Operation

Predator™ Proportioners

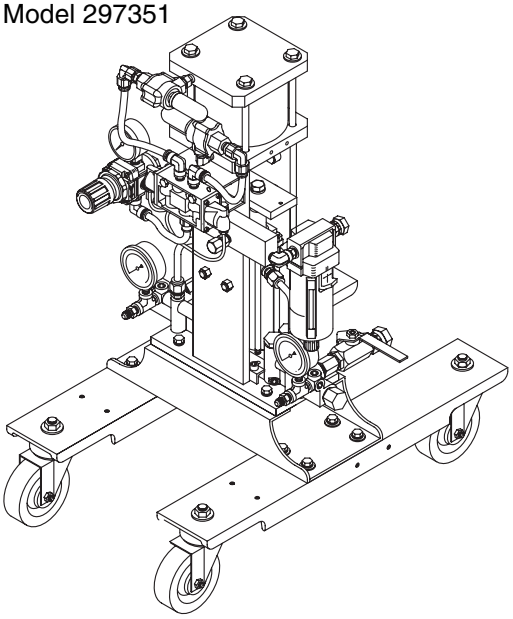
311326A

For spraying polyurethane foam and polyurea coatings.
Not for use in explosive atmospheres.

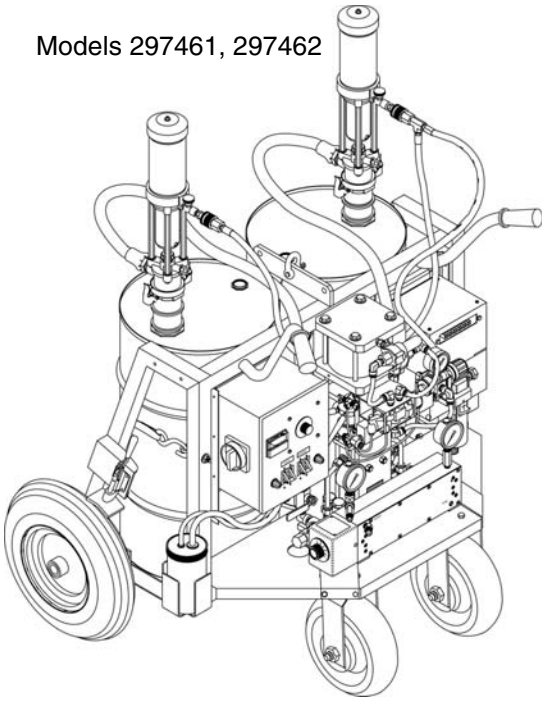
See page 3 for model information, including maximum working pressure.

Important Safety Instructions
Read all warnings and instructions in this manual.
Save these instructions.

Model 297351



Models 297461, 297462



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Contents

Related Manuals

For Repair instructions and parts, see manual 311327.

Models

Part No., Series	Model	Maximum Working Pressure psi (MPa, bar)	Voltage	Amps	Total Heater Watts
297351, A	MP	1600 psi (11.0, 110)	-	-	-
297461, A	MP-04 with heat	1600 psi (11.0, 110)	230 V, 60 Hz	30	5000
297458, A	MP-05	1600 psi (11.0, 110)	-	-	-
297462, A	MP-06 with heat	1600 psi (11.0, 110)	230 V, 60 Hz	30	5000
297460, A	MP-07	1600 psi (11.0, 110)	-	-	-

Warnings

The following general warnings are for the setup, use, grounding, maintenance, and repair of this equipment. Additional, more specific warnings may be found throughout the body of this manual where applicable. *Symbols appearing in the body of the manual refer to these general warnings. When these symbols appear throughout the manual, refer back to these pages for a description of the specific hazard.*

⚠ WARNING

ELECTRIC SHOCK HAZARD

Improper grounding, setup, or usage of the system can cause electric shock.

- Turn off and disconnect power cord before servicing equipment.
- Use only grounded electrical outlets.
- Use only 3-wire extension cords.
- Ensure ground prongs are intact on sprayer and extension cords.
- Do not expose to rain. Store indoors.

TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.

- Read MSDS's to know the specific hazards of the fluids you are using.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.

PERSONAL PROTECTIVE EQUIPMENT

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:

- Protective eyewear
- Clothing and respirator as recommended by the fluid and solvent manufacturer
- Gloves
- Hearing protection

SKIN INJECTION HAZARD

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

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

⚠ WARNING

FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. To help prevent fire and explosion:

- Use equipment only in well ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Ground all equipment in the work area. See **Grounding** instructions.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail.
- If there is static sparking or you feel a shock, **stop operation immediately.** Do not use equipment until you identify and correct the problem.
- Keep a fire extinguisher in the work area.

PRESSURIZED ALUMINUM PARTS HAZARD

Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage.

EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS forms from distributor or retailer.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine Graco-Gusmer replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your Graco distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

MOVING PARTS HAZARD

Moving parts can pinch or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** in this manual. Disconnect power or air supply.

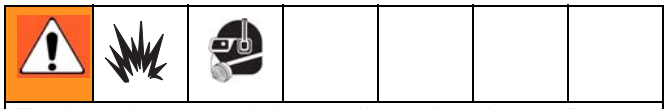
BURN HAZARD

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.

Pressure Relief Procedure

1. Adjust air cylinder pressure regulator counterclockwise to minimum pressure setting.
2. Turn off feed pumps.
3. Trigger gun to relieve pressure.
4. Close gun inlet valves.
5. Close fluid supply inlet valves.

