

LineLazer[™] IV 3900, 5900 Auto-Layout[™] System Airless Line Stripers

312195C

For application of line striping materials.

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



Important Safety Instructions

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

See page 2 for model information.

Chinese Patent ZL03802251.6 Chinese Patent ZL03801904.3 U.S. Patent 6,913,417 U.S. Patent 7,303,155



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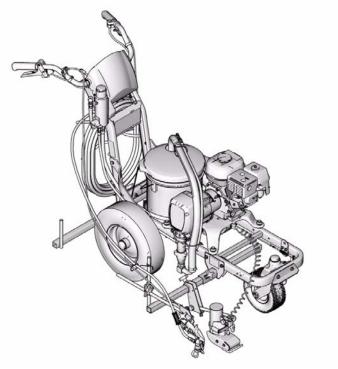
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PROVEN QUALITY. LEADING TECHNOLOGY.



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Models

3900 Line Stripers

253920	~		✓	
253953		~	✓	
255151	~			~
255152		V		~

5900 Line Stripers

253921	~		~	
253954		~	✓	
255153	~			~
255154		V		~

Manual	Language
312195	English
312196	French
312197	Spanish
312198	Dutch
312199	German
312200	Italian
312201	Turkish
312202	Greek
312203	Croatian
312204	Portuguese
312205	Danish
312206	Finnish
312207	Swedish
312208	Norwegian
312209	Russian
312210	Estonian
312211	Latvian
312212	Lithuanian
312213	Polish
312214	Hungarian
312215	Czech
312216	Slovakian
312217	Slovenian
312218	Romanian
312219	Bulgarian

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 symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

MARNING



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.



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.



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 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.
- Do not spray without tip guard and trigger guard installed.
- Engage trigger lock when not spraying.
- Follow Pressure Relief Procedure in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.



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 **Pressure Relief Procedure** in this manual, 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.



PRESSURIZED ALUMINUM PARTS HAZARD

Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage.

MARNING



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 forms from distributor or retailer.
- 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.



BURN HAZARD

Equipment surfaces and fluid that's heated can become very hot during operation. To avoid severe burns, do not touch hot fluid or equipment. Wait until equipment/fluid has cooled completely.



MOVING PARTS HAZARD

Moving parts can pinch 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** in this manual. Disconnect power or air supply.



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 MSDS's 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.
- Always wear impervious gloves when spraying or cleaning equipment.



PERSONAL PROTECTIVE EQUIPMENT

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:

- Protective eyewear
- Clothing and respirator as recommended by the fluid and solvent manufacturer
- Gloves
- Hearing protection



RECOIL HAZARD

Gun may recoil when triggered. If you are not standing securely, you could fall and be seriously injured.

Tip Selection

	I			l I			
	in. (cm)	in. (cm)	in. (cm)	in. (cm)			
LL5213*	2 (5)				~		
LL5215*	2 (5)					~	
LL5217		4 (10)				~	
LL5219		4 (10)					~
LL5315*		4 (10)			~		
LL5317		4 (10)			~		
LL5319		4 (10)				~	
LL5321		4 (10)				~	
LL5323		4 (10)				~	
LL5325		4 (10)					~
LL5327		4 (10)					~
LL5329		4 (10)					~
LL5331		4 (10)					~
LL5333		4 (10)					~
LL5335		4 (10)					~
LL5355		4 (10)					V
LL5417			6 (15)		~		
LL5419			6 (15)		~		
LL5421			6 (15)		~		
LL5423			6 (15)			~	
LL5425			6 (15)			~	
LL5427			6 (15)			~	
LL5429			6 (15)			~	
LL5431			6 (15)				~
LL5435			6 (15)				✓
LL5621				12 (30)	✓		
LL5623				12 (30)	✓		
LL5625				12 (30)	✓		
LL5627				12 (30)	V		
LL5629				12 (30)	✓		
LL5631				12 (30)		V	
LL5635				12 (30)		/	
LL5639				12 (30)			/

^{*} Use 100 mesh filter to reduce tip clogs.

Maintenance

Pressure Relief Procedure



- Engage trigger lock.
- 2. Turn engine ON/OFF switch to OFF.
- 3. Move pump switch to OFF and turn pressure control knob fully counterclockwise.
- 4. Disengage the trigger lock.
- 5. Hold a metal part of the gun firmly to a grounded metal pail. Trigger the gun to relieve pressure.
- 6. Engage the trigger lock.
- 7. Open pressure drain valve. Leave valve open until you are ready to spray again.
- 8. If you suspect the spray tip or hose is 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. Clear hose or tip obstruction.

Trigger Lock

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

Periodic Maintenance

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.

DAILY: Verify calibration.

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.

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 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.

Caster Wheel

(See letter call-outs in Parts, LineLazer IV Swivel Wheel Assembly 240719 drawing on page 28.)

- 1. Once each year, tighten nut (127) under dust cap (142) until spring washer bottoms out. then back off the nut 1/2 to 3/4 turn.
- 2. Once each year, tighten nut (127) on screw (131) 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 (55) 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 screw (145), align wheel and tighten screw.

Troubleshooting









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 dis-	Error code displayed?	Reference pressure control repair. Page 20.
placement pump does	Pump switch is OFF.	Turn pump switch ON.
not operate.	Pressure setting is too low.	Turn pressure adjusting knob clockwise to increase pressure.
	Fluid filter (11) is dirty.	Clean filter. Page 32.
	Tip or tip filter is clogged.	Clean tip or tip filter. See spray gun manual.
	Displacement pump piston rod is stuck due to dried paint.	Repair pump. See pump manual.
	Connecting rod is worn or damaged.	Replace connecting rod. Page 11.
	Drive housing is worn or damaged.	Replace drive housing. Page 12.
	Electrical power is not energizing clutch field.	Check wiring connections. Page 16.
		Reference pressure control repair. Page 17.
		Reference wiring diagram. Page 34.
		With pump switch ON and pressure turned to MAXIMUM, use a test light to check for power between clutch test points on control board.
		Disconnect clutch wires from control board and measure resistance across clutch coil. At 70° F, the resistance must be between 1.2 +0.2 ohms (LineLazer IV 3900); 1.7 +0.2 ohms (LineLazer IV 5900); if not, replace pinion housing.
		Have pressure control checked by authorized Graco dealer.
	Clutch is worn, damaged, or incorrectly positioned.	Replace clutch. Page 13.
	Pinion assembly is worn or damaged.	Repair or replace pinion assembly. Page 12.

Problem	Cause	Solution
Pump output is low.	Strainer (34f) is clogged.	Clean strainer.
	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.
	Intake valve ball is not seating properly.	Clean intake valve. See pump manual.
	Intake valve ball is packed with material.	Clean intake valve. See pump manual.
	Engine speed is too low.	Increase throttle setting. See operation manual.
	Clutch is worn or damaged.	Replace clutch. Page 13.
	Pressure setting is too low.	Increase pressure. See operation manual.
	Fluid filter (11), tip filter or tip is clogged or dirty.	Clean filter. See operation or spray 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 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. See pump manual.
	Displacement 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. See operation manual.
	Tip is partially clogged.	Clear tip. See spray gun manual.
	Fluid supply is low or empty.	Refill fluid supply. Prime pump. See operation manual. 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. See pump manual.
	Paint is too thick.	Thin the paint according to the supplier's recommendations.
	Engine speed is too high.	Decrease throttle setting before priming pump. See operation manual.

Problem	Cause	Solution
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	Misadjusted throttle setting.	Reset throttle to 3600 engine rpm at no load.
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.	Reposition or replace magnet.
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.
	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 (164, page 31)	Turn screw (126, page 31) counterclockwise until spray icon synchronizes with fluid spray.
Spray icon does not show	Loose connector.	Check connector and reconnect.
on display when fluid is sprayed.	Interrupter (164, page 31) is improperly positioned.	Turn screw (126, page 31) counterclockwise until spray icon synchronizes with fluid spray.
	Reed switch assembly (166, page 31) is damaged.	Replace reed switch assembly (166, page 31).
	Magnet on assembly (166, page 31) is missing.	Replace reed switch assembly (166, page 31).
	Cut or sliced wire.	Replace distance sensor harness (66, page 25).
	Control board is damaged.	Replace control board.
	Display is damaged.	Replace display.
Spray icon is always shown on display.	Interrupter (164, page 31) is improperly positioned.	Turn screw (126, page 31) clockwise until spray icon is synchronized with fluid spray.
	Reed switch assembly (166, page31) is damaged.	Replace reed switch assembly (166, page 31).
No dots or poor dots with ghosting	No dots.	Solenoid cartridge bar is too far away from aerosol marking can spray tip. Do Auto-Layout Can Actuator Adjustment.
	Poor dots or dots with ghosting.	Solenoid cartridge bar is too close to aerosol marking can spray tip. Do Auto-Layout Can Actuator Adjustment.
	Engine speed to slow	Engine speed must be greater than 2600 rpm.
	Aerosol can malfunctioning	Check that can sprays. Replace if not.
	Solenoid module malfuntioning	Replace solenoid module.

