

# XM Plural-Component Sprayers

313289H

EN

For spraying two-component epoxy and urethane protective coatings in hazardous and non-hazardous locations. For professional use only.

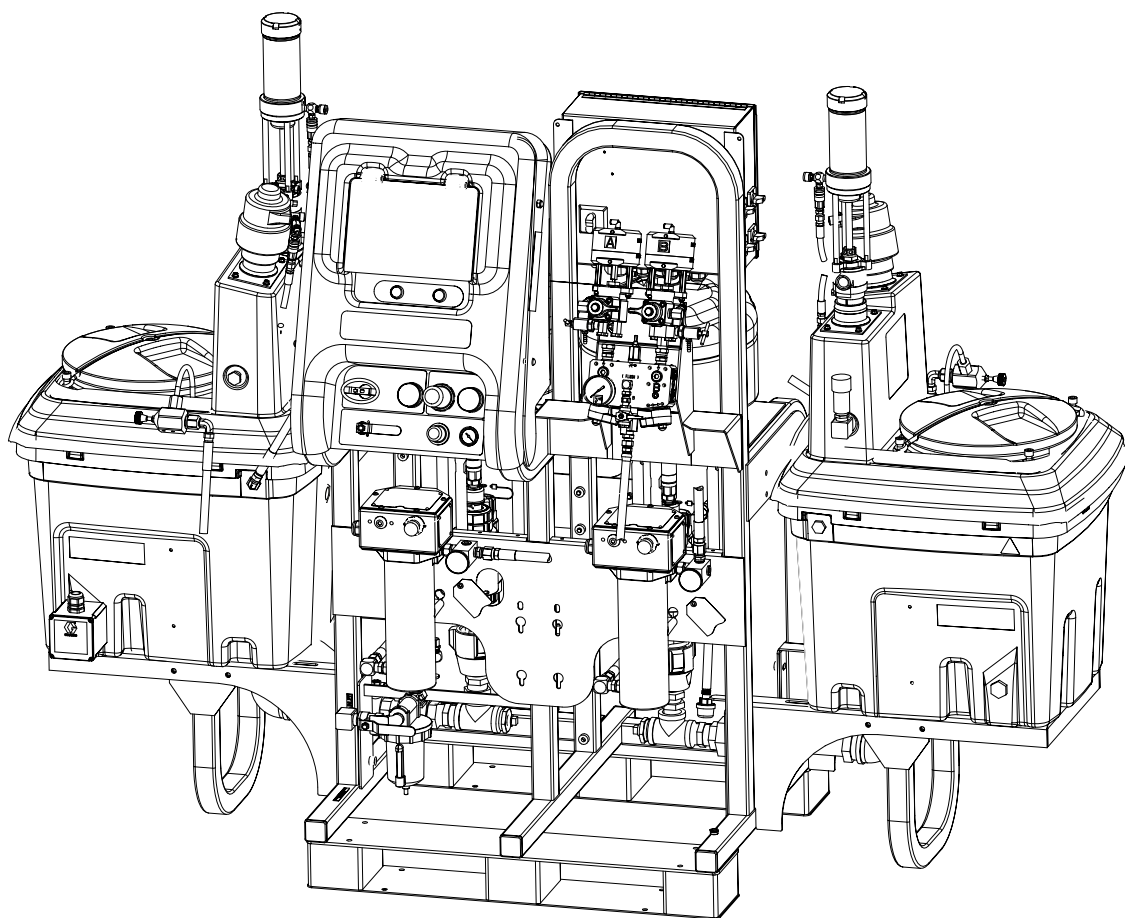


## Important Safety Instructions

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

See pages 7 and 8 for model information and agency approvals.

See page 83 for maximum working pressure.



# Contents

|                                                                          |           |                                             |           |
|--------------------------------------------------------------------------|-----------|---------------------------------------------|-----------|
| <b>Related Manuals</b> .....                                             | <b>3</b>  | <b>Junction Box Wiring Schematics</b> ..... | <b>53</b> |
| <b>Warnings</b> .....                                                    | <b>4</b>  | Fluid Heaters .....                         | 53        |
| <b>Models</b> .....                                                      | <b>7</b>  | Hopper Heaters .....                        | 54        |
| <b>Overview</b> .....                                                    | <b>9</b>  | <b>Parts</b> .....                          | <b>55</b> |
| Isocyanate Hazard .....                                                  | 9         | Control Box (255771) Parts .....            | 67        |
| Material Self-Ignition .....                                             | 9         | Control Box Power Supply Options .....      | 69        |
| Moisture Sensitivity of Isocyanates .....                                | 9         | Air Controls Module (255761) Parts .....    | 71        |
| Components A and B .....                                                 | 10        | Junction Box (256540) Parts .....           | 72        |
| Changing Materials .....                                                 | 10        | Fluid Control Assembly Parts .....          | 73        |
| <b>Before Repair</b> .....                                               | <b>11</b> | Air Inlet Manifold (255762) Parts .....     | 74        |
| Location .....                                                           | 11        | Alternator Module (255728) Parts .....      | 75        |
| Grounding .....                                                          | 11        | Repair and Spare Parts Reference .....      | 76        |
| Proper Lifting of Sprayer .....                                          | 11        | <b>Accessories and Kits</b> .....           | <b>77</b> |
| Pressure Relief Procedure .....                                          | 12        | <b>Dimensions</b> .....                     | <b>80</b> |
| Flush Before Using Equipment .....                                       | 13        | System Dimensions without Hoppers .....     | 80        |
| <b>Flush</b> .....                                                       | <b>14</b> | System Dimensions with Hoppers .....        | 81        |
| Flush Mixed Material .....                                               | 14        | System Dimensions with Hoppers .....        | 82        |
| Empty and Flush Entire System (new sprayer or end of job) .....          | 16        | <b>Technical Data</b> .....                 | <b>83</b> |
| <b>Shutdown Entire System</b> .....                                      | <b>18</b> | <b>Graco Standard Warranty</b> .....        | <b>84</b> |
| <b>Cleaning Procedure</b> .....                                          | <b>18</b> | <b>Graco Information</b> .....              | <b>84</b> |
| <b>Troubleshooting</b> .....                                             | <b>19</b> |                                             |           |
| <b>Alarms</b> .....                                                      | <b>22</b> |                                             |           |
| View Alarms .....                                                        | 22        |                                             |           |
| Diagnose Alarms .....                                                    | 22        |                                             |           |
| Clear Alarms .....                                                       | 22        |                                             |           |
| Alarm Codes and Troubleshooting .....                                    | 23        |                                             |           |
| LED Diagnostic Information .....                                         | 28        |                                             |           |
| <b>Repair</b> .....                                                      | <b>29</b> |                                             |           |
| Replace Air Filter Element .....                                         | 29        |                                             |           |
| User Interface/Control Box .....                                         | 30        |                                             |           |
| Air Controls .....                                                       | 38        |                                             |           |
| Fluid Control Assembly .....                                             | 40        |                                             |           |
| Sensors .....                                                            | 41        |                                             |           |
| Pump Assembly .....                                                      | 42        |                                             |           |
| Solvent Pump .....                                                       | 44        |                                             |           |
| Fluid Heaters .....                                                      | 44        |                                             |           |
| <b>Electrical Schematics</b> .....                                       | <b>45</b> |                                             |           |
| Simplified Electrical Schematic, XM Sprayer with Alternator .....        | 45        |                                             |           |
| Detailed Electrical Schematic, XM Sprayer with Alternator (page 1) ..... | 47        |                                             |           |
| Simplified Electrical Schematic, XM Sprayer with Wall Power .....        | 49        |                                             |           |
| Detailed Electrical Schematic, XM Sprayer with Wall Power (page 1) ..... | 51        |                                             |           |

# Related Manuals





Manuals are available at [www.graco.com](http://www.graco.com).

## Component Manuals in U.S. English:

| Manual | Description                                                             |
|--------|-------------------------------------------------------------------------|
| 312359 | XM Plural-Component Sprayers Operation                                  |
| 313292 | XM Plural-Component OEM Sprayers Instructions-Parts                     |
| 311762 | Xtreme® Displacement Pumps Instructions-Parts                           |
| 311238 | NXT™ Air Motor Instructions-Parts                                       |
| 312747 | Double Wall Hopper Kit Instructions-Parts                               |
| 309524 | Viscon® HP Heater Instructions-Parts                                    |
| 312145 | XTR™ 5 and XTR™ 7 Spray Guns Instructions-Parts                         |
| 312769 | Feed Pump and Agitator Kits Instructions-Parts                          |
| 312794 | Merkur® Pump Assembly Instructions-Parts                                |
| 406699 | 7-Gallon Hopper Installation Kit Instructions-Parts                     |
| 406739 | Desiccant Kit Instructions-Parts                                        |
| 406740 | Level Sensor Adapter Kit Instructions-Parts                             |
| 406690 | Caster Kit Instructions-Parts                                           |
| 406691 | Hose Rack Kit Instructions-Parts                                        |
| 313258 | Electric Heated Hose Power Supply Kit Instructions-Parts                |
| 313259 | Hopper or Hose Heat Circulation Kit Instructions-Parts                  |
| 312770 | Lower Strainer and Valve Kit Instructions-Parts                         |
| 312749 | XM Mix Manifold Kit Instructions-Parts                                  |
| 313293 | Alternator Conversion Kits Instructions-Parts                           |
| 313342 | Dosing Valve Repair Kit Instructions-Parts                              |
| 313343 | High Flow Severe Duty Shutoff Check Valve Repair Kit Instructions-Parts |





# Warnings

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





|  <b>WARNING</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <p><b>FIRE AND EXPLOSION HAZARD</b></p> <p>Flammable fumes, such as solvent and paint fumes, in <b>work area</b> can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> <li>• Use equipment only in well ventilated area.</li> <li>• Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).</li> <li>• Keep work area free of debris, including solvent, rags and gasoline.</li> <li>• Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.</li> <li>• Ground all equipment in the work area. See <b>Grounding</b> instructions.</li> <li>• Use only grounded hoses.</li> <li>• Hold gun firmly to side of grounded pail when triggering into pail.</li> <li>• If there is static sparking or you feel a shock, <b>stop operation immediately</b>. Do not use equipment until you identify and correct the problem.</li> <li>• Keep a working fire extinguisher in the work area.</li> <li>• Do not connect USB device in explosive atmospheres.</li> </ul> |
|               | <p><b>SPECIAL CONDITIONS FOR SAFE USE</b></p> <ul style="list-style-type: none"> <li>• To prevent the risk of electrostatic sparking, the equipment's non-metallic parts must be cleaned with only a damp cloth.</li> <li>• Refer to the Viscon HP Heater manual for special conditions for safe use.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|               | <p><b>ELECTRIC SHOCK HAZARD</b></p> <p>Improper grounding, setup, or usage of the system can cause electric shock.</p> <ul style="list-style-type: none"> <li>• Turn off and disconnect power at main switch before disconnecting any cables and before servicing equipment.</li> <li>• Connect only to grounded power source.</li> <li>• All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |







# ! WARNING

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p><b>INTRINSIC SAFETY</b></p> <p>Intrinsically safe equipment that is installed improperly or connected to non-intrinsically safe equipment will create a hazardous condition and can cause fire, explosion, or electric shock. Follow local regulations and the following safety requirements.</p> <ul style="list-style-type: none"> <li>Only models with model number XM_D__ or XM_E__, and packaged models with part numbers ending in 00-13, 17-23, 27-29, 31, utilizing the air-driven alternator are approved for installation in a Hazardous (explosive atmosphere) Location - see <b>Approvals</b>, page 8. Only the models stated above meet all local safety fire codes including NFPA 33, NEC 500 and 516, and OSHA 1910.107. To help prevent fire and explosion: <ul style="list-style-type: none"> <li>Do not install equipment approved only for a non-hazardous location in a hazardous location. See model ID label for intrinsic safety rating of your model.</li> <li>Do not substitute system components as this may impair intrinsic safety.</li> </ul> </li> <li>Equipment that comes in contact with the intrinsically safe terminals must be rated for Intrinsic Safety. This includes DC voltage meters, ohmmeters, cables, and connections. Remove the unit from the hazardous area when troubleshooting.</li> <li>Do not connect, download, or remove USB device unless unit is removed from the hazardous (explosive atmosphere) location.</li> <li>If explosion-proof heaters are used, ensure wiring, wiring connections, switches, and electrical distribution panel all meet flame-proof (explosion-proof) requirements.</li> </ul> |
|   | <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 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>Do not spray without tip guard and trigger guard installed.</li> <li>Engage trigger lock when not spraying.</li> <li>Follow <b>Pressure Relief Procedure</b> in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|  | <p><b>PRESSURIZED EQUIPMENT HAZARD</b></p> <p>Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> <li>Follow <b>Pressure Relief Procedure</b> in this manual, 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, tubes, and couplings daily. Replace worn or damaged parts immediately.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|  | <p><b>MOVING PARTS HAZARD</b></p> <p>Moving parts can pinch 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> in this manual. Disconnect power or air supply.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

# ! WARNING

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p><b>EQUIPMENT MISUSE HAZARD</b></p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> <li>• Do not operate the unit when fatigued or under the influence of drugs or alcohol.</li> <li>• Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See <b>Technical Data</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. See <b>Technical Data</b> in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS forms from distributor or retailer.</li> <li>• Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.</li> <li>• Do not alter or modify equipment.</li> <li>• Use equipment only for its intended purpose. Call your distributor for information.</li> <li>• Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>• Do not kink or over bend hoses or use hoses to pull equipment.</li> <li>• Keep children and animals away from work area.</li> <li>• Comply with all applicable safety regulations.</li> </ul> |
|    | <p><b>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 MSDS's 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> <li>• Always wear impervious gloves when spraying or cleaning equipment.</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, do not touch hot fluid or equipment. Wait until equipment/fluid has cooled completely.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|  | <p><b>PERSONAL PROTECTIVE EQUIPMENT</b></p> <p>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• Protective eyewear</li> <li>• Clothing and respirator as recommended by the fluid and solvent manufacturer</li> <li>• Gloves</li> <li>• Hearing protection</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

# Models

|                                                                                                                                                                     |                                                                                   |                                                                                   |                                                                                   |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|--|--|
|                                                                                    |  |  |  |  |  |  |
| XM sprayers are not approved for use in hazardous locations unless the base model, all accessories, all kits, and all wiring meet local, state, and national codes. |                                                                                   |                                                                                   |                                                                                   |  |  |  |

Check the identification plate (ID) for the 6-digit part number of the sprayer. Use the following matrix to define the construction of the sprayer, based on the six digits. For example, Part **XM1A00** represents an XM Plural-Component sprayer (**XM**); 5200 psi pump set with pump filters (**1**); wall power supply, no heaters, no junction box, and is not approved for hazardous areas (**A**); with no additional kits (**00**).

## NOTE:

Some configurations in the following matrix cannot be built. See the Product Selection Guide for available systems. If option(s) for third, fourth, fifth, and sixth digits is blank, the option(s) is not included with that particular configuration.

To order replacement parts, see **Parts** section in this manual. The digits in the matrix do not correspond to the Ref. Nos. in the Parts drawings and lists.

| XM                                                  | 1                                               |                        |              |                 | A            |                   |               |              |                   |                                         | 00                         |
|-----------------------------------------------------|-------------------------------------------------|------------------------|--------------|-----------------|--------------|-------------------|---------------|--------------|-------------------|-----------------------------------------|----------------------------|
| First and Second Digits                             | Third Digit                                     |                        |              |                 | Fourth Digit |                   |               |              |                   |                                         | Fifth and Sixth Digits     |
|                                                     | System Choice<br>(See Table 1 for lower models) |                        |              |                 | Kit Choice   |                   |               |              |                   |                                         | Additional Kit             |
|                                                     |                                                 | Pump Set<br>(hose/gun) | Pump Filters | Remote Manifold |              | Control Box       | Fluid Heaters | Junction Box | Location Category | Approvals<br>(See page 8 for approvals) | See Table 2 for selections |
| XM<br>(plural component sprayer mounted on a frame) | 1                                               | 5200 psi               | ✓            |                 | A            | Wall Power Supply |               |              | NE                | CE, FM, FMc                             |                            |
|                                                     | 2                                               | 5200 psi               |              |                 | B            | Wall Power Supply | ✓             | ✓            | NE                | CE, FM, FMc                             |                            |
|                                                     | 3                                               | 6300 psi               | ✓            |                 | D            | IS/ Alternator    |               |              | EH                | CE, FM, FMc, Ex                         |                            |
|                                                     | 4                                               | 6300 psi               |              |                 | E            | IS/ Alternator    | ✓             |              | EH                | CE, FM, FMc, Ex                         |                            |
|                                                     | 5                                               | 5200 psi               | ✓            | ✓               |              |                   |               |              |                   |                                         |                            |
|                                                     | 6                                               | 5200 psi               |              | ✓               |              |                   |               |              |                   |                                         |                            |
|                                                     | 7                                               | 6300 psi               | ✓            | ✓               |              |                   |               |              |                   |                                         |                            |
|                                                     | 8                                               | 6300 psi               |              | ✓               |              |                   |               |              |                   |                                         |                            |

## Location Category Key:

**NE** Not for use in European explosive atmosphere locations or hazardous locations.

**EH** For use in explosive atmospheres and hazardous locations.

## Approvals:



Intrinsically safe for Class I, Div 1, Group D, T2  
Class I, Division 1, Group D, T2  
Ta = 0°C to 54°C



FM09ATEX0015X  
II 2 G  
Ex d ia px IIA T2 Tamb = 0°C to 54°C

See Special Conditions for Safe Use in **Warnings**, page 4.

**Table 1: Lower Models and Corresponding Identification Codes**

| Code   | System Pressure<br>(MPa, bar) | Pump<br>Filters | A Lower<br>(see manual 311762) | B Lower<br>(see manual 311762) |
|--------|-------------------------------|-----------------|--------------------------------|--------------------------------|
| 1 or 5 | 5200 psi (35, 350)            | ✓               | L250C4                         | L220C4                         |
| 2 or 6 | 5200 psi (35, 350)            |                 | L250C3                         | L220C3                         |
| 3 or 7 | 6300 psi (49, 490)            | ✓               | L180C4                         | L145C4                         |
| 4 or 8 | 6300 psi (49, 490)            |                 | L180C3                         | L145C3                         |

**Table 2: Additional Kits - Identification Code Index**





|    | 20 Gal.<br>Hopper<br>Kit | Hopper<br>Heater Kit<br>240V | Hopper<br>Fluid Inlet<br>Kit | Hopper<br>Universal<br>Mount Kit | Twistork<br>Agitator<br>Kit | T2 Pump<br>Feed Kit<br>(on<br>hopper) | 5:1 Pump<br>Feed Kit<br>(on<br>hopper) | 7 Gal.<br>Hopper<br>and<br>Bracket<br>Kit | Drum<br>Feed Kit<br>(Dual T2<br>and<br>Agitator) | Drum<br>Feed Kit<br>(Dual 5:1<br>and<br>Agitator) | Heated<br>Hopper/<br>Hose<br>Circulati<br>on Kit |
|----|--------------------------|------------------------------|------------------------------|----------------------------------|-----------------------------|---------------------------------------|----------------------------------------|-------------------------------------------|--------------------------------------------------|---------------------------------------------------|--------------------------------------------------|
| 00 |                          |                              |                              |                                  |                             |                                       |                                        |                                           |                                                  |                                                   |                                                  |
| 11 | 1                        |                              | 1                            | 1                                | 1                           |                                       |                                        | 1                                         |                                                  |                                                   |                                                  |
| 13 | 1                        |                              |                              | 1                                | 1                           |                                       | 1                                      | 1                                         |                                                  |                                                   |                                                  |
| 14 | 1                        | 1                            | 1                            | 1                                | 1                           |                                       |                                        | 1                                         |                                                  |                                                   |                                                  |
| 15 | 1                        | 1                            |                              | 1                                | 1                           | 1                                     |                                        | 1                                         |                                                  |                                                   |                                                  |
| 16 | 1                        | 1                            |                              | 1                                | 1                           |                                       | 1                                      | 1                                         |                                                  |                                                   |                                                  |
| 17 | 1                        |                              | 1                            | 1                                | 1                           |                                       |                                        | 1                                         |                                                  |                                                   | 1                                                |
| 19 | 1                        |                              |                              | 1                                | 1                           |                                       | 1                                      | 1                                         |                                                  |                                                   | 1                                                |
| 21 | 2                        |                              | 2                            | 2                                | 2                           |                                       |                                        |                                           |                                                  |                                                   |                                                  |
| 23 | 2                        |                              |                              | 2                                | 2                           |                                       | 2                                      |                                           |                                                  |                                                   |                                                  |
| 24 | 2                        | 2                            | 2                            | 2                                | 2                           |                                       |                                        |                                           |                                                  |                                                   |                                                  |
| 25 | 2                        | 2                            |                              | 2                                | 2                           | 2                                     |                                        |                                           |                                                  |                                                   |                                                  |
| 26 | 2                        | 2                            |                              | 2                                | 2                           |                                       | 2                                      |                                           |                                                  |                                                   |                                                  |
| 27 | 2                        |                              | 2                            | 2                                | 2                           |                                       |                                        |                                           |                                                  |                                                   | 1                                                |
| 29 | 2                        |                              |                              | 2                                | 2                           |                                       | 2                                      |                                           |                                                  |                                                   | 1                                                |
| 30 |                          |                              |                              |                                  |                             |                                       |                                        |                                           | 2                                                |                                                   |                                                  |
| 31 |                          |                              |                              |                                  |                             |                                       |                                        |                                           |                                                  | 2                                                 |                                                  |

**NOTE:**






See **Repair and Spare Parts Reference**, page 76, for more information.

See **Related Manuals**, page 3, for kit manual numbers.




# Overview

|                                                                                                                                                                                                                                                                        |                                                                                   |                                                                                   |                                                                                   |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|--|--|
|                                                                                                                                                                                       |  |  |  |  |  |  |
| <p>XM sprayers are not approved for use in hazardous locations unless the base model, all accessories, all kits, and all wiring meet local, state, and national codes. See <b>Models</b>, page 7, to determine the appropriate location for your particular model.</p> |                                                                                   |                                                                                   |                                                                                   |  |  |  |

## Isocyanate Hazard

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|--|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |
| <p>Spraying materials containing isocyanates creates potentially harmful mists, vapors, and atomized particulates.</p> <p>Read material manufacturer's warnings and material MSDS to know specific hazards and precautions related to isocyanates.</p> <p>Prevent inhalation of isocyanate mists, vapors, and atomized particulates by providing sufficient ventilation in the work area. If sufficient ventilation is not available, a supplied-air respirator is required for everyone in the work area.</p> <p>To prevent contact with isocyanates, appropriate personal protective equipment, including chemically impermeable gloves, boots, aprons, and goggles, is also required for everyone in the work area.</p> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |  |

## Material Self-Ignition

|                                                                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|--|
|                                            |  |  |  |  |  |  |
| <p>Some materials may become self-igniting if applied too thick. Read material manufacturer's warnings and material MSDS.</p> |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |  |

## Moisture Sensitivity of Isocyanates

Isocyanates (ISO) are catalysts used in two component foam and polyurea coatings. ISO will react with moisture (such as humidity) to form small, hard, abrasive crystals, which become suspended in the fluid. Eventually a film will form on the surface and the ISO will begin to gel, increasing in viscosity. If used, this partially cured ISO will reduce performance and the life of all wetted parts.

### NOTE:

The amount of film formation and rate of crystallization varies depending on the blend of ISO, the humidity, and the temperature.

To prevent exposing ISO to moisture:

- Always use a sealed container with a desiccant dryer in the vent, or a nitrogen atmosphere. **Never** store ISO in an open container.
- Keep the ISO lube pump reservoir filled with Graco Throat Seal Liquid (TSL), Part 206995. The lubricant creates a barrier between the ISO and the atmosphere.
- Use moisture-proof hoses specifically designed for ISO, such as those supplied with your system.
- Never use reclaimed solvents, which may contain moisture. Always keep solvent containers closed when not in use.
- Never use solvent on one side if it has been contaminated from the other side.
- Always park pumps when you shutdown.
- Always lubricate threaded parts with Part 217374 ISO pump oil or grease when reassembling.

## 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.

### NOTE:

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

Follow these recommendations for reassembly and setup:

- use at least a 3/8 in. (10 mm) x 25 ft. (7 m) hose.
- install a 24-element static mix tube after the integration hose.

## Keep Components A and B Separate

### NOTICE

To prevent cross-contamination of the equipment's wetted parts, **never** interchange component A (resin) and component B (hardener) parts.

## Changing Materials

- When changing materials, flush the equipment multiple times to ensure it is thoroughly clean.
- Always clean the fluid inlet strainers and outlet filter after flushing. See **Flush** on page 14.
- Check with your material manufacturer for chemical compatibility.
- Epoxies often have amines on the B (hardener) side. Polyureas often have amines on the A (resin) side.

### NOTE:

If the amine will switch between the two sides, see **Flush** on page 14.

# Before Repair

## Location

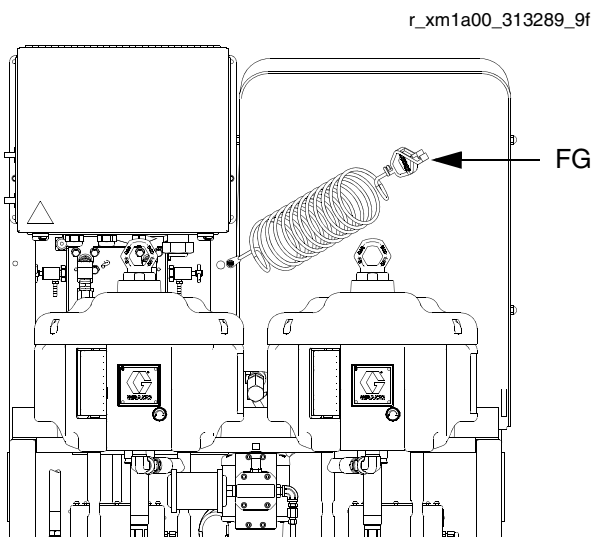
|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|

XM sprayers are not approved for use in hazardous locations unless the base model, all accessories, all kits, and all wiring meet local, state, and national codes. See **Models**, page 7, to determine the appropriate location for your particular model.

## Grounding

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|

Connect ground wire clamp (FG) to a true earth ground. If wall power is used to power controls or heaters, ground electrical connection properly according to local codes.



## Proper Lifting of Sprayer

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|

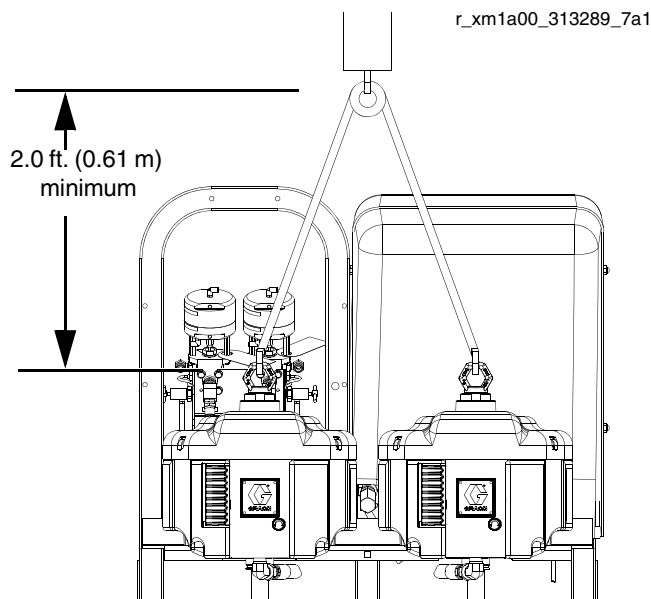
Follow instructions to avoid serious injury or damage to equipment. Never lift with the hopper(s) filled.

### Lift Using a Forklift

Power must be off. Sprayer can be raised and moved using a forklift. Carefully lift the sprayer; make sure it balances evenly.

### Lift Using a Hoist

Sprayer can also be lifted and moved using a hoist. Connect a bridle swing, hooking an end to each of the air motor lift rings. Hook the center ring to a hoist. Carefully lift the sprayer; make sure it balances evenly.

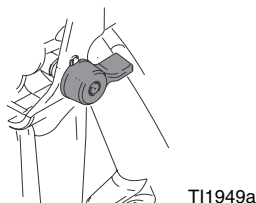


## Pressure Relief Procedure

|                                                                                                                                                           |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
|                                                                                                                                                           |  |  |  |  |  |  |
| <p>Follow <b>Pressure Relief Procedure</b> when you stop spraying or dispensing; and before cleaning, checking, servicing, or transporting equipment.</p> |  |  |  |  |  |  |

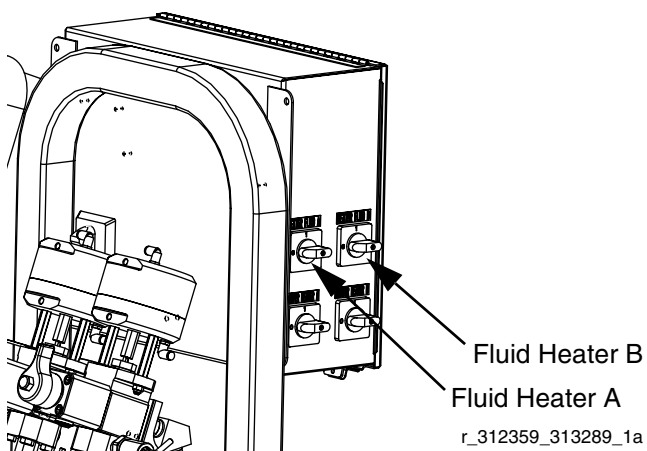
### Relieve A and B Fluid Pressure

1. Engage trigger lock.

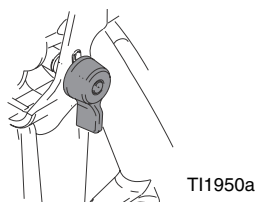


2. Press

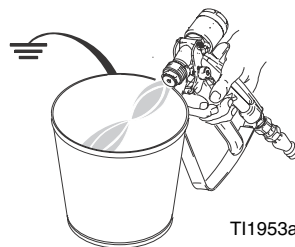
3. If fluid heaters are used, shut them off using the controls on the heater control box.



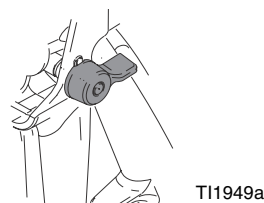
4. Shut off feed pumps, if used.
5. Remove spray tip and clean.
6. Disengage trigger lock.



7. Hold a metal part of the gun firmly to a grounded metal pail with a splash guard in place. Trigger gun to relieve pressure in material hoses.

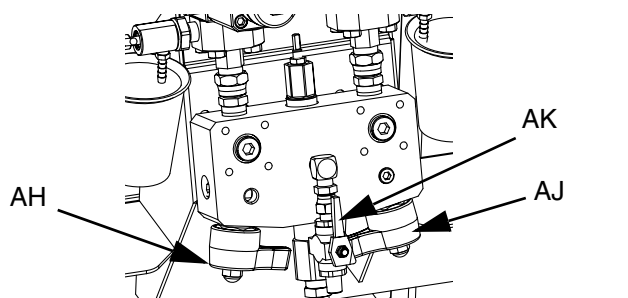


8. Engage trigger lock.

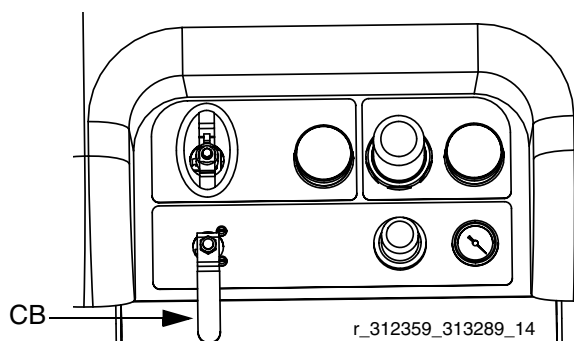


### Relieve Pump Fluid Pressure

9. Close mix manifold valves (AH, AJ), then open solvent flush valve (AK) on mix manifold.

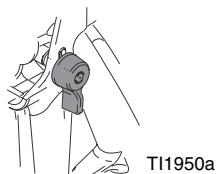


10. Open solvent pump air control (CB). Use lowest pressure needed to flush material out of hose.

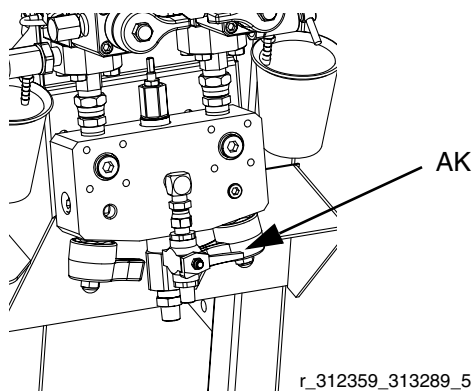




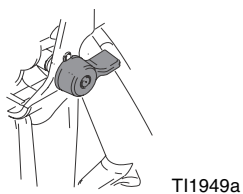
11. Disengage trigger lock.



12. Hold a metal part of the gun firmly to a grounded metal pail with a splash guard in place. Trigger gun to flush mixed material out of line with clean solvent.
13. Shut off solvent pump on air control panel.
14. Repeat steps 11 and 12. Then continue to step 15.
15. Close solvent flush valve (AK) on mix manifold.



