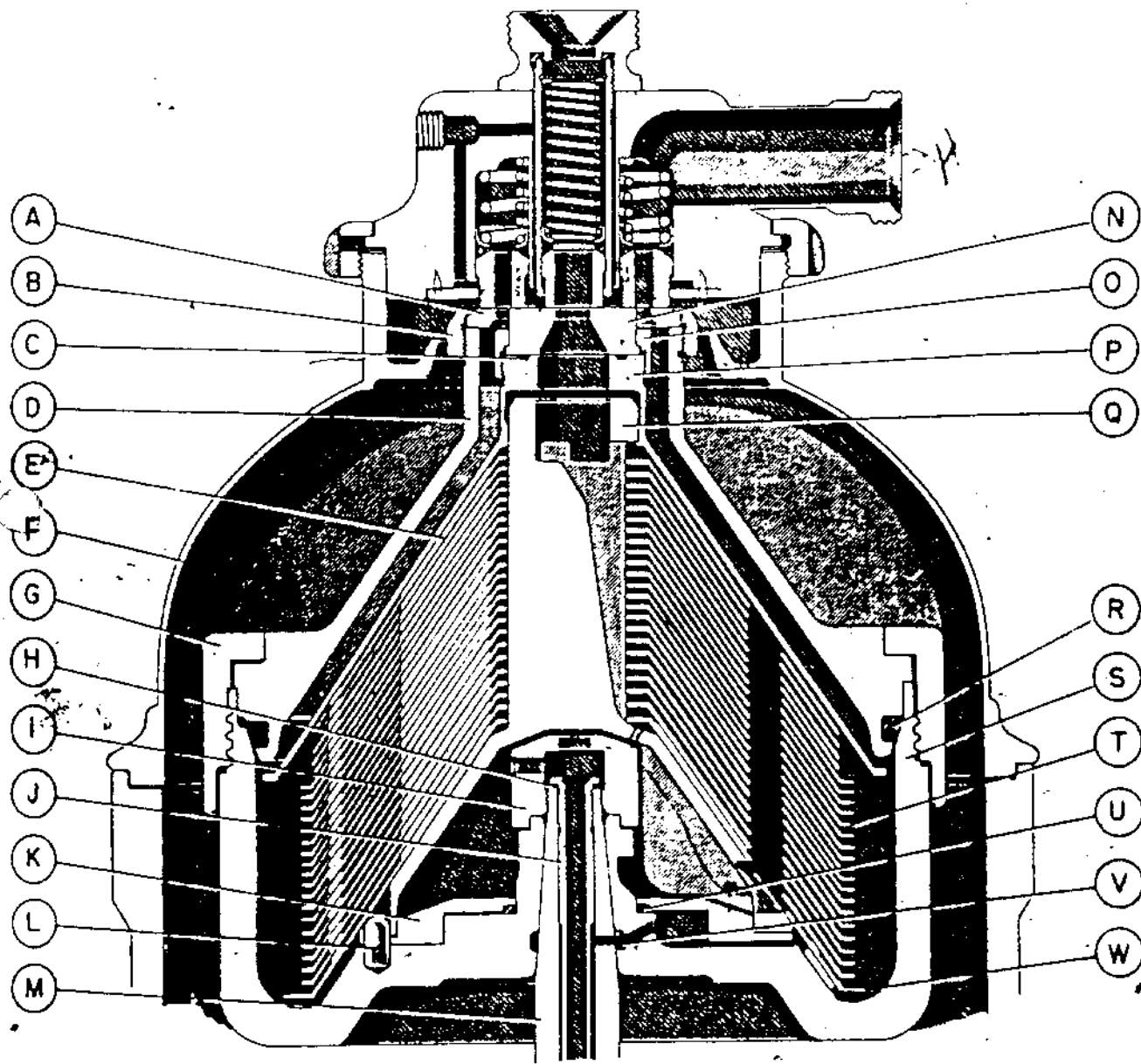


## **Hutchison-Hayes Separators, Inc.**

### **Model VO-244 Parts List With Diagrams**

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



SECTIONAL VIEW OF BOWL

Figure No. 6

## HERMETIC SEPARATOR

## SECTIONAL VIEW OF BOWL

LETTER	NAME	PART NO.
A	Bowl Top Wearing Ring . . . . .	56001-95
B	Bowl Top Coupling Nut . . . . .	34494
C	Top Disc Seal Ring . . . . .	19223
D	Bowl Top . . . . .	35153
E	Intermediate Top Disc . . . . .	35156
F	Frame Cover . . . . .	35145
G	Coupling Ring . . . . .	34707
H	Feed Tube Gasket . . . . .	56001-114
I	Bowl Spindle Cap Nut . . . . .	56001-104
J	Feed Tube . . . . .	56001-123
K	Seal Plate . . . . .	56001-103
L	Locating Pin - Disc Carrier . . . . .	56001-112
M	Bowl Spindle . . . . .	56001-105
N	Top Disc Wearing . . . . .	34681
O	Top Disc Coupling Nut . . . . .	34276
P	Top Disc . . . . .	35155
Q	Disc Carrier . . . . .	56001-107
R	Bowl Ring . . . . .	28062
S	Bowl Shell . . . . .	56001-108
T	Intermediate Disc . . . . .	35157
U	Seal Ring - Seal Plate . . . . .	22810
*V	Seal Ring - Bowl Shell Nave . . . . .	56001-139
W	Bottom Disc . . . . .	56001-109