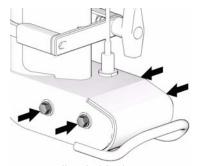
Auto-Layout Can Actuator Adjustment

Adjustments

The can actuator is set at the factory. If the dot size is not as desired, do the coarse and/or fine adjustments.

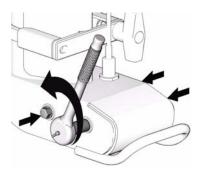
Coarse Adjustment

1 Locate four screws on side of holder base.



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2 Loosen screws to allow holder base to move freely.

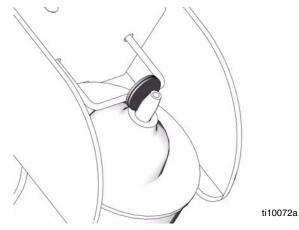


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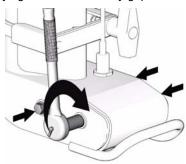


Do not aim aerosol can at your face.

3 Move holder base until solenoid cartridge bar is approximately 0.10 in. (thickness of two dimes) from spray tip.



4 Carefully tighten screws. Verify gap.

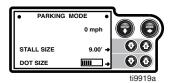


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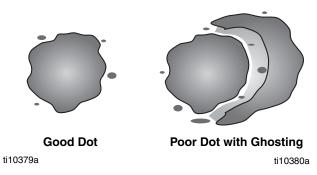
Fine Adjustment

If coarse adjustment did not achieve desired dot size, procede as follows:

1 Start striper and move to PARKING MODE display.



- 2 Set DOT SIZE setting to smallest size(least amount of bars on display). Press arrow keys to increase/decrease size.
- 3 Do Coarse Adjustment steps 1 and 2. Move holder base until a dot size of approximately a dime is achieved. Tighten screws on holder base.



Note: Dot size consistency can vary due to weather changes and differences in aerosol marking can brands.

Bearing Housing and Connecting Rod

Removal



- 1. Relieve pressure, page 6.
- 2. Fig. 2. Remove screws (187) and front cover (83).
- 3. Unscrew suction tube (34) from pump, hold wrench on pump intake valve (A) to keep pump from loosening.
- 4. Disconnect pump outlet hose (100) from displacement pump outlet nipple (60).
- 5. Fig. 1. Use screwdriver to push up retaining spring (236) at top of pump. Push out pin (235).

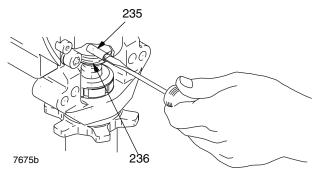


Fig. 1

- 6. Fig. 2. Loosen retaining nut (84). Unscrew and remove displacement pump (21).
- 7. Remove four screws (183) and lockwashers (188) from bearing housing (22).
- 8. Pull connecting rod (26) and lightly tap lower rear of bearing housing (22) with plastic mallet to loosen from drive housing (24). Pull bearing housing and connecting rod assembly (26) off drive housing.
- 9. Inspect crank (B) for excessive wear and replace parts as needed.

Installation

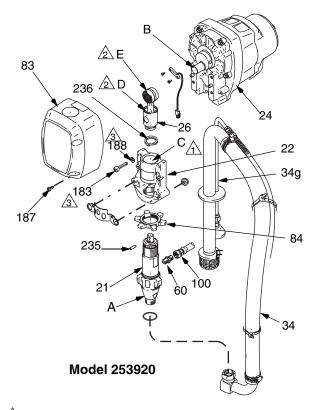
Evenly lubricate inside of bronze bearing (C) in bearing housing (22) with high-quality motor oil. Liberally pack top roller bearing (E), lower bearing (D) inside connecting rod assembly (26) with bearing grease.

- 2. Assemble connecting rod (26) and bearing housing (22).
- 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 (24) with holes in bearing housing (22). Push bearing housing onto drive housing or tap into place with plastic mallet.

CAUTION

Do not use bearing housing screws (183) to align or seat bearing housing with drive housing. Align these parts with locating pins (F), to avoid premature bearing wear.

- Install screws (183) and lockwashers (188) on bearing housing. Torque evenly to note 3 value in Fig. 2.
- 6. Install pump. Refer to **Displacement Pump**, **Installation**, page 21.



⚠ Oil.

Pack with bearing grease 114819.

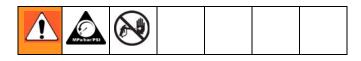
LineLazer IV 3900: Torque to 200 in-lb (22.6 N•m). LineLazer IV 5900: Torque to 25 ft-lb (34 N•m).

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Fig. 2

Drive Housing

Removal



- Relieve pressure, page 6.
- Fig. 3. Remove bearing housing. Do Bearing Housing and Connecting Rod procedure on page 11.
- 3. Remove two screws (158) and reed switch (182).
- 4. Remove six screws (189) from pinion housing (25).
- Lightly tap around drive housing (24) to loosen drive housing. Pull drive housing straight off pinion housing. Be prepared to support gear cluster (23), which may also come out.

Installation

- 1. Liberally apply bearing grease (supplied with replacement gear cluster) to gear cluster (23) and to areas called out by note 2.
- Place bronze colored washer (24g) on shaft protruding from large shaft of drive housing (24). Place silver colored washer (24h) on pinion housing. Clean mating surfaces of pinion and drive housings. Align gears and push new drive housing straight onto pinion housing and locating pins (A).
- 3. Install six screws (189). Torque evenly to note 1 value in Fig. 3.
- 4. Install reed switch (182) with two screws (158).
- Install bearing housing. Do steps 1 through 6 of Bearing Housing and Connecting Rod procedure on page 11.

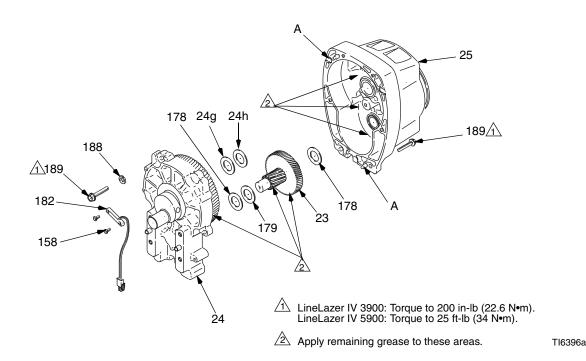


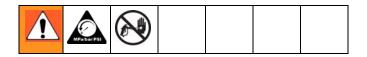
Fig. 3

Pinion Assembly/Clutch Armature/Clamp

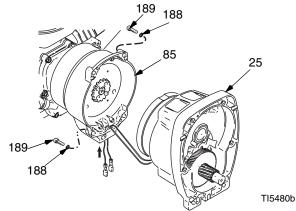
Pinion Assembly/Clutch Armature Removal

Pinion Assembly

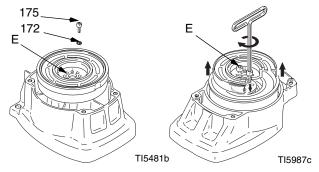
If pinion assembly (25) is not removed from clutch housing (85), do steps 1 through 3. Otherwise, start at 4.



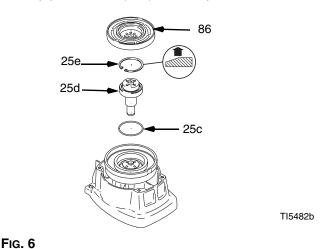
- 1. Remove drive housing, page 12.
- 2. Fig. 12. Remove junction box (226).
- 3. Fig. 11. Disconnect pump stroke sensor and clutch cables.
- 4. Fig. 4. Remove four screws (189) and lockwashers (188) and pinion assembly (25).



