

# Operation, Repair, Parts Airless Paint Line Striper



3A2690A

EN

**For the application of line striping materials. For professional use only. For outdoor use only. Not for use in hazardous locations or explosive atmospheres.**

**Sure Stripe 3650, Sure Stripe 4050, Field Stripe Plus**  
3000 psi (20.7 MPa, 207 bar) *Maximum Working Pressure*

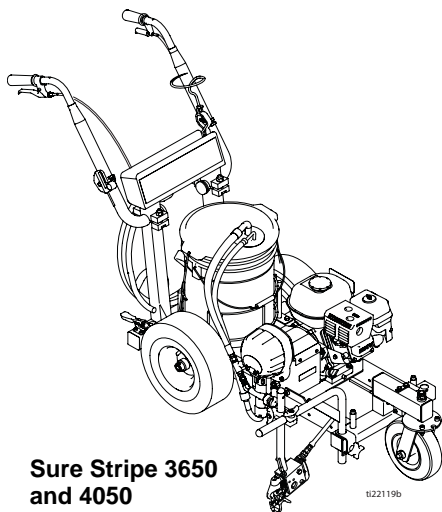
See page 50 for model information, including maximum working pressure and approvals.



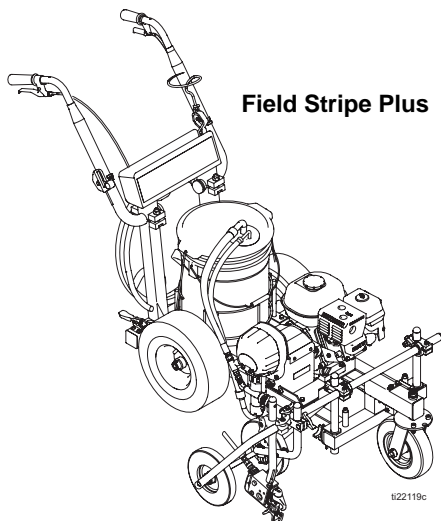
## Important Safety Instructions

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

**Related Manuals - 312363 Gun (500) Gun 3A0479 Gun (009)**



**Sure Stripe 3650  
and 4050**



**Field Stripe Plus**







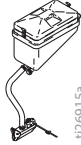

PROVEN QUALITY. LEADING TECHNOLOGY.

## Contents

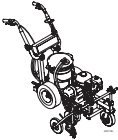


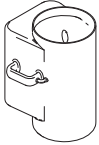
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## Models

### 3650/4050

	 ti26911a	 ti26913a	 ti26914a	 ti26915a	 ti26918a
305401	✓	✓		✓	✓
305402	✓	✓		✓	✓
865935	✓		✓	✓	✓
865936	✓	✓	✓	✓	✓

## Field Stripe

	 ti26911a	 ti26913a	 ti26918a
305406	✓	✓	✓

## 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 or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

### **WARNING**



#### **FIRE AND EXPLOSION HAZARD**

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. Paint or solvent flowing through the equipment can cause static sparking. To help prevent fire and explosion:



- Use equipment only in well ventilated area.
- Do not fill fuel tank while engine is running or hot; shut off engine and let it cool. Fuel is flammable and can ignite or explode if spilled on hot surface.



- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static sparking).
- Ground all equipment in the work area. See **Grounding** instructions.



- Never spray or flush solvent at high pressure.
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are anti-static or conductive.
- **Stop operation immediately** if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.



#### **CARBON MONOXIDE HAZARD**

Exhaust contains poisonous carbon monoxide, which is colorless and odorless. Breathing carbon monoxide can cause death.

- Do not operate in an enclosed area.

## **WARNING**

### **SKIN INJECTION HAZARD**



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.**

- Do not aim the gun at, or spray any person or animal.
- Keep hands and other body parts away from the discharge. For example, do not try to stop leaks with any part of the body.
- Always use the nozzle tip guard. Do not spray without nozzle tip guard in place.
- Use Graco nozzle tips.
- Use caution when cleaning and changing nozzle tips. In the case where the nozzle tip clogs while spraying, follow the **Pressure Relief Procedure** for turning off the unit and relieving the pressure before removing the nozzle tip to clean.
- Equipment maintains pressure after power is shut off. Do not leave the equipment energized or under pressure while unattended. Follow the **Pressure Relief Procedure** when the equipment is unattended or not in use, and before servicing, cleaning, or removing parts.
- Check hoses and parts for signs of damage. Replace any damaged hoses or parts.
- This system is capable of producing 3000 psi. Use Graco replacement parts or accessories that are rated a minimum of 3000 psi.
- Always engage the trigger lock when not spraying. Verify the trigger lock is functioning properly.
- Verify that all connections are secure before operating the unit.
- Know how to stop the unit and bleed pressure quickly. Be thoroughly familiar with the controls.

### **EQUIPMENT MISUSE HAZARD**






**Misuse can cause death or serious injury.**



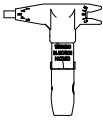

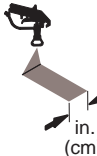

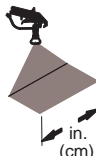
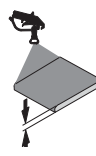
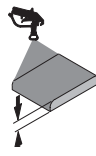
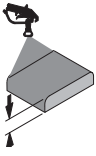
- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheet (SDS) from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure.
- Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

# Warnings

## **WARNING**

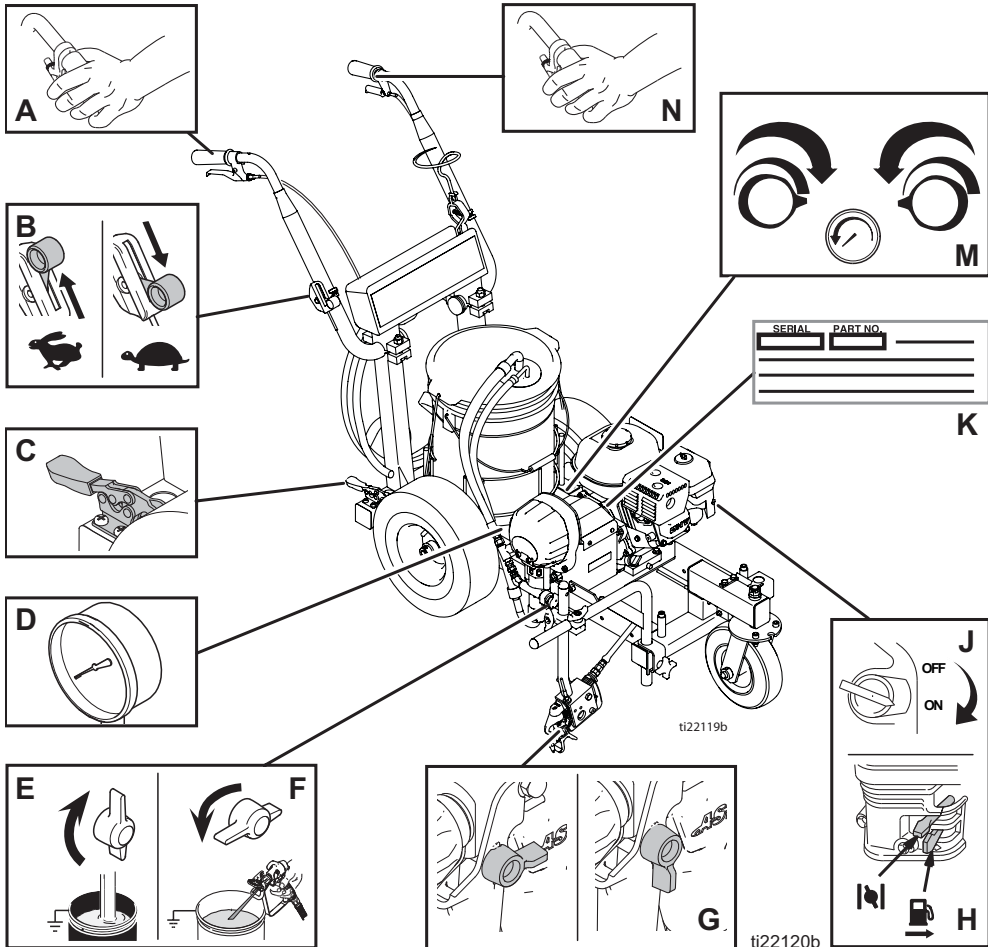
	<p><b>PRESSURIZED ALUMINUM PARTS HAZARD</b></p> <p>Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.</p> <ul style="list-style-type: none"><li>• Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.</li><li>• Do not use chlorine bleach.</li><li>• Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.</li></ul>
 	<p><b>MOVING PARTS HAZARD</b></p> <p>Moving parts can pinch, cut, or amputate fingers and other body parts.</p> <ul style="list-style-type: none"><li>• Keep clear of moving parts.</li><li>• Do not operate equipment with protective guards or covers removed.</li><li>• Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the <b>Pressure Relief Procedure</b> and disconnect all power sources.</li></ul>
	<p><b>TOXIC FLUID OR FUMES HAZARD</b></p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"><li>• Read SDS to know the specific hazards of the fluids you are using.</li><li>• Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.</li></ul>
	<p><b>PERSONAL PROTECTIVE EQUIPMENT</b></p> <p>Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This protective equipment includes but is not limited to:</p> <ul style="list-style-type: none"><li>• Protective eyewear, and hearing protection.</li><li>• Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.</li></ul>
	<p><b>CALIFORNIA PROPOSITION 65</b></p> <ul style="list-style-type: none"><li>• The engine exhaust from this product contains a chemical known to the state of California to cause cancer, birth defects or other reproductive harm. This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling.</li></ul>

## Uni-Tip Selection

	 in. (cm)	 in. (cm)	 in. (cm)	 in. (cm)			
69215ST*	2 (5)				✓	✓	
69217ST		4 (10)				✓	
69315ST		6 (15)			✓		
69317ST		6 (15)			✓	✓	
69319ST		6 (15)				✓	
69321ST		6 (15)				✓	
69327ST		6 (15)					✓
69417ST			6-8 (15-20)		✓		
69517ST				10 (25)	✓		
69615ST*				12 (30)	✓		
69617ST				12 (30)		✓	
* Use 100 mesh filter to reduce tip clogs							

# Component Identification

## Component Identification



A	Spray Gun Control
B	Engine Throttle
C	Brake
D	Pressure Gauge
E	Prime Valve
F	Prime Valve
G	Gun Trigger Lock
H	Engine Controls
J	Engine ON/OFF Switch
K	Serial Identification Tag

M	Pressure Control
N	Turn Control



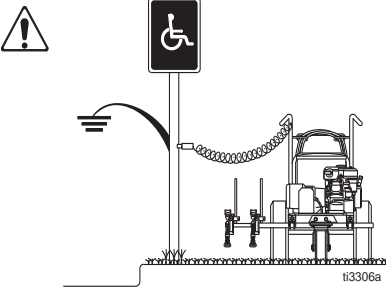
## Operation

### Setup

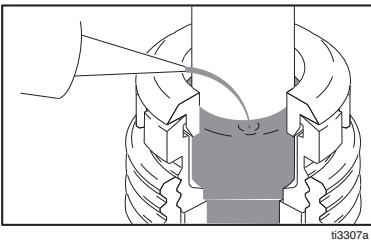


The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Grounding provides an escape wire for the electric current.

1. Ground striper with grounding clamp during Setup and Cleanup.



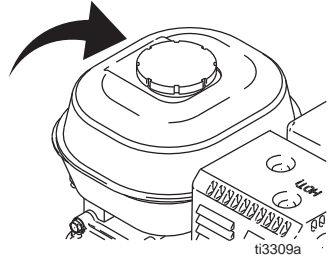
2. Each time you spray and store, add 3 to 5 drops of Throat Seal Oil (TSO) to decrease packing wear.



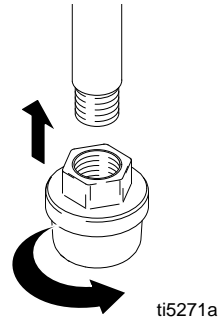
3. Check engine oil level. Add SAE 10W-30 (summer) or 5W-20 (winter). See engine manual.



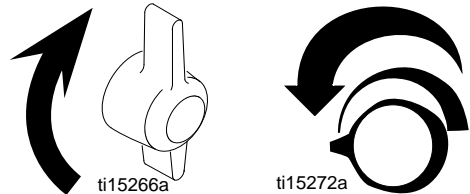
4. Fill fuel tank.



5. If removed, install strainer.



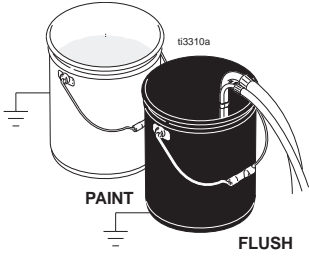
6. Open prime valve. Turn pressure control counterclockwise to lowest pressure.



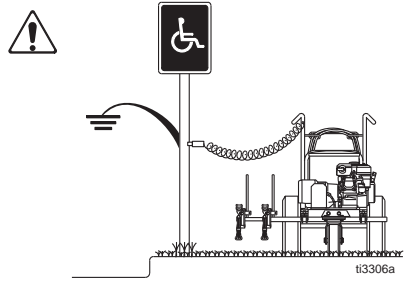
**NOTE:** Minimum hose size allowable for proper striper operation is 1/4 in. x 50 ft.

