### **INSTRUCTIONS-REPAIR**





Rev. L

First choice when quality counts.™



GMax® 3900, 5900, 5900HD **Airless Paint Sprayers** 

important warnings and instructions.

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

#### **GMax 3900**

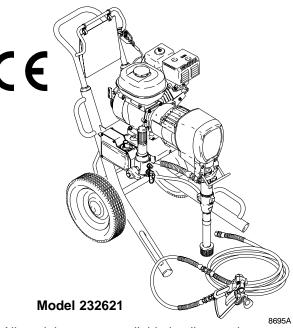
Model	Series	Description
232610	Α	Hi-Boy
232611	Α	Hi-Boy with RAC <sup>™</sup> 5 tip, gun and hose
232612	Α	Lo-Boy
232613	Α	Lo-Boy with RAC 5 tip, gun and hose
233005	Α	Hi-Boy with gauge kit

#### **GMax 5900**

Model	Series	Description
232620	Α	Hi-Boy
232621	Α	Hi-Boy with RAC 5 tip, gun and hose
232622	Α	Lo-Boy
232623	Α	Lo-Boy with RAC 5 tip, gun and hose
233006	Α	Hi-Boy with gauge kit

#### GMax 5900HD

Model	Series	Description
232627	Α	Hi-Boy
232628	Α	Hi-Boy with RAC 5 tip, gun and hose
233007	Α	Hi-Boy with gauge kit



All models are not available in all countries PATENTS PENDING

### **Related Manuals**

Operation	308867
Displacement Pump	
Spray Gun	309091
Texture Spray Gun	308491
Spray Tip	309055
PC Board	308919
Drain Valve Kit	308961

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# **Warnings and Cautions**

#### **Warning Symbol**

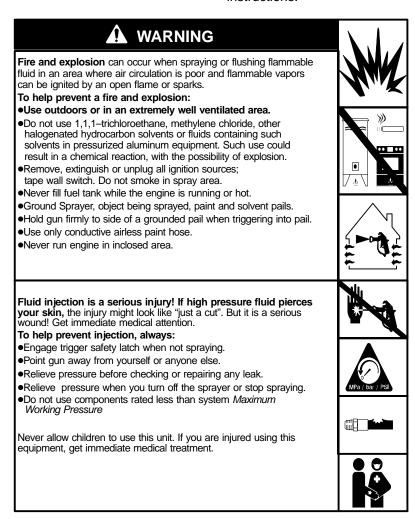
### **WARNING**

This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

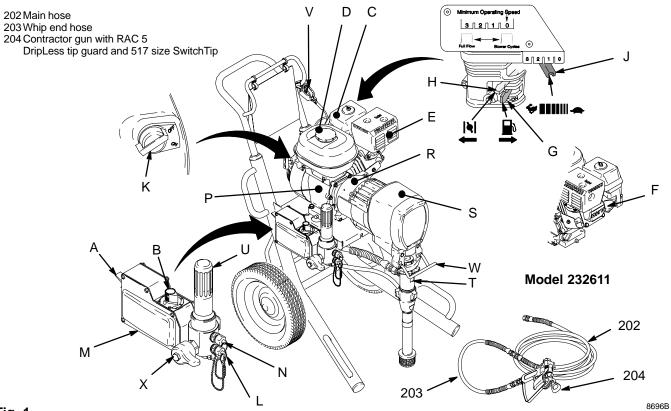
### Caution Symbol



This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.



# **Component Identification and Function**



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Α	Pressure Control Switch	ON/OFF, enables/disables clutch function and pressure control		
		·		
В	Pressure Adjusting Knob	Controls fluid outlet pressure		
С	Air Cleaner*	Filters air entering the carburetor		
D	Fuel Tank*	Uses 86 octane unleaded gasoline		
E	Muffler*	Reduces noise of internal combustion		
F	Spark Plug Cable*	Routes electrical current to spark plug		
G	Fuel Shutoff Lever*	On/off lever to regulate fuel flow from gasoline tank to carburetor		
Н	Choke*	Enriches air/gasoline mixture for cold starting		
J	Throttle Lever*	Adjusts engine speed for large or small orifice spray tips		
K	Engine Switch*	Enables/disables engine operation		
L	Secondary Fluid Outlet	Second hose and spray gun is connected here		
М	Pressure Control	Controls clutch cycling to maintain fluid pressure.		
N	Primary Fluid Outlet	Hose and spray gun is connected here		
Р	Engine*	4–cycle gasoline engine		
R	Clutch Housing	Transfers power from engine to drive assembly		
S	Drive Housing	Transfers power from clutch to displacement pump		
Т	Displacement Pump	Provides fluid to be sprayed through spray gun		
U	Fluid Filter	Filters fluid between source and spray gun		
V	Grounding Clamp and Wire	Grounds sprayer system		
W	Pail Hanger	Provides a hanger for paint pail		
Х	Pressure Drain Valve	Relieves fluid pressure when open		
*	For more detailed explanations of these controls, refer to the Honda Engines Owner's Manual; supplied			

### **Maintenance**

### **A** WARNING



#### **INJECTION HAZARD**

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 **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment,
- or install or clean the spray tip.

#### **Pressure Relief Procedure**

- 1. Lock gun trigger safety.
- 2. Turn engine ON/OFF switch to OFF.
- 3. Move pressure control 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.

### **A** CAUTION

For detailed engine maintenance and specifications, refer to separate Honda Engines Owner's 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 opera-

tion.

**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 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.

# **Troubleshooting**

### **▲** WARNING



#### **INJECTION HAZARD**

To reduce risk of serious injury, including fluid injection or splashing in eyes or on skin, or injury from moving parts, always follow **Pressure Relief Procedure Warning**, page 4, before checking, adjusting, cleaning or shutting down sprayer.

Check everything in chart before disassembling sprayer.

PROBLEM	CAUSE	SOLUTION
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 rope 3 or 4 times. Clean or replace spark plug. Try to start engine. Keep sprayer upright to avoid oil seepage.
Engine operates, but dis-	Pressure control switch is OFF	Turn pressure control switch ON.
placement pump does not operate	Pressure setting is too low	Turn pressure adjusting knob clockwise to increase pressure.
	Fluid filter (318) is dirty	Clean filter. Page 22.
	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 308798.
	Connecting rod is worn or damaged	Replace connecting rod. Page 7.
	Drive housing is worn or damaged	Replace drive housing. Page 8.
	Electrical power is not energizing clutch field	Check wiring connections. Page 11.
		Reference control board diagnostics. Page 14. With pressure control switch ON and pressure turned to MAXIMUM, use a test light to check for power between clutch terminals on control board.
		Remove black clutch wires from control board and measure resistance across wires. At 70° F, the resistance must be between 1.2 $\pm 0.2\Omega$ (GMax3900); 1.7 $\pm 0.2\Omega$ (GMax 5900); if not, replace pinion housing.
		Have pressure control checked by authorized Graco dealer.
	Clutch is worn, damaged, or incorrectly positioned	Replace clutch. Page 9.
	Pinion assembly is worn or damaged	Repair or replace pinion assembly. Page 9.

PROBLEM	CAUSE	SOLUTION
Pump output is low	Strainer (31) is clogged	Clean strainer. Sprayer 232627 strainer is for use in paint only.
	Piston ball (25) is not seating	Service piston ball. Manual 308798.
	Piston packings are worn or damaged	Replace packings. Manual 308798.
	O-ring (227) in displacement pump is worn or damaged	Replace o-ring. Manual 308798.
	Intake valve ball is not seating properly	Clean intake valve. Manual 308798.
	Intake valve ball is packed with material	Clean intake valve. Manual 308798. Do not leave 232627 sprayer under pressure for more than 5 minutes when spraying texture and not actively spraying.
	Engine speed is too low	Increase throttle setting. Manual 308867.
	Clutch is worn or damaged	Replace clutch. Page 9.
	Pressure setting is too low	Increase pressure. Manual 308867.
	Fluid filter (318), tip filter or tip is clogged or dirty	Clean filter. Manual 308867 or 309091.
	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 308798.
	Displacement rod is worn or damaged	Replace rod. Manual 308798.
Fluid is spitting from gun	Air in pump or hose	Check and tighten all fluid connections. Reprime pump. Manual 308867.
	Tip is partially clogged	Clear tip. Manual 309091.
	Fluid supply is low or empty	Refill fluid supply. Prime pump. Manual 308867. 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 308798.
	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 308867.
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 3600–3800 engine rpm at no load
	Worn engine governor	Replace or service engine governor

# **Bearing Housing and Connecting Rod**

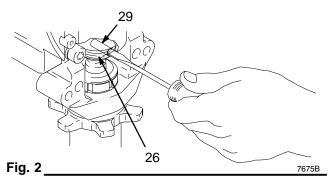
**NOTE:** The item numbers referenced are for the Hi-Boy models. The Lo-Boy models may have different item numbers. Use the Hi-Boy item number and part to find the corresponding Lo-Boy part and item number.

#### Removal



Relieve pressure; page 4.

- 2. Fig. 3. Remove screws (14) and front cover (23).
- For Hi-Boy models; remove spring clip (32) and drain hose (54). Unscrew suction tube (30) from pump, hold wrench on pump intake valve (A) to keep pump from loosening. For Lo-Boy models; unscrew swivel union (30aa) from pump.
- 4. Disconnect pump outlet hose (33) from displacement pump outlet nipple (62).
- 5. Fig. 2. Use screwdriver to push up retaining spring (26) at top of pump. Push out pin (29).



