

## **Hutchison-Hayes Separators, Inc.**

### **Model MRPX 213 Clarifier Parts List With Diagrams**

**P.O. Box 2965 ♦ Houston, Texas 77252**  
**3520 East Belt ♦ Houston, Texas 77015**  
**(713) 455-9600 ♦ Fax (713) 455-7753**

GENERAL DESCRIPTION

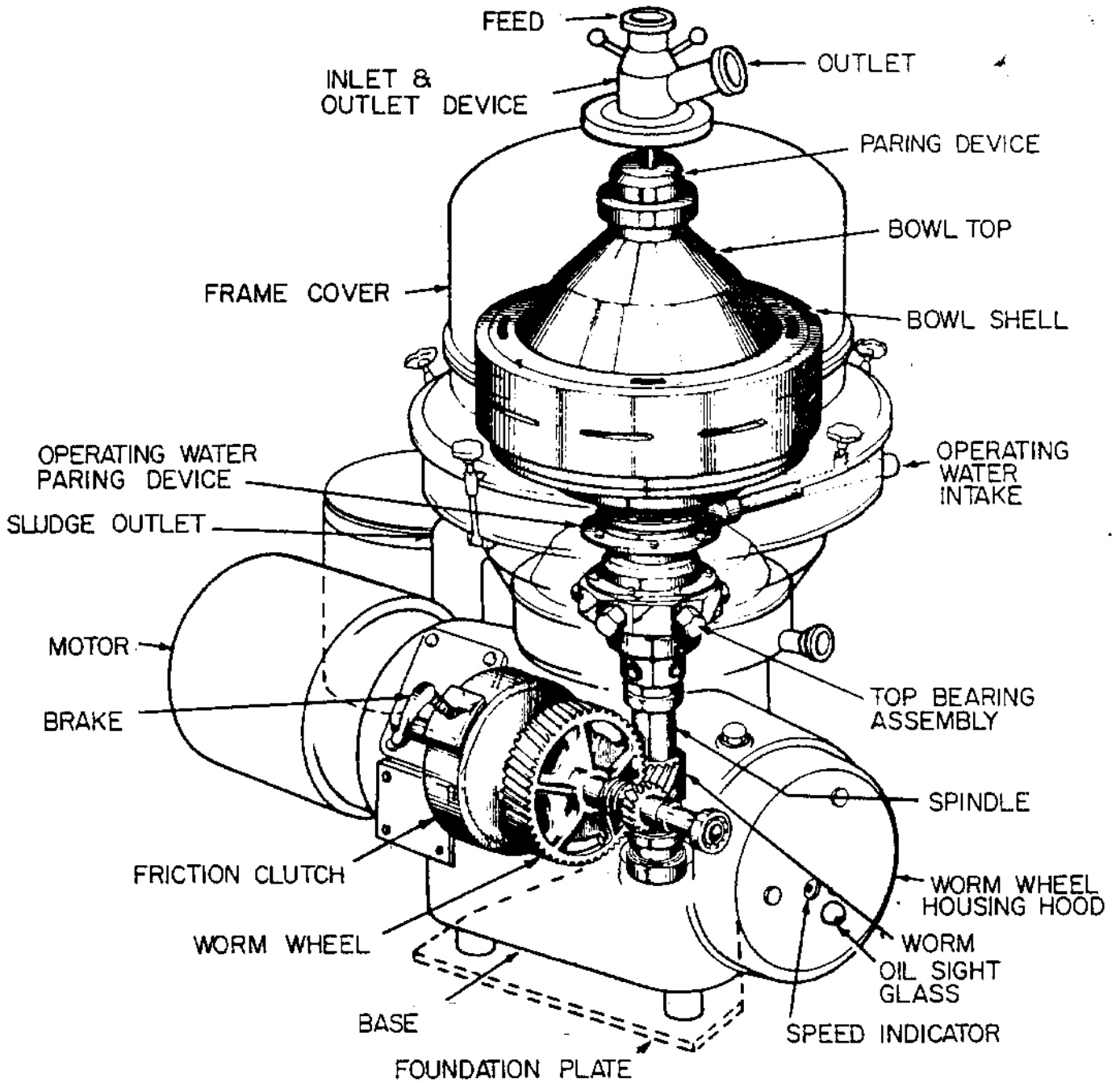
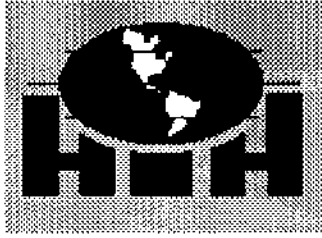


