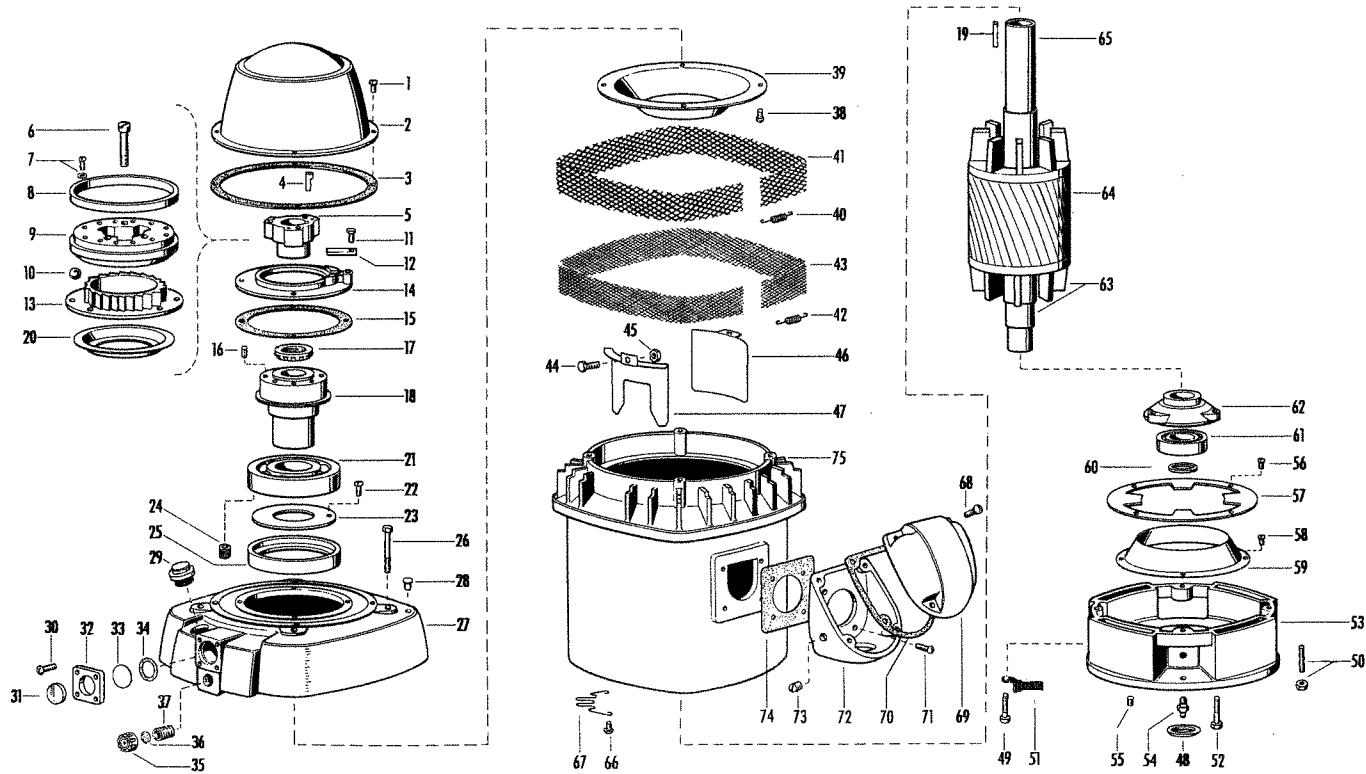


Parts List
U. S. Vertical Hollowshaft Motors
WEATHER PROTECTED - TYPE I

TYPE RU
HIGH THRUST

FRAMES A286U-1446



ITEM NO.	QTY.	NAME OF PART
48	1	Slinger
49	4	Screw (Lower Bracket) (Frames A286U through A326U; Frames 405U & larger)
50	4	Stud & Nut (Lower Bracket) (Frames 326U through A405U)
51	4	Lower Screen
52	3	Screw & Lockwasher (Bearing Cap) (Qty. 4 on Frame 1446 Only without Lockwasher)
53	1	Lower Bracket
54	1	Grease Fitting
55	1	Plug
56	4	Screw & Washer (Air Deflector Ring) (Frames A286U through A365U)
57	1	Air Deflector Ring (Frames A286U through A365U Only)
58	4	Screw or Sem (Air Deflector) (With Lockwasher on Frames A405U & smaller)
59	1	Air Deflector (Lower)
60	1	Retaining Ring
61	1	Ball Bearing
62	1	Bearing Cap
63	1	Rotor Assembly (Includes Items 64 and 65)
64	1	Rotor Core
65	1	Motor Shaft
66	4	Screw & Lockwasher (Lower Grill) (Frames A286U through A405U; Qty. 8 for Frames 405U & larger)

