

GLORIA®

SPRAYERS FOR ALL REASONS



TOP QUALITY PRODUCTS – SERVICE YOU CAN TRUST



GLORIA Heavy Duty Compression Sprayers

OPERATING INSTRUCTIONS & SPARE PARTS LIST

'SPECIAL' - VITON SEAL VERSIONS

These are high specification sprayers, suitable for applying a wide variety of sprayable products. There are however, many liquids which are either not safe to be sprayed, or which may damage your sprayer. Acid and alkaline (caustic) chemicals should not be used in these sprayers; they can cause premature corrosion failure of most metal components. If in doubt concerning a chemicals' safety or compatibility, please consult the chemical manufacturer before using it.

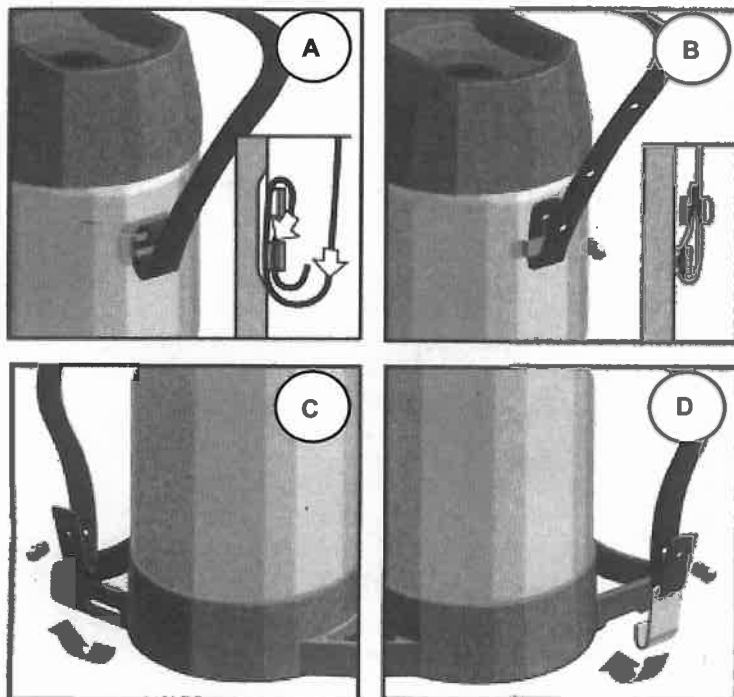
PLEASE READ THIS LEAFLET THOROUGHLY AND KEEP IT FOR FUTURE REFERENCE. FOLLOW THE INSTRUCTIONS CAREFULLY AND OBSERVE THE RULES BELOW FOR SAFER SPRAYING

- **ALWAYS** use personal protection equipment as recommended by the manufacturer of the chemical you are applying, i.e. gloves, faceshield, respirator, coveralls etc.
- **NEVER** eat, drink or smoke whilst dealing with spray chemicals, until after you have removed any protective clothing and washed your hands thoroughly.
- **ALWAYS** check the condition of the sprayer, especially security of joints and connections before each use. Proper operation of the relief valve should also be checked regularly - See relief valve testing under MAINTAINING THE SPRAYER.
- **NEVER** mix chemicals unless recommended by the chemical manufacturer.
- **ALWAYS** read and follow the chemical manufacturers instructions.
- **NEVER** mix more chemical than you will need to use at one application.
- **ALWAYS** use genuine GLORIA parts to repair the sprayer.
- **NEVER** attempt to clear a blocked spray nozzle by blowing through it with your mouth.
- **NEVER** leave the sprayer exposed to hot sun.
- **NEVER** store spray chemical in the sprayer.
- **ALWAYS** avoid spraying in windy weather.
- **ALWAYS** release the pressure, empty and clean the sprayer thoroughly after each use.

