Operation / Repair / Parts

Airlessco Electric Airless Sprayers

3A1959E
EN

- For portable airless spraying of architectural coatings and paints -
- For professional use only -
- Not for use in explosive atmospheres -

16K548 (240V) TS1500 Sprayer
16N173 (110V) TS1500 Sprayer
16M209 (240V) EZ Rent
16N174 (110V) EZ Rent

3300 psi (22.7 MPa, 227 bar) Maximum Working Pressure

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

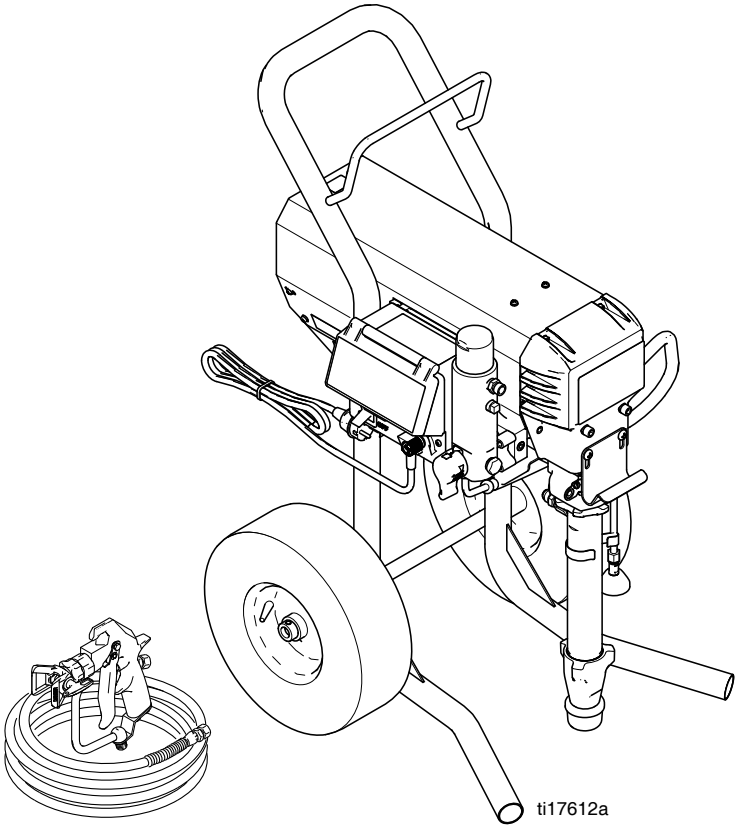


Table of Contents

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.

Grounding Instructions

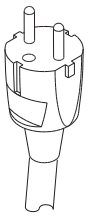
This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into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

⚠ 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 pin 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 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 3-blade grounding plug and a 3-slot 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 mm^2) 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 flammable or 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 Airlessco conductive or grounded high-pressure airless paint sprayer hoses.
- Verify that all containers and collection systems are grounded to prevent static discharge.
- 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 flammable liquid is used in or near the sprayer or for flushing or cleaning, keep sprayer at least 20 feet (6 m) away from explosive vapors.

SKIN INJECTION HAZARD

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 Airlessco 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.
- Do not leave the unit energized or under pressure while unattended. When the unit is not in use, turn off the unit and follow the **Pressure Relief Procedure** for turning off the unit.
- 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**.
- Check hoses and parts for signs of damage. Replace any damaged hoses or parts.
- This system is capable of producing 3300 psi. Use Airlessco replacement parts or accessories that are rated a minimum of 3300 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.

⚠ WARNING


EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- 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 leave the unit energized or under pressure while unattended. When the unit is not in use, turn off the unit and follow the **Pressure Relief Procedure** for turning off the unit.
- 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 Airlessco.
- Do not use the hose as a strength member to pull or lift the equipment.

ELECTRIC SHOCK HAZARD

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

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

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.

- 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.


MOVING PARTS HAZARD

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

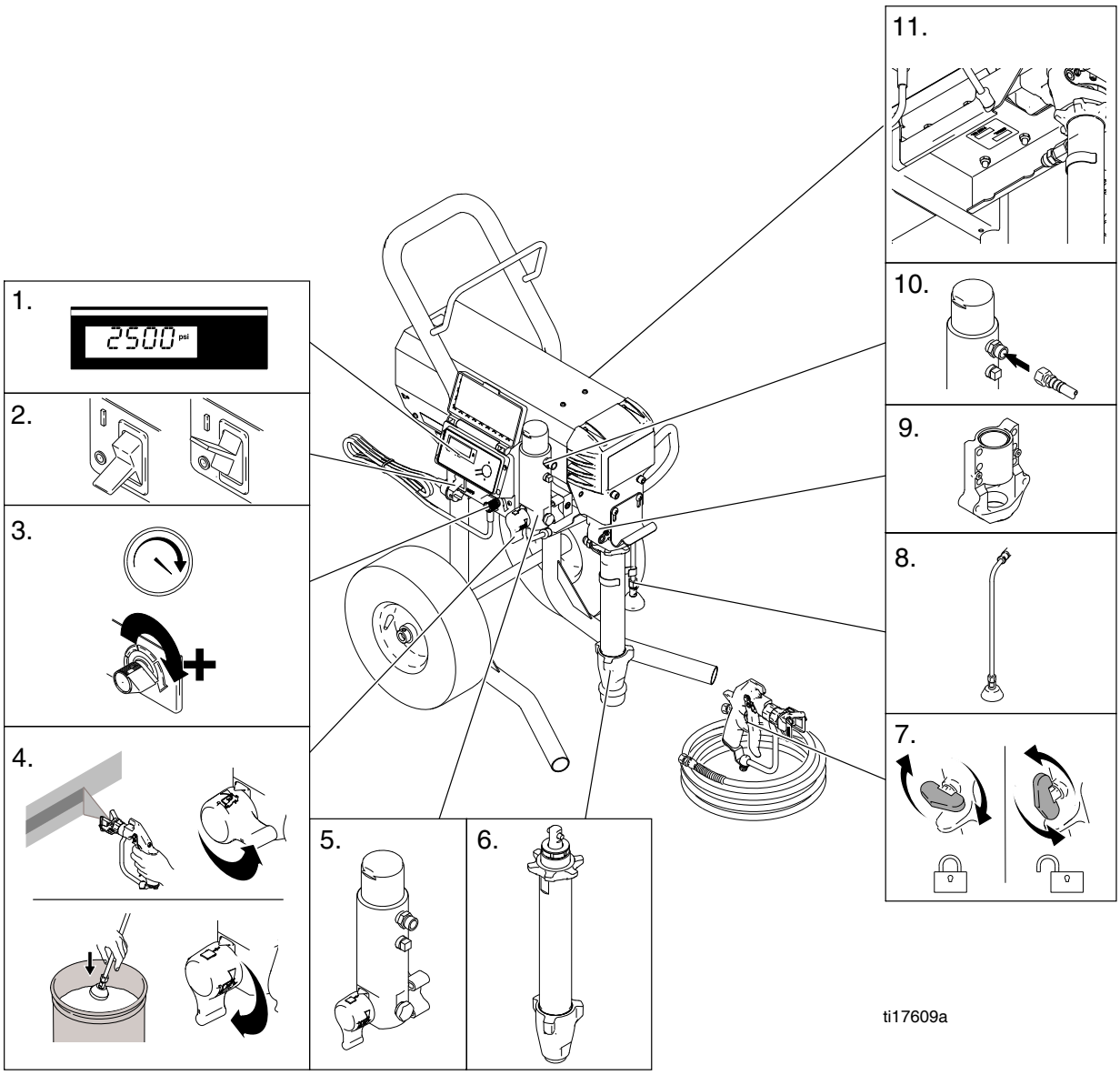
- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** and disconnect all power sources.

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.

Component Identification

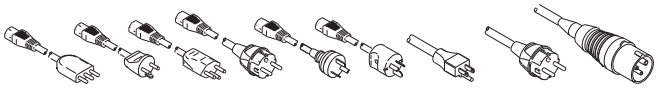


1	Digital Display
2	ON/OFF Switch
3	Pressure Control
4	Prime / Spray
5	Filter
6	Pump
7	Trigger Lock
8	Drain Tube
9	Bearing Housing
10	Fluid Outlet
11	Model/Serial Tag

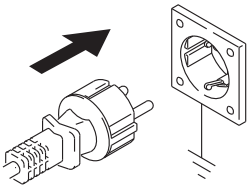
Grounding

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

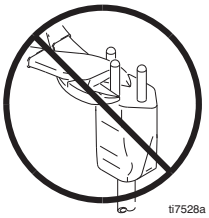
The sprayer cord includes a grounding wire with an appropriate grounding contact.



