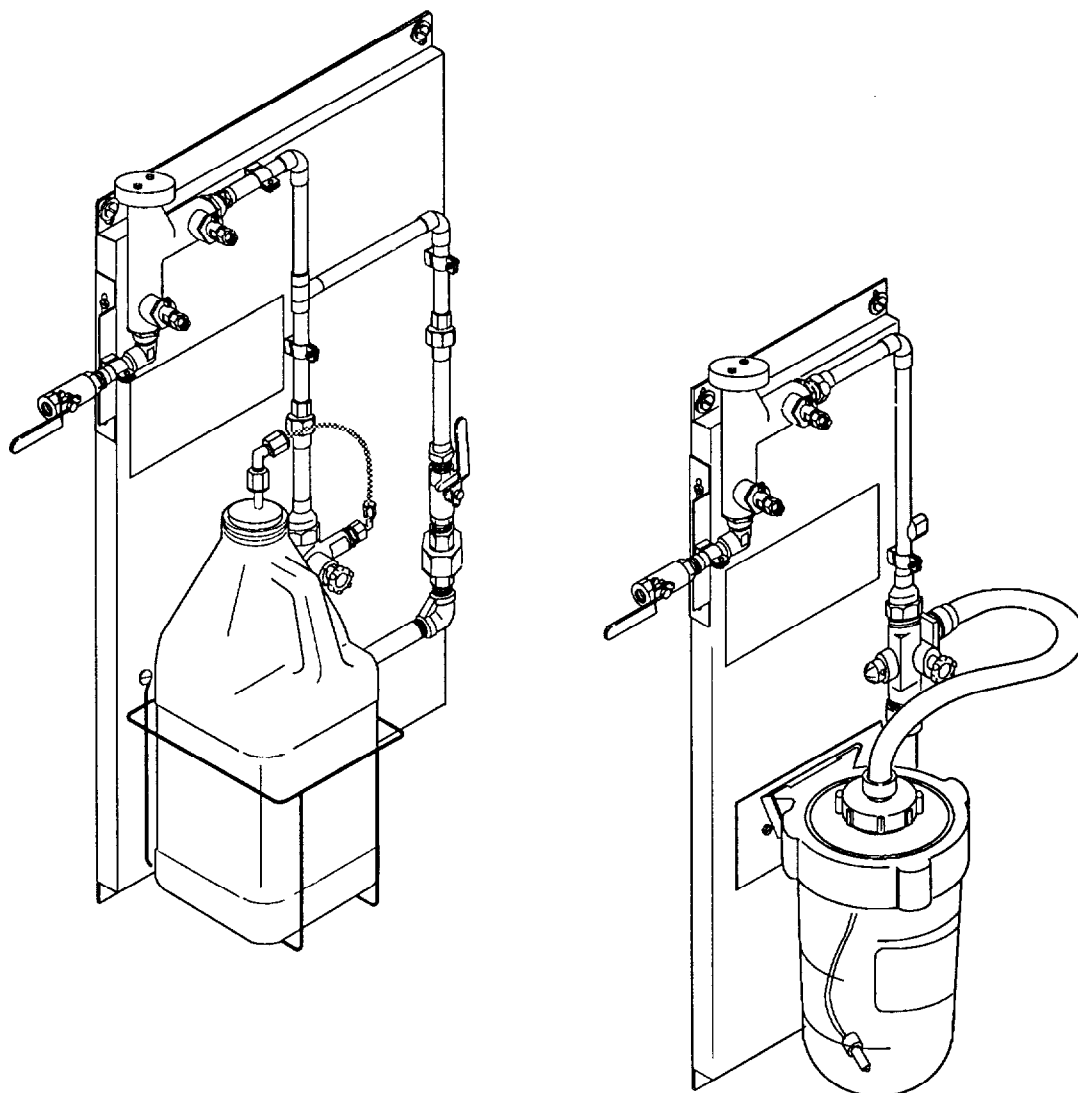


# MIKRO-SPRAY SYSTEMS

## Models J-6 & C-5

### Installation and Operation Manual



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## 1.0 PREFACE

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This manual has been written to present the basic installation and operational characteristics of the *Mikro-Spray Systems*. ***This manual applies, in its entirety, to current units.***

Guidelines will be suggested in reference to the preferred method of installation, however, the variety of equipment and the surrounding physical environment will dictate the actual installation of the *Mikro-Spray Systems*.

**WARNING - These installation and servicing instructions are for use by qualified personnel only. The installation must be made in accordance with local plumbing codes.**

## 2.0 INTRODUCTION

The Mikro-Spray Systems dispense a predetermined concentration of liquid cleaners or germicides into a water hose. They operate using available building water pressure.

