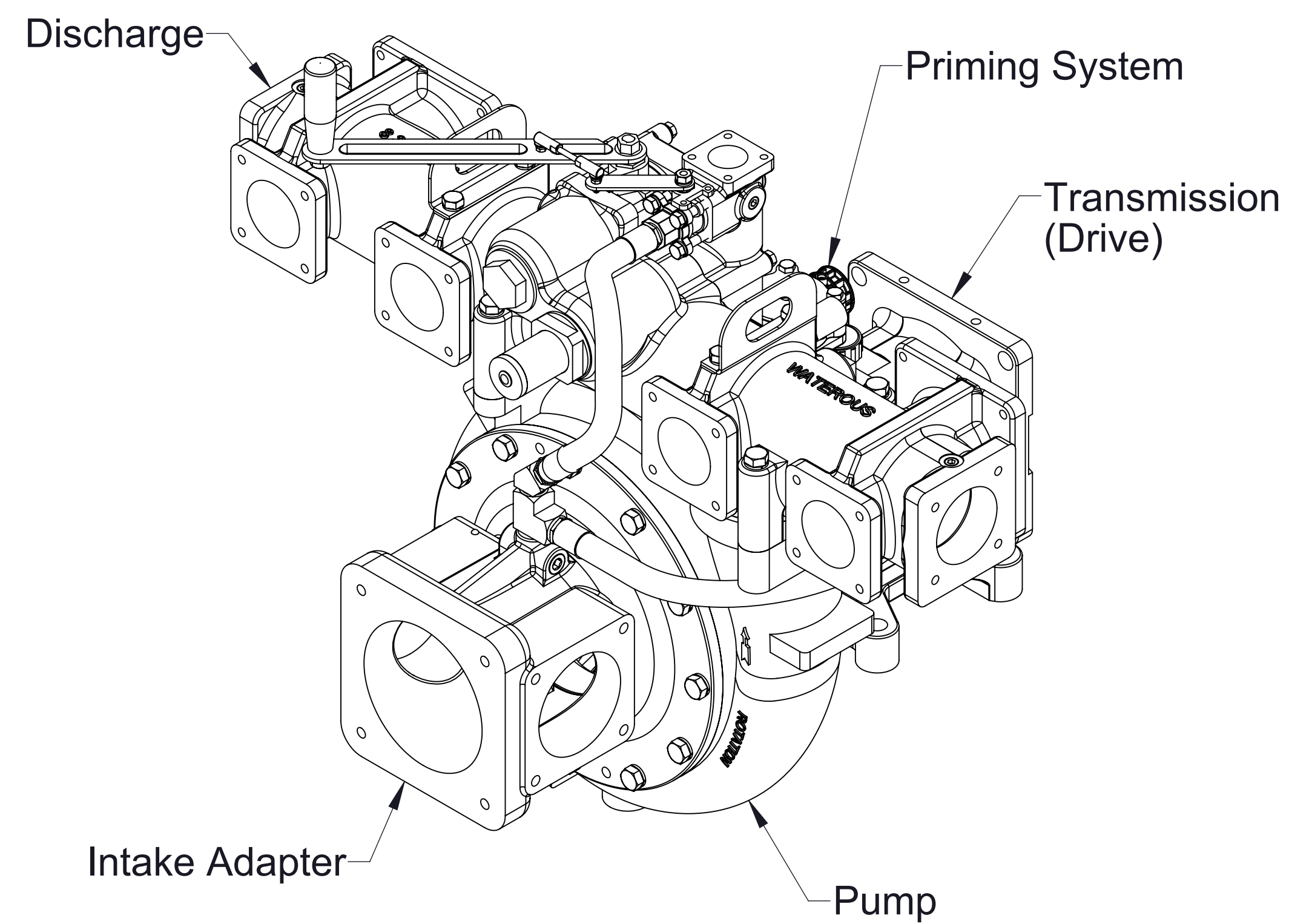


## HLU Series Fire Pump Service Parts List



Index:

Component		See Pages			
		Complete Pump and Transmission Model (Located on Pump Serial Plate)			
		Direct Drive (D Series) HLU D		Gear Drive (K Series) HLU K	
		Input Rotation		Input Rotation	
		CW	CCW	CW	CCW
Determining Pump Model and Input Rotation		2, 3	2, 3	2, 3	2, 3
Crossover Valve		4, 5	6, 7	6, 7	4, 5
Priming System, VPOS and Mounted VAP		8, 9	8, 9	10, 11	10, 11
Discharge Manifold		12, 13	14, 15	14, 15	12, 13
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Transmission (Drive)		20, 21		See SPL83741	
Optional Items	Auxiliary Intake and Discharge	See SPL83156			
	RTP Foam System	See SPL83157			

