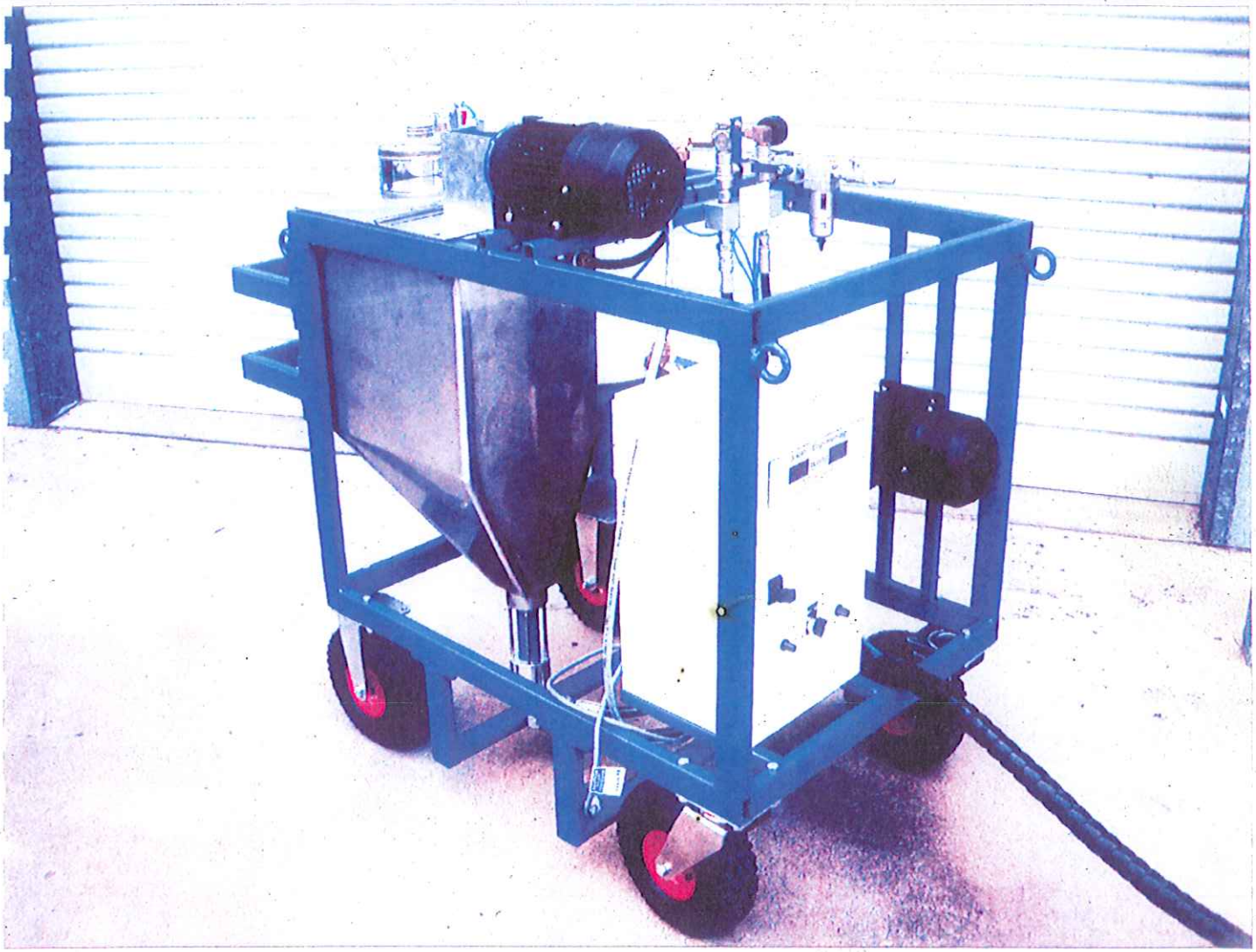
ROBINSON EPOXY DISPENSER



WARNING

THIS EQUOIPMENT SHOULD NEVER BE USED UNTILTHE FOLLOWING CONDITIONS ARE MET.

1. This machine requires high voltage (240v/50hz) power supply, extreme caution should be taken.
2. Never allow children or unauthorized personnel to handle equipment.
3. Only pour/spray in a non-hazardous and well ventilated area suitable to use an IP55 rated machine.
4. The operator should always wear protective attire including full breathing hood, protective goggles, gloves and suitable body protection. Check with Workplace, Health and Safety requirements and your material supplier MSDS sheets.
5. Clear the work area of all other personnel.
6. Exercise care and caution when pouring/spraying and be mindful of overspray/spillage that may affect adjacent areas.
7. Never leave the machine unattended without turning it off completely.
8. Always turn machine off and depressurize before carrying out any maintenance.
9. Opening of the electrical enclosure should be performed by authorized personnel ONLY.
10. Read the instructions before use.
11. Contact your supplier if you are unclear on the instructions.

OPERATING INSTRUCTIONS

INTRODUCTION

Our machines have been designed to dispense two part resins with ratios ranging from 1:1 to 10:1, in a pour or injection configuration. The machine is fitted with two positive displacement low pressure pumps that are capable of delivering accurate outputs (within 3%) of resins that do not require pump pressures of more than 300psi (2000kpa). The ratio of this machine is designed to operate in the range of 5:1. For the machine to operate effectively the following conditions should be met.

1. The product should be of a low enough viscosity as to allow the volume required to be pumped to be delivered at less than 300psi nozzle pressure. It should be noted that the viscosity of some materials alter considerably in colder weather, therefore some action should be taken to heat the materials to a temperature allowing proper performance of the pumps and materials. Example:- materials heated, hose diameter increased to reduce back pressure, hose length reduced to reduce back pressure, output lowered. Please consult with the machine manufacturer if the operator is experiencing any of these problems.
2. Any blockages in the gun or hoses can affect the ratio. Some products crystallize when exposed to the atmosphere, so we recommend the gun be cleaned and checked for crystal build-up regularly. If the machine is left unused for more than two weeks, we recommend the materials should be pumped out and replaced with Mesamol for Polyurethane resins and DMP (Corflex) for epoxy resins. Polyurethane resins are very prone to absorption of moisture in the atmosphere and causes crystal build-up in the ISO and moisture in the POLY causes the membrane to foam. Extreme care should be taken to avoid exposing these materials to the atmosphere. This applies to certain epoxy resins and moisture control is necessary.

WARNING.

The use of a recommended solvent in Robinson equipment is of the utmost importance. Hydrocarbon solvents such as 1,1,1-trichloroethane and methylene chloride must not be used in Robinson equipment. These solvents known as HHC solvents can cause a corrosive reaction of a catalytic nature when in contact with aluminium, galvanized, anodized or oxide coated components particularly when under pressure. A chemical reaction will take place resulting in a build up of heat and pressure and possibly a violent explosion. A solvent such as acetone or some gun thinners is recommended for use in Robinson equipment and all safe handling procedures according to the manufacturers MSDS instructions on acetone or thinners must be followed. Do not use any of the above solvents namely HHC solvents acetone or thinners with MEKP catalyst.

SET UP INSTRUCTIONS.

1. Fill the solvent tank with an appropriate solvent for resins in use. We recommend a non flammable flushing agent where possible. Fill tank to 40mm below the filler bung and not above this level otherwise back feed of solvent is possible.
2. Fill the pump gland with Mesamol for P.U. resins and DMP (Corflex) for epoxy resins.
3. Fill the resin tanks/containers with the required resins or connect each pump to the correct drum. Ensure the correct resin goes into the required tank or pump.

4. Before running any of the pumps, ensure the gun control handle is switched to OFF position and the air and solvent taps are OFF.
5. Turn ON the appropriate valves on the outlets from the tank/containers to the pumps.
6. Connect the air supply to air inlet manifold, ensure all regulators are zeroed and all switch/control handles are OFF, and then open the inlet ball valve to the manifold..
7. Connect the 240 volt AC power source to the unit, turn the ON/OFF switch on the cabinet to OFF then turn power ON to the unit.
8. Adjust the air regulator on the manifold to 40psi to pressurize the solvent tank.
9. Turn the power ON/OFF switch on the cabinet to ON and if the ratio of the materials is say 1:1, adjust each VFD pot on the cabinet to read the same amount at a required output i.e. 30 Hertz. If the ratio is not 1:1 then measured calibration of each pump is required.
10. Open the recycle handle to ON to start the pumps to a recycle mode. Ensure resins flow back into the tanks/drums and shut recycle handle.
11. Remove the static mixing tube/nozzle off the gun before operating the gun initially.
12. Into a suitable container, open the gun control handle to ON and prime the hoses and gun until both resins flow into the container. Turn to OFF the gun control handle and operate into a suitable container the air and solvent flush.
13. Turn solvent ball valve # 762 to on to pressurize the solvent tank. Operate the air flush first to expel most of the mixed epoxy and turn to OFF then solvent flush into the container and turn to OFF then air flush again to expel all liquids in the gun. Connect the static mixing tube and run a test pour to check flow rate and mix. Several short flush procedures may be necessary to clean the gun and mix tube to shutdown stage.
14. Adjust the Hertz reading on each VFD to suit the output required. Higher numbers relate to higher outputs.
15. Check both resin levels to ensure adequate amounts are on hand to complete the operation required. The unit is ready for pouring operations.
16. WARNING. If an extension hose is attached to the outlet of the static mixing tube, this tube MUST be disconnected from the area being poured before any flushing operation is carried out.
17. WARNING. Before any pour operation is started, ensure the recycle handle is in the POUR/OFF position and the air/solvent valve handles on the gun are OFF. Off ratio pouring can result if the recycle valves are left ON and contamination of the poured resin will result.
18. WARNING. Do not open the VFD control cabinet when the power is connected and only authorized personnel must open the cabinet. Only adjust the VFD's by the pots (potentiometer) on the outside of the cabinet.