\*When it is desired to operate the bowl without water flush, this seal ring should be inserted in the recess on the inside of the bowl nave. This will shut off the water passages from the bowl spindle into the bowl shell.



A



B



C



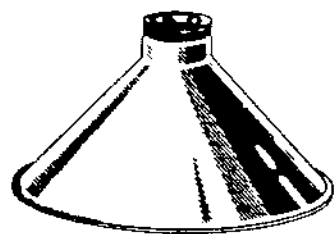
D



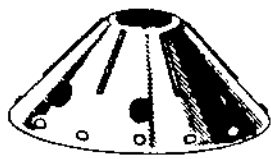
E



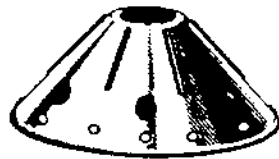
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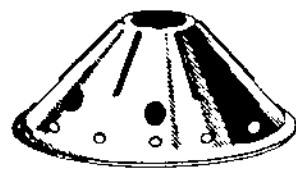
G



H



I



J



K



L

BOWL



M



N



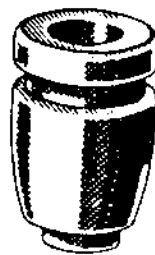
O



O



P



Q



R

FRAME FOOT

LETTERS, NAMES AND PART NUMBERS

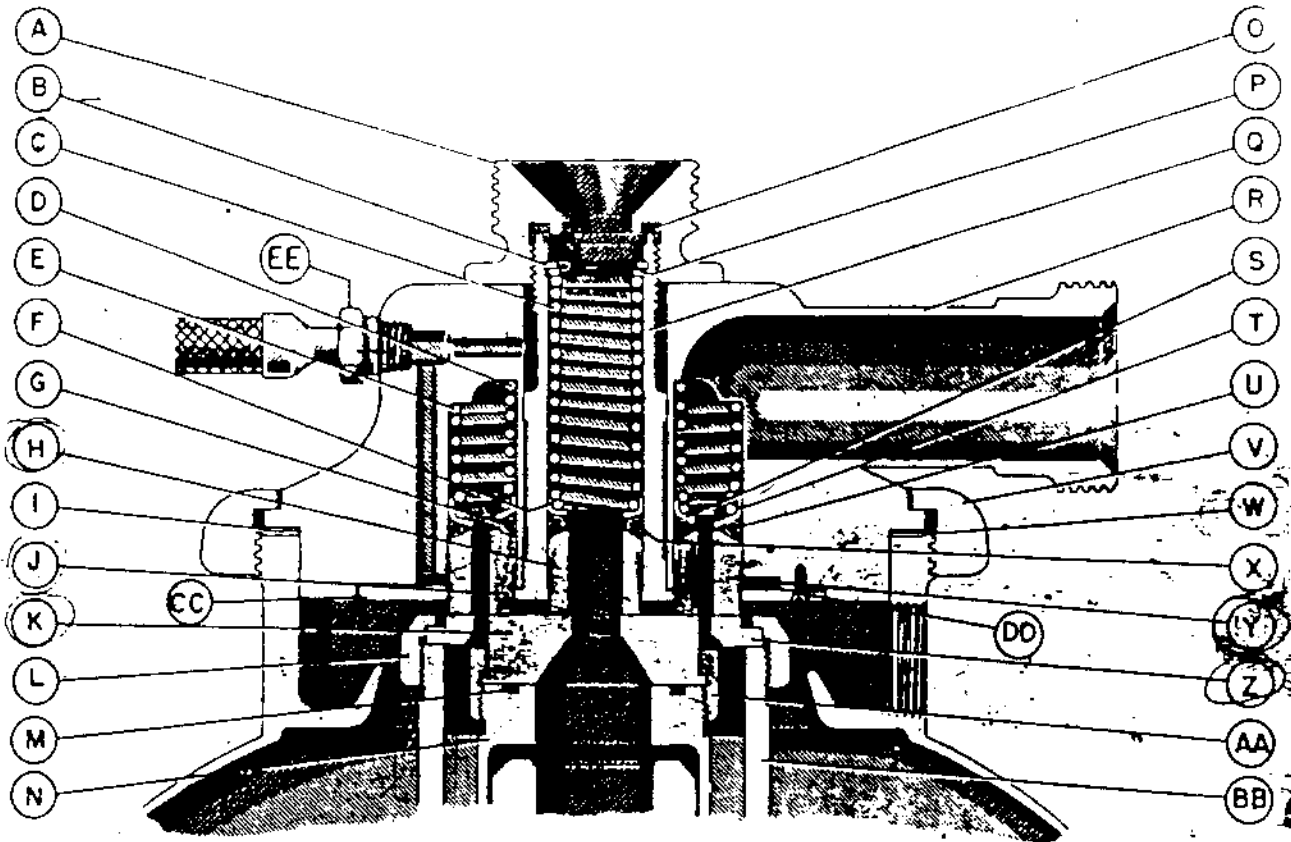
BOWL

A	Bowl Ring . . . . .	28062
B	Bowl Top Coupling Nut . .	34494
C	Bowl Top Wearing Ring . .	56001-95
D	Top Disc Coupling Nut . .	34276
E	Top Disc Wearing Ring . .	34681
F	Top Disc Seal Ring . . . .	19223
G	Top Disc . . . . .	35155
H	Intermediate Top Disc . .	35156
I	Intermediate Disc . . . .	35157
J	Bottom Disc . . . . .	56001-109
K	Seal Plate Seal Ring . . . .	22810
L	*Bowl Shell Nave Seal Ring .	56001-139

FRAME FOOT

M	Set Screw . . . . .	31192
N	Shim Plates . . . . .	30851
O	Jam Nuts. . . . .	3087
P	Washer . . . . .	1/2" Std.
Q	Frame Foot . . . . .	30170
R	Foundation Stud . . . . .	30174

\*When it is desired to operate the bowl without water wash, this seal ring should be inserted in the recess on the inside of the bowl nave. This will shut off the water passages from the bowl spindle into the bowl shell.