ITEM NO.	QTY.	NAME OF PART
67	4	Lower Grill
68	4	Screw (Outlet Box Cover)
69	1	Outlet Box Cover
70	1	Gasket (Outlet Box Cover) (Without Lockwasher for Frames A286U through A365U)
71	4	Screw & Lockwasher (Outlet Box Base) (Without Lockwasher for Frames A286U through A365U)
72	1	Outlet Box Base
73	1	Pipe Plug (Outlet Box Base)
74	1	Gasket (Outlet Box Base)
75	1	Wound Stator Assembly

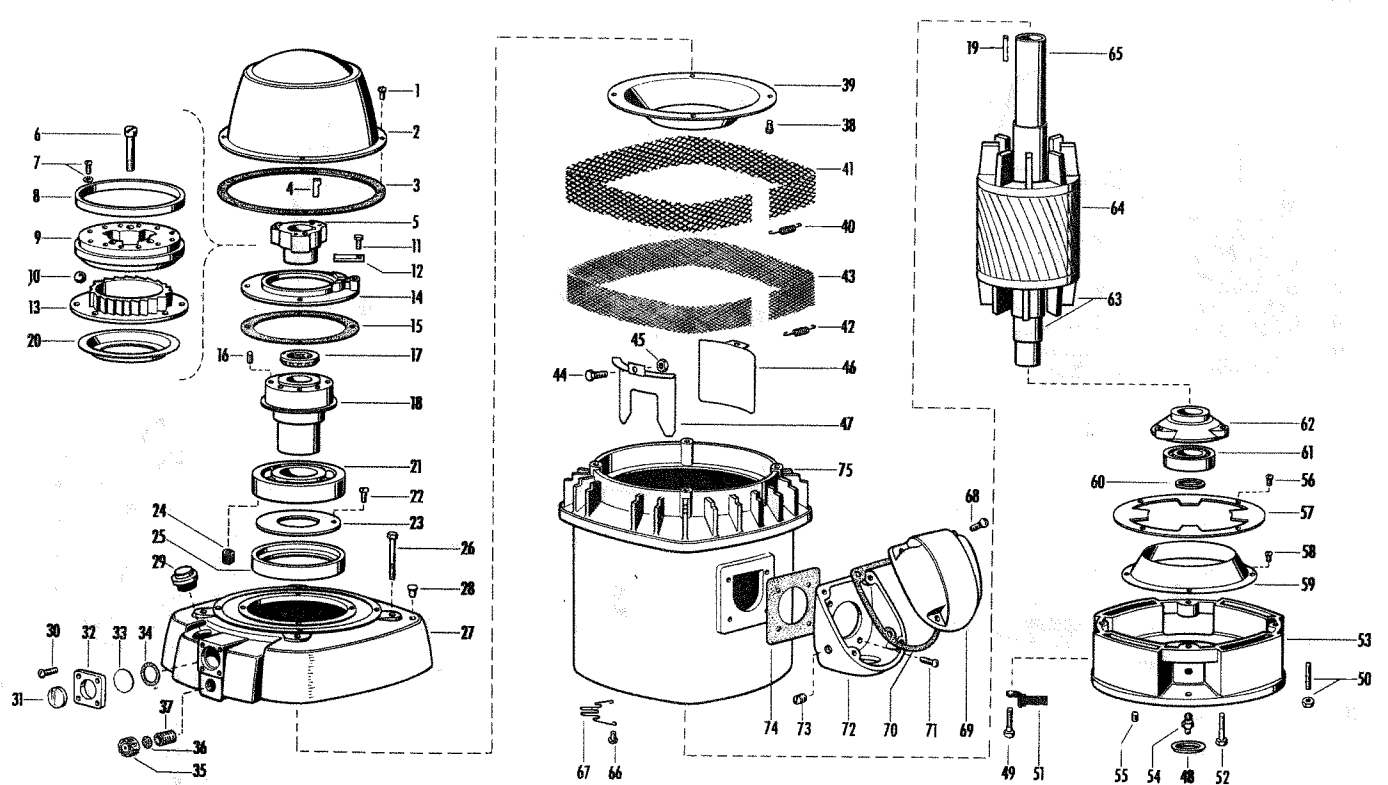
Motor Serial No.	Type
Frame No.	Spec. No.
When ordering parts, specify motor serial number, complete frame number, name of part and complete part number. The complete part number consists of the Parts List Section and Page Number as well as the Item Number as follows:	
Quantity 1, Bearing Cap, Part Number 769 - 46 - 62	Section Number Page No. Item Number

