

GMAX™ II 5900 Convertible TexSpray™ 5900 HD Airless Sprayers

311046J

- For Portable Airless Spraying of Architectural Coatings and Paints -

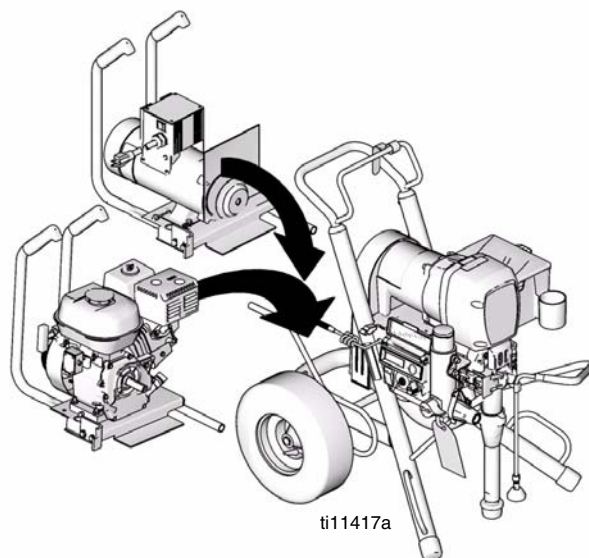
3300 psi (22.8 MPa, 228 bar) Maximum Working Pressure



Important Safety Instructions

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

Model	Series	Description
248691	A	Standard
248692	A	Premium
248693	A	Standard, with electric motor kit
248694	A	Same as 248693 except with ETL approval to CSA and UL standards
248695	A	Standard, with Lo-Boy suction set kit
248696	A	Premium, same as 248890 except with ETL approval to CSA and UL standards
248697	A	Standard, with Lo-Boy suction set kit and electric motor kit
248889	A	Premium, same as 248692 except with electric motor kit
248890	A	Premium, with Lo-Boy suction set kit
255630	A	TexSpray 5900HD convertible with texture gun and hose
255631	A	Same as 255630 with electric motor kit
255954	A	Same as 255630 except with electric motor kit that is ETL approved to CSA and UL standards
245096	A	KIT, electric motor, CSA
245095	A	KIT, electric motor, Non-CSA



Related Manuals



310892

311861
308491

309469



310894



309640

PROVEN QUALITY. LEADING TECHNOLOGY.

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WARNING



Hazard Symbol

WARNING: a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Warnings in the instructions usually include a symbol indicating the hazard. Read the general **Warnings** section for additional safety information.

CAUTION

CAUTION: a potentially hazardous situation which, if not avoided, may result in property damage or destruction of equipment.






Note












Additional helpful information.

Warning

The following are general warnings related to the setup, use, maintenance and repair of this equipment. Additional, more specific, warnings may be found throughout the text of this manual, where applicable.

 WARNING	
	<p>FIRE AND EXPLOSION HAZARD</p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • 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. • 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. • When flammable liquid is sprayed or used for flushing or cleaning, keep sprayer at least 20 feet (6 m) away from explosive vapors. • 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 equipment and conductive objects in 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.
	<p>SKIN INJECTION HAZARD</p> <p>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.</p> <ul style="list-style-type: none"> • 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.
	<p>PRESSURIZED EQUIPMENT HAZARD</p> <p>Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> • 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.
	<p>MOVING PARTS HAZARD</p> <p>Moving parts can pinch or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> • 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.

 WARNING	
	<p>EQUIPMENT MISUSE HAZARD</p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> 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. Check equipment daily. Repair or replace worn or damaged parts immediately. Do not alter or modify equipment. Use equipment only for its intended purpose. Call your Graco distributor for information. Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not use hoses to pull equipment. Keep children and animals away from work area. Comply with all applicable safety regulations.
	<p>PRESSURIZED ALUMINUM PARTS HAZARD</p> <p>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.</p>
	<p>SUCTION HAZARD</p> <p>Never place hands near the pump fluid inlet when pump is operating or pressurized. Powerful suction could cause serious injury.</p>
	<p>CARBON MONOXIDE HAZARD</p> <p>Exhaust contains poisonous carbon monoxide, which is colorless and odorless. Breathing carbon monoxide can cause death. Do not operate in an enclosed area.</p>
	<p>TOXIC FLUID OR FUMES HAZARD</p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> 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.
	<p>BURN HAZARD</p> <p>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.</p>
	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:</p> <ul style="list-style-type: none"> Protective eyewear Clothing and respirator as recommended by the fluid and solvent manufacturer Gloves Hearing protection
	<p>RECOIL HAZARD</p> <p>Brace yourself; gun may recoil when triggered and cause you to fall, which could cause serious injury.</p>

Maintenance

Pressure Relief Procedure

WARNING

Read Skin Injection Hazard, page 3; Burn Hazard, page 4

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

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

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 hoses 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: Check that V-belt (147) is centered on pulley and is not inverted. Replace if worn or damaged.

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 engine 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 and pump corrosion.

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

Problem	Cause	Solution
E=XX is displayed	Fault condition exists	Determine fault correction from table, page 14
Engine will not start	Engine switch is OFF	Turn engine switch ON
	Engine is out of gasoline	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 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
False tripping of WatchDog system. EMPTY is displayed. Pump does not run.	Operating conditions out of WatchDog parameters Pump output is low, page 7.	Turn pressure down. Contact Graco Technical Assistance to adjust WatchDog parameters. Operate without WatchDog active; Manual 310892.
Engine operates, but displacement pump does not operate	Error code displayed	Reference Pressure Control repair, page 14
	Pump switch is OFF	Turn pump switch ON
	Pressure setting too low	Turn pressure adjusting knob clockwise to increase pressure.
	Fluid filter (29) is dirty	Clean filter. Page 22.
	Tip or tip filter is clogged	Clean tip or tip filter. Manual 309639.
	Displacement pump piston rod is stuck due to dried paint	Repair pump. Manual 310894.
	Connecting rod is worn or damaged	Replace connecting rod. Page 8.
	Drive housing is worn or damaged	Replace drive housing. Page 9.
	Electrical power is not energizing clutch field	Check wiring connections. Page 12. Reference pressure control repair. Page 14. Reference wiring diagram. Page 23. With pump switch ON and pressure turned to MAXIMUM, use a test light to check for power between clutch test points on control board. Remove clutch wires from control board and measure resistance across clutch coil. At 70° F, the resistance must be between 1.2 +0.2Ω; if not, replace pinion housing. Have pressure control checked by authorized Graco dealer
	Clutch is worn, damaged, or incorrectly positioned	Adjust or replace clutch. Page 10.
	pinion housing is worn or damaged	Repair or replace pinion housing. Page 10.

Problem	Cause	Solution
Pump output is low	Strainer (82) is clogged	Clean strainer.
	Piston ball (206) is not seating	Service piston ball. Manual 310894.
	Piston packings are worn or damaged	Replace packings. Manual 310894.
	O-ring (227) in pump is worn or damaged	Replace o-ring. Manual 310894.
	Intake valve ball is not seating properly	Clean intake valve. Manual 310894.
	Intake valve ball is packed with material	Clean intake valve. Manual 310894.
	Engine speed is too low	Increase throttle setting. Manual 310892.
	V-belt slipping	Tighten V-belt with tension bar (132). Adjust bracket until it takes 15 lb of force to lock tension bar down
	Clutch is worn or damaged	Adjust or replace clutch. Page 10.
	Pressure setting is too low	Increase pressure. Manual 310892.
	Fluid filter (56), tip filter or tip is clogged or dirty	Clean filter. Manual 310892 or 309639.
	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 310894.
	Displacement rod is worn or damaged	Replace rod. Manual 310894.
Fluid is spitting from gun	Air in pump or hose	Check and tighten all fluid connections. Rep-rime pump. Manual 310892.
	Tip is partially clogged	Clear tip. Manual 309639.
	Fluid supply is low or empty	Refill fluid supply. Prime pump. Manual 310892. 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 310894.
	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 310892.
Clutch squeaks each time clutch engages	Clutch surfaces are not matched to each other when new and may cause noise	Clutch surfaces need to wear into each other. Noise will dissipate after a day of run time.
High engine speed at no load	Misadjusted throttle setting	Reset throttle to 3700 engine rpm at no load
	Worn engine governor	Replace or service engine governor
Gallon counter not working	Bad sensor, broken or disconnected wire. Displaced or missing magnet.	Check connections. Replace sensor or wire. Reposition or replace magnet.
No display, sprayer operates	Display damaged or has bad connection	Check connections. Replace display.

Bearing Housing and Connecting Rod

Removal

⚠ WARNING

Read Skin Injection Hazard, page 3; Burn Hazard, page 4

1. Relieve pressure; page 5.
2. FIG. 1. Remove four screws (45) and front cover (44)
3. Remove pump. Refer to **Displacement Pump, Removal**, page 14.
4. Remove four screws (41) and washers (42) from bearing housing (40).
5. Pull connecting rod (43) and lightly tap lower rear of bearing housing with plastic mallet to loosen from drive housing (33). Pull bearing housing and connecting rod assembly off drive housing.
6. Inspect crank (B) and connecting rod (43) for excessive wear and replace parts as needed.

Installation

1. Evenly lubricate inside of bronze bearing (C) in bearing housing (40) with high-quality motor oil. Liberally pack top roller bearing (E), lower bearing (D) inside connecting rod (43) with bearing grease.
2. Assemble connecting rod (43) to bearing housing (40). Rotate connecting rod to lowest position.
3. Clean mating surfaces of bearing and drive housings.
4. Align connecting rod with crank (B) and carefully align locating pins in drive housing (33) with holes in bearing housing (40). Push bearing housing onto drive housing or tap into place with plastic mallet.

CAUTION

DO NOT use bearing housing screws (41) to align or seat bearing housing with drive housing. Align these parts with locating pins, to avoid premature bearing wear.

5. Install screws (41) and washers (42) in bearing housing.
6. Install pump. Refer to **Displacement Pump, Installation**, page 14.

