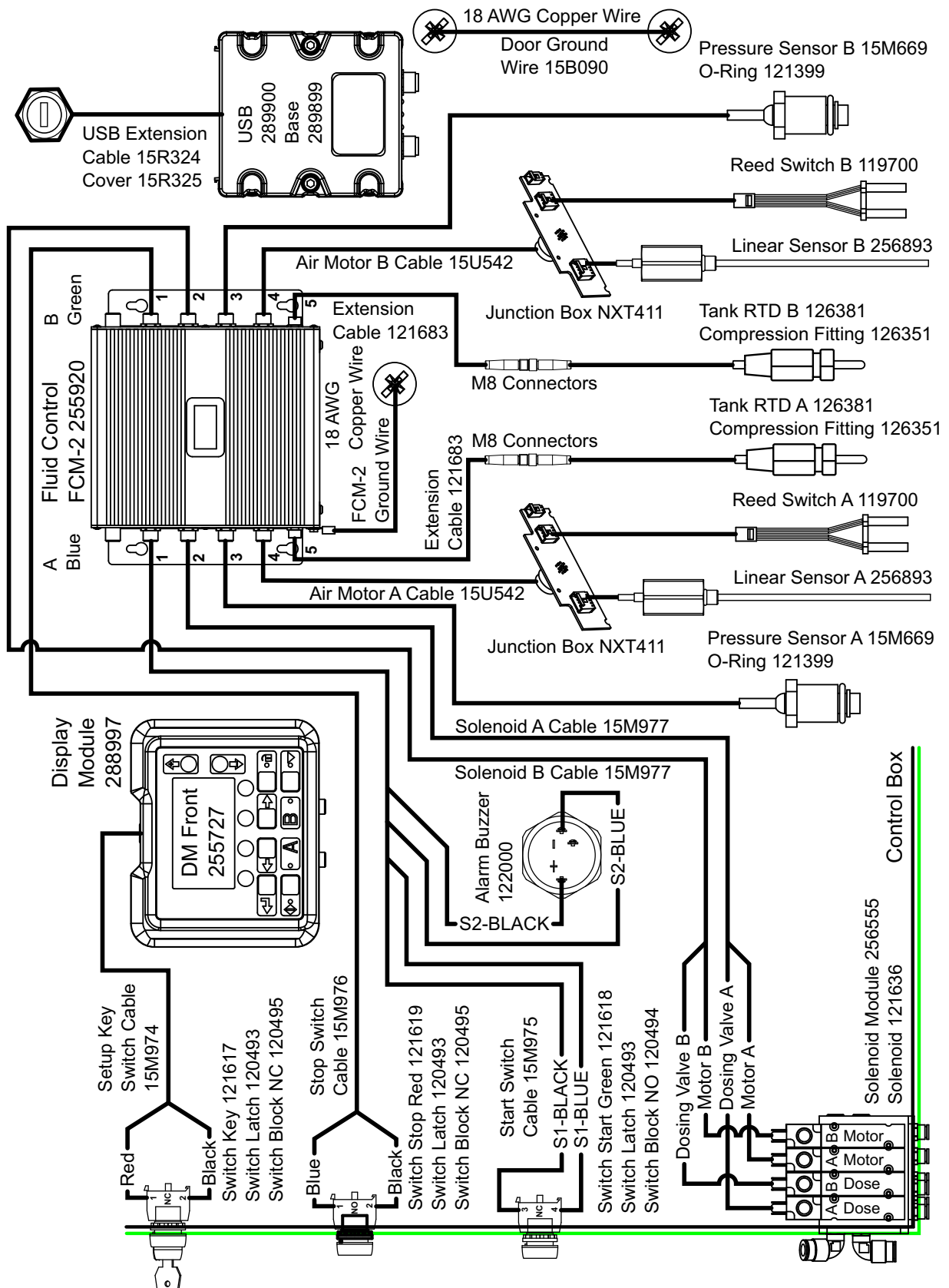
# CAN Network Schematic



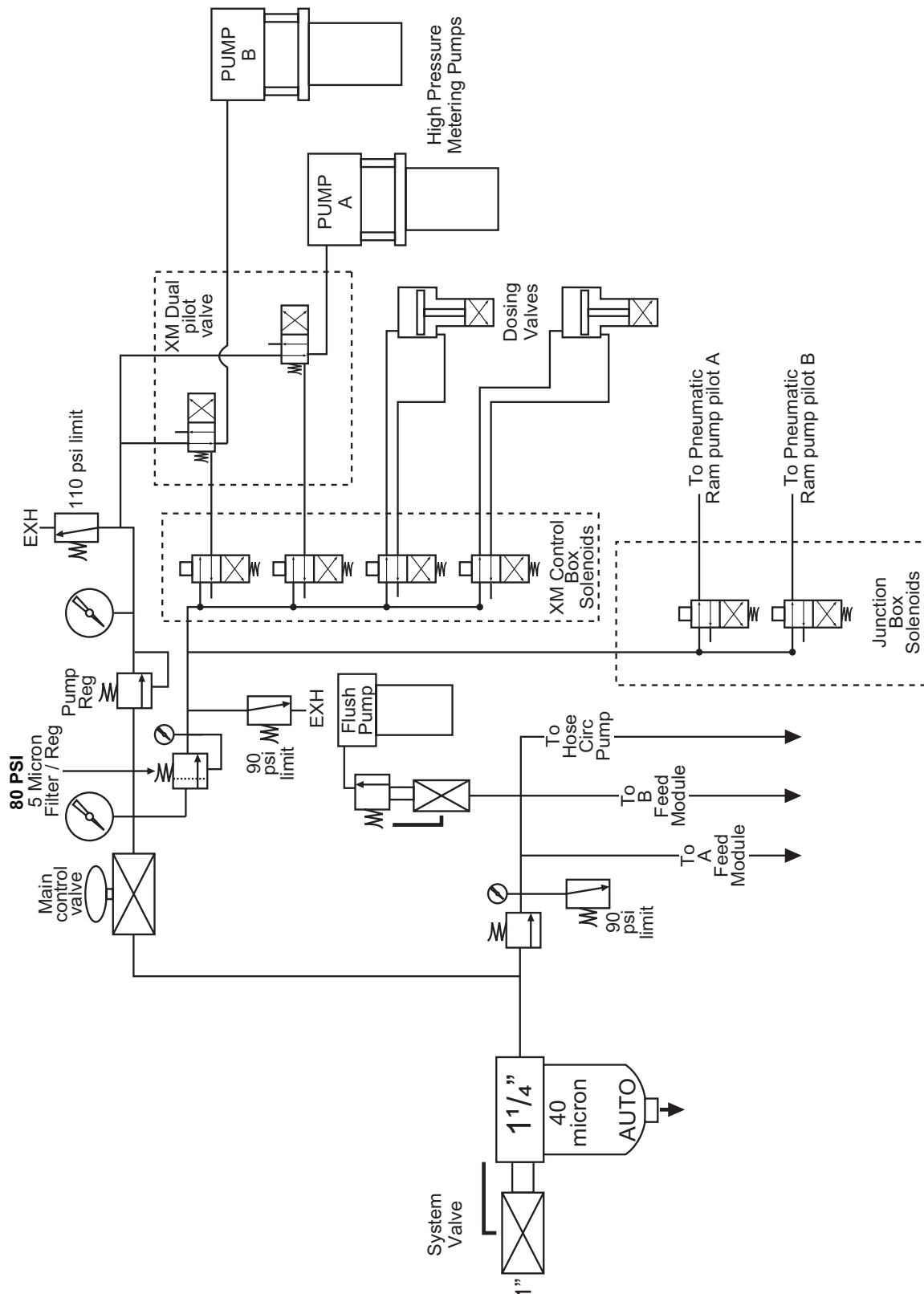
# Sensor Schematic Junction Box



## Sensors Schematic Control Box

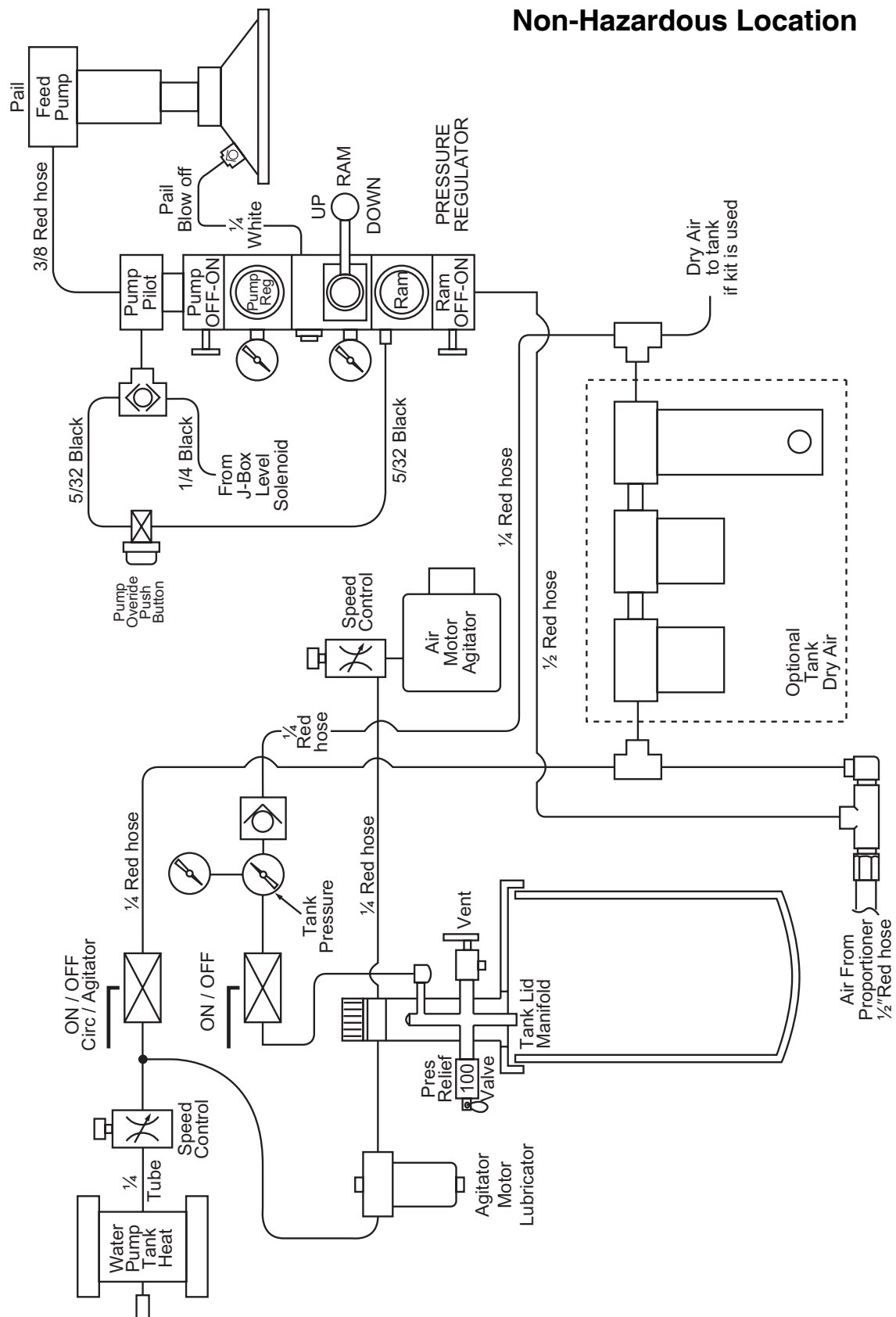


## Non-Hazardous XM PFP Air Logic Schematic



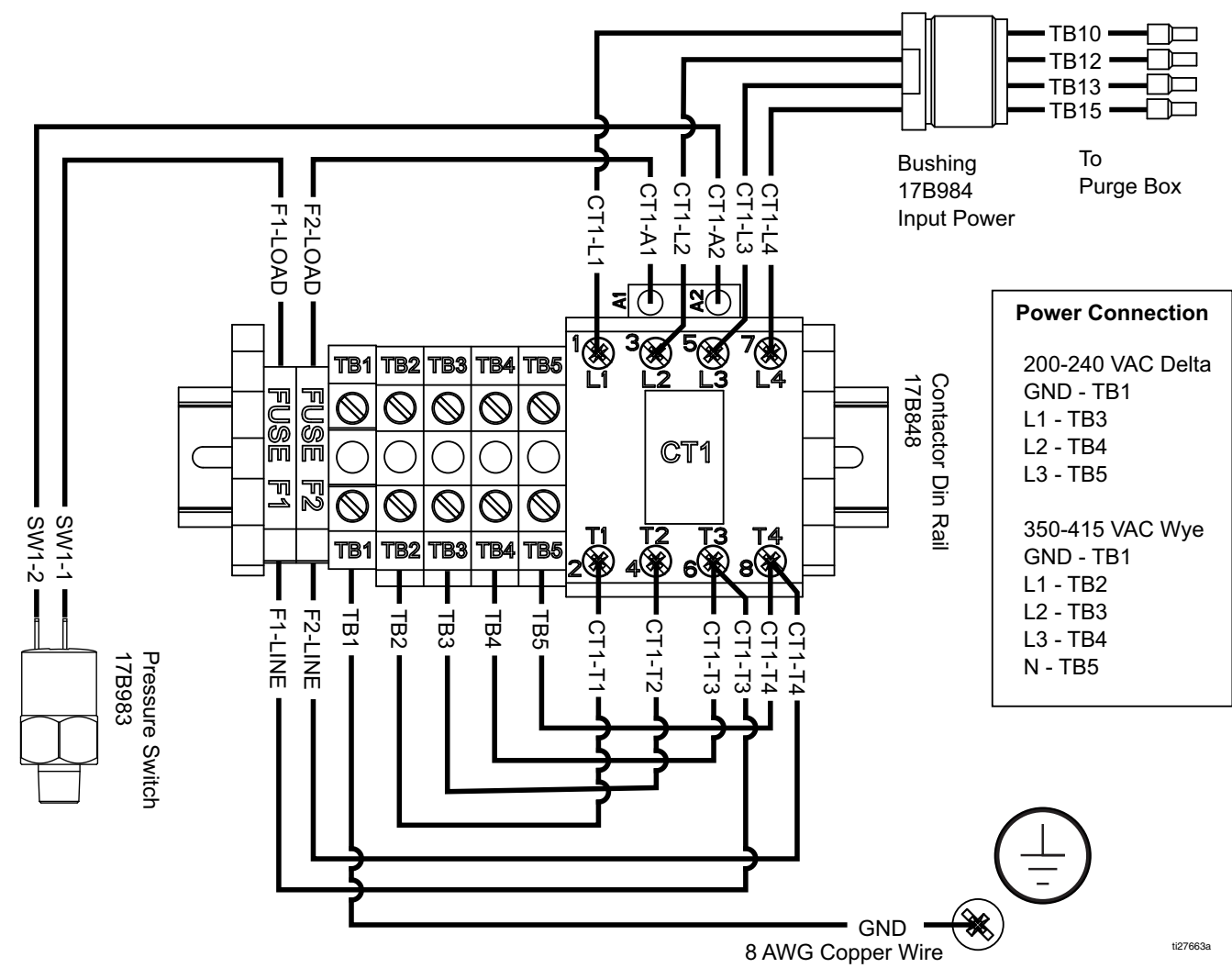


## Feed Module Air Controls Schematic

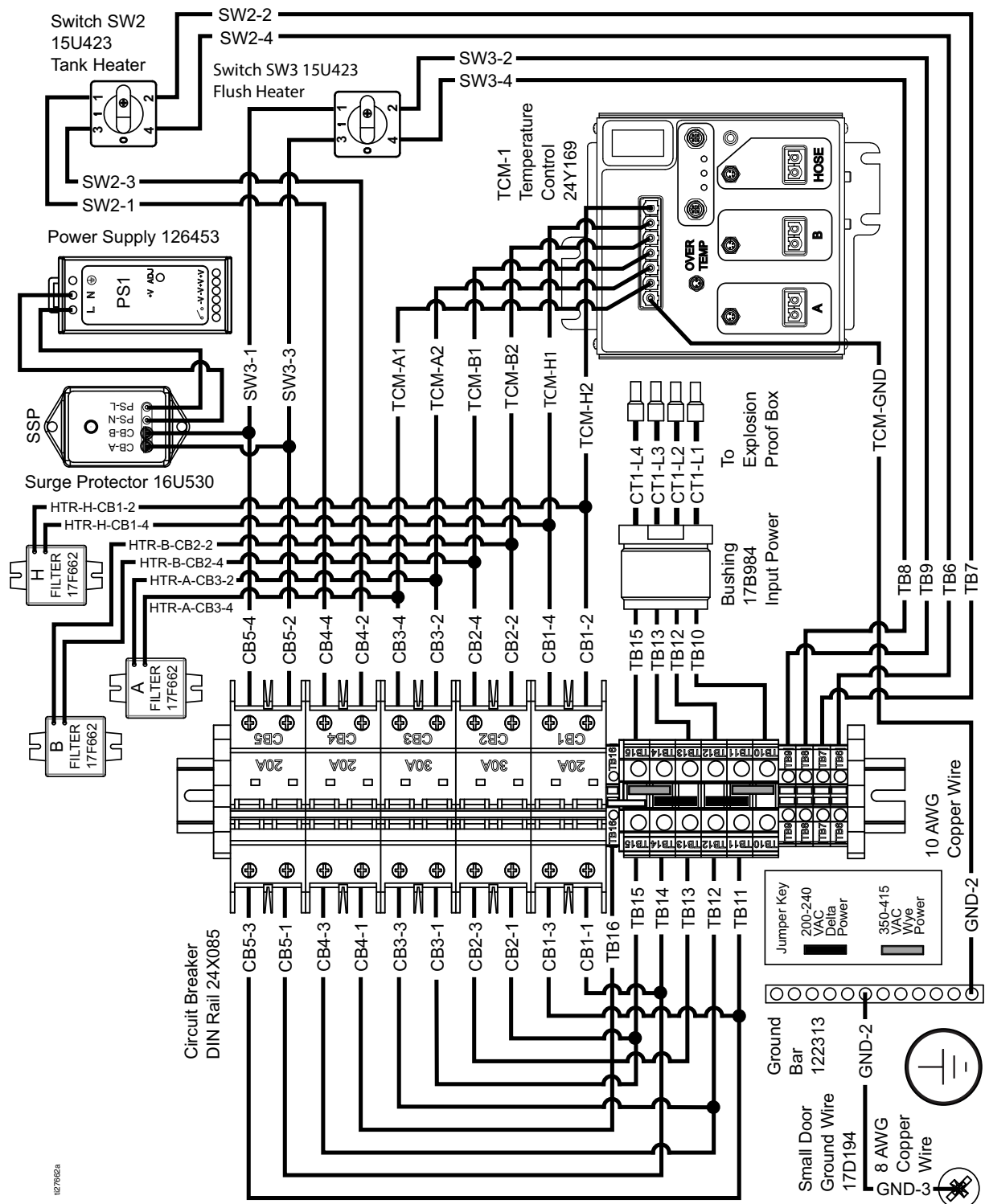


# Hazardous Location Schematics

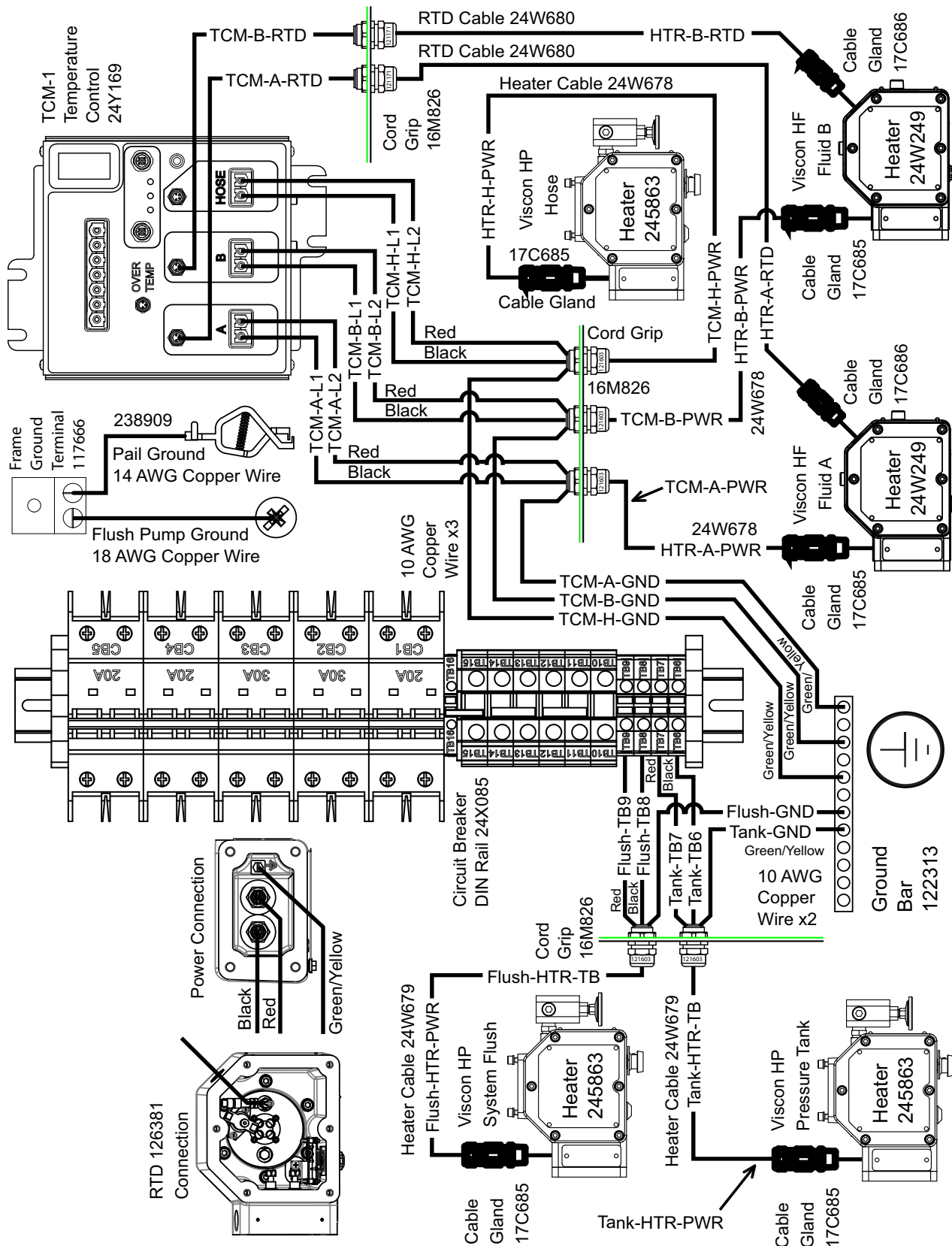
## AC Power Schematic Explosion Proof Box



