



USER MANUAL

UG400S, UG400W AUTOMATIC SPRAY GUN CLEANERS



CORPORATION

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REV 2023-02-22

INTRODUCTION

Uni-ram holds many patents on designs used in its innovative products. Every machine is tested for compliance with Quality Assurance standards. Follow the directions in this manual under Setup, Operation and Maintenance in order to operate this machine safely and effectively. Not following these instructions can lead to malfunction or damage to the machine. Ensure that the manual is readily available for the operator at all times. If you have any questions about the operation of this machine, call your Distributor or Uni-Ram Service Engineer at 1-800-417- 9133.

MODELS

- UG400S; for cleaning solventborne spray guns **only**.
- UG400W; for cleaning waterborne spray guns **only**.

COMMON FEATURES

Automatic Wash

- Clean 1 Spray Guns and 1 Pot at the same time.
- 14 Cleaning Jets with swirl action.
- Size and Weight: 25.75" W x 13.5" D x 42" H, 91 LBS 41 KG.
- Wash liquid is reused until too dirty to clean spray guns.

Manual Cleaning Tank

- Disassemble the spray gun and clean the components in the manual tank using the cleaning tools. The cleaning tools includes the brushes in the cleaning kit, the flow-through brush and the flexible spigot.
- Activate the Flow-through brush by stepping on the foot pedal.
- Activate the flexible spigot by stepping on a second foot pedal.
- Clean liquid flows through the cleaning tools and returns to wash pail.

CAUTIONS AND WARNINGS

- Always disconnect this machine from power sources before performing maintenance.
- **Do not smoke or use near open flames, sparks or heat.**
- **Make sure all ground wires are connected and that unit itself is grounded properly.**

SAFETY EQUIPMENT

- Wear safety eyewear, respiratory protection and protective clothing.
- Wear deluxe extended length neoprene gloves; SAS PN 6588 or Thicksters PN 6602-20 through 6605-20.

SETUP

DELIVERY INSPECTION

- Inspect the shipping carton for any sign of transport damage. Carefully remove the unit from the shipping carton and check the unit for damage. Report any transport damage immediately to the carrier and to Uni-ram Corporation. Initiate a freight claim with the carrier. The manufacturer is not responsible for the freight damage.

Bag of accessories contains the following:

- Push on nozzle extension for disposable cup (110-430PPS).
- Push on nozzle extension for conventional cup system(110-430).
- Push on adapter for PPS2 (110430PPS2)
- Trigger lock spring and plug package (140-2340) (2 in a package).
- Cleaning tools including brushes (KIT-GCTOOLS)
- QUICK COUPLER - WHIP LINE (102-3990)
- AIR BLOW GUN + 42 INCH LINE (102-7010)

UG400S

Automatic Tank

Manual Tank



Timer

Foot pedals for
Manual Tank

LOCATION

Position the unit in a well-ventilated area away from sparks, heat and open flames, at least 6 " from the back wall.

AIR SUPPLY

- Connect a male air supply adapter (not supplied) into the female Air Inlet on the unit. The male air supply adapter is 1/4" NPT.
- Connect the female air supply hose to the adapter. The air supply hose must be at least 3/8" inside diameter. **The air supply pressure must be at least 85 PSI and the supply air must be free from contaminants such as water, dust, rust, tar and grease. If the air supply is not clean and dry install a moisture filter. The operation and longevity of the pump and other components depends on clean dry supply air.**
- To prevent damage to the Diaphragm Pump an internal Air Pressure Regulator has been installed to limit the air pressure to 85 PSI. Do not install a second air pressure regulator or use a pressure set below 85 PSI.

GROUNDING

- Connect the green ground wire at the back of the unit to a ground in the building.

Note: The pump and metal tube that inserts into each pail are grounded.

SOLVENT SELECTION

The adhesion quality of automotive paint has dramatically improved in recent years. Solvent selection is critical. Only use good quality solvent that is formulated for your paint type. DO NOT USE CHLORINATED SOLVENT.