- Fig. 4
- 5. Fig. 5. Place pinion assembly (25) on bench with rotor side up.
- 6. Remove four screws (175) and lockwashers (172). Install two screws in threaded holes (E) in rotor. Alternately tighten screws until rotor comes off.



- Fig. 5
- 7. Fig. 6. Remove retaining ring (25e).
- 8. Tap pinion shaft (25d) out with plastic mallet.



Clutch Armature

- Fig. 7. Use an impact wrench or wedge something between armature (87) and clutch housing to hold engine shaft during removal.
- 10. Remove four screws (175) and lockwashers (172).
- 11. Remove armature (87).

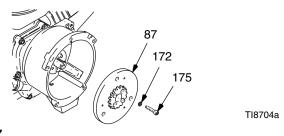
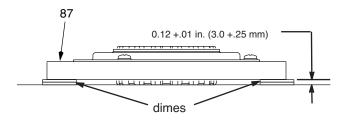


Fig. 7

Installation

Clutch Armature

- Fig. 8. Lay two stacks of two dimes on smooth bench surface.
- 2. Lay armature (87) on two stacks of dimes.
- Press center of clutch down on bench surface.



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Fig. 8

- 4. Install armature (87) on engine drive shaft.
- 5. Fig. 7. Install four screws (175) and lockwashers (172) with torque of 125 in-lb.

Pinion Assembly

- Fig. 6. Check o-ring (25c) and replace if missing or damaged.
- 7. Tap pinion shaft (25d) in with plastic mallet.
- 8. Install retaining ring (25e) with beveled side facing up.
- 9. Fig. 5. Place pinion assembly on bench with rotor side up.
- Apply Loctite to screws. Install four screws (175) and lockwashers (172). Alternately torque screws to 125 in-lb until rotor is secure. Use threaded holes to hold rotor.
- 11. Fig. 4. Install pinion assembly (25) with five screws (189) and lockwashers (188).
- 12. Fig. 11. Connect pump stroke sensor and clutch cables.
- 13. Fig. 12. Install junction box (226).

Clamp

Removal

- 1. Do Engine Removal.
- Drain gasoline from tank according to Honda manual.
- 3. Tip engine on side so gas tank is down and air cleaner is up.
- 4. Fig. 9. Loosen two screws (175) on clamp (82),
- 5. Push screwdriver into slot in clamp (82) and remove clamp.

Installation

- 1. Fig. 9. Install engine shaft key (88).
- Tap clamp (82) on engine shaft (A) with plastic mallet. Maintain dimension shown note 2. Chamfer must face engine.
- Check dimension: Place rigid, straight steel bar (B) across face of clutch housing (5). Use accurate measuring device to measure distance between bar and face of clamp. Adjust clamp as necessary.
 Torque two screws (175) to 125 +10 in-lb (14 +1.1 N•m).
- Face of clutch housing.
- LineLazer IV 3900: 2.55 +/- .010 in. (64.77 +/- 0.25 mm). LineLazer IV 5900: 2.61 +/- .010 in. (66.29 +/- 0.25 mm)
- ③ Torque to 125 +/- 10 in-lb (14 +/- 1.1 N•m).
- A Chamfer this side.

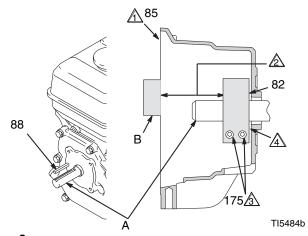


Fig. 9

Clutch Housing

Removal

- 1. Fig. 10. Remove four cap screws (186) and lock washers (188) which hold clutch housing (85) to engine.
- 2. Remove screw (177) from under mounting plate (96).
- 3. Pull off clutch housing (85).

Installation

- 1. Fig. 10. Push on clutch housing (85).
- 2. Install four cap screws (186) and lock washers (188) and secure clutch housing (85) to engine. Torque to 200 in-lb (22.6 N•m).
- 3. Install capscrew (177) from beneath mounting plate (96). Torque to 26 ft-lb (35.2 N•m).

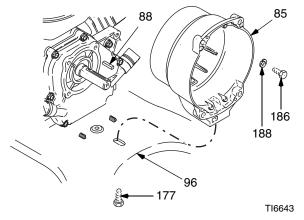


Fig. 10

Engine

Removal

- 1. Remove Pinion Assembly/Clutch Armature/Clamp and Clutch Housing. See pages 13 - 15.
- Fig. 12. Remove junction box (226).
- Fig. 11. Disconnect all necessary wiring.
- Fig. 12. Remove screw (177). Remove two screws (117), locknuts (118), and ground conductor (223, 260) from base of engine (185).
- Lift engine carefully and place on work bench.
- All service to the engine must be performed by an authorized HONDA dealer.

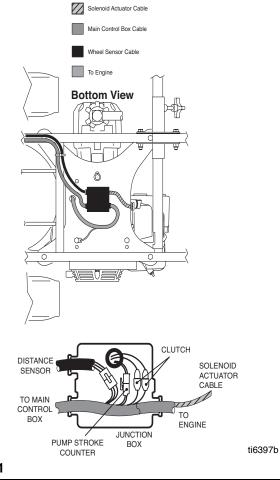


FIG. 11

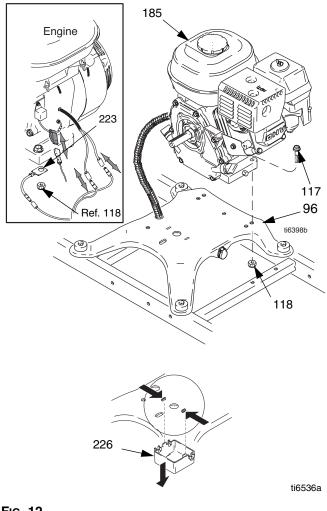


FIG. 12

Installation

- 1. Fig. 12. Lift engine carefully and place on engine mount plate (96).
- 2. Install two screws (117) and ground conductor (223, 260) in base of engine and secure with locknuts (118). Torque to 20 to 30 ft-lb.
- 3. Fig. 11. Connect all necessary wiring.
- Install Pinion Assembly/Clutch Armature/Clamp and Clutch Housing. See pages 13 - 15.

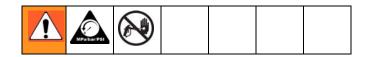
TI6408b

Pressure Control

On/Off Switch

Note: A complete wiring diagram is on page 34.

Removal



- 1. Relieve pressure, page 6.
- 2. Fig. 13. Remove two screws (125) and cover (31).
- 3. Remove three screws (125) from control plate (15a). Slide control plate out to access ON/OFF switch (15g).

- 4. Press locking tab on ON/OFF switch connector (B) and disconnect from control board.
- 5. Press in on two retaining tabs on each side of ON/OFF switch and remove switch.

Installation

- 1. Install ON/OFF switch (15g) so tabs of switch snap into place on inside of pressure control housing.
- Connect ON/OFF switch connector (B) to J3 on control board.
- 3. Slide control plate (15a) back to original position and secure with theree screws (125).
- 4. Install cover (31) with two screws (125).

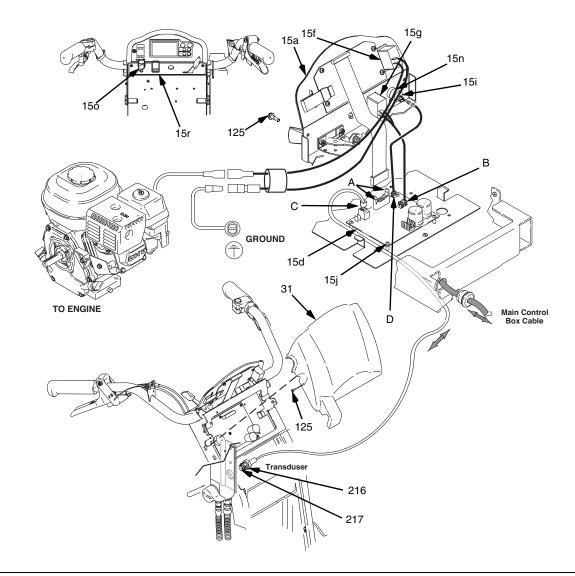


FIG. 13

Control Board

Removal









- Relieve pressure, page 6.
- Fig. 13. Remove two screws (125) and control cover (31). Pull display connector wings open on control board and pull display connector out.
- 3. Fig. 13 and Fig. 21. Note on a paper lead connections to the control board. Disconnect leads from control board (15d).
- 4. Fig. 13. Remove five screws (15j) from control board (15d).