Flushing



Flush equipment only in a well-ventilated area. Do not spray flammable fluids. Do not turn on heaters while flushing with flammable solvents.

- Flush out old fluid with new fluid, or flush out old fluid with a compatible solvent, such as toluene, naptha, or mineral spirts before introducing new fluid.
- Use lowest possible pressure when flushing.
- To flush entire system, circulate through gun fluid manifold (with manifold removed from gun).
- Always leave some type of fluid in system. Do not use water.

Only use flush solvents that are compatible with Fluoroelastomer seals. Non-compatible solvents will damage seals and cause hazardous conditions, such as high pressure leaks and pressure switch failure.

Component Identification

Models 297351, 297458, 297460 Main Components

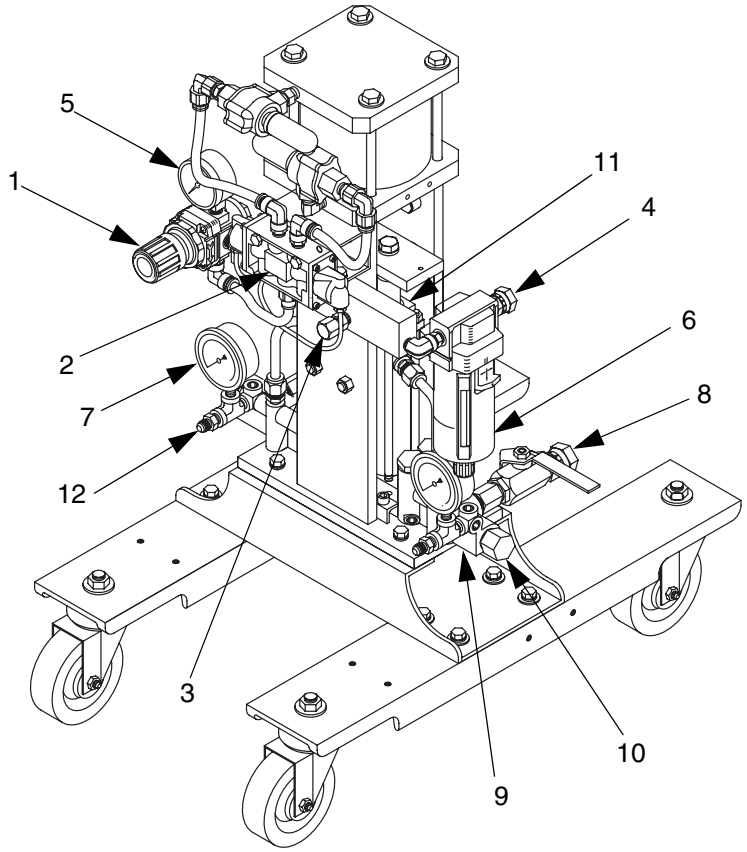


FIG. 1: Model 297351, 297458, 297460 Main Components

1 **Air Pressure Regulator**
Controls speed of air motor on up and down stroke.

2 **Direction Control Valve**
Controls direction of proportioning pump.

3 **Gun Air Outlet**
1/4 MPT fitting

4 **Air Inlet**
3/8 female swivel

5 **Air Pressure Gauge**
Displays air pressure in spray drive system during up and down stroke.

6 **Main Air Filter**
Filters system air supply (3/8 FPT).

7 **A-(Isocyanate) Pressure Gauge**
Displays pump output pressure in isocyanate proportioning pump.

