

SP200, SP300, AllPro Mustang 2400, Mustang 3100

3A0997G

EN

For portable spray application of architectural paints and coatings. For professional use only.



Important Safety Instructions

Read all warnings and instructions in this manual and related manuals. Be familiar with the controls and the proper usage of the equipment. Save these instructions.

Related Manuals:	
3A0994	Operation
312363	Mustang 500 Spray Guns
309881	200 Series Airless Spray Gun

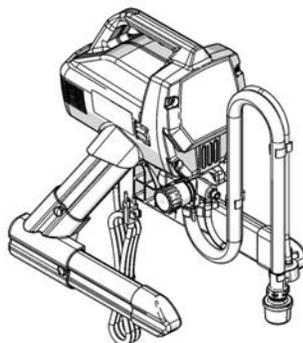
WARNING

FIRE AND EXPLOSION HAZARD SP200/Mustang 2400 Models

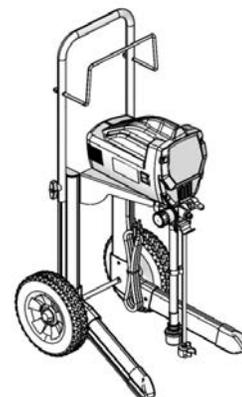
- Use only non-flammable or water-based materials, or non-flammable paint thinners. Do not use materials having flash points lower than 100°F (38°C). This includes, but is not limited to, acetone, xylene, toluene, and naphtha. For more information about your material, request Safety Data Sheet (SDS) from the supplier.
- Spraying flammable or combustible materials in a factory or fixed location must comply with NFPA 33 and OSHA 1910.94(c) requirements in the USA and with all similar local regulations in other countries.

See page 2 for model information, including maximum working pressure and approvals.

**SP200 Model 24F557
Mustang 2400 Model 24F559
Series A, B, C, D**



**SP300 Model 24F558
Mustang 3100 Model 24F560
Series A**



Models

This equipment is not intended for use with flammable or combustible materials used in places such as cabinet shops or other “factory”, or fixed locations. If you intend to use this equipment in this type of application, you must comply with NFPA 33 and OSHA requirements for the use of flammable and combustible materials.

Model Name	Series	Dispense Rate gpm (lpm)	Hose Length and Diameter	Gun Model	Maximum Working Pressure
SP200 Mustang 2400	A, B, C, D	0.24 gpm (0.91 lpm)	1/4 in. x 25 ft (6.4 mm x 7.5 m)	200 Series	2800 psi (19 MPa, 193 bar)
SP300 Mustang 3100	A	0.34 gpm (1.29 lpm)	1/4 in. x 50 ft (6.4 mm x 15m)	500 Series	3000 psi (21 MPa, 207 bar)

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

WARNING

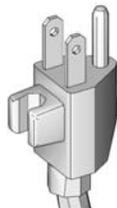


GROUNDING

This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

- Improper installation of the grounding plug is able to result in a risk of electric shock.
- When repair or replacement of the cord or plug is required, do not connect the grounding wire to either flat blade terminal.
- The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.
- Check with a qualified electrician or serviceman when the grounding instructions are not completely understood, or when in doubt as to whether the product is properly grounded.
- Do not modify the plug provided; if it does not fit the outlet, have the proper outlet installed by a qualified electrician.
- This product is for use on a nominal 120V circuit and has a grounding plug similar to the plugs illustrated in the figure below.

120V US



- Only connect the product to an outlet having the same configuration as the plug.
- Do not use an adapter with this product.

Extension Cords:

- Use only a 3-wire extension cord that has a grounding plug and a grounding receptacle that accepts the plug on the product.
- Make sure your extension cord is not damaged. If an extension cord is necessary, use 12 AWG (2.5 mm²) minimum to carry the current that the product draws.
- An undersized cord results in a drop in line voltage and loss of power and overheating.

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:

SP200/Mustang 2400 Models:

- Do not spray or clean with materials having flash points lower than 100°F (38°C). Use only non-flammable or water-based materials, or non-flammable paint thinners. For complete information about your material, request the Safety Data Sheet (SDS) from the material distributor or retailer.
- Do not spray combustible materials near an open flame or sources of ignition such as cigarettes, motors, and electrical equipment.
- Do not spray combustible liquids in a confined area.

SP300/Mustang 3100 Models:

- Do not spray combustible materials near an open flame or sources of ignition such as cigarettes, motors, and electrical equipment.
- Do not spray flammable or combustible liquids in a confined area.

All Models:

- Paint or solvent flowing through the equipment is able to result in static electricity. Static electricity creates a risk of fire or explosion in the presence of paint or solvent fumes. All parts of the spray system, including the pump, hose assembly, spray gun, and objects in and around the spray area shall be properly grounded to protect against static discharge and sparks. Use Airlessco conductive or grounded high-pressure airless paint sprayer hoses.
- Verify that all containers and collection systems are grounded to prevent static discharge. Do not use pail liners unless they are anti-static or conductive.
- Connect to a grounded outlet and use grounded extensions cords. Do not use a 3-to-2 adapter.
- Do not use a paint or a solvent containing halogenated hydrocarbons.
- Keep spray area well-ventilated. Keep a good supply of fresh air moving through the area.
- Sprayer generates sparks. Keep pump assembly in a well ventilated area a least 20 feet (6.1 m) from the spray area when spraying, flushing, cleaning, or servicing. Do not spray pump assembly.
- Do not smoke in the spray area or spray where sparks or flame is present.
- Do not operate light switches, engines, or similar spark producing products in the spray area.
- Keep area clean and free of paint or solvent containers, rags, and other flammable materials.
- Know the contents of the paints and solvents being sprayed. Read all Safety Data Sheet (SDS) and container labels provided with the paints and solvents. Follow the paint and solvents manufacturer's safety instructions.
- Fire extinguisher equipment shall be present and working.



ELECTRIC SHOCK HAZARD

This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.

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



WARNING

	<p>SKIN INJECTION HAZARD</p> <p>High-pressure spray is able to inject toxins into the body and cause serious bodily injury. In the event that injection occurs, get immediate surgical treatment.</p> <ul style="list-style-type: none"> • Do not aim the gun at, or spray any person or animal. • Keep hands and other body parts away from the discharge. For example, do not try to stop leaks with any part of the body. • Always use the nozzle tip guard. Do not spray without nozzle tip guard in place. • Use Graco nozzle tips. • Use caution when cleaning and changing nozzle tips. In the case where the nozzle tip clogs while spraying, follow the Pressure Relief Procedure for turning off the unit and relieving the pressure before removing the nozzle tip to clean. • Equipment maintains pressure after power is shut off. Do not leave the equipment energized or under pressure while unattended. Follow the Pressure Relief Procedure when the equipment is unattended or not in use, and before servicing, cleaning, or removing parts. • Check hoses and parts for signs of damage. Replace any damaged hoses or parts. • This system is capable of producing 3000 psi. Use Graco replacement parts or accessories that are rated a minimum of 3000 psi. • Always engage the trigger lock when not spraying. Verify the trigger lock is functioning properly. • Verify that all connections are secure before operating the unit. • Know how to stop the unit and bleed pressure quickly. Be thoroughly familiar with the controls.
	<p>EQUIPMENT MISUSE HAZARD</p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • Always wear appropriate gloves, eye protection, and a respirator or mask when painting. • Do not operate or spray near children. Keep children away from equipment at all times. • Do not overreach or stand on an unstable support. Keep effective footing and balance at all times. • Stay alert and watch what you are doing. • Do not operate the unit when fatigued or under the influence of drugs or alcohol. • Do not kink or over-bend the hose. • Do not expose the hose to temperatures or to pressures in excess of those specified by Graco. • Do not use the hose as a strength member to pull or lift the equipment. • Do not spray with a hose shorter than 25 feet. • Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards. • Make sure all equipment is rated and approved for the environment in which you are using it.
	<p>PRESSURIZED ALUMINUM PARTS HAZARD</p> <p>Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.</p> <ul style="list-style-type: none"> • Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents. • Do not use chlorine bleach. • Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.

WARNING

 	<p>MOVING PARTS HAZARD</p> <p>Moving parts can pinch or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> • 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.
	<p>TOXIC FLUID OR FUMES HAZARD</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"> • Read Safety Data Sheet (SDS) 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.
	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. Protective equipment includes but is not limited to:</p> <ul style="list-style-type: none"> • Protective eyewear, and hearing protection. • Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.
	<p>CALIFORNIA PROPOSITION 65</p> <p>This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling.</p>

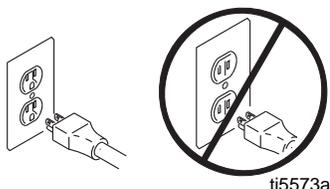
Installation

Grounding and Electric Requirements



Sprayer must be grounded. Grounding reduces the risk of static and electric shock by providing an escape wire for electrical current due to static build up or in the event of a short circuit.

- This sprayer requires a 120 Vac, 60 Hz, 15A circuit with a grounding receptacle.



- Never use an outlet that is not grounded or an adapter.

- Do not use the sprayer if the electrical cord has a damaged ground prong.



- Only use an extension cord with an undamaged 3-prong plug.

Recommended extension cords for use with this sprayer:

- 50 ft (15.0 m) 14 AWG (2.1 mm²)
- 100 ft (30.0 m) 12 AWG (3.3 mm²)

Spray gun: ground through connection to a properly grounded fluid hose and pump.

Smaller gauge or longer extension cords may reduce sprayer performance.

Fluid supply container: follow local code.

Solvent pails used when flushing: follow local code. Use only conductive metal pails, placed on a grounded surface such as concrete. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts grounding continuity.

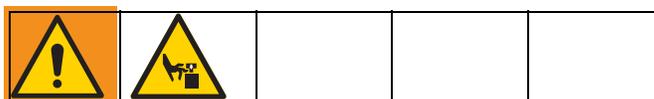
Grounding the metal pail: connect a ground wire to the pail by clamping one end to pail and other end to ground such as a water pipe.

Maintaining grounding continuity when flushing or relieving pressure: hold metal part of the spray gun firmly to the side of a grounded metal pail, then trigger the gun.



