

## LineLazer™ III 3900 and 5900 Airless Paint Stripers

309414K  
EN

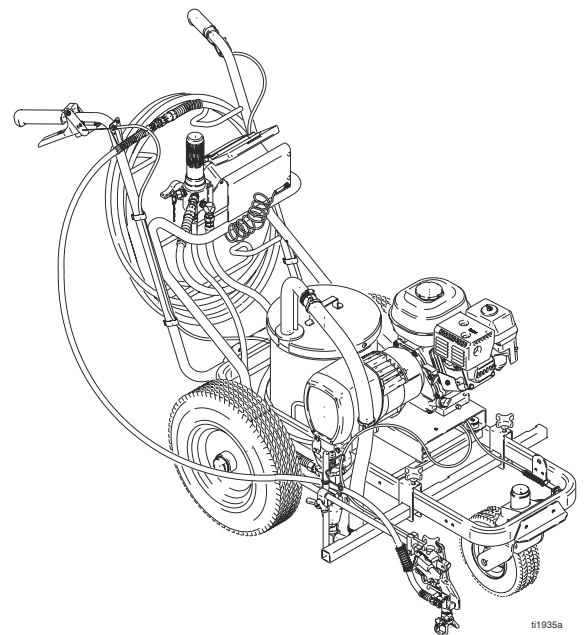
**For water-based materials only. For professional use only. Not approved for use in European explosive atmosphere locations.**

### LineLazer III 3900

Model	Series	Description
233688	A	Striper with one Gun
233689	A	Striper with Second Gun Kit
233664	A	International Striper with on Gun
233694	A	International Striper with 2nd Gun Kit

### LineLazer III 5900

Model	Series	Description
233690	A	Striper with one Gun
233691	A	Striper with Second Gun Kit
233627	A	International Striper with on Gun
233695	A	International Striper with 2nd Gun Kit



3300 psi (228 MPa, 22.8 bar) Maximum Working Pressure



#### IMPORTANT SAFETY INSTRUCTIONS

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

### Related Manuals

Operator .....	309413
Displacement Pump .....	309277
Spray Gun .....	309093
Spray Tip .....	*
PC Board.....	309459
Drain Valve Kit.....	308961
Clutch Replacement Kit.....	309890

\* for spray tip selection, see page 6

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# ! WARNING



## FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. To help prevent fire and explosion:



- 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 arc).
- 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.
- Ground all equipment in the work area. See **Grounding** instructions.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail.
- If there is static sparking or you feel a shock, **stop operation immediately**. Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.



## SKIN INJECTION HAZARD

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



- Do not spray without tip guard and trigger guard installed.
- Engage trigger lock when not spraying.
- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Follow the **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses and couplings daily. Replace worn or damaged parts immediately.

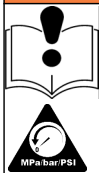


## PRESSURIZED EQUIPMENT HAZARD

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

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

# ⚠️ WARNING



## 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 MSDS from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure. Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.



## PRESSURIZED ALUMINUM PARTS HAZARD

Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.

- Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.
- Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.



## MOVING PARTS HAZARD

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



- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure**, page 7 and disconnect all power sources.



## 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.






## TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.

- Read MSDSs to know the specific hazards of the fluids you are using.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.

 **WARNING**

	<p><b>PERSONAL PROTECTIVE EQUIPMENT</b></p> <p>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This equipment includes but is not limited to:</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>BURN HAZARD</b></p> <p>Equipment surfaces and fluid that's heated can become very hot during operation. To avoid severe burns:</p> <ul style="list-style-type: none"><li>• Do not touch hot fluid or equipment.</li></ul>
	<p><b>RECOIL HAZARD</b></p> <p>Gun may recoil when triggered. If you are not standing securely, you could fall and be seriously injured.</p>

# Spray Tip Selection Table

**LineLazer Tip Selection Guide.** Sprayer is supplied with tip LL5319. For additional applications, use the tip selection table as follows:

**Note:** the last three digits (LL5319) of the tip part number identifies the line width and tip orifice (opening). For example: the line width for tip LL5319 is 4 in. as shown in the table below. The tip orifice for tip LL5319 is .019 in.

## LineLazer Tip Selection Table

Tip Size	Line Width	Used For
221203*	2 inches	Sport court light film build
LL5213*	2 inches	Sport court heavy film build
LL5215*	4 inches	Alkyd paints only light film build
LL5217	4 inches	Alkyd paints only medium film build
LL5219	4 inches	Alkyd paints only heavy film build
LL5315	4 inches	Most traffic paints light film build
LL5317	4 inches	Most traffic paints medium film build
LL5319	4 inches	Most traffic paints medium film build
LL5321	4 inches	Most traffic paints heavy film build
LL5323	4 inches	Most traffic paints heavy film build
LL5327	4 inches	Most traffic paints heavy film build
LL5417#	4 - 8 inches	All paints and high solids traffic paints light film build
LL5419#	4 - 8 inches	All paints and high solids traffic paints medium film build
LL5421#	4 - 8 inches	All paints and high solids traffic paints heavy film build
LL5621	8 - 12 inches	All traffic paints light film build
LL5623	8 - 12 inches	All traffic paints medium film build
LL5625	8 - 12 inches	All traffic paints medium film build
LL5627	8 - 12 inches	All traffic paints heavy film build

\* May require 100 mesh filter to minimize tip plugging.



Best for use with LineDriver.

# Best for cold weather applications.

**How to Maximize Line Quality and Reduce Tip Wear.** Observe the following suggestions to increase line quality and minimize sprayer tip wear.

1. Select a larger tip orifice and run the sprayer at a reduced operating pressure.
2. Running larger tip sizes (example: use tip LL5321 @ 2000 psi instead of LL5317 @ 3300 psi) will significantly increase tip life and reduce tip plugging. It will also produce a more uniform film build across the line.

# Maintenance

						
<p><b>INJECTION HAZARD</b></p> <p>The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the <b>Pressure Relief Procedure</b> whenever you:</p> <ul style="list-style-type: none"> <li>• are instructed to relieve the pressure,</li> <li>• stop spraying,</li> <li>• check or service any of the system equipment,</li> <li>• or install or clean the spray tip.</li> </ul>						

## Grounding

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

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

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

## Pressure Relief Procedure

1. Lock gun trigger safety.
2. Turn engine ON/OFF switch to OFF.
3. Move pump switch to OFF and turn pressure control knob fully counterclockwise.
4. Unlock trigger safety. Hold metal part of gun firmly to side of grounded metal pail, and trigger gun to relieve pressure.
5. Lock gun trigger safety.
6. Open pressure drain valve. Leave valve open until ready to spray again.

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

### NOTICE

For detailed engine maintenance and specifications, refer to separate Honda Engines Owner Manual, supplied.

**DAILY:** Check engine oil level and fill as necessary.

**DAILY:** Check hose for wear and damage.

**DAILY:** Check gun safety for proper operation.

**DAILY:** Check pressure drain valve for proper operation.

**DAILY:** Check and fill the gas tank.

**AFTER THE FIRST 20 HOURS OF OPERATION:** Drain engine oil and refill with clean oil. Reference Honda Engines Owner's 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 filter daily and replace, if necessary.

Repack connecting rod (22) top needle bearing after every pump change.

Replacement elements can be purchased from your local HONDA dealer.

**WEEKLY:** Check level of TSL in displacement pump packing nut. Fill nut, if necessary. Keep TSL in nut to help prevent fluid buildup on piston rod and premature wear of packings.

**AFTER EACH 100 HOURS OF OPERATION:** Change engine oil. Reference Honda Engines Owner's Manual for correct oil viscosity.

**SPARK PLUG:** Use only BPR6ES (NGK) or W20EPRU (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.



## Caster Wheel

(See letter call-outs in Parts drawing on page 27)

1. Once each year, tighten nut (164m) until spring washer bottoms out. Then back off the nut 1/2 to 3/4 turn.
2. Once each year, tighten nut (62) until it begins to compress spring washer. Then tighten the nut an additional 1/4 turn.
3. Once each month, grease the wheel bearing (F).
4. Check pin (164e) for wear. If pin is worn out, there will be play in the caster wheel. Reverse or replace the pin as needed.
5. Check caster wheel alignment as necessary. To align: loosen bolt (164t), align wheel and tighten bolt (164t).



# Troubleshooting

						
Relieve Pressure, page :7.						

PROBLEM	CAUSE	SOLUTION
E=XX is displayed	Fault condition exists	Determine fault correction from table, page 20.
Engine won't start	Engine switch is OFF	Turn engine switch ON
	Engine is out of gas	Refill gas tank. Honda Engines Owner's Manual.
	Engine oil level is low	Try to start engine. Replenish oil, if necessary. Honda Engines Owner's Manual.
	Spark plug cable is disconnected or damaged	Connect spark plug cable or replace spark plug
	Cold engine	Use choke
	Fuel shutoff 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 sprayer upright to avoid oil seepage.
Engine operates, but displacement pump does not operate	Error code displayed?	Reference pressure control repair. Page 18.
	Pump switch is OFF	Turn pump switch ON.
	Pressure setting is too low	Turn pressure adjusting knob clockwise to increase pressure.
	Fluid filter (318) is dirty	Clean filter.
	Tip or tip filter is clogged	Clean tip or tip filter. Manual 309091.
	Displacement pump piston rod is stuck due to dried paint	Repair pump. Manual 309277.
	Connecting rod is worn or damaged	Replace connecting rod. Page 13.
	Drive housing is worn or damaged	Replace drive housing. Page 14.
Electrical power is not energizing clutch field	<p>Check wiring connections. Page 15.</p> <p>Reference pressure control repair. Page 18.</p> <p>Reference wiring diagram. Page 37.</p> <p>With pump switch ON and pressure turned to MAXIMUM, use a test light to check for power between clutch test points on control board.</p> <p>Remove 7-pin connector from control board and measure resistance across clutch coil. At 70° F, the resistance must be between 1.2 ±0.2Ω (LineLazer III 3900); 1.7 ±0.2Ω (Line-Lazer III 5900); if not, replace pinion housing.</p> <p>Have pressure control checked by authorized Graco dealer.</p>	

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
Engine operates, but displacement pump does not operate continued	Clutch is worn, damaged, or incorrectly positioned	Replace clutch. Manual 309890.
	Pinion assembly is worn or damaged	Repair or replace pinion assembly. Manual 309890.
Pump output is low	Strainer (31) is clogged	Strainer (31) is clogged
	Piston ball (206) is not seating	Service piston ball. Manual 309277.
	Piston packings are worn or damaged	Replace packings. Manual 309277.
	O-ring (227) in pump is worn or damaged	Replace o-ring. Manual 309277.
	Intake valve ball is not seating properly	Clean intake valve. Manual 309277.
	Intake valve ball is packed with material	Clean intake valve. Manual 309277. Do not leave 233716 sprayer under pressure for more than 5 minutes when spraying texture and not actively spraying.
	Engine speed is too low	Increase throttle setting. Manual 309413.
	Clutch is worn or damaged	Replace clutch. Manual 309890.
	Pressure setting is too low	Increase pressure. Manual 309413.
	Fluid filter (318), tip filter or tip is clogged or dirty	Clean filter. Manual 309413 or 309093.
	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 sprayer. Use 3/8 in. hose for optimum performance (50 ft minimum).
Excessive paint leakage into throat packing nut	Throat packing nut is loose	Remove throat packing nut spacer. Tighten throat packing nut just enough to stop leakage.
	Throat packings are worn or damaged	Replace packings. Manual 309277.
	Displacement rod is worn or damaged	Replace rod. Manual 309277.
Fluid is spitting from gun	Air in pump or hose	Check and tighten all fluid connections. Reprime pump. Manual 309413.
	Tip is partially clogged	Clear tip. Manual 309093.
	Fluid supply is low or empty	Refill fluid supply. Prime pump. Manual 309413. Check fluid supply often to prevent running pump dry.
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.
	Intake valve is leaking	Clean intake valve. Be sure ball seat is not nicked or worn and that ball seats well. Reassemble valve.
	Pump packings are worn	Replace pump packings. Manual 309277.