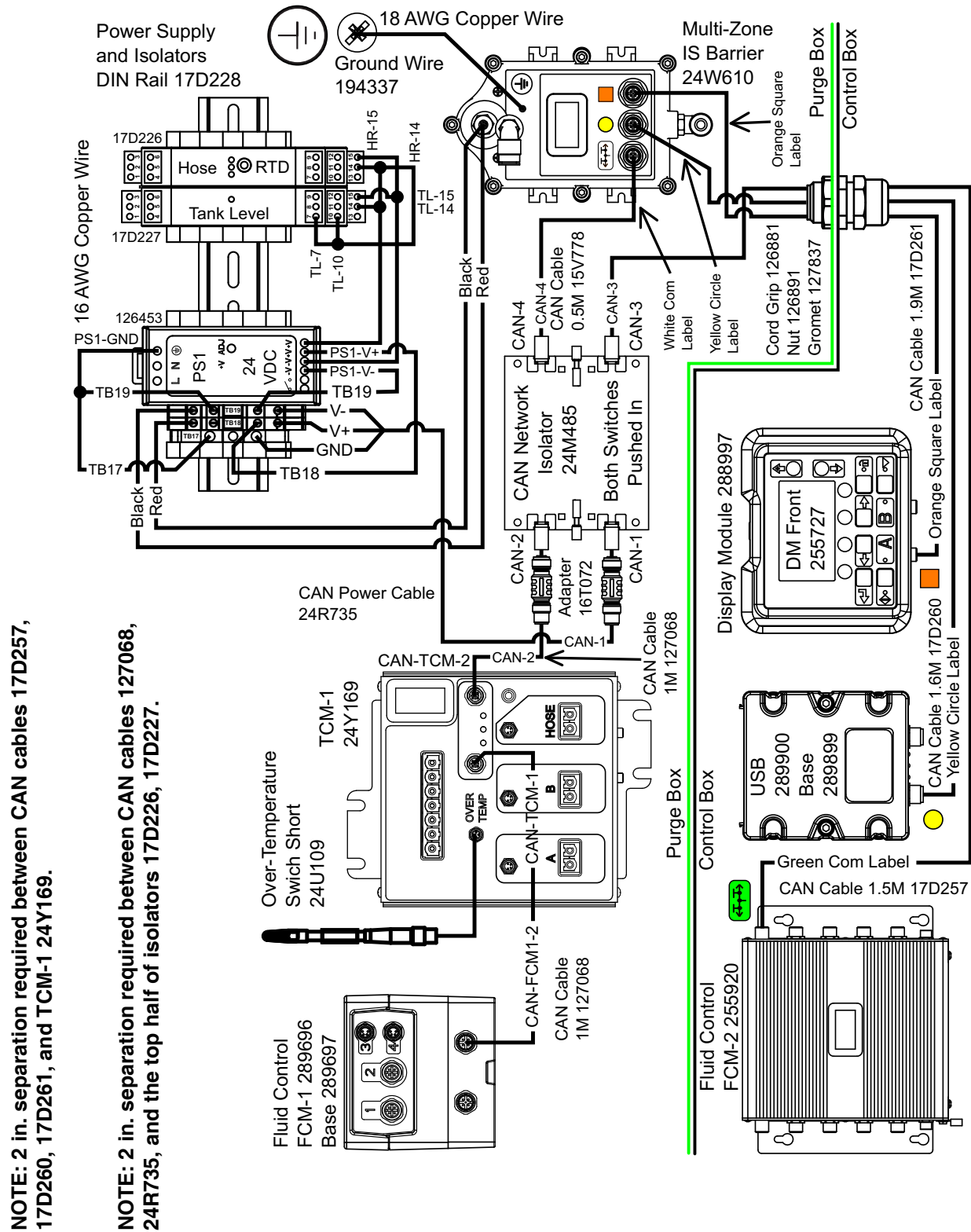
## AC Power Schematic Purge Box



# Heater Schematic Purge Box

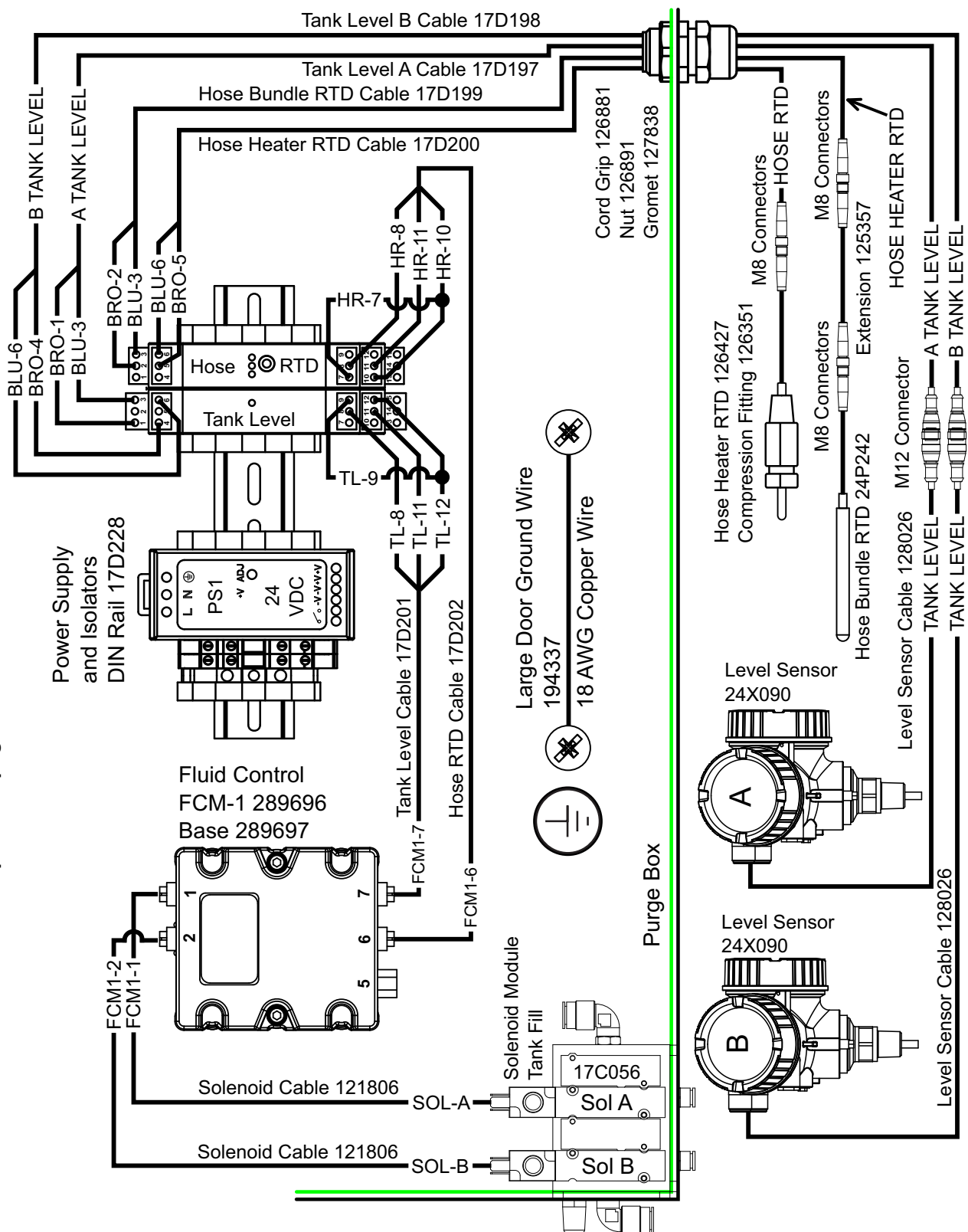


## CAN Network and DC Power Schematic

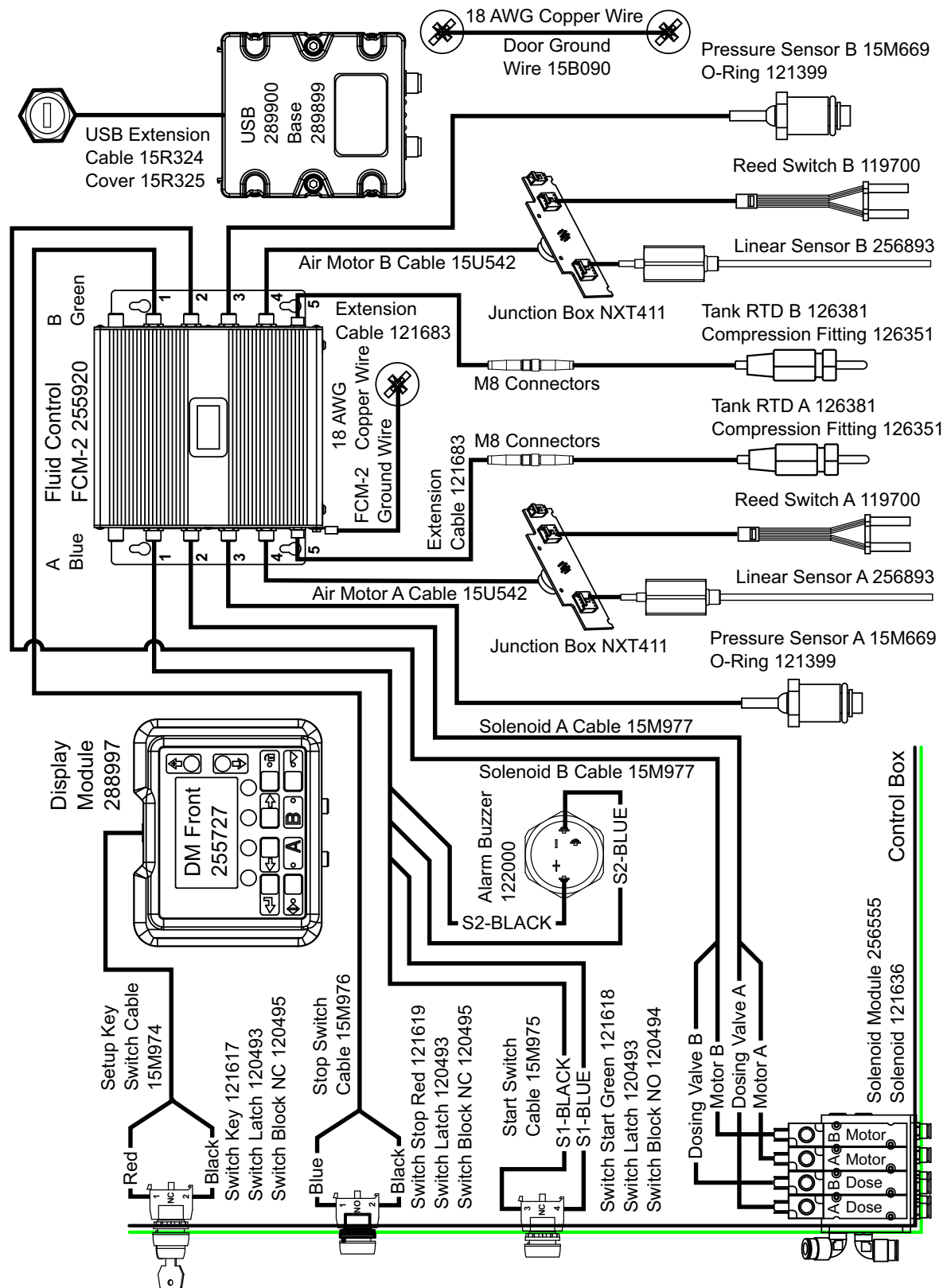


## Sensors Schematic Purge Box

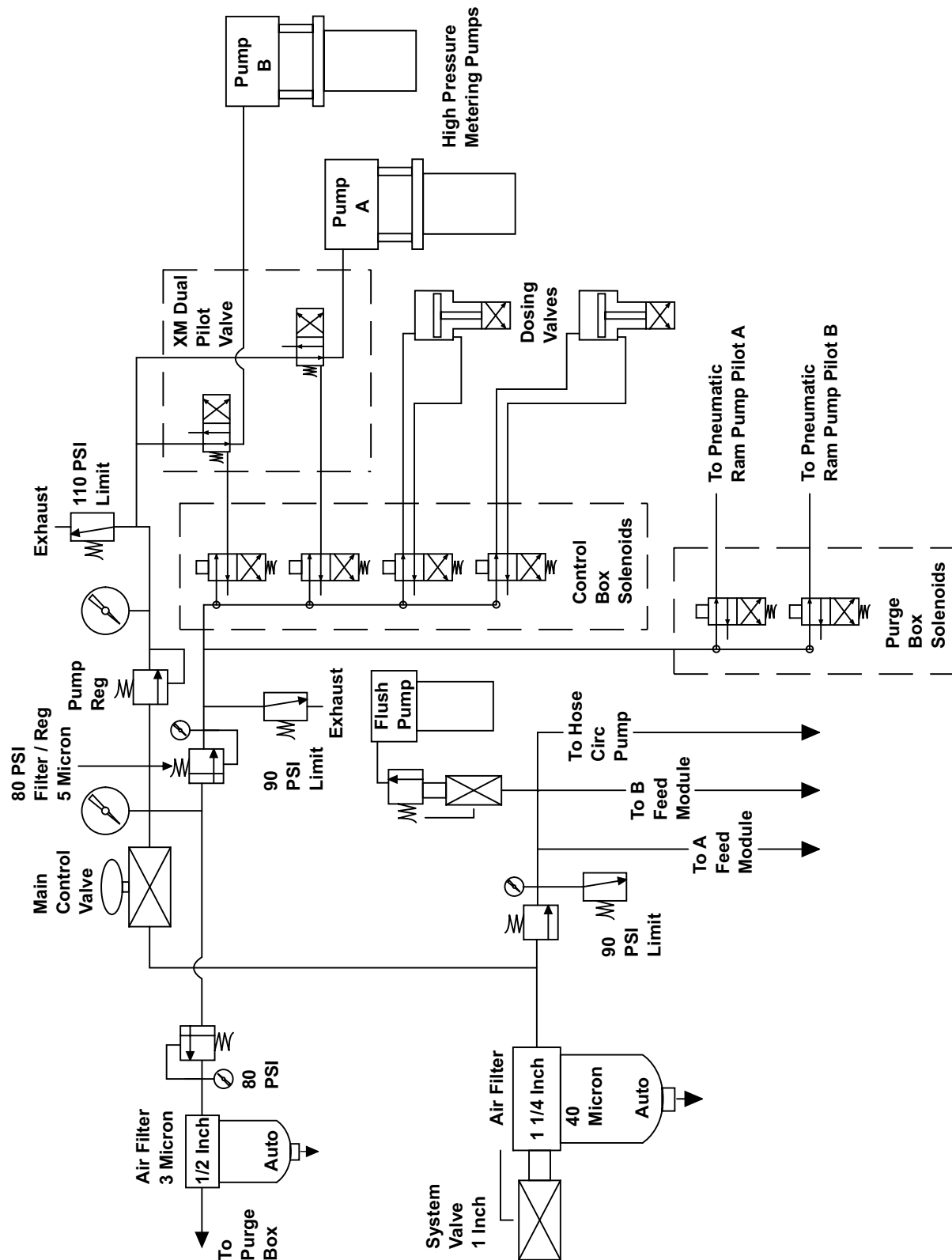
NOTE: 2 in. separation required between sensor cables 17D201, 17D202 and CAN network isolator 24M485 on previous page.



## Sensors Schematic Control Box



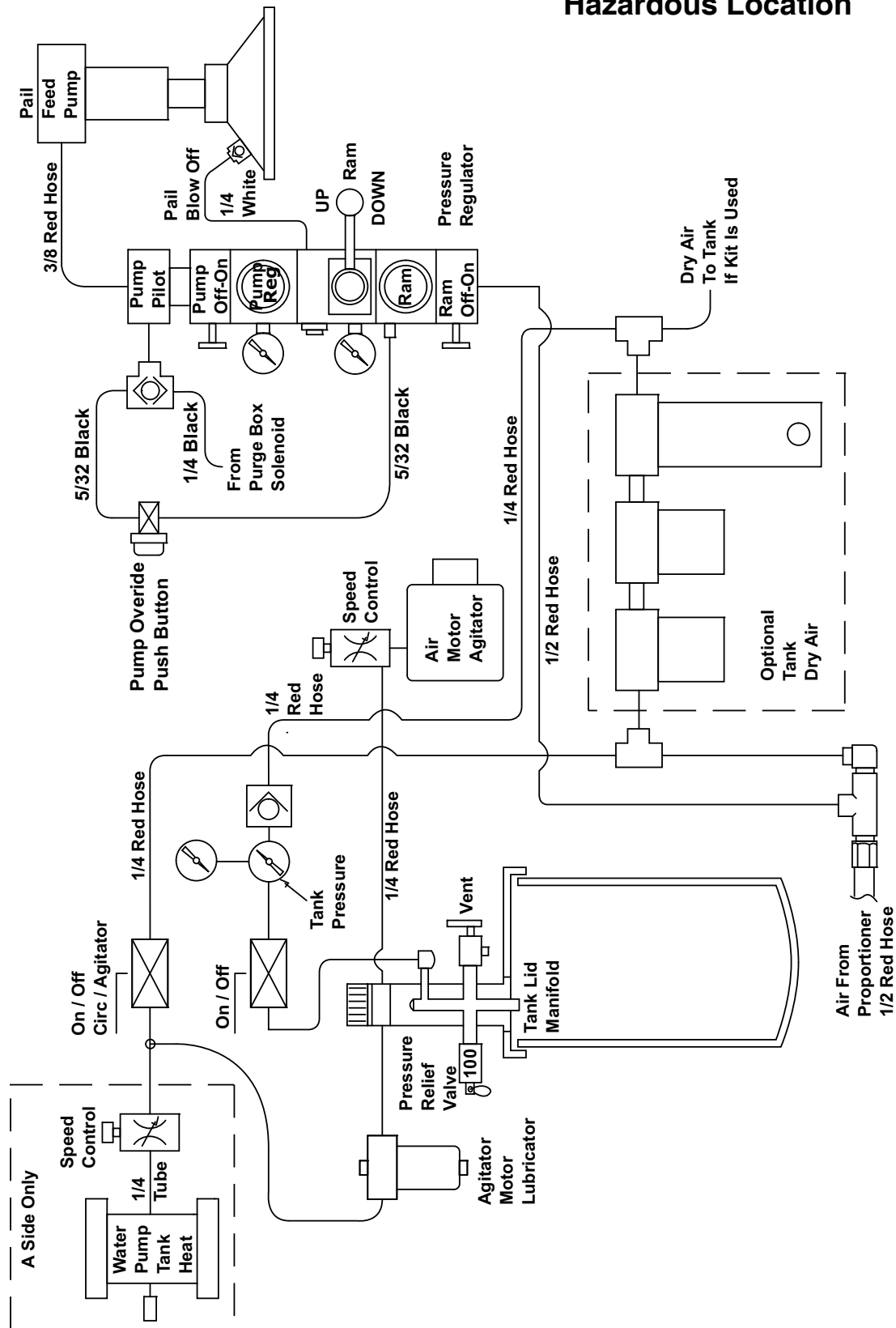
# Hazardous XM PFP Air Logic Schematic



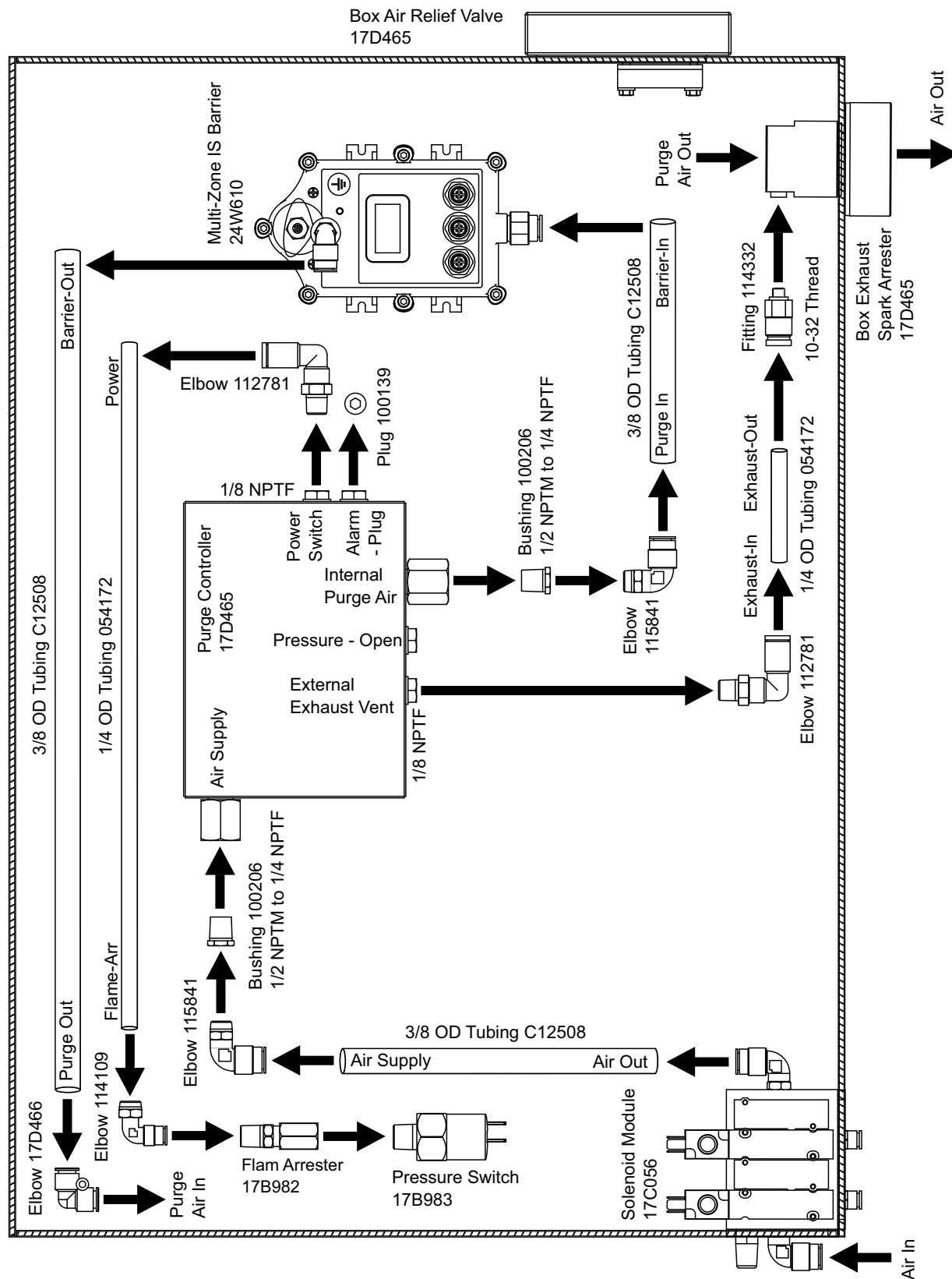


# Feed Module Air Controls Schematic

**Hazardous Location**



# Hazardous Location Purge Box Air Controls Schematic



# Parts

| System | Location      | Ratio Range  | Item and Quantity  |                  |                          |                    |                              |
|--------|---------------|--------------|--------------------|------------------|--------------------------|--------------------|------------------------------|
|        |               |              | (1)<br>Base System | (2)<br>Feed Skid | (2a)<br>Feed Module      | (3)<br>Hose Bundle | Included Accessories         |
| 262869 | Non-Hazardous | 1.5:1 to 4:1 | 262878             | 24P202           | 24Y097 (A)<br>24Y098 (B) | 16T121             |                              |
| 24W626 |               | 1:1 to 1.5:1 |                    |                  | 24Y097 (A)<br>24Y098 (B) | 16T122             |                              |
| 262943 | Hazardous     | 1.5:1 to 4:1 | 262941             | 24W987           | --- (NFS)<br>24Y098 (B)  | 16T121             | 24X113<br>Ex Hot Water Flush |
| 262945 |               | 1:1 to 1.5:1 |                    |                  | --- (NFS)<br>24Y098 (B)  | 16T122             |                              |

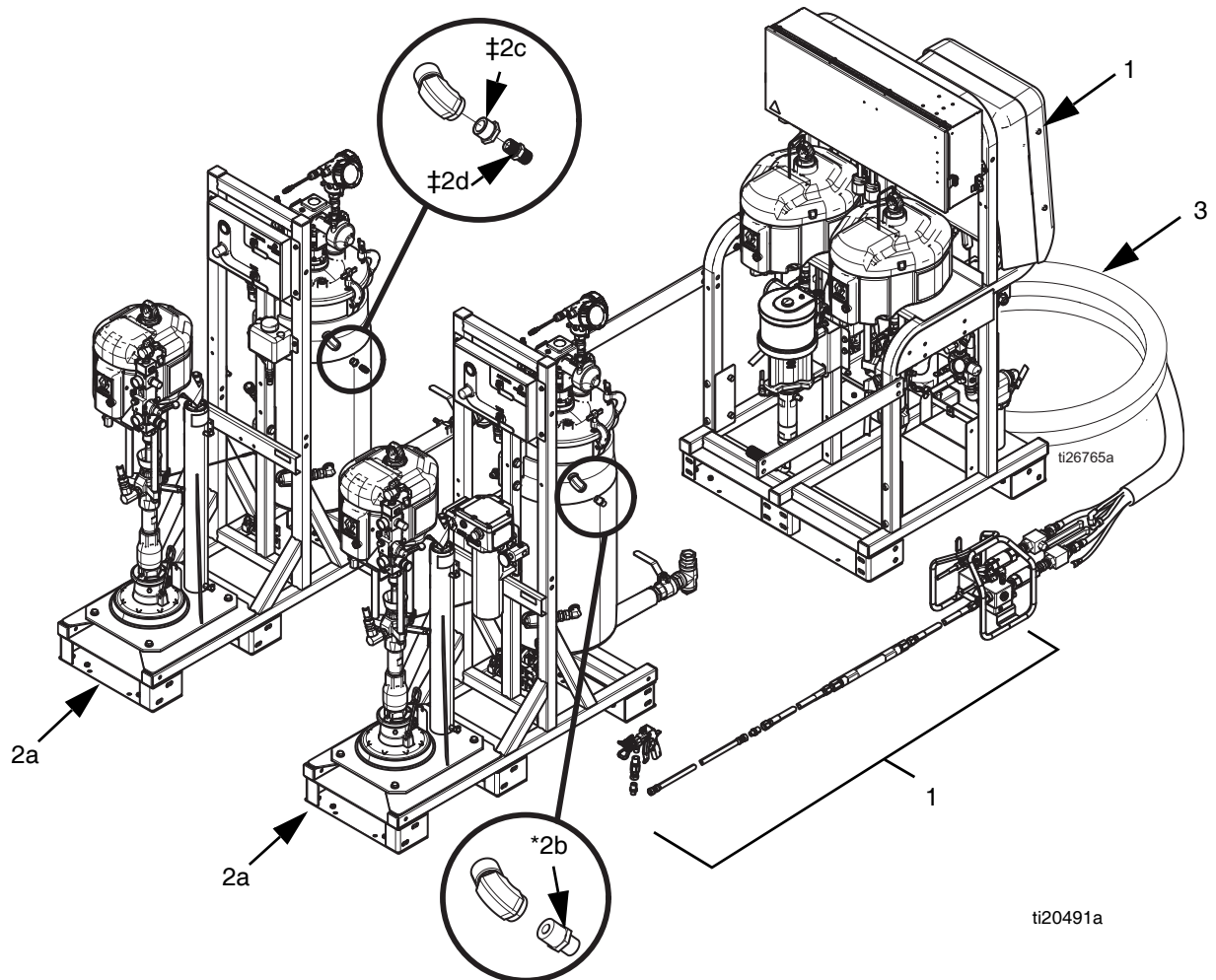
| Ref. | Part   | Description               | Qty. |
|------|--------|---------------------------|------|
| 2b*  | C20461 | NIPPLE, reducing          | 1    |
| 2c‡  | 100505 | BUSHING                   | 1    |
| 2d‡  | 156849 | NIPPLE                    | 1    |
| 2f◆  | 15U654 | LABEL, A/B Identification | 1    |
| 2g◆  | 061134 | HOSE, nylon               | 2.5  |
| 2h◆  | ---    | CABLE TIE                 | 8    |

◆ Not shown.