Thermal Overload

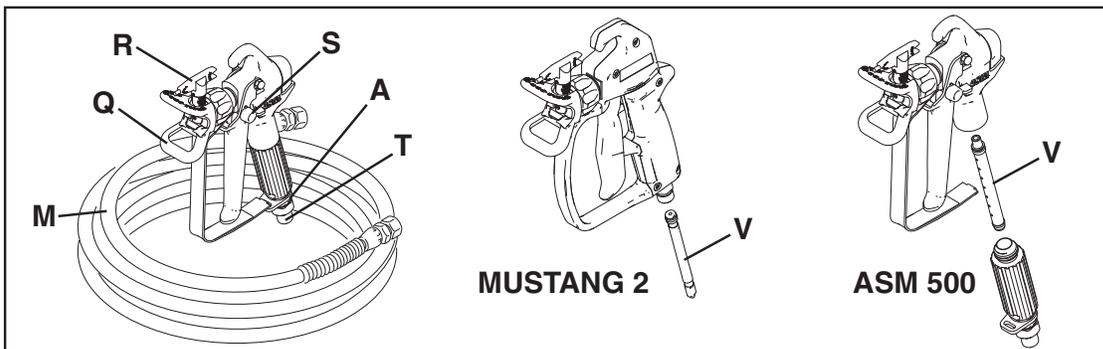
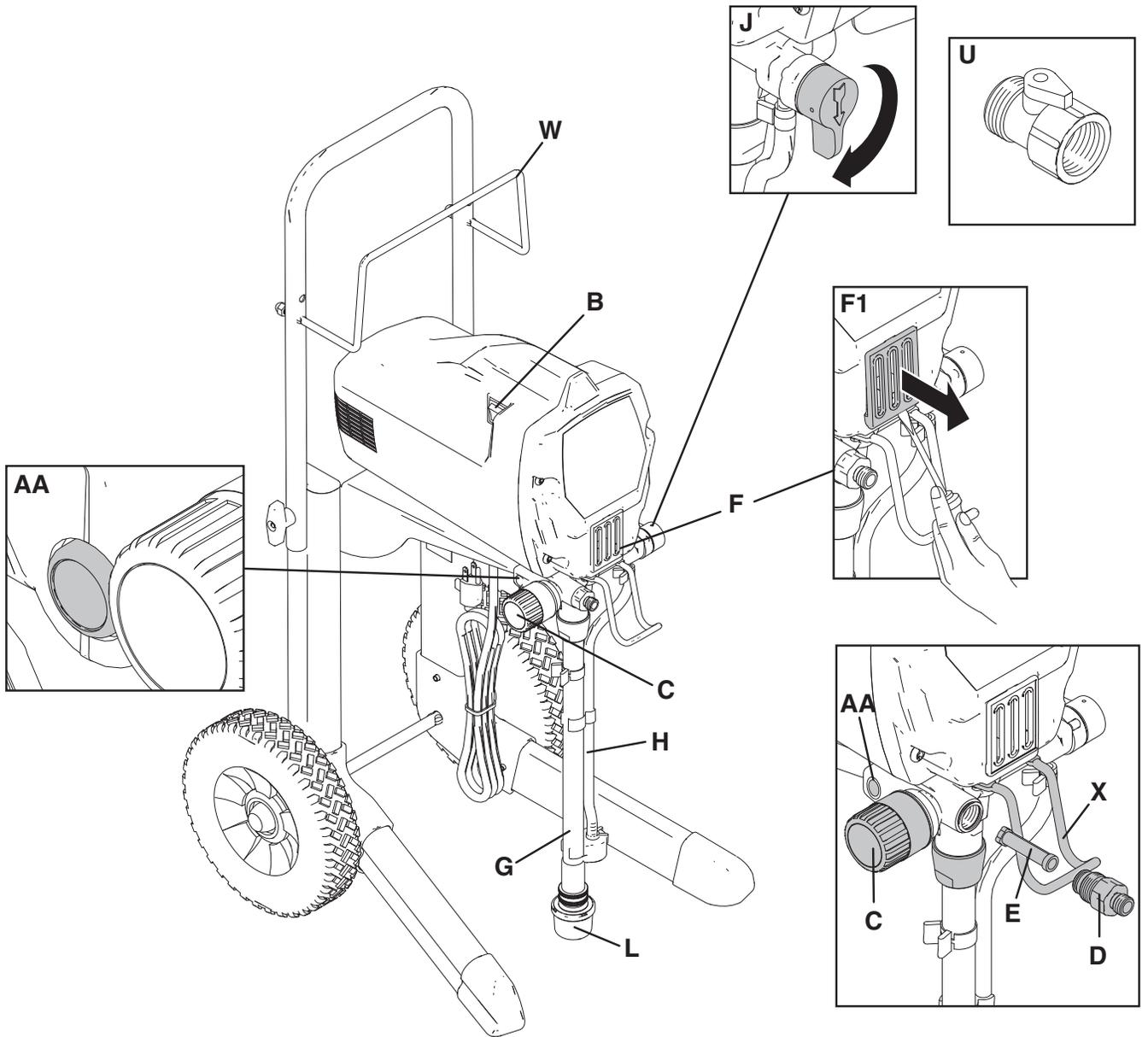
Motor has a thermal overload switch to shut itself down if overheated. If unit overheats, allow approximately 45 minutes for unit to cool. Once cool, switch will close and unit will restart.



To reduce risk of injury from motor starting unexpectedly when it cools, always turn power switch OFF if motor shuts down.

Component Identification

A	Airless spray gun	Sprays fluid.
B	Power switch	Turns sprayer ON and OFF.
C	Pressure control knob	Increases (clockwise) and decreases (counter-clockwise) fluid pressure in pump, hose, and spray gun.
D	Pump fluid outlet fitting	Threaded connection for paint hose.
E	InstaClean™ fluid filter (SP300, Mustang 3100)	<ul style="list-style-type: none"> Filters fluid coming out of pump to reduce tip plugging and improve finish. Self cleans only during pressure relief.
F	ProX Power-Piston™ Pump (behind Easy Access door, not shown) (SP300, Mustang 3100)	Pumps and pressurizes fluid and delivers it to paint hose.
F1	Easy Access™ door (SP300, Mustang 3100)	Easy Access door permits quick access to outlet valve. To remove door, insert flat blade of screwdriver into slot on the bottom of the door.
G	Suction tube	Draws fluid from paint pail into pump.
H	Prime tube (with diffuser)	Drains fluid in system during priming and pressure relief.
J	Prime/Spray valve	<ul style="list-style-type: none"> In PRIME position (pointing down) directs fluid to prime tube. In SPRAY position (pointing forward) directs pressurized fluid to paint hose. Automatically relieves system pressure in overpressure situations.
L	Inlet screen	Prevents debris from entering pump.
M	Paint hose	Transports high-pressure fluid from pump to spray gun.
Q	Tip guard	Reduces risk of fluid injection injury.
R	Reversible spray tip	<ul style="list-style-type: none"> Atomizes fluid being sprayed, forms spray pattern and controls fluid flow according to hole size. Reverse unclogs plugged tips without disassembly.
S	Gun trigger safety lever (page 10)	Prevents accidental triggering of spray gun.
T	Gun fluid inlet fitting	Threaded connection for paint hose.
U	Power Flush attachment	Connects garden hose to suction tube for power flushing water-base fluids.
V	Gun fluid filter	Filters fluid entering spray gun to reduce tip clogs.
W	Hose Wrap Rack (SP300, Mustang 3100)	Stows paint hose.
X	Pail Hanger (SP300, Mustang 3100)	For transporting pail by its handle.
AA	Pump Priming Button (SP200, Mustang 2400)	Manually taps inlet ball to loosen if stuck.



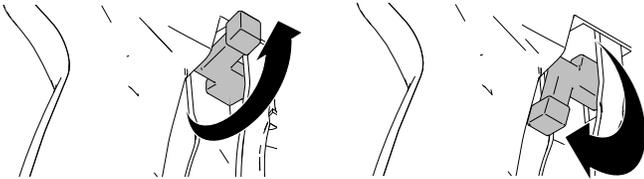
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Operation



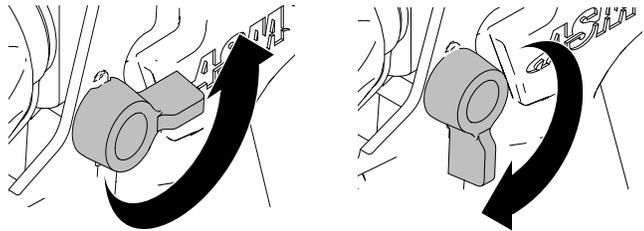
Trigger Lock

Always engage the trigger lock when you stop spraying to prevent the gun from being triggered accidentally by hand or if dropped or bumped.



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Trigger Locked Mustang 2 **Trigger Unlocked Mustang 2**



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Trigger Locked ASM 500

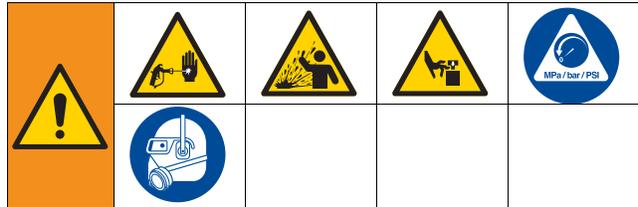
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Trigger Unlocked ASM 500

Pressure Relief Procedure



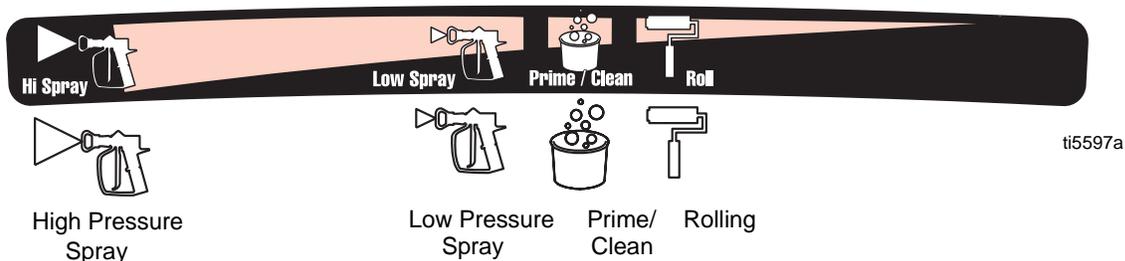
Follow the Pressure Relief Procedure whenever you see this symbol.



