



3A2361B

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Magnum M5 and L10 Airless Sprayer

**- For Portable Spray Applications Architectural Paints and Coatings -
- Not for use in explosive atmospheres -**

Models:

Magnum M5 (24M623) - Series A

Maximum Working Pressure: 207 bar, 21 MPa (3000 PSI)

Includes:

- 1.02 lpm (0.27 gpm) stand-mount sprayer
- SG3 gun - Manual 312830
- 0.635 cm (1/4 in.) x 7.5 m (25 ft) hose

Magnum L10 (24M624) - Series A

Maximum Working Pressure: 207 bar, 21 MPa (3000 PSI)



Includes:

- 1.17 lpm (0.31 gpm) cart-mount sprayer
- SG3 gun - Manual 312830
- 0.635 cm (1/4 in.) x 15 m (50 ft) hose



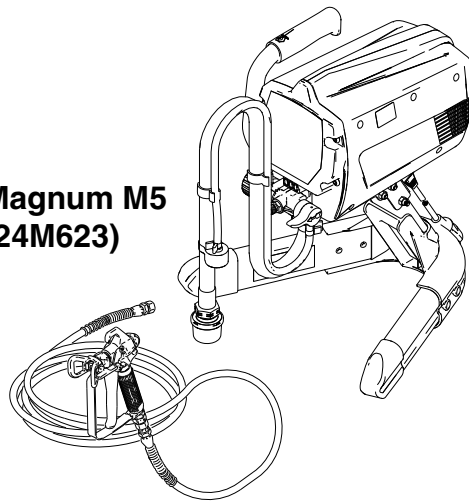
Important Safety Instructions

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

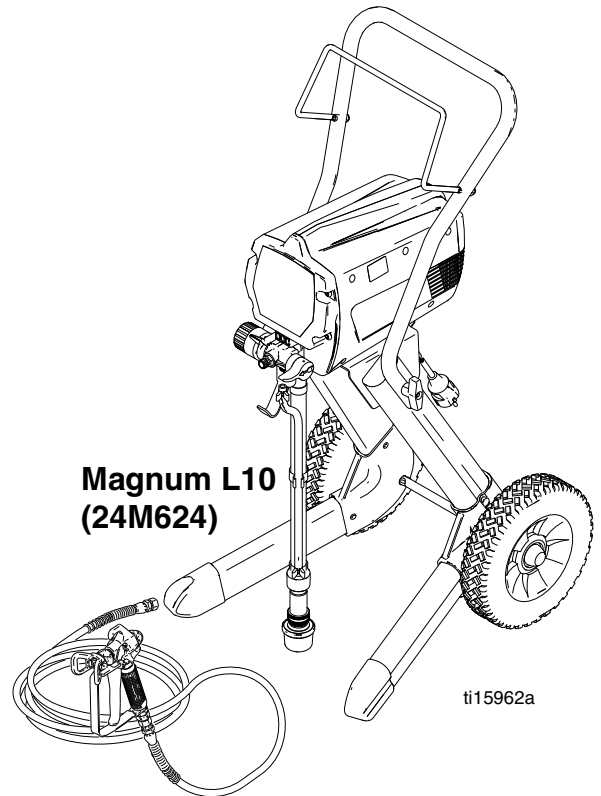
							
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- Use water-based or mineral spirit-type materials only. Do not use flammable materials. For more information about your material, request MSDS from distributor or retailer.
- Spraying combustible materials in a factory or fixed location must comply with NFPA 33 and OSHA 1910.94(c) requirements.

**Magnum M5
(24M623)**



**Magnum L10
(24M624)**



ti15962a



Specifications

This equipment is not intended for use with 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 combustible materials.

Model Name	Series	Dispense Rate gpm (lpm)	Hose Length and Diameter	Maximum Hose Length	Gun Model	Maximum Working Pressure		
						PSI	MPa	bar
Magnum M5	A	1.02 lpm (0.27 gpm)	6.4 mm x 7.5 m (1/4 in. x 25 ft)	23m (75 ft)	SG3	3000	21	207
Magnum L10	A	1.17 lpm (0.31 gpm)	6.4 mm x 15 m (1/4 in. x 50 ft)	30m (100 ft)	SG3	3000	21	207

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.

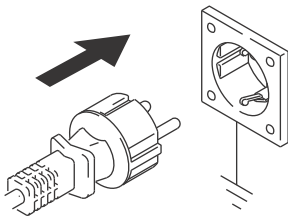
! WARNING



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.
- 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 230V circuit and has a grounding plug similar to the plug illustrated in the figure below.

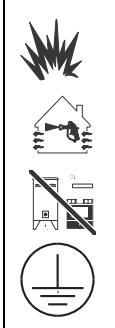


- Only connect the product to an outlet having the same configuration as the plug.
- Do not use an adapter with this product.

Extension Cords:

- Use only a 3-wire extension cord that has a grounding plug and a receptacle that accepts the plug on the product.
- Make sure your extension cord is not damaged. If an extension cord is necessary, use 15m (50 ft) 1.0 mm², 30m (100 ft) 1.5 mm², or 50m (164 ft) 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:

- Do not spray or clean with flammable materials [flash points lower than 100° F (38° C)]. Use water-based material or mineral spirits-type material only. For complete information about your fluid, request the MSDS from the fluid distributor or retailer.
- Do not spray combustible materials near an open flame or sources of ignition such as cigarettes, motors, and electrical equipment.
- 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 Graco 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 antistatic 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. Keep pump assembly in a well ventilated area. Do not spray pump assembly.
- Do not smoke in the spray area.
- 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 Material Safety Data Sheets (MSDS) 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.
- Sprayer generates sparks. When combustible materials are used in or near the sprayer or for flushing or cleaning, keep sprayer at least 20 feet (6 m) away from explosive vapors.



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 at main switch before disconnecting any cables and before servicing equipment.
- Connect only to grounded power source.
- All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.











PRESSURIZED EQUIPMENT HAZARD

Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.

- Follow the **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.

! WARNING

  	<p>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.</p> <ul style="list-style-type: none"> • Do not spray without tip guard and trigger guard installed. • Engage trigger lock when not spraying. • 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. • Follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses and couplings daily. Replace worn or damaged parts immediately.
	<p>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.</p> <ul style="list-style-type: none"> • Read MSDSs 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>PRESSURIZED ALUMINUM PARTS HAZARD 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. • Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.
	<p>RECOIL HAZARD Gun may recoil when triggered. If you are not standing securely, you could fall and be seriously injured.</p>
 	<p>EQUIPMENT MISUSE HAZARD Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • 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 from distributor or retailer. • Do not leave the work area while equipment is energized or under pressure. Turn off all equipment and follow the Pressure Relief Procedure when equipment is not in use. • Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only. • Do not alter or modify equipment. • Use equipment only for its intended purpose. Call your 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.

WARNING



STARTUP HAZARD AFTER THERMAL OVERLOAD

Motor has thermal overload switch to shut itself down if overheated. To reduce risk of injury from motor restarting unexpectedly when it cools, always turn power switch OFF if motor shuts down.