SHUTDOWN PROCEDURE

1. After the pour operation is finished, air/solvent flush the gun and attached mixing tube as in # 13 above. Remove any extension hose from the mixing tube and remove the tube from the gun. Remove the spiral mixers from the tube and clean if necessary.
2. Turn the ON/OFF switch on the cabinet to OFF and disconnect the power from the unit.
3. Turn the air inlet ball valve to OFF and turn solvent ball valve #762 to OFF and open the relief valve # 246 on the solvent tank to relieve all pressure from the tank.
4. Disconnect the air inlet hose and open the recycle ball valve handle to the PARK position for shutdown.
5. Check to ensure the gun control handle is OFF and the flush handles are OFF.

6. The unit is shutdown.

LONGER SHUTDOWN PROCEDURE

Pump out as much as possible of epoxy resin part 'A' or 'B' leaving a small amount in the hopper or container to keep the pump inlet covered with resin. Fill the hopper or container with clean, hot water or a suitable flushing medium recommended by the supplier and operate the gun handle to operate the pumps and flush through the hoses into a suitable container. After the hoses are clear of resin, operate the recycle valves to flush out the recycle system. It is recommended to catch the flushed resin in a container placed in the hopper/container to recycle only clean medium through the system. Pump as much as possible of the flush medium out of the hopper/container then replace with a shutdown medium such as DMP (Corflex). Pump through briefly into hoses and gun and the unit is shutdown for an extended period.

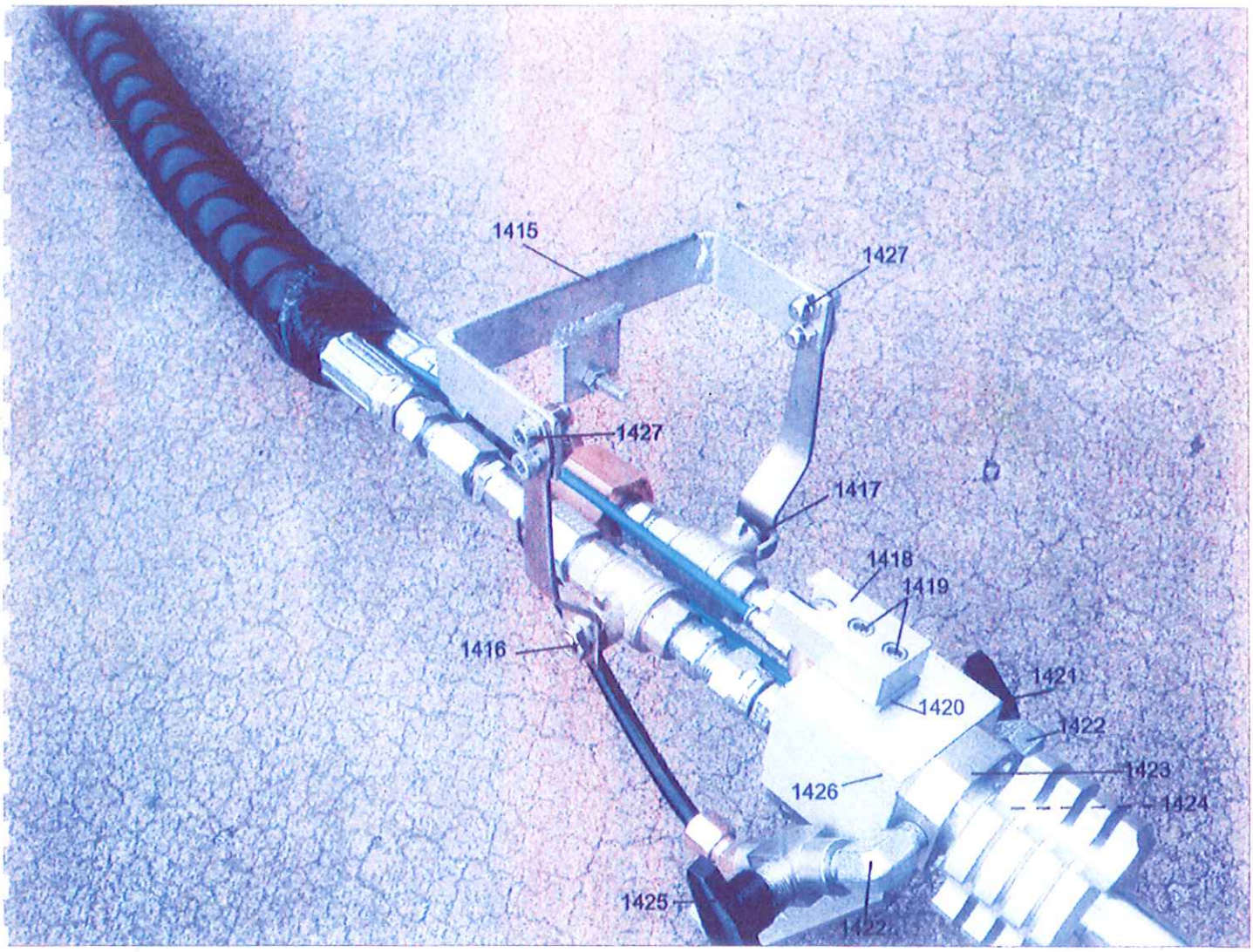
FLOW CALIBRATION

1. The output of the machine is varied by adjusting the Hertz reading on the display facia of both VFD's (Variable Frequency Drive) by only using the dial adjusters on the box door.
2. Adjust the VFD for part 'A' resin to a flow rate desired and measure the amount per minute.
3. Adjust the VFD for part 'B' resin to suit the ratio required for the epoxy system and the flow rate of part 'A'.
4. If the flow rate is changed, part 'A' or 'B' must be adjusted to keep the required ratio constant.

MAINTENANCE

Before each work session begins.
1. Fill the solvent tank with the suitable solvent. Do not fill higher than 50mm from the filler bung.
2. Check for any damage to hoses, gun, fittings and pumps.
3. Squirt DMP/Corflex into the pump gland seal body to lubricate the pump shaft. If there is evidence of gland leakage, replace the seal # 1386.
4. Thoroughly clean the gun and nozzle with a suitable solvent
5. If at anytime the flow of either part 'A' or 'B' resin stops, switch the machine OFF IMMEDIATELY. To run either pump when there is a blockage can damage the pump/s requiring replacement. Investigate the cause of the NO FLOW of either resin before switching the machine ON and operating the gun.
6. As the pumps wear, micro adjustments to either pump flow rate to maintain the required ratio will be necessary.
7. Maintain the machine in a clean appearance and clean regularly.

EPOXY CONTROL CABINET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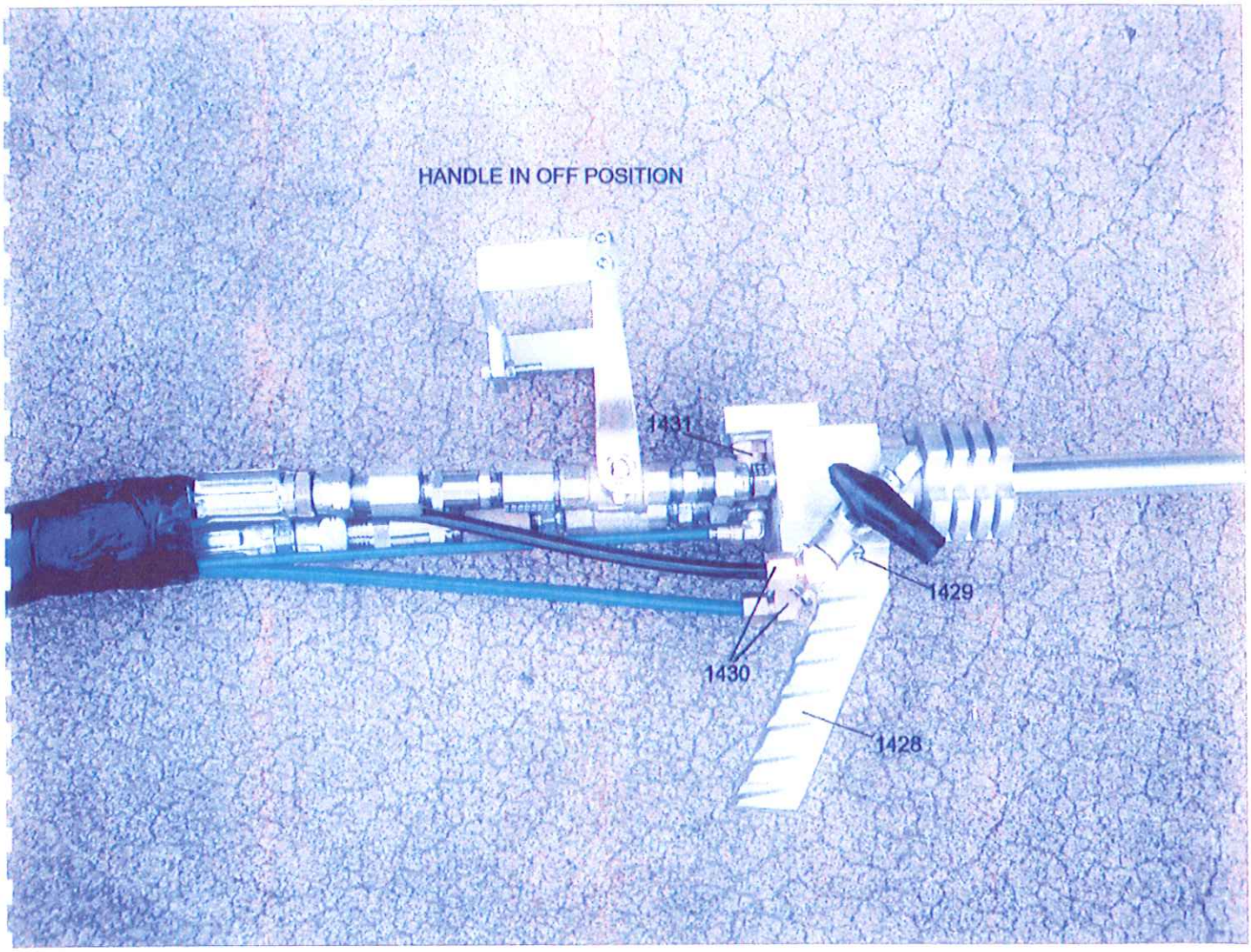
EPOXY DISPENSING GUN

