

# DEMA BLEND SAFE

## MODEL: 661GAPB

### INSTALLATION INSTRUCTIONS

The 661 Series Lockable Stainless Steel Dispensers offer safety and security when it's necessary for gallon bottles to be self-contained inside the dispenser. Units are lightweight and have a mounting flange outside the dispenser for easy installation.

#### 1. PARTS CHECKLIST:

ITEM	DESCRIPTION	QTY.
A.	Blend Safe Assembly	1
B.	¼" ID X 21" LG. Vinyl Supply Tubing & Foot Valve Assembly	1
C.	Ceramic Weight	1
D.	Drip Tray	1
E.	#10 Plastic Anchor	3
F.	#10 Screw	3
G.	Label Card	2
H.	Metering Tip Kit	1
I.	Cabinet Lock Key Set	1

#### 2. INSTALLATION: (Refer to Figure 1)

**Note:** All installations must conform to local plumbing codes and use approved backflow preventers. A pressure indicating tee is to be installed with existing faucets according to local plumbing codes in the state of Wisconsin and any other states that require the use of a pressure indicating tee.

**WARNING: Water supply should not exceed 125 psi and water temperature must not exceed 150°F.**

##### A. MOUNTING AND WATER SUPPLY:

Locate mounting holes on a permanent surface for the Blend Safe. Drill all of the holes into the drywall using a 1/4" diameter bit for use with the included #10 screws and anchors. (If mounting the Blend Safe to wood and you do not plan to use the included anchors, drill 1/8" diameter holes.) Insert the anchors into drilled holes and hammer them into the wall until they are flush with face of wall. Assemble all of the #10 screws with a Phillips screwdriver into the anchors so the screw heads are sticking out of the wall approximately 1/8". Mount the Blend Safe by inserting the screw heads through the keyhole slots in the top and tighten the screws. Now insert and tighten the screws in the bottom.

The water inlet is equipped with a female garden hose fitting (with strainer washer) for attaching a water supply hose. The water inlet may be removed to permit direct connection to a 3/8" NPT pipe. The unit is designed so water can be supplied to either side by interchanging the pipe plug with the pipe and female hose fitting assembly. **Note: Apply pipe dope, hand-tighten, then turn 1-½ times with a wrench. Do not over tighten.**

**WARNING: Do not use Teflon® tape to seal internal plastic threads as the extra thickness of the tape may cause the plastic to crack. Use a non-welding liquid sealant instead.**

##### B. PRESSURE INDICATING TEE INSTALLATION:

Screw female quick disconnect to faucet and attach pressure indicating tee to female quick disconnect. Attach female end of reinforced hose to male threads of tee, then attach the male end to the female garden hose fitting at the water inlet of the Blend Safe (See Figure 3).

##### C. CHEMICAL INJECTION ADJUSTMENT:

**Warning: Use care when handling hazardous chemicals.**

Chemical feed rates are controlled by metering tips screwed into the proportioner barb. Select a tip using Table 1 or 2 as a guide.

1 cps (centipoise) is equal to the viscosity of water  
 75 cps is approximately equal to the viscosity of 10 weight motor oil  
 200 cps is approximately equal to the viscosity of most dishwashing detergents

**DEMA BLEND SAFE  
MODEL: 661GAPB  
INSTALLATION INSTRUCTIONS**

**TABLE 1 - 1 GPM FLOW RATE PROPORTIONER, 1/4" I.D. TUBING**

Metering Tip Color	Injection Rates For Viscosities Shown					
	1 cps		75 cps		200 cps	
	Oz/Gal	Ratio	Oz/Gal	Ratio	Oz/Gal	Ratio
Tan	1.03	125-1	0.76	168-1	0.38	333-1
Orange	1.24	103-1	0.98	130-1	0.53	241-1
Turquoise	1.43	89-1	1.07	119-1	0.61	211-1
Pink	2.47	52-1	1.58	81-1	0.92	139-1
Light Blue*	3.05	42-1	2.1	61-1	1.06	121-1
Brown	3.48	37-1	2.31	55-1	1.15	111-1
Red	4.38	29-1	2.83	45-1	1.23	104-1
White	5.33	24-1	3.1	42-1	1.37	93-1
Green	6.38	20-1	3.63	35-1	1.40	91-1
Blue	6.77	19-1	3.78	34-1	1.45	88-1
Yellow	9.90	13-1	5.1	25-1	1.48	86-1
Black	15.00	9-1	6.54	20-1	1.53	84-1
Purple	24.94	5-1	7.28	18-1	1.57	82-1
Gray	35.94	4-1	8.5	15-1	1.64	78-1
No Tip	73.21	2-1	9.35	14-1	1.87	69-1

