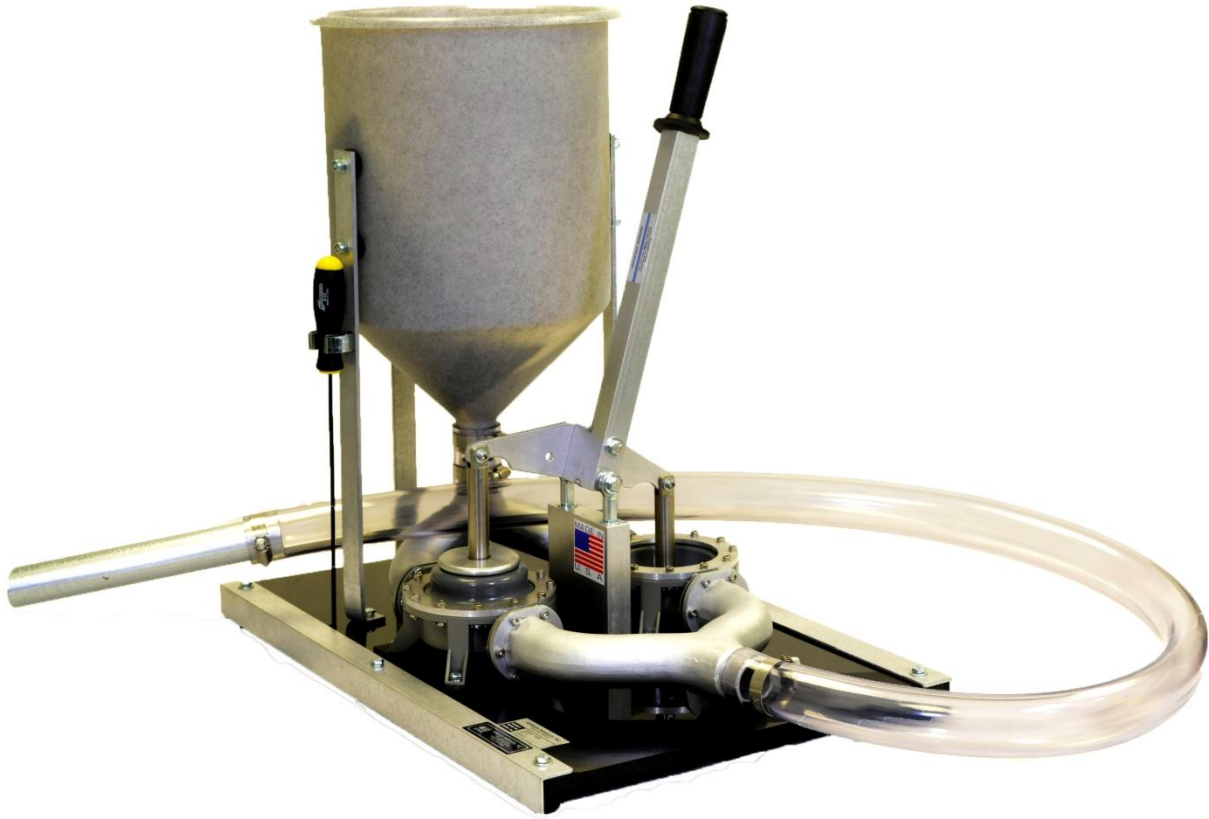


KENRICH PRODUCTS

OWNERS MANUAL

HEAVY DUTY GROUT PUMP, MODEL GP-6



DESCRIPTION
OPERATION
MAINTENANCE
SERVICE
REPAIR PARTS

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Safety Warning

Before you begin using your Kenrich Grout Pump, carefully read and understand this owners manual. It contains important information regarding safety, operation, service and maintenance. If you should have any questions regarding the performance or operation of this product, please call (503) 281-6190 for assistance

Safety Warning

Before you begin using your Kenrich Grout Pump, carefully read and understand this owner's manual. It contains important information regarding safety, operation, service and maintenance.

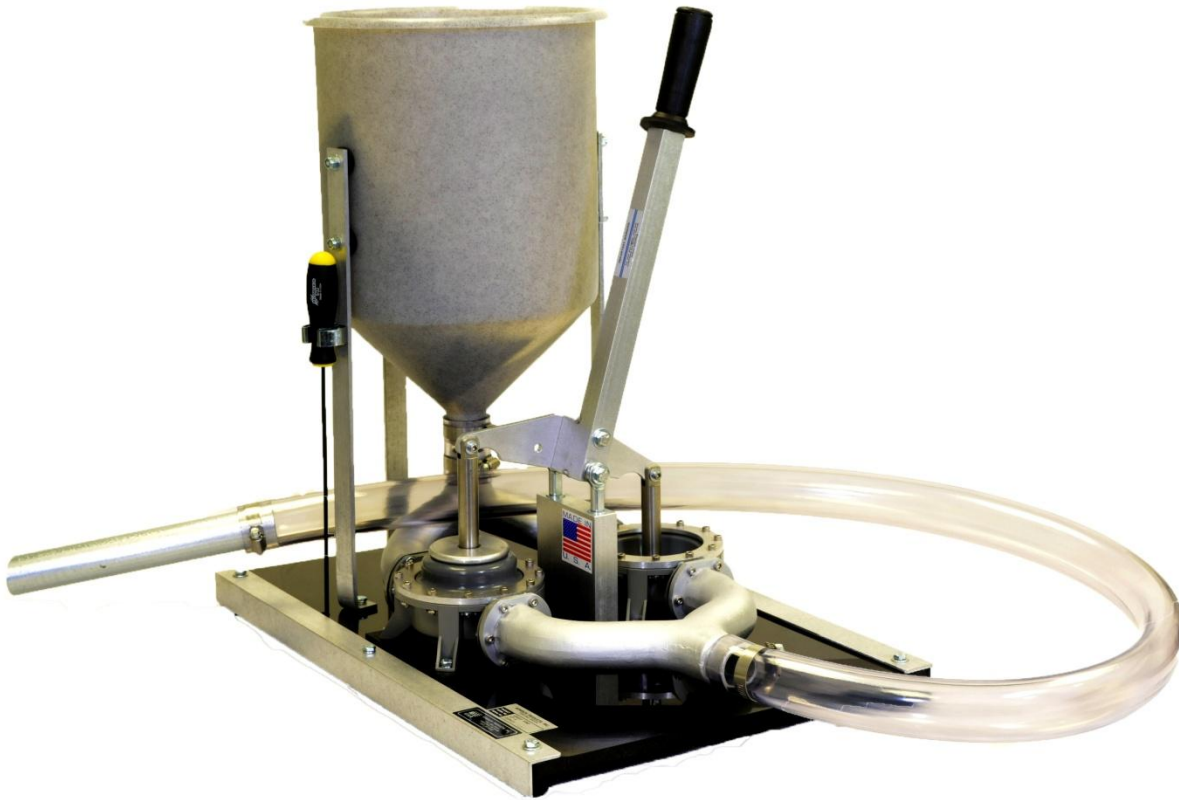
If you should have any questions regarding the performance or operation of this product, please call (503) 281- 6190 assistance.