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, hearing loss, inhalation of toxic fumes, and burns. This equipment includes but is not limited to:

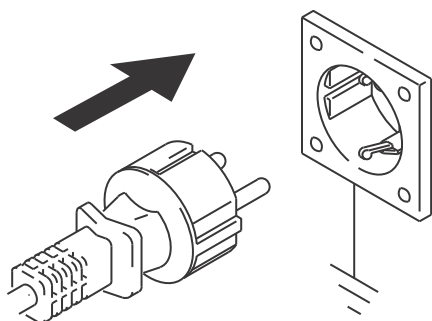
- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

Grounding Instructions

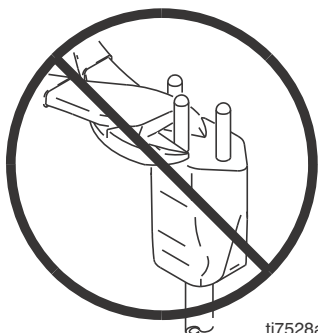


1. This sprayer requires 220-240 VAC, 50/60 Hz 10A circuit with a grounding receptacle. Never use an outlet that is not grounded.

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2. Do not use sprayer if electrical cord has damaged ground prong.



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3. Do not use an extension cord with damaged ground plug.

Recommended extension cords:

- 15 m (50 ft) 1.0 mm²
- 30 m (100 ft) 1.5 mm²
- 50 m (164 ft) 2.5 mm²

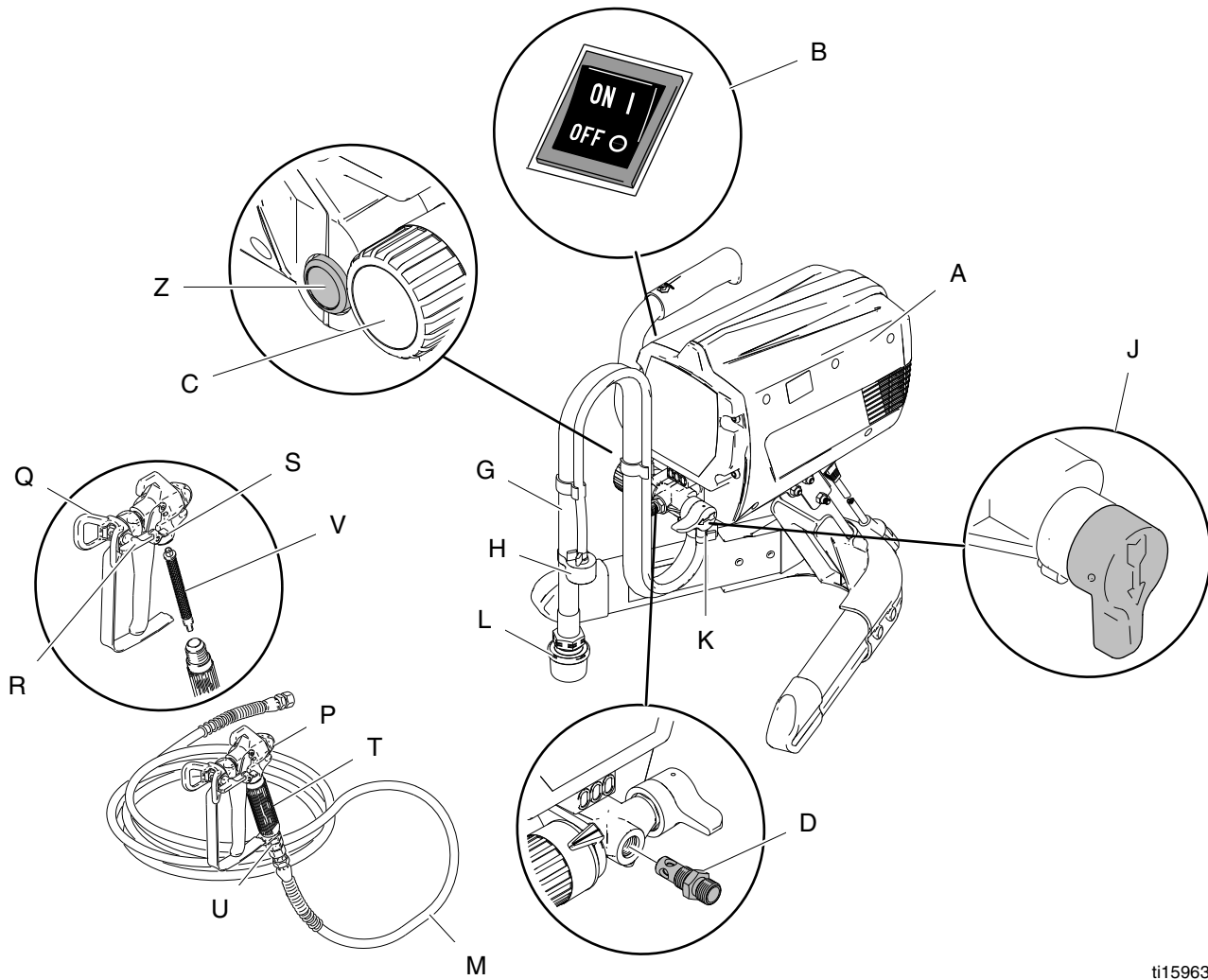
4. Smaller gauge or longer extension cords may reduce sprayer performance.