✕ Not included.

**NOTE:** All machines are set up for 1/2" ID A and 3/8" ID B circulation return hoses. All machines come with a kit to convert to 1/2" A and 1/2" B return hoses for materials with very high viscosity B material.

--- Not for sale.

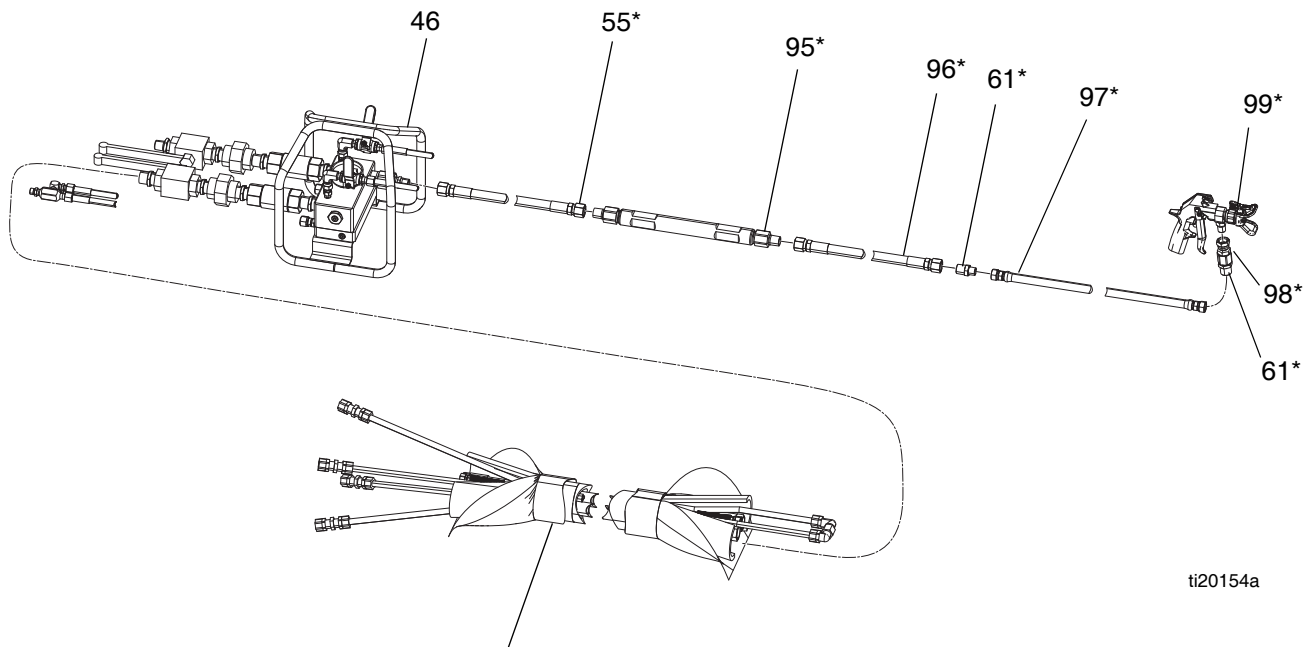


## XM PFP System Subassemblies

Non-Hazardous Location Base System (262878)

Hazardous Location Base System (262941)

Page 1 of 5



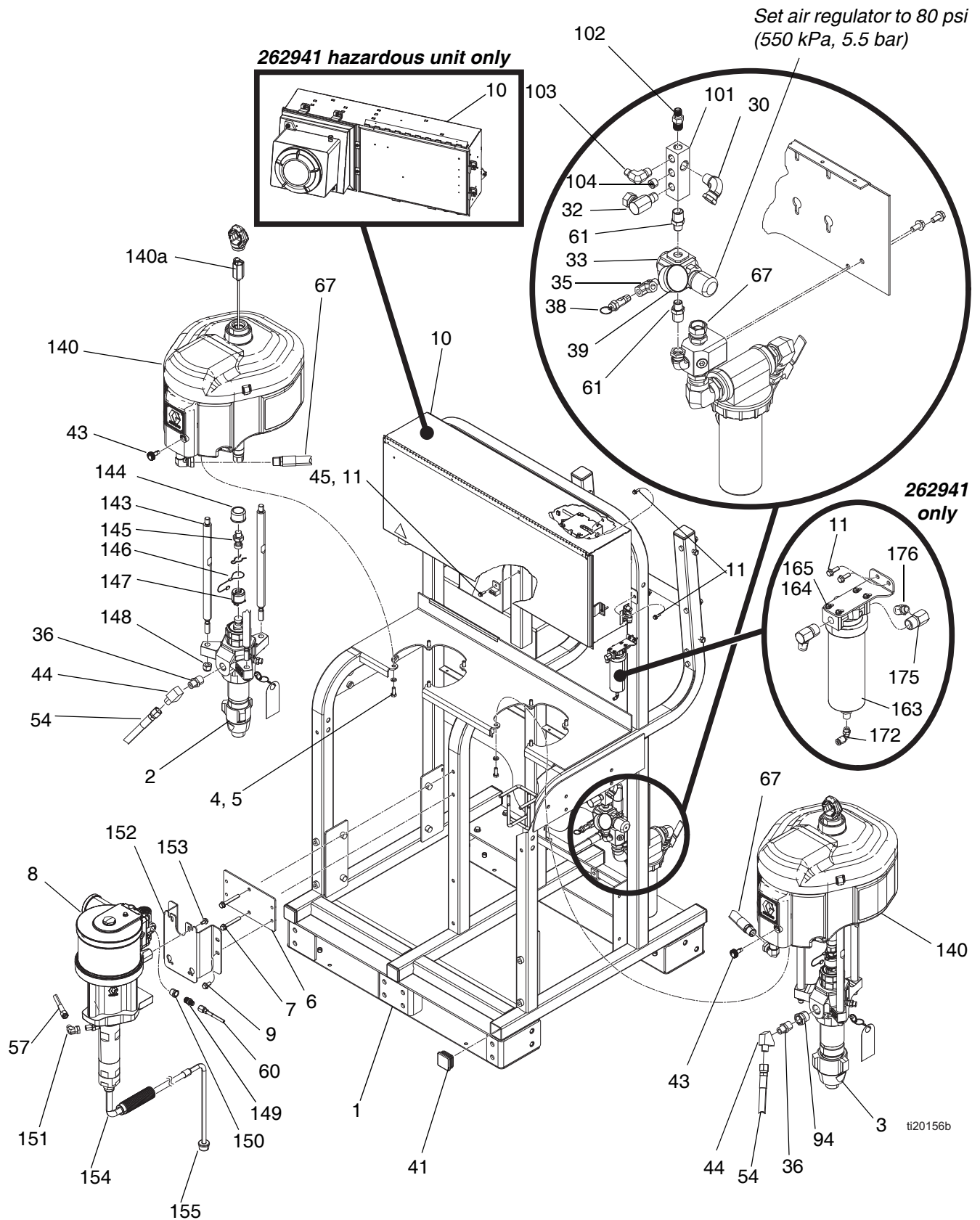
*Heated Hose Bundle 16T121 (3/4 x 1/2) included with assemblies 262869 and 262943.*

*Heated Hose Bundle 16T122 (3/4 x 3/4) included with assembly 262945 and 24W626.*

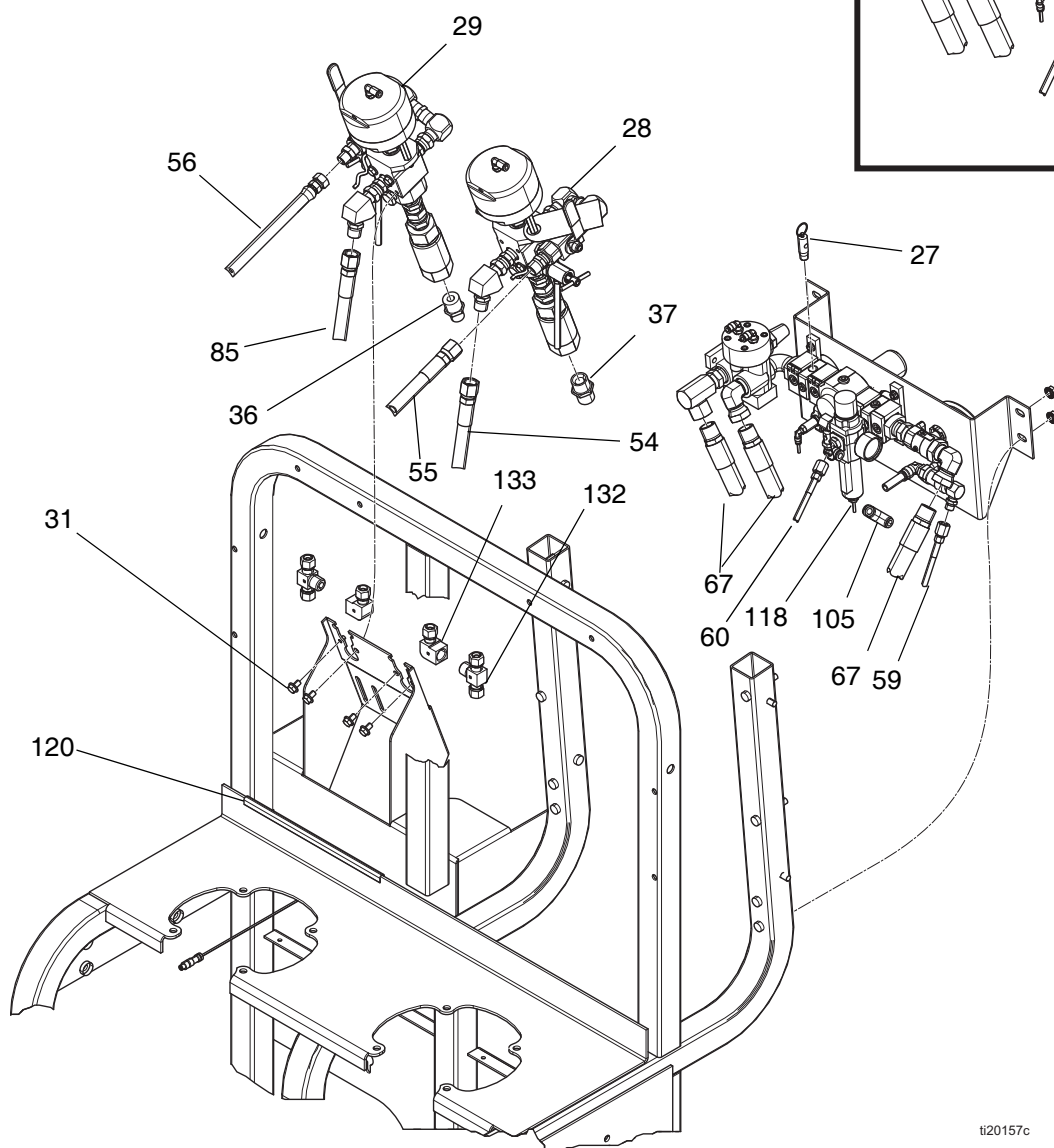
**NOTE:** Apply pipe sealant to all non-swiveling pipe threads.

*\* Mix Replacement Kit 24P833*

Base System (262878, 262941) page 2 of 5

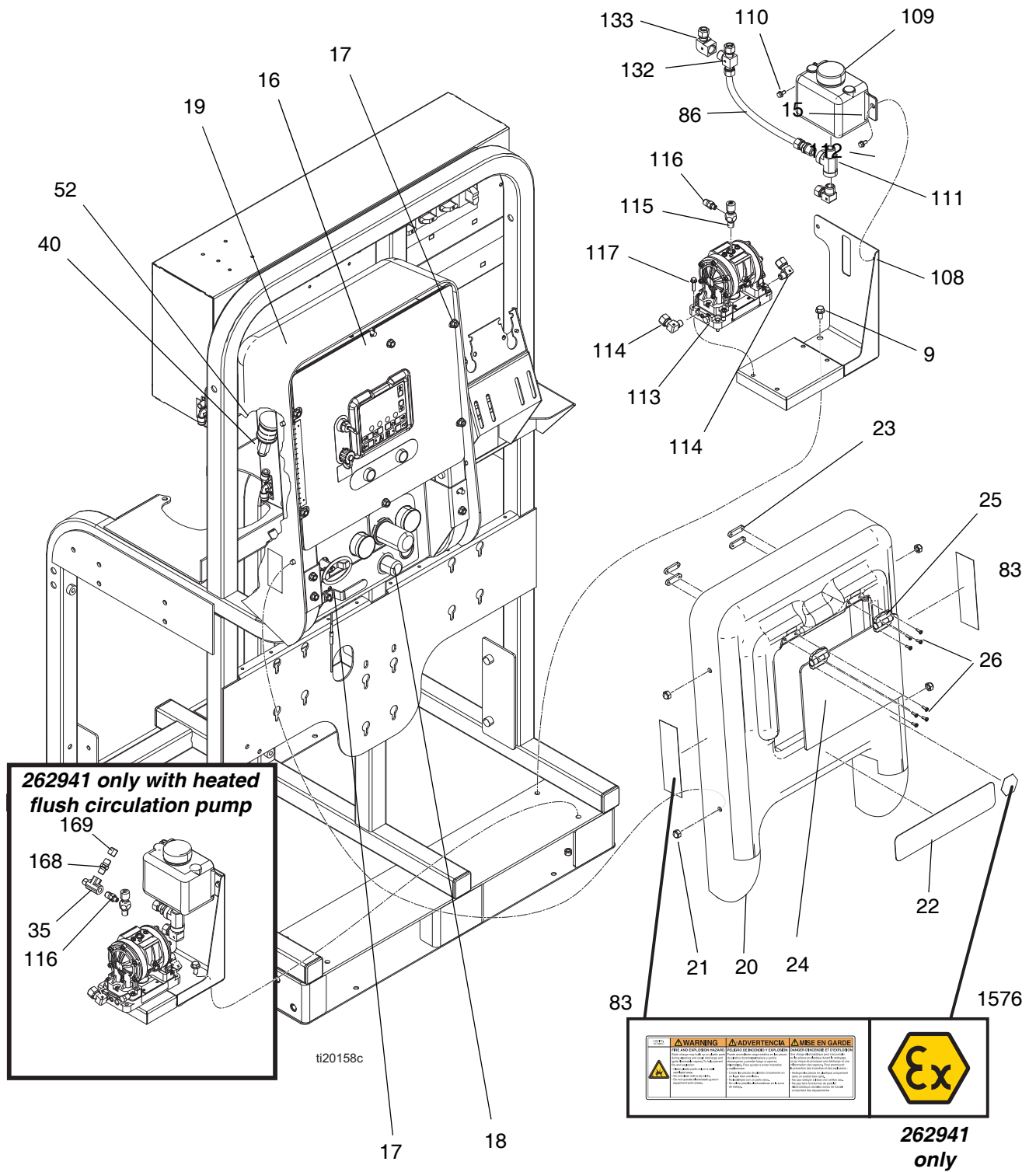


**262941 only**

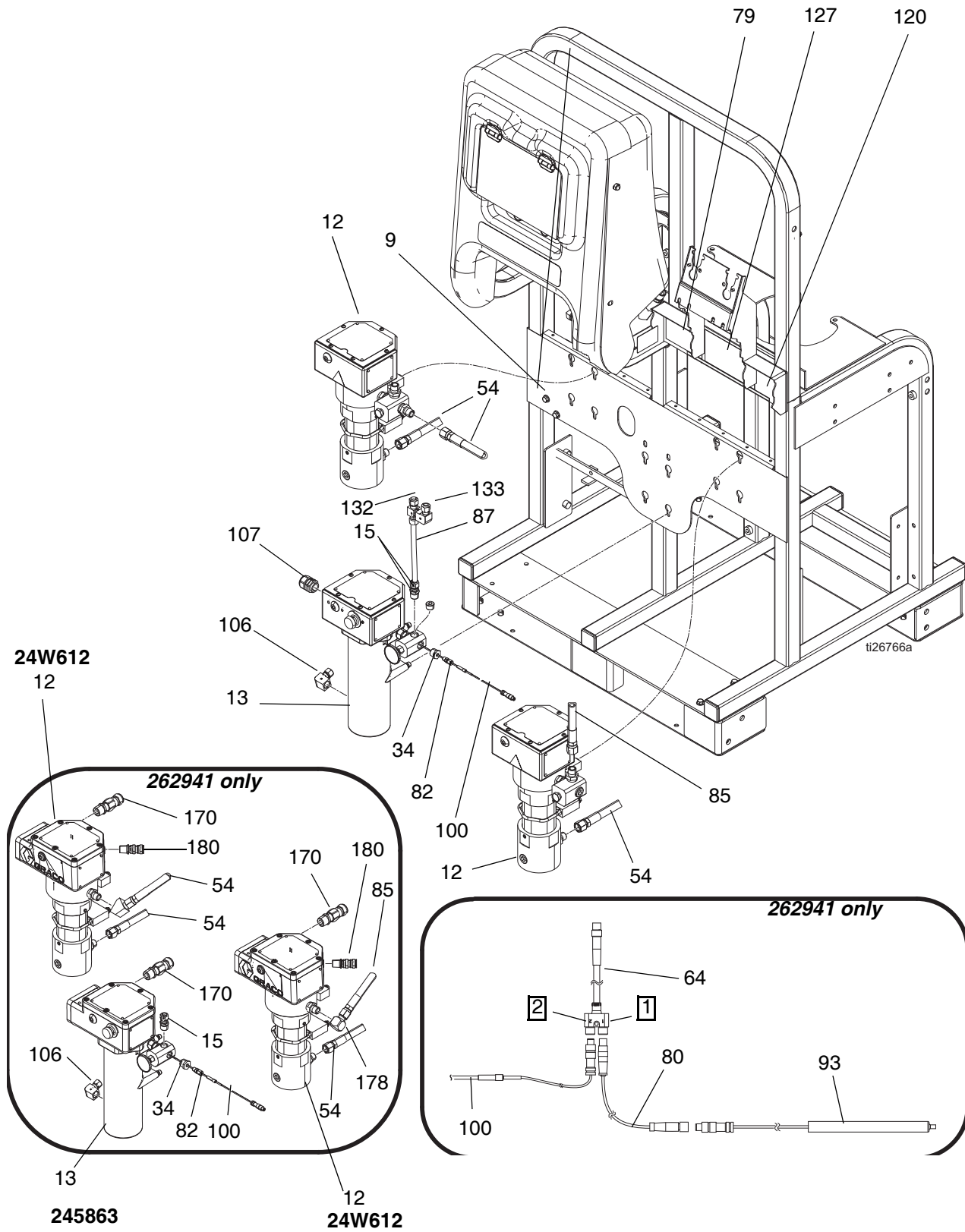


ti20157c

Base System (262878, 262941) page 4 of 5



Base System (262878, 262941) page 5 of 5





**Base System (262878, 262941)**

| Ref | Part   | Description                         | Qty | Ref | Part   | Description                          | Qty  |
|-----|--------|-------------------------------------|-----|-----|--------|--------------------------------------|------|
| 1   | ---    | FRAME                               | 1   | 38  | 116643 | VALVE, safety, relief, air           | 1    |
| 2   | L180C9 | PUMP; B side lower                  | 1   | 39  | 101689 | GAUGE, press, air                    | 1    |
| 3   | L220C9 | PUMP; A side lower                  | 1   | 40  | 121688 | CONNECTOR, 3/8 npti x 3/8 tube       | 1    |
| 4   | 100133 | WASHER, lock, 3/8                   | 8   |     |        | ptc                                  |      |
| 5   | 100101 | SCREW, cap, hex head                | 8   | 41  | 115313 | PLUG, tube                           | 8    |
| 6   | 256169 | PLATE, flush pump                   | 1   | 42  | 160327 | FITTING, union adapter, 90           | 2    |
| 7   | 121488 | SCREW, hex head, flanged            | 2   |     |        | degree                               |      |
| 8   | W30CAS | PUMP, solvent, 6.0 in, 75 cc; see   | 1   | 43  | 15J277 | CONTROL, de-ice, assembly            | 2    |
|     |        | 312794                              |     | 44  | 15M987 | FITTING, elbow, 60 degree            | 2    |
| 9   | 112395 | SCREW, cap, flange head             | 8   | 45  | 117666 | TERMINAL, ground                     | 1    |
| 10  | 24Y247 | JUNCTION BOX; see page 69           | 1   | 46  | 262893 | MANIFOLD, mix; see manual            | 1    |
|     | 24W074 | PURGE BOX, explosion proof;         | 1   |     |        | 3A2988                               |      |
|     |        | 262941 only, see page page 62       |     | 47  | ---    | SEALANT, pipe, stainless steel       | 1    |
| 11  | 113796 | SCREW, flanged, hex head            | 6   | 48  | ---    | LUBRICANT, thread                    | 1    |
|     |        | Model 262878                        | 10  | 49  | ---    | SEALANT, anaerobic                   | 1    |
|     |        | Model 262941                        |     | 50  | 206995 | FLUID, TSL, 1 qt.                    | 1    |
| 12  | 262853 | HEATER, Viscon HF                   | 2   | 52  | 108636 | MUFFLER                              | 1    |
|     | 24W612 | HEATER, Viscon HF; 262941 only      | 2   | 53▲ | 15X393 | LABEL, warning, USB, all             | 1    |
| 13  | 245869 | HEATER, Viscon HP                   | 1   |     |        | languages                            |      |
|     | 245863 | HEATER, Viscon HP; 262941 only      | 1   | 54  | H75003 | HOSE, coupled, 7250 psi,             | 3    |
| 14  | 24P899 | FILTER, air, 1-1/4, assembly, page  | 1   |     |        | 0.50 in. ID, 3 ft                    |      |
|     |        | 73                                  |     | 55  | H75004 | HOSE, coupled, 7250 psi,             |      |
| 15  | 126899 | FITTING, compression, straight      | 2   |     |        | 0.50 in. ID, 4 ft                    |      |
| 16  | 255771 | BOX, control, air/electric, page 71 | 1   |     |        | Model 262878                         | 3    |
| 17  | 112958 | NUT, hex, flanged                   | 10  |     |        | Model 262941                         | 3    |
| 18  | 255761 | MODULE, air controls, upper         | 1   | 56  | H73806 | HOSE, coupled, 7250 psi,             | 1    |
| 19  | ---    | COVER, shroud, rear                 | 1   |     |        | 0.375 in. ID, 6 ft                   |      |
| 20  | 256177 | COVER, shroud, front                | 1   |     |        | (Model 262878 only)                  |      |
| 21  | 117623 | NUT, cap, 3/8-16                    | 4   | 57  | H42506 | HOSE, coupled, 4500 psi,             | 1    |
| 22  | ---    | LABEL, XM PFP                       | 1   |     |        | 0.25 in. ID, 6 ft                    |      |
| 23  | 15T567 | NUT, backup plate, hinge            | 4   | 58  | 205418 | HOSE, coupled, air, 1/2 x 6 ft       | 2    |
| 24  | 15T568 | DOOR, control shroud                | 1   | 59  | 16P244 | HOSE, coupled, air, 5/16 x 3 ft      | 2    |
| 25  | 121471 | HINGE, friction, positioning        | 2   | 60  | 248208 | HOSE, coupled, air, 5/16 x 4 ft      | 1    |
| 26  | 112380 | SCREW, mach, pan head               | 8   | 61◆ | 159239 | FITTING, nipple, pipe, reducing      | 4    |
| 27  | 113498 | VALVE, safety, 110 psi              | 1   | 62  | 16A004 | FLASH DRIVE, USB, 2.0                | 1    |
| 28  | ---    | VALVE, ratio control, left; see     | 1   | 63  | 121456 | CONNECTOR, power, male, 3 pin        | 1    |
|     |        | page 74                             |     | 64  | 125806 | CABLE, splitter, M8, 4-pin,          | 1    |
| 29  | ---    | VALVE, ratio control, right; see    | 1   |     |        | female/female/male, 1.5 m            |      |
|     |        | page 74                             |     | 65  | 126511 | CABLE, GCA, M8, 4-pin, 1.5 m,        | 2    |
| 30  | C19024 | FITTING, elbow, swivel              | 1   |     |        | male/female                          |      |
| 31  | 111801 | SCREW, cap, hex head                | 8   | 66  | 16T123 | CABLE, GCA, CAN, male/female,        | 1    |
| 32  | 217430 | FITTING, swivel, union, 90 degree   | 1   |     |        | 1.0 m                                |      |
| 33  | 15T536 | REGULATOR, air, 3/8 npt             | 1   | 67  | 240900 | HOSE, coupled, air, 30 in. x 3/4 in. | 3    |
| 34  | 100329 | BUSHING, pipe                       | 1   | 68  | 054172 | TUBE, nylon, round, black, 1/4 in.   | 26.5 |
| 35  | 116504 | FITTING, tee, run                   | 1   | 69  | 054175 | TUBE, nylon, round, natural,         | 8.5  |
|     |        | Model 262878                        | 1   |     |        | 1/4 in.                              |      |
|     |        | Model 262941                        | 2   | 70  | 551390 | SIGHTGLASS, beaker, graduated        | 10   |
| 36  | C20461 | FITTING, nipple, reducing, hex      | 3   | 71  | ---    | STRAP, tie                           | 20   |
|     |        | Model 262878                        |     | 73  | 238909 | WIRE, grounding assembly             | 1    |
| 37  | 160032 | FITTING, nipple                     | 2   | 74  | C12508 | TUBING, nylon, round, black,         | 4.7  |
|     |        | Model 262878                        |     |     |        | 3/8 in.                              |      |
|     |        |                                     |     | 76  | 109025 | TERMINAL, ring                       | 1    |