Limited Warranty

- 1) DURATION:
Three months (90 days) from date of purchase by the original purchaser.
- 2) WHO GIVES THIS WARRANTY (WARRANTOR):
Kenrich Products, Inc.
16327 NE Cameron
Blvd
Portland, OR, 97230
Tel:(503) 281-6190 Fax: (503)
281-6227
- 3) WHO RECEIVES THIS WARRANTY (PURCHASER):
The original purchaser (other than for purposes of resale) of this Kenrich product.
- 4) WHAT IS COVERED UNDER THIS WARRANTY:
Defects in material and workmanship which occur within the duration of the warranty period.
- 5) WHAT IS NOT COVERED UNDER THIS WARRANTY:
 - A- IMPLIED WARRANTIES:, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow limitations on how long an implied warranty last, so the above limitations may not apply to you.
 - B- ANY INCIDENTAL, INDIRECT, OR CONSEQUENTIAL LOSS, DAMAGE OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE, MALFUNCTION OF A KENRICH PRODUCT. Some states do not allow exclusion limitation of incidental or consequential damages so the above limitations or exclusion may not apply to you.
 - C- Any failure that result from an accident, purchaser's abuse, neglect or failure to operate the product in accordance with the instructions provided in the owner's manual supplied with the product.
 - D- Items or service that are normally required to maintain the product (i.e. diaphragms and flap valves).
- 6) RESPONSIBILITIES OF WARRANTOR UNDER THIS WARRANTY:
Repair or replace, at Warrantor's option, products or components which have failed within the duration of the warranty period.
- 7) RESPONSIBILITIES OF PURCHASER UNDER THIS WARRANTY:
 - A) Deliver or ship the Kenrich product direct to Kenrich Products at address listed above. Freight cost, if any, must be borne by the purchaser.
 - B) Use reasonable care in the operation and maintenance of the product as described in the owner's manual.

This Limited Warranty gives you specific legal rights and you may also have other rights which vary from State to State.

DESCRIPTION OF PRODUCT



The Kenrich model GP-6 is a hand-operated twin diaphragm pump. It is designed to pump most types of water-based grouts (not chemical-based epoxy grouts). This model features two separate pumps connected by common inlet and outlet manifolds. Both pumps are powered by a single pump handle.

The pumping action is achieved by moving the vertical pump handle back and forth (or up and down if the pump handle is in the optional horizontal position). When the pump handle is moved to the right, the grout mixture in the hopper is drawn into the left pump, while at the same time the grout mixture already in the right pump is forced out into the placement hose where it is directed to the work area. When the handle is moved to the left, grout is drawn into the right pump while the grout in the left pump is forced out.

APPLICATIONS

Filling hollow concrete block walls
Grouting metal door and window frames in place
Hollow areas under machine bed plates
Filling voids
Placing grout anywhere that high pressure is not required

SPECIFICATIONS

Model	GP-6 Grout Pump
Pump Type	Twin Diaphragm, Self-Priming
Power Source	Hand Operated
*Output Capacity	11 gallons per minute
Output Pressure	Zero to 15 psi
Hopper Capacity	.62 cubic foot (4.6 gallons)
Placement Hose Size	1 ½ " ID by 60" long, Clear Vinyl
Discharge Head	10 foot Vertical Lift
Dimensions	16 ½ " x 25" x 24" high
Net Weight	32 pound, including hose

OPTIONS

Placement Hose	10 feet, 15 feet, 20 feet, and 50 feet
1 ½ " Hose Ends	Straight, 90° and 180° Elbows, 180 J
Port Seal	Rubber, will fit 1 ½" Hose Ends
Hose ReducerKits	¾" and 1" ID available

Output and performance will vary on cycle rate, viscosity of grout mixture and pressure conditions.

PERFORMANCE RECOMMENDATIONS

- 1) Always use the shortest length of placement hose as possible. The ideal is five feet long. When grouting metal door frames, place the pump on a cart or platform. This raises the pump handle to a better working height and allows the use of the standard five foot long placement hose.
- 2) Always use the largest diameter hose that access will allow. The ideal size is 1 ½" inside diameter. Never use a "**rubber based**" hose.
- 3) If limited access requires that you must use a hose reducer kit, (either ¾" or 1" inside diameter), remember that this reduction in hose size requires that the operator must cycle the pump at a much slower rate.

