Operation	GRACO
FieldLaze	er [™] 310810A
-	Use with Water-Based Materials -
Model 248942 900 psi (6,2 MPa, 62 bar) N	faximum Working Pressure
Patent pending	
Read all warnings an	d instructions
309045	
309053	
	ti5869a
	PROVEN QUALITY. LEADING TECHNOLOGY.

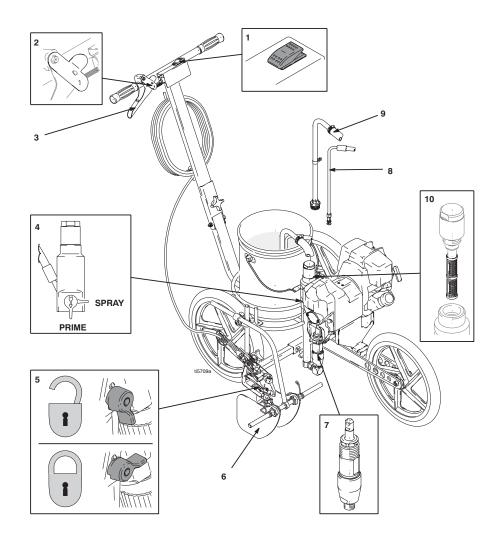
Graco Inc. P.O. Box 1441 Minneapolis, MN 55440-1441 Copyright 2004, Graco Inc. is registered to I.S. EN ISO 9001 CE

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.

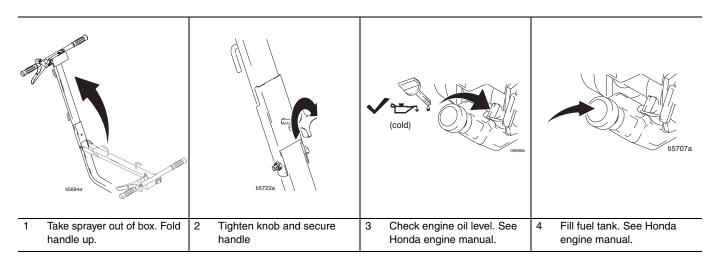
	WARNING
	 FIRE AND EXPLOSION HAZARD Flammable fumes, such as gasoline, solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion: Use water-based materials when spraying and cleaning. Use equipment only in well ventilated area. Do not fill fuel tank while engine 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 with sprayer sitting on any vehicle where static electricity may occur. 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 lights on or off when flammable fumes are present.
	 INJECTION HAZARD High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate medical attention. 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.
KIPALAUPAL	 PRESSURIZED EQUIPMENT HAZARD Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury. Follow Pressure Relief Procedure in this manual, when you stop spraying and before cleaning, checking, or servicing equipment. Tighten all fluid connections before operating the equipment. Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.
T	 MOVING PARTS HAZARD Moving parts can pinch or amputate fingers and other body parts. Keep clear of moving parts. Do not operate equipment with protective guards or covers removed. Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the Pressure Relief Procedure in this manual. Disconnect power or air supply.

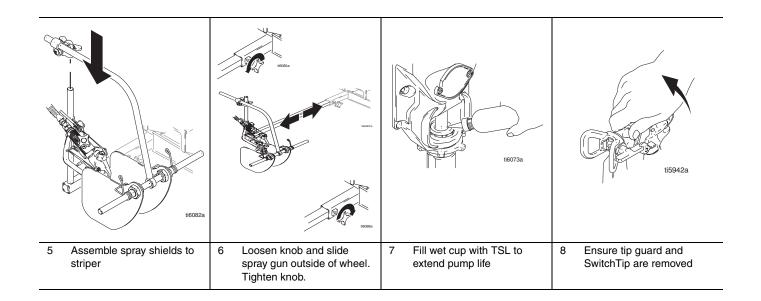
	 EQUIPMENT MISUSE HAZARD Misuse can cause death or serious injury. Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Data in all equipment manuals. Use water-based materials. Use fluids and solvents that are compatible with equipment wetted 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. For professional use only. 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. Comply with all applicable safety regulations.
	PRESSURIZED ALUMINUM PARTS HAZARD Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage.
Â	SUCTION HAZARD Never place hands near the pump fluid inlet when pump is operating or pressurized. Powerful suction could cause serious injury.
*	CARBON MONOXIDE HAZARD Exhaust contains poisonous carbon monoxide, which is colorless and odorless. Breathing carbon mon- oxide can cause death. Do not operate in an enclosed area.
\$	 TOXIC FLUID OR FUMES HAZARD Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed. Read 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.
The second se	BURN HAZARD Equipment surfaces and fluid that's heated can become very hot during operation. To avoid severe burns, do not touch hot fluid or equipment. Wait until equipment/fluid has cooled completely.
	 PERSONAL PROTECTIVE EQUIPMENT You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to: Protective eyewear Clothing and respirator as recommended by the fluid and solvent manufacturer Gloves Hearing protection