- 6. Fig. 3. Loosen retaining nut (34). Unscrew and remove displacement pump (28).
- 7. Remove four screws (13) and lockwashers (12) from bearing housing (21).
- Pull connecting rod (22) and lightly tap lower rear
  of bearing housing (21) with plastic mallet to
  loosen from drive housing (20). Pull bearing housing and connecting rod assembly (22) off drive
  housing.
- 9. Inspect crank (B) for excessive wear and replace parts as needed.

#### Installation

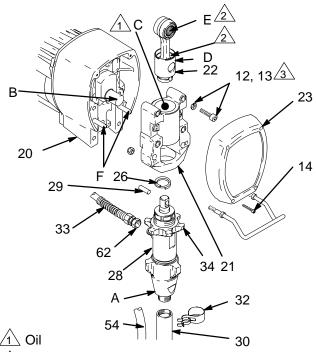
 Evenly lubricate inside of bronze bearing (C) in bearing housing (21) with high-quality motor oil. Liberally pack top roller bearing (E), lower bearing (D) inside connecting rod assembly (22) with bearing grease.

- 2. Assemble connecting rod (22) and bearing housing (21).
- 3. Clean mating surfaces of bearing and drive housings.
- Align connecting rod with crank (B) and carefully align locating pins (F) in drive housing (20) with holes in bearing housing (21). Push bearing housing onto drive housing or tap into place with plastic mallet.

### **A** CAUTION

DO NOT use bearing housing screws (13) to align or seat bearing housing with drive housing. Align these parts with locating pins (F), to avoid premature bearing wear.

- 5. Install screws (13) and lockwashers (12) on bearing housing. Torque evenly to note 3 value in Fig. 3.
- 6. Refer to Displacement Pump, Installation, page 15.



2 Pack with bearing grease 114819

(32.6 N·m) GMax 3900: Torque to 200 in-lb (22.6 N·m) GMax 5900: Torque to 25 ft-lb (34 N·m)

Fig. 3 Model 232610 shown

8697A

# **Drive Housing**

#### Removal

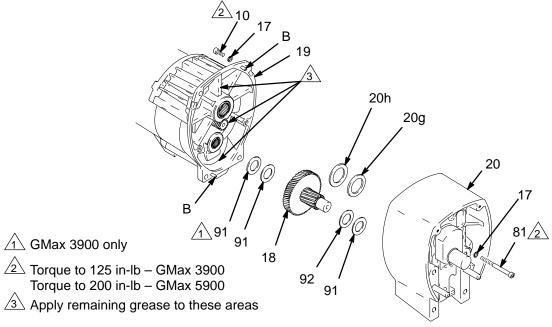
# 1. Relieve pressure; page 4.

- Fig. 4. Remove bearing housing. Do 1. through 8. of Bearing Housing and Connecting Rod procedure on page 7.
- 3. Remove two screws (81) and lockwashers (17).
- 4. Remove four screws (10) and lockwashers (17) from pinion housing (19).
- Lightly tap around drive housing (20) to loosen drive housing. Pull drive housing straight off pinion housing. Be prepared to support gear cluster (18), which may also come out.

#### Installation

- 1. Liberally apply bearing grease (supplied with replacement gear cluster) to gear cluster (18) and to areas called out by note 3. Use full 0.62 pint (0.29 liter) of grease for GMax 3900 and 0.68 pint (0.32 liter) of grease for GMax 5900.
- 2. Place bronze colored washer (20g) on shaft protruding from large shaft of drive housing (20).

  Note: If replacing a washer with pin holes with a washer without pin holes, remove guide pins from housing. Place silver colored washer (20h) on pinion housing. Align gears and push new drive housing straight onto pinion housing and locating pins (B).
- 3. Install four screws (10) and lockwashers (17) from pinion housing (19).
- 4. Install two screws (81) and lockwashers (17).
- 5. Fig. 3. Install bearing housing. Do 1. through 6. of **Bearing Housing and Connecting Rod** procedure on page 7.



Fia. 4

TI0178A

# Pinion Assembly/Rotor/Field/Shaft/Clutch

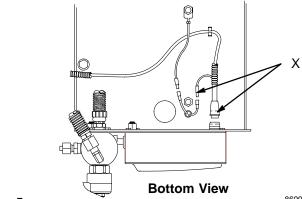
#### Removal

If pinion assembly (19) is not removed from clutch housing (5), do 1. through 4. Otherwise, start at 5.

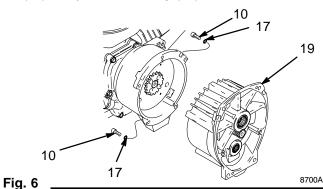


Relieve pressure; page 4.

2. Disconnect field cable (X) from pressure control.



3. Fig. 6. Remove five screws (10) and lockwashers (17) and pinion assembly (19).



4. Fig. 7. Place pinion assembly (19) on bench with rotor side up.

 Remove four screws (72) and lockwashers (17). Install two screws in threaded holes (E) in rotor. Alternately tighten screws until rotor comes off.

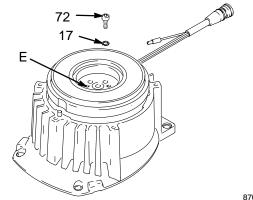
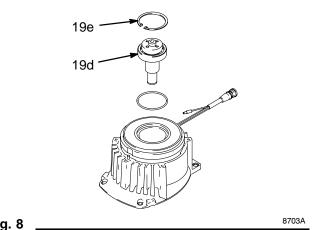


Fig. 7 \_\_\_\_\_\_\_8701A

- 6. Fig. 8. Remove retaining ring (19e).
- 7. Tap pinion shaft (19d) out with plastic mallet.



- 8. Fig.9. Use an impact wrench or wedge something between armature (4a) and clutch housing to hold engine shaft during removal.
- 9. Remove four screws (16) and lockwashers (17).
- 10. Remove armature (4a).

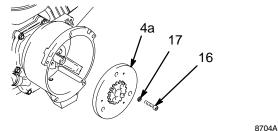
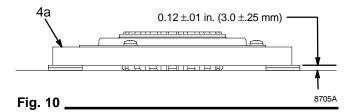


Fig. 9 \_\_\_\_\_

# Pinion Assembly/Rotor/Field/Shaft/Clutch

#### Installation

- 1. Fig. 10. Lay two stacks of two dimes on smooth bench surface.
- 2. Lay armature (4a) on two stacks of dimes.
- 3. Press center of clutch down on bench surface.



- 4. Install armature (4a) on engine drive shaft.
- 5. Install four screws (16) and lockwashers (17) with torque of 125 in-lb.

- 6. Fig. 8. Tap pinion shaft (A) in with plastic mallet.
- 7. Install retaining ring (Z) with beveled side facing field (Y).
- 8. Fig. 7. Place pinion assembly on bench with rotor side up.
- Apply locktite to screws. Install four screws (16) and lockwashers (17). Alternately torque screws to 125 in-lb until rotor is secure. Use threaded holes to hold rotor.
- 10. Fig. 6. Install pinion assembly (19) with five screws (10) and lockwashers (17).
- 11. Fig. 5. Connect field cable (X) to pressure control.

# Clamp

#### Removal

- 1. Fig. 11. Loosen two screws (16) on clamp (8),
- 2. Push screwdriver into slot in clamp (8) and remove clamp.

#### Installation

- 1. Fig. 11. Install engine shaft key (7).
- Tap clamp (8) on engine shaft (A) with plastic mallet.
- 3. Press clamp (8) onto engine shaft (A). Maintain dimension shown note 2 in Fig. 11. Chamfer must face engine.

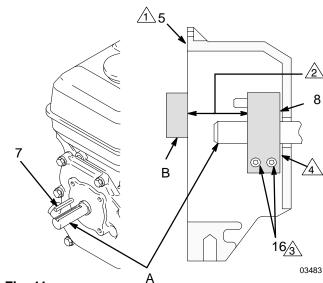
Check dimension: Place rigid, straight steel bar (B) across face of clutch housing (5). Use accurate measuring device to measure distance between bar and face of clamp. Adjust clamp as necessary. Torque two screws (16) to 125  $\pm$ 10 in-lb (14  $\pm$ 1.1 N·m).

1 Face of clutch housing

1.550 ±.010 in. (39.37 ±.25 mm); GMax 3900 1.812 ±.010 in. (46.02 ±.25 mm); GMax 5900

 $\sqrt{3}$  Torque to 125 ±.10 in-lb (14 ±1.1 N·m)

4 Chamfer this side



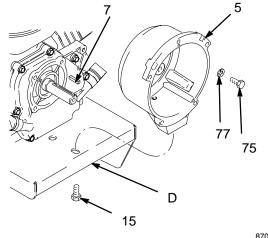
# **Clutch Housing**

#### Removal

- Fig. 12. Remove four capscrews (75) and lockwashers (77) which hold clutch housing (5) to engine.
- 2. Remove screw (15) from under mounting plate (D).
- 3. Remove engine key (7).
- 4. Pull off clutch housing (5).