LS, #
1-2-3

Parts List
U. S. Vertical Hollowshaft Motors
WEATHER PROTECTED - TYPE I

TYPE RU
HIGH THRUST

FRAMES A286U-1446



ITEM NO.	QTY.	NAME OF PART
1	3	Screw (Canopy Cap)
2	1	Canopy Cap
3	1	Gasket (Canopy Cap) (Frames 1445 & 1446 Only)
4	1	Key
5	1	Drive Coupling
When Ball Type Nonreverse Ratchet is supplied, omit Items 12 & 14; add Items 6, 7, 8, 9, 10 & 13. Item 20 is used only on Frames 405U, A444U & A445U.		
6	3	Screw (Rotating Ratchet)
7	6	Screw, Lockwasher & Washer (Washer not used on Frames A286U through A326U)
8	1	Ball Retaining Ring
9	1	Rotating Ratchet
10	12	Steel Balls
11	4	Screw (Locking Arm & Dust Ring or Stationary Ratchet)
12	1	Locking Arm
13	1	Stationary Ratchet
14	1	Dust Ring
15	1	Gasket
16	3	Pin
17	1	Locknut & Lockwasher
18	1	Bearing Mounting
19	1	Key (Qty. 2 used on Frame 1446 Only)
20	1	Oil Baffle (Frames A286 through A405U; Frames 1445 & 1446)
21	1	Bearing (Upper)
22	1	Screw & Washer (Metering Plate) (Frames 405U & larger)
23	1	Metering Plate (Frames 405U & larger)
24	5	Spring (Frames 1445 & 1446 Only)

ITEM NO.	QTY.	NAME OF PART
25	1	Bearing Spacer (Frames A286U through A405U; Frames 1445 & 1446 Only)
26	4	Screw (Upper Bracket to Frame)
27	1	Upper Bracket Assembly
28	2	CAPLUG
29	1	Plug (Oil Fill)
30	4	Screw (Sight Gauge Rim to Bracket)
31	1	Sight Gauge Window
32	1	Sight Gauge Rim
33	1	Reflector Disc
34	2	Gasket (Sight Gauge Rim)
35	1	Drain Cap Assembly
36	1	Gasket (Drain Cap)
37	1	Nipple (Oil Drain)
38	4	Sem (Upper Air Deflector)
39	1	Air Deflector (Upper)
40	1	Spring (Grill)
41	1	Upper Grill
42	1	Spring (Screen)
43	1	Upper Screen
Items 44 through 47 used on Frames A286U through A405U Only		
44	4	Screw (Air Baffles)
45	1	Hex. Nut & Washer (Lead Air Baffle)
46	3	Air Baffle
47	1	Air Baffle (Lead)