	English	Français	Deutsch	Español	Italiano
1	Striper OFF				
2	Stencil Lever				
3	Spray gun control				
4	Prime valve				
5	Spray gun trigger lock				
6	Spray shield				
7	Pump				
8	Drain tube				
9	Suction tube				
10	Fluid filter				

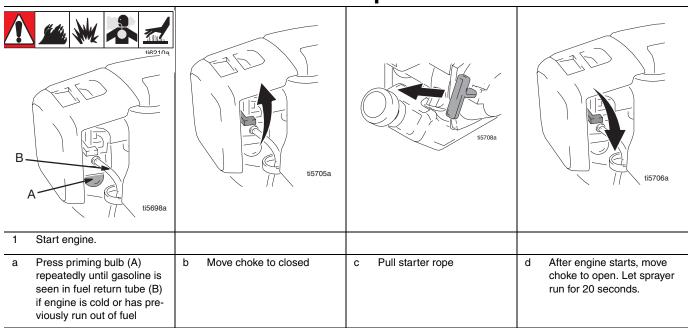
Setup

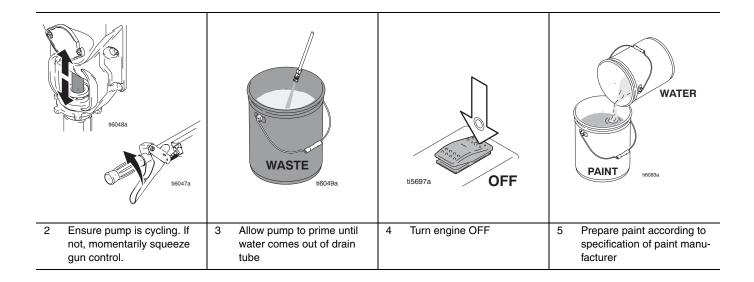




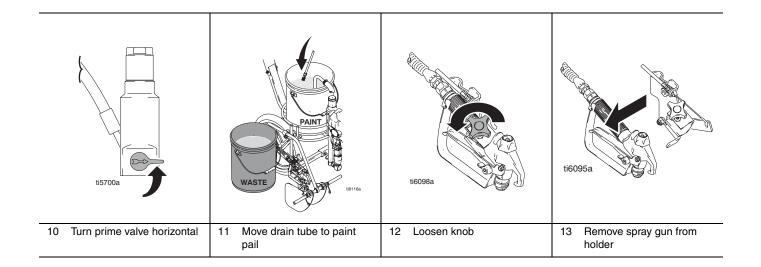
	B0044	WASTE b6117a	ti5701a	
9	Place suction tube in water pail	10 Place drain tube in waste pail	11 Turn prime valve down	

Startup





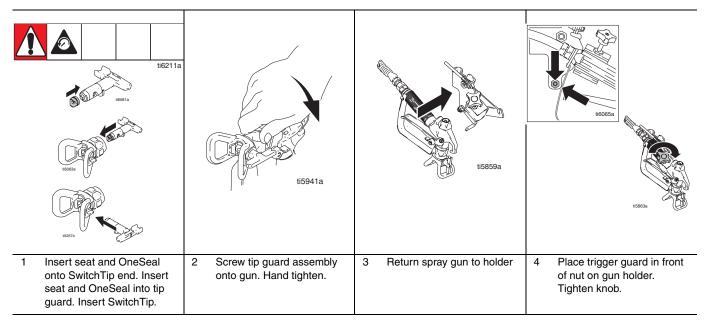
PAINT PAINT WASTE	15708a	16048a	WASTE ti6049a
6 Place suction tube in paint	7 Start engine	8 Ensure pump is cycling. If not, momentarily squeeze spray gun control.	9 Allow pump to prime until paint comes out of drain tube