8 **B-Inlet Supply Valve**
3/4 FPT swivel fitting

9 B-Pump Base

10 B- Inlet Filter Screen

11 B-Packing Nut

12 **A-(Isocyanate) Outlet**
1/2-20 JIC male fitting

Models 297461 and 297462 Main Components

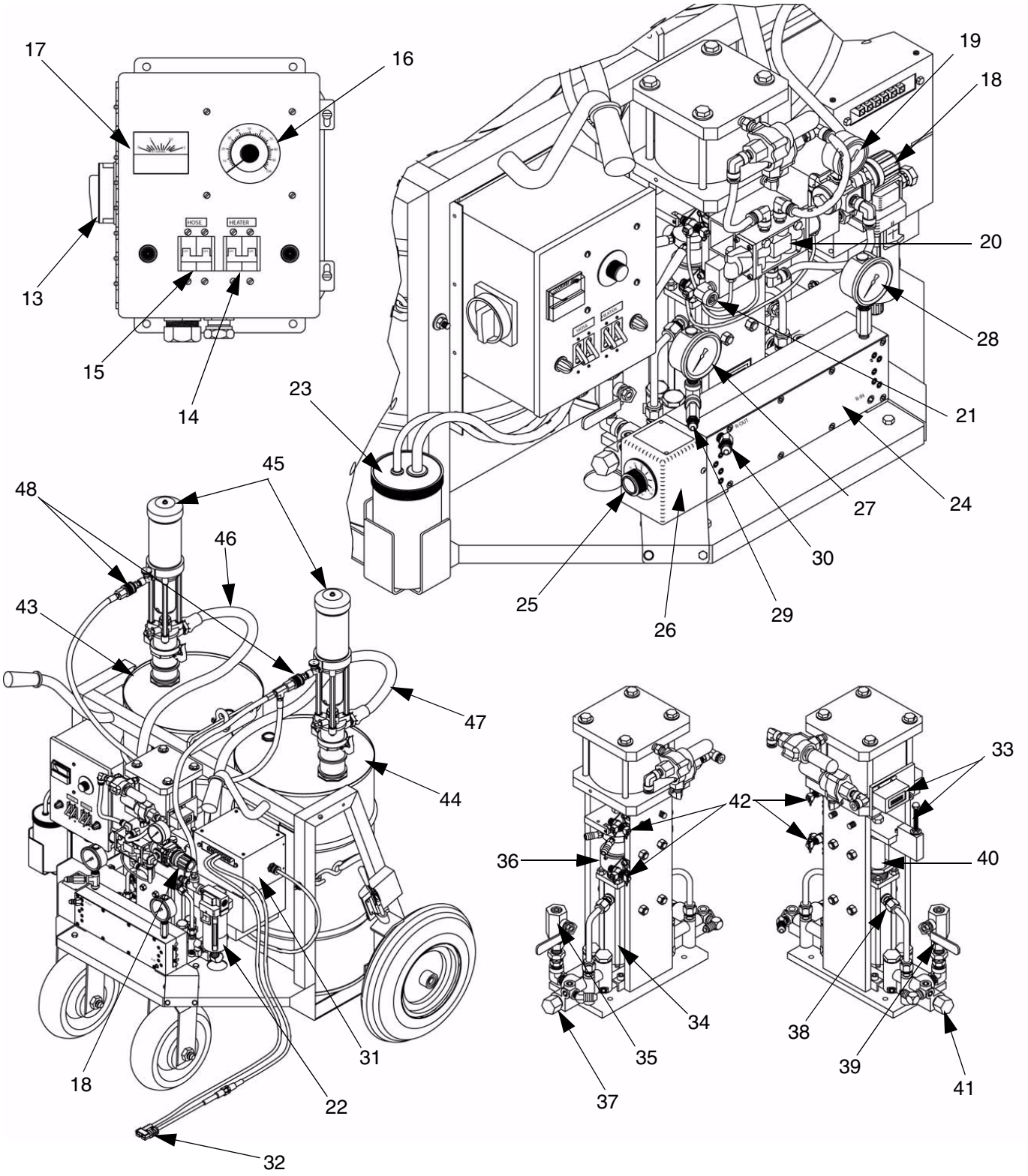


FIG. 2: Models 297461 and 297462 Main Components

13 **Main Power Disconnect**
Controls power to all circuits. Must be ON for any function of unit to operate. Disconnect can be locked in OFF position for OSHA-required lockout/tagout during machine maintenance.

CAUTION
Incoming power leads from main electrical source remain energized when main power switch is OFF. To fully de-energize electrical console, switch OFF and lock out incoming power at source.

14 **Primary Heater Circuit Breaker**
Controls and protects power to primary heater; must be ON for primary heater to operate.
Amber Pilot Light: controlled by thermostat. When illuminated, indicates primary heater is in a heating cycle.

15 **Hose Heater Circuit Breake**r
Controls and protects low-voltage power pack; must be ON for hose heater to operate.
Amber Pilot Light: indicates hose heater circuit breaker is ON.

16 **Hose Heater Power Control**
Controls amount of power delivered to heated hoses. Adjust as required to maintain desired hose temperature as shown on hose thermometer.

17 **Hose Heater Ammeter**
Indicates amount of electrical current in amperes (amps) is delivered to hose heater.

18 **Air Pressure Regulator**
Controls inlet air pressure available to air motor on the up and down stroke. Turn clockwise to increase; turn counterclockwise to decrease.

19 **Air Pressure Gauge**
Displays air pressure in air drive system during the up and down stroke.

20 **Directional Control Valve**
Controls direction of proportioning pump.

21 **Gun Air Outlet**
1/4 FPT elbow fitting

22 **Moisture Separator**
Traps moisture in main air supply. Check daily to prevent moisture contamination of all air system components, including transfer pumps and gun. (3/8 FPT)

23 **Lubricant Reservoir (Model 297462 only)**
(Part of Iso pump lubrication system.) Holds lubricant used to prevent crystallization of isocyanate on Iso pump shaft.

24 **Primary Heater**
Heats materials to required dispensing temperature.

25 **Primary Heater Thermostat**
Controls temperature of primary heater. Turn clockwise to increase temperature; turn counterclockwise to decrease temperature.
Amber Pilot Light: located on console. ON when thermostat calls for heat; OFF when it does not.

26 **Thermal Light Switch**
(Located under cover; not shown.) Interrupts power to primary heater when surface temperature approaches designed operating temperature limit.

27 **A-(Isocyanate) Pressure Gauge**
Displays isocyanate outlet pressure.

28 **B-(Resin) Pressure Gauge**
Displays resin outlet pressure.

29 **A-(Isocyanate) Outlet**
1/2-20 JIC male fitting

30 **B-(Resin) Outlet**
9/16-18 JIC male fitting

31 **Hose Heat Power Pack**
Provides power to hose heat system. Step-down isolation transformer features a range of selectable voltage settings to match various hose lengths.

32 **Power-Lock™ Hose Heat Connection**
Connects power from transformer to heated hoses.

33 **Counter**
Records cycle counts of proportioning pumps; one cycle count equals two strokes (one in each direction).

34 **A-(Isocyanate) Proportioning Pump**
Draws in and dispenses a fixed volume of isocyanate for deliver to gun or pour head.