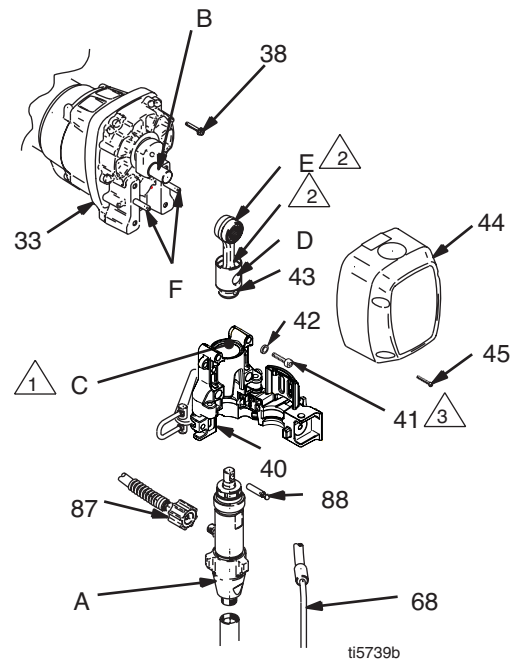


FIG. 1

Drive Housing

Removal

WARNING



Read Skin Injection Hazard, page 3; Burn Hazard, page 4

1. Relieve pressure; page 5.
2. Remove bearing housing. Refer to **Bearing Housing and Connecting Rod, Removal**, page 8.

CAUTION

Gallon counter sensor is connected to control board in pressure control. Pulling on the sensor wires could cause damage.

3. Premium sprayers: Remove two screws (108) and gallon counter sensor (39).

CAUTION

Thrust washers may stick to grease inside of drive housing. Do not lose or misplace.

4. Remove six screws (38).
5. Lightly tap around drive housing (33) to loosen drive housing. Pull drive housing straight off pinion housing. Be prepared to support combination gear (32) which may also come out.

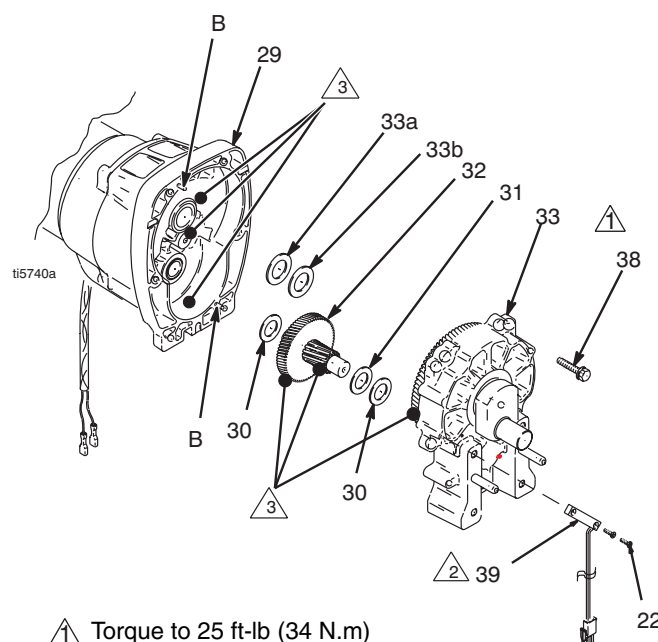
Installation

1. FIG. 2. Apply all grease supplied with replacement gear cluster to gear cluster (32) and to areas called out by note 3.
2. FIG. 3. Ensure thrust washers are on combination gear (32) as shown.
3. Clean mating surfaces of pinion and drive housings.
4. Align gears and push new drive housing straight onto pinion housing (29) and locating pins (B).
5. Install six screws (38).
6. Install gallon counter sensor (39) with two screws (108).
7. Install bearing housing. Refer to **Bearing Housing and Connecting Rod, Installation**, page 8.

CAUTION

DO NOT use drive housing screws (18) to align or seat bearing housing with drive housing. Align these parts with locating pins, to avoid premature bearing wear.

8. Install screws (18) in drive housing. Torque evenly to note 3 value in Fig. 1.
9. Install pump. Refer to **Displacement Pump, Installation**, page 14.



1 Torque to 25 ft-lb (34 N.m)

2 Gallon counter sensor

3 Pack with grease 114819

FIG. 2

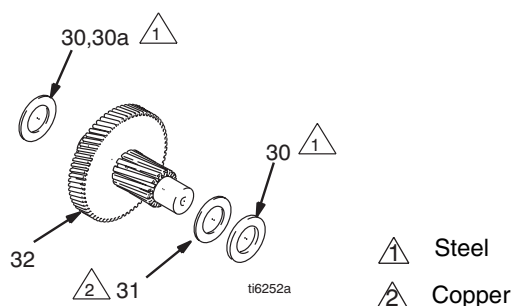


FIG. 3

Pinion Housing/Rotor/Shaft/Clutch/Pulley

Removal

1. If pinion housing (29) is not removed from clutch housing (19), do 2. through 5. Otherwise, do 2 and then start at 6.



2. Do **Pressure Relief Procedure**, page 5.
3. FIG. 4. Disconnect clutch cable connectors.
 - a. Remove two screws (71) and swing down cover (130a).
 - b. Remove strain relief (171).
 - c. Disconnect clutch cable connectors (X).

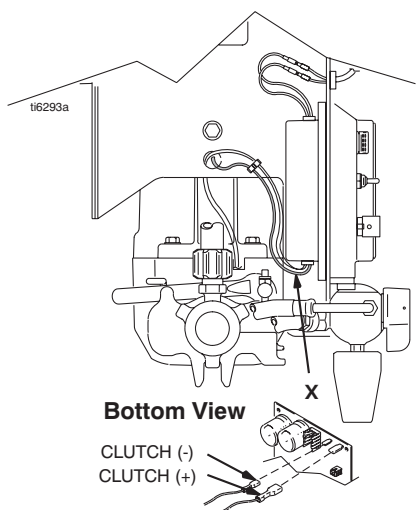


FIG. 4

4. FIG. 5. Remove four screws (36), lock washers (37) and pinion housing (29).

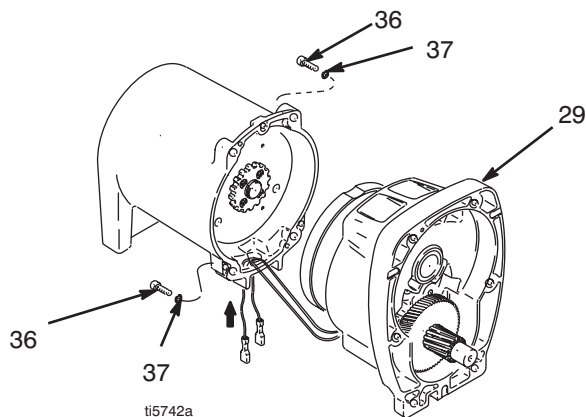


FIG. 5

5. FIG. 6. Place pinion housing (29) on bench with rotor side up.
6. Remove four screws (28) and lock washers (24). Install two screws in threaded holes (E) in rotor. Alternately tighten screws until rotor comes off.

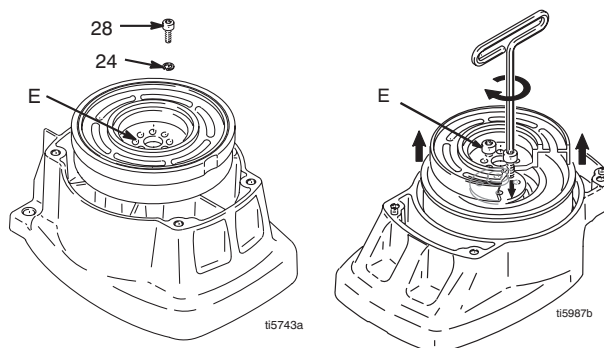


FIG. 6

7. FIG. 7. Remove retaining ring (29e).
8. Turn pinion housing over and tap pinion shaft (29d) out with plastic mallet.

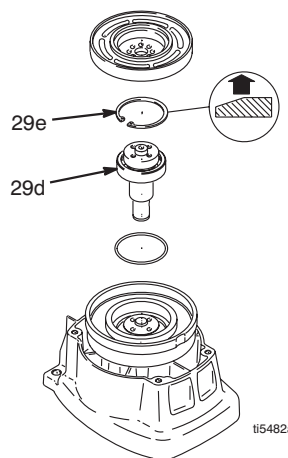


FIG. 7

9. FIG. 9. Remove belt guide bracket (146), belt guard (148) and Vee belt (147).
10. Hold pulley (62) and remove four screws (23) and washers (24) from hub (26). Remove armature (25) and spacer (19f).
11. Engine Detail, page 18. Remove screw (20) and washer (61) from engine drive shaft. Remove pulley (62) and motor shaft sleeve (144). Remove pulley and key (18).
12. Fig. 9. Remove three screws (35) from beneath cart frame (1).
13. Lift off clutch housing (19e).
14. Remove retaining ring (19b). Pull drive shaft assembly (19c) out.

Installation

1. FIG. 10. Install drive shaft assembly (19c). Install retaining ring (19b)
2. FIG. 8. Lay two stacks of two dimes on smooth bench surface.
3. Lay armature (25) on two stacks of dimes.
4. Press center of hub (26) down to bench surface.

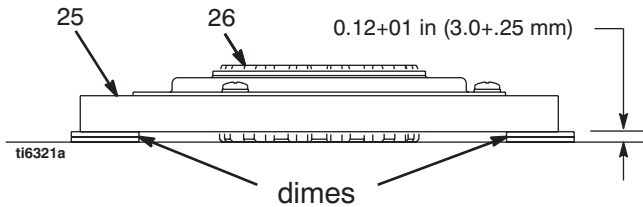


FIG. 8

5. FIG. 9. Place spacer (19f) and armature (26, 25) on drive shaft assembly (19c).

6. Install three screws (35) through cart frame (1) and into clutch housing (19).
7. Apply Loctite® to screw (20). Install screw, washer (61), key (18) and pulley (62) in end of drive shaft assembly (19c). End of driveshaft (19c) must be 0.090 in. below flush with end of bushing.
8. Hold pulley (62) and install four screws (23) and washers (24) in hub (26). Torque to 125 in-lb (14 Nm).
9. Install belt guard (146), belt guide bracket (148) and Vee belt (147).
10. FIG. 7. Tap pinion shaft (19c) in with plastic mallet.
11. Install retaining ring (19b).
12. FIG. 6. Place pinion housing on bench with rotor side up.
13. Apply locktite to screws. Install four screws (28) and lockwashers (24). Alternately torque screws to 125 in-lb until rotor is secure.
14. Push pinion housing (29) assembly onto clutch housing (19e). Tap lightly on front of bearing housing (40) with a plastic mallet to push drive housing and pinion housing assembly onto clutch housing.
15. Install pinion housing with five screws (36) and lockwashers (37).
16. FIG. 4. Connect clutch cable connectors (X) to board.
17. Page 9. Do Drive Housing, Installation.