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

1. Turn power switch OFF and unplug power cord.
 2. Turn Prime/Spray valve to PRIME to relieve pressure.
 3. Hold gun firmly to side of pail. Trigger the gun to relieve pressure.
 4. Engage trigger lock.
- NOTE:** Leave Prime/Spray valve in the PRIME position until you are ready to spray again.
5. If you suspect the spray tip or hose is clogged or that pressure has not been fully relieved:
 - a. VERY SLOWLY loosen the tip guard retaining nut or the hose end coupling to relieve pressure gradually.
 - b. Loosen the nut or coupling completely.
 - c. Clear hose or tip obstruction.

Pressure Control Knob Settings



High Pressure Spray

Low Pressure Spray

Prime / Clean

Rolling

To select function, align symbol on pressure control knob with setting indicator on sprayer.

General Repair Information

				
<p>Flammable materials spilled on hot, bare, motor could cause fire or explosion. To reduce risk of burns, fire or explosion, do not operate sprayer with cover removed. To reduce risk of serious injury, including electric shock:</p> <ul style="list-style-type: none"> • Do not touch moving or electric parts with fingers or tools while testing repair. • Unplug sprayer when power is not required for testing. <p>Install all covers, gaskets, screws and washers before you operate sprayer.</p>				

- Keep all screws, nuts, washers, gaskets, and electrical fittings removed during repair procedures. These parts usually are not provided with replacement kits.
- Test repairs after problems are corrected.
- If sprayer does not operate properly, review repair procedure to verify you did it correctly. See **Basic Troubleshooting**, page 12 and **Advanced Troubleshooting**, page 17.
- Overspray may build up in the air passages. Remove any overspray and residue from air passages and openings in the enclosures whenever you service sprayer.
- Do not operate the sprayer without the cover in place. Replace if damaged. Covers direct cooling air around motor to prevent overheating.

NOTICE

- Do not run sprayer dry for more than 30 seconds. Doing so could damage pump packings.
- Protect the internal drive parts of this sprayer from water. Openings in the cover allow for air cooling of the mechanical parts and electronics inside. If water gets in these openings, the sprayer could malfunction or be permanently damaged.
- Prevent pump corrosion and damage from freezing. Never leave water or water-base paint in sprayer when its not in use in cold weather. Freezing fluids can seriously damage sprayer. Store sprayer with Pump Armor to protect sprayer during storage.

Basic Troubleshooting



Check everything in this Basic Troubleshooting table before you bring the sprayer to a Graco/Airlessco authorized service center.

Problem	Cause	Solution
Power switch is on and sprayer is plugged in, but motor does not run, and pump does not cycle.	Pressure is set at zero pressure.	Turn pressure control knob clockwise to increase pressure setting.
	Electric outlet is not providing power.	<ul style="list-style-type: none"> • Check that lighted plug on sprayer is lit (this indicates electric power at outlet). • Reset building circuit breaker or replace fuse.
	Extension cord is damaged.	Replace extension cord. Read Grounding and Electric Requirements , page 7.
	Sprayer electric cord is damaged.	Check for broken insulation or wires. Replace electric cord if damaged.
	Motor or control is damaged.	Take sprayer to Graco/Airlessco authorized service center.

Problem	Cause	Solution
Pump does not prime.	Prime/Spray Valve is in SPRAY position.	Turn Prime/Spray Valve to PRIME position (pointing down).
	Inlet screen is clogged or suction tube is not immersed.	Clean debris off inlet screen and make sure suction tube is immersed in fluid.
	Pump was not primed with flushing fluid.	Remove suction tube from paint. Prime pump with water or solvent-based flushing fluid, see Operation manual 3A0994.
	Inlet valve check ball is stuck.	Remove suction tube and place a pencil into the inlet section to dislodge the ball, press pump priming button, or Power Flush sprayer, see Operation manual 3A0994.
		SP300 and Mustang 3100: Auto Prime may need replacement. Turn power switch ON and listen for “tap” in pump. If you do not hear “tap”, AutoPrime is damaged. Take sprayer to Graco/Airlessco authorized service center.
	Inlet valve check ball or seat is dirty	Remove inlet fitting. Clean or replace ball and seat.
	Outlet valve check ball is stuck.	SP300, Mustang 3100: Insert screw driver in slot and remove Easy-Access door, page 8. Unscrew outlet valve with a 3/4 in. socket. Remove and clean assembly. SP200, Mustang 2400: Remove outlet fitting and clean outlet check ball.
	Suction tube is leaking.	Check suction tube for cracks and cuts. Make sure suction tube clamp is on hose. Replace suction tube if cracked or damaged.
Pump valves are worn.	Check for worn valves, see page 14.	

Problem	Cause	Solution
Pump cycles but does not build up pressure.	Prime/Spray valve in PRIME position (pointing down).	Turn Prime/Spray valve to SPRAY position (pointing forward).
	Pump is not primed.	Prime pump, see Operation manual 3A0994.
	Inlet screen is clogged or suction tube is not immersed.	Clean debris off inlet screen and make sure suction tube is immersed in fluid.
	Suction tube is leaking.	Check suction tube for cracks and cuts. Make sure suction tube clamp is on hose. Replace suction tube if cracked or damaged.
	Prime/Spray Valve is worn or obstructed with debris.	Take sprayer to Graco/Airlessco authorized service center.
	Pump check ball is stuck.	Read <i>Pump does not prime</i> section in Troubleshooting, page 13.
Pump cycles, but paint only dribbles or spurts when spray gun is triggered.	Pressure is set too low.	Slowly turn pressure control knob clockwise to increase pressure setting which will turn motor on to build pressure.
	Spray tip is clogged.	Unclog spray tip, see Operation manual 3A0994.
	InstaClean fluid filter is clogged. (SP300, Mustang 3100)	Clean or replace InstaClean fluid filter, see Operation manual 3A0994.
	Spray gun fluid filter is clogged.	Clean or replace gun fluid filter, see Operation manual 3A0994.
	Spray tip is too large or worn.	Replace tip.

Problem	Cause	Solution
Pressure is set at maximum but can not achieve a good spray pattern.	Spray tip is clogged.	Unclog spray tip, see Operation manual 3A0994.
	Reversible spray tip is in UNCLOG position.	Rotate arrow-shaped handle on spray tip so it points forward on gun.
	Spray tip is too large for sprayer.	Select smaller spray tip.
	Spray tip is worn beyond capability of sprayer.	Replace spray tip.
	Extension cord is too long or not heavy enough gauge.	Replace extension cord. See Grounding and Electrical Requirements , page 7.
	Spray gun fluid filter is clogged.	Clean or replace spray gun fluid filter, see Operation manual 3A0994.
	InstaClean fluid filter is clogged. (SP300/Mustang 3100)	Clean or replace InstaClean fluid filter, see Operation manual 3A0994.
	Inlet screen is clogged.	Clean debris off inlet screen.
	Pump valves are worn.	Check for worn pump valves. Prime sprayer with paint Trigger gun momentarily. When trigger is released, pump should cycle momentarily and stop. If pump continues to cycle, pump valves may be worn.
	Hose is too long (if extra section is added).	Remove extra section of hose.
Spray gun stopped spraying. Pump is not cycling.	Spray tip is clogged.	Unclog spray tip, see Operation manual 3A0994.
When paint is sprayed, it runs down the wall or sags.	Coat is going on too thick.	Move gun faster.
		Choose a tip with smaller hole size.
		Choose tip with wider fan.
		Make sure gun is far enough from surface.
When paint is sprayed, coverage is inadequate.	Coat is going on too thin.	Move gun slower.
		Choose tip with larger hole size.
		Choose tip with narrower fan.
		Make sure gun is close enough to surface.

Problem	Cause	Solution
Fan pattern varies dramatically while spraying. OR Sprayer does not turn on promptly when resuming spraying.	Pressure control switch is worn and causing excessive pressure variation.	Take sprayer to Graco/Airlessco authorized service center.
Cannot trigger spray gun.	Spray gun trigger lock is locked.	Rotate trigger safety lever to unlock trigger lock, page 10.
Paint is coming out of pressure control switch.	Pressure control switch is worn.	Take sprayer to Graco/Airlessco authorized service center.
Prime/Spray valve actuates automatically relieving pressure through prime tube.	System is over pressurizing.	Take sprayer to Graco/Airlessco authorized service center.
Paint leaks down outside of pump.	Pump packings are worn.	Take sprayer to Graco/Airlessco authorized service center.
Motor is hot and runs intermittently. Motor automatically shuts off due to excessive heat. Damage can occur if cause is not corrected. See Thermal Overload , page 7.	Vent holes in enclosure are plugged or sprayer is covered.	Keep vent holes clear of obstructions and overspray and keep sprayer open to air.
	Extension cord is too long or not a heavy enough gauge.	Replace extension cord. Read Grounding and Electrical Requirements , page 7.
	Unregulated electrical generator being used has excessive voltage.	Use electrical generator with a proper voltage regulator. Sprayer requires 120VAC, 60 Hz, 1500-Watt generator.

Advanced Troubleshooting



See **Basic Troubleshooting** first, page 12 for problems that are more easily remedied.

General Problem: Motor Does Not Operate

Specific Problem	Cause	Solution
Power switch is on and sprayer is plugged in; pump does not cycle.	See Basic Troubleshooting , page 12.	
Basic mechanical problems.	Paint is frozen or hardened in pump.	<p>Unplug sprayer from electrical outlet.</p> <p>If paint is frozen in sprayer:</p> <p>Do NOT try to start sprayer until completely thawed or you may damage the motor, control board, and/or drivetrain.</p> <ol style="list-style-type: none"> 1. Turn power switch OFF. 2. Place sprayer in warm area for several hours. 3. Plug sprayer in. 4. Turn power switch ON and flush sprayer with water or mineral spirits. <ol style="list-style-type: none"> d. Turn on sprayer. e. Turn prime valve to PRIME position. <p>If paint hardened in sprayer:</p> <p>SP300, Mustang 3100: Replace pump packings. See List of Kits, page 26.</p> <p>SP200, Mustang 2400: Replace complete pump. See List of Kits, page 26.</p> <p>Remove all residue from inlet and outlet valves.</p>
	Gears are damaged.	Remove motor enclosure and rotate motor fan to check for bad gears. If gears bind or slip, remove pump cover and replace failed gears. See List of Kits , page 26.
	SP300, Mustang 3100: Yoke is broken because pump is locked up due to dried paint or worn packings.	<p>Repair or replace using Gear/Yoke Kit. See List of Kits, page 26.</p> <p>Replace pump packings on SP300 sprayers. See List of Kits, page 26.</p>