PAIL SETUP FOR AUTOMATIC TANK

- See the photo of the pail arrangement on the next page.
- Move the 5 gallon plastic pail close to the cabinet with the cap at the front. Insert the stainless steel suction tube into the hole in the cap, insert the drain hose from the manual tank into the right hole and insert the drain hose from the automatic cleaning tank into the hole at the back of the pail.
- Place 2 gallons of liquid in the smaller two and one half gallon plastic pail. This pail is for the manual tank.
- Place the suction hose into the cap of the plastic 2.5 gallon pail and place the pail in the right side of the cabinet.
- Place the larger pail for the automatic tank into the right side of the cabinet.
- Open the drain valve (see photo on next page).
- Pour 3 gallons of liquid into the automatic cleaning tank to drain into the 5 gallon plastic pail.



PRE-CLEAN

- Disconnect the spray gun from the air hose. The method for the disposable cup is described first followed by



**DRAIN VALVE IS OPEN
(HANDLE IN VERTICAL POSITION).**



**DRAIN VALVE IS CLOSED
(HANDLE IN HORIZONTAL POSITION).**

the method for the conventional cup.

PRE-CLEAN - DISPOSABLE CUP

- Disconnect the disposable cup as shown in photos to the right and far right.
- Squirt solvent into the disposable cup adapter, shown in photo on far right.
- Pull the gun's trigger to flush the solvent through the fluid channel and into the paint waste container (not supplied) for later disposal.



Disposable Cup



Pre clean Fluid Passageway

PRE-CLEAN - CONVENTIONAL CUP

- Disconnect the cap and pour the paint waste into a paint waste container (not supplied).

CLEANING SPRAY GUNS AND CUPS

- Remove digital air gauge if so equipped.
- Loosen the air cap of the spray gun two full turns.
- Lock the trigger in the open position with the Trigger Lock Spring.

See photos below.



