DEVILBISS

GTI PRO LITE HVLP & LVMP Operation Manual



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EC Declaration of Conformity

We, Finishing Brands UK Limited, Ringwood Rd, Bournemouth, Dorset, BH11 9LH, UK, as the manufacturer of the Spray gun model GTIPRO LITE G, declare, under our sole responsibility, that the equipment to which this document relates is in conformity with the following standards or other normative documents:

BS EN ISO 12100: 2010, BS EN 1953:2013; and thereby conform to the protection requirements of Council Directive 2006/42/EC relating to Machinery Safety Directive, and; EN 13463-1:2009, council Directive 94/9/EC relating to Equipment and Protective Systems intended for use in Potentially Explosive Atmospheres protection level II 2 G X.



D. Smith, Director of Sales (EMEA) 5th May 2016

Finishing Brands UK Limited reserves the right to modify equipment specification without prior notice.

Part Numbers

The ordering code for the GTIPRO LITE G Spray gun is;

E.g. PROLT-GTE10-12 where; G = Gravity Gun TE10 = TE10 Aircap 12 = 1.2 Nozzle

See charts 1 & 2 p13 for available Aircap/Nozzle sizes

Operational Description

This GTIPRO LITE G Spray Gun is a professional quality gun designed with both high volume, low pressure (HVLP) technology or High Efficiency EPA compliant technology. HVLP Technology reduces overspray and limits air cap pressure to 0.7 bar (10 psi). High Efficiency complies with EPA by obtaining transfer efficiency above 65%.

IMPORTANT: These Sprayguns are suitable for use with both waterbased and solvent based coating materials. These guns are not designed for use with highly corrosive and/or abrasive materials and if used with such materials it must be expected that the need for cleaning and/or replacement of parts will be increased. If there is any doubt regarding the suitability of a specific material, contact your DeVilbiss Distributor or DeVilbiss direct.

NOTE: This gun is not to be used with halogenated hydrocarbon solvents or cleaning agents such as 1,1,1,-Trichloroethane or methylene chloride. These solvents can react with the aluminium components used in this gun and cup. The reaction can become violent and lead to an equipment explosion.

	Kit contents (all models)					
1	1 GTIPRO LITE Gravity Feed Spraygun 1 Spanner (10mm and 14mm A/F)					
1	GFC Gravity feed cup	1	Torx/Flat blade screwdriver			
1	Cup Filter	1	Cleaning Brush			
1 Set of 4 coloured identification rings 1 Service bulletin						

	Construction Features						
1	Air Cap (nickel plated brass for long durability)	10	Fan Air Adjustment (stepless regulation for fan to round spray)				
2	Air Cap Retaining Ring (allows easy rotation of air cap)	11	Fluid Adjustment (stepless regulation of fluid volume)				
3	Fluid Nozzle (ideal for most paint systems)	12	Interchangeable Colour ID System (4 coloured rings supplied)				
4	Fluid Needle (grooved stem for easy removal)	13	Anodised, forged aluminium gun body (ergonomic, good looking & durable, easy to clean)				
5	Fluid Inlet (3/8 BSP thread – accepts DeVilbiss and most other cup systems)	14	500cc Acetal Cup (easy clean, anti-static)				
6	Air Inlet (universal thread, accepts G 1/4 & 1/4 NPS)	15	Cup Lid with Drip Free Vent (avoid drips)				
7	Self Adjusting Needle Packing (for trouble free operation)	16	Air Valve (design offers low pull force & low pressure drop)				
8	Trigger (ergonomic for comfort)	17	Gun acceptable for waterborne and solvent borne applications				
9	Trigger Stud & Screw (easy replacement design)						

Materials of Construction				
Gun Body	Anodised aluminium			
Air Cap	Nickel Plated Brass			
Fluid Nozzle, Fluid Needle, Fluid Inlet, Trigger Stud	Stainless steel			
Adjusting Knobs, Air Cap Retaining Ring	Anodized aluminium			
Springs, Clips, Screws	Stainless steel			
Seals, Gaskets	Solvent resistant			
Trigger	Chrome plated steel			
Air Inlet, Body Bushing, Spreader Valve Body, Air Valve	Chrome plated brass			
Nut.				
Air Valve Assembly	Aluminium			