The Mikro-Spray will function within a water pressure range of 20 to 60 PSI (1.3 - 4.1 Bar). Water temperatures should not exceed 160°F (71°C).

There are two models, having different operational characteristics. Both models provide an 8' (2.4 meters) water connection hose, and a 50' (15.2 meters) discharge hose.

### 2.1 Model J-6

The Mikro-Spray Model J-6 draws product direct from the shipping container (1 gal. jug, 5, 15, 30/55 gal. drum). A One Gallon Jug Bracket is mounted to the Mikro-Spray Panel.

This model includes a heavy duty, high volume spray nozzle. This is the only nozzle that can be used, as any flow restriction created by smaller volume nozzles will prevent the unit from drawing product. A maximum of 50' (15.2 meters) of 5/8" ID hose can be used. Smaller ID hose, such as an ordinary garden hose, cannot be used.

The Model J-6 will restrict building pressure about 25% while in the wash mode (while drawing product). An aspirator bypass feature allows for full building pressure during rinse mode operation.

The Model J-6 requires a minimum of 20 PSI (1.3 Bar) water flow pressure to for efficient operation. The water flow rate will be 3-5 gallons (11.3 - 19 liters) of water per minute.

### 2.2 Model C-5

The Mikro-Spray Model C-5 draws product from a 52 OZ. refillable reservoir mounted on the stainless steel backplate. (The unit will not draw product from a shipping container).

The Pressure Differential Injector System provides no significant drop in building water pressure during either the wash or rinse mode.

This injector is not effected by flow rate restrictions or flow rate reductions. Any nozzle may be used to provide the degree of water volume and available pressure that may be required. Any size outlet hose may be used.

This injector provides an "On-Off" valve to change from wash to rinse mode.

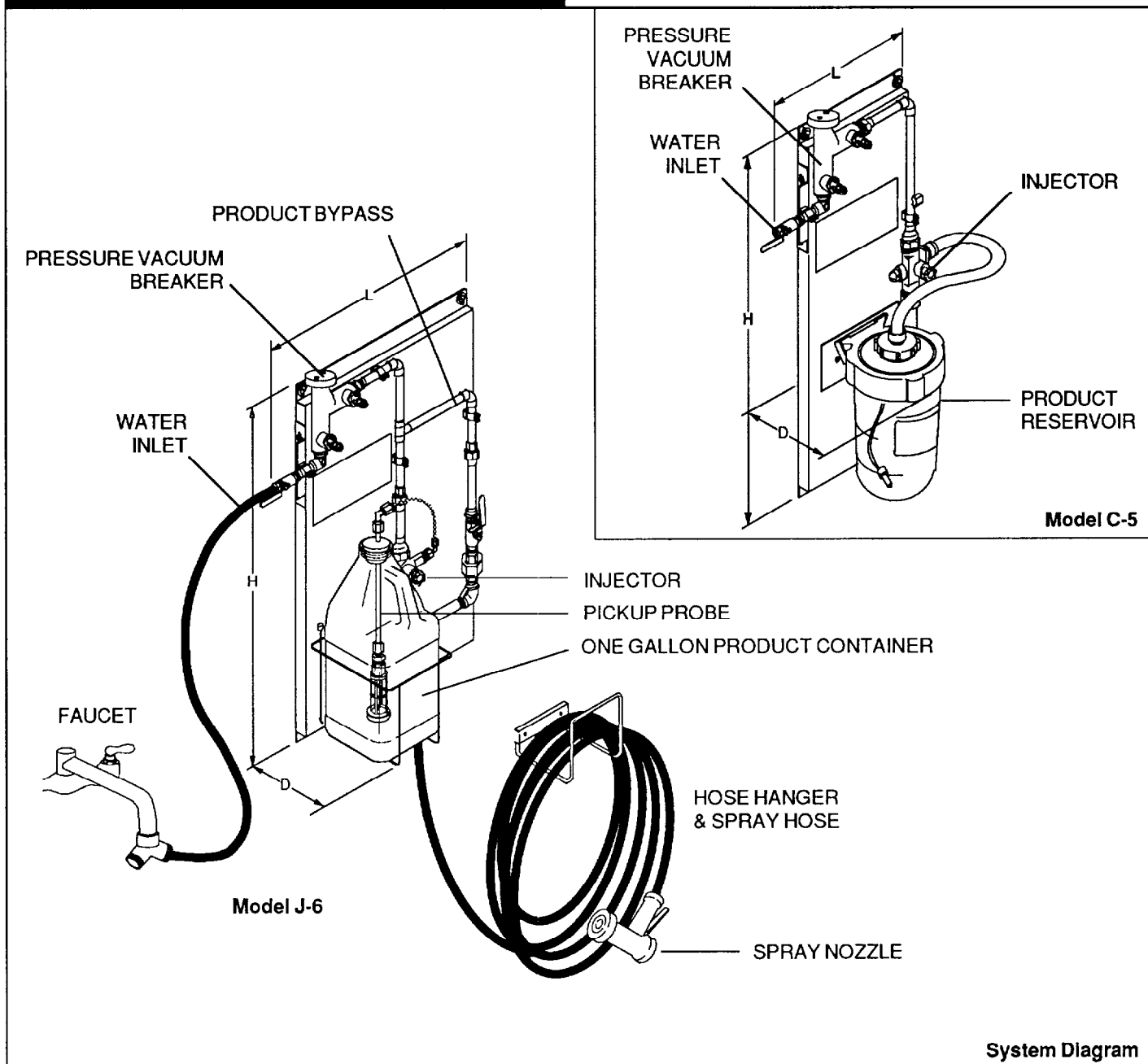
The Model C-5 requires a minimum of 20 PSI (1.3 Bar) flow pressure from efficient operation. Water flow rate can vary dependent upon the type of nozzle used. The standard Model C-5 nozzle will use approximately 4-5 gallons (15 - 19 liters) of water per minute. The optional extension wand will use 1.5 - 2 gallons (5.6 - 7.5 liters) per minute.