Effective
May 5, 1964

Supersedes
February 18, 1963

HS, # 1-2-3 29-1 Parts List 29-6
 1504P A1507PH 1200 RPM
 HU 1358416

U. S. Vertical Hollowshaft Motors
 HIGH THRUST

TYPE HU
 FRAMES 1504P & LARGER

Section Page **769**
 29.5
 Effective March 19, 1963
 New Sheet

Motor Serial Number _____

Frame Number _____

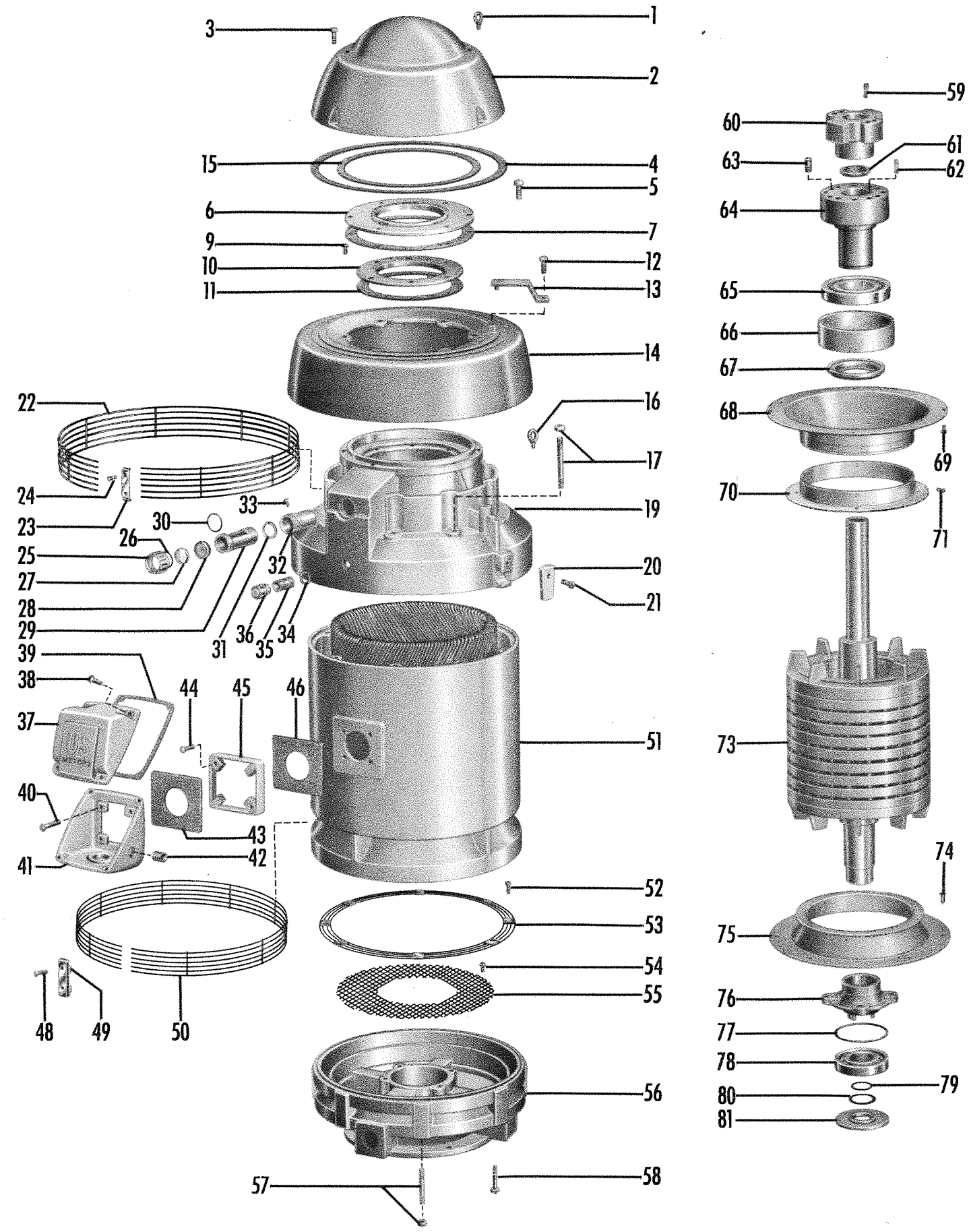
ITEM NO.	QTY.	NAME OF PART
1	2	Eyebolt (Canopy Cap) (Used on 1689 frame only)
2	1	Canopy Cap
3	4	Hex. Head Captive Screw
4	1	Gasket (Canopy Cap)
5	6	Hex. Head Cap Screw (Bracket Cover to Bracket)
6	1	Dust Ring
7	1	Gasket (Dust Ring)
8	4	Hex. Head Cap Screw (Dust Ring) (Not used on 1689 frame) (Not illustrated)
9	4	Round Head Screw (Oil Baffle) (Qty. 6 on 1689 frame)
10	1	Oil Baffle
11	1	Gasket (Oil Baffle)
12	1	Screw (Locking Arm Assembly)
13	1	Locking Arm Assembly
14	1	Bracket Cover
15	1	Gasket (Bracket to Cover)
16	2	Eyebolt (Upper Bracket) (Used on 1689 frame only)
17	8	Stud and Hex. Nut (Bracket to Frame) (Used on 1689 frame only)
18	4	Hex. Head Cap Screw (Bracket to Frame) (Not used on 1689 frame) (Not illustrated)
19	1	Upper Bracket Assembly
20	2	Safety Plate
21	2	Fill Head Screw (Safety Plate)
22	1	Grill (Upper)
23	5	Grill Cleat (Upper)
24	10	Round Head Screw and Lockwasher (Upper Grill)
25	2	Ferrule (Upper and Lower)
26	2	"O" Ring (Oil Fill) (Upper and Lower)
27	2	Sight Gauge Window (Upper and Lower)
28	2	Oil Fill Drawer Filter Assembly (Upper and Lower)
29	2	Oil Fill Drawer (Upper and Lower)
30	2	"Oil" Ring (Upper and Lower)
31	2	Lock Ring (Upper and Lower)
32	2	Oil Fill Drawer Housing (Upper and Lower)
33	4	Flat Head Screw (Upper and Lower)
34	1	Gasket (Oil Drain) (Upper and Lower)
35	2	Nipple (Oil Drain) (Upper and Lower)
36	2	Drain Cup Assembly (Upper and Lower)
37	1	Outlet Box Cover
38	4	Hex. Head Cap Screw (Cover to Base)
39	1	Gasket (Base to Cover)
40	4	Hex. Head Cap Screw and Lockwasher (Base to Frame)
41	1	Outlet Box Base
42	1	Slotted Headless Pipe Plug (Outlet Box Base)
43	1	Gasket (Outlet Base to Frame)
44	2	Round Head Screw and Lockwasher (Outlet Box Base to Spacer) (Used with overhead conduit only)
45	1	Outlet Box Spacer (Used with overhead conduit only)
46	1	Gasket (Base to Spacer) (Used with overhead conduit only)
47	4	Hex. Head Cap Screw (Base to Frame) (Not illustrated) (Used with overhead conduit only) (Replaces Item 40)

