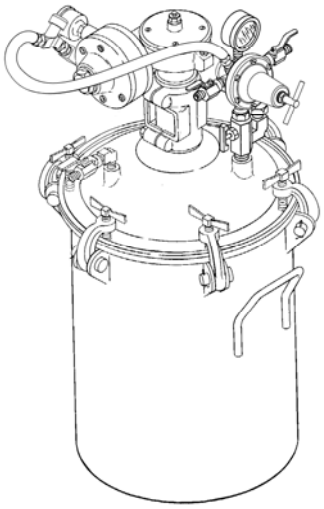
CE 0353

83G(Galvanized) & 83 (Stainless Steel) PRESSURE FEED TANKS with Agitation 9.5, 40 and 60 Litre models.

IMPORTANT: Read and follow all instructions and SAFETY PRECAUTIONS before using this equipment. Retain for future reference.



DESCRIPTION

These Pressure Tanks are CE marked in accordance with the Pressure Equipment Directive 97/23/EC. They are suitable for use with flammable and water based materials.

These Pressure Tanks are designed as a pressure container to supply liquid material at a constant preset pressure up to a maximum of 7.6 bar (110 psi). The tanks are built to ASME BPV XIII standards. All models include a polyethylene liner. These tanks are also suitable for use with vacuum.

WARNING

83G Galvanized tanks only.

Halogenated hydrocarbon solvents - for example: 1,1,1, - trichloroethane and methylene chloride - can chemically react with aluminium parts and components and cause an explosion hazard. These solvents will also corrode the galvanized tank coating. Read the label or data sheet for the material. Do not use materials containing these solvents with these pressure tanks.

CAUTION

Refer to specifications chart to ensure that fluids and solvents being used are chemically compatible with the tank wetted parts. Before placing fluids or solvents in the tank, always read accompanying manufacturer's literature and MSDS.

WARNING

Air pressure loads that are higher than design loads, or changes to the pressure feed tank can cause the tank to rupture or explode. · A safety valve protects the tank from over pressurization. During each use pull the ring on the safety valve to make sure it operates freely and relieves air pressure. If the valve is stuck, does not operate freely, or does not relieve air pressure, it must be replaced. Do not eliminate, make adjustments or substitutions to this valve. Changes to the air tank will weaken it. Never drill into, weld or change the tank in any way. The maximum working pressure of this tank is 7.6 bar (110 psi).

WARNING

Static electricity can be created by the flow of fluid through the pressure tank and hose. If all parts are not properly grounded, sparking may occur. Sparks can ignite vapours from solvents and the fluid being sprayed.

Ground the pressure tank by using conductive air hoses and use of an ATEX approved grounding clamp from the tank and the other end to a true earth ground.

If static sparking, or slight shock, is experienced while using this equipment, stop spraying immediately. Check continuity to earth before continuing to use the equipment.

WARNING

Pressure Relief Procedure

High pressure can cause a serious injury. Pressure is maintained in a pressure tank after the system has been shut down. Before attempting removal of fill plug or cover, pressure must be relieved using the following steps:

1. Turn off the main air supply to the tank.

2. Close air inlet valve located on tank air manifold.

3. Bleed off air in the tank by turning the air relief valve thumb screw counter-clockwise. Wait until all the air has escaped through the valve before removing the pressure tank cover or fill plug.

4. Leave the air relief valve open until you have reinstalled the cover or fill plug.

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SAFETY PRECAUTIONS

This manual contains information that is important for you to know and understand. This information relates to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the following symbols. Please pay particular attention to these sections

CAUTION

Important information that tells how to prevent damage to equipment, or how to avoid a situation that may cause minor injury.

WARNING

Important safety information - A hazard that may cause serious injury or loss of life.

NOTE

Information that you should pay special attention to.

WARNING

The following hazards may occur during the normal use of this equipment. Please read the following chart.