# Operation

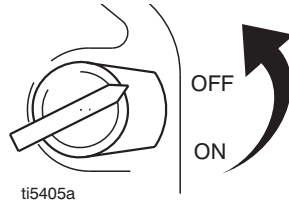
- Place siphon tube set in grounded metal pail partially filled with flushing fluid. Attach ground wire to pail and to true earth ground. Do 1. - 5. of **Startup** to flush out storage oil shipped in striper. Use water to flush water-base paint and mineral spirits to flush oil-base paint and storage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



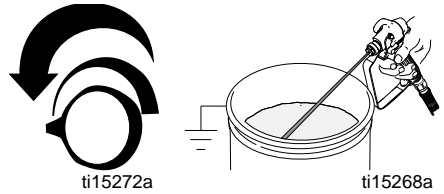
- Ground striper with grounding clamp.



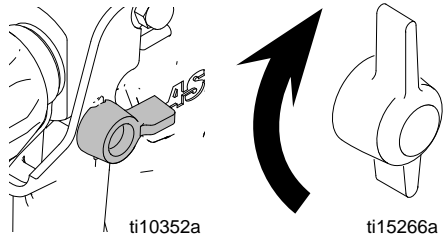
- Turn engine **OFF**.



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



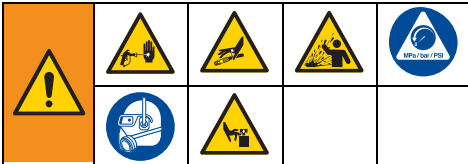
- Engage gun trigger lock. Open prime valve.



## Pressure Relief Procedure



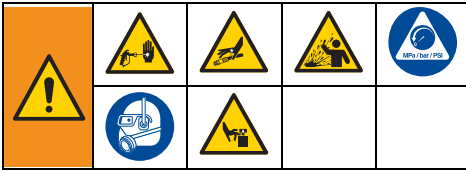
Follow the **Pressure Relief Procedure** whenever you see this symbol.



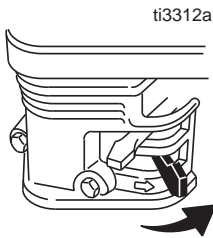
This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashed fluid and moving parts, follow the **Pressure Relief Procedure** whenever sprayer is stopped and before sprayer is cleaned or checked, and before equipment is serviced.

If you suspect that the Uni-Tip or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, **VERY SLOWLY** loosen Uni-Tip Guard retaining nut or hose end coupling to relieve pressure gradually, then loosen completely. Then clear tip or hose.

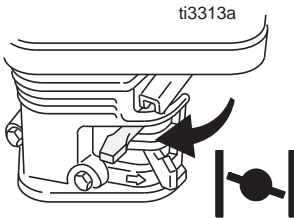
## Startup



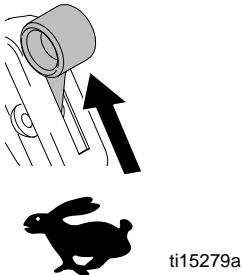
1. Perform Pressure Relief Procedure. See **Pressure Relief Procedure**, page 10.
2. Start Engine.
  - a. Move fuel valve to open.



- b. Move choke to closed.



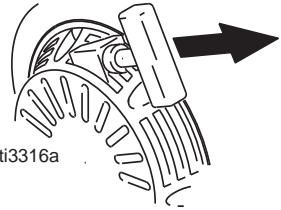
- c. Set throttle to fast.



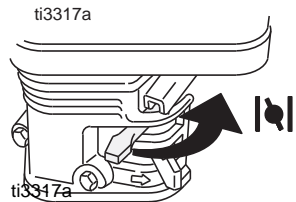
- d. Set engine switch ON.



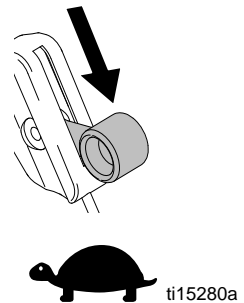
- e. Pull starter cord.



- f. After engine starts, move choke to open.



- g. Set throttle to desired setting.



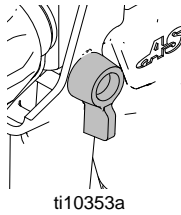
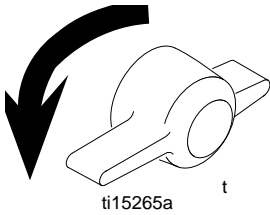
# Operation

3. Increase pressure enough to start pump.  
Allow fluid to circulate for 15 seconds.



15 SEC.

4. Turn pressure down, close prime valve.  
Disengage gun trigger lock.



5. Hold gun against grounded metal  
flushing pail. Trigger gun and increase  
fluid pressure slowly until pump runs  
smoothly.

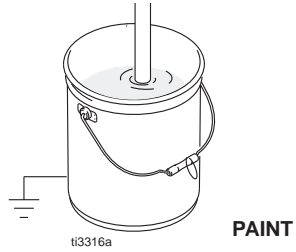


FLUSH

ti15267a

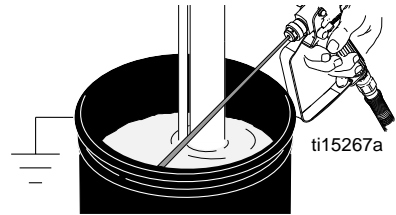
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6. Place siphon tube in paint pail.



PAINT

7. Trigger gun again into flushing fluid pail  
until paint appears. Assemble Uni-Tip  
and Uni-Tip Guard.





FLUSH

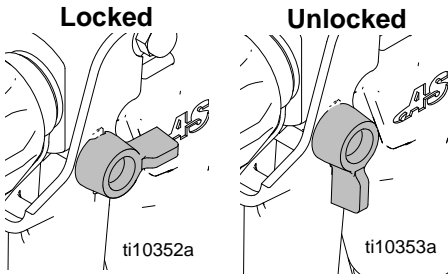
ti15267a

Inspect fittings for leaks. Do not stop leaks with your hand or a rag! If leaks occur, turn striper OFF immediately. Perform **Pressure Relief** (page 10). Tighten leaky fittings. Repeat **Startup**, steps 1-2. If no leaks, continue to trigger gun until system is thoroughly flushed. Proceed to step 3.



## Gun Operation

### Gun Trigger Lock

			
<p>Always engage the trigger lock when the sprayer is stopped to prevent the gun from being triggered accidentally by hand or if dropped or bumped.</p>			



### Setup

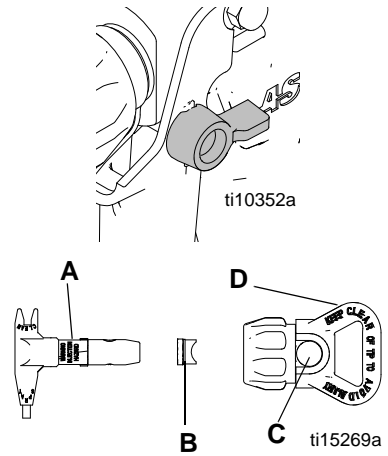
			
<p>Make sure striper is turned off.</p>			

### Connect Gun to Striper

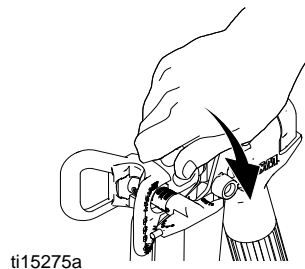
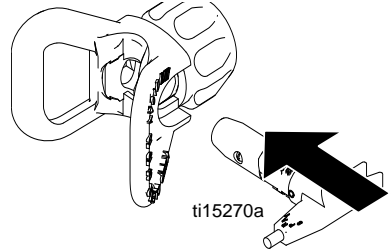
1. Attach supply hose to striper fluid outlet.
2. Attach other end of supply hose to gun swivel. Use two wrenches (one on the swivel and one on the hose) to tighten all connections securely.

### Uni-Tip and Uni-Tip Guard Assembly

1. Engage trigger lock. Use end of Uni-Tip (A) to press Uni-Tip Seal (B) into Uni-Tip Guard (D), with curve matching tip bore (C).



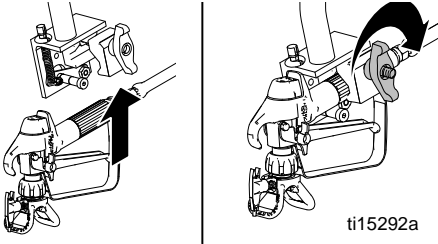
2. Insert Uni-Tip in tip bore and firmly thread assembly onto gun.



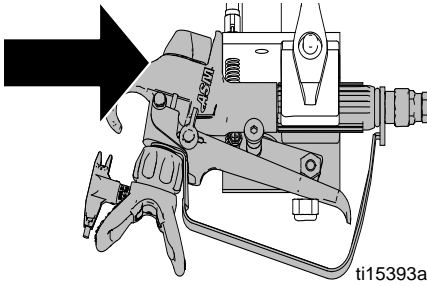
# Operation

## Gun Placement

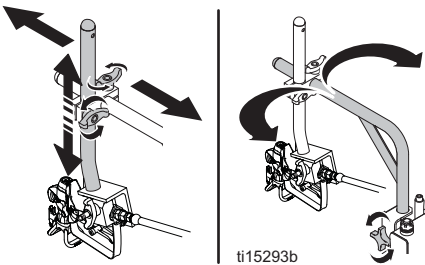
1. **Install Gun:** Insert gun into gun holder with head guard pressed against the holder assembly bracket.



2. Tighten gun into clamp.



3. **Position Gun:** Up/down, forward/reverse, left/right.

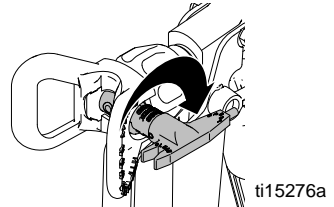


**NOTE:** Verify that the gun can still be triggered **and** that the trigger lock can still be engaged after installation. Make adjustments if necessary.

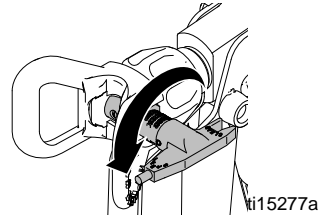
## Clearing Tip Clogs



1. Release trigger, engage gun trigger lock. Rotate Uni-Tip. Disengage gun trigger lock and trigger gun to clear the clog.



2. Engage gun trigger lock, return Uni-Tip to original position, disengage gun trigger lock and continue spraying.

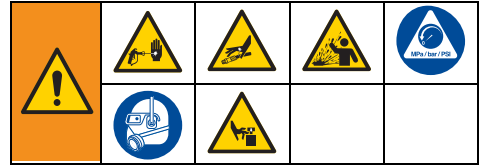


## Spraying Gun



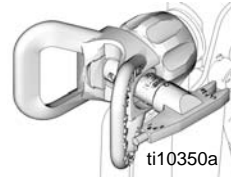
1. Disengage trigger lock.
2. Be sure the arrow-shaped tip faces forward (spray).
3. Hold gun perpendicular and approximately 12 in. (304 mm) from surface. Move gun first, then pull trigger to spray a test pattern.
4. Slowly increase pump pressure until coverage is uniform and even (see striper instruction manual for additional information).

## Aligning Spray

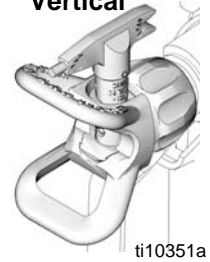


1. Perform Pressure Relief Procedure. See **Pressure Relief Procedure**, page 10. Engage trigger lock.
2. Loosen guard and retaining nut.
3. Align guard horizontally to spray a horizontal pattern, vertically to spray a vertical pattern.

### Horizontal



### Vertical

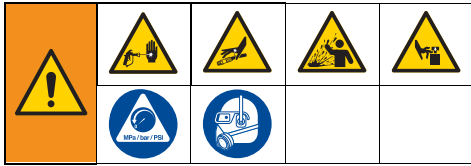


## Cleanup

Flush gun after each work shift and store in a dry location. Do not leave the gun or any parts in water or cleaning solvents.

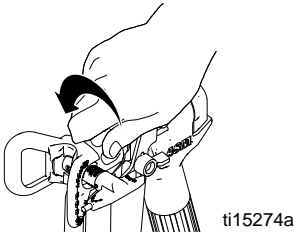
# Operation

## Clean-up



Perform Pressure Relief Procedure.  
See **Pressure Relief Procedure**, page 10.

1. Remove Uni-Tip Guard and Uni-Tip.

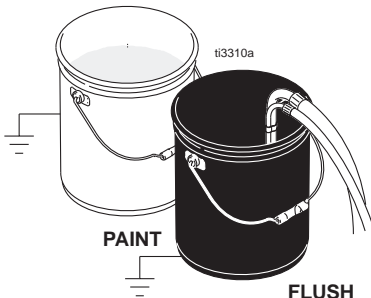


2. Clean gun filter, Uni-Tip Guard and Uni-Tip in flushing fluid.

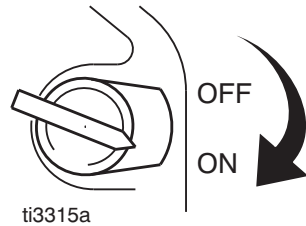


**FLUSH**

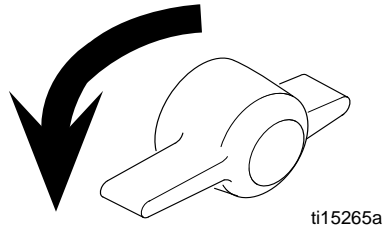
3. Remove siphon tube set from paint and place in flushing fluid. Use water or pump conditioner for water-base paint and mineral spirits for oil-base paint.