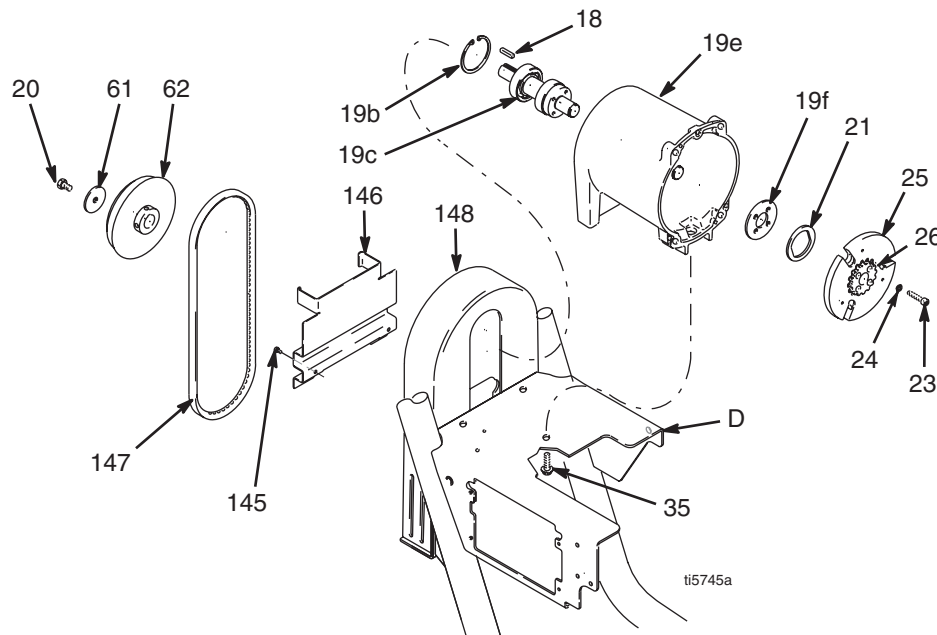


FIG. 9

Pressure Control

On/Off Switch

Removal



1. FIG. 10. Remove two screws (71) and swing down cover (169a).
2. Disconnect ON/OFF switch (169f) connector from control board.
3. Press in on two retaining tabs on each side of ON/OFF switch (169f) and remove switch from cover.

Installation

1. Install new ON/OFF switch (169f) so tabs of switch snap into place on inside of cover.
2. Connect ON/OFF switch connector to control board.
3. Swing up cover (169a) and secure with two screws (71).

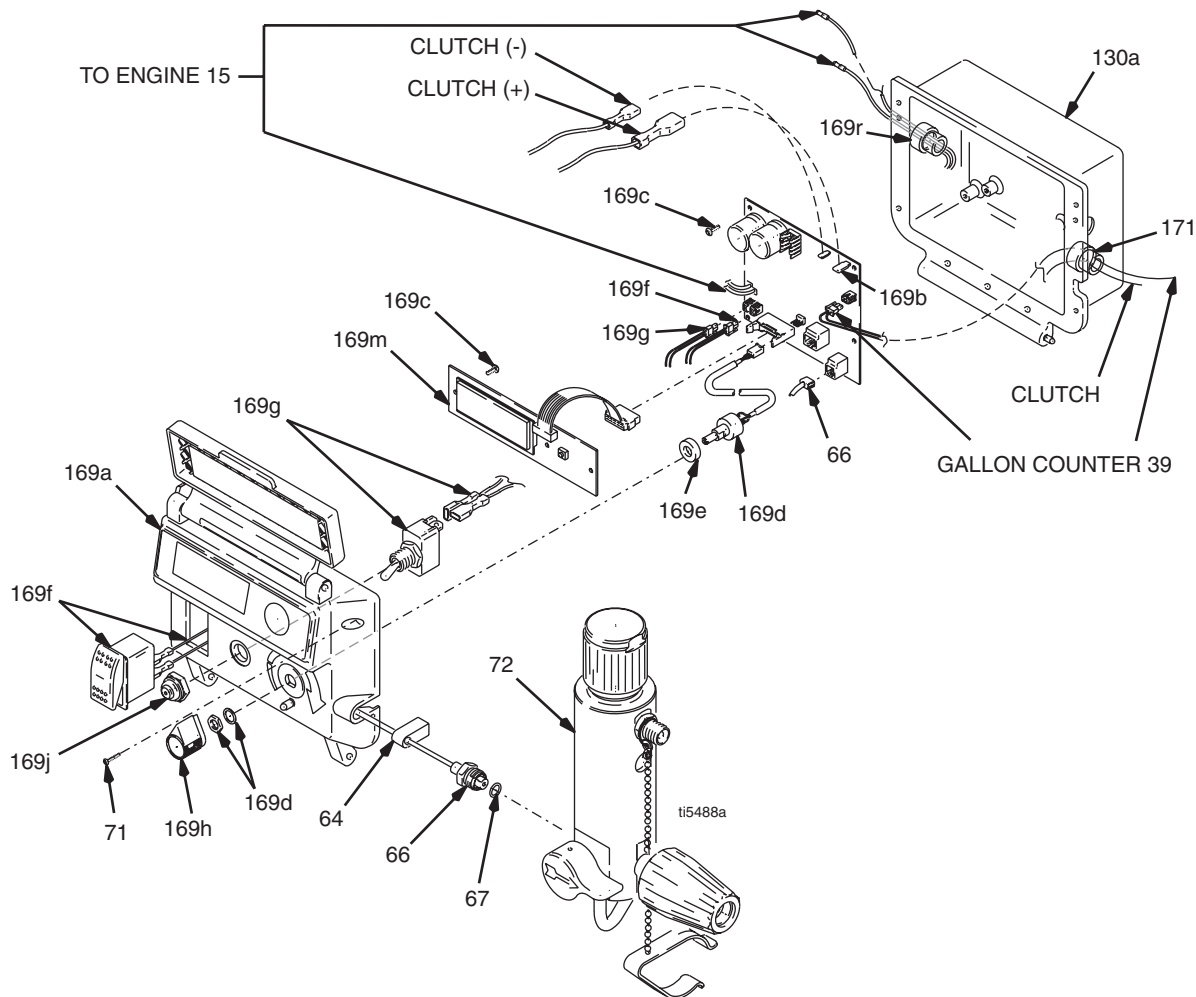


FIG. 10

Control Board

Removal



- FIG. 10. Remove two screws (71) and swing down cover (169a)
- Remove strain relief bushings (123a and 123b).
- Disconnect at control board (169b):
 - Lead from potentiometer (169d)
 - Lead from transducer (66)
 - Lead from WatchDog switch (169g)
 - Lead from ON/OFF switch (169f)
 - Lead from gallon counter sensor (pump stroke)

- Display connector
- Engine, ground and clutch wires

- Remove four screws (169c) and control board (169b).

Installation

- FIG. 10. Install control board (169b) with four screws (169c).
- Connect engine wires to control board (169b).
- Install control box (169a) with four screws (71).
- Connect at control board (169b):
 - Ground and clutch wires
 - Display connector
 - Lead from gallon counter sensor (pump stroke)
 - Lead from ON/OFF switch (169f)
 - Lead from WatchDog switch (169g)
 - Lead from transducer (66)
 - Lead from potentiometer (169d)
- Install new strain relief bushings (123a and 123b).
- Swing up cover (169a) and secure with two screws (71).

Pressure Control Transducer

Removal



- FIG. 10. Remove two screws (71) and swing down cover (169a)
- Disconnect transducer (66) lead from control board (169b).
- Pull transducer connector through rubber grommet (113).
- Remove pressure control transducer (66) and o-ring (67) from filter housing (72).

Installation

- FIG. 10. Install o-ring (67) and pressure control transducer (66) in filter housing (72). Torque to 35 - 45 ft-lb.
- Install transducer connector and rubber grommet in control housing.
- Connect transducer (66) lead to control board (169b).
- Swing up cover (169a) and secure with two screws (71).

Pressure Adjust Potentiometer

Removal



- Fig. 13. Remove two screws (71) and swing down cover (169a)
- Disconnect potentiometer (169d) lead from control board (169b).
- Loosen set screws on potentiometer knob (169h) and remove knob, shaft nut, lock washer and potentiometer (169d).
- Remove shaft spacer (169e) from potentiometer.

Installation

- Install shaft spacer (169e) on potentiometer (169d).
- FIG. 10. Install potentiometer, shaft nut, lock washer and potentiometer knob (169h).
 - Turn potentiometer shaft clockwise to internal stop. Assemble potentiometer knob (169h) to strike pin on cover (169a).
 - After adjustment of step a., tighten both set screws in knob 1/4 to 3/8 turn after contact with shaft.
- Connect potentiometer lead to control board (169b).
- Swing up cover (169a) and secure with two screws (71).

Digital Display Messages






Digital Display Messages


WARNING




Relieve pressure before repair, page 5.