PART NO.	DESCRIPTION
1415	TRIGGER HANDLE
1416	PART 'B' BALL VALVE
1417	PART 'A' BALL VALVE
1418	SIGNAL BUTTON SHROUD
1419	SHROUD SCREWS
1420	SIGNAL BUTTON BRACKET
1421	AIR FLUSH VALVE
1422	VALVE ELBOW
1423	GUN HEAD
1424	HEAD/MIXER GASKET
1425	SOLVENT VALVE
1426	GUN BODY
1427	HANDLE SCREW & NUT
1470	DISPENSER GUN COMPLETE

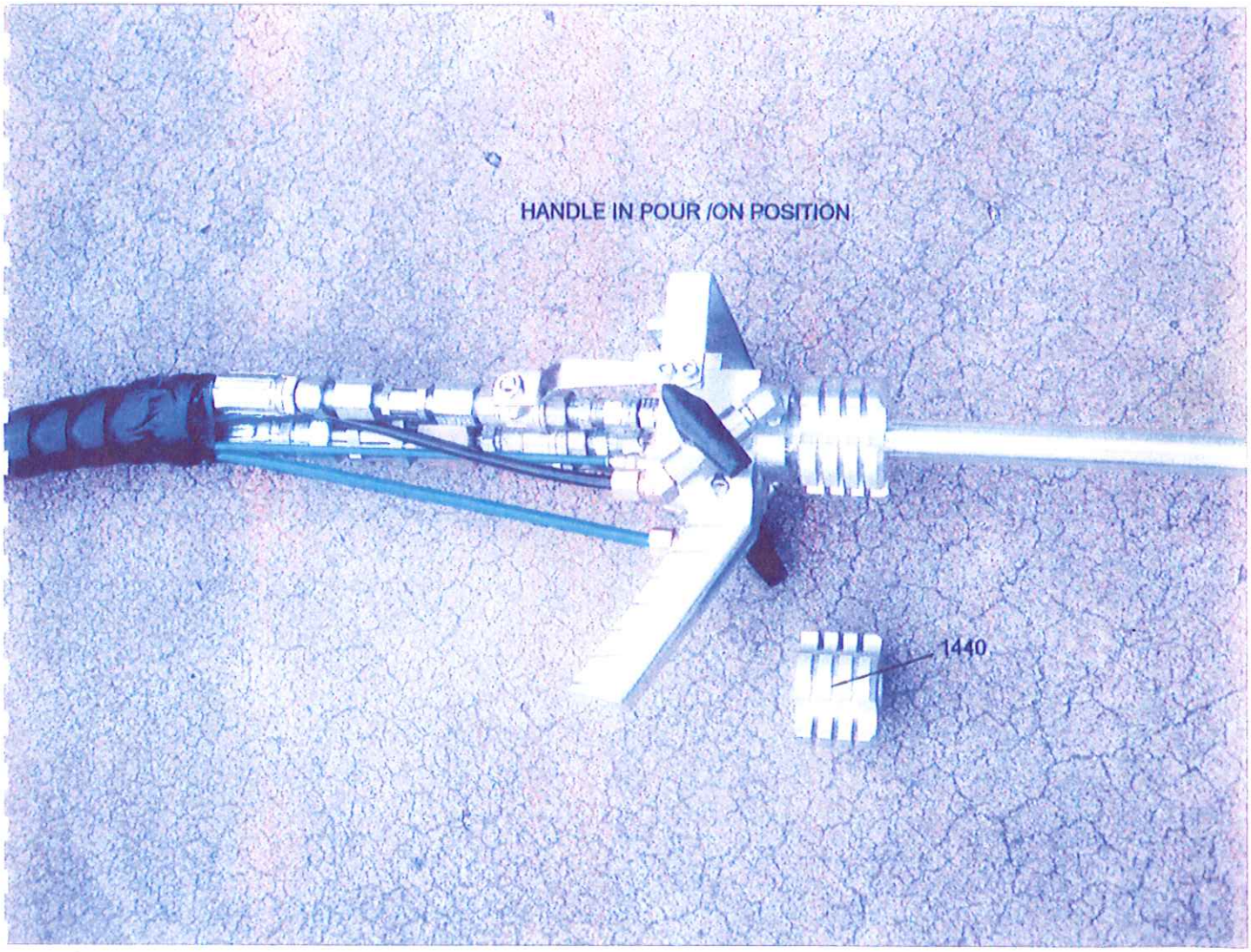
EPOXY DISPENSING GUN



EPOXY DISPENSING GUN

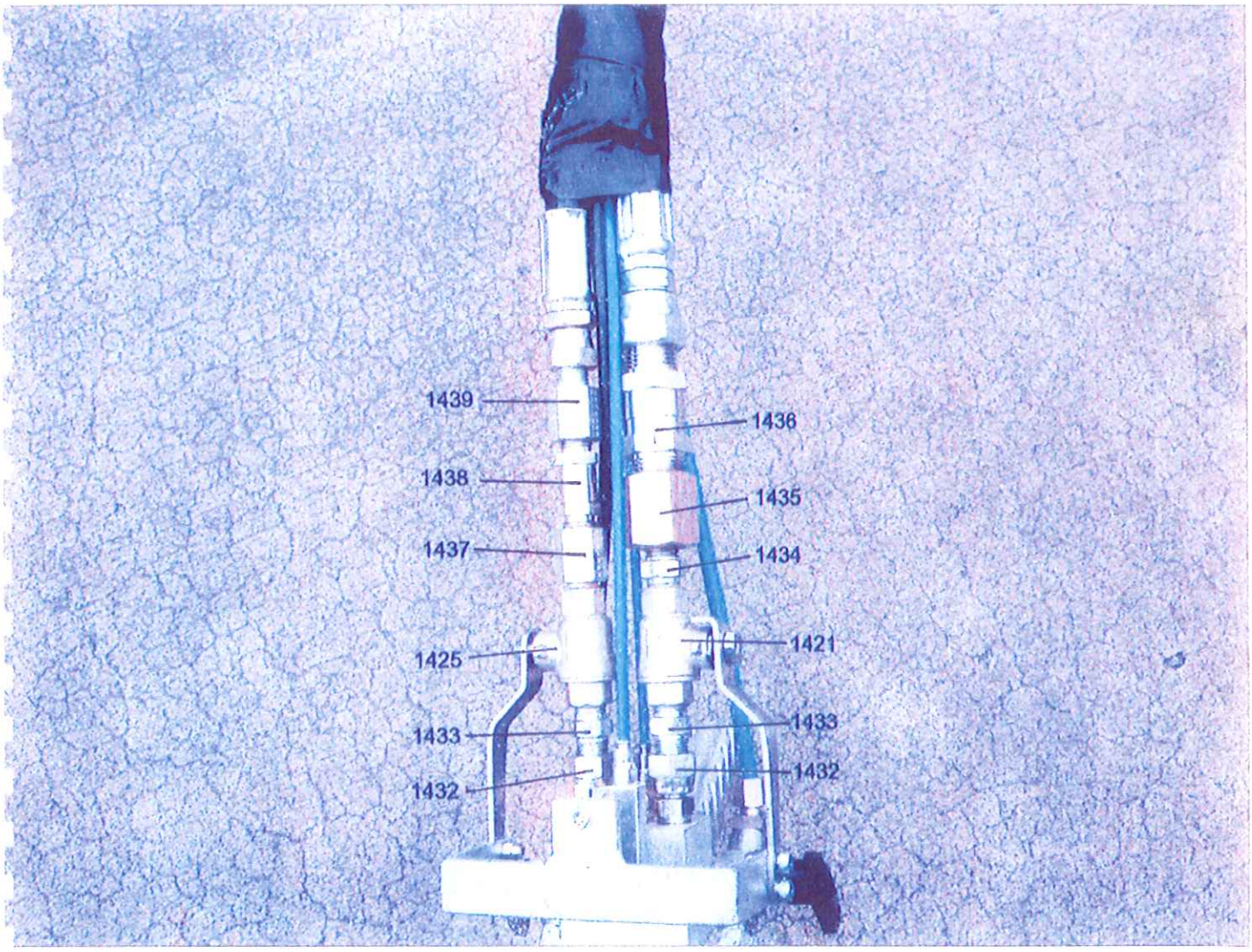
CONTINUED

PART NO.	DESCRIPTION
1428	GUN HANDLE
1429	GUN HANDLE SCREW
1430	FLUSH VALVE ELBOW
1431	SIGNAL BUTTON COMPLETE



PART NO.	DESCRIPTION
1440	MIXER NOZZLE RING