The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.



Do not modify plug! If it will not fit in outlet, have grounded outlet installed by a qualified electrician. Do not use an adapter.



Power Requirements

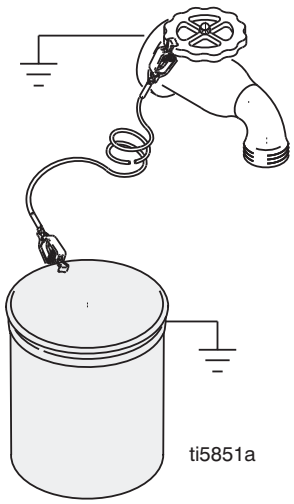
- 100-120 V units require 100-120 VAC, 50/60 Hz, 15 A, 1 phase.
- 230V units require 230 VAC, 50/60 HZ, 10 A, 1 phase.
- Use an extension cord with an undamaged ground contact.
- If an extension cord is necessary, use a 3-wire, 12 AWG (2.5 mm^2) minimum.

Pails

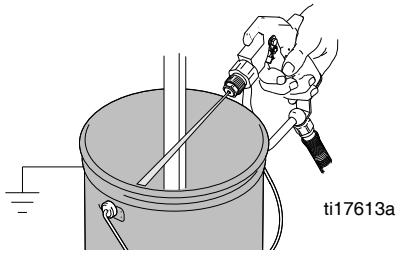
Solvent and oil/based fluids: follow local code. Use only conductive metal pails, placed on a grounded surface such as concrete.

NOTE: Do not place pail on a nonconductive surface such as paper or cardboard that interrupts grounding continuity.

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

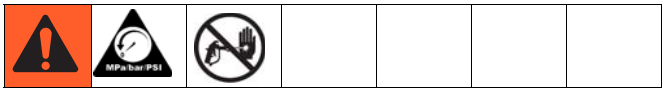


To maintain grounding continuity when flushing or relieving pressure: Hold metal part of spray gun firmly to side of a grounded metal pail. Then trigger gun.

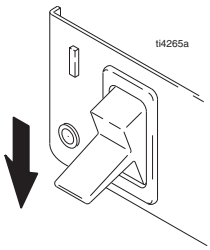


Operation

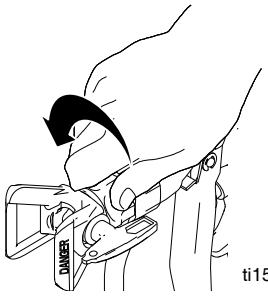
Pressure Relief Procedure



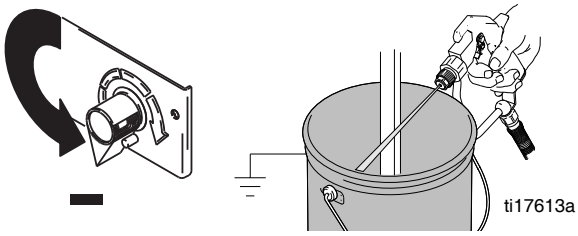
1. Turn power **OFF.** Wait 7 seconds for power to dissipate.



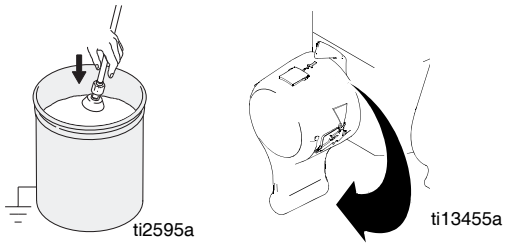
2. Lock gun trigger safety. Remove guard and tip.



3. Turn pressure to lowest setting. Trigger gun to relieve pressure.

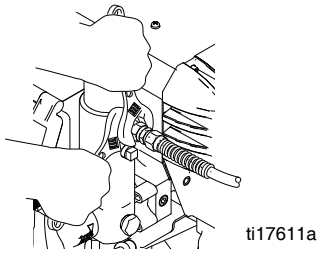


4. Put drain tube in pail. Turn prime valve down to DRAIN position.

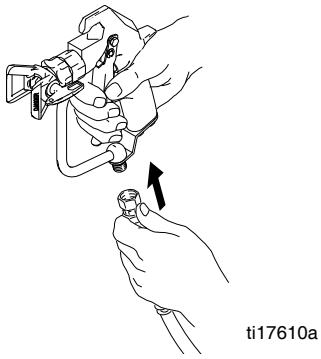


Setup

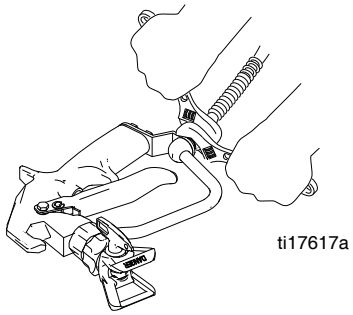
1. Connect Airlessco airless hose to sprayer. Hose must be rated at least 3300 psi maximum working pressure. Tighten securely.



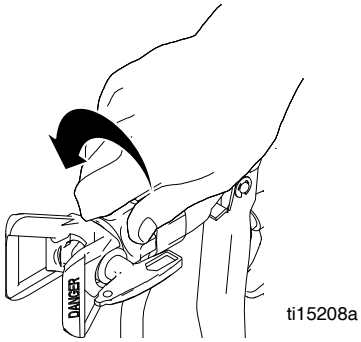
2. Connect other end of hose to gun.



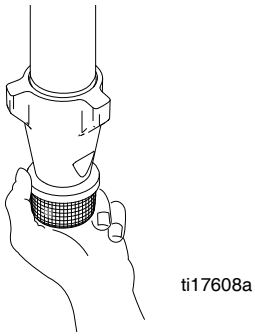
3. Tighten securely.



4. Remove tip guard.



5. Check inlet strainer for clogs and debris.



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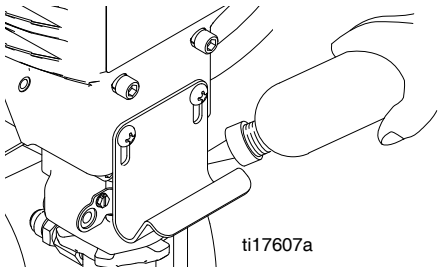
6. Fill throat packing nut with Airlessco TSO to prevent premature packing wear. Do this each time you spray.



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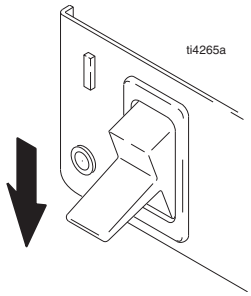
7. Turn power OFF.



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8. Plug power supply cord into a properly grounded electrical outlet.

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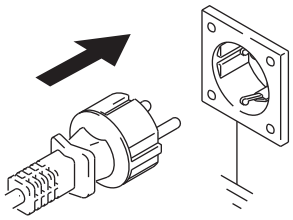
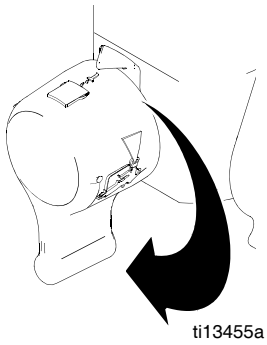


9. Turn prime valve down to DRAIN position.



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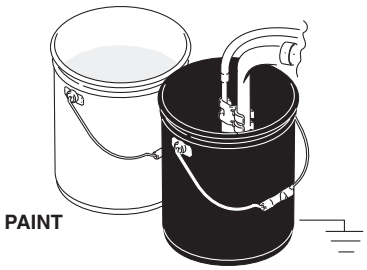
10. Place pump in grounded metal pail partially filled with flushing fluid. Attach a ground wire to pail and to true earth ground. Do 1. - 5. of **Startup** to flush out storage oil shipped in sprayer. Use water to flush water-base paint and mineral spirits to flush oil-base paint and storage oil.



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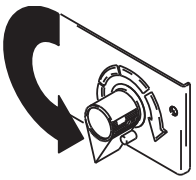
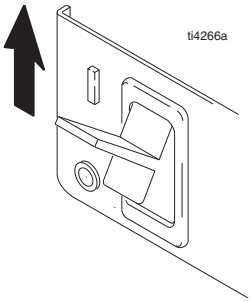
Startup

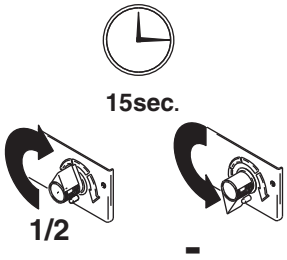
1. Turn pressure control to lowest pressure.



