

TriTech

MADE IN THE U.S.A.

T11

Owners Manual 302-121

REV B 6/2023

PROFESSIONAL AIRLESS SPRAYER

MAXIMUM WORKING PRESSURE 3300PSI / 227BAR / 22.7 MPa

VOLTS	CYCLES	AMPS	PHASE
110V	50 / 60	13	SINGLE
220V	50 / 60	7	SINGLE

FOR THE APPLICATION OF ARCHITECTURAL PAINTS AND COATINGS

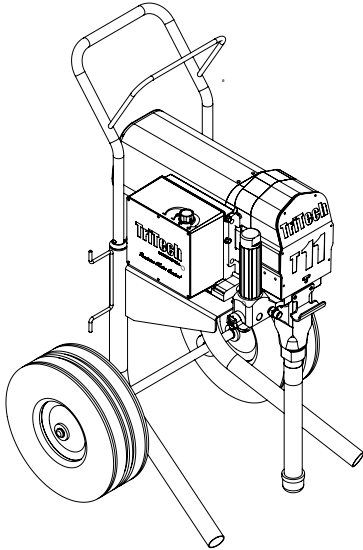


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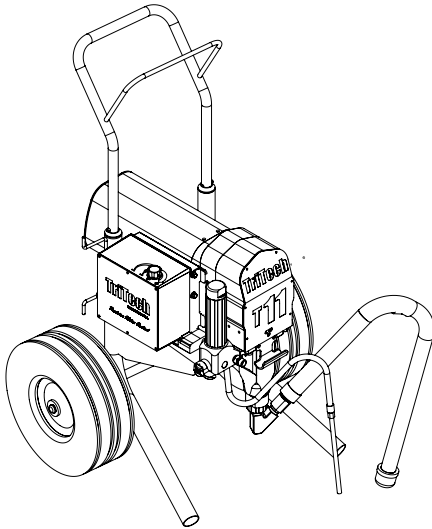


!! SAFETY AND OPERATING INSTRUCTIONS INSIDE !!

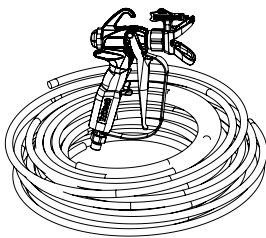
Read all warnings and safe operating information inside and retain this manual for future reference.



602-834	T11 HI CART COMPLETE 110V
602-844	T11 HI CART COMPLETE 220V
602-853	T11 HI CART COMPLETE 110V UK
602-851	T11 HI CART COMPLETE 220V AUS
602-838	T11 HI CART COMPLETE 220V UK



602-836	T11 LO CART COMPLETE 110V
602-846	T11 LO CART COMPLETE 220V
602-860	T11 LO CART COMPLETE 110V UK
602-849	T11 LO CART COMPLETE 220V AUS
602-839	T11 LO CART COMPLETE 220V UK



501-150	T380 AIRLESS SPRAY GUN
200-517	T93R CONTRACTOR TIP
200-999	CONTRACTOR GUARD
400-114	50' X 1/4" AIRLESS HOSE
400-141	25' X 3/8" AIRLESS HOSE
120-625	5000 PSI GAUGE KIT

IMPORTANT SAFETY INFORMATION

SAVE THESE INSTRUCTIONS -- To reduce the risk of fire or explosion, electrical shock and the injury to persons, read and understand all instructions. Become familiar with setup and operation before using this equipment.

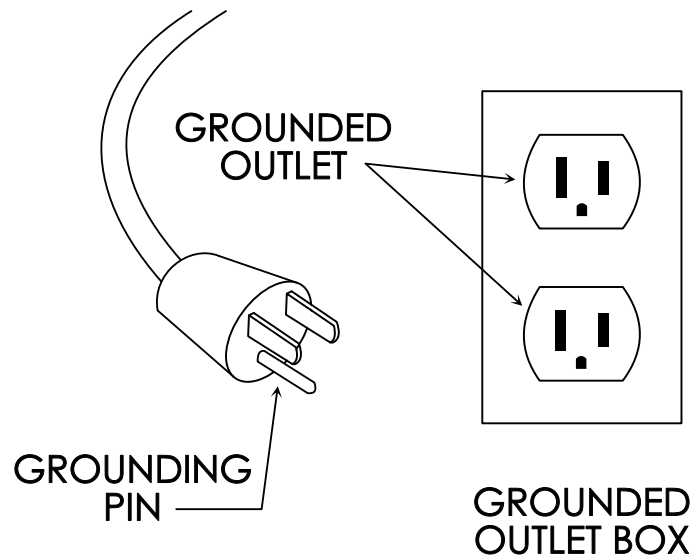
GROUNDING

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 ground 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. Ensure ground prong is intact on equipment power cord, and if used ensure extensions cord ground prong is intact.

WARNING – Improper installation of the grounding plug may result in a risk of electric shock. When repair or replacement of the cord or plug is required, do not connect the grounding wire to either flat blade mains terminal. The wire with the green or green/yellow insulation 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 plug will not fit the outlet have the proper outlet installed by qualified electrician.

Products that operate on a nominal 110VAC circuit have a grounding plug similar to the illustrated below. Only connect the product to an outlet having the same configuration as the plug. Do not use a 2 blade adapter with this product.



IMPORTANT SAFETY INFORMATION

WARNING — To reduce the risk of fire or explosion.

- Do not spray flammable or combustible material near an open flame or source of ignition such as cigarettes, motors, plastic drop cloths and electrical equipment.
- Do not plug or unplug power cord when flammable fumes are present.
- If there is a static spark or you feel a shock, stop use immediately. Do not use equipment until you identify and correct the problem.
- Do not spray or clean using materials with a flashpoint below 100° F (38° C).
- 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 only conductive or grounded high-pressure airless paint spray hoses specified by TriTech Industries, Inc.
- Verify that all containers and collective systems are grounded to prevent static discharge.
- Connect to a grounded outlet and use grounded extension cords. Do not use a 2 to 3 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 or while flammable fumes are present.
- Keep area clean and free of paint or solvent containers, rags, and other flammable materials.
- Sprayer generates sparks. When flammable liquid is used in or near the sprayer or for flushing or cleaning keep sprayer at least 20 feet (6.1 meters) away from explosive vapors.
- Know the contents of the paints and solvents being sprayed. Read all Material Safety Data Sheets (MSDS) and container labels provided with the paint and solvents. Follow paint and solvent manufacturer's safety instructions.
- Fire extinguisher equipment shall be present and working.

IMPORTANT SAFETY INFORMATION

WARNING — To reduce risk of skin injection.

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

- Do not 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 body part.
- Always use the spray gun tip guard. Do not spray without spray gun tip guard in place.
- Only use TriTech Industries, Inc. spray gun tips.
- Use caution when cleaning and changing spray gun tips. In the case where the spray gun tip clogs while spraying, follow the manufacturer's instructions for turning off the equipment and relieving the pressure before removing the spray gun tip to clean or replace.
- Do not leave the unit energized or under pressure while unattended. When the unit is not in use, turn off the unit and relieve the pressure in accordance with TriTech Industries, Inc. instructions.
- High-pressure spray is able to inject toxins into the body and cause serious bodily injury. In the event that injection occurs, seek medical attention immediately.
- Check hoses and parts for signs of damage. Replace any damaged hoses or parts.
- This system is capable of producing 3300 psi. Only use replacement parts or accessories that are specified by TriTech Industries, Inc. and that are rated at a minimum of 3300 psi.
- Always engage the gun trigger lock when not spraying. Verify the gun 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 — To reduce the risk of injury.

- Always wear appropriate gloves, eye protection, hearing protection and a respirator or mask when painting.
- Do not operate or spray near children. Keep children away from equipment at all times.
- Do not overreach or stand on an unstable support. Keep effective footing and balance at all times.
- Stay alert and watch what you are doing.
- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not kink or bend the hose.
- Do not expose the hose to temperature or pressures above that specified by manufacturer.
- Do not use the hose as a strength member to pull or lift the equipment.
- To reduce the risk of electrical shock, do not expose to rain. Store indoors.
- Turn off unit and unplug power cord before servicing equipment.

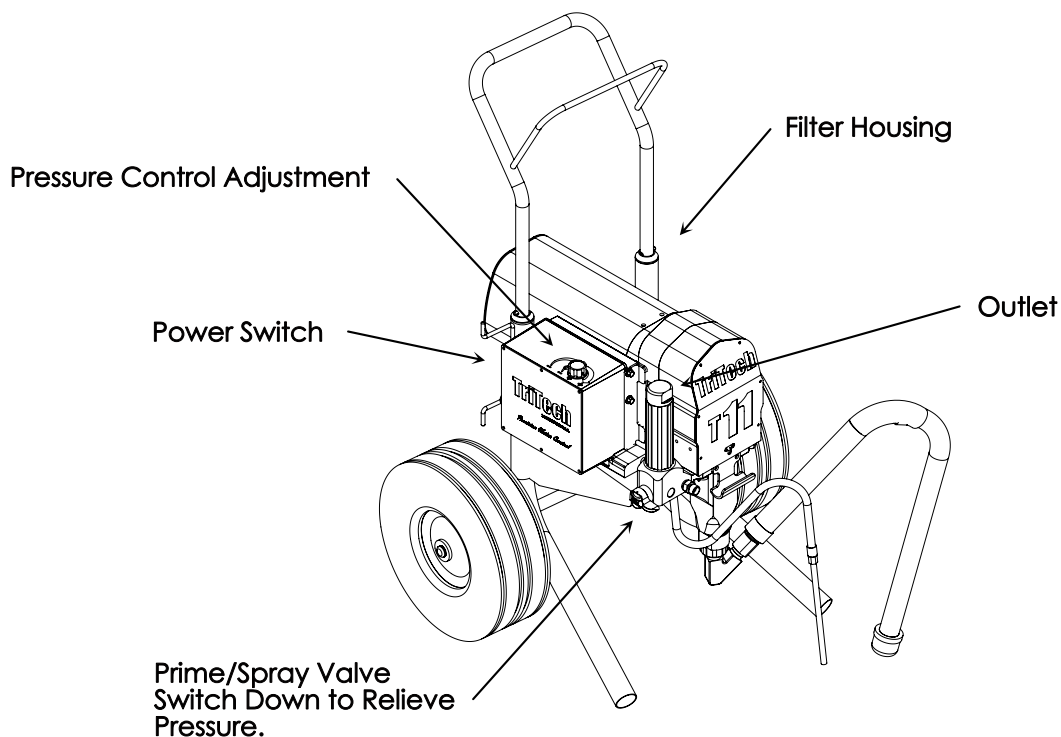
WARNING — To reduce the risk of injury, pressurized aluminum parts hazard.