| Ref  | Part   | Description                                        | Qty | Ref  | Part   | Description                                            | Qty |
|------|--------|----------------------------------------------------|-----|------|--------|--------------------------------------------------------|-----|
| 79   | 16P856 | LABEL, codes, alerts; all languages                | 1   | 120  | 115901 | TRIM, edge, protection                                 | 2   |
| 80   | 125357 | CABLE, M8, 4-pin, male/female, 1 meter             | 1   | 121  | 16T171 | STRAP, frame connector                                 | 2   |
| 81   | 126494 | CABLE, M12, 5p, 4-wire with drain                  | 2   | 122  | 100679 | SCREW, cap, hex head                                   | 8   |
| 82   | 126351 | FITTING, compression, thermocouple                 | 1   | 123  | 115211 | SCREW, cap, hex head                                   | 2   |
| 83▲  | 15T468 | LABEL, warning                                     | 2   | 124  | ---    | SCREW, hex head with serrated face flange base, 1/2-13 | 8   |
| 85◆  | H75002 | HOSE, coupled, 7250 psi, 0.5 in. (12 mm) ID, 2 ft  | 1   | 125  | 109570 | WASHER, plain                                          | 20  |
| 86   | ---    | TUBE, 0.375 in. (9.5mm) ID blue nylon              | 6   | 126  | 112731 | NUT, hex, flanged                                      | 10  |
| 87   | ---    | TUBE, 0.375 in. (12 mm) ID red nylon               | 1.5 | 127▲ | 15W598 | LABEL, warning                                         | 1   |
| 88   | 114601 | CONDUIT, flexible, non-metallic                    | 3.5 | 128  | 15U654 | LABEL, identification, A/B                             | 1   |
| 92   | 15T258 | TOOL, wrench, Xtreme, 145/290                      | 1   | 129  | ---    | FLUID, ethylene glycol/water                           | 2   |
| 93   | 24P242 | SENSOR, RTD, 1k ohm, insulated                     | 1   | 131  | 16F366 | FITTING, 1/4 in. x 1/4 in. push to connect             | 2   |
| 94   | 158586 | FITTING, bushing                                   | 1   | 132  | 126346 | FITTING, tee, tube x tube x nptm                       | 2   |
| 95◆  | 16T316 | MIXER, static, assembly, page 78                   | 1   | 133  | 126345 | FITTING, elbow, tube x nptf                            | 2   |
| 96◆  | H75010 | HOSE, coupled, 7250 psi, 0.50 ID, 10 ft            | 1   | 135  | 121683 | CABLE, M8, 4-pin, male/female, 3 meter                 | 2   |
| 97◆  | H73803 | HOSE, coupled, 7250 psi, 0.375 ID, 3 ft            | 1   | 136  | 122032 | NUT, wire                                              | 2   |
| 98◆  | 24P834 | SWIVEL, straight                                   | 1   | 137  | 15V778 | CABLE, CAN, female-female, 20 in.                      | 1   |
| 99◆  | 262854 | GUN, spray                                         | 1   | 138  | 15V779 | CABLE, CAN, female-female, 34 in.                      | 1   |
| 100  | 126427 | SENSOR, RTD, 1K ohm, 4 pin, 8 in.                  | 1   | 140  | 257055 | MOTOR, 6500 with sensor                                | 2   |
| 101  | 158990 | MANIFOLD, air                                      | 1   | 140a | 256893 | LINEAR SENSOR ASSEMBLY                                 |     |
| 102  | 165198 | FITTING, nipple, reducing                          | 1   | 141  | 100133 | WASHER, lock                                           | 8   |
| 103  | 121858 | FITTING, elbow, 3/8 npte x 1/4 npte                | 1   | 142  | 100101 | SCREW                                                  | 8   |
| 104  | 101754 | PLUG, pipe                                         | 1   | 143  | 257150 | ROD, tie                                               | 6   |
| 105  | 119798 | CONNECTOR, tee, push-tube                          | 1   | 144  | 197340 | COVER, coupler                                         | 2   |
| 106  | 126896 | FITTING, elbow, tube                               | 1   | 145  | 15H392 | ROD, adapter                                           | 2   |
| 107  | 121603 | GRIP, cord, 0.51-0.71, 3/4                         | 1   | 146  | 244820 | CLIP, hairpin lanyard                                  | 2   |
| 108  | 16T745 | BRACKET, water circulation, mount                  | 1   | 147  | 244819 | COUPLING, assembly rod                                 | 2   |
| 109  | 16R871 | BOTTLE, overflow, 1/2npt                           | 1   | 148  | 101712 | NUT, nyloc                                             | 6   |
| 110  | 113161 | SCREW, flange, hex head                            | 2   | 149  | 157350 | ADAPTER, 3/8 x 1/4                                     | 1   |
| 111  | 108126 | FITTING, tee, street                               | 1   | 150  | 100081 | BUSHING                                                | 1   |
| 112  | 126898 | FITTING, elbow                                     | 1   | 151  | 116395 | UNION, 90 degree, 1/4 male x 3/8                       | 1   |
| 113† | 24P835 | PUMP, diaphragm, 205                               | 1   | 152  | 256561 | PLATE, mount, pump                                     | 1   |
| 114  | 126897 | FITTING, elbow                                     | 2   | 153  | 111799 | SCREW, M8 x 1.25 x 16 mm                               | 4   |
| 115  | 206264 | VALVE, needle                                      | 1   | 154  | 256421 | HOSE, siphon                                           | 1   |
| 116  | 151519 | FITTING, nipple, reducing; Model 262878 and 24W648 | 1   | 155  | 181073 | STRAINER, inlet                                        | 1   |
|      | 16D939 | FITTING, nipple, reducing; Model 262941            | 1   | 156  | 24X461 | KIT, circulation, 1:1 fitting                          | 1   |
| 117  | 15R472 | FASTENER, hex head, flanged, 1/4 x 1               | 4   | 157† | 190451 | UNION, adapter                                         | 1   |
| 118  | 054760 | TUBE, polyurethane, round, black                   | 5   | 158† | 162505 | FITTING, union, swivel                                 | 1   |
| 119  | 100028 | WASHER, lock                                       | 1   | 159† | 156823 | FITTING, union, swivel                                 | 1   |
|      |        |                                                    |     | 160† | 116513 | REGULATOR, air                                         | 1   |
|      |        |                                                    |     | 161† | 16T421 | ADAPTER, pipe hex                                      | 1   |
|      |        |                                                    |     | 162† | 112307 | FITTING, street elbow                                  | 1   |
|      |        |                                                    |     | 163† | 234402 | KIT, filter, air                                       | 1   |
|      |        |                                                    |     | 164† | 102360 | WASHER, flat                                           | 4   |
|      |        |                                                    |     | 165† | ---    | SCREW, mach, slot hex washer hd, 10-24 x 1/2"          | 4   |
|      |        |                                                    |     | 166† | 24P834 | SWIVEL, straight, PTFE                                 | 1   |

| Ref  | Part   | Description                         | Qty |
|------|--------|-------------------------------------|-----|
| 167† | ---    | NIPPLE, 3/8 - 1/4 npt x 2.6"        | 1   |
| 168† | 156971 | FITTING, nipple short               | 1   |
| 169† | ---    | FITTING, cap, hex, 1/4 npt(f)       | 1   |
| 170† | 24W678 | CABLE, assembly, armored            | 3   |
| 171† | ---    | BRACKET, air filter                 | 1   |
| 172† | 112698 | ELBOW, male, swivel                 | 1   |
| 173† | 113911 | GAUGE, pressure, air                | 1   |
| 174† | 162453 | FITTING, 1/4 npsm x 1/4 npt         | 1   |
| 175† | 166999 | FITTING, elbow, street, 1/2M x 1/4F | 2   |
| 176† | 122161 | FITTING, air                        | 2   |
| 177† | 115841 | FITTING, elbow                      | 1   |
| 178† | 158683 | FITTING, elbow, 90°                 | 1   |
| 179† | 17D946 | LABEL, cord wrap                    | 1   |
| 180† | 24W680 | CABLE, assembly, armored            | 2   |

--- Not for sale.

▲ Replacement Danger and Warning labels, tags and cards are available at no cost.

† 262941 only.

◆ Included in mix line and gun kit 24P833.

## 24X461 1:1 Fitting Kit

Use to convert the B side recirculation parts on 262941 for 1:1 ratio materials. See manual 334939 for detailed instructions.

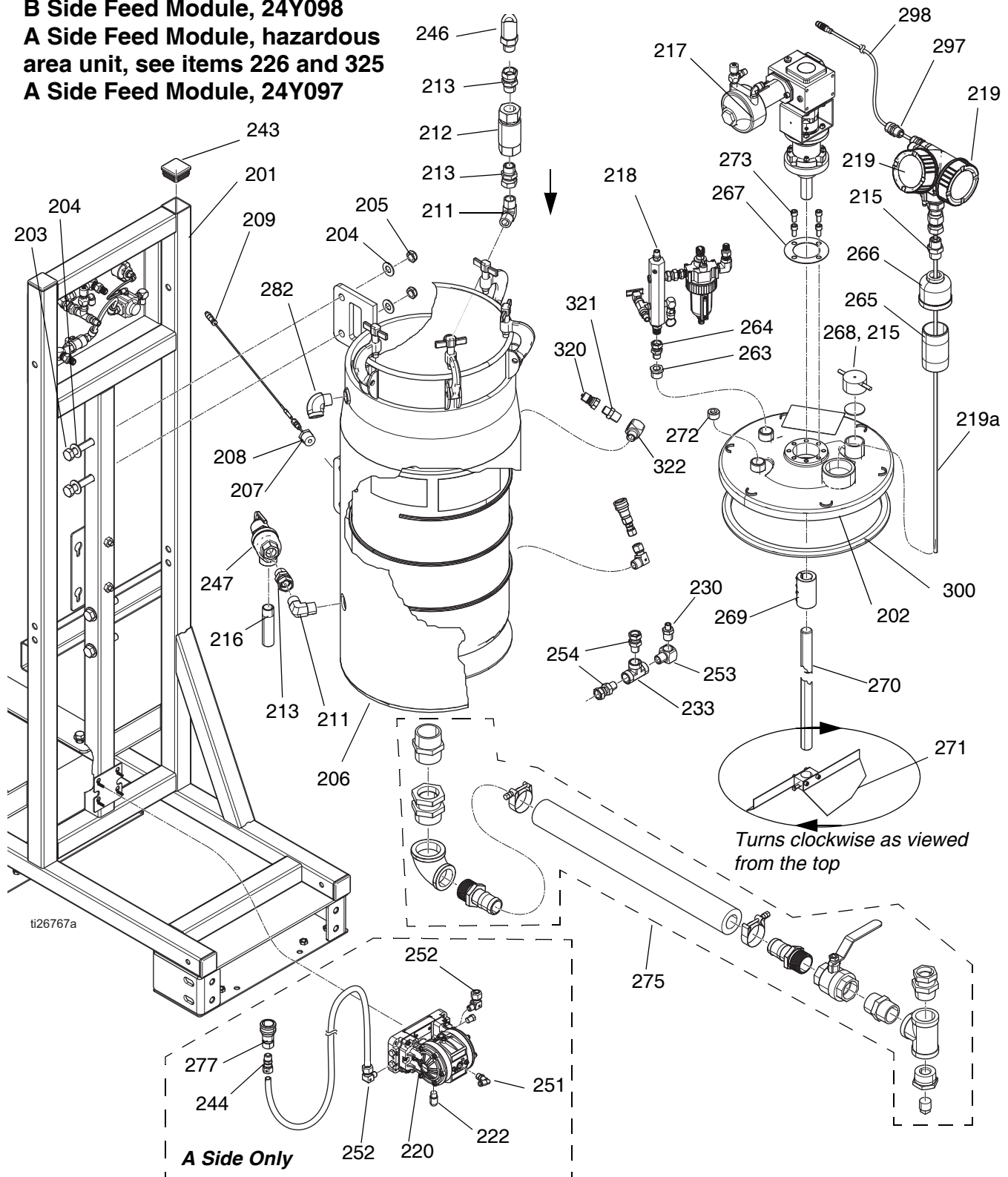
## Feed Modules

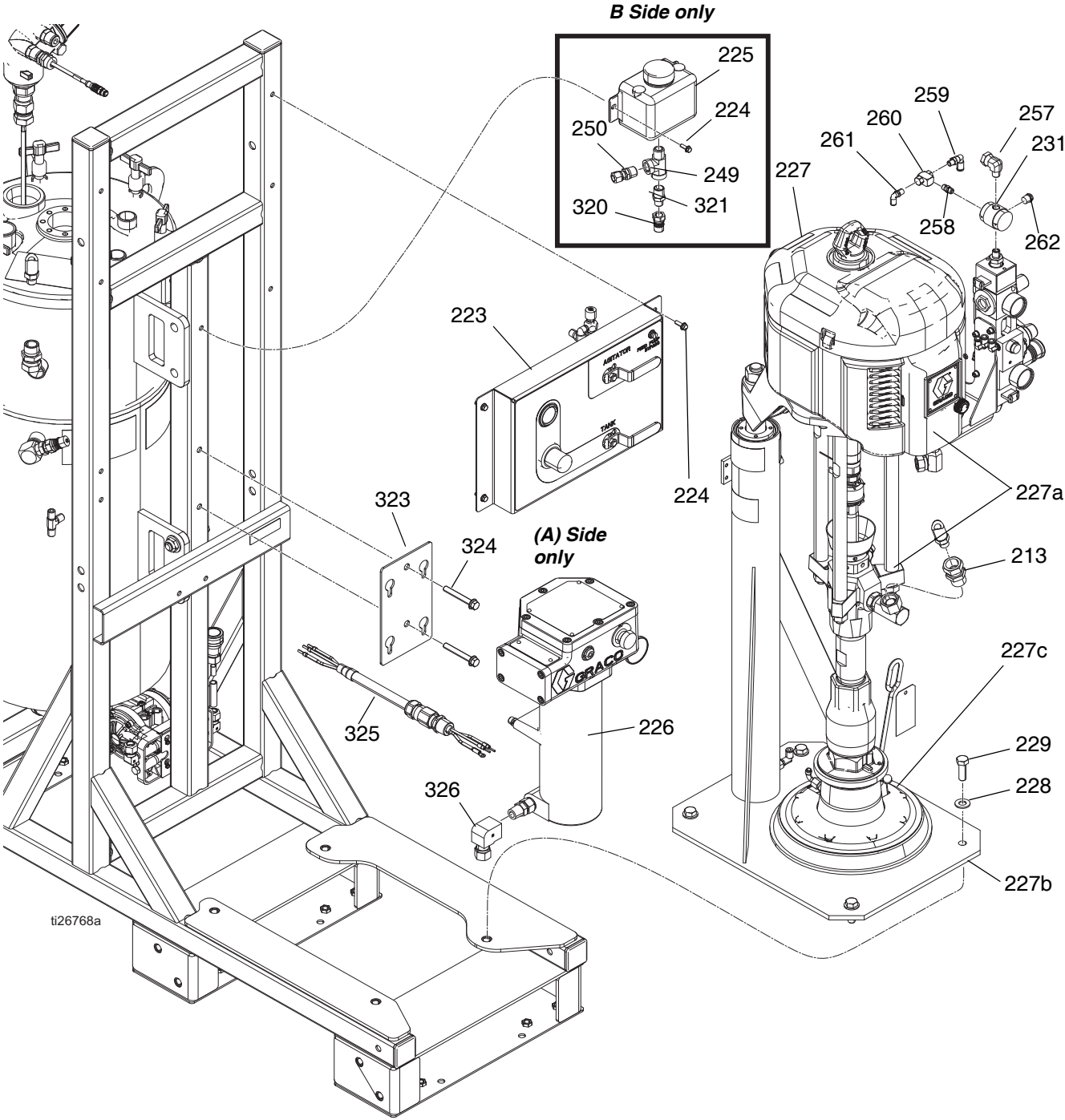
Page 1 of 2

**B Side Feed Module, 24Y098**

**A Side Feed Module, hazardous area unit, see items 226 and 325**

**A Side Feed Module, 24Y097**





## Feed Modules Continued

| Ref. | Part   | Description                                                    | Qty. | Ref. | Part   | Description                                      | Qty. |
|------|--------|----------------------------------------------------------------|------|------|--------|--------------------------------------------------|------|
| 201  | ---    | FRAME                                                          | 1    | 240  | 054172 | TUBE, nylon, round                               | 12   |
| 202  | 24M683 | TANK, pressure, assembly                                       | 1    | 241  | 054753 | TUBE, nylon, round, black                        | 8    |
| 203  | ---    | BOLT, hex head, 3.25 in. long, 5/8-11                          | 4    | 242  | ---    | TUBE, 0.275 in. ID black nylon                   | 5.5  |
| 204  | 111841 | WASHER, plain 5/8                                              | 8    | 243  | 115313 | PLUG, tube                                       | 6    |
| 205  | ---    | NUT, self-locking hex, nylon insert, 5/8-11                    | 4    | 244  | 126900 | FITTING, 1/2 tube x 3/8 npt(m)                   | 1    |
| 206  | 16R869 | COVER, tank wrap                                               | 1    | 246  | 215241 | HOSE, 3/4 in. x 6 ft, 6000 psi (41 MPa, 410 bar) | 1    |
| 207  | ---    | BUSHING, pipe, hex head, 3/4 npt x 1/8 npt, steel              | 1    | 247  | 16T244 | VALVE, pressure relief, 3/4 in. female npt       | 1    |
| 208  | 126351 | FITTING, compression, thermo-couple                            | 1    | 248  | ---    | TIE, cable, 14 in.                               | 20   |
| 209  | 126381 | SENSOR, RTD, 1k ohm, 4 pin, 3 in.                              | 1    | 249  | 108126 | FITTING, tee, street                             | 1    |
| 210  | 126898 | FITTING, elbow                                                 | 2    | 250  | 126899 | FITTING, compression, straight                   | 2    |
| 211  | 295847 | FITTING, elbow, 90, 3/4 mpt                                    | 2    | 251  | 112782 | ELBOW, swivel, 90 degree                         | 1    |
| 212  | 16T481 | VALVE, check (see page 80)                                     | 1    | 252  | 126897 | FITTING, elbow                                   | 2    |
| 213  | 157785 | FITTING, swivel                                                | 4    | 253  | 115764 | FITTING, elbow, 90 degree                        | 1    |
| 215  | 171988 | GASKET, inspection cap                                         | 1    | 254  | 190451 | UNION, adapter                                   | 2    |
| 216  | 16T619 | FITTING, nipple, thread on one end                             | 1    | 255  | ---    | LABEL, part description                          | 1    |
| 217  | 24P885 | AGITATOR, assembly, air (see page 75)                          | 1    | 257  | 116395 | FITTING, swivel, elbow                           | 1    |
| 218  | ---    | MANIFOLD, assembly, air (see page 77)                          | 1    | 258  | 103656 | FITTING, pipe, hex                               | 1    |
| 219  | 24X090 | SENSOR ASSEMBLY, level                                         | 1    | 259  | 198171 | FITTING, elbow                                   | 1    |
| 220  | 24P835 | PUMP, diaphragm                                                | 1    | 260  | 593538 | VALVE, shuttle 1/8 nptf                          | 1    |
| 221  | 100016 | WASHER, lock                                                   | 4    | 261  | 112781 | ELBOW, swivel, 90 degree                         | 1    |
| 222  | 102040 | NUT, lock, hex                                                 | 4    | 262  | 24K976 | MUFFLER, 1/4 npt                                 | 1    |
| 223  | ---    | PANEL, assembly, air, all (A) side supply modules, page 79     | 1    | 263  | 100505 | BUSHING, pipe                                    | 1    |
|      | ---    | PANEL, assembly, air, Model 24Y098 (B) side, page 79           | 1    | 264  | 155665 | UNION, adapter                                   | 1    |
| 224  | 113796 | SCREW, flanged, hex head                                       | 8    | 265  | 16R985 | FITTING, nipple, 2 npt                           | 1    |
| 225  | 16R871 | BOTTLE, overflow, 1/2 npt                                      | 1    | 266  | 16R983 | FITTING, adapter, 2 npt to 3/4 npt               | 1    |
| 226  | 245869 | HEATER, Viscon, non-hazardous area (A) side only, Model 24Y097 | 1    | 267  | 24P837 | GASKET, agitator                                 | 1    |
|      | 245863 | HEATER, Viscon; (A) side hazardous area unit                   | 1    | 268  | 210575 | CAP, filler                                      | 1    |
| 227♦ | 262868 | SUPPLY UNIT, 40:1, 0 volt, S20, 20L                            | 1    | 269  | 16T245 | COUPLING, shaft, one piece clamp                 | 1    |
| 227a | P40DCS | PUMP AND MOTOR, see manual 312376                              | 1    | 270  | 16T396 | SHAFT, agitator, lower                           | 1    |
| 227b | 257620 | S20 RAM, see 313527                                            | 1    | 271  | 257604 | BLADE ASSEMBLY                                   | 1    |
| 227c | 16U676 | PLATEN, pail, see 3A3113                                       | 1    | 272  | 102726 | PLUG, pipe headless                              | 1    |
| 228  | GC2041 | WASHER, flat, std, 1/2                                         | 4    | 273  | 109212 | SCREW, socket cap head                           | 1    |
| 229  | 100017 | SCREW, cap, hex head                                           | 4    | 274  | 115219 | FITTING, tee, 1/4 npt                            | 1    |
| 230  | 117426 | INSERT, tube                                                   | 6    | 275  | 262820 | KIT, fluid outlet, flexible; see page page 81    | 1    |
| 231  | 104633 | VALVE, pilot                                                   | 1    | 276  | 126900 | CONNECTOR, male                                  | 1    |
| 232  | ---    | SEALANT, pipe, stainless steel                                 | 1    | 277  | 126692 | CONNECTOR, male                                  | 1    |
| 233  | 103475 | FITTING, tee, pipe                                             | 1    | 282  | 122327 | FITTING, elbow, street; 3/4-14 npt               | 1    |
| 234  | ---    | TUBE, 0.375 in. (9.5mm) ID red nylon                           | 3.8  | 296  | 156172 | FITTING, union, swivel                           | 1    |
| 235  | ---    | TUBE, 0.375 in. (9.5mm) ID blue nylon                          | 4.2  | 297  | 260067 | FITTING, strain relief                           | 1    |
| 236  | 205418 | HOSE, coupled                                                  | 1    | 298★ | 127172 | CABLE, M12, 5-pin, 4-wire                        | 1    |
| 237  | 109130 | HOSE, coupled, 48 in.                                          | 1    | 299  | 102726 | PLUG, pipe, headless                             | 1    |
| 238  | 16P244 | HOSE, coupled, 3 feet                                          | 3    |      |        |                                                  |      |
| 239  | 15B772 | HOSE, air, 18 inch                                             | 3    |      |        |                                                  |      |

| Ref. | Part   | Description                                                 | Qty. |
|------|--------|-------------------------------------------------------------|------|
| 300  | 117571 | GASKET, santoprene                                          | 1    |
| 320  | 17D307 | FITTING, nipple, quick coupling                             | 1    |
| 321  | 159239 | FITTING, nipple, pipe, reducing                             | 1    |
| 322  | 158683 | FITTING, elbow, 90 degree                                   | 1    |
| 323  | 17D024 | BRACKET, mount, Viscon<br>Heater                            | 1    |
| 324  | 121488 | SCREW, hex head, flanged                                    | 2    |
| 325  | 24Y438 | CABLE, assembly, armored,<br>(non-hazardous), (A) side only | 1    |
|      | 24W679 | CABLE, assembly, hazardous<br>area (A) side only            | 1    |
| 326  | 126896 | ELBOW, 1/2 in. tube x 1/2 nptf                              | 1    |

--- Not for sale.