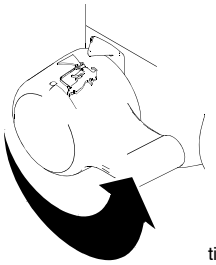
2. Turn power **ON**.



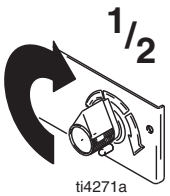
3. Increase pressure 1/2 to start motor and allow fluid to circulate through drain tube for 15 seconds; turn pressure down.

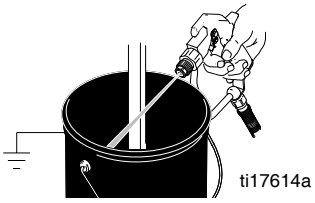


4. Turn prime valve up to SPRAY position.Take spray gun trigger safety OFF.



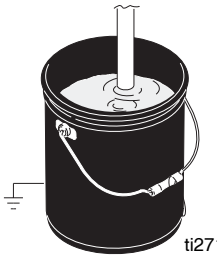
5. Hold gun against grounded metal flushing pail. Trigger gun and increase fluid pressure to 1/2. Flush 1 minute.



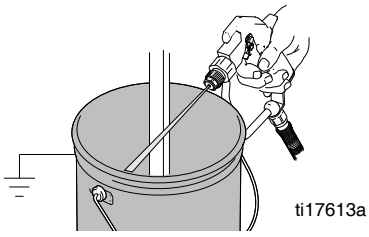


6. Inspect for leaks. Do not stop leaks with hand or a rag! If leaks occur, perform Pressure Relief. Tighten fittings. Do **Startup**, 1. - 5. If no leaks, proceed to 6.

7. Place siphon tube in paint pail.

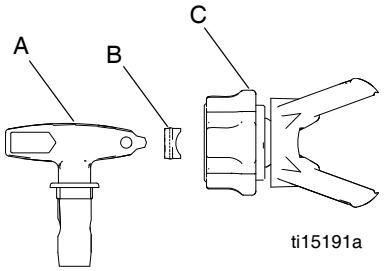


8. Trigger gun again into flushing pail until paint appears. Move gun to paint pail and trigger for 20 seconds. Set gun safety ON. Assemble tip and guard, see instructions on next page.

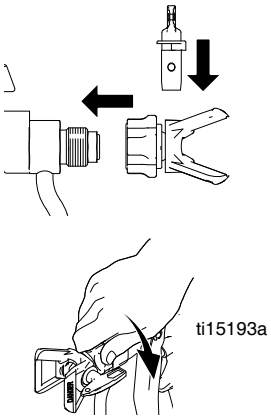


Tip Installation

1. Use spray tip (A) to insert seal (B) into guard (C).



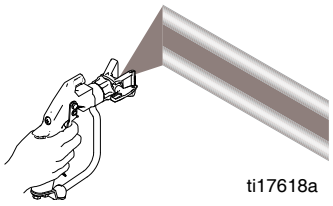
2. Insert tip.



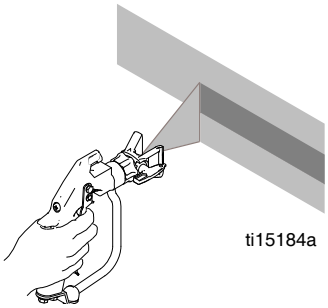
3. Screw assembly onto gun. Tighten.

Spray

1. Spray test pattern. Adjust pressure to eliminate heavy edges. Use smaller tip size if pressure adjustment can not eliminate heavy edges.

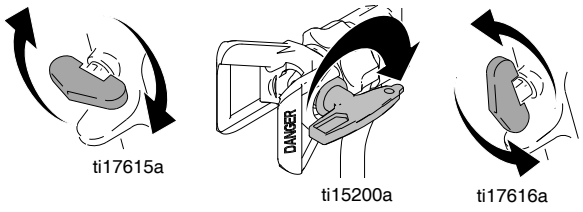


2. Hold gun perpendicular, 10-12 in. (25-30 cm) from surface. Spray back and forth. Overlap by 50%. Start moving the gun before triggering and release trigger before gun stops moving.

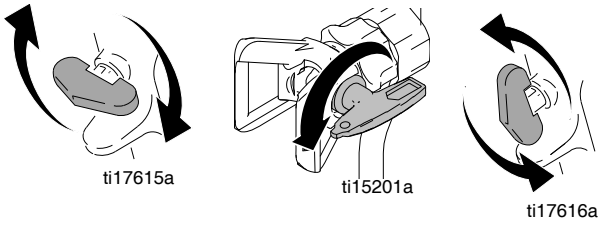


Clear Clog

1. Release trigger, put safety ON. Rotate tip. Take safety OFF. Trigger gun to clear clog. Never point gun at your hand or into a rag!



2. Put safety ON. Return tip to original position. Take safety OFF and continue spraying.



Digital Tracking System (DTS)

Operation Main Menu

1. Short press to move to next display. Press and hold to change units or reset data.

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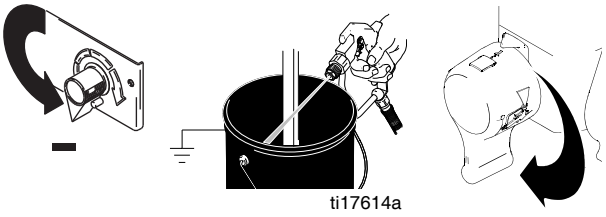
2. Turn pressure to lowest setting. Trigger gun to relieve pressure. Turn prime valve to drain position.



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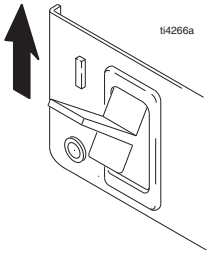
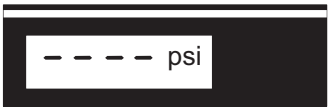
ti13455a

3. Turn power ON. Pressure display appears. Dashes will appear if pressure is less than 200 psi (14 bar, 1,4 MPa).



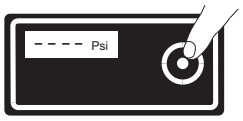
ti4266a



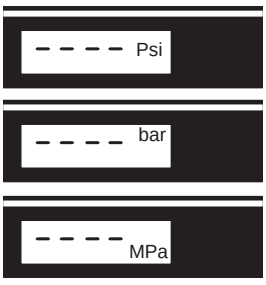
ti13621a

Change Display Units

1. Press and hold DTS button for 10 seconds to change pressure units (**psi, bar, MPa**) to desired units. Selection of bar or MPa changes **gallons** to **liters x 10**. To change display units DTS must be in pressure display mode and pressure must be less than 200 psi.

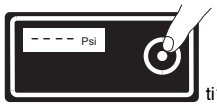


ti13620b



ti13604a

2. Short press DTS button to move to Job Gallons (or liters x 10). **Note: JOB** displays briefly, then the number of gallons sprayed above 1000 psi (70 bar, 7 MPa) displays.



ti13620b

ti13612a

ti13610a

Operation Main Menu

1. Press and hold to reset to zero, or short press DTS button to move to Lifetime Gallons (or liters x 10). **Note: LIFE** displays briefly, then the number of gallons sprayed above 1000 psi (70 bar, 7 MPa) displays.

OR

ti13601b

ti13617a

ti13611a

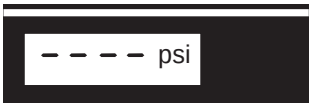
2. Short press DTS button to move to LEARN mode.

ti13603b

ti13627a

3. Short press DTS button to return to Pressure.

ti13616b



ti13602a

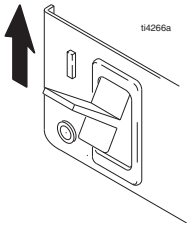
Secondary Menu - Stored Data and Pump Protection Modes

1. Do **Pressure Relief,** steps 1 - 4 if they have not already been done.

ti13605b

2. Turn power switch on while holding DTS button down.

ti13605b



3. **SERIAL NUMBER** scrolls past and then serial number (e.g. 101) displays.

ti13622a

4. Short press DTS button and **MOTOR HOURS** scrolls past and then total motor run hours are displayed.

ti13618a

ti13619a

5. Short press DTS button. **LAST ERROR** description and number scrolls by and last error code is displayed; e.g. **E=07**.

ti13601b

ti13615a

ti13607a

6. Press and hold DTS button to clear error code to zero.

ti13609b

ti13606a

7. Short press to move to **SOFTWARE REV**.

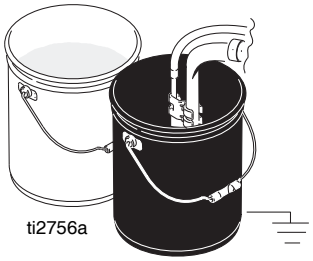
ti13613a

ti13623a

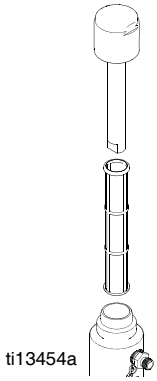
8. Turn power switch OFF.