FIGURE 1

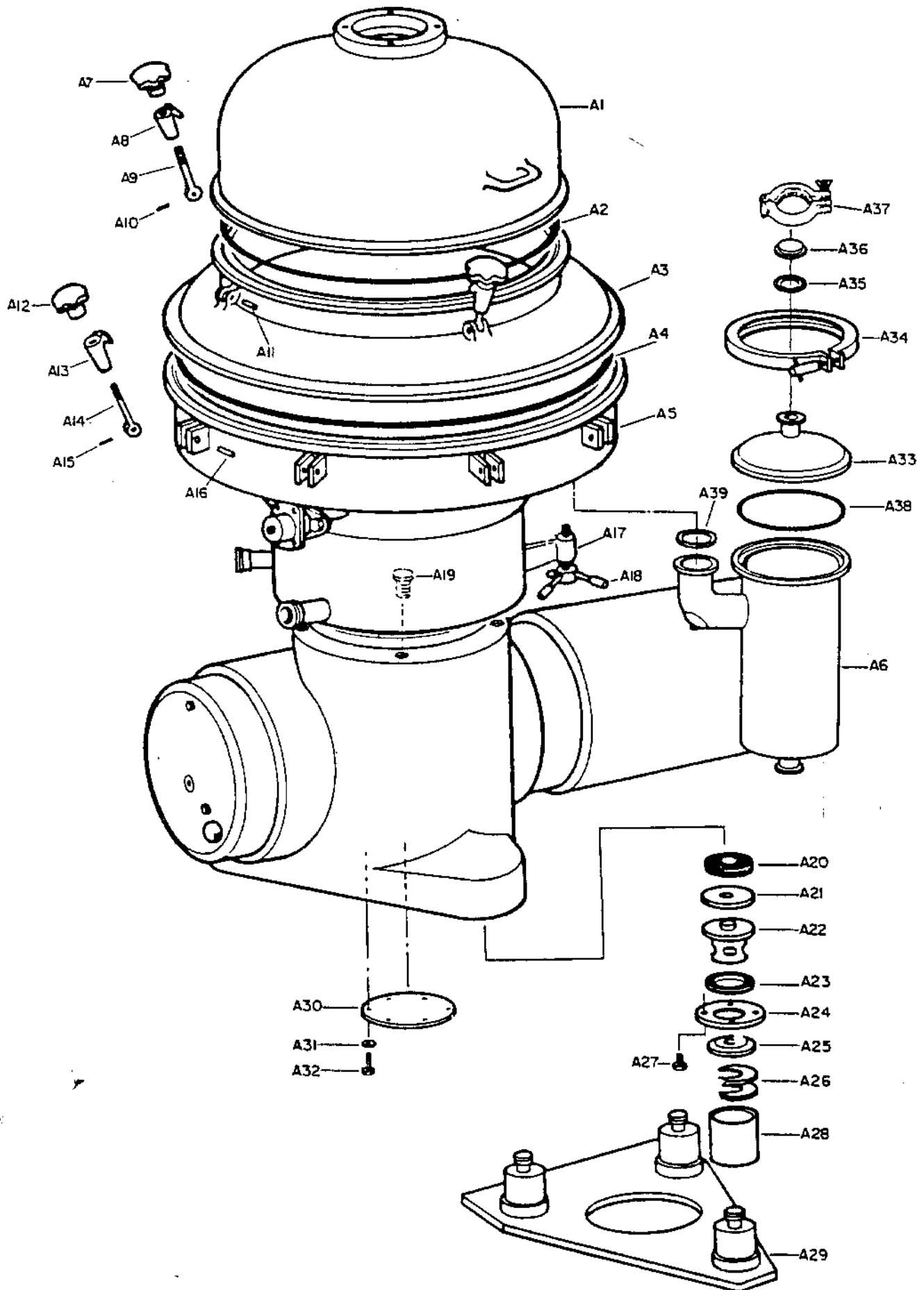


## **Hutchison-Hayes Separators, Inc.**

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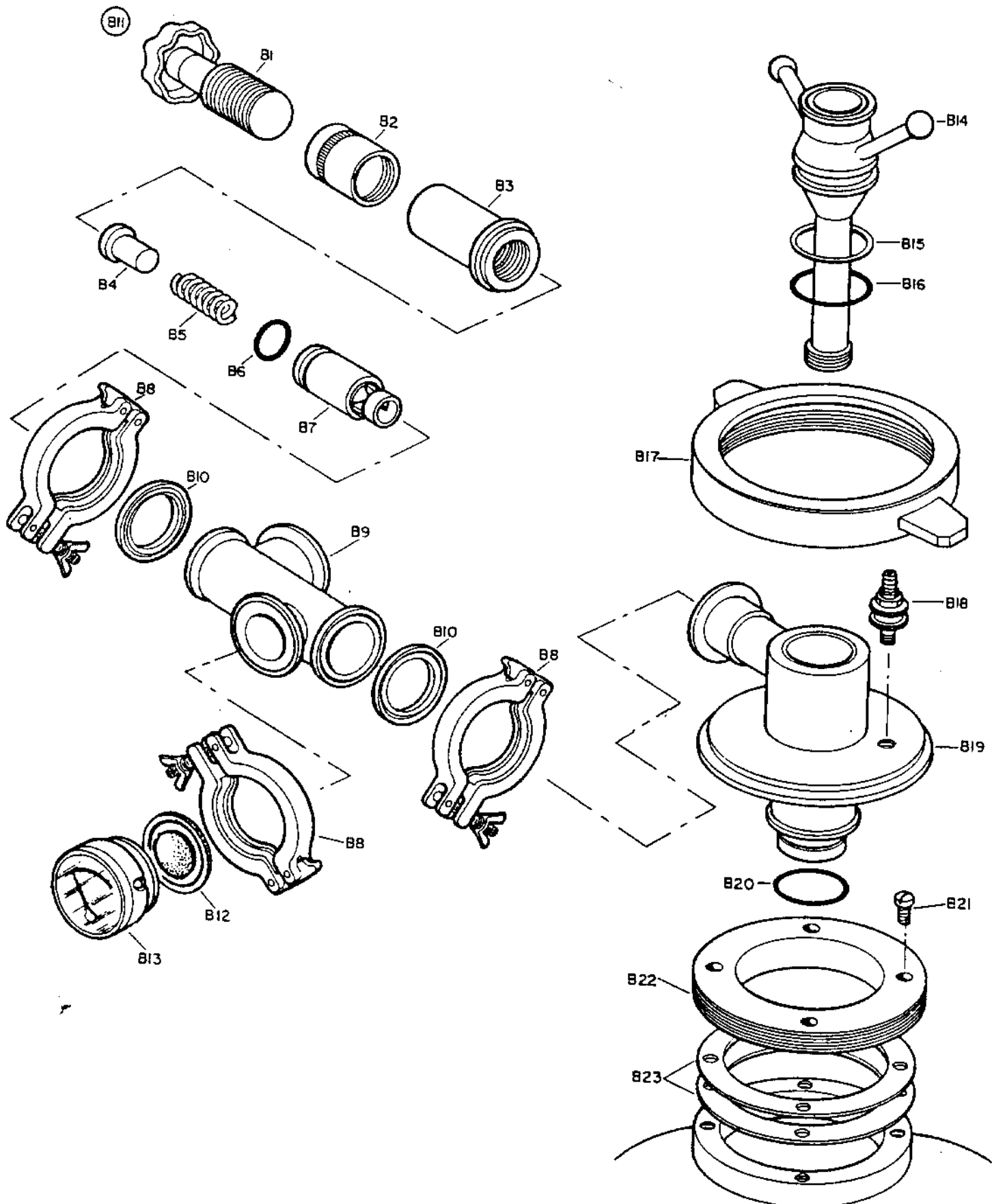
MAIN ASSEMBLY



MAIN ASSEMBLY

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>
A1	39435	1	Frame Cover
A2	37311	1	"O" Ring
A3	39160	1	Top Shell
A4	39268	1	"O" Ring
A5	8200267-80	1	Bottom Cover
A6	8200879-80	1	Cyclone Tank
A7	39173	4	Handwheel
A8	8200283-01	4	Cover Clamp Lug
A9	39123	4	Clamp Stud
A10	39420	4	Groove Hinge Pin
A11	39434	4	Hinge Pin
A12	37428	8	Handwheel
A13	8200311-01	8	Cover Clamp Lug
A14	39463	8	Clamp Stud
A15	39118	8	Groove Hinge Pin
A16	39119	8	Hinge Pin
A17		1	Bracket
A18	39397	1	Clamp Screw
A19	36127	6	Frame Screw
A20	39112	3	Rubber Base Cushion
A21	8200111-01	3	Washer
A22	8200107-01	3	Frame Foot
A23	8200113-01	3	Gasket
A24	8200114-01	3	Foot Plate
A25	8200108-01	3	Spacer Washer
A26	8200109-01	(As req'd.)	Adjusting Washer
A27	32310	12	Screw
A28	8200132-01	3	Spacer
A29	8200849-80	1	Foundation Plate
A30	8200247-01	1	Step Bearing Cover
A31	33528	8	Washer
A32	8200155-01	8	Screw
A33	8200878-80	1	Cover
A34	8200865-80	1	Clamp
A35	40217	1	Gasket
A36	40733	1	Cap
A37	42220	1	Clamp
A38	8200330-12	1	"O" Ring
A39	8200153-01	1	Gasket