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 (24M623) M5

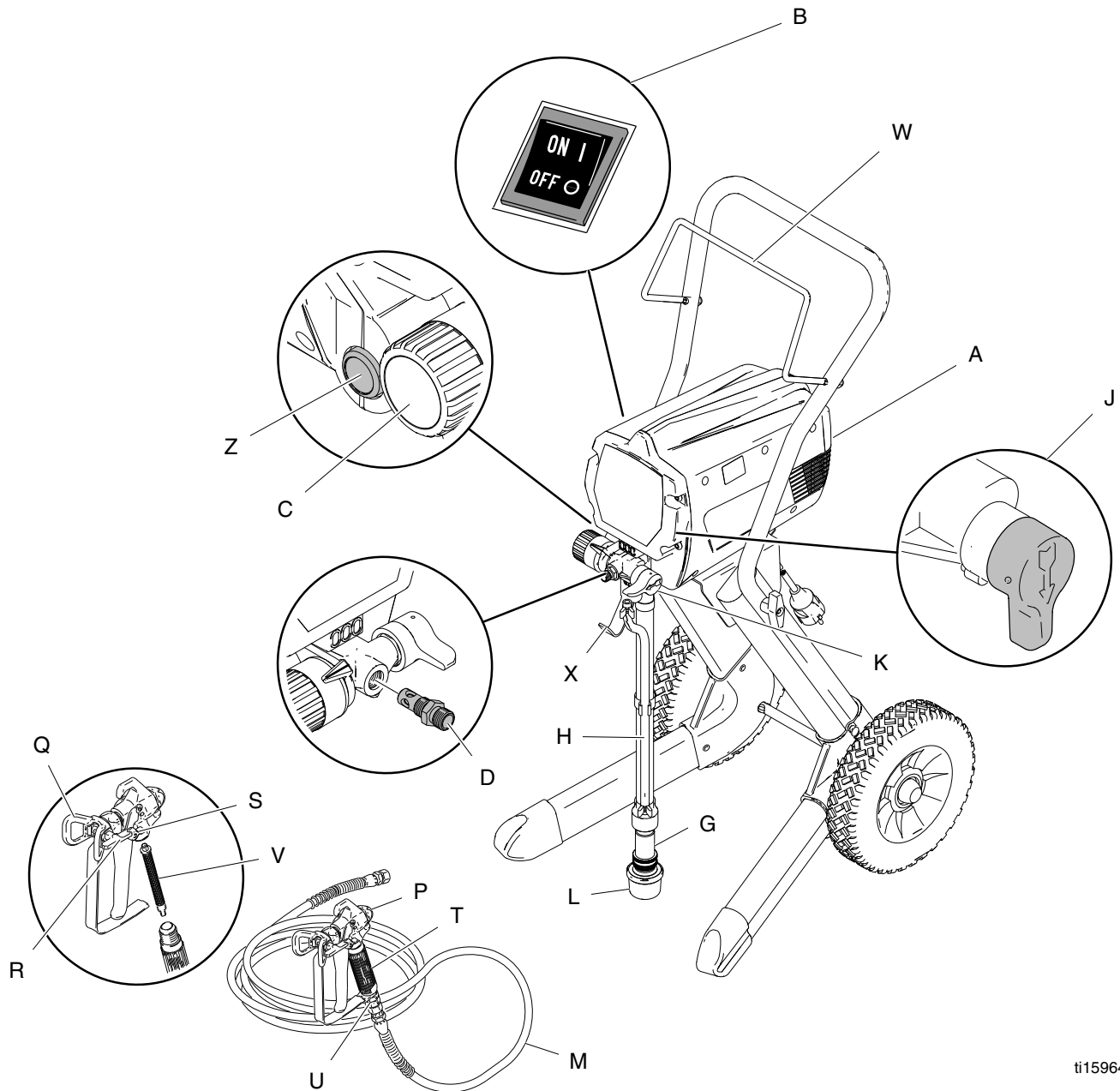


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A	Electric motor (inside enclosure)
B	Power switch
C	Pressure control knob
D	Pump fluid outlet fitting
G	Suction Tube
H	Prime tube (with diffuser)
J	Prime/Spray valve control
K	Fluid inlet connection and inlet valve
L	Inlet screen

M	Paint hose
P	SG3 airless spray gun
Q	Tip guard
R	Reversible spray tip
S	Trigger safety lever
T	Gun fluid inlet fitting
U	Smooth Glide™ swivel
V	Gun fluid filter (in handle)
Z	Pump Priming Button

Component Identification (24M624) L10

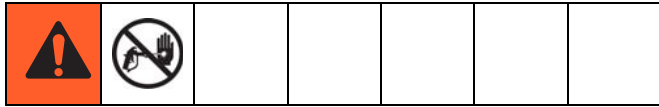


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A	Electric motor (inside enclosure)
B	Power switch
C	Pressure control knob
D	Pump fluid outlet fitting
G	Suction Tube
H	Prime tube (with diffuser)
J	Prime/Spray valve control
K	Fluid inlet connection and inlet valve
L	Inlet screen
M	Paint hose

P	SG3 airless spray gun
Q	Tip guard
R	Reversible spray tip
S	Trigger safety lever
T	Gun fluid inlet fitting
U	Smooth Glide™ swivel
V	Gun fluid filter (in handle)
W	Hose/cord wrap bracket
X	Pail hanger
Z	Pump Priming Button

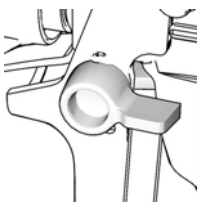
General Repair Information



Trigger Lock

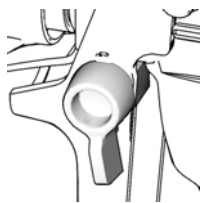
Always engage the trigger lock when you stop spraying to prevent the gun from being triggered accidentally by hand or if dropped or bumped.

Trigger Locked



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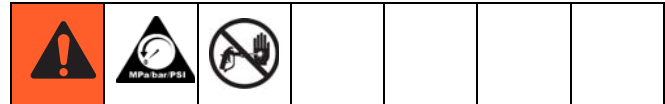
Trigger Unlocked



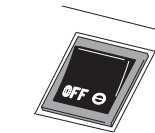
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Pressure Relief Procedure

Follow this **Pressure Relief Procedure** whenever you stop spraying and before cleaning, checking, servicing, or transporting equipment.

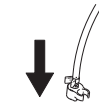


1. Turn OFF power switch.



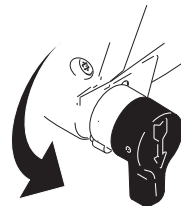
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2. Place prime tube in waste pail.



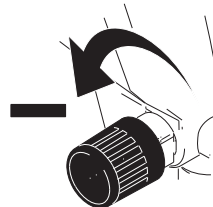
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3. Turn Prime/Spray valve to PRIME.



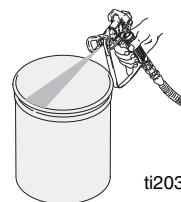
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4. Turn pressure control knob left (minimum pressure).



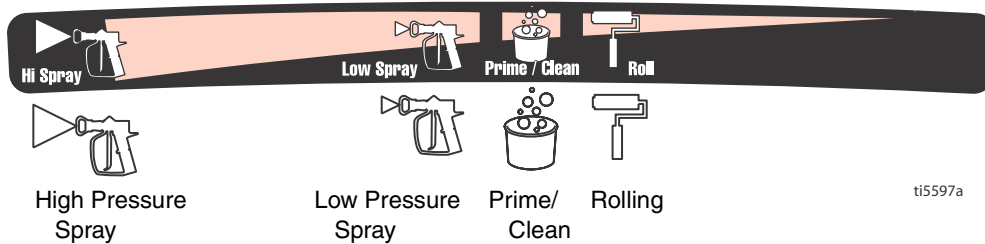
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5. Trigger gun into bucket to relieve pressure in hose.



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Pressure Control Knob Settings

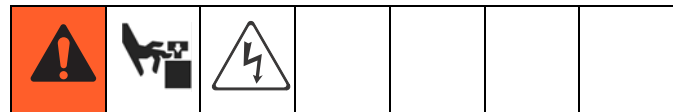


To select function, align symbol on pressure control knob with setting indicator on sprayer.



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.

- 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 **Troubleshooting**, page 12.
- 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.



To reduce risk of serious injury, including electric shock:

- Do not touch moving or electric parts with fingers or tools while testing repair.
- Unplug sprayer when power is not required for testing.
- Install all covers, gaskets, screws and washers before you operate sprayer.

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.