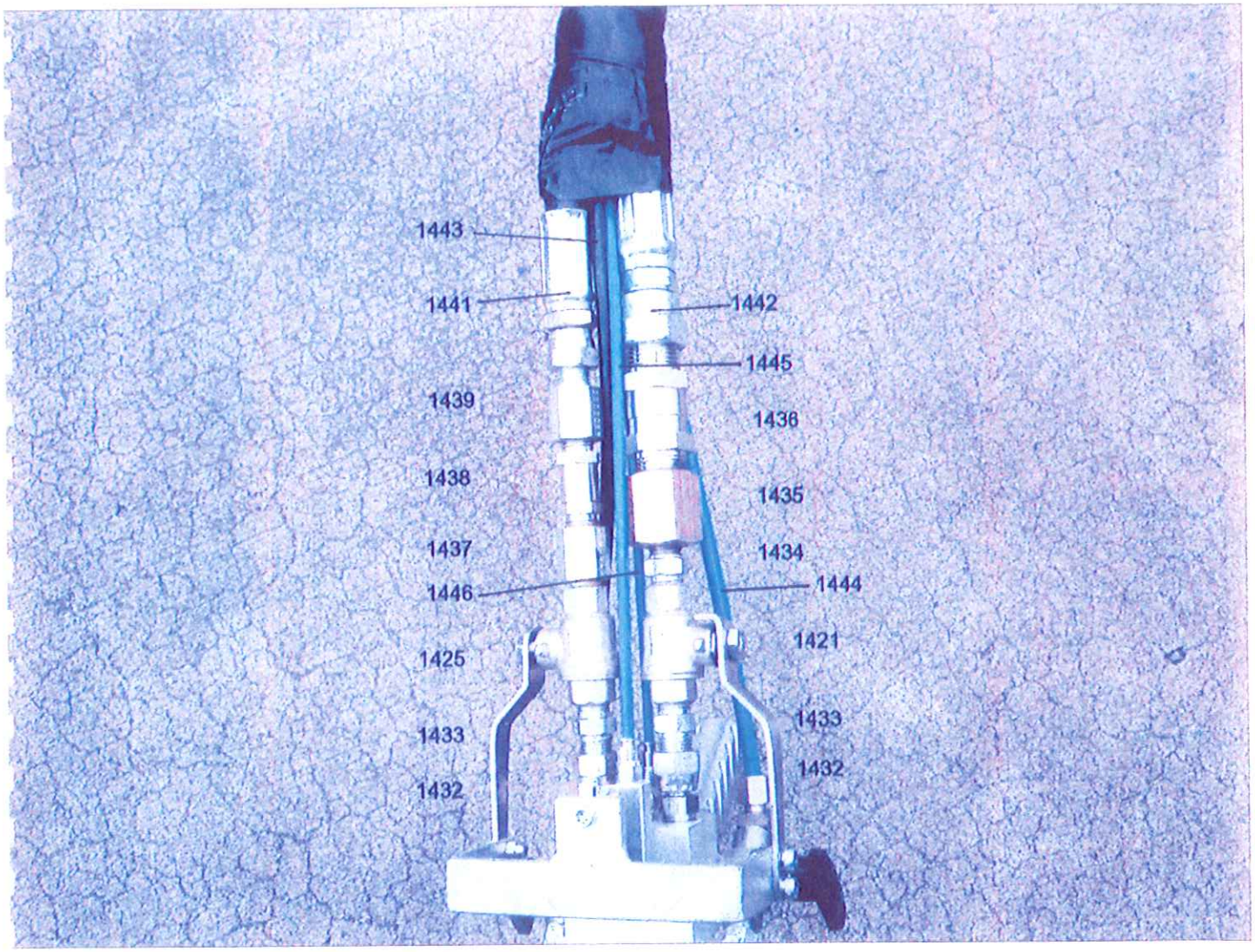
TRIGGER VALVE SYSTEM



TRIGGER VALVE SYSTEM

PART NO.	DESCRIPTION
1421	EPOXY PART 'A' VALVE
1425	EPOXY PART 'B' VALVE
1432	1/4¼ SWIVEL CONNEVTOR
1433	1/4 NIPPLE M
1434	1/4 NIPPLE M
1435	1/4 -3/8 CONNECTOR M
1436	3/8 N/R VALVE PART 'A'
1437	1/4 – 3/8 CONNECTOR M
1438	1/4 N/R VALVE PART 'B'
1439	1/4 - 3/8 CONNECTOR F/M

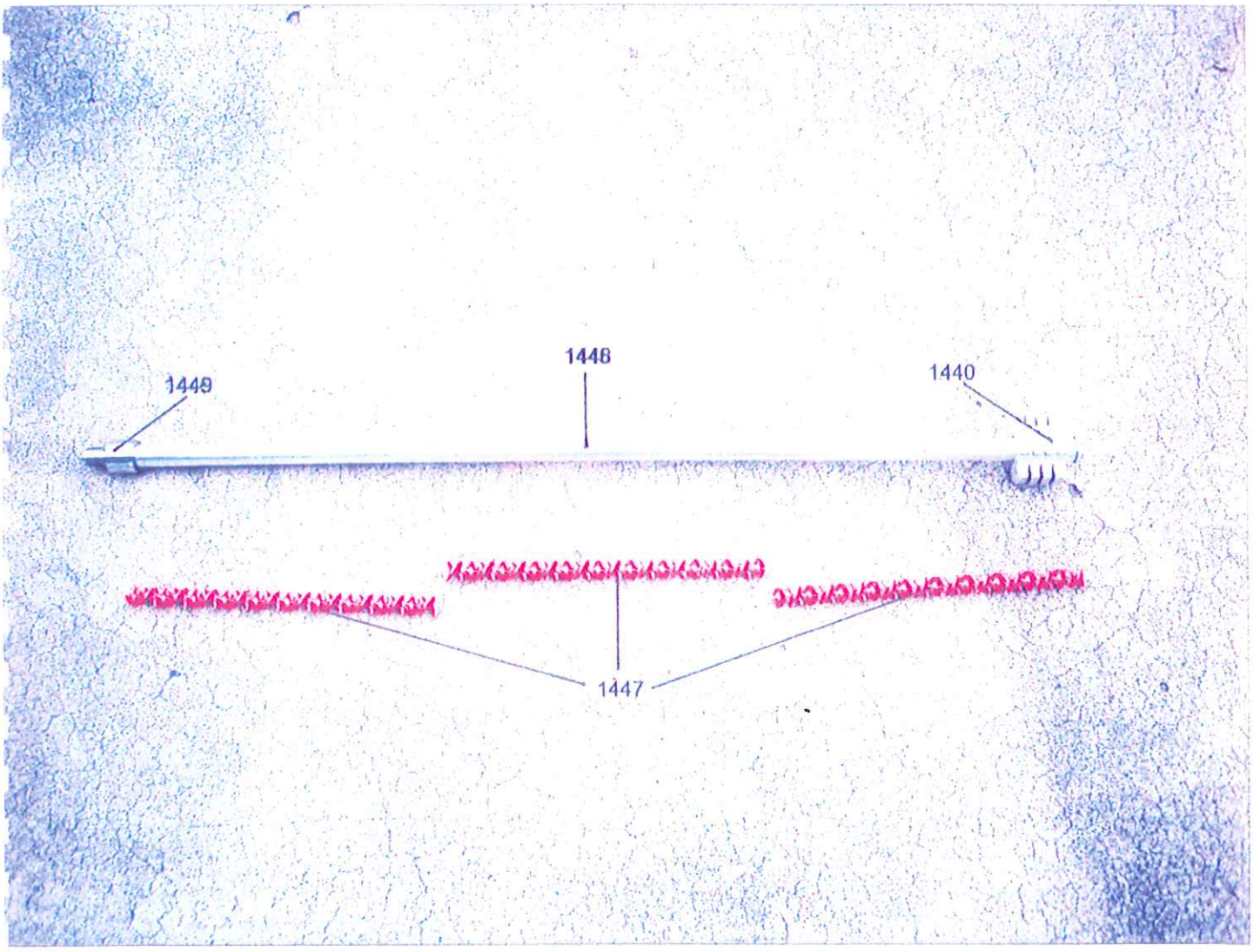
EPOXY HOSE SET



EPOXY HOSE SET

PART NO.	DESCRIPTION
1441	EPOXY PART 'B' HOSE
1442	EPOXY PART 'A' HOSE
1443	SOLVENT PURGE HOSE
1444	AIR PURGE HOSE
1445	SIGNAL AIR HOSE - OUT
1446	SIGNAL AIR HOSE - IN