ITEM NO.	QTY.	NAME OF PART
48	18	Round Head Screw (Grill Cleat Assembly and Lockwasher)
49	9	Grill Cleat Assembly (Used on 1689 frame only)
50	1	Grill (Lower) (Used on 1689 frame only)
51	1	Wound Stator Assembly
52	4	Binding Head Screw and Plain Washer (Exhaust Screen or Grill) (Washers used on 1689 frame only)
53	1	Screen or Grill (Exhaust)
54	5	Binding Head Screw (Screen) (Qty. 7 on 1689 frame)
55	1	Screen
56	1	Bracket (Lower)
57	4	Stud and Cap Nut (Bracket to Frame) (Qty. 8 on 1689 frame)
58	4	Hex. Head Cap Screw and Lockwasher (Bearing Cap)
59	1	Gib Key
60	1	Coupling
61	1	Locknut and Lockwasher
62	1	Sq. Key (Bearing Mounting)
63	3	Drive Pin (Qty. 4 on 1689 frame)
64	1	Bearing Mounting
65	2	Ball Bearing (Upper)
66	1	Bearing Spacer
67	1	Metering Plate
68	1	Cast Air Deflector (Used on 1689 frame only)
69	8	Round Head Machine Screw and Lockwasher (Used on 1689 frame only)
70	1	Air Deflector (Upper)
71	8	Sem (Upper Air Deflector to Cast Air Deflector) (Used on 1689 frame only)
72	6	Round Head Screw and Lockwasher (Upper Air Deflector Assembly) (Not used on 1689 frame) (Not illustrated)
73	1	Rotor Assembly
74	6	Round Head Screw and Lockwasher (Qty. 8 on 1689 frame)
75	1	Lower Air Deflector Assembly
76	1	Bearing Cap
77	1	"O" Ring (Bearing Cap)
78	1	Bearing (Lower)
79	1	Retaining Ring (Lower)
80	1	Dust Sealing Ring
81	1	Oil Baffle Plate (Lower)
BALL TYPE NON-REVERSE RATCHET (Not illustrated) Omit Items 6, 7 and 8 and add the following:		
82	1	Stationary Ratchet Assembly
83	1	Connecting Spring
84	1	Pressure Plate Assembly
85	4	Spring (Qty. 6 on 1689 frame)
86	4	Hex. Head Cap Screw and Washer (Qty. 6 on 1689 frame)
87	1	Rotating Ratchet
88	3	Socket Head Cap Screw (Qty. 4 on 1689 frame)
89	12	Steel Ball (Qty. 16 on 1689 frame)
90	1	Ball Retaining Ring
91	6	Round Head Screw (Qty. 8 on 1689 frame)
92	6	Lockwasher (Qty. 8 on 1689 frame)
93	6	Washer (Qty. 8 on 1689 frame)

ORDERING

When ordering parts, specify motor serial number, complete frame number, name of part and complete part number. The complete part number consists of the Parts List Section and Page Number as well as the Item Number as follows:

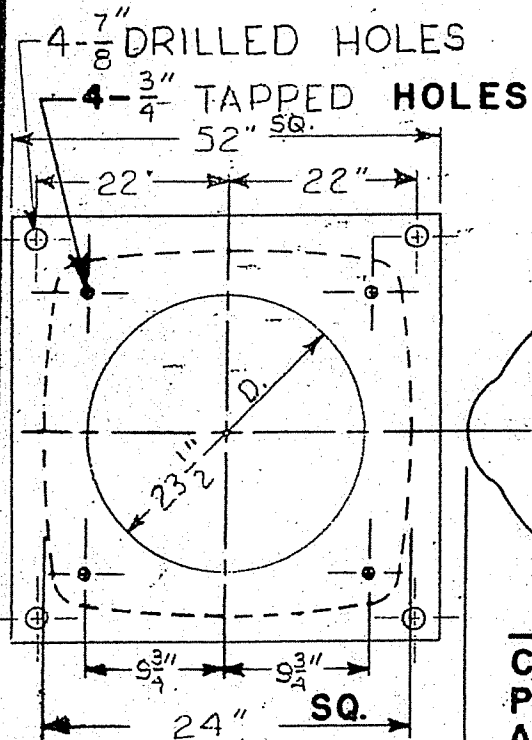
EXAMPLE: Quantity 1, Canopy Cap, Part Number 769 - 29.5 - 2
 Section Number Page No. Item Number