Specific Problem	Cause	Solution
Basic electrical problems.	Motor overheated.	Allow motor to cool for 45 minutes. Retry.
	Electrical outlet is damaged.	Reset building circuit breaker or replace fuse. Try another outlet. Check electric supply with volt meter. Meter must read 85 to 130V AC. If voltage is too high, do not plug sprayer in until outlet is corrected.
	Control board leads are improperly fastened, improperly mated, or corroded.	Replace any loose terminals. Make sure all leads and harnesses are firmly connected. SP300, Mustang 3100: Check pressure control harness connection on front side of drive housing. Clean control board terminals. Securely reconnect leads.
	Motor brushes are worn.	Check length of BOTH brushes (brushes do not wear evenly on both sides of the motor). Brush length must be 0.25 in. (6.4mm). If brushes are worn replace motor using Motor Kit , page 26.
	Motor armature commutator damaged.	Check for burn spots, gouges and extreme roughness. If damaged or if shorts are evident, replace motor using Motor Kit , page 26.
	Fuse is blown.	Find cause for blown fuse before replacing. Turn the motor fan to check for a locked gear or pump. Use a continuity meter to check for a short to ground caused by a pinched wire. SP300, Mustang 3100: Replace the fuse with correct fuse kit. See List of Kits , page 26. SP200, Mustang 2400: The fuse is not replaceable. Replace control board. See List of Kits , page 26.
	Motor armature shorting.	Check for shorts. See Motor Diagnostics , page 23. If shorts are evident, replace motor using Motor Kit , page 26.
	Motor armature open circuit.	Check motor leads for continuity. If open circuit, check brushes. Use Motor Kit to replace motor. See List of Kits , page 26.
Control board damaged.	See Control Board Diagnostics , page 25. Replace control board if damaged using Control Board Kit , page 26.	
	CAUTION: Do not perform control board diagnostics until you have determined the armature is good. A damaged armature can burn out a good control board.	

Specific Problem	Cause	Solution
Sprayer Wiring Problems NOTE: Remove enclosure mounting screws and pull enclosure away from drive housing. Take care not to pull on leads from electrical cord and power switch.	Sprayer power cord damaged.	Unplug sprayer power cord. Disconnect black power cord wire at power switch. Unplug in-line connection white cord wire. Plug in power cord. Test voltage between black and white wires of power cord. Meter must read 85 to 130V AC. Replace power cord if no voltage.
	Sprayer power switch damaged.	<ol style="list-style-type: none"> 1. Unplug sprayer power cord. 2. Disconnect black control board wire at power switch. 3. Unplug in-line connection white cord wire. 4. Plug in power cord. 5. Turn power switch ON. 6. Test voltage between open terminal of power switch and white power cord wire. Meter must read 85 to 130V AC. 7. Replace power switch if no voltage.
	Motor thermal overload cutoff switch damaged. WARNING: See Startup Hazard After Thermal Overload on page 7.	<ol style="list-style-type: none"> 1. Unplug sprayer power cord. 2. Remove motor harness from control card. 3. Check for continuity between yellow leads or motor harness. (SP300, Mustang 3100) 4. If thermal relief switch is open (no continuity) allow motor to cool. 5. If switch remains open after motor cools, replace motor using Motor Kit, page 26. 6. If thermal relief switch closes after motor cools, find correct cause of overheating.

General Problem: Circuit Breaker is Tripping

Specific Problem	Cause	Solution
Building circuit breaker opens as soon as sprayer is turned on. NOTE: Remove enclosure mounting screws and pull enclosure away from drive housing. Take care not to pull on leads from electrical cord and power switch.	Sprayer electrical wiring is pinched or insulation is damaged.	Repair or replace any damaged wiring or terminals. Securely reconnect wires.
	Wires between pressure control switch and control board are pinched.	
	Motor armature is shorting.	Check for shorts. See Motor Diagnostics , page 23. If shorts are evident, replace motor using Motor Kit , page 26.
	Control board is damaged. CAUTION: Do not perform control board diagnostics until you have determined the armature is good. A bad motor armature can burn out a good motor control board.	See Control Board Diagnostics , page 25. Replace control board if damaged using Control Board Kit , page 26.
Building circuit breaker opens as soon as sprayer is plugged into outlet and sprayer is NOT turned on. NOTE: Remove enclosure mounting screws and pull enclosure away from drive housing. Take care not to pull on leads from electrical cord and power switch.	Sprayer power cord damaged.	Unplug sprayer power cord. Disconnect black power cord wire at power switch. Unplug in-line connection white cord wire. Plug in power cord. Test voltage between black and white wires of power cord. Meter must read 85 to 130V AC. Replace power cord if no voltage.
	Sprayer power switch damaged.	<ol style="list-style-type: none"> 1. Unplug sprayer power cord. 2. Disconnect black control board wire at power switch. 3. Unplug in-line connection white cord wire. 4. Plug in power cord. 5. Turn power switch ON. 6. Test voltage between open terminal of power switch and white power cord wire. Meter must read 85 to 130V AC. 7. Replace power switch if no voltage.
	Also see <i>Basic Electrical Problems</i> , and <i>Sprayer Wiring Problems</i> , pages 18 - 19.	

General Problem: Erratic Motor Operation

Specific Problem	Cause	Solution
Sprayer quits after running for 5 to 10 minutes	Building circuit is overloaded.	Remove other loads from building circuit or find another circuit that has less load. See Grounding and Electric Requirements , page 7.
	Electrical outlet supplying wrong voltage.	Try another outlet. Check electric supply with volt meter. Meter must read 85 to 130V AC. If voltage is too high, do not use outlet until corrected.
	Also see <i>Basic Electrical Problems</i> and <i>Sprayer Wiring Problems</i> , pages 18 - 19.	
	Motor is overheating. Warning: See Thermal Over load , page 7.	After motor cools, operate sprayer and determine if motor stops when trigger on gun is released. If sprayer runs continuously, replace Pressure Control . See List of Kits , page 26. Relieve pressure and remove motor enclosure. Turn motor fan by hand to check for binding gears or seized pump. See List of Kits , page 26.

General Problem: Low or Fluctuating Output

Pump cycles, but output is low or surging.	See Basic Troubleshooting , page 12.	
	Worn or obstructed inlet and outlet valves.	Check for worn pump valves as follows: Prime sprayer with paint. Turn the Prime/Spray valve to SPRAY position. Turn pressure control fully clockwise. Trigger spray gun briefly. When spray gun trigger is released pump should cycle momentarily and stop. If pump continues to cycle, pump valves may be worn or obstructed. For replacement inlet and outlet valve kits, see List of Kits , page 26.
	Prime/Spray valve is leaking out drain line when Prime/Spray valve is in SPRAY position.	Check Prime/Spray valve for debris trapped on seat and for worn parts. Torque to 130-180 in-lb (15.8-18.1 N•m). Replace if parts are worn using Prime/Spray Valve Kit , page 26.
	Voltage from electrical outlet is too low. Low voltages reduce sprayer performance.	Check voltage of outlet. Meter must read 85 to 130V AC.
	Extension cord is too long or not heavy enough gauge.	Replace extension cord. See Grounding and Electrical Requirements , page 7.

Pump cycles, but output is low or surging.	Leads from motor or pressure switch to control board are damaged, loose, pinched, or overheated.	Be sure terminals are centered and firmly connected. Inspect for pinched wiring and wiring insulation and terminals for signs of overheating. Replace any loose terminals or damaged wiring. Securely reconnect terminals.
	Motor brushes are worn.	Check length of BOTH brushes (brushes do not wear evenly on both sides of the motor). Brush length must be 0.25 in. (6.4mm). If brushes are worn replace motor using Motor Kit , page 26.
	Motor brush springs are broken.	If springs are broken, replace motor using Motor Kit , page 26.
	Motor brushes are binding in brush holders.	Clean brush holders. Remove carbon dust with small cleaning brush.
	Motor stops before sprayer reaches correct pressure (stall pressure is too low).	Replace pressure control using Pressure Control Switch Kit , page 26.
	Control board is damaged. CAUTION: Do not perform control board diagnostics until you have determined the armature is good. A damaged armature can burn out a good control board.	See Control Board Diagnostics , page 25. If damaged, replace control board using Control Board Kit , page 26.
Motor runs and pump cycles, but pressure does not build up.	Intake valve or outlet valve is not seating properly.	Remove and clean inlet valves and outlet valves. Replace if necessary. See List of Kits , page 26.
	Pump packings are worn or damaged.	Check for leaking around pump. SP300, Mustang 3100: Replace pump packings. See List of Kits , page 26. SP200, Mustang 2400: Replace complete pump. See List of Kits , page 26.

General Problem: Excessive Pressure Build Up

Prime/Spray Valve actuates automatically, relieving pressure through drain tube.	Pressure control switch has pinched wires.	Replace pressure control switch using Pressure Control Switch Kit , page 26.
	Water or paint entered pressure control switch or shorted control board.	Use Pressure Control Switch Kit , to replace switch. See List of Kits , page 26.
	Control board failed.	See Control Board Diagnostics , page 25. Replace damaged control board using Control Board Kit , page 26.

Motor Diagnostics (SP200, Mustang 2400)



If Motor Diagnostics reveal a damaged motor or if motor brushes are shorter than 1/4 in. (6.4 mm) replace the motor using **Motor Kit**, page 26.

Setup

1. Unplug power cord and **Relieve Pressure**, page 10.
2. Remove enclosure and disconnect two black motor leads to control board (see **Wiring Diagram**, page 33).
3. Remove motor fan cover by gently prying up on retention tabs on sides of motor. Motor shaft should spin easily when turning fan. If motor shaft does not turn easily, there is a problem with pump, gears, or motor (see **Troubleshooting**, page 12).
4. Inspect motor windings for evidence of overheating. If windings appear burnt and motor smells, replace motor.
5. Use Ohmmeter to measure resistance across two black motor leads. Resistance of motor should fall within range of 1.5 to 4.5 ohms. If motor falls outside resistance range or is open circuit, replace motor.
6. Use Ohmmeter to measure resistance of motor leads to motor laminations. If resistance is not open circuit, replace motor.
7. Inspect length of both brushes by looking at brush torsion spring. If spring is not bottomed out in slot for brush spring, brush length is acceptable. If brushes are worn out, replace motor.

Motor Diagnostics (SP300, Mustang 3100)



Check for electrical continuity in motor armature, windings and brush as follows:

If Motor Diagnostics reveal a damaged motor or if motor brushes are shorter than 1/4 in. (6.4 mm) or if the motor shaft cannot turn, replace the motor using **Motor Kit**, page 26.