◆ See Supply Systems manuals 313526 and 313527 for detailed instructions and parts list for the S20 Supply Unit (262868).

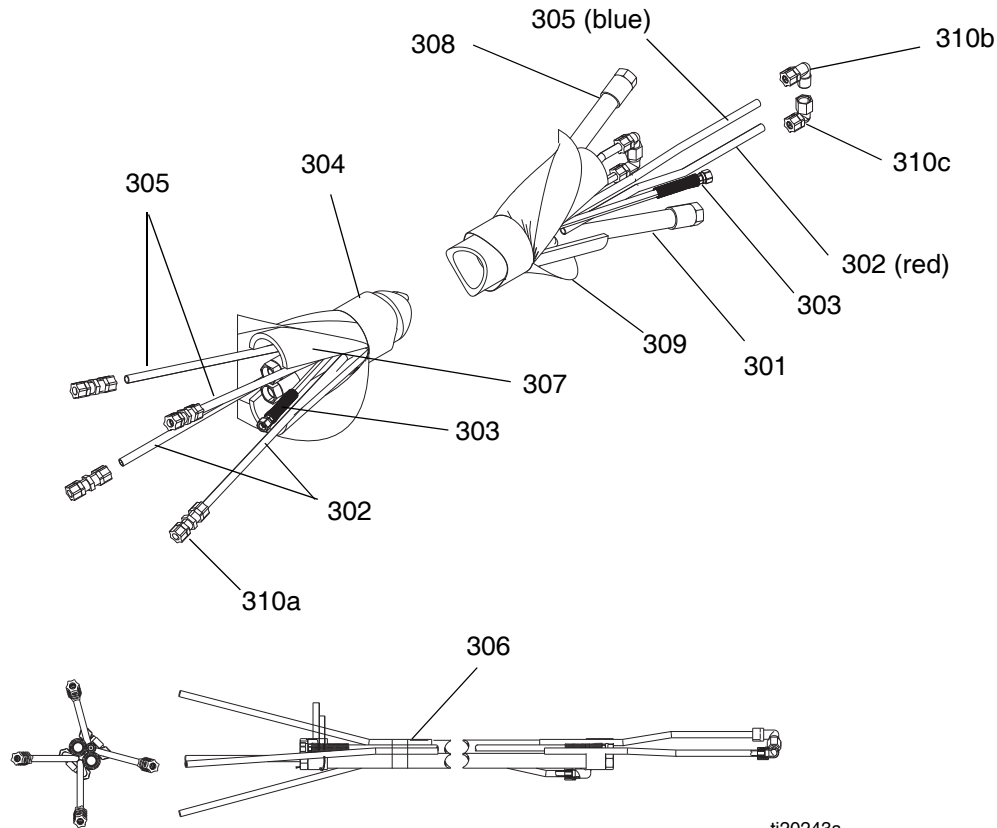
★ Included in radar level sensor kit 24X090. See **Replace Radar Level Sensor** on page 28.

**NOTE:** 24X090 Level sensor with the blue head replaces the 24P884 sensor with the red head. 24X090 includes (298).

## Heated Hose Bundle

16T121 - 3/4 in. x 1/2 in.

16T122 - 3/4 in. x 3/4 in.



ti20243a

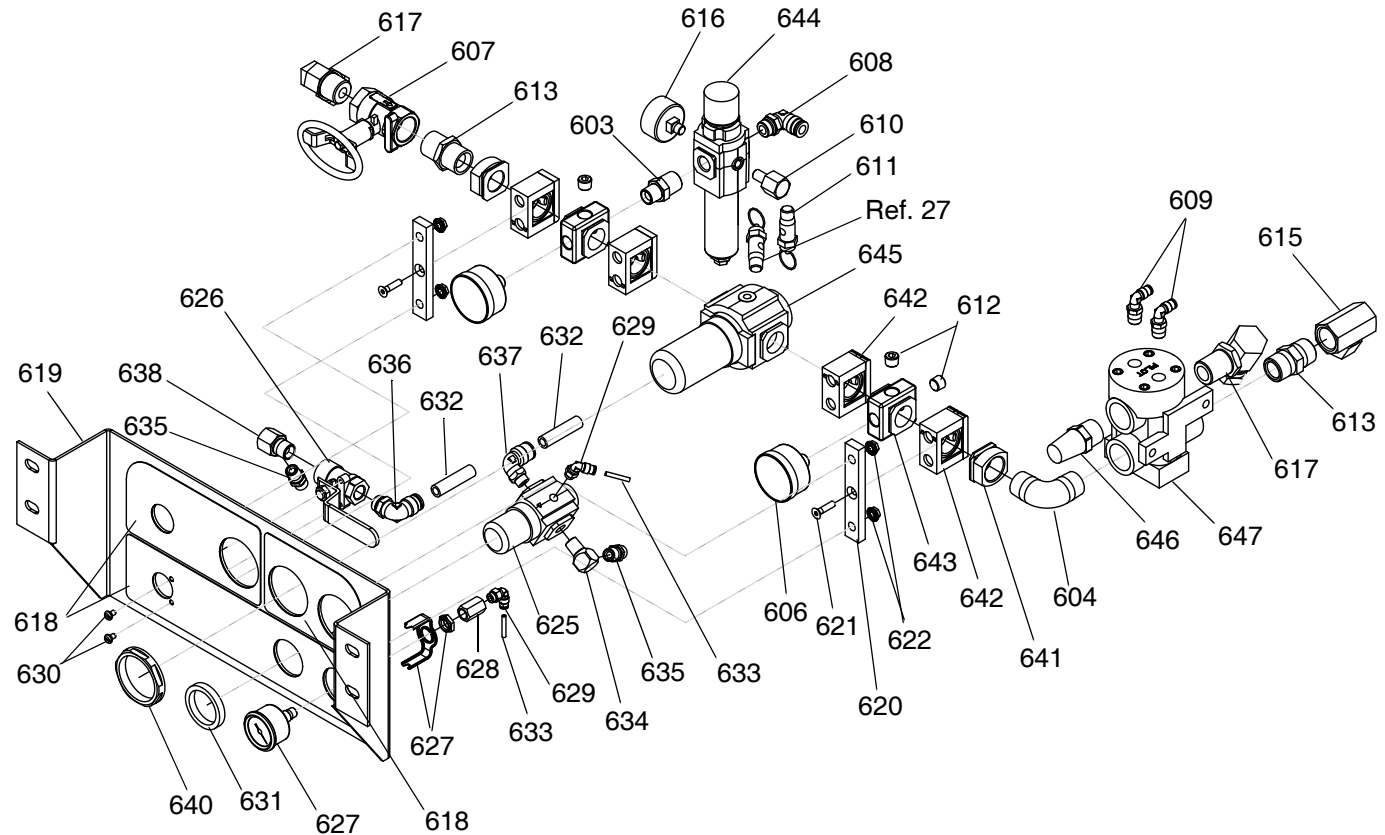
| Ref  | Part   | Description                                                                                     | Qty | Ref               | Part   | Description                    | Qty |
|------|--------|-------------------------------------------------------------------------------------------------|-----|-------------------|--------|--------------------------------|-----|
| 301  | H67550 | HOSE, coupled, 3/4 in., 6500 psi;<br><i>Model 16T121 - Qty 1</i><br><i>Model 16T122 - Qty 2</i> |     | 310c              | 126896 | ELBOW, 1/2 in. tube x 1/2 nptf | 2   |
| 302  | 16X027 | KIT, tube, 0.375 (9.5mm) ID red<br>nylon                                                        | 2   | 311◆              | 16U111 | KIT, fittings, hose connection | 1   |
| 303  | H42550 | HOSE, coupled, 4500 psi, 1/4 in. ID,<br>50 ft (15.2 m)                                          | 1   | 311a◆             | C20487 | NIPPLE, hex                    | 2   |
| 304  | ---    | LABEL, identification                                                                           | 1   | 311b◆             | 158491 | NIPPLE                         | 1   |
| 305  | 16X028 | KIT, tube, 0.375 in. (9.5mm) ID blue<br>nylon                                                   | 2   | 311c◆             | 156823 | UNION, swivel                  | 2   |
| 306  | ---    | TAPE, electrical                                                                                | 1   | 311d◆             | 156971 | NIPPLE, short                  | 1   |
| 307  | ---    | TUBE, insulation, 2-5/8 in. ID, 50 ft<br>(15.2 m)                                               | 1   | --- Not for sale. |        |                                |     |
| 308  | H75050 | HOSE, coupled, 7250 psi, 1/2 in. ID,<br>50 ft (15.2 m); <i>Model 16T121 only</i>                | 1   | ◆ Not shown.      |        |                                |     |
| 309  | 16T138 | JACKET, scuff, 50 ft (15.2 m)                                                                   | 1   |                   |        |                                |     |
| 310  | 16U666 | KIT, tube fittings                                                                              | 1   |                   |        |                                |     |
| 310a | 126894 | UNION, 1/2 in. tube x 1/2 in. tube                                                              | 4   |                   |        |                                |     |
| 310b | 126898 | ELBOW, 1/2 in. tube x 1/2 nptm                                                                  | 2   |                   |        |                                |     |



# Base System (262878, 262941) Subassemblies

## System Air Controls Module (255761)

**NOTE:** For Feed Module Air Panel (262860) parts, see page 79.



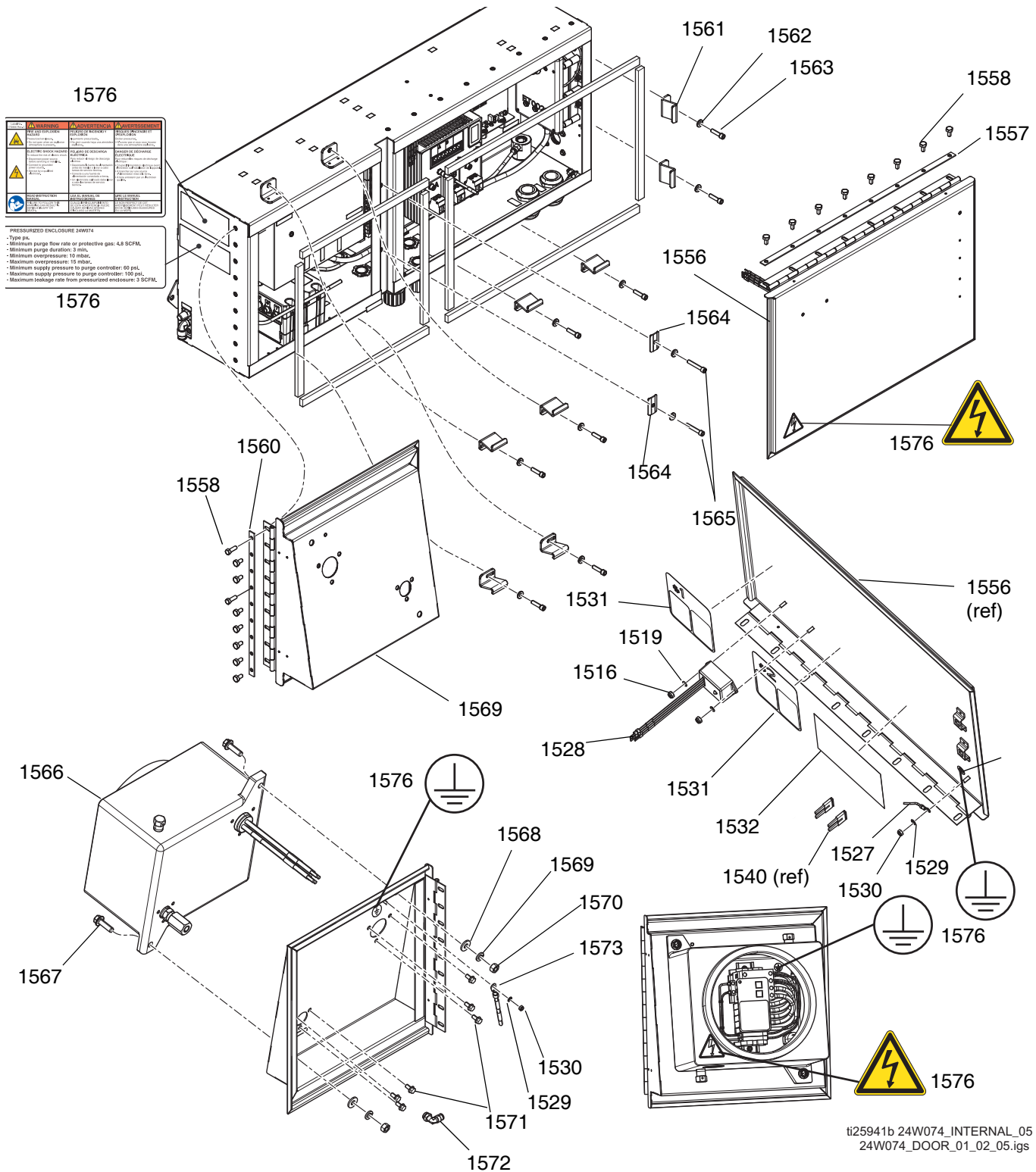
| Ref. | Part   | Description                           | Qty. | Ref. | Part   | Description                                | Qty. |
|------|--------|---------------------------------------|------|------|--------|--------------------------------------------|------|
| 603  | 157350 | NIPPLE, pipe; 1/2 x 3/8 npt           | 1    | 632  | 054760 | TUBE, polyurethane, round, black; 1.25 in. | -    |
| 604  | 108307 | ELBOW, pipe, male                     | 1    | 633  | ---    | TUBE, polyurethane, round; 0.6 ft.         | -    |
| 606  | 101689 | GAUGE, press, air                     | 2    | 634  | 100840 | ELBOW, street                              | 1    |
| 607  | 117346 | VALVE, ball, vented                   | 1    | 635  | 162453 | FITTING; 1/4 npsm x 1/4 npt                | 2    |
| 608  | 114316 | ELBOW, male, swivel                   | 1    | 636  | 114114 | ELBOW, male, swivel                        | 1    |
| 609* | 114109 | ELBOW, male, swivel; 1/4 OD tube      | 2    | 637  | 114128 | ELBOW, male, swivel                        | 1    |
| 610  | 158962 | ELBOW, street; 1/4(f) x 1/8(m)        | 1    | 638  | 164259 | ELBOW, street                              | 1    |
| 611  | 116643 | VALVE, safety, relief, air            | 1    | 640★ | 122336 | NUT, panel, regulator                      | 1    |
| 612  | 100721 | PLUG, pipe                            | 3    | 641★ | 113440 | ADAPTER                                    | 2    |
| 613  | 119992 | PIPE, nipple; 3/4 x 3/4 npt           | 2    | 642★ | 113431 | CLAMP, quick                               | 4    |
| 615  | 156589 | ADAPTER, union; 90 deg.               | 1    | 643★ | 113442 | BLOCK, porting                             | 2    |
| 616  | 113911 | GAUGE, pressure, air                  | 1    | 644★ | 15R488 | REGULATOR                                  | 1    |
| 617  | 160327 | ADAPTER, union; 90 deg.               | 2    | 644a | 123454 | FILTER, element; 5 micron                  | 1    |
| 618  | 15T119 | LABEL, control                        | 1    | 645★ | 15R487 | REGULATOR                                  | 1    |
| 619  | ---    | BRACKET, air controls                 | 1    | 646★ | 15R486 | MUFFLER                                    | 1    |
| 620  | 15R437 | BRACKET, adapter, air controls        | 2    | 647★ | 15R485 | VALVE, dual pilot                          | 1    |
| 621  | 121432 | SCREW, machine, hex flat head         | 2    |      |        |                                            |      |
| 622  | 115942 | NUT, hex, flange head                 | 4    |      |        |                                            |      |
| 625  | 116513 | REGULATOR, air                        | 1    |      |        |                                            |      |
| 626  | 121457 | VALVE, ball, air, panel mounted       | 1    |      |        |                                            |      |
| 627  | 121424 | GAUGE, pressure, panel mount, 1.5 in. | 1    |      |        |                                            |      |
| 628  | 100451 | COUPLING                              | 1    |      |        |                                            |      |
| 629  | 114151 | ELBOW, male, swivel                   | 2    |      |        |                                            |      |
| 630  | 100264 | SCREW, machine, pan head              | 2    |      |        |                                            |      |
| 631  | 116514 | NUT, regulator                        | 1    |      |        |                                            |      |

★ Parts included in Air Controls Kit 255772 (purchase separately).

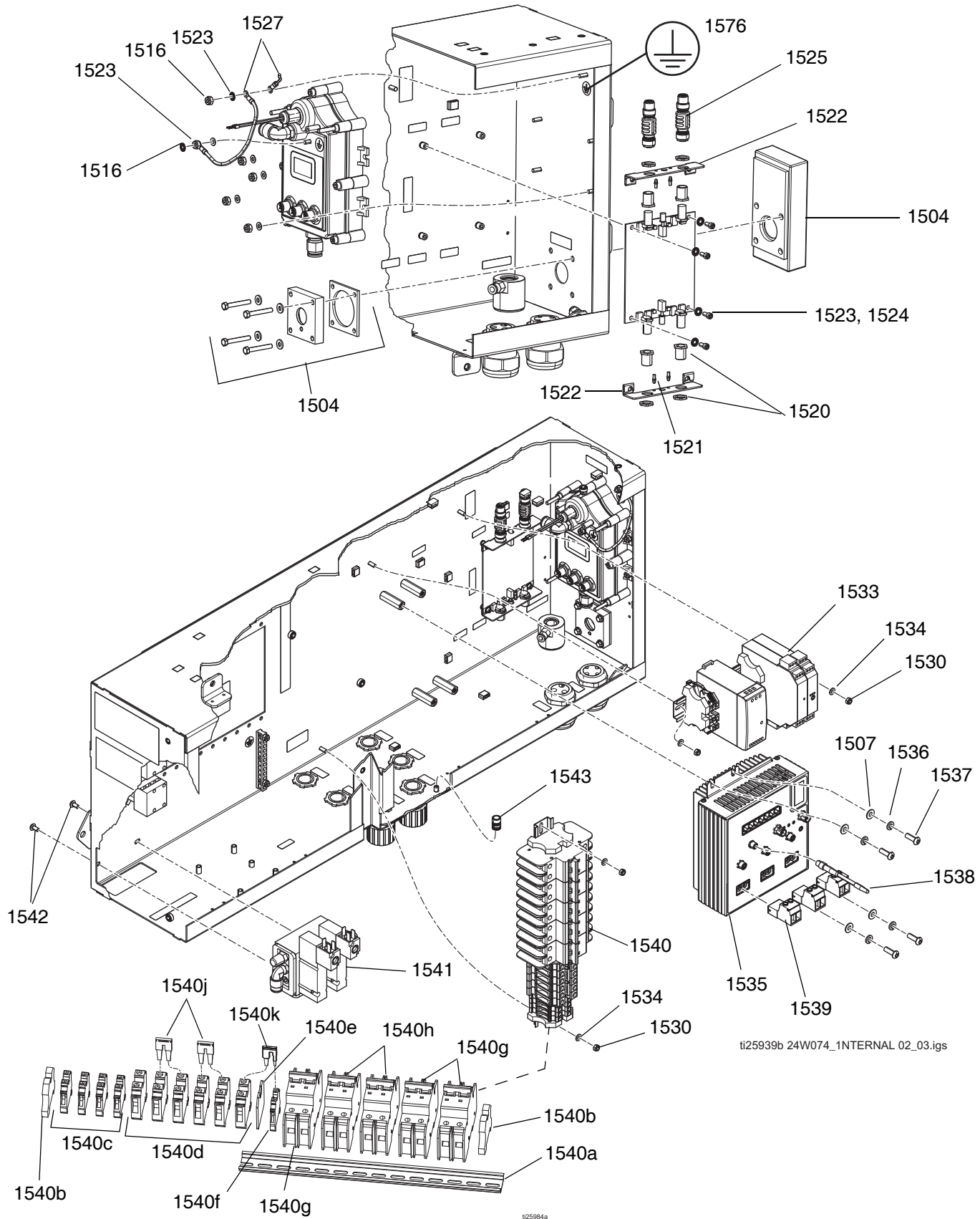
--- Not for sale.

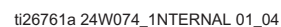
## Purge Box (Hazardous Area Machines)

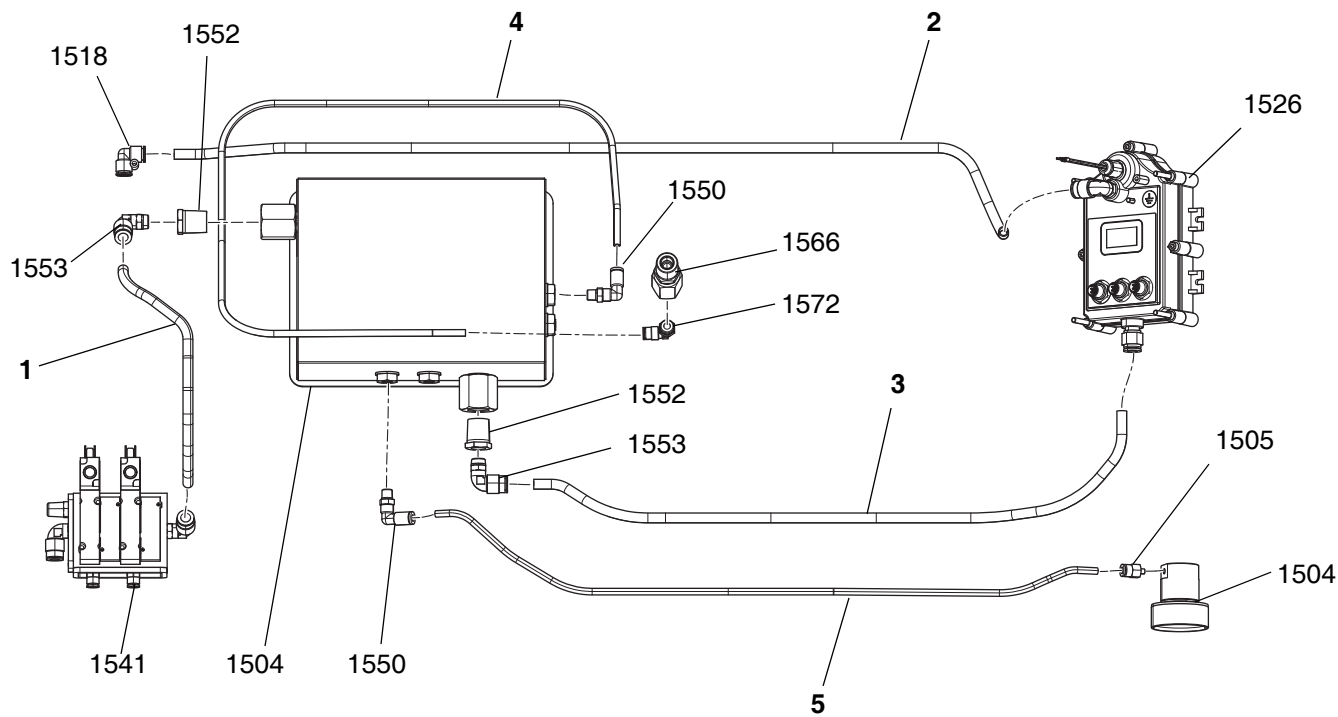
Page 1 of 4



ti25941b 24W074\_INTERNAL\_05  
24W074\_DOOR\_01\_02\_05.igs







ti25945a 24W074\_AIRLINES

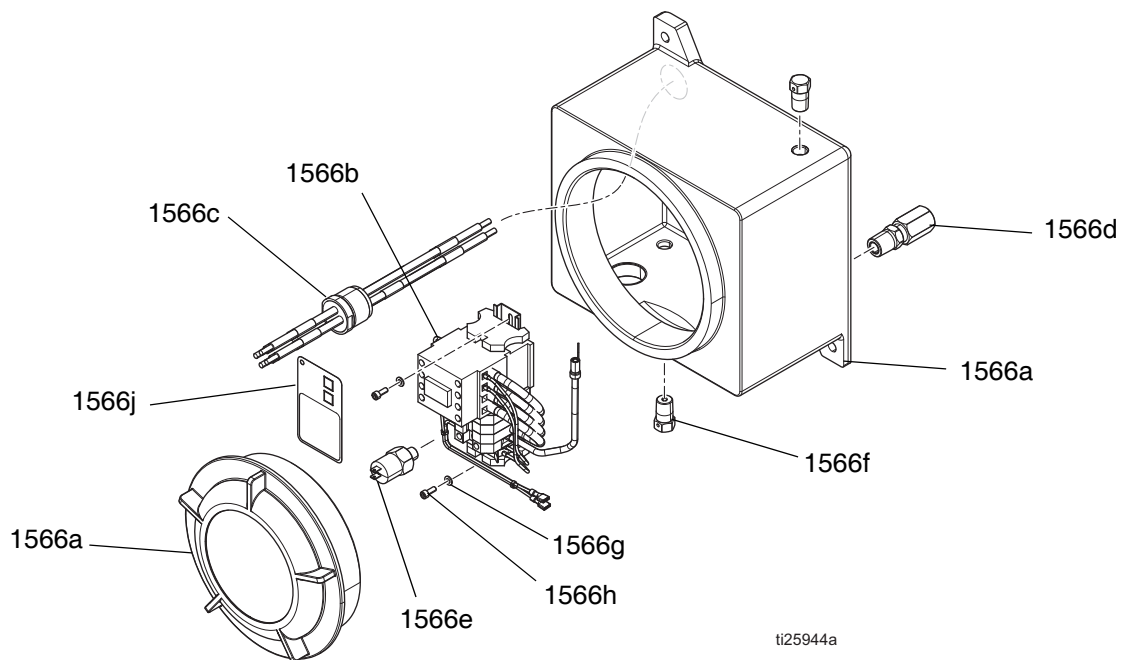
| Tubing | Ref  | Length<br>in (mm) |
|--------|------|-------------------|
| 1      | 1574 | 13 (330.2)        |
| 2      |      | 35 (889)          |
| 3      |      | 26 (660.)         |
| 4      | 1575 | 39 (990.6)        |
| 5      |      | 30 (762)          |