68841-N30

12" DISCHARGE

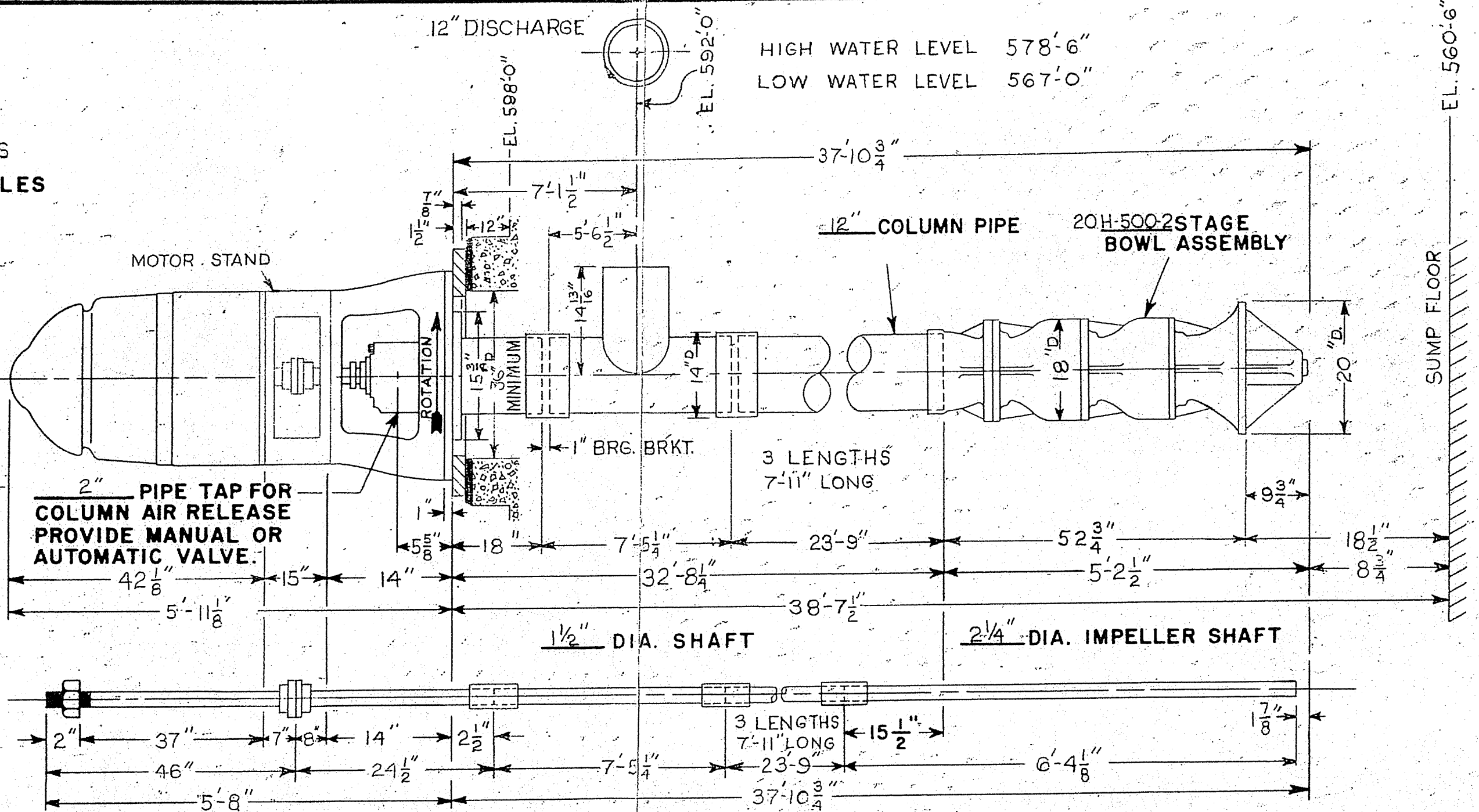
HIGH WATER LEVEL 578'-6"
 LOW WATER LEVEL 567'-0"