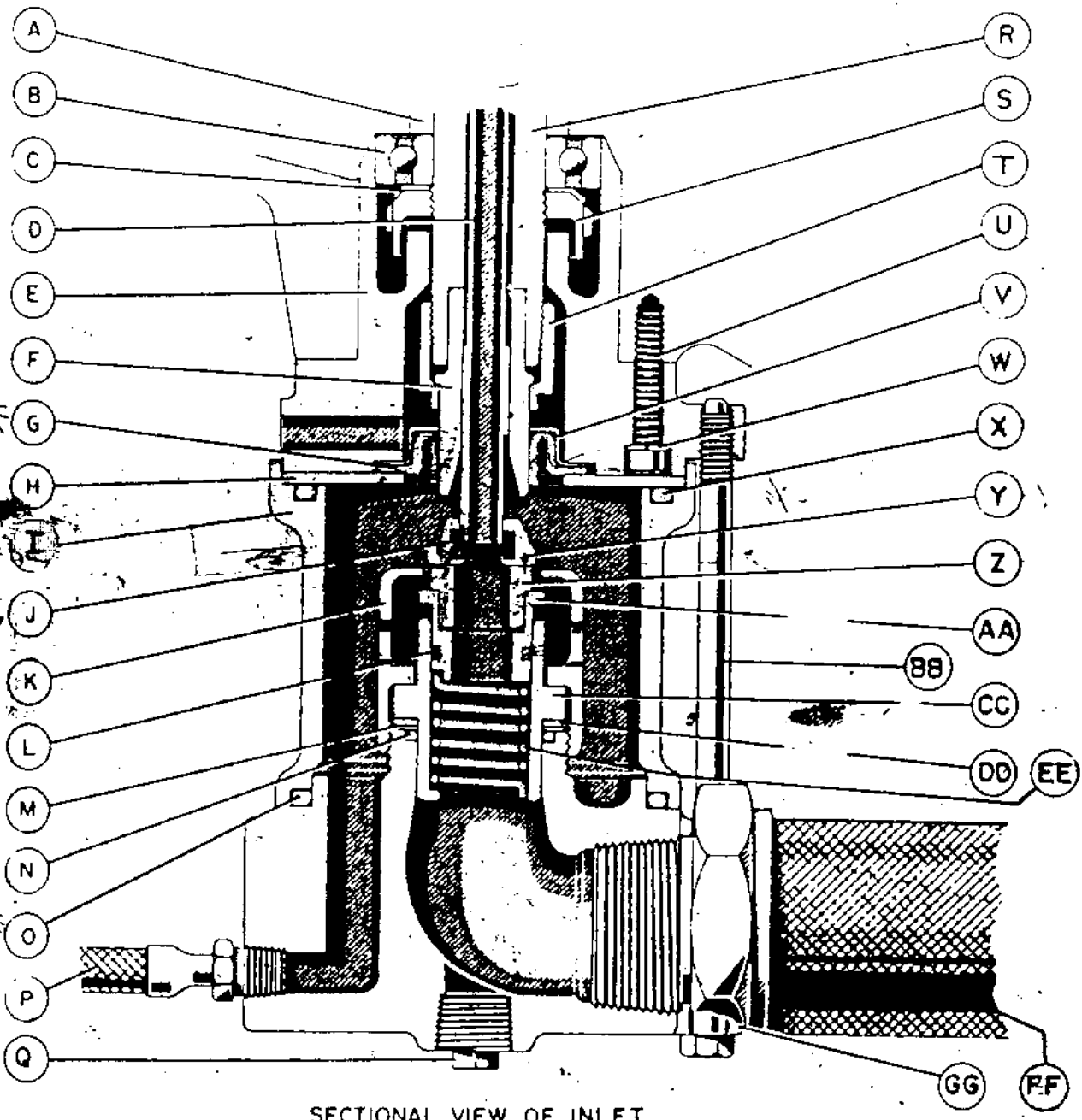
SECTIONAL VIEW THRU THE OUTLETS

Figure No. 7

ASSEMBLING THE SEPARATOR

SECTION THRU OUTLET PARTS

LETTER	NAME	PART NO.
A	Inner Sleeve Nut . . . . .	56001-22
B	Retaining Ring - Tru-Arc #5008-100 . . . . .	---
C	Inner Spring . . . . .	56001-75
D	Middle Spring . . . . .	56001-74 8353
E	Outer Spring . . . . .	56001-73
F	Inner Gland . . . . .	56001-84
G	Middle Rubber Ring . . . . .	56001-79 6329
H	Inner Wearing Collar . . . . .	56001-78 9204
I	Height Adjusting Washer . . . . .	35161
J	Middle Wearing Collar . . . . .	56001-77
K	Top Disc Wearing Ring . . . . .	34681
L	Bowl Top Coupling Nut . . . . .	34494
M	Top Disc Seal Ring . . . . .	19223
N	Top Disc . . . . .	35155
O	Seal Ring - Outlet Connection . . . . .	56001-9
P	Stop Ring . . . . .	56001-32
Q	Inner Sleeve . . . . .	56001-88
R	Outlet Connection . . . . .	56001-86
S	Middle Gland . . . . .	56001-83
T	Outer Gland . . . . .	56001-82
U	Outer Rubber Ring . . . . .	56001-81
V	Coupling Ring - Outlet Connection . . . . .	35159
W	Height Adjusting Washer . . . . .	35161
X	Inner Rubber Ring . . . . .	56001-80
Y	Outer Wearing Collar . . . . .	56001-76
Z	Bowl Top Wearing Ring . . . . .	56001-95
AA	Top Disc Coupling Nut . . . . .	34276
BB	Bowl Top . . . . .	35153
CC	Retaining Ring - Outlet Wearing Collar . . . . .	53005-88
DD	Retaining Ring Screw . . . . .	34480
EE	Flexible Hose . . . . .	34881