- Do not use 1, 1,1-trichloroethane, methylene chloride, halogenated hydrocarbons (a solvent containing, Fluorine, Bromine, Chlorine, or iodine) and examples of those materials – such as methyl bromine, carbon tetrachloride and ethyl iodide.

IMPORTANT SAFETY INFORMATION

WARNING — Equipment Misuse Hazard

- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine TriTech Industries, Inc. replacement parts.
- Do not alter or modify this equipment.
- Use equipment only for its intended purpose. Call TriTech Industries, Inc. customer service or your TriTech Industries, Inc. distributor for information.
- Route hoses, cords, extension cords away from high traffic areas, sharp edges, moving parts and hot surfaces. If spray hose is required to be replaced only replace with identical hose supplied with sprayer.
- Extension Cord, three wire grounded type only.
 - Use only extension cord with plug and receptacle that matches plug supplied on equipment.
 - Inspect the extension cord for damage before use, replaced if necessary
 - Acceptable extension cord lengths:
 - 16 AWG 25 feet maximum
 - 12 AWG 50 feet maximum
 - 10 AWG 100 feet maximum
- Pails – Solvent and oil based fluids: follow local codes;
 - Use only conductive metal pails placed on a grounded surface.
 - Do not place pails on non-conductive surfaces such as paper, cardboard or wood which interrupts ground.
 - To maintain ground continuity when flushing or relieving pressure: hold metal part of the spray gun with the airless tip removed firmly to the side of the grounded metal pail, then trigger gun.



START UP

1. Connect TriTech airless hose to sprayer. Tighten securely.
2. Connect other end of the hose to gun.
3. Tighten securely.
4. Remove tip guard.
5. Check inlet strainer for clogs and debris.
6. Fill upper retainer with TriLube to prevent premature packing wear. Do this each time you spray.
7. Plug power supply cord into a properly grounded electrical outlet.
8. Place siphon tube set in grounded metal container partially filled with flushing fluid. Use mineral spirits to flush storage oil.
9. Turn pressure control to lowest pressure. Open the Prime/Spray Valve so the handle is pointing down.
10. Turn power ON.
11. Increase pressure to start motor and allow fluid to circulate through prime tube for 15 seconds; then turn pressure down.
12. Turn prime / spray valve to the spray position or so the handle is horizontal. Take spray gun trigger safety OFF.
13. Hold gun against grounded metal container. Trigger gun and increase fluid pressure to half way. Flush 1 minute. Inspect for leaks. If a leak occurs follow the pressure relief procedure then tighten fitting were leak occurred. Do not attempt to stop leaks with hand or rag! Repeat Start-up 1-5 again. If no leaks, proceed.
14. Place siphon tube in paint pail.
15. Trigger gun again into metal container until paint appears. Move gun to paint pail and trigger for 20 seconds. Set the safety to ON position. Assemble tip and guard. (See following section).

TIP AND GUARD ASSEMBLY

1. Insert metal seal and “black bellow” seal assembly by placing seals on the end of T93R Contractor tip and insert through guard. Line up seals by turning tip.
2. Insert Tip
3. Screw assembly onto gun. Tighten.

SPRAYING

1. Spray test pattern. Start with pressure turned to its lowest setting, then gradually increase pressure until you achieve a consistent spray pattern without heavy edges. Use smaller tip size if pressure adjustment cannot eliminate heavy edges.
2. Hold gun perpendicular 10-12 inches in of front surface. Spray back and forth overlapping by 30%. To prevent heavy spots, start moving the gun before pulling the trigger. When spraying, after releasing trigger continue to move gun.

CLEARING CLOGGED TIP

- a) Release trigger, put safety ON.
- b) Rotate T93R Tip so the arrow is pointing backwards.
- c) Take safety OFF
- d) Trigger gun to clear clog. Never point gun at your hand or in a rag!

RETURN TO SPRAY

- a) Put Safety ON.
- b) Return Tip to spray position.
- c) Take safety OFF and continue spraying.

CLEAN UP

1. Turn power OFF and unplug sprayer.
2. Turn pressure to lowest setting. Trigger gun to relieve pressure.
3. Put prime hose in pail. Turn the prime / spray valve so the handle is pointing down.
4. Remove guard and T93R tip. Clean tip with soft bristle brush. DO NOT STORE IN WATER.
5. Remove suction hose from paint and place in flushing fluid. Use water for water base paint and mineral spirits for oil base paint.
6. Plug in sprayer. Turn power ON. Turn the prime / spray valve so the handle is horizontal.
7. Hold gun against paint pail. Take trigger safety OFF. Trigger gun and increase pressure until flushing fluid appears.
8. Move gun to flushing pail, hold gun against pail. Trigger gun to thoroughly flush system. Release trigger and put trigger safety ON.
9. Turn the prime / spray valve so the handle is pointing down and allow flushing fluid to circulate for 1 to 2 minutes to clean prime hose.
10. Raise the suction hose just above the flushing fluid and run sprayer for 15 to 30 seconds to drain fluid. Turn power off.
11. Close prime / spray valve. Trigger gun into flushing pail to purge fluid from hose.
12. Open prime / spray valve. Then close. Do not store with prime / spray valve open.
13. Remove filter from gun and sprayer, if installed. Clean and inspect. Reinstall filters.
14. If flushing with water, flush again with mineral spirits or TriTech Pump Cleaner to leave a protective coating to prevent freezing or corrosion.
15. Unplug power cord from outlet and wipe sprayer, hose and gun with rag soaked in water or mineral spirits.

PRESSURE RELIEF PROCEDURE

The sprayer's pressure must be manually relieved to prevent sprayer from starting or spraying accidentally. Fluid under high pressure can be injected through skin and cause serious injury. To reduce risk of injury from injection, splashing fluid, or moving parts, Follow the **PressureRelief Procedure** whenever you:

- Are instructed to relieve pressure
- Stop spraying
- Need to check or service any system equipment
- Install or clean spray tip

PROCEDURE

1. Turn pressure control knob counterclockwise to stop.
2. Turn sprayer off.
3. Do not unplug power supply cord.
4. Hold metal part of gun firmly to grounded metal container. Trigger gun to relieve pressure.
5. Lock gun safety latch.
6. Open prime / spray valve. Leave prime spray valve open until ready to spray again.

NOTE: If suspected that spray tip or hose is completely clogged, or that pressure has not been fully relieved after following steps above. **SLOWLY** loosen tip guard or hose end coupling to relieve pressure gradually, and then loosen completely. Clear tip or hose obstruction.

ELECTRICAL SHOCK WARNING

To reduce risk of serious injury, including electric shock, do not touch moving or electrical parts with fingers or tools while testing repair. Shut off and unplug sprayer when inspection is complete. Install all covers, guards, gaskets, screws and washers before operating sprayer.

PROBLEM	WHAT TO CHECK	REMEDY
MOTOR WILL NOT TURN ON	1 - Unit is not plugged in. 2 - Pressure is set too low. 3 - The circuit breaker is open.	1 - Plug the unit in. 2 - Increase pressure. 3 - Check the breaker and reset if needed.
UNIT WILL NOT PRIME	1 - Suction hose is loose. 2 - Suction filter is clogged. 3 - Inlet ball is stuck. 4 - Outlet ball is stuck.	1 - Check the o-rings and tighten the suction hose. 2 - Clean or replace the suction filter 3 - Remove the suction hose and move the inlet ball with the eraser end of a pencil. 4 - Remove the suction hose and the inlet valve. Move the outlet ball with the eraser end of a pencil.
PUMP BUILDS PRESSURE BUT WILL NOT SHUT OFF	1 - The inlet ball or seat are obstructed or chipped. 2 - Outlet ball or seat are obstructed or chipped. 3 - Prime valve is leaking.	1 - Clean or replace if needed. 2 - Clean or replace if needed. 3 - Replace the prime valve if coating leaks while under pressure.
PAINT LEAKING FROM WET CUP	1 - Inspect upper packing.	1 - Replace upper packing if needed.
PUMP OUTPUT IS LOW	1 - The spray tip could be worn. 2 - The inlet or outlet balls are worn. 3 - Prime valve is worn.	1 - Inspect the tip by checking the fan pattern width. If worn, replace. 2 - Inspect the inlet and outlet balls for damage. Replace if worn. 3 - If the prime valve leaks while spraying, clean or replace is worn.