Installation

- 1. Fig. 13. Install control board (15d) with five screws (15j).
- 2. Fig. 13 and Fig. 21. Refer to note on lead connections to the control board. Connect leads to control board (15d).
- 3. Fig. 13. Push display connector into control board close display connector wings on control board. Install control cover (31) with two screws (125).

Pressure Control Transducer

Removal









- Relieve pressure, page 6.
- Fig. 13. Remove two screws (125) and control cover (31).
- 3. Disconnect transducer lead (C) from control board (15d).
- Remove pressure control transducer (216) and o-ring (217) from filter manifold (40).

Installation

- 1. Fig. 13. Install o-ring (217) and pressure control transducer (216) in filter manifold (40). Torque to 35-45 ft-lb.
- 2. Connect transducer lead (C) to control board (15d).
- 3. Install control cover (31) with two screws (125).

Pressure Adjust Potentiometer

Removal









- 1. Relieve pressure, page 6.
- 2. Fig. 13. Remove two screws (125) and control cover (31).
- 3. Disconnect lead (D) from control board (15d).
- Loosen set screws on potentiometer knob (15o) and remove knob, shaft nut, lockwasher and pressure adjust potentiometer (15i).
- 5. Remove seal (15n) from potentiometer (15i).

Installation

- 1. Install seal (15n) on potentiometer (15i).
- 2. Fig. 13. Install pressure adjust potentiometer (15i), shaft nut, lockwasher and potentiometer knob (15o).
 - a. Turn potentiometer shaft (15i) clockwise to internal stop. Assemble potentiometer knob (15o) to strike pin on plate (15r).
 - 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 (15d).
- 4. Install control cover (31) with two screws (125).

Engine Stop Switch

Note: A complete wiring diagram is on page 34.

Removal



- 1. Relieve pressure, page 6.
- 2. Fig. 13. Remove two screws (125) and cover (31).
- 3. Remove two spade connectors from ENGINE STOP switch (15f).

4. Press in on two retaining tabs on each side of ENGINE STOP switch and remove switch.

Installation

- Install ENGINE STOP switch (15f) so tabs of switch snap into place on inside of pressure control housing.
- 2. Install cover (31) with two screws (125).

Trigger Sensor Adjustment

Refer to **Troubleshooting** for trigger sensor adjustment, and see operation manual.

Distance Sensor Replacement

- 1. Remove wheel (120) from LineLazer.
- 2. Remove screw (273), wire clamp (115) and distance sensor (66).
- 3. Install new distance sensor (66) with wire clamp (115) and screw (273).
- 4. Install wheel (120) on LineLazer.

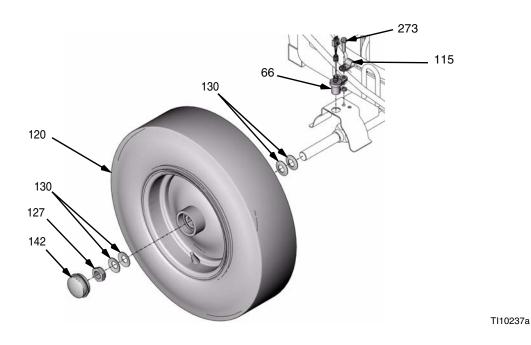
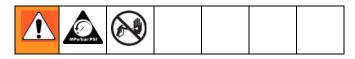


Fig. 14

Control Board Diagnostics

Digital Display Messages



Relieve pressure before repair; page 6. No display does not mean that sprayer is not pressurized.

Sprayer may be pres- surized. Sprayer may be pres- surized. Sprayer is pressur- zed. Power is applied. Pressure varies with	Loss of power or display not connected. Pressure less than 200 psi (14 bar, 1.4 MPa). Normal operation.	Check power source. Relieve pressure before repair or disassembly. Verify display is connected. Increase pressure as needed.
Sprayer is pressur- zed. Power is applied. Pressure varies with	psi (14 bar, 1.4 MPa).	·
zed. Power is applied. Pressure varies with	Normal operation.	Cnrov
ip size and pressure control setting.)		Spray.
Sprayer stops. Engine s running.	Exceeded pressure limit.	Remove any filter clogs or flow obstructions.
Sprayer stops. Engine s running.	Pressure transducer faulty, bad connection or broken wire.	Check transducer connections and wire. Replace transducer or control board, if necessary.
Sprayer stops. Engine s running.	High clutch current.	 Check clutch connections. Clean contacts. Measure 1.2 +0.2 Ohms (LineLazer IV 3900); 1.7 +0.2 Ohms (LineLazer IV 5900) across clutch field at 70°F. Replace clutch field assembly.
5	running. prayer stops. Engine	running. faulty, bad connection or broken wire. prayer stops. Engine High clutch current.

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 6.
- 3. Fig. 15. Cycle pump piston rod (A) to lowest position.
- 4. Fig. 15. Remove suction tube (34) and hose (100).

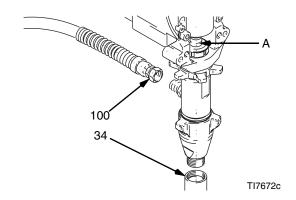


Fig. 15

5. Fig. 16. Use screwdriver: push retaining spring up and push out pin (235).

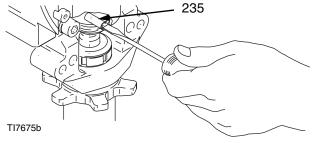


FIG. 16

6. Fig. 17. Loosen locknut by hitting firmly with a 20 oz (maximum) hammer. Unscrew pump.

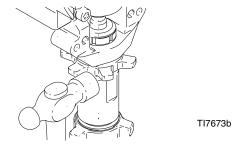


Fig. 17

7. See manual 310643 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.

CAUTION

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

1. Fig. 18. Pull piston rod out 1.5 in. Screw in pump until holes in bearing cross link and piston rod align.

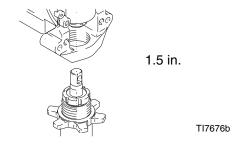
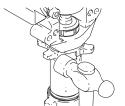


Fig. 18

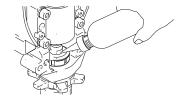
- 2. Fig. 16. Push pin (235) into hole. Push retaining spring into groove around connecting rod.
- 3. Fig. 19. Screw jam nut onto pump until nut stops. Screw pump into bearing housing until stopped by jam nut. Back off pump and jam nut to align pump outlet to back. Hand tighten jam nut; then tap 1/8 1/4 turn with a 20 oz hammer to approximately 75 +/- 5 ft-lb (102 N•m).



TI7673b

Fig. 19

 Fig. 20. Fill packing nut with Graco TSL until fluid flows onto the top of seal.

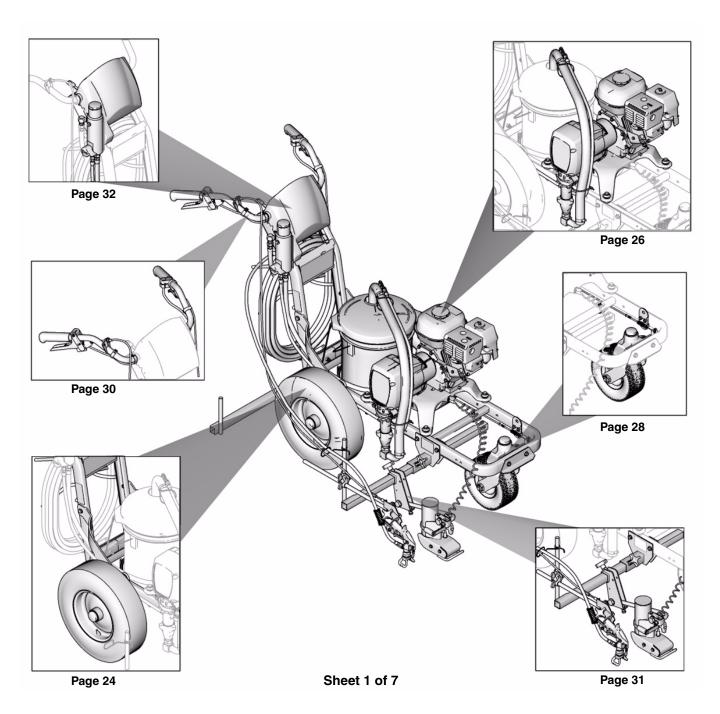


TI7677b

FIG. 20

Parts

LineLazer IV



ti10062a

Parts - Drive and Pinion Housing Assemblies

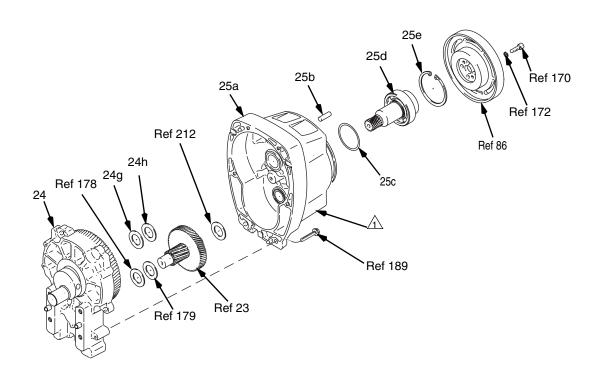
Ref No. 24 and 25

Ref No. 24: Drive Housing Assembly 287467 for LineLazer IV 3900; Drive Housing Assembly 287469 for LineLazer IV 5900