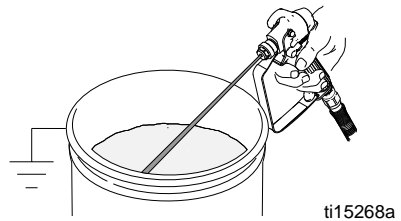
4. Turn engine **ON** and start engine.



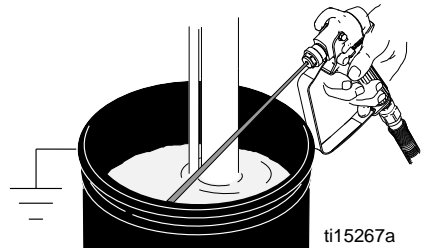
5. Close prime valve.



6. Hold gun against paint pail. Disengage gun trigger lock. Gradually turn pressure control up until motor begins to drive pump. Trigger gun until flushing fluid appears.

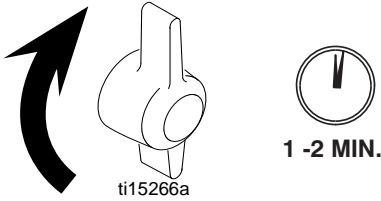


7. Move gun to flushing pail, hold gun against pail, trigger gun to thoroughly flush system. Release trigger and engage trigger lock.

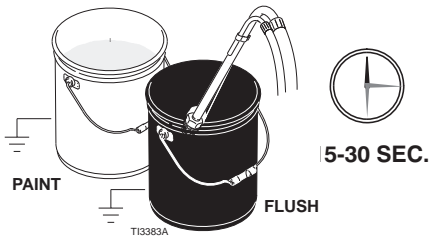




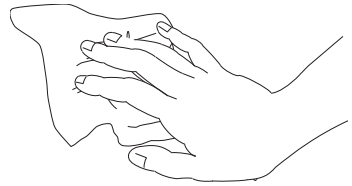
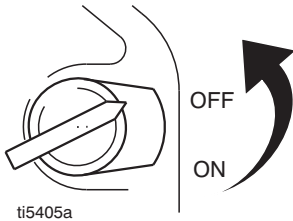
8. Open prime valve and allow flushing fluid to circulate for 1 to 2 minutes to clean drain tube.



9. Raise siphon tube above flushing fluid and run striper for 15 to 30 seconds to drain fluid.

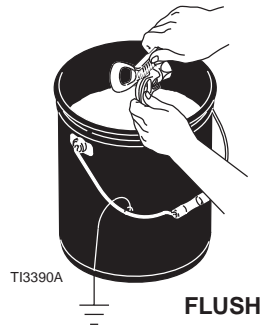


10. Turn engine OFF.



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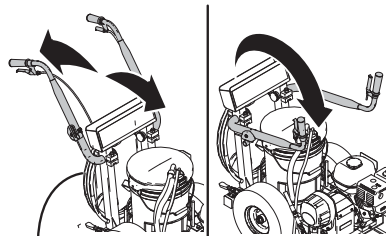
12. Clean Uni-Tip, Uni-Tip Guard and gasket with a soft bristle brush to prevent part failure due to dried materials. Assemble parts and attach loosely onto gun.



## Handle Bar Adjustment

To adjust height and angle of handle bars, loosen two nuts (147) and move handle bars to desired position. Then tighten two nuts (147).

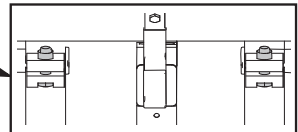
**NOTE:** Handle bars can be moved to down position for storage.



### NOTICE









If flushing with water, flush again with pump conditioner to leave a protective coating to prevent freezing or corrosion.

11. Wipe striper, hose and gun with a rag soaked in water or mineral spirits.



## Maintenance

### Striper

This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashed fluid and moving parts, follow the **Pressure Relief Procedure** whenever sprayer is stopped and before sprayer is cleaned or checked, and before equipment is serviced.

**NOTE:** Minimum hose size allowable for proper striper operation is 1/4 in. x 50 ft. For detailed engine maintenance and specifications, refer to separate engine manual supplied.

- DAILY:** Check engine oil level and fill as necessary.
- DAILY:** Check hose for wear and damage.
- DAILY:** Check gun trigger lock for proper operation.
- DAILY:** Check pressure drain valve for proper operation.
- DAILY:** Check and fill gas tank.

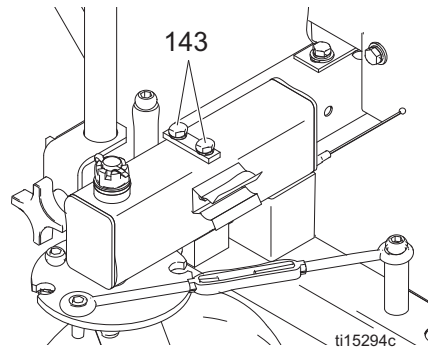
**AFTER THE FIRST 20 HOURS OF OPERATION:** Drain engine oil and refill with clean oil. See engine manual for correct oil viscosity.

**WEEKLY:** Remove air filter cover and clean element. Replace element if necessary. If operating in an unusually dusty environment, check air filter daily and replace if necessary. Replacement elements can be purchased from your local engine dealer.

**WEEKLY:** Check level of TSO in fluid pump packing nut. Add 3 to 5 drops if necessary. Keep TSO in nut to help prevent fluid buildup on piston rod and premature wear of packings.

**AFTER EACH 100 HOURS OF OPERATION:** Change engine oil. See engine manual for correct oil viscosity.  
**SPARK PLUG:** Use only BPR6ES (NGK) or W20EPR-U (NIPPONDENSO) plug. Gap plug to 0.028 to 0.031 in. (0.7 to 0.8 mm). Use spark plug wrench when installing and removing plug.

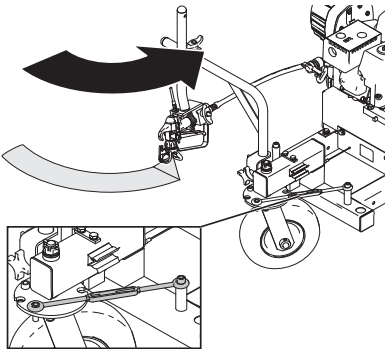
### Swivel Wheel



- Stripers are factory aligned, but if necessary, loosen two bolts (143) on swivel wheel assembly just enough to be able to move the wheel by hand.
- Place turnbuckle over the two mounting nubs on the frame.
- Pressurize the unit with water and Pump Conditioner and spray out several lines with the swivel assembly in the locked position. Use the turnbuckle to fine tune the alignment of the wheels until the stripes are straight.
- Tighten bolts (143).

## Curves and Arcs

- The swivel assembly can be adjusted to 30 degrees either side of straight ahead. Place turnbuckle over mounting nubs. Adjust to the desired arc and tighten jam nuts. If you have arcs that you paint regularly, purchase additional turnbuckles (74) and keep them set to those arc sizes.



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## Pump

- Always stop the pump at the bottom of its stroke when you take a break or at the end of the day. This helps keep material from drying on the rod, damaging the packings.
- Keep the displacement pump packing nut/wet cup 1/3 full of Throat Seal Oil (2501) at all times. The TSO helps protect the packings and rod.
- Lubricate Connecting Rod Pin every three months.
- Inspect the packing nut daily. The paint pump has a patented "Triple Life Packing System". Packing life will be extended significantly if the proper packing tightening procedure is followed.

## PACKING TIGHTENING PROCEDURE:

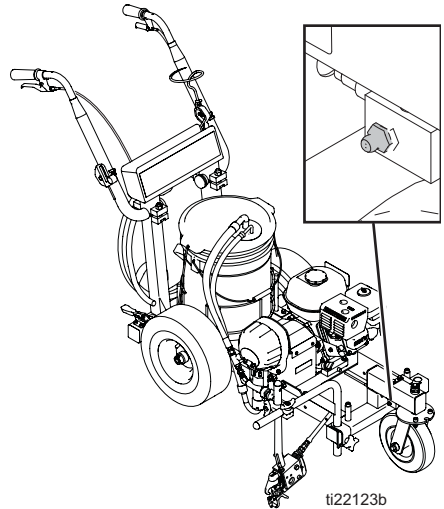
Inspect the packing nut daily. If seepage of paint into the packing nut and/or movement of the piston upward is found (while not spraying), the packing nut should be tightened enough to stop leakage only, but not any tighter. (Approximately 24 In lbs).

### NOTICE

Do NOT over-tighten packings. Packings will become damaged and reduce the packing life.

## Grease Points

- Fill grease points at swivel wheel and in center of drive assembly axle until grease purges from end collars. Wipe away any excess grease. Use only quality-grade water resistant grease.



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## Gun

Refer to the 312363 Gun Manual for gun maintenance procedures.

# Troubleshooting

## Troubleshooting

### General Troubleshooting



Problem	Cause	Solution
Engine Will Not Start	Engine switch is OFF	Turn engine ON
	Engine is out of gas	Refill gas tank (see engine manual).
	Engine oil level is low	Try to start engine. Replenish oil if necessary (see engine manual).
	Spark plug cable is disconnected or damaged	Connect spark plug cable or replace spark plug.
	Cold engine	Use choke.
	Fuel shut-off lever is OFF	Move lever to ON position.
	Oil is seeping into combustion chamber	Remove spark plug. Pull starter 3 to 4 times. Clean or replace spark plug. Start engine. Keep striper upright to avoid oil seepage.

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
Engine operates, but fluid pump does not operate	Pressure setting is too low	Turn pressure adjusting knob clockwise to increase pressure
	Uni-Tip or gun filter is clogged	Clean Uni-Tip or gun filter (see gun manual).
	Fluid pump piston rod is stuck due to dried paint	Repair pump (see pump manual).
	Connecting rod is worn or damaged	Replace connecting rod, page 36.
	Electrical power is not energizing clutch field.	Check wiring connections, page 49. See pressure control repair, page 27. Test sensor by reading resistance between the red and black wires. The resistance runs between 1.5-3k Ohms. Have pressure control checked by authorized Pioneer dealer.
	Clutch is worn, damaged, or incorrectly positioned.	Replace clutch, page 35.

# Troubleshooting

Problem	Cause	Solution
Pump output is low	Piston ball is not seating	Service piston ball. See pump manual.
	Piston packings are worn or damaged	Replace packings. See pump manual.
	O-ring in pump is worn or damaged	Replace o-ring. See pump manual.
	Worn, missing, or improperly installed parts in suction nut	Remove suction nut and check that all parts are present and installed correctly.
	Engine speed is too low	Increase throttle setting. See <b>Startup</b> , page 11.
	Clutch is worn or damaged	Replace clutch, page 35.
	Pressure setting is too low	Increase pressure. See <b>Startup</b> , page 11.
	Uni-Tip filter or tip is clogged or dirty	See gun manual.
	Large pressure drop in hose with heavy materials	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 striper. Use 1/4 in. hose for optimum performance (50 ft minimum).
Excessive paint leakage into throat packing nut	Throat packing nut is loose	See pump manual.
	Throat packings are worn or damaged	Replace packings. See pump manual.
	Fluid rod is worn or damaged	Replace rod. See pump manual.
Fluid is spitting from gun	Air in pump or hose	Check and tighten all fluid connections. Reprime pump.
	Uni-Tip is partially clogged	Clear Uni-Tip. See gun manual.
	Fluid supply is low or empty	Refill fluid supply. Reprime pump. Check fluid supply often to prevent running pump dry.

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
Pump is difficult to prime	Air in pump or hose	Check and tighten all fluid connections.  Reduce engine speed and cycle pump as slowly as possible during priming.
	Suction nut is leaking	Clean suction nut. Be sure ball seat is not nicked or worn and that ball seats well. Reassemble suction nut.
	Pump packings are worn	Replace pump packings. See pump manual.
	Paint is too thick	Thin the paint according to supplier recommendations
	Engine speed is too high	Decrease throttle setting before priming pump.
High Engine Speed at no load	Incorrect throttle setting	Adjust throttle cable as needed
	Worn engine governor	Replace or service engine governor

## Airless Spray Troubleshooting

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
Coarse spray	Low pressure	Increase pressure
Excessive fogging (overspray)	High pressure Material too thin	Reduce pressure to satisfactory pattern distribution. Use less thinner.
Pattern too wide	Spray angle too large	Use smaller spray angle Uni-Tip
Pattern too narrow	Spray angle too small	Use larger spray angle Uni-Tip (if coverage is acceptable, try tip in same nozzle group)
Too much material	Nozzle too large Material too thin Pressure too high	Use smaller nozzle  Reduce pressure
Too little material	Nozzle too small	Use next larger nozzle Material too thick
Thin distribution in center of pattern "horns"	Worn Uni-Tip Wrong Uni-Tip	Change to new Uni-Tip Use nozzle with narrow spray angle
Thick skin of work	Material too viscous Application too heavy	Thin cautiously Reduce pressure and/or use Uni-Tip in next smaller nozzle group
Coating fails to close and smooth over	Material too viscous	Thin cautiously
Spray pattern irregular, deflected	Orifice clogged Uni-Tip damaged	Clean carefully Replace with new Uni-Tip
Craters or pock marks, bubbles on work	Solvent balance	Use 1 to 3% "short" solvents remainder "long" solvents (this is most likely to happen with material of low viscosity, lacquers, etc).
Clogged gun screens	Extraneous material in paint Coarse pigments Poorly milled pigments (paint pigments glocculate)	Clean screen. Use coarse screen if orifice size allows. Use courser screen with larger orifice tips. Obtain ball milled paint. If thinner has been added, test to see if a cover screen. Incompatible drop placed on top of paint mixes or flattens out on the paint mixture and thinners on the surface. If not, try different thinner in fresh batch of paint.