16. Release any residual gun pressure and engage trigger lock.



## Flush Before Using Equipment

The equipment was tested with lightweight oil, which is left in the fluid passages to protect parts. To avoid contaminating your fluid with oil, flush the equipment with a compatible solvent before use. See **Flush** on page 14.


# Flush

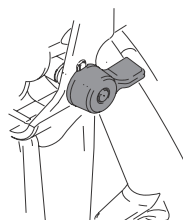
## Flush Mixed Material



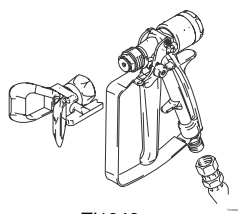
### Flush Mix Manifold

#### Use Solvent Pump

1. Press  to turn off system. Follow **Pressure Relief Procedure**, page 12. Engage trigger lock. Remove spray tip.

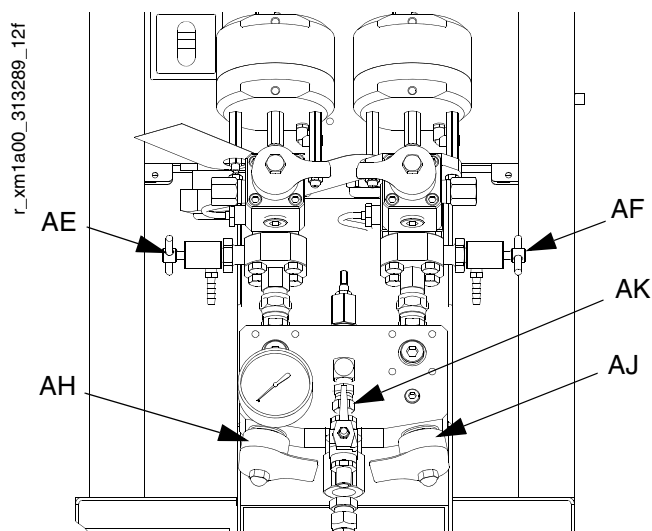


TI1949a



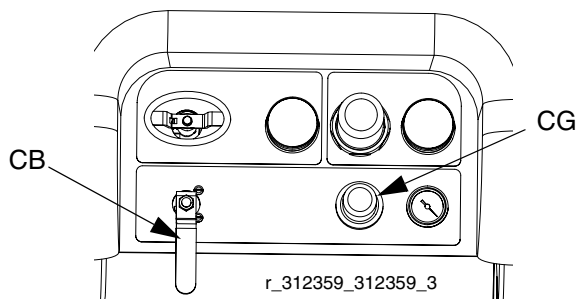
TI1948a

2. Close sampling valves (AE, AF) and mix manifold valves (AH, AJ).



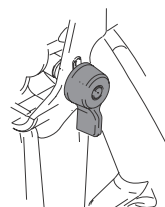
3. Open solvent shutoff valve (AK) at mix manifold.

4. Open solvent pump air control (CB). Pull out and slowly turn solvent pump air regulator (CG) clockwise to increase air pressure. Use lowest possible pressure.

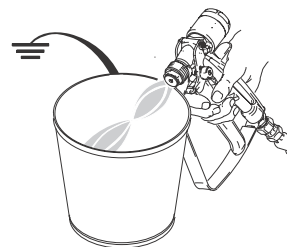


r\_312359\_312359\_3

5. Disengage trigger lock. Hold a metal part of the gun firmly to a grounded metal pail with a splash guard in place. Use a pail lid with a hole in it to dispense through. Be careful to keep fingers away from the front of the gun. Trigger gun until solvent appears.

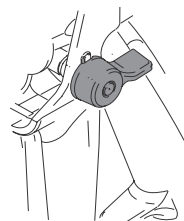


TI1950a



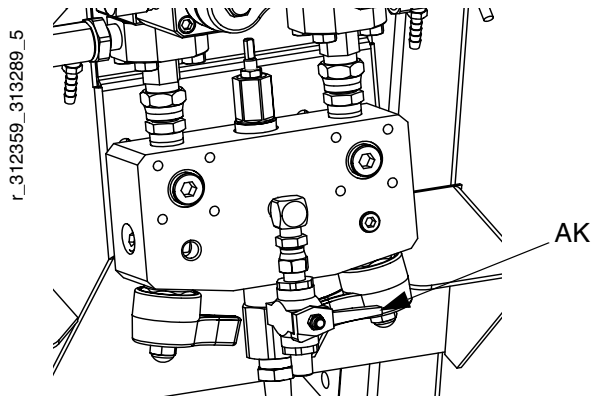
TI1953a

6. Engage trigger lock.

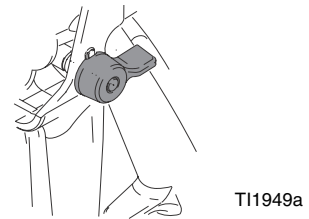


TI1949a

7. Close solvent pump air valve (CB) and solvent shut-off valve (AK) at mix manifold.



8. Follow **Pressure Relief Procedure**, page 12.
9. Engage trigger lock.



10. Disassemble and clean spray tip with solvent by hand. Reinstall on the gun.

## Empty and Flush Entire System (new sprayer or end of job)



### NOTE:

- If system includes heaters and heated hose, turn them off and allow to cool before flushing. **Do not turn on heaters until fluid lines are clear of solvent.**
- Use the lowest possible pressure when flushing to avoid splashing.
- Before color change or shutdown for storage, flush at a higher flow rate and for a longer time.
- To flush only mix manifold, see **Flush Mix Manifold** procedure page 14.

### Guidelines

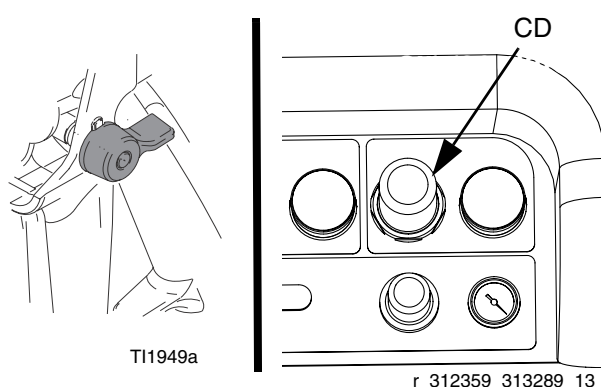
Flush new systems if coating materials will be contaminated by 10W oil.

Flush system when any of the following situations occur. Flushing will help prevent materials from clogging the line between hoppers and pump inlets.

- anytime sprayer will not be used for more than one week
- if materials used will settle
- if using thixotropic resins that require agitation

### Procedure

1. Follow **Pressure Relief Procedure**, page 12, and **Flush Mixed Material**, page 14, as required. Engage trigger lock. Turn main pump air regulator (CD) fully counter-clockwise to shut off.



### NOTE:

When flushing coating materials remove pump fluid filters, if installed, and soak in solvent to decrease cleaning time. Proceed with Step 2. If flushing a new system, leave filters in place.

2. Move circulation return lines to separate fluid containers to pump remaining fluid out of system.
3. Increase main pump air regulator (CD) pressure to 30 psi (21 kPa, 2.1 bar).

4. Select  . Press .

### NOTE:

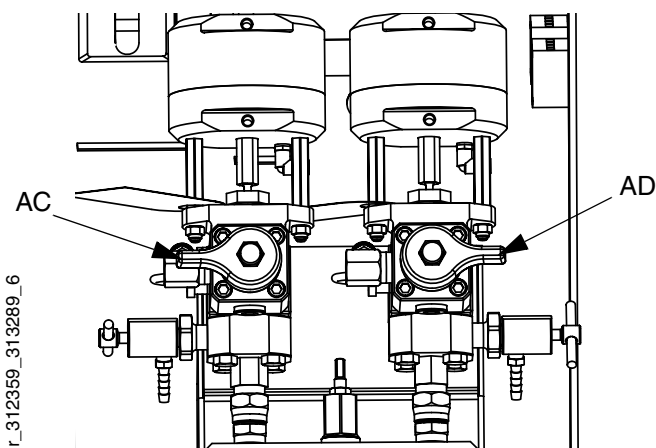
When running pumps independently set to  or

 . Press  and  as needed to clean.

### NOTE:

If sprayer does not start with static pressure, increase air pressure by 10 psi (69 kPa, 0.7 bar) increments. To avoid splashing do not exceed 40 psi (28 kPa, 2.8 bar).

5. Open recirculation valves (AC, AD) for respective pump dispense side. Run pumps until the A and B reservoirs are empty. Salvage the material in separate, clean containers.



**NOTE:**

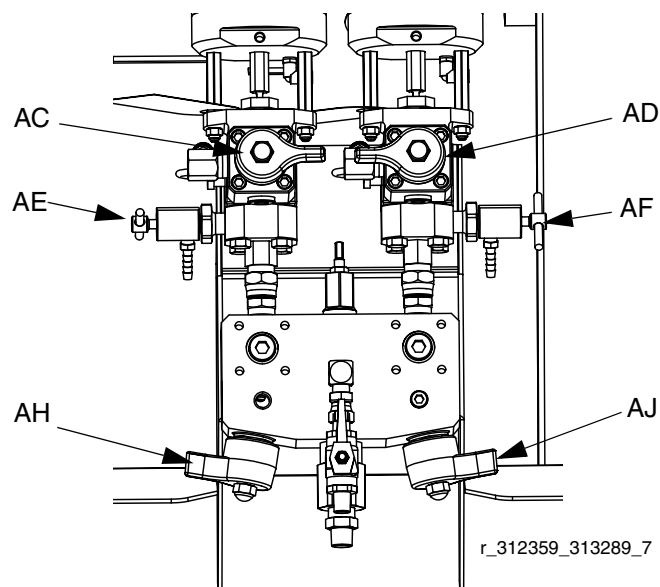
When priming or flushing the pumps, it is normal to get cavitation or pump runaway alarms. Clear the alarms




, and press again as necessary. These alarms prevent excessive pump speeds that can damage pump packings.

6. Wipe the reservoirs clean, then add solvent to each. Move circulation lines to waste containers.
7. Repeat Step 4 to flush through each side until clean solvent exits recirculation hose.
8. Stop and move recirculation hoses back to reservoirs. Continue recirculating until machine is thoroughly flushed.

9. Close recirculation valves (AC, AD) and open mix manifold valves (AH, AJ). Dispense fresh solvent through mix manifold valves and out gun.



10. Close mix manifold valves (AH, AJ).
  11. Slowly open sampling valves (AE, AF) to flush solvent through until clean. Close sampling valves.
- Press .
12. Follow **Pressure Relief Procedure**, page 12.
  13. Remove pump fluid filters, if installed, and soak in solvent. Clean and replace filter cap. Clean filter o-rings and leave out to dry. Do not leave o-rings in solvent.
  14. Close main air valve (E).

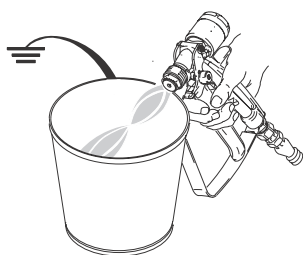
**NOTE:**

Always leave some type of fluid, such as solvent or oil, in the system to prevent scale build up. This build up can flake off later. Do not use water.

## Shutdown Entire System

Follow this procedure before prolonged shutdown or before servicing equipment.

1. Follow **Pressure Relief Procedure**, page 12. Place gun over pail. Trigger gun; wait until pumps are down.

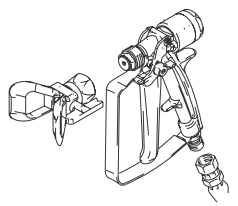


TI1953a

2. Engage trigger lock, turn off air regulator, and close main air shutoff valve. Remove spray tip.



TI1949a



TI1948a

3. Follow flushing procedure, see **Flush** on page 14.
4. Follow **Pressure Relief Procedure**, page 12. Engage trigger lock.



TI1949a

5. *For prolonged shutdown (one week or longer):*

- Follow flushing procedure, see **Empty and Flush Entire System (new sprayer or end of job)** on page 16.
- Cap fluid outlets to keep solvent in the lines.
- Fill pump A and B packing nuts with throat seal liquid (TSL).

## Cleaning Procedure



1. Ensure all equipment is grounded. See **Grounding**, page 11.
2. Turn off all heaters and allow equipment to cool.
3. Flush mixed material. See **Flush Mixed Material**, page 14.
4. Relieve pressure. See **Pressure Relief Procedure**, page 12.
5. Shutdown sprayer and turn off all power. See **Shutdown Entire System**, page 18.
6. Ensure the area where the sprayer will be cleaned is well ventilated; and remove all ignition sources.
7. Clean external surfaces using only a rag soaked in solvent that is compatible with the spray material and the surfaces being cleaned.
8. Allow enough time for solvent to dry before using sprayer.

# Troubleshooting

**NOTE:**

If an error code displays, see **Alarms** on page 22.

**NOTE:**

The sprayer operates using air pressure. Many problems are caused by inadequate air supply. The inlet air pressure gauge cannot drop below 50 psi (0.35 MPa, 3.5 bar) while running.

| Problem                                                                                                                                                            | Cause                                                                                                                  | Solution                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display not lit on system with alternator power supply.<br>No electric power.                                                                                      | Air valve not turned on.                                                                                               | Turn on main air valve to system.                                                                                                                           |
|                                                                                                                                                                    | Air supply pressure too low.                                                                                           | Increase pressure to 30 psi (0.21 MPa, 2.1 bar) or greater.                                                                                                 |
|                                                                                                                                                                    | Air supply filters plugged. Inlet manifold filter (604) or air regulator (344) filter plugged.                         | Clean filter bowls; replace filter elements. Page 29.                                                                                                       |
|                                                                                                                                                                    | Turbine air regulator (277) set too low.                                                                               | Adjust to 18 +/- 1 psi (12.6 +/- 10 kPa, 1.26 +/- 0.07 bar).                                                                                                |
|                                                                                                                                                                    | Alternator turbine failure.                                                                                            | Repair or replace turbine. Page 35.                                                                                                                         |
|                                                                                                                                                                    | Power supply not connected to main board.                                                                              | Check power connections to main board. See <b>Electrical Schematics</b> , starting on page 45.                                                              |
|                                                                                                                                                                    | Display board failure.                                                                                                 | Replace display board. Page 34.                                                                                                                             |
| Display not lit on system with alternator power. Green light is present on FCM (218) and USB (219), but no green light is present on back of display module (204). | Faulty CAN cable (268). Or CAN cable is disconnected.                                                                  | Check cable and replace. See <b>Alternator Assembly</b> , page 69.                                                                                          |
|                                                                                                                                                                    | Faulty display module.                                                                                                 | Replace display module. See <b>User Interface/Control Box</b> , page 30.                                                                                    |
| Display not lit on system with wall power supply. No green light present on back of display module (204).                                                          | No electric power. Disconnect "off" or breaker "open."                                                                 | Reset main disconnect and breaker.                                                                                                                          |
|                                                                                                                                                                    | No green lights present on display, FCM, or USB module.                                                                | Check for 24 Vdc on J1, pins 2 and 3, of power supply. See <b>Electrical Schematics</b> , starting on page 45. If there is not 24 Vdc, replace with 15V747. |
|                                                                                                                                                                    | No display power through CAN cable (266). Green light is present on FCM (218), but is not present on USB module (219). | Check CAN cable. Replace if necessary. See <b>Wall Power Supply Assembly</b> , page 70.                                                                     |
|                                                                                                                                                                    | Green light is present on USB module (219).                                                                            | Check CAN cable (274). Replace if necessary. See <b>Wall Power Supply Assembly</b> , page 70.                                                               |
| Display not lit on system with wall power supply. Green light is present on back of display module (204).                                                          | Display module failed.                                                                                                 | Replace display module. See <b>User Interface/Control Box</b> , page 30.                                                                                    |

| Problem                                                                                                     | Cause                                                                           | Solution                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pumps do not run.                                                                                           | Air pressure to pumps too low                                                   | Increase pressure to 50 psi (0.35 MPa, 3.5 bar) or greater.                                                                                                                                                           |
|                                                                                                             | Air pilot lines are obstructed                                                  | Check pilot lines for kinks or pinches.                                                                                                                                                                               |
|                                                                                                             | Solenoid valve stuck.                                                           | Actuate solenoid manually, if it does not operate, replace solenoid. Page 30.                                                                                                                                         |
|                                                                                                             | Air pilot valve(s) to motor stuck.                                              | Replace valve(s). Page 40.                                                                                                                                                                                            |
|                                                                                                             | Metering valve(s) not opening.                                                  | Service or replace valve(s). Page 40.                                                                                                                                                                                 |
|                                                                                                             | Air motor stalled.                                                              | See manual 311238.                                                                                                                                                                                                    |
| Pump Test completes without error, but A or B component has more than 750cc of fluid in beaker.             | Incorrect pumps were selected in System Setup screens.                          | See Appendix A in manual 312359.                                                                                                                                                                                      |
|                                                                                                             | Air is trapped in fluid due to excessive agitation, circulation, and heat.      | Repeat Pump Test with fresh fluid.<br>If the specific gravity of each fluid is known, check samples by weight (750cc x specific gravity equals weight in grams). If weight is correct, extra volume in beaker is air. |
| Batch Test completes without error, but A or B component has more fluid in beaker than displayed on screen. | See causes for previous pump test problem.                                      | See solutions for previous pump test problem.                                                                                                                                                                         |
| Sprayer does not start when start button is pressed.                                                        | Faulty start switch or wire harness.                                            | Check start switch and wiring harness continuity; switch is normally open circuit. See <b>Electrical Schematics</b> , starting on page 45.                                                                            |
|                                                                                                             | Faulty stop switch or wiring harness.                                           | Check stop switch and wiring harness continuity; stop switch is normally closed circuit. See <b>Electrical Schematics</b> , starting on page 45.                                                                      |
| Fluid valves leaking.                                                                                       | Loose or worn packings.                                                         | Tighten packing nut. If leak continues, replace packings.                                                                                                                                                             |
| Paint does not cure consistently.                                                                           | Ratio not set correctly.                                                        | Check that correct ratio is set and set by volume. See manual 312359.                                                                                                                                                 |
|                                                                                                             | Material not mixing correctly.                                                  | Test pump. Make sure mixer is clean; flush as needed. See manual 312359.<br>Position mixer after integrator hose.                                                                                                     |
|                                                                                                             | Material not properly conditioned before it was added to sprayer.               | Mix material thoroughly.                                                                                                                                                                                              |
|                                                                                                             | Not using enough integration hose.                                              | Add more integration hose.                                                                                                                                                                                            |
| Poor spray pattern.<br>Also, see "System runs erratically" below.                                           | Fluid pressure too low.                                                         | Increase pump pressure.                                                                                                                                                                                               |
|                                                                                                             | Fluid temperature too low.                                                      | Increase fluid temperature.                                                                                                                                                                                           |
|                                                                                                             | Spray tip dirty or worn.                                                        | Relieve pressure. Clean or replace tip. Follow gun manual instructions.                                                                                                                                               |
|                                                                                                             | Fluid A or B filters plugged.                                                   | Clean filters. See pump manual.                                                                                                                                                                                       |
|                                                                                                             | Mixer or hoses partially plugged or too restrictive.                            | Inspect parts for cured material. Clean or replace, or use larger hoses and mixer.                                                                                                                                    |
| System runs erratically.                                                                                    | Air filter(s) clogged. Replace elements.                                        | Clean. Replace element(s). See page 29.                                                                                                                                                                               |
|                                                                                                             | Air supply hoses undersized.                                                    | Replace hoses with appropriate size.                                                                                                                                                                                  |
|                                                                                                             | Air compressor undersized.                                                      | Use larger air compressor.                                                                                                                                                                                            |
|                                                                                                             | Air supply pressure tank undersized.                                            | Use larger pressure tank.                                                                                                                                                                                             |
|                                                                                                             | Inlet air pressure gauge drops below 50 psi (0.35 MPa, 3.5 bar) while spraying. | See solutions above for system runs erratically problem.                                                                                                                                                              |

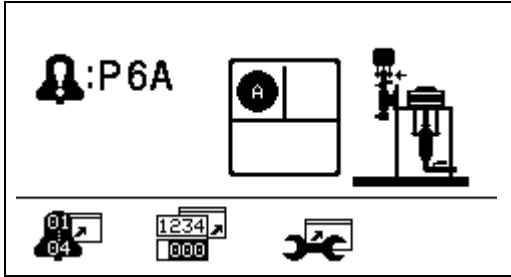


| Problem                                                                                     | Cause                                                                                                                                                                                               | Solution                                                                                                                     |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Air supply relief valve opens.                                                              | Air regulator set too high.                                                                                                                                                                         | Lower setting.                                                                                                               |
| Turbine alternator makes high-pitched whining noise, or quits.                              | Turbine bearings worn. (Setting turbine air regulator too high, wears bearings.)                                                                                                                    | Replace turbine cartridge. See <b>Alternator Power Supply Control Components</b> , page 35.                                  |
| Display module cycles on and off.                                                           | Turbine is not supplying enough power to board.                                                                                                                                                     | Increase turbine regulator setting to 18 +/- 1 psi (12.6 +/- 10 kPa, 1.26 +/- 0.07 bar).                                     |
|                                                                                             |                                                                                                                                                                                                     | Check turbine and electrical control exhaust air for restrictions.                                                           |
|                                                                                             |                                                                                                                                                                                                     | Replace turbine cartridge. See <b>Alternator Power Supply Control Components</b> , page 35.                                  |
| Flow rate too low.                                                                          | Air supply hose is too small.                                                                                                                                                                       | Use 3/4 in. (minimum) ID hose. See <b>Technical Data</b> , page 83.                                                          |
|                                                                                             | Inadequate air supply.                                                                                                                                                                              | Use larger CFM compressor.                                                                                                   |
|                                                                                             | Air pressure to pumps too low.                                                                                                                                                                      | Increase pressure.                                                                                                           |
|                                                                                             | Fluid A or B filters plugged.                                                                                                                                                                       | Clean filters. See pump manual.                                                                                              |
|                                                                                             | Spray tip too small.                                                                                                                                                                                | Relieve pressure. Install larger tip. Follow gun manual instructions.                                                        |
|                                                                                             | Mixer or hoses partially plugged or too restrictive.                                                                                                                                                | Inspect parts for cured material. Clean or replace, or use larger hoses and mixer.                                           |
| Receive ratio alarm after starting in spray mode while using remote mix manifold.           | A and B hoses do not fill to correct pressure ratio simultaneously. Therefore, spray time increases in order to balance pressure. Ratio screen bar graph stays to one side until pressure balances. | While in circulation mode, close circulation valves and increase pressure in hoses until correct spray pressure is achieved. |
|                                                                                             |                                                                                                                                                                                                     | Select correct hose size to balance your volume ratio. See manual 312749.                                                    |
| Receive ratio alarm while using remote mix manifold after a significant change in pressure. | A and B hoses do not fill to correct pressure ratio simultaneously. Therefore, spray time increases in order to balance pressure. Ratio screen bar graph stays to one side until pressure balances. | While in circulation mode, close circulation valves and increase pressure in hoses until correct spray pressure is achieved. |
|                                                                                             |                                                                                                                                                                                                     | Select correct hose size to balance your volume ratio. See manual 312749.                                                    |
|                                                                                             |                                                                                                                                                                                                     | Change pressure slowly while spraying.                                                                                       |
| Erratic pressure at spray gun when using feed pumps.                                        | Feed pressure is too high. Feed pressure at metering pump is too high on up stroke.                                                                                                                 | Use lowest feed pressure needed to maintain feed.                                                                            |

# Alarms

## View Alarms

When an alarm occurs the alarm information screen automatically displays. It shows the current alarm code along with a bell icon. It also shows the alarm location with top and side views of the sprayer.





There are two levels of alarms: warnings and advisories. A bell icon indicates an alarm. A solid bell icon with an exclamation point and three audible alerts indicate a warning. And an outlined hollow bell icon and a single audible alert indicate an advisory.

Advisories are notifications that require attention but not immediately. Warnings require immediate correction; therefore, sprayer operation automatically stops.

## Diagnose Alarms

See **Alarm Codes and Troubleshooting** for causes and solutions to each alarm code.

## Clear Alarms

Press  to clear alarms. From the alarm information screen, press  to return to the run (fluid control) screen.

## Alarm Codes and Troubleshooting

| Alarm Code                                             | Alarm Problem                                                                                                                                         | When Active | Cause                                                                                                     | Solution                                                                                                                                                                |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Performance Alarms                             |                                                                                                                                                       |             |                                                                                                           |                                                                                                                                                                         |
| R4B                                                    | Ratio High B (Overdose B), system delivering too much B component.                                                                                    | Spray       | B Dosing valve not closing.                                                                               | Perform Pump Test to test for leakage. See Pump and Metering test in manual 312359.                                                                                     |
|                                                        |                                                                                                                                                       |             |                                                                                                           | Loosen valve packing nut.                                                                                                                                               |
|                                                        |                                                                                                                                                       |             |                                                                                                           | Check air signal at valve top                                                                                                                                           |
|                                                        |                                                                                                                                                       |             |                                                                                                           | Repair valve or air solenoid. See <b>Replace Solenoid Module</b> , page 30.                                                                                             |
|                                                        |                                                                                                                                                       |             | No B restriction at mix manifold.                                                                         | Increase B Restriction by turning B restrictor stem clockwise. See Adjust B Mix Manifold Restriction in manual 312359.                                                  |
|                                                        |                                                                                                                                                       |             | Pump filter plugged on A side.                                                                            | Clean filter. See manual 311762.                                                                                                                                        |
|                                                        |                                                                                                                                                       |             |                                                                                                           | Use alternate 30 mesh screen. See manual 311762 for part number.                                                                                                        |
|                                                        |                                                                                                                                                       |             | Inlet air dropping below 50 psi (0.35 MPa, 3.5 bar) while spraying. B dosing valve not closing correctly. | Check air filters. See <b>Air Controls</b> , page 38.                                                                                                                   |
|                                                        |                                                                                                                                                       |             |                                                                                                           | Use larger air hose.                                                                                                                                                    |
|                                                        |                                                                                                                                                       |             |                                                                                                           | Use larger compressor.                                                                                                                                                  |
| Use smaller gun tips or less guns to reduce flow rate. |                                                                                                                                                       |             |                                                                                                           |                                                                                                                                                                         |
| R1B                                                    | Ratio Low B (under dose B); system delivering not enough B component.                                                                                 | Spray       | B dosing valve will not open.                                                                             | Check for air signal to valve.                                                                                                                                          |
|                                                        |                                                                                                                                                       |             | B mix manifold valve closed.                                                                              | Open green mix manifold valve.                                                                                                                                          |
|                                                        |                                                                                                                                                       |             | Pump filter plugged on B side.                                                                            | Use alternate 30 mesh screen. See manual 311762 for part number.                                                                                                        |
|                                                        |                                                                                                                                                       |             |                                                                                                           | Clean B pump outlet filter. See manual 311762.                                                                                                                          |
| REC                                                    | System detected five R4B (ratio high B) or five R1B (ratio low B) alarms within five minutes. Sprayer shuts down for five minutes to resolve problem. | Spray       | See R4B or R1B alarm causes.                                                                              | See R4B or R1B alarm solutions. Flush mixed material if necessary, and purge off-ratio mixed material in hose.                                                          |
| FHA<br>FHB                                             | System detects pump movement (fluid flow) when valves are closed.                                                                                     | Spray       | Recirculation valve or dosing valve open or leaking for more than 5 seconds.                              | Close or repair recirculation valve, and run Pump Test. See Pump and Metering test in manual 312359. See <b>Mix Manifold Assembly</b> , page 40.                        |
| R2D                                                    | Dosing sizes are not optimized.                                                                                                                       | Spray       | Dosing valve is operating near high or low timing limits.                                                 | Adjust mix manifold B restrictor stem clockwise or counter clockwise as indicated by bar graph on ratio screen. See Adjust B Mix Manifold Restriction in manual 312359. |
| P4A<br>P4B                                             | Pressure high                                                                                                                                         | Always      | Fluid pressure is above maximum.                                                                          | Decrease main air regulator or feed pump pressure.                                                                                                                      |

| Alarm Code                          | Alarm Problem                                                  | When Active                 | Cause                                                                                     | Solution                                                                                                                                         |
|-------------------------------------|----------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| DAA<br>DAB                          | Pump runaway, above 60 cpm for 10 sec.                         | Always                      | No material in pump or lines; no fluid restriction.                                       | Refill material in tank or hoses; install fluid tip.                                                                                             |
| DDA<br>ddb                          | Pump cavitation; dives more than 3/4 of stroke.                | Always                      | No fluid or valve closed.                                                                 | Refill supply and open inlet valve.                                                                                                              |
|                                     |                                                                |                             | Material is too cold or thick.                                                            | Increase material temperature to reduce viscosity. (See Heat Fluid section in manual 312359.) Shear material with agitation to reduce viscosity. |
|                                     |                                                                |                             | Pump inlet check valve not closing.                                                       | Clear debris from check valve. Or replace ball, seat, and seal. See <b>Pump Assembly</b> , page 42.                                              |
|                                     |                                                                |                             | Feed pump not providing material.                                                         | Check feed pump (if used).                                                                                                                       |
|                                     |                                                                |                             | Inlet strainer plugged (if used).                                                         | Check and clean strainer. See <b>Pump Assembly</b> , page 42.                                                                                    |
| P1A<br>P1B                          | Pressure low.                                                  | Spray, Pump Test, Leak Test | Fluid pressure is below 1000 psi (7 MPa, 70 bar).                                         | Increase main air regulator.                                                                                                                     |
| P4R                                 | Pressure high.                                                 | Recirculation               | Pressure is above maximum advisory limit of 3000 psi (21 MPa, 210 bar).                   | Decrease pump air regulator pressure.                                                                                                            |
| P5R                                 | Pressure high.                                                 | Recirculation               | Pressure is above maximum warning limit of 5200 psi (35.9 MPa, 359 bar).                  | Decrease pump air regulator pressure.                                                                                                            |
| Pump Test (Daily Check Recommended) |                                                                |                             |                                                                                           |                                                                                                                                                  |
| DFA<br>DFB                          | Pump did not stall against fluid pressure on up stroke only.   | Pump Test                   | Pump piston check valve, piston packings, or dosing valve are not holding fluid pressure. | Flush pump. See <b>Flush</b> , page 14. Recheck. Remove, clean, and repair lower. See <b>Pump Assembly</b> , page 42.                            |
| DGA<br>DGB                          | Pump did not stall against fluid pressure on down stroke only. | Pump Test                   | Pump inlet check or dose valve is fouled, or damaged.                                     | Remove inlet housing & clean and inspect. See <b>Pump Assembly</b> , page 42.                                                                    |
| DEA<br>DEB                          | Pump does not move in 10 minutes.                              | Park or Pump Test           | Recirculation valves were not opened to allow flow.                                       | Open recirculation valves.                                                                                                                       |
| General System Component Alarms     |                                                                |                             |                                                                                           |                                                                                                                                                  |
| DJA<br>DJB                          | Pump motor linear sensor has no signal.                        | Always                      | No linear sensor signal from motor.                                                       | Swap A and B sensors. Replace sensor if problem follows sensor.                                                                                  |
|                                     |                                                                |                             | Linear sensor plugged in while power is on.                                               | Power sprayer off and back on. Do not plug in linear sensor while power is on.                                                                   |
|                                     | Pump motor linear sensor is out of range.                      | Always                      | Linear sensor is beyond range.                                                            | Replace sensor or sensor magnet.                                                                                                                 |
| PJA<br>PJB                          | Pump linear sensor is out of range.                            | Always                      | Linear sensor signal is beyond range.                                                     | Replace sensor or sensor magnet. See <b>Pump Assembly</b> , page 42.                                                                             |
|                                     |                                                                |                             | Sprayer is not properly grounded.                                                         | See <b>Grounding</b> , page 11.                                                                                                                  |

| Alarm Code                                  | Alarm Problem                                                                                      | When Active        | Cause                                                                                                        | Solution                                                                                                                                          |
|---------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| DKA<br>DKB                                  | Pump motor reed switch failure; missing signals from one or both switches.                         | Always             | Bad motor cable connections, or bad reed switch.                                                             | Swap A and B motor cables. Replace cable if problem persists. Otherwise replace reed sensor assembly.                                             |
|                                             |                                                                                                    |                    | Reed switch cable is plugged in while power is on.                                                           | Power sprayer off and back on. Do not plug in reed switch cable while power is on.                                                                |
| P6A<br>P6B                                  | Pressure sensor failure; no signal.                                                                | Always             | Pressure sensor or cable is bad on the A or B side.                                                          | Replace sensor and cable assembly. See <b>Pump Assembly</b> , page 42.                                                                            |
| V1M                                         | Voltage low control                                                                                | Always             | Voltage dropping below 10 Vdc from power supply.                                                             | Change air filter in control filter regulator. See <b>Replace Air Filter Element</b> , page 29.                                                   |
|                                             |                                                                                                    |                    |                                                                                                              | Check the pressure setting is 18 psi (0.12 MPa, 1.24 bar) on turbine air regulator.                                                               |
|                                             |                                                                                                    |                    | Turbine not spinning with air on.                                                                            | Replace air turbine cartridge. See <b>Alternator Power Supply Control Components</b> , page 35.                                                   |
| P1M                                         | Low air supply warning; voltage drops below 10 Vdc when pumps move. (Turbine power supplies only). | Always             | Filter plugged and/or air motors are using available air and not leaving enough for turbine control voltage. | Change large air filter and control air filter. See <b>Replace Air Filter Element</b> , page 29. Use a larger air supply. Use smaller spray tips. |
| N6C                                         | Display has no signal.                                                                             | Always             | No display communication signal.                                                                             | Check cable connections. Replace display.                                                                                                         |
| Optional User-Settable Maintenance Warnings |                                                                                                    |                    |                                                                                                              |                                                                                                                                                   |
| MAA<br>MAB                                  | Maintain pump                                                                                      | Always, if enabled | Pump usage exceeds user-set limit. Maintenance due.                                                          | Service pump. See <b>Pump Assembly</b> , page 42.                                                                                                 |
| MEA<br>MEB                                  | Maintain dosing valve                                                                              | Always, if enabled | Dosing valve usage exceeds user-set limit. Maintenance due.                                                  | Service dosing valve. See <b>Dosing Valve Assembly</b> , page 40.                                                                                 |
| MG0                                         | Maintain air filter                                                                                | Always, if enabled | Air filter exceeds user-set limit. Maintenance due.                                                          | Service main air filter and control filter regulator. See <b>Replace Air Filter Element</b> , page 29.                                            |
| P5A<br>P5B                                  | Pressure exceeded warning limits                                                                   | Always, if enabled | Pressure exceeded high or low warning limits for more than 15 seconds.                                       | Adjust pump pressure regulator, change tips, or adjust target set point.                                                                          |

| Alarm Code                          | Alarm Problem                                                           | When Active        | Cause                                                                                                              | Solution                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------|-------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Optional User-Settable Spray Limits |                                                                         |                    |                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                   |
| T5A<br>T5B                          | Temperature exceeded warning limits                                     | Always, if enabled | Fluid temperature exceeded high or low warning limits for more than four minutes.                                  | <p>If fluid temperature is too low, return to circulation mode to increase fluid temperature. Adjust heater set point if needed. See Heat Fluid section in manual 312359.</p> <p>If fluid temperature is too high, lower heater set point, and return circulation mode to cool. See Heat Fluid section in manual 312359.</p> <p>Adjust temperature target set-point. See Heat Fluid section in manual 312359.</p> |
| P2A<br>P2B                          | Pressure exceeded advisory limits                                       | Always, if enabled | Pressure exceeded high or low advisory limits for more than 15 seconds.                                            | Same as P5A or P5B.                                                                                                                                                                                                                                                                                                                                                                                               |
| T2A<br>T2B                          | Temperature exceeded temperature limits                                 | Always, if enabled | Fluid temperature exceeded high or low limits for more than four minutes.                                          | Same as T5A or T5B.                                                                                                                                                                                                                                                                                                                                                                                               |
| N4D                                 | Pot life timer expired. Mixed fluid will cure in hoses, mixer, and gun. | Spray              | Have not sprayed enough volume to keep fresh mixed fluid in the integration hose, mixer, whip hose, and spray gun. | Spray fluid, or flush. Resets when you leave spray mode. See manual 312359. See <b>Flush</b> , page 14.                                                                                                                                                                                                                                                                                                           |