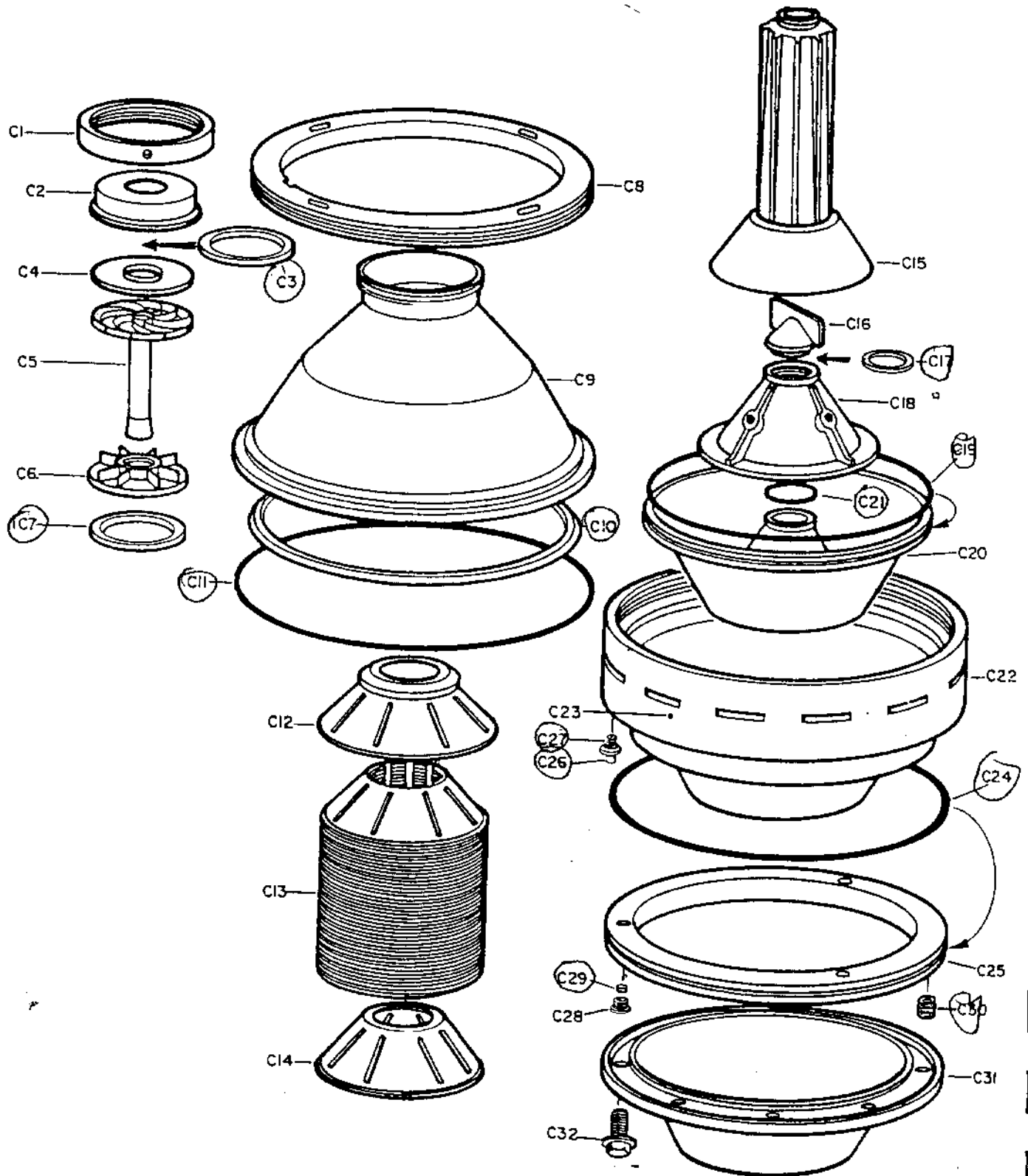
# INLET AND OUTLET DEVICE



INLET AND OUTLET DEVICE

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>
B1	8200274-80	1	Adjusting Screw
B2	8200273-01	1	Lock Nut
B3	8200277-01	1	Ferrule
B4	39371	1	Thrust Plug
B5	39462	1	Valve Spring
B6	39461	1	"O" Ring
B7	8200272-01	1	Regulating Valve
B8	42220	3	Clamp
B9	8200269-01	1	Body
B10	40217	2	Gasket
B11	8200270-80	1	Regulating Valve (complete)
B12	8200286-01	1	Rubber Membrane
B13	8200309-80	1	Pressure Gauge
B14	8200023-80	1	Inlet Connection
B15	8200028-01	1	Washer
B16	8200040-01	1	"O" Ring
B17	8200032-80	1	Coupling Nut
B18	8200078-80	1	Water Flush Coupling
B19	8200031-80	1	Outlet Connection
B20	39272	1	"O" Ring
B21	8200555-01	4	Screw
B22	8200033-01	1	Guide Ring
B23	39473	(As req'd.)	Height Adjusting Ring

BOWL

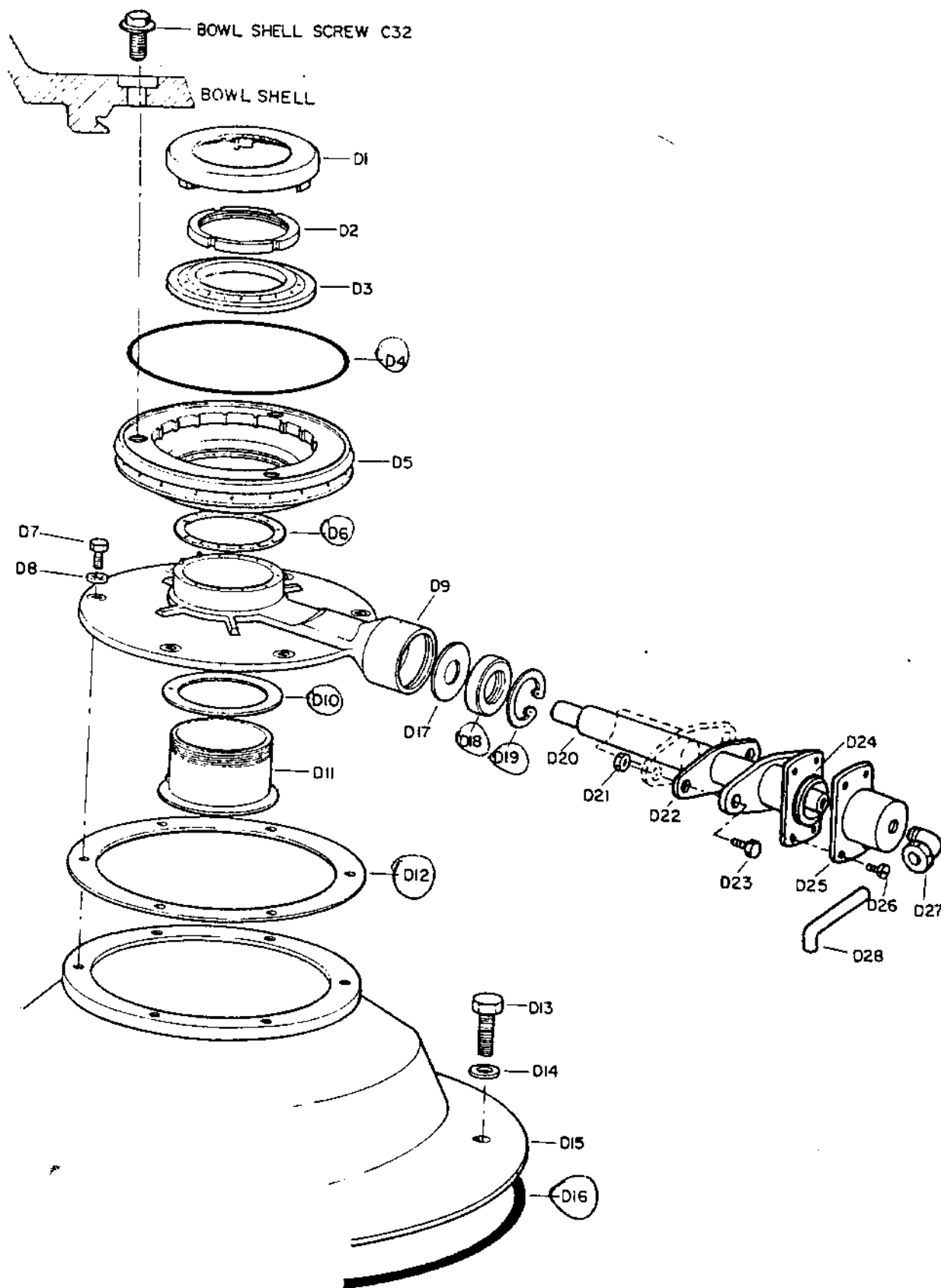


## BOWL

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>
C1	39478	1	Coupling Nut
C2	8700200-01	1	Paring Chamber Top
(C3)	8700211-01	1	Gasket
C4	39290	1	Paring Disc Top
C5	39681	1	Paring Disc Bottom
C6	8200320-01	1	Paring Chamber Bottom
(C7)	8700212-01	1	Gasket
C8	*	1	Coupling Ring
C9	*	1	Bowl Top
(C10)	39026	1	Seal Ring
(C11)	39275	1	"O" Ring
C12	8700205-80	1	Top Disc - Unsoldered Caulks
	8700205-81	1	Top Disc - Soldered Caulks
C13	8700208-80	149	Intermediate Disc - Unsoldered Caulks
	8700208-81	149	Intermediate Disc - Soldered Caulks
C14	8700209-80	1	Bottom Disc - Unsoldered Caulks
	8700209-81	1	Bottom Disc - Soldered Caulks
C15	*	1	Tubular Shaft
C16	39654	1	Spindle Cap Nut
(C17)	8200034-01	1	Gasket
C18	*	1	Tubular Shaft Cone
(C19)	39276	1	"O" Ring
C20	*	1	Sliding Bowl Bottom
(C21)	39277	1	"O" Ring
C22	*	1	Bowl Shell
C23	39524	1	Nozzle, 3mm
(C24)	525643-02y	1	"O" Ring
C25	*	1	Operating Slide
(C26)	8700223-01	3	Valve Seat
(C27)	8700560-04	3	"O" Ring
C28	8700224-01	3	Valve Plug Holder
(C29)	8700225-01	3	Valve Plug
(C30)	39408	18	Spring
C31	*	1	Spring Support
C32	39039	8	Screw
	8700208-82	1	Fill-in Disc; Plain