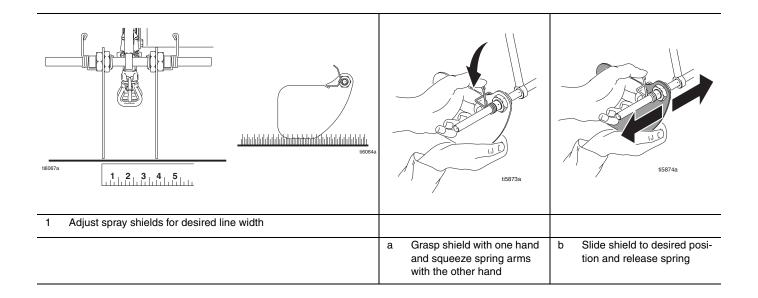


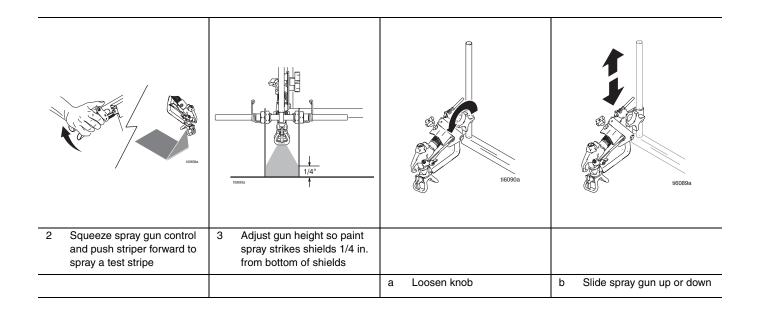


14 Point spray gun into waste pail. Squeeze spray gun trigger. Release spray gun trigger when paint comes out of spray gun.

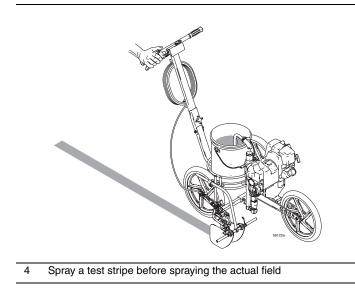
Spraying







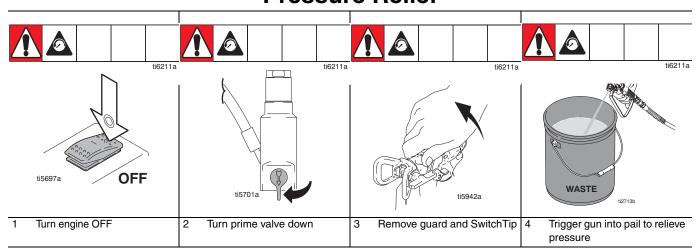
Spray a Test Stripe



Stencil Spraying

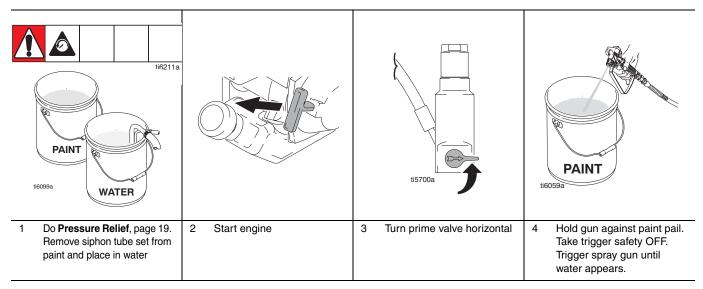
tiste2a	ti5860a	15695a	ti5703a
1 Loosen knob	2 Remove gun from holder	3 Lift stencil plate up and rotate right. This increases engine speed which engages pump.	4 Trigger spray gun over sten- cil pattern

ti6047a	ti5859a	tiseGa	
5 Momentarily squeeze spray gun control to release sten- cil plate and decrease engine speed	6 Return gun to holder	7 Tighten knob	