Setup

1. **Relieve Pressure**, page 10.
2. Unplug electric cord.
3. Remove enclosure and disconnect motor leads from control card.
4. Remove fan brace.
5. Remove four screws and front cover.
6. Remove yoke and guide rods.
7. Remove gear.

Armature Short Circuit Spin Test

Quickly turn motor fan by hand. There should not be electrical shorts and fan should coast two or three revolutions before stopping. If fan does not spin freely, armature is shorted. Replace motor using **Motor Kit**, page 26.

Armature, Brushes and Motor Wiring Open Circuit Test (Continuity)

1. Connect red and black motor leads together with test lead.
2. Turn motor fan by hand, about two revolutions per second.
3. If there is an uneven resistance or no resistance, replace motor using **Motor Kit**, page 26.

Pressure Control Switch Diagnostics

SP200, Mustang 2400, SP300, Mustang 3100

If pressure control switch diagnostics reveal a damaged pressure control, replace it with the correct **Pressure Control Switch Kit**, see page 26. SP200 and Mustang 2400 sprayers have different pressure control kits because stall pressure is preset at the factory.

1. Unplug power cord and **Relieve Pressure**, page 10.
2. If paint is leaking from pressure control switch between pressure control knob and base, replace pressure control switch.
3. **SP300 and Mustang 3100:** Remove front cover, yoke, and pins. Disconnect pressure control switch connector from control board.

SP200 and Mustang 2400: Remove enclosure and disconnect pressure control switch connector from control board. Use finger to support control board when removing pressure control switch connector.
4. Use ohmmeter to check for no continuity between sprayer ground and both pressure control terminals in connector. If either pressure control switch lead is shorted to ground, pressure control switch wires have been pinched to ground during assembly and pressure control switch needs to be replaced.
5. Use Ohmmeter to measure across two terminals in pressure control connector. No continuity or open circuit should exist when pressure control knob is at lowest pressure setting (full counter-clockwise). Replace pressure control switch if continuity exists.
6. Using ohmmeter to measure across two terminals in pressure control connector. Continuity or closed circuit should exist when pressure control knob is set at maximum pressure (full clockwise). Replace pressure control switch if no continuity exists.

Control Board Diagnostics (SP300, Mustang 3100)

Check for motor problems before replacing control board. A damaged motor may burn out a good control card.

Check for a damaged control board or pressure control switch as follows:



1. **Relieve Pressure**, page 10.
2. Unplug electrical cord.
3. Remove four cover screws and front cover. Remove motor enclosure.
4. Remove yoke and guide rods.
5. Remove gear.
6. Remove pressure control harness from control board. Using tip of small, flat blade screwdriver, press tab on right side connector to release.
7. Attach harness from a pressure control switch you know is functioning correctly to control board.

Pressure control switch does not have to be installed in pump.

8. Turn pressure control adjustment knob (C) +to maximum pressure setting.
9. Plug electrical cord into 120VAC receptacle.
10. Turn power switch (B) ON.
 - If motor runs, replace pressure switch. **Pressure Control Switch Kit**, page 26.
 - If motor does not run, replace control board repeat test. **Control Board Kit**, page 26.

Control Board Diagnostics (SP200, Mustang 2400)

Check for motor problems before replacing control board. A damaged motor may burn out a good control card.



1. Unplug electrical cord and **Relieve Pressure**, page 10.
2. Remove enclosure and check all control board connectors for proper installation (see **Wiring Diagram**, page 33).
3. Check fuse on control board. If fuse is blown, determine the cause before replacing control board (see **Advanced Troubleshooting**, page 17).

Pump Diagnostics

NOTICE

To avoid damage, when repairing or cleaning the pump, never submerge pump in water or allow fluid to enter pressure control.

When pump packings wear, paint begins to leak down the outside of the pump. At the first sign of leakage, replace the pump or additional damage to the drive train could occur.

1. **SP200, Mustang 2400:** Replace pump using Pump Replacement (Complete). See **List of Kits**, page 26.

SP300, Mustang 3100: Replace pump using Pump Repair kit. See **List of Kits**, page 26.

2. If there is no paint leakage, see **Advanced Troubleshooting**, page 17. Pump may not be defective.

List of Kits

Kit Number	Models	Kit Description
289107	SP200, Mustang 2400, SP300, Mustang 3100	AutoPrime
16E829	SP200, Mustang 2400 (Series A, B, C)	Control Board
17L104	SP200, Mustang 2400 (Series D)	Control Board
288705	SP300, Mustang 3100	Control Board
244035	SP200, Mustang 2400, SP300, Mustang 3100	Drain Tube Diffuser
16E830	SP200, Mustang 2400	Enclosure (includes labels and screws)
288695	SP300, Mustang 3100	Enclosure (includes labels and screws)
287770	SP300, Mustang 3100	Fan Replacement
288747	SP300, Mustang 3100	Filter Kit (InstaClean™)
288692	SP300, Mustang 3100	Front Cover
119276	SP300, Mustang 3100	Fuse
16E835	SP200, Mustang 2400	Gear and Drive
289102	SP300, Mustang 3100	Gear/Yoke
245449	SP200, Mustang 2400	Hose 1/4 in. x 25 ft
HSE1450	SP300, Mustang 3100	Hose 1/4 in. x 50 ft
288716	SP200, Mustang 2400, SP300, Mustang 3100	Inlet Strainer
256212	SP300, Mustang 3100	Lacquer Conversion Kit
24K633	SP200, Mustang 2400 (Series A, B, C)	Leg, Left
24K632	SP200, Mustang 2400 (Series A, B, C)	Leg, Right
16E838	SP200, Mustang 2400	Motor, Cinderson
289104	SP300, Mustang 3100	Motor
257803	SP300, Mustang 3100	Power Cord (includes warning label)
244266	SP200, Mustang 2400	Pressure Control Switch
244267	SP300, Mustang 3100	Pressure Control Switch
235014	SP200, Mustang 2400, SP300, Mustang 3100	Prime/Spray Valve
16E844	SP200, Mustang 2400	Pump Inlet Valve
288700	SP300, Mustang 3100	Pump Inlet Valve
16E845	SP200, Mustang 2400	Pump Outlet Valve
243094	SP300, Mustang 3100	Pump Outlet Valve
288818	SP300, Mustang 3100	Pump Repair Kit
16F047	SP200, Mustang 2400	Pump Replacement
288703	SP300, Mustang 3100	Pump Replacement (Complete)
246802	SP200, Mustang 2400	Spray Gun
289316	SP300, Mustang 3100	Spray Gun
197607	SP200, Mustang 2400	Suction Tube
24J019	SP300, Mustang 3100	Suction Tube
16E835	SP200, Mustang 2400	Drive (for Cinderson Motor)
16E842	SP200, Mustang 2400 (Series A, B, C)	Power Cord (includes warning label)
16E846	SP200, Mustang 2400 (Series A, B, C)	Pump Replacement (Complete)
17L079	SP200, Mustang 2400 (Series D)	Pump Replacement (Complete)

Parts

SP200, Model 24F557 and Mustang 2400, Model 24F559 Parts List

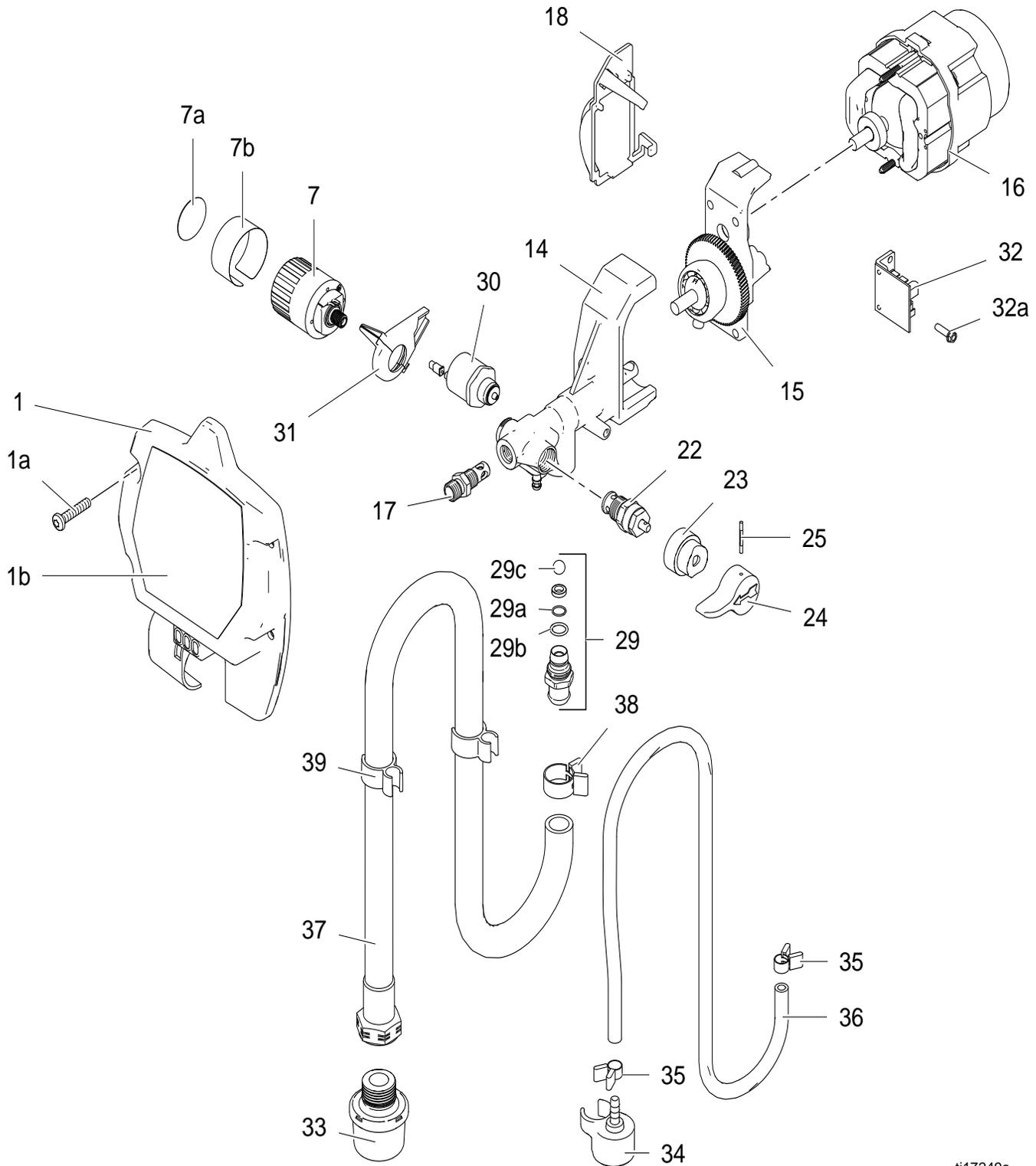
Ref.	Part	Description	Qty	Ref.	Part	Description	Qty
1		COVER, housing	.	36	195084	TUBE, drain	1
	16D672	Series A, B, C	1	37	197607	TUBE, suction	1
	17K540	Series D	1	38	116295	CLAMP, tube	1
1a	120724	SCREW	4	39	195400	CLIP, spring	2
1b	16F554	LABEL, SP200, front	1	40	118899	SWITCH, rocker, spdt	1
1b	16F732	LABEL, Mustang 2400, front	1	41		ENCLOSURE	
7	244266	KIT, pressure control (includes 7a, 7b)	1		16F616	Series A, B, C	1
					17K539	Series D	1
7a	15A464	LABEL, control	1	43	112689	SCREW, button, thd form	4
7b	16F635	LABEL	1	44	16D682	BRACKET, motor	1
14*	16F047	KIT, pump (includes 17, 29, 43)	1	47	24K633	KIT, left leg, (includes 2 screws, 47a, 47b)	1
15	16E835	DRIVE (for Cinderson motor)	1	47a	125116	SCREW, hex washer hd, thd form	4
16	16E838	KIT, motor	1	47b	102040	NUT, lock, hex	4
17	16E845	KIT, outlet valve	1	51	24K632	KIT, right leg, (includes 2 screws, 47a, 47b)	1
18	24E510	Cover, Gear	1	52	17H422	CUP, inlet drip	1
22	235014	KIT, drain valve	1	67	16E842	KIT, power cord, (includes 67a, 67b)	1
23	24E578	BASE, valve	1	67a	115498	SCREW, grounding	1
24	187625	HANDLE, valve, drain	1	67b▲	17K627	LABEL, warning	1
25	111600	PIN, grooved	1	68	16E212	WIRE, jumper	1
29	16E844	KIT, pump, inlet valve (includes 29a, 29b, 29c)	1	84	245449	HOSE, cpld, 1/4 in. x 25 ft	1
29a	124249	BALL, intake	1	85	246802	GUN, spray, Mustang 2	1
29b	103338	O-RING	1	85a	288748	KIT, gun filter, 60m/100m	1
29c	123849	SPRING, inlet	1	91	115648	VALVE, shutoff (not shown)	1
30	289107	KIT, solenoid (Series A, B, C)	1	92	245650	FLUID, pump Life, 8 oz (not shown)	1
	17L086	KIT, push prime (Series D)	1	93▲	179960	CARD, medical wallet (not shown)	1
31	15Y296	COVER, solenoid	1				
32		KIT, control board (includes 32a)					
	16E829	Series A, B, C	1				
	17L104	Series D	1				
32a	115477	SCREW, mach, torx	6				
33	288716	KIT, strainer	1				
34	244035	DEFLECTOR, barbed	1				
35	115489	CLAMP, drain tube	2				