\* - IMPORTANT: The clarifier bowl forms a balanced unit. If the bowl top, bowl shell, the tubular shaft or the large coupling ring need repair or replacement, the entire bowl should be sent back to the factory. The remaining parts can normally be replaced or repaired in the field.

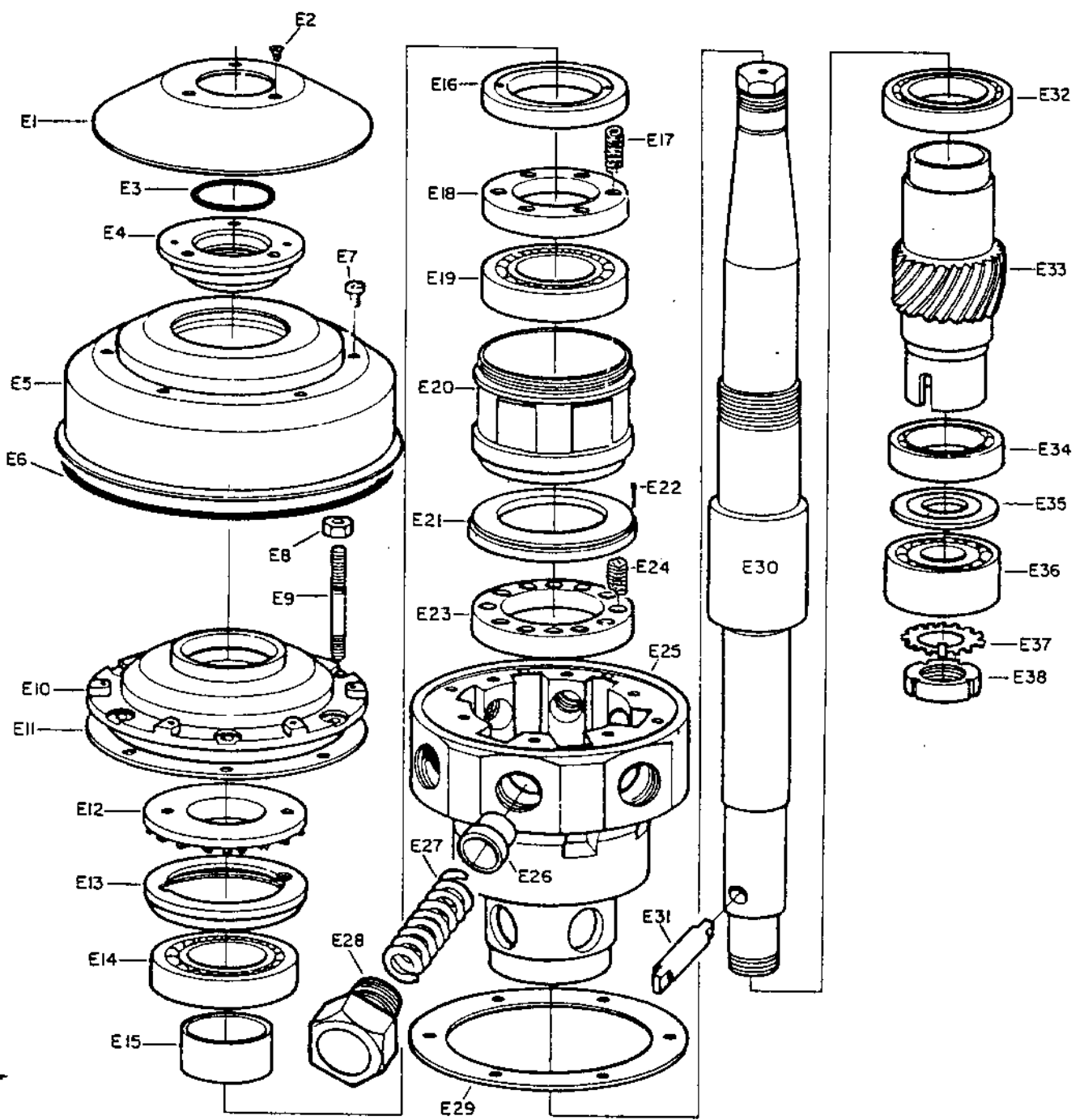
OPERATING WATER PARTS



OPERATING WATER PARTS

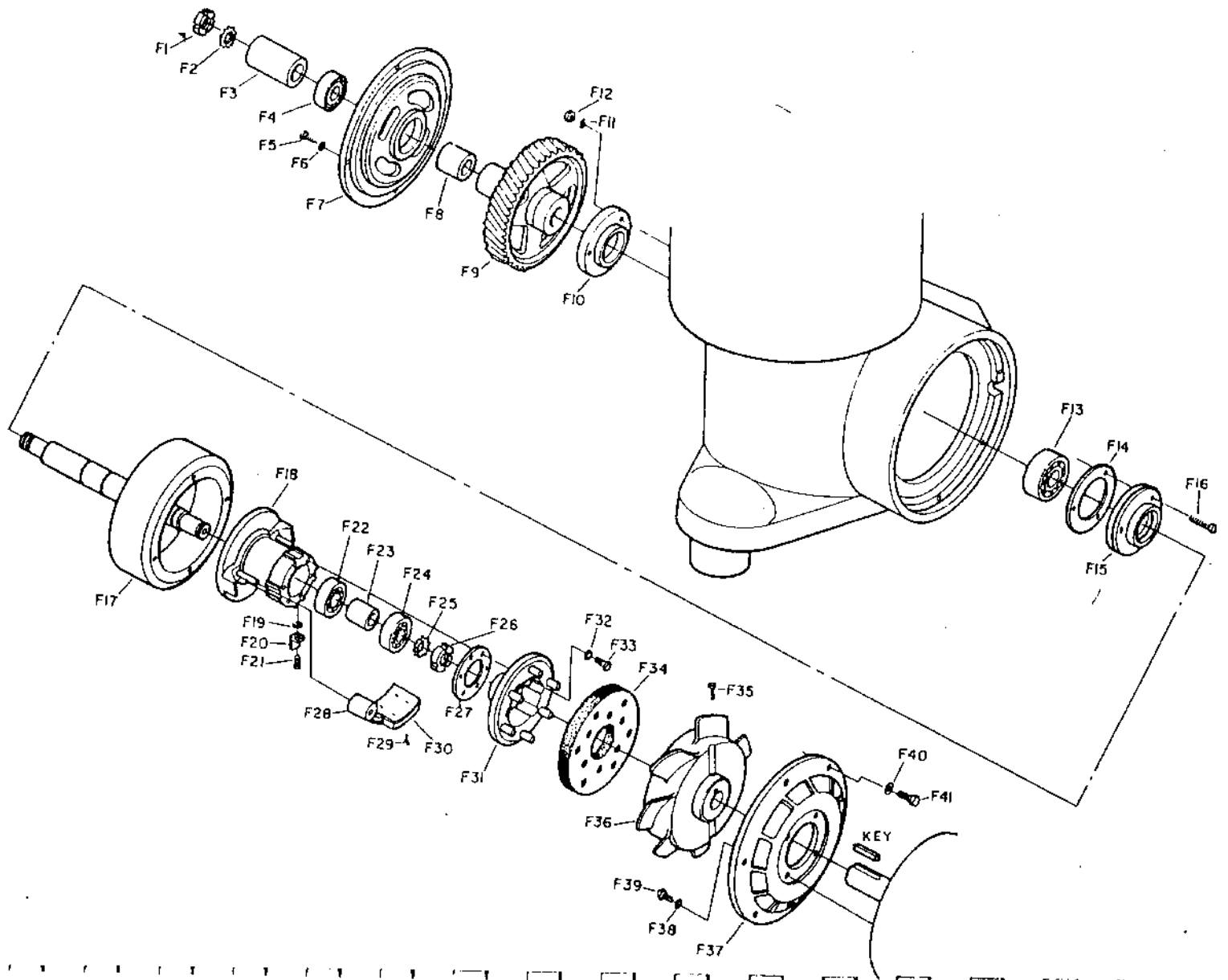
<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Name</u>
D1	8700282-80	1	Collar
D2	39137	1	Nut
D3	39286	1	Paring Disc
(D4)	39283	1	"O" Ring
D5	39279	1	Distribution Ring
(D6)	39363	1	Gasket
D7	32310	6	Screw
D8	39148	6	Washer
D9	39399	1	Distribution Cover
(D10)	39362	1	Gasket
(D11)	39202	1	Sleeve
(D12)	39473	(As req'd.)	Height Adjusting Ring
D13	32310	6	Screw
D14	39148	6	Washer
D15	39231	1	Top Bearing Cover
(D16)	39271	1	"O" Ring
D17	39352	1	Guide Ring
(D18)	39274	1	Seal Ring
(D19)	39354	1	Snap Ring
D20	39249	1	Water Inlet Connection
D21	30573	2	Nut
(D22)	20376	1	Gasket
D23	32310	2	Screw
(D24)	35333	1	"O" Ring
D25	37917	1	End Cap
D26	30037	4	Screw
D27	8200528-01	1	Elbow
D28	39536	1	Drain Tube