HAZARD	CAUSE	SAFEGUARDS
FIRE 	Solvents and coatings can be highly combustible, especially when sprayed.	1. Adequate exhaust must be provided to keep the air free of accumulations of flammable vapours 2. Smoking must never be allowed in the spray area. 3. Fire extinguishing equipment must be present in the spray area.
FIRE - PRESSURE TANK 	Vapours from flammable liquids can catch fire or explode	1. Keep tank at least 3 metres away from sources of ignition, including hot surfaces, mechanical sparks and arcing (non-explosion proof) electrical equipment.
INHALING TOXIC SUBSTANCES 	Certain materials may be harmful if inhaled, or there is contact with the skin.	1. Follow the requirements of the Material Safety Data Sheet supplier by the coating manufacturer. 2. Adequate exhaust must be provided to keep the air free of accumulations of toxic materials. 3. Use a mask or respirator wherever there is a risk of inhaling sprayed materials. The mask must be suitable for the material being sprayed.
EXPLOSION, PRESSURE TANK—RUPTURE 	Making any changes or modification to the pressure tank may weaken it.	1. Never drill into, weld or modify the tank in any way. 2. Do not adjust, remove or tamper with the safety valve. 3. Only replace the safety valve with the correct spare part as listed. 4. Do not fit any other safety valve of a higher pressure rating than the maximum working pressure of the tank.
GENERAL SAFETY	Improper operation or maintenance may create a hazard.	Operators should be given adequate training in the safe use and maintenance of this equipment. Refer to Pressure Systems Safety Regulations 2000 Approved Code of Practice

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These Pressure Tanks are constructed in either Galvanized Carbon Steel (83G models) or Fully Stainless Steel (83S models).

The tanks come equipped with pressure regulator and gauge, Safety Valve, air bleed screw, air feed and fluid outlet ball valves.

Included is a polyethylene liner which can be used for easy cleanup. See accessories page.

Available is a second regulator kit to enable regulated air to the spray gun (single pressure regulator gives provides air to spray gun at line feed pressure). See accessories page.

Part Number Chart

83G Galvanised Models							
Tank Code	Cap (litres)	Agitation	Agitator Drive No	Weight (kg)	Height (mm)	Overall Width (mm)	Inside Dia (mm)
83G-1012	40	Manual	_	44	830	470	355
83G-1013	40	Indirect Geared Drive Agitator	QS-5012	48	900	470	355
83G-1016	40	Reciprocating Air Motor	105451	50	900	470	355
83S Stainless Steel Models							
83S-211	9.5	Direct drive	QMS-430	16	420	340	241
83S-212	9.5	Manual Agitator	-	17	350	340	241
83S-213	9.5	Indirect Geared Drive Agitator	QS-5012	22	420	340	241
83S-1012	40	Manual	-	37	900	470	355
83S-1013	40	Indirect Geared Drive Agitator	QS-5012	41	900	470	355
83S-1016	40	Reciprocating Air Motor	105451	43	900	470	355
83S-1512	60	Manual	-	42	1150	470	355
83S-1513	60	Indirect Geared Drive Agitator	QS-5012	46	1150	470	355

SPECIFICATION CHART

	83G Galvanised Models	83S Stainless Steel Models
Maximum working pressure	7.6 bar (110 psi)	7.6 bar (110 psi)
Safety Valve set Pressure	7.6 bar (110 psi)	7.6 bar (110 psi)
Tank Shell	SA-414 H.R Steel Zinc plate 2.7 mm (12 Gauge)	304 Stainless Steel, Electro-polished, 2.3 mm (13 Gauge)
Tanks Lid	SA-414 H.R Steel Zinc plate 4.7 mm (3/16”)	304 Stainless Steel, Electro-polished, 4.7 mm (3/16”)
Fluid Tube	Steel, Galvanised Zinc Plate	316 Stainless Steel
Fluid Outlet Ball Valve	Brass Nickel plated 3/8” NPSM	316 Stainless Steel 3/8” NPSM
Air Manifold	CRS Zinc Plated	CRS Zinc Plated
Fluid Outlet	Steel, Galvanised Zinc Plate	316 Stainless Steel
Lid Gasket	Santoprene	Santoprene