PROBLEM	CAUSE	SOLUTION
Pump is difficult to prime continued	Paint is too thick	Thin the paint according to the supplier's recommendations
	Engine speed is too high	Decrease throttle setting before priming pump. Manual 309413.
Clutch squeaks each time clutch engages	Clutch surfaces are not matched to each other when new and may cause noise	Clutch surfaces need to wear into each other. Noise will dissipate after a day of run time.
High engine speed at no load	Misadjusted throttle setting	Reset throttle to 3700 engine rpm at no load
	Worn engine governor	Replace or service engine governor
Gallon counter not working	Broken or disconnected wire	Check wires and connections. Replace broken wires.
	Bad sensor	Replace sensor
	Missing magnet	Replace magnet. Locate in correct spot.
Sprayer operates, but display does not	Bad connection between control board and display	Remove display and reconnect
	Display damaged	Replace display
Distance counter not operating properly	Trigger sensor not set correctly	See "Spray icon does not show on display when fluid is sprayed"
	Bad wiring connections	Check connector, and reconnect
	Distance sensor not spaced correctly from gear	Adjust space between sensor and gear to .050 /+ .020
	Distance and gear not aligned	Remove tire, and press in or pull out gear to align sensor and gear.
	Gear teeth missing or damaged.	Replace distance gear/wheel
	Wire cracked or broken	Replace sensor
Mils not calculating	Distance sensor	See "Distance counter not operating properly"
	Trigger sensor	See "Spray icon does not show on display when fluid is sprayed"
	Gallon counter	See "Gallon counter not working"
	Bad or damaged control board	Replace control board
Fluid spray starts after spray icon is shown on display	Interrupter (213) is improperly positioned	Turn screw (215) counterclockwise until spray icon synchronizes with fluid spray
Fluid spray starts before spray icon is shown on display	Interrupter (213) is improperly positioned	Turn screw (215) clockwise until spray icon is synchronized with fluid spray
Spray icon does not show on display when fluid is sprayed	Loose connector	Check that 5-pin connector and reed switch are properly connected
	Interrupter (213) is improperly positioned	Turn screw (215) counterclockwise until spray icon synchronizes with fluid spray
	Reed switch assembly (207) is damaged	Replace reed switch assembly (207)
	Magnet on assembly (207) is missing	Replace reed switch assembly (207)

PROBLEM	CAUSE	SOLUTION
Spray icon does not show on display when fluid is sprayed continued	A connector on wiring harness (58) or on reed switch (207) is damaged	Disconnect reed switch and 5-pin connector from back of control board. Check continuity between pin 1 on 2-pin connector and pin 1 on 5-pin connector. Check continuity between pin 2 on 2-pin connector and pin 4 on 5-pin connector. If there is no continuity in either case, replace wiring harness (58). If there is continuity in both cases replace reed switch assembly (207).
	Cut or sliced wire	Replace wiring harness (58)
	Control board is damaged	Replace control board
	Display is damaged	Replace display
Spray icon is always shown on display	Interrupter (213) is improperly positioned	Turn screw (215) clockwise until spray icon is synchronized with fluid spray
	Reed switch assembly (207) is damaged	Replace reed switch assembly (207)

# Bearing Housing and Connecting Rod

## Removal



1. Relieve pressure; page 7.
2. Fig. 2. Remove screws (27) and front cover (92).
3. Unscrew suction tube (12) from pump, hold wrench on pump intake valve (A) to keep pump from loosening.
4. Disconnect pump outlet hose (61) from displacement pump outlet nipple (6).
5. Fig. 1. Use screwdriver to push up retaining spring (95) at top of pump. Push out pin (96).

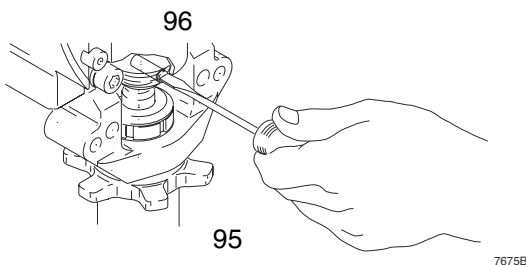


FIG. 1

6. Fig. 2. Loosen retaining nut (97). Unscrew and remove displacement pump (119).
7. Remove four screws (26) and lockwashers (25) from bearing housing (94).
8. Pull connecting rod (83) and lightly tap lower rear of bearing housing (94) with plastic mallet to loosen from drive housing (101). Pull bearing housing and connecting rod assembly (83) off drive housing.
9. Inspect crank (B) for excessive wear and replace parts as needed.

## Installation

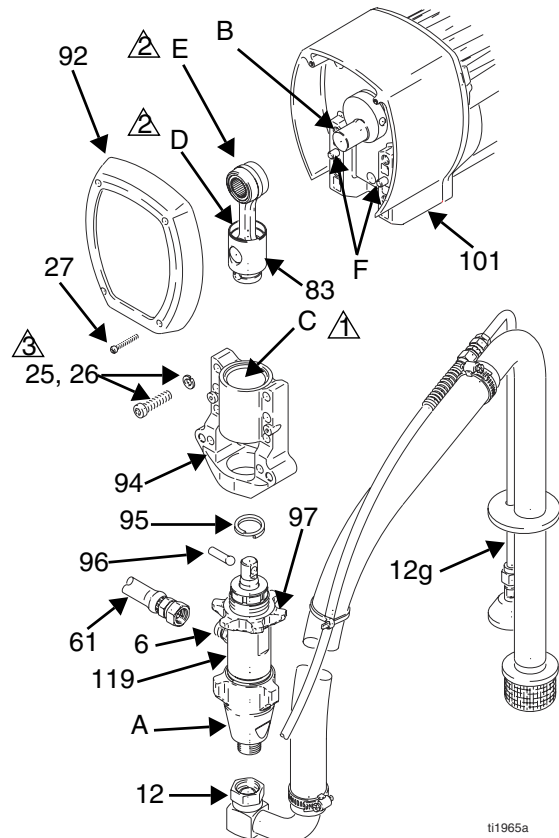
1. Evenly lubricate inside of bronze bearing (C) in bearing housing (94) with high-quality motor oil. Liberally pack top roller bearing (E), lower bearing (D) inside connecting rod assembly (83) with bearing grease.
2. Assemble connecting rod (83) and bearing housing (94).
3. Clean mating surfaces of bearing and drive housings.

4. Align connecting rod with crank (B) and carefully align locating pins (F) in drive housing (101) with holes in bearing housing (94). Push bearing housing onto drive housing or tap into place with plastic mallet.

### NOTICE

DO NOT use bearing housing screws (26) to align or seat bearing housing with drive housing. Align these parts with locating pins (F), to avoid premature bearing wear.

5. Install screws (26) and lockwashers (25) on bearing housing. Torque evenly to note 3 value in Fig. 2.
6. Refer to Displacement Pump, Installation, page 21.



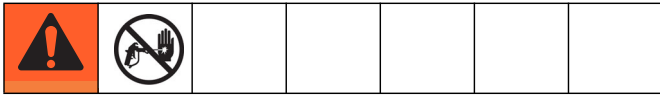
	Oil
	Pack with bearing grease 114819
	LineLazer III 3900: Torque to 200 in-lb (22.6 N⋅m) LineLazer III 5900: Torque to 25 ft-lb (34 N⋅m)

Model 233701 shown

FIG. 2

# Drive Housing

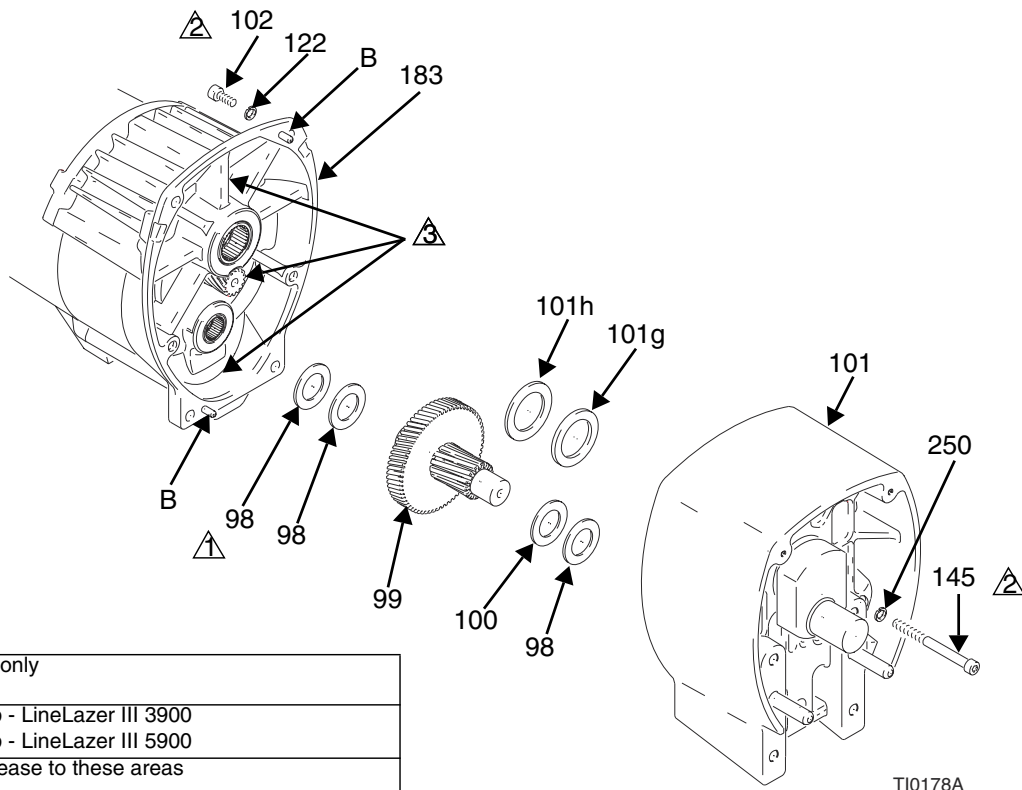
## Removal



1. Relieve pressure; page 7.
2. Fig. 3. Remove bearing housing. Do 1. through 8. of Bearing Housing and Connecting Rod procedure on page 13.
3. Fig. 3. Disconnect gallon counter sensor at (A). **Cut tie wrap holding gallon counting sensor wire to clutch wire.**
4. Fig. 3. Remove two screws (145) and lockwashers (122).
5. Remove four screws (102) and lockwashers (122) from pinion housing (183).
6. Lightly tap around drive housing (101) to loosen drive housing. Pull drive housing straight off pinion housing. Be prepared to support gear cluster (99), which may also come out.