**TABLE 2 - 4 GPM FLOW RATE PROPORTIONER, 1/4" I.D. TUBING**

Metering Tip Color	Injection Rates For Viscosities Shown					
	1 cps		75 cps		200 cps	
	Oz/Gal	Ratio	Oz/Gal	Ratio	Oz/Gal	Ratio
Tan	0.33	387-1	0.26	500-1	0.12	1090-1
Orange	0.42	307-1	0.32	430-1	0.17	735-1
Turquoise	0.51	251-1	0.34	382-1	0.19	676-1
Pink	0.78	165-1	0.56	230-1	0.30	422-1
Light Blue*	0.87	147-1	0.67	192-1	0.33	391-1
Brown	0.99	129-1	0.74	174-1	0.37	345-1
Red	1.37	93-1	0.91	141-1	0.44	289-1
White	1.52	84-1	1.04	123-1	0.48	264-1
Green	1.72	74-1	1.22	105-1	0.52	244-1
Blue	2.13	60-1	1.27	101-1	0.54	239-1
Yellow	3.05	42-1	1.71	75-1	0.56	229-1
Black	4.50	28-1	1.96	65-1	0.57	224-1
Purple	7.75	17-1	2.40	53-1	0.59	217-1
Gray	9.86	13-1	2.54	50-1	0.63	204-1
No Tip	19.63	7-1	3.16	40-1	0.67	190-1

**NOTE: \*Metering tip color was formerly clear. All induction rates are based on a water pressure of 40 psi. Leaner dilutions can be achieved by ordering DEMA ultra lean tip kit 100-15KU or capillary tip 44-61P.**

**D. CHEMICAL SUPPLY:**

Install the chemical supply tubing by pushing the tubing over the barb of the proportioner. The proportioner is accessible through the case door (Refer to Figure 1). Push the tubing through the slots in the cover. Place the chemical container inside the case and insert the foot valve and ceramic weight end of the chemical supply tubing into the chemical container. Peel off gummed labels are provided for labeling chemicals.

**E. DRIP TRAY:**

The Drip Tray is installed by simply sliding the tray flange under the tabs on the bottom of the case. Lower the tray allowing tray dimples to fall into the receptor holes.

**3. OPERATION:**

The Blend Safe is now ready for use. Depressing a push button opens the valve allowing water to flow through the chemical proportioner that mixes a chemical water solution at the desired ratio. The buttons are spring loaded to prevent accidental overflow if unattended, but

# DEMA BLEND SAFE MODEL: 661GAPB INSTALLATION INSTRUCTIONS

may be converted to locking buttons by cutting off the tab at the notch (See Figure 2). Pushing the button and turning it a 1/4 turn clockwise at the end of its travel allows the valve to lock on. This makes it unnecessary for the attendant to hold the button in while filling large containers. Turning the button in a counterclockwise direction will release it, allowing the valve to shut off.

## 4. **SERVICING:**

**Caution: Turn off water supply before servicing.**

### A. **Proportioner fails to draw chemical:**

1. Pinch outlet tube to create back pressure, which will cause unit to prime. The foot valve will keep the inlet tube primed thereafter.
2. Insufficient water supply pressure. 20 PSI is the minimum allowable.