- Digital messages are not available on all sprayers
- Blinking LED total count equals digital error code i.e., two blinks is the same as E=02

DISPLAY*	SPRAYER OPERATION	INDICATION	ACTION
No Display	Sprayer may be pressurized	Loss of power or display not connected	Check power source. Relieve pressure before repair or disassembly. Verify display is connected.
 ti6314a	Sprayer may be pressurized	Pressure less than 200 psi (14 bar, 1.4 MPa)	Increase pressure as needed
3000 psi 210 bar 21 MPa ti6315a	Sprayer is pressurized. Power is applied. (Pressure varies with tip size and pressure control setting.)	Normal operation	Spray
 ti6316a	Sprayer stops. Engine is running.	Exceeded pressure limit	1. Check fluid path for clogs, such as clogged filter. 2. Open prime valve and gun if running AutoClean. 3. Use Graco paint hose, 1/4 in. x 50 ft minimum. Smaller hose or metal braid hose may result in pressure spikes. 4. Replace transducer if fluid path is not clogged and proper hose is used.
 ti6317a	Sprayer stops. Engine is running.	Pressure transducer faulty, bad connection or broken wire	1. Check transducer connection. 2. Disconnect and reconnect transducer plug to ensure good connection with control board socket. 3. Open prime valve. Replace sprayer transducer with known good transducer and run sprayer. Replace transducer if sprayer runs or control board if sprayer does not run.
 ti6318a	Sprayer stops. Engine is running.	High clutch current	1. Check wiring connections. 2. Measure: 1.2 +0.2Ω (GMAX II 3900); 1.7 +0.2Ω (GMAX II 5900/ 7900) across clutch field at 70°F. 3. Replace clutch field assembly.
EMPTY (with constant green LED)	Sprayer stops. Engine is running.	Loss of paint to pump or severe pressure loss	1. Check for empty paint condition, clogged inlet strainer, failed pump or severe leak. 2. Reduce pressure and turn pump switch OFF and ON to restart pump. 3. Watch dog function can be deactivated by turning WatchDog switch OFF.
 ti6320a	Sprayer stops. Engine is running.	Pressure greater than 2000 psi (138 bar, 14 MPa) while in Flush Timer Mode	1. Open prime valve and gun. 2. Verify no flow obstructions or clogged filter.

* Error codes also appear on control board as a blinking red LED. LED is an alternate to digital messages.

1. Remove two screws (71) and swing down cover (130).
2. Start engine. Blink count is the same as error code(E=0X).

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. FIG. 19. Stop pump with piston rod in its lowest position.

WARNING



Read Skin Injection Hazard, page 3; Burn Hazard, page 4

3. Do Pressure Relief, page 5.
4. Separate drain hose from sprayer.

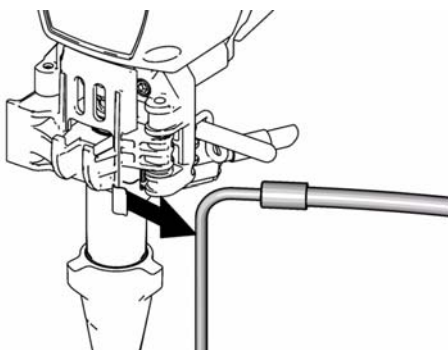


FIG. 11

5. Disconnect material hose from pump.

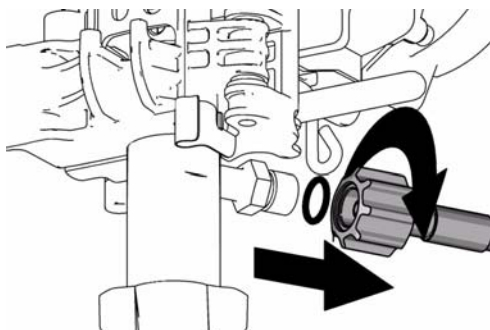


FIG. 12

6. Raise latch lock. Push latch open.

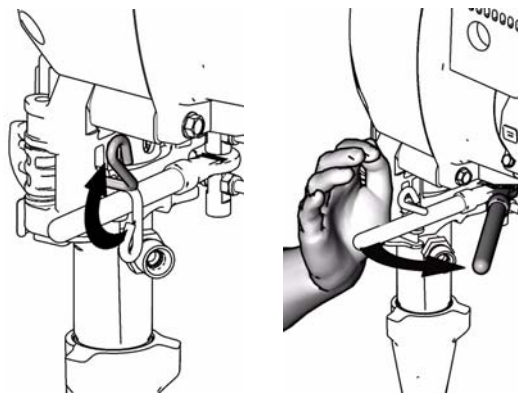


FIG. 13

7. FIG. 14. Ratchet open pump door.
 - a. Ratchet pump door forward.

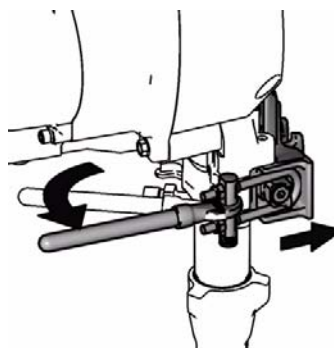


FIG. 14

- b. Twist latch u-bolt out of pump door recess.
- c. Place u-bolt on pump door outer edge.
- d. If pump door is stuck, do steps e., f. and 8., otherwise go to step 9.

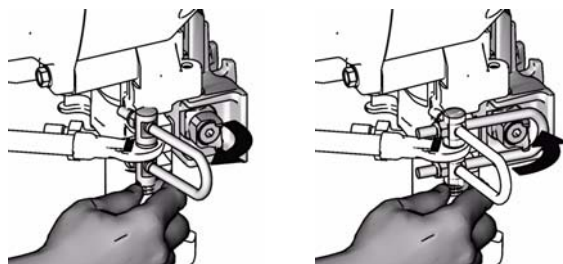
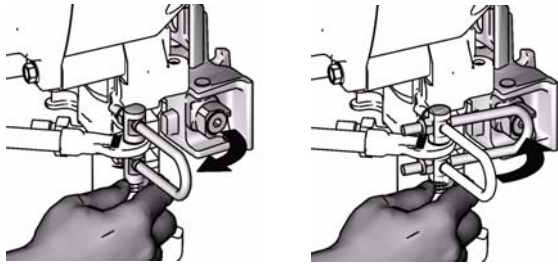
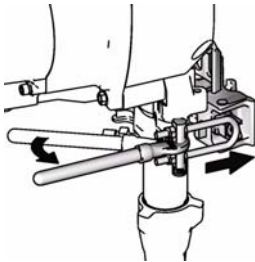


FIG. 15

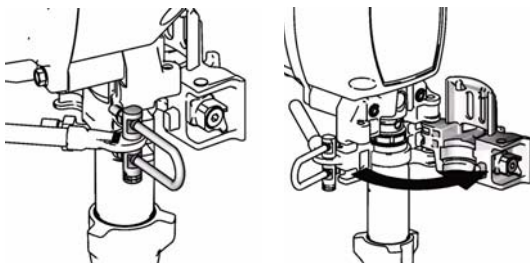
- e. Twist latch u-bolt back from pump door outer edge
- f. Place u-bolt on pump door protrusion

**FIG. 16**

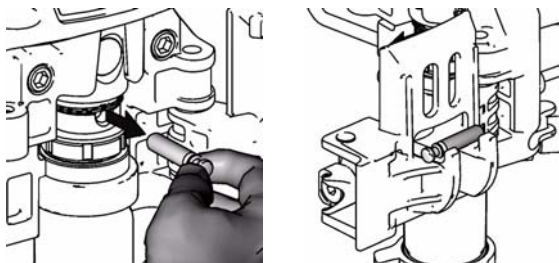
- 8. Ratchet pump door forward.

**FIG. 17**

- 9. Open pump door.

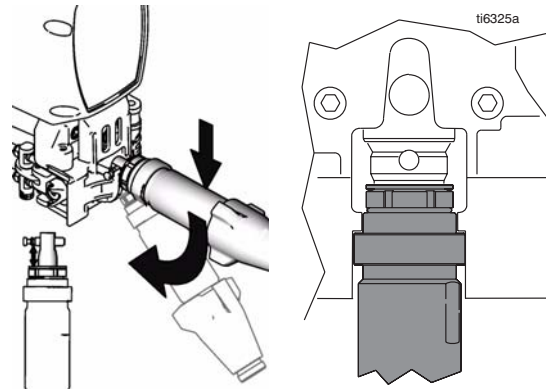
**FIG. 18**

- 10. FIG. 19. Pull out pump pin and place in pin holder

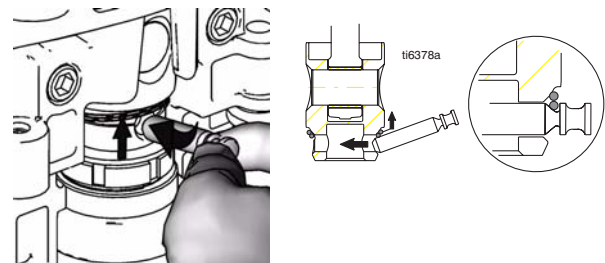
**FIG. 19**

Installation

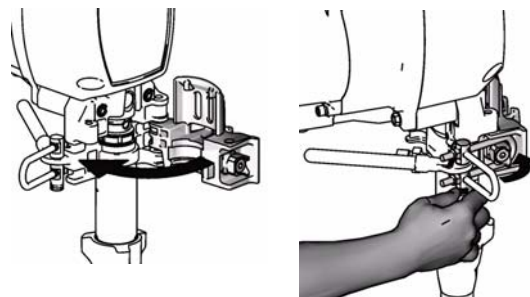
1. FIG. 20. Adjust piston rod with pin holder to pull out piston rod. Tap piston rod on hard surface to push in piston rod.
2. Push pump collar flush with bearing housing ledge to be able to close pump door.