Note: **Never force the pump handle.**

- 4) It is always recommended that a quality pre-packaged grout to use. These products usually contain additives to help the grout pump and flow easier.
- 5) If you are mixing your own grout (sand/cement/water), the mixture will usually require additional cement in order to keep the sand in suspension. When pumping "homemade" grout, extra time will be required to find the exact proportions of sand/cement/water to achieve a pump able mixture.

OPERATION INSTRUCTIONS

- 1) Place grout in a suitable container and mix per manufacturer's instructions. Pour the mixed grout mixture into hopper. Though usually not required, some grouts are easier to start pumping if the pump is first primed with a cement/water slurry.
- 2) Move the vertical handle back and forth (or up and down if the handle has been installed in optional horizontal position) to draw the grout mixture from the hopper through the pumps and out the clear placement hose to the work area. CAUTION: VERY MINIMAL PUMP PRESSURE IS REQUIRED TO FILL VOIDS WITH GROUT.

Note: **Never force the pump handle.**

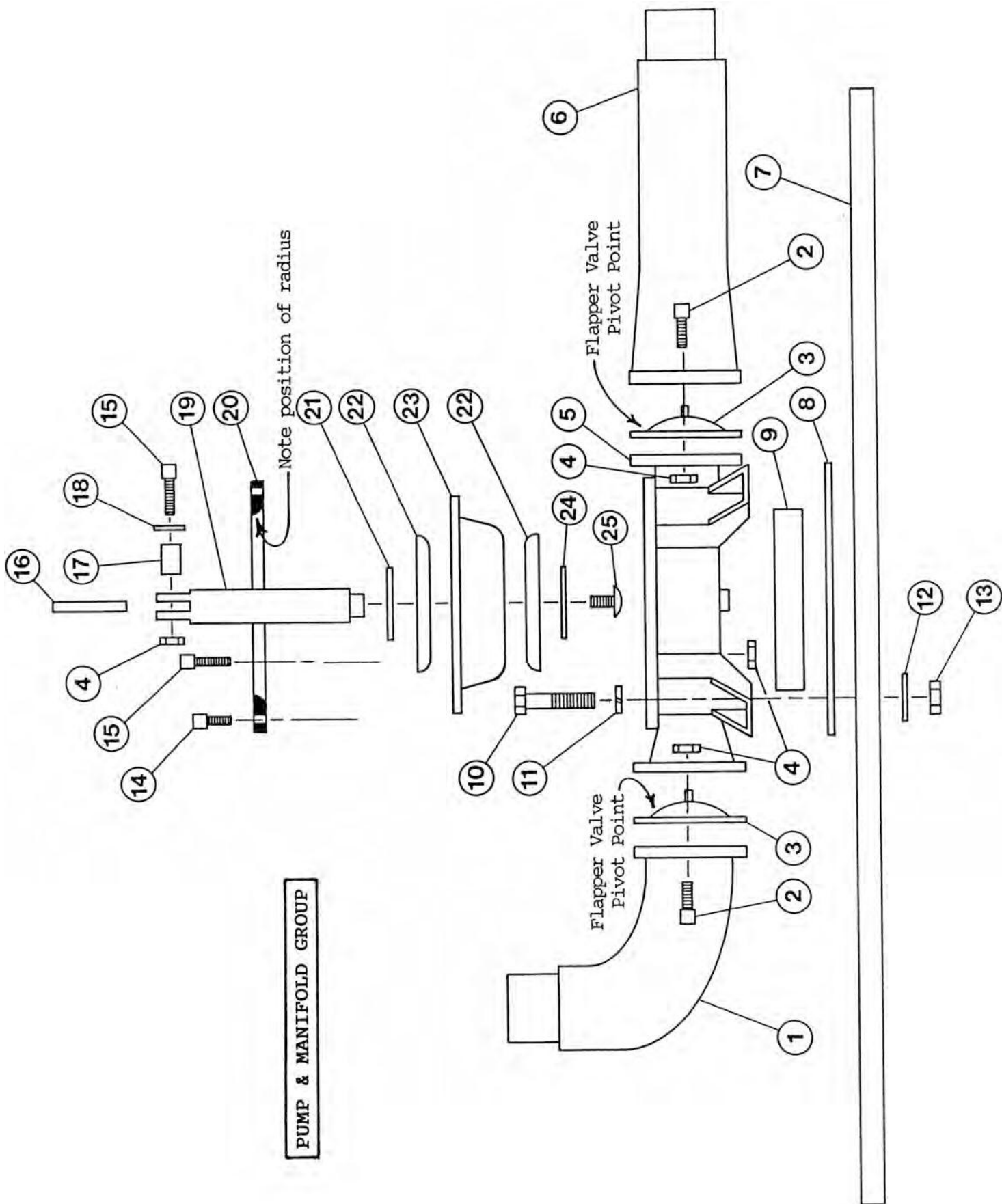
- 3) Be sure the work area being filled is vented to allow any trapped air to escape.
- 4) Do not allow the grout to harden while inside or on the outside of the pump and related components. Clean immediately after use.
- 5) This pump is designed to pump most types of water based grouts. It is not to be used to pump chemical based epoxy grouts.

CLEANING & MAINTENANCE INSTRUCTIONS

- 1) Keep all interior and exterior surfaces of your Kenrich grout pump clean.
- 2) Immediately after use, flush the inside of the pump by filling the hopper with clean water while at the same time operating the pump. Continue until the water discharged through the placement hose is clear.
- 3) Rinse off all exterior surfaces with clean water until clean.
- 4) To prevent air and/or grout leakage, periodically check all pump screws and hose clamps for tightness. Always tighten screws evenly.