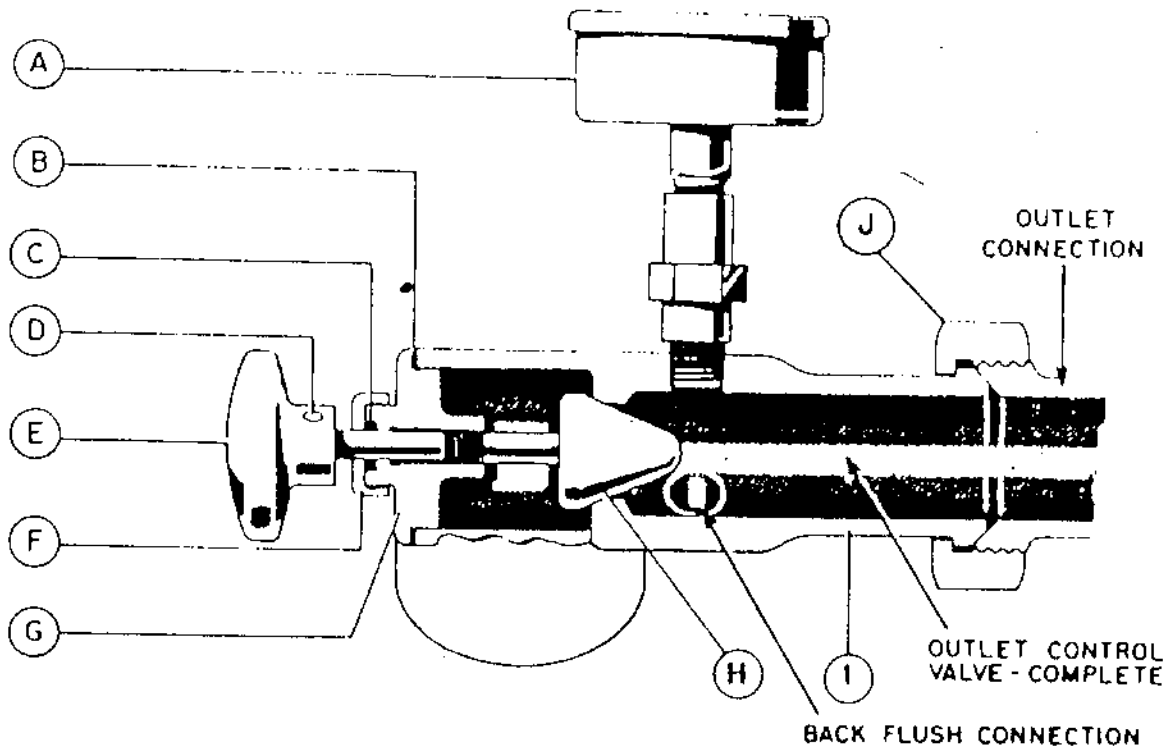
SECTIONAL VIEW OF INLET  
 Figure No. 8

HERMETIC SEPARATOR

LIST OF PARTS FOR SECTIONAL VIEW OF INLET

LETTER	NAME	PART NO.
A	Worm Screw Shell . . . . .	25877
B	Lower Ball Bearing . . . . .	28985
C	Lock Washer . . . . .	24588
D	Feed Tube . . . . .	56001-123
E	Step Bearing . . . . .	56001-121
F	Inlet Nozzle . . . . .	56001-118
G	Water Inlet Seal . . . . .	56001-116
H	Seal Plate . . . . .	56001-101
I	Water Chamber . . . . .	56001-90
J	Rubber Seal Ring - Seal Seat . . . . .	56001-122
K	Lock Nut . . . . .	56001-98
L	Seal Ring . . . . .	56001-2
M	Height Adjusting Washer 1 mm . . . . .	56001-99
N	Seal Ring - Inlet Connection . . . . .	56001-45
O	Seal Ring - Water Chamber . . . . .	1413
P	Flexible Hose . . . . .	34881
Q	Pipe Plug . . . . .	22281
R	Bowl Spindle . . . . .	56001-105
S	Lock Nut - Lower Ball Bearing . . . . .	28685
T	Inlet Nozzle Lock Nut . . . . .	56001-119
U	Screw - Step Bearing - 1/4" -20 NC Sock Hd 1 1/2" Lg.	
V	Reinforcing Cup . . . . .	25025
W	Washer . . . . .	7460
X	Seal Ring - Water Chamber . . . . .	1413
Y	Seal Seat . . . . .	56001-120
Z	Wearing Collar . . . . .	56001-25
AA	Wearing Collar Sleeve . . . . .	56001-24
BB	Screw - Inlet Connection . . . . .	56001-115
CC	Seal Holder . . . . .	56001-97
DD	Height Adjusting Washer 2 mm . . . . .	56001-100
EE	Seal Spring . . . . .	56001-26
FF	Inlet Hose . . . . .	32942
GG	Inlet Connection . . . . .	56001-89