**FIG. 20**

3. FIG. 21. Slide pump into connecting rod. Push pump pin until it is fully retained.
Note: Pin will snap into position.

**FIG. 21**

4. FIG. 22. Close pump door and rotate latch into position. Do not tighten latch.



5. FIG. 22. Rotate pump to align with material hose. Connect material hose and hand tighten to 70 in-lb

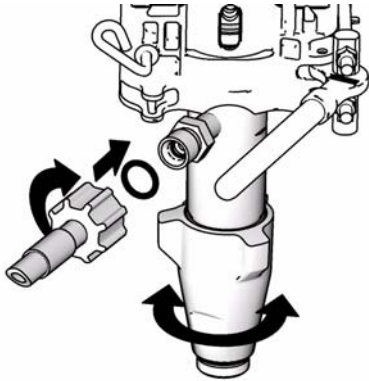


FIG. 22

6. FIG. 23. Tighten latch and rotate latch lock into locked position.

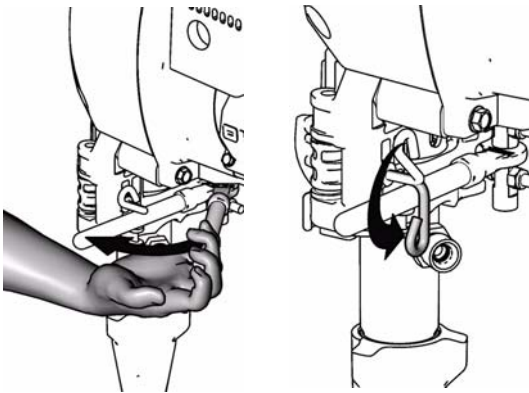


FIG. 23

7. FIG. 24. Attach drain hose to sprayer.

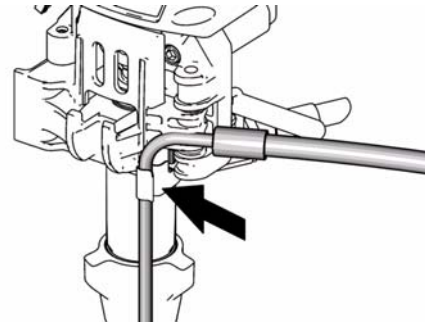


FIG. 24

8. FIG. 25. Fill pump with Graco TSL until fluid flows onto top of seal.

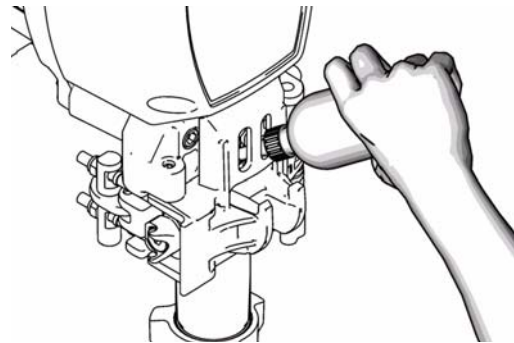
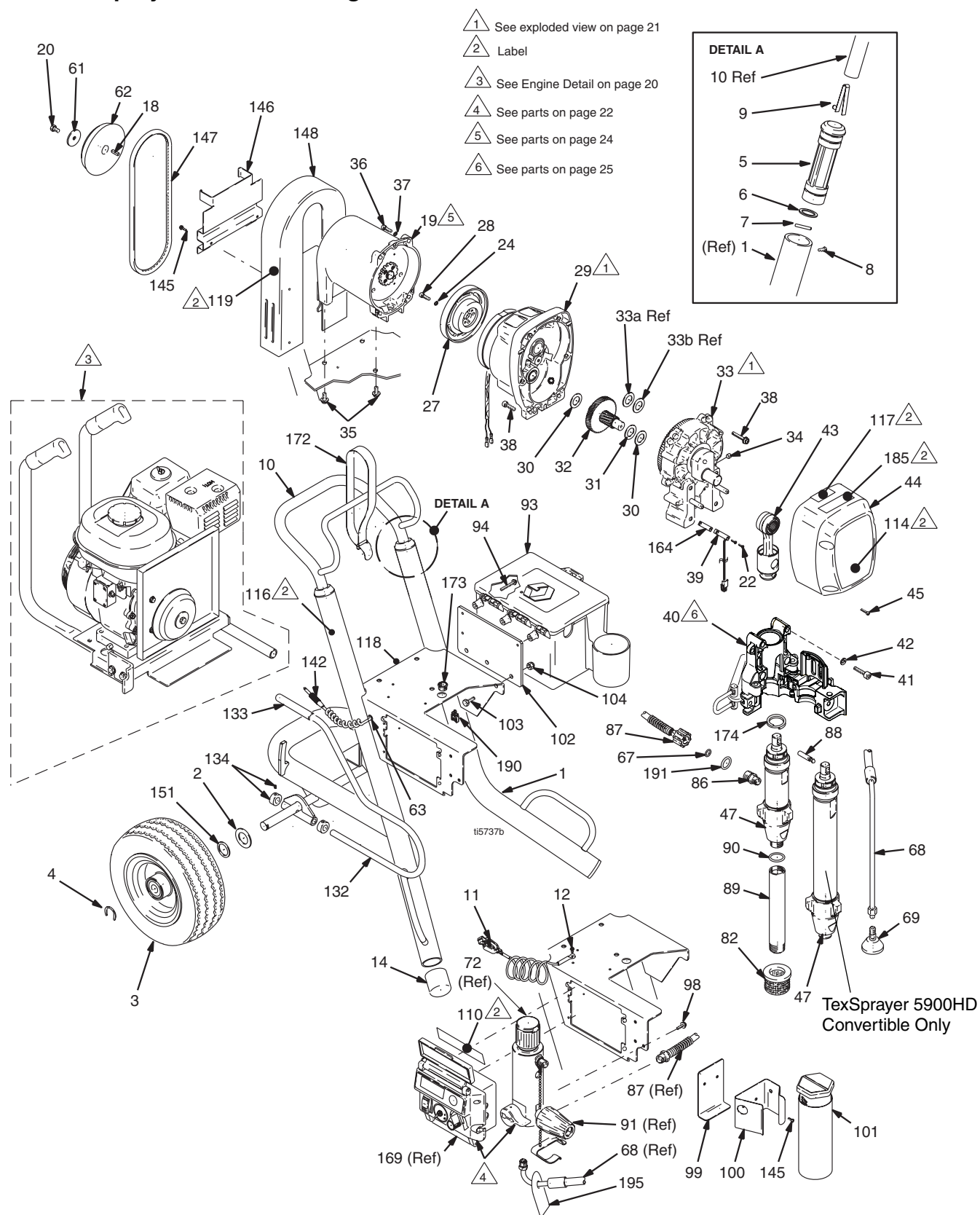