## Possible Alarms by Mode

The following table outlines the alarms that you may receive while operating the system. The alarms are categorized according to each mode.

| Mode        | Control Logic                                                                                          | Alarms             |
|-------------|--------------------------------------------------------------------------------------------------------|--------------------|
| Spray       | Dosing valves close for startup test; green light blinks.                                              | --                 |
|             | If fluid pressure is under 1000 psi (7 MPa, 70 bar), STOP.                                             | P1A                |
|             | If pumps move (indicating internal leakage), STOP.                                                     | FHA, F4A, F4B, FHB |
|             | If fluid pressure is more than 103% of allowed maximum, air motor shuts off.                           | None               |
|             | If is pressure more than 110% of allowed maximum, STOP.                                                | P4B                |
|             | Dosing valve A opens, and dosing valve B cycles to maintain ratio.                                     | --                 |
|             | Blue lights when dosing valves are operating.                                                          | --                 |
|             | If there is not enough B component to hold ratio, dosing valve A closes momentarily.                   | R5D                |
|             | If A or B component is more than 5% off ratio setpoint, STOP.                                          | R4A, R4B, R1A, R4B |
| Park        | Both dosing valves open; A and B blue lights turn on.                                                  | --                 |
|             | User opens circulation valves or sprays gun. When pump reaches bottom stroke the blue light turns off. | --                 |
|             | If park does not complete in 10 minutes, turn off air to both motors.                                  | DE--               |
| Circulation | A and/or B dosing valves open and motor air turns on.                                                  | --                 |
|             | If fluid pressure exceeds 3000 psi (21.0 MPa, 210 bar), receive yellow light advisory.                 | P4A, P4B           |
|             | If fluid pressure exceeds 5600 psi (39.2 MPa, 392 bar), STOP.                                          | P4A, P4B           |
|             | If no movement in 10 minutes, turn off air to both motors.                                             | DEA, DEB           |
| Pump Test   | Both dosing valves close; green light blinks.                                                          | --                 |
|             | If fluid pressure is under 1000 psi (7.0 MPa, 70 bar), STOP.                                           | P1A, P1B           |
|             | If pumps move (indicating leakage) STOP.                                                               | F4A, F4B           |
|             | Turn on A blue light, open A dosing valve, user opens sampling valve.                                  | --                 |
|             | Close A dosing valve on upstroke; check for no movement.                                               | DFA                |
|             | Close A dose valve on down stroke; check for no movement.                                              | DGA                |
|             | If pump moves on both up and down strokes.                                                             | DHA                |
|             | Open A dose valve and dispense total of 750 ml material, close valve, turn off blue light.             | --                 |
|             | Repeat for B side.                                                                                     | DFB, DGB, DHB      |
|             | If both pumps pass pump test, display shows two beakers of 750ml each.                                 | --                 |
|             | User selects total volume desired.                                                                     | --                 |
|             | Open A dosing valve, turn on blue light, user opens sampling valve, turn off blue light when complete. | --                 |
|             | Open B dosing valve, turn on blue light, user opens sampling valve, turn off blue light when complete. | --                 |
|             | Display shows volume of A and B components at end of batch dispense test.                              | --                 |
| Valve Test  | If fluid pressure is not 1000 psi (7 MPa, 70 bar), STOP.                                               | P1A                |
|             | Check for no movement of pumps (stall within 10 seconds).                                              | F4A, F4B           |

## Alarm Code Key

Use the following table as a quick guide to determine alarm codes.

| What |                 | Alert |                              | Where |                     |
|------|-----------------|-------|------------------------------|-------|---------------------|
| F    | Flow            | 1     | Low                          | A     | Material A          |
| N    | Time            | 2     | Deviation                    | B     | Material B          |
| P    | Pressure        | 4     | High                         | C     | Controller          |
| R    | Ratio           | 5     | Limit warning                | D     | Dosing/Pot life     |
| T    | Temperature     | 6     | Sensor or connection failure | M     | Power or Air supply |
| V    | Voltage         |       |                              | R     | Recirculation       |
| D    | Pump            | A     | Pump runaway                 |       |                     |
|      |                 | D     | Pump diving/cavitation       |       |                     |
|      |                 | E     | Pump time-out                |       |                     |
|      |                 | F     | Pump failed to stall up      |       |                     |
|      |                 | G     | Pump failed to stall down    |       |                     |
|      |                 | H     | Pump failed to stall         |       |                     |
|      |                 | J     | Linear sensor failure        |       |                     |
|      |                 | K     | Directional switch failure   |       |                     |
| M    | Maintenance due | A     | Pump                         |       |                     |
|      |                 | E     | Dosing valve                 |       |                     |
|      |                 | G     | Filter                       |       |                     |

## LED Diagnostic Information

The following LED signals, diagnosis, and solutions are the same for the display module, fluid control module, and USB module. LEDs are located next to the module power cable.

| Module Status LED Signal | Diagnosis                          | Solution                                                     |
|--------------------------|------------------------------------|--------------------------------------------------------------|
| Green on                 | System is powered up               | -                                                            |
| Yellow                   | Internal communication in progress | -                                                            |
| Red solid                | Hardware failure                   | Replace display module, fluid control module, or USB module. |
| Red flashing fast        | Uploading software                 | -                                                            |
| Red flashing slow        | Token error                        | Remove token and upload software token again.                |



# Repair



Follow **Shutdown Entire System** procedure, page 18, if service time may exceed pot life time, before servicing fluid components, and before transporting sprayer to a service area.

## Replace Air Filter Element

There are two air filters on the system: the inlet air regulator filter on the air controls and the main air inlet manifold filter. Check filters weekly and replace element as needed.

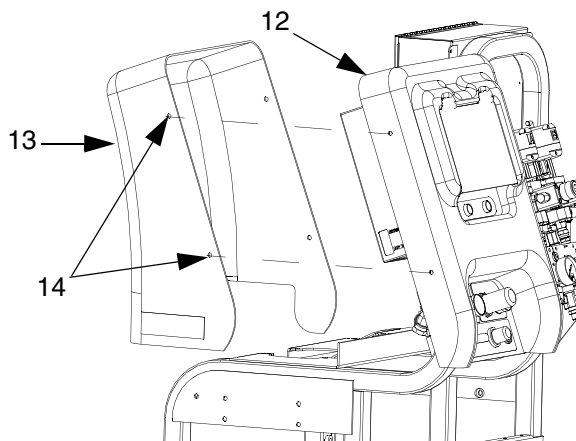


### Both Filters

1. Close main air shutoff valve on air supply line and on unit. Depressurize air line.

### Control Air Regulator Filter

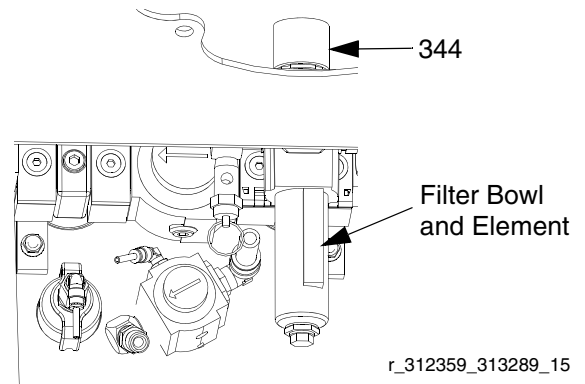
2. Remove front and rear shrouds (12, 13). Remove four nuts (14) and then shrouds.



r\_312359\_313289\_16

3. Unscrew filter bowl from inlet air regulator (344).

4. Remove and replace element.

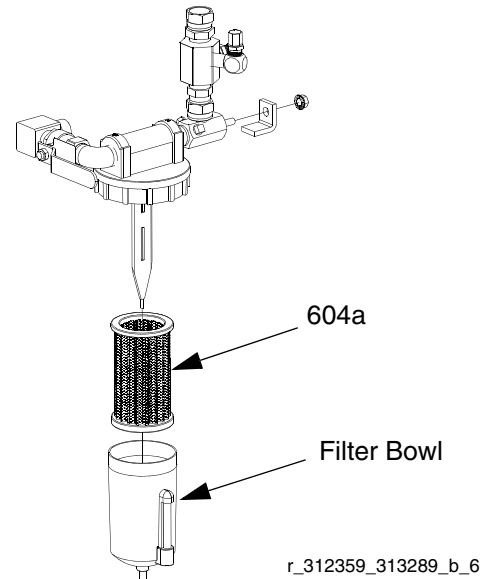


r\_312359\_313289\_15

5. Screw filter bowl on securely.

### Main Air Inlet Manifold Filter

2. Unscrew filter bowl from main air inlet manifold (6).
3. Remove and replace filter element (604a). See **Air Inlet Manifold (255762) Parts**, page 74.



r\_312359\_313289\_b\_6

4. Reassemble filter bowl.
5. Replace front and rear shrouds (12, 13) using four nuts (14).

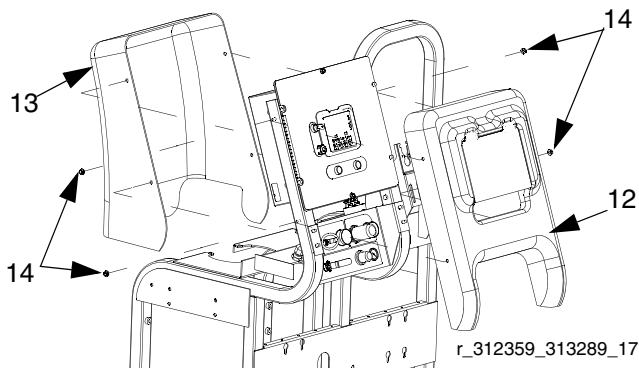
## User Interface/Control Box

### NOTE:

This section covers all components included in the wall power supply control box option and the intrinsically safe pneumatic power supply control box option.

### Remove Shroud

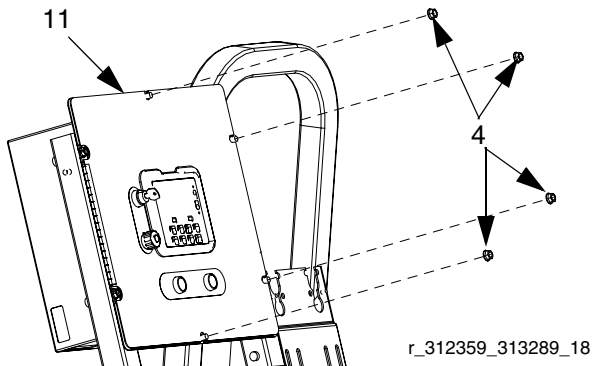
1. Close main air shutoff valve on air supply line and on system.
2. Remove shrouds (12, 13) covering control box. Remove four nuts (14) and front shroud (12) first.



### Replace Solenoid Module

Follow this procedure to replace a single solenoid

1. Remove shroud. See **Remove Shroud**.
2. Disconnect power.
3. Remove four nuts (4); leave two nuts on left side of panel tight. Open front panel of control box (11).



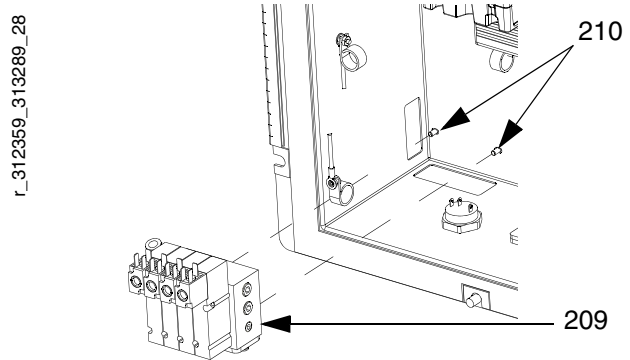
4. Disconnect solenoid cable connectors (242) from solenoids.

5. Disconnect air tubing from solenoid manifold block (209).

### NOTE:

If your sprayer is an intrinsically safe model, you will need to remove the alternator air regulator from the solenoid module. See **Replace Alternator Regulator**, page 37, for removal instructions.

6. Remove two screws (210).

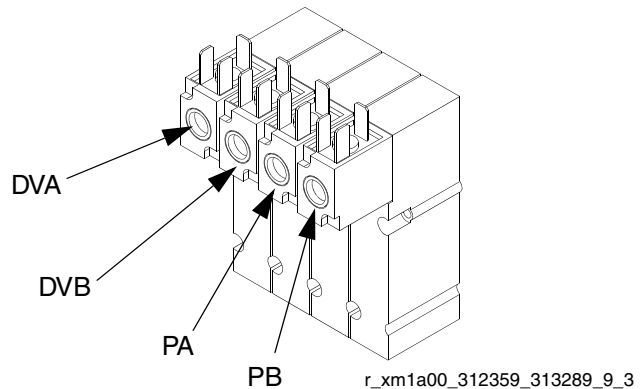


7. Remove and replace solenoid (209).
8. Reassemble screws (210) and solenoid cable connectors (242).

### NOTE:

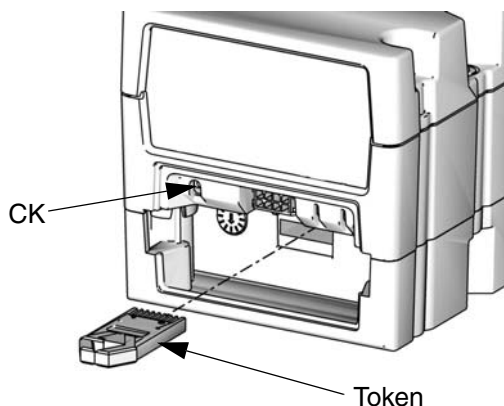
From left to right, solenoid functions are as follows:

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



## Update USB Module Software

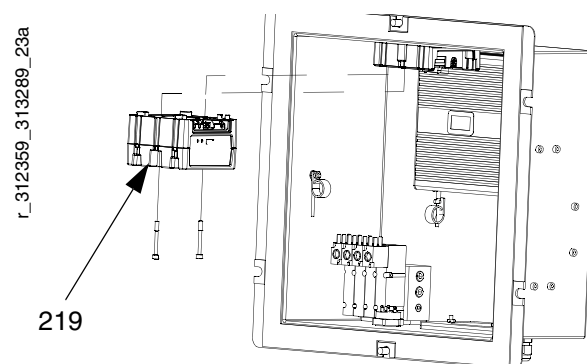
1. Remove shroud. See **Remove Shroud**.
2. Turn off power to the system.
3. Remove access cover.
4. Insert and press token firmly into slot.



5. Turn on power to the system. The red indicator light (CK) will flash. Then the green and yellow indicators lights will flash for about five minutes.
6. After all three indicator lights shut off, turn off power to the system.
7. Remove token.
8. Replace access cover.

## Replace USB Module

1. Remove shroud. See **Remove Shroud**.
2. Disconnect power.
3. Remove four nuts (4); leave two nuts on left side of panel tight. Open front panel of control box (11).
4. Disconnect CAN cables and USB cable from USB module (219).
5. Remove two mounting screws from USB module and remove module from base.

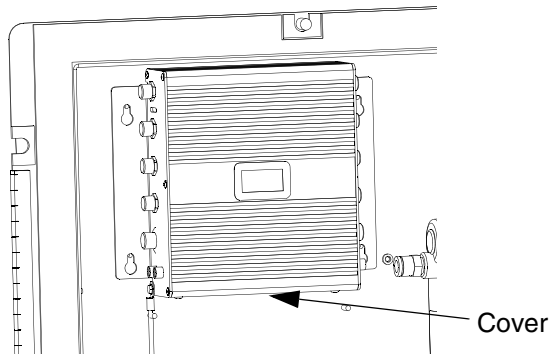


6. Follow steps in reverse order to install new USB module.

## Update Fluid Control Module (FCM) Software

1. Remove shroud. See **Remove Shroud**.
2. Turn off power to the system.
3. Remove two screws on cover, and then remove cover.

r\_312359\_313289\_26



4. Insert token into connector.
5. Turn on power to the system. The red indicator light will flash for about 10 seconds.
6. After the red indicator light shuts off, turn off power to the system.
7. Remove token.
8. Replace cover and secure with two screws.

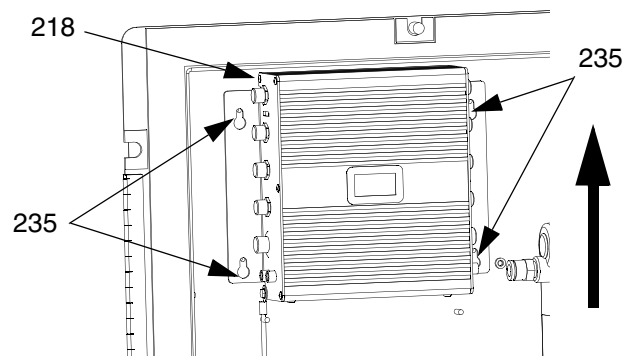
## Replace Fluid Control Module (FCM)

### NOTE:

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

1. Remove shroud. See **Remove Shroud**.
2. Disconnect power.
3. Remove four nuts (4); leave two nuts on left side of panel tight. Open front panel of control box (11).
4. Remove all cables from FCM (218). Take note of cable locations.
5. Loosen four mounting screws (235).

r\_312359\_313289\_26

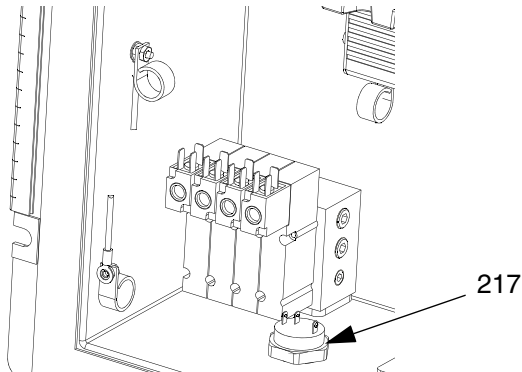


6. Slide FCM up and out of keyhole slots.
7. Follow steps in reverse order to install new FCM.

## Replace Alarm

1. Remove shroud. See **Remove Shroud**.
2. Disconnect power.
3. Remove four nuts (4); leave two nuts on left side of panel tight. Open front panel of control box (11).
4. Disconnect alarm wires from alarm (217).
5. Unscrew alarm (217) and replace.

r\_312359\_313289\_22



6. Screw in new alarm. Reconnect alarm wires. Refer to **Electrical Schematics**, page 45.
7. Reassemble air control front shroud (12).

## Display

### Upgrade Software

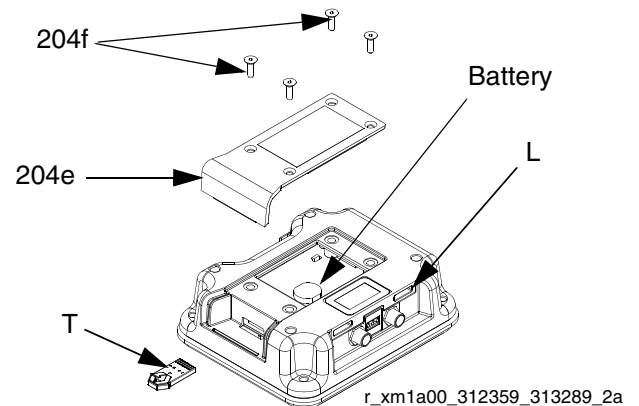


Do not upgrade software when an explosive gas atmosphere may be present.

### NOTICE

To avoid damaging circuit board, wear a grounding strap.

1. Remove shroud. See **Remove Shroud**.
2. Disconnect power.
3. Remove four nuts (4); leave two nuts on left side of panel tight. Open front panel of control box (11).
4. Remove four screws (204f) and then access cover (204e).



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

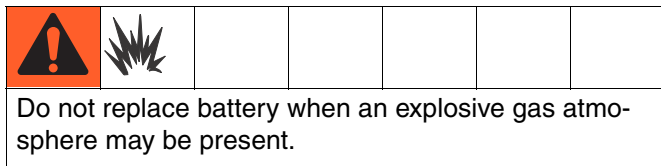
### NOTE:

There is no preferred orientation of token.

6. Turn power on.
7. The red indicator light (L) will flash until new software is completely loaded.

8. Turn power off.
9. Remove token (T).
10. Reassemble access cover (204e) and screws (204f).

### Replace Display Battery



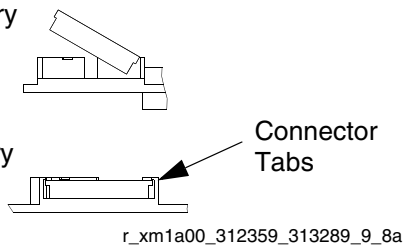
#### NOTICE

To avoid damaging circuit board, wear a grounding strap.

1. Perform steps 1-4 under **Upgrade Software** section, page 33.
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. Reassemble access cover (204e) and screws (204f).

### Replace Display

**NOTE:** Order kit 257484 for replacement.

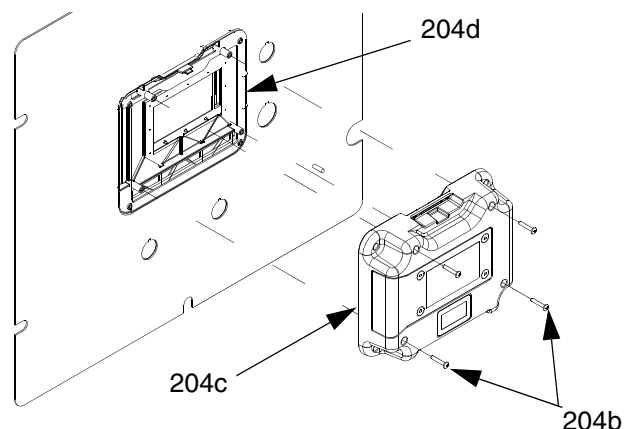
#### NOTICE

To avoid damaging circuit board, wear a grounding strap.

1. Remove shroud. See **Remove Shroud**.
2. Disconnect power.
3. Remove four nuts (4); leave two nuts on left side of panel tight. Open front panel of control box (11).
4. Disconnect CAN cable from display module.
5. Remove four screws (204b) from rear display panel (204c) while holding front display panel (204d) in place.

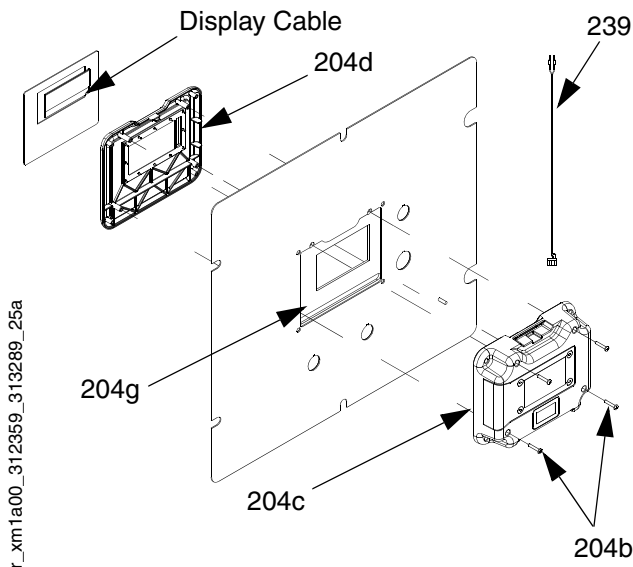
#### NOTE:

To ease removal process use clear tape to hold front display panel (204d) in place.



6. Remove rear display panel (204c) and disconnect display cable and key switch cable (239) from circuit board.


- Remove front display panel (204d) and gasket (204g).



- Discard old display assembly.
- Place new front display panel (204d) and gasket (204g) on front panel of control box (11).

**NOTE:**

To ease installation process use clear tape to hold front display panel in place.

- Carefully connect display cables and key switch cable to new circuit board.
- Install new rear display panel (204c) and secure with four screws (204b). Ensure key switch cable protrudes from opening in top of display module.
- Install access cover and screws. Apply warning label to access cover.
- Reconnect CAN cable to display module.
- Reconnect power.
- Replace shroud.
- Press . Configure system settings as they were set on old display. See XM Plural-Component Operation manual 312359 for instructions.

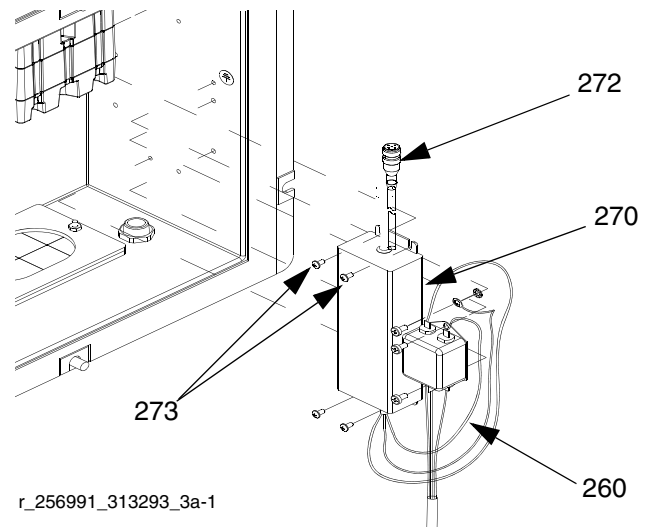
**Replace Front Panel**

See **Replace Display**, page 34, for instructions

## Wall Power Supply Control Components

### Replace Power Supply Module

- Remove shroud. See **Remove Shroud**.
- Disconnect main power.
- Remove four nuts (4); leave two nuts on left side of panel tight. Open front panel of control box (11).
- Disconnect incoming power cable connections to power supply module and ground lead (260) from control box.
- Disconnect power supply cable (272) from FCM (218).
- Remove four screws (273) holding power supply module (270) bracket in place.



- Remove and replace power supply module (270).
- Follow steps in reverse order to install new power supply module.

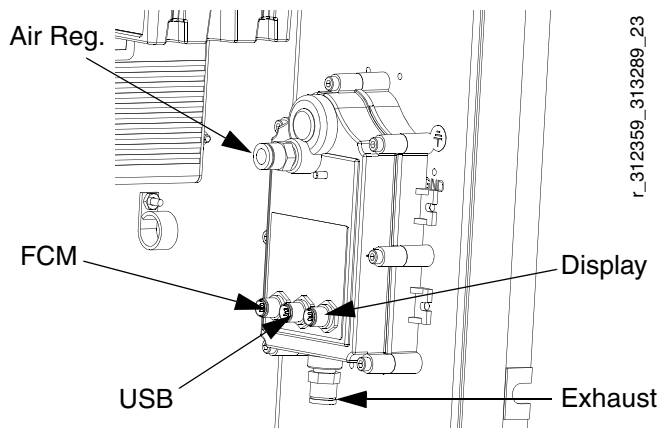
## Alternator Power Supply Control Components

### Alternator Module Repair

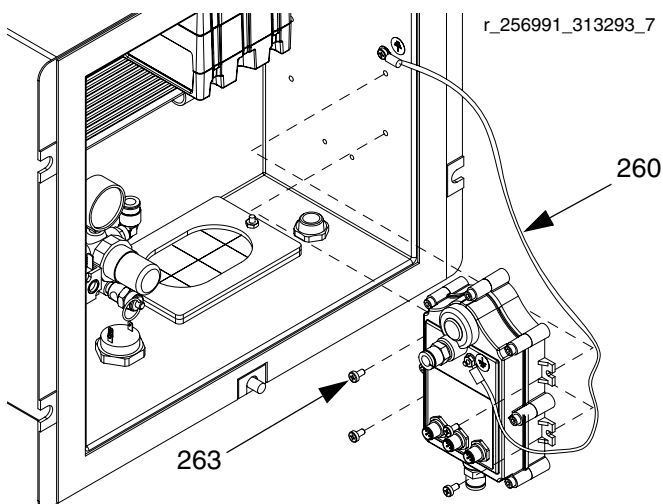
Alternator Repair Kit 257147 is available to replace turbine bearings.

- Remove shroud. See **Remove Shroud**.
- Disconnect main power.

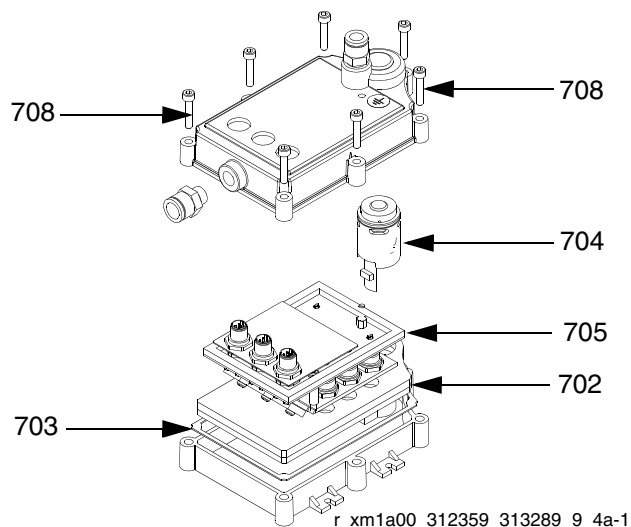
3. Remove four nuts (4); leave two nuts on left side of panel tight. Open front panel of control box (11).
4. Disconnect output power cable connections from alternator module and ground lead from control box.
5. Disconnect power supply cables from FCM, USB, and display.



6. Disconnect air regulator air line and exhaust air line.
7. Remove four screws (263) from mounting to remove alternator from control box.



8. Remove seven screws (708) to separate alternator housings.
9. Replace turbine (704) if necessary. Lightly lubricate turbine o-ring to ease alternator housing reassembly.



10. Replace gasket (702) and/or circuit board assembly (705) if damaged.
11. Follow steps in reverse order to reassemble alternator regulator assembly and to reconnect power cables and air lines. Refer to **Electrical Schematics**, page 45.

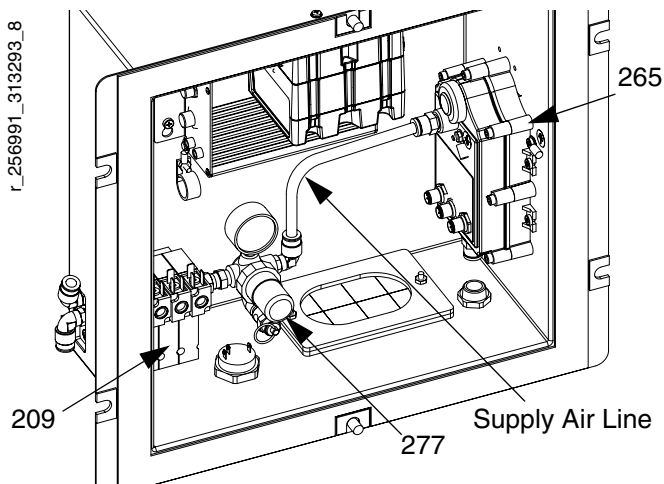
**NOTE:**

Avoid causing a kink in the flexible circuit board when you reconnect the circuit board assembly (705).