NOTE: Before performing and inspection or repair, make sure to follow the pressure relief Procedure. Never attempt to do any service while the unit is plugged in or under pressure.



EC - DECLARATION OF CONFORMITY

Models T11
Part Number 602-834, 602-836, 602-844, 602-853, 602-851, 602-838
602-846, 602-860, 602-849, 602-839

Complies with the EC Directives: 2006/42/EC Machinery Directive
Standards Used: ISO 1200, ISO 3744

Approved by:

Rollan Henderson

National Sales Manager

Manufactured by: June 26, 2023

TriTech Industries, Inc.

610 Rahway Avenue

Union, NJ 07083 U.S.A.

302-119B



EC - DECLARATION OF CONFORMITY

Models T360, T380, T420, T720, T750, T370IL

Part Number

500-150, 500-151, 500-152, 500-153, 500-150-GTH, 500-152-GTH

501-150, 501-155, 501-251, 501-255, 501-150-GTH, 501-155-GTH

503-150, 503-151, 503-152, 503-153, 503-150-GTH, 503-152-GTH

506-150, 506-151, 506-152, 506-153

507-150, 507-151, 507-152, 507-153

Complies with the EC Directives: 2006/42/EC Machinery Directive

Standards Used: ISO 1200, ISO 3744

Approved by:

Rollan Henderson

National Sales Manager

Manufactured by: August 27, 2021

TriTech Industries, Inc.

610 Rahway Avenue

Union, NJ 07083 U.S.A.

302-119B



WEEE Compliance

Statement

The mark shown to the right is in compliance with the Waste Electrical and Electronic Equipment Directive 2002/96/EC (WEEE). The mark indicates the requirement NOT to dispose of the equipment as unsorted municipal waste, but use the return and collection systems according to local law. Users should contact their supplier and check the terms and conditions of the purchase contract. When purchased directly from TriTech Industries, or a TriTech Industries Distributor you may contact technical support for disposal arrangements.

RoHS Compliance Statement

TriTech Industries products are designed to meet Reduction of Hazardous Substance Directive 2011/65/EU 8June2011, the product manufactured by TriTech Industries do not contain materials that exceed thresholds for cadmium, mercury, hexavalent chromium, Polybrominated diphenyl ethers (PBDEs) or other regulated substances.

Safety Compliance Statement

TriTech Industries product are certified meeting UL 1450 Issued: 2010/05/05 Ed: 4 Rev: 2013/11/01 Motor-Operated Air Compressors, Vacuum Pumps, & Painting Equipment and CSA C22.2#68 Issued: 2009/09/01 Ed: 7 Motor-Operated Appliances (Household and Commercial)-General Instruction No 1 : 2010/02/01 - General Instruction No. 2: 2010/09/28. TriTech Industries products are designed to conform to EN 55014-1 *Issue: 2006/12/01 Electromagnetic compatibility Requirements for electric tools and similar apparatus*, EN 55014-2 *Issued: 2001/12/01 EMC- Requirements for Electric Tools and Similar Apparatus*, and European Union Low Voltage Directive (LVD) 2006/95/EC

EXTENSION CORD VOLTAGE DROP				
120V	15 AMP	100'	200'	300'
14 AWG		110.6	101.2	91.8
12 AWG		114.1	108.1	102.2
10 AWG		116.3	112.5	108.8
LINE LOSS 1/4" HOSE STANDARD LATEX PAINT				
HORIZONTAL	AT PUMP		AT TIP	
50'	3300PSI	227 BAR	3150	217 BAR
100'	3300PSI	227 BAR	3100	213 BAR
150'	3300PSI	227 BAR	3050	210 BAR
200'	3300PSI	227 BAR	3000	207 BAR
250'	3300PSI	227 BAR	2950	203 BAR
300'	3300PSI	227 BAR	2900	199 BAR
VERTICAL				
50'	3200	220 BAR	3135	216 BAR
100'	3200	220 BAR	3070	211 BAR
150'	3200	220 BAR	3005	209 BAR
200'	3200	220 BAR	2940	202 BAR
250'	3200	220 BAR	2875	198 BAR
300'	3200	220 BAR	2810	193 BAR

PRESSURE RELIEF PROCEDURE

!! IMPORTANT !!

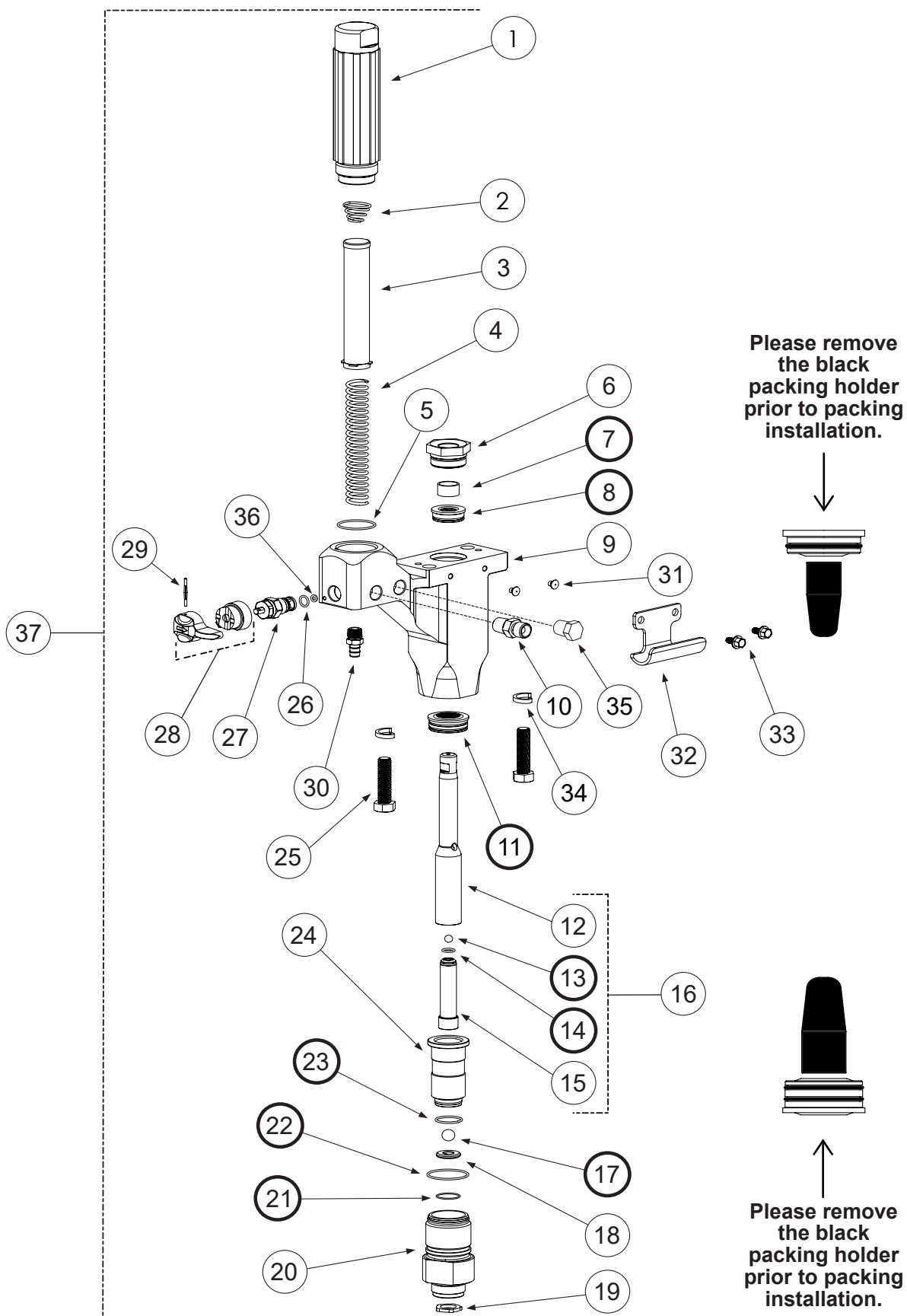
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- Are instructed to relieve pressure
- Stop spraying
- Have to check or service your equipment
- Are installing or cleaning the spray tip

PRESSURE RELIEF PROCEDURE

1. Turn the pressure control knob all the way to the left to stop the unit from pumping.
2. Turn the On/Off switch to the **OFF** position.
3. Unplug the power cord from the wall.
4. Hold the metal part of the gun firmly to a grounded metal container and trigger the gun to relieve the pressure.
5. Engage the trigger lock.
6. Open the prime valve (The valve is in prime or open position when the handle is pointing down) and leave it open until you are ready to spray again.

DIAGRAM A T11 FLUID MANIFOLD



NOTE: Items listed in bold are included in packing kit 602-475.