## Field Troubleshooting

Problem	Cause	Solution
Striper will not prime	Air leak due to: <ul style="list-style-type: none"> <li>• Loose suction nut</li> <li>• Worn o-rings</li> <li>• Hole in siphon hose</li> <li>• Stuck or fouled balls</li> </ul>	<ul style="list-style-type: none"> <li>• Tighten suction nut</li> <li>• Replace o-ring (867-361) on suction seat</li> <li>• Replace siphon hose (331-290)</li> <li>• See pump manual</li> </ul>
Striper primes but has poor or no pressure	<ul style="list-style-type: none"> <li>• Pressure set too low</li> <li>• Filter is clogged</li> <li>• Outlet valve fouled/worn</li> <li>• Prime/pressure valve bypassing</li> <li>• Packings and/or piston worn</li> </ul>	<ul style="list-style-type: none"> <li>• Turn up pressure</li> <li>• Clean or replace gun filter</li> <li>• Service outlet valve</li> <li>• Clean or replace prime valve</li> <li>• Tighten packing nut with tool</li> <li>• Repack unit</li> </ul>
Unit does not maintain good spraying pressure	<ul style="list-style-type: none"> <li>• Blown Uni-Tip</li> <li>• Packings and/or pistons worn</li> <li>• Upper seat worn</li> </ul>	<ul style="list-style-type: none"> <li>• Replace Uni-Tip</li> <li>• Repack striper</li> <li>• Replace upper seat and ball</li> </ul>
Clutch does not engage	Clutch failed. Check resistance between leads (should read between .6 - .7k Ohms).	Take to Pioneer Service Center
	Engine voltage is below 19-24 VAC	Take to Honda Engine Service Center
	Pressure Sensor Check 1.5 - 3.5k Ohms	Replace the sensor

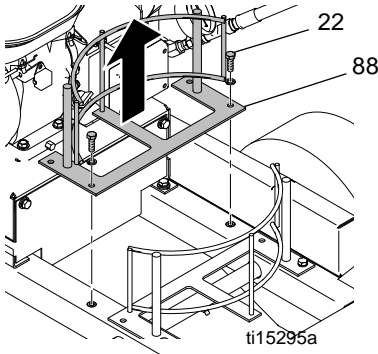
## Repair

### Pail Bracket



#### Removal

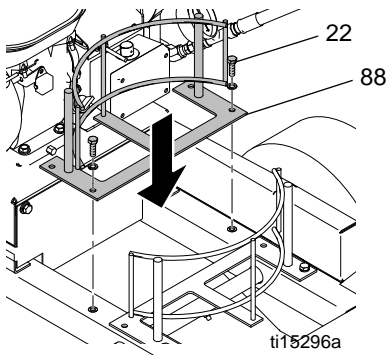
1. Perform Pressure Relief Procedure. See **Pressure Relief Procedure**, page 10.
2. Remove pail (103).
3. Remove two screws (22) and remove pail bracket (88).



**NOTE:** The pail bracket is adjustable to fit different pail configurations.

#### Installation

1. Replace pail bracket (88) and tighten two bolts (22).



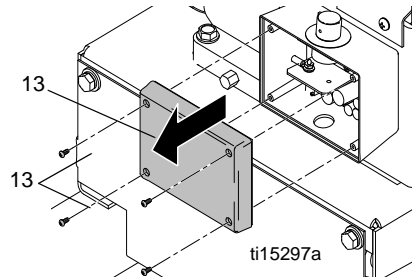
2. Replace pail (103).

### Pressure Sensor

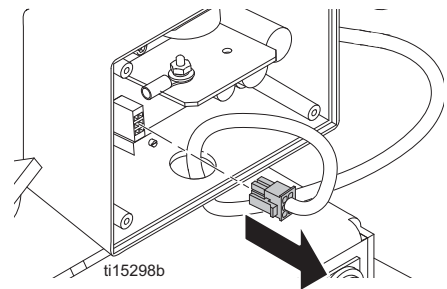


#### Removal

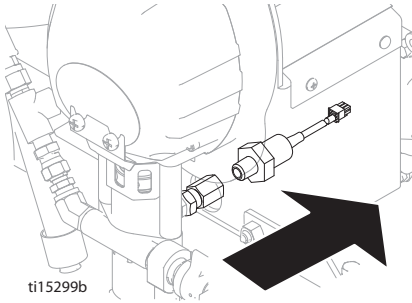
1. Perform Pressure Relief Procedure. See **Pressure Relief Procedure**, page 10.
2. Remove pail (103).
3. Use small phillips screwdriver to remove four screws (13) and remove control box cover (13).



4. Squeeze sides of pressure sensor connector to disconnect pressure sensor wire from control board (17). Pull pressure sensor wire through access hole in bottom of control box (13).



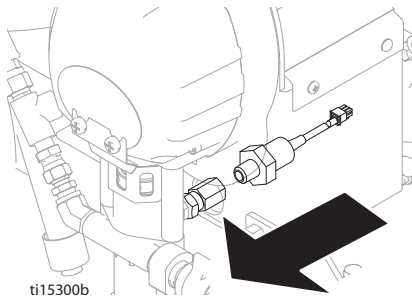
5. Use two wrenches to unscrew pressure sensor (209) from swivel fitting (216).



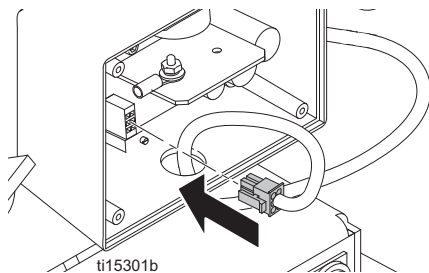
6. Remove pressure sensor (209).

## Installation

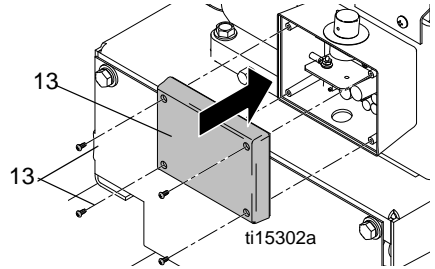
1. Install new pressure sensor (209) and tighten onto swivel fitting (216).



2. Feed pressure sensor wire through access hole in bottom of control box (13). Connect pressure sensor wire to control board (17).



3. Replace control box cover (13) and use a small phillips screwdriver to tighten four screws (13).



<b>NOTICE</b>
Be careful not to over tighten four screws (13). They can easily become stripped or damaged.

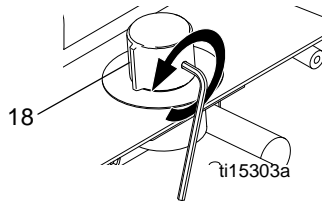
4. Replace pail (103).

## Pressure Control and Circuit Board

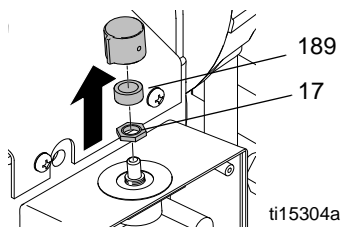


### Removal

1. Perform Pressure Relief Procedure. See **Pressure Relief Procedure**, page 10.
2. Remove pail (103).
3. Use small phillips screwdriver to loosen four screws (13) and remove control box cover (13).
4. Use a small allen wrench to loosen screw in pressure control knob (18). Remove knob.

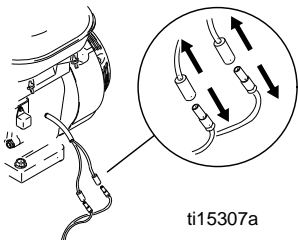


5. Remove spacer (189) then loosen and remove hex nut (17) from pressure control.

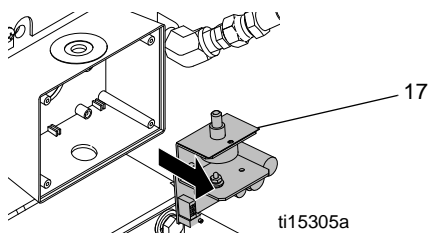


6. **Single Engine Wire Models:** Loosen grounding nut and screw on board heat sink and remove ground wire.

**Double Engine Wire Models:** Disconnect all wires to circuit board and Honda engine. Be sure to mark all wires to refer to when reconnecting, or refer to **Wiring Diagram** (see page 50).

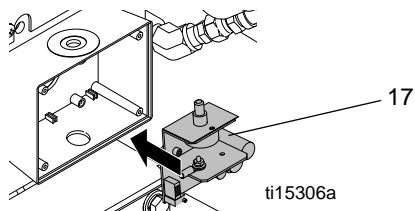


7. Remove circuit board and pressure control (17).



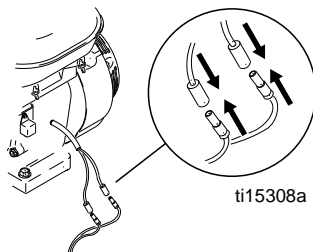
## Installation

1. Install new circuit board and pressure control (17).

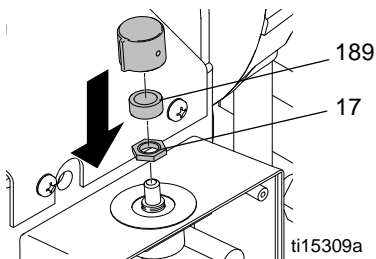


2. **Single Engine Wire Models:** Replace grounding wire and tighten grounding nut and screw on board heat sink.

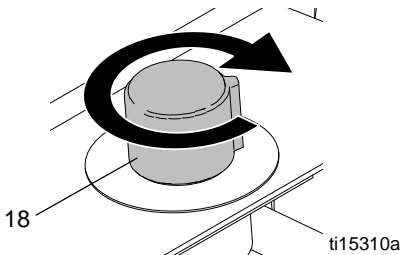
**Double Engine Wire Models:** Reconnect wire(s) to circuit board and place wires back into control box.



3. Install and tighten hex nut (17) and replace spacer (189) onto pressure control.

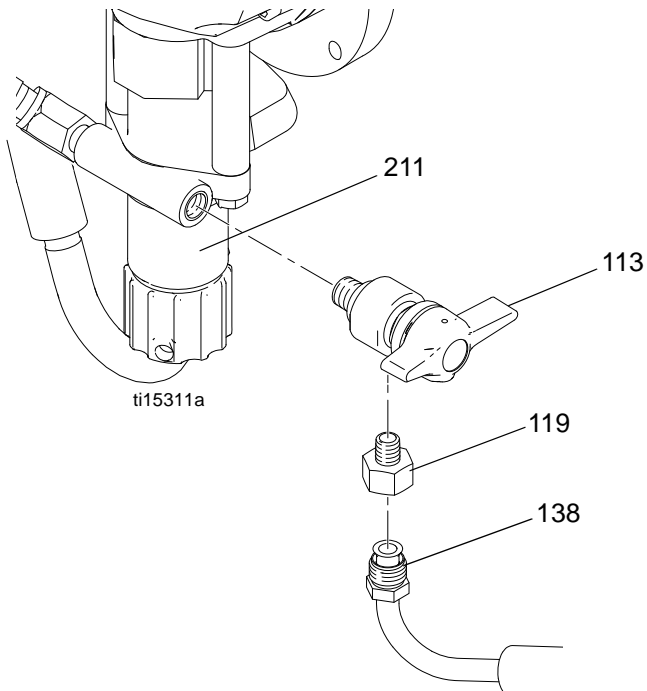
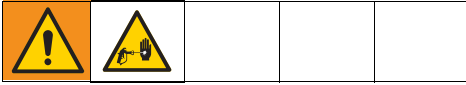


4. Turn pressure control fully clockwise and install knob (18) (knob should point to arrow on label). Use allen wrench to tighten screw on knob.



5. Replace control box cover (13) and use a small phillips screwdriver to tighten four screws (13).  
6. Replace pail (103).

## Drain Valve



### Removal

1. Perform Pressure Relief Procedure. See **Pressure Relief Procedure**, page 10.
2. Remove drain line (138) and fitting (119).
3. Use a wrench to loosen drain valve (113) and remove it from pump (211).

### Installation

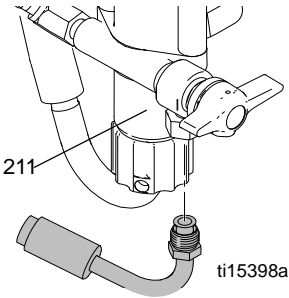
1. Thread drain valve (113) into pump (211) opening.
2. Hand tighten securely. Use a wrench to tighten new drain valve into pump.  
**NOTE:** Tighten drain valve so fitting (119) will install from bottom.
3. Replace fitting (119) and drain line (138).