## Determining Pump Model and Input Rotation

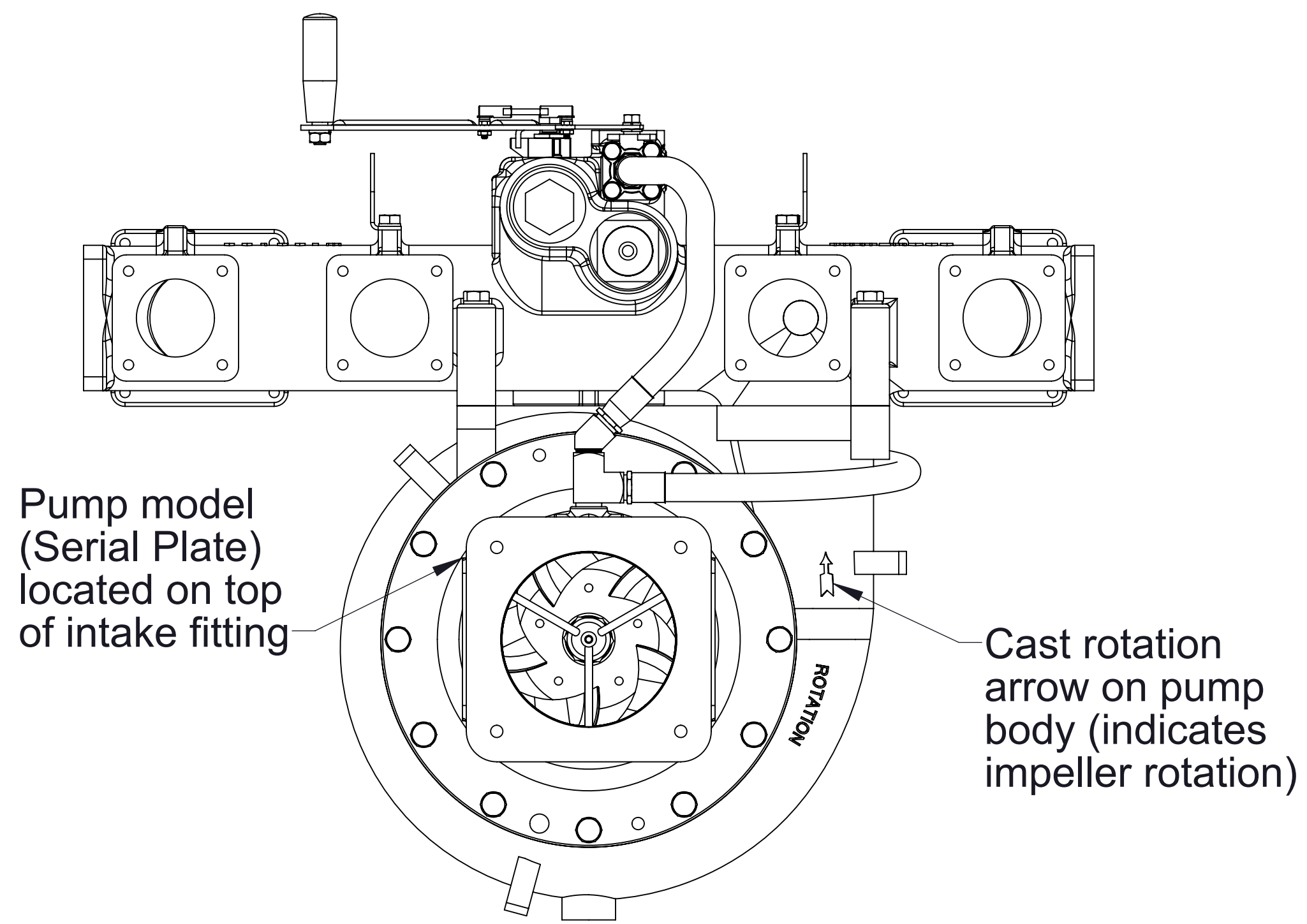
The pump configuration and components vary for each pump model and input rotation.