T11 FLUID MANIFOLD PARTS LIST

ITEM #	PART #	DESCRIPTION	QTY
1	602-178	FILTER HOUSING	1
2	600-255	FILTER SPRING	1
3	600-141-02	MANIFOLD FILTER, 20 MESH	1
4	600-240	FILTER CORE	1
5	600-353	O-RING	1
6	602-034	UPPER RETAINER	1
7	602-035	UPPER GUIDE	1
8	602-177	UPPER PACKING	1
9	602-083	PUMP HOUSING	1
10	120-227	NIPPLE, 3/8" NPT X 3/8" NPT	1
11	602-176	LOWER PACKING	1
12	602-099	PISTON ROD	1
13	600-047	UPPER BALL	1
14	101-504	O-RING	1
15	602-242	PISTON VALVE	1
16	602-090	PISTON ROD COMPLETE (Includes 12-15)	1
17	600-022	LOWER BALL	1
18	600-021	INTAKE VALVE SEAT	1
19	600-234	GASKET	1
20	602-073	INTAKE VALVE HOUSING	1
21	600-279	O-RING	1
22	602-259	O-RING	1
23	600-367	O-RING	1
24	602-087	GUIDE, BALL / PISTON	1
25	602-025	HEX BOLT	2
26	600-166	O-RING	1
27	600-157	PRIME / SPRAY VALVE (Includes 26 & 36)	1
28	600-437	HANDLE & CAM KIT (Includes 29)	1
29	600-214	PIN	1
30	602-236	FITTING, HOSE BARBED	1
31	600-242	PLUG (Lo Cart Only)	2
32	600-320	PAIL HOOK (Hi Cart Only)	1
33	600-541	SCREW (Hi Cart Only)	2
34	602-023	LOCK WASHER	2
35	120-238	PLUG	1
36	600-174	GASKET	1
37	602-335	PUMP COMPLETE	1
	602-475	PACKING KIT Includes the following items: (7,8,11,13,14,17,21,22,23)	

OPTIONAL MANIFOLD FILTERS	
600-141-05	MANIFOLD FILTER, 50 MESH
600-141-10	MANIFOLD FILTER, 100 MESH

PACKING REMOVAL TOOL	
602-667	PACKING REMOVAL TOOL
602-668	PACKING REMOVAL TIPS (2)

FLUID MANIFOLD SERVICE AND REPAIR

REPACKING FLUID MANIFOLD

IMPORTANT! FOLLOW THE PRESSURE RELIEF PROCEDURE AS STATED ON PAGE 41

IMPORTANT! UNPLUG THE UNIT.

1. Remove the suction set by unthreading the nut (#1) in Diagram E. Then pull the elbow straight down out of the inlet valve housing (#20) in Diagram A.
2. Remove the filter housing (#1), the Filter (#2) and the filter core (#4) in Diagram A.
3. Remove the intake valve housing (#20) in Diagram A.
4. Remove the piston guide (#24) in Diagram A, by inserting a flat head screw driver into the gap between the piston guide and the intake valve housing. Gently twist the screw driver until the piston guide pops up and is free from the intake valve housing.
5. Empty the contents of the intake valve housing (lower ball & intake valve seat) Carefully inspect the lower ball (#17) and the intake valve seat (#18) for any chips or cracks and replace if worn. The seat is two-sided and can be flipped over if one side is damaged. If you are repacking the unit, you must always replace the lower ball (#17) and the gaskets (#22) and (#21) in Diagram A.
6. Insert a 15/16" hex key into the piston valve (#15) in Diagram A, and turn counter clockwise to remove. When you remove the piston valve, there will be an upper ball (#13) and an o-ring (#14) that will come out with it. Carefully inspect the upper ball and the carbide seat in the top of the piston valve for any cracks or chips and replace if worn. If you are repacking the unit, always replace the upper ball (#13) and the o-ring (#14) in Diagram A.
7. To remove the pump housing (#9) in Diagram A, use a 5/8" socket wrench to remove the two hex bolts on the bottom of the pump housing. Next, unthread the transducer (#20) Diagram C from the back of the pump housing. Make sure to hold the steel tubing that runs from the back of the pump housing to the control box in Diagram C, with a pair of pliers to keep it from turning while you loosen the nut on the transducer using a 3/4" open end wrench. This will keep the wires from twisting off the circuit board.
8. Remove the Front Cover (#11) in Diagram B.
9. Remove the motor cover (#3) in Diagram B by removing the three screws (#1) and pulling the motor cover straight back off the motor.
10. Spin the fan (#14) in Diagram B in either direction. The pump housing will lower down away from the crank housing (#9) in Diagram B. Once the pump housing has cleared the aligning pins on the bottom of the crank housing, slide the pump housing off the connecting rod (#12) in Diagram B.
11. Place the pump housing in a vise and use a 1" open end or adjustable wrench to remove the upper retainer (#6) in Diagram A.
12. Remove the piston rod (#12) in Diagram A by tapping the top of the piston rod with a rubber mallet.
13. Remove the upper packing (#8) and lower packing (#11) in Diagram A with the packing removal tool #602-667.
14. When replacing the packings, make sure to apply packing grease to the inside and outside of the packings prior to insertion. The grease is supplied with the packing kit 602-475.
15. Remove the black packing holder from the upper and lower packings, and apply the grease. The smaller upper packing (#8) in Diagram A is to be inserted into the top of the pump housing. The packing will only go in direction.
16. Insert the upper guide (#7) into the upper retainer (#6) in Diagram A and thread the upper retainer into the pump housing. Leave the upper retainer hand-tight until the piston is installed.
17. Insert the lower packing (#11) into the pump housing. It will only do in one direction.
18. Hold the piston rod (#12) upside down and insert the upper ball (#13). Replace the o-ring (#14) on the piston valve (#12) and thread the piston valve back into the piston rod. Slide the piston rod into the connecting rod (#12) in Diagram B to hold it steady while you tighten the piston valve firmly.
19. Replace o-rings (#21, 22, 23) in Diagram A. Insert the intake valve seat (#18) and the lower ball (#17) into the intake valve housing (#20) in Diagram A. Insert the piston guide into the intake valve housing pressing firmly until it snaps into place.
20. Place the piston rod into the intake valve assembly. Use the intake valve assembly to insert the piston rod through the lower packing. When you thread the intake valve assembly into the pump housing, it will seat the lower packing correctly and drive the piston through the upper packing.

FLUID MANIFOLD SERVICE AND REPAIR

REPACKING FLUID MANIFOLD (CON'T)

21. Insert a pair of needle nose pliers into the slots on the top of the piston rod. Pry up on the Piston Rod and turn it to align the slots front to back.
22. Use a 1" open end or an adjustable wrench to tighten the upper retainer (#6) in Diagram A firmly.
23. Slide the slots of the piston rod onto the connecting rod.
24. Gently turn the fan in either direction and it will draw the pump assembly up to the crank housing. Be careful to make sure the alignment pins line up while seating the pump housing.
25. Attached the transducer to the back of the pump housing. Make sure the o-ring (#19) in Diagram C, is in place before threading it in. Tighten it firmly with a 3/4" open end wrench, while holding the steel tubing with a pair of pliers.
26. Use a 5/16" Socket Wrench to insert the two hex bolts into the bottom of the pump housing and tighten firmly.
27. Replace the Front Cover (#11) in Diagram B.
28. Replace the Motor Cover and tighten the three screws (#1) snug.
29. Re-attach the suction assembly. Make sure to apply some packing grease to the two o-rings (#4) in Diagram E before inserting the elbow into the intake valve assembly. Push the elbow straight in until it stops. Thread the nut (#1) in Diagram E back onto the intake valve assembly snugly, but hand-tight.