**Purge Box (Hazardous Area Machines)**

| Ref. | Part   | Description                       | Qty. | Ref.  | Part   | Description                                         | Qty. |
|------|--------|-----------------------------------|------|-------|--------|-----------------------------------------------------|------|
| 1501 | 24W069 | ENCLOSURE                         | 1    | 1539  | 24R754 | CONNECTOR, power, male, 2 pin                       | 3    |
| 1502 | 15U423 | SWITCH, 2P, 25A                   | 2    | 1540  | 24X085 | RAIL, purge, circuit breakers; includes 1540a-1540k | 1    |
| 1503 | 17D815 | LABEL, purge box, XM PFP, haz loc | 1    | 1540a | 514014 | RAIL                                                | 1    |
| 1504 | 17D465 | CONTROL BOX, purge                | 1    | 1540b | 120838 | BLOCK, clamp end                                    | 2    |
| 1505 | 114332 | FITTING, connector, male          | 1    | 1540c | 17D195 | BLOCK, terminal                                     | 4    |
| 1506 | 102040 | NUT, lock, hex                    | 1    | 1540d | 126382 | COVER, end                                          | 6    |
| 1507 | 100086 | WASHER, plain                     | 5    | 1540e | 24X086 | BLOCK, terminal, 2 cond, 6.2 mm                     | 1    |
| 1508 | 24W820 | BRACE, prop, door                 | 1    | 1540f | 17A314 | CIRCUIT, breaker, 2P, 20A, UL489, AB                | 1    |
| 1509 | 127837 | GROMMET, CAN, 3 cable             | 1    | 1540g | 17A316 | CIRCUIT, breaker, 2P, 30A, UL489, AB                | 3    |
| 1510 | 127838 | GROMMET, sensor, 4 cable          | 1    | 1540h | 126384 | BRIDGE, plug-in, jumper                             |      |
| 1511 | 126881 | BUSHING, strain relief            | 2    | 1540j | 24X087 | BRIDGE, plug-in jumper, reducing                    | 2    |
| 1512 | 126891 | NUT, bushing                      | 2    | 1540k | 24R755 | CONNECTOR, power, female, 7 pin                     | 1    |
| 1513 | 16M826 | CORD, grip, 3/4 in                | 7    | 1541  | 17C056 | MODULE, solenoid, pfp, exp proof                    | 1    |
| 1515 | 122313 | BAR, ground, kit                  | 1    | 1542  | 106084 | SCREW, mach, pnh                                    | 2    |
| 1516 | 109466 | NUT, lock, hex                    | 13   | 1543  | 24W821 | MAGNET, prop, door                                  | 1    |
| 1517 | 17D464 | NUT, coupling, hex, 1/4-20 x 1.5  | 4    | 1544  | 289697 | MODULE, GCA, cube, base                             | 1    |
| 1518 | 17D466 | FITTING, push connect, 3/8 3/8 90 | 1    | 1545  | 126687 | SCREW, mach, pnh                                    | 1    |
| 1519 | 107584 | WASHER, plain                     | 10   | 1546  | 104371 | SCREW, cap sch; 10 x.375                            | 4    |
| 1520 | 24M485 | BOARD, assy, GCA, CAN ISO, IS     | 1    | 1547  | 289696 | MODULE, GCA, cube, FCM                              | 1    |
| 1521 | 121645 | LIGHT                             | 4    | 1548  | 277674 | ENCLOSURE, cube door                                | 1    |
| 1522 | 16N621 | BRACKET, board, circuit           | 2    | 1549  | 24W073 | GASKET, controller, purge                           | 1    |
| 1523 | 102063 | WASHER, lock, ext                 | 6    | 1550  | 112781 | ELBOW, swivel, 90°                                  | 2    |
| 1524 | 103229 | SCREW, cap sch                    | 4    | 1551  | 100139 | PLUG, pipe                                          | 1    |
| 1525 | 16T072 | ADAPTER, cable, CAN, IS TO NON IS | 2    | 1552  | 100206 | BUSHING, pipe                                       | 2    |
| 1526 | 24W610 | MODULE, XMPFP, exp atmosphere     | 1    | 1553  | 115841 | FITTING, elbow                                      | 2    |
| 1527 | 194337 | WIRE, grounding, door             | 2    | 1555  | 17B838 | STRIP, foam neoprene 0.313 x .625                   | 9.5  |
| 1528 | 16U530 | MODULE, surge protector           | 2    | 1556  | 24W052 | ENCLOSURE, door, large                              | 1    |
| 1529 | 100718 | WASHER                            | 2    | 1557  | 24W070 | ENCLOSURE, hinge, backer, long                      | 1    |
| 1530 | 115483 | NUT, lock                         | 6    | 1558  | 100333 | SCREW, cap, hex hd                                  | 17   |
| 1531 | 17D814 | LABEL, power, XM PFP, haz loc     | 1    | 1559  | 24W054 | ENCLOSURE, door, small                              | 1    |
| 1532 | 127111 | ENVELOPE, packing, self-adhesive  | 1    |       |        |                                                     |      |
| 1533 | 17D228 | RAIL, purge, haz loc, isolation   | 1    |       |        |                                                     |      |
| 1534 | 116876 | WASHER, flat                      | 4    |       |        |                                                     |      |
| 1535 | 24Y169 | MODULE, gca, mzhp                 | 1    |       |        |                                                     |      |
| 1536 | 100016 | WASHER, lock                      | 4    |       |        |                                                     |      |
| 1537 | 112689 | SCREW, button hd                  | 4    |       |        |                                                     |      |
| 1538 | 24U109 | CABLE, over-temp, switch short    | 1    |       |        |                                                     |      |

| Ref.  | Part   | Description                          | Qty. | Ref.                                                                              | Part   | Description                             | Qty. |
|-------|--------|--------------------------------------|------|-----------------------------------------------------------------------------------|--------|-----------------------------------------|------|
| 1560  | 24W072 | ENCLOSURE, hinge, backer, short      | 1    | 1582                                                                              | 17D199 | CABLE, sensor, ISO to RTD, hose         | 1    |
| 1561  | 17C058 | LATCH, enclosure, hd                 | 8    | 1583                                                                              | 17D200 | CABLE, sensor, ISO to RTD, heater       | 1    |
| 1562  | 331103 | WASHER, washer                       | 10   | 1584                                                                              | 17D201 | CABLE, sensor, ISO to FCM 3, tank level | 1    |
| 1563  | C19810 | SCREW, cap, socket hd                | 8    | 1585                                                                              | 17D202 | CABLE, sensor, ISO to FCM3, RTD         | 1    |
| 1564  | 24W116 | LATCH, enclosure, center             | 2    | 1586                                                                              | 17D257 | CABLE, I.S. CAN, fem-fem, 1.5m          | 1    |
| 1565  | 596936 | SCREW, cap, socket hd, 1/4 x 1.5     | 2    | 1587                                                                              | 17D260 | CABLE, GCA, I.S., CAN, m/f, 1.6m        | 1    |
| 1566  | 17B850 | BOX, power, explosion proof, page 68 | 1    | 1588                                                                              | 17D261 | CABLE, male A to fem B code, 1.9m       | 1    |
| 1567  | 124431 | SCREW, head, washer, hex, 3/8-16     | 2    | 1589                                                                              | 24R735 | CABLE, CAN power, m12 fem, pigtail      | 1    |
| 1568  | 100023 | WASHER, flat                         | 2    | 1590                                                                              | 17D867 | LABEL, cord wrap, XM PFP, haz loc       | 1    |
| 1569  | 100133 | WASHER, lock, 3/8                    | 2    | 1591                                                                              | 125871 | TIE, cable, 7.5 in                      | 21   |
| 1570  | 100307 | NUT, hex                             | 2    | 1593                                                                              | 17F587 | BRACKET, line filter                    | 1    |
| 1571  | 113161 | SCREW, flange, hex hd                | 6    | 1594                                                                              | 17F662 | FILTER, line, ssr, assembly             | 3    |
| 1572  | 114109 | FITTING, elbow, male, swivel         | 1    | 1595                                                                              | 188773 | WASHER, flat                            | 6    |
| 1573  | 17D194 | CABLE, ground, box, purge            | 1    | 1596                                                                              | C27076 | NUT                                     | 6    |
| 1574  | C12508 | TUBING, nylon, round                 | 6.2  | 1597                                                                              | 115942 | NUT, hew, flange head                   | 2    |
| 1575  | 054172 | TUBE, nylon, rd                      | 5.75 | --- Not for sale.                                                                 |        |                                         |      |
| 1576▲ | 17D866 | LABEL, safety, purge box, multi      | 1    | ▲ Replacement Danger and Warning labels, tags and cards are available at no cost. |        |                                         |      |
| 1577  | 121000 | CABLE, CAN, f x f, 0.5m              | 1    |                                                                                   |        |                                         |      |
| 1578  | 121806 | CABLE, solenoid                      | 2    |                                                                                   |        |                                         |      |
| 1579  | 127068 | CABLE, CAN, female/female 1.0m       | 2    |                                                                                   |        |                                         |      |
| 1580  | 17D197 | CABLE, sensor, ISO to level, A       | 1    |                                                                                   |        |                                         |      |
| 1581  | 17D198 | CABLE, sensor, ISO to level, B       | 1    |                                                                                   |        |                                         |      |

## Explosion Proof Power Box (Hazardous Area Machines)

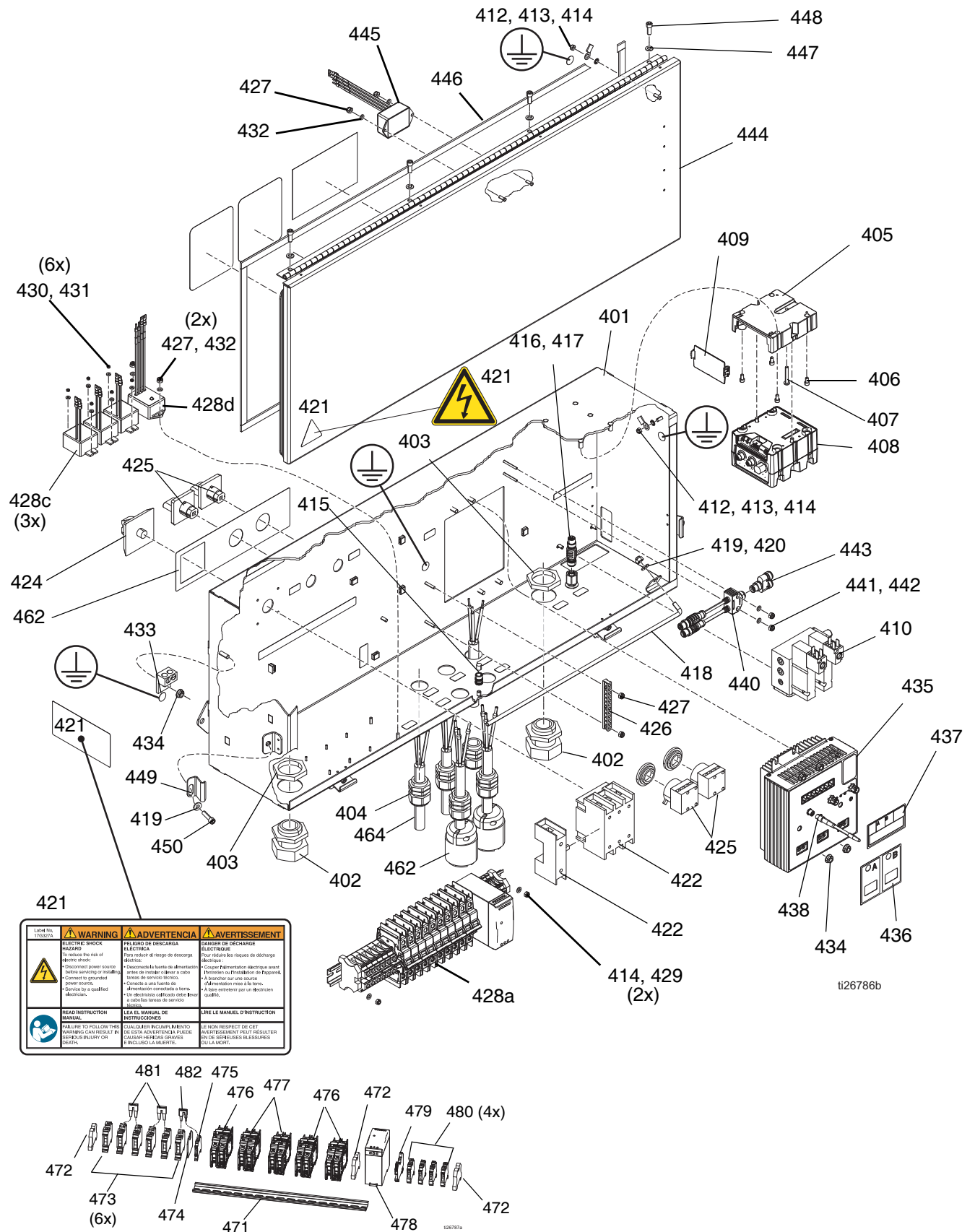


ti25944a

| Ref.  | Part   | Description                    | Qty. |
|-------|--------|--------------------------------|------|
| 1566a | 17B849 | BOX, explosion proof           | 1    |
| 1566b | 17B848 | RAIL, power, disconnect        | 1    |
| 1566c | 17B984 | BUSHING, line                  | 1    |
| 1566d | 17B982 | FITTING, arrestor, flame       | 1    |
| 1566e | 17B983 | SWITCH, pressure               | 1    |
| 1566f | 24X158 | BREATHER, drain                | 2    |
| 1566g | 116876 | WASHER, flat                   | 2    |
| 1566h | 120039 | FASTENER, schs, 10-32 x 1/2 in | 2    |
| 1566j | 17D816 | LABEL, hang tag, XM PFP, haz   | 1    |
| 1566k | 125871 | TIE, cable 7.5 in              | 1    |



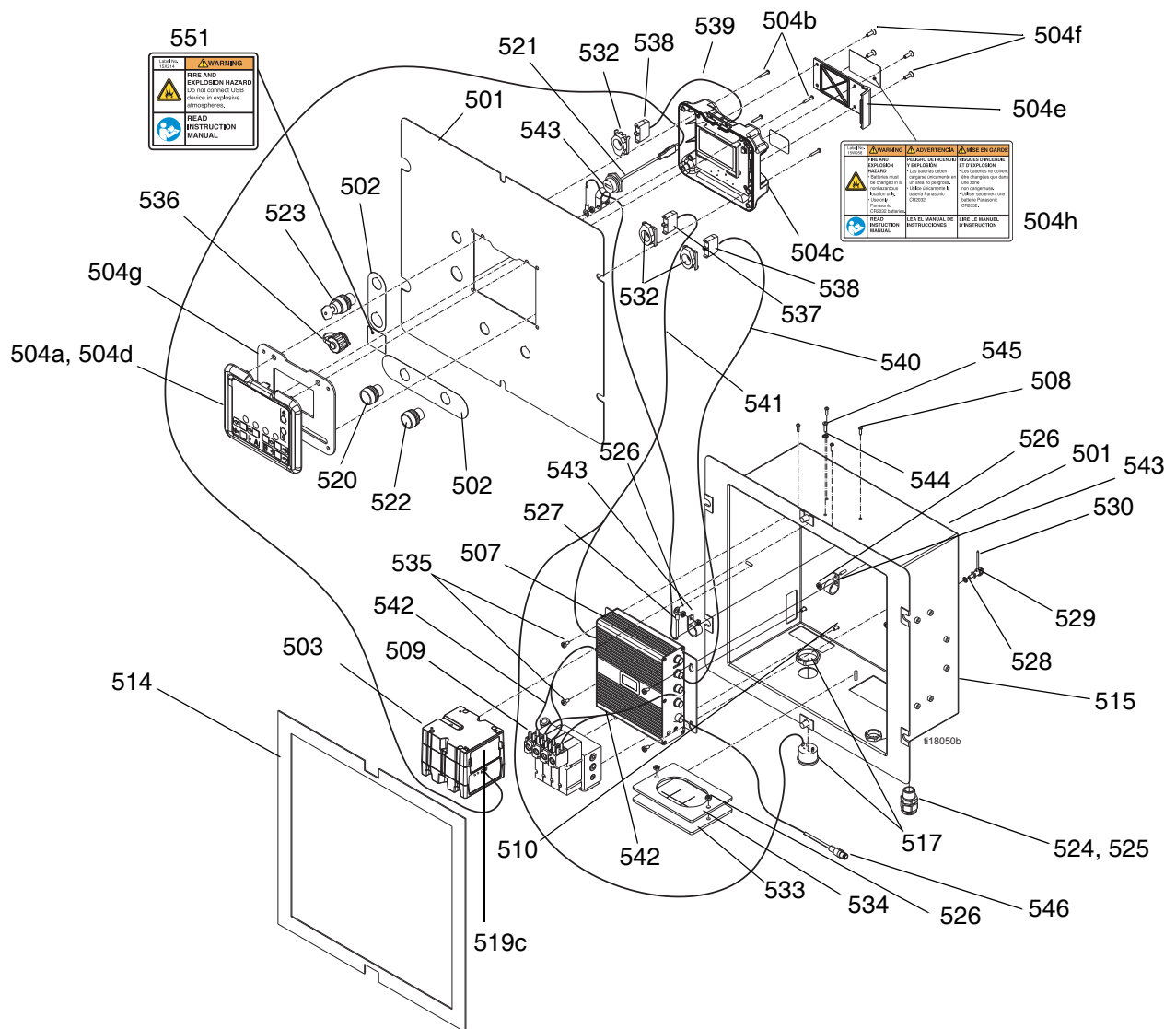
# Junction Box (Non-Hazardous Area Machines)



## Junction Box (Non-Hazardous Area Machines)

| Ref. | Part No. | Description                                    | Qty |                                                                                   |        |                                          |    |
|------|----------|------------------------------------------------|-----|-----------------------------------------------------------------------------------|--------|------------------------------------------|----|
| 401  | ---      | ENCLOSURE, weldment                            | 1   | 434                                                                               | 115942 | NUT, hex, flange head                    | 5  |
| 402  | 120858   | BUSHING, strain relief, m40 thread             | 2   | 435                                                                               | 24Y169 | MODULE, gca, mzhp                        | 1  |
| 403  | 120859   | NUT, strain relief, m40 thread                 | 2   | 436                                                                               | 17F844 | LABEL, ID, multi-zone, lower a b         | 1  |
| 404  | 121603   | GRIP, cord,.51-.71,3/4                         | 5   | 437                                                                               | 17F921 | LABEL, ID, multi-zone, upper a b         | 1  |
| 405  | 289697   | MODULE, gca, cube, base                        | 1   | 438                                                                               | 24R754 | CONNECTOR, power, male, 2 pin            | 3  |
| 406  | 104371   | SCREW, cap sch 10x.375                         | 4   | 439                                                                               | 24U109 | CABLE, over-temp, switch short           | 1  |
| 407  | 126687   | SCREW, mach, pnh                               | 1   | 440                                                                               | 126495 | CABLE, splitter, 4-20ma, 2 circuit       | 1  |
| 408  | 289696   | MODULE, GCA, cube, FCM                         | 1   | 441                                                                               | 151395 | WASHER, flat                             | 2  |
| 409  | 277674   | ENCLOSURE, cube door                           | 1   | 442                                                                               | C19862 | NUT, lock, hex                           | 1  |
| 410  | ---      | MODULE, solenoid, pfp                          | 1   | 443                                                                               | 124273 | CONNECTOR, splitter                      | 1  |
| 410a | 121636   | VALVE, solenoid                                | 2   | 444                                                                               | 17G504 | DOOR, weldment                           | 1  |
| 410b | 15A798   | GASKET, outlet                                 | 1   | 445                                                                               | 16U530 | MODULE, sys surge protector              | 1  |
| 410c | 15A799   | GASKET, inlet                                  | 1   | 446                                                                               | 070689 | STRIP, foam, neoprene                    | 8  |
| 411  | 106084   | SCREW, mach, pnh                               | 2   | 447                                                                               | 100016 | WASHER, lock                             | 4  |
| 412  | 555629   | WASHER, #10 external tooth lock                | 2   | 448                                                                               | 121112 | SCREW, cap, socket head                  | 4  |
| 413  | 194337   | WIRE, grounding, door                          | 1   | 449                                                                               | 17G423 | CLAMP, door latch                        | 4  |
| 414  | 115483   | NUT, lock                                      | 4   | 450                                                                               | C19810 | SCREW, cap, socket hd                    | 4  |
| 415  | 24W821   | MAGNET, prop, door                             | 1   | 451                                                                               | 24Y439 | WIRE, chassis ground                     | 1  |
| 416  | 126496   | CONNECTOR, thru, m12, mx f, reverse key        | 1   | 452                                                                               | 125789 | CABLE, can, f x f, 0.5M                  | 2  |
| 417  | 16T072   | ADAPTER, cable, can, is to non is              | 1   | 453                                                                               | 126494 | CABLE, M12, 5p, 4 wire with drain        | 2  |
| 418  | 24W820   | BRACE, prop, door                              | 1   | 454                                                                               | 121806 | CABLE, solenoid                          | 2  |
| 419  | 331103   | WASHER, washer .562 .250 .060 .st              | 5   | 455                                                                               | 24R735 | CABLE, can power, m12 fem, pig-tail      | 1  |
| 420  | 102040   | NUT, lock, hex                                 | 1   | 456                                                                               | 126511 | CABLE, gca, m8, 4-pin, 1.5m, m x f, mold | 2  |
| 421  | 17G327   | LABEL, safety, junction                        | 1   | 457                                                                               | 125806 | CABLE, splitter, m8, 4-pin, ffm 1.5M     | 1  |
| 422  | 123969   | SWITCH, disconnect, 100 amp                    | 1   | 458                                                                               | 16T439 | LABEL, cord wrap                         | 1  |
| 423  | 123968   | SWITCH, disconnect, 100 amp                    | 1   | 460                                                                               | 125871 | TIE,cable,7.50 inch                      | 14 |
| 424  | 123967   | KNOB, operator disconnect                      | 1   | 462                                                                               | 24Y480 | CABLE, assembly, junction box            | 2  |
| 425  | 15U423   | SWITCH, 2p, 25a                                | 2   | 464                                                                               | 24Y437 | CABLE, assembly, Viscon heater           | 3  |
| 426  | 122313   | BAR, ground, kit                               | 1   | 471                                                                               | 16T119 | RAIL, mounting, 16 in.                   | 1  |
| 427  | 109466   | NUT, lock, hex                                 | 6   | 472                                                                               | 120838 | BLOCK, clamp end                         | 3  |
| 428  | 24Y446   | RAIL, breaker assembly                         | 1   | 473                                                                               | 126382 | BLOCK, terminal                          | 6  |
| 428a | 24Y294   | RAIL, circuit breaker (includes items 471-482) | 1   | 474                                                                               | 126383 | COVER, end                               | 1  |
| 428b | 24R755   | CONNECTOR, power, female                       | 1   | 475                                                                               | 24X086 | BLOCK, terminal, 2 cond, 6.2 mm          | 1  |
| 428c | 17H081   | FILTER, line, ssr assembly                     | 3   | 476                                                                               | 17A314 | CIRCUIT, breaker, 2P, 20A, UL489, AB     | 3  |
| 428d | 16U530   | MODULE, system surge protector                 | 1   | 477                                                                               | 17A316 | CIRCUIT, breaker, 2P, 30A, UL489, AB     | 2  |
| 428e | 123410   | FERRULE, wire, 10 awg                          | 24  | 478                                                                               | 126453 | POWER SUPPLY, 24V                        | 1  |
| 429  | 116876   | WASHER, flat                                   | 2   | 479                                                                               | 24R722 | BLOCK, terminal PE, quad, AB             | 1  |
| 430  | 188773   | WASHER, flat                                   | 6   | 480                                                                               | 17D195 | BLOCK, terminal, 2 cond, 8.2 mm          | 4  |
| 431  | C27076   | NUT                                            | 6   | 481                                                                               | 126384 | BRIDGE, plug-in, jumper                  | 2  |
| 432  | 107584   | WASHER, plain                                  | 2   | 482                                                                               | 24X087 | BRIDGE, plug-in, jumper, rdng            | 1  |
| 433  | 117666   | TERMINAL, ground                               | 1   | --- Not for sale.                                                                 |        |                                          |    |
|      |          |                                                |     | ▲ Replacement Danger and Warning labels, tags and cards are available at no cost. |        |                                          |    |