The input rotation of the drive end of the pump determines the direction the pump impeller rotates.

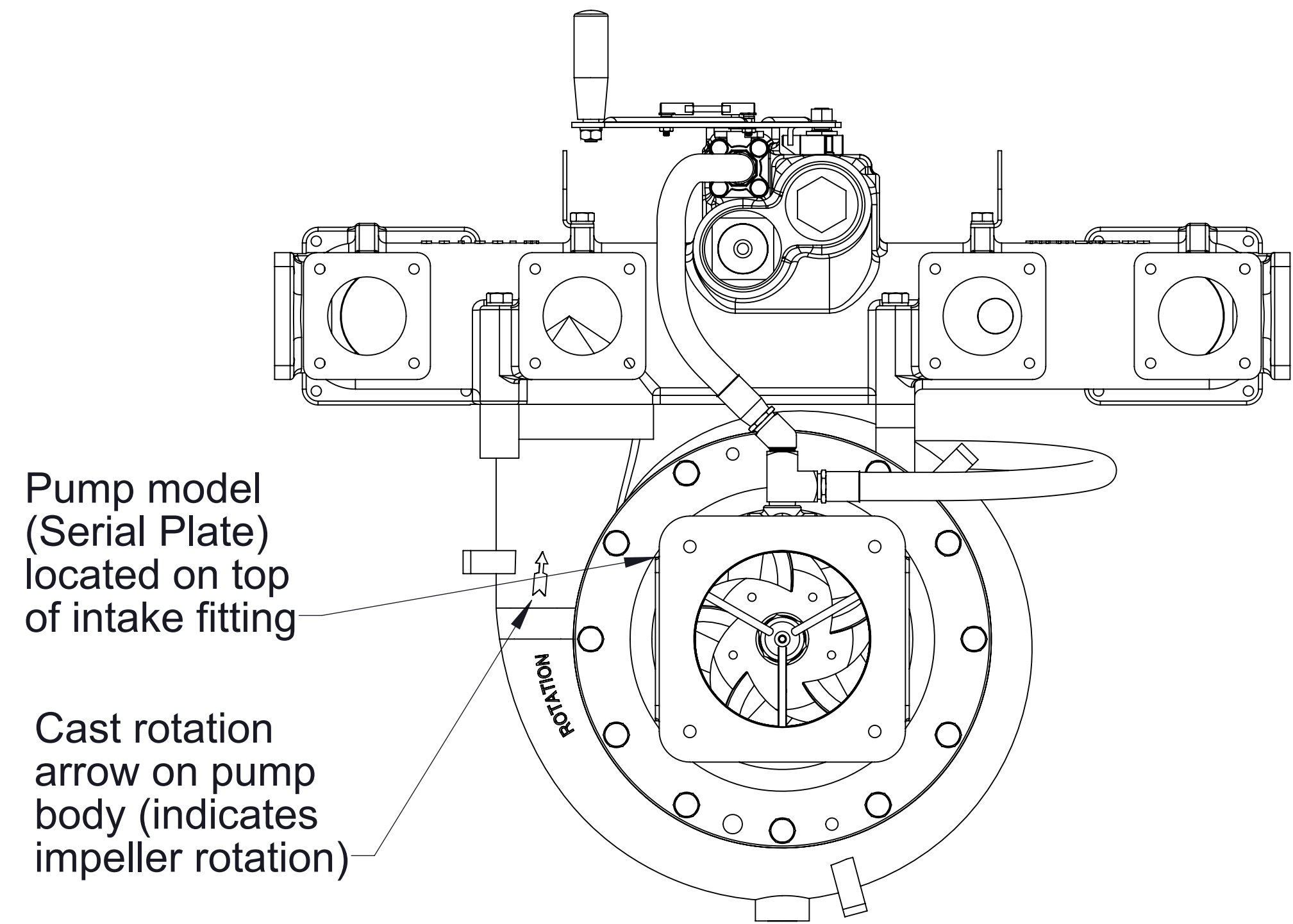
Use the pump model and input rotation when referring to pages listed in the index.