### 2.3 Backflow Prevention

Both Mikro-Spray Models are supplied with a pressure type vacuum breaker. This will provide backflow prevention acceptable to most plumbing codes.

In a few areas, a double check valve backflow preventer may be required. This is available as an option.

### 3.0 SPECIFICATIONS



#### 3.1 Model J-6

- Dimensions**

Height (H): 25" (64 cm)

Length (L): 17" (43 cm)

Depth (D): 7-1/2" (19 cm)

- Service Access:** Allow enough space around the perimeter of the Model J-6 for easy water inlet and spray hose connections. Also allow space for easy removal/replacement of product containers.

- Water Pressure**

Min. 20 psi (1.4 Bar)

Max. 60 psi (4.1 Bar)

#### 3.2 Model C-5

- Dimensions**

Height (H): 24" (61 cm)

Length (L): 15" (38 cm)

Depth (D): 7-1/2" (19 cm)

- Service Access:** Allow enough space around the perimeter of the Model C-5 for easy water inlet and spray hose connections. Also allow space for easy reservoir removal and refilling.

- Water Pressure**

Min. 20 psi (1.4 Bar)

Max. 60 psi (4.1 Bar)

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## 4.0 INSTALLATION PROCEDURES

There is no substitute for planning the installation before beginning the work. Several minutes in planning may save hours during the installation. Consider the factors listed below before installation begins.

- Locate either Mikro-Spray System within 8' (2.4 meters) of the water source if the Water Inlet Hose will be used. Otherwise the water inlet can be "hard plumbed".
- Refer to Section 3.0 for the site and clearance requirements for both models. Make sure that the panels are secured to the wall, using appropriate wall anchors.
- Make sure the panel and hose hangers are mounted in a location that will provide physical protection from passing carts, etc.; and will provide sufficient space and clearance for the hose and (in case of the Model J-6) for placement of larger product containers.

### 4.1 Mikro-Spray Installation

1. Secure the Mikro-Spray to the wall using the screws, washers and wall anchors provided in the installation kit. *Refer to Figure 1.*
2. Secure the Hose Hanger Bracket to the wall using the supplied screws, washers and wall anchors. *Refer to Figure 2.*
3. Connect the supplied Spray Hose to the Outlet Side of the Mikro-Spray and wrap the remainder of the hose onto the hanger. *Refer to Figure 2.*
4. Connect the Water Inlet 8' Hose to the water supply. If the Water Inlet Hose is not used, hard plumb from the water source to the Inlet Side of the Mikro-Spray. *Refer to Figure 2.*