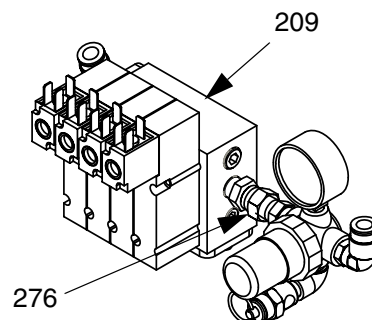


## Replace Alternator Regulator

1. Remove shroud. See **Remove Shroud**, page 30
2. Disconnect main power.
3. Remove four nuts (4); leave two nuts on left side of panel tight. Open front panel of control box (11).
4. Disconnect supply air line from alternator assembly (265).



5. Loosen air regulator swivel fitting (276) and remove from solenoid module (209).



6. Repair or replace alternator regulator parts as necessary. See **Alternator Assembly**, page 69, for repair parts. Replace air regulator swivel fitting (276).
7. Set regulator to 18 +/- 1 psi (12.6 +/- 10 kPa, 1.26 +/- 0.07 bar).

## Air Controls

### Remove Air Control Assembly

1. Remove shroud. See **Remove Shroud**, page 30.
2. Disconnect air motor air lines and system air line.
3. Remove four nuts (7) from front of air control bracket (319).
4. Pull out assembly.
5. Follow steps in reverse order to reinstall air control assembly.

### Replace Solvent Pump Ball Valve

1. Remove shroud. See **Remove Shroud**, page 30.
2. Disconnect air motor air lines and system air line.
3. Remove four nuts (7) from front of air control bracket (319).
4. Pull out assembly.
5. Remove two nuts (330) from front of air control bracket (319).
6. Disconnect air line (332) running to ball valve assembly (326).
7. Replace with new ball valve assembly. See **Air Controls Module (255761) Parts**, page 71.
8. Follow steps in reverse order to reassemble.

### Replace Solvent Air Regulator

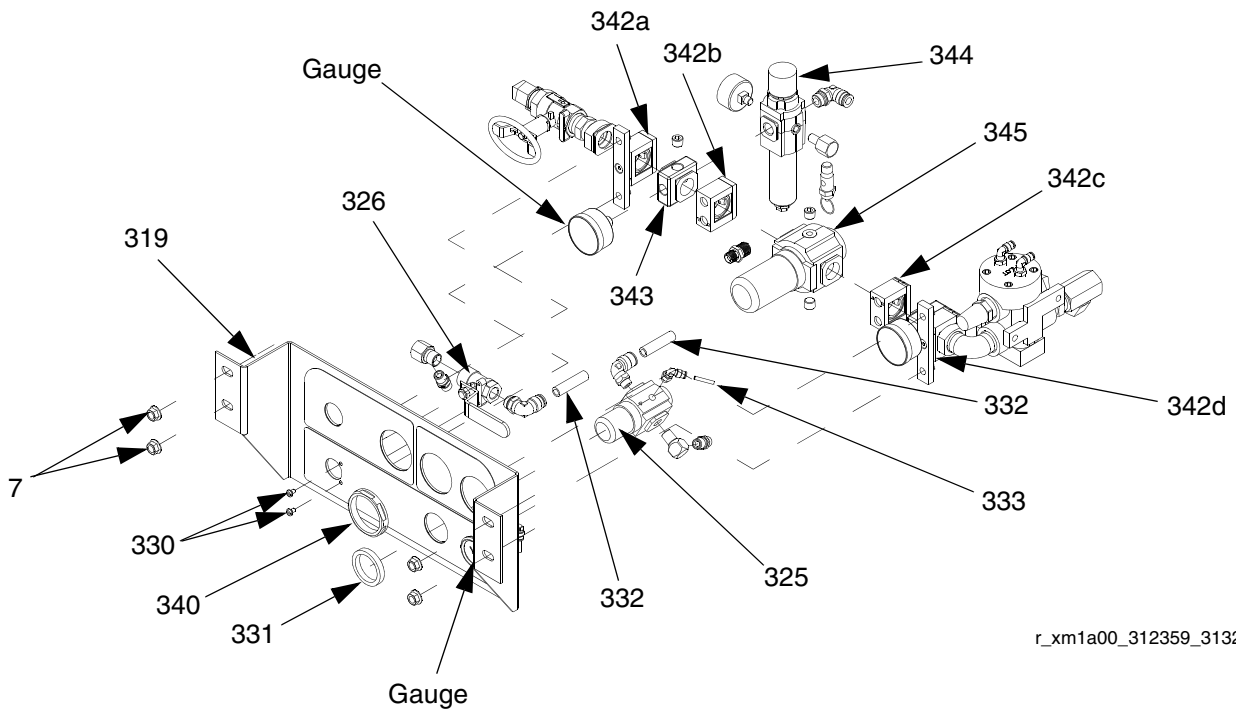
1. Remove shroud. See **Remove Shroud**, page 30.
2. Disconnect air motor air lines and system air line.
3. Remove four nuts (7) from front of air control bracket (319).
4. Pull out assembly.
5. Remove regulator nut (331), and disconnect air lines (332, 333) running to regulator (325).
6. Remove regulator assembly and replace with new. See **Air Controls Module (255761) Parts**, page 71.
7. Follow steps in reverse order to reassemble.

### Replace System Air Regulator

1. Remove shroud. See **Remove Shroud**, page 30.
2. Disconnect air motor air lines and system air line.
3. Remove four nuts (7) from front of air control bracket (319).
4. Pull out assembly.
5. Remove regulator nut (340) and disconnect system air line.
6. Remove screws from quick clamps and open clamps (342b, 342c) at hinge.
7. Remove regulator assembly (345) and replace with new. See **Air Controls Module (255761) Parts**, page 71.
8. Follow steps in reverse order to reassemble.

### Replace Solenoid Inlet Air Regulator

1. Remove shroud. See **Remove Shroud**, page 30.
2. Disconnect air motor air lines and system air line.
3. Remove four nuts (7) from front of air control bracket (319).
4. Pull out assembly.
5. Disconnect air line.
6. Remove gauge from block (343).
7. Remove screws from quick clamps (342a, 342b) holding air regulator assembly (344) in place.
8. Open clamps (342a, 342b) at hinge and pull apart from block (343).
9. Remove regulator assembly (344) and replace with new. See **Air Controls Module (255761) Parts**, page 71.
10. Follow steps in reverse order to reassemble.



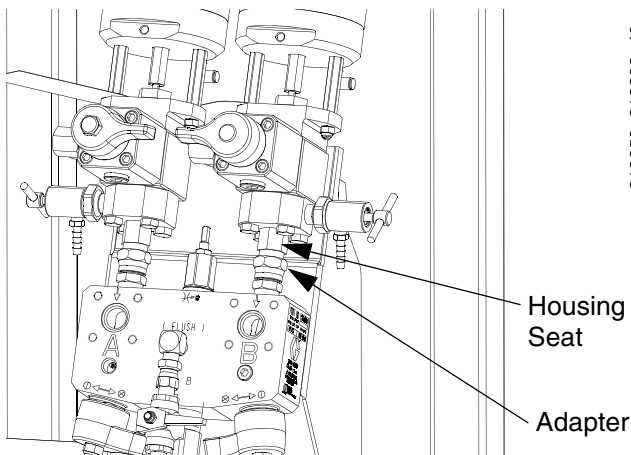
r\_xm1a00\_312359\_313289\_9\_9

## Fluid Control Assembly

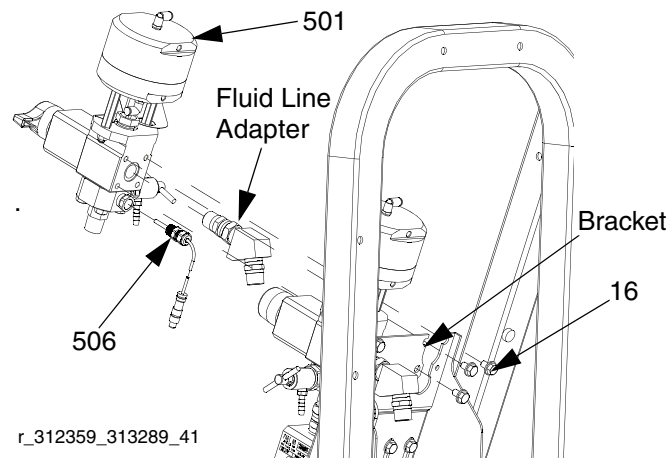


### Dosing Valve Assembly

1. Follow **Pressure Relief Procedure**, page 12.
2. Disconnect all fluid lines from dosing valve assembly (8).
3. Remove three bolts (16) on back of each dosing valve (501) from bracket.
4. Unscrew dosing valve housing seats from adapters on mix manifold.



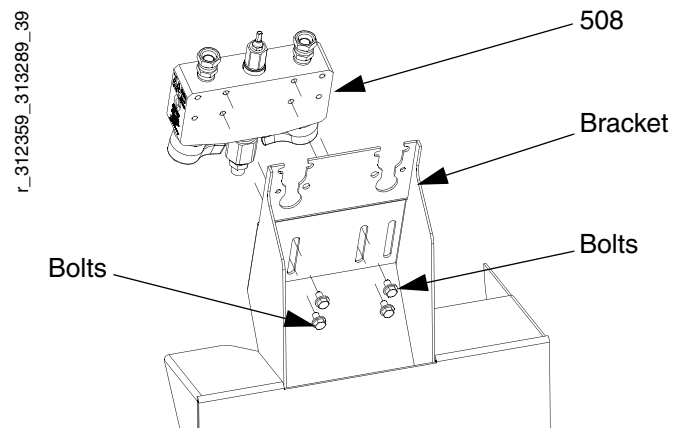
5. Disconnect RTD (506) from cord grip. Disconnect pressure sensor (507) and fluid line adapter from each dosing valve (501).



6. Remove dosing valves. See manual 313342 for dosing valve service and repair instructions.
7. Follow steps in reverse order to reassemble dosing valve assembly.

### Mix Manifold Assembly

1. Follow **Pressure Relief Procedure**, page 12.
2. Disconnect fluid line and solvent lines from mix manifold assembly.
3. Loosen four bolts securing mix manifold (508) to bracket.

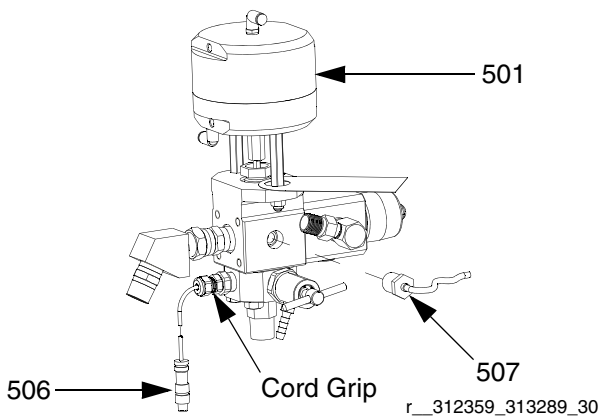


4. Unscrew dosing valve housing seats from adapters on mix manifold.
5. Remove four bolts securing mix manifold (508) to bracket.
6. Remove mix manifold assembly (508) from bracket. See manual 312749 for mix manifold service and repair instructions.
7. Follow steps in reverse order to reassemble mix manifold assembly.

## Sensors

### Replace Fluid Pressure Sensor

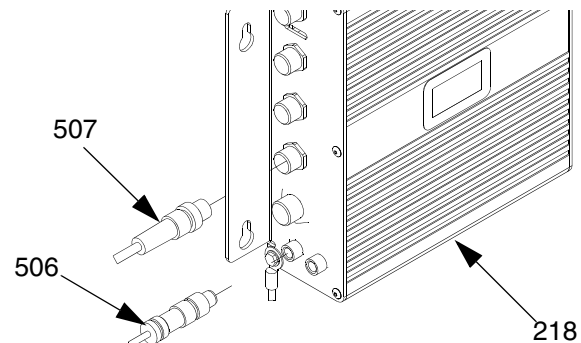
1. Close main air shutoff valve on air supply line and on system.
2. Relieve fluid pressure. See **Pressure Relief Procedure**, page 12.
3. Open control box cover. See **User Interface/Control Box**, page 30.
4. Disconnect pressure sensor (507) from FCM (218).
5. Disconnect fluid pressure sensor (507) from dosing valve (501).



6. Replace with new fluid pressure sensor, and reconnect pressure sensor to FCM.

### Temperature (RTD) Sensor

1. Close main air shutoff valve on air supply line and on system.
2. Relieve fluid pressure. See **Pressure Relief Procedure**, page 12.
3. Open control box cover. See **User Interface/Control Box**, page 30.
4. Disconnect temperature sensors (506) from FCM (218).



5. Remove RTD (506) cable from cord grip.
6. Replace with new temperature (RTD) sensor.
7. Reassemble RTD cable (506) and cord grip.
8. Connect temperature (RTD) sensor to FCM.
9. Close control box cover.

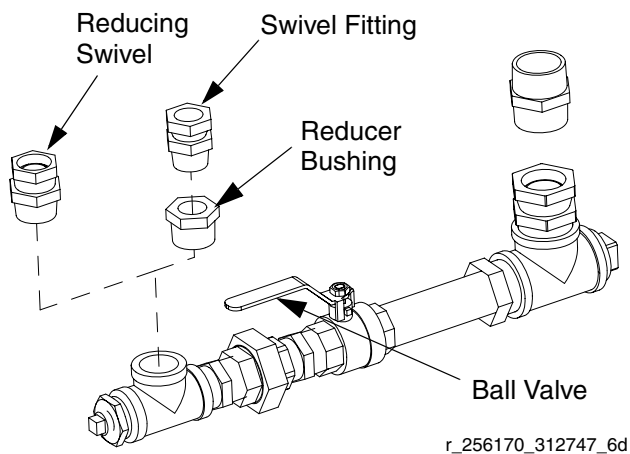
## Pump Assembly



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 12.
2. Close ball valve on hopper outlet assembly.
3. Disconnect displacement pump from fluid inlet assembly.
  - *50:1 Pump*: disconnect reducer bushing fitting from swivel fitting on fluid inlet assembly.
  - *70:1 Pump*: disconnect reducing swivel from fluid inlet assembly.

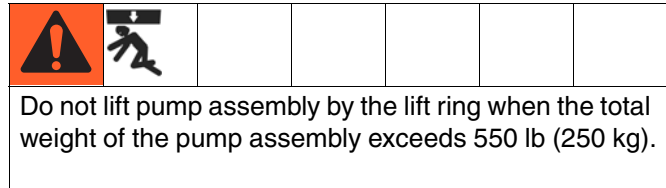


#### NOTE:

Refer to the Double Wall Hopper manual 312747 to service or repair the fluid inlet assembly.

4. Disconnect air motor.
  - a. Disconnect sensor cable, air line, and ground wire from air motor.
  - b. Remove mounting screws (4) and washers (3) holding air motor (2) to mounting bracket. See illustration in **Remove Air Motor** section.

5. Remove pump assembly by lift ring on air motor.

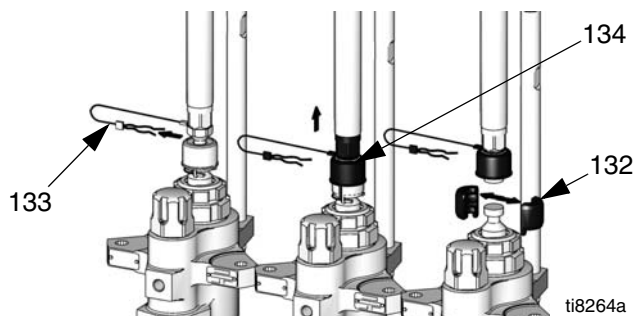


6. Refer to Xtreme Displacement Pump manual 311762 to service or repair the displacement pump. Refer to NXT Air Motor manual 311238 to service or repair the air motor.
7. Follow steps in reverse order to reinstall pump assembly.

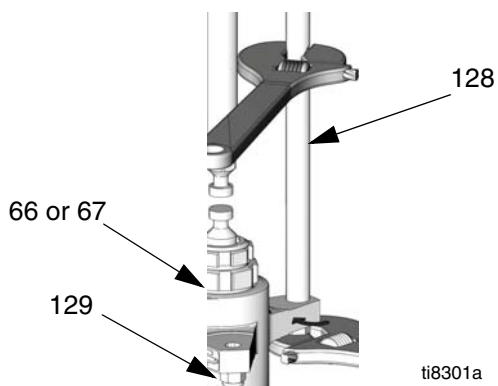
### Remove Displacement Pump

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

1. Follow **Pressure Relief Procedure**, page 12.
2. Disconnect displacement pump from fluid inlet assembly. See steps 2 and 3 under **Remove Pump Assembly**, page 42.
3. Remove clip (133), and slide coupling cover (134) up to remove coupling (132).



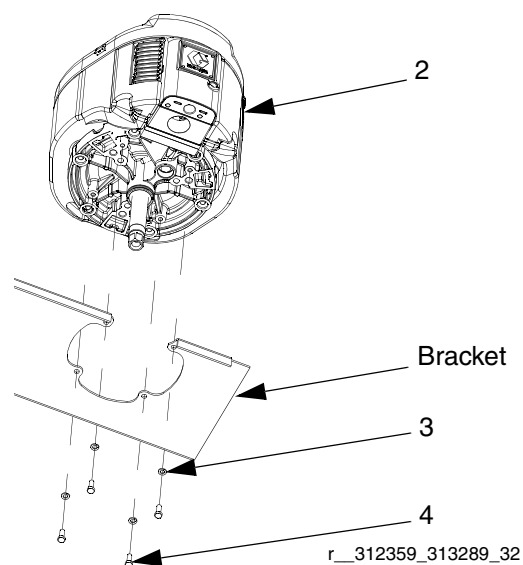
4. Use a wrench to hold the tie rod flats to keep the rods from turning. Unscrew the nuts (129) from the tie rods (128) and carefully remove the displacement pump (66 or 67).



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

## Remove Air Motor

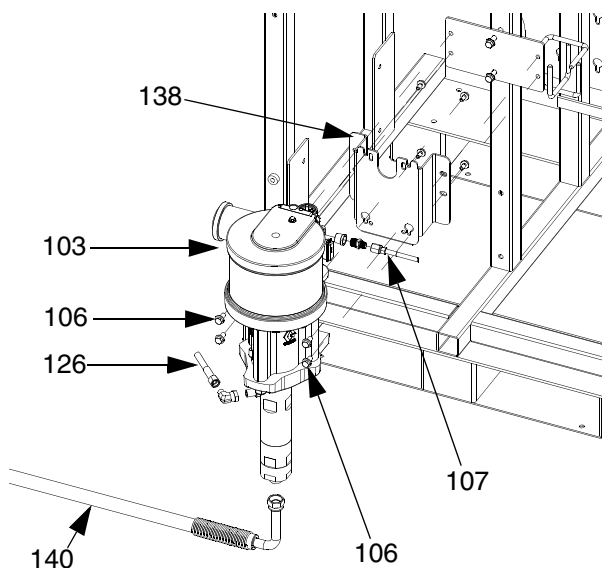
1. Follow **Pressure Relief Procedure**, page 12.
2. Disconnect displacement pump from air motor. See steps 2 and 3 under **Remove Displacement Pump**, page 42.
3. Disconnect sensor cable, air line, and ground wire from air motor.
4. Remove mounting screws (4) and washers (3) holding air motor (2) to mounting bracket.



5. Refer to NXT Air Motor manual 311238 to service or repair the air motor.
6. Follow steps in reverse order to reinstall air motor.

## Solvent Pump

1. Follow **Pressure Relief Procedure**, page 12.
2. Disconnect fluid line (140) and air lines (107, 126) from solvent pump.
3. Remove four screws (106) that attach solvent pump (103) to bracket (138) and remove solvent pump.



4. Refer to Merkur Pump Assembly manual 312794 to service or repair solvent pump.
5. Follow steps in reverse order to reinstall solvent pump.

## Fluid Heaters

### NOTE:

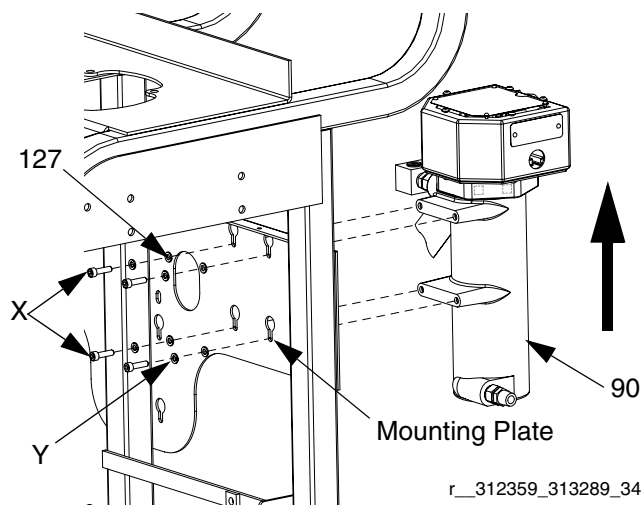
Wiring for explosion-proof heaters (245863) is not provided. See Viscon HP heater manual 309524 for wiring, repair, and parts information for explosion-proof heaters.

### Service and Repair

1. Follow **Pressure Relief Procedure**, page 12.
2. Disconnect fluid lines and electrical wiring from fluid heater.
3. Refer to Viscon HP heater manual 309524 to service or repair heater.
4. Reconnect fluid lines and electrical wiring.

### Replace

1. Follow steps 1 through 2 above.
2. Loosen four mounting screws (X), lock washers (Y), and plain washers (127) on back of heater (90). Slide heater up and remove from mounting plate.