Troubleshooting



Problem	Cause	Solution
Pump will not prime HINT: <ul style="list-style-type: none"> Attempt to free check balls by pushing pump priming button. Attempt to free check balls by tapping side of inlet valve as sprayer is stroking. Strain paint before spraying. Keep sand and debris out. Thoroughly flush after every paint job. Do not store in water. Use Pump Armor or mineral spirits. 	Prime/Spray valve set at SPRAY.	Turn Prime/Spray valve to PRIME.
	Inlet screen clogged.	Clean debris off inlet screen.
	Suction tube is not immersed.	Reposition suction tube in bottom of paint pail.
	Inlet valve check ball stuck.	Press pump priming button two times to dislodge the ball.
		Remove tube. Insert end of pencil into inlet section to dislodge ball. Press pump priming button, page 8. OR Power Flush unit.
	Outlet valve check ball stuck.	Unscrew outlet valve. Remove and clean assembly.
	Suction tube is leaking.	Tighten suction tube connection. Inspect for cracks or vacuum leaks.
Prime/Spray valve clogged.	Clean/replace drain tube as necessary. Return sprayer to Graco/MAGNUM authorized service center if drain valve is clogged.	
Power switch is on and sprayer is plugged in but pump does not cycle.	Pressure set at minimum.	Turn pressure control knob right to increase pressure.
	Electrical outlet is not providing power.	<ul style="list-style-type: none"> Try a different outlet OR test outlet by plugging something in that you know is working. Reset building circuit breaker or replace fuse.
	Damaged extension cord.	Replace extension cord. See Grounding Instructions, page 7.
	Damaged sprayer electrical cord.	Check for broken insulation or wires. Replace damaged electrical cord.
	Motor or control damaged.	Return sprayer to authorized Graco service center.
	Paint frozen or hardened in pump.	Unplug sprayer from electrical outlet. If paint is frozen in sprayer: Do NOT try to start frozen sprayer. Thaw completely or you may damage motor, control board and/or drivetrain. 1 Turn OFF power switch. 2 Place sprayer in warm area for several hours. 3 Plug in and turn on sprayer. 4 Slowly increase pressure until motor starts. If paint hardened in sprayer: 1 Replace pump packings. 2 Remove all residue from valves and passages.

Problem	Cause	Solution
Pump cycles but pressure does not build up.	Pump not primed.	Prime pump.
	Inlet screen clogged.	Clean debris off inlet screen
	Suction tube not immersed.	Reposition suction tube in bottom of paint pail.
	Paint pail empty.	Refill paint pail and reprime sprayer.
	Suction tube has vacuum air leak.	Tighten suction tube connection. Inspect for cracks or vacuum leaks. If cracked or damaged, replace.
	Pump check valves are dirty or damaged.	Return sprayer to Graco/MAGNUM authorized service center.
	Prime/Spray valve worn or obstructed with debris.	
	Pump check ball stuck.	See "Pump will not prime" section of Troubleshooting table. Press pump priming button two times.
Cannot pull gun trigger.	Gun trigger safety engaged.	Remove gun trigger safety
Gun stops spraying.	Spray tip clogged.	<ol style="list-style-type: none"> 1 Turn arrow-shaped handle to unclog position. 2 Aim gun into waste pail. 3 Squeeze trigger. 4 Return arrow-shaped handle to spray position and begin spraying.
Pump cycles but paint only dribbles or spurts when trigger is pulled.	Pressure is set too low.	Turn pressure control knob right to increase pressure.
	Spray tip clogged.	Clean tip. See "Gun stops spraying" section of Troubleshooting table.
	Spray tip too large or worn.	Replace tip.
	Gun filter clogged.	Clean or replace gun filter.
	Fluid filter is clogged.	Clean or replace fluid filter.
	Pump check ball stuck.	See "Pump will not prime" section of Troubleshooting table.
Pressure set at maximum, but cannot achieve good spray pattern.	Tip is too large for sprayer.	Select smaller tip.
	Tip is worn beyond capability of sprayer.	Replace tip.
	Gun filter clogged.	Clean or replace gun filter.
	Inlet screen clogged.	Clean debris off inlet screen.
	Pump valves worn.	Check for worn pump valves: <ol style="list-style-type: none"> 1 Prime sprayer with paint. 2 Trigger gun momentarily. When trigger is released, pump should cycle and stop. 3 If pump continues to cycle, pump valves may be worn. 4 Return sprayer to Graco/MAGNUM authorized service center.
	Fluid filter clogged.	Clean or replace fluid filter.
	Extension cord too long or not heavy enough gauge.	Replace cord, Grounding Information, page 7.

Problem	Cause	Solution
Sprayed paint runs down wall or sags.	Going on too thick.	Move gun faster.
		Use tip with smaller hole size.
		Use tip with wider fan.
		Move gun away from surface.
Sprayed paint is not covering.	Going on too thin.	Move gun slower.
		Use tip with larger hole size.
		Use tip with narrower fan.
		Move gun closer to surface.
Pattern is inconsistent or leaving stripes. HINT: Thin paint slightly with water/solvent.	Pressure set too low.	Turn pressure control knob right to increase pressure.
	Spray tip worn beyond capability of sprayer.	Replace tip.
Motor is hot and runs intermittently. <i>This is a Thermal Overload condition. Motor will automatically shut off due to excessive heat. Damage can occur if cause is not corrected.</i>	Vent holes in shroud are clogged or sprayer is covered.	Clear vent holes.
	Extension cord too long or not heavy enough gauge.	Replace cord, Grounding Instructions, page 7.
	Unregulated electrical generator being used has excessive voltage.	Use electrical generator with proper voltage regulator. Sprayer requires 220-240, VAC 50/60 Hz.
	Sprayer was operated at high pressure with small tip, causing frequent motor starts and excessive heat build up.	Decrease pressure setting or increase tip size. Move sprayer to cooler location.
Building circuit breaker opens after sprayer operates for 5-10 minutes. OR Building circuit breaker opens as soon as sprayer is plugged into outlet and sprayer is turned on.	Too many appliances plugged in on same circuit.	Unplug some appliances or use a less busy circuit.
	Extension cord is damaged, too long, or not a heavy enough gauge.	Plug in something that you know is working to test extension cord. Replace extension cord. Grounding Instructions, page 7.
	Damaged sprayer electrical cord.	Check for broken insulation or wires. Replace damaged electrical cord.
	Damaged motor or control.	Return sprayer to Graco/MAGNUM authorized service center.
Fan pattern varies dramatically while spraying. Sprayer does not turn on promptly when resuming spraying.	Pressure control switch is worn and causing excessive pressure variation.	Return sprayer to Graco/MAGNUM authorized service center.
Spray comes out of gun in two thick streams.		
Paint leaks down outside of pump.	Worn pump packings.	Replace pump packings, see Pump manual.
Paint comes out of pressure control knob.	Worn pressure control knob.	Return sprayer to Graco/MAGNUM authorized service center.
Pressure drain actuates automatically, relieving pressure through prime tube.	System is overpressuring.	

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 220 to 240V AC. If voltage is too high, do not plug sprayer in until outlet is corrected.
	Control board leads are improperly fastened or improperly mated.	Replace any loose terminals. Make sure all leads and harnesses are firmly connected. 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 17.
	Motor armature commutator damaged.	Check for burn spots, gouges and extreme roughness. Replace motor using Motor Kit , page 17.
	Control board 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 18. Replace control board if damaged using Control Board Kit , page 17.