If you are unsure of the input rotation of your pump, the cast rotation arrow on the pump body can be used to determine which rotation configuration you have. The pump model can be obtained from the serial plate attached to the pump intake fitting.

Compare your pump to the diagrams on the following page.

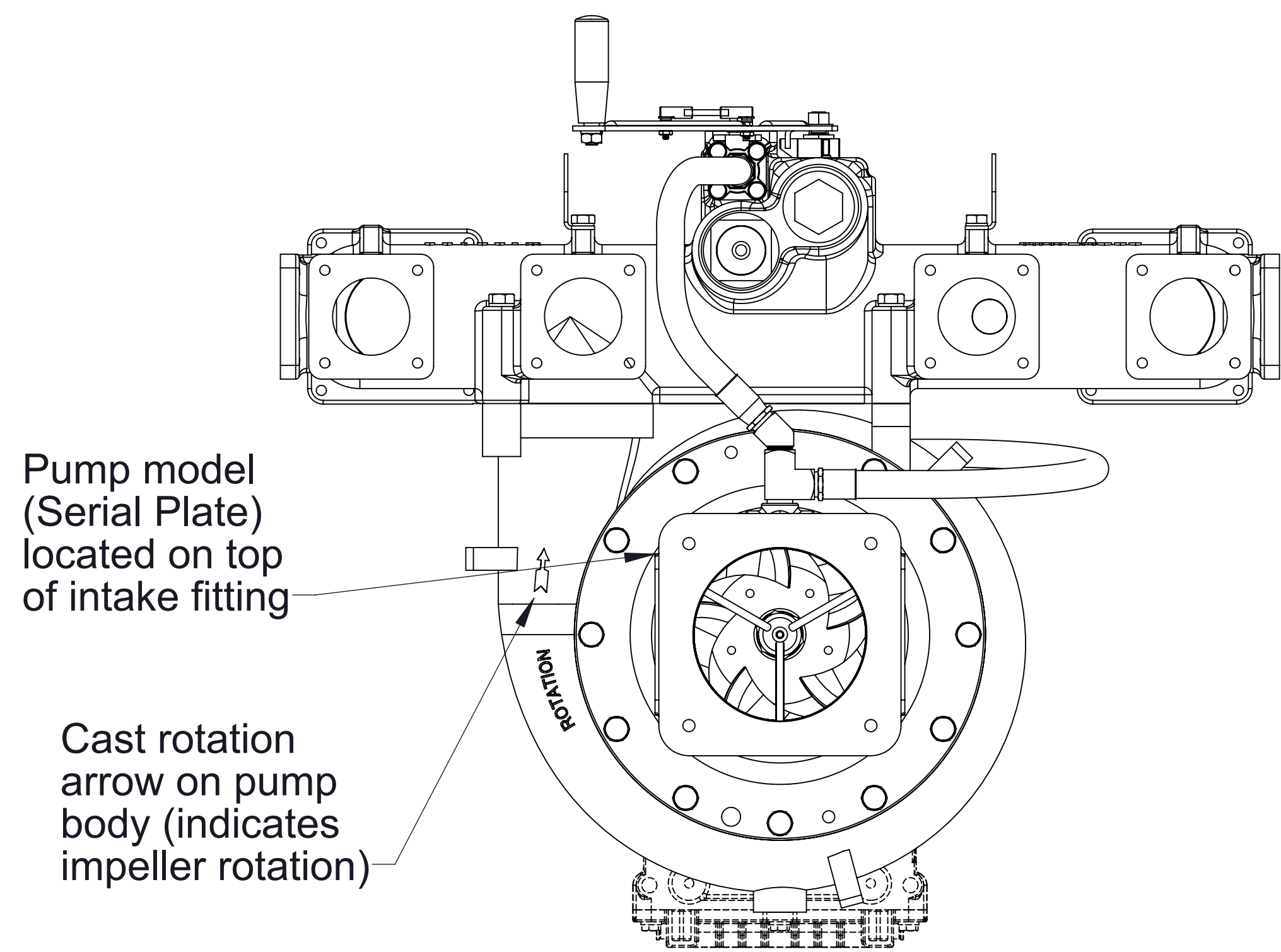


**Clockwise (CW) Input Rotation**  
Counter-Clockwise (CCW) Impeller Rotation

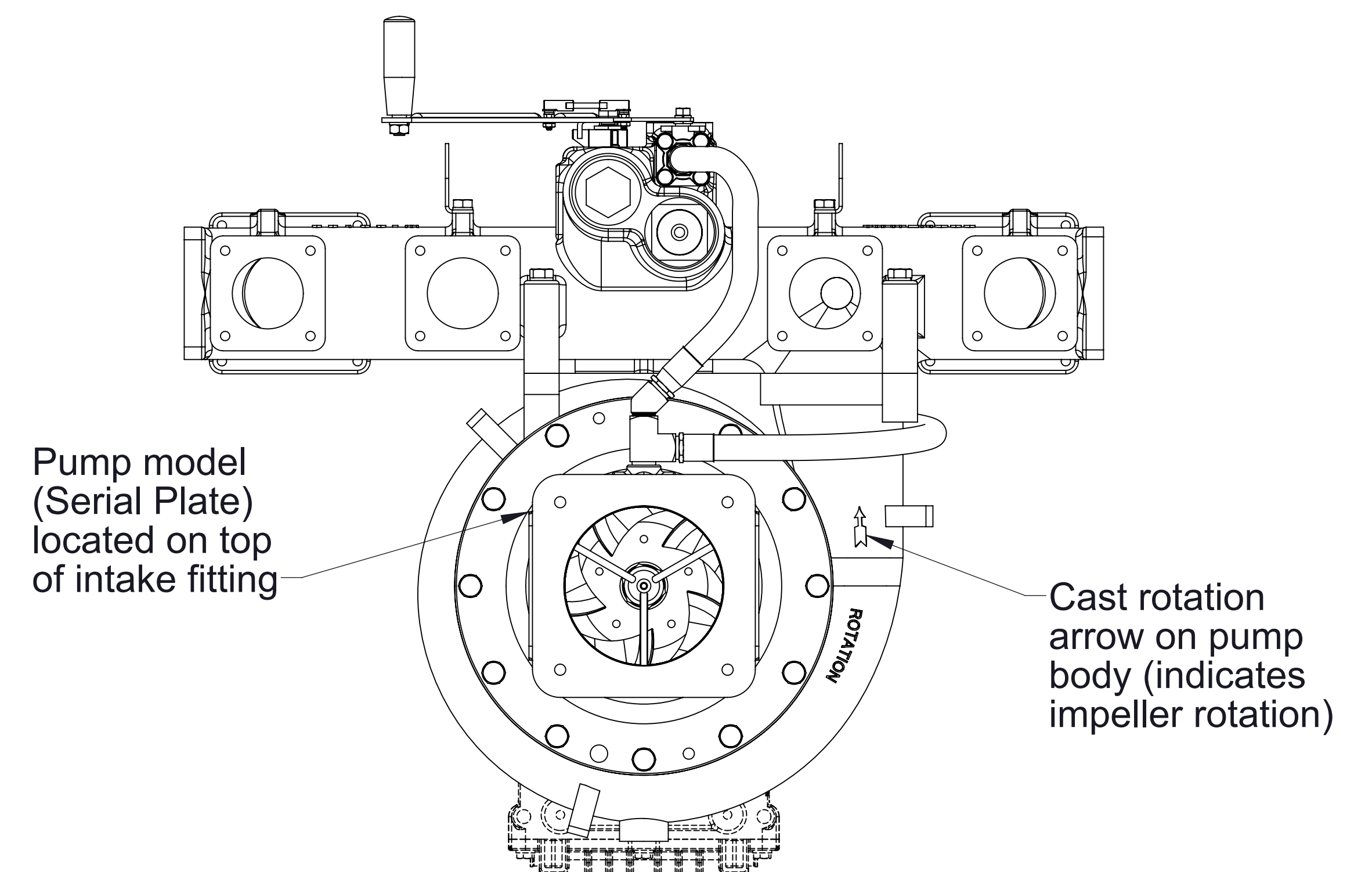


**Counter-Clockwise (CCW) Input Rotation**  
Clockwise (CW) Impeller Rotation

**Model HLUK**



**Clockwise (CW) Input Rotation**  
Clockwise (CW) Impeller Rotation