Ref	Part	Description	Qty
24	287467	HOUSING, drive (3900)	1
	287469	HOUSING, drive (5900)	1
24g		WASHER	
_	107089	LineLazer IV 3900	1
	194173	LineLazer IV 5900	1
24h		WASHER	
	116191	LineLazer IV 3900	1
	116192	LineLazer IV 5900	1

Ref No. 25: Pinion Housing Assembly 287463 for LineLazer IV 3900; Pinion Housing Assembly 287465 for LineLazer IV 5900

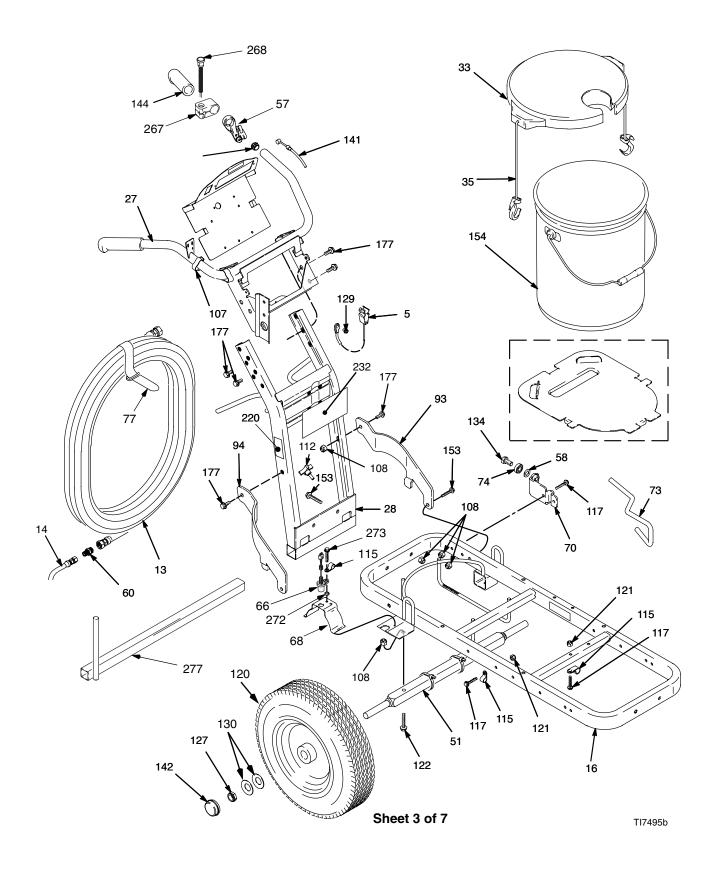
Re	f Part	Description	Qty
25	287463	HOUSING, pinion (3900)	1
	287465	HOUSING, pinion (5900)	1
258	а	KIT, repair, coil	
	287474	LineLazer IV 3900	1
	287476	LineLazer IV 5900	1
25l	105489	PIN	2
250	0	O-RING	
	165295	LineLazer IV 3900	1
	114683	LineLazer IV 5900	1
250	d*	PINION SHAFT	
	241110	LineLazer IV 3900	1
	241114	LineLazer IV 5900	1
25	e*	RETAINING RING, large	
	113094	LineLazer IV 3900	1
	112770	LineLazer IV 5900	1
*M	ust be order	ed separately.	



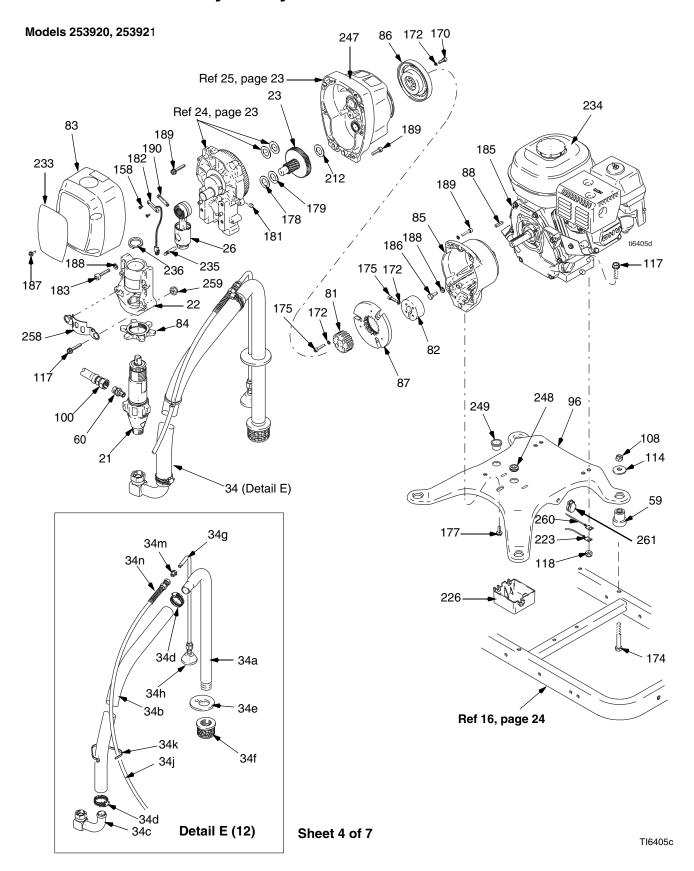
Pinion housing assembly (25) includes clutch field and connector.

Sheet 2 of 7

TI6407c



Ref	Part	Description	Qty	Ref	Part	Description	Qty
5	237686	WIRE, ground assembly w/ clamp	1	117	110837	SCREW, flange, hex	10
13	245225		1	120	255162	WHEEL, pneumatic	2
14		HOSE, cpld, 1/4 in. x 7	1	121	111040	NUT, lock, insert, nylock, 5/16	6
16		FRAME, linestriper (painted)	1	122	111194		2
27	287417	HANDLÉ " " /	1	127	112405		4
28	287622	SUPPORT, handle (painted)	1	129		SCREW, thread forming, hex hd	1
33		COVER, pail, includes 35	1	130		WASHER, spring	4
33	240926		1	134	113961		1
35	119771	STRAP, cover	1	141		CABLE, swivel wheel	1
51	193405	AXLE	1	142	114648		3
57	194310	LEVER, actuator	1	144	114659		2
58	195134	SPACER, ball, guide	1	153		SCREW, cap, flng hd	8
60	196176	ADAPTER, nipple	2	154	115077	•	1
66	15K357	SENSOR, distance	1	158		SCREW, mach, phillips, pnhd	2
68	15J088	SHIELD, distance sensor	1	177		SCREW, cap, flng hd	5
70	198891	BRACKET, mounting	1	181	116618	MAGNET	1
73	198930	ROD, brake	1	182		SWITCH, reed w/connector	1
74	198931	BEARING	1	220		LABEL, GMAX warning fire & skin	2
77	114271	STRAP, retaining	1	232		LABEL, LineLazer IV front	1
93	15F577	BRACE, left (painted)	1	264	120151		1
94	15F576	BRACE, right (painted)	1	267		BLOCK	1
107	178342	CLIP, spring	4	268		SWITCH, push button	1
108	101566	NUT, lock	16	272		SPACER, round, .500 O.D.	1
109	102478	STRAP, wiring tie (not shown)	4	273		SCREW, hex washer hd, thd form	1
112	111145	KNOB, pronged	2	277		CALIBRATION BAR	1
115	108868	CLAMP, wire	3	354	194312	PLATE, pail, Euro pail only	1