Remove Gauge



Loosen Cap

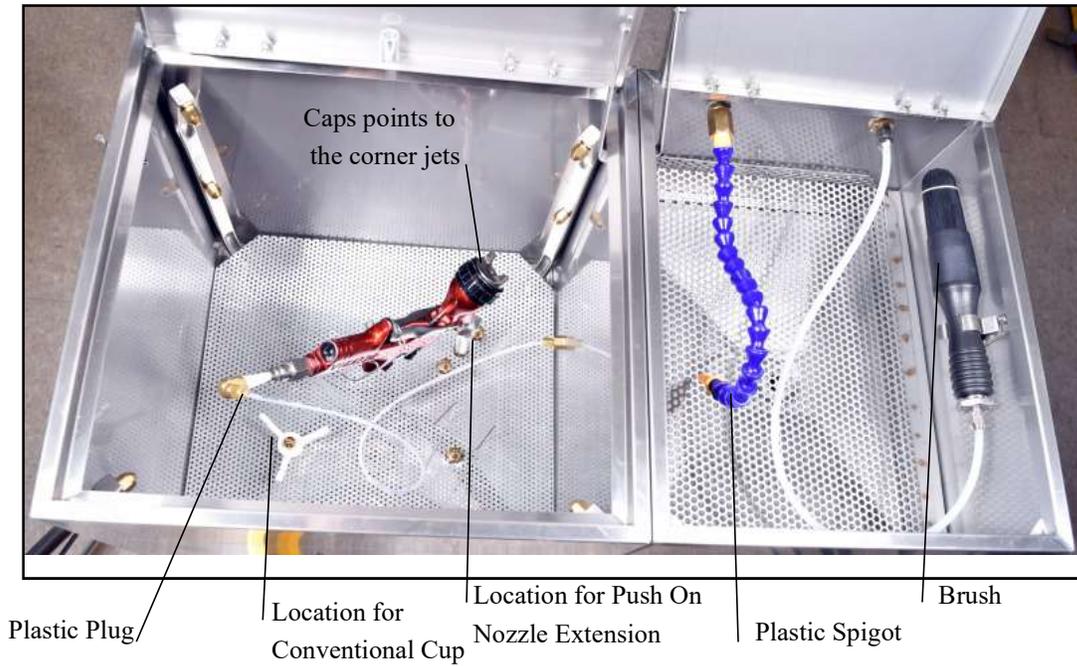


Trigger Lock Spring On Spray Gun

SPRAY GUN PLACED IN TANK

Automatic Tank

Manual Tank

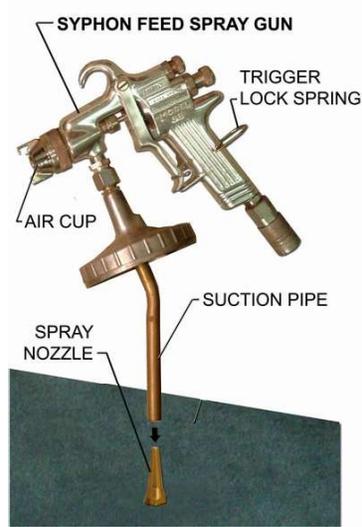
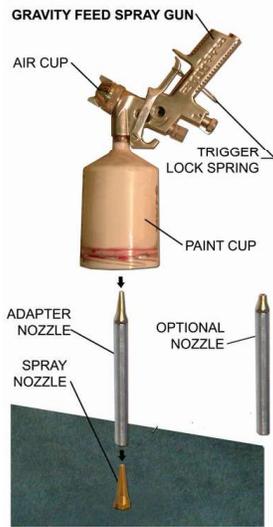
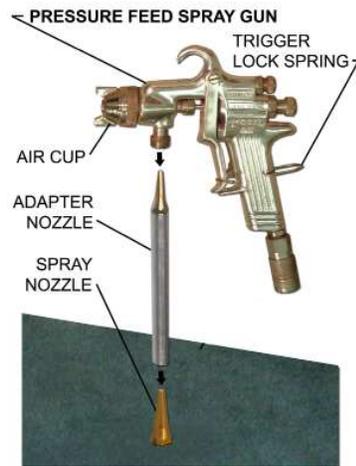
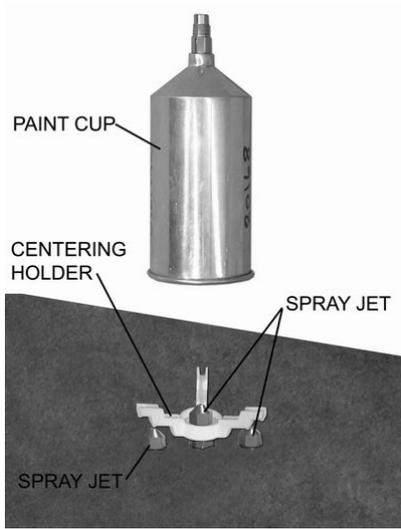


INSTALLING SPRAY GUNS IN TANK

- Place the spray gun on the nozzle with the cap facing the corner.



Nozzle Extension for disposable cups



Prevent Solvent From Entering the Air Passage of Spray Gun:

insert the plastic plug into the air fitting of the spray gun as in the photo below. Positive air will flow through the passage way to the cap during cleaning. If the air passage way has a male fitting attach the knurled female nut to prevent solvent from entering the air passage way. This fitting is located on the chain with the trigger clamp.



Plastic Plug inserted into the air passage way of the spray gun

- Close the lid of the spray tank and turn the "Auto Wash Timer" clockwise as in photo below to initiate cleaning. The wash cycle takes about 60 seconds.



CLEANING COMPONENTS IN THE MANUAL CLEANING TANK

- Disassemble the spray gun and clean the components in the manual tank using the cleaning tools. The cleaning tools include the brushes in the cleaning kit, the Flow-through brush and the flexible spigot.
- Activate the Flow-through brush by stepping on the foot pedal.
- Activate the flexible spigot by stepping on a second foot pedal.
- Clean liquid flows through the cleaning tools and returns to wash pail.