TROUBLESHOOTING GUIDE

Problem	Causes	Corrections
Pump will Not Draw Grout Into Pump	1.Grout Mixture is too Thick. 2.Hole in Diaphragm. 3.Incorrect Installation of Flapper Valve(s).	1.Add Water to Grout Mixture and/or Prime the Pump with a Cement/Water Slurry 2.Replace Diaphragm 3.Check and Install Correctly
Pumps Water OK but will not Pump Grout	1.Grout Mixture is too Thick 2.Aggregate size is too large	1.Add Water to Grout Mixture and/or Prime Pump with a Cement/Water Slurry. 2.Use Smaller Aggregate or Screen Out Larger Pieces
Grout Mixture Leakage	1.Loose Screws that Attache Clamp Ring, Inlet and Outlet to Pump Body. 2.Hole in Diaphragm. 3.Loose Hose Clamps(s). 4.Cracked pump body.	1.Check and Tighten Screws as Necessary 2.Replace Diaphragm. 3.Tighten Hose Clamps. 4.Check and replace as required.

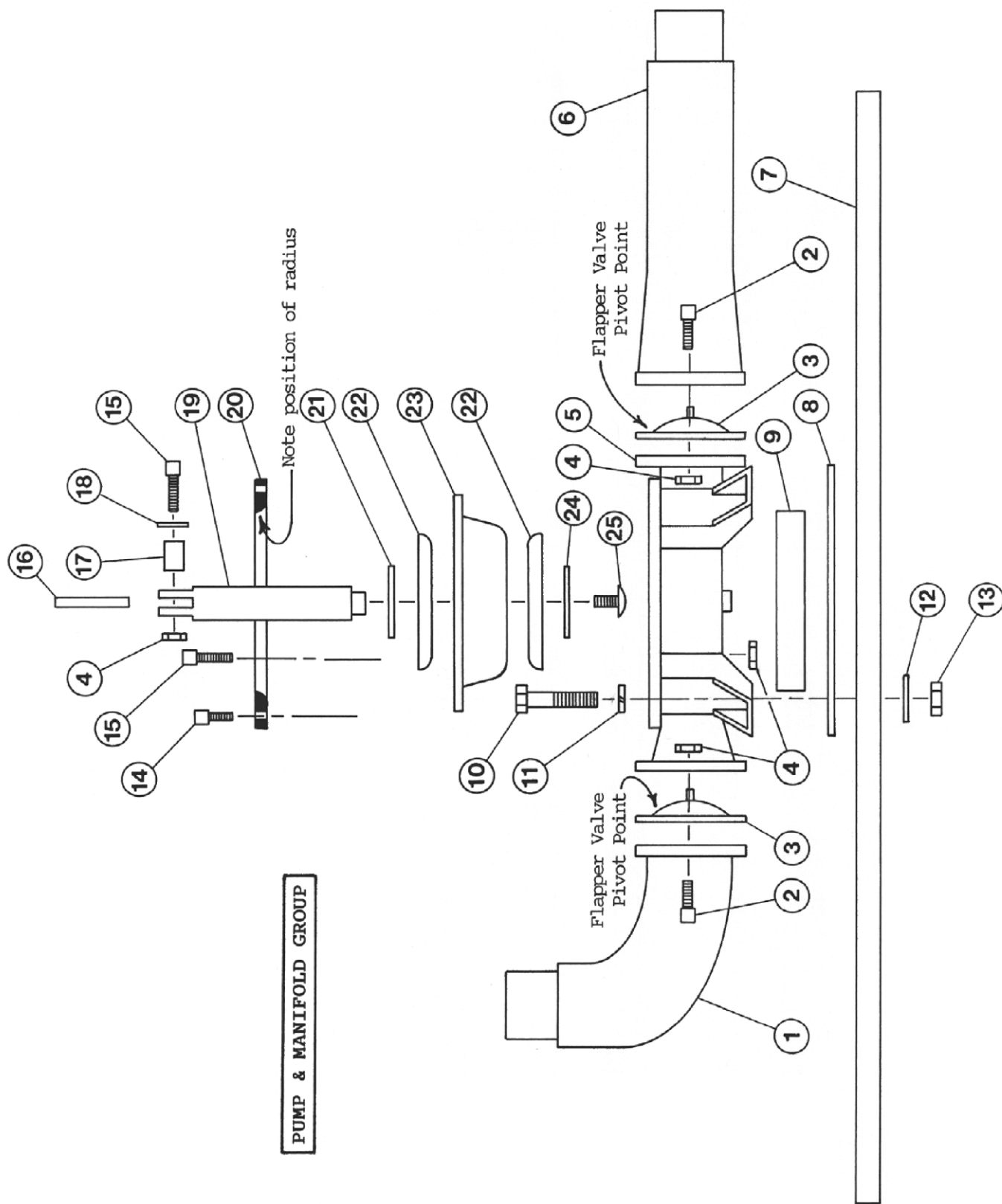


SERVICE INSTRUCTIONS

- 1) Start with the diaphragm that is in the down position.
- 2) Using the tool supplied with the pump, remove 12 clamp ring retaining screws and lift up the clamp ring (item 20). Now move the pump handle to raise the diaphragm (item 23) from the pump body (item 5).
- 3) Pivot the clevis (item 19) outward to expose the bottom of the diaphragm (item 23) and remove the truss head retaining screw (item 25). Remove and discard the worn diaphragm.
- 4) Install new diaphragm and related parts as shown in illustration. Tighten truss head screw.
- 5) Swing the clevis down and lower diaphragm into pump body (item 5). Be careful to align rib on diaphragm into groove on pump body.
- 6) Position clamp ring, install 12 screws and tighten evenly.
- 7) Now replace second diaphragm using the same procedure as the first diaphragm.