#### Installation

- 1. Fig. 12. Push on clutch housing (5).
- 2. Install four capscrews (75) and lockwashers (77) and secure clutch housing (5) to engine. Torque to 200 in-lb (22.6 N•m).
- 3. Install capscrew (15) from beneath mounting plate (D). Torque to 26 ft-lb (35.2 N•m).



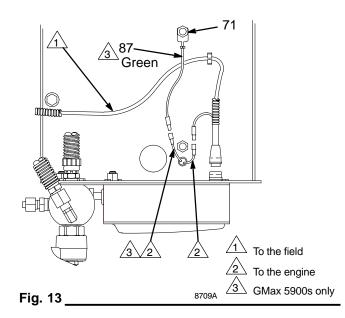
**Fig. 12**\_\_\_\_\_\_\_8708A

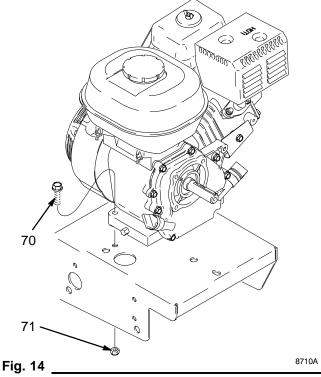
# **Engine**

#### Removal

- Remove Pinion Assembly/Rotor/Field/Pinion/ Clutch, Clamp and Clutch Housing, as instructed on pages 9, 10 and 11.
- 2. Fig. 13. Disconnect all necessary wiring.
- 3. Fig. 14. Remove two locknuts (71) and screws (70) 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.





### Installation

- 1. Lift engine carefully and place on cart.
- 2. Fig. 14. Install two screws (70) in base of engine and secure with locknuts (71). Torque to 200 in-lb (22.6 N•m).
- 3. Fig. 13. Connect all necessary wiring.
- Install Pinion Assembly/Rotor/Field/Pinion/ Clutch, Clamp and Clutch Housing, as instructed on pages 9 and 10 and 11.

## **On/Off Switch**

#### Removal

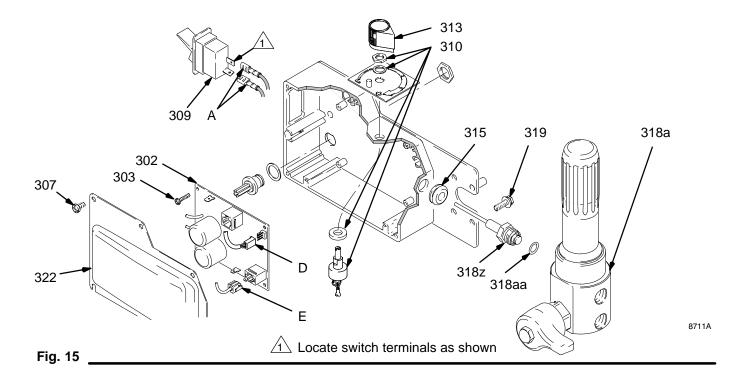


Relieve pressure; page 4.

- Fig. 15. Remove five screws (307) and cover (322).
- 3. Disconnect two wires (A) from ON/OFF switch (309).
- 4. Press in on two retaining tabs on each side of ON/OFF switch (309) and remove switch.

#### Installation

- 1. Install new ON/OFF switch (309) so tabs of switch snap into place on inside of pressure control housing.
- 2. Connect two wires (A) to ON/OFF switch.
- 3. Install pressure control cover (322) with five screws (307).



### **Pressure Control**

#### **Control Board**

#### Removal



Relieve pressure; page 4.

- 2. Fig. 15. Remove five screws (307) and cover (322).
- 3. Fig. 22. Disconnect at control board (302):
  - Four clutch leads: two violet and two black.
  - Lead (D) from potentiometer.
  - Lead (E) from transducer.
  - Two red leads (A) to ON/OFF switch (309).
- 4. Fig. 15. Remove five screws (303), green ground wire and control board (302).

#### Installation

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

- 1. Fig. 15. Install green ground wire and control board (302) with five screws (303).
- 2. Fig. 22. Connect to control board (302):
  - Two red leads (A) to ON/OFF switch (309).
  - Lead (E) to transducer.
  - Lead (D) to potentiometer.
  - Four clutch leads: two violet and two black.
- 3. Fig. 15. Install cover (322) with five screws (307).

#### **Pressure Control Transducer**

#### Removal



Relieve pressure; page 4.

- 2. Fig. 15. Remove five screws (307) and cover (322).
- 3. Disconnect lead (E) from control board (302).
- 4. Remove three screws (319) and fluid filter (318) from control plate (301). Carefully pull transducer connector through rubber grommet (315).

5. Remove pressure control transducer (318z) and packing o-ring (318aa) from filter housing (318a).

#### Installation

- 1. Fig. 15. Install packing o-ring (318aa) and pressure control transducer (318z) in filter housing (318a). Torque to 30–35 ft-lb.
- 2. Carefully feed transducer connector through rubber grommet (315). Install fluid filter (318) on control plate (301) with three screws (319).
- 3. Connect lead (E) to motor control board (302).
- 4. Install cover (322) with five screws (307).

### **Pressure Adjust Potentiometer**

#### Removal



Relieve pressure; page 4.

- 2. Fig. 15. Remove five screws (307) and cover (322).
- 3. Disconnect lead (D) from control board (302).
- 4. Loosen set screws on potentiometer knob (313) and remove knob, shaft nut, lockwasher (310) and pressure adjust potentiometer (310).
- 5. Remove seal (311) from potentiometer (310).

#### Installation

- 1. Install seal (311) on potentiometer (310).
- Fig. 15. Install pressure adjust potentiometer (310), shaft nut, lockwasher (310) and potentiometer knob (313).
  - a. Turn potentiometer shaft (310) clockwise to internal stop. Assemble potentiometer knob (313) to strike pin on plate (312).
  - 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 (302).
- 4. Install cover (322) with five screws (307).

# **Pressure Control**

### **Control Board Diagnostics**

- 1. Fig. 15. Remove five screws (307) and cover (322).
- 2. Start sprayer.

- 3. Turn ON/OFF switch ON.
- 4. Observe LED operation and reference following table:

LED BLINKS	SPRAYER OPERATION	INDICATES	WHAT TO DO
Two times repeatedly	Sprayer shuts down and LED continues to blink two times repeatedly	Run away pressure. Pressure greater than 4500 psi (310 bar, 31 MPa).	<ol> <li>Check pressure transducer connection at control board</li> <li>Replace pressure transducer</li> <li>Replace control board</li> </ol>
Three times repeatedly	Sprayer shuts down and LED continues to blink three times repeatedly	Pressure transducer is faulty or missing	<ol> <li>Check pressure transducer connection at control board</li> <li>Replace pressure transducer</li> <li>Replace control board</li> </ol>
Four times repeatedly	Sprayer shuts down and LED continues to blink four times repeatedly	Generator voltage is low	<ol> <li>Increase engine throttle</li> <li>Check wiring connections</li> <li>Service Honda engine alternator</li> </ol>
Five times repeatedly	Sprayer shuts down and LED continues to blink five times repeatedly	High clutch current	<ol> <li>Check clutch 5-pin bulkhead connector. Clean contacts.</li> <li>Measure 1.2 ±0.2Ω (GMax 3900); 1.7 ±0.2Ω (GMax 5900) across clutch field at 70°F</li> <li>Replace clutch field assembly</li> </ol>
Six times repeatedly	Sprayer shuts down and LED continues to blink six times repeatedly	High clutch temperature	<ol> <li>If clutch is new, let sprayer cool down and then restart</li> <li>Inspect clutch. Replace clutch if there is excessive wear.</li> <li>Remove pump pin, separate pinion housing from clutch housing. Rotate rotor clockwise to check for excessive drag.</li> </ol>

## **Displacement Pump**

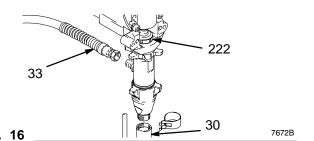
#### Removal

1. Flush pump.



Relieve pressure; page 4.

- 3. Fig. 16. Cycle pump with piston rod (222) in its lowest position.
- 4. Fig. 16. Remove suction tube (30) and hose (33).



#### Repair

See manual 308798 for pump repair instructions.

#### Installation

### **▲** WARNING

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.

### **A** 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. 19. Pull piston rod out 1.5 in. Screw in pump until holes in bearing cross link and piston rod align.

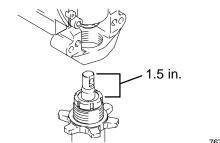
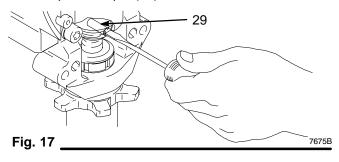
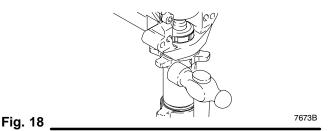


Fig. 19 7676

5. Fig. 17. Use screwdriver: push retaining spring up and push out pin (29).



6. Fig. 18. Loosen locknut by hitting firmly with a 20 oz (maximum) hammer. Unscrew pump.



2. Fig. 17. Push pin (29) into hole. And push retaining spring into groove all the way around connecting

Fig. 20. 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 20 oz (maximum) hammer to approximately 75□ 5 ft–lb (102 N·m).