PLAN VIEW

N-20

MOTOR BASE
& BASE PLATE



MOTOR DATA	
M'F'R.	U.S. MOTORS
H.P.	75
PHASE	3
CYCLES	60
VOLTS	480
R.P.M.	1200
FRAME NO.	A445UPH

LOW SERVICE PUMP ITEM #1 & #2

ELEVATION			
20H-500-2 STAGE			
VERTICAL TURBINE PUMP			
WORTHINGTON CORPORATION DENVER, COLORADO			
ORDER DTP-24333		DATE 6-24-64	SCALE N.T.S. 1" = 1 FOOT
DRAWN <i>[Signature]</i>	CHECKED <i>[Signature]</i>	APPROVED	DEN-14839

PLEASE NOTE
 THIS PRINT IS MERELY FOR PRELIMINARY USE UNLESS FOLLOWING SPACES ARE FILLED.

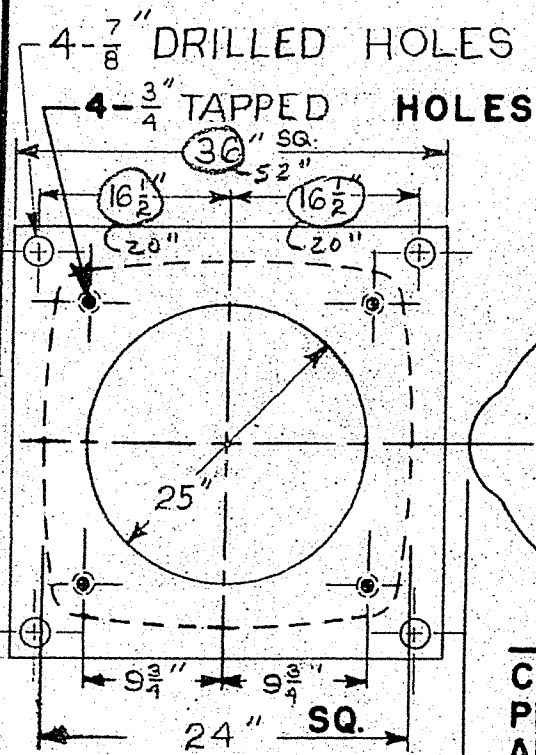
CORRECT FOR CUSTOMER'S ORDER
 CUSTOMER PORT CITY HEATING & PLUMBING CO.
 BRANCH OFFICE ORDER 1239-1382 OUR SHOP ORDER DTP-24333

APPROVED BY _____ DATE _____

Dimensions are from drawings, castings may vary slightly. Foundation bolts must not be fixed rigidly until machine is in place. This print is loaned subject to return on demand and under condition that it is not to be used in any way detrimental to our interests.
 The quotation accompanying this drawing covers the material exactly as shown and any changes or extras will be quoted separately as required. To secure prices quoted, order should refer to quotation number. Do not scale; additional dimensions will be furnished upon request.

ALT. DATE 7-16-64	7-22-64	9-10-64	10-27-64
REMOVED COVER PLATE NOTE	BASE PLATE HOLE WAS 25" NOW 23 1/2"	REV. PER CUSTOMER'S COMMENTS	REV. PER CUSTOMER'S COMMENTS
			V.O. [D]