## Fluid Pump

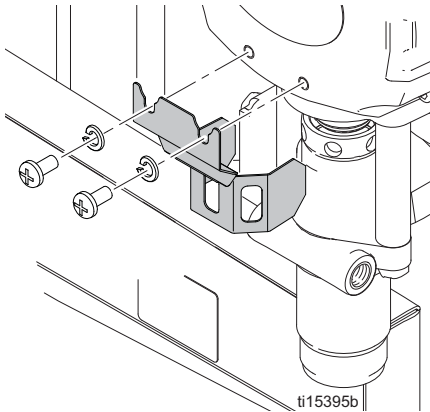


### Removal

1. Perform Pressure Relief Procedure. See **Pressure Relief Procedure**, page 10
2. Flush material out of striper.
3. Disconnect drain line from the pump (211).

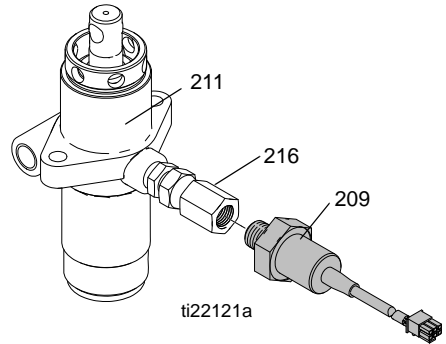


4. Remove connecting rod shield (205).



5. Slowly cycle pump to move piston rod so that connecting rod pin is visible.

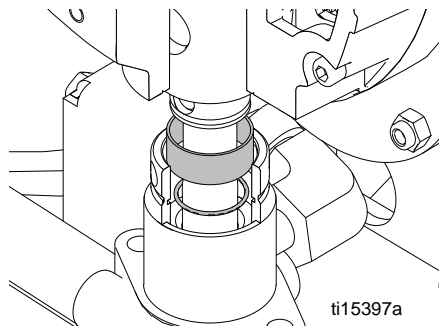
6. Disconnect pressure sensor (209) from the pump (211) by holding sensor in place with a wrench and unscrewing the swivel fitting (216) with an additional wrench.



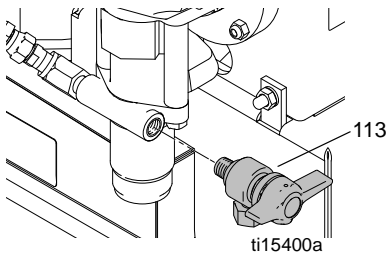
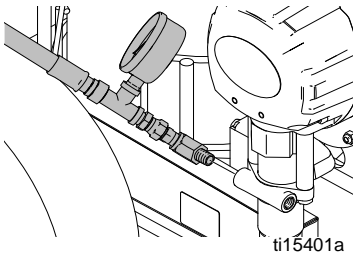
### NOTICE

Do not turn the sensor. The cable will become damaged.

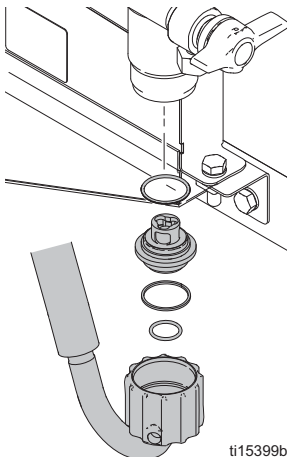
7. Remove retaining ring from connecting rod and slide sleeve down revealing connecting rod pin.



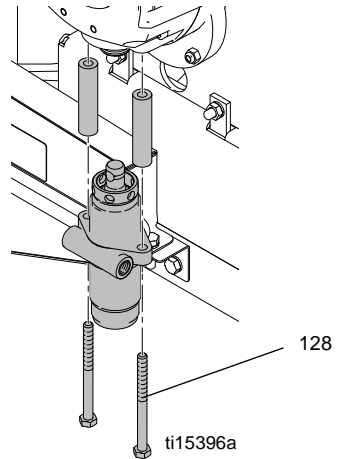
8. Remove hose fittings and drain valve (113).



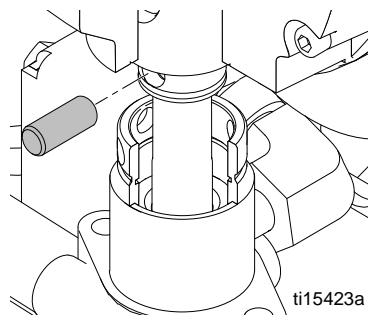
9. Remove siphon tube/hose assembly from fluid pump by unscrewing suction nut with packing adjustment tool.



10. Use wrench to unscrew two bolts (128) from front cover assembly (the fluid pump will hang loosely).



11. Remove connecting rod pin out of connecting rod to allow for removal of fluid pump from striper.



## Repacking the Pump

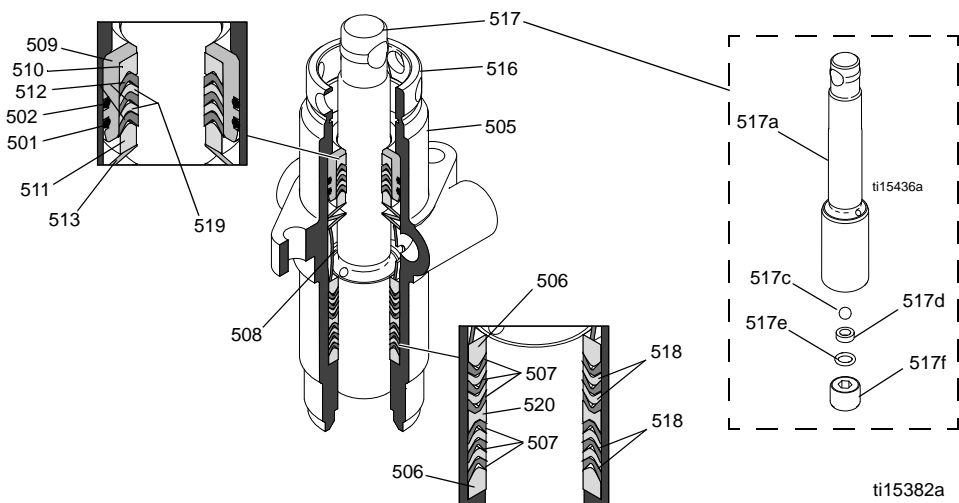
**NOTE:** The packing kit comes completely assembled (except for the packing holder 509) ready for installation. There is no need to break it apart. Reuse your old packing holder (509).

1. Unscrew and remove the packing nut (516).
2. Push the piston rod (517) down through the packings and out of the pump.
3. Use the packing removal tool (866435) to push up through the bottom of the fluid pump and remove from the top, bringing the packings, spacer, springs and holder along with it, leaving the fluid body (505) empty.

# Repair

**NOTE:** Make sure all old packings and glands have been removed from the fluid body.

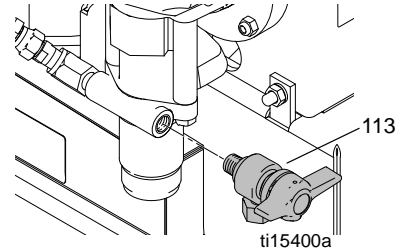
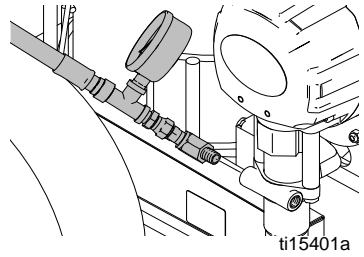
4. Clean the inside of the fluid body.
5. Lightly lubricate outside of new packing kit assembly (331210) with a light weight oil or Throat Seal Oil.
6. Replace black o-ring (502) and the white o-ring (501) on the packing holder (509), with the new o-rings from the packing kit.
7. Slide the packing holder on top of the new upper packings.
8. Slide the complete packing assembly down into the clean fluid pump body (505).
9. Install packing nut (516) loosely, not putting any pressure on new packings.
10. Remove the plastic packing tool (311465) down through bottom of fluid pump body. Lightly lubricate inside of the new packings with light weight oil or Throat Seal Oil.
11. Replacing the Outlet Valve Parts:
  - a. Place piston holder (331195) in a vise and slide piston into holder and lock in place with a 3/8 in. dowel.
  - b. Use a 1/4 in. allen wrench to unscrew the outlet seat retainer (517f) from the piston.
  - c. Remove the outlet seat (517d), o-ring (517e) and outlet ball (517c).
  - d. Inspect the outlet ball, o-ring and seat for wear. Replace as necessary.
  - e. While piston is still locked in the holder, install parts back into the piston in the following order: **ball, outlet seat, and o-ring.**
  - f. **NOTE:** The outlet seat needs to be oriented properly when assembling so that the inside diameter edge chamfer of the seat faces up (mating to ball).
  - g. Before reinstalling the outlet seat retainer, apply two drops of (113500) thread sealant on threads and torque to 20 ft-lb.
12. Slip the piston rod (517) up through the bottom of the fluid pump body, through the packings and into its upper position
13. Tighten the packing nut until you feel a slight resistance against the Belleville Springs (513). Use the packing adjustment tool (865008), tighten another 3/4 of a turn. (Approx. 24 In Lbs)



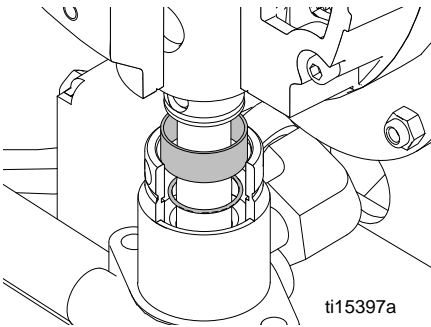


## Installation

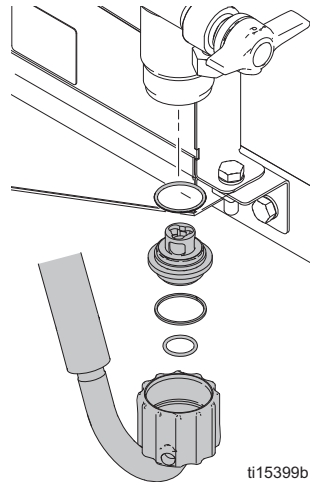
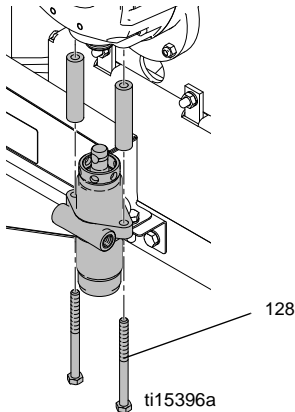
1. Loosen the packing nut and ensure that the piston rod (517) is in its upper position in the fluid pump body. Slip the sleeve (206) and the retaining ring (203) over the piston rod.
2. Push the piston rod up into the connecting rod (199) and align the holes. Insert the connecting rod pin (214) through the connecting rod and piston.
3. Slip the sleeve over the connecting rod pin and insert the retaining ring into the groove on the connecting rod.



6. Reassemble the lower suction valve assembly by placing the suction seat assembly (o-ring, seat, suction ball, and suction ball guide) in the suction nut and screw onto the pump body.



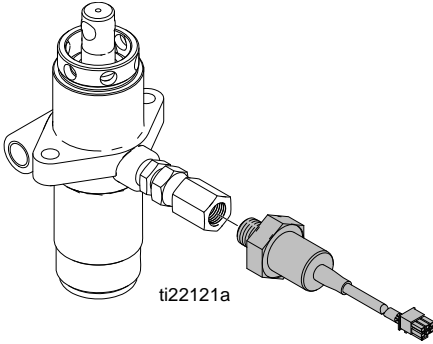
4. Push the two bolts (128) through the tube spacers (204) and screw them into cover assembly (210). Use a torque wrench to tighten two bolts evenly (alternating between them) to 20 ft-lb.



5. Reattach hose fittings and drain valve (113). Use plumbers tape around threads to ensure a good seal.

# Repair

7. On pumps with electronic pressure control, reconnect the sensor to the pump body (211). Hold the sensor with a wrench while tightening the swivel fitting (216) with an additional wrench.

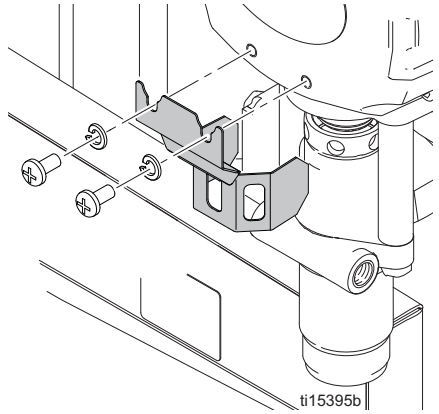


## NOTICE

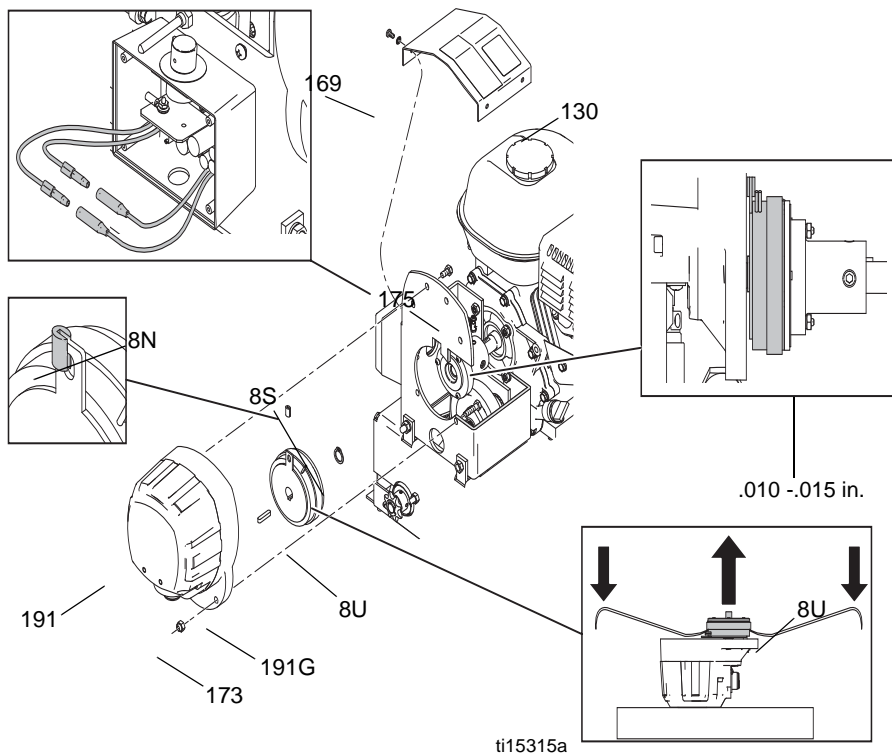
Do not turn the sensor. The cable will become damaged.