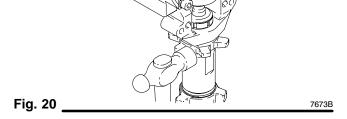


Fig. 21. Fill packing nut with Graco TSL until fluid flows onto the top of seal.

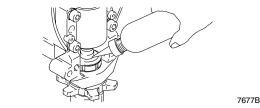
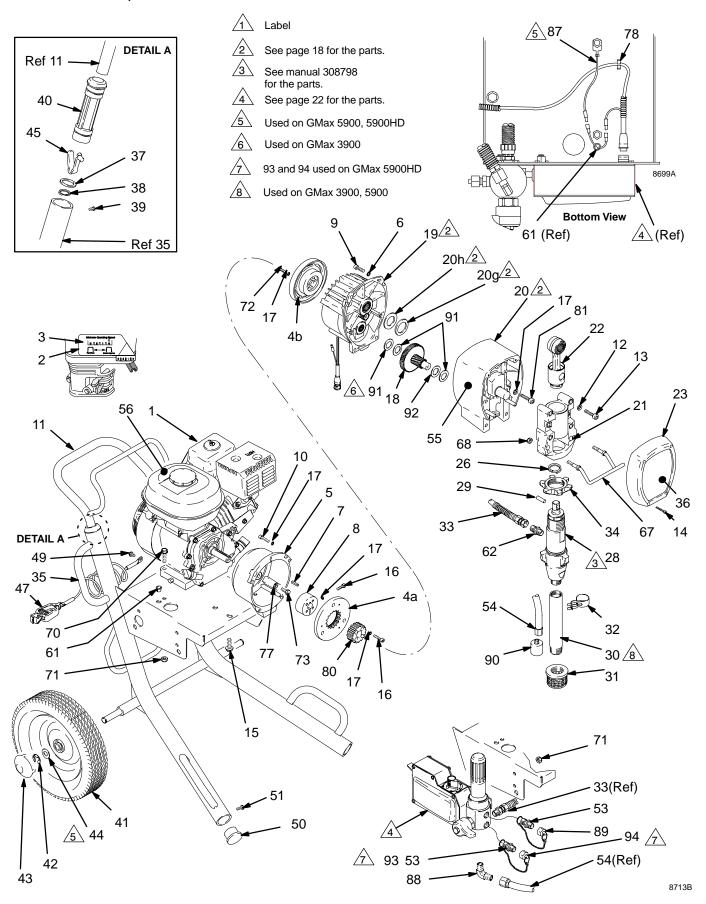