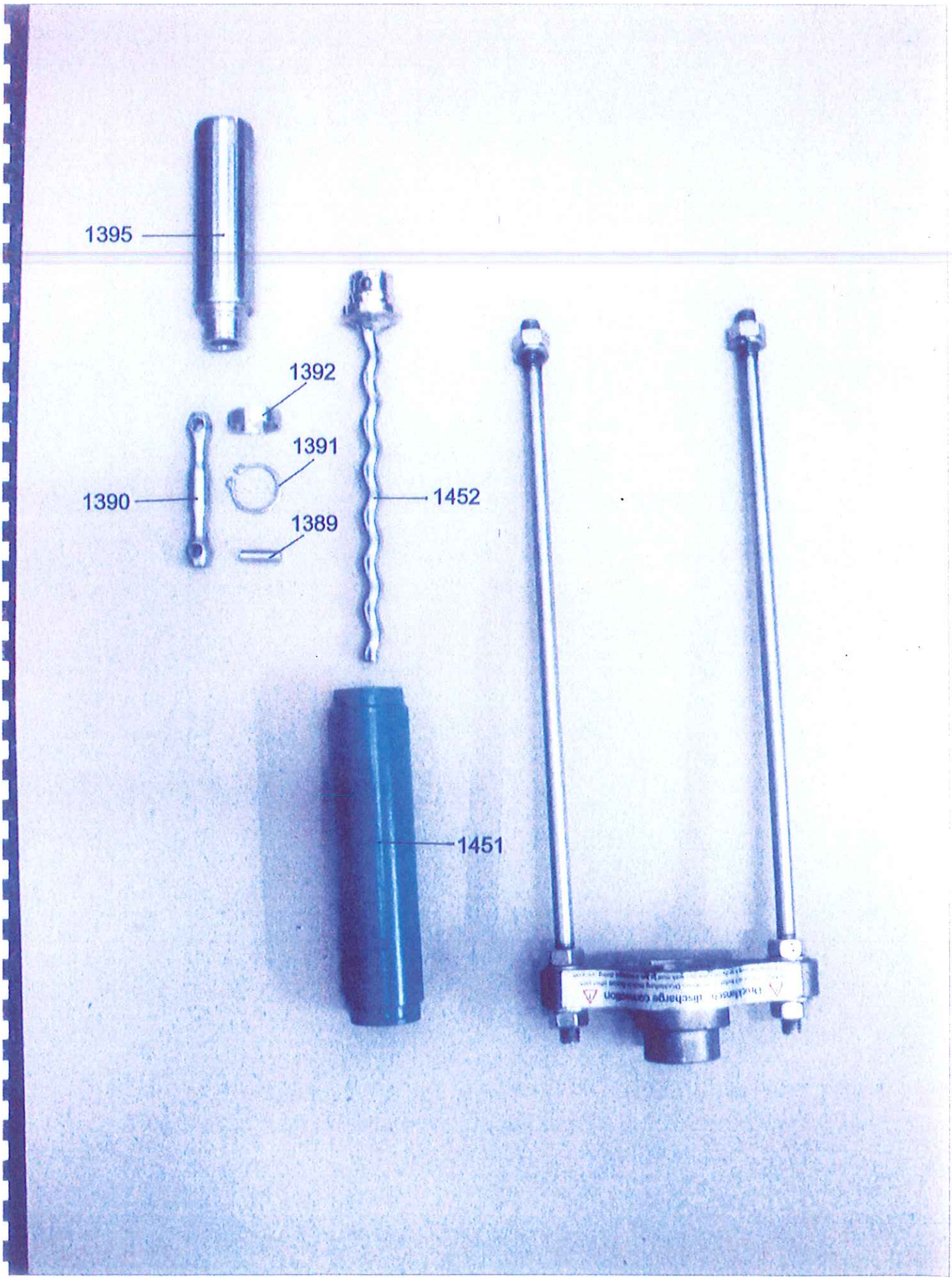
EPOXY STATIC MIXING NOZZLE



EPOXY STATIC MIXING NOZZLE

PART NO.	DESCRIPTION
1440	MIXER NOZZLE RING
1447	5/8 STATIC SPIRAL MIXERS
1448	5/8 STATIC MIXER TUBE
1449	5/8 TUBE ADAPTER OUTLET
1471	5/8 STATIC MIXER NOZZLE X 60 COMPLETE

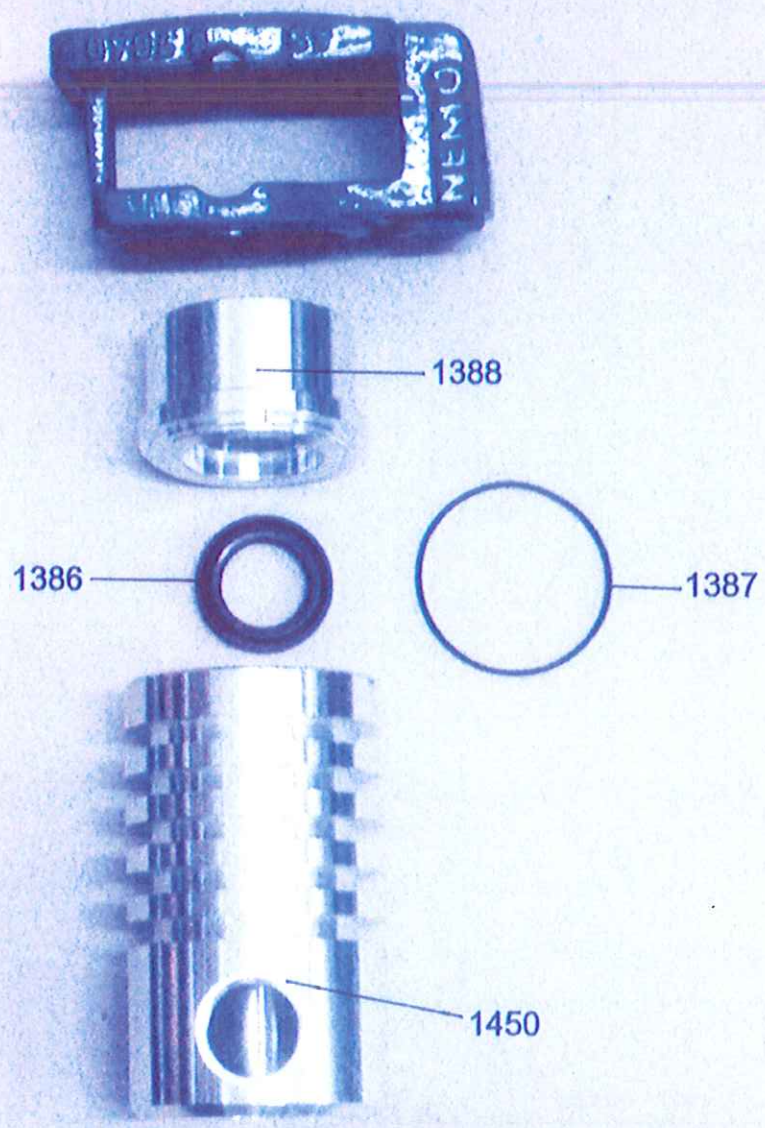
EPOXY PUMP N.M. 8 PART B



EPOXY PUMP N.M. 8 PART 'B'

PART NO.	DESCRIPTION
1390	CONNECTOR ROD
1391	CIRCLIP
1392	PIN COVER
1395	PUMP SHAFT
1451	PUMP STATOR N.M. 8
1452	PUMP ROTOR N.M. 8