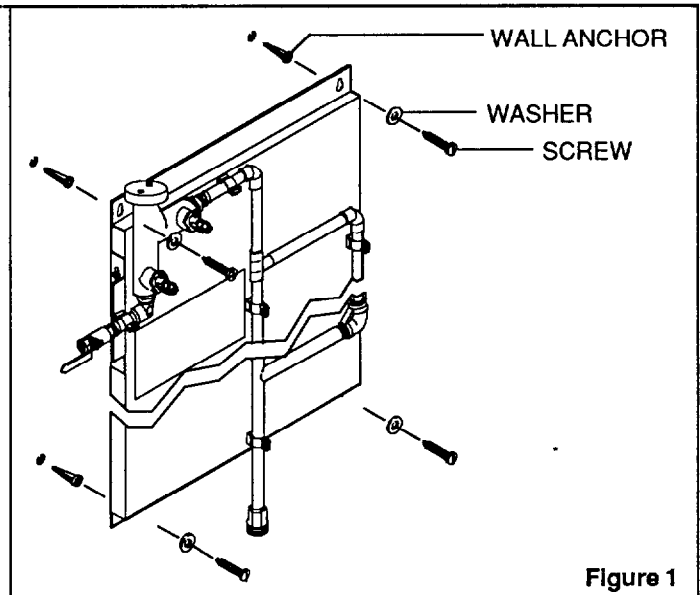


Figure 1

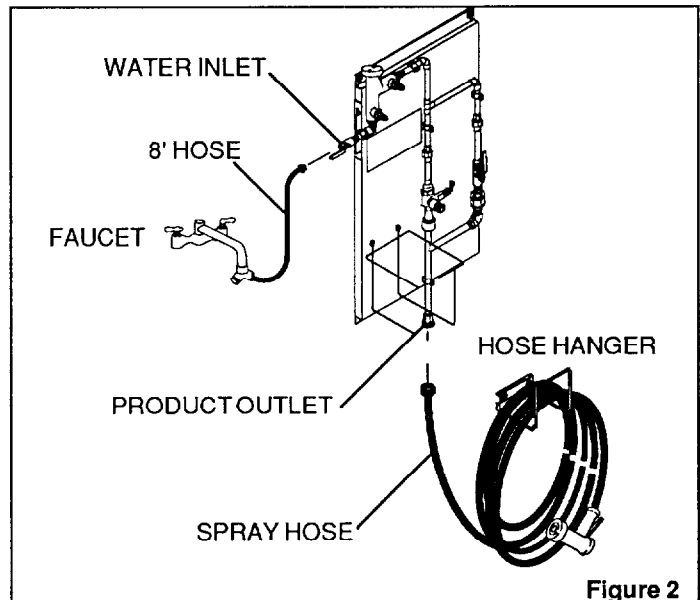


Figure 2

## 5.0 MODEL J-6 PRODUCT INJECTION ADJUSTMENT

Metering Tips used in the Aspirator Inlet govern product injection rates. The chart in *Figure 3* provides a general guideline for tip selection. It is always necessary, where germicides are used, to verify proper injection rate by titration or volumetric measurement. Change the metering tip to a smaller or larger size as required, *refer to Figure 3.*

**IMPORTANT - When using germicidal products, the concentration must be verified by titrating the solution to insure required levels are achieved.**

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Approximate Ounces Per Gallon		
Tip Color	Orifice	Approximate ozs/gallon
Pink	.0135	.25
Beige	.018	.5
Red	.020	.64
Black	.0225	1.25
Yellow	.028	1.9
Blue	.036	3.8
White	.063	8.3
No Tip		16.0

Figure 3

## 6.0 MODEL C-5 SYSTEM ADJUSTMENTS

### 6.1 Model C-5 Reservoir Fill

(Refer to Figure 4)

1. Turn off the water unit and open the nozzle to relieve the pressure.
2. Unscrew the fluted (large) cap ring. Remove the plug and product strainer from the reservoir.
3. Remove the reservoir from the hanger and rinse with clean water.
4. Fill the reservoir with the liquid product and replace the reservoir in the hanger.
5. Insert the strainer and cap plug. Tighten the fluted cap ring.

**WARNING - Hand tighten only. Do not use a wrench.**

**NOTE - Water feeds slowly into the top of the reservoir to equalize line pressure and forces product into the pickup tube and injector body. The clear water will remain on top of the product. A distinct water-product line will be visible. When the water line reaches the bottom of the reservoir it is time to refill the reservoir.**

### 6.2 Concentration Adjustment

A metering screw, located on the injector body, adjusts product concentration. By turning the adjusting screw in, product concentration will decrease. Turning the adjusting screw out will increase the concentration.

**CAUTION - The adjusting screw will come out at 8 full turns.**

The amount of product dispensed at a particular setting will be dependent upon the water flow rate thru the system. Using the standard nozzle, flow rates will be approximately 5 GPM (19 LPM). Refer to Figure 5.

Using the optional extension wand, flow rates will be approximately 1.5 GPM (5.6 LPM). Refer to Figure 6.