MAINTENANCE

- A removable screen filter is installed at the end of the suction pipe, in the wash pail. See the photos below.
- Once each week, remove the wash pail from the cabinet, remove the suction pipe with the pail, see photos below, unscrew the metal filter (see right photo below) and clean the filter in a cup of solvent.



Wash Pail



Remove Suction Pipe and Filter



Filter

REPLACING SOLVENT

- Replace the solvent when the solvent has lost its cleaning effectiveness or after approximately 100 cleanings.
- Close the drain valve, see photo below. Move the large pail out of the cabinet. Remove the drain hoses and suction pipe.
- Pour wash liquid from the wash pail into a waste drum for later disposal. Rinse out the pail.
- Remove the small pail and add solvent such that the small pail has 2 gallons of liquid.
- Return the small pail with suction tube included to the right side of the cabinet.
- Return the large pail to the left side of the cabinet with one suction hose and 2 drain hoses inserted.
- Close the drain valve. Pour 3 gallons (12 L) of fresh solvent in the cleaning tank to fill the large pail in the cabinet.

Drain Valve
(closed position)

TROUBLE SHOOTING

PROBLEM	REASON	CORRECTIVE ACTION
WASH PUMP MAKES PUMPING SOUND BUT SOLVENT DOES NOT FLOW FROM THE JETS	Drain valve closed	Open drain valve (put in vertical position), if not already open
	Liquid level too low	Check wash liquid level. Add liquid if less than 1/2 full. Fill to 3 gal (11 L).
	Debris in pump or suction and output hose	Follow Procedure 1, "Blocked Fluid Passage in Diaphragm pump"
WASH PUMP MAKES HISSING SOUND AND SOLVENT DOES NOT FLOW	Water or contaminants are in air line of pump.	Follow Procedure 2. "Blocked Air Passage in Diaphragm Pump".
WASH PUMP DOES NOT STOP UNLESS TIMER IS TURNED BY HAND OR	Defective Timer	Replace Timer, PN 115-200K.
AIR IS SHUT OFF. WASH PUMP DOES NOT START.		
TIMER KNOB SPINS BACK WHEN TURNED	Defective Timer	Replace Timer. PN 115-200K.

Trouble shooting continued		
SYMPTOM	REASON	CORRECTIVE ACTION
INSIDE WALL OF TANK IS COATED WITH PAINT EVEN THOUGH OPERATOR MAINTAINS TANK	Liquid lacks cleaning strength	Replace solvent / water and AQUA-KLEEN in pail. Consider a solvent that is formulated for type of paint used and for use with automatic spray gun cleaning.
GUNS NOT CLEAN, PUMP WORKING, SOLVENT FLOW NORMAL	Trigger not locked in open position	Use Trigger Lock Spring PN 120-350
	Spray gun is not properly installed on to nozzle	Re-install with proper adapter
	Incompatible solvent	solvent formulated for type of paint
	Low pressure in air supply	of 85 PSI
	Plugged jets	through the jets. If not successful,
SOLVENT APPEARS RED or ORANGE	Water in solvent is corroding metal pail	Replace or recycle wash solvent
GUNS NOT CLEAN, WASH SOLVENT IS MILKY WHITE	Wash solvent is contaminated with water	Replace or recycle wash solvent
CLEAN RINSE DOES NOT WORK	Not enough liquid in clean rinse pail (right side)	Add liquid
	Rinse Pump is leaking from a crack caused by corrosion due to acidic or chlorine contaminated solvent	Replace rinse pump, PN URP-100SF
CLEAN RINSE IS DIRTY	Faulty Valve	Replace Combination Valve, PN UVB-400KIT

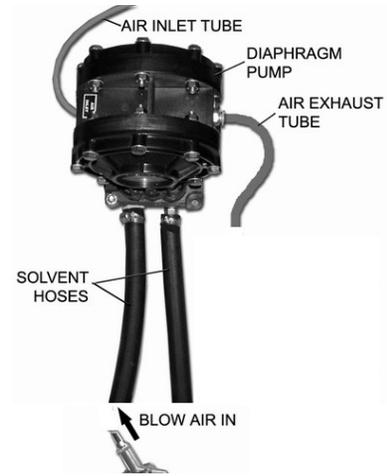
TROUBLESHOOTING PROCEDURES PROCEDURE 1

Blocked Fluid Passage In Diaphragm Pump

If the pump sounds like it is working but liquid does not flow, clear the fluid passage as follows:

- Remove suction tube from the pail and blow air at 85 PSI into the INLET Liquid Hose (see diagram). Step on foot pedal to activate pump. This procedure may have to be repeated several times. If this procedure does not help, blow some water into the suction hose using a spray gun, wait one minute and step on foot pedal to activate pump. This procedure may have to be repeated several times. If this procedure does not work, the pump must be replaced.

If you need to replace the pump call the Uni-ram Service Engineer. The warranty on the diaphragm pump is two years from date of purchase.



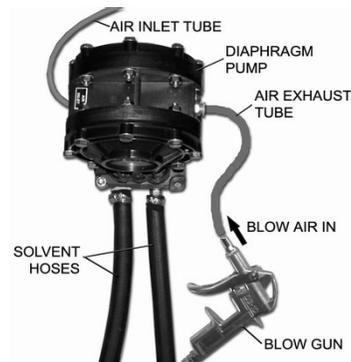
This procedure will also clear a blockage in the fluid line for the brush. Follow the same procedure to clear a blockage in the automatic nozzle except turn the timer instead of stepping on the foot pedal.

PROCEDURE 2

Blocked Air Passage In Diaphragm Pump

If there is a steady hissing sound and the pump is not cycling, the spool valve has stalled due to a blocked air passage. Follow the procedure below to clear the blockage.

- Connect a blow gun to an 85 PSI source. Locate the blue hose that extends from the air exhaust port of the diaphragm pump. Use a blow gun to blow air into the open end of this hose. Turn timer. If the procedure is successful, the pump will start working. The procedure may have to be repeated several times. If this procedure does not work, replace the pump.
- Cause:** Contaminants in the air supply (water, oil, solid particles etc)
- Preventative Action:** If necessary, install an Airline (Moisture) Filter.



PROCEDURE 3

Blocked Passage in Air Line

The components in the air line are the **diaphragm pump, air valve, foot pedal, 3-way ball valve and regulator. See the Flow Diagram and the section: Replacement Parts.**