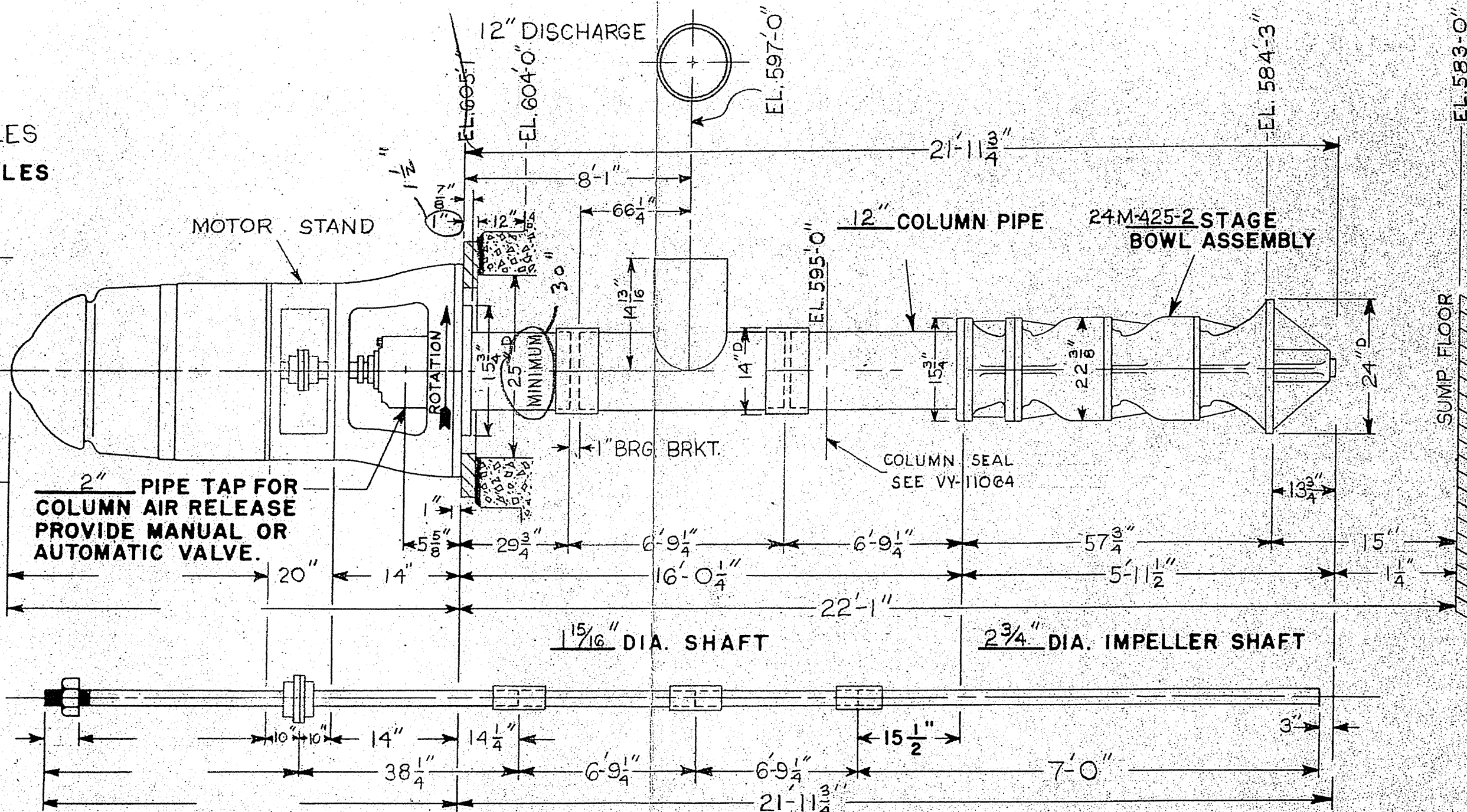
14841-N30



PLAN VIEW

N-20

MOTOR BASE & BASE PLATE



MOTOR DATA

M'F'R.	U.S. MOTORS
H. P.	200
PHASE	3
CYCLES	60
VOLTS	480
R.P.M.	1200
FRAME NO.	

- APPROVED NOT APPROVED
- APPROVED AS CORRECTED
- REVISE AND RESUBMIT

Checking is only for conformance with the design concept of the project and compliance with the information given in the Contract Documents. Contractor is responsible for dimensions to be confirmed and correlated at the job site; for information that pertains solely to the fabrication processes or to techniques of construction; and for coordination of the work of all trades.

BY _____
DATE **AUG 6 1964**

McNAMEE, PORTER & SEELEY
2223 PACKARD ROAD
ANN ARBOR, MICHIGAN

HIGH SERVICE PUMP ITEM #2 & #3

ELEVATION
24M-425-2 STAGE
VERTICAL TURBINE PUMP

WORTHINGTON CORPORATION
DENVER, COLORADO

ORDER **DTP-24335** DATE **6-25-64** SCALE **N.T.S.** INS. = 1 FOOT

DRAWN *Q.S.* CHECKED *A.M.H.* APPROVED _____ **DEN-14841**

PLEASE NOTE
THIS PRINT IS MERELY FOR PRELIMINARY USE UNLESS FOLLOWING SPACES ARE FILLED.
CORRECT FOR CUSTOMER'S ORDER
CUSTOMER **GEORGE DATEMA & SONS**
BRANCH OFFICE ORDER **34-40884** OUR SHOP ORDER **DTP-24335**
APPROVED BY _____ DATE _____
Dimensions are from drawings, castings may vary slightly. Foundation bolts must not be fixed rigidly until machine is in place. This print is loaned subject to return on demand and under condition that it is not to be used in any way detrimental to our interests.
The quotation accompanying this drawing covers the material exactly as shown and any changes or extras will be quoted separately as required. To secure prices quoted, order should refer to quotation number. Do not scale; additional dimensions will be furnished upon request.