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

* 16E846 Kit, Repair, Pump complete Available (Series A, B, C) (included 17, 22, 23, 24, 25, 29, 30)

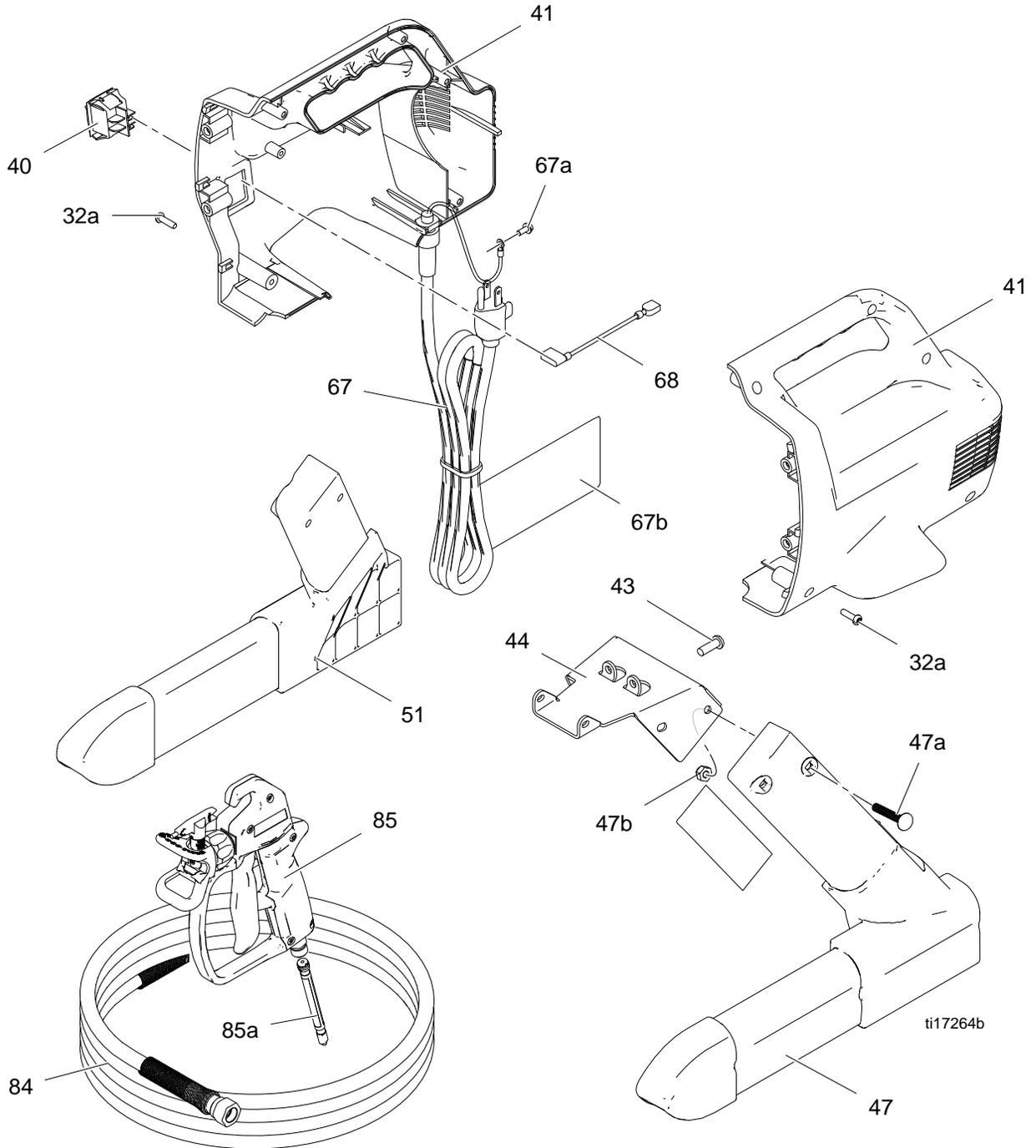
* 17L079 Kit, Repair, Pump complete Available (Series D) (included 7, 17, 22, 23, 24, 25, 29, 30)

SP200, Model 24F557 and Mustang 2400, Model 24F559



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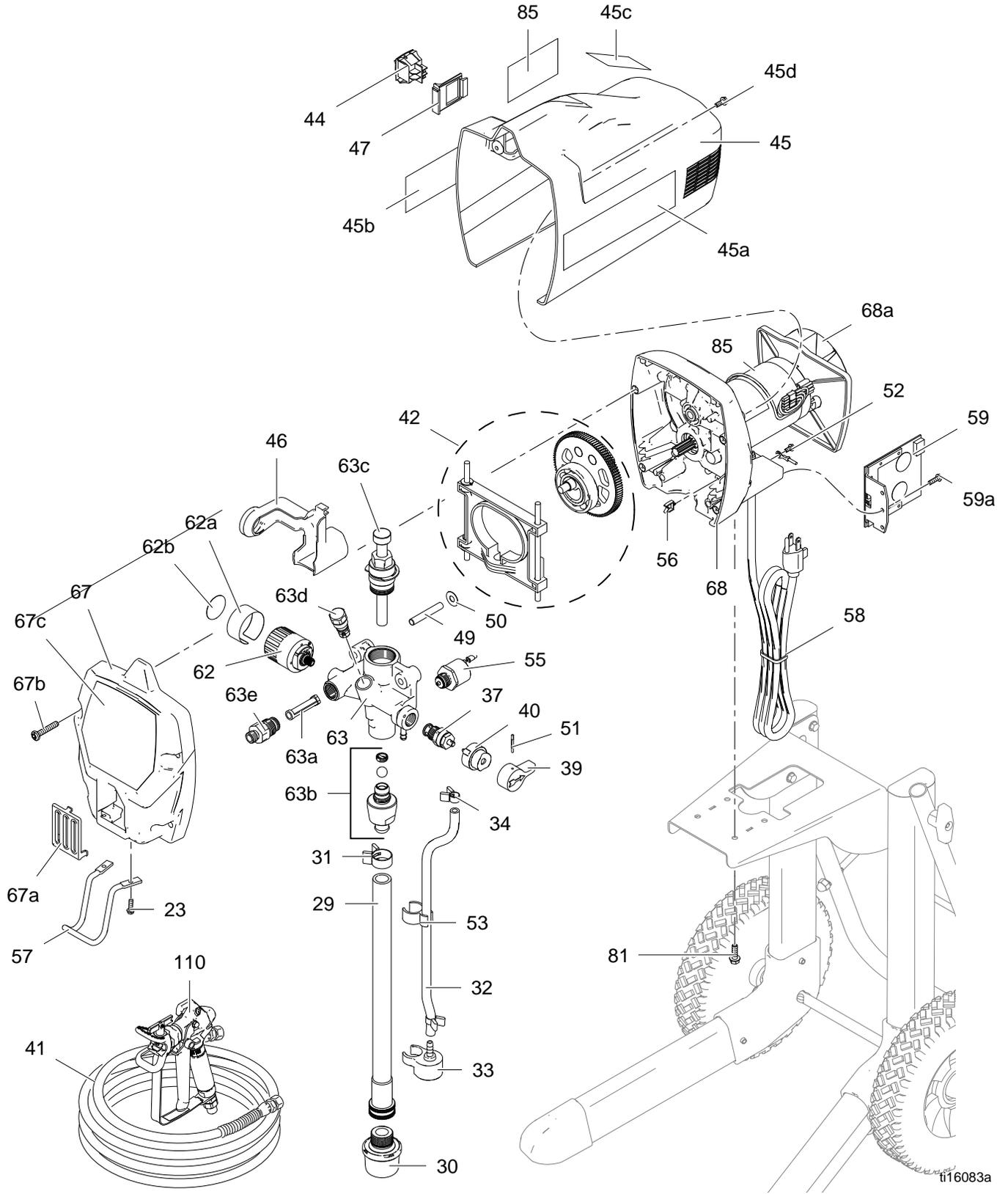
SP200, Model 24F557 and Mustang 2400, Model 24F559