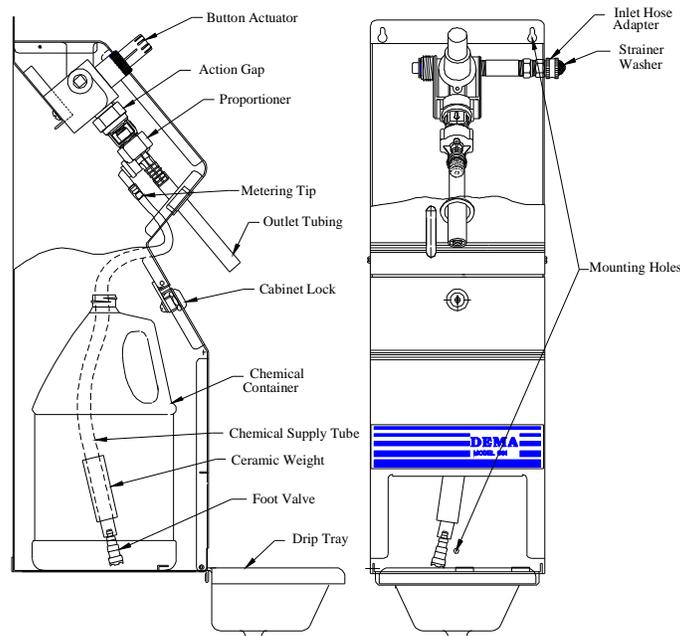
### B. **Proportioner stops drawing chemical:**

1. Inspect foot valve for dried chemical or dirt. Soak in hot water to clean.
2. Proportioner metering tip clogged with dried chemical. Remove tip and try injecting in hot water. If there is no suction, remove proportioner and soak in hot water to clear interior passages.
3. Inspect proportioner to ensure that there are no mineral deposit build-ups on the nozzle. If so, soak proportioner body in de-liming solution. (Remove all parts attached to proportioner before soaking in de-liming solution.) **Note: Use care when handling hazardous chemicals.**

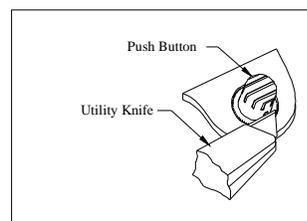
### C. **Valve Malfunction:**

Check that the button moves freely in & out and that a "click" can be heard when the button is pushed and released, indicating that the magnet is activating the plunger properly. Remove cover. To inspect internal parts, unscrew magnet housing and carefully pull off the enclosing tube so as not to drop the plunger, kickoff spring, and spacer. Check for dirt or damage impeding plunger and kickoff spring movement. Inspect the diaphragm, making sure the two small pinholes (bleed holes) in the diaphragm convolution are clear in order to allow the valve to close.

**Caution: When servicing unit, be sure that replacement parts have been installed according to the drawing.**



**FIGURE 1**



**FIGURE 2**

## RETURNS:

**NO MERCHANDISE MAY BE RETURNED FOR CREDIT WITHOUT DEMA'S WRITTEN PERMISSION. RETURN MERCHANDISE AUTHORIZATION NUMBER REQUIRED IN ADVANCE OF RETURN.**