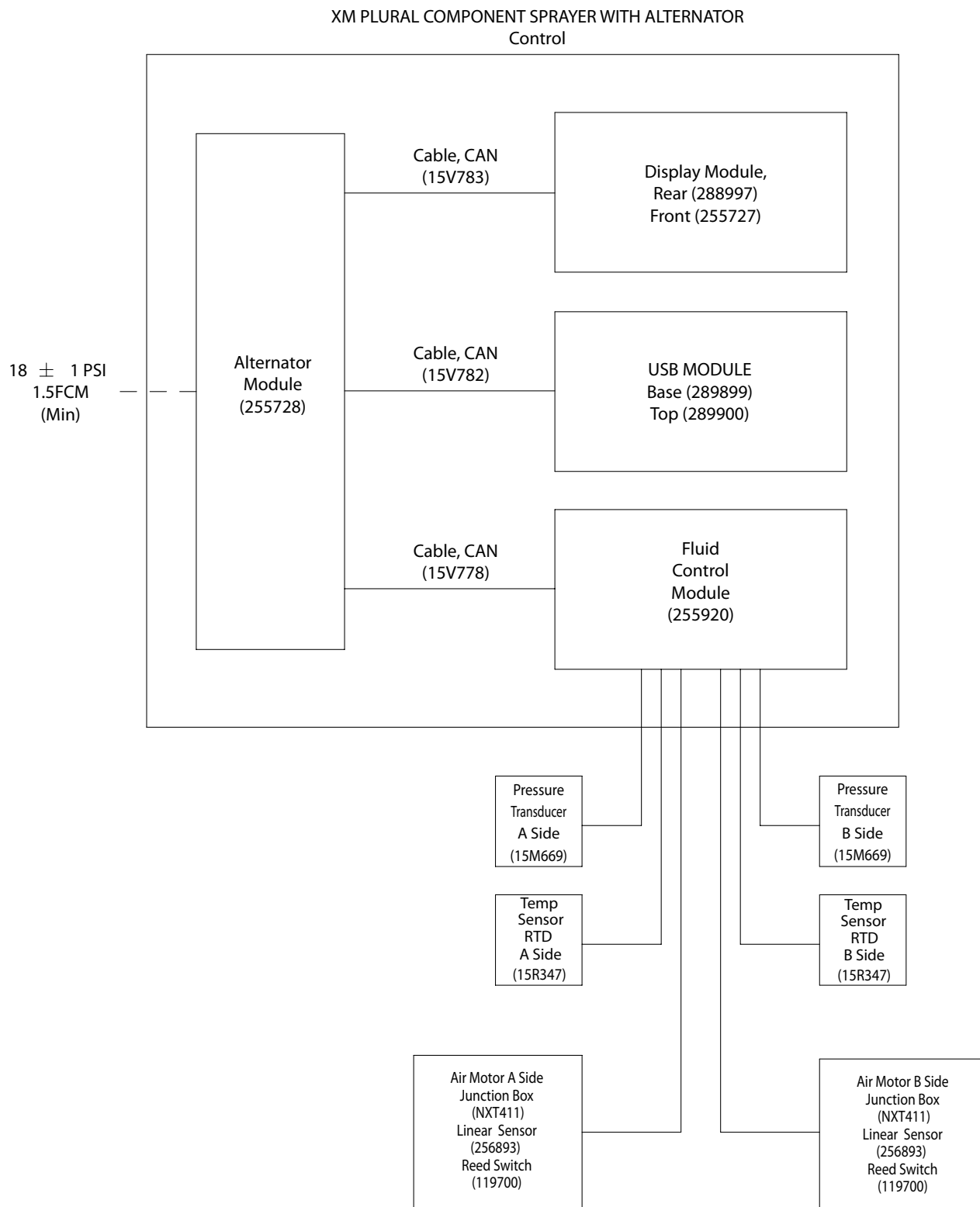


3. Replace heater. Follow steps in reverse order to install new heater.

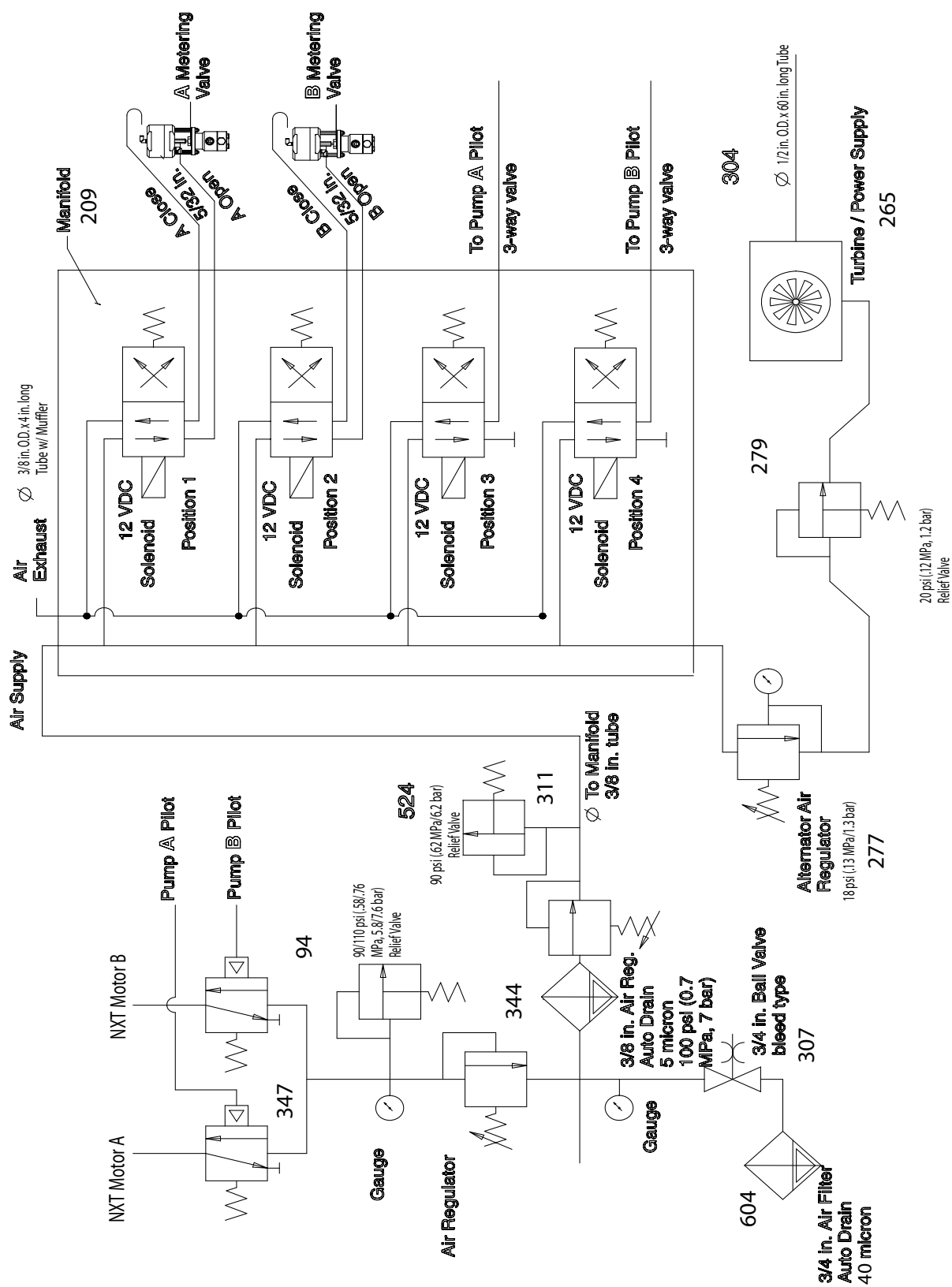


# Electrical Schematics

## Simplified Electrical Schematic, XM Sprayer with Alternator

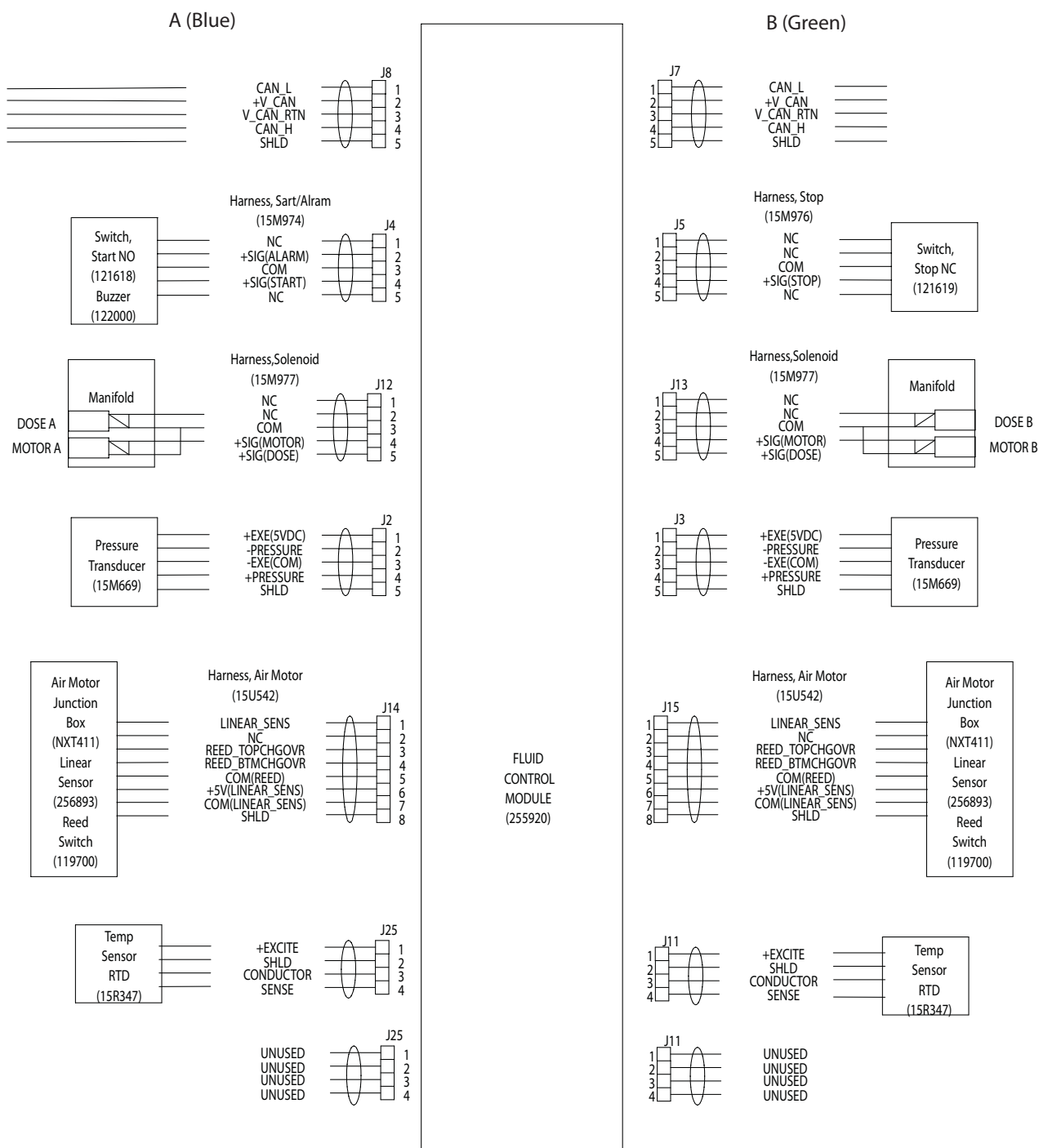


## Simplified Pneumatic Schematic, XM Sprayer with Alternator



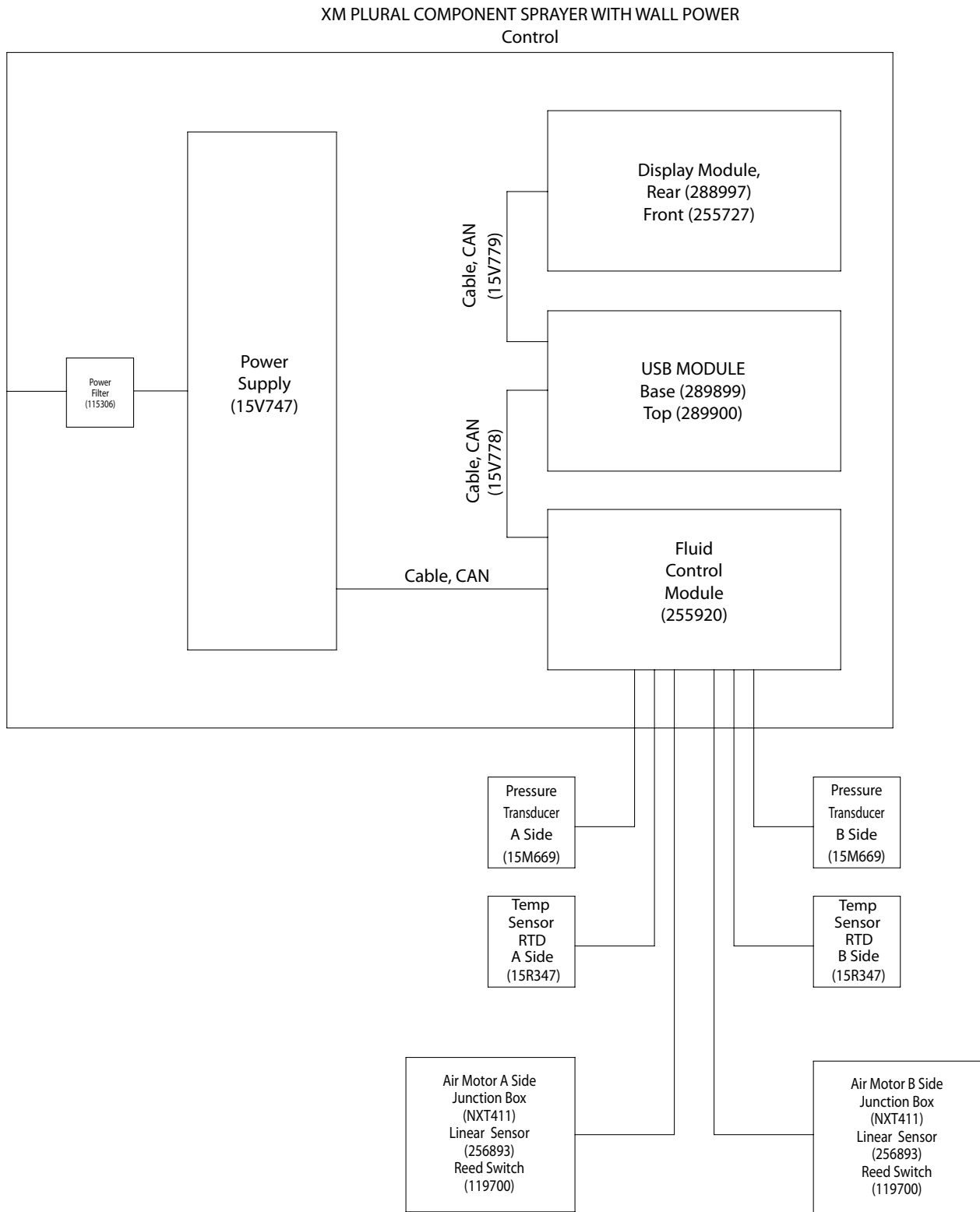


## Detailed Electrical Schematic, XM Sprayer with Alternator (page 2)

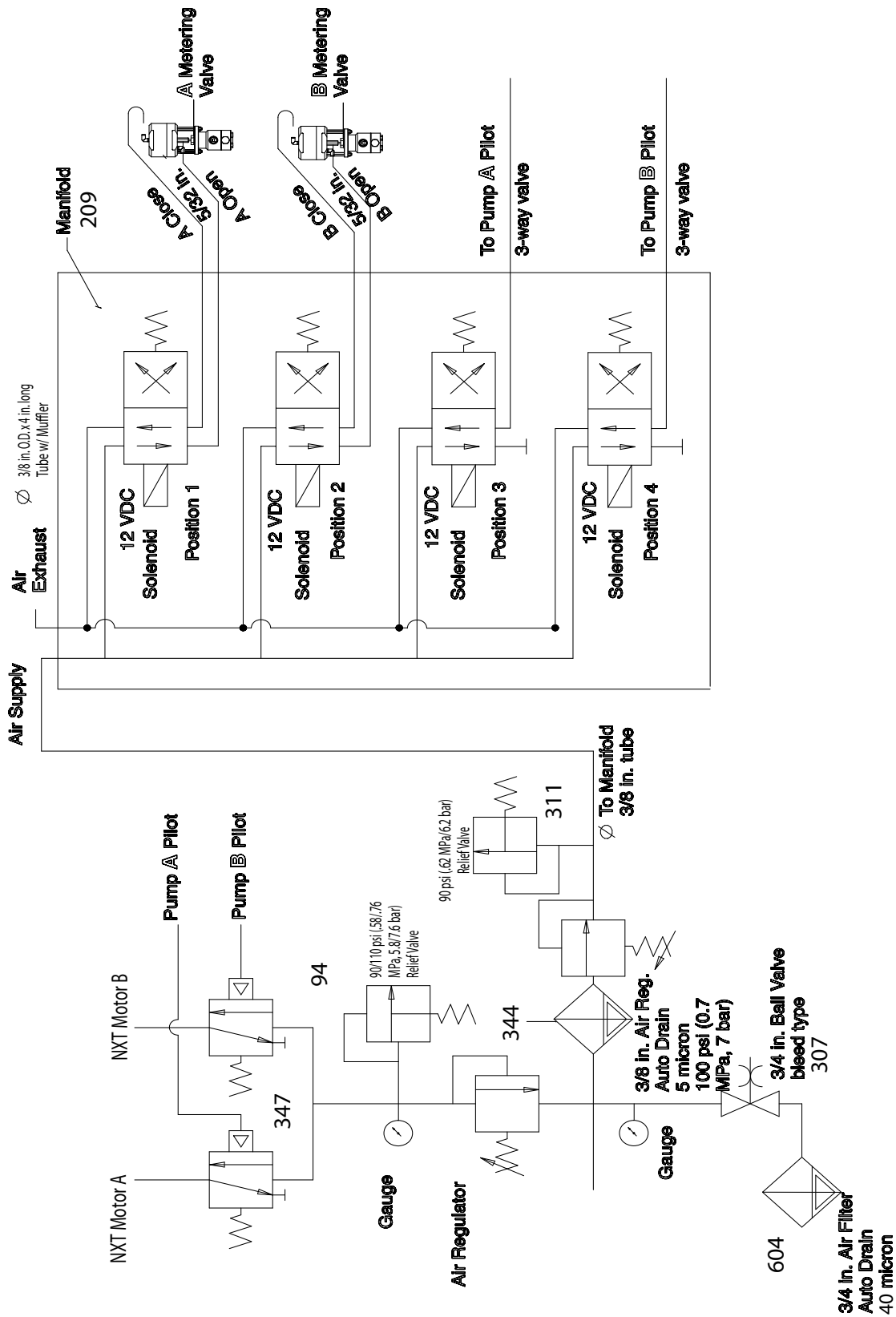


**NOTE: NC indicates the wire is not connected.**

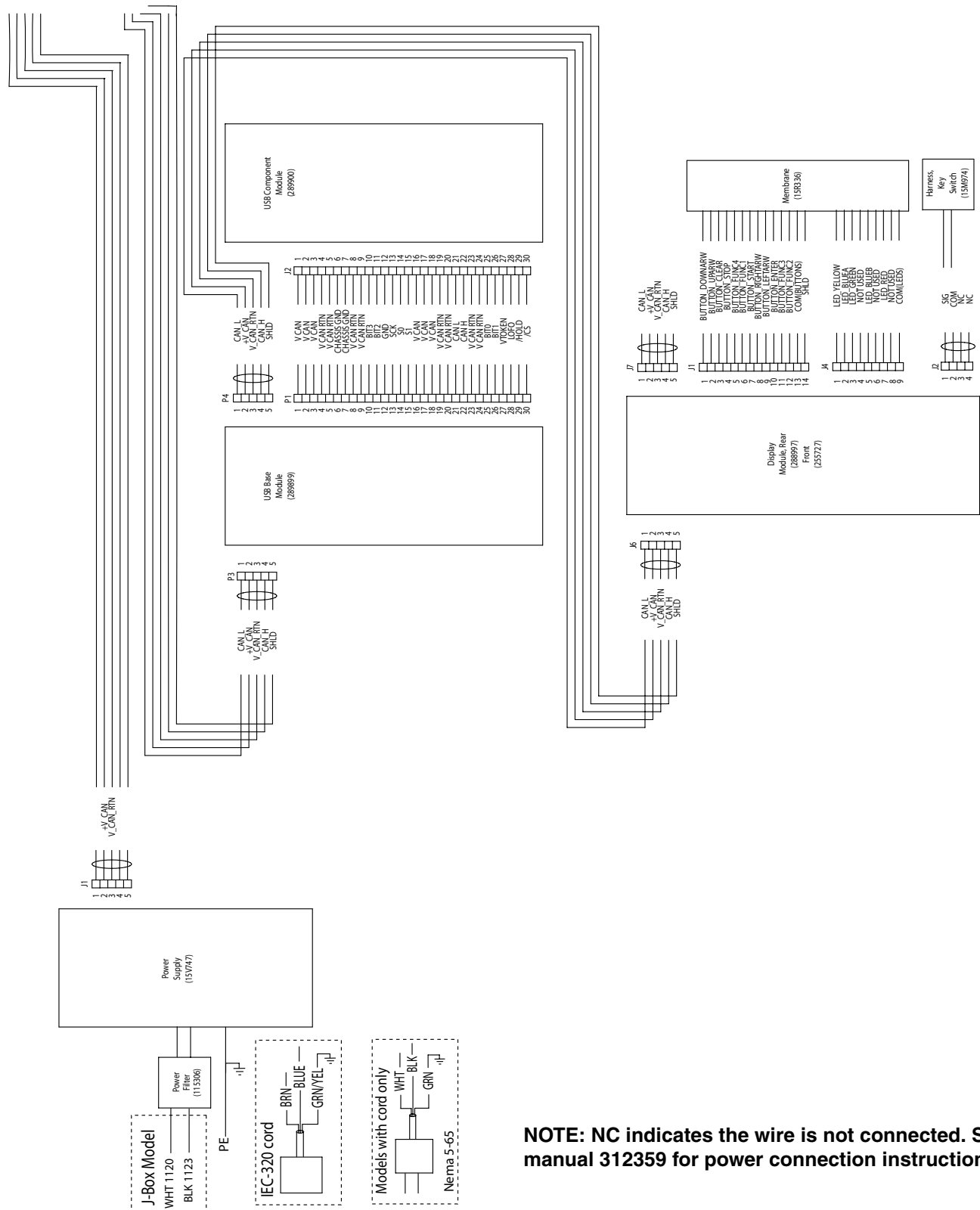
# Simplified Electrical Schematic, XM Sprayer with Wall Power



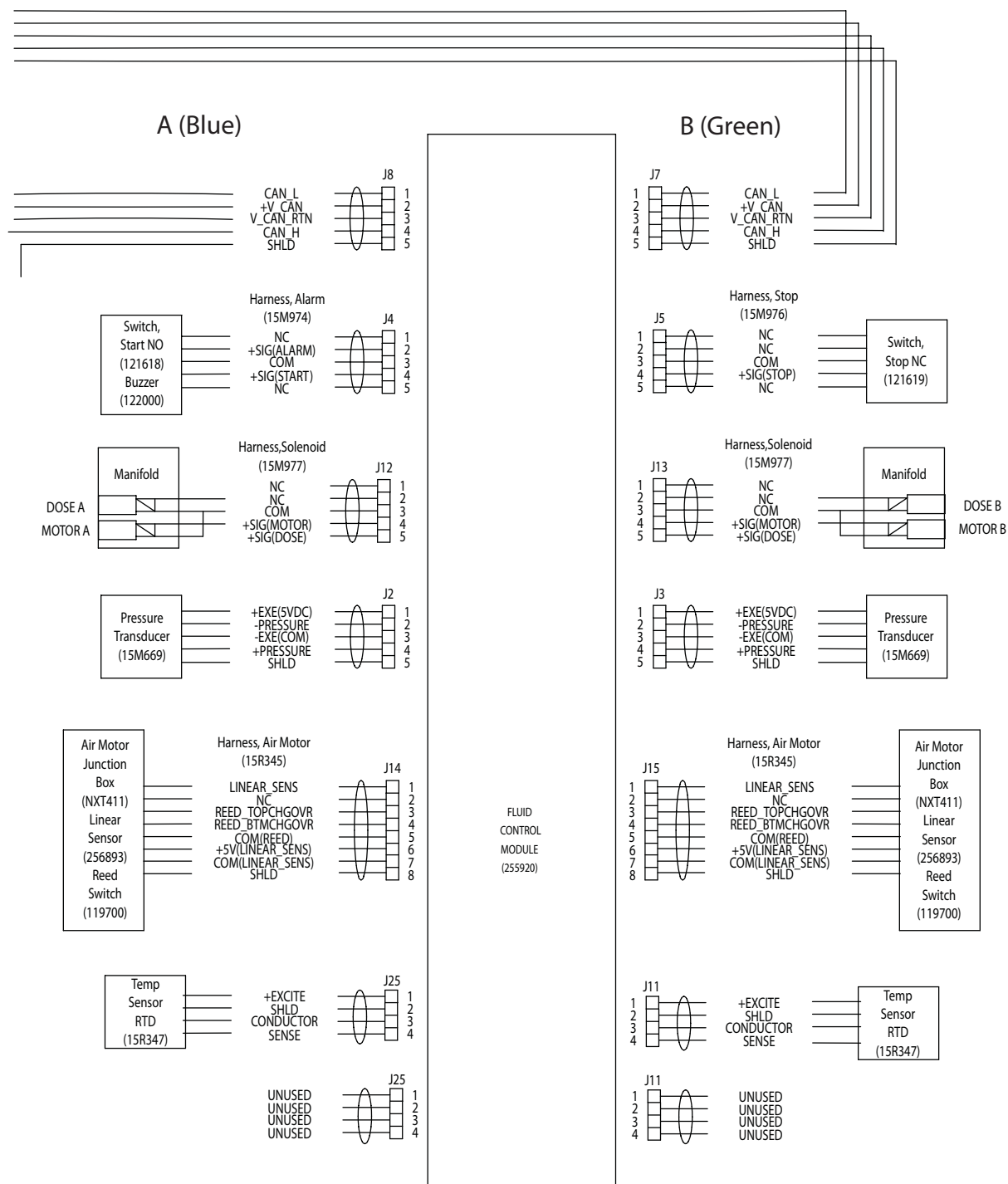
Simplified Pneumatic Schematic, XM Sprayer with Wall Power



## Detailed Electrical Schematic, XM Sprayer with Wall Power (page 1)



## Detailed Electrical Schematic, XM Sprayer with Wall Power (page 2)

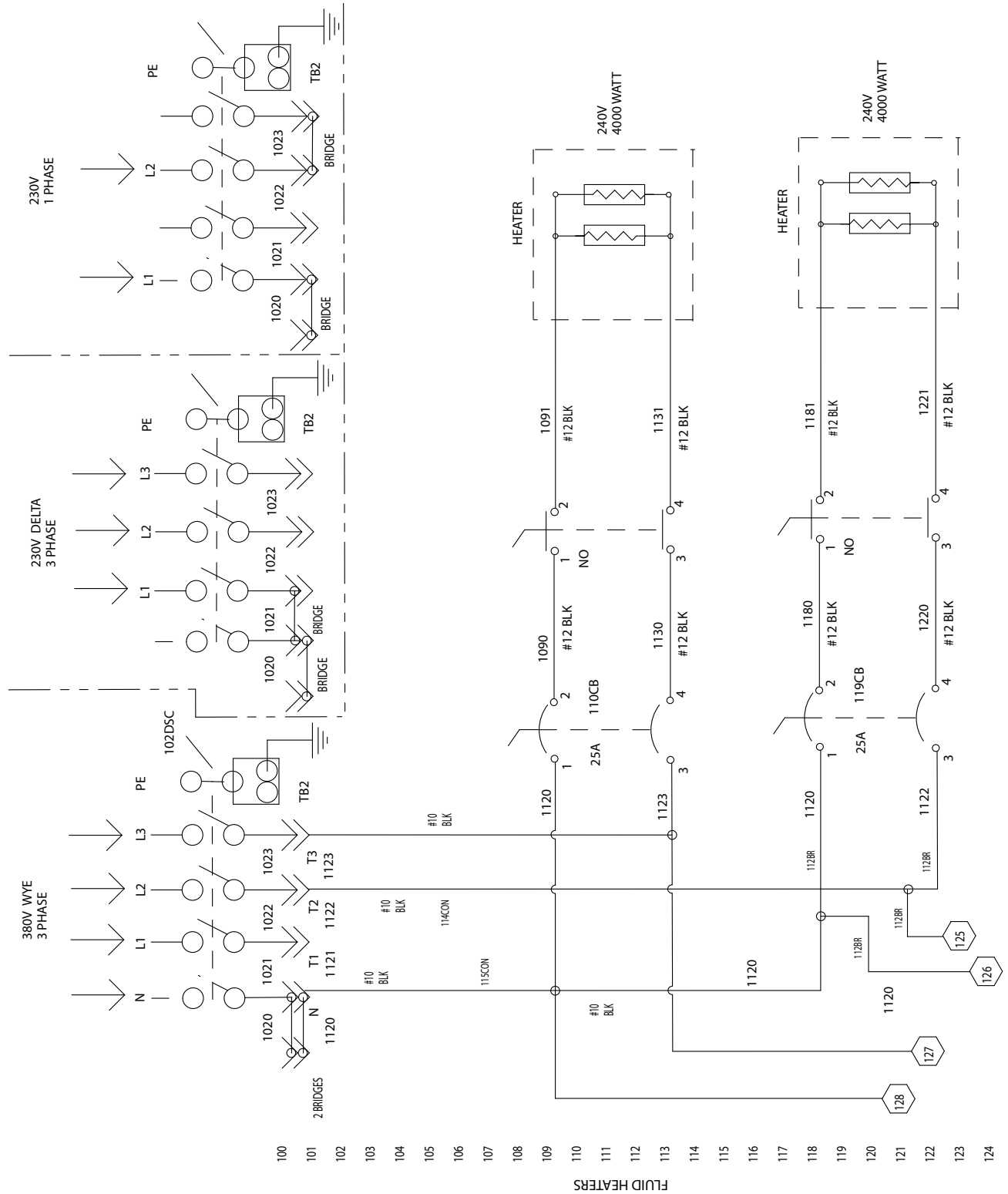




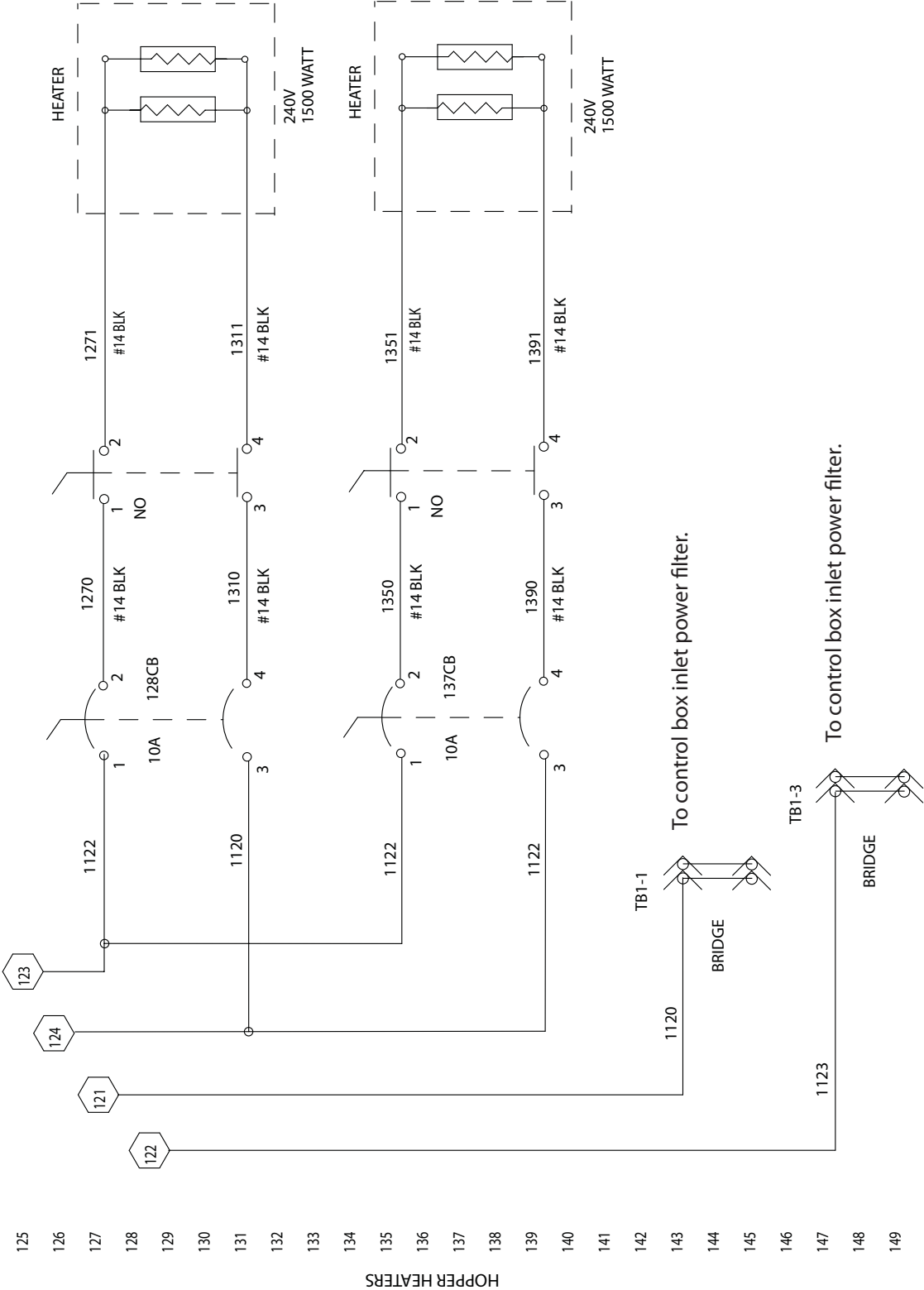
# Junction Box Wiring Schematics

## Fluid Heaters

NOTE: See manual 312359 for power connection instructions.




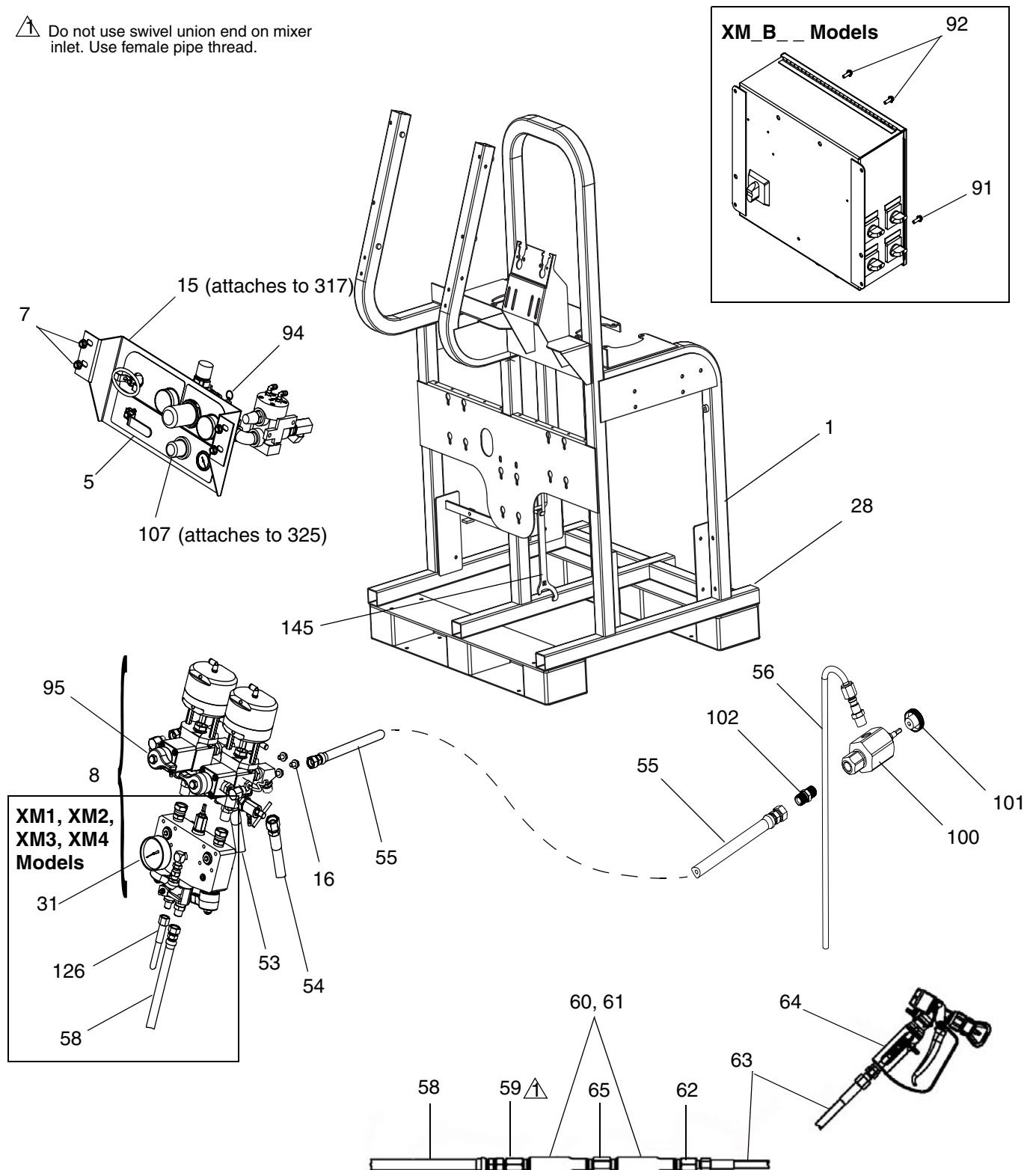
Hopper Heaters

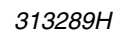


# Parts

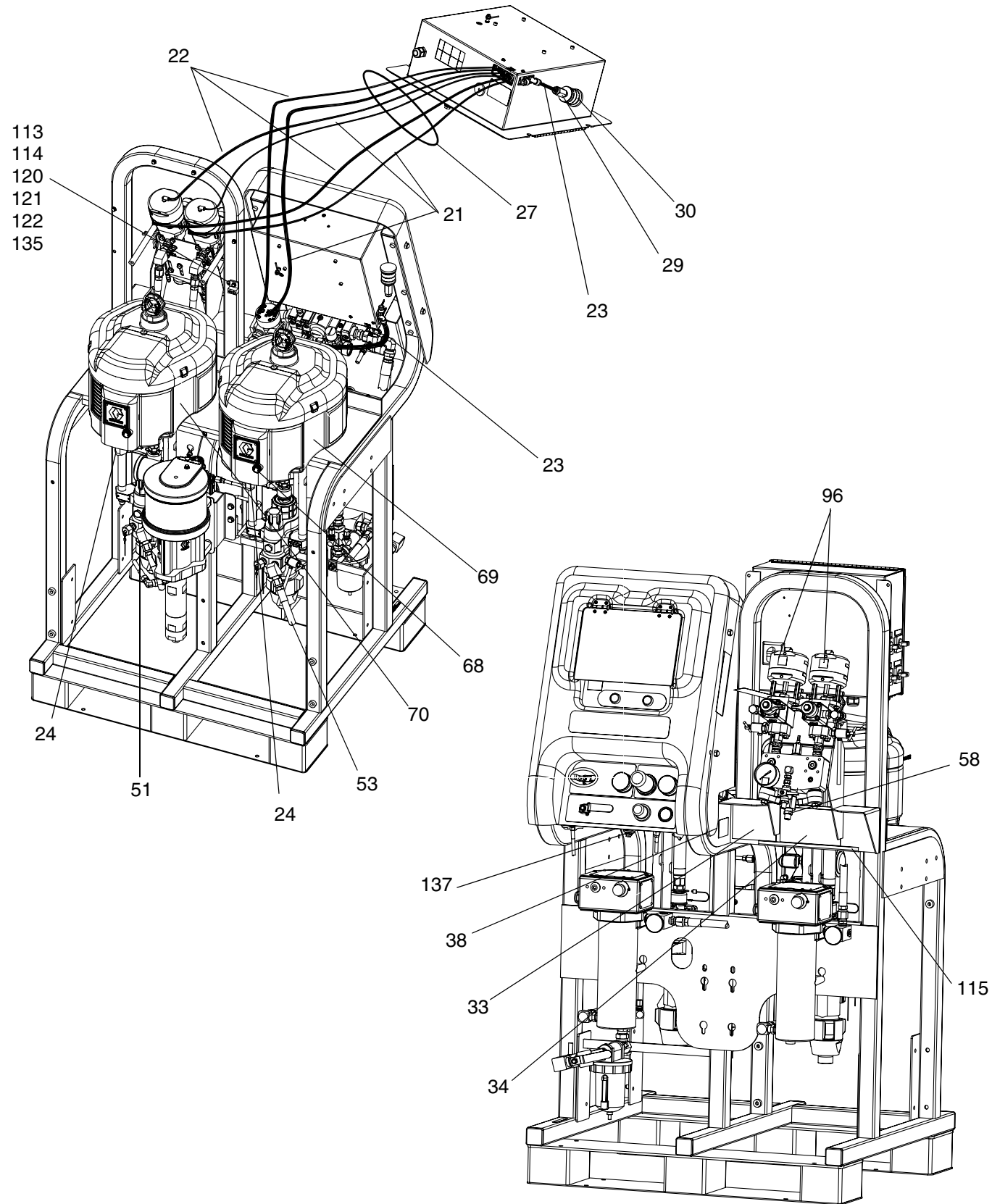
## XM Plural-Component Sprayers

 Do not use swivel union end on mixer inlet. Use female pipe thread.