Problem	Cause	Solution
<p>Sprayer Wiring Problems</p> <p>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.</p>	<p>Sprayer electrical cord damaged.</p>	<p>Unplug sprayer electrical cord.</p> <p>Disconnect black electrical cord wire from filter.</p> <p>Unplug in-line connection white cord wire.</p> <p>Plug in electrical cord.</p> <p>Test voltage between black and white wires. Meter must read 220 to 240V AC.</p> <p>Replace electrical cord if no voltage.</p>
	<p>Sprayer power switch damaged.</p>	<ol style="list-style-type: none"> 1. Unplug sprayer electrical cord. 2. Disconnect black control board wire at power switch. 3. Unplug in-line connection white cord wire. 4. Plug in electrical cord. 5. Turn power switch ON. 6. Test voltage between open terminal of power switch and white electrical cord wire. Meter must read 220 to 240V AC. 7. Replace power switch if no voltage.
	<p>Motor thermal overload cutoff switch.</p> <p>Startup Hazard After Thermal Overload, page 7.</p>	<ol style="list-style-type: none"> 1. Unplug sprayer electrical cord. 2. Remove motor harness from control card. 3. Check for continuity between yellow leads or motor harness. 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 17. 6. If thermal relief switch closes after motor cools, find correct cause of overheating.
	<p>Terminals are damaged or loose.</p>	<p>Replace any damaged terminals. Make sure all terminal connections are tight.</p>

List of Kits

Kit Number	Models	Kit Description
16G223	M5 and L10	Control Board Kit
16K624	M5 and L10	Enclosure
247339	M5	Hose 6.4mm x 7.5, 6.4mm x 6.4mm fitting
247340	L10	Hose 6.4mm x 15, 6.4mm x 6.4mm fitting
257566	M5 and L10	Strainer Inlet
16E839	M5	Stand
257568	L10	Left Leg (when viewed from front)
257569	L10	Right Leg (when viewed from front)
16G226	M5 and L10	Power Cord (CEE)
246286	M5 and L10	Pressure Control 3000 psi
16F291	M5 and L10	Pump Inlet
16F292	M5 and L10	Pump Outlet
16F047	M5 and L10	Pump
243012	M5 and L10	SG3 Gun
197607	M5	Suction Tube
16E847	L10	Suction Tube
235014	M5 and L10	Drain Valve
16G228	M5 and L10	Motor
16F391	M5 and L10	Gear/Drive
16G227	M5 and L10	Complete Pump Repair

Motor Diagnostics



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

Rotate motor and inspect bearings and shaft for proper fit. There should be no clearance. Inspect gear train for wear or binding. Check armature and field winding for discoloration (dark brown) and burnt odor. Replace motor if burning has occurred. Inspect commutator and brushes for wear and arcing. If commutator surface is pitted and uneven in color, replace motor.

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 17.

Setup

1. **Relieve pressure**, page 10.
2. Unplug electric cord.
3. Remove enclosure and disconnect motor leads from control card.
4. Remove four screws and front cover.

Control Board Diagnostics

NOTE: 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 cover screws and front cover.
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.

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

8. Turn pressure control adjustment knob clockwise to maximum pressure setting.
9. Plug electrical cord into 120VAC receptacle.
10. Turn power switch ON.
 - If motor runs, replace pressure switch. **Pressure Control Switch Kit**, page 17.
 - If motor does not run, replace control board repeat test. **Control Board Kit**, page 17.

Pump Diagnostics

NOTICE

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 outside of pump. Replace pump packings at the first sign of leaking or additional damage to drive train could occur. Use **Pump Repair Kit**, page 17.

Pump Service

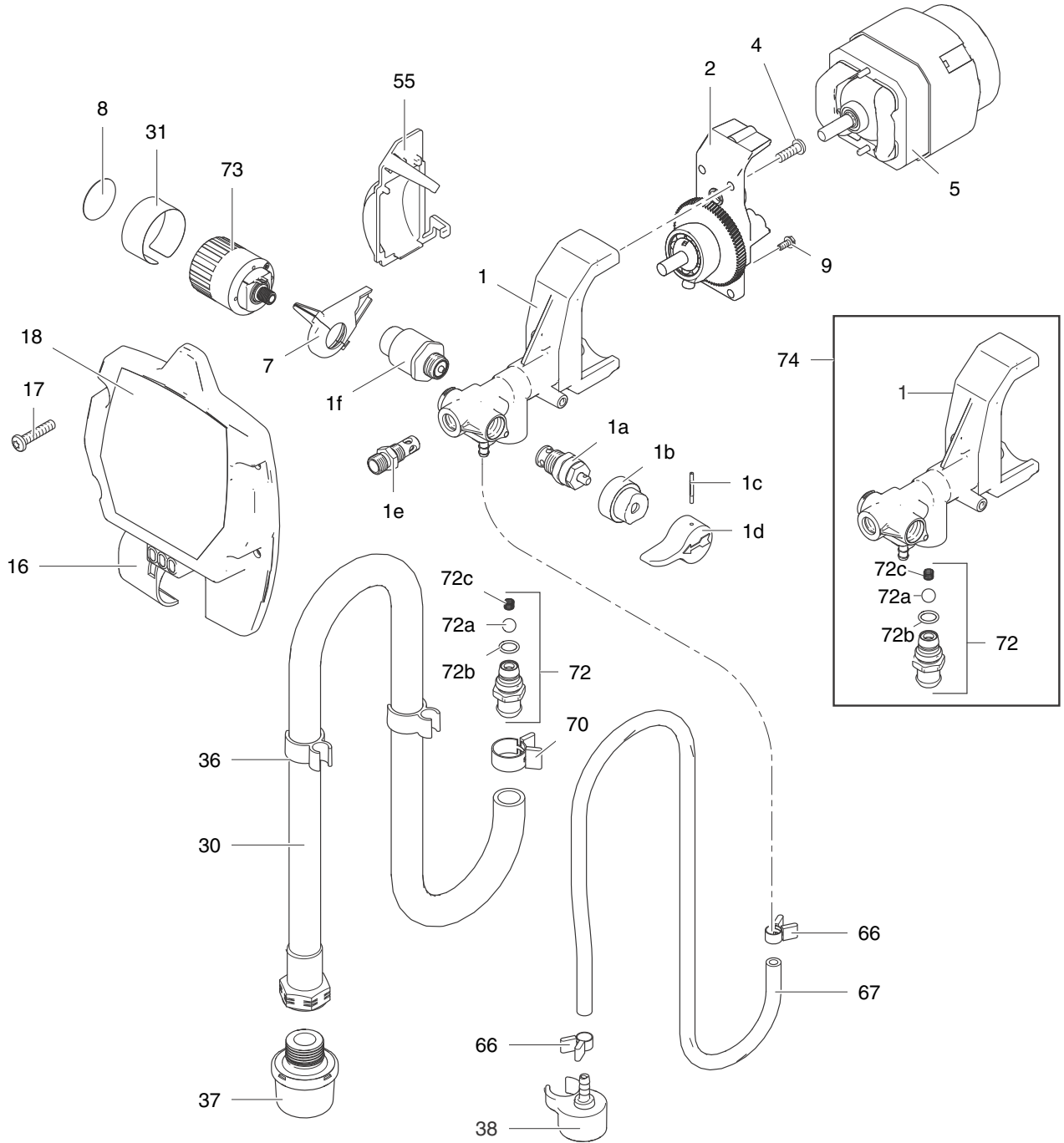
NOTICE

When repairing or cleaning pump, never submerge pump in water or allow fluid to enter pressure control.

If sprayer continues to cycle (motor and pump run) when the spray gun trigger is released, or if performance is poor even with new spray tips and clean filters, the pump inlet or outlet valve may be obstructed or worn. If a pump is worn, replace it using Pump Repair Kit (see **List of Kits**, page 17).