*\* No longer available to invent*

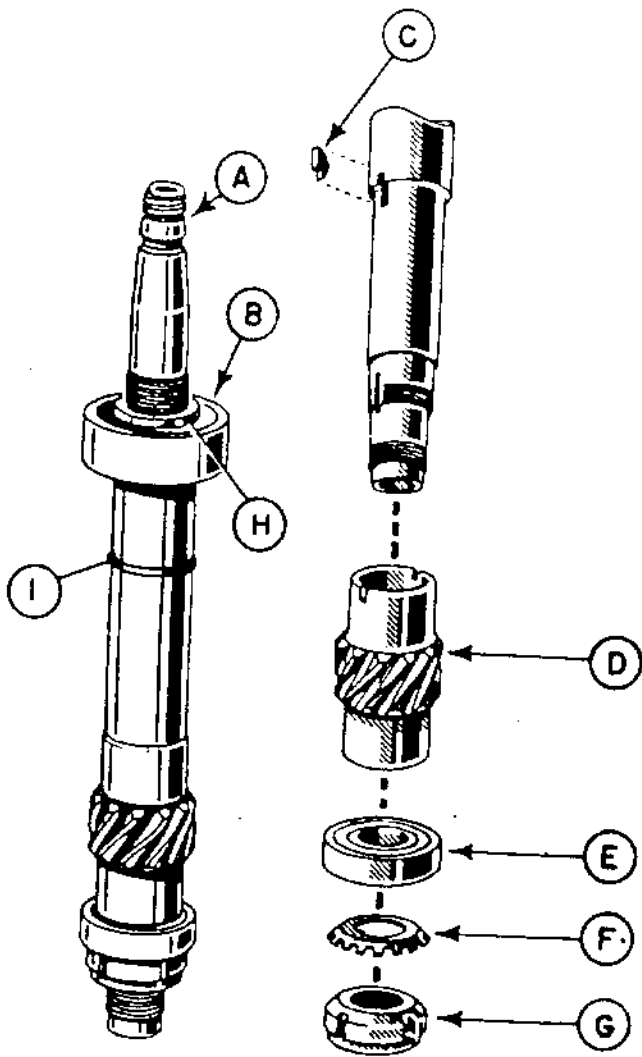


LIGHT PHASE OUTLET CONTROL VALVE PARTS

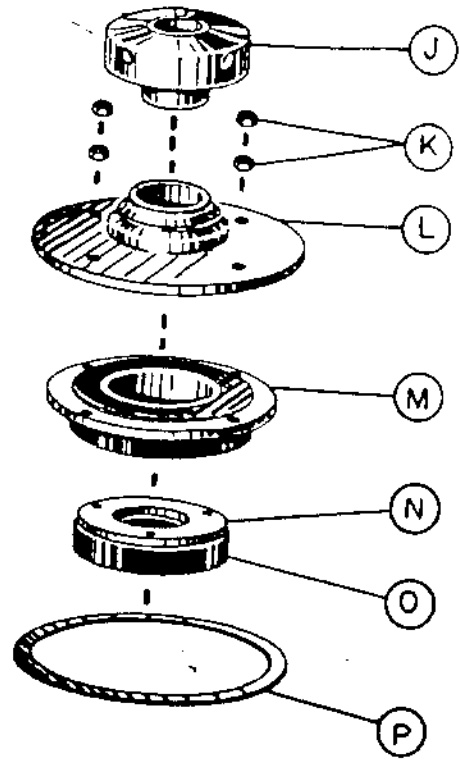
LETTERS, NAMES AND PART NUMBERS

OUTLET CONTROL VALVE

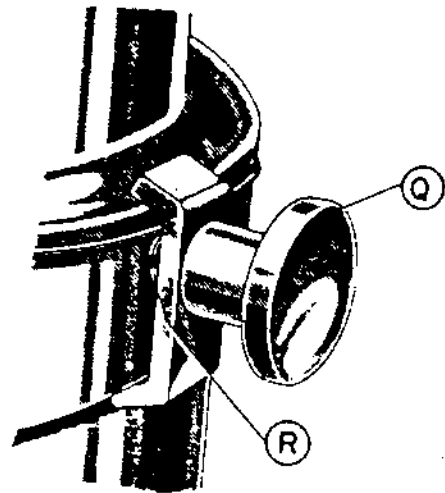
	Outlet Control Valve - Complete	35150
A	Pressure Gauge . . . . .	34587
B	Nut and Body Gasket . . . . .	34586
C	Valve Stem Seal Ring . . . . .	34585
D	Pin - Handle . . . . .	34874
E	Valve Handle . . . . .	34582
F	Valve Stem Seal Nut . . . . .	34591
G	Body Nut . . . . .	34381
H	Valve . . . . .	34368
I	Outlet Control Valve Body . . . . .	35151
J	Sanitary Union Nut . . . . .	17296