8. Start striper and operate slowly to check piston rod for binding. Readjust the two bolts to eliminate binding if necessary.

9. Tighten packing nut until slight resistance is felt against the belleville spring (these springs retain internal tension against the packings), then tighten an additional 3/4 turn. Place five drops of Throat Seal Oil into the packing nut.
10. Run the striper at full pressure for several minutes. Perform **Pressure Relief Procedure**, see page 10, and readjust the packing nut (see step 8).
11. Install connecting rod shield so that the small hole is in the upper right hand corner.



## Clutch



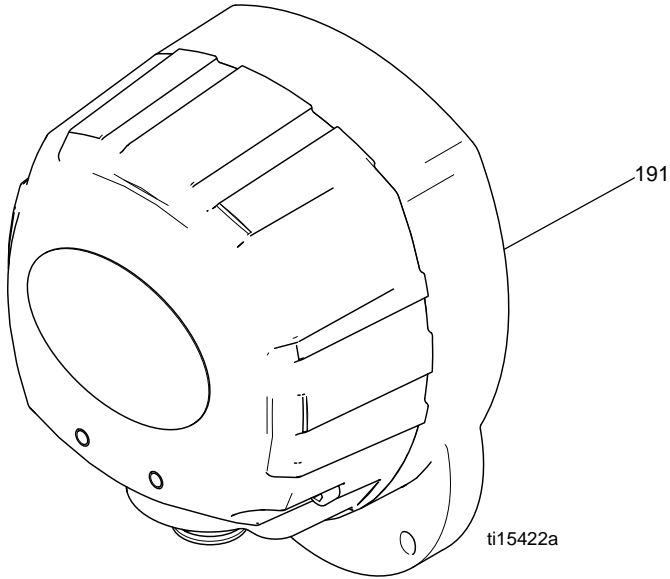
## Removal

1. Perform Pressure Relief Procedure. See **Pressure Relief Procedure**, page 10.
2. Remove pail (103).
3. Disconnect and remove siphon and drain tubes.  
**NOTE:** When siphon tube is removed from pump intake, be sure to catch ball cage, ball, ball seat, and o-ring or they will fall to the floor. Keep these pieces together in the same order.
4. Remove **Control Board Cover**, page 27.
5. Disconnect pressure sensor wire, page 26.
6. Remove **Pump**, page 30.
7. Remove four screws (169) on clutch housing cover (130) and remove cover.
8. Cut plastic wire holder (be careful not to cut wires). and disconnect clutch wire. Mark wires to refer to when reconnecting.
9. Remove four top screws (175) and two bottom screws and nuts (173) and remove gear box (191).
10. Use a small pliers to remove clutch retaining clip (8S).
11. Place clutch housing on a flat surface and use two pry bars to evenly lift clutch off of shaft.  
**NOTE:** The clutch installs onto a square key. Retain key when removing clutch.

## Installation

1. Install key into shaft.
2. Install edge grommet onto side of clutch orientation tab.  
**NOTE:** If the clutch is not installed correctly, a loud rattle will be heard during operation.
3. Align new clutch with key-way and push clutch (8U) onto shaft.
4. Install clutch retaining clip (8S).
5. If after installing the retaining clips, there is movement of the clutch on the shaft, install supplied shim(s) as needed to remove any movement on shaft.
6. Align clutch orientation tab with slot on gear box and replace clutch housing (191G). Tighten screws (173 and 175). Check gap between clutch and clutch plate (clutch should be .010 to .015 in. from gear box).
7. Route wires through tie strap and secure into place.
8. Replace clutch housing cover (130) and tighten four screws (169).
9. Replace **Pump**, page 30.
10. Reconnect pressure sensor wire, page 26.
11. Replace **Control Board Cover**, page 27.
12. Reconnect siphon and drain tubes.
13. Replace pail (103).

## Gear Box



### Removal

1. Perform Pressure Relief Procedure, See **Pressure Relief Procedure**, page 10.
2. Remove **Pail Bracket**, page 26.
3. Disconnect and remove all hoses.

**NOTE:** When siphon tube is removed from pump, be sure to catch ball cage, ball, ball seat, and o-ring or they will fall to the floor. Keep these pieces together in the same order.

4. Remove **Pressure Sensor**, page 26.
5. Remove **Pump**, page 30.
6. Remove **Clutch**, page 35.
7. Remove gear box (191).

### Installation

1. Replace gear box (191).
2. Replace **Clutch**, page 35.
3. Replace **Pump**, page 30.
4. Replace **Pressure Sensor**, page 26.
5. Reconnect all hoses.
6. Replace **Pail Bracket**, page 26.

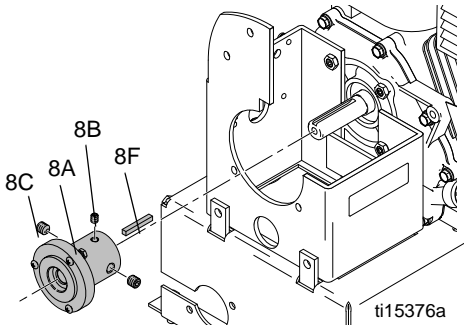
## Engine

For further information on engine maintenance and repair, see Honda Engine manual.

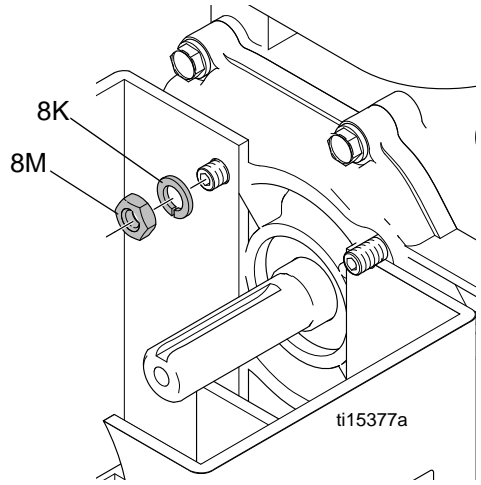


### Removal

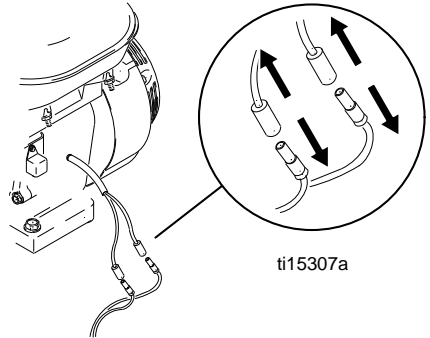
1. Perform Pressure Relief Procedure. See **Pressure Relief Procedure**, page 10
2. Remove **Pail Bracket**, page 26.
3. Remove **Gear Box**, page 36.
4. Remove **Drive Chain**, page 38.
5. Remove three set screws (8C) and clutch adapter (8A). Remove key (8F) from shaft.



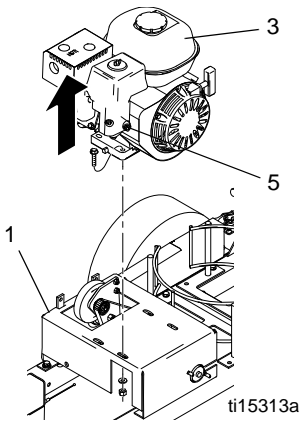
6. Remove four hex nuts (8M) and washers (8K) between clutch housing and engine.



7. Disconnect engine wire(s). Be sure to mark wires to refer to when reconnecting.

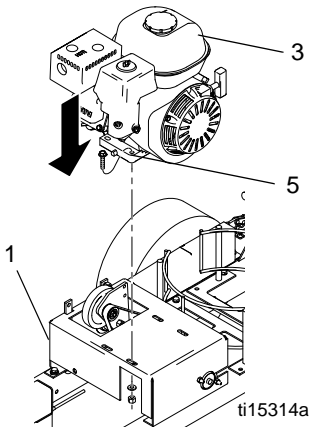


8. Use wrench to remove four engine bolts (5) and remove engine (3) from engine mount bracket (1).

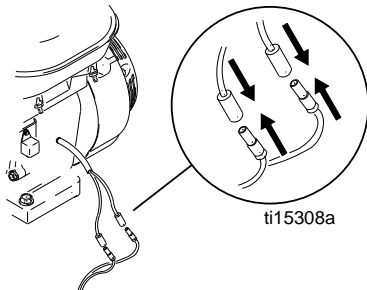


## Installation

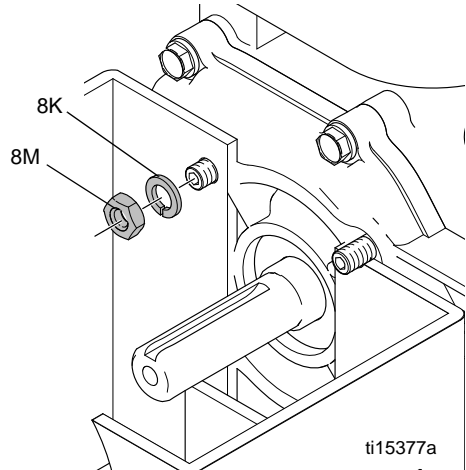
1. Install new engine (3) into engine mount bracket (1) and use wrench to tighten four engine bolts (5).



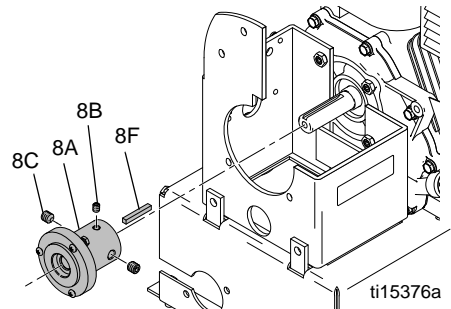
2. Connect engine wires.



3. Replace four hex nuts (8M) and washers (8K) between clutch housing and engine.

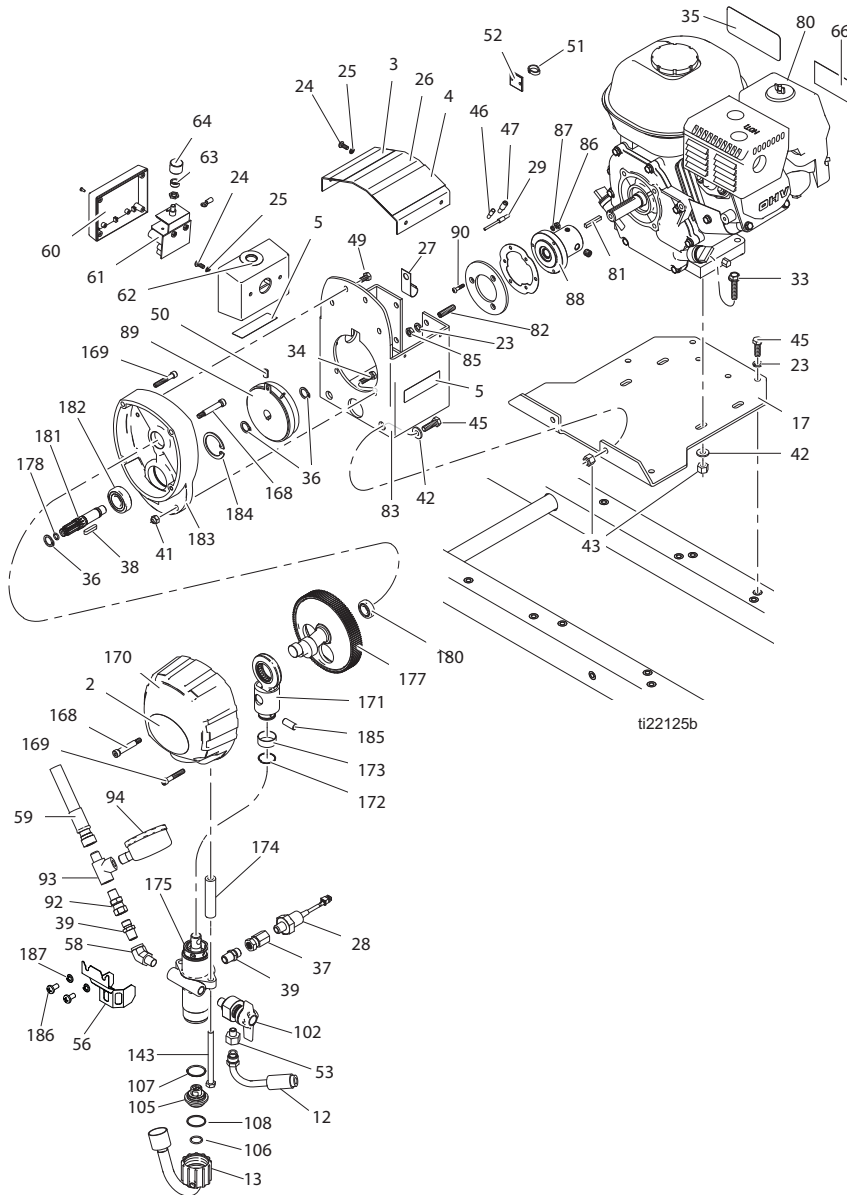


4. Install key (8F) into shaft. Replace clutch adapter (8A) and tighten three set screws (8C and 8B). Torque setscrew 8C to 25 ft-lb. Torque set screw 8B to 12 ft-lb. Clutch adapter plate should be .010 to .015 in. from clutch.