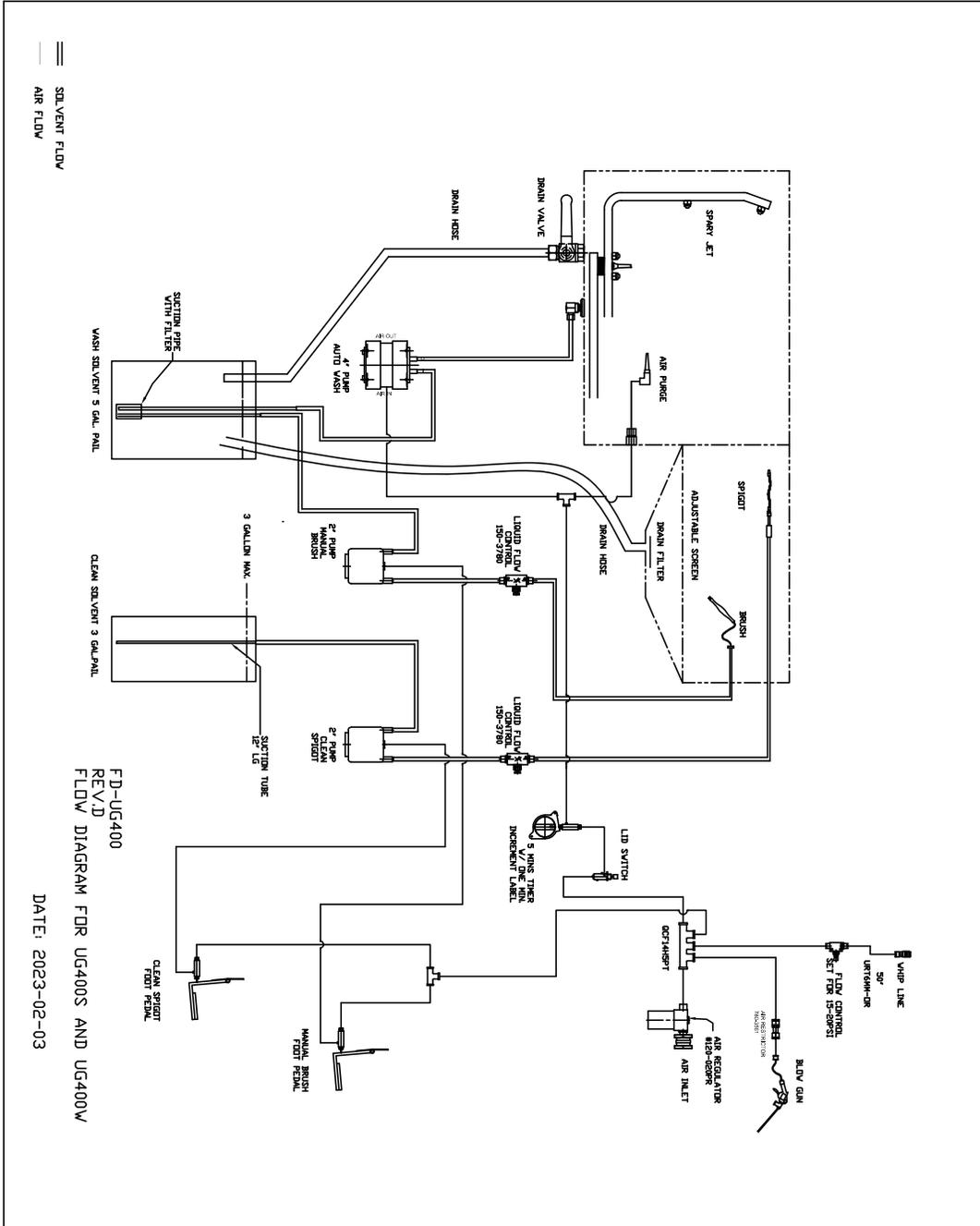
To troubleshoot a component:

- 1) Disconnect the air line to the component using the quick disconnect.
- 2) Step on foot pedal and check for presence of positive air pressure in the air line. If there is ample positive air pressure, replace the component.

If air pressure is absent, there is a faulty component upstream. Reconnect the air line and check the operation of the next component upstream by following steps 1 and 2 above.

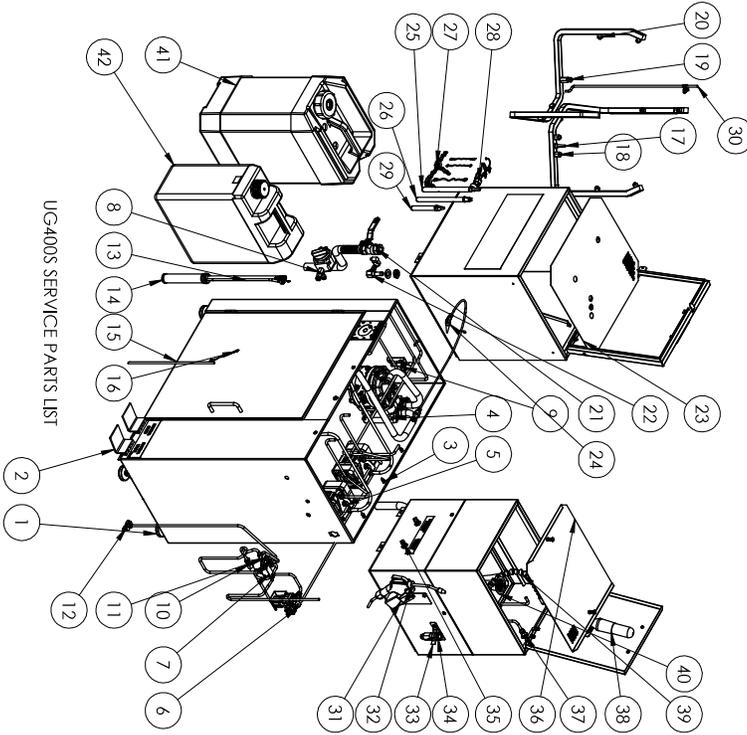
UG4000E FLOW DIAGRAM

Use the diagram to trace the flow of compressed air and solvent.