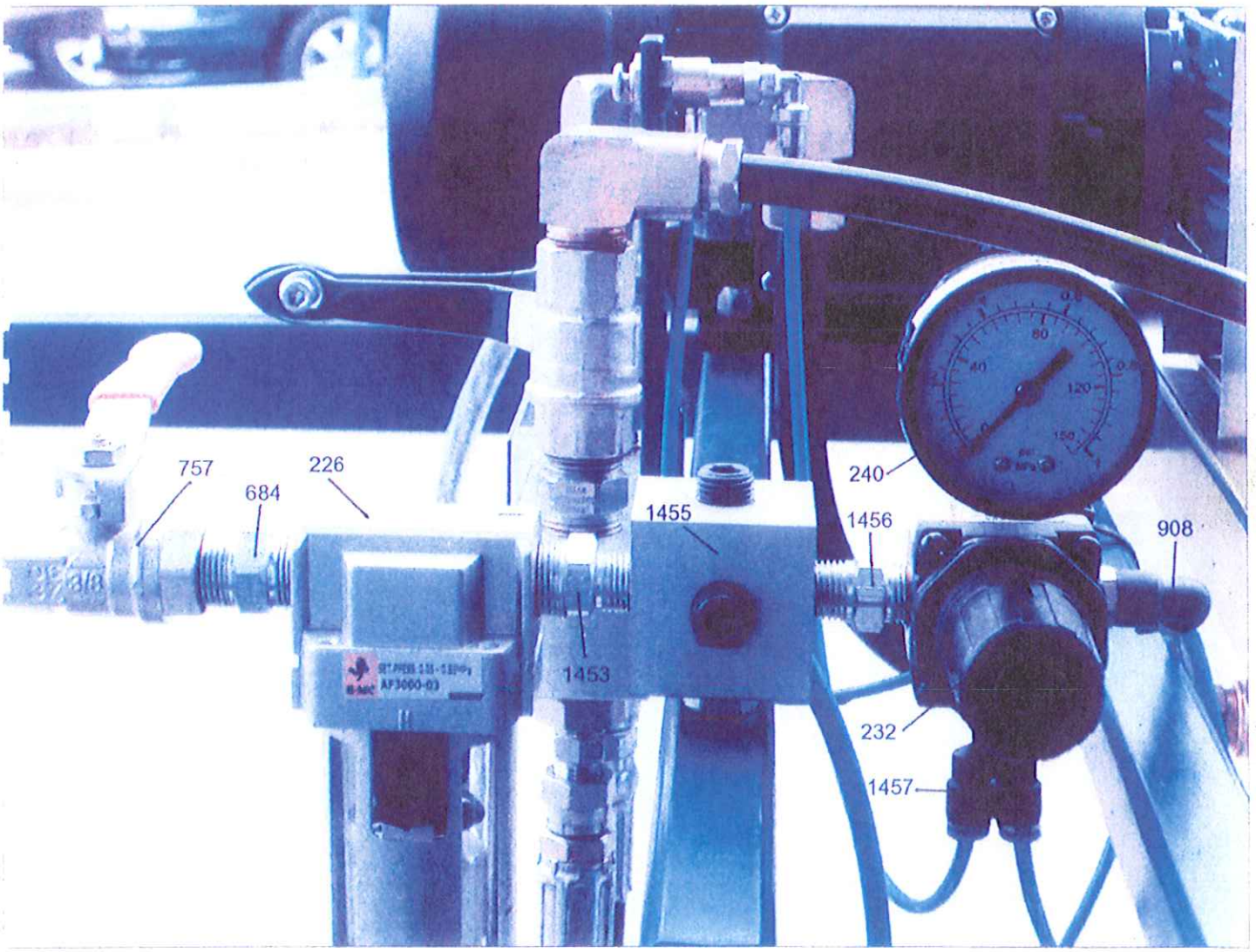
EPOXY PUMP BODY



EPOXY PUMP BODY

PART NO.	DESCRIPTION
1386	SHAFT SEAL
1387	SEAL BODY O RING
1388	SEAL BODY
1450	PUMP INLET HOUSING

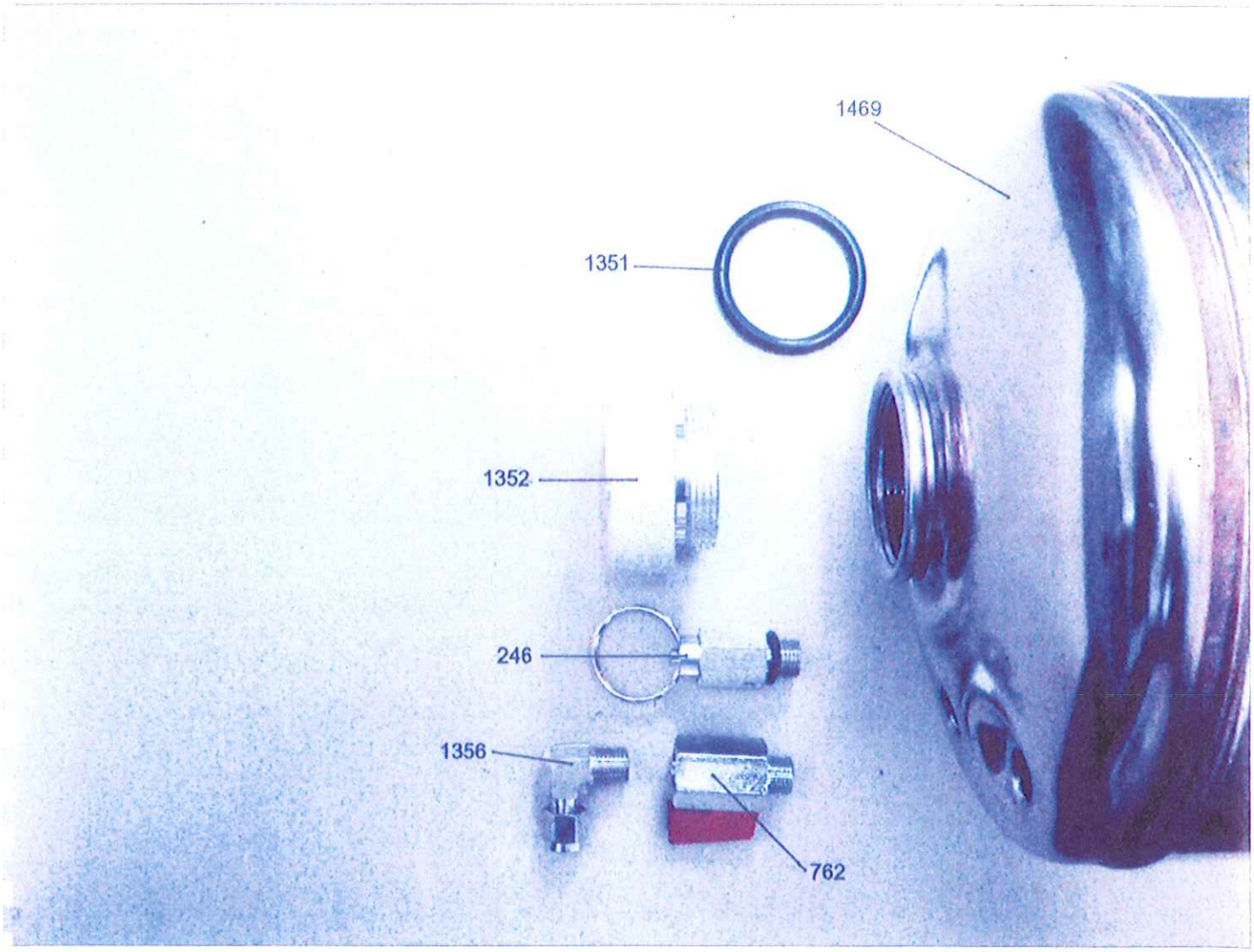
EPOXY PNEUMATIC MANIFOLD



EPOXY PNEUMATIC MANIFOLD

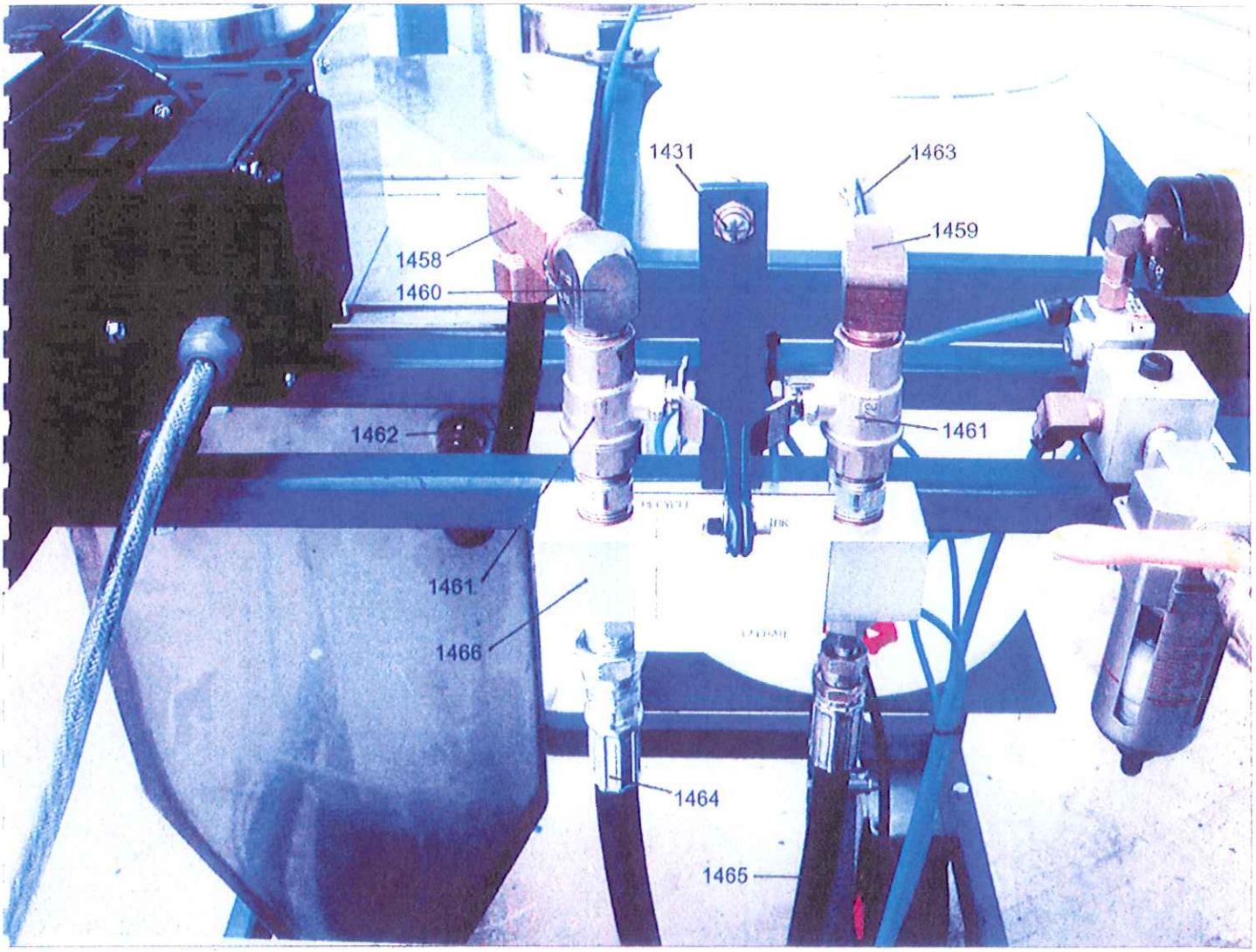
PART NO.	DESCRIPTION
226	AIR FILTER
232	AIR REGULATOR
240	GAUGE
684	3/8 NIPPLE
757	AIR INLET BALL VALVE
908	SOLVENT TANK AIR ELBOW
1453	3/8 – 1/4 NIPPLE
1454	AIR PURGE HOSE ELBOW
1455	AIR MANIFOLD
1456	1/4 NIPPLE
1457	TWIN P/P HOSE CONNECTOR