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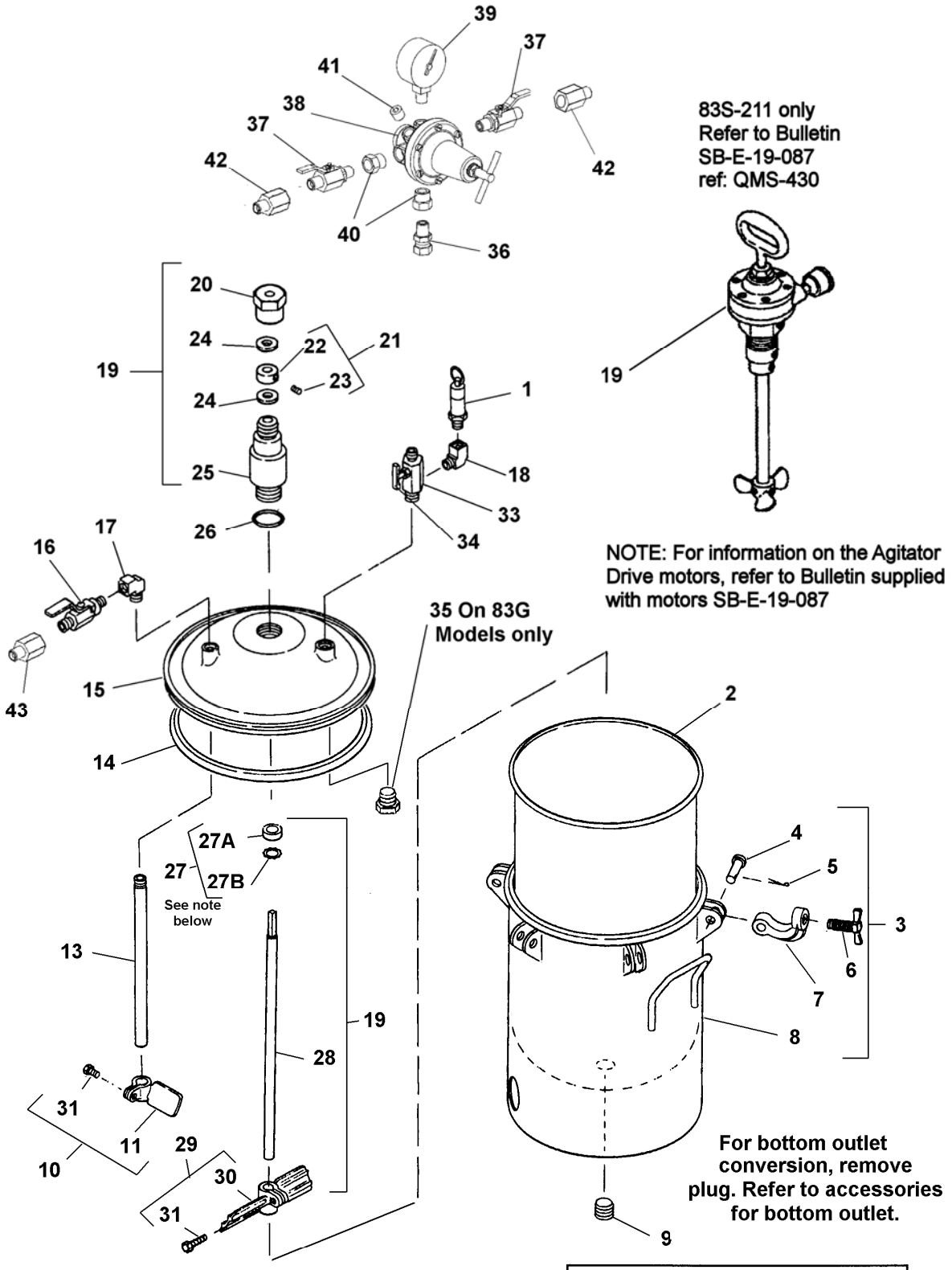
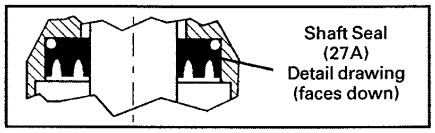


Note
Open side of Shaft Seal (27A) faces downwards
Retainer 27B only necessary to replace if tank used for vacuum operation. Not necessary for pressure use.



Note: Retainer (27B) required only if tank is used for vacuum operation.