Fig. 21

### Parts Drawing - GMax 3900, 5900, 5900HD Hi-Boy Sprayers

### Models 232610, 232620 and 232627



## Parts List – GMax 3900, 5900, 5900HD Hi-Boy Sprayers

18879		232620 and 232627*	<b>0</b> 4	Ref	<b>5</b>	<b>-</b>	
108879	Part No.		Qty	No.	Part No.	Description	Qty
114530				31			
13084   PLATE, Indicator   1							1
192014   PLATE, indicator		•		00	189920	•	1
4		•		32	404404		
Part	192014	•	1			•	1
241109		•		20			1
241113	244400		4		240795	•	1
48				34	102722		1
Mary State	241113	•					1
ARMATURE, clutch, 5 in.,   1			'	35	193031	· · · · · · · · · · · · · · · · · · ·	'
Max 5900, 5900HD			1	33	240696	-	1
4			•				1
Lange		· ·		36			1
Sin, GMax 5900, 5900HD			1				1
5.6         CLUTCH HOUSING         38         110243         RING, retaining           193531         GMax 5900, 3900HD         1         39         108795         SCREW, mch, pn hd, 10-32 x 5/16 in.           1 04008         GMax 5900, 5900HD         4         191084         GMax 3900         GMax 3900           7 1 83401         KEY, parallel         1         4         1 WHEEL, semi-pneumatic           8 1 9360         CLAMP         1         179811         GMax 3900         WHEEL, semi-pneumatic           9 1 00644         GMax 3900         4         43         104811         GMax 3900         WHEEL, semi-pneumatic           10 10644         GMax 3900, 390HD         4         43         104811         HUBCAP         RING, retaining           10 10764         GMax 3900, 390HD         4         43         104811         HUBCAP         RING, retaining           11 2 39986         CART HANDLE & HOSE RACK         1         4         44         145636         WASHER, GMax 5900, 5900HD only           12 1 10 20 10 GMax 3900         GMax 5900, 3900HD 38-16 x 2.25 in.         4         51         112984         SCREW, mesh pn hd, GMax 3900           13 1 14 14 15 SCREW, secket beat, 14-20 x 344 in.         4         51         114984         S			1	37		•	2
193531   GMax 5900, 5900HD						• •	2
COCKWASHER, spring, 1/4 in.	193540	GMax 3900	1	39	108795	SCREW, mch, pn hd, 10-32 x 5/16 in.	4
105510   GMax 3900	193531	GMax 5900, 5900HD	1	40		SLEEVE	
104008   GMax 5900, 5900HD		LOCKWASHER, spring, 1/4 in.			192027	GMax 3900	2
7         183401         KEY, parallel         1         1 06062         CMax 3900         Max 3900           8         19360         CLAMP         1         17811         CMax 3900         4         1 17811         CMax 3900         4         1 101242         RINO, retaining           100644         GMax 3900         4         43         104811         HUBC, retaining           10         100644         CAPSCREW, socket head, 1/4–20 x 3/4 in.         4         41         154636         WASHER, GMax 5900, 5900HD only           11         23989         CAPT-HANDLE & HOSE RACK         1         4         7         27586         GROUNDING CLAMP & WIRE           12         106115         LCOKWASHER, spring, 36 in.         4         4         9         112798         SCREW, hex washer hd., No. 8 x 3/8 in           107210         GMax 3900, 3900-890, 5900HD, 39-16 x 1.5 in.         4         51         114894         SCREW, hex washer hd., No. 8 x 3/8 in           14         114418         SCREW, self-tap, fil hd, 8-32 x 1 in.         4         53         146472         ADAPTER           16         108803         CAPSCREW, sch, 1/4–2 x 1 in.         4         53         14417         HOSE, drain           16         108803	105510	GMax 3900	4		191084	GMax 5900, 5900HD	2
8   193880	104008	GMax 5900, 5900HD	4	41			
CAPSCREW, socket head, 1/4–20 x 3/4 in.   43 104811 HUBGAP		KEY, parallel	1			GMax 3900	2
100644	193680		•			GMax 5900, 5900HD	2
101864   GMax 5900, 5900HD   4						• •	2
10 100844 CAPSCREW, socket head, 1/4-20 x 3/4 in. 5 45 112827 BUTTON, snap 23998 CART HANDLE & HOSE RACK 1 47 237686 GROUNDING CLAMP & WIRE 12 106115 LOCKWASHER, spring, 3/8 in. 4 49 112798 SCREW, hex washer hd,, No. 8 x 3/8 in 13 CAPSCREW, socket head, 50 193700 PLUG, tubing; GMax 3900 107210 GMax 3900, 39-616 x 1.5 in. 4 4 114418 SCREW, self-tap for 1.5 to. 1.5 in. 4 4 114418 SCREW, self-tap file, 8-32 x 1 in. 4 51 114984 SCREW, meh, pn hd; GMax 3900 only 14 114418 SCREW, self-tap file, 8-32 x 1 in. 4 51 114984 SCREW, meh, pn hd; GMax 3900 only 15 113802 SCREW, slange, hex hd, 3/8-16 x 5/8 in. 1 54 194178 HOSE, drain 16 108803 CAPSCREW, sch, 1/4-2 x 1 in. 6 55  194125 LABEL, danger 17 LOCKWASHER, spring, 1/4 in. 56  194126 LABEL, warning 105510 GMax 3900 17 61 114678 BUSHING, strain relief 105510 GMax 3900 17 667 192719 HANGER, pail 18 GEAR COMBINATION 162445 NIPPLE, GMax 3900 241430 GMax 3900 1 1 67 192719 HANGER, pail 241102 GMax 5900, 5900HD 1 1 72 101682 SCREW, cap, sch 241007 GMax 3900 1 1 72 101682 SCREW, cap, sch 241015 GMax 3900 1 1 109031 GMax 3900 241102 GMax 5900, 5900HD 1 1 10837 SCREW, cap, sch 241015 GMax 3900 1 1 109031 GMax 5900, 5900HD 241016 GMax 3900 1 1 109031 GMax 5900, 5900HD 241017 GMax 5900, 5900HD 1 1 10838 LOCKNUT, 5/16-18 x 1-1/2 locknut, sch and sch a							2
11         239998         CART HANDLE & HOSE RACK         1         47         237686         GROUNDING CLAMP & WIRE           12         106115         LOCKWASHER, spring, 3/8 in.         4         49         112798         SCREW, hex washer hd, No. 8 x 3/8 in           13         107210         GMax 3900, 3/8-16 x 1.5 in.         4         193682         CAP, end; GMax 5900, 5900HD           14         114418         SCREW, sedr, 16 hd, 8-32 x 1 in.         4         51         114984         SCREW, mch, pn hd; GMax 3900 only           15         113802         SCREW, seln-lap, fil hd, 8-32 x 1 in.         4         53         164672         ADAPTER           16         108803         CAPSCREW, sch, 1/4-2 x 1 in.         6         55▲         194125         LABEL, danger           17         LOCKWASHER, spring, 1/4 in.         56▲         194125         LABEL, warning           105510         GMax 3900         17         61         114678         BURING, strain relief           19         GMax 3900         1         67         192719         HANGER, pail           241132         GMax 3900         1         67         192719         HANGER, pail           241112         GMax 3900         1         71         110837			-			•	2
12			-				2
107210   GMax 3900; 36-16 x 1.5 in,			-				1
107210   GMax 3900; 3/6-16 x 1.5 in.   4   193682   CAP, end; GMax 5900, 5900HD   114666   GMax 5900, 5900HD; 3/8-16 x 2.25 in.   4   51   11498   SCREW, melt-lap, fill hd, 8-32 x 1 in.   4   53   164672   ADAPTER   HOSE, drain   13802   SCREW, lange, hex hd, 3/8-16 x 5/8 in.   1   54   194178   HOSE, drain   HOSE, drain   LOCKWASHER, spring, 1/4 in.   56   194126   LABEL, danger   LABEL, dan	106115		4				1.
114.666	407040	· · · · · · · · · · · · · · · · · · ·		50			2
144         114418         SCREW, self-tap, fil ind, 8–32 x 1 in.         4         53         164672         ADAPTER           113802         SCREW, flange, hex hdx 3/8–16 x 5/8 in.         1         54         194178         HOSE, drain           16         108803         CAPSCREW, sch, 1/4–2 x 1 in.         6         55		· ·		<b>-</b> 4			2
13802   SCREW, flange, hex hd, 3/8-16 x 5/8 in.   1   54   194178   HOSE, drain							2
16         108803         CAPSCREW_sch, 1/4-2 x 1 in.         6         55							2 1
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18						•	1
241439	100010		••	62		·	1 1
241440	241439		1	67			1
PINION ASSEMBLY; Parts, page 18						·	2
241108							2
241112	241108		1				6
DRIVE HOUSING; Parts, page 18   73   SCREW, cap, sch							4
241007         GMax 3900         1         109031         GMax 3900           241011         GMax 5900, 5900HD         1         108842         GMax 5900, 5900HD           21         BEARING HOUSING; includes 67 and 68         77         WASHER, lock, spring           240523         GMax 3900         1         104008         GMax 3900           241015         GMax 5900, 5900HD         1         100214         GMax 3900, 5900HD           241008         GMax 3900         1         80         HUB, armature           241012         GMax 5900, 5900HD         1         81         SCREW           23         COVER, HOUSING, DRIVE         107218         GMax 3900         1         114686         GMax 3900           241308         GMax 3900         1         82         206994         THROAT SEAL LIQUID; not shown           26         SPRING, retaining         87         240997         CONDUCTOR, ground           176817         GMax 3900         1         88         110249         ADAPTER, male elbow, 90°           183169         GMax 5900, 5900HD         1         89         240131         PLUG, packless           240291         GMax 5900         1         91         114672         WASHER					101002	• • •	4
241011	241007	GMax 3900	1	, ,	109031		4
21	241011	GMax 5900, 5900HD	1				4
240523		BEARING HOUSING; includes 67 and 68		77		•	
241015 GMax 5900, 5900HD	240523	GMax 3900	1		104008		4
CONNECTING ROD       78       114687       CLIP, retainer         241008       GMax 3900       1       80       HUB, armature         241012       GMax 5900, 5900HD       1       81       SCREW         23       COVER, HOUSING, DRIVE       107218       GMax 3900         179899       GMax 3900       1       114686       GMax 5900         241308       GMax 5900, 5900HD       1       82       206994       THROAT SEAL LIQUID; not shown         26       SPRING, retaining       87       240997       CONDUCTOR, ground         176817       GMax 3900       1       88       110249       ADAPTER, male elbow, 90°         183169       GMax 5900, 5900HD       1       89       240131       PLUG, packless         28       DISPLACEMENT PUMP; Manual 308798       90       241718       DEFLECTOR         239923       GMax 3900       1       91       114672       WASHER, GMax 3900 (3); 5900, 5900H         29       PIN, straight       93**       162485       ADAPTER         29       PIN, straight       94***       240987       PLUG, packless, 3/8 in.         30       TUBE, intake       * Models 233005 through 233007 include Pressur	241015	GMax 5900, 5900HD	1				4
241008 GMax 3900 1 80 HUB, armature 241012 GMax 5900, 5900HD 1 81 SCREW COVER, HOUSING, DRIVE 107218 GMax 3900 179899 GMax 3900 1 114686 GMax 5900 241308 GMax 5900, 5900HD 1 82 206994 THROAT SEAL LIQUID; not shown SPRING, retaining 87 240997 CONDUCTOR, ground 176817 GMax 3900 1 88 110249 ADAPTER, male elbow, 90° 183169 GMax 5900, 5900HD 1 88 110249 ADAPTER, male elbow, 90° 183169 GMax 5900, 5900HD 1 89 240131 PLUG, packless DISPLACEMENT PUMP; Manual 308798 90 241718 DEFLECTOR 239923 GMax 3900 1 91 114672 WASHER, GMax 3900 (3); 5900, 5900H 240291 GMax 5900 1 92 114699 WASHER 240800 GMax 5900HD 1 92 114699 WASHER 240800 GMax 5900HD 1 93** 162485 ADAPTER PIN, straight 94** 240987 PLUG, packless, 3/8 in.  176818 GMax 3900 1 Amage of the packless of the packle		CONNECTING ROD		78			1
23 COVER, HOUSING, DRIVE 107218 GMax 3900 179899 GMax 3900 1 114686 GMax 5900 241308 GMax 5900, 5900HD 1 82 206994 THROAT SEAL LIQUID; not shown 26 SPRING, retaining 87 240997 CONDUCTOR, ground 176817 GMax 3900 1 88 110249 ADAPTER, male elbow, 90° 183169 GMax 5900, 5900HD 1 89 240131 PLUG, packless DISPLACEMENT PUMP; Manual 308798 90 241718 DEFLECTOR 239923 GMax 3900 1 91 114672 WASHER, GMax 3900 (3); 5900, 5900H 240291 GMax 5900 1 92 114699 WASHER 240800 GMax 5900HD 1 93** 162485 ADAPTER 29 PIN, straight 94** 240987 PLUG, packless, 3/8 in. 176818 GMax 3900 1 1 91 114672 Warning labels, tags, and cards are free 183210 GMax 5900, 5900HD 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	241008	GMax 3900	1				1
179899 GMax 3900 1 114686 GMax 5900 241308 GMax 5900, 5900HD 1 82 206994 THROAT SEAL LIQUID; not shown SPRING, retaining 87 240997 CONDUCTOR, ground 176817 GMax 3900 1 88 110249 ADAPTER, male elbow, 90° 183169 GMax 5900, 5900HD 1 89 240131 PLUG, packless DISPLACEMENT PUMP; Manual 308798 90 241718 DEFLECTOR 239923 GMax 3900 1 91 114672 WASHER, GMax 3900 (3); 5900, 5900H 240291 GMax 5900 1 92 114699 WASHER 240800 GMax 5900HD 1 93** 162485 ADAPTER 29 PIN, straight 94** 240987 PLUG, packless, 3/8 in. 176818 GMax 3900 1 1 91 114672 WASHER 240987 PLUG, packless, 3/8 in.  176818 GMax 3900 1 1 94** 240987 PLUG, packless, 3/8 in. 176818 GMax 3900 1 1	241012	•	1	81		SCREW	
241308 GMax 5900, 5900HD 1 82 206994 THROAT SEAL LIQUID; not shown SPRING, retaining 87 240997 CONDUCTOR, ground 176817 GMax 3900 1 88 110249 ADAPTER, male elbow, 90° 183169 GMax 5900, 5900HD 1 89 240131 PLUG, packless DISPLACEMENT PUMP; Manual 308798 90 241718 DEFLECTOR 240291 GMax 5900 1 91 114672 WASHER, GMax 3900 (3); 5900, 5900H 240291 GMax 5900 1 92 114699 WASHER 240800 GMax 5900HD 1 93** 162485 ADAPTER PIN, straight 94** 240987 PLUG, packless, 3/8 in.  176818 GMax 3900 1 1		COVER, HOUSING, DRIVE			107218	GMax 3900	2
26 SPRING, retaining 176817 GMax 3900 1 88 110249 ADAPTER, male elbow, 90° 183169 GMax 5900, 5900HD 1 89 240131 PLUG, packless DISPLACEMENT PUMP; Manual 308798 90 241718 DEFLECTOR 239923 GMax 3900 1 91 114672 WASHER, GMax 3900 (3); 5900, 5900H 240291 GMax 5900 1 92 114699 WASHER 240800 GMax 5900HD 1 93** 162485 ADAPTER 29 PIN, straight 94** 240987 PLUG, packless, 3/8 in. 176818 GMax 3900 1 1			1		114686	GMax 5900	2
176817 GMax 3900 1 88 110249 ADAPTER, male elbow, 90° 183169 GMax 5900, 5900HD 1 89 240131 PLUG, packless DISPLACEMENT PUMP; Manual 308798 90 241718 DEFLECTOR 239923 GMax 3900 1 91 114672 WASHER, GMax 3900 (3); 5900, 5900H 240291 GMax 5900 1 92 114699 WASHER 240800 GMax 5900HD 1 93** 162485 ADAPTER PIN, straight 94** 240987 PLUG, packless, 3/8 in.  176818 GMax 3900 1	241308	·	1	82	206994	THROAT SEAL LIQUID; not shown	1
183169 GMax 5900, 5900HD 1 89 240131 PLUG, packless DISPLACEMENT PUMP; Manual 308798 90 241718 DEFLECTOR  239923 GMax 3900 1 91 114672 WASHER, GMax 3900 (3); 5900, 5900H  240291 GMax 5900 1 92 114699 WASHER  240800 GMax 5900HD 1 93** 162485 ADAPTER  PIN, straight 94** 240987 PLUG, packless, 3/8 in.  176818 GMax 3900 1 1			_	87	240997	CONDUCTOR, ground	1
28 DISPLACEMENT PUMP; Manual 308798 239923 GMax 3900 1 91 114672 WASHER, GMax 3900 (3); 5900, 5900h 240291 GMax 5900 1 92 114699 WASHER 240800 GMax 5900HD 1 93** 162485 ADAPTER 29 PIN, straight 94** 240987 PLUG, packless, 3/8 in. 176818 GMax 3900 1 1				88	110249	ADAPTER, male elbow, 90°	1
239923 GMax 3900 1 91 114672 WASHER, GMax 3900 (3); 5900, 5900H 240291 GMax 5900 1 92 114699 WASHER 240800 GMax 5900HD 1 93** 162485 ADAPTER 29 PIN, straight 94** 240987 PLUG, packless, 3/8 in. 176818 GMax 3900 1	183169		1	89	240131	PLUG, packless	1
240291 GMax 5900 1 92 114699 WASHER 240800 GMax 5900HD 1 93** 162485 ADAPTER 29 PIN, straight 94** 240987 PLUG, packless, 3/8 in. 176818 GMax 3900 1				90		DEFLECTOR	1
240800 GMax 5900HD 1 93** 162485 ADAPTER 29 PIN, straight 94** 240987 PLUG, packless, 3/8 in. 176818 GMax 3900 1 1						WASHER, GMax 3900 (3); 5900, 5900HD	(2)
29 PIN, straight 176818 GMax 3900 1 183210 GMax 5900, 5900HD 30 TUBE, intake 192641 GMax 3900 1 1 DATE: 102430							1
176818 GMax 3900 1 1	240800		1				1
183210 GMax 5900, 5900HD 1 1 ** Models 233005 through 233007 include Pressur Gauge Kit 241339	470040		4	94**	240987	PLUG, packless, 3/8 in.	1
* Models 233005 through 233007 include Pressur 192641 GMax 3900 1 Gauge Kit 241339				<b>▲</b> Da	nger & Warn	ing labels, tags, and cards are free	
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# Parts List & Drawing – Pinion Assembly