TECHNICAL SPECIFICATIONS:	141T	176T	142T	172RT
Working capacity	5 litres	5 litres	10 litres	10 litres
Total capacity	8 litres	8 litres	13.7 litres	13.7 litres
Maximum operating pressure	All models	6 bars (90psi)		
Maximum operating temp.	All models	+ 50 deg. C		
Safety features	All models	Pressure gauge Relief valve		
Container material	Stainless steel	Galvanised steel	Stainless steel	Galvanised steel
Seal material	All models	Viton		
Spray nozzle	Either variable type, adjustable from a 0 degree pencil jet, to 60 degree, hollow conespray pattern, or GPS Universal Nozzle Holder with specific, fixed spray pattern, interchangeable spray tip.			

PREPARING THE SPRAYER

- 1 Attach the end of the hose into the container outlet with the spanner provided.
- 2 Screw the spray lance onto the trigger valve.
- 3 Fit the carrying strap(s) as per diagrams opposite; diagram A is for the 176T/172RT, diagram B is for the 141T/142T and diagrams C and D are for the 142T/172RT.
- 4 Test the sprayer with water, following instructions 1a to 6a under "OPERATING THE SPRAYER".



OPERATING THE SPRAYER

The 'D' handle on top of the pump is designed to carry the sprayer if you don't wish to put it on your back, or shoulder. To lock the handle in position, hold it down and turn it clockwise until the hooks on the handle locate on the two lugs on the pump barrel.

- 1a Before removing the pump, always ensure that the container is not pressurised, by holding down the red decompression button until no further air can be heard escaping.

Take care also, to remove any particles which may have accumulated in the filler funnel during storage, to prevent them falling into the container and causing blockages.

- 2a **Always unscrew the pump assembly very slowly at first allow any remaining pressure to escape safely.** To unscrew it, hold down the pump handle and turn it anti-clockwise against the lugs on the pump barrel.
- 3a Measure and pour in water, up to but not more than, the nominal working capacity of the sprayer. (5 litres or 10 litres)
- 4a Replace the pump assembly (do not overtighten) and operate it until the pressure gauge indicates that a suitable working pressure has been achieved. Over pumping will result in the safety relief valve operating and air will be heard escaping. If this occurs, cease pumping immediately.

See Testing the Safety Relief Valve under "MAINTAINING AND LUBRICATING THE SPRAYER".

OPERATING THE SPRAYER cont'd

- 5a Operate the on/off trigger control valve a few times until a satisfactory spray pattern occurs. (Immediate shut-off may not occur until all air has been expelled from the system).
- 6a Providing there are no leaks, the sprayer is now ready for use.

EMPTYING & CLEANING THE SPRAYER

- 1b Release any remaining pressure as described at 1a under "OPERATING THE SPRAYER".
- 2b Unscrew and remove the pump assembly.
- 3b Empty out the remaining contents and dispose of them safely.
- 4b Refill the sprayer with an appropriate cleaning fluid, or a weak, lukewarm solution of detergent and water, replace the pump and shake the container carefully to dilute any remaining residue. To ensure that the hose, lance and nozzle are also thoroughly rinsed, pump in a little pressure and operate the trigger valve. Repeat the operation, until the sprayer is thoroughly clean.

Store the sprayer upside down, with the pump removed, so the container can dry.

MAINTAINING AND LUBRICATING THE SPRAYER

Maintenance and repairs should only be carried out by a competent person, using genuine GLORIA replacement parts. If in any doubt, please contact GPS Sprayers Ltd., UK Agent for GLORIA. We will be pleased to either supply parts or service the sprayer for a reasonable charge.

BEFORE COMMENCING ANY WORK ON THE SPRAYER, ALWAYS RELEASE ANY REMAINING PRESSURE FOLLOWING THE INSTRUCTIONS AT 1a & 2a UNDER "OPERATING THE SPRAYER".

REGULAR EXAMINATION

The entire sprayer should be thoroughly examined at frequent, regular intervals for evidence of corrosion, breakage or leaks. Any faulty component found should be replaced before using the sprayer again.