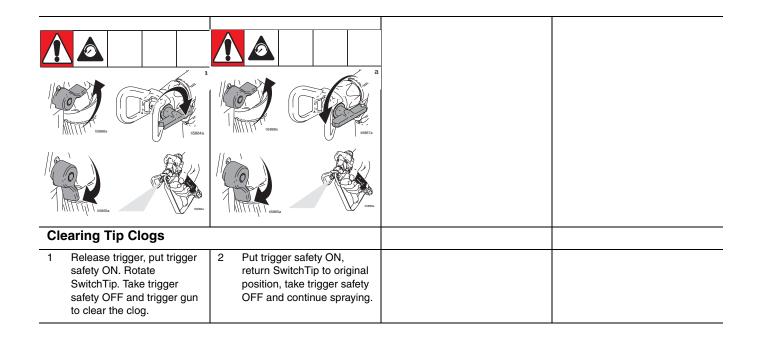
Pressure Relief

Cleanup



	WATER ti6100a	ti5701a	II6212a		ti5697a OFF
5	Move gun to water pail, hold gun against pail, trig- ger gun to thoroughly flush system. Release trigger and put trigger safety ON.	6 Turn prime valve down and allow flushing fluid to circu- late for approximately 20 seconds to clean drain tube. Important: If drain tube is not properly flushed, and becomes plugged, sprayer will malfunction	Caution: After flushing with water, do not leave water in sprayer. Flush again with oil or Pump Armor and leave this pro- tective coating in the sprayer to prevent freezing and increase sprayer life.	7	Turn engine OFF

	15943a	WATER 16066a	i5276a
8	Unscrew cap; remove filter.	9 Place filter, guard and SwitchTip in flushing fluid	 Clean filter, guard and SwitchTip with a soft bristle brush to prevent part failure due to dried materials. Assemble parts. Wipe sprayer, hose and gun with a rag soaked in water or mineral spirits.



Troubleshooting

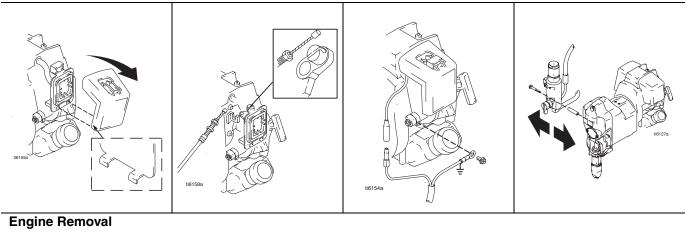
PROBLEM	CAUSE	SOLUTION
Gas engine does not start	No gasoline	Fill gasoline tank. Consult engine manual, supplied
Gas engine doesn't work properly	Faulty engine	Consult engine manual
	Elevation (above 5000 ft)	Carburetor needs modification. Consult engine manual.
Gas engine operates, but displacement pump	Dried paint, seized pump rod	Service pump. See manual 309053.
does not operate	New pump, new pump packings and/or low engine speed.	Squeeze spray gun control, to momentarily increase engine speed.
Displacement pump operates, but output is low	Pump ball checks not seating properly.	Service ball checks. See manual 309053.
	Piston packings worn or damaged.	Tighten packing nut or replace packings. See manual 309053.
	Displacement pump outlet filter (if used) is dirty or clogged	Clean filter
	Suction tube to pump inlet is not tight	Tighten
	Worn prime valve	Replace
Paint leaks and runs over side of wetcup	Loose wet-cup	Tighten wet-cup enough to stop leakage
	Throat packings worn or damaged	Replace packings. See manual 309060.
The engine overheats	Paint buildup on engine components	Clean
	Oil level is low	Fill with oil. See page 7.
Spitting from gun	Air in fluid pump or hose	Check for loose connections on siphon assembly, tighten, then reprime pump
	Loose intake suction	Tighten
	Fluid supply is low or empty	Refill supply container
Cannot achieve a good line	Cold weather	Warm paint or thin with water
	Paint too thick	Thin as necessary
	Bumpy turf	Use spray shields
	Worn tip	Replace tip
	Wrong tip size	See tip selection chart
Sprayer will not prime	Inlet ball stuck	Tap pump with hammer handle to loosen ball
		Store sprayer with Pump Aromor in pump
	Pump not cycling	Increase engine spped
Poor starting spray pattern	Worn prime valve	Replace prime valve
	High speed on engine set too low	Increase engine speed. See page 37.