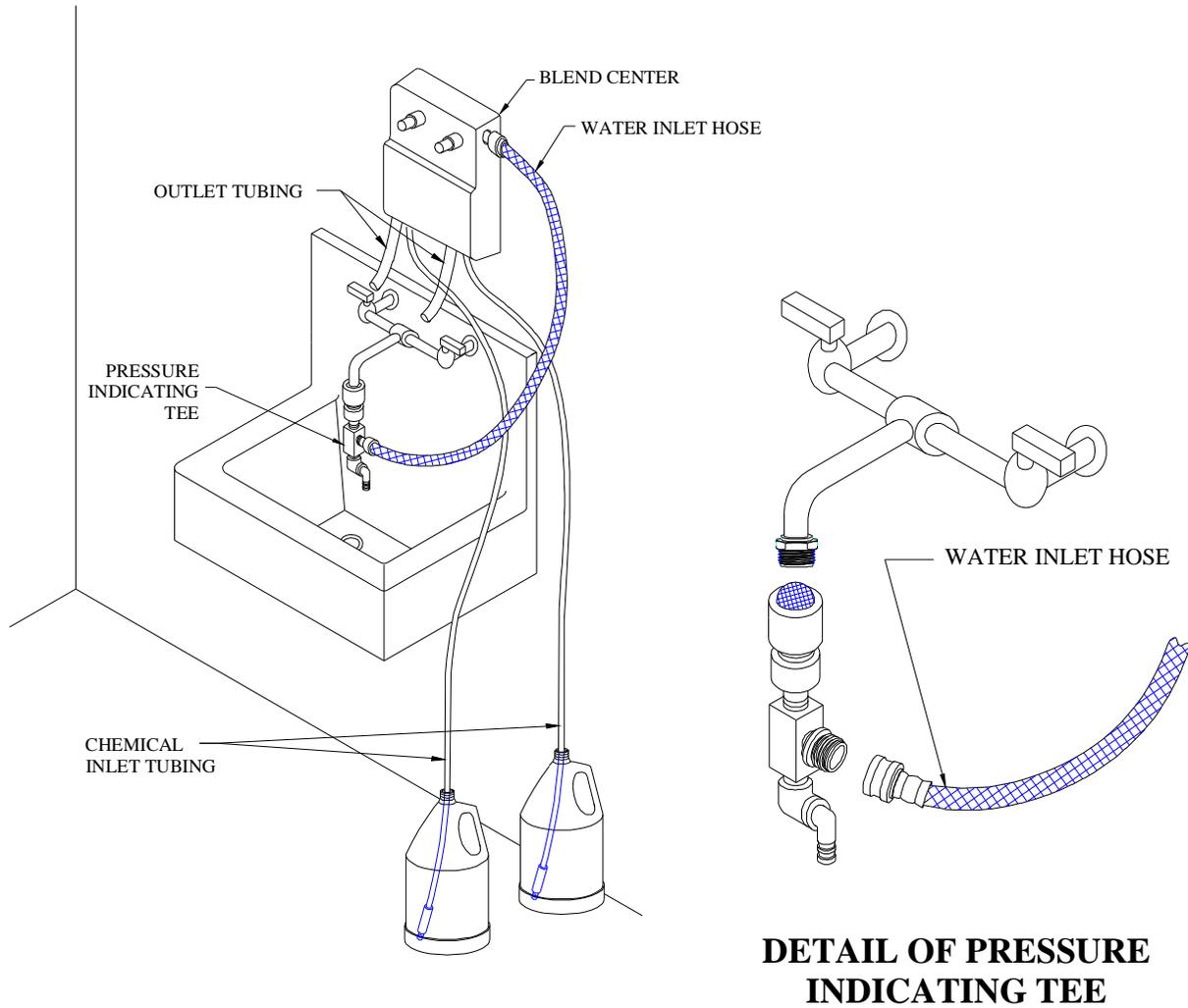
## WARRANTY:

DEMA products are warranted against defective material and workmanship under normal use and service for one year from the date of manufacture. This limited warranty does not apply to any products, which have a normal life shorter than one year or failure and damage caused by chemicals, corrosion, improper voltage supply, physical abuse, or misapplication. Rubber and synthetic rubber parts such as "o"-rings, diaphragms, squeeze tubing and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of DEMA products. If products are altered or repaired without prior approval of DEMA, this warranty will be void.

Defective units or parts should be returned to the factory with transportation prepaid. If inspection shows them to be defective, they will be repaired or replaced without charge, F.O.B. factory. DEMA assumes no liability for damages. Return merchandise authorization number, to return units for repair or replacement, must be granted in advance of return.