Specifications & Technical Data				
Air Supply Connection	Universal 1/4" BSP and 1/4" NPS male			
Maximum Static Air Inlet Pressure	P1 = 12 bar (175 psi)			
Gun Air Inlet Pressure for HVLP and High Efficiency® both with gun triggered.	0.69 bar (10 psi) 2.0 bar (29 psi)			
Fluid Supply Connection	3/8" BSP			
Service Temperature	0 to 40°C (32 to 104°F)			
Gun Weight (gun only) (with cup)	446 g 623 g			

Fire and explosion



Solvents and coating materials can be highly flammable or combustible when sprayed. ALWAYS refer to the coating material supplier's instructions and COSHH sheets before using this equipment.



Users must comply with all local and national codes of practice and insurance company requirements governing ventilation, fire precautions, operation and house-keeping of working areas.



This equipment, as supplied, is NOT suitable for use with Halogenated Hydrocarbons.



Static electricity can be generated by fluid and/or air passing through hoses, by the spraying process and by cleaning non-conductive parts with cloths. To prevent ignition sources from static discharges, earth continuity must be maintained to the spray gun and other metallic equipment used. It is essential to use conductive air and/or fluid hoses.

Personal Protective Equipment



Toxic vapours – When sprayed, certain materials may be poisonous, create irritation or be otherwise harmful to health. Always read all labels, safety data sheets and follow any recommendations for the material before spraying. If in doubt, contact your material supplier.



The use of respiratory protective equipment is recommended at all times. The type of equipment must be compatible with the material being sprayed.



Always wear eye protection when spraying or cleaning the spray gun.



Gloves must be worn when spraying or cleaning the equipment.

Training - Personnel should be given adequate training in the safe use of spraying equipment.

Misuse

Never aim a spray gun at any part of the body.

Never exceed the maximum recommended safe working pressure for the equipment.

The fitting of non-recommended or non-original spares may create hazards.

Before cleaning or maintenance, all pressure must be isolated and relieved from the equipment.

The product should be cleaned using a gun-washing machine, and should be removed and dried immediately after cleaning is completed. Prolonged exposure to cleaning solutions can cause damage to the product.