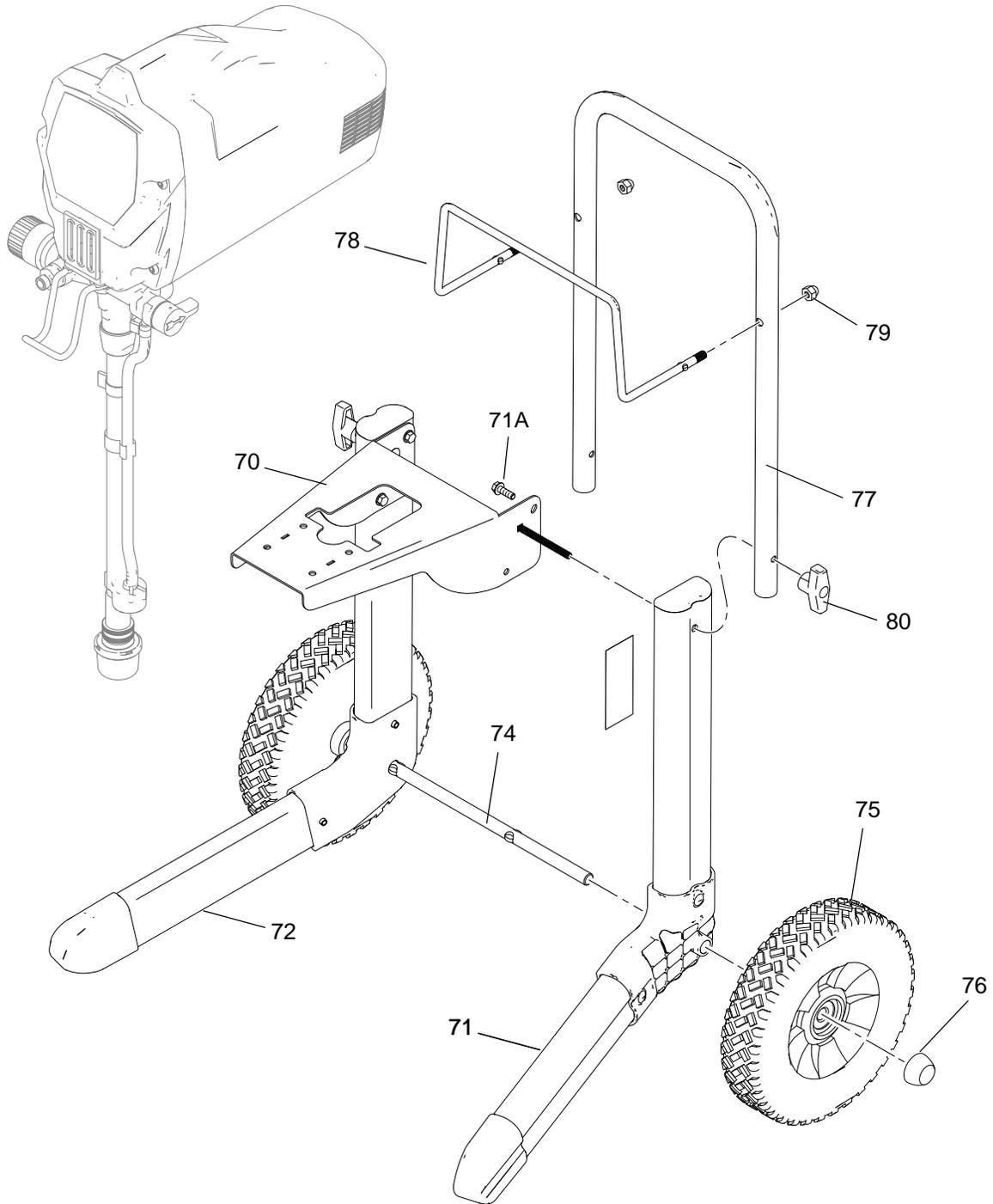
SP300, Model 24F558 and Mustang 3100, 24F560 Parts List

Ref.	Part	Description	Qty	Ref.	Part	Description	Qty
23	121939	SCREW, mach 8-16 x 5/8 in. plastite	4	68	16F733	LABEL, Mustang 3100, Front	.
29	16H348	SUCTION TUBE	1	68a	289104	KIT, motor, includes 68a	1
30	288716	KIT, Strainer	1	70	287770	KIT, fan	1
31	116295	TUBE CLAMP	1	71	16F372	SHELF, motor	1
32	195108	DRAIN TUBE	1	71a	262012	KIT, left leg, (includes 2 screws 71a)	1
33	244035	DEFLECTOR	1	71a	260212	SCREW, hex washer hd, thd form	4
34	115489	DRAIN TUBE CLAMP	2	72	262014	KIT, right leg, (includes 2 screws 71a)	1
37	235014	KIT, drain valve	1	73	120788	SCREW, carriage	2
39	115648	SHUTOFF VALVE (not shown)	1	74	15R602	AXLE, cart	1
40	187625	DRAIN VALVE HANDLE	1	75	115095	WHEEL, 9 in.	2
41	224807	BASE, valve	1	76	112612	CAP, hub	2
42	HSE1450	HOSE, cpd, 1/4 in. x 50 ft	1	77	16H354	HANDLE, cart	1
44	289102	KIT, gear and yoke	1	78	15J949	RACK, hose	1
45	118899	ROCKER SWITCH	1	79	120689	NUT, hex, acorn, 5/16 - 18 nickel	2
45a▲	16F614	Motor Shield	1	80	115480	KNOB, t-handle	2
45b▲	15K521	LABEL, warning skin injection	1	81	260212	SCREW, hw hd, thd form 1/4-20 x .75 in.	10
45c▲	15K522	LABEL, warning fire explosion	1	85		SERIAL LABEL	2
45d	15K520	LABEL, warning elec shock	1	92▲	179960	SIGN, warning (not shown)	1
	118444	SCREW, mach, hw hd 10-24 x .5 in.	2	110	289316	SPRAY GUN, 500	1
46	15J802	SOLENOID COVER	1	116	121939	SCREW, plastite	4
47	15J803	SWITCH BRACKET	1		245650	Fluid, Pumplife, 8 oz (not shown)	
49	194507	DOWEL PIN, 5/16	2	▲	15T069	LABEL, warning	
50	196001	WASHER	2	▲ Replacement Warning labels, tags, and cards are available at no cost.			
51	111600	PIN, grooved	1				
52	115498	SCREW, ground, 8-32 x .375 in. taptite	1				
53	195400	SPRING CLIP	1				
55	289107	KIT, solenoid	1				
56	119275	WIRE CLIP	1				
57	15J790	PAIL HOOK	1				
58	15J952	POWER CORD, lighted	1				
59	288705	KIT, control	1				
59a			1				
62	244267	KIT, pressure control, includes 62a, 62b	1				
62a	15K530	LABEL, Control	1				
62b	15A464	LABEL	1				
63	288703	KIT, pump, (complete) includes 37, 39, 40, 51, 63a, 63b, 63c, 63d, 63e	1				
63a	288747	KIT, filter	1				
63b	288700	KIT, pump inlet module	1				
63c	288818	KIT, packing repair	1				
63d	243094	KIT, pump outlet valve	1				
63e	195947	ADAPTER, filter	1				
67	288692	KIT, housing cover, includes 67a, 67b, 67c	1				
67a	15J809	COVER, pump outlet	1				
67b	115478	SCREW, mach, 1/4 x 20 x 1.375 in. taptite	4				
67c	16F555	LABEL, front, SP300	1				

SP300, Model 24F558 and Mustang 3100, 24F560



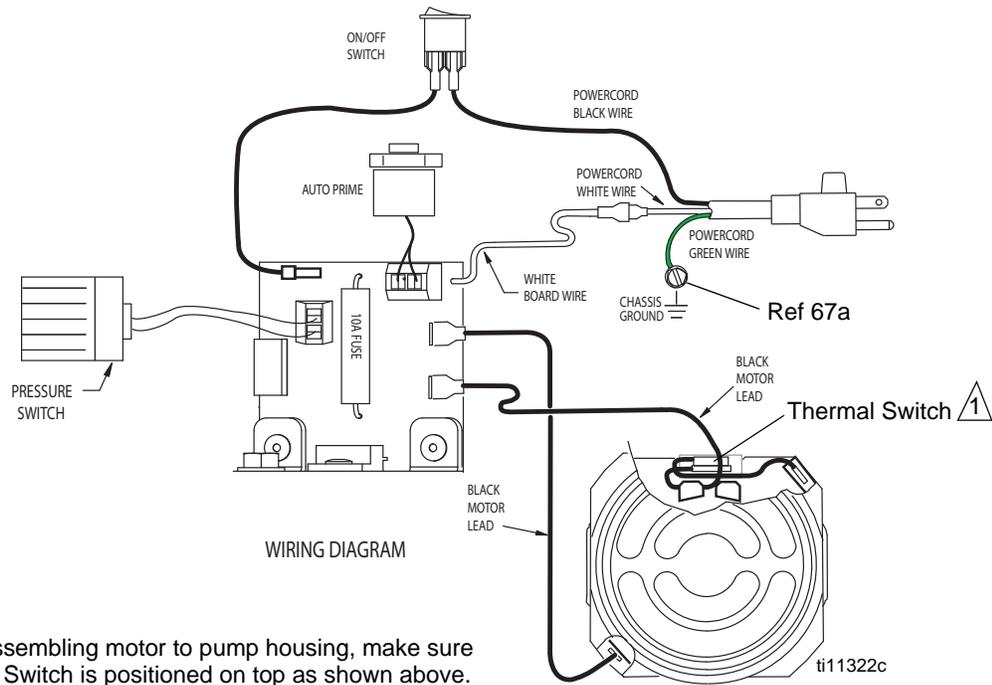
SP300, Model 24F558 and Mustang 3100, 24F560