SERVICE PARTS

ITEM NO.	PartNo	DESCRIPTION	QTY.
1	110-6311S	ADJUSTABLE FOOT 3/8"-16 THREAD x 50MM STUD	4
2	240-2410	FOOT PEDAL, HEAVY DUTY, WITH VALVE	2
3	100-834-6	GROUND WIRE ASSY 18GA, 1300MM, GREEN, BOTH ENDS WITH 1/4" NON-INSULATED TERMINAL COPPER RING	1
4	UDP-47A	DUAL DIAPHRAGM PUMP, 4" DELBRI BODY, TETON DISC, BM INCL	1
5	UDP-27A-B	2" DIA-4" UMP, TETON BALL, WITH BM&M INTERFAND 6MM OULET FITTINGS	2
6	190-200BR	2" BR PRESSURE HOSE, 100' LG, 1/2" I.D. PERI	1
7	100-3900A	AIR PRESSURE HOSE, 100' LG, 1/2" I.D. PERI	1
8	115-200X	MICH. MANUAL, TAPER KIT, 5 MINUS	1
9	112-800	LID SWITCH ASSY FOR MODEL S/WO VENT	1
10	87-5347	PLUG AIR DESIGNATOR, SUBASSY, 22 PPS	1
11	OCCTEEL4	OCCTEEL FILLING TEE FOR 6MM O.D. HOSE	2
12	129-4210IDM	SUCTION TUBE ASSY, WORK WITH 30MM FILTER	1
13	104-4206	11.75" FILTER	1
14	104-4206	6MM O.D. X 12" LG. SUCTION TUBE WELDED WITH NUT FOR UMBROS	1
15	104-8450	GROUND WIRE ASSY 14GA, 3.6' LG GREEN	2
16	104-8456	GROUND WIRE ASSY 14GA, 3.6' LG GREEN	2
17	100-3356	GUN CLEANER NOZZLE BRASS	3
18	100-3357	SPRAY JET ASSY BRASS	3
19	100-3301	SPRAY JET ASSY BRASS	8
20	100-3301	SPRAY JET ASSY BRASS	8
21	14G-480	DRAIN VALVE WITH FITTINGS AND HOSE SUB-ASSY	1
22	14G-480	CENTRE CONNECTOR WITH FITTING WORK SCREEN	1
23	N110-322A	AIR PURGE KIT, SPRAY GUN	1
24	14G-230	TAPER NOZZLE ADAPTER, ALUM. TUBE, 4.5" LG	1
25	110-430	NOZZLE ADAPTER FOR PPS, ALUM. TUBE, 6.5" LG	1
26	110-430PPS	NOZZLE ADAPTER FOR PPS, ALUM. TUBE, 6.5" LG	1
27	100-419F	CUP HOLDER	2
28	140-2341	KIT, TUBE FOR GUN	2
29	110-430PPS2	UNIVERSAL NOZZLE 3.25" LG, ALUM. TUBE	1
30	100-3902	PUSH ROD WITH GUIDE CLIP ASSY	1
31	102-3008	BRACKET GUN HOLDER	1
32	102-3008	BLOW GUN WITH TUB & COUCH BALL	1
33	102-3008	BLOW GUN WITH TUB & COUCH BALL	1
34	102-3990	QUICK COUPLER, 1/4" BODY, WITH 6MM QC	1
35	150-3780	LIQUID FLOW CONTROL ASSEMBLY, 6MM	2
36	243-8020	SCREEN WITH TUBE	1
37	791-1470	FITTING, SLIP-ASSY TO MANUAL BRUSH, W/ 90DEG. ELBOW	1
38	103-3903	MANUAL SHORT BRUSH WITH 6MM COMPRESS FITTING, FOR SOLVENT, W/O	1
39	243-2910	SCREEN ASSEMBLY, TUBE	1
40	243-3323	MANUAL WASH TANK, STEEL	1
41	143-8115	SOLVENT WASH PAIL, HDPE, RECTANGULAR, 20" x 56" GALLON, WITH 55 FILTER HOLES ON CAP AND DRAIN HOLE CLEAN PAIL, 10L WITH ONE 6MM HOLES CAP	1
42	100-8111UW	CLEAN PAIL, 10L WITH ONE 6MM HOLES CAP	1