**IMPORTANT - When using germicidal products, the concentration must be verified by titrating the solution to insure required levels are achieved.**

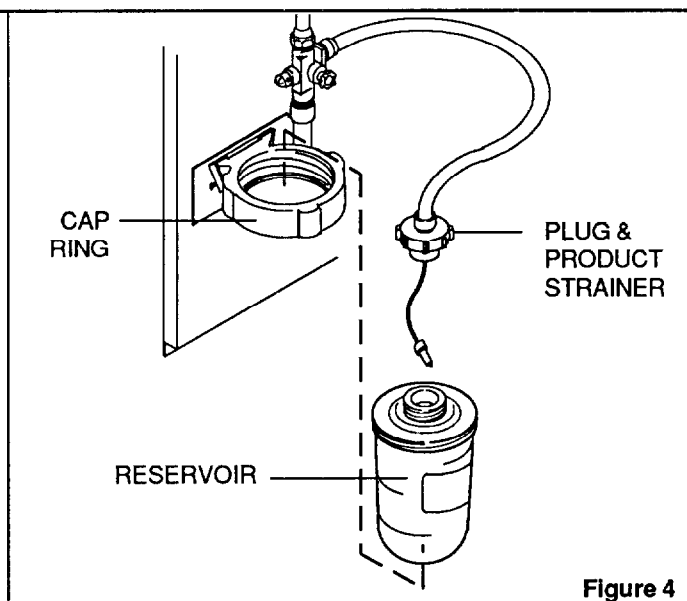


Figure 4

#### Approximately 5 GPM

No. of Full Turns Open	Ozs/Gallon
1	.25
2	.33
3	.50
4	.66
5	.75
6	1.0
7	1.25

Figure 5

#### Approximately 1.5 GPM

No. of Full Turns Open	Ozs/Gallon
1	.1
2	.2
3	.3
4	.4
5	.5
6	.6
7	.66

Figure 6

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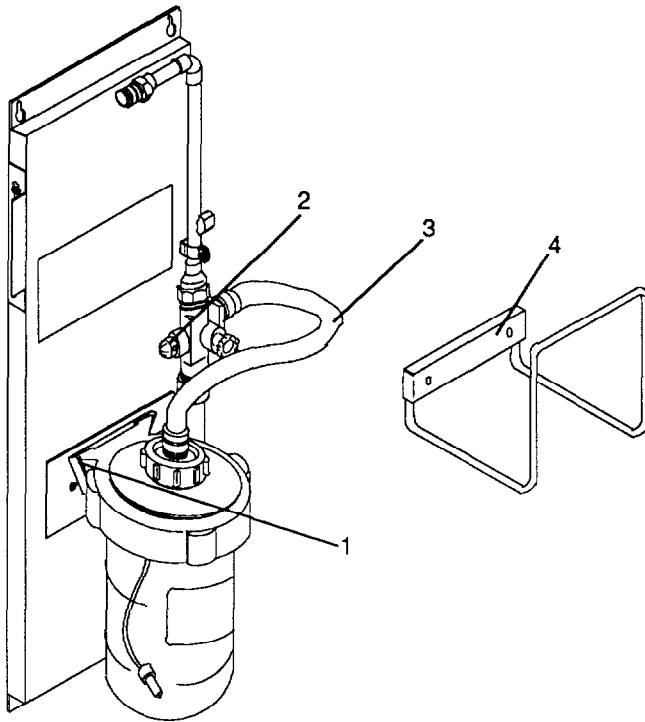
## 7.0 TROUBLESHOOTING

Symptom	Possible Cause
7.1 Unit fails to inject product while in the "wash" mode ( Model J-6 Only).	<p>1. The problem is most likely a restriction in the water flow rate. A maximum of 50' of 5/8" ID outlet hose can be used. Note that common garden hose has a smaller ID and its use may prevent the unit from properly functioning.</p> <p>Similarly, only the heavy duty Model J-6 nozzles can be used. No other hose nozzles result in excessive flow restriction/back pressure and will prevent the unit from drawing product.</p> <p>If the flow restriction is not caused by the hose or nozzle. Product injection failure is a result of an air leak in the product pickup tubing, tubing connections, or a plugged aspirator body.</p>
7.2 Unit fails to inject product (Model C-5 Only).	<ol style="list-style-type: none"><li>1. Plugging, or an air leak in the injector body, metering screw, or in the wash/rinse selector valve.</li><li>2. Fouling of the pick up strainer in the reservoir.</li><li>3. A break in the small tubing within the hose from the injector body to the reservoir.</li></ol>