Cleanup

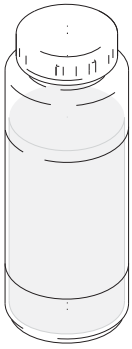
1. Do **Pressure Relief,** steps 1 - 4.



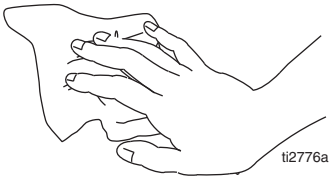
2. Remove filters from gun and sprayer, if installed. Clean and inspect. Install filters.



3. If flushing with water, flush again with mineral spirits, to leave a protective coating to prevent freezing or corrosion.

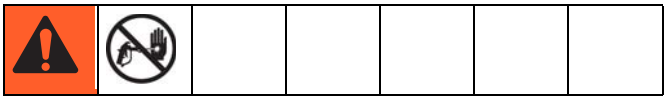


4. Wipe sprayer, hose and gun with a rag soaked in water or mineral spirits.



Troubleshooting

Mechanical/Fluid Flow



Perform **Pressure Relief Procedure**; page 8.

TYPE OF PROBLEM	WHAT TO CHECK If check is OK, go to next check	WHAT TO DO When check is not OK, refer to this column
E=XX is displayed	1. Fault condition exists	1. Determine fault correction from table.
Pump output is low	1. Spray tip worn	1. Follow Pressure Relief procedure Warning, then replace tip. See your separate gun or tip manual.
	2. Spray tip clogged	2. Relieve pressure. Check and clean spray tip.
	3. Paint supply	3. Refill and reprime pump.
	4. Intake strainer clogged	4. Remove and clean, then reinstall
	5. Intake valve ball and piston ball are not seating properly	5. Remove intake valve and clean. Check balls and seats for nicks; replace if necessary; see pump manual. Strain paint before using to remove particles that could clog pump.
	6. Suction hose connections	6. Tighten any loose connections. Check for missing or damaged seals.
	7. Fluid filter, tip filter, or tip is clogged or dirty.	7. Clean filter; see operation manual.
	8. Prime valve leaking	8. Relieve pressure. Repair prime valve.
	9. Verify pump does not continue to stroke when gun trigger is released. (Prime valve not leaking.)	9. Service pump; see pump manual.
	10. Leaking around throat packing nut which may indicate worn or damaged packings.	10. Replace packings; see pump manual. Also check piston valve seat for hardened paint or nicks and replace if necessary. Tighten packing nut/wet-cup.
	11. Pump rod damage	11. Repair pump. See pump manual.
	12. Low stall pressure	12. Turn pressure knob fully clockwise. Make sure pressure control knob is properly installed to allow full clockwise position. If problem persists, replace pressure transducer.
	13. Piston packings are worn or damaged	13. Replace packings; see pump manual.

TYPE OF PROBLEM	WHAT TO CHECK If check is OK, go to next check	WHAT TO DO When check is not OK, refer to this column
Pump output is low	14. O-ring in pump is worn or damaged	14. Replace o-ring; see pump manual.
	15. Intake valve ball is packed with material	15. Clean intake valve; see pump manual.
	16. Pressure setting is too low	16. Increase pressure; see pump manual.
	17. Large pressure drop in hose with heavy materials	17. Use larger diameter hose and/or reduce overall length of hose. Use of more than 100 ft of 1/4 in. hose significantly reduces performance of sprayer. Use 3/8 in. hose for optimum performance (50 ft minimum).
Motor runs but pump does not stroke	1. Displacement pump pin (32) damaged or missing; see pump manual.	1. Replace pump pin if missing. Be sure retainer spring (31) is fully in groove all around connecting rod; see pump manual.
	2. Connecting rod assembly (43) damaged; see pump manual.	2. Replace connecting rod assembly; see pump manual.
	3. Gears or drive housing damaged.	3. Inspect drive housing assembly and gears for damage and replace if necessary; see pump manual.
Excessive paint leakage into throat packing nut	1. Throat packing nut is loose	1. Remove throat packing nut spacer. Tighten throat packing nut just enough to stop leakage.
	2. Throat packings are worn or damaged	2. Replace packings; see pump manual.
	3. Displacement rod is worn or damaged	3. Replace rod; see pump manual.
Fluid is spitting from gun	1. Air in pump or hose	1. Check and tighten all fluid connections. Reduce engine speed and cycle pump as slowly as possible during priming.
	2. Tip is partially clogged	2. Clear tip; see tip guard manual.
	3. Fluid supply is low or empty	3. Refill fluid supply. Prime pump; see pump manual. Check fluid supply often to prevent running pump dry.
Pump is difficult to prime	1. Air in pump or hose	1. Check and tighten all fluid connections. Reduce engine speed and cycle pump as slowly as possible during priming.
	2. Intake valve is leaking	2. Clean intake valve. Be sure ball seat is not nicked or worn and that ball seats well. Reassemble valve.
	3. Pump packings are worn	3. Replace pump packings; see pump manual.
	4. Paint is too thick	4. Thin the paint according to the supplier's recommendations.
No display, sprayer operates	1. Display is damaged or has bad connection	1. Check connections. Replace display.

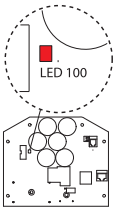
Electrical

Symptom: Sprayer does not run or stops running.

Perform **Pressure Relief Procedure**; page 8.

- Plug sprayer into correct voltage, grounded outlet
- Set power switch OFF for 30 seconds and then ON again. This ensures sprayer is in normal run mode.
- Turn pressure control knob clockwise 1/2 turn
- View digital display

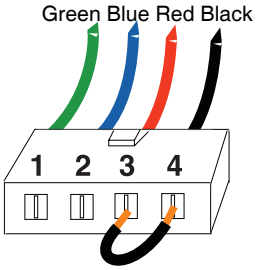
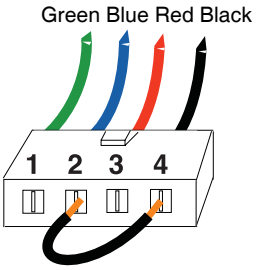
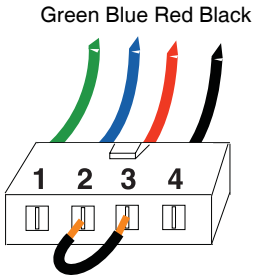
To avoid electrical shock or moving parts hazards when covers are removed for troubleshooting, wait 30 seconds after unplugging power cord for stored electricity to dissipate. Keep clear of electrical and moving parts during troubleshooting procedures.



If no digital display is available, use control board status light to troubleshoot problems: Turn ON/OFF switch OFF, remove control cover and then turn power back ON. Observe status light. Blinking LED total count equals digital error code i.e., two blinks equals E=02.

TYPE OF PROBLEM	WHAT TO CHECK	HOW TO CHECK
Sprayer does not run at all Digital display is blank Control board status light never lights	See **Sprayer Will Not Run** chart, page 22.	
Sprayer does not run at all Digital display shows E=02  Control board status light blinks 2 times repeatedly	Check transducer or transducer connections	1. Make sure there is no pressure in the system (see **Pressure Relief Procedure**; page 8.). Check fluid path for clogs, such as clogged filter. 2. Use airless paint spray hose with no metal braid 1/4 in. x 50 ft minimum. Smaller hose or metal braid hose may result in high-pressure spikes. 3. Set sprayer to OFF and disconnect power to sprayer. 4. Check transducer and connections to control board. 5. Disconnect transducer from control board socket. Check that transducer and control board contacts are clean and secure. 6. Reconnect transducer to control board socket. Connect power, set sprayer ON and control knob 1/2 turn clockwise. If sprayer does not run properly, set sprayer to OFF and go to next step. 7. Install new transducer. Connect power, set sprayer ON and control knob 1/2 turn clockwise. Replace control board if sprayer does not run properly.