**XM Plural-Component Sprayers**



## Common Parts

| Ref. | Part    | Description                                                                               | Qty. | Ref.  | Part   | Description                              | Qty. |
|------|---------|-------------------------------------------------------------------------------------------|------|-------|--------|------------------------------------------|------|
| 1    |         | FRAME                                                                                     | 1    | 59    | 15B729 | COUPLING; 3/8-18 npsm x 3/8-18 npt       | 1    |
| 2    | 257055  | MOTOR, 6500, de-icing; see manual 311238                                                  | 2    | 60    | 15E592 | HOUSING, mixer                           | 2    |
| 2a   | 256893  | HOUSING, assy., linear sensor; see manual 311328                                          | 2    | 61*   | 248927 | KIT, mixer, element; pack of 25          | 1    |
| 2b*  | NXT102  | CONTROL, assy, de-ice                                                                     | 2    | 62    | 150287 | COUPLING; 1/4-18 npsm x 3/8-18 npt       | 1    |
| 3    | 100133  | WASHER, lock                                                                              | 8    | 63    | H72510 | HOSE, coupled; 1/4-18 npsm; 10 ft        | 1    |
| 4    | 100101  | SCREW, cap, hex hd                                                                        | 8    | 64    | XTR704 | GUN                                      | 1    |
| 5    | 255761  | AIR CONTROLS, module, upper; see <b>Air Controls Module (255761) Parts</b> , page 71      | 1    | 65    | 162024 | COUPLING; 3/8-18 npt x 3/8-18 npt        | 1    |
| 6    | 255762  | MANIFOLD, inlet, air distribution; see <b>Air Inlet Manifold (255762) Parts</b> , page 74 | 1    | 75*   | 206995 | TSL; 1 qt.                               | 1    |
| 7    | 112958  | NUT, hex, flanged                                                                         | 9    | 95    | 15U655 | LABEL, identification                    | 1    |
| 8    |         | FLUID CONTROL, assy; see <b>Fluid Control Assembly Parts</b> , page 73                    | 1    | 96    | 15U654 | LABEL, identification                    | 1    |
| 11   | 255771  | BOX, control; see <b>Control Box (255771) Parts</b> , page 67                             | 1    | 101✓  | 114593 | KNOB                                     | 2    |
| 12   | 256177  | SHROUD, front                                                                             | 1    | 103   | W30CAS | PUMP, solvent, Merkur; see manual 312794 | 1    |
| 13   | 256178  | SHROUD, rear                                                                              | 1    | 104   | 256169 | PLATE, pump, solvent                     | 1    |
| 14   | 117623  | NUT, cap (3/8-16)                                                                         | 4    | 105   |        | SCREW, hex hd, flanged                   | 2    |
| 15   | 240900  | HOSE, coupled, 30 in.                                                                     | 3    | 106   | 112395 | SCREW, cap, flanged                      | 4    |
| 16   | 111801  | SCREW, cap, hex hd                                                                        | 10   | 107   | 248208 | HOSE, coupled; 4 ft                      | 1    |
| 17   | 121471  | HINGE, friction, positioning                                                              | 2    | 113   | 117666 | TERMINAL, ground                         | 1    |
| 18   | 15T568  | DOOR, control shroud                                                                      | 1    | 114   | 100028 | WASHER, lock                             | 1    |
| 19   | 15T567  | NUT, backup plate, hinge                                                                  | 4    | 115   | 115901 | TRIM, edge                               | 2    |
| 20   | 112380  | SCREW, mach, pan head                                                                     | 8    | 120   |        | WIRE, ground assy.                       | 1    |
| 21   | 054753  | TUBE, nylon, round, black; 10 ft                                                          |      | 121   |        | WIRE, electric; copper                   |      |
| 22   | 054757  | TUBE, nylon, round; 7 ft                                                                  |      | 122   | 109025 | RING, terminal                           | 1    |
| 23   | C12508  | TUBE, nylon, round; 1.3 ft                                                                |      | 124▲  |        | LABEL, pressure control                  | 2    |
| 24   | 160327  | FITTING, union adapter; 90 deg.                                                           | 2    | 125*✓ | 162449 | NIPPLE, reducing; 1/2 x 1/4 npt          | 2    |
| 27   | 114601  | CONDUIT, flexible, non-metallic; 3 ft                                                     |      | 128   | 257150 | ROD, tie                                 | 6    |
| 28   | 115313  | PLUG, tube                                                                                | 8    | 129   | 101712 | NUT, lock                                | 6    |
| 29   | 121688  | CONNECTOR; 3/8 npt x 3/8 tube ptc                                                         | 1    | 131   | 15H392 | ROD, adapter                             | 2    |
| 30   | 108636  | MUFFLER                                                                                   | 1    | 132   | 244819 | COUPLING, assy.                          | 2    |
| 31   | 114434  | GAUGE, pressure, fluid, sst                                                               | 1    | 133   | 244820 | CLIP, hairpin with lanyard               | 2    |
| 32▲  | 15T468  | LABEL, warning                                                                            | 2    | 134   | 197340 | COVER, coupler                           | 2    |
| 33▲  |         | LABEL, codes, alerts                                                                      | 1    | 135   | 113796 | SCREW, flanged, hex head                 | 1    |
|      | 15U926  | English                                                                                   |      | 136*  | 114958 | TIE, strap                               | 10   |
|      | ✓15X126 | All languages                                                                             |      | 137*  | 054760 | TUBE, polyurethane, black; 3.5 ft.       | -    |
| 34▲  | 15W598  | LABEL, warning                                                                            | 1    | 138   | 256561 | PLATE, mounting, solvent pump            | 1    |
| 35*  | 15U656  | LABEL, identification                                                                     | 1    | 139   | 111799 | SCREW, cap, hex head                     | 4    |
| 38   | 293547  | LABEL, identification                                                                     | 1    | 140   | 256421 | HOSE, siphon, assy.                      | 1    |
| 51   | 15M987  | ELBOW; 60 deg.                                                                            | 2    | 141   | 181073 | STRAINER, inlet                          | 1    |
| 53   | H75003  | HOSE, coupled; 1/2-14 npsm; 3 ft                                                          | 3    | 142   | 116935 | SCREW, cap                               | 1    |
| 54   | H75002  | HOSE, coupled; 1/2-14 npsm; 2 ft                                                          | 1    | 143   | 100081 | BUSHING, pipe                            | 1    |
| 55✓  | H53806  | HOSE, coupled; 3/8-18 npsm; 6 ft                                                          | 2    | 144   | 157350 | ADAPTER; 3/8 npt x 1/4 npt               | 1    |
| 56✓  | 15T396  | TUBE, recirculation                                                                       | 2    | 145   | 15T258 | TOOL, wrench, Xtreme                     | 1    |
| 57*  | 551390  | SIGHTGLASS, beaker, graduated                                                             | 10   | 146✓  | 159239 | NIPPLE, reducing; 1/2 x 3/8 npt          | 1    |
| 58   | H73825  | HOSE, coupled; 3/8-18 npsm; 25 ft                                                         | 1    | 147*  | 16A004 | FLASH DRIVE, USB; 4 GB                   | 1    |

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

\* Not shown.

✓ Not assembled.

## Parts Varying by Model

### XM1\_ \_ \_ and XM2\_ \_ \_ Models

| Ref. | Part   | Description                                       | XM-50 Plural-Component Sprayer Models |        |        |        |        |        |        |        |
|------|--------|---------------------------------------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|
|      |        |                                                   | XM1A00                                | XM1B00 | XM1D00 | XM1E00 | XM2A00 | XM2B00 | XM2D00 | XM2E00 |
| 52   | 117623 | NUT, cap                                          |                                       |        |        |        |        |        |        |        |
| 66   | L250C4 | LOWER, A side; see manual 311762                  | 1                                     | 1      | 1      | 1      |        |        |        |        |
|      | L250C3 |                                                   |                                       |        |        |        | 1      | 1      | 1      | 1      |
| 67   | L220C4 | LOWER, B side; see manual 311762                  | 1                                     | 1      | 1      | 1      |        |        |        |        |
|      | L220C3 |                                                   |                                       |        |        |        | 1      | 1      | 1      | 1      |
| 69   | 15H652 | LABEL, motor, A side                              | 1                                     | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 70   | 15H654 | LABEL, motor, B side                              | 1                                     | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 76   | 121295 | SCREW, cap, socket head                           |                                       |        |        |        |        |        |        |        |
| 77   |        | LABEL, system                                     | 1                                     | 1      |        |        | 1      | 1      |        |        |
|      |        |                                                   |                                       |        | 1      | 1      |        |        | 1      | 1      |
| 80   | 158491 | NIPPLE; 1/2 npt                                   | 2                                     | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 81   | 100361 | PLUG, pipe                                        |                                       |        |        |        |        |        |        |        |
| 82   | 15R529 | BLOCK, fluid distribution                         |                                       |        |        |        |        |        |        |        |
| 83   | 156684 | UNION, adapter                                    |                                       |        |        |        |        |        |        |        |
| 84   | 121139 | O-RING; PTFE                                      |                                       |        |        |        |        |        |        |        |
| 85   | 15J594 | HOUSING, check valve                              |                                       |        |        |        |        |        |        |        |
| 86   | 15J916 | HANDLE, blue                                      |                                       |        |        |        |        |        |        |        |
| 87   | 15R380 | HANDLE, green                                     |                                       |        |        |        |        |        |        |        |
| 88   | 255747 | CARTRIDGE, valve                                  |                                       |        |        |        |        |        |        |        |
| 89   | 24A034 | CARRIAGE, remote mix manifold                     |                                       |        |        |        |        |        |        |        |
| 90   | 245869 | HEATER, fluid                                     |                                       | 2      |        |        |        | 2      |        |        |
|      | 245863 |                                                   |                                       |        |        | 2      |        |        |        | 2      |
| 91   | 256540 | BOX, junction                                     |                                       | 1      |        |        |        | 1      |        |        |
| 92   | 113796 | SCREW, flanged, hex head                          | 1                                     | 5      | 1      | 1      | 1      | 5      | 1      | 1      |
| 93   | 111801 | SCREW, cap, hex head                              |                                       |        |        |        |        |        |        |        |
| 94   | 113498 | VALVE, relief; 110 psi (0.76 MPa, 7.6 bar)        | 1                                     | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 100✓ | 222200 | VALVE, restrictor                                 | 2                                     | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 102✓ | 156849 | PIPE, nipple; 3/8 npt                             | 2                                     | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 108  |        | LABEL, XM50                                       | 1                                     | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|      |        | LABEL, XM70                                       |                                       |        |        |        |        |        |        |        |
| 112  |        | CABLE, CAN, IS, display to USB; female B/female B | 1                                     | 1      |        |        | 1      | 1      |        |        |
| 116† | 158683 | ELBOW, 90 deg.                                    |                                       | 2      |        | 2      |        | 2      |        | 2      |
| 117  | 15T967 | CABLE, heater                                     |                                       | 2      |        |        |        | 2      |        |        |
| 118  | 116171 | BUSHING, strain relief                            |                                       | 2      |        |        |        | 2      |        |        |
| 119  | 122032 | NUT, wire                                         |                                       | 4      |        |        |        | 4      |        |        |
| 126  | H42506 | HOSE, coupled, 4500 psi                           | 1                                     | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 127  | 100527 | WASHER                                            |                                       | 8      |        | 8      |        | 8      |        | 8      |

**XM1\_ \_ \_ and XM2\_ \_ \_ Models (continued)**

| Ref. | Part   | Description                              | XM-50 Plural-Component Sprayer Models |        |        |        |        |        |        |        |
|------|--------|------------------------------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|
|      |        |                                          | XM1A00                                | XM1B00 | XM1D00 | XM1E00 | XM2A00 | XM2B00 | XM2D00 | XM2E00 |
| 128* | 224458 | STRAINER, pump; 30 mesh (qty. of 2)      | 1                                     | 1      | 1      | 1      |        |        |        |        |
| 152  | 162505 | UNION, swivel; 3/8 male x 1/2 female npt |                                       |        |        |        |        |        |        |        |
| 153  | 155699 | ELBOW, street; 3/8-18 npt                |                                       |        |        |        |        |        |        |        |
| 154  | 159239 | NIPPLE, pipe; 1/2 x 3/8 npt              |                                       |        |        |        |        |        |        |        |
| 155  | 164672 | ADAPTER                                  |                                       |        |        |        |        |        |        |        |

† Must purchase when installing fluid heaters on a non-heated sprayer.

\* Not shown.

✓ Not assembled.



## Parts Varying by Model (continued)

### XM3\_ \_ \_ and XM4\_ \_ \_ Models

| Ref. | Part   | Description                                       | XM Plural-Component Sprayer Models |        |        |        |        |        |        |        |
|------|--------|---------------------------------------------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|
|      |        |                                                   | XM3A00                             | XM3B00 | XM3D00 | XM3E00 | XM4A00 | XM4B00 | XM4D00 | XM4E00 |
| 52   | 117623 | NUT, cap                                          |                                    |        |        |        |        |        |        |        |
| 66   | L180C4 | LOWER, A side; see manual 311762                  | 1                                  | 1      | 1      | 1      |        |        |        |        |
|      | L180C3 |                                                   |                                    |        |        |        | 1      | 1      | 1      | 1      |
| 67   | L145C4 | LOWER, B side; see manual 311762                  | 1                                  | 1      | 1      | 1      |        |        |        |        |
|      | L145C3 |                                                   |                                    |        |        |        | 1      | 1      | 1      | 1      |
| 69   | 15H107 | LABEL, motor, A side                              | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 70   | 15J692 | LABEL, motor, B side                              | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 76   | 121295 | SCREW, cap, socket head                           |                                    |        |        |        |        |        |        |        |
| 77   |        | LABEL, system                                     | 1                                  | 1      |        |        | 1      | 1      |        |        |
|      |        |                                                   |                                    |        | 1      | 1      |        |        | 1      | 1      |
| 80   | 158491 | NIPPLE; 1/2 npt                                   | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 81   | 100361 | PLUG, pipe                                        |                                    |        |        |        |        |        |        |        |
| 82   | 15R529 | BLOCK, fluid distribution                         |                                    |        |        |        |        |        |        |        |
| 83   | 156684 | UNION, adapter                                    |                                    |        |        |        |        |        |        |        |
| 84   | 121139 | O-RING; PTFE                                      |                                    |        |        |        |        |        |        |        |
| 85   | 15J594 | HOUSING, check valve                              |                                    |        |        |        |        |        |        |        |
| 86   | 15J916 | HANDLE, blue                                      |                                    |        |        |        |        |        |        |        |
| 87   | 15R380 | HANDLE, green                                     |                                    |        |        |        |        |        |        |        |
| 88   | 255747 | CARTRIDGE, valve                                  |                                    |        |        |        |        |        |        |        |
| 89   | 24A034 | CARRIAGE, remote mix manifold                     |                                    |        |        |        |        |        |        |        |
| 90   | 245869 | HEATER, fluid                                     |                                    | 2      |        |        |        | 2      |        |        |
|      | 245863 |                                                   |                                    |        |        | 2      |        |        |        | 2      |
| 91   | 256540 | BOX, junction                                     |                                    | 1      |        |        |        | 1      |        |        |
| 92   | 113796 | SCREW, flanged, hex head                          | 1                                  | 5      | 1      | 1      | 1      | 5      | 1      | 1      |
| 93   | 111801 | SCREW, cap, hex head                              |                                    |        |        |        |        |        |        |        |
| 94   | 116643 | VALVE, relief; 90 psi (0.63 MPa, 6.3 bar)         | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 100✓ | 222200 | VALVE, restrictor                                 | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 102✓ | 156849 | PIPE, nipple; 3/8 npt                             | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 108  |        | LABEL, XM50                                       |                                    |        |        |        |        |        |        |        |
|      |        | LABEL, XM70                                       | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 112  |        | CABLE, CAN, IS, display to USB; female B/female B | 1                                  | 1      |        |        | 1      | 1      |        |        |
| 116† | 158683 | ELBOW, 90 deg.                                    |                                    | 2      |        | 2      |        | 2      |        | 2      |
| 117  | 15T967 | CABLE, heater                                     |                                    | 2      |        |        |        | 2      |        |        |
| 118  | 116171 | BUSHING, strain relief                            |                                    | 2      |        |        |        | 2      |        |        |
| 119  | 122032 | NUT, wire                                         |                                    | 4      |        |        |        | 4      |        |        |
| 126  | H42506 | HOSE, coupled, 4500 psi                           | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 127  | 100527 | WASHER                                            |                                    | 8      |        | 8      |        | 8      |        | 8      |

**XM3\_ \_ \_ and XM4\_ \_ \_ Models (continued)**

| Ref. | Part   | Description                              | XM Plural-Component Sprayer Models |        |        |        |        |        |        |        |
|------|--------|------------------------------------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|
|      |        |                                          | XM3A00                             | XM3B00 | XM3D00 | XM3E00 | XM4A00 | XM4B00 | XM4D00 | XM4E00 |
| 128* | 224458 | STRAINER, pump; 30 mesh (qty. of 2)      | 1                                  | 1      | 1      | 1      |        |        |        |        |
| 152  | 162505 | UNION, swivel; 3/8 male x 1/2 female npt |                                    |        |        |        |        |        |        |        |
| 153  | 155699 | ELBOW, street; 3/8-18 npt                |                                    |        |        |        |        |        |        |        |
| 154  | 159239 | NIPPLE, pipe; 1/2 x 3/8 npt              |                                    |        |        |        |        |        |        |        |
| 155  | 164672 | ADAPTER                                  |                                    |        |        |        |        |        |        |        |

† Must purchase when installing fluid heaters on a non-heated sprayer.

\* Not shown.

✓ Not assembled.

## Parts Varying by Model (continued)

### XM5\_ \_ \_ and XM6\_ \_ \_ Models

| Ref. | Part   | Description                                       | XM Plural-Component Sprayer Models |        |        |        |        |        |        |        |
|------|--------|---------------------------------------------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|
|      |        |                                                   | XM5A00                             | XM5B00 | XM5D00 | XM5E00 | XM6A00 | XM6B00 | XM6D00 | XM6E00 |
| 52   | 117623 | NUT, cap                                          | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 66   | L250C4 | LOWER, A side; see manual 311762                  | 1                                  | 1      | 1      | 1      |        |        |        |        |
|      | L250C3 |                                                   |                                    |        |        |        | 1      | 1      | 1      | 1      |
| 67   | L220C4 | LOWER, B side; see manual 311762                  | 1                                  | 1      | 1      | 1      |        |        |        |        |
|      | L220C3 |                                                   |                                    |        |        |        | 1      | 1      | 1      | 1      |
| 69   | 15H652 | LABEL, motor, A side                              | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 70   | 15H654 | LABEL, motor, B side                              | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 76   | 121295 | SCREW, cap, socket head                           | 8                                  | 8      | 8      | 8      | 8      | 8      | 8      | 8      |
| 77   |        | LABEL, system                                     | 1                                  | 1      |        |        | 1      | 1      |        |        |
|      |        |                                                   |                                    |        | 1      | 1      |        |        | 1      | 1      |
| 80   | 158491 | NIPPLE; 1/2 npt                                   | 4                                  | 4      | 4      | 4      | 4      | 4      | 4      | 4      |
| 81   | 100361 | PLUG, pipe                                        | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 82   | 15R529 | BLOCK, fluid distribution                         | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 83   | 156684 | UNION, adapter                                    | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 84   | 121139 | O-RING; PTFE                                      | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 85   | 15J594 | HOUSING, check valve                              | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 86   | 15J916 | HANDLE, blue                                      | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 87   | 15R380 | HANDLE, green                                     | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 88   | 255747 | CARTRIDGE, valve                                  | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 89   | 24A034 | CARRIAGE, remote mix manifold                     | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 90   | 245869 | HEATER, fluid                                     |                                    | 2      |        |        |        | 2      |        |        |
|      | 245863 |                                                   |                                    |        |        | 2      |        |        |        | 2      |
| 91   | 256540 | BOX, junction                                     |                                    | 1      |        |        |        | 1      |        |        |
| 92   | 113796 | SCREW, flanged, hex head                          | 1                                  | 5      | 1      | 1      | 1      | 5      | 1      | 1      |
| 93   | 111801 | SCREW, cap, hex head                              | 8                                  | 8      | 8      | 8      | 8      | 8      | 8      | 8      |
| 94   | 113498 | VALVE, relief; 110 psi (0.76 MPa, 7.6 bar)        | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 100✓ | 222200 | VALVE, restrictor                                 | 3                                  | 3      | 3      | 3      | 3      | 3      | 3      | 3      |
| 102❖ | 156849 | PIPE, nipple; 3/8 npt                             | 3                                  | 3      | 3      | 3      | 3      | 3      | 3      | 3      |
| 108  |        | LABEL, XM50                                       | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
|      |        | LABEL, XM70                                       |                                    |        |        |        |        |        |        |        |
| 112  |        | CABLE, CAN, IS, display to USB; female B/female B | 1                                  | 1      |        |        | 1      | 1      |        |        |
| 116† | 158683 | ELBOW, 90 deg.                                    |                                    | 2      |        | 2      |        | 2      |        | 2      |
| 117  | 15T967 | CABLE, heater                                     |                                    | 2      |        |        |        | 2      |        |        |
| 118  | 116171 | BUSHING, strain relief                            |                                    | 2      |        |        |        | 2      |        |        |
| 119  | 122032 | NUT, wire                                         |                                    | 4      |        |        |        | 4      |        |        |
| 126  | H42506 | HOSE, coupled, 4500 psi                           |                                    |        |        |        |        |        |        |        |
| 127  | 100527 | WASHER                                            |                                    | 8      |        | 8      |        | 8      |        | 8      |

**XM5\_ \_ \_ and XM6\_ \_ \_ Models**

| Ref. | Part   | Description                              | XM Plural-Component Sprayer Models |        |        |        |        |        |        |        |
|------|--------|------------------------------------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|
|      |        |                                          | XM5A00                             | XM5B00 | XM5D00 | XM5E00 | XM6A00 | XM6B00 | XM6D00 | XM6E00 |
| 128* | 224458 | STRAINER, pump; 30 mesh (qty. of 2)      | 1                                  | 1      | 1      | 1      |        |        |        |        |
| 152  | 162505 | UNION, swivel; 3/8 male x 1/2 female npt | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 153  | 155699 | ELBOW, street; 3/8-18 npt                | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 154  | 159239 | NIPPLE, pipe; 1/2 x 3/8 npt              | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 155  | 164672 | ADAPTER                                  | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |

† Must purchase when installing fluid heaters on a non-heated sprayer.

\* Not shown.

✓ Not assembled.

❖ Assemble remote restrictor valve.

## Parts Varying by Model (continued)

### XM7\_ \_ \_ and XM8\_ \_ \_ Models

| Ref. | Part   | Description                                       | XM Plural-Component Sprayer Models |        |        |        |        |        |        |        |
|------|--------|---------------------------------------------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|
|      |        |                                                   | XM7A00                             | XM7B00 | XM7D00 | XM7E00 | XM8A00 | XM8B00 | XM8D00 | XM8E00 |
| 52   | 117623 | NUT, cap                                          | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 66   | L180C4 | LOWER, A side; see manual 311762                  | 1                                  | 1      | 1      | 1      |        |        |        |        |
|      | L180C3 |                                                   |                                    |        |        |        | 1      | 1      | 1      | 1      |
| 67   | L145C4 | LOWER, B side; see manual 311762                  | 1                                  | 1      | 1      | 1      |        |        |        |        |
|      | L145C3 |                                                   |                                    |        |        |        | 1      | 1      | 1      | 1      |
| 69   | 15H107 | LABEL, motor, A side                              | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 70   | 15J692 | LABEL, motor, B side                              | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 76   | 121295 | SCREW, cap, socket head                           | 8                                  | 8      | 8      | 8      | 8      | 8      | 8      | 8      |
| 77   |        | LABEL, system                                     | 1                                  | 1      |        |        | 1      | 1      |        |        |
|      |        |                                                   |                                    |        | 1      | 1      |        |        | 1      | 1      |
| 80   | 158491 | NIPPLE; 1/2 npt                                   | 4                                  | 4      | 4      | 4      | 4      | 4      | 4      | 4      |
| 81   | 100361 | PLUG, pipe                                        | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 82   | 15R529 | BLOCK, fluid distribution                         | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 83   | 156684 | UNION, adapter                                    | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 84   | 121139 | O-RING; PTFE                                      | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 85   | 15J594 | HOUSING, check valve                              | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 86   | 15J916 | HANDLE, blue                                      | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 87   | 15R380 | HANDLE, green                                     | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 88   | 255747 | CARTRIDGE, valve                                  | 2                                  | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 89   | 24A034 | CARRIAGE, remote mix manifold                     | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 90   | 245869 | HEATER, fluid                                     |                                    | 2      |        |        |        | 2      |        |        |
|      | 245863 |                                                   |                                    |        |        | 2      |        |        |        | 2      |
| 91   | 256540 | BOX, junction                                     |                                    | 1      |        |        |        | 1      |        |        |
| 92   | 113796 | SCREW, flanged, hex head                          | 1                                  | 5      | 1      | 1      | 1      | 5      | 1      | 1      |
| 93   | 111801 | SCREW, cap, hex head                              | 8                                  | 8      | 8      | 8      | 8      | 8      | 8      | 8      |
| 94   | 116643 | VALVE, relief; 90 psi (0.63 MPa, 6.3 bar)         | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 100✓ | 222200 | VALVE, restrictor                                 | 3                                  | 3      | 3      | 3      | 3      | 3      | 3      | 3      |
| 102❖ | 156849 | PIPE, nipple; 3/8 npt                             | 3                                  | 3      | 3      | 3      | 3      | 3      | 3      | 3      |
| 108  |        | LABEL, XM50                                       |                                    |        |        |        |        |        |        |        |
|      |        | LABEL, XM70                                       | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 112  |        | CABLE, CAN, IS, display to USB; female B/female B | 1                                  | 1      |        |        | 1      | 1      |        |        |
| 116† | 158683 | ELBOW, 90 deg.                                    |                                    | 2      |        | 2      |        | 2      |        | 2      |
| 117  | 15T967 | CABLE, heater                                     |                                    | 2      |        |        |        | 2      |        |        |
| 118  | 116171 | BUSHING, strain relief                            |                                    | 2      |        |        |        | 2      |        |        |
| 119  | 122032 | NUT, wire                                         |                                    | 4      |        |        |        | 4      |        |        |
| 126  | H42506 | HOSE, coupled, 4500 psi                           |                                    |        |        |        |        |        |        |        |
| 127  | 100527 | WASHER                                            |                                    | 8      |        | 8      |        | 8      |        | 8      |

**XM7\_ \_ \_ and XM8\_ \_ \_ Models**

| Ref. | Part   | Description                              | XM Plural-Component Sprayer Models |        |        |        |        |        |        |        |
|------|--------|------------------------------------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|
|      |        |                                          | XM7A00                             | XM7B00 | XM7D00 | XM7E00 | XM8A00 | XM8B00 | XM8D00 | XM8E00 |
| 128* | 224458 | STRAINER, pump; 30 mesh (qty. of 2)      | 1                                  | 1      | 1      | 1      |        |        |        |        |
| 152  | 162505 | UNION, swivel; 3/8 male x 1/2 female npt | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 153  | 155699 | ELBOW, street; 3/8-18 npt                | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 154  | 159239 | NIPPLE, pipe; 1/2 x 3/8 npt              | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |
| 155  | 164672 | ADAPTER                                  | 1                                  | 1      | 1      | 1      | 1      | 1      | 1      | 1      |

† Must purchase when installing fluid heaters on a non-heated sprayer.

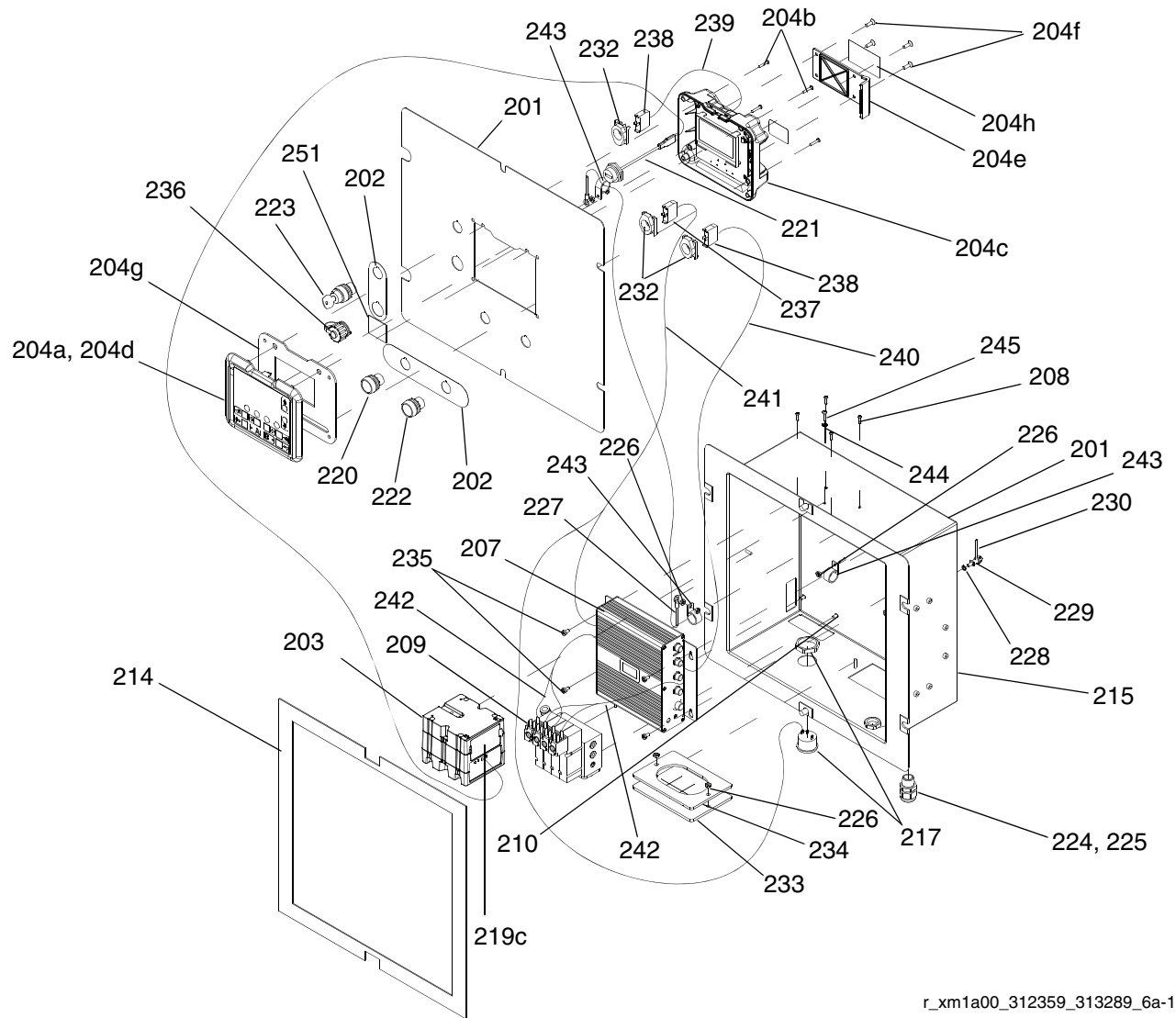
\* Not shown.

✓ Not assembled.

❖ Assemble remote restrictor valve.

# Control Box (255771) Parts

## Air Power and Electric Power Versions



r\_xm1a00\_312359\_313289\_6a-1

| Ref.  | Part   | Description                                 | Qty. | Ref. | Part   | Description                                     | Qty. |
|-------|--------|---------------------------------------------|------|------|--------|-------------------------------------------------|------|
| 201   |        | BOX, control                                | 1    | 205† | 262642 | KIt, replacement, display; includes 204 and 206 | 1    |
| 202   |        | LABEL, control display                      | 1    | 206  | 16A265 | TOKEN, software                                 | 1    |
| 203†  | 262641 | KIT, replacement, USB; includes 219 and 206 | 1    | 207† | 262643 | KIT, replacement, FCM; includes 218 and 206     | 1    |
| 204●  | 257484 | MODULE, display, kit                        |      | 208  |        | SCREW, pan head                                 | 4    |
| 204a  | 15M483 | SHIELD, membrane, display (qty. 10)         | 1    | 209  | 256555 | MODULE, solenoid, IS version                    | 1    |
| 204b  |        | SCREW, pan head; #6 x 7/8 in.               | 4    | 209a | 121636 | VALVE, solenoid, din connector                  | 4    |
| ●204c | 288997 | CASE, rear, display module, IS version      | 1    | 209b | 15A789 | GASKET, solenoid, outlet                        | 1    |
| 204d  | 255727 | CASE, front, data module                    | 1    | 209c | 15A799 | GASKET, solenoid, inlet/exhaust                 | 1    |
| 204e  | 277463 | COVER, access, low level display            | 1    | 210  | 106084 | SCREW, machine, pan head                        | 2    |
| 204f  | 113768 | SCREW, socket, flat head                    | 4    | 214  | 15R379 | GASKET, box, control                            | 1    |
| 204g  | 15R458 | GASKET, control, front panel                | 1    | 215  |        | LABEL                                           | 1    |
| ▲204h | 15W958 | LABEL, warning, battery                     | 1    | 216* | 15B056 | LABEL, air motor/dosing valve                   | 1    |
|       |        |                                             |      | 217  | 122000 | ALARM, panel mount                              | 1    |

| Ref.  | Part   | Description                            | Qty. |
|-------|--------|----------------------------------------|------|
| 218●  | 255920 | MODULE, fluid control                  | 1    |
| 219●  | 257088 | MODULE, USB, assy.                     |      |
| 219a  | 289899 | BASE                                   | 1    |
| ●219b | 289900 | MODULE, USB                            | 1    |
| 219c  | 277674 | DOOR, module                           | 1    |
| 220   | 121618 | SWITCH, start, push button,<br>green   | 1    |
| 221   | 15R324 | HARNESS, USB, plug/bulkhead;<br>32 in. | 1    |
| 222   | 121619 | SWITCH, stop, push button, red         | 1    |
| 223   | 121617 | SWITCH, 2 position, key, controls      | 1    |
| 223a* | 123412 | KEY, replacement (pair)                |      |
| 224   | 117745 | BUSHING, strain relief                 | 1    |
| 225   | 117625 | NUT, locking                           | 1    |
| 226   | 113505 | NUT, keps, hex head                    | 6    |
| 227   | 15B090 | WIRE, grounding, door                  | 1    |
| 228   | 558685 | WASHER, lock, external                 | 1    |
| 229   | 15R343 | CLAMP, ground, electrical              | 1    |
| 230   | 065213 | WIRE, copper, elect                    | 3    |
| 231*  | 172953 | LABEL, designation                     | 2    |
| 232   | 120493 | LATCH, mounting                        | 3    |
| 233   | 15H189 | BOOT, wire feed through                | 1    |
| 234   | 15G816 | COVER, plate, wire                     | 1    |
| 235   | 110637 | SCREW, machine, pan head               | 4    |
| 236   | 15R325 | COVER, dust, bulkhead<br>receptacle    | 1    |
| 237   | 120494 | BLOCK, switch, n.o.                    | 2    |
| 238   | 120495 | BLOCK, switch, n.c.                    | 1    |
| 239   | 15M974 | HARNESS, key switch                    | 1    |
| 240   | 15M975 | HARNESS, start/alarm                   | 1    |
| 241   | 15M976 | HARNESS, stop                          | 1    |
| 242   | 15M977 | HARNESS, solenoid                      | 2    |
| 243   | 121988 | RETAINER, routing, wire harness        | 4    |
| 244   | 195875 | SCREW, machine, pan head               | 1    |
| 245   | 102063 | WASHER, lock                           | 1    |
| 246*  | 15U542 | CABLE, motor                           | 2    |
| 251▲  |        | LABEL, warning, USB                    | 1    |
|       | 15X214 | English                                |      |
|       | 15X393 | All languages                          |      |
| 252*  | 122829 | CONDUIT; 0.75 ft.                      | -    |

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

\* Not shown.