Parts

Magnum M5 Model (24M623)



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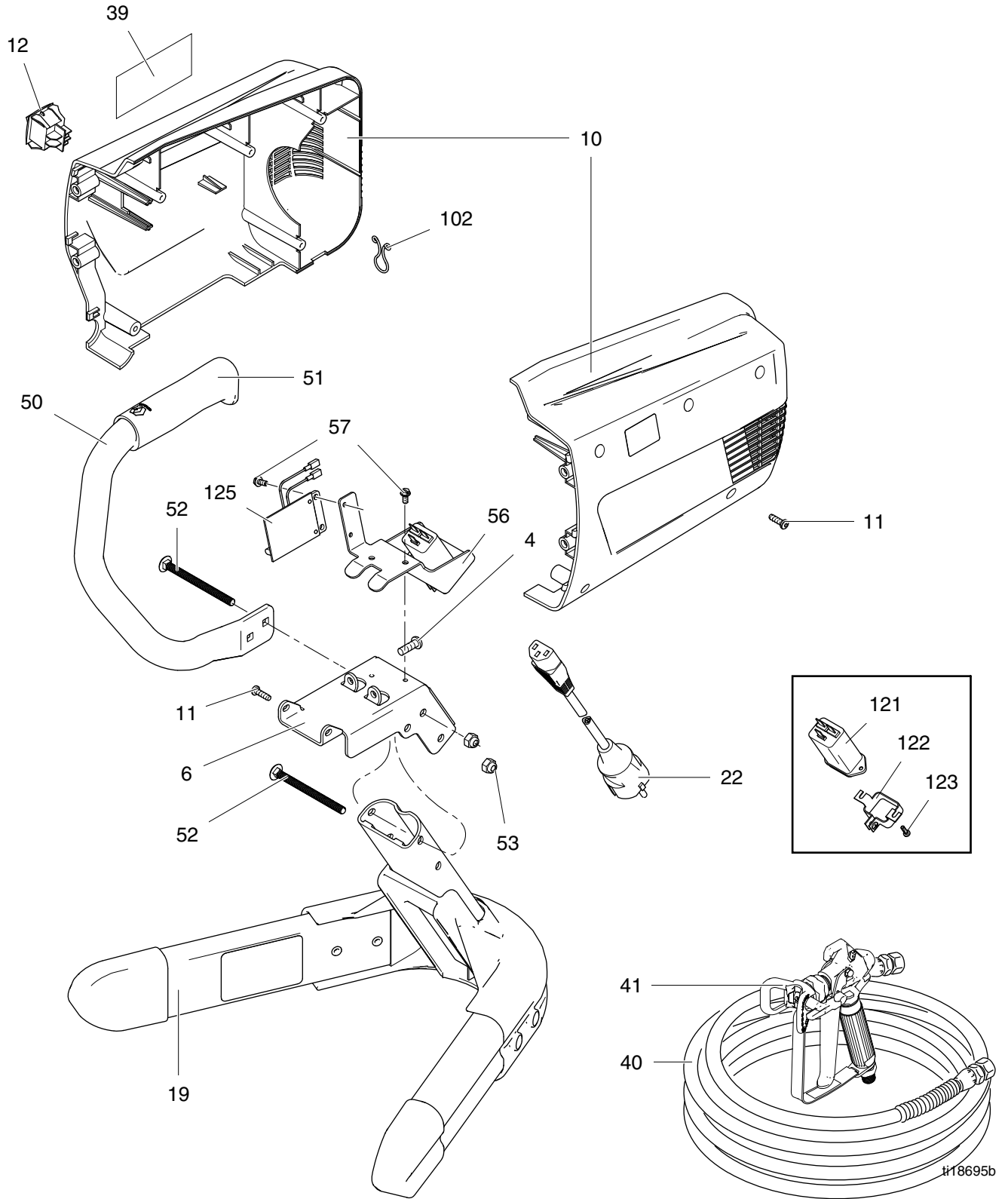
Parts List

Magnum M5 Model 24M623

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
1	16G227	PUMP, assembly, magnum, 240V (includes 72, 72a, 72b, 72c)	1	31	15K530	LABEL, control, Magnum	1
1a	235014	DUMP VALVE	1	36	195400	CLIP, spring	1
1b	24E578	BASE, valve	1	37	195697	STRAINER	1
1c	111600	PIN, grooved	1	38	244035	DEFLECTOR, barbed	1
1d	187625	HANDLE, valve, drain	1	55	24E510	COVER, gear	1
1e	16F292	VALVE, outlet	1	66	115489	CLAMP, drain tube	1
1f	16F621	MODULE, ball knocker	1	67	195084	TUBE, drain	1
2	16E778	HOUSING, drive	1	70	116295	CLAMP, tube	1
4	112689	SCREW, button hd	4	72	16F291	HOUSING, inlet (includes 72a, 72b, 72c)	1
5	16G228	MOTOR, Magnum, 230V	1	72a	124249	BALL	1
7	15Y296	COVER, wire	1	72b	103338	PACKING, o-ring	1
8	15A464	LABEL, control	1	72c	123849	SPRING, compression	1
9	115498	SCREW, mach, slot hex wash hd	1	73	246286	KIT, control, pressure	1
16	16F629	COVER, housing	1	74	16F047	KIT, repair, pump (includes 1, 72)	1
17	120724	SCREW	4				
18	16N553	LABEL, Magnum M5, front	1				
30	197607	TUBE, suction set	1				