FIG. 25

Parts

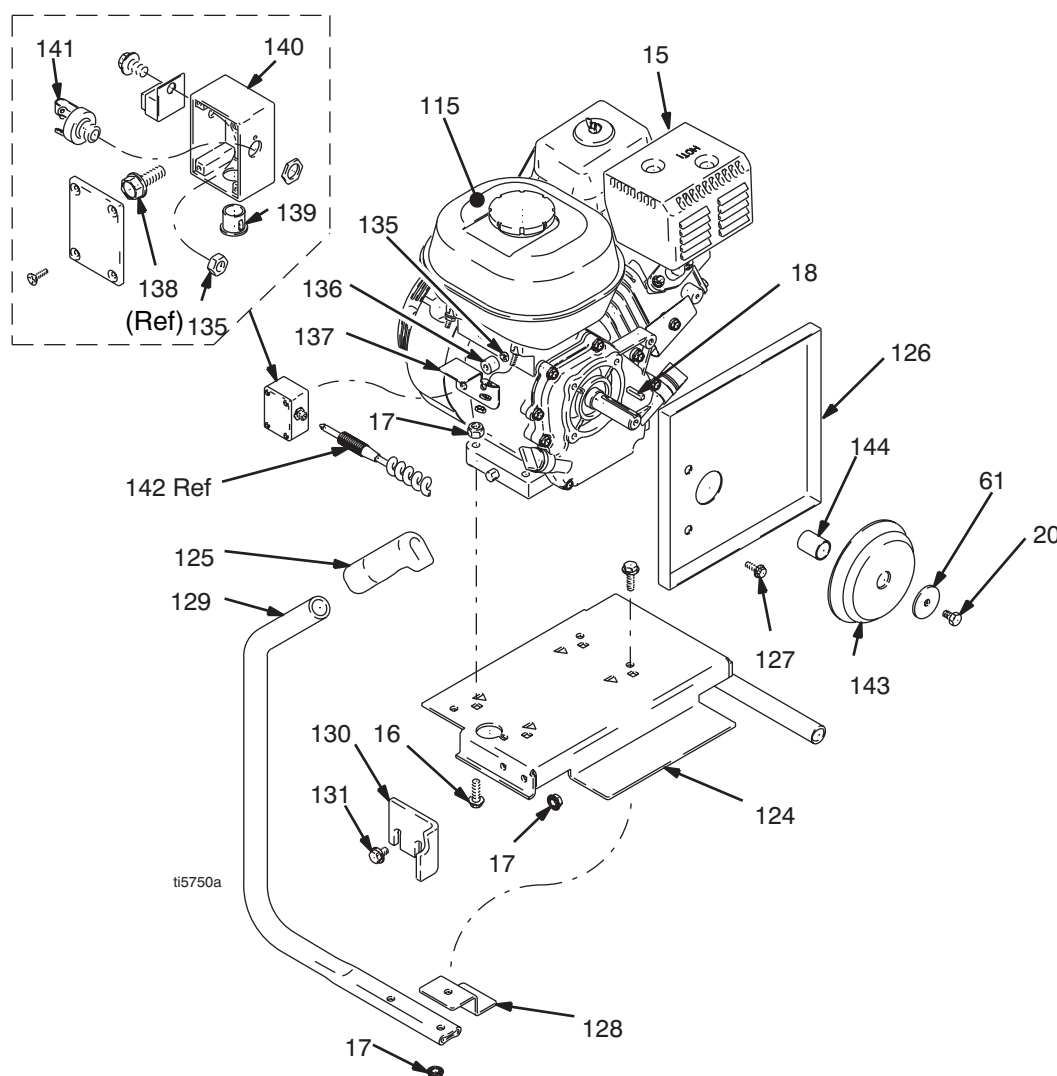
Standard Sprayer - Parts Drawing



Standard Sprayer - Parts List

Ref	Part	Description	Qty	Ref	Part	Description	Qty
1	287423	FRAME, cart	1	91	287162	VALVE, auto clean	1
2	156306	WASHER, flat	2	93†	287253	TOOL BOX	1
3	119509	WHEEL, pneumatic	2	94†	118852	SCREW, machine, hex washer hd	3
4	15E891	CLIP, retaining	2	98	113161	SCREW, flange, hex hd	3
5	191084	SLEEVE, cart	2	99	15E918	BRACKET, holder, manual	1
6	183350	WASHER	2	100	15E736	BRACKET, holder, manual	1
7	108068	PIN, spring straight	2	101	119510	HOLDER, manual	1
8	108795	SCREW, mach, pnh	4	102†	15E902	PLATE	1
9	112827	BUTTON, snap	2	103†	100270	SCREW, cap, hex hd	2
10	245245	HANDLE, cart	1	104†	102040	NUT, lock, hex	3
11	237686	WIRE, ground assembly w/ clamp	1	110		LABEL, identification	
12	112798	SCREW, thread forming, hex hd	1		15F755	Premium & TexSpray 5900HD	1
14	276974	CAP, leg	2			Convertible	
18	183401	KEY, parallel	1		15E854	Standard	1
19	287519	HOUSING, clutch	1	114	15E979	LABEL, identification	1
20	121727	SCREW, cap, hex hd	1		15E980	LABEL, identification (TexSpray	1
22	114528	SCREW, mach, phillips, pnhd	2			5900HD convertible)	
23*	108803	SCREW, hex, socket head	4	116▲	15F638	LABEL, warning	1
		(see page 24)		117▲	290228	LABEL, caution	1
24*	105510	WASHER, lock, spring (hi-collar)	8	118▲	804495	LABEL, warning	1
26*	193510	HUB, armature (see page 24)	1	119	195098	LABEL, instruction (English)	1
27*		ROTOR, clutch, 5 in.	1	132	245688	BAR, torsion; includes 133, 134	1
28*	101682	SCREW, cap, sch	4	133	114808	CAP, vinyl	1
29	287465	HOUSING, pinion, 5900	1	134	198772	COLLAR, torsion bar	2
30	114672	WASHER, thrust	2	142	119584	CORD, power, convertible	1
31	114699	WASHER, thrust	1	145	100078	SCREW, thd forming, hex hd	6
32	287460	GEAR, combination	1	146	198996	BRACKET, belt guide	1
33	287700	HOUSING, drive, convert	1	147	193547	BELT, Vee, 30	1
34	116618	MAGNET	1	148	198691	GUARD, belt	1
35	112395	SCREW, cap, flnghd	3	151	116038	WASHER, wave spring	2
36	102962	SCREW, cap sch	4	164	15F947	SHIELD, magnetic	1
37	104008	WASHER, lock, spring	4	169		BOX, control (see pages 22-23)	
38	15C753	SCREW, mach, torx, hex wash hd	6		287648	Premium	1
39	119562	SWITCH, reed w/connector	1		287649	Standard	1
40	289274	HOUSING, bearing	1	172	114271	STRAP, retaining	1
41	114666	SCREW, cap, socket hd	4	173	119569	BUSHING, strain relief	1
42	106115	WASHER, lock spring (hi-collar)	4	174	119677	SPRING, retaining	1
43	287472	ROD, connecting (5900)	1	185	15F584	LABEL, ProConnect	1
44	287511	COVER, front, 5900; includes 45	1	190	114687	CLIP, retainer	1
45	118444	SCREW, machine hex washer head	4	191	119790	O-RING	1
47	287513	PUMP, displacement (5900)	1	195▲	195119	LABEL, warning	1
		includes 86, 89, 90; Manual 310894		▲ Replacement Danger and Warning labels, tags, and cards are available at no cost.			
	287579	PUMP, displacement (TexSpray	1	* Included in Clutch Repair Kit 241113			
		5900HD convertible) includes 86		† Not used on TexSpray 5900HD Convertible			
61	112717	WASHER	1				
62	198688	PULLEY, engine	1				
63	114425	BUSHING, strain relief	1				
67	111457	O-RING	1				
68	243993	HOSE, coupled	1				
69	241920	DEFLECTOR, threaded	1				
72	15E284	HOUSING, filter	1				
82	189920	STRAINER, (1-11 1/2 npsm)	1				
86	15E802	FITTING, pump, quick disconnect	1				
87	287543	HOSE, coupled	1				
88	15F110	PIN, pump	1				
89†	248215	TUBE, intake	1				
90†	118494	O-RING	1				

Engine Detail



Engine Detail - Parts List

Ref	Part	Description	Qty	Ref	Part	Description	Qty
				129	198693	HANDLE, slide, engine	2
15	114530	ENGINE, gas, 5.5 Honda	1	130	198695	BRACKET, torsion bar	1
16	114653	SCREW, cap, flange hd	4	131	110963	SCREW, cap, hex hd, flange	2
17	110996	NUT, flng hd, hex	6	135	114816	NUT, hex	1
18	183401	KEY, parallel	1	136	116149	SPACER	1
20	121727	SCREW, cap, hex hd	1	137	194414	BRACKET, J-box	1
61	112717	WASHER	1	138	114813	SCREW, mach, hex washer hd	1
115	194126	LABEL, warning	1	139	114678	BUSHING, snap	1
124	245272	BASE, mounting	1	140	194181	BOX, junction, engine	1
125	116139	GRIP, handle	2	141	114805	JACK, 1/4 engine	1
126	198689	BRACKET, belt guard (motor)	1	143	15E896	PULLEY, engine	1
127	112406	SCREW	3	144	15B314	SLEEVE, motor shaft	1
128	198997	BRACKET, tension	1				

Pinion and Drive Housing - Parts Drawing and List

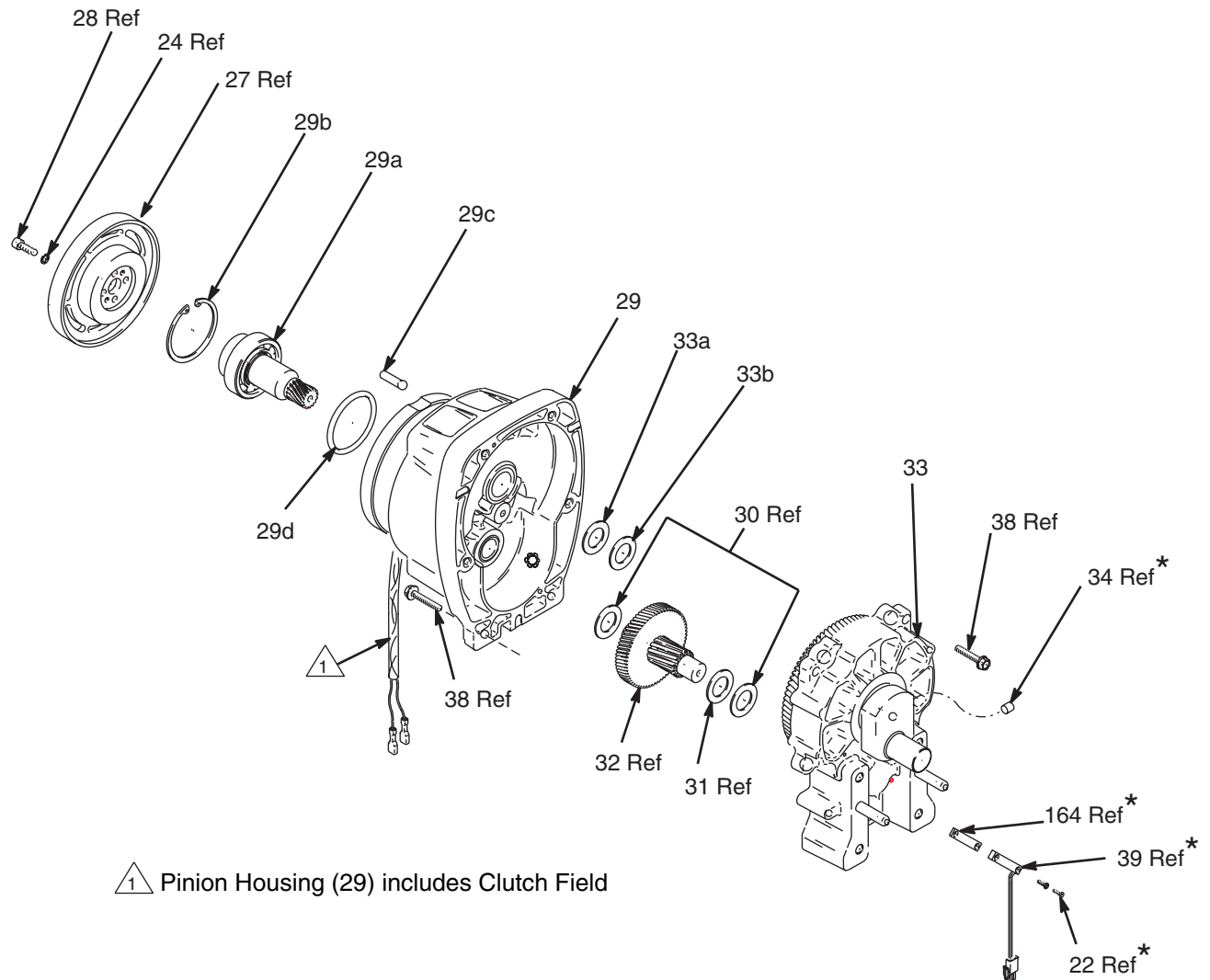
Ref No. 29: Pinion Housing 287465

Ref	Part	Description	Qty
29	287476	PINION HOUSING & COIL	1
29a	241114	PINION SHAFT	1
29b	112770	RETAINING RING, large	1
29c	105489	PIN	2
29d	114683	O-RING	1