## Installation

1. Liberally apply bearing grease (supplied with replacement gear cluster) to gear cluster (99) and to areas called out by note 3. Use full 0.62 pint (0.29 liter) of grease for LineLazer III 3900 and 0.68 pint (0.32 liter) of grease for LineLazer III 5900.
2. Place bronze colored washer (101g) on shaft protruding from large shaft of drive housing (101). Place silver colored washer (101h) on pinion housing. Align gears and push new drive housing straight onto pinion housing and locating pins (B).
3. Install four screws (102) and lockwashers from pinion housing (183).
4. Install two screws (145) and lockwashers (122).
5. Fig. 2. Connect gallon counter sensor at (A). **Secure gallon counting sensor wire to clutch wire with a tie wrap.**
6. Fig. 3. Install bearing housing. Do 1. through 6. of Bearing Housing and Connecting Rod procedure on page 13.



	LineLazer III 3900 only
	Torque to 125 in-lb - LineLazer III 3900 Torque to 200 in-lb - LineLazer III 5900
	Apply remaining grease to these areas

FIG. 3

# Engine

## Removal

1. Remove **Pinion Assembly/Rotor/Field/Pinion/Clutch, Clamp and Clutch Housing**, as instructed in Manual 309890.
2. Fig. 4. Disconnect all necessary wiring.
3. Fig. 5. Remove two locknuts (72) and screws (131) from base of engine.
4. Lift engine carefully and place on work bench.

**NOTE:** All service to the engine must be performed by an authorized HONDA dealer.

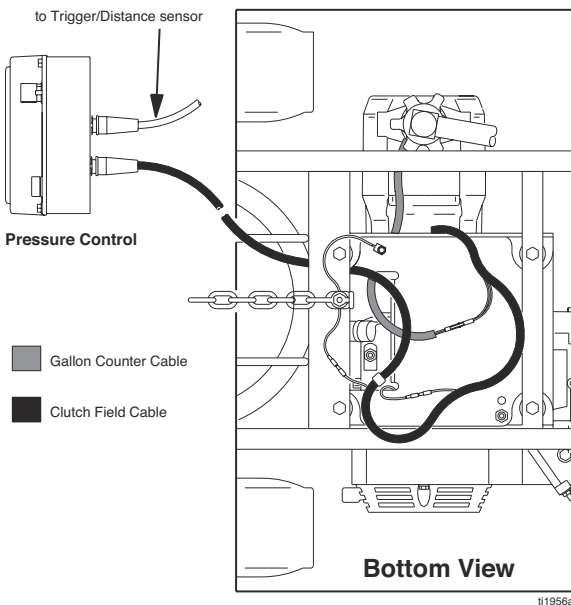


FIG. 4

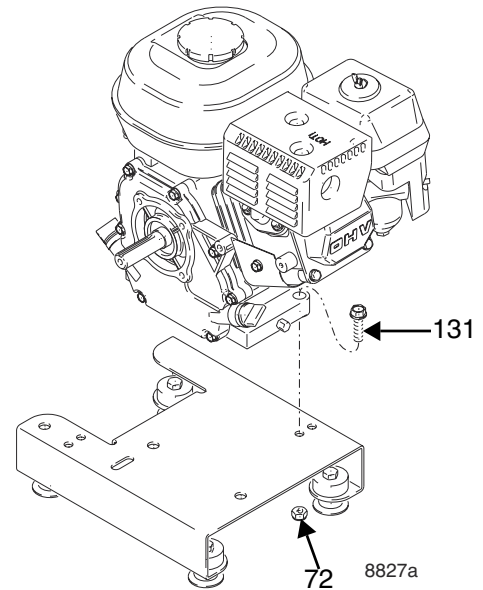


FIG. 5

## Installation

1. Lift engine carefully and place on cart.
2. Fig. 5. Install two screws (131) in base of engine and secure with locknuts (72). Torque to 200 in-lb (22.6 NSm).
3. Fig. 4. Connect all necessary wiring.
4. Install **Pinion Assembly/Rotor/Field/Pinion/Clutch, Clamp and Clutch Housing**, as instructed in Manual 309890.

# On/Off Switch



## Removal

1. Relieve pressure; page 7.
2. Fig. 6. Remove four screws (93) and display/cover (139).
3. Pull display connector wings (A) open on PC board and pull display connector out.
4. Disconnect ON/OFF switch connector (B) from PC board.
5. Press in on two retaining tabs on each side of ON/OFF switch (24) and remove switch.

## Installation

1. Install new ON/OFF switch (24) so tabs of switch snap into place on inside of pressure control housing.
2. Connect ON/OFF switch connector (B) to PC board.
3. Push display connector into PC board close display connector wings (A) on PC board.
4. Install display/cover (139) with four screws (93).

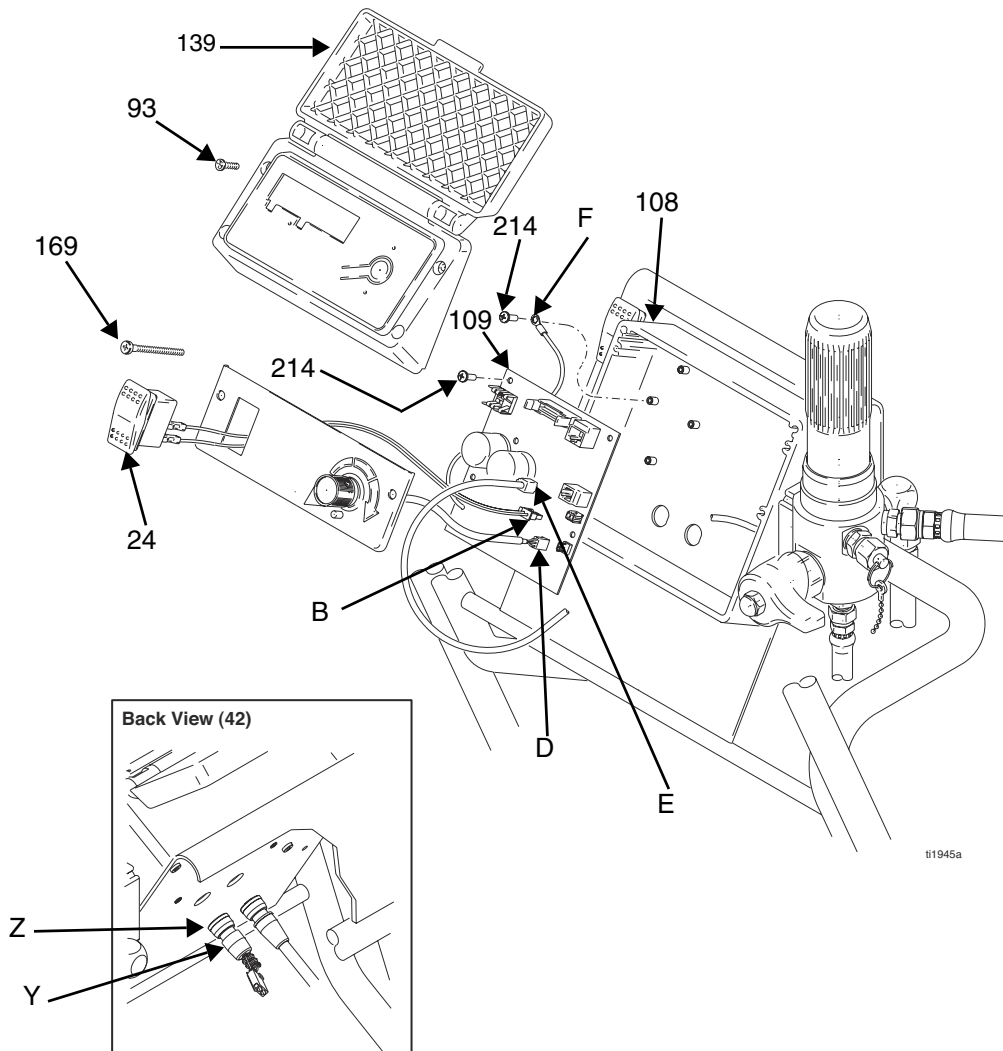


FIG. 6



## Trigger Sensor Adjustment

Refer to Troubleshooting for trigger sensor adjustment, and Manual 309413.

## Distance Sensor Adjustment



### Gear Alignment

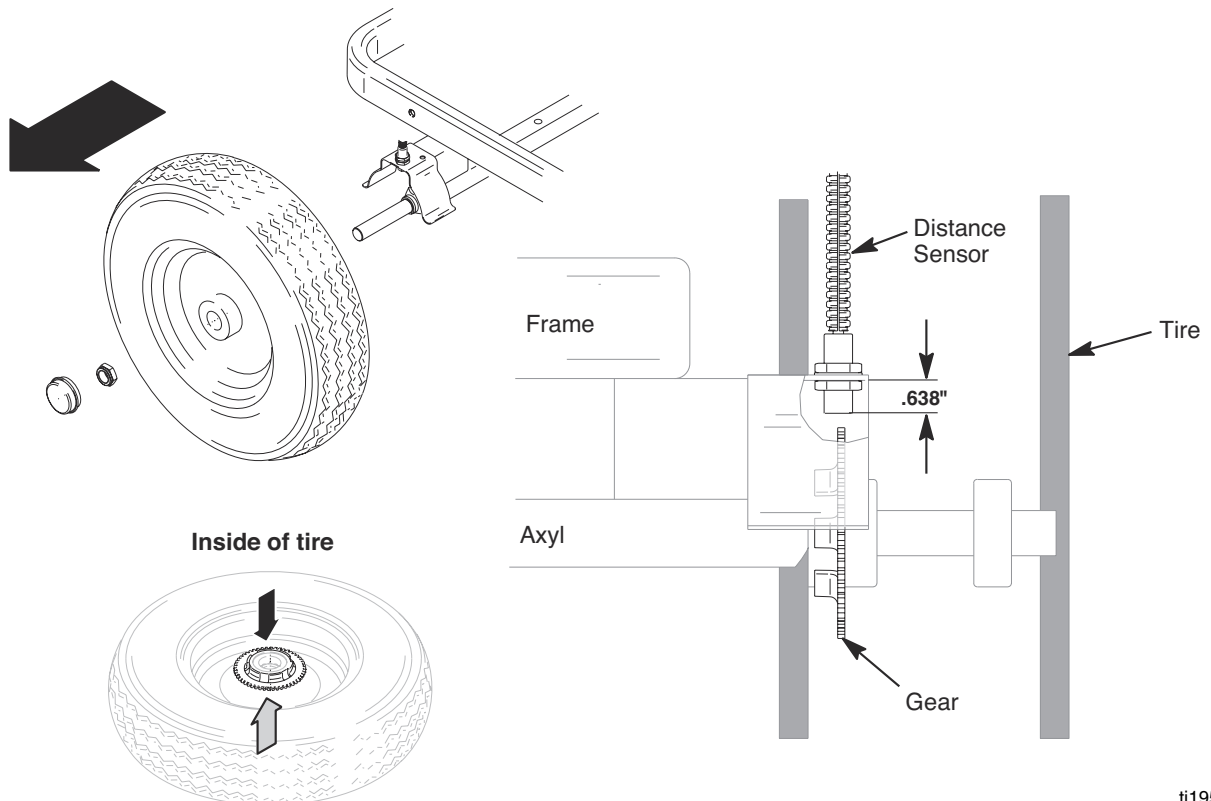
5. Install wheel (82) on LineLazer. 6. Install nut (62) until tight, then back off 1/4 turn.