## 8.0 REPLACEMENT PARTS

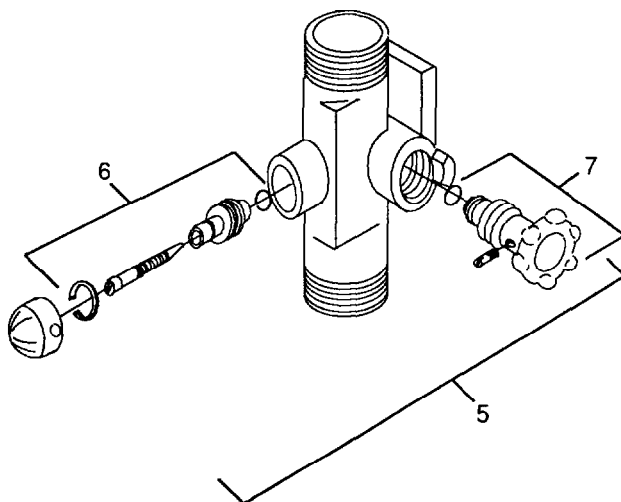
### Mikro-Spray C-5 Complete Unit



#### REF.

NO.	PART NO.	DESCRIPTION
1	9283-7624	RESERVOIR HANGER
2	9275-0132	ADJUSTING VALVE CAP
3	9284-1196	COAXIAL PICK-UP TUBING (EXTERNAL AND INTERNAL HOISING BETWEEN INJECTOR BODY AND RESERVOIR)
4	9219-9736	HOSE HANGER

### Mikro-Spray C-5 Injector Body



#### REF.

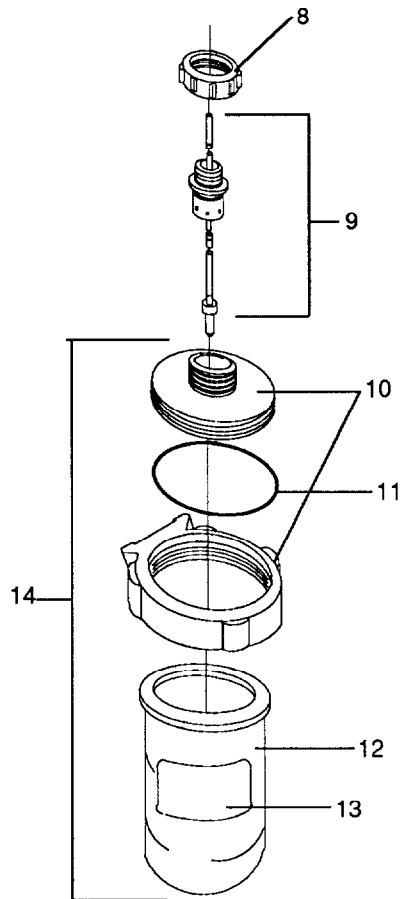
NO.	PART NO.	DESCRIPTION
5	9283-1130	REPLACEMENT C-5 INJECTOR COMPLETE
6	9284-1204	ADJUSTING STEM REPLACEMENT KIT
7	9284-1212	WASH/RINSE SELECTOR VALVE REPLACEMENT KIT

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## Mikro-Spray C-5 Reservoir

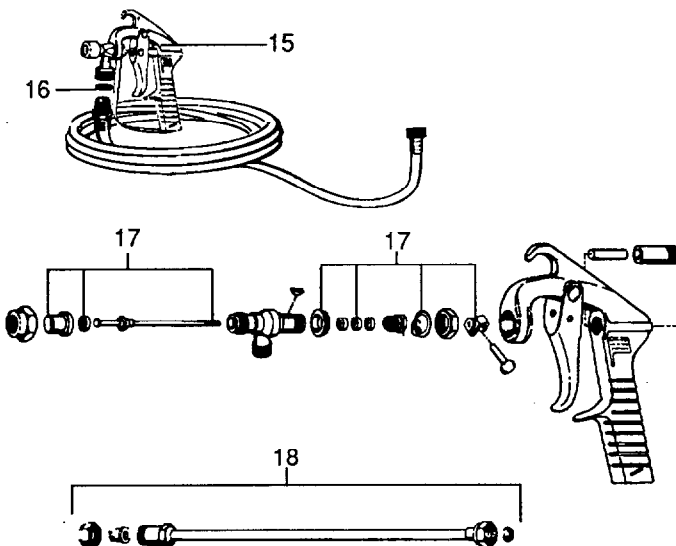


### REF.

NO.	PART NO.	DESCRIPTION
8	9280-9029	RESERVOIR CAP
9	9280-1224	RESERVOIR PLUG & PICKUP ASSEMBLY
10	9283-9398	RESERVOIR TOP & RING
11	9283-1338	O-RING
12	9283-9463	RESERVOIR BOWL
13	9280-2156	RESERVOIR LABEL
14	9280-1141	COMPLETE RESERVOIR
		• MIKRO-SPARY HOSE