Ref No. 33: Drive Housing 287700

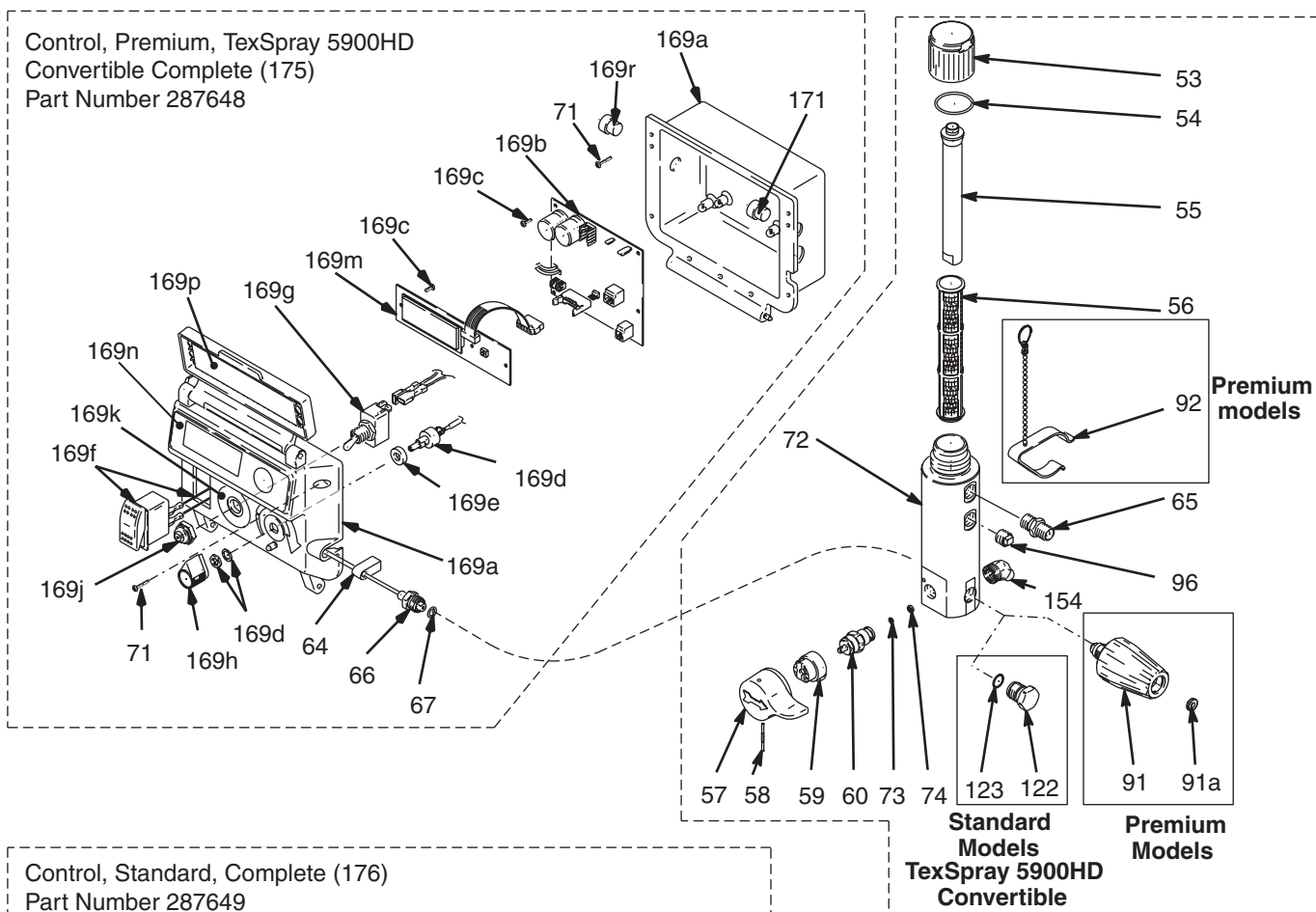
Ref	Part	Description	Qty
33		HOUSING, drive	1
33a	194173	WASHER	1
33b	116192	WASHER	1

* Premium models and TexSpray 5900HD convertible.



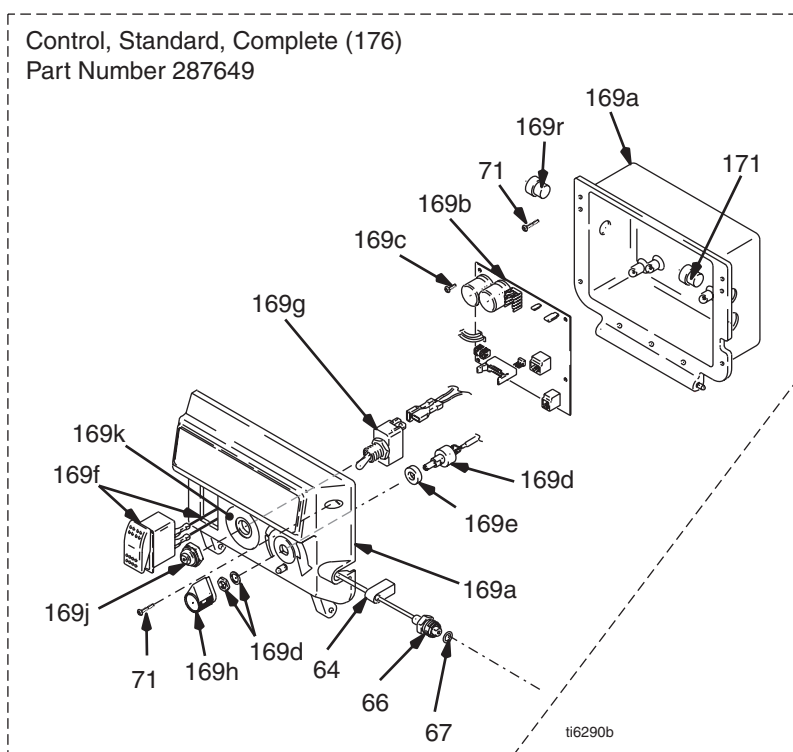
Pressure Control and Filter - Parts Drawing

Control, Premium, TexSpray 5900HD
Convertible Complete (175)
Part Number 287648



Part Number 287510

Control, Standard, Complete (176)
Part Number 287649



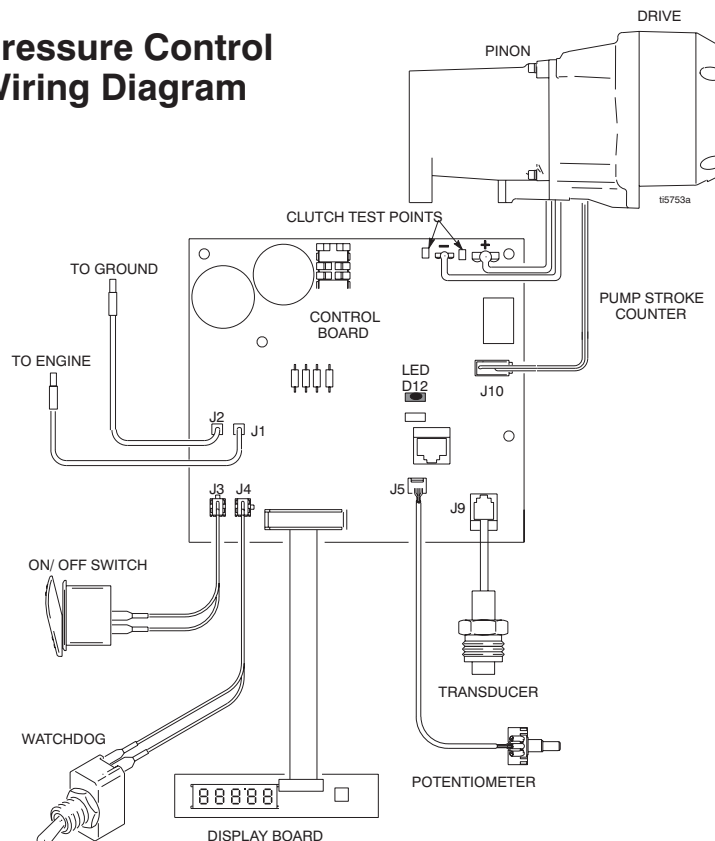
Pressure Control and Filter - Parts List

REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY
53*	15C765	CAP, filter	1	154	116756	FITTING, elbow, 45 degrees	1
54*	117285	O-RING	1	169a★	249583	BOX, control, premium	1
55*	15C766	TUBE, diffusion	1	169a	249584	BOX, control, standard	1
56*	243984	FILTER, fluid	1	169b	287516	CONTROL, board	1
57*	15C780	HANDLE	1	169c	117317	SCREW, plastite, pan hd	7
58*	15C972	PIN, grooved	1	169d	240925	POTENTIOMETER	1
59*	224807	BASE, valve	1	169e	198650	SPACER, shaft	1
60*	235014	VALVE, drain	1	169f	116752	SWITCH, rocker	1
64	15E925	GASKET, transducer	1	169g	119541	SWITCH, toggle	1
65	164672	ADAPTER	1	169h	116167	KNOB, potentiometer	1
	162485	ADAPTER, nipple (TexSpray 5900HD Convertible)	1	169j	195428	BOOT, toggle	1
66*	241732	TRANSDUCER, pressure contrl	1	169k	15E857	LABEL, identification	1
67*	111457	O-RING	1	169m★	287515	DISPLAY, LCD, GMAX	1
71	116585	SCREW, mach, pnh, sems	6	169n★	15E855	LABEL, identification	1
72*	15E284	HOUSING, filter	1	169p★	15E858	LABEL, identification	1
73*	15E022	SEAT, valve	1	169r	119545	BUSHING, strain, relief	1
74*	111699	GASKET, seat, valve	1	171	119545	BUSHING, strain, relief	1
91★	287293	VALVE, auto clean, includes 91a	1	175★	287648	CONTROL, premium, complete (includes 169b-169r)	1
91a★	115524	GASKET	1	176	287649	CONTROL, standard, complete (includes 169b-169r)	1
92★	244346	KIT, repair, clamp, trigger	1				
96*	104813	PLUG, pipe	1				
122	248314	PLUG, includes 123	1				
123	15D541	O-RING	1				