EPOXY SOLVENT TANK



EPOXY SOLVENT TANK

PART NO.	DESCRIPTION
246	AIR RELIEF VALVE
762	AIR INLET BALL VALVE
1351	FILLER BUNG O RING
1352	FILLER BUNG
1356	AIR INLET ELBOW
1469	S/S SOLVENT TANK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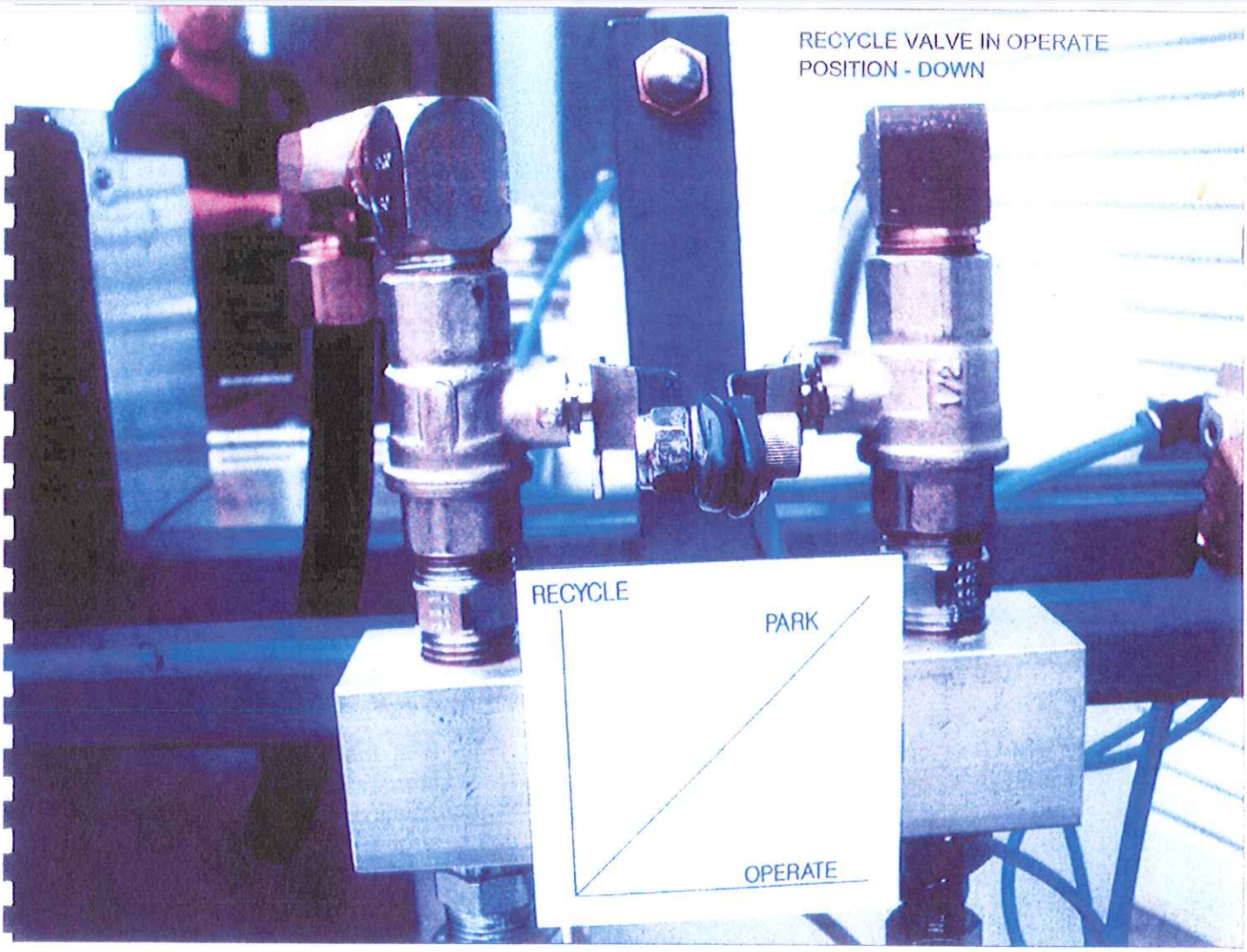
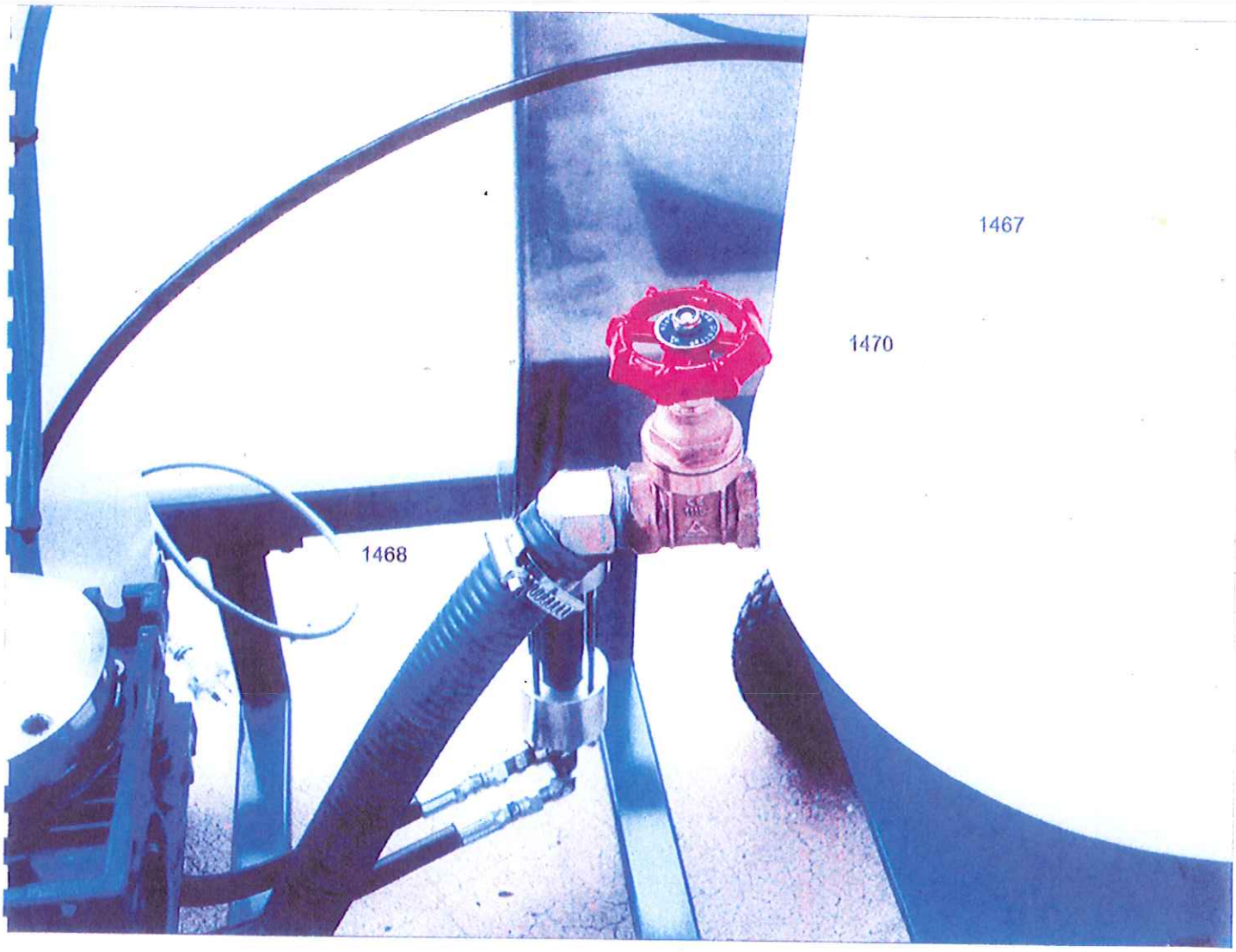
EPOXY RECYCLE VALVE SYSTEM