Noise Levels

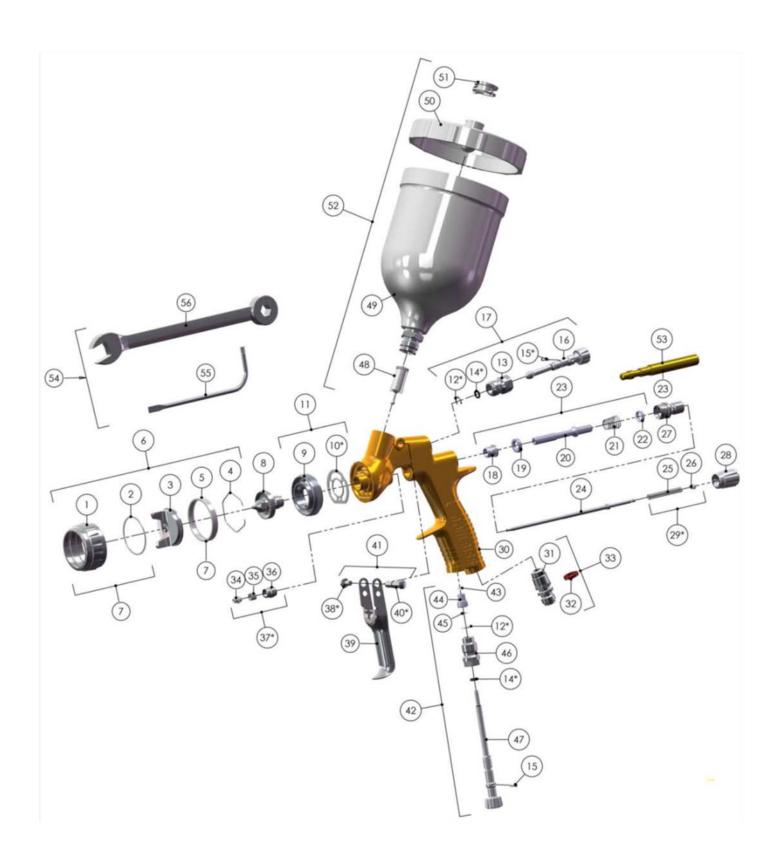


The A-weighted sound level of spray guns may exceed 85 dB (A) depending on the setup being used. Details of actual noise levels are available on request. It is recommended that ear protection is worn at all times when spraying.

Operating

Spray equipment using high pressures may be subject to recoil forces. Under certain circumstances, such forces could result in repetitive strain injury to the operator.

	PARTS LIST								
REF. NO.	DESCRIPTION	PART NO.	QTY	REF. NO.	DESCRIPTION	PART NO.	QTY		
1	Air Cap Retaining Ring	-	1	31	Air Inlet	-	1		
2	Slip Ring	-	1	32	Colour ID Ring Kit (4Colours)	SN-26-K4	1		
3	Air Cap	-	1	33	Air Inlet Kit	SN-9-K	1		
4	Air Cap Retaining Clip	JGA-156-K5	1	34	Needle Packing	-	1		
5	Retaining Ring Seal	-	1	35	Packing Spring	-	1		
6	Aircap & Ring	See chart 1 p13		36	Packing Nut	-	1		
7	Air Cap Retaining Ring & Seal	PRO-420-K	1	*37	Packing, Spring and Packing Nut Kit	SN-404-K	1		
8	Fluid Nozzle Kit	See chart 2 p13	1	*38	Trigger Screw	-	1		
9	Spray Head	-	1	39	Trigger	-	1		
*10	Spray head Seal	SN-18-1-K2	1	*40	Trigger Stud	-	1		
11	Spray head kit	SN-69-K	1	41	Trigger Stud & Screw Kit	SP617-CR-K	1		
*12	Circlip	-	1	42	Airflow Valve	PRO-407-K	1		
13	Valve Body	-	1	43	Circlip - Kit of 5	25746-007-K5	1		
*14	O Ring	-	1	44	Valve Head	-	1		
*15	Spreader Valve Pin	-	2	45	Washer	-	1		
16	Spreader Valve Adjusting Knob	-	1	46	Valve Body	-	1		
17	Spreader Valve Assembly	PRO-406-K	1	47	Valve Adjusting Knob	-	1		
18	Front Valve Seal	-	2	48	Filter	KGP-5-K5	1		
19	Valve Seat	-	1	49	Gravity Cup	-	1		
20	Spindle	-	1	50	Gravity Cup Lid	GFC-402	1		
21	Air Valve Spring	-	1	51	Drip Check Lid (kit of 5)	GFC-2-K5	1		
22	Rear Valve Seal	-	1	52	Gravity Cup Kit	GFC-501	1		
23	Air Valve Kit	PRO-471	1	*53	Air Valve Service Tool	-	1		
24	Fluid Needle	PRO-301-K	1	54	Tool kit	SN-406	1		
25	Needle Spring	-	1	SERV	ICE PARTS				
26	Spring Pad	-	1	Spray Gun repair kit (includes items marked *)					
27	Housing	SN-66-K	1						
28	Fluid Adjusting Knob	SN-67-C-K	1	Seal a	nd Pin Kit, kit of 5	GTI-420 KE			
*29	Needle Spring Kit	PRO-472-K3	1	(items 12, 14 and 15)					
30	Gunbody	-	1	* Not included in the Gun Kit, only with ref 23					



INSTALLATION

For maximum transfer efficiency, do not use more pressure than is necessary to atomise the material being applied. NOTE: when using the HVLP do not exceed 1.75 bar inlet pressure.

 Connect the gun to a clean, moisture and oil free air supply using a conductive hose, of at least 8 mm I.D.