**BOWL SPINDLE**



**TOP BEARING**



**COVER CLAMP**

LETTERS, NAMES AND PART NUMBERS

BOWL SPINDLE

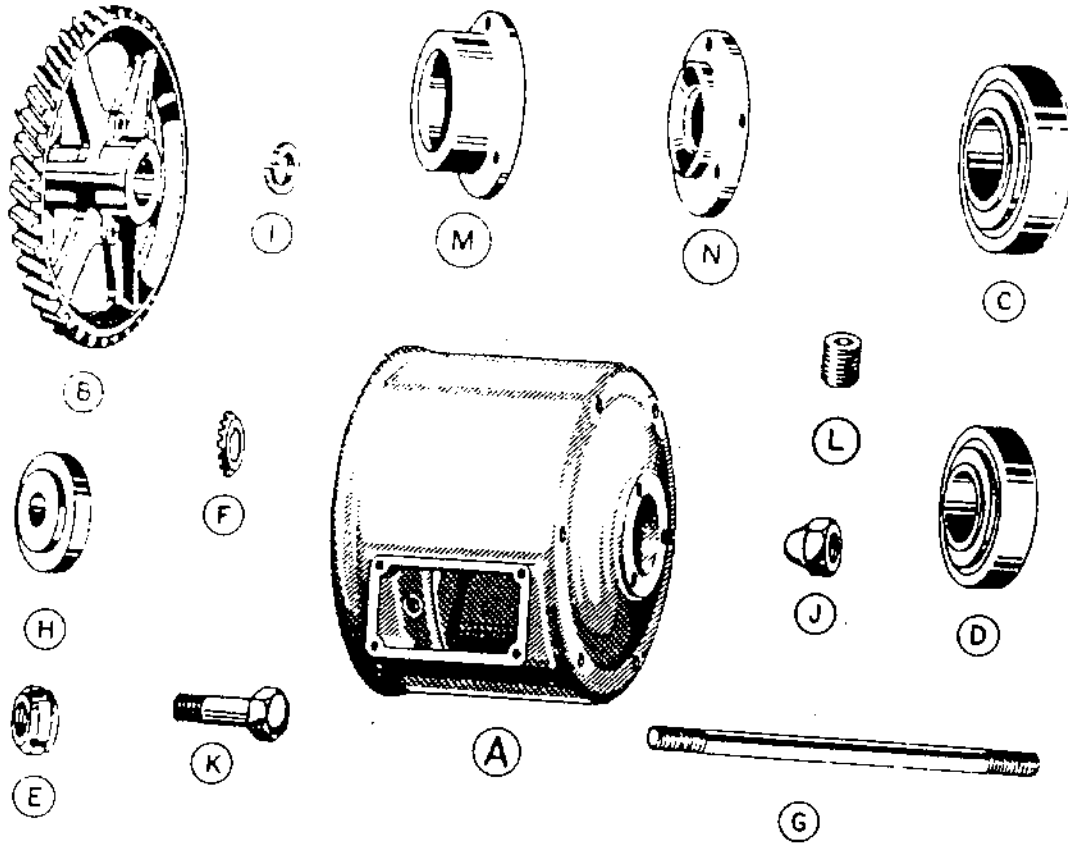
A	Bowl Spindle . . . . .	56001-105
B	Upper Ball Bearing . . . . .	33748
C	Key . . . . .	30140
D	Worm Screw Shell . . . . .	25877
E	Lower Ball Bearing . . . . .	28985
F	Lock Washer . . . . .	24588
G	Lock Nut . . . . .	28685
H	Lock Nut . . . . .	32503
I	Throw-Off Ring . . . . .	34311
	Feed Tube . . . . .	56001-123
	Feed Tube Gasket . . . . .	56001-114

TOP BEARING

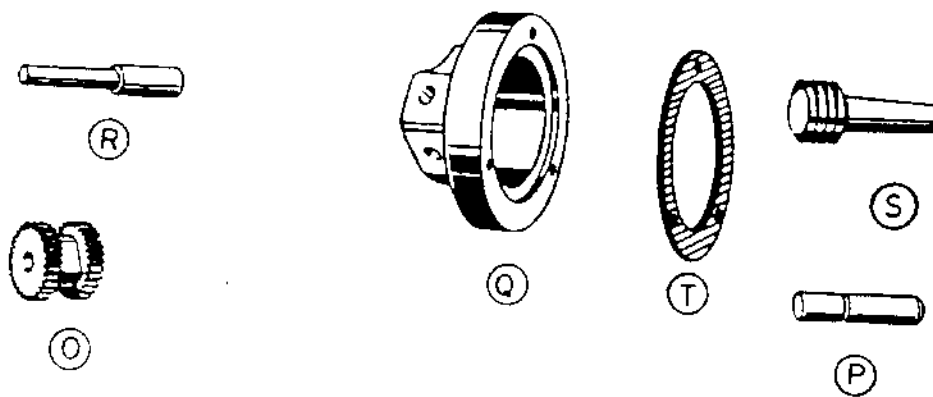
J	Top Bearing Protecting Cover	32502
K	Cap Stop Nut . . . . .	31647