35 **A-(Isocyanate) Inlet Supply Ball Valve**
1/2 FPT swivel fitting

36 **A-Lubricant Pump**
(Part of Iso pump lubrication system.) Continuously circulates lubricant between the isocyanate proportioning pump and reservoir to prevent crystallization of isocyanate on pump shaft.

37 **A-Inlet Filter Screen**
Traps solid contaminants in chemical supply.

38 **B-(Resin) Proportioning Pump**
Draws in and dispenses a fixed volume of resin for delivery to gun or pour head.

39 **B-(Resin) Inlet Supply Ball Valve**
3/4 FPT swivel fitting

40 **B-Packing Nut**
Retains pump piston seals.

41 **B-Inlet Filter Screen**
Traps solid contaminants in chemical supply.

42 **Pilot Valves**
Reverse direction of pumps.

43 **A-Supply Drum**
15-gallon capacity

44 **B-Supply Drum**
15-gallon capacity

45 **Transfer Pumps**
2:1 ratio. Part of Predator Material Supply Package 260652.

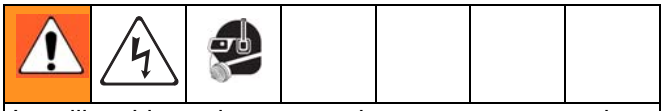
46 **A-Supply Hose**
Part of Predator Material Supply Package 260652.

47 **B-Supply Hose**
Part of Predator Material Supply Package 260652.

48 **Transfer Pump Air Hose Assembly**
Part of Predator Material Supply Package 260652.

Initial Set-up

Main Power Installation



Installing this equipment requires access to parts that may cause electric shock or other serious injury if work is not performed properly. Have a qualified electrician connect power and ground to main power switch terminals. Ensure your installation complies with all National, State, and Local safety and fire codes.

CAUTION

Ensure main power source meets all electrical requirements specified on nameplate of proportioning unit. Also ensure main power source has a dedicated fuse disconnect. Power cord is not supplied.

1. Open electrical console and connect main power cord as follows:

   a. Feed power cord through strain relief in bottom of console. Connect power leads to terminals L1 and L2 of main disconnect. See FIG. 3.

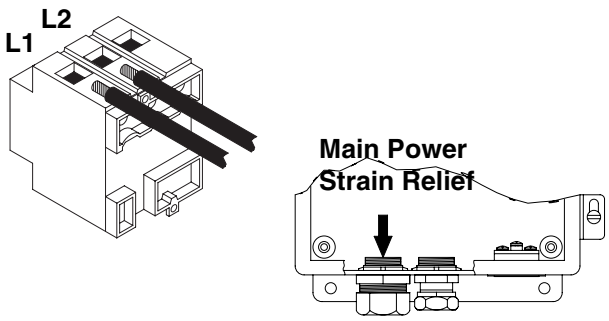


FIG. 3: Main Power Connection

   b. Connect ground wire to Ground Lug located inside console near strain relief opening. See FIG. 4.

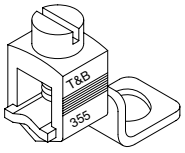


FIG. 4: Ground Lug

2. Set up chemical supply, air supply, and moisture control systems as required. See **Material Supply Connections**, page 12 for proper set-up and operating procedures.

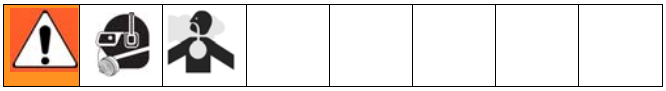
3. Properly ground all auxiliary equipment. If not grounded, high velocity flow of fluid can create a static charge, which may spark and cause fire and explosion. Certain solvents commonly used with this equipment are flammable and may present a flash danger to operator. Ground equipment as follows:

   a. Ground material supply (transfer pumps/day tanks).

   b. The 2:1 transfer pump has a ground lug. Ground pump in accordance with the instructions provided with pump.

   c. Ensure that proportioning unit ground at main electrical source is installed in accordance with the National Electrical Code. If generator will be powering unit, consult a certified electrician about additional grounding measures that may be required.

Material Supply Connections



Connect material supply to inlets of proportioning/spray units for all models, except model 297351, as follows:

1. Ensure A- and B- inlet ball valves (35 and 39) on proportioning/spray units are closed.
2. Connect and tighten B- (resin) supply hose (47) to 3/4 FPT swivel fitting on B-inlet ball valve (39), and to resin transfer pump (45).
3. Connect and tighten A- (isocyanate) supply hose (46) to 1/2 FPT swivel fitting on A-inlet ball valve (35), and to isocyanate transfer pump (45).
4. *Models 297461 and 297462 only*: Connect female couplings of air supply hose on each transfer pump. Then connect hose to 1/4 MPT fitting on unit air inlet.

   All other models: Connect air supply (48) to 1/4 MPT nipple on 2:1 transfer pump (45). Remove cap to access it.
5. Connect main air supply (48) to proportioning unit. The main air inlet (4) at air filter (6) requires a 3/8 npt fitting.

Model 297351 Only

Set up chemical supply and air control system as follows:

1. Connect B-supply hose (47) from transfer pump (45) to B-inlet fitting (41).
2. Connect A-supply hose (46) from transfer pump (45) to A-inlet fitting (37).
3. Connect main air supply (48) to transfer pump (45).

CAUTION
Main air supply must be clean and free of contaminants. Use a minimum of 3/8 in. ID air line (not supplied) to deliver air supply to proportioning unit. A main air shutoff valve to proportioning unit is recommended.