1. Relieve pressure; page 7.
2. Fig. 7. Remove dust cap (74) from wheel. Remove nut (62).

3. Remove wheel (82) from LineLazer.
4. Align gear (57) with sensor.
  - a. Pull gear out from wheel with gear puller.
  - b. Push gear in toward wheel with mallet. Torque to 8 +/- 2 in-lb.
5. Install wheel (82) on LineLazer.
6. Install nut (62) until tight, then back off 1/4 turn. Install dust cap (74) on wheel.

### Sensor Height Adjustment

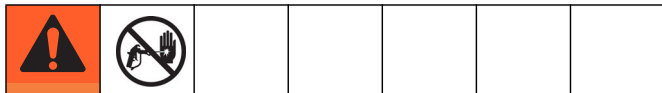
1. Remove wheel (82) from LineLazer.
2. Remove sensor assembly (58).
3. Adjust sensor assembly height with two 17 mm nuts of sensor so bottom surface of sensor is 0.638 +/- 0.020 from bottom surface of shield. Torque to 8 +/- 2 in-lb.



ti1955a

FIG. 7

# Pressure Control



## Control Board

### Removal

1. Relieve pressure; page 7.
2. Fig. 6. Remove four screws (93) and display/cover (139). Pull display connector wings open on PC board and pull display connector out.
3. Fig. 14. Disconnect at control board (109):
  - Lead (D) from potentiometer.
  - Lead (E) from transducer.
  - Remove ON/OFF switch (24) connector (A).
4. Fig. 6. Remove six screws (214) from control board (109) and green ground wire.
5. Remove two connectors (Y) at backside of pressure control. Remove jam nuts (Z) and control board (109).

### Installation

When installing replacement control board, follow instructions with control board to set model type.

1. Fig. 6. Install control board (109) and jam nuts (Z). Install two connectors (Y) at backside of pressure control.
2. Install green ground wire and control board (109) with six screws (214).
3. Fig. 14. Connect to control board (109):
  - Connect ON/OFF switch (24) connector (A).
  - Lead (E) to transducer.
  - Lead (D) to potentiometer.
4. Fig. 6. Push display connector into PC board close display connector wings on PC board. Install display/cover (139) with four screws (93).

## Pressure Control Transducer

### Removal

1. Relieve pressure; page 7.
2. Fig. 6. Remove four screws (93) and display/cover (139).
3. Disconnect lead (E) from control board (109).
4. Remove two screws (201) that connect control housing (108) to filter housing (200e). From inside of control box, pull transducer connector through control housing (108).
5. Remove pressure control transducer (200p) and o-ring (200r) from filter housing (200e).

### Installation

1. Fig. 6. Install o-ring (200r) and pressure control transducer (200p) in filter housing (200e). Torque to 30 36 ft-lb.
2. Install transducer cable through control box. Install filter housing and spacer to control box with two screws (201).
3. Connect lead (E) to motor control board (109).
4. Install display/cover (139) with four screws (93).

# Pressure Adjust Potentiometer



## Removal



1. Relieve pressure; page 7.
2. Fig. 6. Remove four screws (93) and display/cover (139).
3. Disconnect lead (D) from control board (109).
4. Loosen set screws on potentiometer knob (19) and remove knob, shaft nut, lockwasher and pressure adjust potentiometer (81).
5. Remove seal (148) from potentiometer (81).

## Installation

1. Install seal (148) on potentiometer (81).
2. Fig. 6. Install pressure adjust potentiometer (81), shaft nut, lockwasher and potentiometer knob (19).
  - a. Turn potentiometer shaft (81) clockwise to internal stop. Assemble potentiometer knob (19) to strike pin on plate (23).
  - b. After adjustment of step a., tighten both set screws in knob 1/4 to 3/8 turn after contact with shaft.
3. Connect lead (D) to control board (109).
4. Install display/cover (139) with four screws (93).

# Control Board Diagnostics

## Digital Display Messages

						
No display does not mean that sprayer is not pressurized. Relieve pressure before repair. See <b>Pressure Relief Procedure</b> , page 7						

DISPLAY	SPRAYER OPERATION	INDICATION	ACTION
<b>No Display</b>	Sprayer may be pressurized.	Loss of power or display not connected	Check power source. Relieve pressure before repair or disassembly. Verify display is connected.
-----	Sprayer may be pressurized.	Pressure less than 200 psi *14 bar, 1.4 MPa)	Increase pressure as needed
3000 psi 210 bar 21 Mpa	Sprayer is pressurized. Power is applied. (Pressure varies with tip size and pressure control setting.)	Normal operation	Spray
E=02	Sprayer stops. Engine is running.	Exceeded pressure limit	Remove any filter clogs or flow obstructions. Make sure gun trigger is locked open if using AutoClean valve.
E=03	Sprayer stops. Engine is running.	Pressure transducer faulty, bad connection or broken wire.	Check transducer connections and wire. Replace transducer or control board, if necessary.
E=05	Sprayer stops. Engine is running.	High clutch current	<ol style="list-style-type: none"> <li>1. Check clutch 7-pin bulk-head connector. Clean contacts.</li> <li>2. Measure 1.2±0.2Ω (LineLazer III 3900); 1.7±0.2Ω (LineLazer III 5900) across clutch field at 70°F.</li> <li>3. Replace clutch field assembly.</li> </ol>
E=06	Sprayer stops. Engine is running. Display alternates E=06.	High clutch temperature.	<ol style="list-style-type: none"> <li>1. If clutch is new, let sprayer cool down and the restart.</li> <li>2. inspect clutch. Replace clutch if there is excessive wear.</li> <li>3. Remove pump pin, separate pinion housing from clutch housing. Rotate rotor clockwise to check for excessive drag.</li> </ol>

**After a fault, follow these steps to restart sprayer:**

1. Correct fault condition
2. Turn sprayer OFF
3. Turn sprayer ON

# Displacement Pump

## Removal

1. Flush pump.



2. Relieve pressure; page 7.
3. Fig. 8. Cycle pump with piston rod (222) in its lowest position.
4. Fig. 8. Remove suction tube (12) and hose (61).

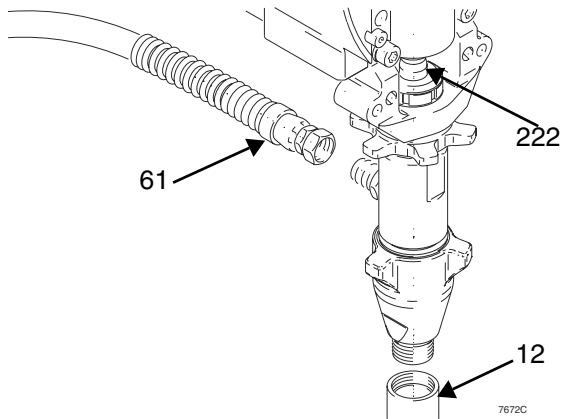


FIG. 8

5. Fig. 9. Use screwdriver: push retaining spring up and push out pin (96)

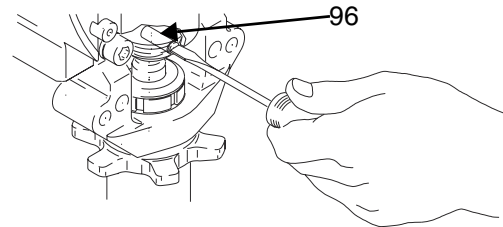


FIG. 9

6. Fig. 10. Loosen locknut by hitting firmly with a 20 oz (maximum) hammer. Unscrew pump.

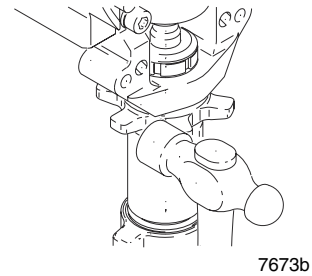


FIG. 10

## Repair

See manual 309277 for pump repair instructions.

## Installation

--	--	--	--	--	--	--

If pin works loose, parts could break off due to force of pumping action. Parts could project through the air and result in serious injury or property damage. Make sure pin and retaining spring are properly installed.

### NOTICE

If the pump locknut loosens during operation, the threads of the bearing housing will be damaged. Make sure locknut is properly tightened.

1. Fig. 11. Pull piston rod out 1.5 in. Screw in pump until holes in bearing cross link and piston rod align.

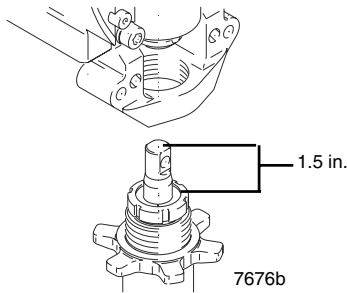
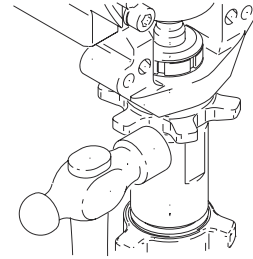


FIG. 11

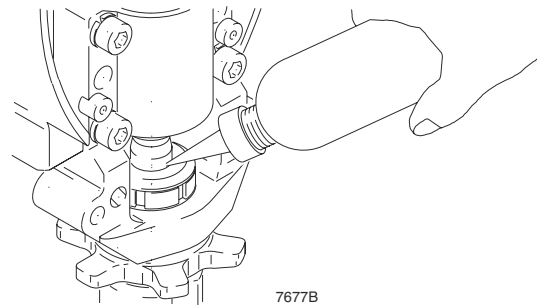
2. Fig. 9. Push pin (96) into hole. And push retaining spring into groove all the way around connecting rod.
3. Fig. 12. Screw jam nut down onto pump until nut stops. Screw pump up into bearing housing until it is stopped by jam nut. Back off pump and jam nut to align pump outlet to back. Tighten jam nut by hand, then tap 1/8 to 1/4 turn with a 20oz (maximum) hammer to approximately 75±5ft-lb (102 N·m).