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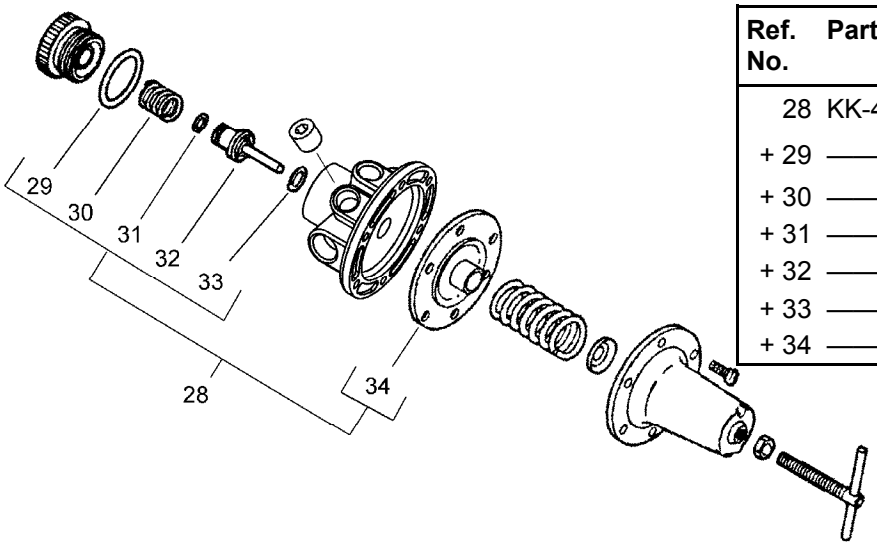
PARTS LIST

Ref. No.	Part No. for 83G Galv. Models	Part No. for 83S S.S Models	Description	Individual Parts Req.
1	TIA-4110	TIA-4110	Safety Valve 7.6 bar (110 psi)	1
2	—	PT-78-K10 or K60 (9.5 L)	Disposable tank liner—kit of 10 or 60	1
	PTL-412-K8	PTL-412-K8 (40L)	Disposable tank liner—kit of 8	1
	—	PTL-415-K8 (60L)	Disposable tank liner—kit of 8	1
3	—	KK-5013-CE (83S-2**)	Clamp, screw and clevis pin kit (includes items 4 to 7)	4
	KK-5014-CE	KK-5014-CE (83S-10** & 15**)		6
4	—	—	Clevis Pin	-
5	—	—	Cotter Pin (1/8” dia x 1”)	-
6	—	—	Thumb Screw	-
7	—	—	Clamp	-
8	—	—	Tank Shell	1
9	—	—	Plug	1
10	—	— (83S-2**)	Not fitted	-
	QMS-445	QMS-445	Stationary Paddle Kit (includes items 11 and 31)	1
11	—	—	Stationary Paddle	1
13	—	QMS-53-1 (83S-2**)	Fluid Tube (3/8” - 18NPT)	1
	QMG-33	QMS-11-1 (83S-10**)	Fluid Tube (3/8” - 18NPT)	1
	—	QMS-12-1 (83S-15**)	Fluid Tube (3/8” - 18NPT)	1
14	—	QMS-80-1 (83S-2**)	Lid Gasket, Santoprene	1
	QM-1458-1	QM-1458-1 (83S-10** & 15**)		1
15	—	QMS-416 (83S-2**)	Tank Lid	1
	QMG-402	QMS-417 (83S-10** & 15**)		1
16	VA-540	VA-527	Ball Valve	1
17	—	SSP-1939	Street Elbow (3/8” - 18NPT) Stainless Steel	1
♦18	—	—	Street Elbow (1/4” - 18NPT) Brass	1
19	—	QMS-430 (83S-211 only)	Agitator Assembly complete INCLUDING motor	1
	—	QMS-431 (83S-212 & 213)	Agitator Assembly (includes items 20 to 31 but not air motor drive)	1
	QMG-419	QMS-433 (83S-10**)		1
	—	QMS-434 (83S-15**)		1
20	QMS-46	QMS-46	Retaining Nut	1
21	QMS-447	QMS-447	Thrust Collar Kit (includes items 22 and 23)	1
22	—	—	Thrust Collar	1
♦23	—	—	Set Screws (5/16” - 18 x 3/8”)	1
24	KK-5049	KK-5049	Thrust Washer Kit (includes 2 Washers)	1
25	QMG-409	QMS-407	Bearing Assembly	1
26	SSG-8184-K2	SSG-8184-K2	O-Ring (kit of 2)	1
27	KK-5042	KK-5042	Shaft Seal Kit	2
27A	—	—	Shaft Seal	1
27B	—	—	Retainer	1
28	—	QMS-5 (83S-2**)	Agitator Shaft (5/8” dia)	1
	QMG-29	QMS-7 (83S-10**)		1
	—	QMS-8 (83S-15**)		1
29	—	QMS-449 (83S-2**)	Agitator Paddle Kit (includes items 30 and 31), Nylon	1
	QMS-444	QMS-444 (83S-10** & 15**)		1
30	—	—	Agitator Paddle	1
♦31	—	—	Hex Socket head Cap Screw (5/16” x 1-1/4”, stainless Steel)	1
33	QMG-21	QMG-21	Air Manifold	1
34	SS-2707	SS-2707	Air Relief Valve	1
35	—	Not required	Pipe Plug 1/2” -13	1
36	SSP-8217-ZN	SSP-8217-ZN	Swivel Adaptor	1
37	VA-542	VA-542	Ball Valve	2
38	HAR-511	HAR-511	Regulator	1
39	83-1290	83-1290	Gauge	1
40	—	—	Bushing (supplied with regulator)	2
41	—	—	Pipe Plug 1/4” NPT (supplied with regulator)	1
42	CT-453	CT-453	1/4 “NPSM to 1/4” BSP Adaptor (supplied with BSP models only)	2
43	CT-454	CT-454	3/8” NPSM to 3/8” BSP Adaptor (supplied with BSP models only)	1