#### Ref No. 19 and 20

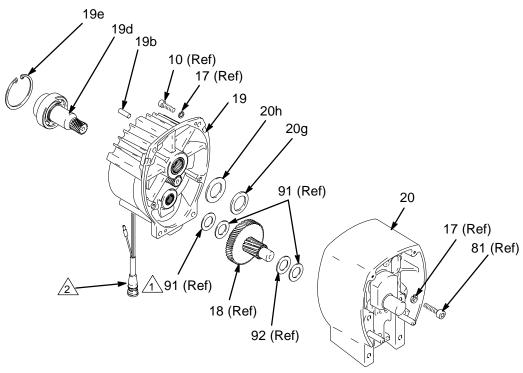
\*Must be ordered separately..

Ref No. 19: Pinion Housing Assembly 241108 for GMax 3900; Pinion Housing Assembly 241112 for GMax 5900

Ref No. 20: Drive Housing Assembly 241007 for GMax 3900; Drive Housing Assembly 241011 for GMax 5900

Ref No.	Part No.	Description	Qty	Ref No.	Part No.	Description	Qty
19		PINION HOUSING	1	20		DRIVE HOUSING	1
19b	105489	PIN	2	20g*		WASHER	
19d*		PINION SHAFT		-	107089	GMax 3900	1
	241110	GMax 3900	1		194173	GMax 5900, 5900HD	1
	241114	GMax 5900, 5900HD	1	20h*		WASHER	
19e*	113094	RETAINING RING, large GMax 3900	1		194411	GMax 3900	1
	112770	GMax 5900, 5900HD	1		194172	GMax 5900, 5900HD	1

<sup>\*</sup>Must be ordered separately..



1 Only used on GMax 3900, Models 232610 and 232612

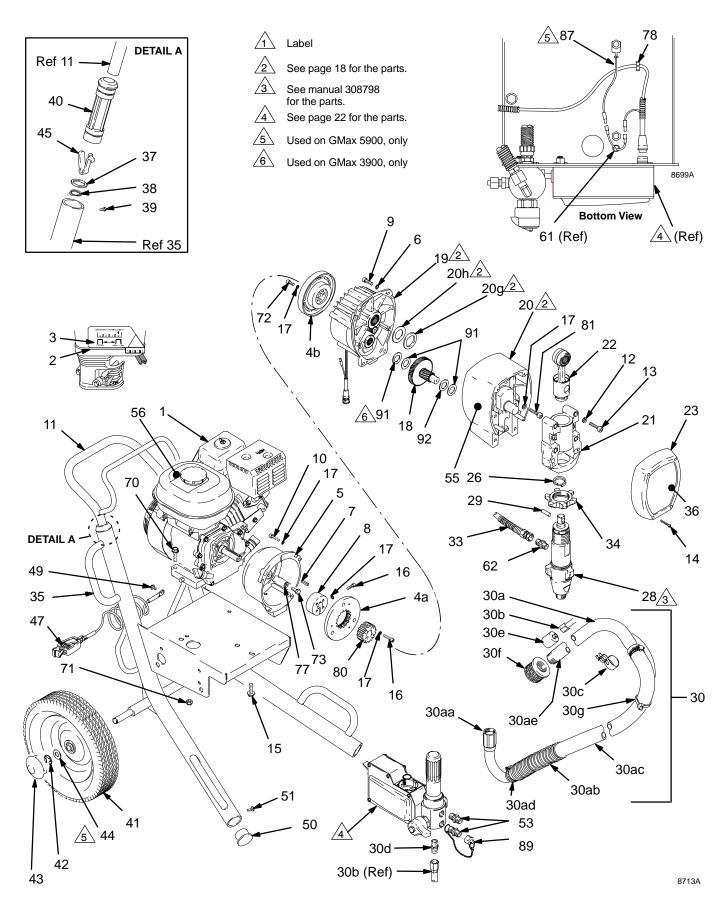
2 Pinion housing assembly (19) includes clutch field and connector