### • PART NOT SHOWN

## Mikro-Spray C-5 Nozzle and Extension Wand



### REF.

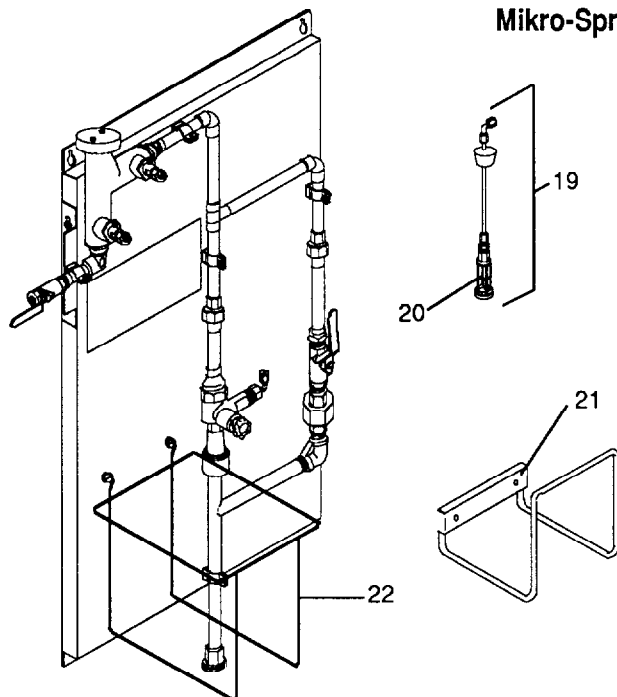
NO.	PART NO.	DESCRIPTION
15	8531-0050	MODEL C SPRAY NOZZLE
16	8579-9906	HOSE WASHER
17	8538-0152	NOZZLE REPAIR KIT
18	8532-0059	NOZZLE EXTENTION

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### Mikro-Spray J-6 Complete Unit

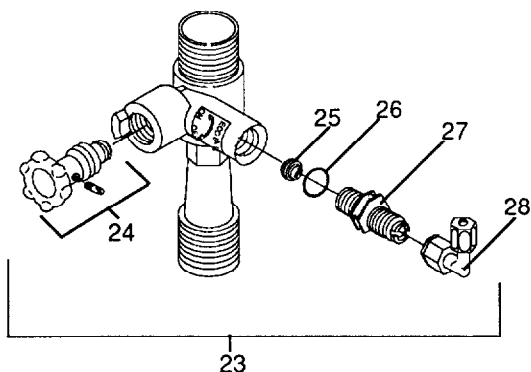


## REF.

NO.	PART NO.	DESCRIPTION
19	9284-0016	1 GALLON PROBE
20	9219-0891	REPLACEMENT PROBE STRAINER
21	9219-9736	HOSE HANGER
22	9263-3320	1 GALLON BOTTLE HOLDER

NOTE: WHEN USING LARGER PRODUCT CONTAINERS REFER TO THE PROBE SECTION IN THE "COMMON COMPONENTS" SECTION.

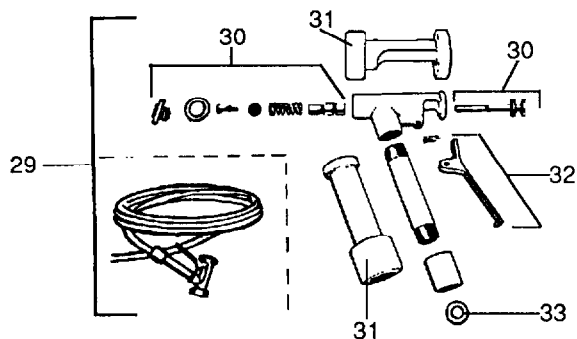
### Mikro-Spray J-6 Injector Body



## REF.

NO.	PART NO.	DESCRIPTION
23	9284-1048	COMPLETE INJECTOR ASSEMBLY
24	9284-1212	WASH/RINSE SELECTOR ASSEMBLY
25		METERING TIPS
	9263-3031	PINK .0135 ORIFICE
	9263-3023	BEIGE .018 ORIFICE
	9263-2538	RED .020 ORIFICE
	9263-2546	BLACK .0225 ORIFICE
	9263-2553	YELLOW .028 ORIFICE
	9263-2603	BLUE .036 ORIFICE
	9263-2611	WHITE .063 ORIFICE
26	8720-6579	"O" RING
27	9263-0532	CHECK VALVE
28	8563-5035	1/4 FPT X 1/4 TUBE ELBOW