**Counter-Clockwise (CCW) Input Rotation**  
Counter-Clockwise (CCW) Impeller Rotation

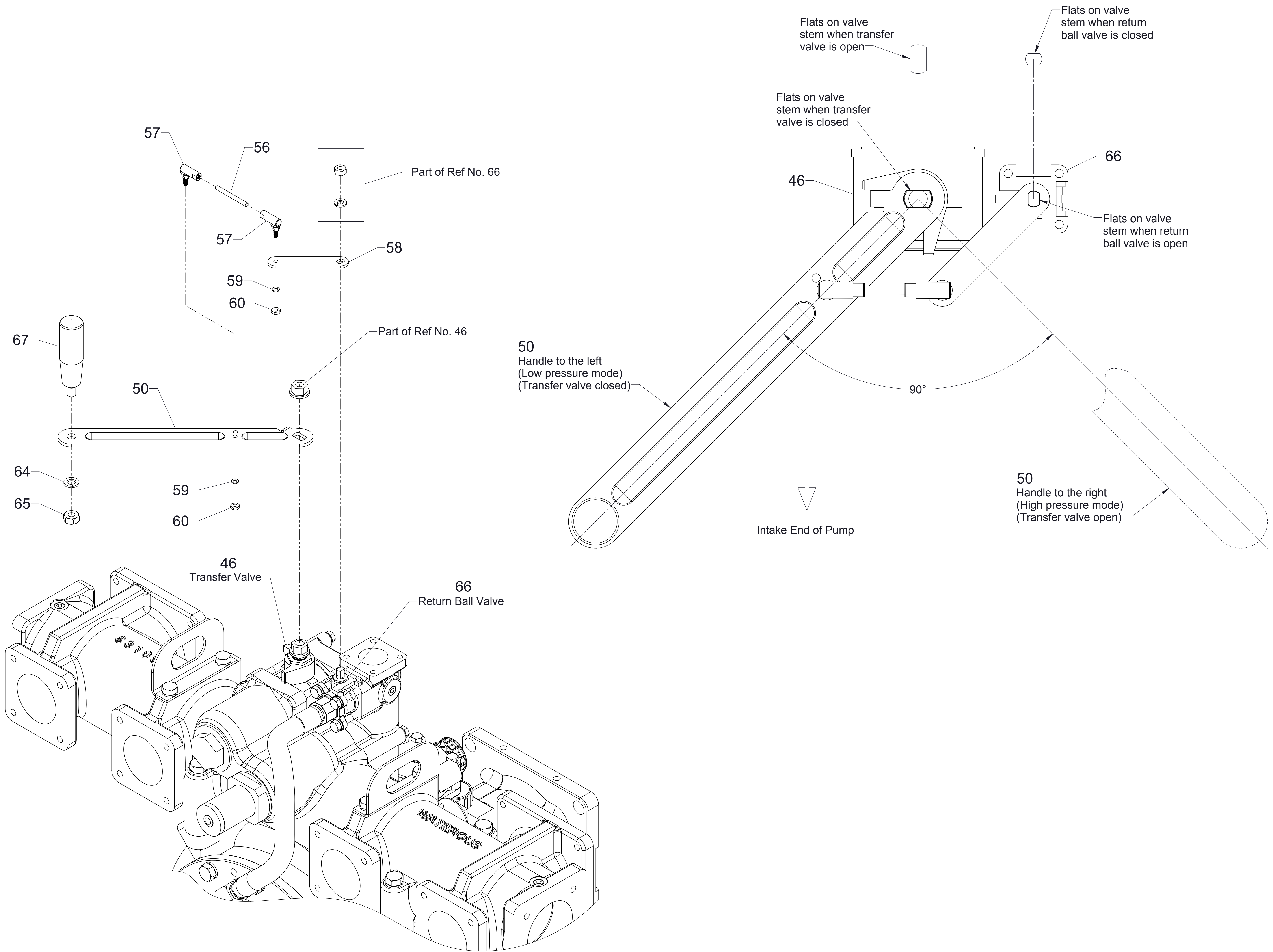
**Model HLUK**

## Crossover Valve

HLUD - CW Input rotation (CCW impeller rotation)  
 HLUK - CCW Input rotation (CCW impeller rotation)

Ref No.	Description
46	Transfer Valve, 1-1/2 in. (Includes 7/16-14 UNC Hex Nut and Lockwasher)
50	Crossover Valve Handle
56	Threaded Stud, 10-32 x 2 in.
57	Ball Joint Linkage
58	Ball Valve Handle
59	Lock Washer, No. 10

Ref No.	Description
60	Hex Nut, 10-32
64	Lock Washer, 10 mm
65	Hex Nut, M10-1.5
66	Ball Valve, 1/2 in NPT (Includes 3/8-16 UNC Hex Nut and Lockwasher)
67	Handle