L	Top Bearing Plate . . . . .	30303
M	Top Bearing Rubber Mount .	30302
N	Top Bearing Cushion Plate .	30305
O	Top Bearing Rubber Cushion .	30306
P	Top Bearing Gasket . . . . .	30307
	Top Bearing Plate Stud . . .	31621

COVER CLAMP

Q	Cover Clamp Handwheel (Complete)	34223
R	Stud . . . . .	33168



MOTOR PARTS



SPEED INDICATOR PARTS

PART FOR REPAIRS

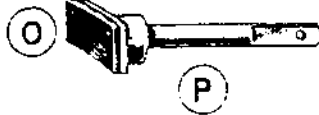
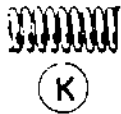
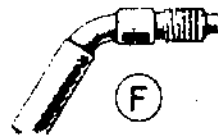
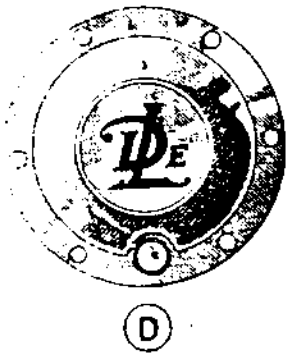
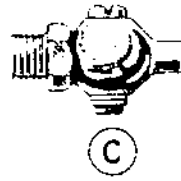
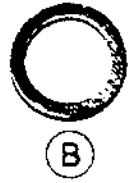
LETTERS, NAMES AND PART NUMBERS