Repair

	ti6211a				ti6137a	
Pump Removal					Pump Installation	
1	Flush pump (23). Do Pres- sure Relief , page 19.	2	Loosen two screws and rotate cover. Cycle pump to position pump pin to be removed. Remove pump pin.	3	Remove suction tube (27) and hose (120). Loosen pump jam nut (12). Unscrew pump.	If pin works loose, parts could break off due to force of pumping action. Parts could project through the air and result in seri- ous injury or property damage

	ti5916a	S573A	
Caution : If pump locknut loos- ens during operation, drive hous- ing threads will be damaged.	1 Extend pump piston rod fully. Apply grease to top of pump rod at (A) or inside connecting rod.	2 Install pump pin (9a). Verify retainer spring (9b) is in groove of pump pin. Push pump up until pump threads engage	3 Screw in pump until threads are flush with drive housing opening. Align pump outlet to back.

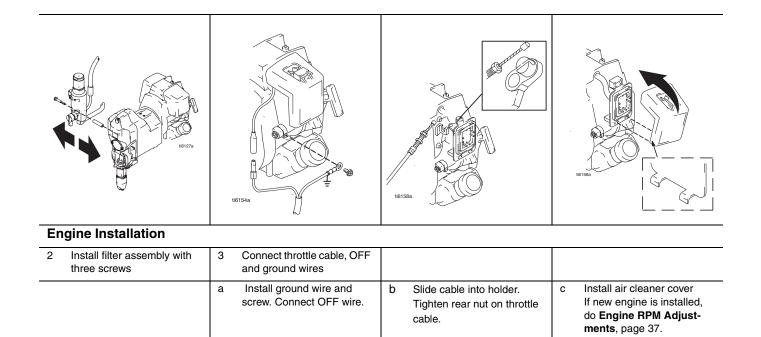
ti6137a	ti6140a	16141a	ti6160a
4 Install suction tube and hose.	5 Screw jam nut (12) up onto pump until nut stops. Tighten jam nut by hand, then tap 1/8 to 1/4 turn with a 20 oz (maximum) ham- mer to approximately 75 +/-5 ft-lb (102 Nm).	6 Fill packing nut with Graco TSL until fluid flows onto top of seal.	7 Rotate cover; tighten screws



1 Disconnect throttle cable, OFF and ground wires 2 Remove three screws and filter assembly a Remove air cleaner cover b Loosen rear nut on throttle cable. Slide cable out of holder. c Disconnect OFF wire. Remove ground screw and wire.

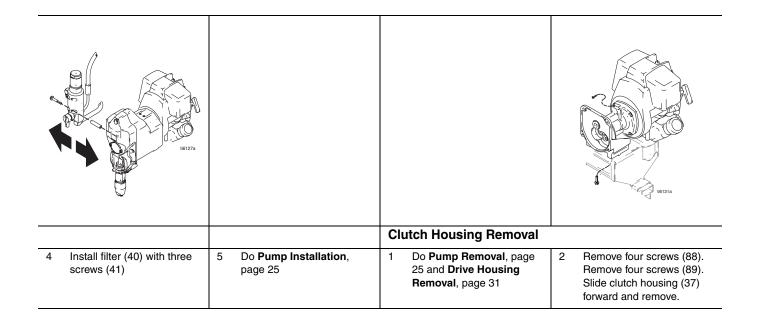
I

		ti6133a	té133a		
Er	ngine Removal		Engine Installation	1	
3	Remove two screws and shroud	4 Remove four screws (88), two screws (91) and slide engine (35) back to remove	1 Slide engine (35) in and install with two screws (91) and four screws (88)	2	Install shroud (8) with two screws (102)
		3			



	KI27a	The second se	
Drive Housing Removal			
1 Do Pump Removal , page 25	2 Remove three screws (41) and filter (40)	3 Remove two screws (102) and shroud (8)	4 Remove four screws (89) and drive housing (20)

	ti6214a		
	Drive Housing Installation		·
Caution: Crankshaft and gear may stick to grease between drive housing and clutch hous- ing. Do not drop crankshaft or gear on floor.	1 Install supplied grease in back of drive housing	2 Install drive housing (20) with four screws (89)	3 Install shroud (8) with two screws (102)