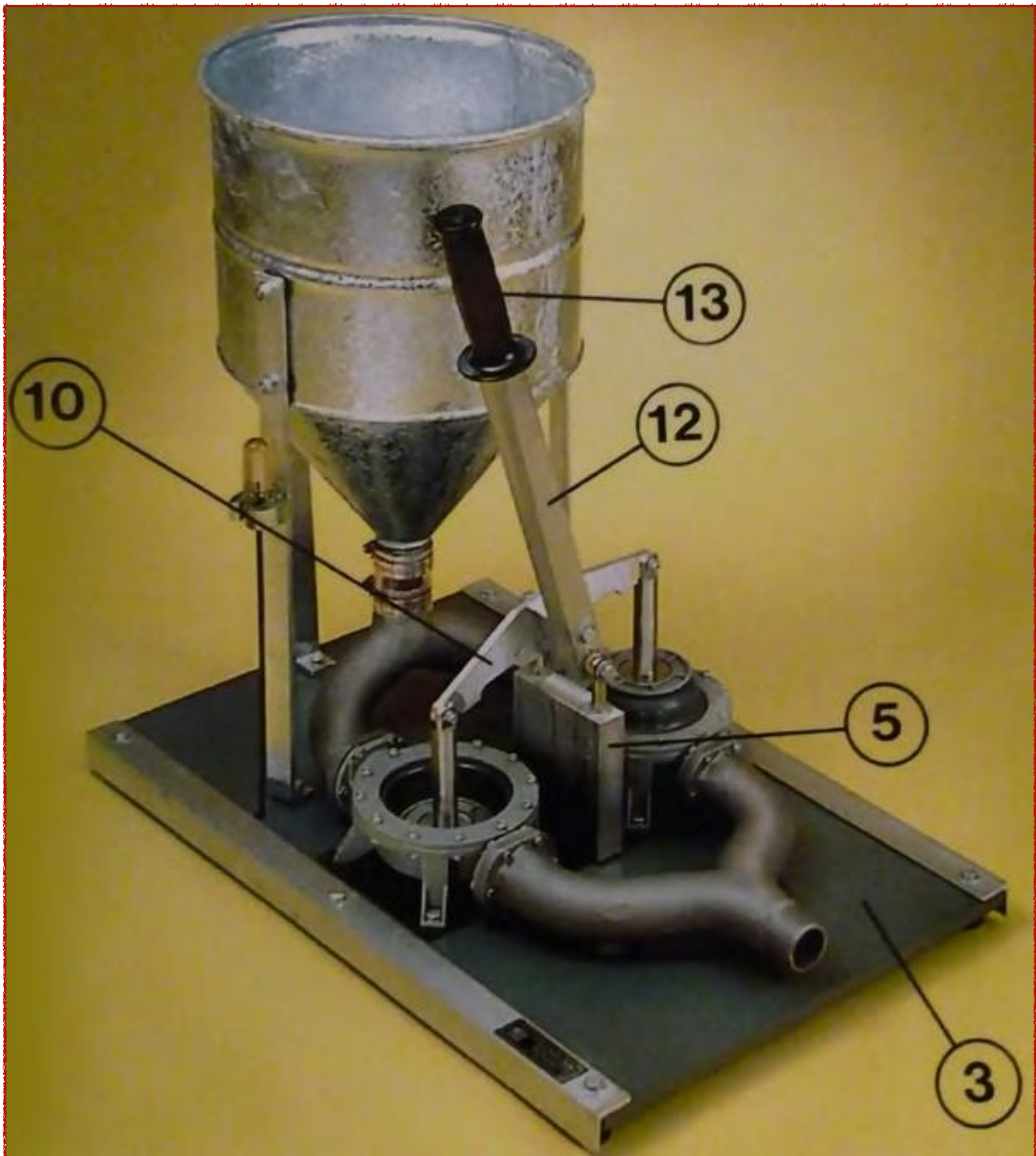
FLAPPER VALVE REPLACEMENT

- 1) Loosen the hose clamp that attachment the hopper to the inlet manifold (item 1). Remove 3 cap screws that connect the hopper support legs to the baseboard. Lift off the hopper assembly and set aside.
- 2) Using the tool supplied with the pump, remove 24 screws (item 2) that attach the inlet and outlet manifolds (item 1 & item 6).
- 3) Remove and discard flapper valves (item 3). Then position the new flapper valves carefully noting direction and position of pivot point as shown on illustration. Align manifolds and install screws. Tighten evenly.
- 4) Install hopper assembly, support leg mounting cap screws and tighten hose clamp.
- 5) Replace tool in mounting clip on hopper support leg.