**Crossover Valve**

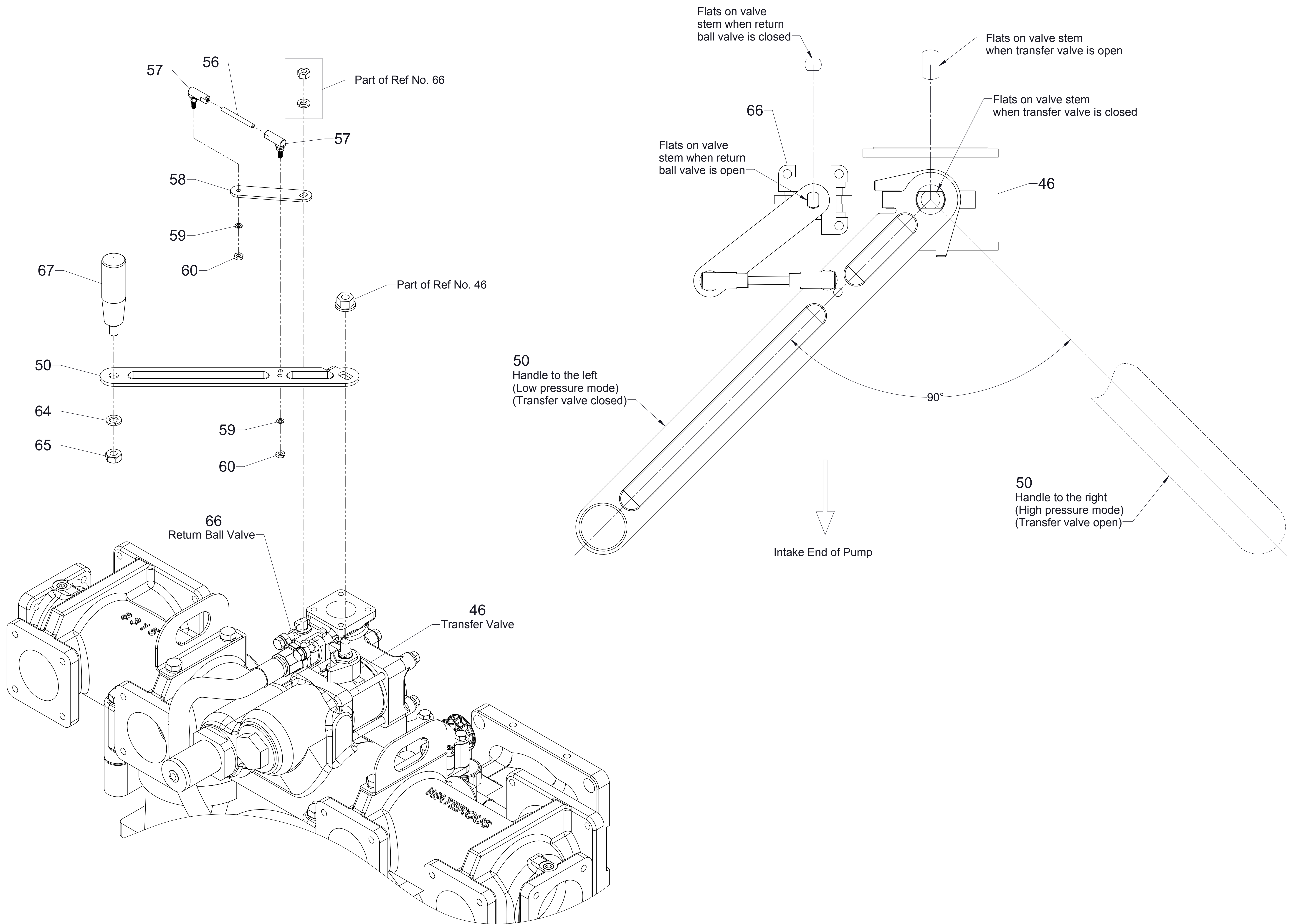
HLUD - CW Input rotation (CCW impeller rotation)  
 HLUK - CCW Input rotation (CCW impeller rotation)

## Crossover Valve

HLUD - CCW Input rotation (CW impeller rotation)  
 HLUK - CW Input rotation (CW impeller rotation)

Ref No.	Description
46	Transfer Valve, 1-1/2 in. (Includes 7/16-14 UNC Hex Nut and Lockwasher)
50	Crossover Valve Handle
56	Threaded Stud, 10-32 x 2 in.
57	Ball Joint Linkage
58	Ball Valve Handle
59	Lock Washer, No. 10

Ref No.	Description
60	Hex Nut, 10-32
64	Lock Washer, 10 mm
65	Hex Nut, M10-1.5
66	Ball Valve, 1/2 in NPT (Includes 3/8-16 UNC Hex Nut and Lockwasher)
67	Handle