★ Premium & TexSpray 5900HD Convertible models only

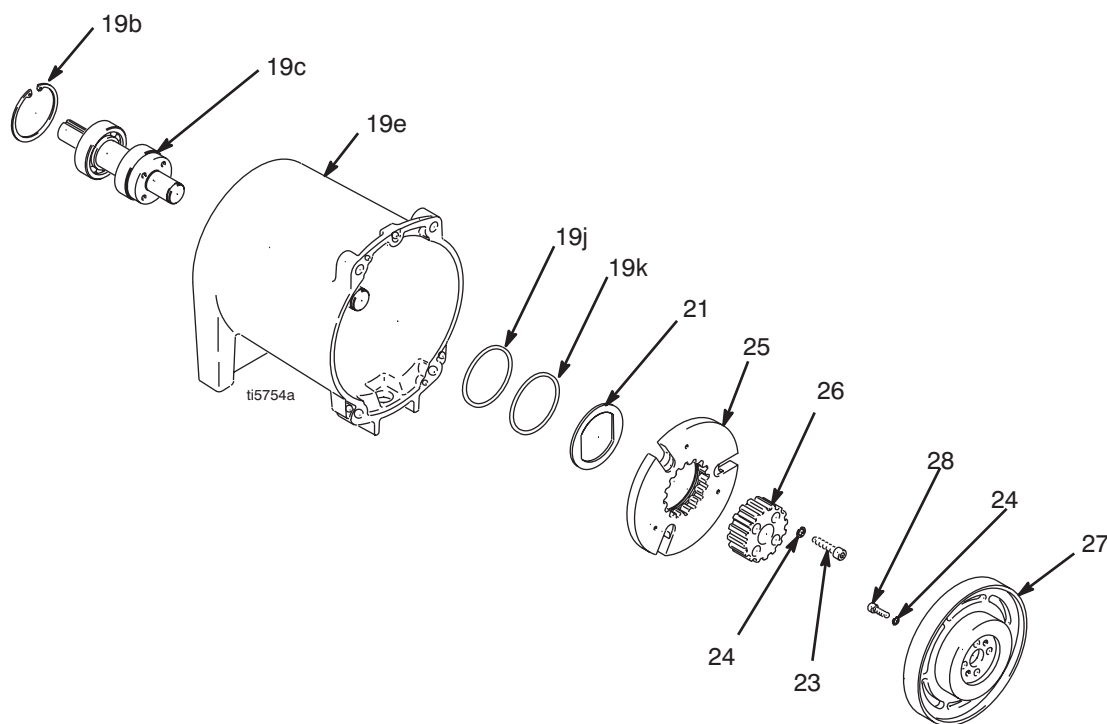
* Included in Filter Base Repair Kit 287510

Pressure Control Wiring Diagram

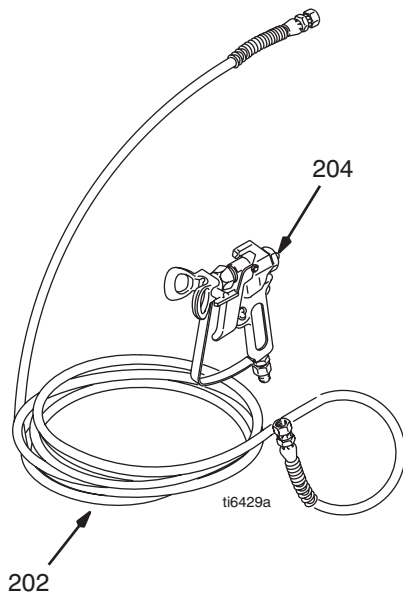


Clutch Housing - Parts Drawing and List

Ref	Part	Description	Qty	Ref	Part	Description	Qty
19	287519	HOUSING, clutch	1	24	105510*	WASHER, lock, spring (hi-collar)	8
		Includes 19b, 19c, 19e, 19j & 19k		25	*	ARMATURE, clutch, 5 in.	1
19b	114962	RING, retaining, internal	1	26	193510*	HUB, armature	1
19c	287422	SHAFT, drive, input	1	27	*	ROTOR, clutch, 5 in.	1
19e	15E887	HOUSING, clutch	1	28	101682*	SCREW, cap, sch	4
19j	115078	O-RING	1	* Included in Clutch Repair Kit 241113			
19k	115079	O-RING	1				
21	15E894	STOP, armature	1				
23	108803*	SCREW, hex, socket head	4				

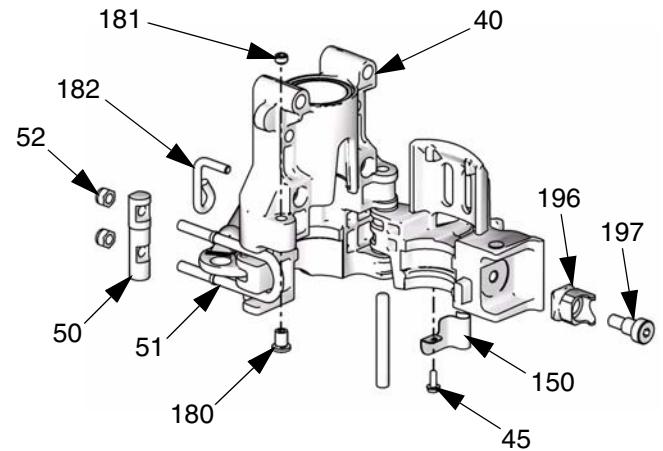


Premium Sprayers - Parts Drawing and List



Ref.	Part	Description	Qty.
201		Hi-Boy Sprayers See parts, page 18	1
		Lo-Boy Sprayers See parts, page 18	1
		Includes Lo-Boy Suction Set Kit, See parts, page 26	
202	240794	HOSE, grounded, nylon; 1/4 in. ID; cpld 1/4 npsm(fbe); 50 foot (15 m); spring guards both ends 3300 psi (227 bar, 27.7 MPa)	1
	240797	HOSE, grounded 3/8 in. x 50 ft (TexSpray 5900HD Convertible)	1
204	288420	CONTRACTOR II SPRAY GUN Includes RAC X 517-size SwitchTip and HandTite Guard See 311861 for parts	1
	241705	TEXTURE SPRAY GUN, see 308491 for parts (TexSpray 5900HD Convertible)	1
205	241735	HOSE, whip 1/4 in. x 3 ft (TexSpray 5900HD Convertible)	1

Ref 40: Bearing Housing

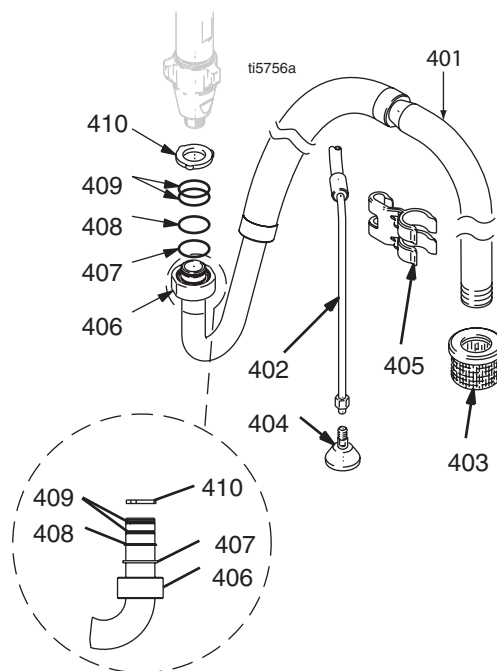


Ref.	Part	Description	Qty.
40	289274	HOUSING, bearing, complete	1
45	118444	SCREW, mach hex wash hd	1
50	15E625	PIN, housing, bearing	1
51	15G890	LATCH, housing, bearing	1
52	111040	NUT, lock hex	2
150	15E975	CLIP, spring	1
180	15F498	SCREW, adjustment	1
181	15F503	SCREW, set, socket hd	1
182	15F116	LATCH	1
196	15G584	RECEIVER, clamp	1
197	116942	SCREW, shoulder, socket head	1

Lo-Boy Suction Set - Parts Drawing and List

Models 248695, 248697, 248890

Ref	Part	Description	Qty
	287631	KIT, repair, tube suction	
401	287537	HOSE, suction, GMAX II 3900/5900	1
402	287536	HOSE, drain, GMAX II 3900/5900	1
403	189920	STRAINER, 1-11 1/2 npsm	1
404	241920	DEFLECTOR, threaded	1
405	15D000	CLIP, drain line	1
406	15C980	NUT, jam	1
407	15C981	WASHER, suction, swivel	1
408	118505	RING, retaining, external	1
409	117559	O-RING	2
410	115099	WASHER, garden hose	1



Technical Data

Power	
Honda GX160 Engine (ANSI Power Rating @ 3600 rpm)	5.5 Horsepower (4.1 kW)
Electric Motor	2.0 HP (1.5 kW)
Maximum working pressure	3300 psi
	(227 bar, 22.7 MPa)
Noise Level	
Sound power	100 dBa
	per ISO 3744
Sound pressure	86 dBa
	measured at 3.1 feet (1 m)
Cycles/gallon (liter)	93 (25)
Maximum delivery	
Gas Engine	1.6 gpm (6.0 liter/min)
Electric Motor	1.1 gpm (4.2 liter/min)
Maximum tip size	
Gas Engine	1 gun with 0.043 in. tip 2 gun with 0.029 in. tip 3 gun with 0.023 in. tip 4 gun with 0.019 in. tip
Electric Motor	1 gun with 0.031 in. tip 2 gun with 0.017 in. tip
Inlet paint strainer	16 mesh (1190 micron)
	stainless steel screen, reusable
Outlet paint filter	60 mesh (250 micron)
	stainless steel screen, reusable
Pump inlet size	1-5/16–12 UN-2A
Fluid outlet size	¼ npsm from fluid filter
Wetted parts	zinc-plated carbon steel, PTFE, Nylon, polyurethane, UHMW polyethylene, fluoroelastomer, acetal, leather, aluminum, tungsten carbide, nickel- and zinc-plated carbon steel, stainless steel, chrome plating

Dimensions

Sprayer (without hose and gun)	Weight lb (kg)	Height in. (cm)	Width in. (cm)	Length in. (cm)
248691 Hi-Boy	168 (76)	34.5 (87.6)	24.5 (62.2)	33.5 (85.1)
255630 HD, 248695 Lo-Boy	173 (78)	34.5 (87.6)	24.5 (62.2)	33.5 (85.1)

Graco Standard Warranty

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

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

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

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

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

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

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Graco 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.

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