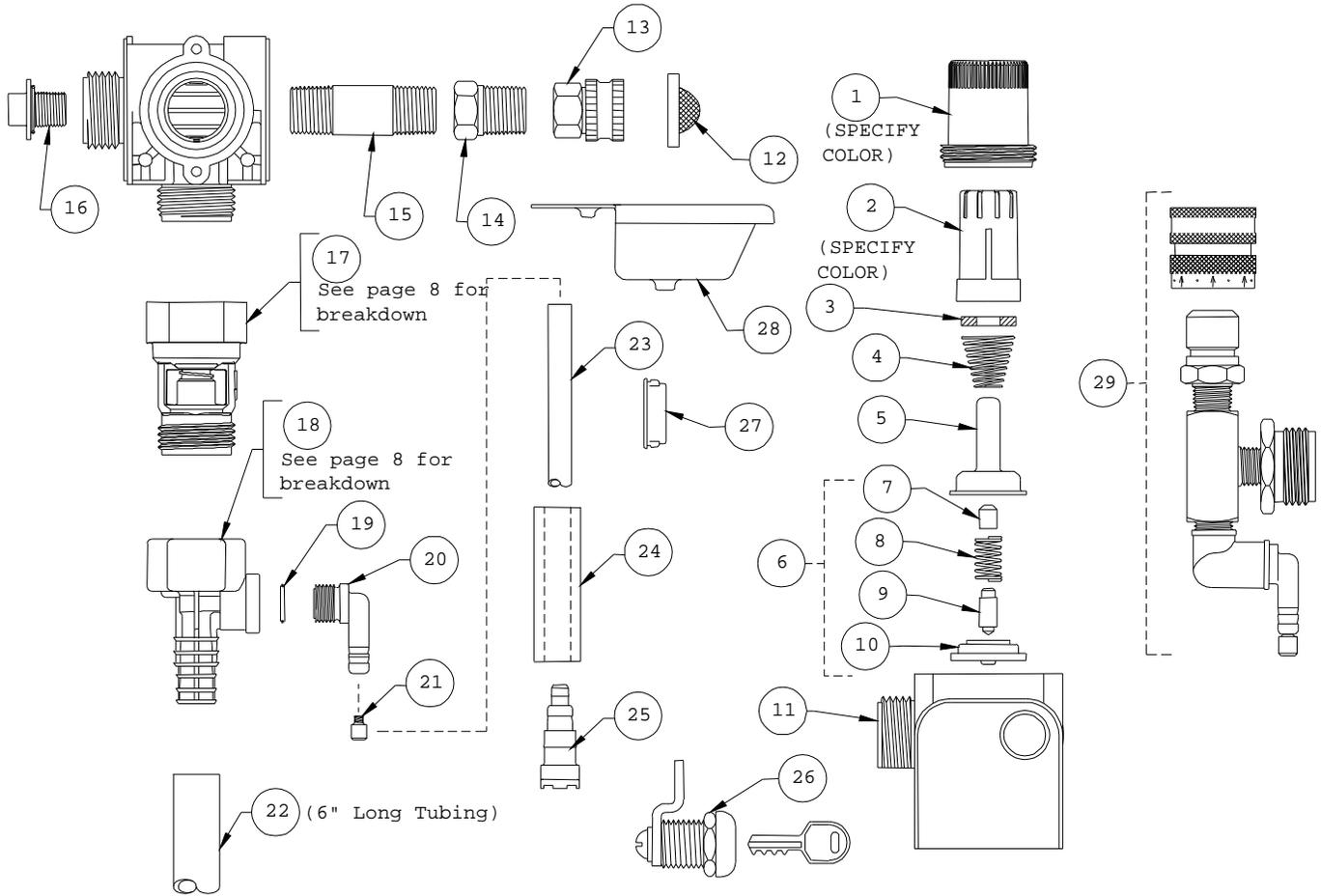
**DEMA BLEND SAFE  
MODEL: 661GAPB  
INSTALLATION INSTRUCTIONS**

**PRESSURE INDICATING TEE INSTALLATION**



**FIGURE 3**

# DEMA BLEND SAFE MODEL: 661GAPB INSTALLATION INSTRUCTIONS



NO.	PART NO.	DESCRIPTION
1	66-139	Magnet Housing (Specify Color)
2	66-140	Push Button (Specify Color)
3	63-35	Magnet
4	63-36	Spring
5	41-7-25	Enclosing Tube
6	63-87	Valve Repair Kit
7	63-37	Spacer
8	41-1-8	Kick-off spring
9	63-38	Plunger
10	41-15-10	Diaphragm
11	63-39	Valve Body
12	100-38	Strainer Washer
13	93-19	Swivel Adapter 1/2 NPT
14	66-27	Bushing
15	68-8	Pipe Nipple (3/8" NPT X 2" Lg.)
16	66-153	Pipe Plug & O-Ring Assy.
17	16-30	Action Gap Assembly
18	61-99GAP-2	1 GPM (1/4" Barb) Proportioner (Green)