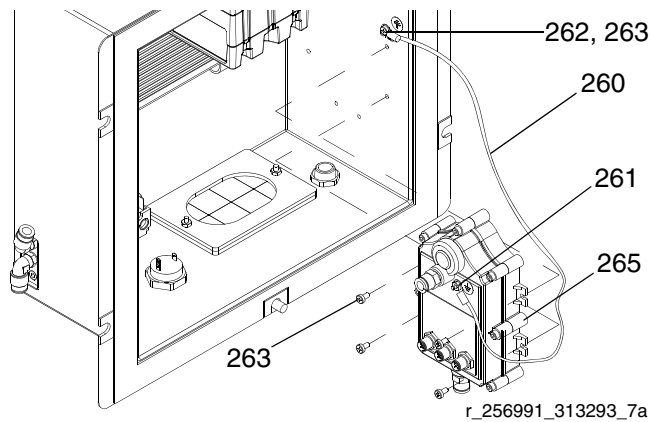
● Base electronic components do not have XM-specific software installed. Therefore, use software upgrade token (206) to install software before use.

† Includes software token (206) and instruction sheet.



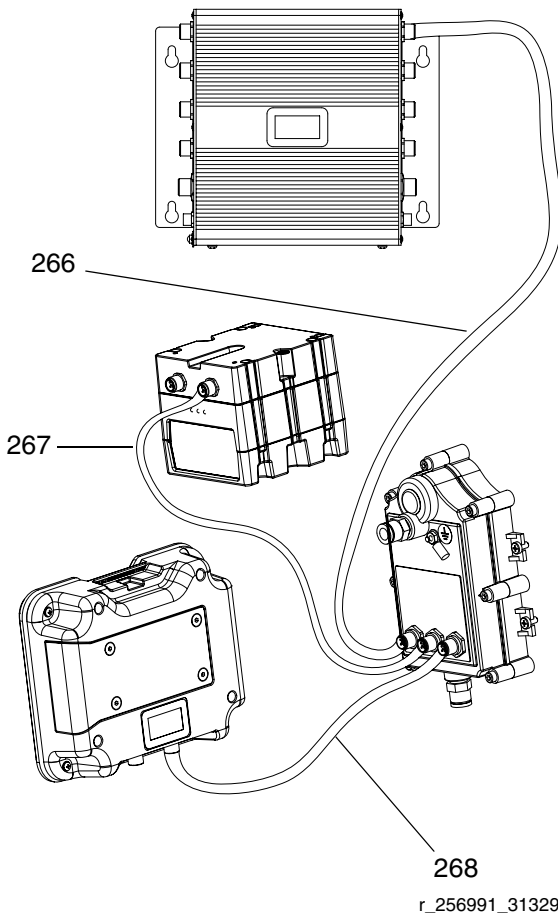
# Control Box Power Supply Options

## Alternator Assembly

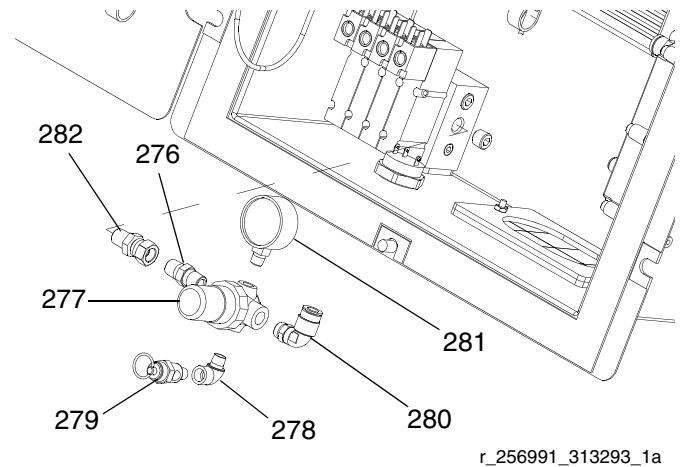


| Ref. | Part   | Description                               | Qty. |
|------|--------|-------------------------------------------|------|
| 260  | 15B090 | WIRE, grounding, door                     | 1    |
| 261  | 100284 | NUT, hex                                  | 1    |
| 262  | 102063 | WASHER, lock; carbon steel                | 1    |
| 263  | 110637 | SCREW, machine pan head                   | 5    |
| 264* | C12508 | TUBING, round; nylon; 5.0 ft              |      |
| 265  | 255728 | ALTERNATOR, module; see page 75           | 1    |
| 266  | 15V778 | CABLE, CAN, IS, female B/female B; 20 in. | 1    |
| 267  | 15V782 | CABLE, CAN, IS, male B/female B; 20 in.   | 1    |
| 268  | 15V783 | CABLE, CAN, IS, female A/male B; 39 in.   | 1    |

## Alternator Assembly Cable Connections

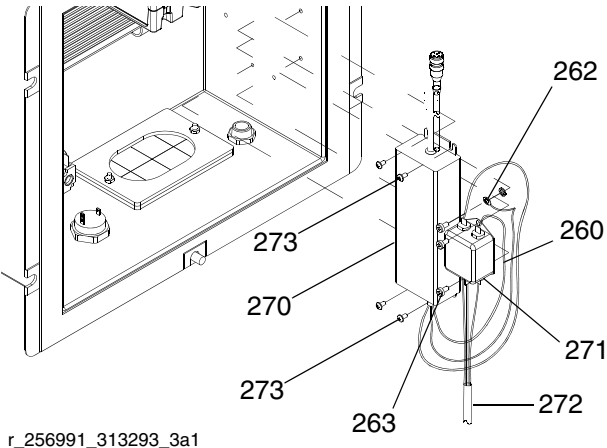


## Air Regulator Assembly



| Ref. | Part   | Description                                                  | Qty. |
|------|--------|--------------------------------------------------------------|------|
| 276  | 156971 | NIPPLE, short; 2 x 1/4-18 npt                                | 1    |
| 277  | 115243 | REGULATOR, air; 1/4 npt                                      | 1    |
| 278  | 112307 | ELBOW, union; 90 deg.; 1/8 npt(f) x 1/8 npt(m); carbon steel | 1    |
| 279  | 15W017 | VALVE, safety, regulator                                     | 1    |
| 280  | 115841 | ELBOW, swivel, male; 1/4 npt                                 | 1    |
| 281  | 104655 | GAUGE, air pressure                                          | 1    |
| 282  | 156823 | SWIVEL, union; 2 x 1/4-18 npt                                | 1    |

Wall Power Supply Assembly

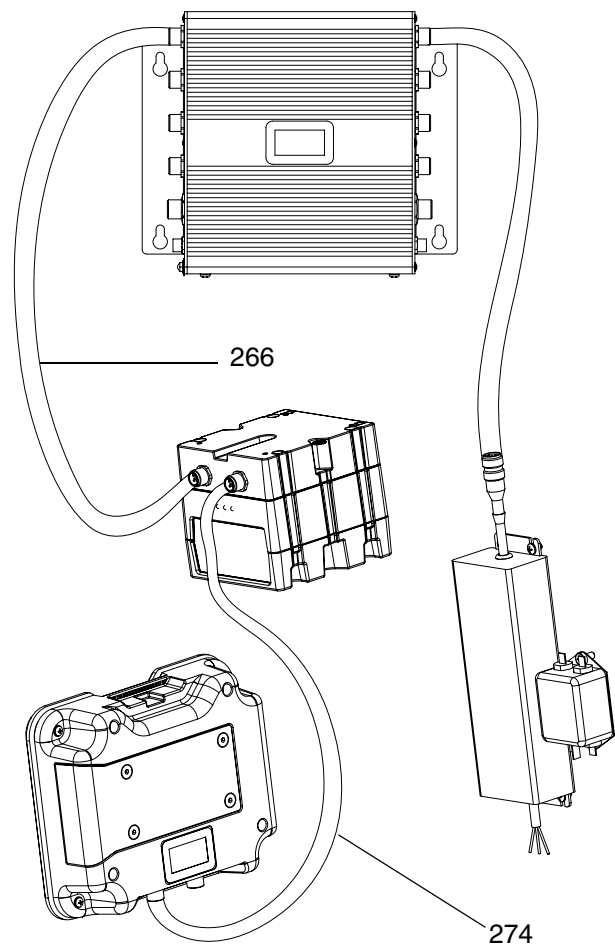


| Ref.  | Part   | Description                                 | Qty. |
|-------|--------|---------------------------------------------|------|
| 262   | 102063 | WASHER, lock; carbon steel                  | 1    |
| 263   | 110637 | SCREW, machine pan head                     | 3    |
| 266   | 15V778 | CABLE, CAN, IS, female B/female B; 20 in.   | 1    |
| 270   | 15V747 | POWER SUPPLY; 24V, 2.5A, 60W                | 1    |
| 271   | 115306 | FILTER, power supply                        | 1    |
| 272✱  |        | CABLE, power, control box                   | 1    |
| 272a✱ | 15X407 | CABLE, power, US plug                       | 1    |
| 272b✱ | 15Y685 | CORD; 240V, 10A, IEC320                     | 1    |
|       | 195551 | RETAINER, adapter, cord                     | 1    |
|       | 242001 | CORD, set, adapter, Europe                  | 1    |
|       | 242005 | CORD, set, adapter, Australia               | 1    |
| 273   | 100035 | SCREW, machine pan head                     | 4    |
| 274   | 15V779 | CABLE, CAN, IS, female B/female B; 39.4 in. | 1    |

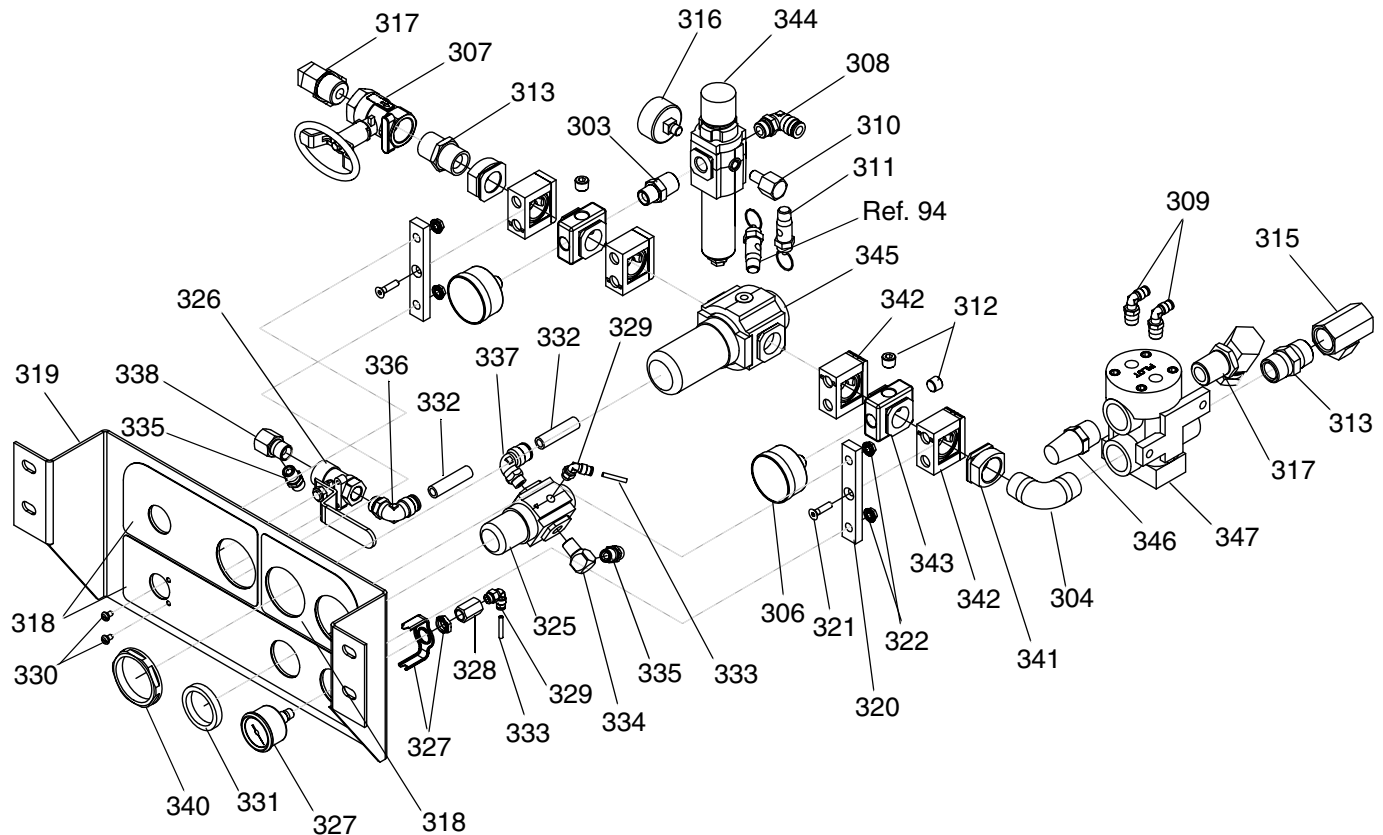
✱ Used on XM\_A\_ \_ models only.

✱ Not shown.

Wall Power Supply Assembly Cable Connections

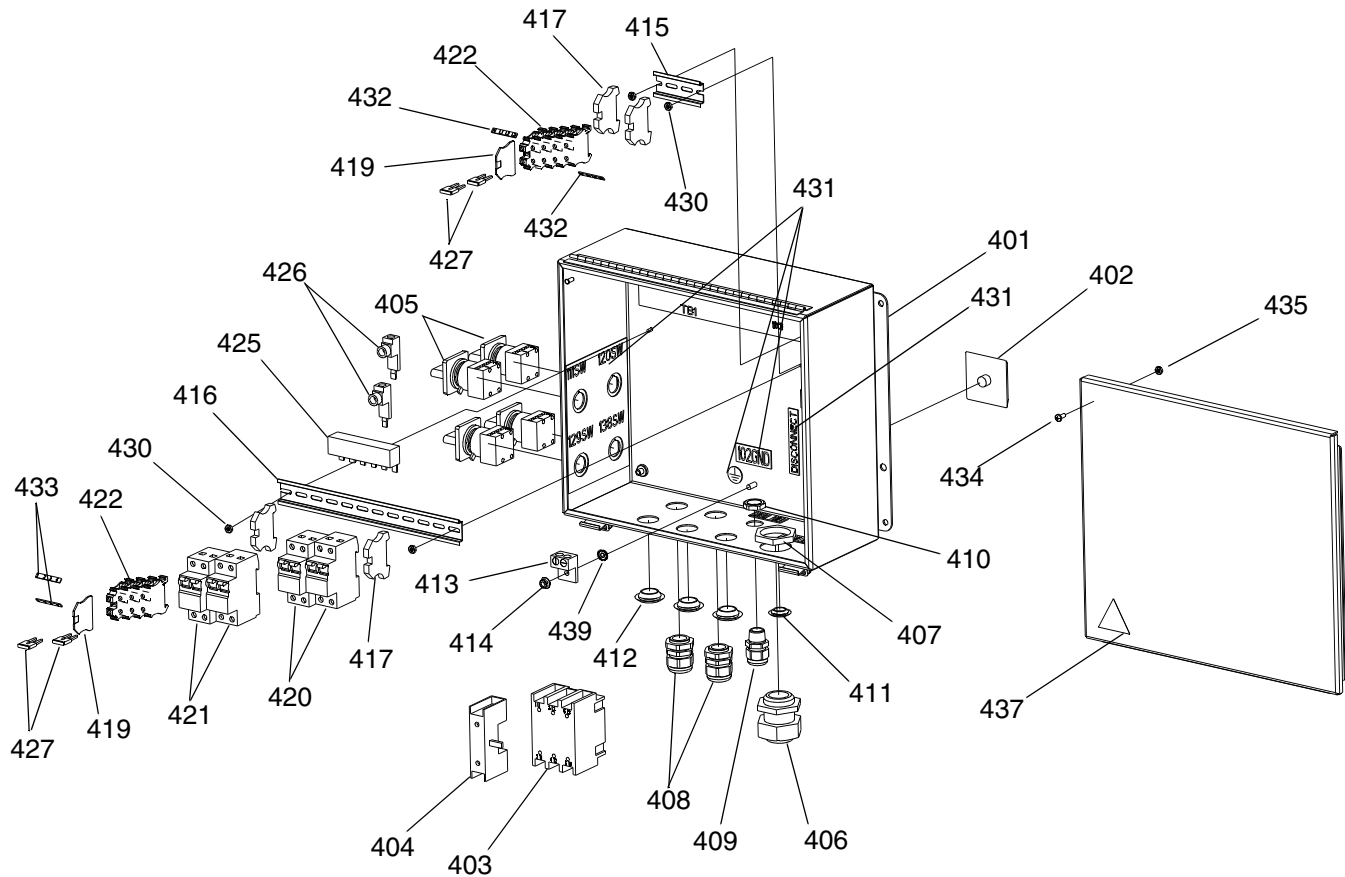


## Air Controls Module (255761) Parts



| Ref. | Part   | Description                           | Qty. | Ref.                                                                      | Part   | Description                                | Qty. |
|------|--------|---------------------------------------|------|---------------------------------------------------------------------------|--------|--------------------------------------------|------|
| 303  | 157350 | NIPPLE, pipe; 1/2 x 3/8 npt           | 1    | 332                                                                       | 054760 | TUBE, polyurethane, round, black; 1.25 in. | -    |
| 304  | 108307 | ELBOW, pipe, male                     | 1    |                                                                           |        |                                            |      |
| 306  | 101689 | GAUGE, press, air                     | 2    | 333                                                                       |        | TUBE, polyurethane, round; 0.6 ft.         | -    |
| 307  | 117346 | VALVE, ball, vented                   | 1    | 334                                                                       | 100840 | ELBOW, street                              | 1    |
| 308  | 114316 | ELBOW, male, swivel                   | 1    | 335                                                                       | 162453 | FITTING; 1/4 npsm x 1/4 npt                | 2    |
| 309  | 114469 | ELBOW, male, swivel                   | 2    | 336                                                                       | 114114 | ELBOW, male, swivel                        | 1    |
| 310  | 158962 | ELBOW, street; 1/4(f) x 1/8(m)        | 1    | 337                                                                       | 114128 | ELBOW, male, swivel                        | 1    |
| 311  | 116643 | VALVE, safety, relief, air            | 1    | 338                                                                       | 164259 | ELBOW, street                              | 1    |
| 312  | 100721 | PLUG, pipe                            | 3    | 340★                                                                      | 122336 | NUT, panel, regulator                      | 1    |
| 313  | 119992 | PIPE, nipple; 3/4 x 3/4 npt           | 2    | 341★                                                                      | 113440 | ADAPTER                                    | 2    |
| 315  | 156589 | ADAPTER, union; 90 deg.               | 1    | 342★                                                                      | 113431 | CLAMP, quick                               | 4    |
| 316  | 113911 | GAUGE, pressure, air                  | 1    | 343★                                                                      | 113442 | BLOCK, porting                             | 2    |
| 317  | 160327 | ADAPTER, union; 90 deg.               | 2    | 344★                                                                      | 15R488 | REGULATOR                                  | 1    |
| 318  | 15T119 | LABEL, control                        | 1    | 344a                                                                      | 123454 | FILTER, element; 5 micron                  | 1    |
| 319  |        | BRACKET, air controls                 | 1    | 345★                                                                      | 15R487 | REGULATOR                                  | 1    |
| 320  | 15R437 | BRACKET, adapter, air controls        | 2    | 346★                                                                      | 15R486 | MUFFLER                                    | 1    |
| 321  | 121432 | SCREW, machine, hex flat head         | 2    | 347★                                                                      | 15R485 | VALVE, dual pilot                          | 1    |
| 322  | 115942 | NUT, hex, flange head                 | 4    |                                                                           |        |                                            |      |
| 325  | 116513 | REGULATOR, air                        | 1    | ★ <i>Parts included in Air Controls Kit 255772 (purchase separately).</i> |        |                                            |      |
| 326  | 121457 | VALVE, ball, air, panel mounted       | 1    |                                                                           |        |                                            |      |
| 327  | 121424 | GAUGE, pressure, panel mount, 1.5 in. | 1    |                                                                           |        |                                            |      |
| 328  | 100451 | COUPLING                              | 1    |                                                                           |        |                                            |      |
| 329  | 114151 | ELBOW, male, swivel                   | 2    |                                                                           |        |                                            |      |
| 330  | 100264 | SCREW, machine, pan head              | 2    |                                                                           |        |                                            |      |
| 331  | 116514 | NUT, regulator                        | 1    |                                                                           |        |                                            |      |

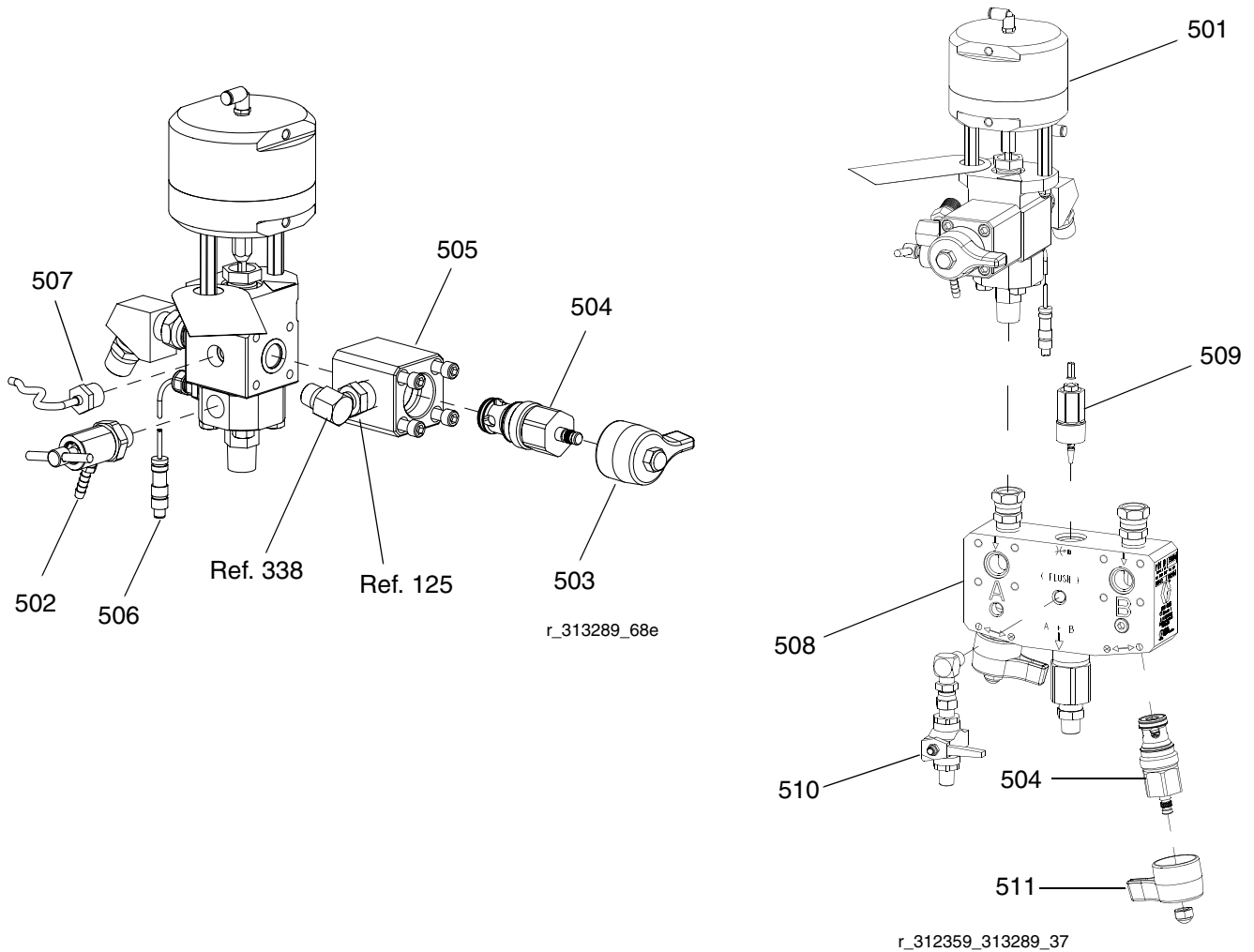
## Junction Box (256540) Parts



r\_312359\_313289\_38

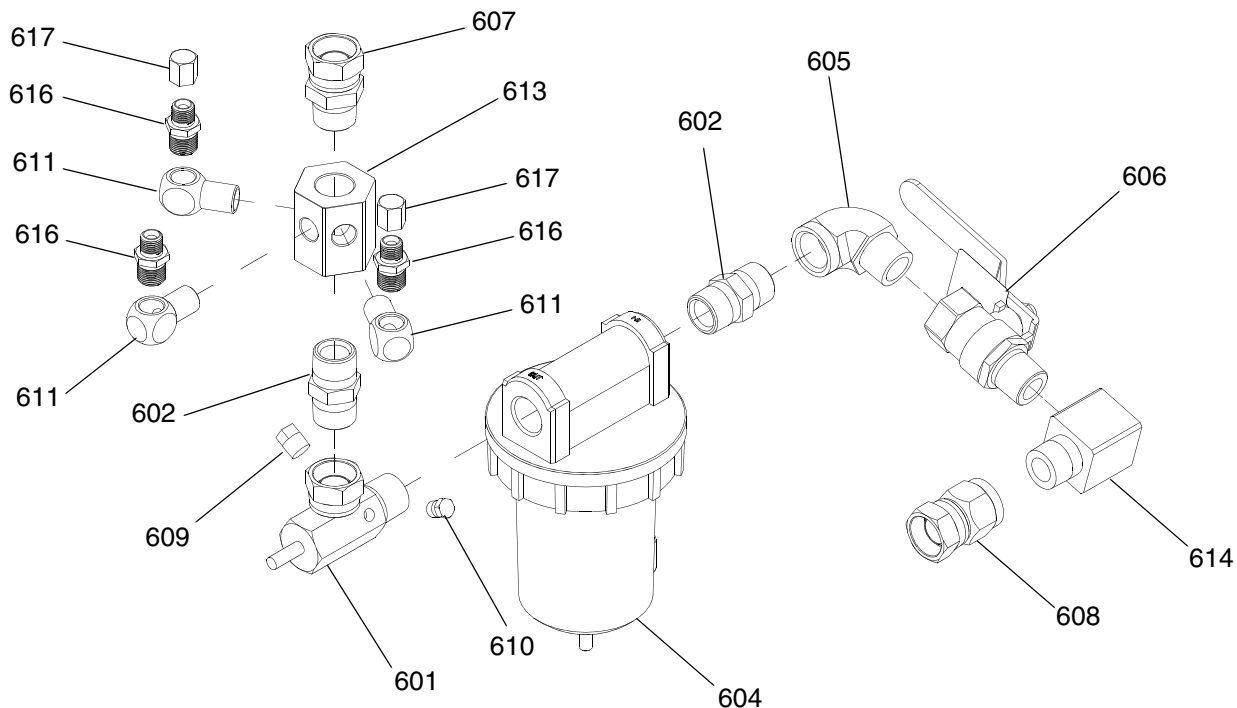
| Ref. | Part   | Description                              | Qty. | Ref.                                                                               | Part   | Description                   | Qty. |
|------|--------|------------------------------------------|------|------------------------------------------------------------------------------------|--------|-------------------------------|------|
| 401  |        | ENCLOSURE, electrical                    | 1    | 428*                                                                               | 15U954 | HARNESS, junction box         | 1    |
| 402  | 117545 | KNOB, operator disconnect                | 1    | 430                                                                                | 113505 | NUT, keps, hex head           | 4    |
| 403  | 117564 | SWITCH, disconnect; 100A                 | 1    | 431                                                                                | 15U662 | LABEL, identification         | 1    |
| 404  | 117553 | SWITCH, disconnect, phase expander; 100A | 1    | 432                                                                                |        | MARKER, block, terminal       | 2    |
| 405  | 15U423 | SWITCH; 25A                              | 4    | 433                                                                                |        | MARKER, block, terminal       | 2    |
| 406  | 255047 | BUSHING, strain relief, m40 thread       | 1    | 434                                                                                | 112948 | SCREW, machine head           | 1    |
| 407  | 255048 | NUT, strain relief; M40 thread           | 1    | 435                                                                                | 100166 | NUT, full hex                 | 1    |
| 408  | 116171 | BUSHING, strain relief                   | 2    | 436*                                                                               | 15R344 | LABEL, identification, wiring | 1    |
| 409  | 117745 | BUSHING, strain relief                   | 1    | 437▲                                                                               | 196548 | LABEL, caution                | 1    |
| 410  | 117625 | NUT, locking                             | 1    | 438*                                                                               |        | SCHEMATIC, wiring             | 1    |
| 411  | 15U543 | PLUG, hole; 7/8 in.                      | 1    | 439                                                                                | 558685 | WASHER, 1/4 external          | 1    |
| 412  | 15U544 | PLUG, hole; 1 1/8 in.                    | 3    | ▲ Replacement Danger and Warning labels, tags, and cards are available at no cost. |        |                               |      |
| 413  | 117666 | TERMINAL, ground                         | 1    |                                                                                    |        |                               |      |
| 414  | 115942 | NUT, hex, flange head                    | 1    | * Not shown.                                                                       |        |                               |      |
| 415  |        | RAIL, mounting; 3 in.                    | 1    |                                                                                    |        |                               |      |
| 416  |        | RAIL, mounting                           | 1    |                                                                                    |        |                               |      |
| 417  | 255045 | BLOCK, clamp end                         | 4    |                                                                                    |        |                               |      |
| 419  |        | COVER, end                               | 2    |                                                                                    |        |                               |      |
| 420  | 255050 | CIRCUIT BREAKER; 25A                     | 2    |                                                                                    |        |                               |      |
| 421  | 121623 | CIRCUIT BREAKER; 10A                     | 2    |                                                                                    |        |                               |      |
| 422  | 120570 | BLOCK, terminal                          | 9    |                                                                                    |        |                               |      |
| 425  |        | BAR, power bus, 6 pin                    | 1    |                                                                                    |        |                               |      |
| 426  | 117679 | CONNECTOR, power lug                     | 2    |                                                                                    |        |                               |      |
| 427  | 120573 | BRIDGE, plug-in                          | 4    |                                                                                    |        |                               |      |

# Fluid Control Assembly Parts



| Ref.  | Part   | Description                                  | Qty. |                                                                                                               |
|-------|--------|----------------------------------------------|------|---------------------------------------------------------------------------------------------------------------|
| 501✕  | 255478 | VALVE, dosing                                | 2    | ✕ See Dosing Valve manual 313342 for more information.                                                        |
| 502‡  | 245143 | VALVE, sampling                              | 2    | ‡ See Xtreme Displacement Pumps manual 311762 for more information. Repair kit 245145 is available for order. |
| 503♣  | 15R381 | HANDLE, valve, recirculation (black)         | 2    | ♣ See High Flow Severe Duty Shutoff Check Valve manual 313343 for more information.                           |
| 504♣* | 255747 | CARTRIDGE, valve, check                      | 4    | ♦ See XM Mix Manifold Kits manual 312749 for more information and part numbers.                               |
| 505♣  | 15J594 | HOUSING, valve, check                        | 2    | * Seal kit 256239 is available for order.                                                                     |
| 505a  | 121139 | O-RING, valve; PTFE                          | 2    |                                                                                                               |
| 506   | 15R347 | SENSOR, RTD                                  | 2    |                                                                                                               |
| 507   | 15M669 | SENSOR, fluid, pressure                      | 2    |                                                                                                               |
| 507a  | 121399 | O-RING, transducer, pressure                 | 2    |                                                                                                               |
| 508♦  | 255684 | MANIFOLD, mix, assy                          | 1    |                                                                                                               |
| 509♦  |        | VALVE, restrictor, assy                      | 1    |                                                                                                               |
| 510♦  | 214037 | VALVE, solvent, shutoff, assy                | 1    |                                                                                                               |
| 511♦  |        | HANDLE, valve, mix manifold (blue and green) | 2    |                                                                                                               |

## Air Inlet Manifold (255762) Parts

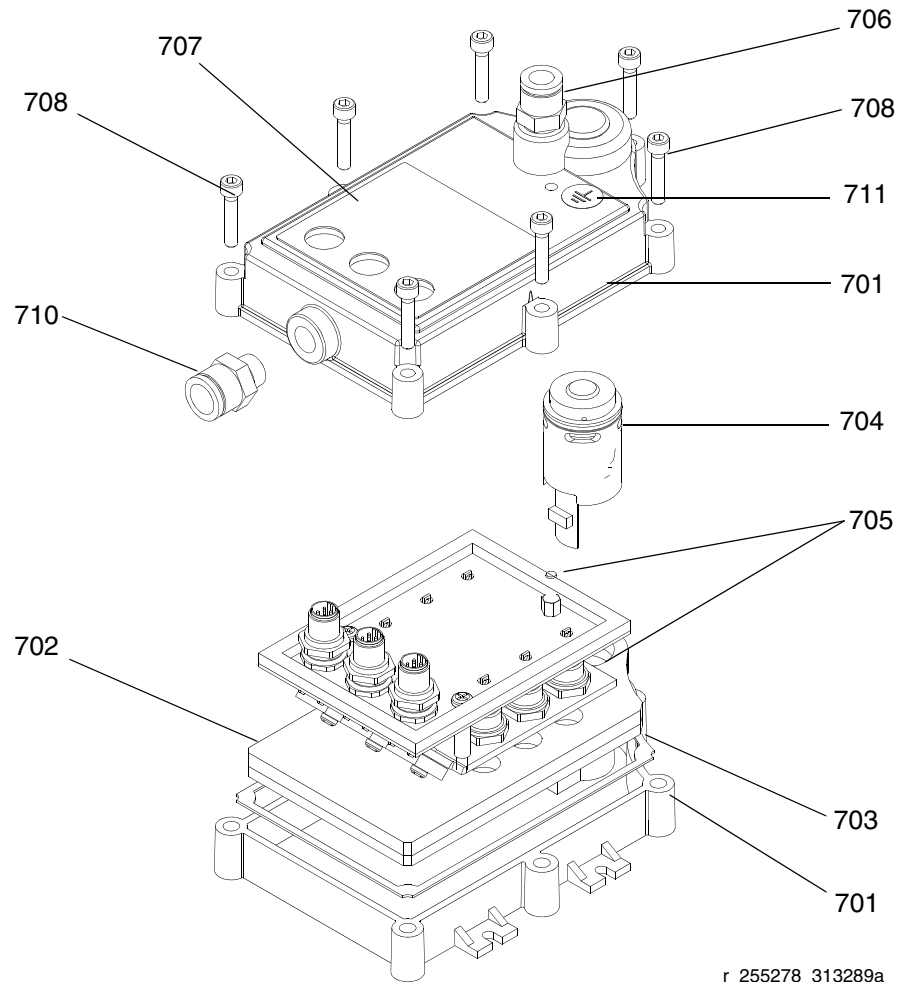


r\_xm1a00\_312359\_313289\_21a

| Ref.  | Part   | Description                      | Qty. |
|-------|--------|----------------------------------|------|
| 601   | 207675 | MANIFOLD, air                    | 1    |
| 602   | 119992 | PIPE, NIPPLE; 3/4 x 3/4 npt      | 2    |
| 603   | 15E145 | MANIFOLD, air distribution       | 1    |
| 604   | 117628 | FILTER, air, auto drain; 3/4 npt | 1    |
| 604a* | 106204 | ELEMENT, filter; 3/4 npt         | 1    |
| 605   | 122327 | ELBOW, pipe, male                | 1    |
| 606   | 113218 | VALVE, ball, vented              | 1    |
| 607   | 157785 | SWIVEL                           | 1    |
| 608   | 156172 | UNION, swivel                    | 1    |
| 609   | 100509 | PLUG, pipe                       | 1    |
| 610   | 114234 | PLUG, hex head                   | 1    |
| 611   | 155699 | ELBOW, street                    | 3    |
| 614   | 166590 | ELBOW, street                    | 1    |
| 616   | 157350 | ADAPTER                          | 3    |
| 617   | 115781 | CAP PLUG                         | 2    |

\* Not shown.