# VERTICAL DRIVE



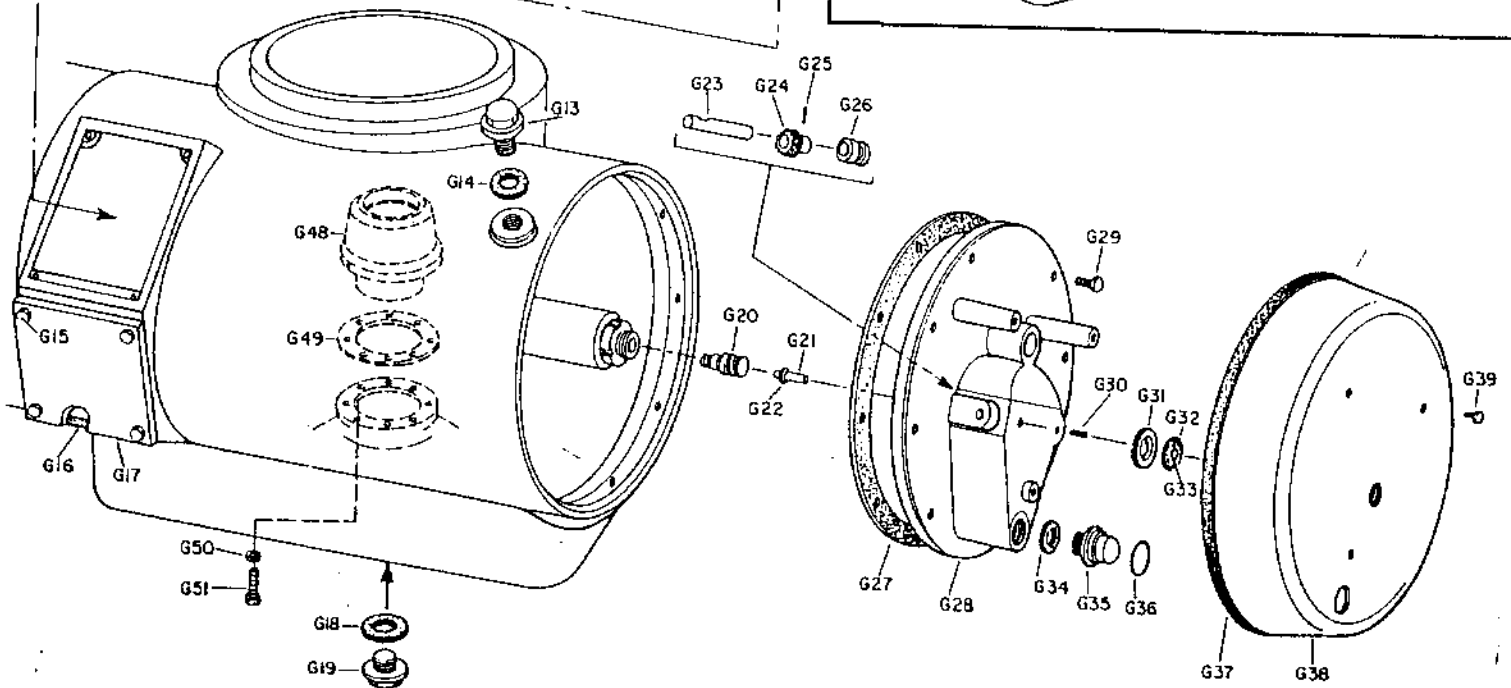
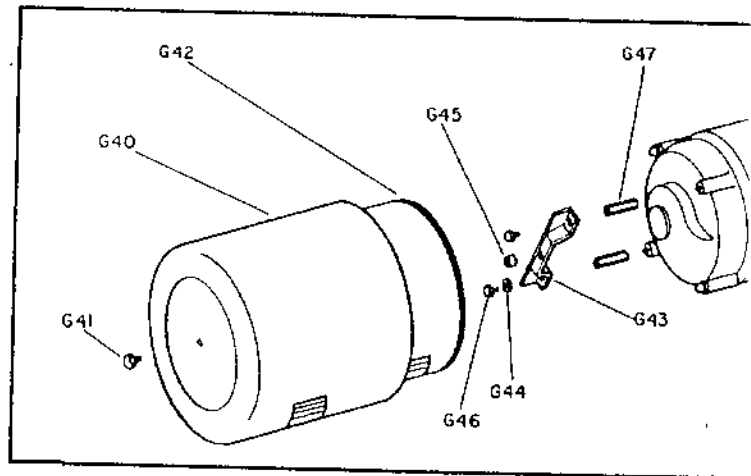
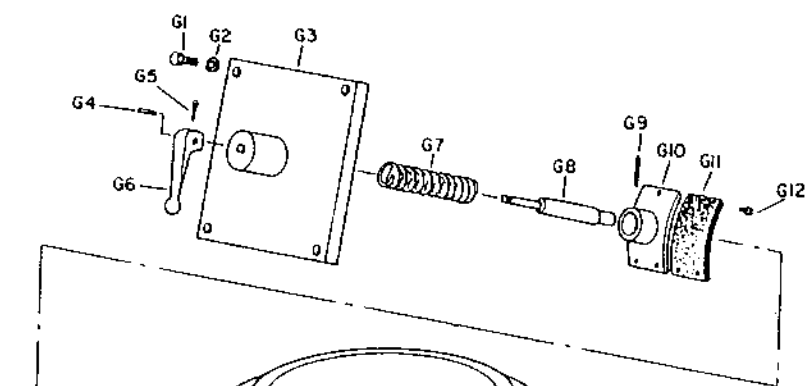
VERTICAL DRIVE