7673b

### FIG. 12

4. Fig. 13. Fill packing nut with Graco TSL until fluid flows onto the top of seal.



7677B

### FIG. 13

## Parts Pinion and Drive Housing Assemblies

Ref No. 183 and 101

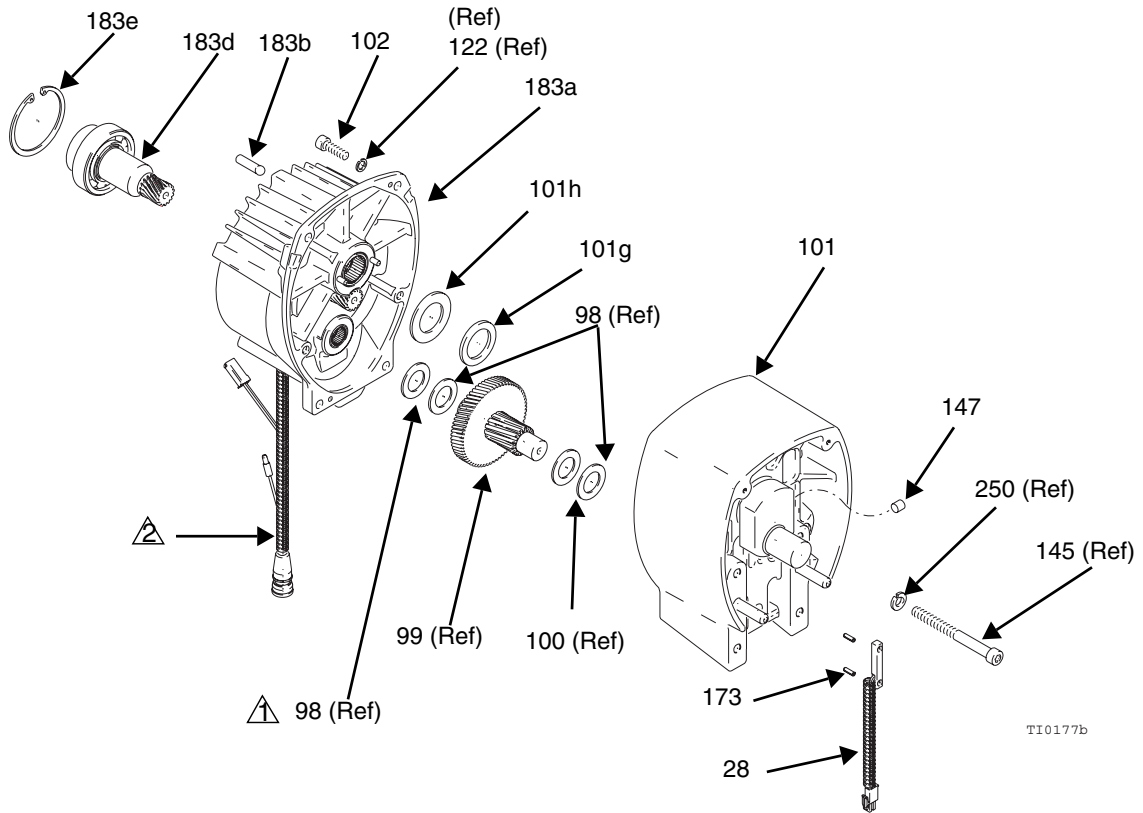
Ref No. 183: Pinion Housing Assembly 245715 for LineLazer III 3900; Pinion Housing Assembly 245834 for LineLazer 5900

Ref No. 101: Drive Housing Assembly 245442 for LineLazer III 3900; Drive Housing Assembly 245443 for LineLazer III 5900

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
183		PINON HOUSING	1	101		DRIVE HOUSING	1
183a		KIT, repair coil		101g		WASHER	
	245419	LineLazer III 3900	1	107089		LineLazer III 3900	1
	245420	LineLazer III 5900	1	194173		LineLazer III 5900	1
183b	105489	PIN	2	101h		WASHER	
183d*		PINION SHAFT			116191	LineLazer III 3900	1
	241110	LineLazer III 3900	1		116192	LineLazer III 5900	1
	241114	LineLazer III 5900	1	28	116806	SWITCH, reed	1
183e*		RETAINING RING, large		173	116838	PIN, spring	2
	113094	LineLazer III 3900	1	147	116618	MAGNET	1
	112770	LineLazer III 5900	1				

*\*Must be ordered separately*

Parts Pinion and Drive Housing Assemblies



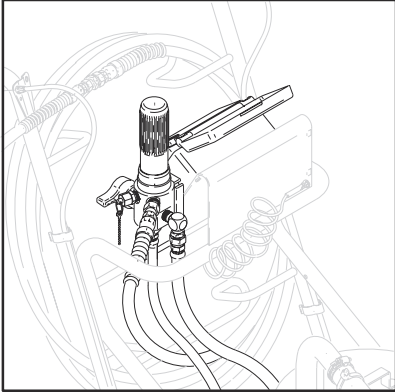
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⚠	Only used on LineLazer III 3900, Models 233688 and 233664
⚠	Pinion housing assembly (183) includes clutch field and connector

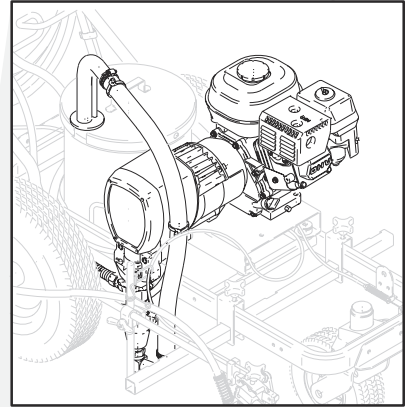


# Parts LineLazer III

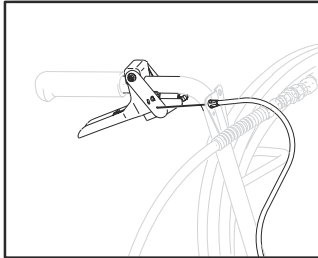
Parts Page 33



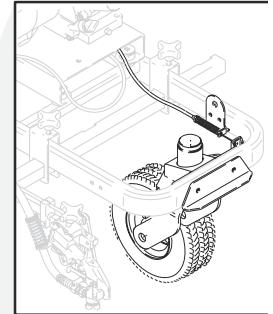
Parts Page 27



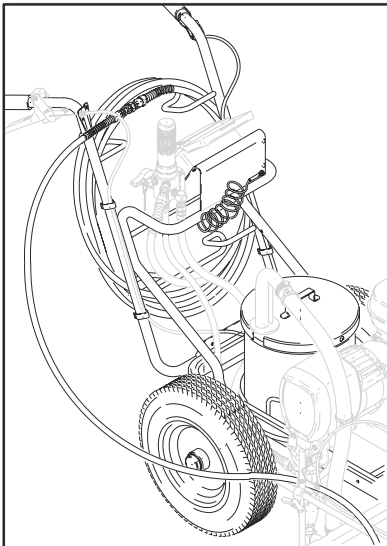
Parts Page 31



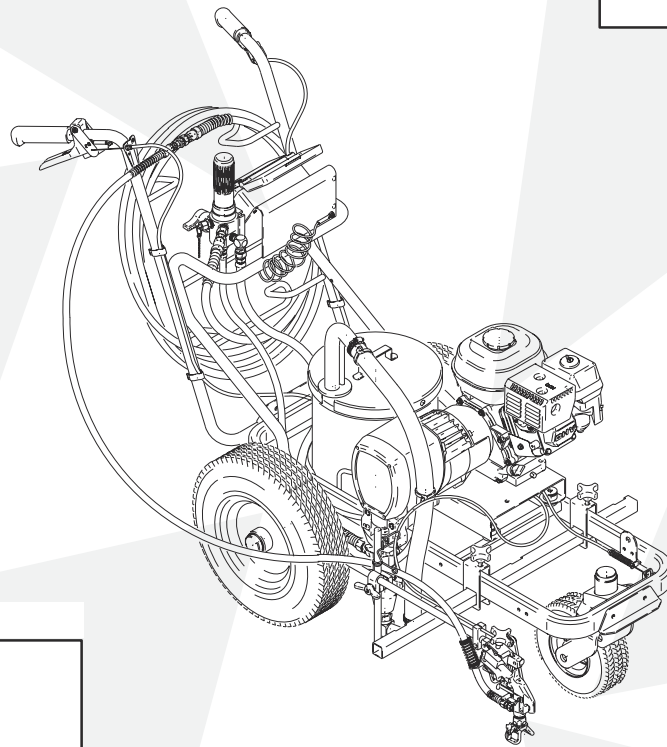
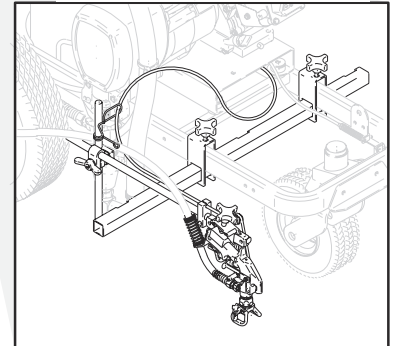
Parts Page 29