GENERAL LUBRICATION

Occasional lubrication of rubber seals and 'O' rings which move, will keep the sprayer functioning nicely. If parts which employ an 'O' ring seal are removed, a light smear of grease around the outside of the 'O' ring, before the part is replaced, will ensure they slide into place properly to make a good seal. Suitable lubricants are a light grease or petroleum jelly.

TO LUBRICATE THE PUMP

The piston "O" ring (58), accessed by unscrewing the pump cap (3) at the top of the pump and withdrawing the piston rod (1). It should be lubricated with petroleum jelly or a similar light grease, but only on its' external perimeter. The frequency of this operation will depend on usage, but experience will soon tell when excessive friction occurs and the "O" ring is dragging, making pumping difficult. A little lubricant on the piston rod will also make pumping easier.

TO LUBRICATE THE TRIGGER VALVE

If the trigger valve becomes stiff or sluggish to operate, it is necessary to lubricate the valve spindle and its' 'O' rings (66) & (67).

CLEANING THE FILTER IN THE TRIGGER VALVE

There is a filter (44) in the handle of the trigger valve to prevent nozzle blockages. The filter can be unscrewed from the brass valve body (46) for cleaning, after first unscrewing the filter barrel (43).

TESTING THE SAFETY RELIEF VALVE

The safety valve should be tested at frequent, regular intervals; every three months if the machine is used continuously, or every six months if only used periodically. Proceed as follows.

- 1) Ensure that the trigger valve is closed.
- 2) Fill the sprayer almost full with water to exclude nearly all the air inside.

- 3) Pressurise the sprayer using the pump until the relief valve opens. This should occur at between 6 and 7 bars (90-100 psi.)

If the valve is not heard to operate between these pressures, it must be replaced before the sprayer is used again.

REMOVING & REPLACING THE FILLER FUNNEL (17)

This is necessary to access the relief valve (70), decompression valve (62), or pressure gauge (37). After releasing the pressure, replace the pump, and pour near boiling water into the funnel, allowing it to stand for a couple of minutes to soften the plastic. With gloves on, tip out the water, remove the pump and pull off the filler funnel whilst holding the container base with your feet. To replace, immerse the funnel in very hot water for a few minutes, then with gloves on and a blunt screwdriver handy, offer it into position on the container and press it home with your thumbs onto the container neck. The screwdriver may be necessary to prise the last area of lip home.

HYDRAULIC TESTING

This test is essential to ensure that the container is in good condition and has not become weakened by corrosion or damage. Test at least once a year, more often if the sprayer is used continuously, or with aggressive chemicals. Test Equipment - It is recommended that an auxillary pump such as a bucket pump, or boiler test pump is used. A check valve should be installed in the pump outlet and connected directly to the container under test, via a suitable hose at least 10 metres long. A 14 bar pressure gauge and bleed-off valve should be connected downstream of the check valve. This valve will allow the container pressure to be released after testing.

Preparation - Carefully remove the funnel, relief valve, decompression valve and pressure gauge and replace them with test plugs. (Part No. 08-055 available from GPS Sprayers Ltd.) Connect the 10 metre hose to the container outlet and remove the sprayers' pump assembly.

Testing - Completely fill the container with water to exclude all air and replace the pump assembly. Thoroughly dry the outside of the container before testing, to allow possible leaks to show up. The container under test should be placed behind a protective screen and the auxillary pump operated at the full 10 metres distance provided by the hose. The container should be pressurised to 10 bars and the pressure maintained for at least 10 minutes. After testing, decompress by opening the bleed-off valve.

IMPORTANT - Failure to remove all air before performing the test could lead to explosive failure during testing.

Examination - Examine external surface for signs of leaks, especially at the seams. Remove test hose and empty the container. Remove the sprayer pump and use a light to examine internal seams for corrosion and distortion. If there is any doubt, even after the test, as to the soundness of the container, it should be replaced immediately.