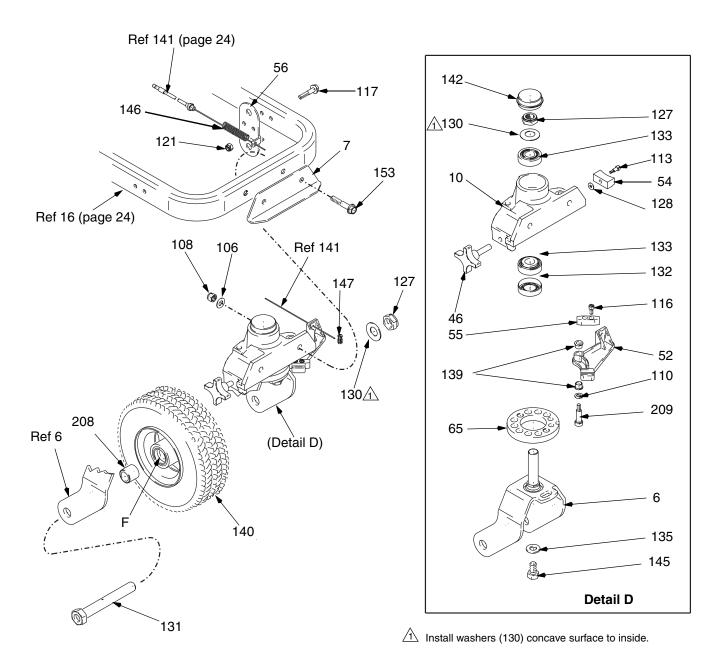
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34 245730 HOSE, drain, includes 34a thru 34n 1 34a 170957 TUBE, suction 1 34b 185381 HOSE 1 34c 110194 SWIVEL, 180° 1 34d 101818 CLAMP, hose 2 34e 15F513 GASKET, pail 1 34f 181072 STRAINER 1 34g 245731 TUBE, drain (includes 34h) 1 34h DEFLECTOR, threaded 1 34j 245798 HOSE, coupled, 1/4 in. x 7 ft 1 34k 114958 STRAP. tie 2 34m 196180 BUSHING 1 34n▲ 195119 LABEL, warning (not shown) 1 59 119695 DAMPENER, engine mount 4 60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (3900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	212
34a 170957 TUBE, suction 1 34b 185381 HOSE 1 34c 110194 SWIVEL, 180° 1 34d 101818 CLAMP, hose 2 34e 15F513 GASKET, pail 1 34f 181072 STRAINER 1 34g 245731 TUBE, drain (includes 34h) 1 34h DEFLECTOR, threaded 1 34j 245798 HOSE, coupled, 1/4 in. x 7 ft 1 34k 114958 STRAP. tie 2 34m 196180 BUSHING 1 34n▲ 195119 LABEL, warning (not shown) 1 59 119695 DAMPENER, engine mount 4 60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	212
34b 185381 HOSE 34c 110194 SWIVEL, 180° 34d 101818 CLAMP, hose 34e 15F513 GASKET, pail 34f 181072 STRAINER 34g 245731 TUBE, drain (includes 34h) 34h DEFLECTOR, threaded 34j 245798 HOSE, coupled, 1/4 in. x 7 ft 34k 114958 STRAP. tie 34m 196180 BUSHING 34n▲ 195119 LABEL, warning (not shown) 59 119695 DAMPENER, engine mount 40 196176 ADAPTER, nipple 81† HUB, armature 10 19680 COLLAR, shaft 82 193680 COLLAR, shaft 83 287521 COVER, front, (3900) 10 287511 COVER, front, (5900) 11 287511 COVER, front, (5900) 12 15E535 HOUSING, clutch, machine, (3900) 18 15E535 HOUSING, clutch, machine, (3900) 18 15E277 HOUSING, clutch, mach (5900)	223
34c 110194 SWIVEL, 180° 1 34d 101818 CLAMP, hose 2 34e 15F513 GASKET, pail 1 34f 181072 STRAINER 1 34g 245731 TUBE, drain (includes 34h) 1 34h DEFLECTOR, threaded 1 34j 245798 HOSE, coupled, 1/4 in. x 7 ft 1 34k 114958 STRAP. tie 2 34m 196180 BUSHING 1 34n▲ 195119 LABEL, warning (not shown) 1 59 119695 DAMPENER, engine mount 4 60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (3900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	226
34d 101818 CLAMP, hose 2 34e 15F513 GASKET, pail 1 34f 181072 STRAINER 1 34g 245731 TUBE, drain (includes 34h) 1 34h DEFLECTOR, threaded 1 34j 245798 HOSE, coupled, 1/4 in. x 7 ft 1 34k 114958 STRAP. tie 2 34m 196180 BUSHING 1 34n▲ 195119 LABEL, warning (not shown) 1 59 119695 DAMPENER, engine mount 4 60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (3900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	
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34f 181072 STRAINER 1 34g 245731 TUBE, drain (includes 34h) 1 34h DEFLECTOR, threaded 1 34j 245798 HOSE, coupled, 1/4 in. x 7 ft 1 34k 114958 STRAP. tie 2 34m 196180 BUSHING 1 34n▲ 195119 LABEL, warning (not shown) 1 59 119695 DAMPENER, engine mount 4 60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	004
34g 245731 TUBE, drain (includes 34h) 1 34h DEFLECTOR, threaded 1 34j 245798 HOSE, coupled, 1/4 in. x 7 ft 1 34k 114958 STRAP. tie 2 34m 196180 BUSHING 1 34n▲ 195119 LABEL, warning (not shown) 1 59 119695 DAMPENER, engine mount 4 60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E355 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	234
34h DEFLECTOR, threaded 1 34j 245798 HOSE, coupled, 1/4 in. x 7 ft 1 34k 114958 STRAP. tie 2 34m 196180 BUSHING 1 34n▲ 195119 LABEL, warning (not shown) 1 59 119695 DAMPENER, engine mount 4 60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	235
34j 245798 HOSE, coupled, 1/4 in. x 7 ft 1 34k 114958 STRAP. tie 2 34m 196180 BUSHING 1 34n▲ 195119 LABEL, warning (not shown) 1 59 119695 DAMPENER, engine mount 4 60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	000
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34m 196180 BUSHING 1 34n▲ 195119 LABEL, warning (not shown) 1 59 119695 DAMPENER, engine mount 4 60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	0.47
34n▲ 195119 LABEL, warning (not shown) 1 59 119695 DAMPENER, engine mount 4 60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	247
59 119695 DAMPENER, engine mount 4 60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	248
60 196176 ADAPTER, nipple 1 81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	249
81† HUB, armature 1 82 193680 COLLAR, shaft 1 83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	258
82	259
83 287521 COVER, front, (3900) 1 287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	260
287511 COVER, front, (5900) 1 84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	261
84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	
84 192723 NUT, retaining, (3900) 1 84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	▲ R
84 193031 NUT, retaining, (5900) 1 85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	† Inc
85 15E535 HOUSING, clutch, machine, (3900) 1 85 15E277 HOUSING, clutch, mach (5900) 1	
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06+ DOTOD -1b 4 (0000)	
86† ROTOR, clutch, 4, (3900) 1	
ROTOR, clutch, 5, (5900)	
87† ARMATURE, clutch, 4 in., (3900) 1	
ARMATURE, clutch, 5 in., (5900) 1	
88 183401 KEY, parallel 1	
96 15F583 PLATE, engine mount 1	
100 245797 HOSE, CPLD, 3/8 in.X 3 1	
108 101566 NUT, lock 16	
114 108851 WASHER, plain 4	
117 110837 SCREW, flange, hex 10	
118 110838 NUT, lock 2	
158 114528 SCREW, mach, phillips, pnhd 2	
170† 101682 SCREW, cap, sch 4	
172† 105510 WASHER, lock, spring (hi-collar) 10	
174 113743 SCREW, cap, hex hd 4	
175 108803 SCREW, hex, socket head 6	
177 112395 SCREW, cap, flng hd 5	
178 114672 WASHER, thrust 1	
179 114699 WASHER, thrust 2	
181 116618 MAGNET 1	
182 119562 SWITCH, reed w/connector 1	
183 113467 SCREW, cap, socket hd, (3900) 4	
114666 SCREW, cap, socket hd, (5900) 4	
185 108879 ENGINE, gasoline, 4.0 HP, (3900) 1	
114530 ENGINE, gasoline, 4.5 Hr, (5900) 1	
17-000 E14G114E, gasolillo, 5.5111, (5500)	