## Alternator Module (255728) Parts



r\_255278\_313289a

| Ref. | Part   | Description               | Qty. |
|------|--------|---------------------------|------|
| 701  |        | HOUSING, upper and lower  | 1    |
| 702  |        | GASKET, stacked, internal | 1    |
| 703  |        | GASKET, housing           | 1    |
| 704  | 257147 | TURBINE                   | 1    |
| 705  |        | BOARD, assy.              | 1    |
| 706  | 122161 | FITTING, air              | 1    |
| 707▲ | 15R337 | LABEL, warning            | 1    |
| 708  | 114380 | SCREW, cap, socket head   | 7    |
| 709* | C12508 | TUBING, nylon; 2 ft.      | -    |
| 710  | 122848 | FITTING, air              | 1    |
| 711▲ | 172953 | LABEL, grounding          | 1    |

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

\* Not shown.

## Repair and Spare Parts Reference

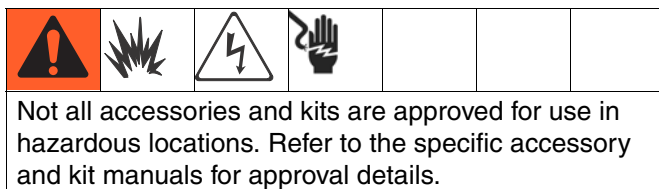
**NOTE:**

Part numbers and sub-assemblies may change. See [www.graco.com](http://www.graco.com) for most current part numbers and manuals.

| Ref. | Part   | Description                                                        | Qty. | Part of Assembly |
|------|--------|--------------------------------------------------------------------|------|------------------|
| 2    | 257055 | NXT Motor w/linear transducer                                      | 2    | Motor            |
| 2    | NXT600 | Motor seal kit                                                     | 2    | Motor            |
| 2    | NXT135 | Air Valve seal kit                                                 | 2    | Motor            |
| 2    | NXT136 | Air valve rebuild kit                                              | 2    | Motor            |
| 2a   | 256893 | Linear sensor                                                      | 2    | Motor            |
| 60   | 15E592 | Mixer housing, no mixer; 1/2 in. ID, 3/8 nptm                      | 2    | System           |
| 61   | 248927 | Mixer sticks; 1/2 in. x 12 element, package of 25                  | 2    | System           |
| 64   | XTR704 | XTR spray gun; 7250 psi; includes 519 RAC tip                      | 1    | System           |
| 64a  | XHD001 | RAC guard, housing, replacement                                    | 1    | System           |
| 64b  | XHDxxx | RAC tip, seal, gasket, x indicates tip size                        | 1    | System           |
| 66   | L250C4 | Xtreme displacement pump L250C3 w/o filter                         | 1    | XM50 "A" pump    |
| 66   | 244903 | Repair kit with Tuff Stack                                         | 1    | XM50 "A" pump    |
| 66   | 244853 | Repair kit with Xtreme seals                                       | 1    | XM50 "A" pump    |
| 66   | L180C4 | Xtreme displacement pump L180C3 w/o filter                         | 1    | XM70 "A" pump    |
| 66   | 244901 | Repair kit with Tuff Stack                                         | 1    | XM70 "A" pump    |
| 66   | 244851 | Repair kit with Xtreme seals                                       | 1    | XM70 "A" pump    |
| 67   | L220C4 | Xtreme displacement pump L220C3 w/o filter                         | 1    | XM50 "B" pump    |
| 67   | 244902 | Repair kit with Tuff Stack                                         | 1    | XM50 "B" pump    |
| 67   | 244852 | Repair kit with Xtreme seals                                       | 1    | XM50 "B" pump    |
| 67   | L145C4 | Xtreme displacement L145C3 w/o filter                              | 1    | XM70 "B" pump    |
| 67   | 244900 | Repair kit with Tuff Stack                                         | 1    | XM70 "B" pump    |
| 67   | 244850 | Repair kit with Xtreme seals                                       | 1    | XM70 "B" pump    |
| 67a  | 224458 | Filter screens; 30 mesh, package of 2 (optional)                   | 1    | Pump             |
| 67a  | 224459 | Filter screens; 60 mesh, package of 2 (optional)                   | 1    | Pump             |
| 67b  | 24B732 | Filter o-rings, solvent resistant rubber, package of 10 (optional) | 4    | Pump             |
| 67b  | 244895 | Filter o-rings; PTFE, package of 10 (optional)                     | 4    | Pump             |
| 67b  | 24B733 | Filter o-rings; solvent resistant rubber, package of 10 (optional) | 2    | Pump             |
| 67b  | 244895 | Filter o-rings; PTFE, package of 10 (optional)                     | 2    | Pump             |
| 72   | 15T258 | Wrench, Xtreme pump                                                | 1    | System           |
| 75   | 206995 | TSL; quart bottle                                                  | 1    | System           |
| 88   | 255747 | Cartridge, circulation, shut-off, mix manifold valves              | 4-6  | Shut-off/check   |
| 88a  | 256239 | Seal kit for cartridge valves                                      | 4-6  | Shut-off/check   |
| 100a | 223016 | Repair kit for b/p restrictor valve                                | 2    | System           |
| 147  | 16A004 | Flash drive for USB download; 4 GB                                 | 1    | Control          |
| 204a | 15M483 | Membrane shields, package of 10                                    | 1    | Control          |
| 209a | 121636 | Solenoid valve, individual replacement valve with DIN              | 4    | Control          |
| 223a | 123412 | Spare key; one pair                                                | 1    | Controls         |
| 344a | 123454 | Control filter; 5 micron, replacement element                      | 1    | Air controls;    |
| 501a | 234098 | Seal kit; include soft parts, old and new dosing valve             | 2    | Dosing valve     |
| 501b | 234131 | Rebuild kit; includes seals, stem, seat, and air spring            | 2    | Dosing valve     |
| 502  | 245143 | Sample valve; complete valve                                       | 2    | Dosing valve     |
| 502a | 245145 | Sample valve kit; includes o-rings, ball, seat, clip               | 2    | Dosing valve     |
| 505b | 121139 | Circulation valve seal; face o-ring, -210, PTFE                    | 2    | Dosing valve     |
| 507b | 121399 | Transducer seal; o-ring, -012, solvent resistant rubber            | 2    | Dosing valve     |
| 508a | 256238 | Repair kit; includes seals, balls, seats, shut-off stems           | 1    | Mix manifold     |
| 508b | 551387 | Fluid gauge, bottom mount; 10,000 psi (690 bar)                    | 1    | Mix manifold     |
| 508c | 114434 | Fluid gauge, back mount; 10,000 psi (690 bar)                      | 1    | Mix manifold     |
| 508d | 185416 | B-side strainer; 40 mesh (use tool 15T630)                         | 1    | Mix manifold     |
| 508e | 121410 | Strainer o-ring; PTFE, -113, strainer restrainer                   | 1    | Mix manifold     |
| 508f | 15T630 | Strainer tool (push in 121410 o-ring + shut-off u-cup)             | 1    | Mix manifold     |
| 510  | 214037 | Flush valve, ball; 1/4 npt(m) PTFE                                 | 1    | Mix manifold     |
| 604a | 106204 | Main air filter, element (fits 3/4 npt air filters)                | 1    | Air controls     |
| 704  | 257147 | Turbine cartridge (fits 255728 XM or Xtreme Mix)                   | 1    | Control          |



# Accessories and Kits



## 20-Gallon Hopper Kit, 255963

One complete double-wall 20-gallon hopper. See manual 312747 for more information.

## Hopper Heater Kit (240V), 256257

For heating fluid in a 20-gallon hopper. See manual 312747 for more information.

## Universal Hopper Fluid Inlet Kit, 256170

For connecting any of the four lower models included with XM sprayer to a 20-gallon hopper. See manual 312747 for more information.

## Universal Hopper Mounting Kit, 256259

For mounting a 20-gallon hopper to the side or back of an XM sprayer. See manual 312747 for more information.

## Twistork Agitator Kit, 256274

For mixing viscous materials held within a 20-gallon hopper. See manual 312769 for more information.

## T2 Feed Pump Kit, 256275

For supplying viscous material from a 20-gallon hopper to an XM sprayer. See manual 312769 for more information.

## 5:1 Feed Pump Kit, 256276

For supplying viscous materials from a 20-gallon hopper to an XM sprayer. See manual 312769 for more information.

## 7-Gallon Hopper and Bracket Kit, 256260

One 7-gallon hopper and mounting brackets. Mounts to the side or back of an XM sprayer. See manual 406999 for more information.

## 2:1 Drum Feed Kit, 256232

One T2 pump feed kit and one Twistork agitator kit for mixing and supplying viscous materials from a with 55-gallon drum to an XM sprayer. See manual 312769 for more information.

## 5:1 Drum Feed Kit, 256255

One 5:1 pump feed kit and one Twistork agitator kit for mixing and supplying viscous materials from a with 55-gallon drum to an XM sprayer. See manual 312769 for more information.

## Hopper/Hose Heat Circulation Kit, 256273

For circulating heated water mixture through 20-gallon hoppers, heated hose, and Viscon HP heater. See manual 313259 for more information.

## Desiccant Dryer Kit, 256512

For use with 20-gallon hoppers. See manual 406739 for more information.

## **Caster Kit, 256262**

For mounting casters on XM sprayer frame. See manual 406690 for more information.

## **Hose Rack Kit, 256263**

For mounting to side, front, or back of XM sprayer frame. See manual 406691 for more information.

## **Lower Strainer and Valve Kit, 256653**

For straining material from a feed pump to an XM sprayer fluid inlet. See manual 312770 for more information.

## **Electric Heated Hose Power Supply Kit, 256876**

For monitoring and controlling fluid temperature in low-voltage heated hoses. See manual 313258 for more information.

## **5000 psi Two-Component Main Heated Hose Set Kit**

Electric heated hose set for adding additional sections.

| <b>Part</b> | <b>Description</b>                                  |
|-------------|-----------------------------------------------------|
| 248907      | Heated hose set; 1/4 in. ID x 3/8 in. ID;<br>50 ft. |
| 248908      | Heated hose set; 3/8 in. ID x 3/8 in. ID;<br>50 ft. |

*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 313289

**Graco Headquarters:** Minneapolis

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

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

**Copyright 2009, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.**

www.graco.com  
Revised 08/2011

### **10:1 Drum Feed Kit, 256433**

For supplying highly viscous material from a 55-gallon drum to an XM sprayer. See manual 312769 for more information.

### **Shutoff/Check Valve Kit, 255278**

For replacing shutoff valve or check valve. See manual 313343 for more information.

### **Alternator Conversion Kit, 256991**

For converting an XM sprayer from wall power supply to intrinsically safe alternator power supply. See manual 313293 for more information.

### **Mix Manifold Kit, 255684**

See manual 312749 for more information.

### **Remote Mix Manifold and Carriage Kit, 256980**

For converting to a remote mix manifold kit with a protective guard. See manual 312749 for more information.

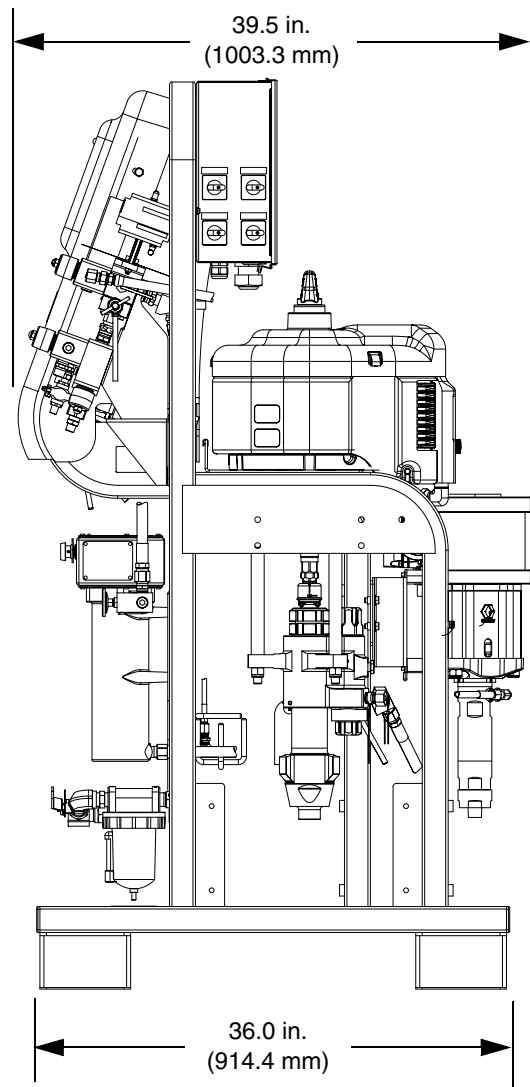
### **Level Sensor Adapter Kit, 256261**

For monitoring level of spray material inside 20-gallon hopper. See manual 406740 for more information.

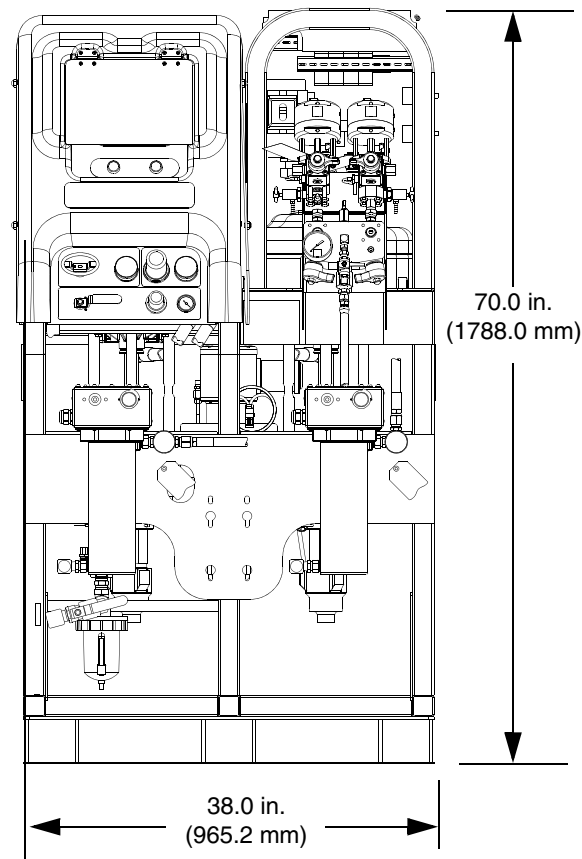
### **Xtreme Pump Wet Cup Wrench, 15T258**

# Dimensions

## System Dimensions without Hoppers



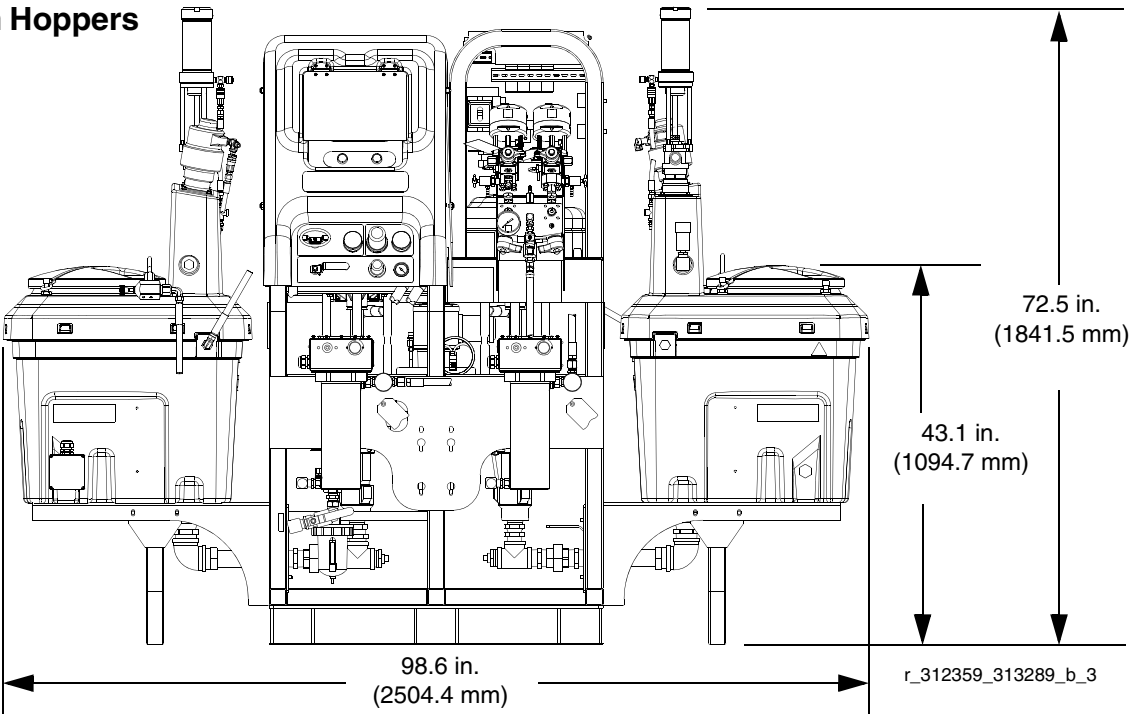
r\_xm1a00\_312359\_313289\_12a



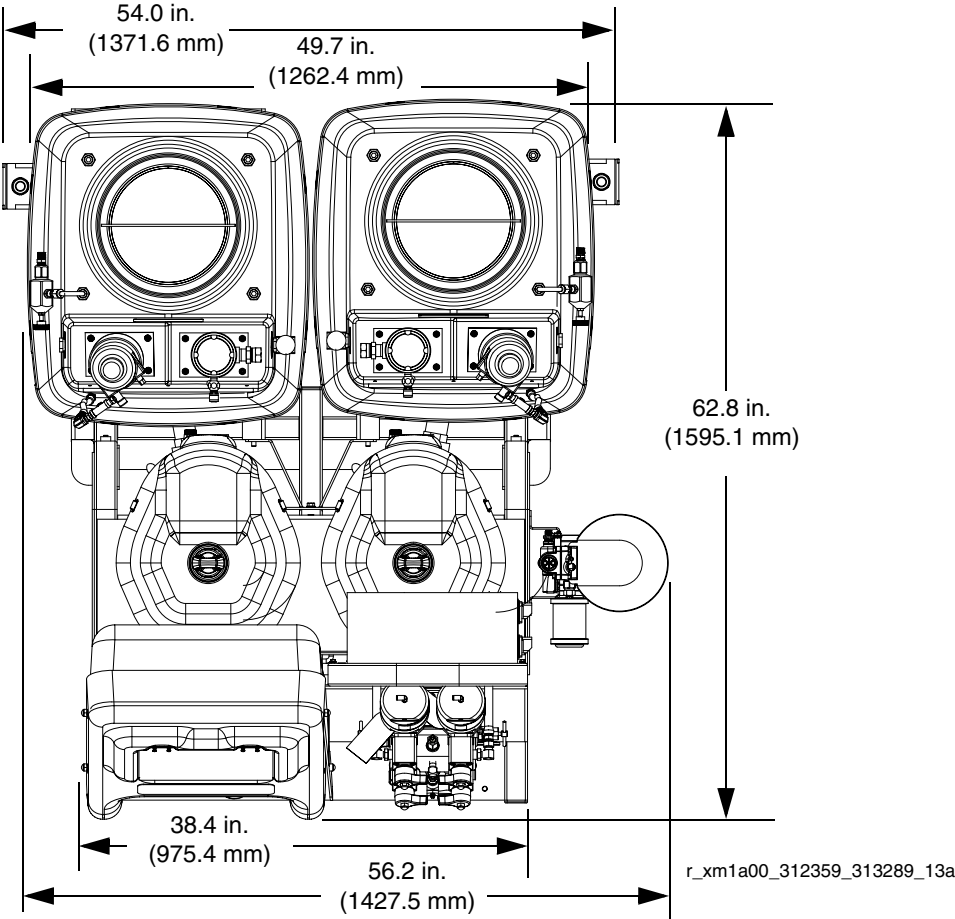
r\_312359\_313289\_b\_2

# System Dimensions with Hoppers

Two 20-Gallon Hoppers  
Side Mounted

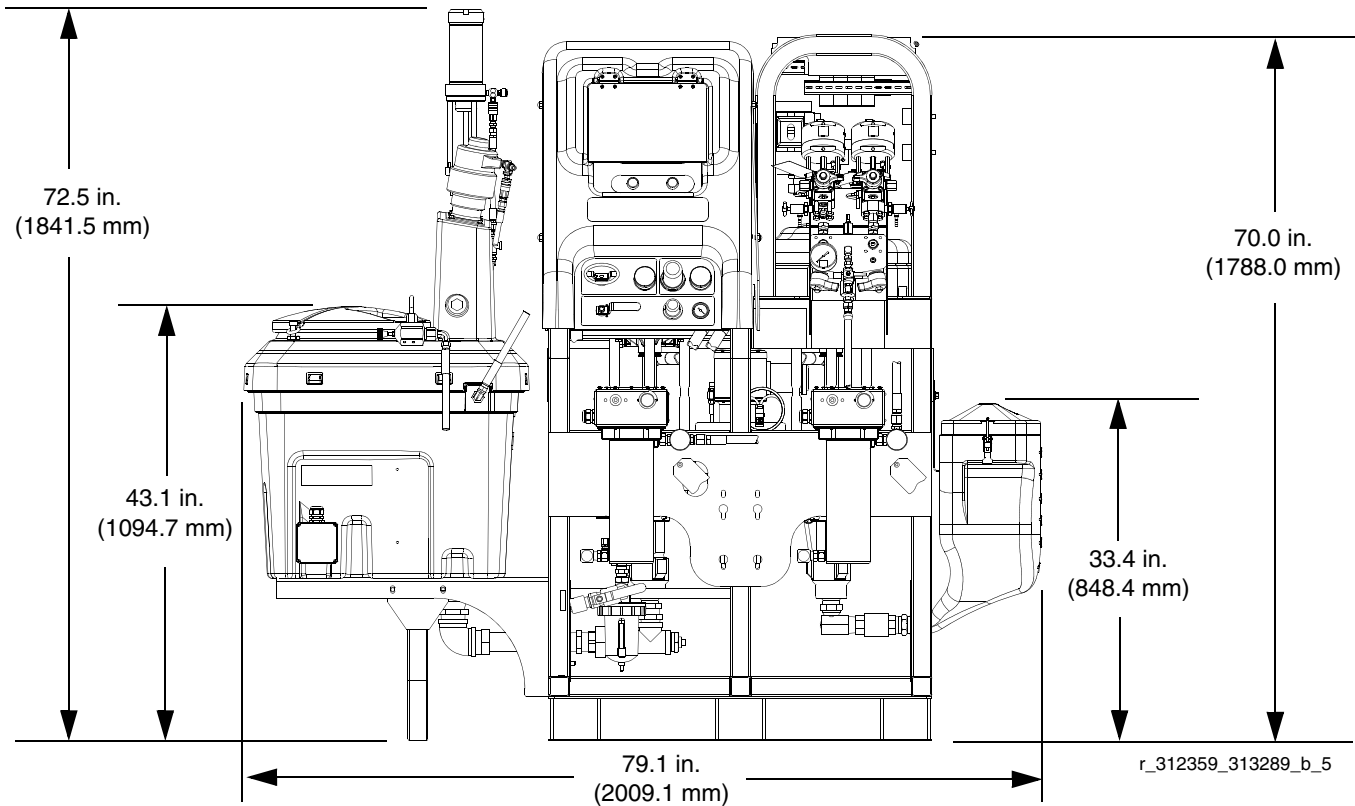


Two 20-Gallon Hoppers  
Rear Mounted  
(Top View)

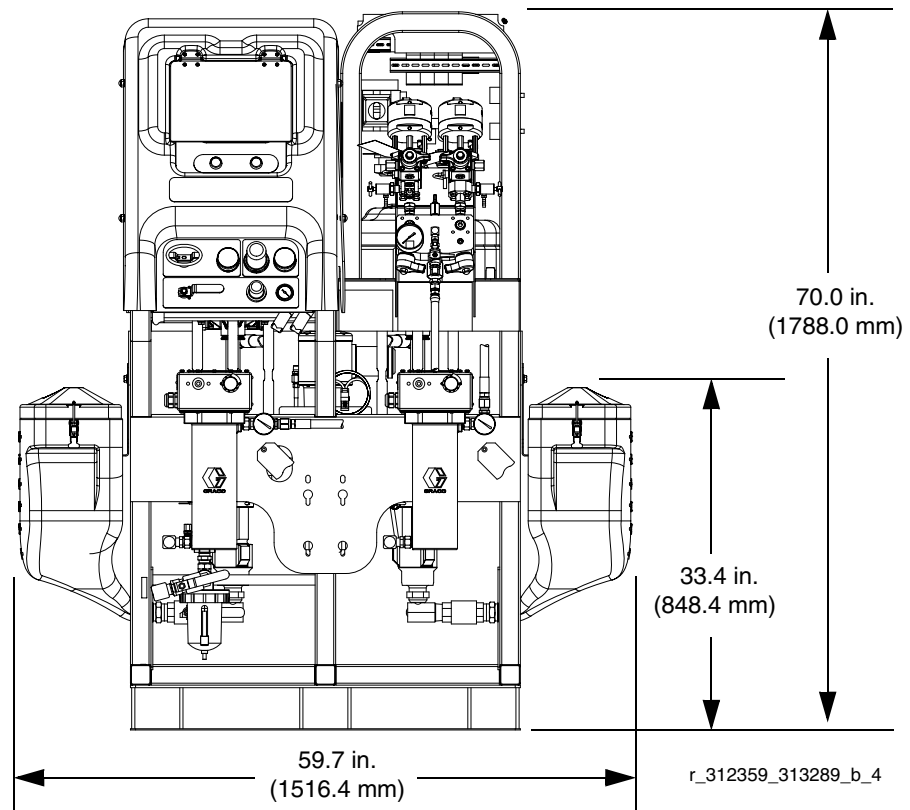


# System Dimensions with Hoppers

## One 20-Gallon Hopper and One 7-Gallon Hopper



## Two 7-Gallon Hoppers



# Technical Data

|                                                       |                                                                                                                                  |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Mixed ratio range                                     | 1:1-10:1 (in 0.1 increments)                                                                                                     |
| Ratio tolerance range (before alarm)                  | +/- 5%                                                                                                                           |
| Flow rates                                            |                                                                                                                                  |
| Minimum                                               | 1 qt./min. (0.95 liter/min.)*                                                                                                    |
| Maximum                                               | 3 gal./min/ (11.4 liter/min.)                                                                                                    |
| Fluid viscosity range                                 | 200-20,000 cps (heavier viscosities can be mixed using heat, circulation, and/or pressure feeding)                               |
| Fluid filtration                                      | 60 mesh, (238 micron) standard on pump outlets (filter assembly not included on some models)                                     |
| Air inlet                                             | 3/4 npt(f)                                                                                                                       |
| Fluid inlets without feed kits                        | 1 1/4 npt(m)                                                                                                                     |
| Maximum fluid working pressure of mixed material      |                                                                                                                                  |
| 50:1                                                  | 5200 psi (35.8 MPa, 358 bar)                                                                                                     |
| 70:1                                                  | 6300 psi (43.5 MPa, 435 bar)                                                                                                     |
| Maximum fluid temperature                             | 160° F (71° C)                                                                                                                   |
| Air supply pressure range                             | 50-150 psi (0.35-1.0 MPa, 3.5-10.3 bar)                                                                                          |
| Maximum pump air set pressure                         |                                                                                                                                  |
| 50:1                                                  | 105 psi (0.74 MPa, 7.4 bar)                                                                                                      |
| 70:1                                                  | 85 psi (0.60 MPa, 6.0 bar)                                                                                                       |
| Maximum pump inlet fluid feed pressure                | 250 psi (1.7 MPa, 17 bar)                                                                                                        |
| Maximum air consumption at 100 psi (0.7 MPa, 7.0 bar) |                                                                                                                                  |
| in scfm (m <sup>3</sup> /min.)                        | 70 scfm per gpm (1.96 m <sup>3</sup> /min. per lpm)                                                                              |
| Ambient temperature range                             |                                                                                                                                  |
| Operating                                             | 32-135° F (0-57° C)                                                                                                              |
| Storage                                               | 30-160° F (-1-71° C)                                                                                                             |
| Environmental conditions rating                       | Indoor/outdoor use                                                                                                               |
|                                                       | Altitude up to 4000 m                                                                                                            |
|                                                       | Maximum relative humidity to 99% up to 130° F (54° C)                                                                            |
|                                                       | Pollution degree (11)                                                                                                            |
|                                                       | Installation category (2)                                                                                                        |
| Sound pressure                                        | 86 dBA at 100 psi (0.7 MPa, 7 bar)                                                                                               |
| Sound power                                           | 98 dBA at 100 psi (0.7 MPa, 7 bar)                                                                                               |
| Wetted parts                                          |                                                                                                                                  |
| Suction tubes                                         | aluminum                                                                                                                         |
| Flush pump                                            | carbide, PTFE, stainless steel, UHMWPE                                                                                           |
| Hoses                                                 | nylon                                                                                                                            |
| Pumps (A and B)                                       | carbon steel, alloy steel, 303, 440, 17-ph grades stainless steel, zinc and nickel plating, ductile iron, tungsten carbide, PTFE |
| Metering valves                                       | carbon steel, nickel plating, carbide, polyethylene, leather                                                                     |
| Manifold                                              | carbon steel, nickel plating, carbide, 302 stainless steel, PTFE, UHMWPE                                                         |
| Mixer                                                 | stainless steel housing with acetal elements                                                                                     |
| Spray gun                                             | Refer to spray gun manual                                                                                                        |
| Dimensions                                            | See <b>Dimensions</b> , page 80                                                                                                  |
| Weight                                                | Base sprayer (XM1A00 and XM5A00 models)                                                                                          |
|                                                       | 742 lbs (336.87 kg)                                                                                                              |
|                                                       | (Add component weight(s) to base sprayer weight for your specific model weight. See component manuals.)                          |

\* Minimum flow rate is dependent on material being sprayed and mixing capability. Test your material specific to flow rate.

# 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 présent 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).

**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 313289

**Graco Headquarters:** Minneapolis

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

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

**Copyright 2009, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.**

[www.graco.com](http://www.graco.com)  
Revised 08/2011