Parts

Magnum M5 Model 24M623



Parts List

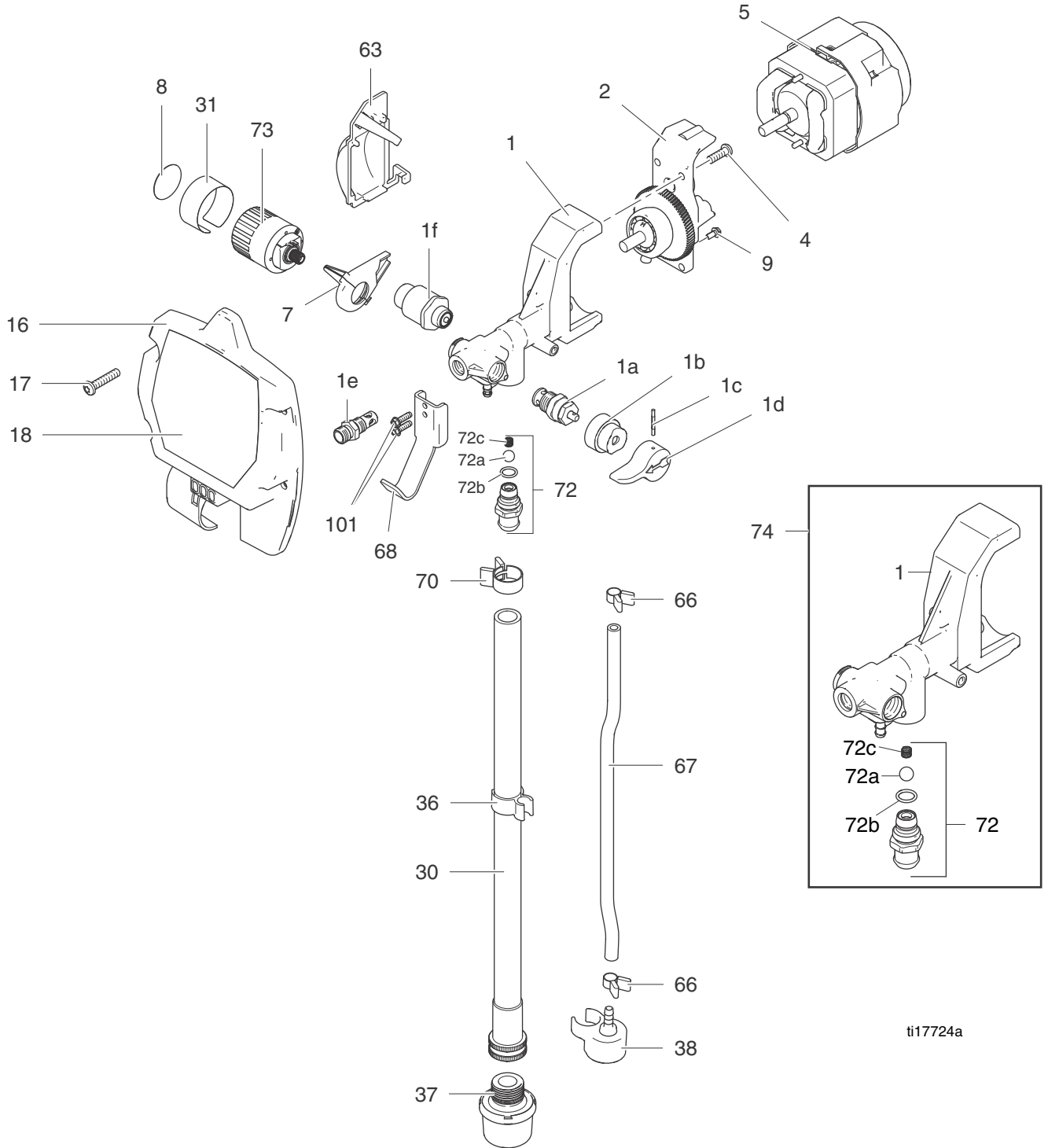
Magnum M5 Model 24M623

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
4	112689	SCREW	4	52	122233	BOLT, carriage	3
6	16D684	FRAME	1	53	102040	NUT, lock, hex	3
9	115498	SCREW, mach, slot hex wash hd	1	56	16F567	BRACKET, control board/EMI filter	1
10	24M805	ENCLOSURE, sprayer (blue)	1	57	115492	SCREW, mach, slot hex wash hd	4
11	115477	SCREW, mach, torx pan hd	6	75	15J695	CAP, tube	2
12	118899	SWITCH, rocker, spdt	1	102	121423	RETAINER, wire	1
19	16E839	BASE, assembly	1	121	245648	FILTER, EMI	1
22	16G226	CORD SET, 2M, Europe	1	122	115632	CLAMP, power cord	1
38	244035	DEFLECTOR, barbed		123	114528	SCREW, mach, phillips, pnhd	2
39▲	16G596	LABEL, warning		125	16G223	KIT, control board	1
40	247339	HOSE, cpd, 1/4 in. x 25 ft	1				
41	246506	GUN, spray, SG3	1				
47▲	179960	SIGN, warning	1				
50	256992	HANDLE, painted	1				
51	116139	GRIP, handle	1				