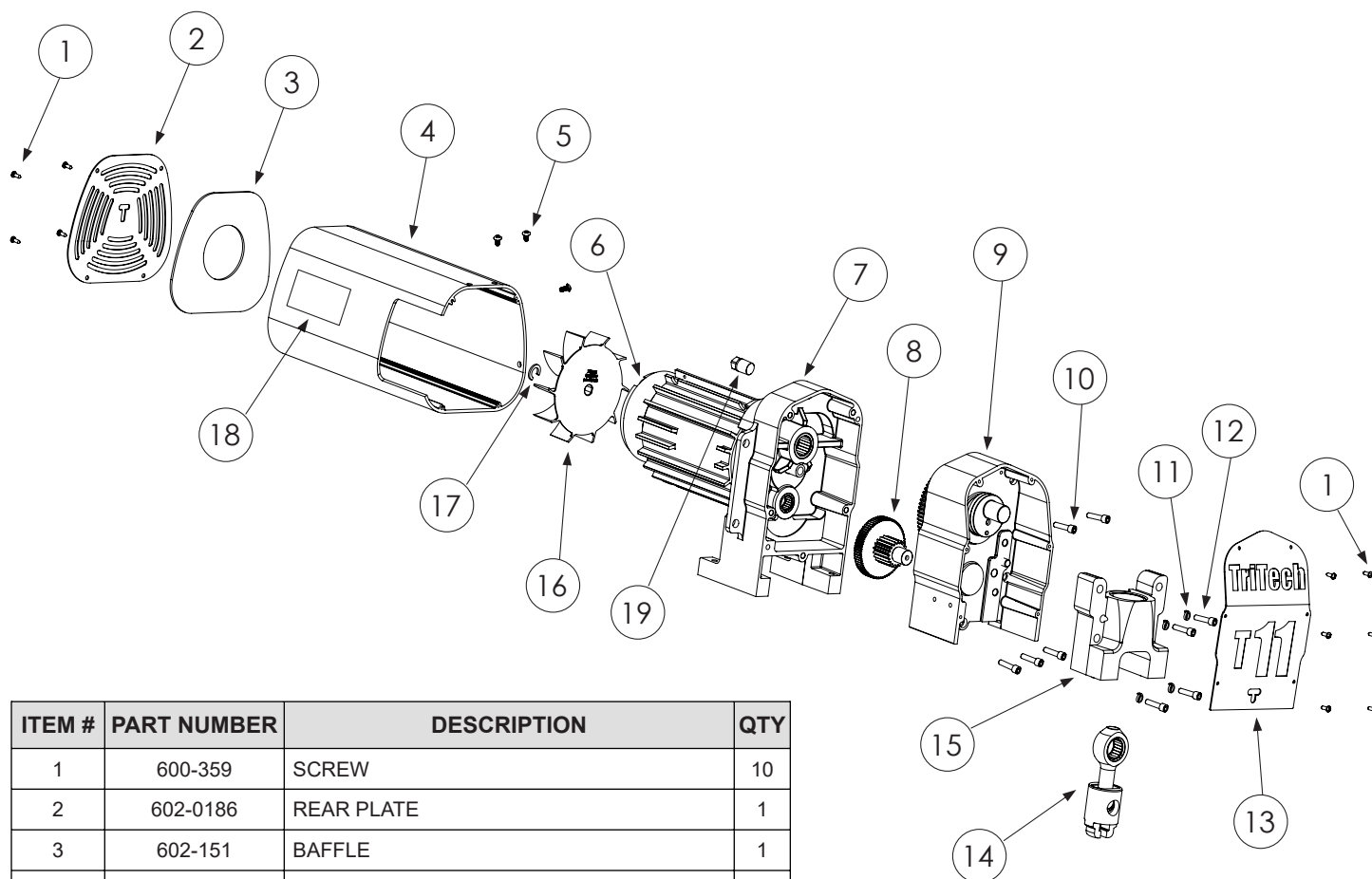
REPLACING THE PRIME / SPRAY VALVE

1. Using a 3/32" punch, knock out the pin (#29) from the black handle (#28) in Diagram A.
2. Remove the black handle and cam exposing the prime/spray valve (#27) in Diagram A.
3. Using a 3/4" open end or adjustable wrench, remove the prime/spray valve and inspect. Replace if worn or leaking.

REPLACING THE MANIFOLD FILTER

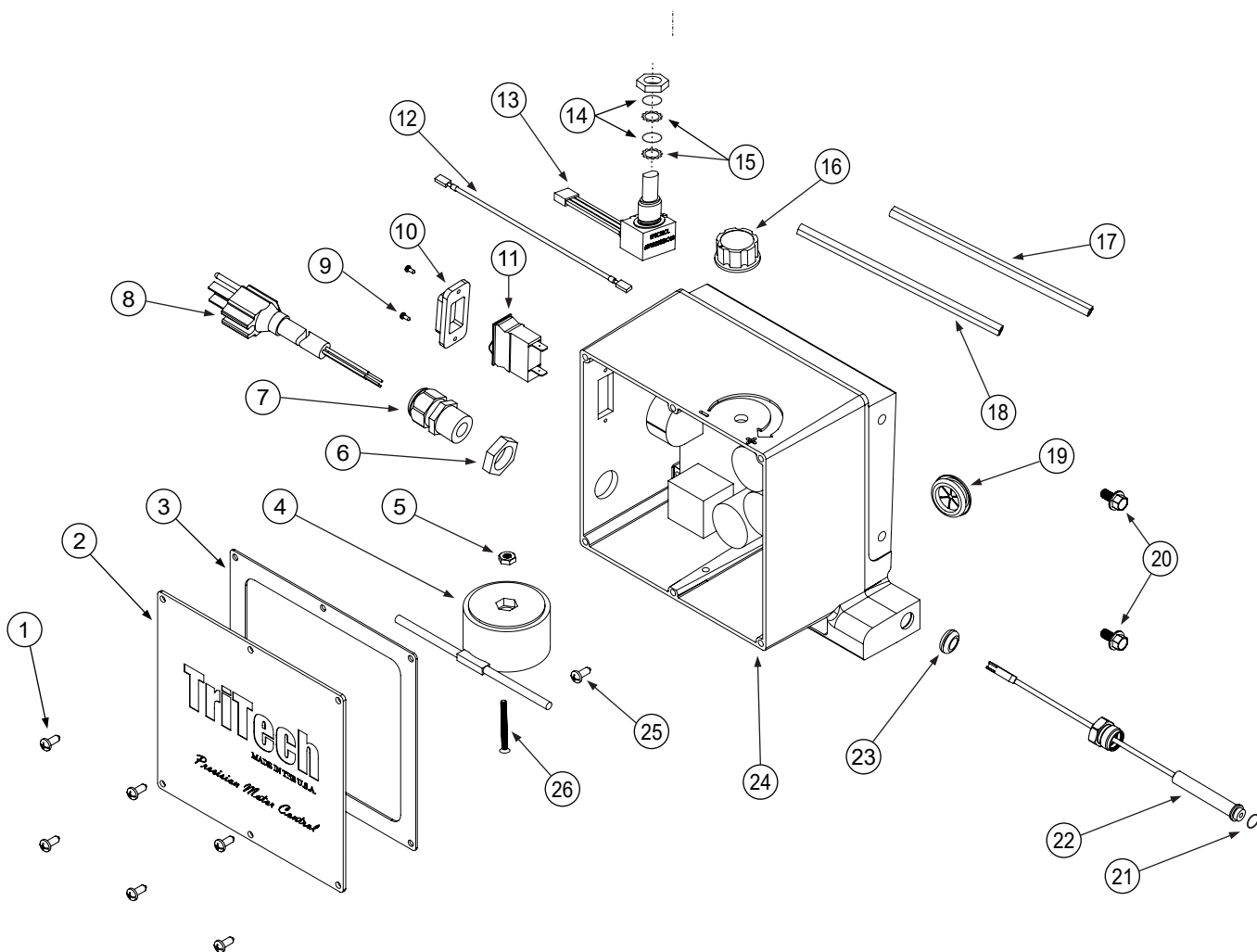
1. Remove the filter housing (#1) in Diagram A from the pump housing. New pumps from the factory will be tight and you will need to use an adjustable wrench to loosen.
2. Remove the filter (#3) and the filter core (#4) in Diagram A. Clean both components and if the filter is damaged or worn, replace.
3. When screwing the filter housing back in, make sure it is snug but hand-tight.

DIAGRAM B T11 MOTOR & GEARBOX



ITEM #	PART NUMBER	DESCRIPTION	QTY
1	600-359	SCREW	10
2	602-0186	REAR PLATE	1
3	602-151	BAFFLE	1
4	602-190	COVER	1
5	602-298	SCREW	3
6	600-582	BRUSHES (Set of 2)	1
7	602-646	MOTOR (Includes 6, 16 & 17)	1
8	602-126	REDUCER GEAR	1
9	602-253	CRANK HOUSING	1
10	600-316	SCREW	5
11	602-124	LOCK WASHER	4
12	602-123	SCREW	4
13	602-113	FRONT COVER	1
14	602-108	CONNECTING ROD	1
15	602-252	SLIDER HOUSING	1
16	602-356	FAN	1
17	600-494	SNAP RING	1
18	302-059	LABEL, FIRE / EXPLOSION	1
19	600-438	PLUG	1

DIAGRAM C T11 CONTROL BOX



ITEM #	PART #	DESCRIPTION	QTY
1	600-359	SCREW	6
2	602-319	COVER PLATE	1
3	602-417	GASKET	1
4	602-459	INDUCTOR FILTER (110V Only)	1
5	602-446	NUT (110V Only)	1
6	600-129	STRAIN RELIEF LOCK NUT	1
7	600-128	STRAIN RELIEF CORD GRIP	1
8	602-464	POWER CORD 110V	1
8	602-505	POWER CORD 110V UK	1
8	602-491	POWER CORD 110V CANADA	1
8	600-151	POWER CORD 220V	1
8	600-148	POWER CORD 220V AUSTRALIA	1
9	600-411	SCREW	2
10	600-122	SWITCH COVER 110V	1
10	600-124	SWITCH COVER 220V	1
11	602-465	SWITCH 110V	1
11	600-126	SWITCH 220V	1
12	600-366	SWITCH TO BOARD WIRE (220V Only)	1
13	602-407	POTENTIOMETER	1

ITEM #	PART #	DESCRIPTION	QTY
14	600-419	O-RING	1
15	600-592	LOCK WASHER	1
16	600-123	KNOB	1
17	600-264-1	EDGE LINER TOP (7.125" Long)	1
18	600-264-2	EDGE LINER BOTTOM (6.125" Long)	1
19	602-472	GROMMET	1
20	602-233	SCREW	2
21	600-418	O-RING	1
22	600-036	TRANSDUCER	1
23	600-337	GROMMET	1
24	602-480	CONTROL BOARD & BOX 110V	1
24	602-488	CONTROL BOARD & BOX 220V	1
25	600-519	SCREW	1
26	602-447	SCREW (110V Only)	1
	602-496	CONTROL BOX COMPLETE 110V	1
	602-499	CONTROL BOX COMPLETE 110V UK	1
	602-497	CONTROL BOX COMPLETE 110V CANADA	1
	602-498	CONTROL BOX COMPLETE 220V	1
	602-504	CONTROL BOX COMPLETE 220V AUSTRALIA	1