TYPE OF PROBLEM	WHAT TO CHECK	HOW TO CHECK
Sprayer does not run at all Digital display shows E=03  Control board status light blinks 3 times repeatedly	Check transducer or transducer connections (control board is not detecting a pressure signal).	1. Set sprayer to OFF and disconnect power to sprayer. 2. Check transducer and connections to control board. 3. Disconnect transducer from control board socket. Check to see if transducer and control board contacts are clean and secure. 4. Reconnect transducer to control board socket. Connect power, set sprayer ON and control knob to 1/2 turn clockwise. If sprayer does not run, set sprayer to OFF and go to next step. 5. Connect a confirmed working transducer to control board socket. 6. Set sprayer ON and control knob to 1/2 turn clockwise. If sprayer runs, install new transducer. Replace control board if sprayer does not run. 7. Check transducer resistance with ohmmeter (less than 9k ohm between red and black wires and 3-6k ohm between green and yellow wires).

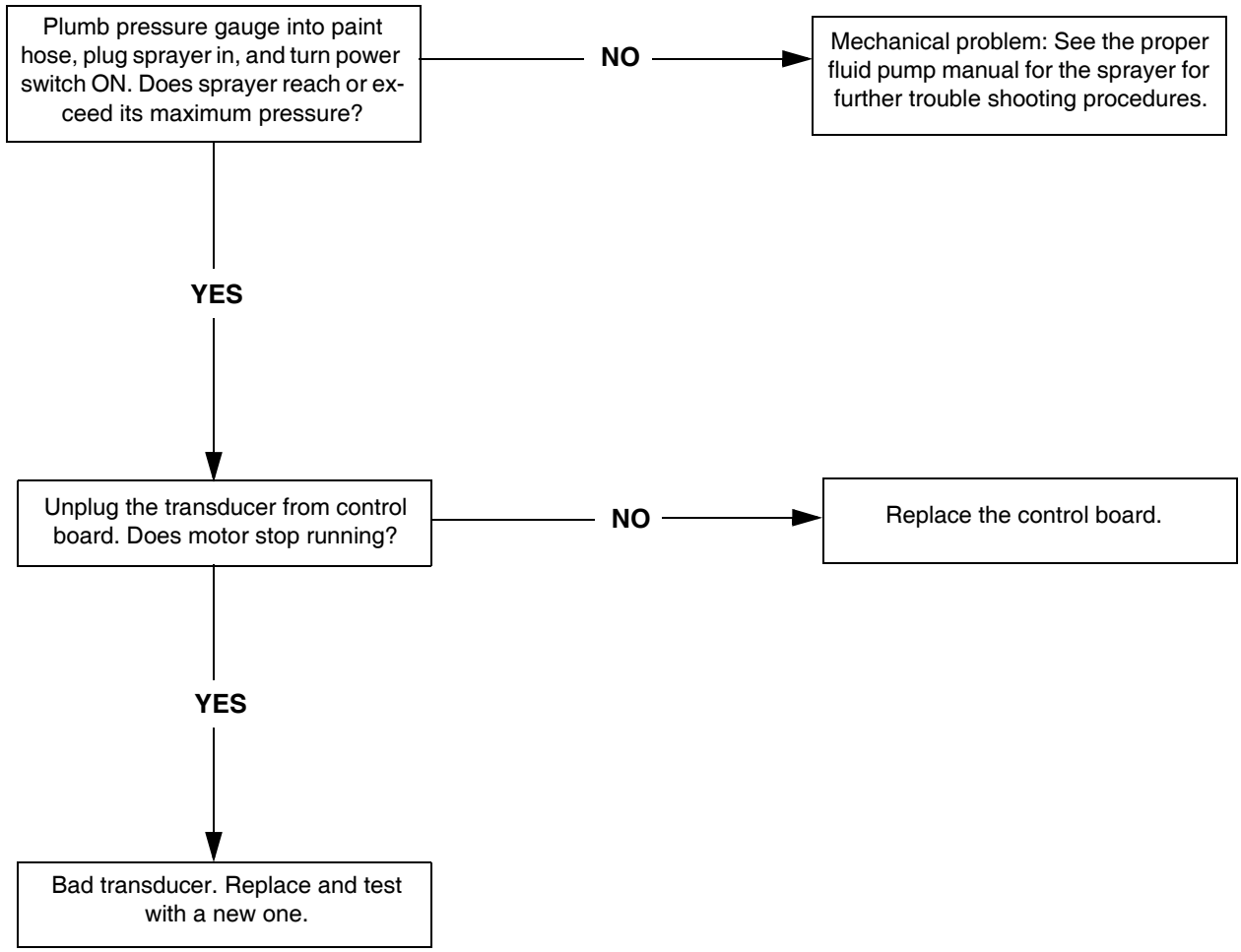
TYPE OF PROBLEM	WHAT TO CHECK	HOW TO CHECK
Sprayer does not run at all Digital display shows E=05  Control board status light blinks 5 times repeatedly	Control is commanding motor to run but motor shaft does not rotate. Possibly locked rotor condition, an open connection exists between motor and control, there is a problem with motor or control board, or motor amp draw is excessive.	1. Remove pump and try to run sprayer. If motor runs, check for locked or frozen pump or drive train. If sprayer does not run, continue to step 2. 2. Set sprayer to OFF and disconnect power to sprayer. 3. Disconnect motor connector(s) from control board socket(s). Check that motor connector and control board contacts are clean and secure. If contacts are clean and secure, continue to step 4. 4. Set sprayer to OFF and spin motor fan 1/2 turn. Restart sprayer. If sprayer runs, replace control board. If sprayer does not run, continue to step 5. 5. **Perform Spin Test:** Test at large 4-pin motor field connector. Disconnect fluid pump from sprayer. Test motor by placing a jumper across pins 1 & 2. Rotate motor fan at about 2 revolutions per second. A cogging resistance to motion should be felt at the fan. The motor should be replaced if no resistance is felt. Repeat for pin combinations 1 & 3 and 2 & 3. Pin 4 (the green wire) is not used in this test. If all spin tests are positive, continue to step 6. **STEP 1:**  **STEP 2:**  **STEP 3:** 

TYPE OF PROBLEM	WHAT TO CHECK	HOW TO CHECK
Sprayer does not run at all Digital display shows E=05  Control board status light blinks 5 times repeatedly	Control is commanding motor to run but motor shaft does not rotate. Possibly locked rotor condition, an open connection exists between motor and control, there is a problem with motor or control board, or motor amp draw is excessive.	6. **Perform Field Short Test:** Test at large 4-pin motor field connector. There should not be continuity from pin 4, the ground wire, and any of the remaining 3 pins. If motor field connector tests fail, replace motor.
Sprayer does not run at all Digital display shows E=06  Control board status light blinks 6 times repeatedly	Allow sprayer to cool. If sprayer runs when cool, correct cause of overheating. Keep sprayer in cooler location with good ventilation. Make sure motor air intake is not blocked. If sprayer still does not run, follow Step 1.	**NOTE:** Motor must be cooled down for the test. 1. Check thermal device connector (yellow wires) at control board. 2. Disconnect thermal device connector from control board socket. Make sure contacts are clean and secure. 0 3. Measure resistance of the thermal device. If reading is not correct, replace motor. **Check Motor Thermal Switch:** Unplug thermal wires. Set meter to ohms. Meter should read 3.9k **Ω.** 4. Reconnect thermal device connector to control board socket. Connect power, turn sprayer ON and control knob 1/2 turn clockwise. If sprayer does not run, replace control board.
Sprayer does not run at all Digital display shows E=09  Control board status light blinks 9 times repeatedly	Check the connections. Control is not receiving a motor position sensor signal	1. Turn power OFF. 2. Disconnect motor position sensor and inspect for damage at connectors. 3. Reconnect sensor. 4. Turn power ON. If error continues, replace motor.
Sprayer does not run at all Digital display shows E=10  Control board status light blinks 10 times repeatedly	Check to see if control board is over heating.	1. Make sure motor air intake is not blocked. 2. Make sure fan has not failed. 3. Make sure control board is properly connected to back plate and that conductive thermal paste is used on power components. 4. Replace control board. 5. Replace motor.