Repair

	Clutch Housing Installatio		
	Clutch Housing Installatio	n	
Caution: Do not run engine unless connected to striper. Cen- trifugal force will damage clutch shoes and engine case. Go to an authorized Honda repair center for clutch repairs.	 Slide clutch housing (37) into engine. Install four screws (89). Install four screws (88). 	2 Do Drive Housing Instal- lation, page 32 and Pump Installation, page 25	

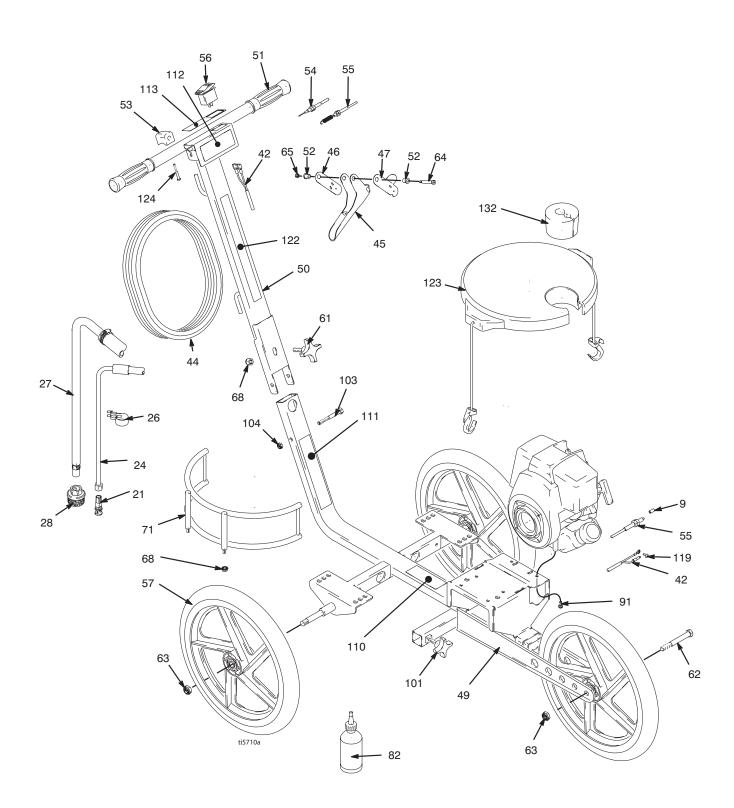
ti6211a	bilita	b6134a	
Prime Valve Removal			
1 Relieve pressure, page 19.	2 Remove pin and prime valve handle	3 Remove valve base (16) and prime valve (15).	

		ti6134a	ti6162a	
Pr	ime Valve Installation			
1	Apply grease to rear of prime valve. Apply thread sealant to prime valve threads.	2 Install prime valve (15). Torque prime valve 130 - 150 in-lb. Install valve base (16).	3 Install prime valve handle (85) and pin (6) as shown	