Note

Depending on hose length, larger I.D. hose may be required. Install an air gauge at the gun handle. When gun is triggered on, adjust regulated pressure to 2.0 bar for High Efficiency Aircaps and 1.75 bar for HVLP. Do not use more pressure than is necessary to atomise the material being applied. Excess pressure will create additional overspray and reduce transfer efficiency.

Note

If quick connect couplings are required, use only high flow quick connects approved for HVLP use. Other types will not flow enough air for correct gun operation.

Note

If an air adjusting valve is used at the gun inlet, use DGIPRO-502-BAR Digital Gauge. Some competitive adjusting valves have significant pressure drop that can adversely affect spray performance. The DGIPRO Digital Gauge has minimal pressure drop, which is important for HVLP spraying.

 Insert the filter (48) into the inlet of the Gravity Cup.
 Make sure the body of the filter is pushed fully so the body of the filter does not protrude from the cup insert.



3. Attach the gravity feed cup to the material inlet.

Note

Before using the gun, flush it with solvent to ensure that the fluid passages are clean.

OPERATION

- Mix coating material to manufacturer's instructions and strain material.
- 2. Fill the cup to no more than 20 mm from the top of the cup. DO NOT OVERFILL.
- 3. Attach Cup Lid.
- 4. Turn fluid adjusting knob (28) clockwise to prevent fluid needle movement.
- 5. Turn spreader valve adjusting knob (16) counter clockwise to fully open.

- Adjust inlet air pressure if required.
- 7. Turn fluid adjusting knob (28) counter clockwise 5 turns for full needle travel.
- 8. Test spray. If the finish is too dry, reduce airflow by reducing air inlet pressure.
- 9. If finish is too wet, reduce fluid flow by turning fluid adjusting knob (28) clockwise. If atomisation is too coarse, increase inlet air pressure. If too fine, reduce inlet pressure.
- 10. The pattern size can be reduced by turning spreader valve knob (16) clockwise.
- 11. Hold gun perpendicular to surface being sprayed. Arcing or tilting may result in uneven coating.
- 12. The recommended spray distance is 150-200mm.
- 13. Spray edges first. Overlap each stroke a minimum of 75%. Move gun at a constant speed.
- 14. Always turn off air supply and relieve pressure when gun is not in use.

PREVENTIVE MAINTENANCE & CLEANING

To clean air cap and fluid nozzle, brush exterior with a stiff bristle brush. If necessary to clean cap holes, use a broom straw or toothpick if possible. If a wire or hard instrument is used, extreme care must be used to prevent scratching or burring of the holes which will cause a distorted spray pattern.

To clean fluid passages, remove excess material from cup, then flush with gun wash solution. Wipe the gun exterior with a dampened cloth. Never completely immerse in any solvent or cleaning solutions as this is detrimental to the lubricants and life of the spray gun.

Note

When replacing the fluid nozzle or fluid needle, replace both at the same time. Using worn parts can cause fluid leakage. See page 13, Chart 2. Also, replace the needle packing at this time. Torque the fluid nozzle to 18–20 Nm. Do not over tighten.

CAUTION

To prevent damage to fluid nozzle (8) or fluid needle (24), be sure to either 1) pull the trigger and hold while tightening or loosening the fluid nozzle, or 2) remove fluid adjusting knob (28) to relieve spring pressure against needle collar.

CAUTION

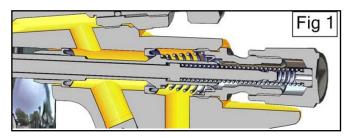
IMPORTANT - the Gravity cup is made from special anti-static materials, but it is still important to avoid generating static charges. The Cup must not be cleaned or rubbed with a dry cloth or paper. It is possible to generate a static charge by rubbing which, if discharged to an earthed object could create an incendive spark and cause solvent vapours to ignite. Only use a dampened cloth or antistatic wipes if manual cleaning is required within a hazardous area.