DIAGRAM D **T11 110V WIRING DIAGRAM**

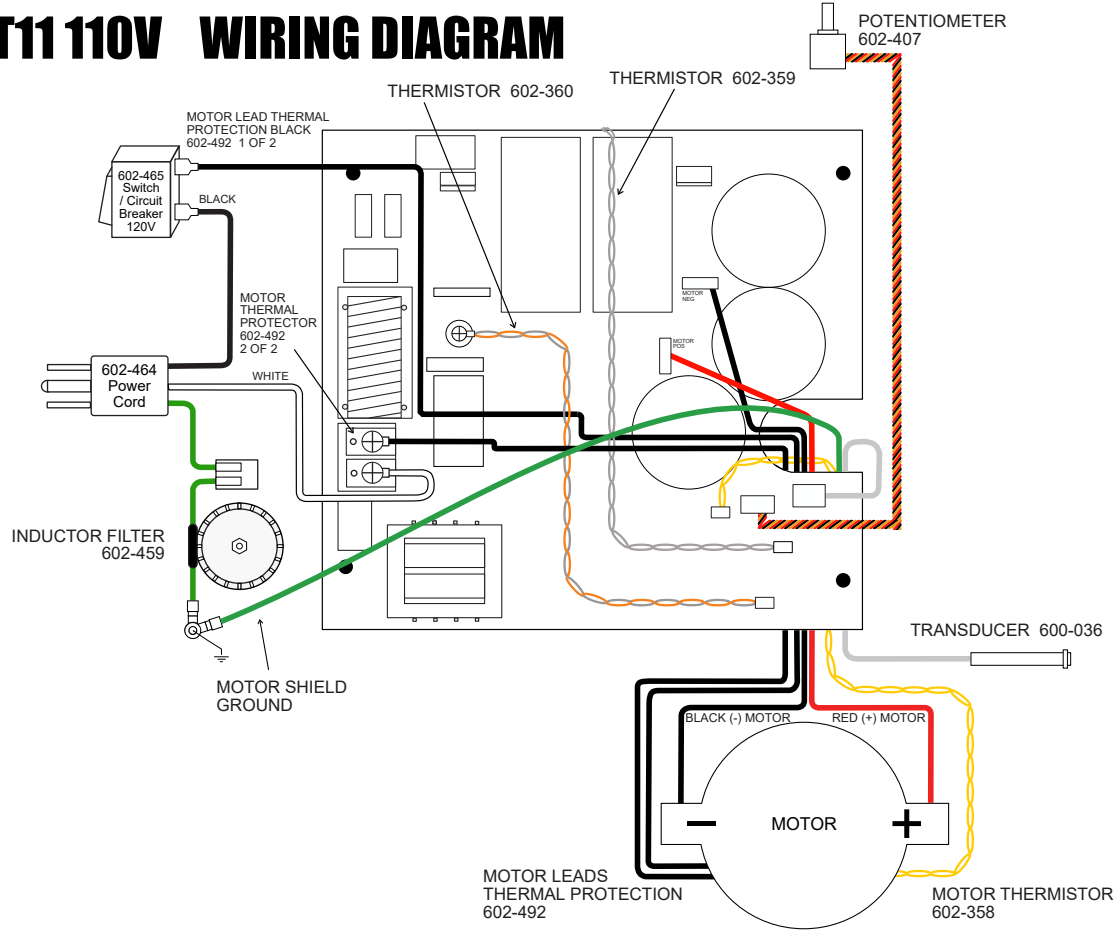
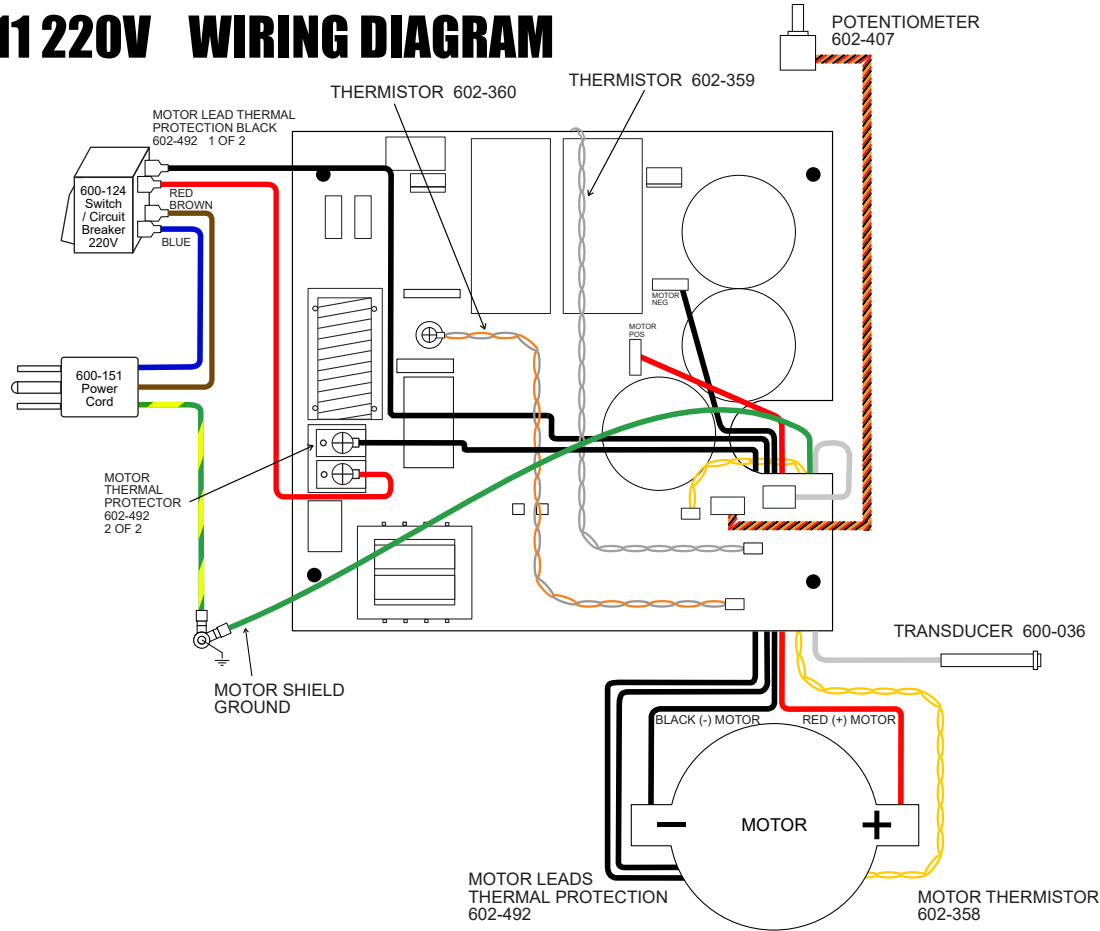


DIAGRAM E **T11 220V WIRING DIAGRAM**



REPLACE CONTROL BOX

Follow the pressure relief procedure before attempting to service or repair this unit.

If the trouble shooting guide suggests replacing the control box, follow the directions listed below.

1. Remove 6 screws #1 and the Control Box Cover #2 in Diagram C.
2. Disconnect the transducer wire from the circuit board in Diagram D/E. (**GRAY** wire)
3. Unthread the transducer #19 Diagram C from the back of the pump housing #9 in Diagram A using a $\frac{3}{4}$ " open-end wrench.
4. Disconnect the following wires: The top **BLACK** wire from the on-off switch, the **BLACK** wire from the thermal protection pad, the **RED** & **BLACK** motor leads, the **YELLOW** thermistor wire all on Diagram D/E.
5. Remove the filter housing, #1 on Diagram A for easier access to the three control box mounting bolts.
6. Remove the three hex head mounting bolts using a $\frac{3}{8}$ " socket wrench #17 Diagram C.
7. Carefully remove the control box while feeding all of the disconnected wires through the opening in the back of the box.
8. To install the new control box, follow these steps in reverse order.

NOTE: By removing the motor cover #4 Diagram B, it will make it much easier to install the new control box.

NOTE: If the potentiometer, transducer & on/off switch are all good, they will have to be removed from the old box and re-installed into the new box #24 Diagram C.

REPLACE THE POTENTIOMETER

Follow the pressure relief procedure before attempting to service or repair this unit.

If the trouble shooting guide suggests replacing the potentiometer, follow the directions listed below.

1. Remove 6 screws #1 and the control box cover #2 both in Diagram C.
2. Disconnect the potentiometer leads from the circuit board. (Red, Black & Yellow twisted wire) shown in Diagram D/E.
3. Remove the knob # 16 in Diagram D/E.
4. To reinstall, follow these instruction in reverse order.

REPLACE THE TRANSDUCER

Follow the pressure relief procedure before attemption to service or repair the unit.

If troube shooting guide suffests replacing the transducer, follow the directions below.

1. Remove 6 Screws #1 and revove the control box cover #2 in Diagram c.
2. Unplug the transducer wire from the circuit board. (gray wire)
3. Loosen the transducer nut with a $\frac{3}{4}$ " open end wrench and slide the transducer from the filter manifold.
4. Disconnect the **RED** & **BLACK** motor leads, the top **BLACK** wire from the on/off switch, the **BLACK** thermal protection wire and the **YELLOW** thermistor wire. Diagram D/E.
5. Remove 2 screws #20 Diagram C and carefully remove the control box.
6. Remove the transducer by guiding the wire through the circuit board and out through the gromett on the back of the control box and out through the grommet on the side of the box. Diagram C
7. Install the new transducer by following steps 4 - 6 in reverse order.
8. Thread the transducer into the pump housing making sure the o-ring #21 is in place. Thread the transducer nut into the pump housing and tighten with a $\frac{3}{4}$ " open end wrench. Make sure to hold the transducer with a pair of needle nose pliers to keep it from twisting.
9. Reattach the control box cover with 6 screws #1. Diagram C

REPLACE ON/OFF SWITCH

Follow pressure relief procedure before attempting to service or repair unit.