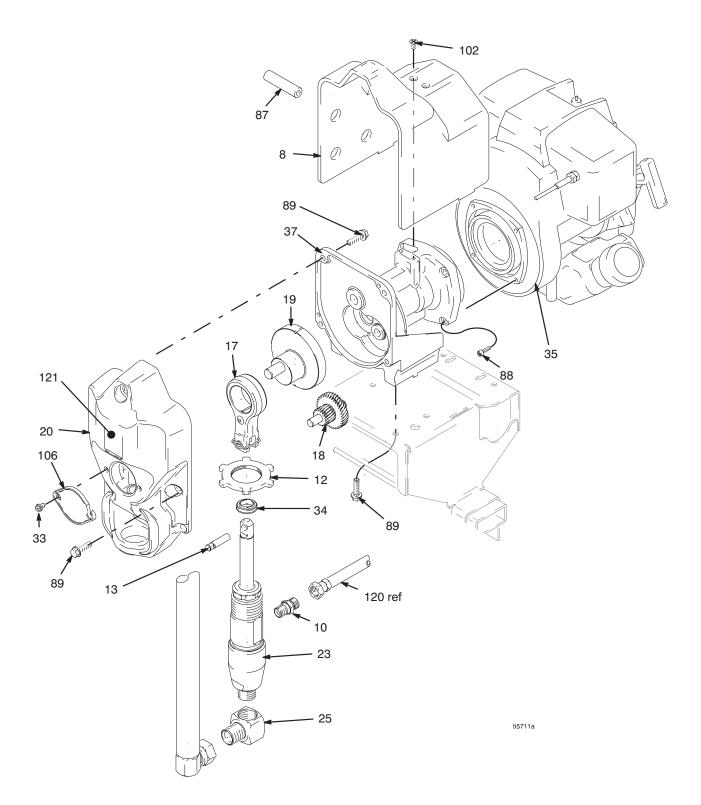
Engine RPM Adjustments

KIISS				ti5701a	((II570Ba
Low Speed (Idle)						
1 Remove cover	2	Install tachometer lead to spark plug	3	Turn prime valve down	4	Start engine

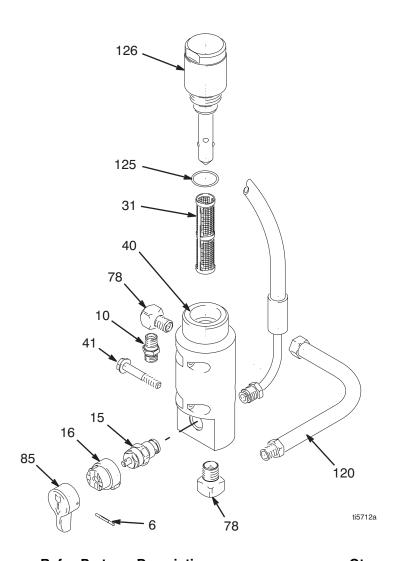
tie	55a	ti5700a	15695a	B A
		High Speed		
5	Adjust idle adjustment screw until RPM is 4400 to 4600 Hint: pump starts to cycle	6 Turn prime valve horizontal (pump stalls). Pump must contain fluid (water/paint) and be primed.	7 Set Throttle Override: Lift stencil plate up and rotate right.	8 Adjust idle adjustment screw until RPM is 5700 to 5900 Increase RPM: Loosen front nut (A) and tighten rear nut (B). Decrease RPM: Loosen rear nut and tighten front nut.



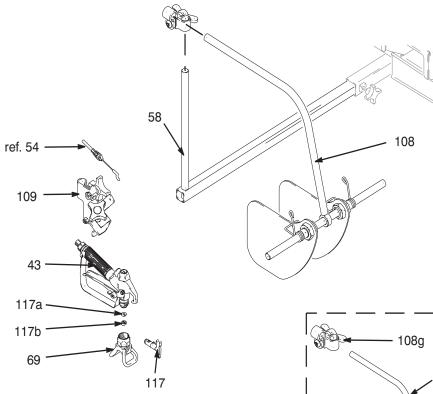
Ref	Part	Description	Qty
9	119550	SPACER, round, .120 ID	1
21	195426	STEM, deflector	1
24	243993	HOSE, drain	1
26	114026	CLIP, hose	1
27	244353	HOSE, suction, female, black	1
28	187651	STRAINER, 3/4-16 unf	1
42	119544	WIRE, engine ground	1
44	243954	HOSE, coupled, 3/16 in.x 25 ft	1
45	245676	HANDLE	1
46	198895	PLATE, lever, pivot	1
47	15E864	PLATE, lever, pivot	1
49	15E842	FRAME, Field Lazer	1
50	15E840	HANDLE, fieldmarker	1
51	108063	GRIP, handle	2
52	111017	BEARING, flange	2
53	198896	BLOCK, mounting (mach)	1
54	119534	CABLE	1
55	15E849	CABLE	1
56	114954	SWITCH, rocker	1
57	119528	TIRE, semi-pneumatic	3
61	108471	KNOB, pronged	1
62	101147	SCREW, cap, hex hd	1
63	119547	NUT, hex, lock, nylon, thin	3
64	116941	SCREW, shoulder, socket head	1
65	116969	NUT, lock	1
68	101566	NUT, lock	5
71	15E955	HOLDER, bracket	2
82	206994	FLUID, TSL, 8 oz	1
91	112179	SCREW, mach, slt hex hd	2
101	111145	KNOB, pronged	1
103	113664	SCREW, cap, hex hd	1
104	112746	NUT, hex	1
110▲	15F129	LABEL, safety	1
111▲	15F128	LABEL, safety	1
112▲	194126	LABEL, warning	1
113	15F130	LABEL, instructions	1
119	106084	SCREW, mach, pan hd	1
122	15F238	LABEL, Field Lazer, handle	1
123	287590	KIT, pail cover	1
124	116973	SCREW, 10-24 x1.5 in., taptite, phil	
132		PLUG, pail cover	1
	Safety la	bels are available at no charge	