Lubrication System Set-up

Model 297462 Only

Prepare isocyanate pump lubrication system as follows:

1. Fill lubricant reservoir with pump lubricant.
2. Thread reservoir onto reservoir cap assembly and place it into bracket.

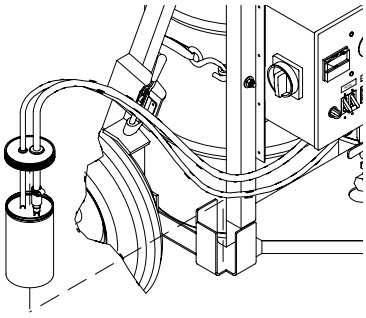


FIG. 5: Lubricant Reservoir Installation

3. Push larger diameter supply tube approximately 1/3 of the way down into reservoir.
4. Push smaller diameter return tube down into reservoir until it reaches the bottom.

The larger diameter supply tube must be at upper level of reservoir and the return tube must be at lower level of reservoir. This ensures that any isocyanate crystals will settle to bottom of reservoir and not return to isocyanate pump shaft.

The lubrication system is now ready for operation. No priming is required.

Hose Heat Power Pack

CAUTION
The hose heat transformer voltage must be set to match the hose length in use. Too much power will cause hose heat circuit fuse to fail. Too little power will result in insufficient hose heating.

For Models 297461 and 297462 only.

To select correct tap settings, proceed as follows:

1. Turn hose heater power control fully counterclockwise.

   With hose heater control turned fully clockwise, secondary amperage should not exceed 50 amps.

2. Turn off hose heater and primary heater circuit breakers.
3. Turn off and lock out main power disconnect.
4. Use FIG. 6 and FIG. 7 and the following chart to connect tap wires (A) and (B) to transformer taps that match hose length to be used.

Hose Length	Tap Wire A	Tap Wire B
25 ft. (7.6 m.)	S1	S2
35 ft. (10.6 m.)	S2	S3
60 ft. (18.2 m.)	S1	S3
110 ft. (33.3 m.)	S1	S4
160 ft. (48.5 m.)	S4	S5
210 ft. (63.6 m.)	S3	S5
260 ft. (78.8 m.)	S1	S5
310 ft. (94 m.)	S1	S5

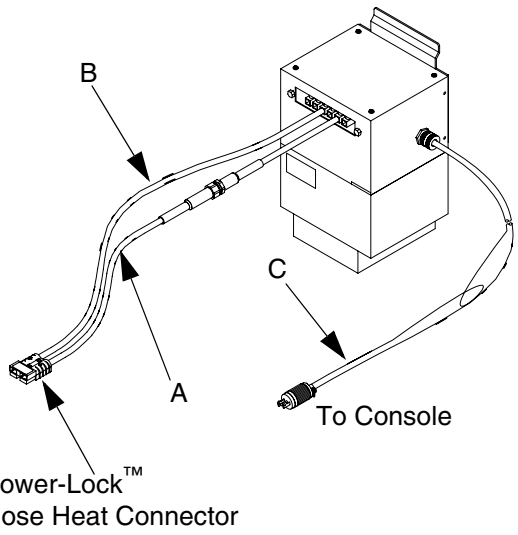


FIG. 6: Transformer Connections

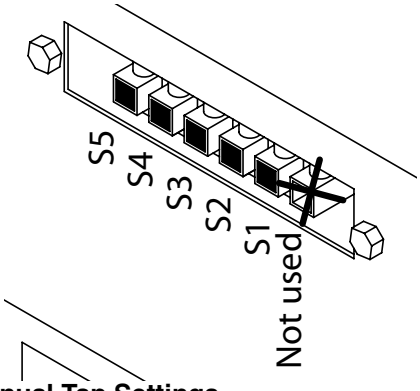


FIG. 7: Manual Tap Settings

5. Connect power cord (C) from power pack to electric console. Twist plug to lock it into receptacle.

Heated Hose Installation

CAUTION
Hose connection points are a potential source of chemical and air leaks. These areas are also most exposed to damage due to scuffing and snagging. It is strongly recommended to install a scuff jacket to protect hoses and a TSU extension harness to protect from damage.

Isocyanate hoses are color-coded red and resin hoses are color-coded blue. In addition, isocyanate and resin hose fittings have different thread sizes.

The following procedure is for all models except model 297351; please see *Model 297351 Hose Installation*.

1. Connect isolation hoses to respective primary heater outlet fittings.

Heated hose assemblies are connected end to end when shipped to protect them from moisture. Do not separate hoses until you are ready to connect them to proportioning unit.

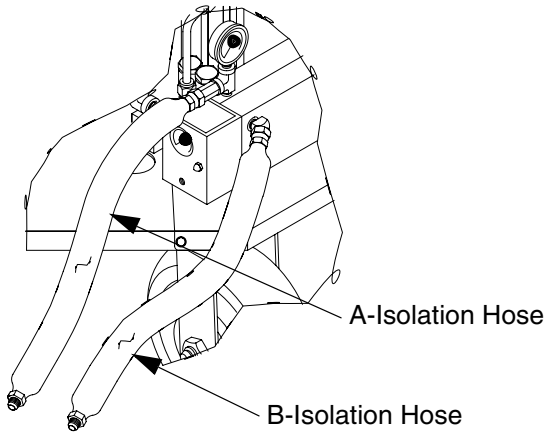


FIG. 8: Isolation Hose Connections

2. Connect heated hose assembly to isolation hoses:

   a. Lay out hose assemblies end-to-end as shown in FIG. 9.