5. Replace **Drive Chain**, page 35.
6. Replace **Gear Box**, page 36
7. Replace **Pail Bracket**, page 26.

## Parts Lists





## Parts List

Ref.	Part	Description	Qty	Ref.	Part	Description	Qty
				45	124227	SCREW, cap, hex hd, 5/16-18x1.00	10
2	342577	LABEL, SS3650, Gearbox Cover (Models-305401, 865935)	1	46**		CONNECTOR, bullet male.180	1
				47**		CONNECTOR, bullet, female,.180	1
	342578	LABEL, SS4050, Gearbox Cover (Models-305402, 865936)	1	49	100333	SCREW, cap, hex hd	4
				50**		TRIM, edge	1
				51	103473	STRAP, tie wrap	1
	342465	LABEL, Fieldstripe, Cover (Model-305406)	1	52**		BASE, mounting, wire, harness	1
				53	867759	CONNECTOR,male, 3/8 tube x 1/8 pipe	1
3▲	342473	LABEL, general warning	1	56	868016	Cover, guard	1
4	342506	LABEL, never/always LP&SL	1	58	121283	FITTING,elbow,45 deg street	1
5		LABEL, identification	1	59	867742	HOSE,whip,3/8" x 6' lg	1
12	248217	HOSE, drain	1	60	305277	ENCLOSURE, control board	1
13	331290	HOSE, suction hose assy	1	61	865676	CONTROL, pressure (includes 47, 46)	1
17	305343	BRACKET, mounting plate	1	62	342520	LABEL, pressure	1
23**	100214	WASHER, lock	4	63	331184	SPACER, 3/8 ID.54 OD.23 L	1
24	331342	SCREW,10-24x.50 PH PN HD	6	64	867291	KNOB	1
25	100718	WASHER	6	65▲	342445	LABEL, caution	1
26	305268	COVER, engine mount	1	71	164672	ADAPTER	1
27	866211	CLIP,J	1	80	114530	ENGINE, gas,5.5 HP, Honda GX160	1
28	866334	SENSOR	1	81**		KEY, square, 3/16 x 1.35	1
29	24E873	WIRE, control board, engineer	1	82	331496	SCREW, set 5/16-24	1
33	100837	SCREW, flange, hex	4	83	24E115	BRACKET, mounting	1
34	867496	SCREW,1/4-20 x 1.125 HX HD	2	85**		NUT, jam, hex	4
				86**		NUT, locking, distorted thread	3
35	342461	LABEL, engine speed	1	87**		WASHER, lock, spring	3
36**		RING,retaining,external,15mm	2	88**		ADAPTER, clutch assembly	1
37++	867238	SWIVEL, ftg-swivel,1/4 x 1/4	1	89**		CLUTCH, electromagnetic	1
38**		KEY,5mm x 25mm	1	90**		SCREW, pan head, phillips	3
39	162453	FITTING (1/4NPSM x 14NPT)	2	92	156823	FITTING, union swivel	1
41	136217	NUT, 1/4-20 jam ny-lock st	2	93	116504	FITTING, tee, run	1
42	100527	WASHER, plain	6	94	102814	GAUGE, press, fluid	1
43	110838	NUT, lock	6	102	866428	VALVE, relief/priming	1

# Parts Lists

Ref.	Part	Description	Qty
105*	331051	KIT, suction seat	1
106*+		PACKING, o-ring 016 FX75	1
107*+		PACKING, o-ring 022	1
108*+		RING, backup -022PTFF	1
143	867539	SCREW,5/16-18 x 3.75 HX HD	2
168++		SCREW, shoulder, socket, modified	2
169++		SCREW, cap, sch	2
170++		COVER, front assy	1
171++		YOKE, cross head assy	1
172	331062	SPRING, ret. spring	1
173	331117	SLEEVE	1
174	331074	SPACER,2.691 long	2
175	866482	PUMP	1
177++		GEAR, crank.32 assy	1
178++		PACKING, o-ring	1
180++		BEARING, ball	1
181++		SHAFT, pinion	1
182++		BEARING, ball	1
183++		HOUSING, end bell	1
184++		RETAINER, ring internal, 40mm	1
185	866082	PIN, cross	1
186	113783	SCREW, machine, PN HD	2
187	C19209	WASHER, lock	2

+ Included in 16W484 Kit, O-Ring

++ 24E861 Kit Repair Gear Box

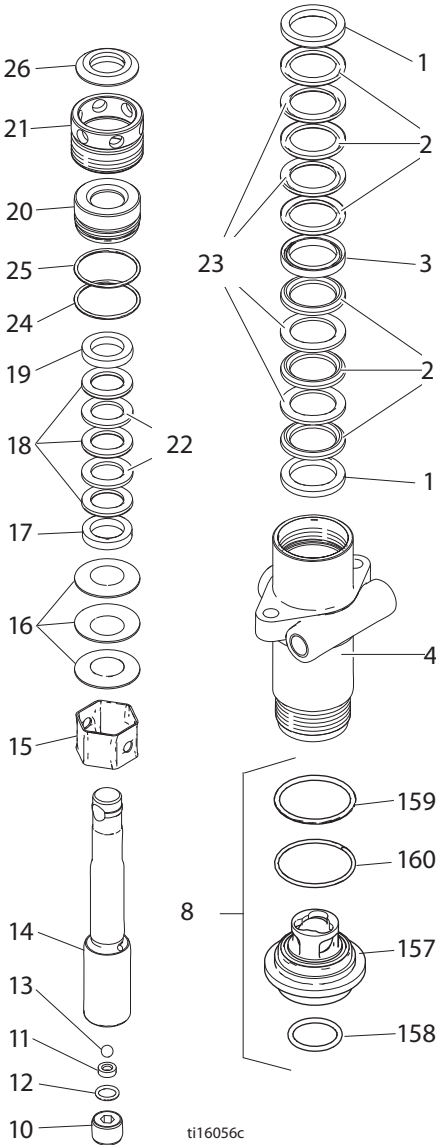
\* Included in 331051Kit, Suction Seat Assy.

\*\* 301666 Clutch Assembly

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

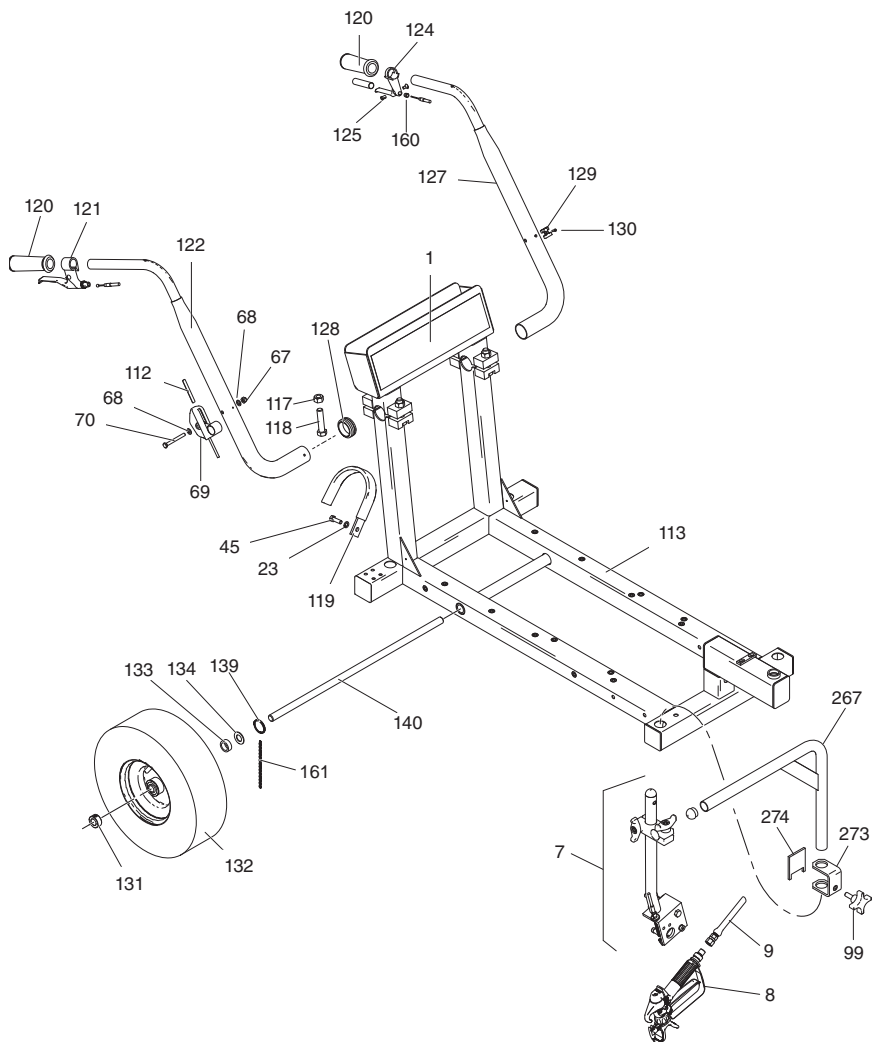
## Pump Parts

## Pump Parts List



Ref.	Part	Description	Qty
1*	331014	MALE GLAND	2
2*	331016	PACKING POLYETHYLENE	6
3*	331308	FEMALE ADAPTOR	1
4	331011	FLUID PUMP BODY	1
8	331051	SUCTION SEAT	1
9	331034	SUCTION NUT	1
10+	331314	OUTLET SEAT RETAINER	1
11+	331026	OUTLET SEAT	1
12+*	111457	O-RING	1
13+*	331027	OUTLET BALL	1
14+		PISTON	1
15*	331018	SPACER	1
16*	331025	WASHER SPRING	3
17*	331022	MALE GLAND	1
18*	331023	PACKING POYETHYLENE	3
19*	331021	FEMALE GLAND	1
20	331019	PACKING HOLDER	1
21	331037	PACKING NUT	1
22*	331307	PACKING LEATHER	2
23*	331306	PACKING LEATHER	4
24*	107313	WHITE O-RING	1
25*	108771	BLACK O-RING	1
26	180656	PLUG BUTTON SEAT,SUCTION SEAT	1
157**		SEAT	1
158**++		PACKING, O-RING	1
159**++		PACKING, O -RING	1
160**++		RING,BACKUP	1
*	331210	PACKING KIT	1
+	331093	PISTON ASSY	
**	INCLUDED IN 331051		
++	INCLUDED IN O-RING KIT 16W484		

## Parts



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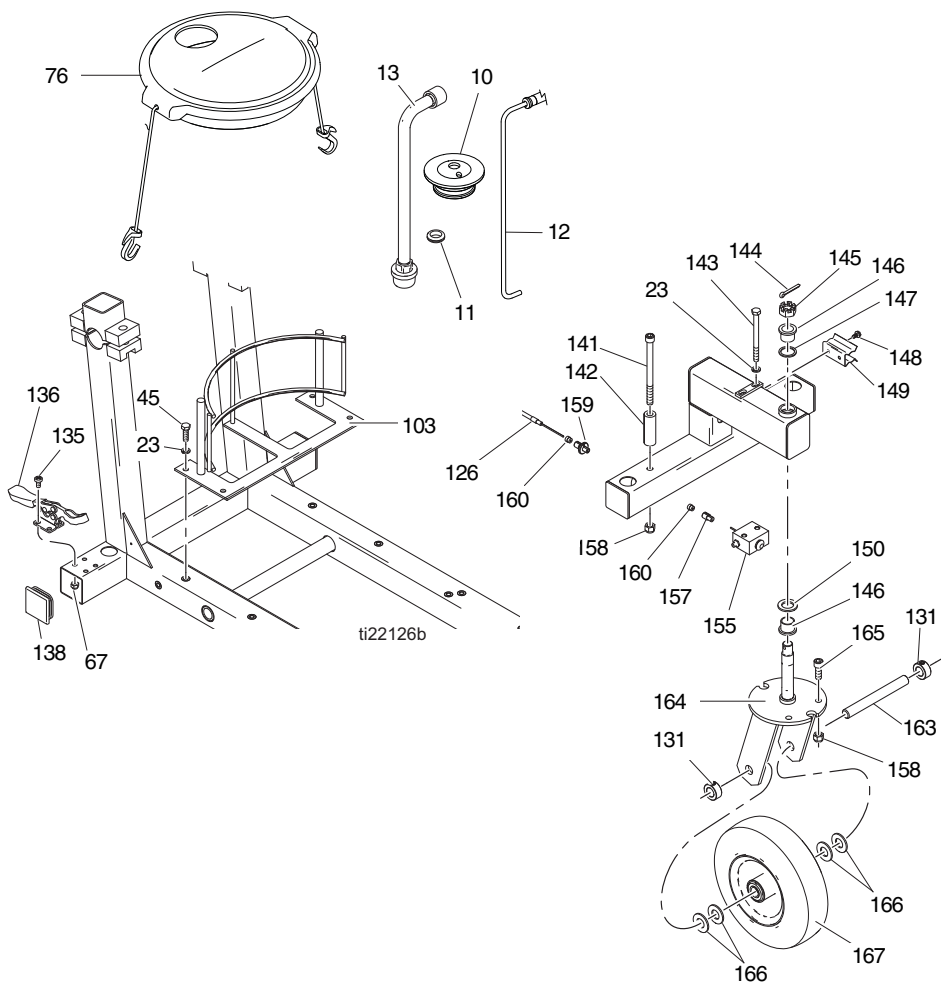
## Parts List