## Control Box (16)



| Ref.  | Part   | Description                      | Qty | Ref. | Part   | Description                     | Qty |
|-------|--------|----------------------------------|-----|------|--------|---------------------------------|-----|
| 501   | ---    | BOX, control                     | 1   | 505† | 262642 | KIT, replacement, display;      | 1   |
| 502   | ---    | LABEL, control display           | 1   |      |        | includes 504 and 506            |     |
| 503†  | 262641 | KIT, replacement, USB; includes  | 1   | 506* | 17E110 | TOKEN, software                 | 1   |
|       |        | 519 and 506                      |     | 507† | 262643 | KIT, replacement, FCM; includes | 1   |
| 504●  | 257484 | MODULE, display, kit             |     |      |        | 518 and 506                     |     |
| 504a  | 15M483 | SHIELD, membrane, display (qty.  | 1   | 508  | ---    | SCREW, pan head                 | 4   |
|       |        | 10)                              |     | 509  | 256555 | MODULE, solenoid, IS version    | 1   |
| 504b  | ---    | SCREW, pan head; #6 x 7/8 in.    | 4   | 509a | 121636 | VALVE, solenoid, din connector  | 4   |
| ●504c | 288997 | CASE, rear, display module, IS   | 1   | 509b | 15A798 | GASKET, solenoid, outlet        | 1   |
|       |        | version                          |     | 509c | 15A799 | GASKET, solenoid, inlet/exhaust | 1   |
| 504d  | 255727 | CASE, front, data module         | 1   | 510  | 106084 | SCREW, machine, pan head        | 2   |
| 504e  | 277463 | COVER, access, low level display | 1   | 514  | 15R379 | GASKET, box, control            | 1   |
| 504f  | 113768 | SCREW, socket, flat head         | 4   | 515  | ---    | LABEL                           | 1   |
| 504g  | 15R458 | GASKET, control, front panel     | 1   | 516* | 15B056 | LABEL, air motor/dosing valve   | 1   |
| ▲504h | 15W958 | LABEL, warning, battery          | 1   | 517  | 122000 | ALARM, panel mount              | 1   |
|       |        |                                  |     | 518● | 255920 | MODULE, fluid control           | 1   |

| Ref.  | Part   | Description                                | Qty |
|-------|--------|--------------------------------------------|-----|
| 519●  | 257088 | MODULE, USB, assy.                         | .   |
| 519a  | 289899 | BASE                                       | 1   |
| ●519b | 289900 | MODULE, USB                                | 1   |
| 519c  | 277674 | DOOR, module                               | 1   |
| 520   | 121618 | SWITCH, start, push button,<br>green       | 1   |
| 521   | 15R324 | HARNESS, USB, plug/bulkhead;<br>32 in.     | 1   |
| 522   | 121619 | SWITCH, stop, push button, red             | 1   |
| 523   | 121617 | SWITCH, 2 position, key, controls          | 1   |
| 523a* | 123412 | KEY, replacement (pair)                    |     |
| 524   | 117745 | BUSHING, strain relief                     | 1   |
| 525   | 117625 | NUT, locking                               | 1   |
| 526   | 113505 | NUT, keps, hex head                        | 6   |
| 527   | 15B090 | WIRE, grounding, door                      | 1   |
| 528   | ---    | WASHER, lock, external, 1/4 in.            | 1   |
| 529   | 15R343 | CLAMP, ground, electrical                  | 1   |
| 530   | ---    | WIRE, copper                               | 3   |
| 531*  | 172953 | LABEL, designation                         | 2   |
| 532   | 120493 | LATCH, mounting                            | 3   |
| 533   | 15H189 | BOOT, wire feed through                    | 1   |
| 534   | 15G816 | COVER, plate, wire                         | 1   |
| 535   | 110637 | SCREW, machine, pan head                   | 4   |
| 536   | 15R325 | COVER, dust, bulkhead                      | 1   |
| 537   | 120494 | receptacle<br>BLOCK, switch, normally open | 2   |
| 538   | 120495 | BLOCK, switch, normally closed             | 1   |
| 539   | 15M974 | HARNESS, key switch                        | 1   |
| 540   | 15M975 | HARNESS, start/alarm                       | 1   |
| 541   | 15M976 | HARNESS, stop                              | 1   |
| 542   | 15M977 | HARNESS, solenoid                          | 2   |
| 543   | 121988 | RETAINER, routing, wire harness            | 4   |
| 544   | 195875 | SCREW, machine, pan head                   | 1   |
| 545   | 102063 | WASHER, lock                               | 1   |
| 546   | 15U542 | CABLE, motor                               | 2   |
| 551▲  |        | LABEL, warning, USB                        | 1   |
|       | 15X214 | English                                    |     |
|       | 15X393 | All languages                              |     |
| 552*  | 122829 | CONDUIT; 0.75 ft.                          | -   |

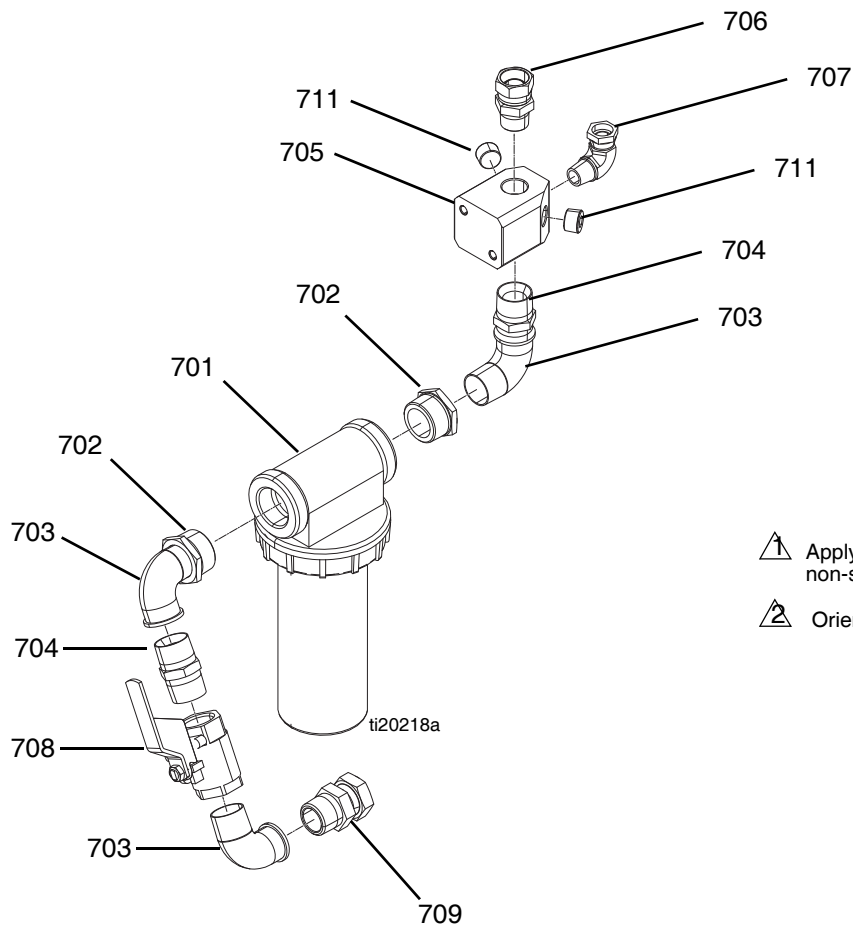
▲ Replacement Danger and Warning labels, tags, and cards are available at no cost.

--- Not for sale.

\* Not shown.

● Base electronic components do not have XM PFP-specific software installed. Therefore, use software upgrade token (506) to install software before use.

† Includes software token (506) and instruction sheet.

**Air Filter (24P899)**

 Apply PTFE tape and/or pipe sealant to all non-swiveling pipe threads.

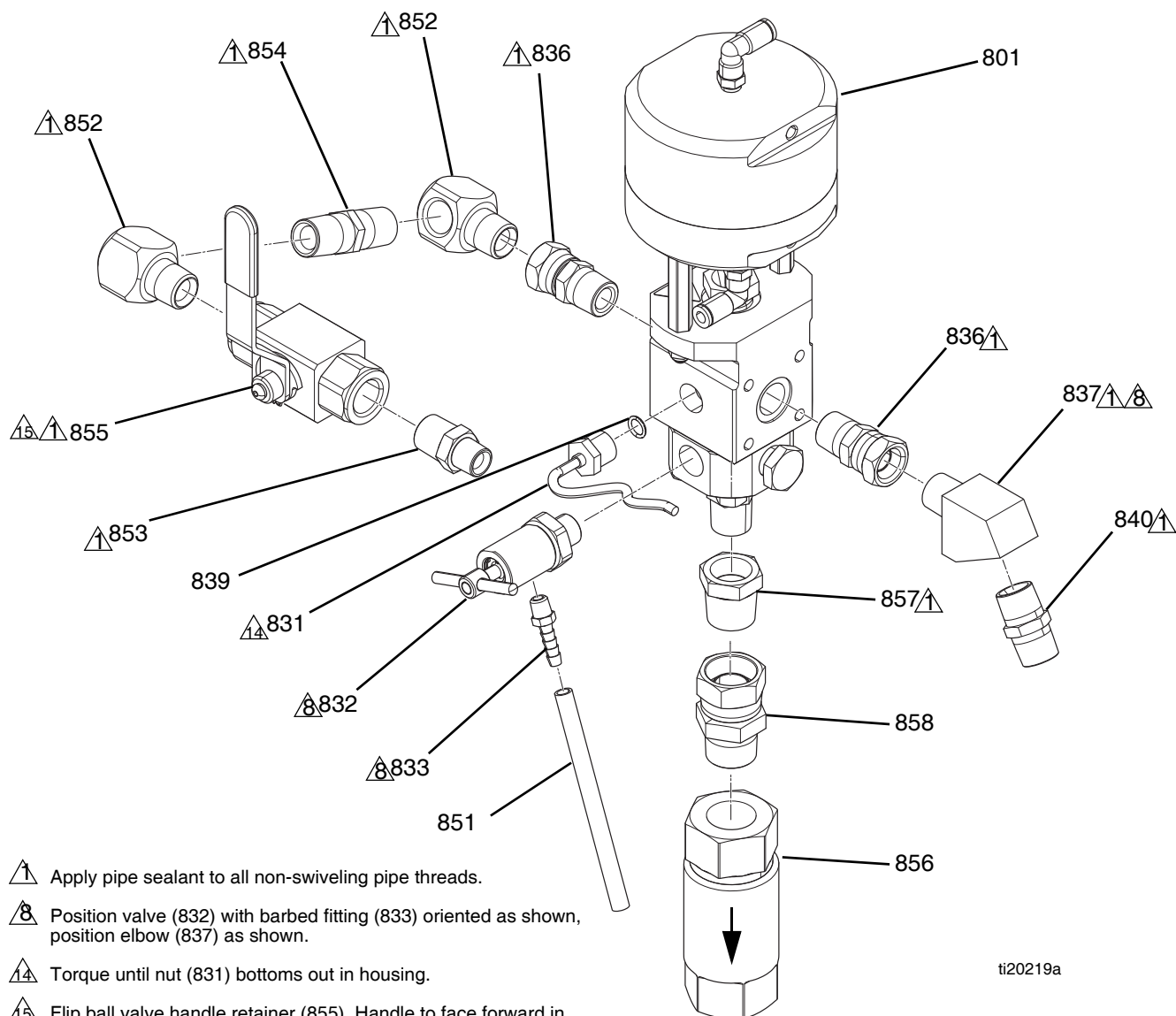
 Orient fittings approximately as shown.

| Ref   | Part   | Description                         | Qty |
|-------|--------|-------------------------------------|-----|
| 701   | 16T236 | FILTER, air, 1-1/4, auto drain      | 1   |
| 701a◆ | 106204 | FILTER ELEMENT                      | 1   |
| 702   | C19662 | BUSHING, 1-1/4 x 1 npt carbon steel | 2   |
| 703   | 110300 | FITTING, elbow, street, pipe        | 3   |
| 704   | 158585 | FITTING, nipple                     | 2   |
| 705   | 16R951 | MANIFOLD, air distribution          | 1   |
| 706   | 157785 | FITTING, swivel                     | 1   |
| 707   | C19024 | FITTING, elbow, swivel              | 1   |
| 708   | 113163 | VALVE, ball, vented, 1.00 in.       | 1   |
| 709   | 160022 | FITTING, union, adapter             | 1   |
| 710   | ---    | SEALANT, pipe, stainless steel      | 1   |
| 711   | 100361 | PLUG, pipe                          | 2   |

--- Not for sale.

◆ Not shown.

## Ratio Control Valve Assemblies (28, 29)



ti20219a

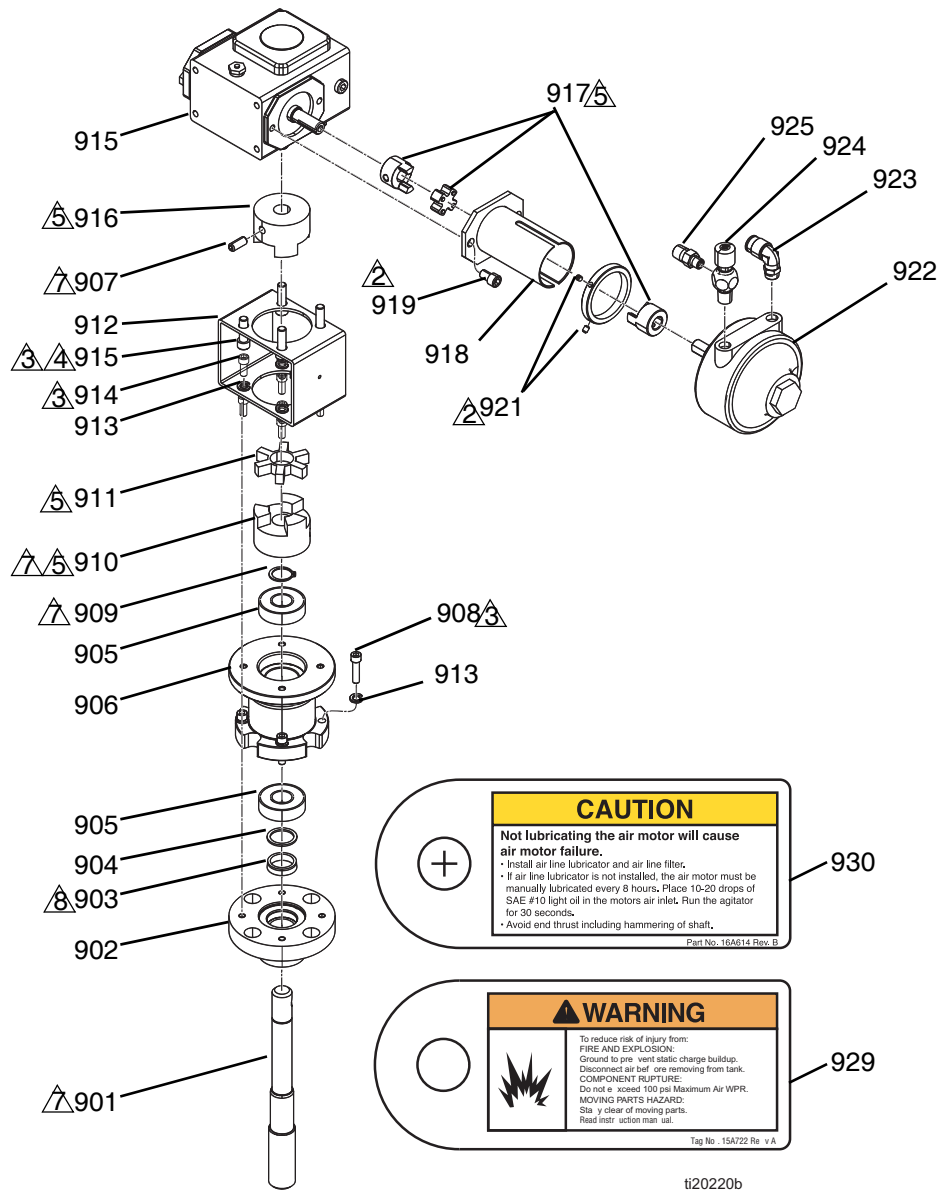
| Ref  | Part   | Description                     | Qty |
|------|--------|---------------------------------|-----|
| 801† | 255478 | VALVE, dosing                   | 1   |
| 831  | 15M669 | SENSOR, pressure, fluid outlet  | 1   |
| 832  | 262872 | VALVE, pressure, bleed, PFP     | 1   |
| 833  | 116746 | FITTING, barbed, plated         | 1   |
| 836  | 156684 | FITTING, union, adapter         | 2   |
| 837  | 15M987 | FITTING, elbow, 60 degree       | 1   |
| 839  | 121399 | PACKING, o-ring                 | 1   |
| 840  | 158491 | FITTING, nipple                 | 1   |
|      |        | (B side only - Qty 1)           |     |
|      |        | (A side only - Qty 2)           |     |
| 851  | 116750 | TUBE, nylon                     | 1   |
| 852  | 158683 | FITTING, elbow, 90 degree       | 2   |
| 853  | 159239 | FITTING, nipple, pipe, reducing | 1   |
|      |        | (B side only)                   |     |

| Ref | Part   | Description               | Qty |
|-----|--------|---------------------------|-----|
| 854 | 156877 | FITTING, nipple, long     | 1   |
| 855 | 262739 | VALVE, ball, 1/2 in.      | 1   |
| 856 | 16T481 | VALVE, check; see page 80 | 1   |
| 857 | 502033 | FITTING, bushing, pipe    | 1   |
| 858 | 157785 | FITTING, swivel           | 1   |

† See Dosing Valve Instructions - Parts manual referenced on page 4 for further details.

# Feed Module Sub-Assemblies

## Air Powered Agitator (24P885)



1 Apply pipe sealant to all non-swiveling pipe threads.

2 Apply low strength threadlocker.

3 Apply blue thread locker.

4 Remove four screws from gear reducer (915), pass them through bracket (912) and back into gear reducer (915) then torque to 150-170 in-lb (17-19 N•m).

5 Leave a 0.015 in. gap between each half of couplings (910, 911, 916, 917).

7 When ordering a replacement coupling: Remove set screw supplied with couplings (910, 916) and discard. Replace with set screw (931).

8 Open side of u-cup seal (903) must face down inside housing (902).

**Air Powered Agitator (24P885)**

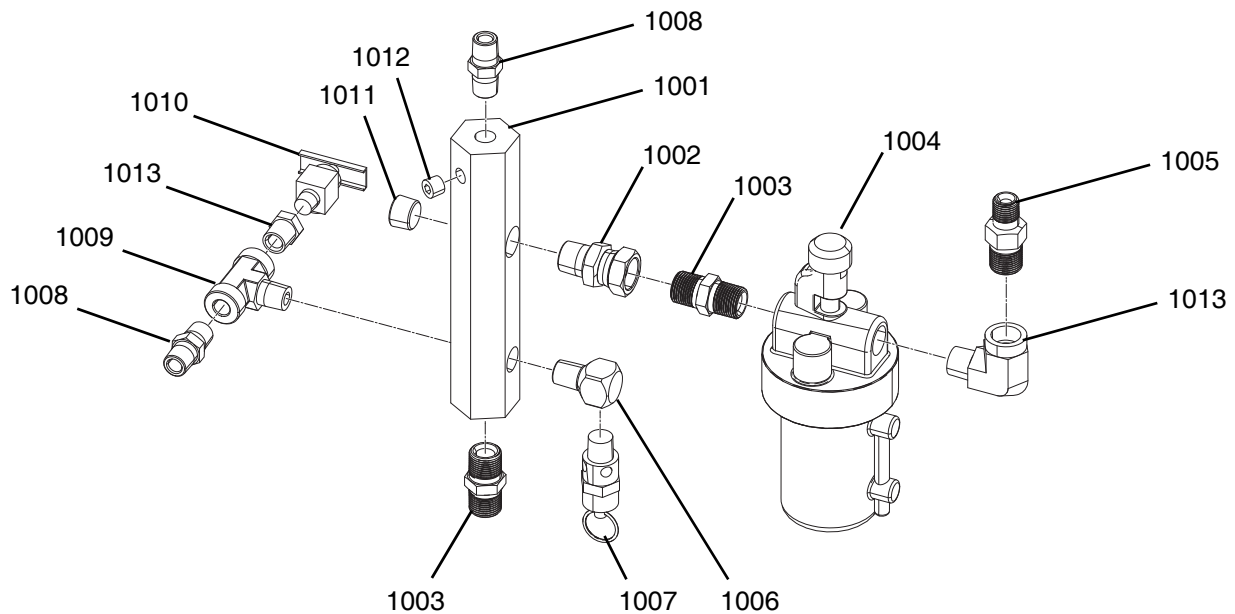
| Ref  | Part   | Description                                  | Qty |
|------|--------|----------------------------------------------|-----|
| 901  | 16P919 | SHAFT, agitator, upper                       | 1   |
| 902  | 16U219 | HOUSING, agitator                            | 1   |
| 903  | 122772 | SEAL, 0.875 in. ID x 1.125 in. OD, PTFE      | 1   |
| 904  | 15Y360 | SPACER, shaft, agitator, ASME                | 1   |
| 905  | 122774 | BEARING, ball, 3/4bore x 1-3/4 dia. x 1/2    | 2   |
| 906  | 16P920 | HOUSING, bearing, agitator                   | 1   |
| 907  | ---    | SCREW, socket head set screw, 5/16-18 x 0.75 | 2   |
| 908  | 112222 | SCREW, socket cap head                       | 4   |
| 909  | 122776 | RING, retaining, external, 0.750 in.         | 1   |
| 910  | 122761 | HOUSING, alignment, hub                      | 1   |
| 911  | 122760 | COUPLING, alignment, disk, TPE               | 1   |
| 912  | 16P922 | BRACKET, adapter, agitator                   | 1   |
| 913  | C19209 | WASHER, lock                                 | 8   |
| 914  | 101682 | SCREW, socket cap head                       | 4   |
| 915  | 181794 | GEAR, reducer                                | 1   |
| 916  | 16P923 | COUPLER, adapter                             | 1   |
| 917  | 100828 | COUPLING, flexible                           | 1   |
| 918  | 16T063 | COLLAR, mounting                             | 1   |
| 919  | 116940 | SCREW, cap, socket head, 5/16-18             | 2   |
| 920  | 181849 | COLLAR                                       | 1   |
| 921  | 101118 | SCREW                                        | 2   |
| 922  | 111310 | MOTOR, air, rotary                           | 1   |
| 923  | 115841 | FITTING, elbow                               | 1   |
| 924  | 206264 | VALVE, needle                                | 1   |
| 925  | 191872 | FITTING, nipple, reducing                    | 1   |
| 926  | ---    | SEALANT, pipe, stainless steel               | 1   |
| 927  | ---    | SEALANT, low strength thread locker          | 1   |
| 928  | ---    | SEALANT, blue thread locker                  | 1   |
| 929▲ | 15A722 | TAG, warning, agitator                       | 1   |
| 930▲ | 16A614 | TAG, label, caution                          | 1   |

--- Not for sale.

▲ Replacement Danger and Warning labels, tags and cards are available at no cost.