Parts Replacement/Maintenance AIR VALVE INSTRUCTIONS

Servicing Air Valve

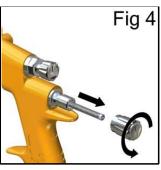
Reasons to service air valve:

- A) Air valve not functioning correctly (may need cleaning).
- B) Routine maintenance.
- C) Air leaks.
- 1. Remove trigger screw (38) with Torx tool (55) or Torx T20 key. (See fig 2).
- 2. Remove trigger stud (40) and remove trigger (39) (See fig 3).
- 3. Remove fluid adjusting knob (28) and spring (29). (See fig 4).
- 4. Remove fluid needle (24) (See fig 5).
- 5. Using a 6mm hex key, remove Valve housing (27). (See Figs 6 and 7).
- 6. Remove spring (21) and valve spindle (20). (See Fig 8).
- 7. Using service tool (53), engage groove behind the valve seat (19) (See Fig 9).



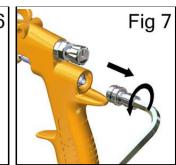


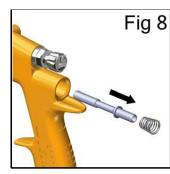


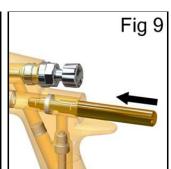




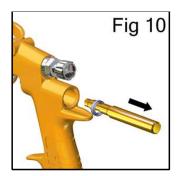


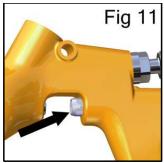


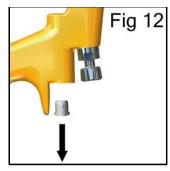


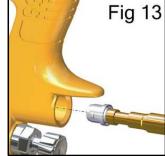


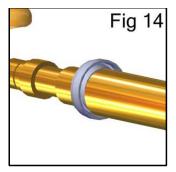
- 8. Withdraw the valve seat (19) from the gun body. (See fig 10).
- 9. Push out the front airvalve seal (18) with a finger. (See fig 11).
- 10. Turn the Gun upside down and let the seal fall out. (See fig 12).
- 11. Fit New front seal (18) to service tool (53). Fit into gunbody and press firmly to ensure Seal is engaged. (See fig 13).
- 12. Fit a new valve seat (19) to service tool (53). Groove must face outwards. (See fig 14).
- 13. Fit valve seat (19) to gunbody. (See fig 15).
- 14. Remove rear airvalve seal (22) from housing (27) with a hooked instrument. (See fig 16).
- 15. Fit new seal (22) to service tool (53). Groove must face outwards. Press seal (22) to housing (27). (See fig 17).
- 16. Reassemble remaining parts in reverse order valve (20), spring (21), housing (27) and tighten with 6mm hex key, needle (24) spring (29) and knob (28). Replace trigger (39), fitting trigger stud (40), and screw in the trigger screw (38) with Key (55) or Torx Key T20.
- 17. Trigger gun fully and screw in fluid adjusting knob (28) until it stops. Back it off 1/2 turn and gun will have full needle travel.
- 18. Trigger gun several times to verify correct operation.

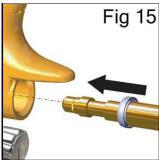


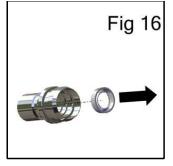


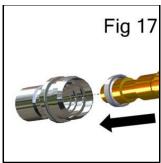








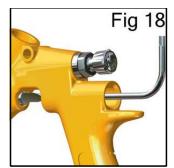




Parts Replacement/Maintenance NEEDLE PACKING REPLACEMENT INSTRUCTIONS

- 1. Remove trigger and needle following steps 1 to 6 on P9, servicing airvalve.
- 2. Loosen and remove packing nut using Key (57) or a straight blade screwdriver. (See figs 18 & 19)
- 3. Discard old packing (34) and packing spring (35) if replacing.

 Clean packing if reusing. Also clean packing spring and nut (36). (See fig 20).
- 4. Re-assemble the packing, assemble into gunbody by hand and then tighten. (See fig 21)
- 5. Complete re-assembly following 16 to 24 on P10.









SPREADER VALVE ASSEMBLY REPLACEMENT/MAINTENANCE

The spreader valve assembly can be replaced if damaged. Remove using 14 mm Spanner (56) (See figs 22 & 23). The internal seal can be replaced and is included in the Gun Rebuild Kit (See fig 24).