♦ Purchase locally

For Agitator motor part numbers refer to Part Number Chart on page 3



Ref. No.	Part No.	Description	Individual Parts Req.
28	KK-4977	Repair Kit	1
+ 29	———	"O" Ring	1
+ 30	———	Spring	1
+ 31	———	"O" Ring	1
+ 32	———	Valve	1
+ 33	———	"O" Ring	1
+ 34	———	Diaphragm Assembly	1

INSTALLATION

Regulator Assembly

1. Unbox the regulator assembly and mount it on the manifold connection (20) with the swivel connection (18).
2. If BSP thread is required, attach adaptor (26) to the ball valve (21)
3. Attach the air supply hose to the ball valve (21) or adaptor (26).

Air Supply

1. The air supply line should pass through an air filter/regulator to filter dirt from air and remove entrained water and oil. Connect the air supply hose to the air inlet fitting on tank regulator.
2. Connect the atomisation air hose to the air outlet fitting which is directly opposite air inlet fitting.
3. Connect material hose to the fluid outlet fitting.
4. See Figure 1 for a typical setup.
5. To avoid hazards from electrostatic discharges, the tank should be earthed directly via an earth clamp, or through the air supply hoses, which have to be conductive. Check continuity to earth before using the equipment.

Material preparation

Mix and prepare material to be used according to manufacturer's instructions. Strain material through a fine mesh screen (60 or 90 mesh) to remove all foreign matter which is likely to enter and clog material passages.

1. Always relieve all air pressure in the tank. Pull the ring on the safety valve until pressure bleeds down.
2. Loosen thumb screws, tip lid clamps back and remove lid assembly.
3. Pour material into the tank. See accessories for disposable tank liners. A five gallon container may also be used.
4. Replace the lid assembly and tighten clamps and thumb screws securely.

OPERATION

1. Close air inlet valve to tank. Turn handle on regulator counter-clockwise until tension on the spring is relieved. This is the minimum pressure position.
2. Turn on air supply to the tank.
3. Open air inlet valve to the tank.
4. Turn the handle on the tank pressure regulator clockwise to increase the tank pressure. Counter-clockwise will decrease the pressure.
5. Set the tank pressure at the desired level.
6. Turn on the atomising air to the spraygun, either from an independent supply or from the gun supply on the tank regulator.
7. Start spraying.