TROUBLE SHOOTING

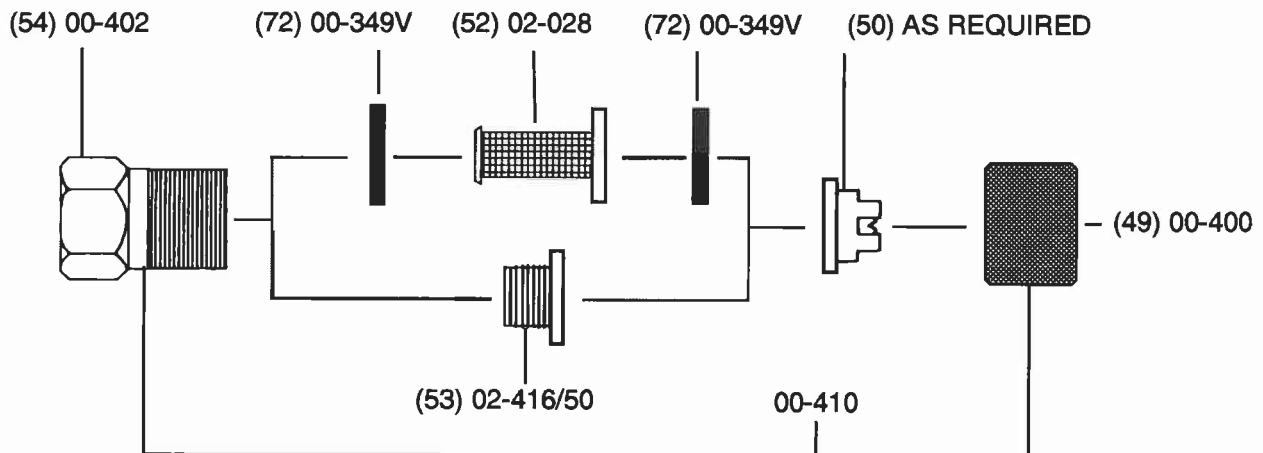
SYMPTOM	POSSIBLE CAUSE	REMEDY
Pump is difficult to operate, or does not appear to be creating pressure.	Piston 'O' ring (58) is dry or damaged.	Lubricate or replace piston 'O' ring.
Piston rises after pumping.	Footvalve (60) damaged or dirty.	Replace footvalve assembly.
Pump is operating, but pressure is being lost from container.	Pump not screwed in tight.	Tighten pump carefully - BUT DO NOT OVERTIGHTEN.
	Pump sealing 'O' ring (59) damaged.	Replace pump sealing 'O' ring.
Container has pressure but will not spray.	Blocked strainer (44) in trigger valve, or blocked nozzle.	Remove and clean the strainer or nozzle by flushing with water.
Poor spray pattern, even though all strainers appear clear and there is pressure in the container.	Nozzle partially blocked, or damaged.	Remove and clean, or fit a new nozzle. Never use a metallic object to clean the nozzle, it will ruin the spray pattern and render it useless.

INTERCHANGABLE, FIXED SPRAY PATTERN NOZZLES

Since the nozzle determines how the sprayed product is actually applied, it's obviously a most important part of the sprayer. Whilst adjustable nozzles, similar to those found on 'garden' sprayers are adequate for many applications, fixed spray pattern nozzles will usually achieve better results.

The most popular form of fixed spray pattern nozzle is an 'interchangeable nozzle tip', usually made of plastic or brass. There are literally thousands of these available, to provide an almost infinite variety of spray patterns and application rates.

The GPS Universal Nozzle Holder assembly, which screws either onto the end of the spray lance tube (15), or directly onto the trigger valve (46), is designed to accommodate any of these 'International standard' interchangeable nozzle tips (50). It usually incorporates a suitable strainer, to prevent nozzle blockages.