Ref	Part	Description	Qty
186	108842	SCREW, cap, hex hd	4
187	118444	SCREW, mach, slot hex wash hd	4
188	100214	WASHER,(3900)	10
	106115	WASHER, (5900)	10
189	119426	SCREW, mach, hex washer hd, (3900)	12
	15C753	SCREW, mach, hex washer hd, (5900)	6
190	15F947	SHIELD, magnetic	1
212	15F250	WASHER, thrust, (3900)	1
	114672	WASHER, thrust, (5900)	1
223	119579	CONDUCTOR, ground	1
226	15F369	BOX	1
233	15K636	LABEL, linelazer iv front, (3900)	1
	15K637	LABEL, linelazer iv front, (5900)	1
234▲	194126	LABEL, warning	1
235	15F855	PIN, pump, (3900)	1
	15F856	PIN, pump, (5900)	1
236	119676	SPRING, retaining, (3900)	1
	119778	SPRING, retaining, (5900)	1
247	290228	LABEL, caution	1
248	114629	GROMMET, transducer	1
249	119569	BUSHING, strain relief	1
258	15C762	SHIELD, pump rod	1
259	110996	NUT, hex, flange head	2
260	240997	CONDUCTOR, ground (5900)	1
261	120761	COVER, jack	1

▲ Replacement warning labels may be ordered free of charge fundamental Included in Clutch Repair Kit 241109 (3900) and 241113 (5900)

LineLazer IV Swivel Wheel Assembly 240719

Models 253920 and 253921

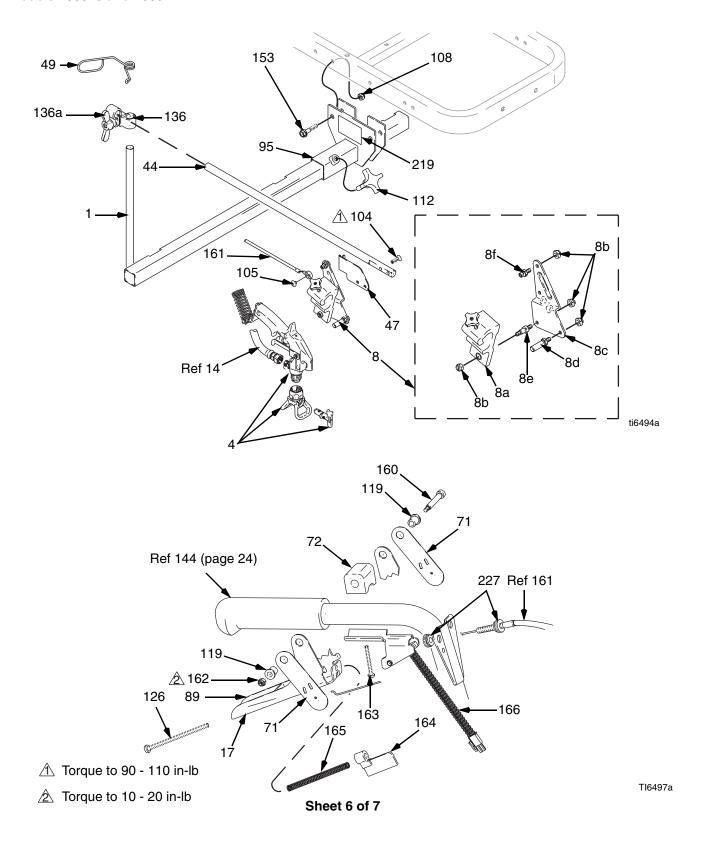


Sheet 5 of 7

LineLazer IV Swivel Wheel Assembly 240719

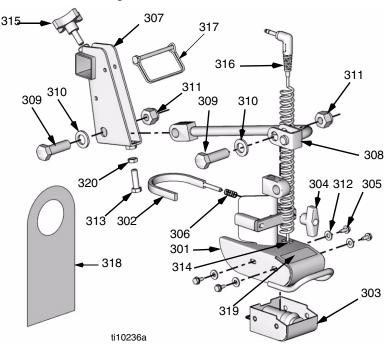
Ref	Part	Description	Qty	Ref	Part	Description	Qty
6	240942	SHAFT, fork	1	130	119563	SPRING, belleville	2
7	240991	BRACKET, caster, front	1	131	113471	SCREW, cap, hex hd	1
10*		BRACKET	1	132*	113484	SEAL	1
46	181818	KNOB	1	133*	113485	BEARING	2
52	193528	ARM, detent	1	135	113962	WASHER	1
54	193661	JAW	1	139	114548	BEARING, bronze	2
55	193662	STOP, wedge	1	140	114549	WHEEL, pneumatic	1
56	15F910	BRACKET, cable	1	141	241445	CABLE	1
65	198606	DISK, adjuster	1	142	114648	CAP, dust	3
106	100731	WASHER	2	145	114681	SCREW	1
108	101566	NUT, lock	16	146	114682	SPRING, compression	1
110	15J603	WASHER	1	147	114802	STOP, wire	1
113	108483	SCREW, shoulder, sch	1	153		SCREW, cap, flng hd	8
116	110754	SCREW, cap	2	208	193658	SPACER, seal	2
117	110837	SCREW, flange, hex	10	209*	120476	BOLT	1
121	111040	NUT, lock, insert, nylock, 5/16	6				
127	112405	NUT, lock	4	* Inclu	uded In Br	acket Repair Kit 240940	
128	112776	WASHER	1				

Models 253920 and 253921



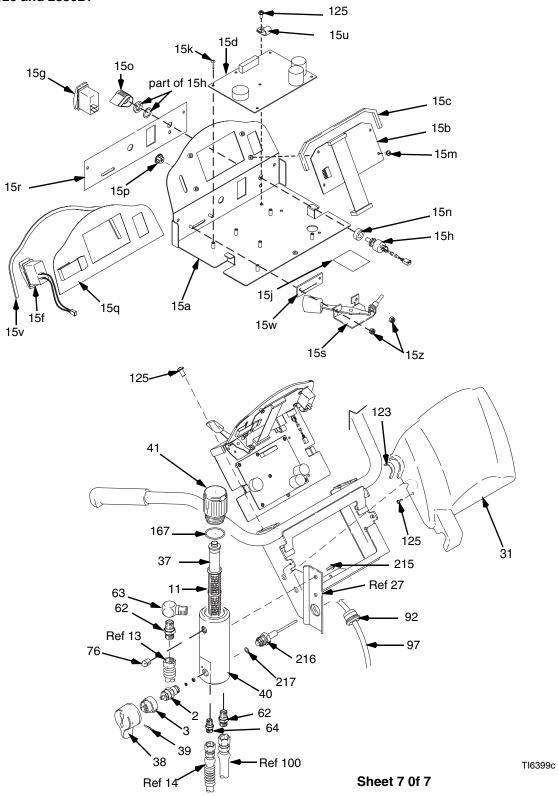
Ref	Part	Description	Qty	Ref	Part	Description	Qty
1	224052	BRACKET, support gun	1	105	119648	SCREW, mch, trs hd, cross recess	1
4	248157	GUN, flex, basic	1	108	101566	NUT, lock	16
8	287570	HOLDER ASSEMBLY, gun	1	112	111145	KNOB, pronged	2
8a	287569	HOLDER, gun	1	119	111017	BEARING, flange	2
8b	102040	NUT, lock	4	126*	112381	SCREW, mach, pan head	1
8c	15F214	LEVER, acuator	1	136	287566	KIT, clamp, (includes 136a)	1
8d	15F209	STUD, pull, trigger	1	136a	114028	NUT, winged	1
8e	15F210	STUD, pivot	1	153	114982	SCREW, cap, flng hd	8
8f	15F211	STUD, cable	1	160	116941	SCREW, shoulder, socket head	1
17*	245733	KIT, trigger handle repair (includes	1	161	287696	CABLE, gun, includes 227	1
		17. 89, 126, 164, 165)		162	116969	NUT, lock	1
44	15F212	ARM, holder, gun	1	163	116973	SCREW, #10 taptite phil	1
47	15F213	BRACKET, cable	1	164*	117268	BRACKET, interrupter	1
49	188135	GUIDE, cable	1	165	117269	SPRING	1
71	198895	PLATE, lever, pivot	2	166	287699	SENSOR, trigger	1
72	198896	BLOCK, mounting (mach)	1	219▲	15F637	LABEL,GMax warning skin inject	1
89*		LABEL, trigger	1	227	15F624	NUT, cable, gun (knurled)	2
95	15K198		1				
104	119647	SCREW, cap, socket, filhd	2	* Inclu	ıded in Tri	igger Repair Kit 245733	
-		, ,		▲ Rep	olacement	warning labels may be ordered free of ch	arge