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Notes	

### Parts Drawing - GMax 3900 and GMax 5900 Lo-Boy Sprayers

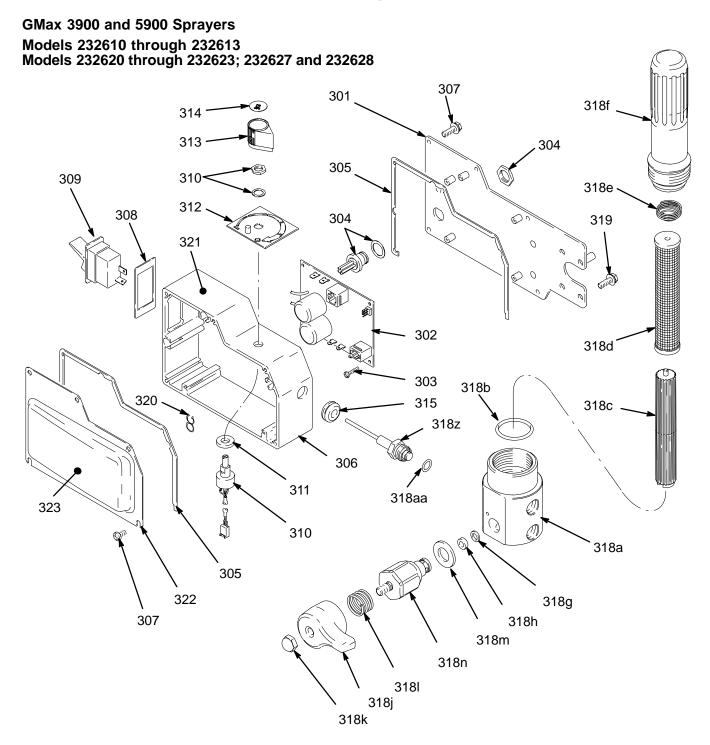
#### Models 232612 and 232622



## Parts List – GMax 3900 and GMax 5900 Lo–Boy Sprayers

Ref		nd 232622		Ref			
No.	Part No.	Description	Qty	No.	Part No.	Description	Qty
1		ENGINE		30ab	176450	GUARD, hose	1
	108879	GMax 3900	1	30ac	194306	HOSE, fluid	1
	114530	GMax 5900	1	30ad	101818	CLAMP, hose	2
2	113084	RIVET, blind	2	30ae	170957	TUBE, suction	1
3	192014	PLATE, indicator	1	30b	194180	.HOSE, drain	1
4		CLUTCH ASSEMBLY,		30c	194194	.CLIP, spring	1
		includes 4a, 4b, 16, 17, 80		30d	162453	.NIPPLÉ	1
	241109	GMax 3900	1	30e	241718	.DEFLECTOR	1
	241113	GMax 5900	1	30f	187147	.STRAINER	1
4a		.ARMATURE, clutch, 4 in.,	1	30g	144958	.STRAP, tie	1
		GMax 3900		33	240795	HOSE, coupled	1
		.ARMATURE, clutch, 5 in.,	1	34		NUT, retaining	
		GMax 5900			192723	GMax 3900	1
4b		.ROTOR			193031	GMax 5900	1
		4 in., GMax 3900	1	35		CART FRAME	
		5 in., GMax 5900	1		240728	GMax 3900	1
5		CLUTCH HOUSING			240727	GMax 5900	1
	193540	GMax 3900	1	36	193698	LABEL, identification, GMax 3900	1
	193531	GMax 5900	1		193683	LABEL, identification, GMax 5900	1
6		LOCKWASHER, spring, 1/4 in.		37	183350	WASHER, plain	2
	105510	GMax 3900	1	38	110243	RING, retaining	2
	104008	GMax 5900	1	39	108795	SCREW, mch, pn hd, 10-32 x 5/16 in.	4
7	183401	KEY, parallel	1	40		SLEEVE	
8	193680	COLLAR, shaft	1		192027	GMax 3900	2
9		CAPSCREW, socket head, 1/4-20 x 3/4 in			191084	GMax 5900	2
	100644	GMax 3900	4	41		WHEEL, semi-pneumatic	
	101864	GMax 5900	4		106062	GMax 3900	2
10	100644	CAPSCREW, socket head, 1/4-20 x 3/4 in	. 5		179811	GMax 5900	2
11	239998	CART HANDLE & HOSE RACK	1	42	101242	RING, retaining	2
12	106115	LOCKWASHER, spring, 3/8 in.	4	43	104811	HUBCAP	2
13		CAPSCREW, socket head,		44	154636	WASHER, GMax 5900 only	2
	107210	GMax 3900; 3/8-16 x 1.5 in.	4	45	112827	BUTTON, snap	2
	114666	GMax 5900; 3/8-16 x 2.25 in.	4	46	108068	PIN, spring, straight, 3/16 x 1–1/4 in.	2
14	114418	SCREW, self-tap, fil hd, 8-32 x 1 in.	4	47	237686	GROUNDING CLAMP & WIRE	1
15	113802	SCREW, flange, hex hd,, 3/8-16 x 5/8 in.	1	49	112798	SCREW, hex washer hd, No. 8 x 3/8 in	1
16	108803	CAPSCREW, sch, 1/4-2 x 1 in.	6	50	193700	PLUG, tubing; GMax 3900	2
17		LOCKWASHER, spring, 1/4 in.			193682	CAP, end; GMax 5900	2
	105510	GMax 3900	17	51	114984	SCREW	2
	105510	GMax 5900	11	52	100020	WASHER, GMax 3900 only	4
18		GEAR COMBINATION		53	164672	ADAPTER	2
	241439	GMax 3900	1	55▲	194125	LABEL, danger	1
	241440	GMax 5900	1	56▲	194126	LABEL, warning	1
19		PINION ASSEMBLY; Parts, page 18		0.4	114678	BUSHING, strain relief	1
-	241108	GMax 3900	1	61 62	114070	NIPPLE, 3/8–18 npsm(m) x 1/4 npt(m)	
	241112	GMax 5900	1	02	183461	GMax 3900	1
20		DRIVE HOUSING			162485	GMax 5900	1
-	241007	GMax 3900	1	70	110837	SCREW, flng, hex hd, 5/16–18 x 1–1/2 in.	2
	241011	GMax 5900	1	71	110838	LOCKNUT, heavy hex, 5/16–18	6
21		BEARING HOUSING		72	101682	SCREW, cap, sch	4
	240523	GMax 3900	1	73	101002	SCREW, cap, sch	4
	241015	GMax 5900	1	73	109031	GMax 3900	4
22		CONNECTING ROD			108842	GMax 5900 GMax 5900	4
	241008	GMax 3900	1	77	100042	WASHER, lock, spring	7
	241012	GMax 5900	1	,,	104008	GMax 3900	4
23		COVER, HOUSING, DRIVE	•		100214	GMax 5900 GMax 5900	4
	179899	GMax 3900	1	78	114687	CLIP, retainer	1
	241308	GMax 5900	1	80	114001	HUB, armature	1
26		SPRING, retaining	•	81		SCREW	'
	176817	GMax 3900	1	01	107210		2
	183169	GMax 5900	1		107218	GMax 3900 GMax 5900	2
28	.00.00	DISPLACEMENT PUMP, Manual 308798	•	92	114686	GMax 5900 THROAT SEAL LIQUID; not shown	2 1
	239923	GMax 3900	1	82 97	206994		
	240291	GMax 5900 GMax 5900	1	87 80	240997	CONDUCTOR, ground	1
29	270231	PIN, straight	'	89	240131	PLUG, packless	1
	176818	GMax 3900	1	91	44.4070	Washer	_
	183210	GMax 5900 GMax 5900	1		114672	GMax 3900	3
30	241287	ASSEMBLY, tube, suction	1	00	114672	GMax 5900	2
30a	241207	.TUBE, suction, 5 gallon (20 liter)	1	92	114699	WASHER	1
Jua	47114 <del>4</del>	includes 30aa through 30ae	'	▲ Dai	nger & Warn	ing labels, tags, and cards are free.	
		molados soda tillough sodat		_		- ·	

# **Parts Drawing – Sprayer**



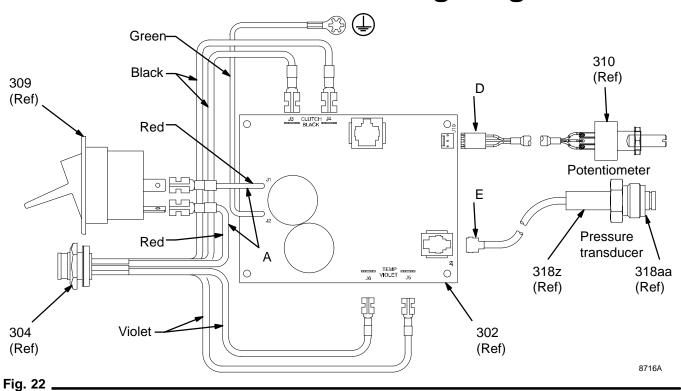
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# Parts List – Sprayer