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>
E1	39223	1	Throw-off Plate
E2	39086	3	Screw
E3	39270	1	"O" Ring
E4	39288	1	Protecting Cover
E5	8700220-80	1	Drip Shield
E6	38567	1	"O" Ring
E7	39085	6	Screw
E8	33942	6	Nut
E9	8200192-01	6	Stud
E10	39444	1	Top Bearing Plate Cover
E11	36502	1	Gasket
E12	39406	1	Oil Fan
E13	39292	1	Lock Ring
E14	38507	1	Upper Ball Bearing
E15	38425	1	Spacer Sleeve
E16	39046	1	Spring Holder
E17	38509	6	Upper Ball Bearing Spring
E18	39046	1	Spring Holder
E19	37326	1	Lower Ball Bearing
E20	39293	1	Ball Bearing Housing
E21	39224	1	Wear Ring
E22	36448	2	Cotter Pin
E23	39229	1	Spring Support
E24	36446	12	Spring
E25	8200235-80	1	Top Bearing Plate
E26	36452	6	Top Bearing Buffer
E27	36453	6	Top Bearing Spring
E28	36454	6	Top Bearing Buffer Screw
E29	36502	1	Gasket
E30	8200135-01	1	Bowl Spindle
E31	39443	1	Drive Pin
E32	39242	1	Upper Worm Quill Ball Bearing
E33	39069	1	Worm Quill
E34	37328	1	Lower Worm Quill Ball Bearing
E35	39127	1	Cover Plate
E36	37423	1	Spindle Ball Bearing
E37	66076y	1	Ball Bearing Lock Washer
E38	39417	1	Ball Bearing Lock Nut



HORIZONTAL DRIVE

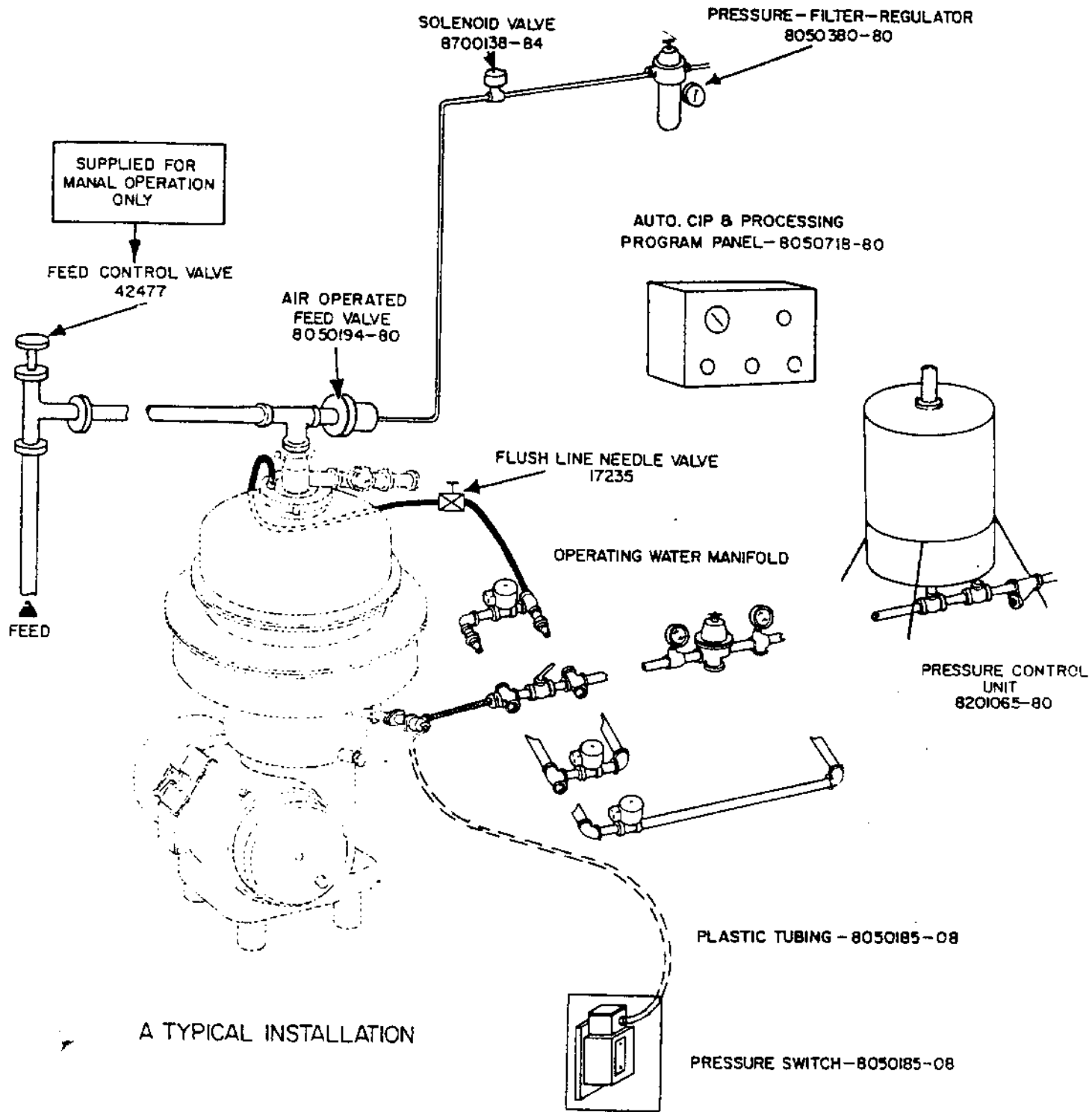
<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>
F1	39418	1	Lock Nut
F2	38159y	1	Lock Washer
F3	8200122-01	1	Spacing Sleeve
F4	37524	1	Ball Bearing - Inner (W.W. Shaft)
F5	25001	4	Screw
F6	9611	4	Lock Washer
F7	39287	1	End Shield
F8	8701470-01	1	Spacing Collar
F9	8701178-01	1	Worm Wheel
F10	37287	1	Inner Cap
F11	6478	3	Lock Washer
F12	32057	3	Nut
F13	8701444-08	1	Ball Bearings - Outer (W.W. Shaft)
F14	39446	1	Gasket
F15	37283	1	Outer Cap
F16	39091	3	Screw
F17	8200137-80	1	Worm Wheel Shaft & Friction Clutch Housing
F18	37292	1	Friction Clutch Hub
F19	6478	4	Lock Washer
F20	37203	4	Friction Weight Stop
F21	37206	4	Screw
F22	8701444-07	1	Ball Bearing - Inner (Hub)
F23	37210	1	Sleeve
F24	8701444-06	1	Ball Bearing - Outer (Hub)
- F25	38159y	1	Lock Washer
- F26	39418	1	Lock Nut
F27	37207	1	Gasket
F28	39380	4	Friction Clutch Weight
F29	37231	4	Screw
F30	39410	1	Lining
F31	37286	1	Clutch End Coupling
F32	6478	6	Lock Washer
F33	5583	6	Screw
F34	37215	1	Rubber Cushion
F35	39375	1	Set Screw
F36	8201036-80	1	Motor End Coupling
F37	8200370-01	1	Motor Adapter Plate
F38	9611	4	Lock Washer
F39	25001	4	Screw
F40	6478	6	Washer
F41	22250	6	Screw