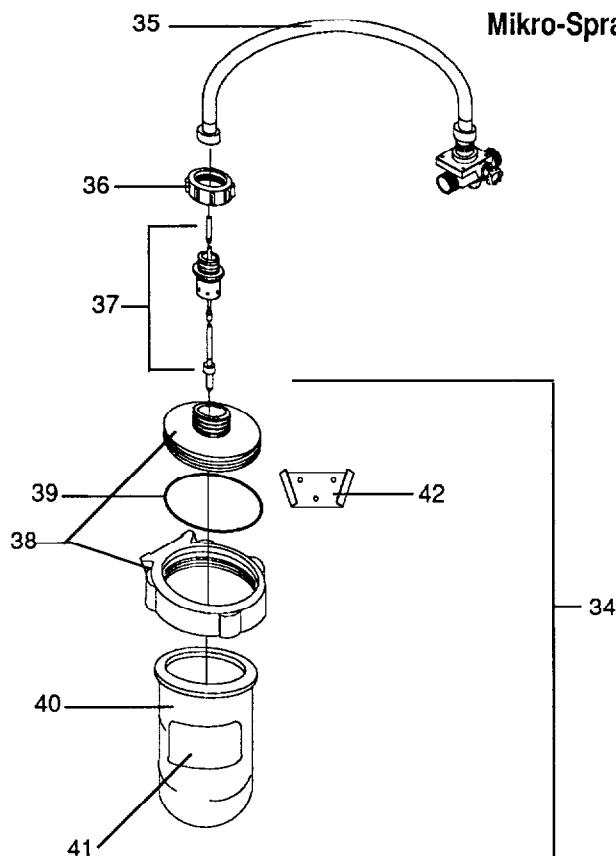
### Mikro-Spray J-6 Spray Nozzle



## REF.

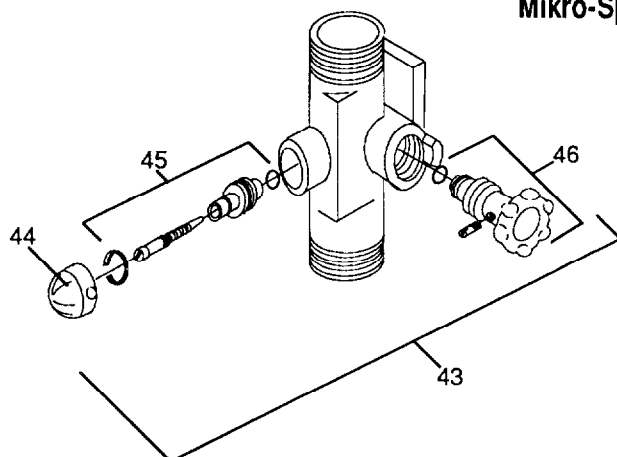
NO.	PART NO.	DESCRIPTION
29	9284-0081	MODEL J NOZZLE
30	9284-1220	NOZZLE REPAIR KIT
31	9284-1238	NOZZLE COVER REPLACEMENT KIT
32	9284-1089	REPLACEMENT HANDLE AND PIN
33	8579-9906	HOSE WASHER

### Mikro-Spray D-3 Complete Unit


**REF.**

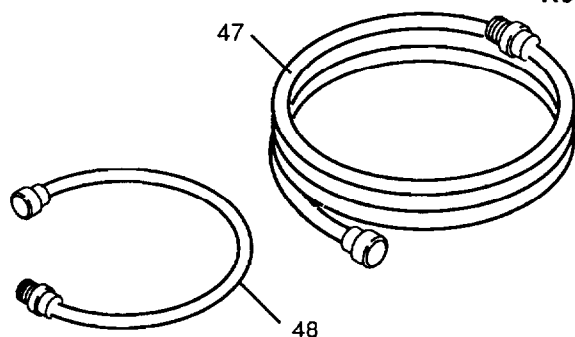
NO.	PART NO.	DESCRIPTION
34	9280-1141	COMPLETE RESERVOIR
35	9284-1196	COAXIAL PICK UP TUBING (EXTERNAL AND INTERNAL HOSEING BETWEEN INJECTOR)
36	9280-9029	RESERVOIR CAP
37	9280-1224	RESERVOIR PLUG AND PICK-UP ASSEMBLY
38	9283-9398	RESERVOIR TOP & RING
39	9283-1338	O-RING
40	9283-9463	RESERVOIR BOWL
41	9280-2156	RESERVOIR LABEL
42	9280-9078	RESERVOIR HANGER

### Mikro-Spray D-3 Injector Body


**REF.**

NO.	PART NO.	DESCRIPTION
43	9283-1023	REPLACEMENT D3 INJECTOR COMPLETE
44	9275-0132	ADJUSTING VALVE CAP
45	9284-1204	ADJUSTING STEM REPLACEMENT KIT
46	9284-1212	WASH/RINSE SELECTOR VALVE REPLACEMENT KIT

### Replacement Hoses


**REF.**

NO.	PART NO.	DESCRIPTION
47	9283-1189	50' HOSE
	9283-1197	25' HOSE
48	9280-2054	8' HOSE - MODEL C-5 & J-6
	9283-1250	8' HOSE - MODEL D-3