UG400S SERVICE PARTS LIST

THIS INFORMATION CONTAINS IN THE DRAWING THE SOLE PROPERTY OF UNIRAM CORP. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF UNIRAM CORP. IS PROHIBITED.

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
FRACTIONAL: 1/32
2 PLACE DECIMAL: .015
3 PLACE DECIMAL: .005
ANGLES: 5, 15

3RD ANGLE PROJECTION

TITLE: UG400S WORK STATION, YELLOW CABINET, SOLVENT BASE
PROJECT: UG400S

BINDER:
SCALE: DO NOT SCALE DRAWING
SHEET NO: 2 OF 2

DATE	NAME

DWN: FEB-14-2022 **REN**
CHD:
APPD:

MATL-: See Parts
WEIGHT: 94.54 LBS
QTY-:

FILE NAME: UG400S
PATH: N:\Engineers\ENV\UG400\

DWG. NO: UG400S
REV: C



Full Product Warranty

These Uni-ram products have been engineered and manufactured to high performance standards. Each unit has been subjected to detailed factory testing before shipment.

This product comes with a one-year full warranty from the date of purchase. Uni-ram Corporation reserves the right to repair or replace the unit, free of charge, to the original purchaser if a part is found to be defective in material or workmanship as determined by factory service personnel. The items listed below under "Conditions of Warranty" as consumables are not covered.

Uni-ram reserves the right to direct the customer to ship the unit collect to the Uni-ram factory or to an approved Service Center for repair using the Uni-ram Return Goods Procedure or to repair the unit on-site. To prevent damage in transport, the purchaser must ship the unit in the original packaging or use alternate adequate packaging. All units must be **shipped clean and free of liquid**.

Diaphragm Pump:

We are pleased to advise that the warranty on the diaphragm pump, the heart of the spray gun cleaner, comes with a 2 year replacement warranty. If, in the unlikely event your diaphragm pump fails during the first two years of service, call Uni-ram Service at 1-800-417-9133. We will send you a new pump free of charge and arrange for the return of your original pump.

Conditions of Warranty:

As Uni-ram Corporation has no control over the working conditions or circumstances under which the purchaser stores, handles or uses the product, Uni-ram makes no warranty or claim, either expressed or implied with respect to this product's fitness for any purpose or the result to be obtained from its use. This condition applies to the sale of all products and no representative or distributor of Uni-ram Corporation has the authority to waive or change these conditions.

This warranty applies only to the original purchaser and does not apply if the unit has been misused, overloaded, neglected, altered or used for any purpose other than those specified in the operating and installation instructions. Deterioration due to normal wear is not covered by this warranty. Damage due to accident, transportation, fire, floods or acts of God is also not covered. Units whose serial numbers have been altered or removed are not covered. The warranty is invalid if unauthorized chemicals as noted in the manual or liquids with acid content are used in this unit. Unauthorized attempts at self-repair or alterations by the owner also invalidate this warranty. Interior or exterior finishes are not covered by this warranty.

Consumable Items are not covered by this warranty (eg: gaskets, screens, bags, filters, nozzles and air jets).

This warranty replaces all other warranties expressed or implied by statute or otherwise.

To make a claim, call Uni-ram Service at 1-800-417-9133 and quote the serial number of the unit.