FLUID SUPPLY INSERT

The fluid insert and seal are NOT replaceable. (See fig 25).

Do not remove these parts.

No maintenance is required for these parts other than regular cleaning of the internal bore.





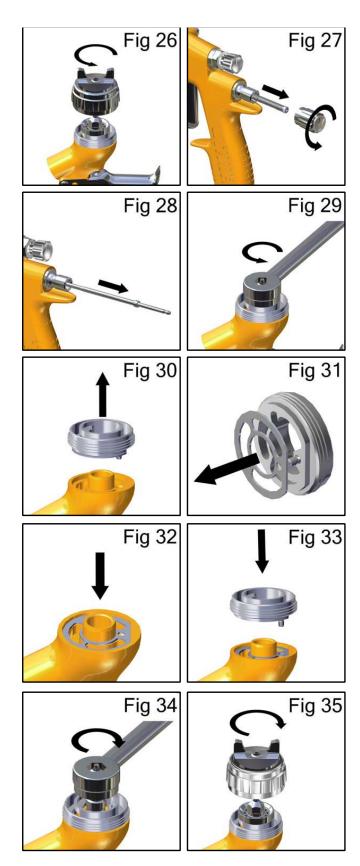




Parts Replacement/ Maintenance

SPRAY HEAD SEAL REPLACEMENT

- 1. Remove air cap and retaining ring (6). (See fig 26).
- 2. Remove fluid adjusting knob (28), spring (25), and spring pad (26). (See fig 27).
- 3. Remove fluid needle (24) from gun body. (See fig 28).
- 4. Remove fluid nozzle using 10mm Spanner (56) (See fig 29).
- 5. Remove spray head (9) and Seal (10) (See fig 30).
- 6. Remove seal (10) from spray head. (See fig 31).
- 7. Clean front of gun if required, using a soft brush, as well as the fluid nozzle, air cap, and retaining ring.
- 8. Place a new seal (10) into the front of the gun, making sure the flat of the seal is aligned to the flat in the gun. (See fig 32).
- 9. Fit the spray head (9), making sure the pin is engaged into the hole in the gunbody. (See fig 33).
- Fit fluid nozzle (8), air cap and retaining Ring (6).
 Torque the fluid nozzle to 18–20 Nm (160–180 lbs.in). Do not over torque the fluid nozzle. (See figs 34, and 35)
- 11. Reassemble remaining parts in reverse order fluid needle (24), Needle spring and pad (29), and fluid adjusting knob (28).
- 12. Trigger gun fully and screw in fluid adjusting knob (28) until it stops. Back it off 1/2 turn and gun will have full needle travel.
- 13. Trigger gun several times to verify correct operation.



Parts Replacement/Maintenance

Chart 1 – Air Caps

PART No. FOR AIR CAP	TECHNOLOGY	MARKING ON AIR CAP	RECOMMENDED INLET PRESSURE (bar)	AIR FLOW (L/min) @ 2 bar
PROLT-GTE10-1314	LVMP	TE10	0.2	270
PROLT-GTE20-1314	LVMP	TE20	0.2	380
PROLT-GHV30-1314	HVLP	HV30	-	460
PROLT-GT110-1314	LVMP	T110	-	265

NOTE: When removing air cap from retaining ring, don't remove the Slip Ring (2) or Retaining Ring Seal (5) from the Retaining Ring. Damage to the parts may occur. Slip ring and Retaining Ring seal are not available as replacements. Simply wipe parts clean and reassemble with new or clean air cap.

Chart 2 - Fluid Nozzle Range & Fluid Needle

PART No. FOR FLUID NOZZLE	PART No. NEEDLE
PRO-200-12-K	
PRO-200-13-K	PRO-301-K
PRO-200-14-K	

NOTE: When replacing the fluid nozzle or fluid needle, replace both at the same time. Torque to 18–20 Nm (160–180 lbs.in). Do not over tighten the fluid nozzle. Use SN-28 (56) 10mm Spanner supplied with the gun and check with a torque wrench.