MOTOR

A	Motor Housing . . . . .	31865
B	Worm Wheel . . . . .	30142
C	Inner Ball Bearing . . . . .	29987
D	Outer Ball Bearing . . . . .	29988
E	Lock Nut - Ball Bearing . . . . .	24587
F	Lock Washer - Ball Bearing . . . . .	24588
G	Stud - Motor End of Frame . . . . .	31012
H	Clamp Washer . . . . .	31899
I	Lock Washer . . . . .	9611
K	Screw . . . . .	44
	Stator - Louis Allis - . . . . .	56001-206
	Rotor - Louis Allis . . . . .	56001-207
L	Screw - Motor Housing and Stator . . . . .	32377
	Screw - Lock - Stator Set Screw . . . . .	34633
M	Bushing - Frame . . . . .	33119
N	Catcher - Oil . . . . .	33120

SPEED INDICATOR

O	Gear . . . . .	30826
P	Plunger . . . . .	30817
Q	Case . . . . .	30816
R	Gear Shaft . . . . .	30818
S	Worm . . . . .	30814
T	Gasket . . . . .	33142



FRAME PARTS

HERMETIC SEPARATOR

LETTERS, NAMES AND PART NUMBERS

FRAME

A	Oil Filler Cap . . . . .	32316
B	Oil Filler Cap Washer . . . . .	31193
C	Frame Drain Cock . . . . .	31677
D	Worm Wheel Housing Cap . . . . .	30372
E	Oil Sight Glass . . . . .	29447
F	Bowl Lock Screw . . . . .	31073
G	Bowl Lock Screw Bushing . . . . .	31076
H	Brake Bushing Lock Nut . . . . .	33166
H	Bowl Lock Screw Bushing Lock Nut	28732
I	Washer Bowl Lock Screw . . . . .	30524
J	Worm Wheel End of Frame Screw .	31012
K	Brake Spring . . . . .	33503
L	Brake Lever Anti-Rattle Spring . .	29364
M	Vent and Drain Plug . . . . .	33289
N	Brake Bushing . . . . .	28733
O	Brake Lining . . . . .	33667
P	Brake Plunger . . . . .	33507
Q	Brake Lever Cross Pin . . . . .	33505
R	Brake Lever . . . . .	33502



## LETTERS, NAMES AND PART NUMBERS

## TOOLS

T1	Socket Wrench Handle . . . . .	30562
T2	Socket Wrench 15/32" Hex. . . . .	30563
T3	Socket Wrench 17/32" Hex. . . . .	30654
T4	Socket Wrench 23/32" Hex. . . . .	30655
T5	Socket Wrench 25/32" Hex. . . . .	30656
T6	Coupling Ring Wrench - Bowl . . . . .	18701
T7	Bowl Spindle Protecting Cover . . . . .	28769
T8	Disc Carrier Lifter . . . . .	19713
T9	Disc Carrier Stand . . . . .	19161
T11	Bowl Nut Wrench . . . . .	31356
T12	Inlet Nozzle Lock Nut Wrench . . . . .	30749
T13	Open End Wrench 1 1/2" . . . . .	34250
T14	Bowl Shell Lifter . . . . .	27543
T15	Lifter Handle . . . . .	19715
T16	Coupling Ring Wrench - Outlet Connection . . . . .	35158
T17	Top of Bowl Spindle Protecting Plug . . . . .	56001-141
T18	Wrench - Inner Sleeve Nut . . . . .	56001-142
T19	Top Bearing Protecting Cover Wrench . . . . .	28769
T20	Lower Ball Bearing Extractor . . . . .	28929
T21	Socket Wrench 19/32" Hex. . . . .	30564
T22	Bowl Spindle Brush . . . . .	16287
T23	Lower Ball Bearing Driver Tube . . . . .	28928
T24	Bowl Scraper . . . . .	15582
T25	Upper Ball Bearing Driver Block Tube . . . . .	16077
T26	Frame Foot Locating Template . . . . .	30534
T27	Jam Nut Wrench . . . . .	30748
T28	Motor Shaft Bearing Extractor . . . . .	31242
T29	Motor Shaft Bearing Driver Tube . . . . .	31244
T30	Speed Indicator Worm Extractor Plate . . . . .	31243
T31	Socket Screw Key (Frame Foot) . . . . .	31648
T32	Socket Screw Key (Stators) . . . . .	31649
T33	Top Disc Nut Wrench . . . . .	34677
T34	Bowl Top Nut Wrench . . . . .	34425
T35	Worm Wheel Extractor . . . . .	15868
T36	Worm Wheel Extractor Plug . . . . .	28931
T37	Wrench - Feed Tube . . . . .	56001-130