## Tank Air Manifold Assembly (218)



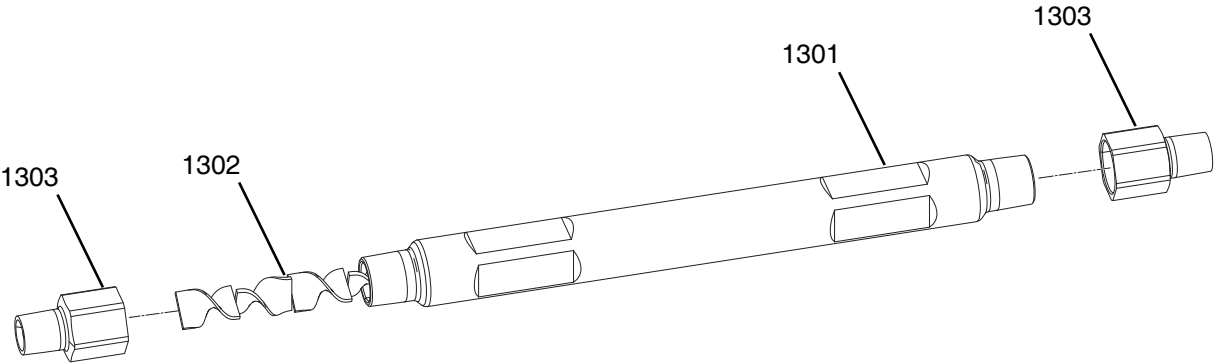
1 Apply pipe sealant to all non-swiveling pipe threads.

2 Orient all fittings as shown.

| Ref  | Part   | Description                    | Qty |
|------|--------|--------------------------------|-----|
| 1001 | 189016 | MANIFOLD, air, inlet           | 1   |
| 1002 | 155665 | UNION, adapter                 | 1   |
| 1003 | 156849 | PIPE, nipple                   | 2   |
| 1004 | 214847 | LUBRICATOR, air line           | 1   |
| 1005 | 165198 | FITTING, nipple, reducing      | 1   |
| 1006 | 100840 | FITTING, elbow, street         | 1   |
| 1007 | 116643 | VALVE, safety, 90 psi          | 1   |
| 1008 | 156971 | FITTING, nipple, short         | 2   |
| 1009 | 108638 | FITTING, pipe, tee             | 1   |
| 1010 | 101759 | FITTING, drain cock            | 1   |
| 1011 | 101754 | PLUG, pipe                     | 1   |
| 1012 | 100139 | PLUG, pipe                     | 1   |
| 1013 | 100030 | BUSHING                        | 1   |
| 1014 | 111856 | FITTING, elbow, street         | 1   |
| 1015 | ---    | SEALANT, pipe, stainless steel | 1   |

--- Not for sale.

Static Mixer (16T316)



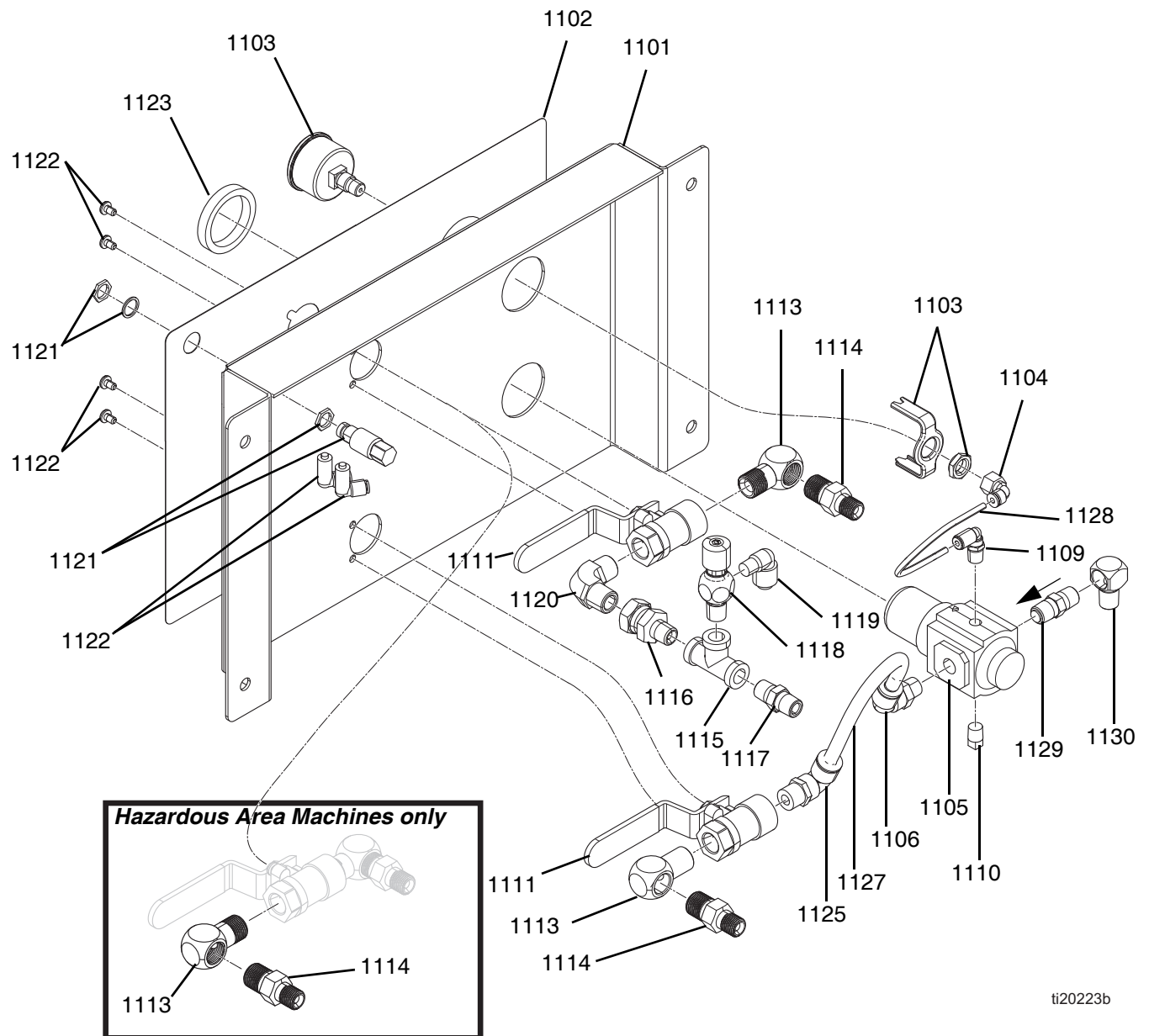
 Apply pipe sealant to all non-swiveling pipe threads.

| Ref  | Part   | Description                          | Qty |
|------|--------|--------------------------------------|-----|
| 1301 | ---    | TUBE, mixer                          | 1   |
| 1302 | 24P886 | MIXER, 12 element, stainless steel   | 1   |
| 1303 | 16T315 | BUSHING, reducing 3/4 nptf x 1/2 npt | 2   |
| 1304 | ---    | SEALANT, pipe, stainless steel       | 1   |

--- Not for sale.

## Feed Module Air Panel (262860)

**NOTE:** For **System Air Controls Module (255761)** parts, see page 61.



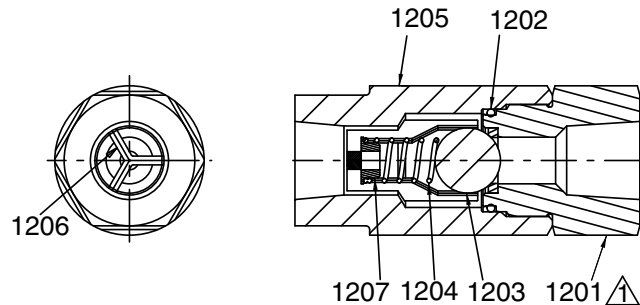
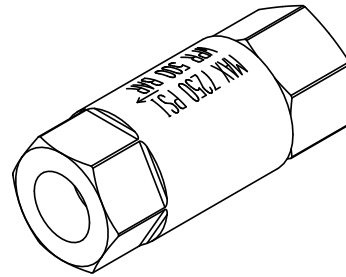
 Apply pipe sealant to all non-swiveling pipe threads.

## Air Panel

| Ref  | Part   | Description                                                   | Qty |
|------|--------|---------------------------------------------------------------|-----|
| 1101 | ---    | BRACKET, air control                                          | 1   |
| 1102 | ---    | LABEL, instructions                                           | 1   |
| 1103 | 121424 | GAUGE, pressure, panel mount, 1.5 in.                         | 1   |
| 1104 | 15T498 | FITTING, 90 degree, swivel, 5/32 in. tee x 1/8 in. female npt | 1   |
| 1105 | 116513 | REGULATOR, air                                                | 1   |
| 1106 | 121141 | FITTING, elbow, swivel, 3/8 tee, 1/4 in. male npt             | 1   |
| 1109 | 198171 | FITTING, elbow                                                | 1   |
| 1110 | 100403 | PLUG, pipe                                                    | 1   |
| 1111 | 121457 | VALVE, ball, air, panel mounted                               | 2   |
| 1113 | 155699 | FITTING, elbow, street                                        |     |
|      |        | 262860: Qty 2) (262844: Qty. 3)                               |     |
| 1114 | 165198 | FITTING, nipple, reducing (262860: Qty 2) (262844: Qty. 3)    |     |
| 1115 | 104984 | FITTING, tee, pipe                                            | 1   |
| 1116 | 157705 | UNION, swivel                                                 | 1   |
| 1117 | 156971 | FITTING, nipple, short                                        | 1   |
| 1118 | 206264 | VALVE, needle                                                 | 1   |
| 1119 | 114367 | FITTING, tube, qd, 90 degree elbow                            | 1   |
| 1120 | 109544 | FITTING, elbow, pipe, male                                    | 1   |
| 1121 | 110914 | VALVE, button, push                                           | 1   |
| 1122 | 100264 | SCREW, mach, panhead                                          | 4   |
| 1123 | 116514 | NUT, regulator mount                                          | 1   |
| 1124 | 109193 | FITTING, tube, male, elbow                                    | 2   |
| 1125 | 16F151 | FITTING, elbow, swivel, 3/8 tee, 3/8 npt                      | 1   |
| 1126 | ---    | SEALANT, pipe, stainless steel                                | 1   |
| 1127 | 054134 | TUBE, nylon, 3/8 in. OD                                       | 1.1 |
| 1128 | 517305 | TUBE, nylon, 5/32 in. OD                                      | 0.7 |
| 1129 | 106495 | VALVE, check, brass, 1/4 MBE                                  | 1   |
| 1130 | 100840 | FITTING, elbow, street                                        | 1   |

--- Not for sale.

## Check Valve (16T481)

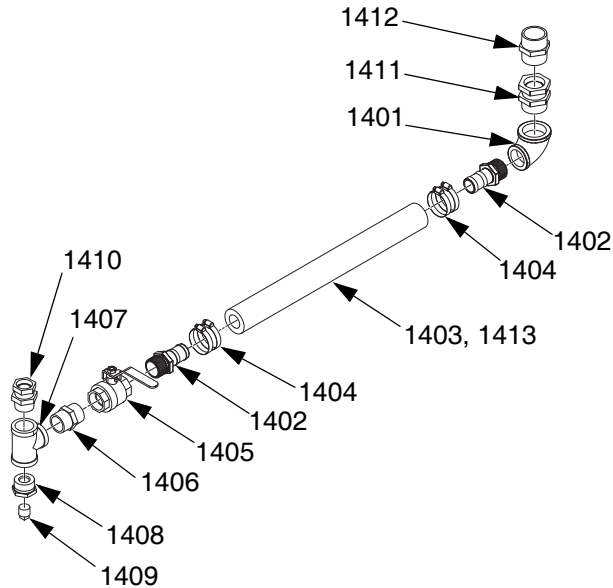


 Torque to 75-80 ft-lb (102-108 N•m).

| Ref  | Part   | Description         | Qty |
|------|--------|---------------------|-----|
| 1201 | ---    | NUT, seat           | 1   |
| 1202 | 102595 | PACKING, o-ring     | 1   |
| 1203 | 100279 | BALL, metallic      | 1   |
| 1204 | 108361 | SPRING, compression | 1   |
| 1205 | ---    | HOUSING, ball check | 1   |
| 1206 | 181492 | GUIDE, ball         | 3   |
| 1207 | 181535 | RETAINER, spring    | 1   |

--- Not for sale.

## Flexible Fluid Connection Kit (262820)



| Ref  | Part   | Description                                                        | Qty |
|------|--------|--------------------------------------------------------------------|-----|
| 1401 | 120291 | PIPE, elbow female                                                 | 1   |
| 1402 | 125995 | FITTING, hose, barbed, 1-1/2 npt                                   | 2   |
| 1403 | 126320 | HOSE, 1-1/2 ID, 200 psi, 3 ft;<br>for side to side configuration   | 1   |
| 1404 | 126889 | CLAMP, hose                                                        | 2   |
| 1405 | 121440 | VALVE, ball, 1-1/2 npt                                             | 1   |
| 1406 | 121441 | FITTING, nipple, hex, 1-1/2 npt                                    | 1   |
| 1407 | 121443 | FITTING, tee, 1-1/2npt                                             | 1   |
| 1408 | 101496 | BUSHING, pipe                                                      | 1   |
| 1409 | 104663 | PLUG, pipe                                                         | 1   |
| 1410 | 121445 | SWIVEL, reducing, 1-1/2 x 1-1/4                                    | 1   |
| 1411 | 121436 | FITTING, swivel, male, 2 in.                                       | 1   |
| 1412 | 121435 | FITTING, nipple, hex, 2 in.                                        | 1   |
| 1413 | 17D794 | HOSE, 1-1/2 ID, 200 psi, 13 in;<br>for front to back configuration | 1   |

## Accessories

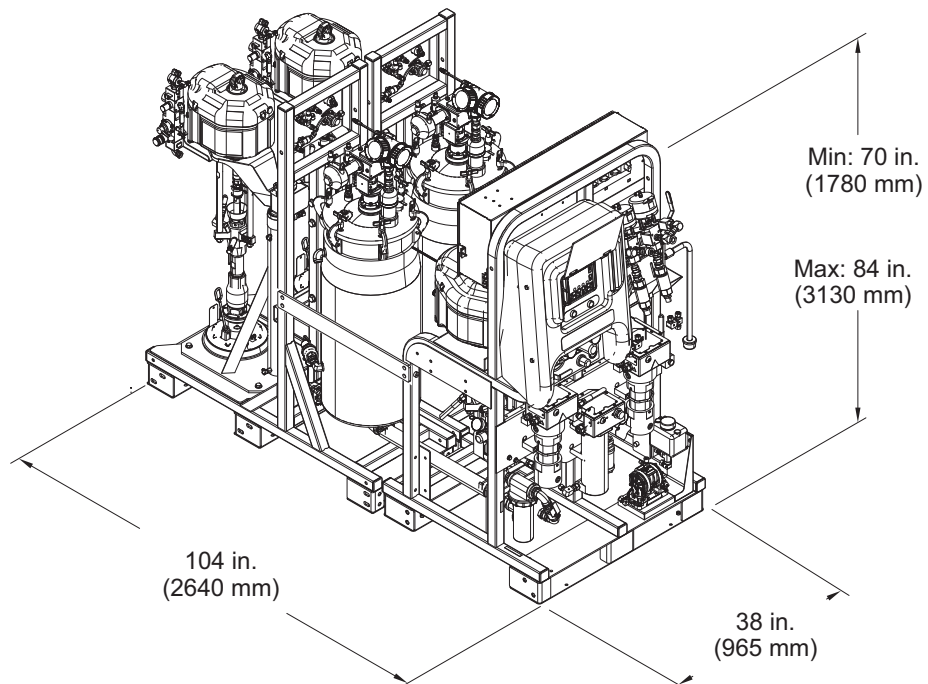
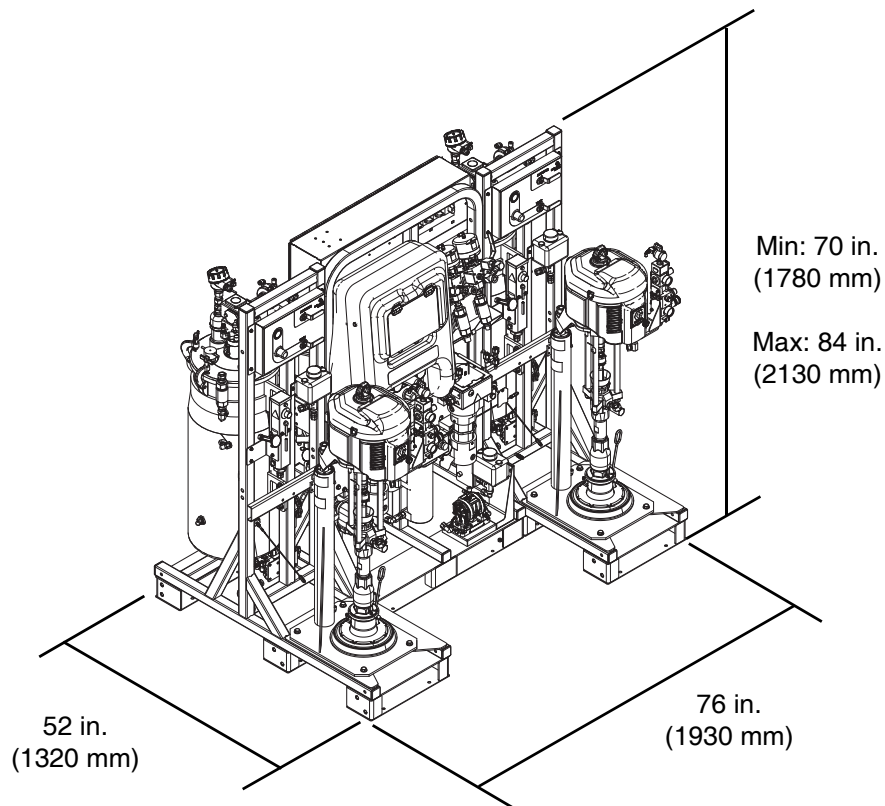
| Part   | Description                                                                                                | Qty |
|--------|------------------------------------------------------------------------------------------------------------|-----|
| 17G061 | BAG, 100 pack, polyethylene, (see <b>Batch Dispense or Ratio Test</b> in sprayer Setup - Operation manual) | 1   |
| 24P833 | KIT, mix wetted parts, contains one set of spare parts from the mix manifold outlet to the spray tip.      | 1   |
| 24X113 | KIT, hot water flush, for hazardous area machines, see form 332073                                         | 1   |
| 24Y132 | KIT, hot water flush, for non-hazardous area machines, see form 332073                                     | 1   |

# Technical Data

| XM PFP                                               |                                                                                                                                                                                                                   |                                 |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
|                                                      | US                                                                                                                                                                                                                | Metric                          |
| Ratio Tolerance Range (before alarm)                 | +/- 5%                                                                                                                                                                                                            |                                 |
| Maximum Flow Rate (measured with oil)                | 3 gallons per minute                                                                                                                                                                                              | 13.6 liters per minute          |
| Fluid Viscosity Range                                | Handles mastic materials which are loaded into heated tanks with ram-fed priming piston pumps                                                                                                                     |                                 |
| Air Inlet                                            | 1 in. npt(f)                                                                                                                                                                                                      |                                 |
| Fluid Inlets                                         | Pail (Pail Feed RAM Pumps)                                                                                                                                                                                        |                                 |
| Maximum Fluid Working Pressure for A and B Materials | 6000 psi                                                                                                                                                                                                          | 41 MPa, 414 bar                 |
| Maximum Fluid Working Pressure for Flushing Fluid    | 4500 psi                                                                                                                                                                                                          | 31 MPa, 7 bar                   |
| Maximum Fluid Working Pressure for Heating Fluid     | 100 psi                                                                                                                                                                                                           | 0.7 MPa, 7 bar                  |
| Maximum Fluid Temperature                            | 160°F                                                                                                                                                                                                             | 70°C                            |
| System Inlet Supplied Air Pressure Range             | 80-150 psi                                                                                                                                                                                                        | 0.5-1.0 MPa, 5.5-10.3 bar       |
| Maximum Pump Air Pressure                            | 100 psi                                                                                                                                                                                                           | 0.7 MPa, 7 bar                  |
| Maximum Tank Air Pressure                            | 90 psi                                                                                                                                                                                                            | 0.6 MPa, 6 bar                  |
| Air Filtration                                       | 40 micron main filter, 5 micron control air filter, 3 micron purge controller filter (Hazardous Location only)                                                                                                    |                                 |
| Ambient Operating Temperature Range                  | 32 to 130°F                                                                                                                                                                                                       | 0 to 54°C                       |
| Ambient Storage Temperature Range                    | 30 to 160°F                                                                                                                                                                                                       | -1 to 71°C                      |
| Environmental Conditions Rating                      | Altitude up to 13,123 ft                                                                                                                                                                                          | Altitude up to 4000 m           |
| Sound Pressure *                                     | 86 dBA at 100 psi                                                                                                                                                                                                 | 86 dBA at 0.7 MPa, 7 bar        |
| Sound Power **                                       | 98 dBA at 100 psi                                                                                                                                                                                                 | 98 dBA at 0.7 MPa, 7 bar        |
| System Weight (empty, no fluid)                      | 2175 lb                                                                                                                                                                                                           | 987 kg                          |
| Mix Ratio Range                                      |                                                                                                                                                                                                                   |                                 |
| 262869, 262943                                       | 1.5:1 to 4:1                                                                                                                                                                                                      |                                 |
| 24W626, 262945                                       | 1:1 to 1.5:1                                                                                                                                                                                                      |                                 |
| Air Consumption                                      |                                                                                                                                                                                                                   |                                 |
| Minimum                                              | 100 scfm                                                                                                                                                                                                          | 2.8 meter <sup>3</sup> /min     |
| Maximum                                              | 250 scfm                                                                                                                                                                                                          | 7.1 meter <sup>3</sup> /min     |
| Typical Application                                  | 125-175 scfm                                                                                                                                                                                                      | 3.5-5.0 meter <sup>3</sup> /min |
| Power Requirements                                   |                                                                                                                                                                                                                   |                                 |
| Voltage (can be set with jumpers)                    | Option 1: 200-240 VAC, 3 phase DELTA (3 wire plus ground)<br>Option 2: 350-415 VAC, 3 phase WYE (4 wire including neutral plus ground)                                                                            |                                 |
| Wattage                                              | 18,800 watts (non-hazardous location)<br>18,900 watts (hazardous location)<br>22,900 watts (with hazardous location flush water heater)<br>23,400 watts (with optional non-hazardous location flush water heater) |                                 |
| Amps                                                 | 200-240 VAC, 3-phase models DELTA: 63 Amps per phase full load<br>350-415 VAC, 3-phase models WYE: 40 Amps per phase full load                                                                                    |                                 |

| XM PFP                                                       |                                                                                                                                  |        |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------|
|                                                              | US                                                                                                                               | Metric |
| Wetted Parts                                                 |                                                                                                                                  |        |
| Suction Tube (Flush)                                         | Aluminum                                                                                                                         |        |
| Tanks                                                        | Stainless Steel                                                                                                                  |        |
| Flush Pump                                                   | Carbide, PTFE, stainless steel, UHMWPE                                                                                           |        |
| Hoses                                                        | Nylon                                                                                                                            |        |
| Pumps (A, B and Feed Pail)                                   | Carbon steel, alloy steel, 303, 440, 17-ph grades stainless steel, zinc and nickel plating, ductile iron, tungsten carbide, PTFE |        |
| Dosing Valves                                                | Carbon Steel, nickel plating, carbide, polyethylene, leather                                                                     |        |
| Manifold                                                     | Carbon steel, nickel plating, carbide, 302 stainless steel, PTFE, UHMWPE                                                         |        |
| Mixer                                                        | Stainless steel housing with stainless elements                                                                                  |        |
| Approvals<br>(see Models, page 3 for approval ratings)       |                                                                                                                                  |        |
| Non-Hazardous Location Models                                | CE, ETL                                                                                                                          |        |
| Hazardous Location Models                                    | CE, ETL, IECEx, ATEX                                                                                                             |        |
| Pressure Tanks                                               | ASME, PED (steel stamped on tanks under blue jacket)                                                                             |        |
| Notes                                                        |                                                                                                                                  |        |
| * Sound pressure measured 3.3 feet (1 meter) from equipment. |                                                                                                                                  |        |
| ** Sound power measured per ISO-9614-2.                      |                                                                                                                                  |        |

## Dimensions



ti20267b



This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook paper. There are no margins, text, or other markings on the page.

# 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.

**THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

**GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO.** These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

## **FOR GRACO CANADA CUSTOMERS**

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

# Graco Information

For the latest information about Graco products, visit [www.graco.com](http://www.graco.com).

For patent information, see [www.graco.com/patents](http://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: 1-800-328-0211 Fax: 612-378-3505**

*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 3A2989

**Graco Headquarters:** Minneapolis

**International Offices:** Belgium, China, Japan, Korea

**GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA**

**Copyright 2012, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.**

[www.graco.com](http://www.graco.com)

Revision W, November 2017