Troubleshooting Possible Problems in Operation

CONDITION		CAUSE	CORRECTION
Heavy top or bottom pattern		Horn holes plugged.	Clean. Ream with non-metallic point.
Jones Panon		Obstruction on top or bottom of fluid nozzle.	Clean.
	18	Cap and/or nozzle seat dirty.	Clean.
			Clean. Ream with non-
Hoover right		Left or right side horn holes plugged.	metallicpoint.
Heavy right or			Clean.
left side pattern	33	Dirt on left or right side of fluid nozzle.	

Remedies for the top-heavy, bottom-heavy, right-heavy, and left-heavy patterns:

- 1. Determine if the obstruction is on the air cap or the fluid nozzle. Do this by making a test spray pattern. Then, rotate the cap one-half turn and spray another pattern. If the defect is inverted, obstruction is on the air cap. Clean the air cap as previously instructed. Also check for dried paint just inside the cap centre hole opening; remove by washing with solvent.
- 2. If the defect is not inverted, it is on the fluid nozzle. Clean nozzle. If problem persists, renew nozzle.

Heavy centre pattern	Spreader adjustment valve set too low.	Turn out counter clockwise to achieve correct pattern.
	Atomising pressure too low.	Increase pressure.
	Material too thick.	Thin to correct consistency
Split spray pattern	Air pressure too high.	Reduce at regulator or gun handle.
100	Fluid adjusting knob turned in too far.	Turn out counter clockwise to achieve correct pattern.
	Spreader adjusting valve set too high.	Turn in clockwise to achieve correct pattern.
Jerky or fluttering spray	Loose or damaged fluid nozzle/seat	Tighten or replace
	Loose or broken cup fluid nipple	Tighten or replace cup
We are	Material level too low	Refill
	Container tipped too far	Hold more upright
28	Obstruction in fluid passage	Back flush with solvent
	Loose fluid needle packing nut	Tighten
	Damaged fluid needle packing	Replace

Troubleshooting Possible Problems in Operation (cont)					
Starved spray pattern	Inadequate material flow	Wind fluid adjusting knob out or change to larger fluid nozzle size			
	Blocked vent in Cup lid	Clean lid and unblock vent			
	Low atomisation air pressure	Increase air pressure and rebalance gun.			
Excessive overspray	Air pressure to high.	Reduce air pressure.			
	Gun too far from work surface.	Adjust to correct distance.			
Dry spray	Air pressure too high.	Reduce air pressure.			
	Gun too far from work surface.	Adjust to correct distance.			
	Gun motion too fast.	Slow down.			
	Fluid flow too low.	Wind out needle adjusting screw or use larger nozzle size.			
Fluid leaking from packing nut	Packing worn.	Replace.			
Fluid leaking or dripping from front of gun	Fluid nozzle or fluid needle worn or damaged.	Replace fluid nozzle and fluid needle.			
	Foreign matter in fluid nozzle.	Clean.			
	Fluid needle dirty or stuck in needle packing	Clean.			
	Wrong size fluid needle or fluid nozzle.	Replace fluid nozzle and fluid needle.			
Fluid dripping or leaking from bottom of cup	Cup loose on gun.	Tighten			
D	Cup fluid inlet seat dirty.	Clean.			
Runs and sags	Too much material flow.	Turn fluid adjusting knob clockwise or switch to smaller fluid nozzle and fluid needle size.			
	Material too thin.	Mix correctly or apply light coats.			
	Gun tilted on an angle, or gun motion too slow.	Hold gun at right angle to work and adapt to correct gun technique.			

ACCESSORIES							
Spanner		5	Gun Stand	GFV-50-F			
Torx driver	SN-406		600 cc Mixing Cups pack of 50	MC-1-K50			
Cleaning Brush			Air Valve (with gauge)	HAV-501-B			
Cleaning Brush (5 pieces)	4900-5-1-K3		Air Valve (with gauge)	HAV-502-B			
Torx driver	SPN-8-K2		DGi PRO Digital Pressure Gauge	DGIPRO-502- BAR			

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