Sprayer Will Not Shut Off

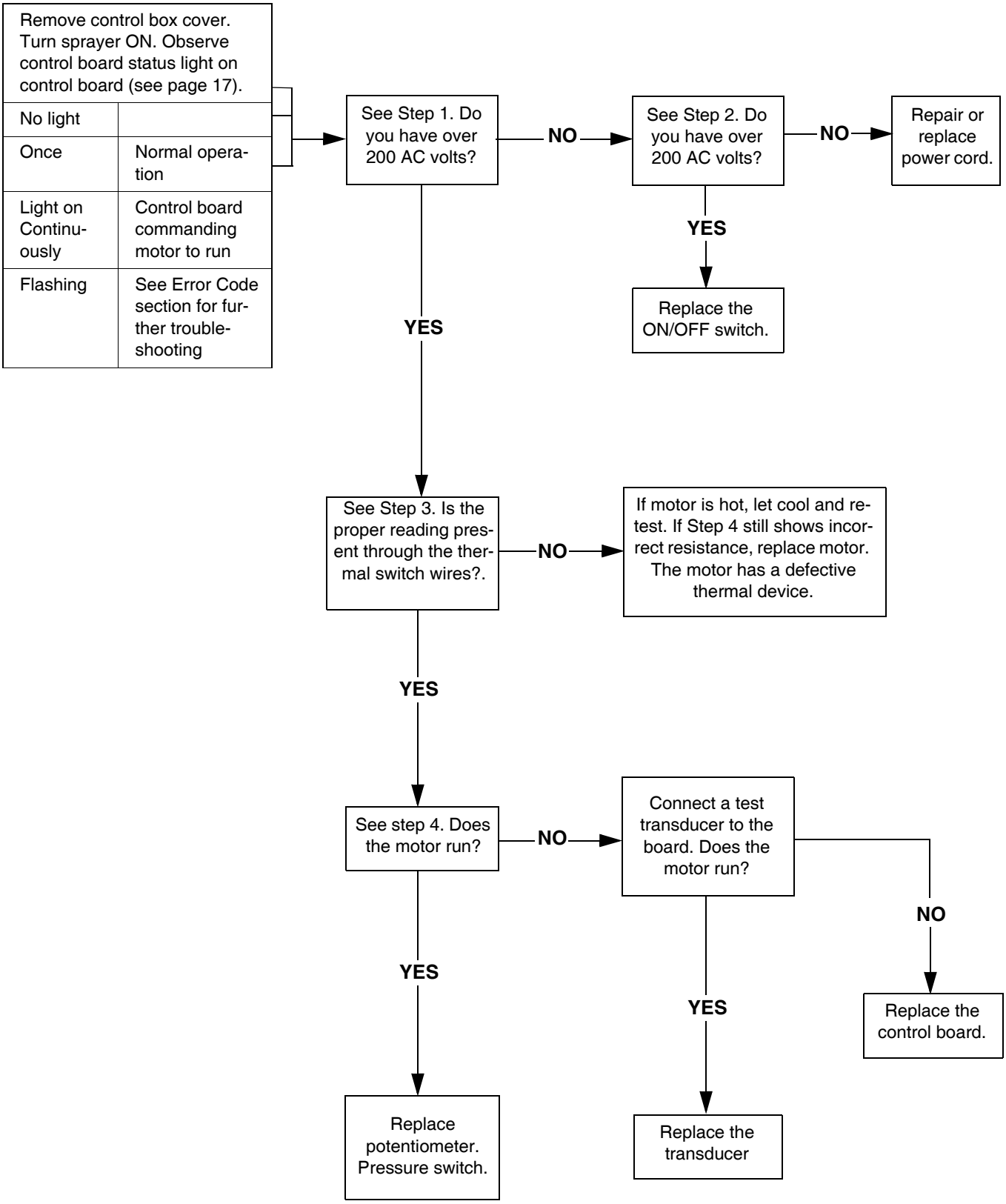
1. Perform **Pressure Relief Procedure**; page 8. Leave prime valve open and power switch OFF.
2. Remove control box cover so the control board status light can be viewed if available.

Troubleshooting Procedure



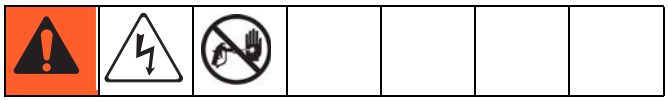
Sprayer Will Not Run

(See following page for steps)



240 Vac and 110 Vac Motor Control Board

Removal



Perform **Pressure Relief Procedure**; page 8. Wait 5 minutes before servicing.

1. Unplug power cord.
2. Remove **Motor Shroud**:
   a. Remove bolts from motor shroud.
   b. Remove pressure tube from sprayer.
   c. Remove bottom screw from toolbox.
   d. Loosen (but do not remove) four nuts on shelf. Carefully slide shelf forward.
   e. Remove shroud.
   f. Slide shelf back and tighten four nuts on shelf.
3. Remove all four screws (38) and cover (96).
4. Disconnect display connector (A) from motor control board (69).
5. Remove bottom two screws (39). disconnect potentiometer connector (82) from motor control board (69). Disconnect power cord connectors and filter board connectors from ON/OFF switch (33) and remove control panel (68).
6. Disconnect motor control board power connectors from filter board.
7. Remove top two screws (39) and control box (61).
8. Disconnect transducer connector from motor control board.
9. Disconnect motor connectors.
10. Remove six screws (39), two screws (13) and control board (69).

Installation

1. Use acetone or equivalent cleaner to thoroughly remove thermal paste from pockets on the Powerbar.
2. Apply thermal compound:
   a. For units shown in Fig. 1 below, apply a small amount of thermal compound 110009 or 110009 to shaded areas on rear of motor control board (52).

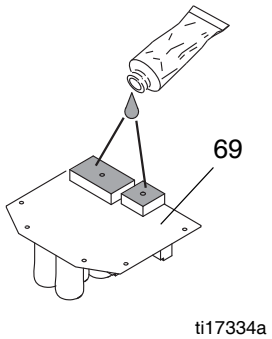


Fig. 1

   b. For units shown in Fig. 2 below, apply a small amount of thermal compound 110009 or 110009 into both pockets of the Powerbar and scrape across the pocket with the provided scraper so an even layer is remaining in the pocket.