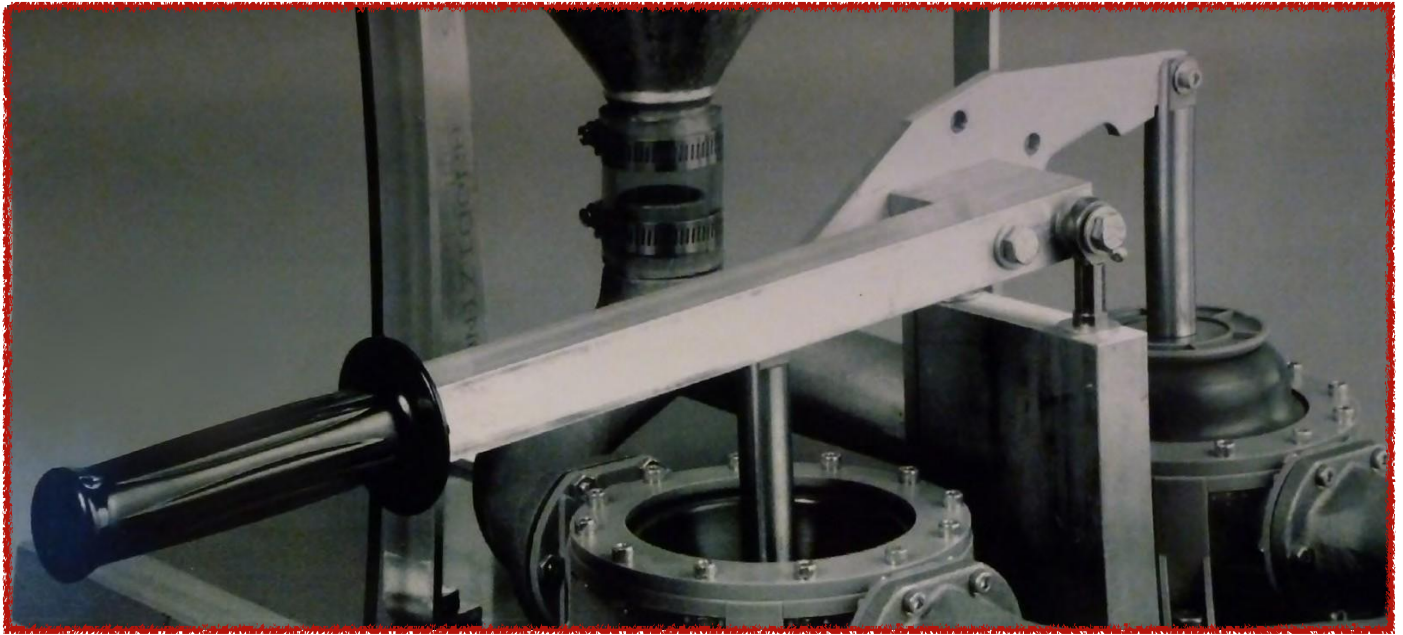


<u>Item</u>	<u>Qty</u>	<u>Part Number</u>	<u>Description</u>
1	1	5164	Inlet Manifold
2	24	1528-0062	Socket Head Machine Screw
3	4	5019-15	Flapper Valve
4	46	1453	Machine Hex Nut
5	2	5019-12	Pump Body
6	1	5165	Outlet Manifold
7	1	5159	Baseboard
8	1	5166	Spacer Plate
9	2	5157	PVC Spacer, 4" diameter
10	8	1000-0100	Hex Head Capscrew
11	8	1380	Lockwasher
12	8	1350	Flatwasher
13	8	1200	Hex Nut
14	4	1528-0050	Socket Head Machine Screw
15	22	1528-0075	Socket Head Machine Screw
16	1	5171	Rocker Arm
17	2	5019-6	Pivot Bushing, short
18	2	1490	SAE Flatwasher
19	2	5154	Clevis
20	2	5019-33	Clamp Ring
21	2	5019-22	Reinforce Washer, $\frac{1}{2}$ " hole
22	4	5019-21	Button
23	2	5019-9UR	Diaphragm
24	2	5019-29	Reinforce Washer, $\frac{1}{4}$ " hole
25	2	1050-0050	Truss Head Screw
NS	1	5019-34	Repair Kit (contains 2 diaphragms & 4 flapper valves)

Handle shown in standard vertical position.