One strainer (52) has a fine, 100 mesh screen for protecting nozzle tips with small orifices and is used with the two rubber seals (72). Strainer (53) has a coarser, 50 mesh screen, suitable for nozzle tips with larger orifices and does not require rubber seals, because it is made from a softer material.

The Nozzle Body (54) and Nozzle Retaining Nut (49), are precision machined from brass. The two items are also available under one Part No. 00-410.

We stock around 65 different nozzle tips; our standard Nozzle Tip Selection Chart and advice regarding suitable nozzle tips for specific applications are available on request.

SOME ACCESSORIES FOR GLORIA HEAVY DUTY SPRAYERS

LANCE EXTENSIONS

These fit between the trigger valve and the sprayers' standard lance, to increase the working length by the extension length.

Brass fixed length extensions

0.5 metre	Part No.124
0.7 metre	Part No.109
1.0 metre	Part No.110

Aluminium fixed length extensions

1.5 metre	Part No 120
2.0 metre	Part No 123

Brass telescopic extensions

0.5 - 1.0 metre	Part No 131
1.0 - 2.0 metre	Part No 132

SPRAYCART TROLLEY

A handy two wheel trolley, to mobilise 5 or 10 litre GLORIA Heavy Duty Sprayers **Part No 198**

COMPRESSOR CONNECTOR

A unit resembling the head of the standard hand pump, but fitted with an additional relief valve and a 'schrader type' connector to facilitate charging the sprayer with a compressor. **Part No 135**