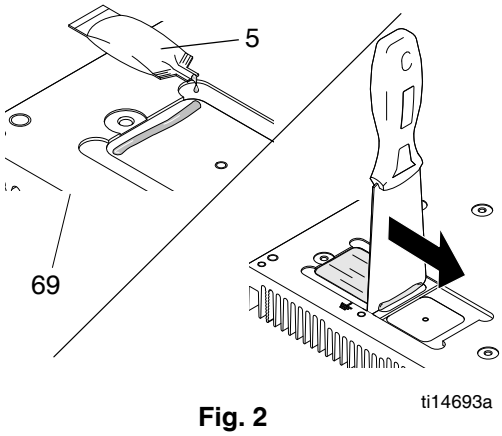


Fig. 2

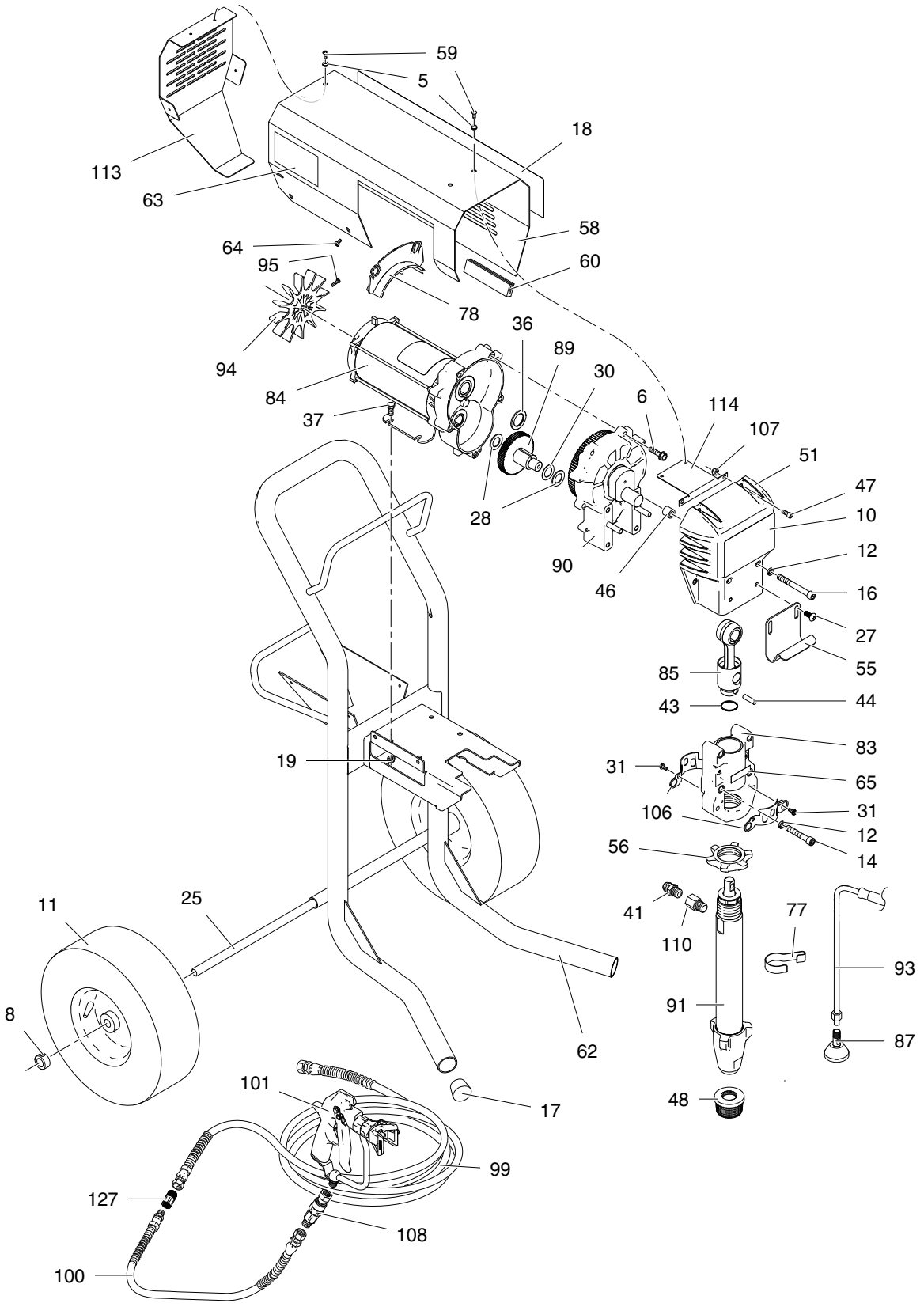
NOTICE

To reduce risk of motor control board failure, do not overtighten screws which can damage the electric components.

3. Install and tighten two screws (13). Install motor control board (69) with six screws (39).
4. Connect motor connectors and install into baffle.
5. Connect transducer connector (88) to motor control board (69).
6. Connect motor control board power connectors to filter board.
7. Install control box (61) with top two screws (39).
8. Connect filter board power connectors and power cord connectors to ON/OFF switch (33).
9. Connect potentiometer connector to motor control board.
10. Install control panel (68) with two screws (39).
11. Connect display connector to motor control board (69).
12. Install cover (96) with four screws (38)
13. Install **Motor Shroud**.
    a. Loosen (but do not remove) four nuts on shelf and slide shelf forward.
    b. Replace shroud.
    c. Slide shelf back and tighten four nuts on shelf.
    d. Replace bottom screw from toolbox and tighten.
    e. Replace pressure tube from sprayer.
    f. Replace bolts from motor shroud.

Notes

Parts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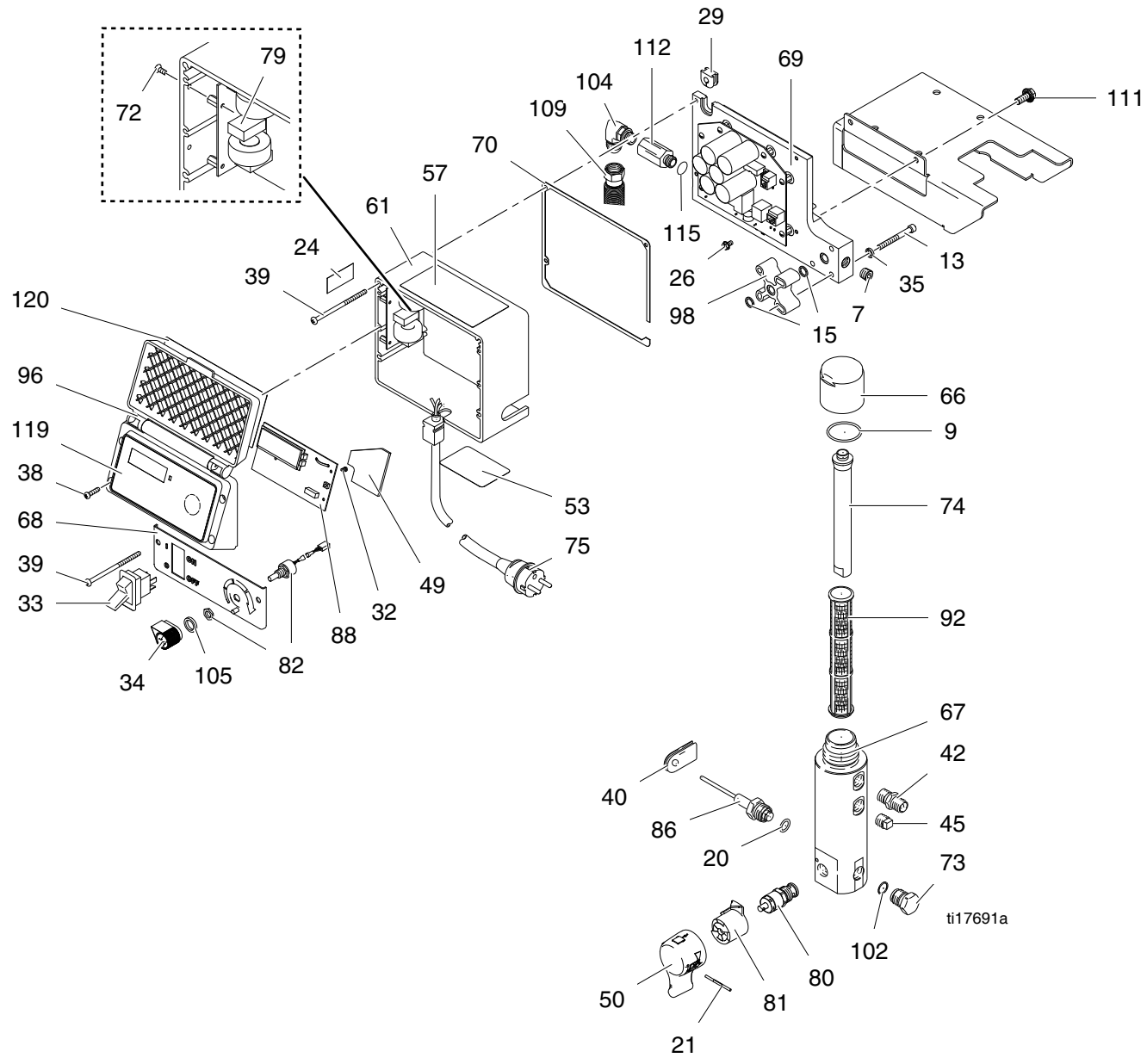
Parts List

Ref.	Part	Description	Qty.
5	301135	GROMMET	10
6	15C753	SCREW, mach, hex wash HD	5
8	143029	COLLAR, screw, set (special ID)	2
10	16F596	LABEL, Airlessco, TS1500, front	1
	16H945	LABEL, Airlessco, EZ Rent, Front	1
11	301165	WHEEL, pneumatic	2
12	106115	WASHER, lock (hi-collar)	4
14	114666	SCREW, cap, socket head	2
16	C19834	SCREW, cap, socket HD	2
17	301134	PLUG, neoprene	2
18	16F597	LABEL, Airlessco, TS1500, right	1
	16H946	LABEL, Airlessco, EZ Rent, right	1
19	112746	NUT, lock, nylon, thin pattern	4
25	866025	AXLE	1
27	867529	SCREW, screw 5/16-18 x .75 ph HD	2
28	114672	WASHER, thrust	2
30	114699	WASHER, thrust	1
31	118444	SCREW, mach, slot hex wash HD	4
36	116192	WASHER, thrust	1
37	100057	SCREW, cap, hex HD	4
41	117608	FITTING, nipple, straight	1
43	183169	SPRING, retaining	1
44	183210	PIN, str, hdls	1
46	16K551	SPACER, front cover	2
47	121112	SCREW, cap, socket head	2
48	112604	STRAINER, (1-11 1/2 NPSM)	1
51	16K547	COVER, front	1
55	301105	HOOK	1
56	193031	NUT, retaining	1
58	16K546	COVER	1
59	110037	SCREW, mach, pnh	6
60	865180	TRIM, edge, rubber	1
62	16K542	FRAME, cart	1
63	16K553	LABEL, Airlessco, EZ Rent, left	1
	16K961	LABEL, Airlessco, TS1500, left	
64	110637	SCREW, mach, pan head	4
65	187437	LABEL, torque	1
77	198542	CLIP, spring	1
78	278075	BRACKET, wire	1
83	287602	HOUSING, bearing, black	1
84	257187	MOTOR, electric, C104	1
85	241279	ROD, connecting	1
87	241920	DEFLECTOR, threaded	1
89	244265	GEAR, combination	1
90	287295	HOUSING, drive (240V)	1
	287294	HOUSING, drive (110V)	1
91	249059	PUMP, displacement, HD	1
93	287952	HOSE, drain	1
94	15D088	FAN, motor	1
95	115477	SCREW, mach, torx pan HD	1
99	865675	HOSE, paint hose 3/8 in. x 50	1
	HSE3850	HOSE, coupled, 3/8” in x 50’	1
100	867739	HOSE, whip, 1/4 in. x 5 LG	1
	255439	HOSE, coupled, 1/4” x 3’	1
101	24E382	KIT, gun, mastic, 500 (TS1500)	1
	24L879	KIT, gun (EZ Rent)	1
106	15C762	SHIELD, pump rod	2
107	102040	NUT, lock, hex	2
108	239663	SWIVEL, straight	1
110	150286	ADAPTER	1
113	16K672	COVER, back shroud	1
114	16K629	BRACKET, shroud	1
127	159841	BUSHING, EZ Rent	1