Models 232610 through 232613; 232620 through 232623; 232627 and 232628

			REF			
PART NO.	DESCRIPTION	QTY	NO.	PART NO.	DESCRIPTION	QTY
193653	PLATE, control	1	318f	192706	BOWL, filter	1
241093	BOARD, PC	1	318g	193710	SEAL, valve	1
111839	SCREW, mch pan, 6-32 x 1/2 in.	5	318h	193709	SEAT, valve	1
240776	HARNESS, wiring.	1	318j	194102	HANDLE, valve	1
193497	GASKET, control	2	318k	114688	NUT, cap, hex hd	1
193652	HOUSING, control box	1	3181	114708	SPRING, compression	1
114631	SCREW, mch, pan hd	10	318m	114797	GASKET	1
193052	PLATE, instruction	1	318n	245103*	VALVE	1
114277	SWITCH, rocker, (spst)	1	318z	240314	TRANSDUCER, pressure control	1
241443	POTENTIOMETER, pressure control	1			includes 318aa	
193657	GASKET, potentiometer	1	318aa	a 111457	O-RING	1
193654	PLATE, instruction	1	319	110997	SCREW, flange, hex	3
114273	KNOB, potentiometer	1	320	114532	TIE, wire, twist	1
193072	LABEL, control	1	321▲	189246	LABEL, warning	1
114629	GROMMET, transducer	1	322	241444	COVER, pressure control	1
	FILTER, fluid	1	323	193684	LABEL, identification	1
193651	HOUSING, filter	1				
104361	O-RING	1	* D			
186075	SUPPORT, filter	1		•	cement kit 245103 includes 318g thr	ougn
167025	STRAINER, mesh, 60	1	318	Bn		
171941	SPRING, compression	1	▲ Re	placement wa	rning labels may be ordered free of ch	arge
	193653 <b>241093</b> 111839 240776 193497 193652 114631 193052 114277 241443 193657 193654 114273 193072 114629 193651 104361 186075 167025	193653         PLATE, control           241093         BOARD, PC           111839         SCREW, mch pan, 6–32 x 1/2 in.           240776         HARNESS, wiring.           193497         GASKET, control           193652         HOUSING, control box           114631         SCREW, mch, pan hd           193052         PLATE, instruction           114277         SWITCH, rocker, (spst)           241443         POTENTIOMETER, pressure control           193657         GASKET, potentiometer           193654         PLATE, instruction           114273         KNOB, potentiometer           193072         LABEL, control           114629         GROMMET, transducer           FILTER, fluid         HOUSING, filter           104361         O-RING           186075         SUPPORT, filter           167025         STRAINER, mesh, 60	193653         PLATE, control         1           241093         BOARD, PC         1           111839         SCREW, mch pan, 6–32 x 1/2 in.         5           240776         HARNESS, wiring.         1           193497         GASKET, control         2           193652         HOUSING, control box         1           114631         SCREW, mch, pan hd         10           193052         PLATE, instruction         1           114277         SWITCH, rocker, (spst)         1           241443         POTENTIOMETER, pressure control         1           193657         GASKET, potentiometer         1           193654         PLATE, instruction         1           114273         KNOB, potentiometer         1           114629         GROMMET, transducer         1           114629         GROMMET, transducer         1           1193651         HOUSING, filter         1           104361         O-RING         1           186075         SUPPORT, filter         1           167025         STRAINER, mesh, 60         1	PART NO.         DESCRIPTION         QTY         NO.           193653         PLATE, control         1         318f           241093         BOARD, PC         1         318g           111839         SCREW, mch pan, 6-32 x 1/2 in.         5         318h           240776         HARNESS, wiring.         1         318j           193497         GASKET, control         2         318k           193652         HOUSING, control box         1         318l           114631         SCREW, mch, pan hd         10         318m           193052         PLATE, instruction         1         318z           241443         POTENTIOMETER, pressure control         1         318z           241443         POTENTIOMETER, pressure control         1         318ac           193657         GASKET, potentiometer         1         318ac           193654         PLATE, instruction         1         319           114273         KNOB, potentiometer         1         321▲           193072         LABEL, control         1         321▲           114629         GROMMET, transducer         1         322           FILTER, fluid         1         323	PART NO.         DESCRIPTION         QTY         NO.         PART NO.           193653         PLATE, control         1         318f         192706           241093         BOARD, PC         1         318g         193710           111839         SCREW, mch pan, 6–32 x 1/2 in.         5         318h         193709           240776         HARNESS, wiring.         1         318j         194102           193497         GASKET, control         2         318k         114688           193652         HOUSING, control box         1         318l         114708           114631         SCREW, mch, pan hd         10         318m         114797           193052         PLATE, instruction         1         318z         245103*           114277         SWITCH, rocker, (spst)         1         318z         240314           241443         POTENTIOMETER, pressure control         1         318aa 111457           193657         GASKET, potentiometer         1         318aa 111457           193654         PLATE, instruction         1         319         110997           114273         KNOB, potentiometer         1         321         189246           114629 <td< td=""><td>PART NO.         DESCRIPTION         QTY         NO.         PART NO.         DESCRIPTION           193653         PLATE, control         1         318f         192706         BOWL, filter           241093         BOARD, PC         1         318g         193710         SEAL, valve           111839         SCREW, mch pan, 6-32 x 1/2 in.         5         318h         193709         SEAT, valve           240776         HARNESS, wiring.         1         318j         194102         HANDLE, valve           193497         GASKET, control         2         318k         114688         NUT, cap, hex hd           193497         GASKET, control box         1         318l         114708         SPRING, compression           193652         HOUSING, control box         1         318m         114797         GASKET           193052         PLATE, instruction         1         318n         245103*         VALVE           114277         SWITCH, rocker, (spst)         1         318z         240314         TRANSDUCER, pressure control includes 318aa           193657         GASKET, potentiometer         1         318aa         111457         O-RING           193654         PLATE, instruction         1         319&lt;</td></td<>	PART NO.         DESCRIPTION         QTY         NO.         PART NO.         DESCRIPTION           193653         PLATE, control         1         318f         192706         BOWL, filter           241093         BOARD, PC         1         318g         193710         SEAL, valve           111839         SCREW, mch pan, 6-32 x 1/2 in.         5         318h         193709         SEAT, valve           240776         HARNESS, wiring.         1         318j         194102         HANDLE, valve           193497         GASKET, control         2         318k         114688         NUT, cap, hex hd           193497         GASKET, control box         1         318l         114708         SPRING, compression           193652         HOUSING, control box         1         318m         114797         GASKET           193052         PLATE, instruction         1         318n         245103*         VALVE           114277         SWITCH, rocker, (spst)         1         318z         240314         TRANSDUCER, pressure control includes 318aa           193657         GASKET, potentiometer         1         318aa         111457         O-RING           193654         PLATE, instruction         1         319<

# **Pressure Control Wiring Diagram**



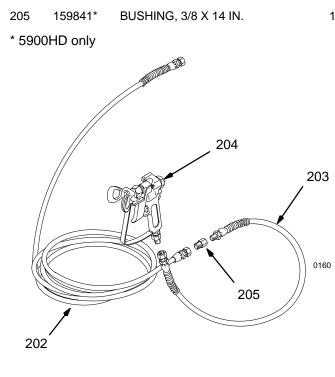
# Parts List & Drawing – Complete Sprayers

Part No.

Models 232611, 232613, 232621, 232623, 232628

GMax 3900, 5900, 5900HD Airless Paint Sprayers Includes items 201 to 204

Ref No.	Part No.	Description	Qty	Ref No.
201	232611	GM3900 Hi-Boy Sprayer See parts list on page 16	1	205
	232621	GM5900 Hi-Boy Sprayer See parts list on page 16	1	* 59
	232628	GM5900HD Hi-Boy Sprayer See parts list on page 16	1	
	232613	GM3900 Lo-Boy Sprayer See parts list on page 21	1	
	232623	GM5900 Lo-Boy Sprayer See parts list on page 21	1	
202	240794	HOSE, grounded, nylon; 1/4 in. ID; cpld 1/4 npsm(fbe); 50 foot (15 m); spring guards both ends	1	
	240797*	3300 psi (227 bar, 27.7 MPa) HOSE, grounded, nylon; 3/8 in. ID; cpld 1/4 npsm(fbe); 50 foot (15 m); spring guards both ends 3300 psi (227 bar, 27.7 MPa)	1	
203	238358	HOSE, grounded, nylon; 3/16 in. ID; cpld 1/4 npsm(m) x 1/4 npsm(f) swive 3 foot (0.9 m); spring guards both end		(
	241735*	HOSE, grounded, nylon; 1/4 in. ID; cpld 1/4 npsm(m) x 1/4 npsm(f) swive	I;	
204	220955	3 foot (0.9 m); spring guards both end CONTRACTOR SPRAY GUN Includes RAC 5™ 517–size SwitchTip and HandTite™ Guard		20
	241705*	See 309091 for parts TEXTURE SPRAY GUN Includes GHD527 Heavy Duty Switch and Guard	1 Tip	



Description

Qty

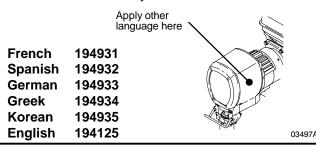
### **Accessories**

#### **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.

See 308491 for parts

Order the labels from your Graco distributor.



#### **Displacement Pump Repair Kits**

Packing repair kits.

GMax 3900 239928 GMax 5900, 5900HD 240248

## **Technical Data**

Honda GX120 Engine Power Rating @ 3700 rpm  ANSI	Maximum delivery rating       GMax3900
Honda GX160 Engine	GMax5900, 5900HD 1 gun with 0. 041 in. tip
Power Rating @ 3700 rpm	2 guns with 0.028 in. tip 3 guns with 0.022 in. tip
ANSI 5.5 Horsepower	4 guns with 0. 019 in. tip
DIN 6270B/DIN 6271	Inlet paint strainer
NA 2.9 Kw – 4.0 Ps	stainless steel screen, reusable
NB 3.6 Kw – 4.9 Ps	Outlet paint filter 60 mesh (250 micron)
Maximum working pressure	stainless steel screen, reusable
(227 bar, 22.7 MPa)	Pump inlet size
Noise Level	Fluid outlet size 1/4 npsm from fluid filter
Sound power105 dBa per ISO 3744	Wetted parts zinc-plated carbon steel, PTFE, Nylon, polyurethane, UHMW polyethylene,
Sound pressure	Viton®, Delrin®, leather, aluminum, tungsten carbide,nickle-plated carbon steel, stainless steel,
Cycles/gallon (liter)	chrome plating
GMax3900	NOTE: Delrin@and_Viton@ are trademarks of the DuPont
GMax5900, 5900HD	Company.

## **Dimensions**

#### **GMax 3900**

Model 232610, 233005 Hi-Boy without hose or gun	Model 232612  Lo-Boy Cart without hose or gun				
Weight (dry, without packaging)       110 lb (49.9 kg)         Height       40 in. (101.6 cm)         Length       37 in. (94 cm)         Width       22 in. (55.9 cm)	Weight (dry, without packaging)       110 lb (49.9 kg)         Height       40 in. (101.6 cm)         Length       37 in. (94 cm)         Width       22 in. (55.9 cm)				
GMax 5900, 5900HD					
Model 232620, 232627, 233006 and 233007	Model 232622				
Hi-Boy without hose or gun	Lo-Boy without hose or gun				
Weight (dry, without packaging)	Weight (dry, without packaging)				

### **Graco Phone Number**

**TO PLACE AN ORDER**, contact your Graco distributor, or call this number to identify the distributor closest to you: 1–800–690–2894 Toll Free

### **Graco Warranty**

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor 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**

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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".

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Graco reserves the right to make changes at any time without notice.

Sales Offices: Minneapolis, Detroit International Offices: Belgium, Korea, Hong Kong, Japan

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