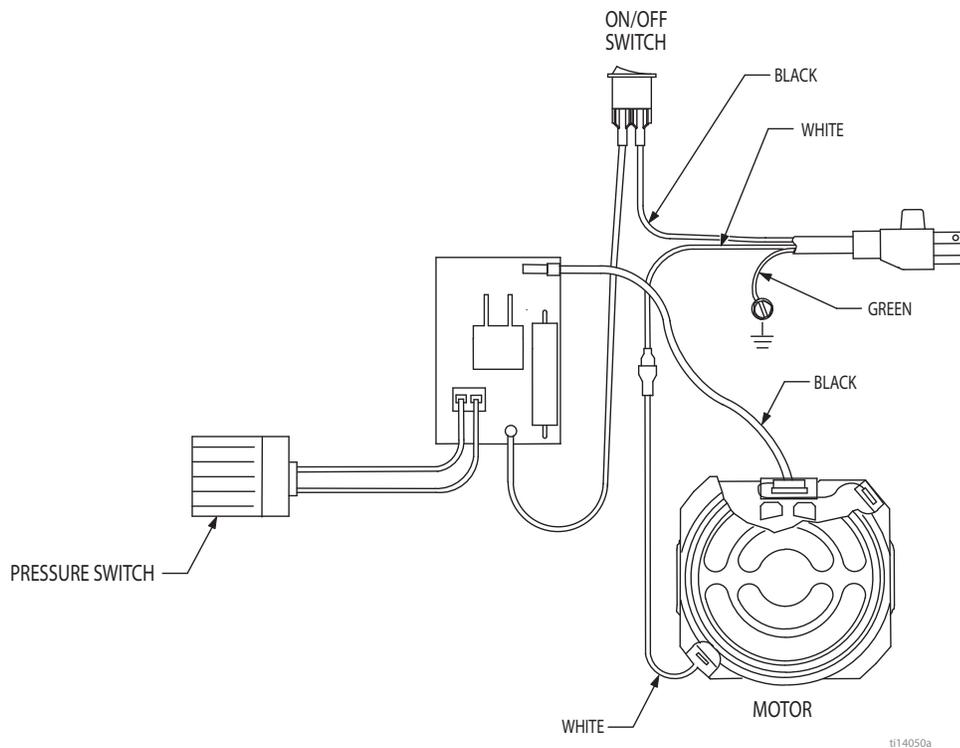
Wiring Diagrams

SP200, Model 24F557 and Mustang 2400, Model 24F559

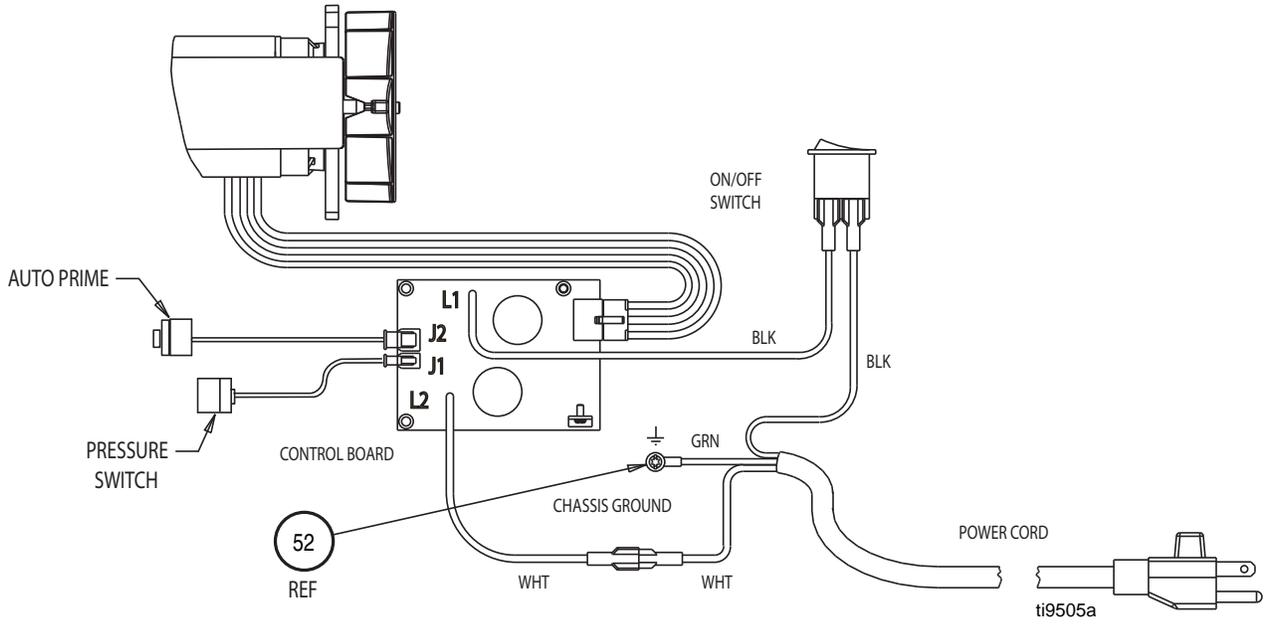
Series A, B, C



Series D



SP300, Model 24F558 and Mustang 3100, 24F560



WIRING DIAGRAM

Technical Data

SP200, Mustang 2400

Electrical Power Requirements	120 Vac, 60 Hz, 15A, 1 phase
Working Pressure Range	0 - 2800 psi (0-19 MPa, 0-193 bar)
Generator required	1500W minimum
Electric Motor	9.0A (open frame, universal)
Operating horsepower	1/2
Power Cord	18 AWG, 3-wire, 6 ft (1.8m)
Fluid inlet fitting	3/4 in. internal thread (standard garden hose thread)
Fluid outlet fitting	1/4 NPSM external thread
Inlet screen (on suction tube)	35 mesh (450 micron)
Maximum Delivery (with tip)	0.24 gpm (0.91 lpm)
Paint Hose	1/4 in. x 25 ft. (6.4 mm x 7.5 m)
Maximum tip hole size	0.015 in. (0.38 mm)
Weight, sprayer only	13.3 lb (6.0 kg)
Weight, sprayer, hose and gun	16.5 lb (7.5 kg)

Dimensions: Upright

Length	14.5 in. (36.8 cm)
Width	12.4 in. (31.5 cm)
Height	17.9 in. (45.5 cm)

Wetted Parts, pump and hose	stainless steel, brass, leather, ultra-high molecular weight polyethylene (UHMWPE), carbide, nylon, aluminum, PVC, polypropylene, fluoroelastomer
Wetted Parts, gun	aluminum, brass, carbide, nylon, plated steel, stainless steel, UHMWPE, zinc
Storage Temperature Range ♦❖	-30° F - 160° F (-35° C - 71° C)
Operating Temperature Range ✓	40° F - 115° F (4° C - 46° C)

- ♦ When pump is stored with non-freezing fluid. Pump damage will occur if water or latex paint freezes in pump.
- ❖ Damage to plastic parts may result if impact occurs in low temperature conditions.
- ✓ Changes in paint viscosity at very low or very high temperatures can affect sprayer performance.

SP300, Mustang 3100

Electrical Power Requirements	120 Vac, 60 Hz, 15A, 1 phase
Working Pressure Range	0 - 3000 psi (0-21 MPa, 0-207 bar)
Generator required	1500W minimum
Electric Motor	5.8A (permanent magnet DC)
Operating horsepower	3/4
Power Cord	16 AWG, 3-wire, 6 ft (1.8m)
Fluid inlet fitting	3/4 in. internal thread (standard garden hose thread)
Fluid outlet fitting	1/4 NPSM external thread
Inlet screen (on suction tube)	35 mesh (450 micron)
Maximum Delivery (with tip)	0.34 gpm (1.29 lpm)
Paint Hose	1/4 in. x 50 ft. (6.4 mm x 15 m)
Maximum tip hole size	0.017 in. (0.43 mm)
Weight, sprayer only	43 lb (20 kg)
Weight, sprayer, hose and gun	46 lb (21 kg)

Dimensions: Upright

Length	23.75 in. (60.32 cm)
Width	17.5 in. (44.45 cm)
Height	36.5 in. (92.71 cm)

Dimensions: Folded

Length	23.25 in. (59.05 cm)
Width	17.5 in. (44.45 cm)
Height	22.0 in. (55.88 cm)

Wetted Parts, pump and hose	stainless steel, brass, leather, ultra-high molecular weight polyethylene (UHMWPE), carbide, nylon, aluminum, PVC, polypropylene, fluoroelastomer
Wetted Parts, gun	aluminum, brass, carbide, nylon, plated steel, stainless steel, UHMWPE, zinc
Storage Temperature Range ♦❖	-30° F - 160° F (-35° C - 71° C)
Operating Temperature Range ✓	40° F - 115° F (4° C - 46° C)

- ♦ When pump is stored with non-freezing fluid. Pump damage will occur if water or latex paint freezes in pump.
- ❖ Damage to plastic parts may result if impact occurs in low temperature conditions.
- ✓ Changes in paint viscosity at very low or very high temperatures can affect sprayer performance.

Airlessco Standard Warranty

Airlessco warrants all equipment referenced in this document which is manufactured by Airlessco 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 Airlessco, Airlessco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Airlessco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Airlessco's written recommendations.

This warranty does not cover, and Airlessco 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-Airlessco component parts. Nor shall Airlessco be liable for malfunction, damage or wear caused by the incompatibility of Airlessco equipment with structures, accessories, equipment or materials not supplied by Airlessco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Airlessco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Airlessco distributor for verification of the claimed defect. If the claimed defect is verified, Airlessco 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.

Airlessco'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.

AIRLESSCO 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 Airlessco. These items sold, but not manufactured by Airlessco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Airlessco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Airlessco be liable for indirect, incidental, special or consequential damages resulting from Airlessco 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 Airlessco, or otherwise.

FOR AIRLESSCO CANADA CUSTOMERS

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

***TO PLACE AN ORDER OR FOR SERVICE, contact your Airlessco distributor,
or call 1-800-223-8213 to identify the nearest distributor.***

*All written and visual data contained in this document reflects the latest product information available at the time of publication.
Airlessco reserves the right to make changes at any time without notice.*

For patent information, see www.graco.com/patents

Original instructions. This manual contains English. MM 3A0997

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