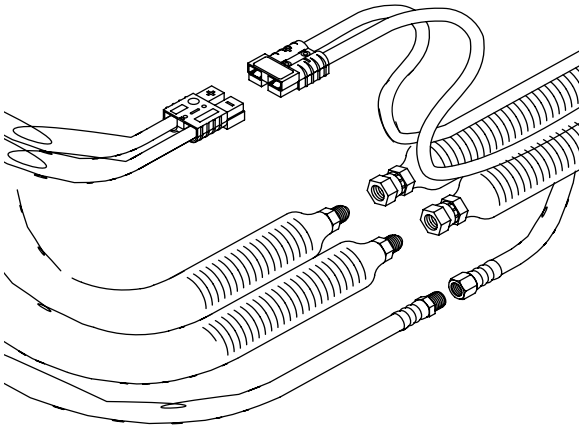


FIG. 9: Hose Connection (step a)

   b. Connect heated hoses to isolation hoses and tighten. To ensure a leak-proof chemical connection, do not cross-thread or over-tighten fittings. See FIG. 10.

   c. Connect air hoses and tighten fittings. See FIG. 10.

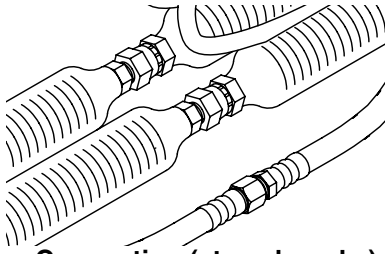


FIG. 10: Hose Connection (steps b and c)

   d. Install isolator between chemical hose fittings. Use small amount of tape to hold in place. See FIG. 11.

Always install isolator to prevent damage to fittings, but do not tape fully in place until after hoses are pressurized and free of leaks.

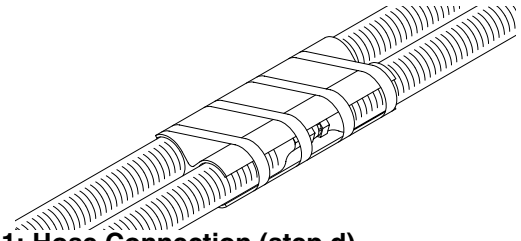


FIG. 11: Hose Connection (step d)

e. Plug in Power-Lock™ hose heat connectors. Secure connection with cable tie provided; failure to do so will disrupt hose heat system if connectors separate. See FIG. 12

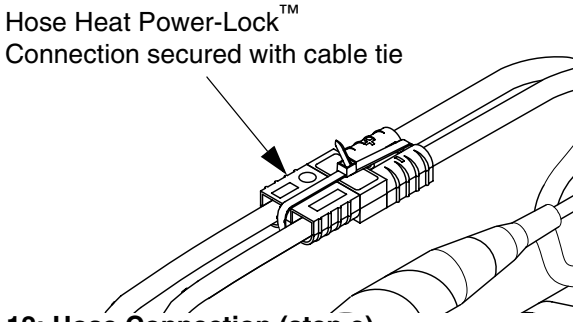


FIG. 12: Hose Connection (step e)

3. Repeat Step 2 to add additional hose assemblies, including the gun whip hose.
4. Connect main air valve source to end of air hose included with heated hose assemblies.
5. Install optional hose scuff jacket, if used, over hose lengths.
6. Connect coupling block to gun whip hose and ensure that manual valves are closed. See Spray Gun Operation Manual.
7. Carefully insert thermometer through outer sponge in the 10 ft. gun hose so that stem follows twist of hoses and lies between butyl inner hose and outer insulation. Choose a location where thermometer is easily inserted through sponge without excessive force. Position thermometer close to spray gun so it can easily be read by operator while spraying, and secure with electrical tape.

Model 297351 Hose Installation

1. Connect first section of isocyanate and resin hoses to their respective pump outlet fittings on proportioning unit. See FIG. 13.

Hose assemblies are connected end to end when shipped to protect them from moisture. Do not separate hoses until you are ready to connect them to proportioning unit.