If trouble shooting guide suggests replacing the on/off switch follow the directions below.

1. Remove 6 screws #1 and remove cover plate #2.
2. Disconnect the two leads from the on/off switch. See Diagram "D/E"
3. Remove mounting screws #7.
4. Remove switch cover plate #8 and remove the on/off switch #9.
5. Replace in reverse order.

REPLACE MOTOR BRUSHES

Follow pressure relief procedure before attempting to service or repair unit.

If trouble shooting guide suggests replacing the motor brushes follow the directions below.

1. Remove 3 screws #1 from motor cover and remove cover #3. See Diagram "B"
2. Use a straight blade screwdriver to remove brush retaining cap to expose motor brushes.
3. Remove motor brushes #13 one at a time. Inspect. Replace if worn or damaged
4. Reassemble in reverse order. When reinstalling motor brushes make sure to have red and black wire leads to the back of the motor housing.

REPLACE MOTOR

Follow pressure relief procedure before attempting to service or repair unit.

If trouble shooting guide suggests replacing the motor follow the directions below.

REMOVE MOTOR

1. Remove 3 screws #1, Diagram B, and remove motor cover #3, Diagram B.
2. Remove 6 screws #1, Diagram C and remove control box cover #2, Diagram c.
3. Disconnect **BLACK** & **RED** motor leads from the circuit board, Diagram D/E.
4. Remove 4 screws #1 and remove the front cover #11, Diagram B.
5. Unthread the transducer #19, Diagram C and slide the transducer back away from the pump housing #9, Diagram A.
6. Remove 4 screws #10 Diagram B and remove the crank housing #9 Diagram B and Fluid Manifold #35 Diagram A together.
7. Remove the crankshaft #7 and thrust washer #8, both in Diagram B.
8. Remove the reducer gear #6, Diagram B.
9. Remove 3 screws #18, Diagram C and remove the control box from the motor.
10. Remove 4 bolts #5, Diagram I, from underneath to separate the motor and gearbox from the frame assembly.

INSTALL MOTOR

1. Install reducer gear #6, Diagram B into the gearbox and rotate the fan to ensure the armature shaft is engaging.
2. Install the crankshaft #7 and the thrust washer #8, both in Diagram B.
3. Fill the gear box #5, Diagram B with a #2 Lithium based grease.
4. Complete reassembly in reverse order starting at #10 above.
5. Insert 4 bolts #5, Diagram I, from underneath to connect the motor and gearbox to the frame assembly.
6. Insert 3 screws #18, Diagram C and reattach the control box to the motor.
7. Insert 4 screws #10, Diagram B and reattach the crank housing #9 Diagram B and Fluid Manifold #35 Diagram A together.
8. Thread the transducer #19, Diagram C into the back of the pump housing #9, Diagram A.
9. Reattach the transducer wire to the circuit board. Diagram D/E.
10. Reattach the **BLACK** and **RED** motor leads to the circuit board. Diagram D/E.
11. Insert 6 screws #1, to reattach the control box cover #2 both in Diagram C.
12. Slide the motor cover #3 Diagram B, back onto the motor and insert 3 screws #1 to attach.
13. Insert 4 screws #1 to attached the front cover #11, all in Diagram B.

REPLACE GEARS/CONNECTING ROD

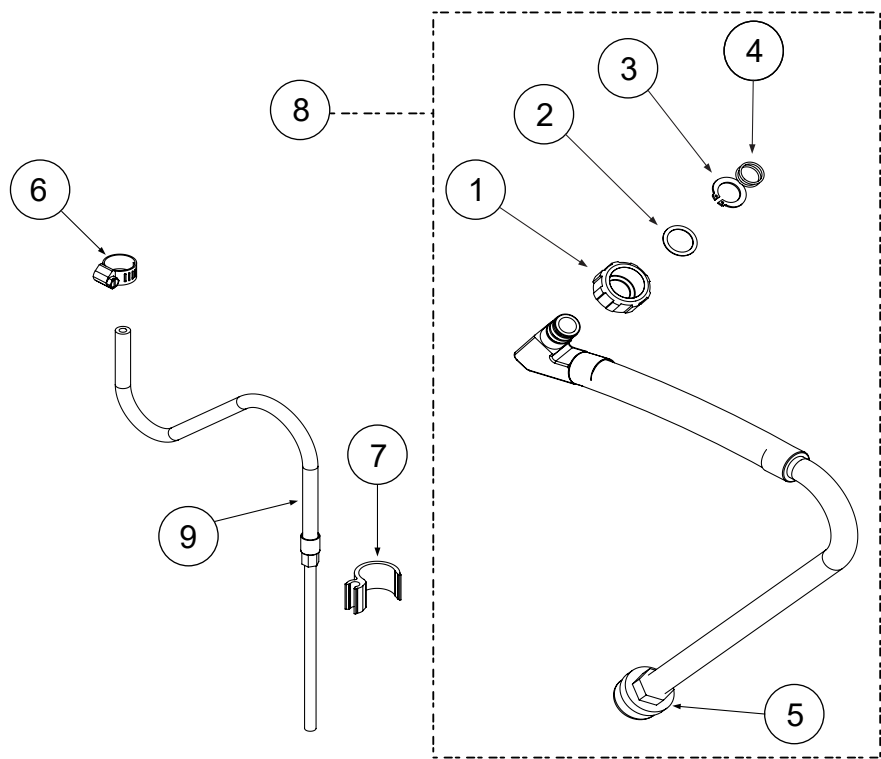
Follow pressure relief procedure before attempting to service or repair unit.

If trouble shooting guide suggests replacing the gears or connecting rod follow the directions below.

1. Remove 4 screws #1 and remove cover plate #11, Diagram B.
2. Remove 2 screws #25 and unthread transducer #19, Diagram C and remove pump/filter manifold.
4. Remove 4 screws # 10 Diagram B then remove crank housing. Connecting rod can be replaced at this point.
5. The reducer gear #6 and crankshaft #7, Diagram B can also be replaced at this point.
6. Complete reassemble in reverse order.

DIAGRAM F

SUCTION ASSEMBLY T9, T11 LO CART



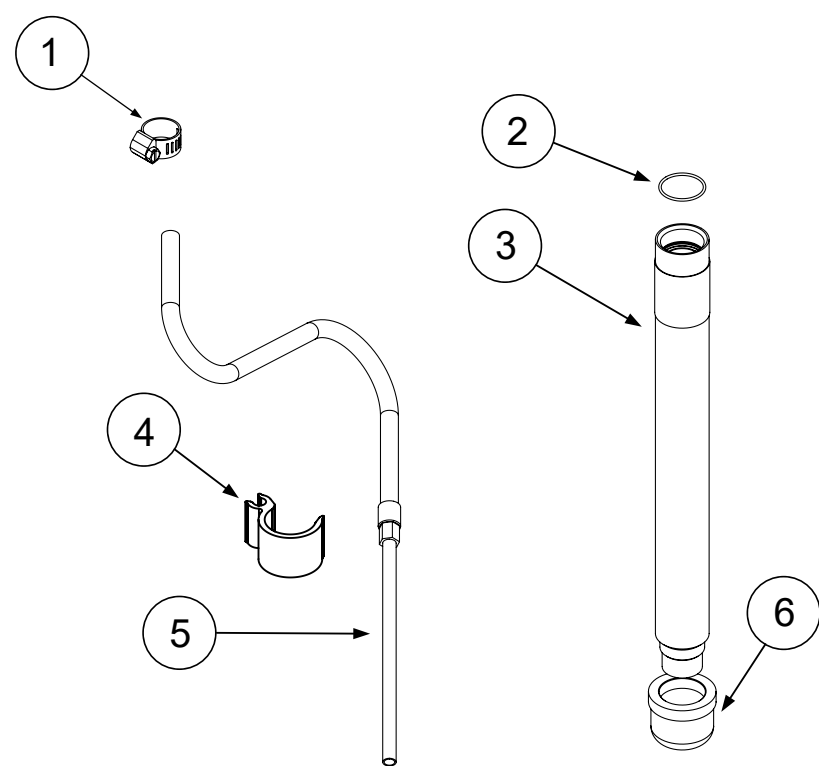
LO CART SUCTION ASSEMBLY

ITEM #	PART NUMBER	DESCRIPTION	QTY
1	600-233	NUT	1
2	600-168	WASHER	1
3	600-236	SNAP RING	1
4	600-164	O-RING	2
5	600-085-10	SUCTION FILTER, 10 MESH	1
6	600-542	HOSE CLAMP	1
7	600-442	HOSE CLIP	1
8	602-210	SUCTION HOSE ASSEMBLY	1
9	602-239	PRIME HOSE	1

OPTIONAL SUCTION FILTER	
600-085-15	SUCTION FILTER, 15 MESH
600-085-30	SUCTION FILTER, 30 MESH

DIAGRAM G

SUCTION ASSEMBLY T9, T11 HI CART



HI CART SUCTION ASSEMBLY

ITEM #	PART NUMBER	DESCRIPTION	QTY
1	602-543	HOSE CLAMP	1
2	600-406	O-RING	1
3	602-077	SUCTION TUBE D.I.	1
4	600-471	HOSE CLIP	1
5	602-238	PRIME HOSE	1
6	600-085-10	SUCTION FILTER, 10 MESH	1