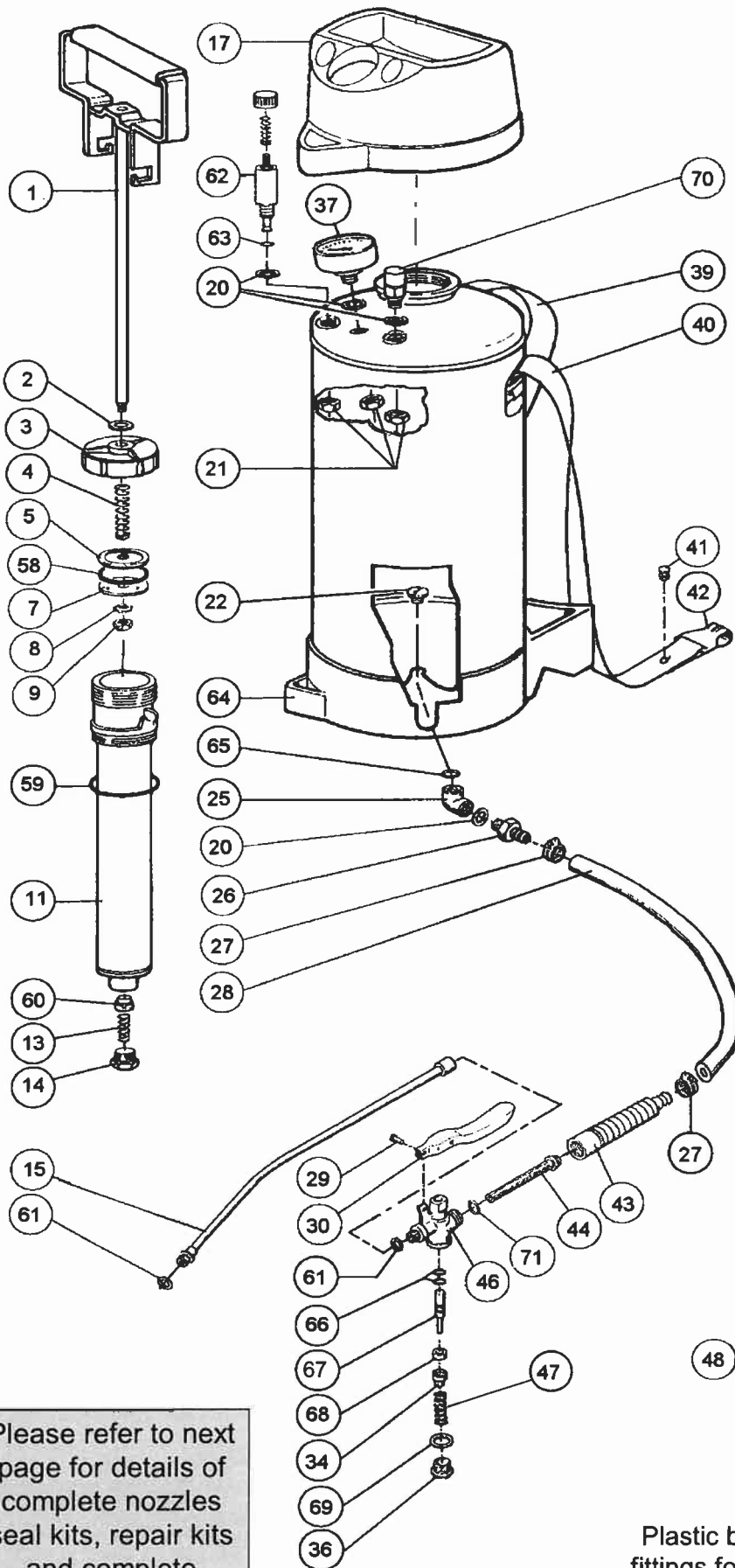
ALTERNATIVE HOSES

Different hose sizes, lengths, and material types, including small bore nylon surcoils and all necessary fittings, are readily available. **Details on request**

ALTERNATIVE SPRAY GUNS

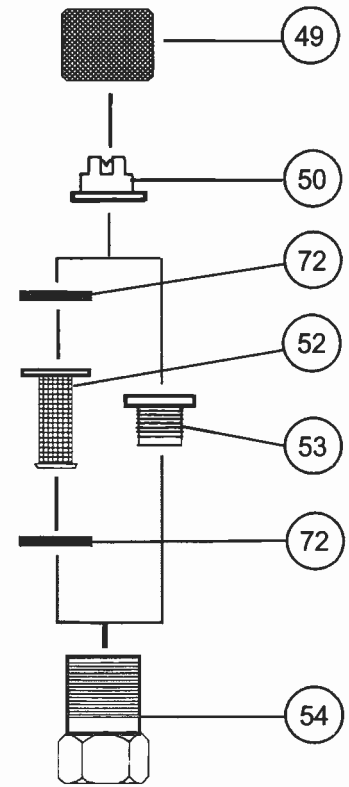
Several options available **Details on request**

COMPONENT IDENTIFICATION - 'SPECIAL' - VITON SEAL VERSIONS

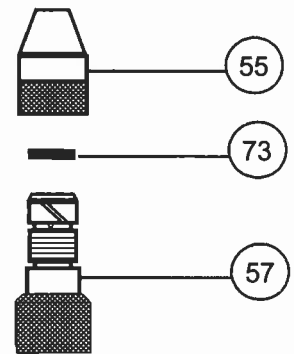


Please refer to next page for details of complete nozzles seal kits, repair kits and complete assemblies.