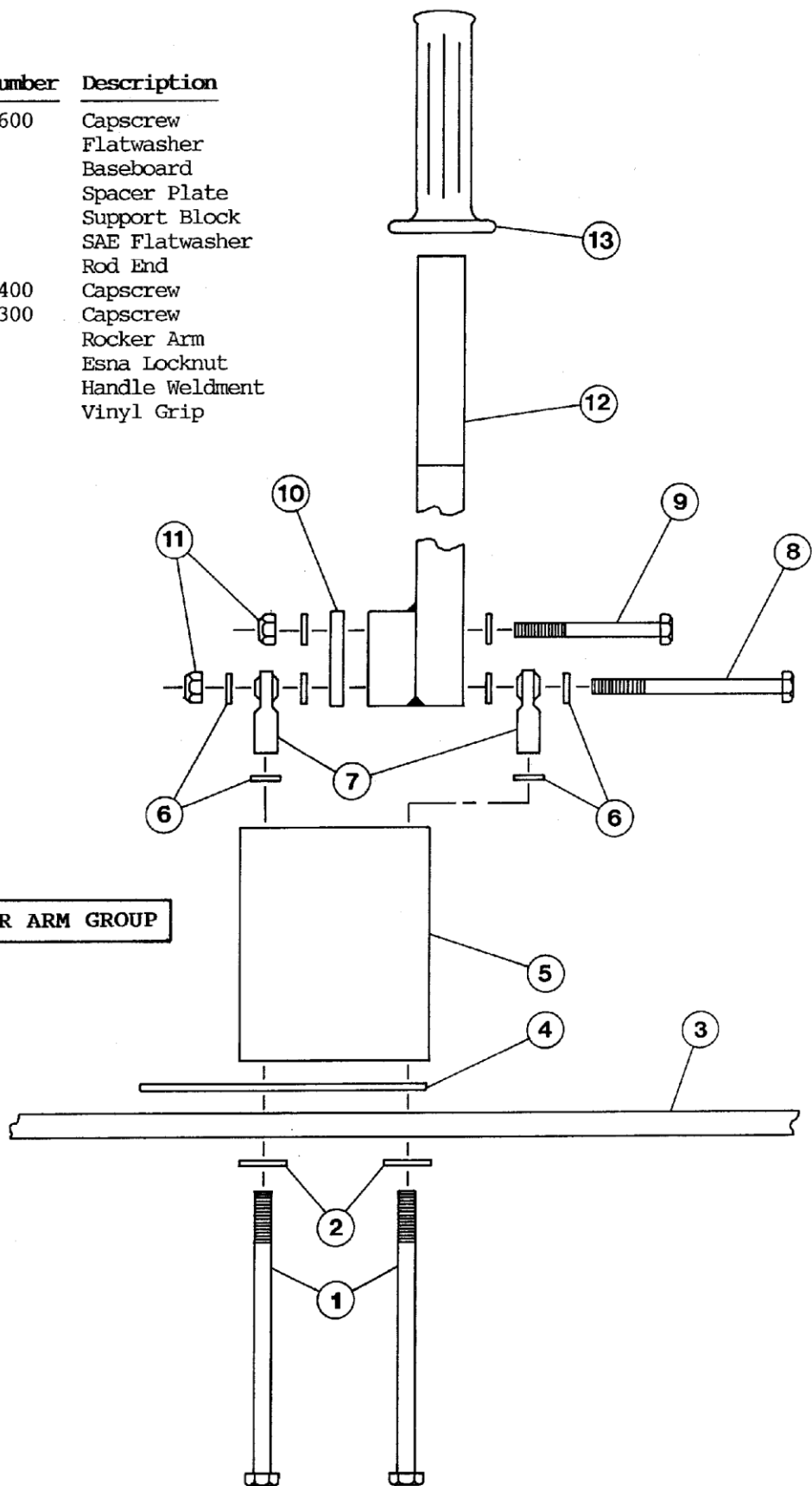


Handle shown in optional horizontal position.

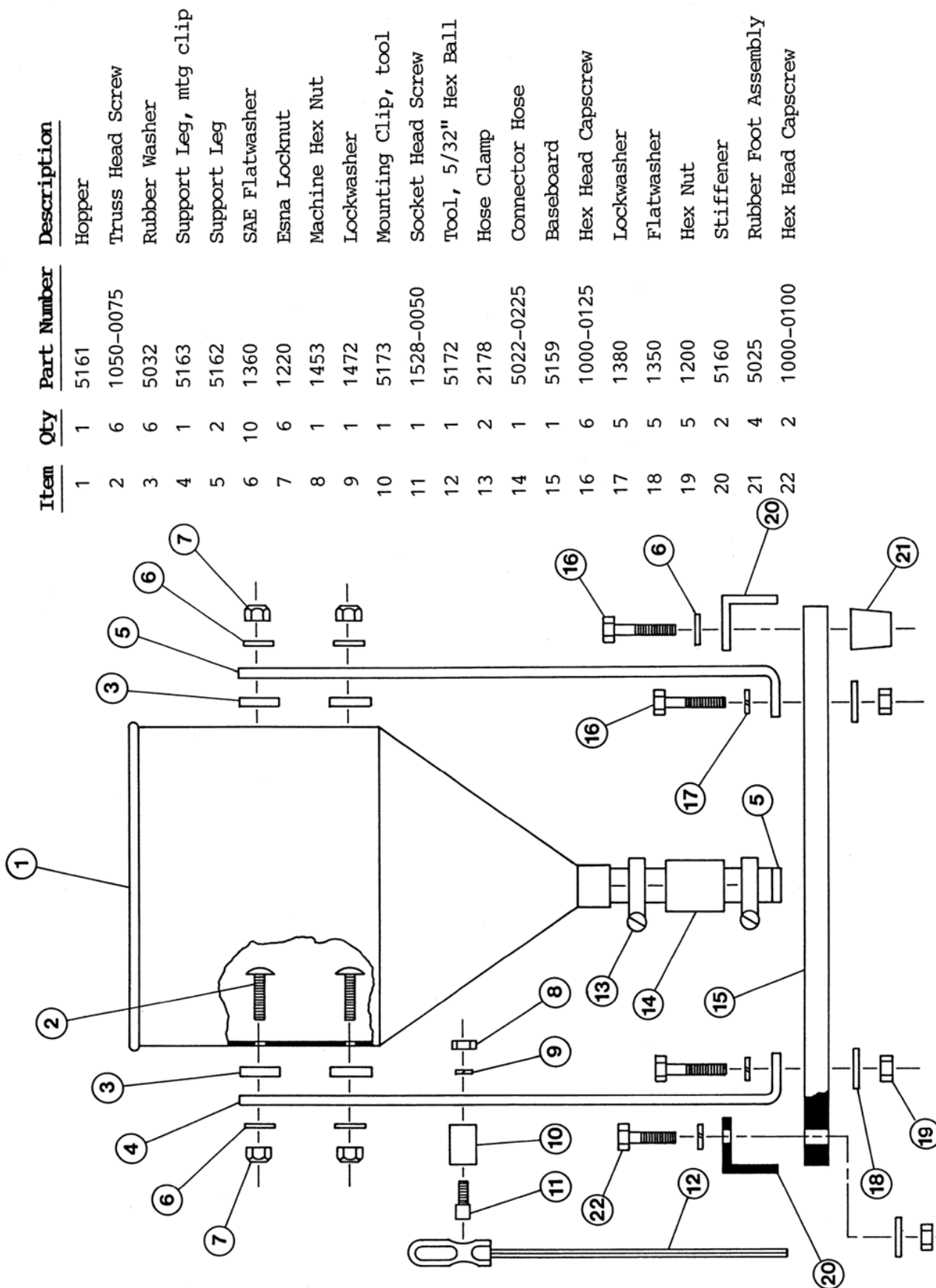


Item	Qty	Part Number	Description
1	2	1011-0600	Capscrew
2	2	1351	Flatwasher
3	1	5159	Baseboard
4	1	5166	Spacer Plate
5	1	5167	Support Block
6	8	1361	SAE Flatwasher
7	2	5168	Rod End
8	1	1001-0400	Capscrew
9	1	1001-0300	Capscrew
10	1	5171	Rocker Arm
11	2	1221	Esna Locknut
12	1	5169	Handle Weldment
13	1	5170	Vinyl Grip