**Crossover Valve**

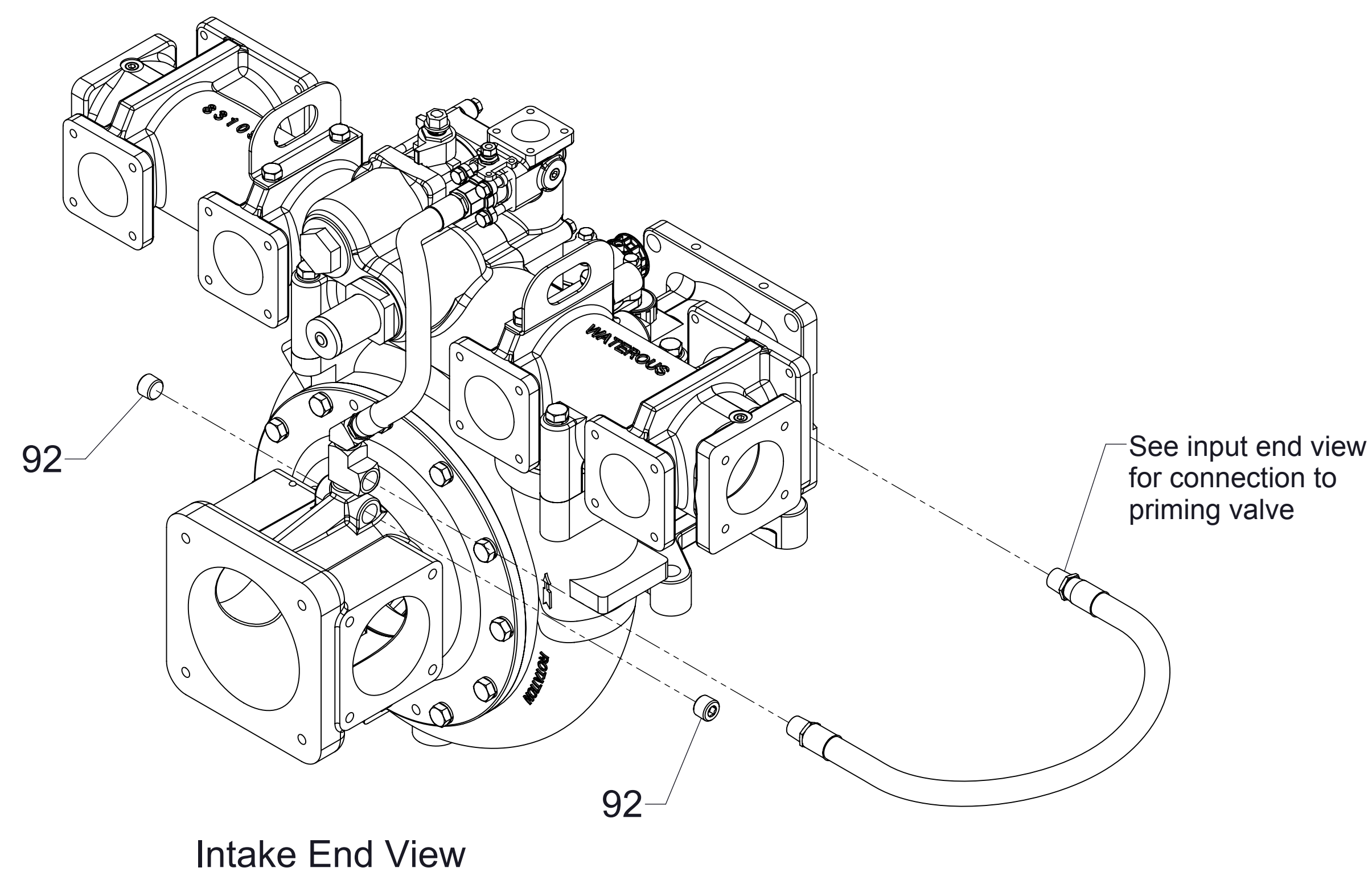
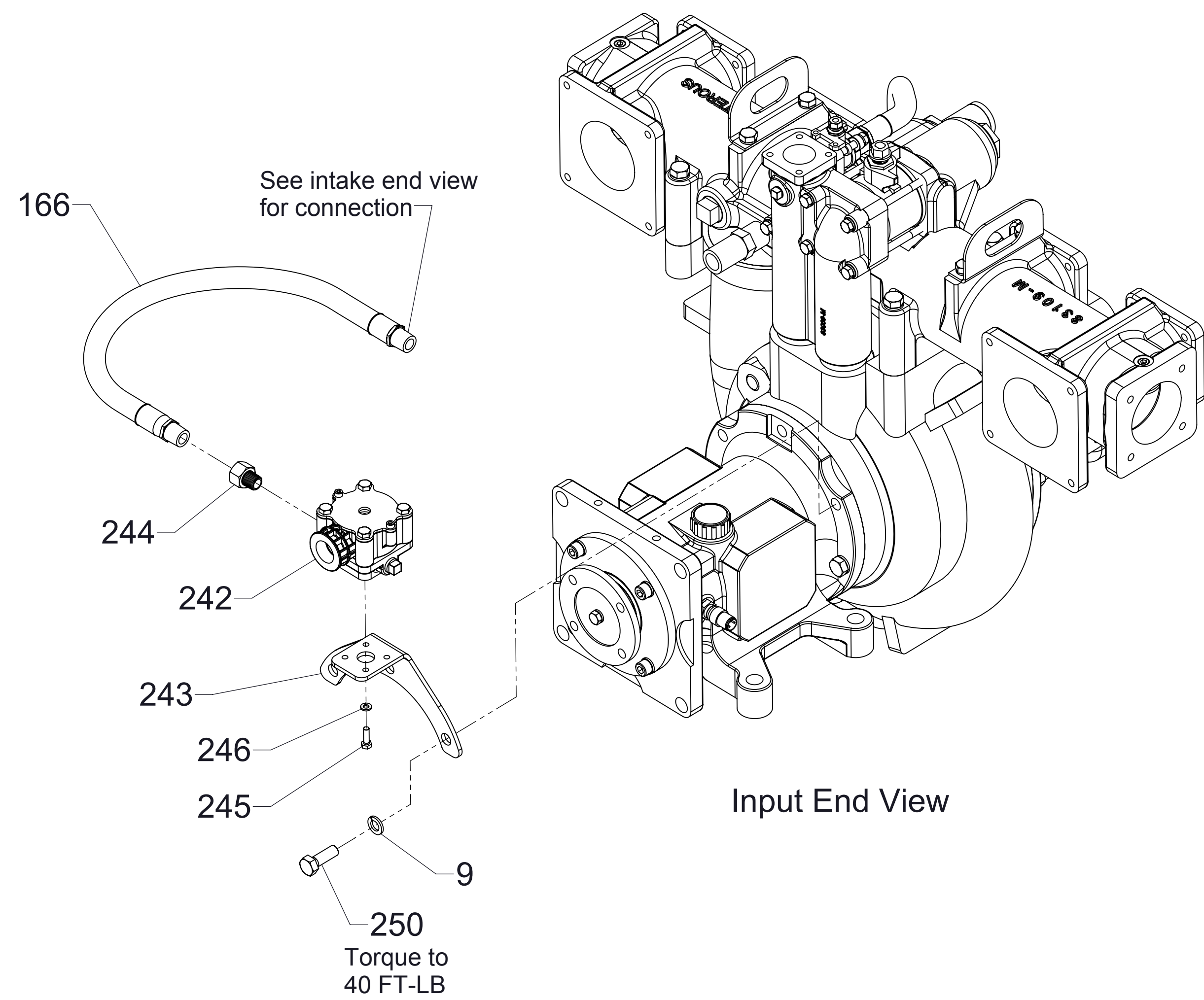
HLUD - CCW Input rotation (CW impeller rotation)  
 HLUK - CW Input rotation (CW impeller rotation)