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

Parts

Magnum L10 Model 24M624



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Parts List

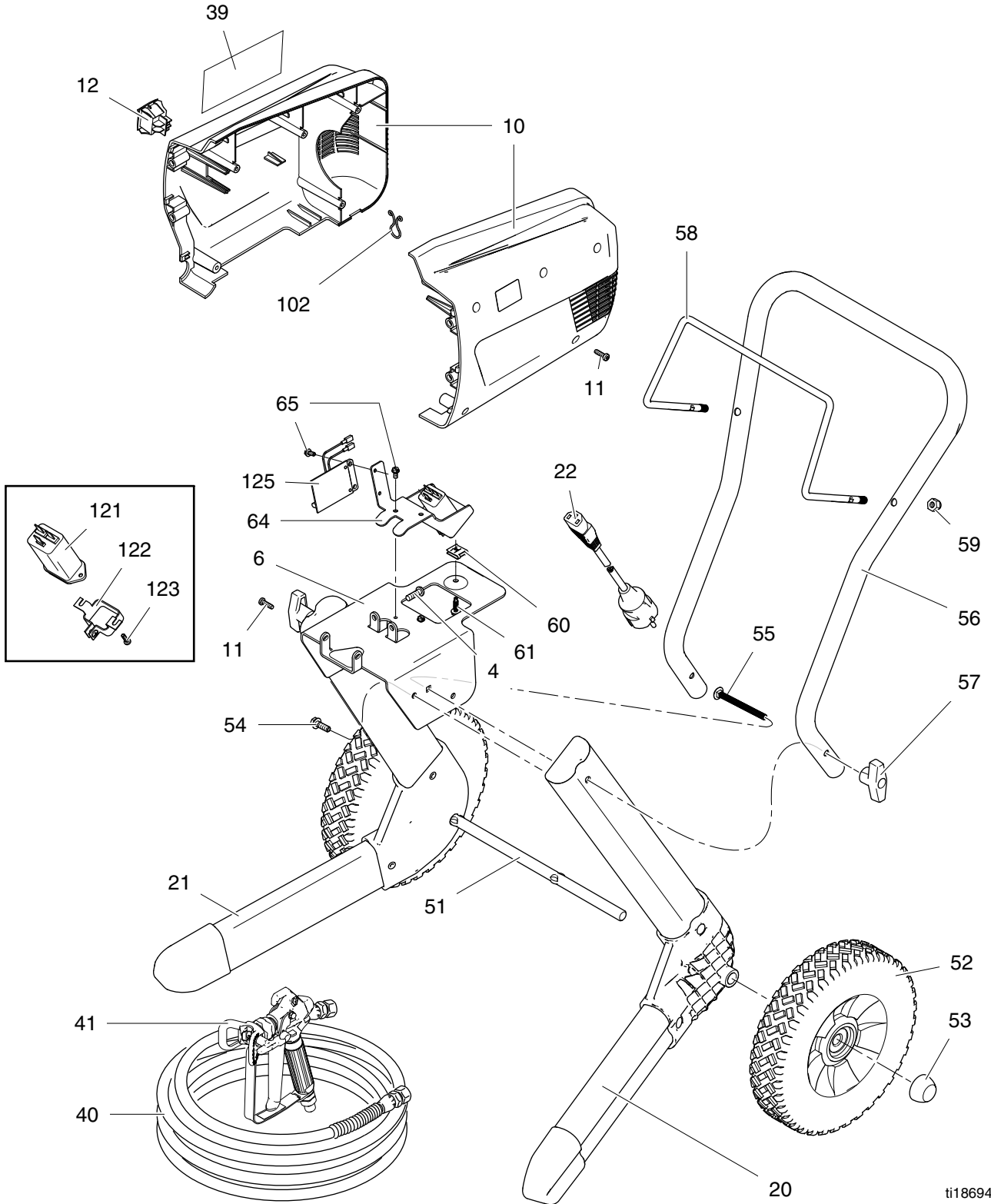
Magnum L10 Model 24M624

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
1	16G227	PUMP, assembly, magnum, 240V (includes 72, 72a, 72b, 72c)	1	36	195400	CLIP, spring	1
1a	235014	DUMP VALVE	1	37	195697	STRAINER	1
1b	24E578	BASE, valve	1	38	244035	DEFLECTOR, barbed	1
1c	111600	PIN, grooved	1	63	24E510	COVER, gear	1
1d	187625	HANDLE, valve, drain	1	66	115489	CLAMP, drain tube	1
1e	16F292	VALVE, outlet	1	67	195108	TUBE, drain	1
1f	16F621	MODULE, ball knocker	1	68	16D907	HANGER, pail	1
2	16E778	HOUSING, drive	1	70	116295	CLAMP, tube	1
4	112689	SCREW, button HD	4	72	16F291	HOUSING, inlet (includes 72a, 72b, 72c)	1
5	16G228	MOTOR, magnum, 230V	1	72a	124249	BALL	1
7	15Y296	COVER, wire	1	72b	103338	PACKING, o-ring	1
8	15A464	LABEL, control	1	72c	123849	SPRING, compression	1
9	115498	SCREW, mach, slot hex wash head	1	73	246286	CONTROL, pressure, diaphragm	1
11	115477	SCREW, mach, torx pan hd	6	74	16F047	KIT, repair, pump (includes 1, 72)	1
16	16F629	COVER, housing	1	101	121939	SCREW, plastite, #8, wash hd	2
17	120724	SCREW	4				
18	16N554	LABEL, L10, front	1				
30	16D951	TUBE, suction	1				
31	15K530	LABEL, control, magnum	1				

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

Parts

Magnum L10 Model 24M624



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Parts List

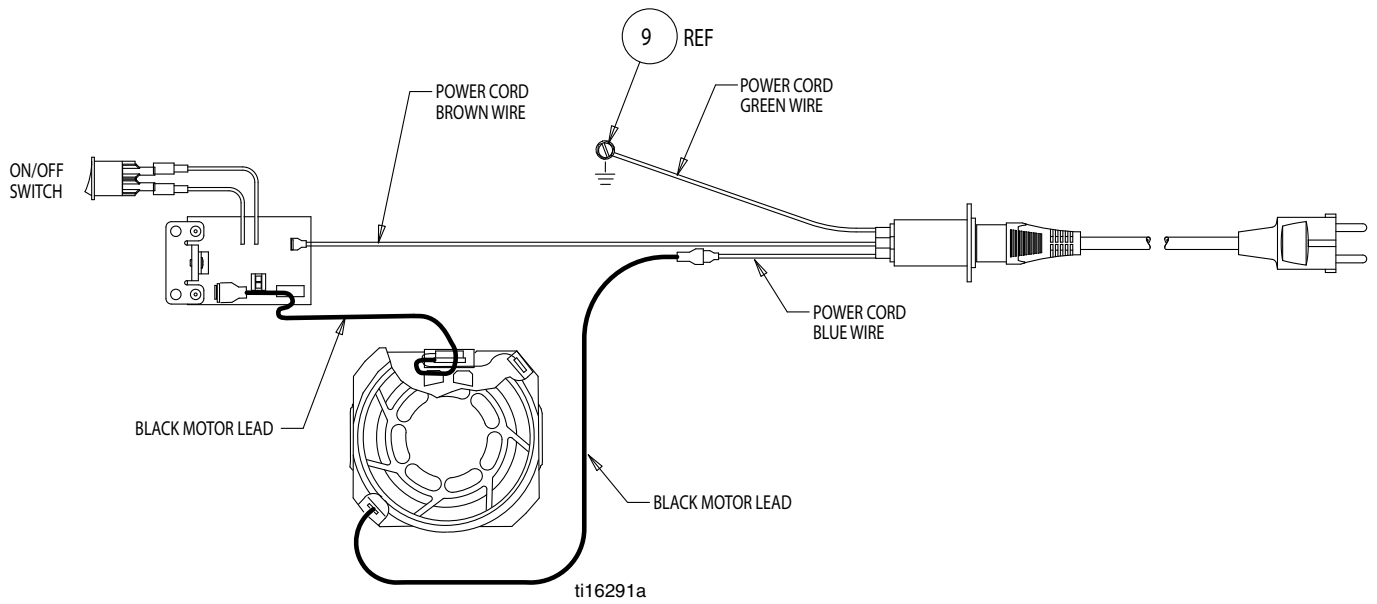
Magnum L10 Model 24M624

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
4	112689	SCREW, button HD	4	57	115480	KNOB, t-handle	2
6	16D685	FRAME	1	58	257326	RACK, hose, painted	1
10	24M805	ENCLOSURE, sprayer (blue)	1	59	120689	NUT, hex, acorn, 5/16-18, nickel	2
11	115477	SCREW, mach, torx pan hd	6	60	121481	NUT, u-type, tinnerman	1
12	118899	SWITCH, rocker, spdt	1	61	120093	SCREW, self drilling	1
20	257569	LEG, left	1	64	16F567	BRACKET, control board/EMI filter	1
21	257568	LEG, right	1	65	115492	SCREW, mach, slot hex wash hd	4
22	16G226	CORD SET, 2M, Europe	1	75	15J695	CAP, tube	2
39▲	16G596	LABEL, warning	1	102	121423	RETAINER, wire	1
40	247339	HOSE, cpld, 1/4 in. X 50 ft	1	120	15A467	BRACKET, filter	1
41	246506	GUN, spray, SG3	1	121	245648	FILTER, EMI	1
47▲	179960	SIGN, warning	1	122	115632	CLAMP, power cord	1
51	15R602	AXLE, cart	1	123	114528	SCREW, mach, phillips, pnhd	2
52	115095	WHEEL, 9 in.	2	125	16G223	KIT, control board	1
53	112612	CAP, hub	2				
54	260212	SCREW, hex washer hd, thd form	4				
55	120788	SCREW, carriage	2				
56	256993	HANDLE, painted	1				

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

Wiring Diagram

Magnum M5 24M623
Magnum L10 24M624



Technical Data

	M5	L10
Maximum fluid working pressure - sprayer	207 bar, 21 MPa (3000 psi)	
Sprayer inlet size	3/4 in. internal thread (standard garden hose)	
Sprayer outlet size	1/4 npsm external thread	
Electric motor (open frame universal motor)	1/2 hp 4.5 Amp	5/8 hp 4.5 Amp
Sprayer weight only	6.1 kg (13.3 lb)	10.6 kg (23.3 lb)
Dimensions:		
Length	36.0 cm (14.5 in.)	49.5 cm (19.5 in.)
Width	31.5 cm (12.4 in.)	38.9 cm (15.3 in.)
Height	45.5 cm (17.9 in.)	94.0 cm (37.0 in.)
Wetted parts sprayer	Stainless steel, ultra-high molecular weight polyethylene (UHMWPE) carbide, nylon, aluminum, PVC, polypropylene, fluoroelastomer	
Inlet Screen on Suction Tube	450 micron (35 mesh)	
Maximum material temperature	50° C (120° F)	
Electrical power requirement	220 - 240V AC 50/60 Hz, 1 phase, 10A	
Sound data* SG3 spray gun:		
Sound pressure level	78 dB(A) to 85 dB(A)	
Sound power level	87 dB(A) to 89 dB(A)	
Storage temperature range	-30° to 160° F (-35° to 71° C)	
Operating temperature range	40° to 115° (4° to 46° C)	

**Measured while spraying water-based paint - specific gravity 1.36 through a 517 tip at 207 bar, 21 MPA (3000 psi) per ISO 9614-2. Actual sound levels may vary with length of extension used.*

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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 by an authorized Graco distributor 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.

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 by an authorized Graco distributor 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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Original instructions. This manual contains English. MM 3A2361

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