Paint Can Holder Assembly 255346



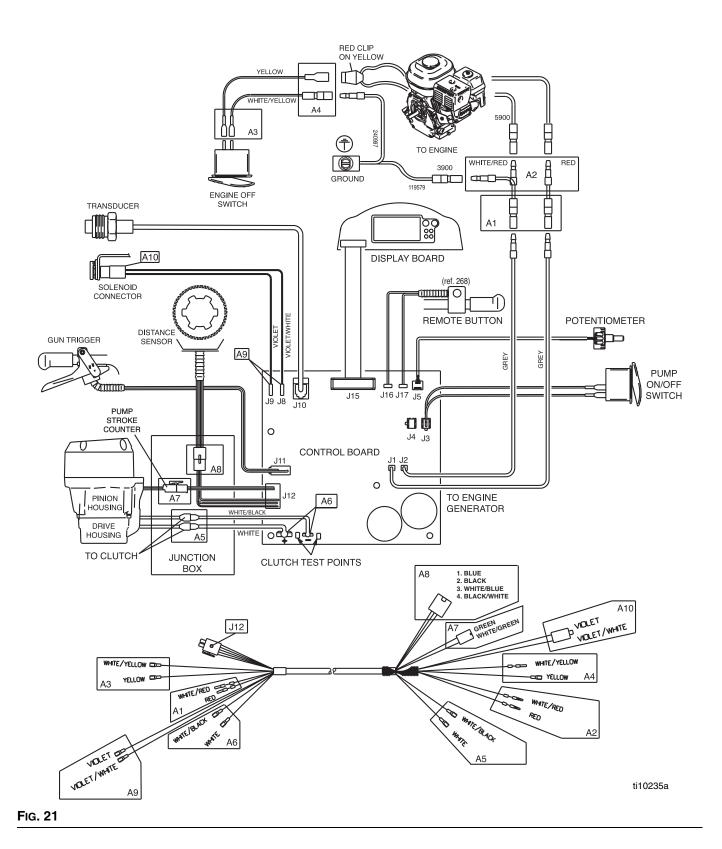
Ref	Part	Description	Qty	Ref	Part	Description	Qty
301	15K757	HOLDER, paint can, base (painted)	1	312	110755	WASHER, plain	4
302	15K570	CLAMP, paint can	1	313	100004	SCREW, cap, hex hd	1
303	255347	CARTRIDGE, solenoid	1	314	120879	BUSHING, strain relief	1
304	120865	KNOB, T-handle	1	315	111145	KNOB, pronged	1
305	101501	SCREW, mach., slot hex wash hd	4	316	15K103	CORD, power, solenoid	1
306	120864	SPRING, compression	1	317	113696	PIN, ball coupler	1
307	15K567	CLAMP	1	318	15M216	TAG, chalk can	1
308	15K568	ARM, pivot	1	319	15M220	LABEL, Auto Layout System	1
309	100428	SCREW, cap hex hd	2	320	260188	NUT, jam	1
310	120856	WASHER, Belleville	2			•	
311	101712	NUT, lock	2				

Models 253920 and 253921



Ref	Part	Description	Qty	Ref	Part	Description	Qty
2*	239914	VALVE, drain	1	15z	109466	NUT, lock, hex	2
3*	224807	BASE, valve	1	31	15F589	COVER, control	1
11	244067	FILTER, fluid	1	37*	15C766	TUBE, diffusion	1
15a	289264	KIT, switch, panel, includes 15q,	1	38*	15C780	HANDLE	1
		15r, 15v		39*		, O	1
15b	289265	KIT, display board	1	40*	15H561	MANIFOLD	1
15c	15M509		1	41*		KIT, repair, filter cap, includes 37, 167	1
15d		BOARD, control	1	62*		ADAPTER, nipple	3
15f		SWITCH, rocker	1	63*		FITTING, elbow, street	1
15g		SWITCH, rocker	1	64	196181	FITTING, nipple	1
15ȟ		POTENTIOMETER KIT	1	76	15G331	PLUG, pipe	1
15J	15B804	LABEL, Graco logo	1	92	115642	BUSHING, relief, strain	1
15k		SCREW, mach, pnh, sems	6	97	15J087	HARNESS	1
15m		SCREW, mach, pnh, sems	1	123		GASKET, handle	2
15n		SPACER, shaft	1	125	117501	SCREW, mach, slot hex wash hd	6
15o	116167	KNOB, potentiometer	1	167*	117285	PACKING, o-ring	1
15p	120854		1	215	111801	SCREW, cap, hex hd	2
15q	15G666	LABEL, control, top	1	216*	287172	TRANSDUCER, pressure control,	1
15r [.]		LABEL, control, bottom	1			includes 111457	
15s		KIT, control, throttle	1	217*	111457	PACKING, o-ring	1
15u	119736	CLAMP	1				
15v	15F777	GASKET, control	1	▲ Re _l	olacement	warning labels may be ordered free of ch	arge
15w	15F776	GASKET, throttle	1	* Inclu	ided in Filte	er Repair Kit 288100	

Auto-Layout System Wiring Diagram



Technical Data

Honda GX120 Engine (3900)	
Power Rating @ 3600 rpm	4.0.11
ANSI	4.0 Horsepower
	0.4 Km, 0.0 Da
NA	
NB	2.0 KW - 3.0 PS
Honda GX160 Engine (5900)	
Power Rating @ 3600 rpm	C. C. Llevennesser
ANSI	5.5 Horsepower
DIN 6270B/DIN 6271	0.0 Km, 4.0 Da
NA	
NB	
Maximum working pressure	3300 psi (228 bar, 22.8 MPa)
Noise Level	105 dDo nov ICO 2744
Sound power	
Sound pressure	96 dba, measured at 3.1 leet (1 m)
LineLazer IV 3900	
Left hand	1.81 m/sec ²
Right hand	1.45 m/sec^2
Left hand	2.05 m/sec ²
Right hand	1.70 m/sec ²
* Vibration measured per ISO 5349 based on 8 hour daily	,
exposure	
Maximum delivery	
LineLazer IV 3900	1.15 apm (4.4 litar/min)
LineLazer IV 5900	
Maximum tip size	1.5 gpm (5.7 iiter/min)
LineLazer IV 3900	1 aun with 0 034 in tip
LineLazer IV 3300	2 guns with 0.024 in. tip
LineLazer IV 5900	
LineLazer IV 3300	2 guns with 0.028 in. tip
Inlet naint strainer	16 mesh (1190 micron) stainless steel screen, reusable
Outlet paint strainer	
Pump inlet size	,
Fluid outlet size	
Wetted parts	
Trottod parto	UHMW polyethylene, fluoroelastomer, acetal, leather,
	tungsten carbide, stainless steel, chrome plating
	tangeton darbido, stannoos stool, onforno plating

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Dimensions

LineLazer IV 3900 Auto-Layout System

Model 253920, 255151 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 253953, 255152 Striper wit	h 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 IV 5900 Auto-Layout System

Model 253921, 255153 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 253954, 255154 Striper wit	h 2nd Gun Kit
Wodel 20000+, 20010+ Ollipei Wit	ii Ziid Guii Kit
Weight (dry, without packaging)	
•	242 lb (110 kg)
Weight (dry, without packaging)	242 lb (110 kg) 40 in. (101.6 cm)
Weight (dry, without packaging) Height	242 lb (110 kg) 40 in. (101.6 cm) 65 in. (165.1 cm)

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.

FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

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ADDITIONAL WARRANTY COVERAGE

Graco does provide extended warranty and wear warranty for products described in the "Graco Contractor Equipment Warranty Program".

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.

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