2. Connect end of air hose included with hose assemblies to air outlet fitting on proportioning unit. See FIG. 13.

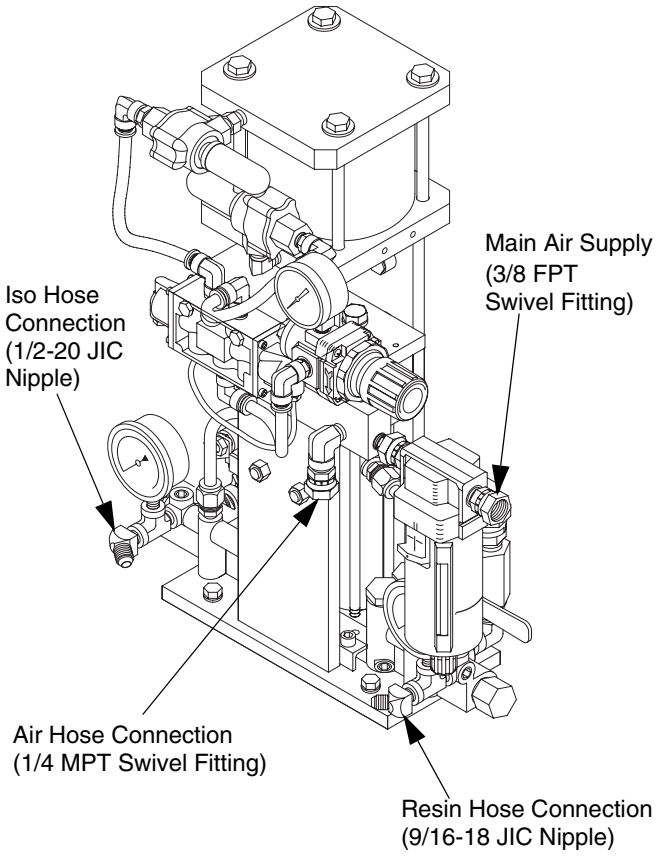


FIG. 13: Model 297531 Hose Connection Locations

3. Connect hose assemblies together as follows:

   a. Lay out hose assemblies end-to-end as shown in FIG. 14.

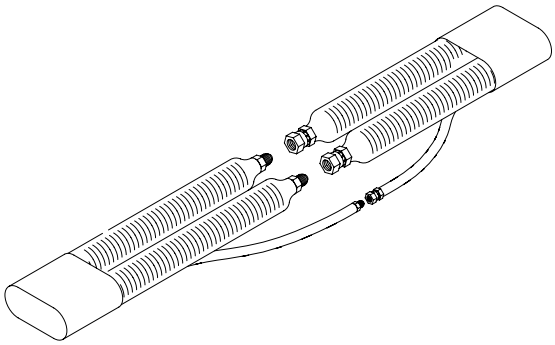


FIG. 14: Hose Connection (step a)

   b. Connect heated hoses to isolation hoses and tighten. To ensure a leak-proof chemical connection, do not cross-thread or over-tighten fittings. See FIG. 15.

   c. Connect air hoses and tighten fittings. See FIG. 15.

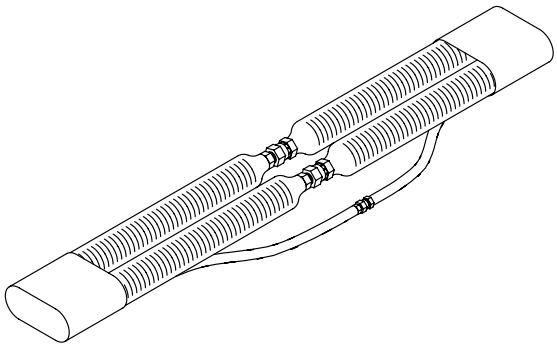


FIG. 15: Hose Connection (steps b and c)

4. Repeat Step 3 for adding additional hoses.

5. Connect coupling block to gun whip hose and ensure that manual valves are closed. See Spray Gun Operation Manual.

6. Connect main air supply to proportioning unit. See FIG. 13.

The main air supply must be clean and free of moisture and contaminants. Use a minimum of 3/8 in. inside diameter air line (not supplied) to deliver air supply to unit.

Air Purge

Prior to using equipment, purge chemical system of air and test oil residual from functional testing at factory.

1. Turn on main air supply to transfer pumps and drums/day tanks.
2. Open A- and B-inlet supply valves. Check for chemical leaks.
3. Turn hydraulic pressure control fully counterclockwise to zero.
4. Adjust air cylinder pressure regulator clockwise until pumps begin to move (approximately 15-psi air pressure).

   All models except 297462: Stop pumps when they reach top of their stroke by turning regulator to zero. This allows access to pump lube cup on isocyanate pump. Fill lube cup to about 1/4 in. from top with pump lube.

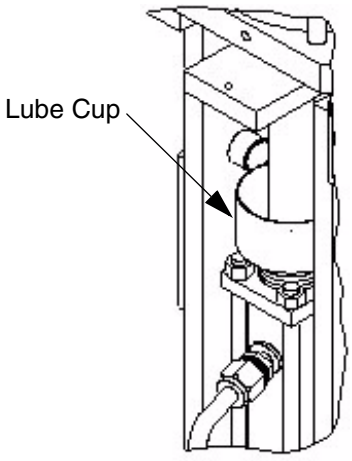


FIG. 16: Pump Lube Cup

5. All models except 297462: Adjust air cylinder pressure regulator until pumps begin to move (approximately 15-psi air pressure).
6. Hold coupling clock with A- and B- ports over separate containers and open both manual valves. Allow material to flow out of coupling block until spitting of air stops and all traces of residual material have disappeared, leaving a solid flow of each material.

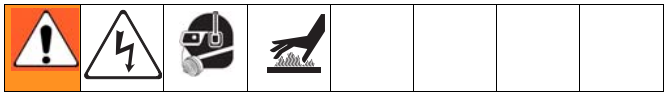
   Properly dispose of waste chemicals in accordance with applicable local, state, and federal codes.

7. Model 297462 only: Slowly increase hydraulic pressure and check all fittings for signs of hydraulic chemical leaks. Tighten fittings as required.
8. Close both manual valves and wipe off any residual material from outside of coupling block.
9. Mount spray gun to coupling block. (See Spray Gun Operation Manual.)

   After proportioning unit is at operating pressure and hose connections are tight and free of leaks, use duct tape to wrap hoses and electrical wires around rubber isolators forming a compact bundle. If using a scuff jacket, pull it over bundle and secure with duct tape.