HANDLE & ROCKER ARM GROUP

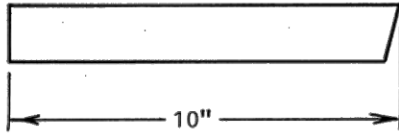


HOPPER & BASEBOARD GROUP

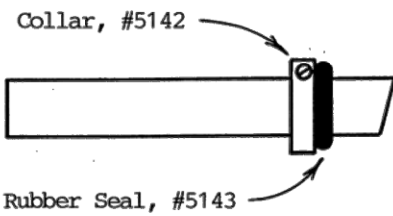


1½" HOSE ENDS & SEAL INSTALLATION

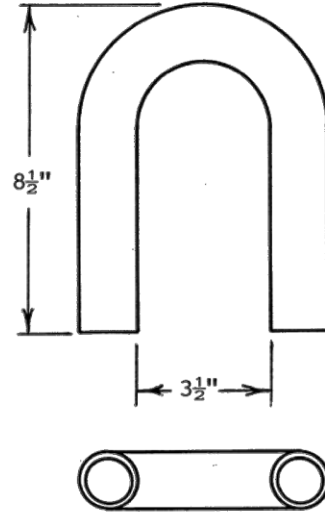
Straight, #5023



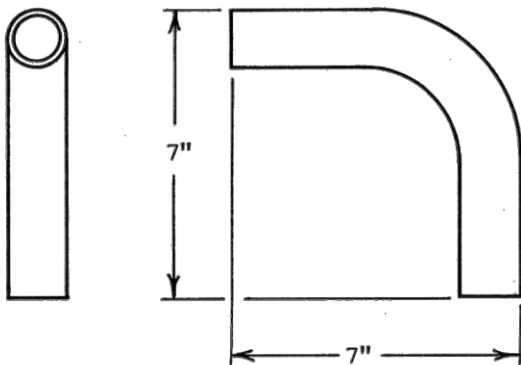
Seal Installation



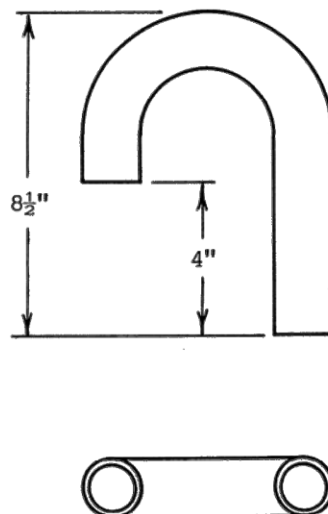
180° Elbow, #5140



90° Elbow, #5139

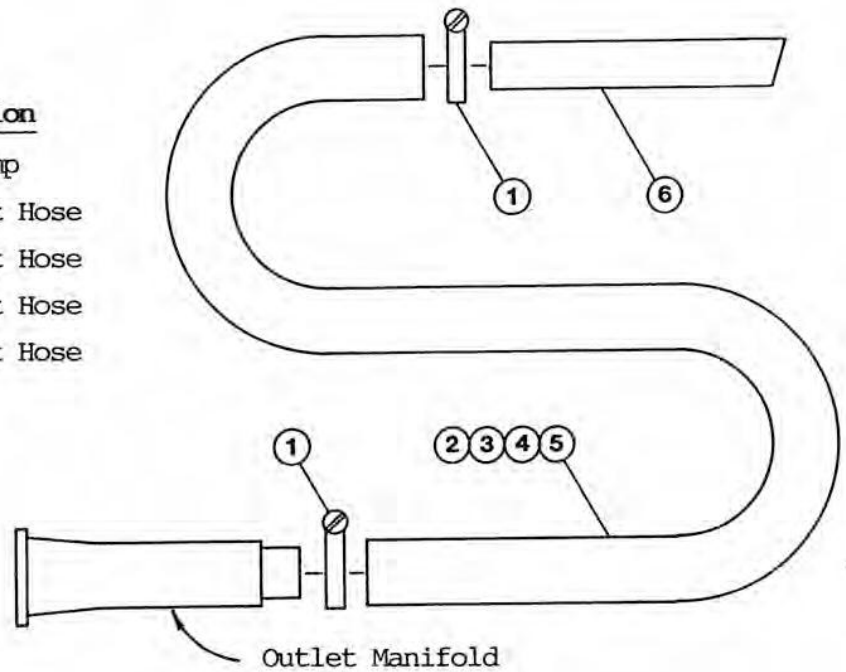


180° Elbow, Short Leg, #5141



1½" I.D. PLACEMENT HOSE

Item	Qty	Part Number	Description
1	2	2178	Hose Clamp
2	1	5022-5ft	Placement Hose
3	1	5022-10ft	Placement Hose
4	1	5022-15ft	Placement Hose
5	1	5022-20ft	Placement Hose
6	1	5023	Barrel



HOSE REDUCER KITS

Item	Qty	¾" Kit	1" Kit	Description
All	1	5034	5083	Complete Hose Kit
1	2	2178	2178	Hose Clamp
2	1	5022-0250	5022-0250	Sleeve
3	1	5081	5076	Adapter
4	2	2174	2175	Hose Clamp
5	1	5079-6000	5078-6000	Placement Hose
6	1	5130	5131	Nozzle