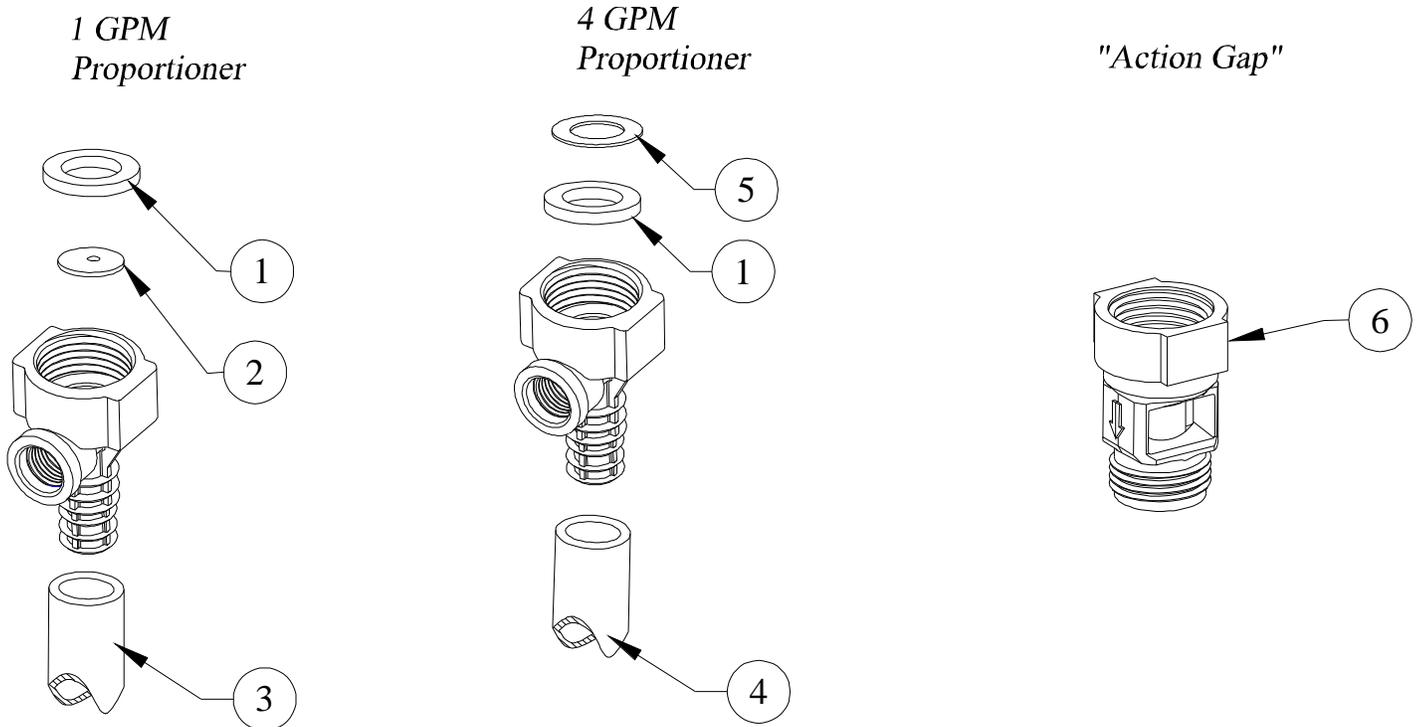
NO.	PART NO.	DESCRIPTION
19	63-78	O-Ring
20	63-79	Inlet Barb (1/4" Barb)
21	100-15K	Metering Tip Kit-14 Sizes
22	16-3-6	1/2" I.D. X 6" Lg. Vinyl Outlet Tube (1 GPM Only)
23	66-28	1/4" ID X 21" Lg. Vinyl Supply Tubing
24	61-107-2	Ceramic Weight
25	100-11P	Foot Valve
26	66-21	Cabinet Lock
27	61-71	Snap Bushing
28	66-23-1	Drip

### ACCESSORIES

NO.	PART NO.	DESCRIPTION
29	68-6-QD2	Pressure Indicating Tee

**DEMA BLEND SAFE**  
**MODEL: 661GAPB**  
**INSTALLATION INSTRUCTIONS**

**PROPORTIONER AND ACTION GAP BREAKDOWN**



NO.	PART NO.	DESCRIPTION
1	150-6	Rubber Washer
2	61-36	Flow Disk
3	16-3-6	1/2" I.D. x 6" Lg. Vinyl Outlet Tube (1 GPM Only)
4	61-21	1/2" I.D. x 6' Lg. Vinyl Outlet Tube (4 GPM Only)
5	63-89-1	Rubber Washer (1/32" Thick)
6	16-30	Action Gap Assembly