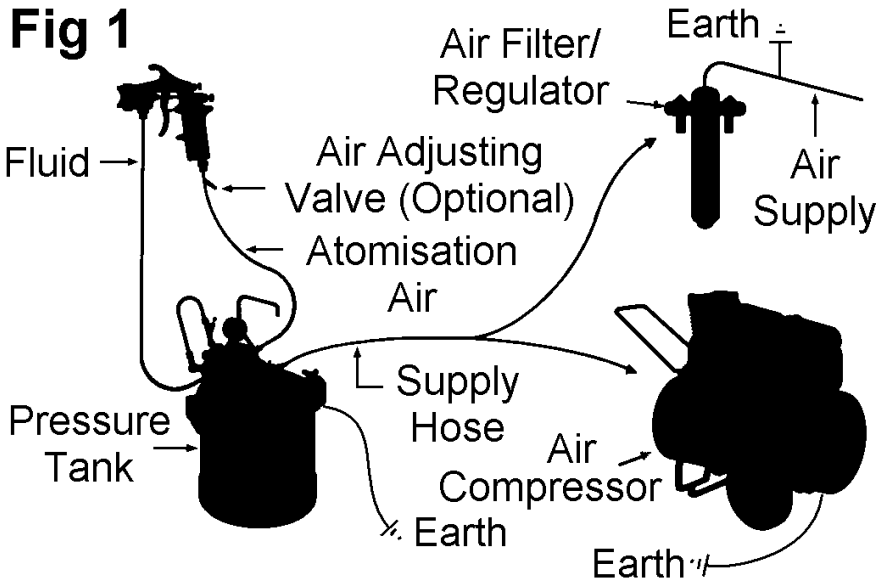
WARNING

CLEANING THE EQUIPMENT

To clean the equipment, proceed as follows;

1. Turn off air supply to the tank.
2. Follow pressure relief procedure on page 1.
3. Turn the regulator handle counter-clockwise until pressure is relieved on the spring.
4. Loosen thumb screws (6), and move clamps (7) clear of the lid (15). Slide the lid to one side, do not remove completely.
5. To drain down the fluid supply hose to the gun, remove the Aircap and replace with about 2 turns. Trigger the Spraygun into the booth , which will create a back pressure in the fluid line and force the fluid back into the tank.
6. Now remove the lid, empty and clean the parts that have come into contact with the material with compatible cleaning material.
7. When clean, pour a little cleaning material into the tank and replace the lid.
8. Repeat 1 to 5 of the **OPERATION**.
9. Do not turn on the atomising air to the Gun. Make sure the Aircap is fully tight. Trigger the gun and jet the cleaning material into a container until clean material is visible.
10. Remove solvent and replenish with new material as from **INSTALLATION** section 1 onwards.

Fig 1



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PREVENTATIVE MAINTENANCE

Keep the safety valve (1) clean at all times. Check regularly by pulling the ring to ensure the valve is free to operate.

Air Motor Lubrication

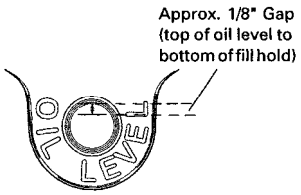
CAUTION

Failure to properly lubricate the air motor will result in premature motor failure and will void warranty.
Lubricate air motor daily by adding 4 or 5 drops of SAE 10 weight oil into air inlet fitting. Recommend an automatic lubricator be used.

QS-5012 Gear Reduction unit

Daily—check oil level by removing plug and note level as indicated. Fill if necessary with 140 weight SAE Gear Oil. Replace plug and tighten to 27Nm.

After 250 hrs operation, drain and refill Gearbox.
After 2500 operating hours, drain and replace oil.



Replacement of parts

Refer to Bulletin SB-E-19-087 for full maintenance information.

Service Checks

Condition	Cause	Correction
Air escaping from port on Regulator cap	Broken or damaged diaphragm (ref No. 34)	Replace diaphragm
Pressure creepage registered on gauge	Dirty or worn valve seat in regulator	Clean or replace valve seat
Air leakage from Safety Valve below maximum working pressure	The Valve seat is dirty or damaged, or the valve stem assy is seized	Replace Safety Valve. Do not attempt to repair.
Fluid or air leak at Lid Gasket	Defective Lid Gasket (ref. No. 14) Thumb Screws not sufficiently tight	Replace gasket Tighten Screws
Coating material tends to settle out rapidly	Not enough agitation	Increase Agitator speed
Air bubbles form in coating material	Fluid Tube thread not sealed	Tighten Fluid Tube to Lid

Note: Occasionally check gauge (Ref. No. 9). The needle should return to zero with no pressure on the gauge.