OPTIONAL SUCTION FILTER	
600-085-15	SUCTION FILTER, 15 MESH
600-085-30	SUCTION FILTER, 30 MESH

DIAGRAM H **55 GALLON SUCTION SET T7, T8, T9, T11**

ITEM #	PART #	DESCRIPTION	QTY
1	600-233	NUT	1
2	600-168	WASHER	1
3	600-236	SNAP RING	1
4	600-164	O-RING	2
5	602-156	SUCTION HOSE	1
6	602-544	HOSE CLAMP	2
7	602-157	SUCTION TUBE	1
8	600-471	HOSE CLIP	1
9	600-085-10	SUCTION FILTER, 10 MESH	1
10	602-153	PRIME HOSE	1
11	602-158	SUCTION SET COMPLETE	1

OPTIONAL SUCTION FILTERS	
600-085-15	SUCTION FILTER, 15 MESH
600-085-30	SUCTION FILTER, 30 MESH

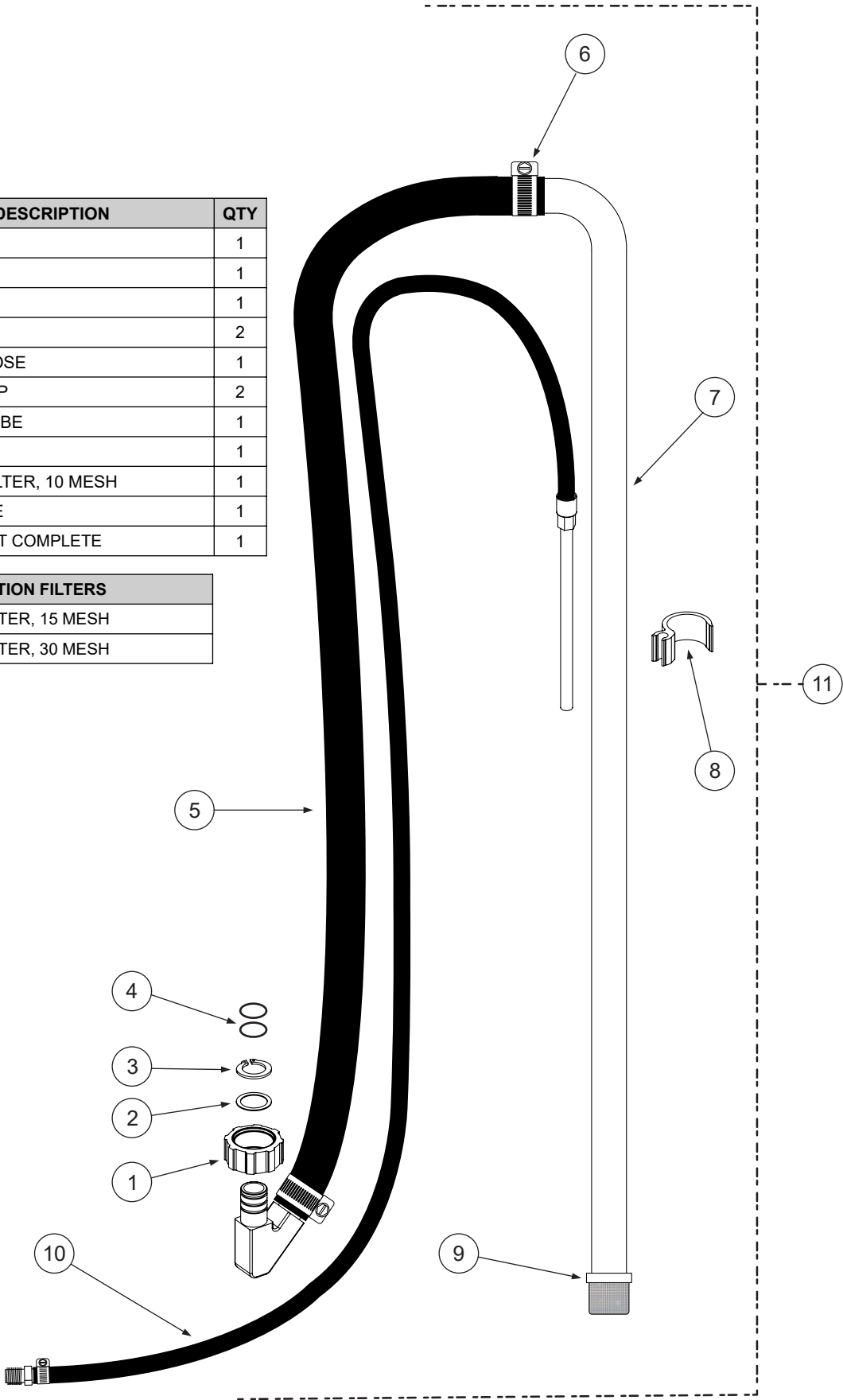
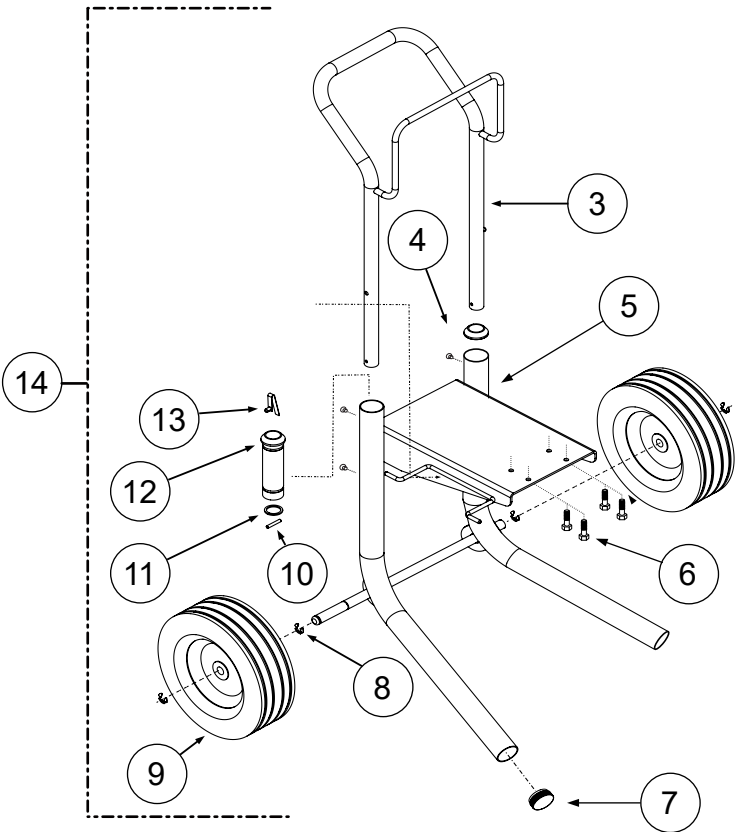


DIAGRAM I **FRAME ASSEMBLIES T9 / T11**

HI CART



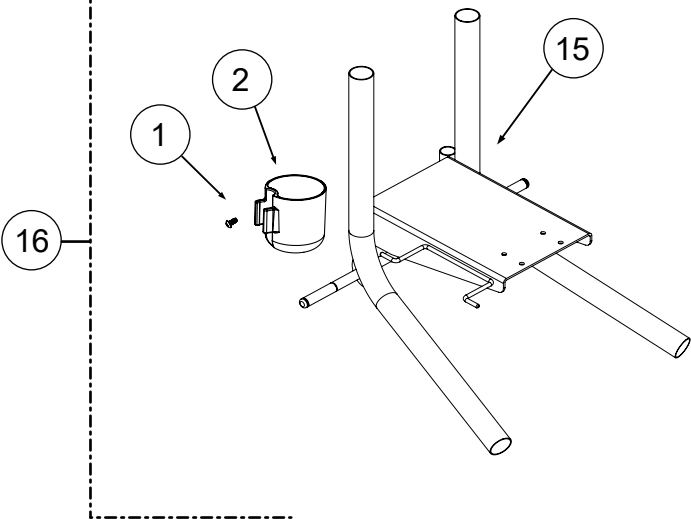
HI CART / LO CART

ITEM #	PART NUMBER	DESCRIPTION	QTY
1**	600-198	SCREW	1
2	600-351	CUP	1
3	602-388	HANDLE	1
4	600-382	SCREW	4
5	602-389	HI CART BASE FRAME	1
6	602-264	BOLT	4
7	600-397	FRAME CAP	2
8	602-399	SNAP RING	4
9	602-373	WHEEL	2
10	600-381	PIN	2
11	600-379	WASHER	2
12	600-378	HANDLE GUIDE	2
13	600-391	BUTTON SNAP	2
14	602-375	HI CART COMPLETE (Excludes 1, 2 & 6)	1
15	602-429	LO CART BASE FRAME	1
16	602-430	LO CART COMPLETE (Excludes 6)	1

** DRILL SELF-TAPPING SCREW (1) THROUGH THE TAB ON THE CUP (2) INTO THE FRAME.

LO CART

NOTE: All of the parts needed to complete the lo cart frame are listed above with the hi cart frame.



NOTES:

NOTES:

WARRANTY

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

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This warranty is conditioned upon the prepaid return of the of the equipment claimed to be defective to TriTech or an authorized TriTech distributor/service center for verification of the claimed defect. If the claimed defect is verified, TriTech will repair or replace free of charge any defective parts. 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 cost of parts, labor, and transportation.

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