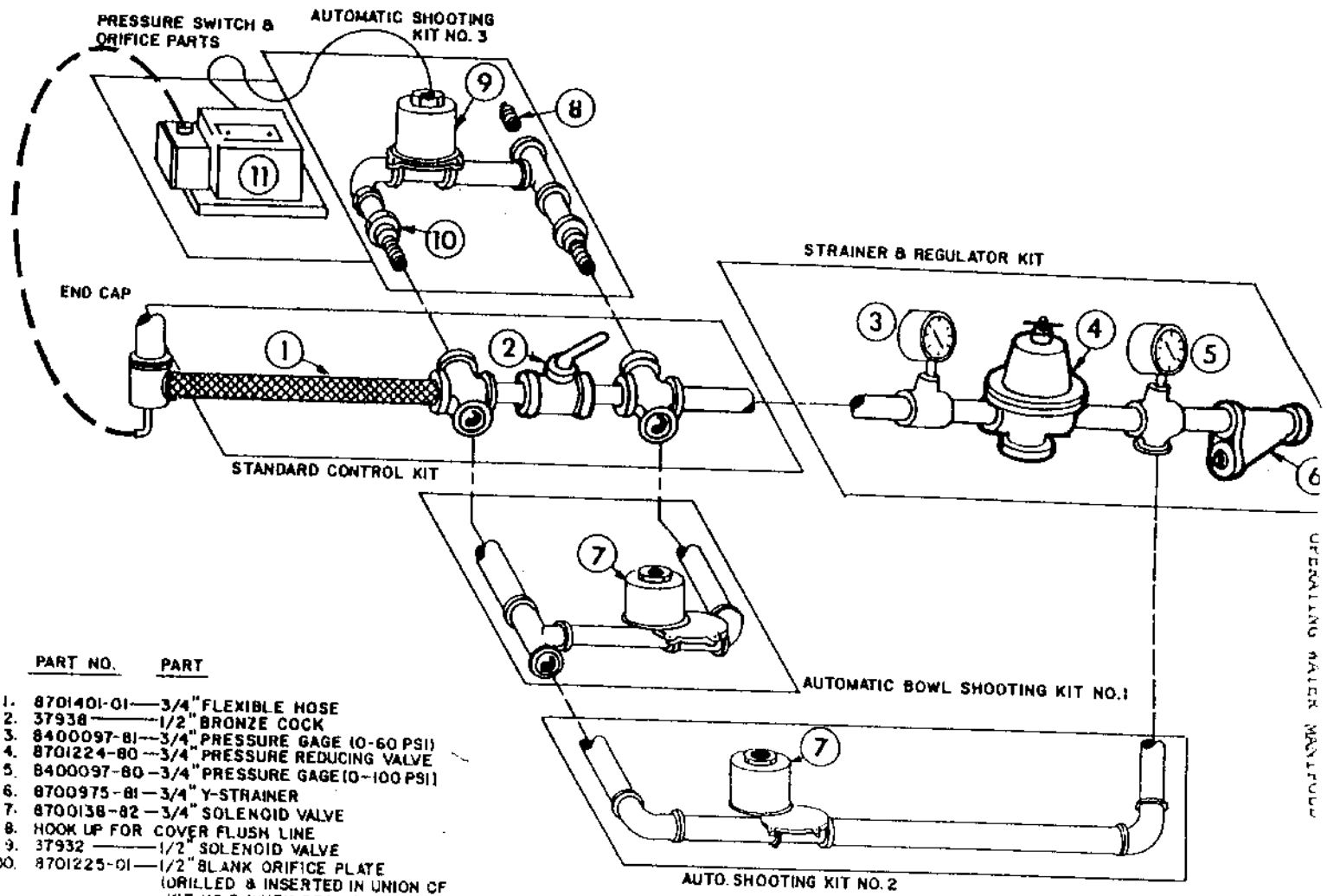


## FRAME PARTS

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>
G1	38920	4	Screw
G2	8200248-01	4	Washer
G3	8200106-80	1	Brake Mounting Plate
G4	39122	1	Handle Pin
G5	8200252-01	1	Cotter Pin
G6	8200282-01	1	Handle
G7	39096Y	1	Spring
G8	8200254-01	1	Stem
G9	39419	1	Pin
G10	39357	1	Shoe
G11	39358	1	Lining
G12	37231	3	Screw
G13	8200130-01	1	Oil Filter Plug
G14	8200129-01	1	Gasket
G15	38920	4	Screw
G16	8200126-01	1	Gasket
G17	8200125-01	1	Conduit Box Cover
G18	31468	1	Gasket
G19	8200128-01	1	Oil Drain Plug
G20	11545Y	1	Speed Indicator Pinion
G21	8200115-01	1	Plunger
G22	43083Y	1	Snap Ring
G23	43080Y	1	Shaft
G24	11553Y	1	Wheel Gear
G25	63796Y	1	Pin
G26	8200104-01	1	Bushing
G27	8200127-01	1	Gasket
G28	8200176-80	1	Worm Wheel Housing Cover
G29	21894	8	Screw
G30	8200179-01	1	Set Screw
G31	8200233-01	1	Lock Ring
G32	8200139-01	1	Rubber Membrane
G33	8200138-01	1	Pushbutton
G34	37819Y	1	Gasket
G35	43625Y	1	Oil Sight Glass
G36	35317	1	"O" Ring
G37	8200142-01	1	Rubber Seal Strip
G38	8200232-80	1	Worm Wheel Housing Hood
G39	34873	3	Screw
G40	8201377-80	1	Motor Cover
G41	34960	1	Screw
G42	8200142-02	1	Seal Strip
G43	8200530-80	1	Bracket
G44	20550	2	Washer
G45	37081	1	Spacer
G46	25193	2	Screw
G47	8200529-01	2	Spacer Nut
G48	8200855-01	1	Step Bearing
G49	39359	1	Gasket
G50	9611	1	Washer
G51	39098	1	Screw

AUTOMATIC EQUIPMENT



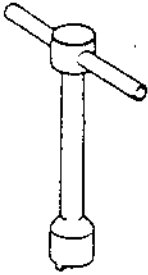


**PART NO.    PART**

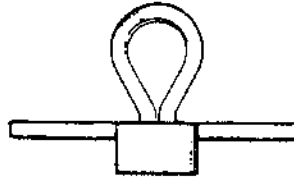
- 1. 8701401-01—3/4" FLEXIBLE HOSE
- 2. 37938—1/2" BRONZE COCK
- 3. 8400097-81—3/4" PRESSURE GAGE (0-60 PSI)
- 4. 8701224-80—3/4" PRESSURE REDUCING VALVE
- 5. 8400097-80—3/4" PRESSURE GAGE (0-100 PSI)
- 6. 8700975-81—3/4" Y-STRAINER
- 7. 8700138-82—3/4" SOLENOID VALVE
- 8. HOOK UP FOR COVER FLUSH LINE
- 9. 37932—1/2" SOLENOID VALVE
- 10. 8701225-01—1/2" BLANK ORIFICE PLATE  
(DRILLED & INSERTED IN UNION OF  
KIT NO. 3 WHEN REQUIRED)
- 11. 8050381-80—PRESSURE SWITCH