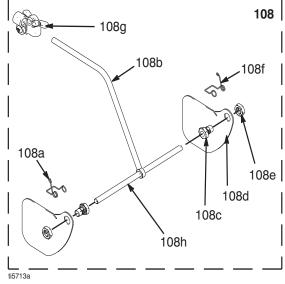
Ref	Part	Description	Qty
8	287582	COVER, field lazer	1
10	162453	NIPPLE, 1/4 npsm x 1/4 npt	1
12	195150	NUT, jam, pump	1
13	195175	PIN, straight, headless	1
17	243221	ROD, connecting, includes 13	1
18	243219	GEAR, combination	1
19	243218	SHAFT, crank	1
20	243220	HOUSING, drive,	1
		includes 10, 33, 34, 106	
23	246426	PUMP, displacement, includes 13	1
25	115764	FITTING, elbow, 90	1
33	115492	SCREW, mach, slot hex wash hd	2
34	115491	WIPER, rod	1
35	287583	ENGINE	1
37	287546	HOUSING, clutch	1
87	119556	SPACER	3
88	117029	SCREW, shcs m6 x 25	4
89	115495	SCREW, mach, hex washer hd	8
102	106078	SCREW, flat head	2
106	195099		1
121	15F237	LABEL, drive housing	1



Ref	Part	Description	Qty
6	111600	PIN, grooved	1
10	162453	FITTING, (1/4 npsm x 1/4 npt)	1
15	287545	KIT, repair, prime valve	1
16	224807	BASE, valve	1
31	246384	FILTER, fluid, 60 mesh,	1
		original equipment	
	246425	30 mesh	1
	246382	100 mesh	1
	246383	200 mesh	1
40	15E830	MANIFOLD, filter	1
41	119525	SCREW, thread-forming	3
78	100840	ELBOW	2
85	187625	HANDLE, valve, drain	1
120	287003	HOSE, cpld, 1/4 (f) x 11 in. HP	1
125	117828	O-RING	1
126	287167	CAP, filter	1



Ref	Part	Description	Qty
43	243011	GUN, spray, SG2	1
58	287453	BRACKET, support, extension	1
69	243161	GUARD, RAC 5	1
108	287528	KIT, spray shield	1
		Includes 108a - 108g	1
108a	15F142	GUIDE, wire, right shield	1
108b	287494	BAR, guide shield	1
108c	15F007	GUIDE, shield	2
	15F016	SHIELD, guide	2
108e	100056	NUT, jam, hex	2
	15F143	GUIDE, wire, left shield	1
108g	287566	KIT, clamp	1
108h	15F050	ROD	1
109	287529	, gen nenen	2
117	LL5421	TIP, spray RAC, 5, striping	1
		includes 117a, 117b	1
117a	115524	GASKET	1
117b	195558	SEAT, cylinder	1



Spray Tip Selection

Line Width	Spray Tip
2 in.	LL5217
4 - 8 in. and Stenciling	LL5421
8 - 12 in.	LL5627

Technical Data

Idle RPM 4	400 to 4600
High Speed RPM 5	5700 to 5900
Dimensions (handle down)48	x 24 x 24 in.
(121)	x 61 x 61 cm)
Weight 80	lb (36.32 kg)
Wetted Parts zinc-plated carbon steel, polyethylene, sta PTFE, Delrin [®] , chrome plating, leather, V UHMWPE, aluminum, tungsten carbide	ainless steel,
Note: Delrin is a registered trade mark of the	Co.

Sound Levels*

Sound Pressure	
Sound Power	101 dB(A)
*Measured at maximum normal load conditi	ons per ISO 3744

Warranty

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

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

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

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

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

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

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

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ADDITIONAL WARRANTY COVERAGE

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

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

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

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

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