Parts Page 25

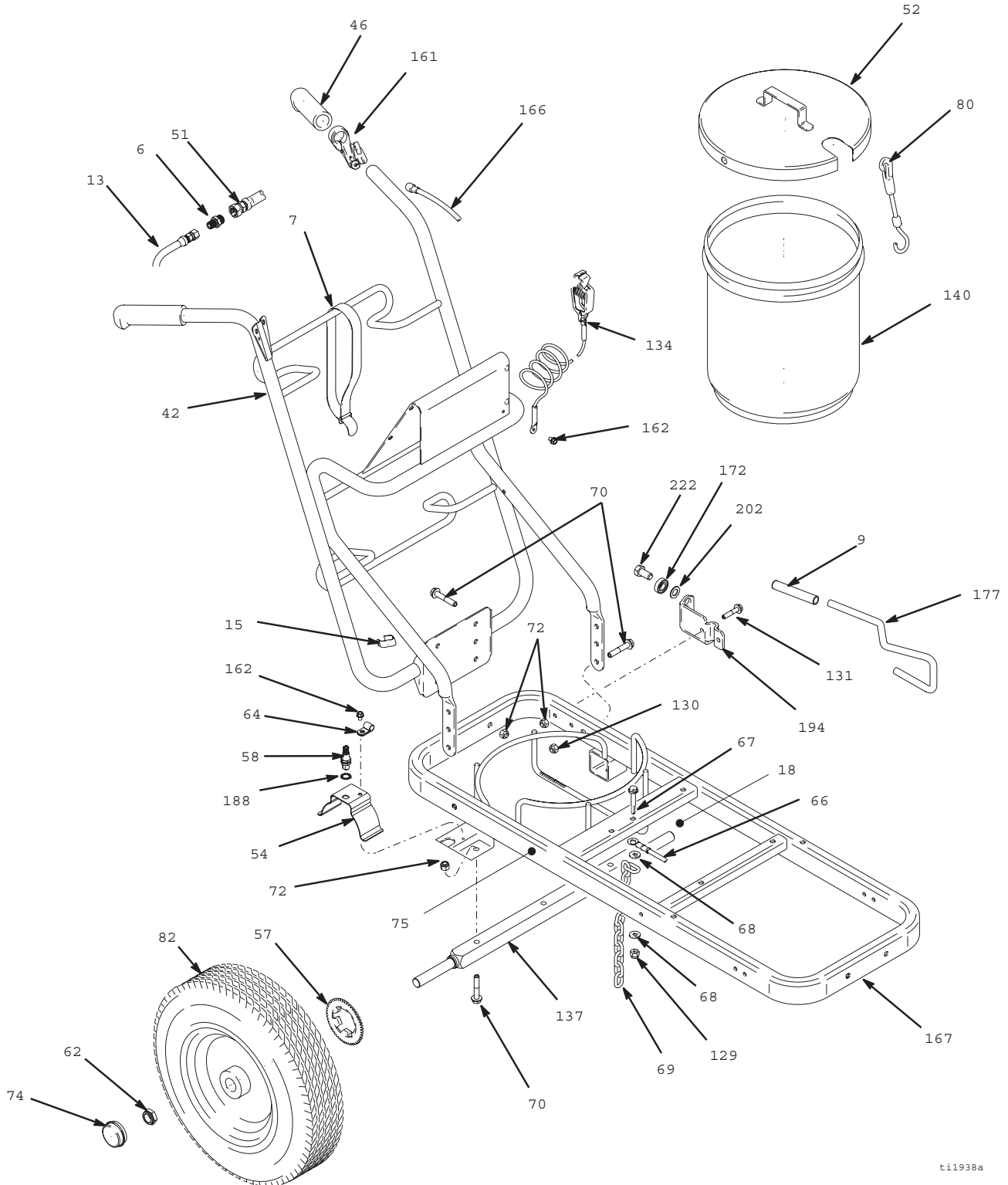


Parts Page 31



# Parts - LineLazer III

Models 233688 and 233690



ti1938a

## Parts - LineLazer III

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
6	196176	ADAPTER, nipple	2	72	101566	NUT, lock	12
7	114271	STRAP, retaining	1	74	114648	CAP, dust	2
9	114808	CAP, vinyl	1	75	186821	LABEL, warning	2
13	245798	HOSE, 1/4 in. x 7 ft	2	80	114690	STRAP	2
15	178342	CLIP, spring	6	82	111020	WHEEL, pneumatic	1
18	186620	LABEL, symbol, ground	1	129	110838	NUT, lock	5
42	245224	HANDLE, linelazer	1	130	111040	NUT, lock, insert, nylock, 5/16	5
46	114659	GRIP, handle	2	131	110837	SCREW, flange, hex	7
51	245225	HOSE, 3/8 in, x 50 ft	1	134	237686	CLAMP, grounding assy	1
52	241005	COVER, pail	1	137	193405	AXLE	1
54	198612	BRACKET, sensor, distance	1	140	115077	PAIL, plastic	1
57	245734	KIT, repair, wheel, LineLazer includes 82	1	161	194310	LEVER, actuator	1
58	245597	SENSOR, distance, includes 54, 64, 162, 188	1	162	112798	SCREW, thread forming, hex hd	2
62	112405	NUT, lock	3	166	241445	CABLE	1
64	108868	CLAMP, wire	3	167	245246	FRAME, linestriper	1
66	240999	CONDUCTOR, ground	1	172	198931	BEARING	1
67	114653	SCREW, cap, flange hd	1	177	198930	ROD, brake	1
68	100731	WASHER	4	188	116287	WASHER, sst, external, starwasher	1
69	186812	CHAIN, ground 3.5 hp	1	194	198891	BRACKET, mounting	1
70	111194	SCREW, cap flang hd	6	202	195134	SPACER, ball, guide	1
				222	113961	SCREW, cap, hex hd	1

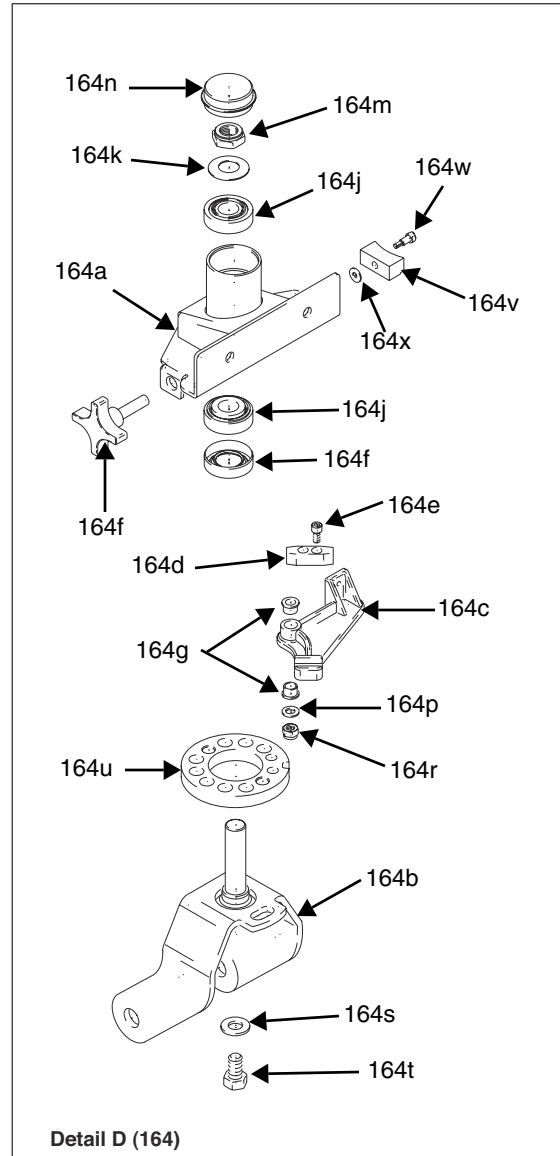
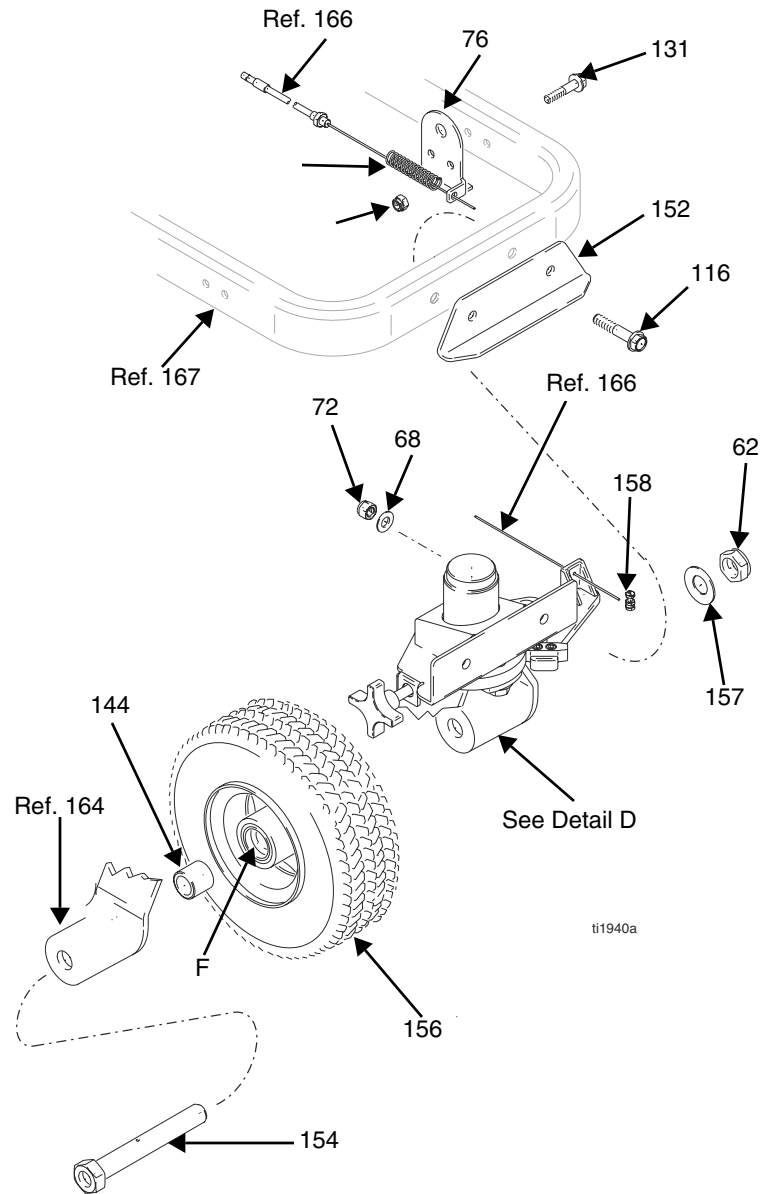


## Parts - LineLazer III

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
6	196176	ADAPTER, nipple	2		183169	(5900)	1
12	245730	HOSE, suction and drain (includes 12a-12n)	1	96		PIN, str, hdl	
12a	170957	TUBE, suction	1		176818	(3900)	1
12b	185381	HOSE	1		183210	(5900)	1
12c	110194	SWIVEL, 180°	1	97	192723	NUT, retaining (3900)	1
12d	101818	CLAMP, hose	1		193031	NUT, retaining (5900)	1
12e	193711	GASKET, pail	1	98		WASHER, thrust	
12f	181072	STRAINER	1		114672	WASHER, thrust (3900)	3
12g	245731	TUBE, drain (includes diffuser)	1		114672	WASHER, thrust (5900)	2
12h		DIFFUSER	1	99	241439	GEAR, combination (3900)	1
12j	245798	HOSE, coupled, 1/4 in. x 7 ft	1		241440	GEAR, combination (5900)	1
12k	114958	STRAP, tie	2	100	114699	WASHER, thrust	1
12m	196180	BUSHING	1	101		HOUSING, drive, includes 28, 147, 173	
12n▲	195119	LABEL, warning	1		245442	(3900)	1
25	106115	WASHER, lock spring (hi-collar)	4		245443	(5900)	1
26		SCREW, cap, socket hd				(includes 28, 117, 143, 147, 173)	
	107210	(3900)	4	102	100644	SCREW, cap, sch	9
	114666	(5900)	4	112▲	194126	LABEL, warning	1
27		SCREW, self tap, fil hd		117▲	290228	LABEL, caution	1
	114418	(3900)	4	119		PUMP, displacement	
	114818	(5900)	4		244197	(3900)	1
28	116806	SWITCH, reed	1		244224	(5900)	1
37	106212	SCREW, cap, hex hd	4			Manual 309277	
38	193677	PLATE, mounting	1	120	195516	SPACER	4
40	113802	SCREW, hex hd, flanged	1	122	105510	WASHER, lock, spring (hi-collar)	19
61	245797	HOSE, 3/8 in, x 3 ft	1	127	108851	WASHER, plain	4
63	195515	DAMPENER, motor mount	4	129	110838	NUT, lock	5
64	108868	CLAMP, wire	3	130	111040	NUT, lock, insert, nylock, 5/16	5
65	110963	SCREW, cap, flng hd	2	131	110837	SCREW, Flange, Hex	2
66	240999	CONDUCTOR, ground	1	132	108803	SCREW, hex, socket head	6
72	101566	NUT, lock	12	141		LABEL, front	
83		ROD, connecting			198605	(3900)	1
	241008	(3900)	1		198883	(5900)	1
	241012	(5900)	1	143▲	194125	LABEL, danger, English	1
84		WASHER, lock, spring		145		SCREW, cap, soc. hd	
	104008	(3900)	4		107218	(3900)	2
	100214	(5900)	4		114686	(5900)	2
85		SCREW, cap sch		250		WASHER	
	109031	(3900)	4		105510	(3900)	2
	108842	(5900)	4		104008	(5900)	2
86	183401	KEY, parallel	1	146		ENGINE, gasoline	
87	193680	COLLAR, shaft	1		108879	(3900)	1
88		HUB, armature (see 229)	1		114530	(5900)	1
89		HOUSING, clutch	1	147	116618	MAGNET	1
	193540	(3900)	1	150		ARMATURE, clutch, 4 in, (see 229)	1
	193531	(5900)	1	173	116838	PIN, spring	2
90		ROTOR, clutch (see 229)	1	183		HOUSING, pinon	
91	101682	SCREW, cap, sch	4		245715	(3900)	1
92		COVER, housing			245834	(5900)	1
	179899	(3900)	1	229		KIT, clutch	
	241308	(5900)	1		241109	(3900)	1
94	240523	HOUSING, bearing (3900)	1		241113	(5900)	1
	241015	HOUSING, bearing (5900)	1			includes 88, 90, 91, 122, 132, 150	
95		SPRING, retaining				▲ Replacement Danger and Warning labels, tags, and cards are available at no cost.	
	176817	(3900)	1				