Ref.	Part	Description	Qty	Ref.	Part	Description	Qty
				119*	123979	HOOK, hose	3
				120	123938	GRIP, handle	2
1	342582	LABEL, SureStripe	1	121	866520	LEVER, assembly	1
		Handle,		122	305315	HANDLE, right	1
		(Models-305401,		124	305105	LEVER,128 right	1
		305402, 865935,				hand	
		865936)		125	305079	WIRE,swivel	1
	342585	LABEL, Fieldstripe,	1	127	305314	HANDLE, left	1
		Handle		128	867419	CAP, tube, round	2
		(Model-305406)		129	867638	STRAP, two channel	2
7	305150	HOLDER, gun assy.	1	130	867487	SCRW,#4-40X.	2
		(Includes Ref.# 121)				50log flat	
8	289316	GUN,500,4 Finger	1	131	143029	COLLAR, screw set	4
		(Models-305401,		132	301166	WHEEL, pneumatic	2
		305402, 305406)		133	305039	SPACER,.75" x.50"	2
	24H289	GUN, 009,	1	134	867732	WASHER, wave	2
		(Models-865935,				washer for 5/8 axle	
		865936)		139	136133	RING,retaining	1
9	865674	HOSE, paint hose	1	140	866026	AXLE,5/8 x 21.81" lg	1
		1/4 x 50'		160	305089	INSERT, cable	2
23	100214	WASHER, lock	4	161	136131	CHAIN,sash #8x7"	1
45	124227	SCREW, cap, hex	3	267	139353	ARM, sg short	1
		HD, 5/16-18 x 1		268	143027	BALL, guide	2
67	102040	NUT, lock, hex	1	273	867125	CLAMP, arm	1
68	158223	WASHER, special	2	274	305108	PLATE, gun arm	1
69	305376	CABLE, throttle	1	275▲	222385	LABEL,	1
70	113469	SCREW, cap,	1			safety,warning	
		hex hd				(not shown)	
99	111145	KNOB, pronged	1				
112	16P601	LABLE, throttle	1				
		control					
113	309395	FRAME, w/swivel	1				
117	867318	NUT, locking	4				
118*	867780	SCREW, hex hd	4				

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

# Parts Lists

## Parts

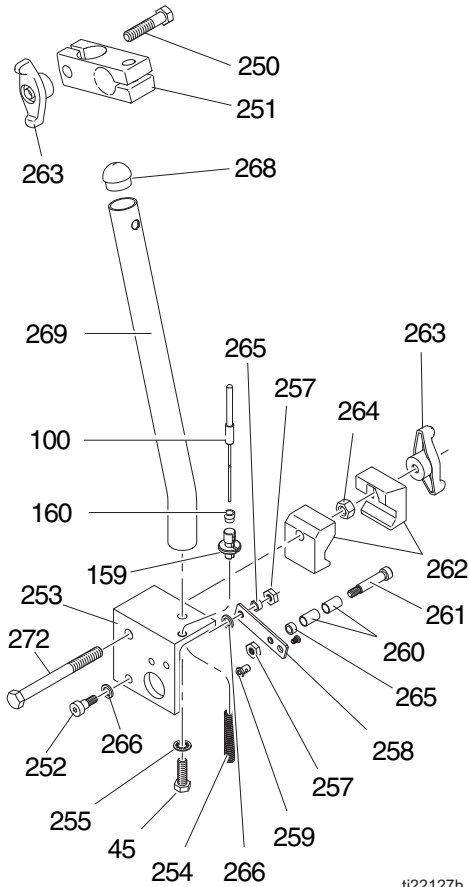


## Parts List

Ref.	Part	Description	Qty	Ref.	Part	Description	Qty
				141	867520	SCREW, cap, socket head	2
10	278723	GASKET, pail	1	142	865010	SPACER, tube	2
11	16D431	GROMMET	1	143	867539	SCREW, 5/16-18 x 3.75 hex hd	2
12	17D469	HOSE, drain	1	144	867139	PIN, cotter	1
13	331290	HOSE, hose suction assy.	1	145	867021	NUT, hex slotted, 5/8-18	1
23	100214	WASHER, lock	8	146	867230	BEARING, flanged	2
45	124227	SCREW, cap, hex hd, 5/16-18 x 1.00	10	147	145006	WASHER, plain	1
67	102040	NUT, lock, hex	4	148	139355	SCREW, self drilling	2
74	136231	TURNBUCKLE 12-1/4 max (not shown)	1	149	867622	CLAMP, spring	1
76	24U241	KIT, pail cover	1	150	154628	WASHER	1
126	866047	CABLE, assy 80.75"		155	305160	KIT, swivel lock assy.	1
131	143029	COLLAR, screw, set	4	157	305261	CABLE, holder	1
135	113783	SCREW, machine, PN HD	4	158	101566	NUT, lock	4
136	17E109	CLAMP, brake, hold down	1	159	305141	ADJUSTER, cable	1
138	867107	CAP, tube, square	1	160	305089	INSERT, cable	2
				163	136230	AXLE, front	1
				164	305253	CLAMP, swivel	1
				165	C19837	SCREW, cap, socket hd	2
				166	111841	WASHER, plain 5/8	4
				167	119542	WHEEL, small	1

# Parts Lists

## Gun Arm Parts



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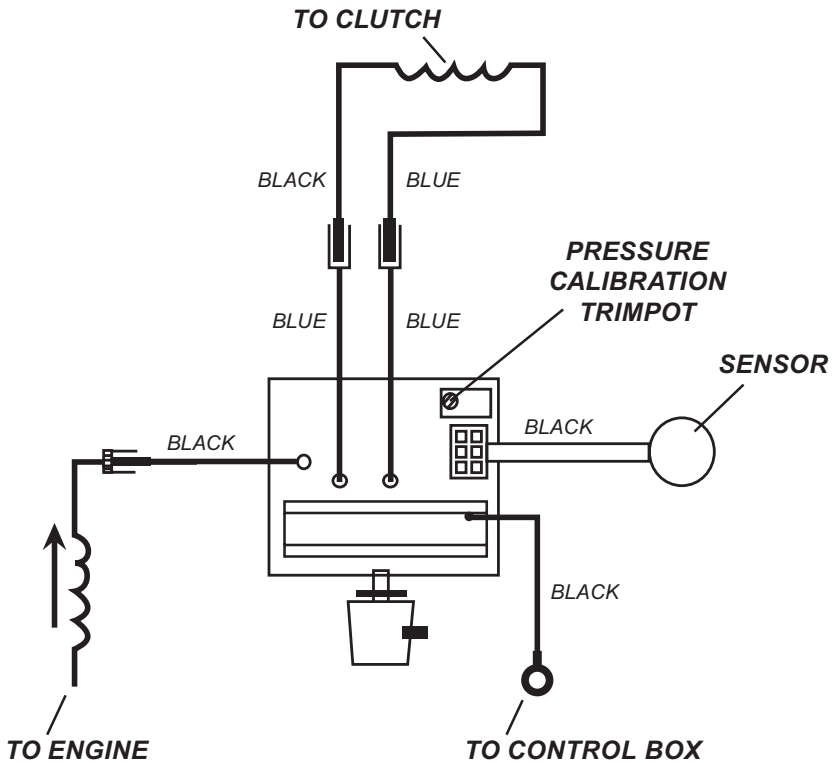
## Gun Arm Parts List

Ref.	Part	Description	Qty
45	124227	SCERW, cap, hex hd,5/16-18 x 1.00	1
100	866043	CABLE assy	1
159	305141	ADJUSTER, cable	1
160	305089	INSERT, cable	1
250	867513	SCERW,3/8-16 x 1.75 hx hd	2
251	867653	BLOCK, swivel clamp	1
252	305158	SCERW, shoulder, socket head	1
253	305154	BRACKET, clamp	1
254	867627	SPRING, compression	1
255	100186	WASHER, lock, internal tooth	1
257	140045	NUT, hex, jam	2
258	305155	LEVER, lever - gun holder assy	1
259	305079	WIRE, swivel	1
260	305159	BEARING, sleeve bearing	2
261	866339	SCREW, shoulder screw 5/16 x 1.25	1
262	305152	CLAMP, clamp outer - casting	2
263	305157	KNOB, wing	3
264	100307	NUT, hex	1
265	305161	SPACER	2
266	305156	WASHER, flat	2
268	143027	BALL, glide	2
269	305297	HOLDER, gun	1
272	124234	SCREW, cap hex,3/8-16x4,GR.5	1



## Pressure Control Wiring Diagram

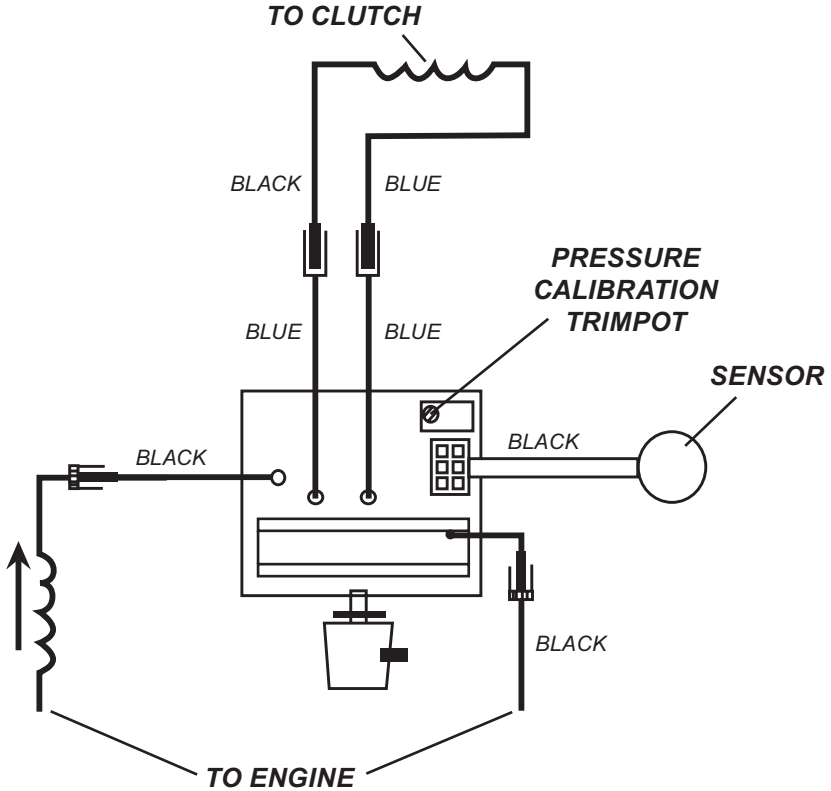
Engine - Single Wire Models:



Ref.	Part	Description	Qty
3	114530	ENGINE, gas	1
13	305277	ENCLOSURE, mach	1
17	865676	KIT, control, pressure (includes 246, 247)	1
209	331294	SENSOR, assy	1
246	117316	CONNECTOR, bullet M	1
247	867095	CONNECTOR, bullet F	1
248	24E873	WIRE, control board	1
249	24E874	WIRE, control board	1

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Engine - Double Wire Models:



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247	867095	CONNECTOR, bullet F	1
248	24E873	WIRE, control board	1
249	24E874	WIRE, control board	1

## Technical Data

### **Sure Stripe 3650**

#### **(Model 305401- 865935)**

Maximum working pressure	3000 psi (20.7 MPa, 207 bar)
Maximum delivery gpm (lpm)	0.70 (2.65)
Maximum tip size	0.027 in.
Motor	Honda GX120
Weight	166 lbs

### **Sure Stripe 4050**

#### **(Model 305402-865936)**

Maximum working pressure	3000 psi (20.7 MPa, 207 bar)
Maximum delivery gpm (lpm)	0.80 (3.03)
Maximum tip size	0.029 in.
Motor	Honda GX160
Weight	166 lbs

### **FieldStripe Plus (Model 305406)**

Maximum working pressure	3000 psi (20.7 MPa, 207 bar)
Maximum delivery gpm (lpm)	0.80 (3.03)
Maximum tip size	0.029 in.
Motor	Honda GX160
Weight	171lbs

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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.

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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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*For patent information, see [www.graco.com/patents](http://www.graco.com/patents)*

Original Instructions. This manual contains English. *MM 3A2690A*

**GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441**

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