NOZZLES

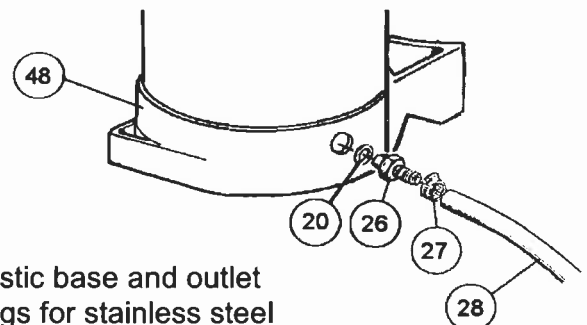


Universal Nozzle Holder



Adjustable Nozzle

Plastic base and outlet fittings for stainless steel models 141T & 142T



COMPONENT PART DESCRIPTIONS - 'SPECIAL' - VITON SEAL VERSIONS

Key	Part No.	Description	Key	Part No.	Description
1	709150	Piston rod with handle - bare	41	603060	Stud for carrying strap
2	611170	Buffer washer for pump	42	604410	Hook for carrying strap
3	605843	Pump cap / piston guide	43	511760	Filter barrel for trigger
4	610471	Buffer spring for pump	44	613320	Strainer for trigger valve
5	624230	Piston plate - dished	46	511820	Body for trigger valve
7	624330	Piston plate - flat	47	612071	Spring for trigger valve
8	200110	Locking washer	48	604420	Black plastic base 141T
9	634170	Hexagon nut for piston rod	48	604430	Black plastic base 142T
11	711210	Pump barrel	49	00-400	Brass nut for nozzle holder
13	615972	Spring for footvalve	50	Various	Nozzle tip - please specify
14	605000	Retaining plug for footvalve	52	02-028	Nozzle strainer 100 mesh
15	701310	Lance tube with washer	53	02-416/50	Strainer 50 mesh blue P/P
17	604240	Black filler funnel 10 litre	54	00-402	Brass body for nozzle holder
17	604250	Blue filler funnel 10 litre	55	601900	Cap for adjustable nozzle
17	604270	Blue filler funnel 5 litre	57	601920	Body of adjustable nozzle
17	604280	Black filler funnel 5 litre	58	625971	Piston O ring
20	618170	Washer for gauge etc.	59	503460	Pump sealing O ring
21	604500	Hexagon nut for gauge etc.	60	710870	Footvalve poppet assembly
22	538683	Screw for container outlet	61	603360	Washer for lance and trigger
25	538682	Outlet adaptor elbow	62	712090	Decompression valve c/washer
26	602800	Tank outlet adaptor w/o washer	63	604610	O Ring for decomp'n valve
26	712650	Tank outlet adaptor c/w washer	64	538752	Black plastic base for 176T
27	602900	Worm drive hose clip	64	538755	Black plastic base for 172RT
28	706950	Hose 1.25 metres c/w clips	65	130300	O ring seal for outlet elbow
29	633070	Rivet for trigger lever	66	503420	O ring for trigger spindle
30	600680	Lever for trigger valve	67	607472	Valve spindle without O rings
34	602570	Housing for valve disc	67	711790	Valve spindle with O rings
36	602370	Base plug for trigger valve	68	503410	Rubber valve disc
37	706410	Pressure gauge, nut & washer	69	503490	Washer for base plug
39	620140	Strap c/w studs for 141T	70	712440	Relief valve with washer
39	609834	Strap for 176T - has no fittings	71	503490	O ring for filter barrel
39	620130	Strap 142T/172RT not for hook	72	00-349V	Nozzle sealing washer
40	604530	Strap 142T/172RT - for hook	73	538950	O ring for adjustable nozzle

SEAL KITS, REPAIR KITS & ASSEMBLIES

Description	Part No.	Key numbers included in item
Complete Seal Kit	951860	20, 58, 59, 60, 61, 63, 66, 68, 69, 71, 72, 73.
Pump Group		
Piston rod assembly complete	710260V	1, 2, 3, 4, 5, 7, 8, 9, 58.
Piston end components	706490V	5, 7, 8, 9, 58.
Pump barrel with footvalve	721160	11, 13, 14, 59, 60.
Footvalve components	721180	13, 14, 60.
Pump assembly complete	712070	1, 2, 3, 4, 5, 7, 8, 9, 11, 13, 14, 58, 59, 60.
Trigger Valve Group		
Valve spindle c/w O rings	711790	66, 67.
Trigger Valve complete	712040	29, 30, 34, 36, 43, 44, 46, 47, 61, 66, 67, 68, 69, 71.
Hose Group		
Hose complete with ends	00-605/OR	20, 26, 27, 28, 43.
Spray Lance		
Lance tube with washer	701310V	15, 61.