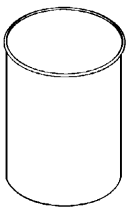
ACCESSORIES

PT-78-K10 OR K60 LINERS KIT OF 10 OR 60 (83S-2 9.5L)**

PTL-412-K8 TANK LINERS KIT OF 8 (83-10 40L)**

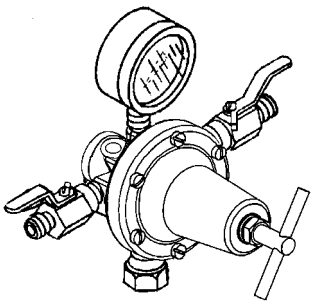
PTL-415-K8 TANK LINERS KIT OF 8 (83S-15 60L)**

Polyethylene tank liners to reduce solvent waste and tank clean up time. The liner is made of tough, durable polyethylene and can be used with all compatible materials.



QMS 4006 SINGLE REGULATOR KIT (STANDARD)

Provides standard fluid pressure control only. For use when atomisation air is controlled by a separate filter-regulator. Kit includes pressure regulator with gauge, inlet and outlet ball valves and connections fittings as per items 36 to 41 from tank parts list.



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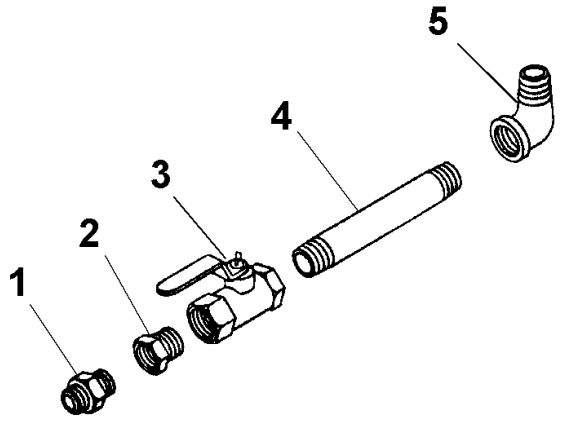
ACCESSORIES (cont)

QMS-443 BOTTOM OUTLET CONVERSION KIT

The pressure tank has a 1” NPT plug (9) fitted in the bottom of the tank. This plug may be removed and a Bottom Outlet Kit fitted that allows standard top outlet tanks to feed from bottom.

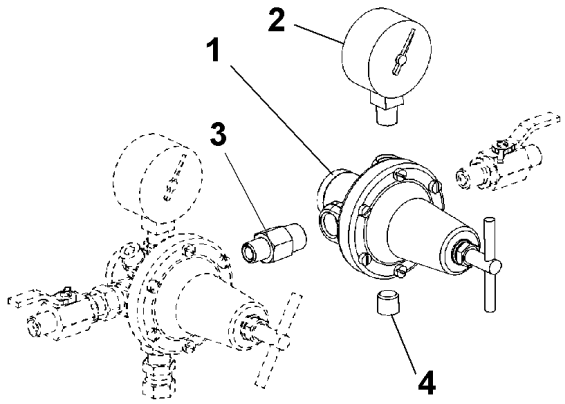
QMS-436 CONVERSION TO DOUBLE



Ref. No.	Part No.	Description	Individual Parts Req.
1	—	Adaptor, 3/4”NPT to 3/4-14 NPSM Stainless Steel	1
2	—	Reducer Bushing, 3/4” to 1”, Stainless Steel	1
3	—	Ball Valve, 1 x 1”NPT(f) Stainless Steel	1
4	—	Pipe Nipple, Stainless Steel	1
5	—	Street Elbow, 1” Stainless Steel	1

REGULATOR ASSEMBLY KIT

Adapt to tanks equipped with single regulator to provide independent pressure control of atomisation air and fluid pressures. Converts QMS-4006 single regulator to a QMS-4007 dual regulator.



Ref. No.	Part No.	Description	Individual Parts Req.
1	HAR-507	Regulator	1
2	83-1355	Gauge, 100 lbs	1
3	83-4233	D.M Nipple, 1/4” x 3/8” Universal Pip Thread	1
4	—	Pipe plug, supplied with regulator	1

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