# Parts - LineLazer III

## Models 233688 and 233690

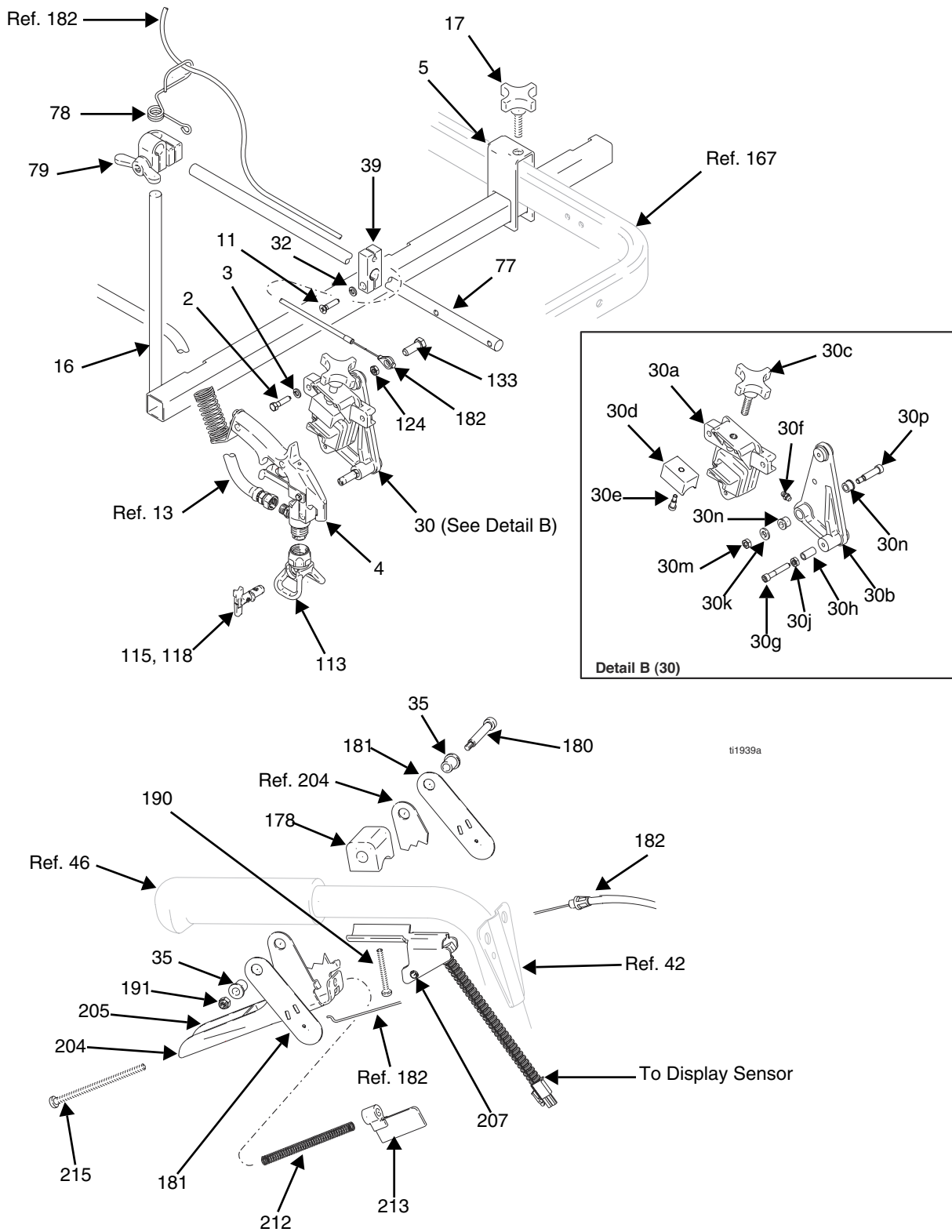


## Parts - LineLazer III

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
41	114682	SPRING, compression	1	164d	193662	PIN, locking, tapered	1
62	112405	NUT, lock	3	164e	110754	SCREW, cap, soc hd	1
68	100731	WASHER	4	164f	181818	KNOB, pronged	1
72	101566	NUT, lock	12	164g	114548	BEARING, bronze	1
76	193665	BRACKET, cable	1	167h	113484	SEAL, grease	1
116	114982	SCREW, cap, flng hd	2	164j	113485	BEARING, cup/cone	2
131	110837	SCREW, flange, hex	7	164k	112825	SPRING, Belleville	1
144	193658	SPACER, seal	2	164m	112405	NUT, lock	1
152	240991	BRACKET, center, front	1	164n	114648	CAP, dust	1
154	113471	SCREW, cap, hex hd	1	164p	107194	WASHER, plain	1
156	114549	WHEEL, pneumatic	1	164r	108000	NUT, lock	1
157	112825	SPRING, belleville	1	164s	113962	WASHER, hardened	1
158	114802	STOP, wire	1	164t	114681	SCREW, cap, hex hd	1
164	241105	CASTER, swivel	1	164u	198606	DISK, adjuster	1
164a	240940	KIT, repair, bracket, hub includes 164j *2(, 164h		164v	193661	JAW	1
164b	240942	SHAFT, fork	1	164w	108483	SCREW. shoulder, soc hd	1
164c	193528	ARM, detent	1	164x	112776	WASHER, plain	1

# Parts - LineLazer III

## Models 233688 and 233690



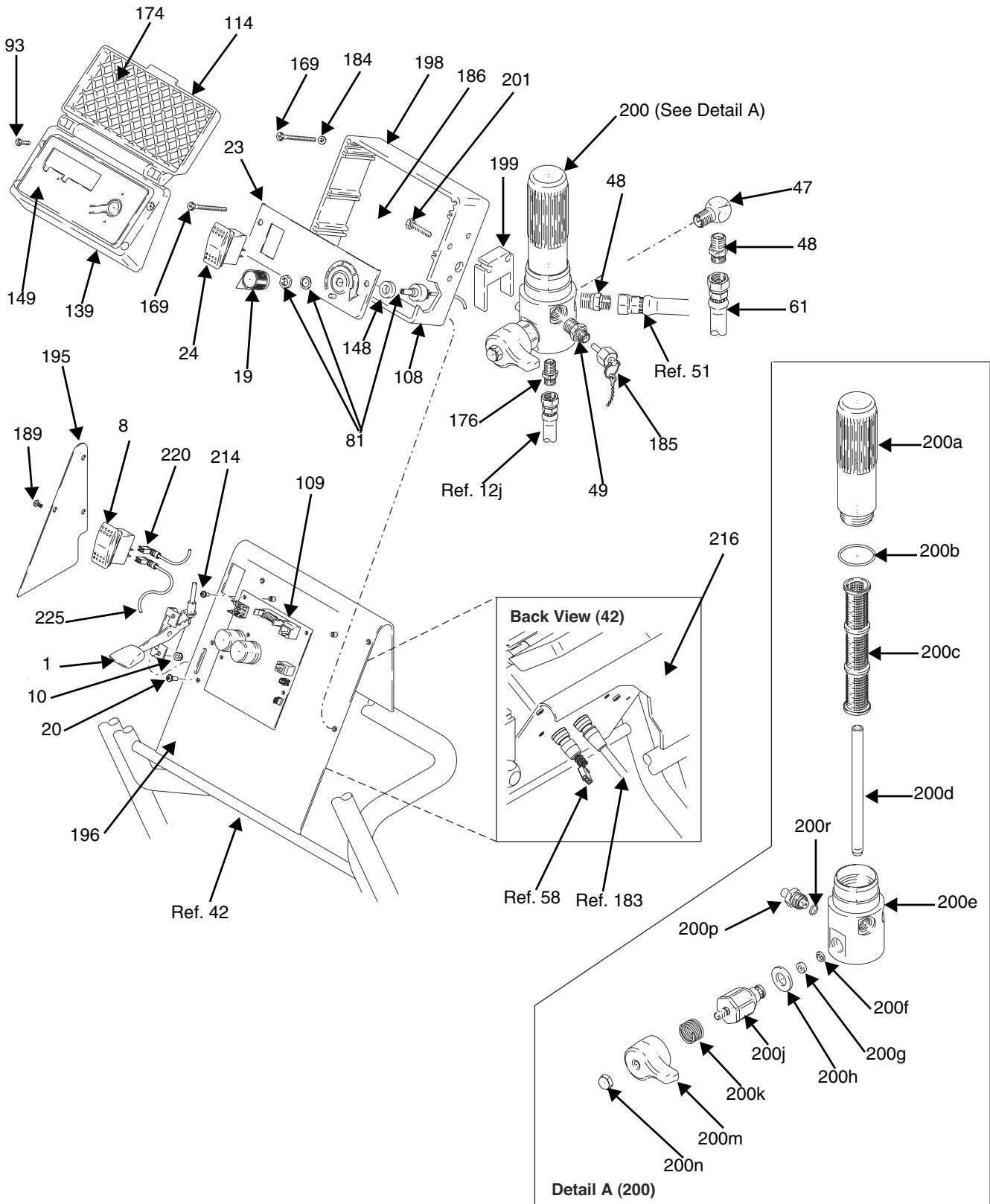


## Parts - LineLazer III

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
2	100021	SCREW, cap, hex hd	2	35	111017	BEARING, flange	2
3	100016	WASHER, lock	2	39	186699	BLOCK, mounting, cable	1
4	243284	GUN, flex, basic Manual 303093	4	77	181734	ARM, support	1
5	240780	BRACKET, arm, gun	2	78	114029	CLAMP, swivel, adjustable	1
11	100101	SCREW, cap, hex, hd	1	79	188135	GUIDE, cable	1
16	224052	BRACKET, support gun	1	113	243161	GUARD, RAC 5	1
17	108471	KNOB, pronged	2	115	286517	TIP, spray, RAC-5	1
30	241001	HOLDER, gun	1	118	LL5319	TIP, spray, RAC 5, striping	1
30a	188452	HOLDER, gun	1	124	101345	NUT, hex, jam	1
30b	188452	LEVER, actuator	1	133	111230	SCREW, mach, flhd	1
30c	181818	KNOB, pronged	1	178	198896	BLOCK, mounting (mach)	1
30d	181795	JAW, clamped	1	180	116941	SCREW, shoulder, socket head	1
30e	108483	SCREW, shoulder sch	1	181	198895	PLATE, lever, pivot	2
30f	100846	FITTING, lubrication	1	182	245732	KIT, cable	1
30g	107445	SCREW, cap	1	190	116973	SCREW, #10 taptite phil	1
30h	108535	BEARING, sleeve	1	191	116969	NUT, lock	1
30j	101345	NUT, hex, jam	1	204	245733	TRIGGER, includes 205, 212, 213, 215	1
30k	110755	WASHER, plain	1	205	15A644	LABEL, trigger	1
30m	100015	NUT, hex MSCR	1	207	245713	BRACKET, sensor and magnet	1
30n	111016	BEARING, flange	2	212	117269	SPRING	1
30p	111045	SCREW, shoulder	1	213	117268	BRACKET, interrupter	1
32	100133	WASHER, lock	1	215	112381	SCREW, mach, pan hd	1