Parts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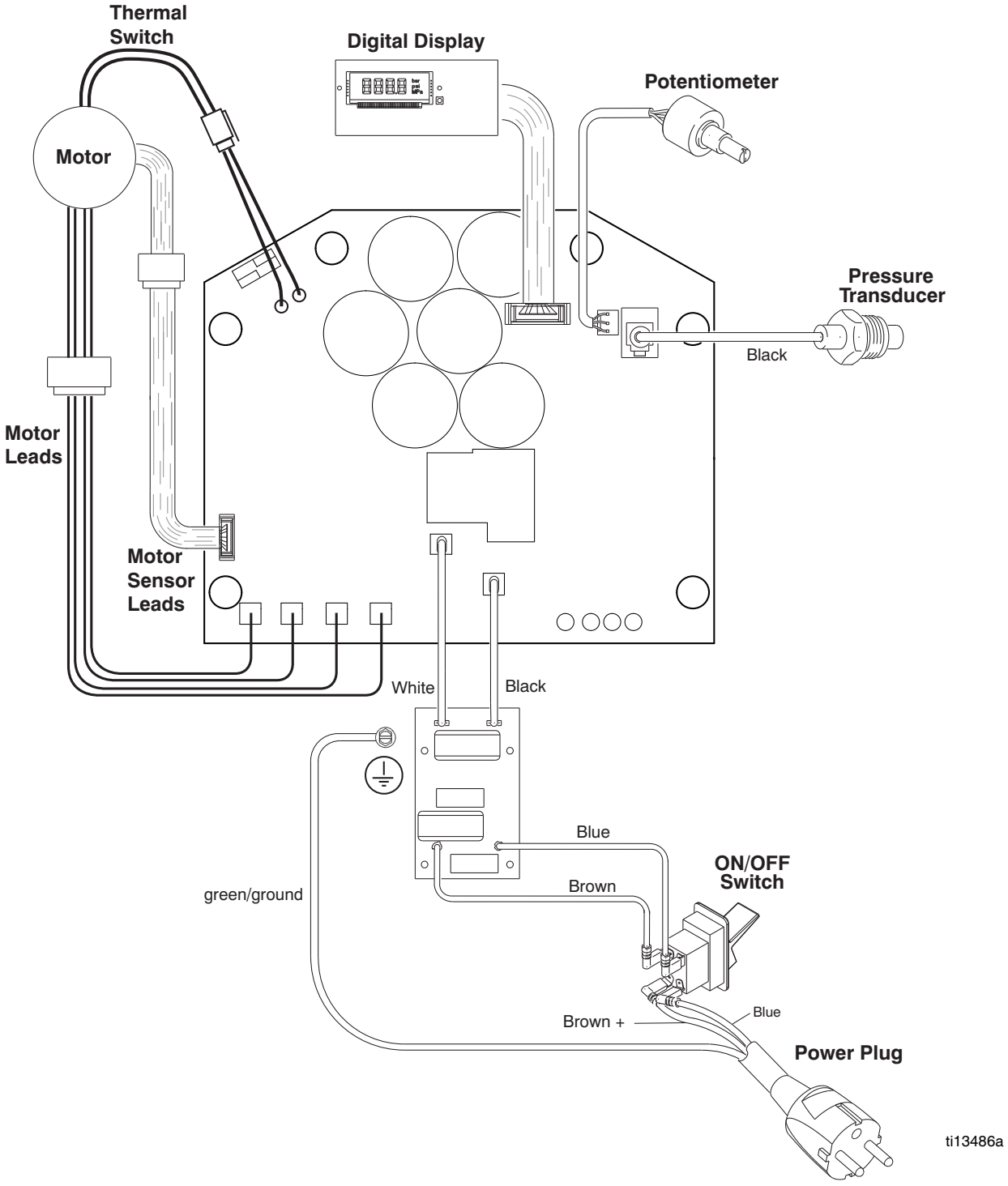
Parts List

Ref.	Part	Description	Qty.
7	100721	PLUG, pipe	1
9	117285	PACKING, o-ring	1
13	C19817	SCREW, cap, socket head	3
15	121513	PACKING, square ring	2
20	111457	PACKING, o-ring	1
21	15C972	PIN, spring	1
24	342425	LABEL, label, high voltage	1
26	114391	SCREW, grounding	1
29	15V996	GROMMET, motor lead	1
32	115522	SCREW, mach, pnh	3
33	15D527	SWITCH, rocker, (240V)	1
	15C979	SWITCH, rocker (110V)	1
34	116167	KNOB, potentiometer	1
35	105510	WASHER, lock, spring (hi-collar)	3
38	116252	SCREW, #10, taptite phil	4
39	112381	SCREW, mach, pan head	4
40	15D033	GROMMET, transducer	1
42	162485	ADAPTER, nipple	1
45	104813	PLUG, pipe	1
49	15E008	PAD, foam	1
50	15V591	HANDLE, prime valve, heavy duty	1
57▲	16G596	LABEL, warning icons intl	1
61	15D431	BOX, control	1
66	15C765	CAP, filter	1
67	15C838	BASE, filter	1
68	15C947	PANEL, control	1
69	258965	CONTROL, board, (240V)	1
	258964	CONTROL, board (110V)	1
70	15D036	GASKET, control box	1
72	119228	SCREW, mach, flat HD	4
73	248314	PLUG	1
74	15C766	TUBE, diffusion	1
75	15D528	CORD, power, (240V)	1
	15D530	CORD, power, (110V)	1
79	257905	CONTROL, board (240V)	1
	248219	CONTROL, board (110V)	1
80	24B156	VALVE, prime, heavy duty	1
81	24A382	BASE, valve, heavy duty	1
82	256219	POTENTIOMETER, assembly	1
86	243222	TRANSDUCER, pressure control	1
88	287671	DISPLAY, LCD	1
92	244067	FILTER, fluid	1
96	287605	COVER, control, black	1
98	15F844	SPACER, manifold	1
102	15D541	SEAL, washer	1
104	118896	FITTING	1
105	15C973	GASKET	1
109	15F017	HOSE, coupled, 1/2 x 16.00	1
111	110963	SCREW, cap, flange head	2
112	16K671	ADAPTER, power bar fitting	1
120	16H958	LABEL, cover	1

▲ *Replacement Danger and Warning labels are available at no cost.*

Wiring Diagram



Technical Data

Model	100 - 120V A, Hz	220 - 240V A, Hz	Generator Minimum W	Motor HP (W)	Cycles per gallon (liter)	Maximum Delivery gpm (lpm)	Maximum Tip Size		Fluid Outlet NPSM
							1 Gun	2 Guns	
TS1500	15, 50/60	10, 50	5000	2.20 (1640)	123 (33)	1.25 (4.7)	0.035	0.022	3/8 in.

Basic Sprayer Wetted Parts.....
zinc- and nickel-plated carbon steel, nylon, stainless steel, PTFE, Acetel, leather, UHMWPE, aluminum, tungsten carbide, PEEK, brass

Noise Level
Sound power ..... 91 dBa*
Sound pressure ..... 82 dBa*
*per ISO 3744; measured at 3.1 feet (1 m)

Dimensions

Model	Weight lb (kg)	Height in (cm)	Length in (cm)	Width in (cm)
TS1500	130.0 (59.0)	38.5 (97.8)	26.0 (66.0)	22.5 (57.2)

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.

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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.

Original Instructions. This manual contains English. MM 3A1959

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