OPERATING WATER MANIFOLD

BOWL TOOLS



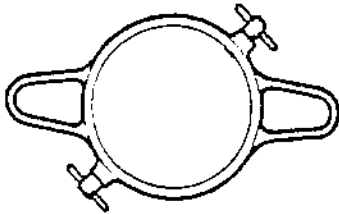
VALVE SEAT & HOLDER WRENCH  
8700226-80



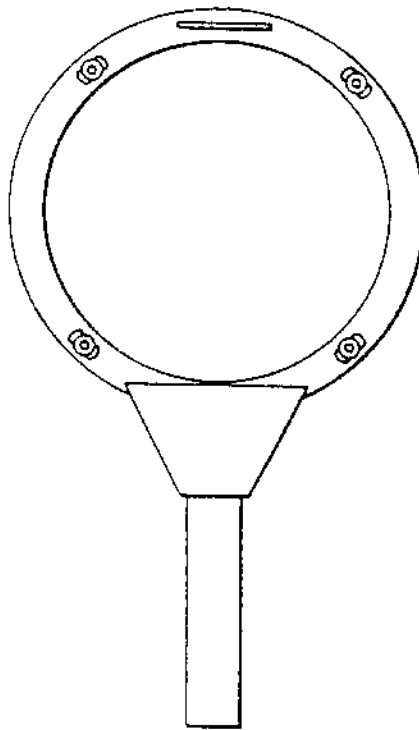
TUBULAR SHAFT LIFTER  
39507



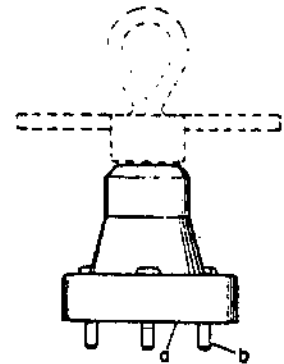
BOWL BRUSH  
8300636-01



BOWL COUPLING NUT WRENCH  
39526



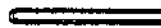
BOWL COUPLING RING WRENCH  
39403



a) BOWL SHELL LIFTER  
39498  
b) SHELL LIFTER SCREWS (3)  
39514



TUBULAR SHAFT CONE LIFTER  
& SPINDLE CAP NUT WRENCH  
39657

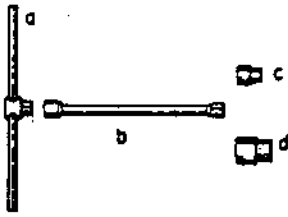


BOWL TOP SEAL  
DRIVE OUT PIN  
39537

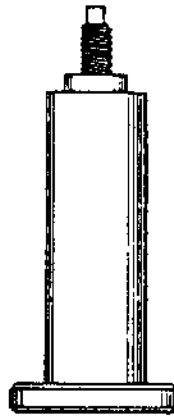


SLIDING BOWL BOTTOM LIFTER  
39517

DRIVE TOOLS



- a) SOCKET HANDLE  
39500
- b) SOCKET EXTENSION  
39501
- c) SOCKET 15mm (19/32")  
39486
- d) SOCKET 21mm (13/16")  
39487



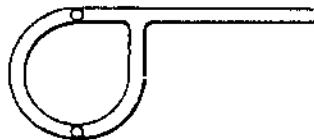
TOP BALL BEARING EXTRACTOR  
39495



CLUTCH BALL BEARING  
MOUNTING TOOL  
37469



BOWL SPINOLE LIFTER  
39515



BALL BEARING LOCK RING  
OIL FAN & PROTECTING  
COVER SPANNER WRENCH  
38433



WORM WHEEL SHAFT BALL  
BEARINGS JACK SCREW (2)  
39533



WORM WHEEL & CLUTCH BALL BEARING  
LOCK NUT WRENCH  
38544



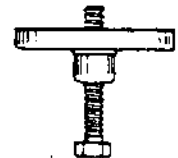
CLAMP PLATE PULL WORM  
QUILL BALL BEARING  
39532



TOP BEARING BUFFER WRENCH  
38548



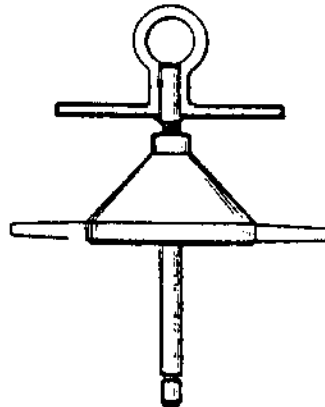
PUNCH  
38543



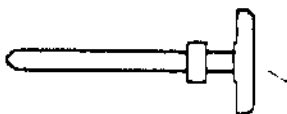
FRICTION CLUTCH HUB  
EXTRACTOR  
39055



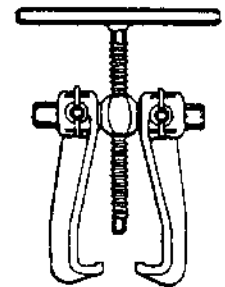
INLET & OUTLET CONNECTION  
ADJUSTING HOOK SPANNER  
39541  
BALL BEARING LOCK NUT  
HOOK SPANNER 39483



BOWL TOP LIFTER  
39918



OPERATING PARING DISC  
HGT. ADJUSTING TEMPLATE  
39519



BALL BEARING EXTRACTOR  
8700477-80

RECOMMENDED SPARE PARTS INVENTORY

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>	<u>Check List</u>
A2	37311	1	"O" Ring	
A4	39268	1	"O" Ring	
A20	39112	3	Rubber Base Cushion	
A23	8200113-01	3	Gasket	
A35	40217	1	Gasket	
A38	8200330-12	1	"O" Ring	
A39	8200153-01	1	Gasket	

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>	<u>Check List</u>
B6	39461	1	"O" Ring	
B8	42220	3	Clamp	
B10	40217	2	Gasket	
B12	8200286-01	1	Rubber Membrane	
B15	8200028-01	1	Washer	
B16	8200040-01	1	"O" Ring	
B20	39272	1	"O" Ring	

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>	<u>Check List</u>
C3	8200321-01	1	Gasket	
C7	8700212-01	1	Gasket	
C10	39026	1	Seal Ring	
C13	8700208-80	149	Intermediate Disc-Unsoldered Caulks	
C13	8700208-81	149	Intermediate Disc - Soldered Caulks	
C17	8200034-01	1	Gasket	
C19	39276	1	"O" Ring	
C21	39277	1	"O" Ring	
C23	39524	1	Nozzle, 3mm	
C24	525643-02y	1	"O" Ring	
C27	8700560-04	3	"O" Ring	
C29	8700225-01	3	Valve Plug	

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>	<u>Check List</u>
D4	39285	1	"O" Ring	
D6	39363	1	Gasket	
D10	39362	1	Gasket	
D16	39271	1	"O" Ring	
D18	39274	1	Seal Ring	
D19	39554	1	Snap Ring	
D22	20376	1	Gasket	
D24	35353	1	"O" Ring	

RECOMMENDED SPARE PARTS INVENTORY

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>	<u>Check List</u>
E3	39270	1	"O" Ring	
E6	38567	1	"O" Ring	
E11	36502	1	Gasket	
E14	38507	1	Upper Ball Bearing	
E19	37326	1	Lower Ball Bearing	
E24	36446	12	Spring	
E26	36452	6	Top Bearing Buffer	
E27	36453	6	Top Bearing Spring	
E31	39443	1	Drive Pin	
E32	39242	1	Upper Worm Quill Ball Bearing	
E34	37328	1	Lower Worm Quill Ball Bearing	
E36	37423	1	Spindle Ball Bearing	

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>	<u>Check List</u>
F13	8701444-08	1	Ball Bearing-Outer (W.W. Shaft)	
F14	39446	1	Gasket	
F22	8701444-07	1	Ball Bearing - Inner (Hub)	
F24	8701444-06	1	Ball Bearing - Outer (Hub)	
F27	37207	1	Gasket	
F30	39410	4	Lining	

<u>Ref.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>	<u>Check List</u>
G11	39358	1	Lining	
G12	37231	3	Screw	
G14	8200129-01	1	Gasket	
G16	8200126-01	1	Gasket	
G18	31468	1	Gasket	
G21	8200115-01	1	Plunger	
G22	43083Y	1	Snap Ring	
G24	11553Y	1	Wheel Gear	
G27	8200127-01	1	Gasket	
G32	8200139-01	1	Rubber Membrane	
G33	8200138-01	1	Pushbutton	
G34	37819Y	1	Gasket	
G36	35317	1	"O" Ring	
G37	8200142-01	1	Rubber Seal Strip	
G42	8200142-02	1	Seal Strip	
G49	39359	1	Gasket	

Miscellaneous Spare Parts

<u>Part No.</u>	<u>Qty.</u>	<u>Part Description</u>	<u>Check List</u>
37935	1	Flexible Hose	
8701027-80	1	De Laval Oil - 5 gal.	
8701028-80	1	De Laval Oil - 30 gal.	
36325	1	De Laval Stainless Steel Thread Lubricant	