# Parts - LineLazer III

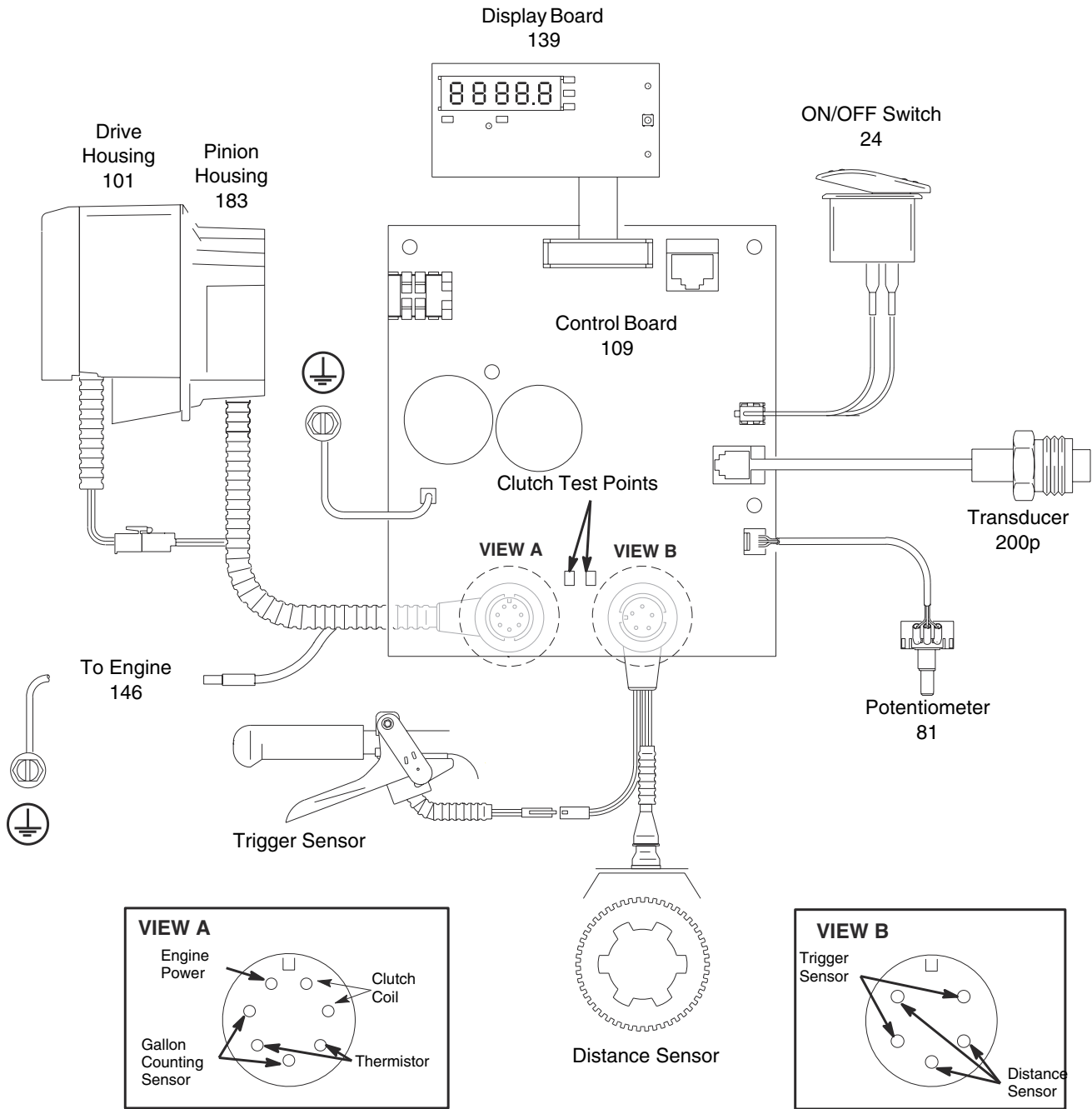
## Models 233688 and 233690



# Parts - LineLazer III

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
1	114955	CONTROL, throttle	1	196▲	15A245	LABEL, warning	1
8	114954	SWITCH, rocker	1	198▲	189246	LABEL, warning	1
10	109466	NUT, lock, hex	2	199	198684	SPACER, base	1
19	116167	KNOB, potentiometer	1	200	245515	FILTER, assembly	1
20	112380	SCREW, mach, pan hd	2	200a	196675	BOWL, filter	1
23	198553	PANEL, control	1	200b	104361	O-RING	1
24	116752	SWITCH, rocker	1	200c	244067	FILTER, fluid	1
47	196179	FITTING, elbow, street	1	200d	196786	TUBE, diffuser	1
48	196178	ADAPTER, nipple	2	200e	245796	HOUSING, filter, 3/8 npt	1
49	196177	ADAPTE, nipple	1	200f	193710	SEAL, valve	1
61	245797	HODE, 3/8 in. X 3 ft.	1	200g	193709	SEAT, valve	1
81	241443	POTENTIOMETER	1	200h	114797	GASKET	1
93	116252	SCREW, #8 taptite phil	4	200j	245103*	VALVE	1
108	198602	BOX, control	1	200k	114708	SPRING, compression	1
109	245512	BOARD, control, linelazer	1	200m	194102	HANDLE, valve	1
114	196670	LABEL, ctrl box cover	1	200n	114688	NUT, cap, hex, hd	1
139	245791	KIT, display, includes 93, 114, 149, 174	1	200p	243222	TRANSDUCER, includes 200p	1
148	198650	SPACER, shaft	1	200r	111457	SEAL	1
149	198648	LABEL, LCD	1	201	117232	SCREW, cap, hex hd	3
169	114393	SCREW, mach, pan hd	4	214	114331	SCREW, mach, pnh, sems	6
174	198649	LABEL, LCD instructional	1	216	15A621	LABEL, identification	1
176	196181	FITTING, nipple	1	220	198975	WIRE, ground	1
184	116876	WASHER, flat	2	225	15A670	CONDUCTOR, electrical	1
185	245441	PLUG, packless	1	* Drain valve replacement kit 245103 includes 200f, g, h, k, m, n			
186	198999	LABEL, instruction	1	▲ Replacement Danger and Warning labels, tags, and cards are available at no cost.			
189	100035	SCREW, mach, pnh	3				
195	198942	PLATE, side	1				

# Pressure Control Wiring Diagram



ti1943a

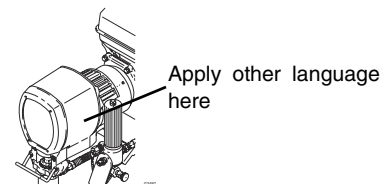
# Accessories

## Danger Labels

An English language DANGER label is on your sprayer. If you have painters who do not read English, order one of the following labels to apply to your sprayer. The drawing shows the best placement of these labels for good visibility.

Order the labels from your Graco distributor.

French	194931
Spanish	194932
German	194933
Greek	194934
Korean	194935
English	194125



## Dimensions

### LineLazer III 3900

**Model 233688, 233664 Striper**

Weight (dry, without packaging)	212 lb (96 kg)
Height	40 in. (101.6 cm)
Length	65 in. (165.1 cm)
Width	32 in. (81.3 cm)

**Model 233689, 233694 Striper with 2nd Gun Kit**

Weight (dry, without packaging)	222 lb (101 kg)
Height	40 in. (101.6 cm)
Length	65 in. (165.1 cm)
Width	32 in. (81.3 cm)

### LineLazer III 5900

**Model 233690, 233627 Striper**

Weight (dry, without packaging)	232 lb (105 kg)
Height	40 in. (101.6 cm)
Length	65 in. (165.1 cm)
Width	32 in. (81.3 cm)

**Model 233691, 233695 Striper with 2nd Gun Kit**

Weight (dry, without packaging)	242 lb (101 kg)
Height	40 in. (101.6 cm)
Length	65 in. (165.1 cm)
Width	32 in. (81.3 cm)

## Technical Data

### Honda GX120 Engine

#### Power Rating @ 3600 rpm

ANSI .....	4.0 Horsepower
DIN 6270B/DIN 6271	
NA .....	2.1 Kw - 2.8 Ps
NB .....	2.6 Kw - 3.6 Ps

### Honda GX160 Engine

#### Power Rating @ 3600 rpm

ANSI .....	5.5 Horsepower
DIN 6270B/DIN 6271	
NA .....	2.9 Kw - 4.0 Ps
NB .....	3.6 Kw - 4.9 Ps

Maximum working pressure ..... 3300 psi (228 bar, 22.8 MPa)

#### Noise Level

Sound power .....	105 dBa per ISO 3744
Sound pressure .....	96 dBa measured at 3.1 feet (1m)

#### Maximum delivery

LineLazer III 3900 .....	1.15 gpm (4.4 liter/min)
LineLazer III 5900 .....	1.5 gallons (5.7 liter/min)

#### Maximum tip size

LineLazer III 3900 .....	1 gun with 0.034 in. tip 2 guns with 0.024 in. tip
LineLazer III 5900 .....	1 gun with 0.041 in. tip 2 guns with 0.028 in. tip

Inlet paint strainer ..... 16 mesh (1190 micron)  
stainless steel screen, reusable

Outlet paint filter ..... 60 mesh (250 micron)  
stainless steel screen, reusable

Pump inlet size ..... 3/4 in. npt (m)

Fluid outlet size ..... 1/4 npsm from fluid filter

Wetted parts ..... nickel-plated carbon steel, PTFE, Nylon, polyurethane, UHMW polyethylene, fluoroelastomer, acetal, leather, tungsten carbide, stainless steel, chrome plating.

# Notes

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# Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

**THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

**GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO.** These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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# Graco Information

For the latest information about Graco products, visit [www.graco.com](http://www.graco.com).

**TO PLACE AN ORDER**, contact your Graco distributor or call 1-800-690-2894 to identify the nearest distributor.

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

Original instructions. This manual contains English. MM 309414

**Graco Headquarters:** Minneapolis  
**International Offices:** Belgium, China, Japan, Korea

**GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA**

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