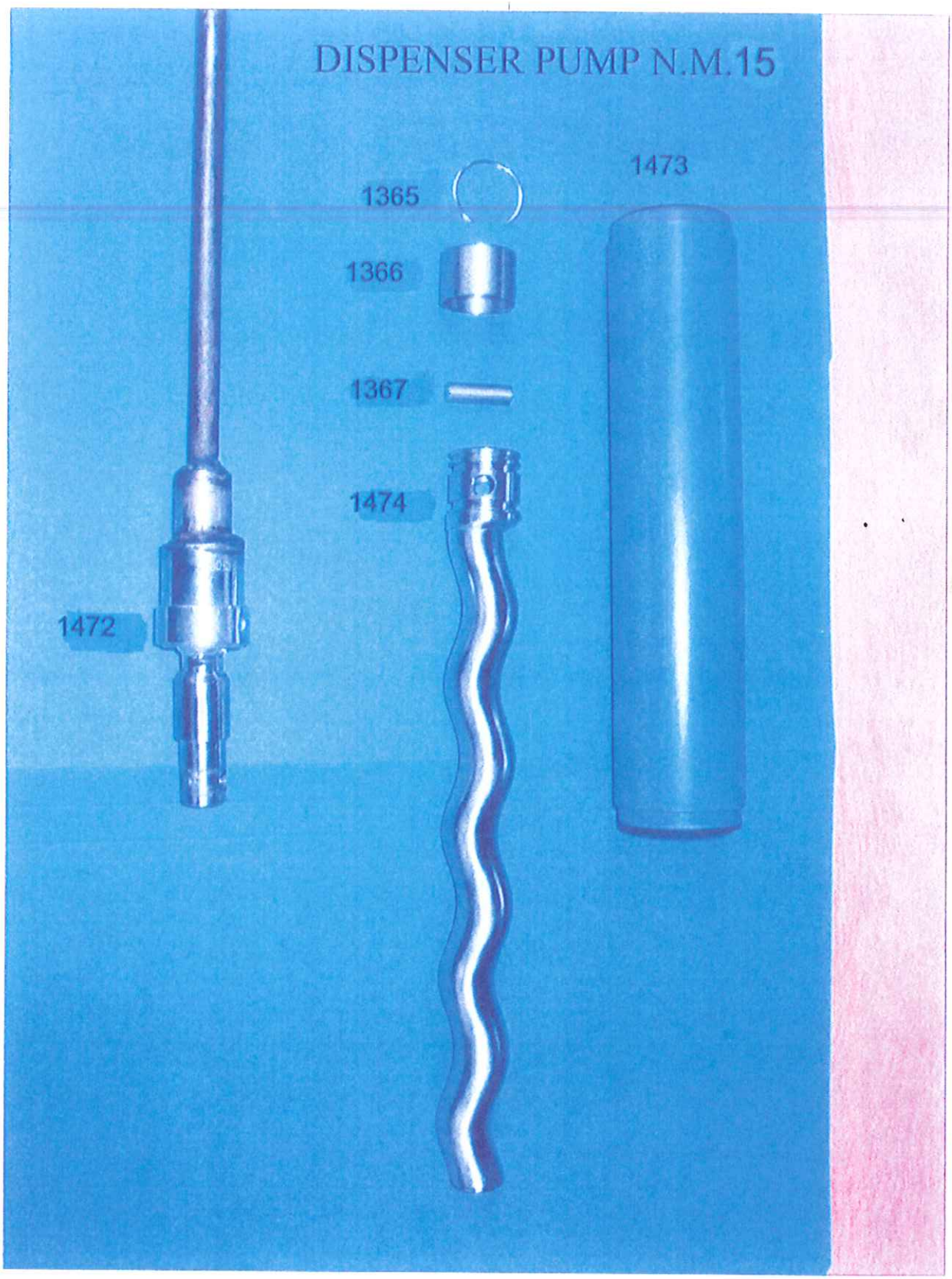
PART NO.	DESCRIPTION
1431	SIGNAL BUTTON COMPLETE
1458	PART 'A' RECYCLE HOSE ELBOW
1459	PART 'B' RECYCLE HOSE ELBOW
1460	PART 'A' VALVE ELBOW
1461	PART 'A' & 'B' BALL VALVE
1462	PART 'A' TANK RECYCLE HOSE
1463	PART 'B' TANK RECYCLE HOSE
1464	PART 'A' RECYCLE DELIVERY HOSE
1465	PART 'B' RECYCLE DELIVERY HOSE
1466	RECYCLE MANIFOLD


RECYCLE VALVE IN OPERATE
POSITION - DOWN
RECYCLE
PARK
OPERATE

EPOXY PART 'B' CONTAINER



PART NO.	DESCRIPTION
1467	PART 'B' CONTAINER COMPLETE
1468	PART 'B' INLET FEED HOSE
1479	PART 'B' CONTAINER BALL VALVE


DISPENSER PUMP N.M.15
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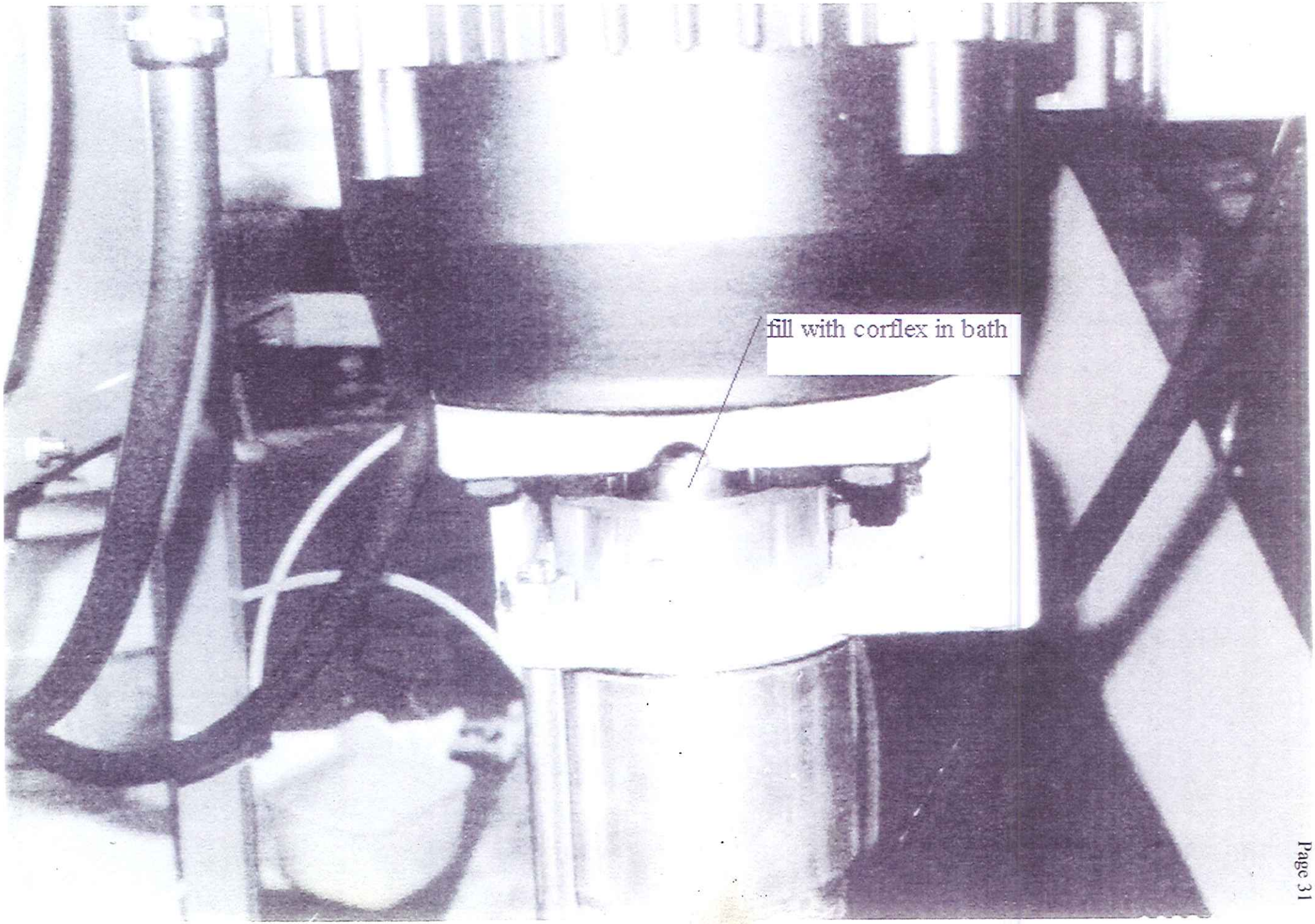
DISPENSER PUMP N.M. 15

PART NO.	DESCRIPTION
1365	CIRCLIP N.M. 15
1366	PIN COVER
1367	DRIVE PIN N.M. 15
1472	PUMP DRIVE SHAFT N.M. 15
1473	PUMP STATOR N.M. 15
1474	PUMP ROTOR N.M. 15


fill with corflex in bath