Operation

Daily Start-up Procedure



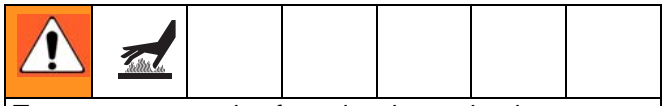
1. Check condition of hydraulic and isocyanate lubrication systems and service as required. Change pump lubricant when it shows signs of color change.
2. Adjust pump packings, if required. The packing nuts are adjustable and will require tightening when the pump lubricant is changed.
3. Ensure supply system is at correct temperature as recommended by chemical system supplier. Also ensure individual chemicals are correctly mixed within their drums/day tanks, and moisture protection system is properly set for operation.
4. Check inlet screens and service as required.
5. Turn on main air supply to transfer pumps (and spray unit), or on units equipped with day tanks adjust air pressure to 60 psi.
6. Open A- and B-inlet supply valves.
7. Set air cylinder pressure regulator as required.

Steps 8 - 14 apply to heated units only. Skip to Step 15 for all other units.

8. Switch ON main power disconnect switch.
9. Models 297461 and 297462 only: Uncoil heated hose assemblies.

CAUTION
Uncoil heated hoses before turning on hose heater switch to prevent overheating and hot spots within hose.

10. Models 297461 and 297462 only: Turn hose heat power control fully clockwise.
11. Switch ON hose heat circuit breaker. Amber pilot light should be on.



To ensure personal safety, closely monitor hose temperature during operation of hose heat system. Hose temperature, as indicated by a properly installed hose thermometer (see **Heated Hose Installation**, page 15), cannot exceed 170° F (76° C).

12. Adjust hose heater power control clockwise until ammeter reads 15 amps. Do not exceed 15 amps.
13. Using a clamp style ammeter on hose lead, set hose current to 35-40 amps for optimum temperature control. Do not exceed 50 amps.
14. Check hose thermometer for proper spray temperature and readjust power control as necessary to maintain temperature.
15. Switch ON primary heater circuit breaker. Amber pilot light should be on.
16. Set heater thermostat to desired temperature (clockwise to increase, counterclockwise to decrease) and allow heater to stabilize.
17. Adjust air pressure regulator as required.
18. Connect air to gun, open manual valves, and test spray while observing chemical pressure gauges on both the up and down strokes. Readjust regulator as required.

The unit is now ready for operation.

Daily Shutdown Procedure

1. Turn hose heater power control fully counterclockwise.
2. Switch OFF hose heater and primary heater circuit breakers if equipped.
3. Disconnect air from transfer pumps (45), or on units with day tanks bleed off all air in system.
4. Adjust air cylinder pressure regulator (1 and 18) counterclockwise to zero or to its minimum pressure setting.
5. Switch OFF main power disconnect (13) if equipped.
6. Trigger spray gun off target until isocyanate and resin gauges read zero. Close both manual valves on gun.
7. Turn OFF both inlet supply valves (35 and 39).
8. Remove hose thermometer from hose if equipped.
9. Coil and store or secure heated hose in manner that prevents damage.
10. Turn OFF main air supply to transfer pumps (45).
11. Shut down and store chemical supply as required.
12. Shut down and service spray gun as required. See Spray Gun Operation Manual.

Technical Data

Category	Data
Maximum working pressure	*Model 297351:* 1600 psi (11.0 MPa, 110 bar) *Model 297461:* 1600 psi (11.0 MPa, 110 bar) *Model 297458:* 1600 psi (11.0 MPa, 110 bar) *Model 297462:* 1600 psi (11.0 MPa, 110 bar) *Model 297460:* 1600 psi (11.0 MPa, 110 bar)
Maximum fluid temperature	190°F (88°C)
Maximum output (may vary due to operating conditions)	*Model 297351:* 16 lb/min (7.25 kg/min) *Model 297461:* 16 lb/min (7.25 kg/min) *Model 297458:* 16 lb/min (7.25 kg/min) *Model 297462:* 16 lb/min (7.25 kg/min) *Model 297460:* 16 lb/min (7.25 kg/min)
Viscosity range	250-1500 centipoise
Maximum material inlet pressure	400 psi (2.7 MPa, 27 bar)
Voltage requirement +/- 10%	See **Models**, page 3
Amperage requirement	See **Models**, page 3
Total heater watts	Models 297461 and 297462: 5000 W
Inlet filter size	80 mesh standard (optional - 60/40 mesh)
Component B (resin) inlet	3/4 npt(f)
Component A (isocyanate) inlet	1/2 npt(f)
Maximum heated hose length	310 ft. (95 m)
Height	*Model 297351:* 32 in. (81 cm) *Models 297461 and 297462:* 50 in. (127 cm) *Model 297458:* 32 in. (81 cm) *Model 297460:* 25 in. (64 cm)
Width	*Model 297351:* 18 in. (46 cm) *Models 297461 and 297462:* 41 in. (104 cm) *Model 297458:* 18 in. (46 cm) *Model 297460:* 12 in. (31 cm)
Depth	*Model 297351:* 24 in. (61 cm) *Models 297461 and 297462:* 28 in. (71 cm) *Model 297458:* 24 in. (61 cm) *Model 297460:* 12 in. (31 cm)
Weight	*Model 297351:* 80 lbs. (36 kg) *Models 297461 and 297462:* 225 lbs. (102 kg) *Model 297458:* 80 lbs. (36 kg) *Model 297460:* 80 lbs. (36 kg)
Wetted parts	Carbon steel, stainless steel, chrome, aluminum, Fluoroelastomer, PTFE, nylon

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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.

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