**Priming System**  
**VPOS and Mounted VAP**  
 Model HLU D

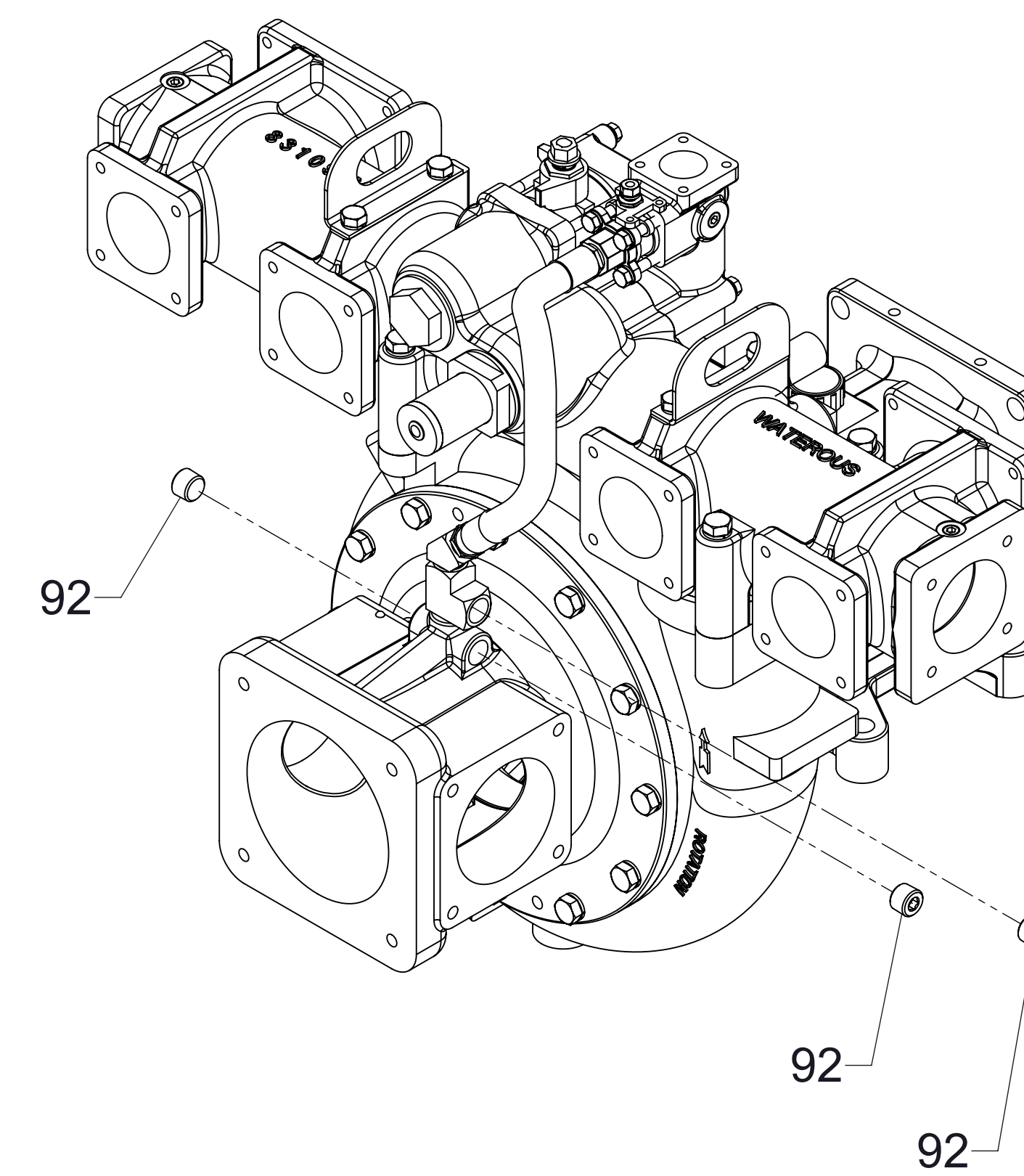
Ref No.	Description
9	Lock Washer, 12 mm
92	Headless Pipe Plug, 1/2 NPT
166	Hose Assembly, 1/2 NPT x 20 in.
242	Priming Valve Subassembly
243	VAP Mounting Bracket

Ref No.	Description
244	Fitting, 1/2 NPTF x 3/8 NPTM
245	Hex Head Screw, M6-1 x 20 mm
246	Lock Washer, 6 mm
250	Hex Head Screw, M12-1.75 x 35 mm





VAP  
(When VPOS is ordered)

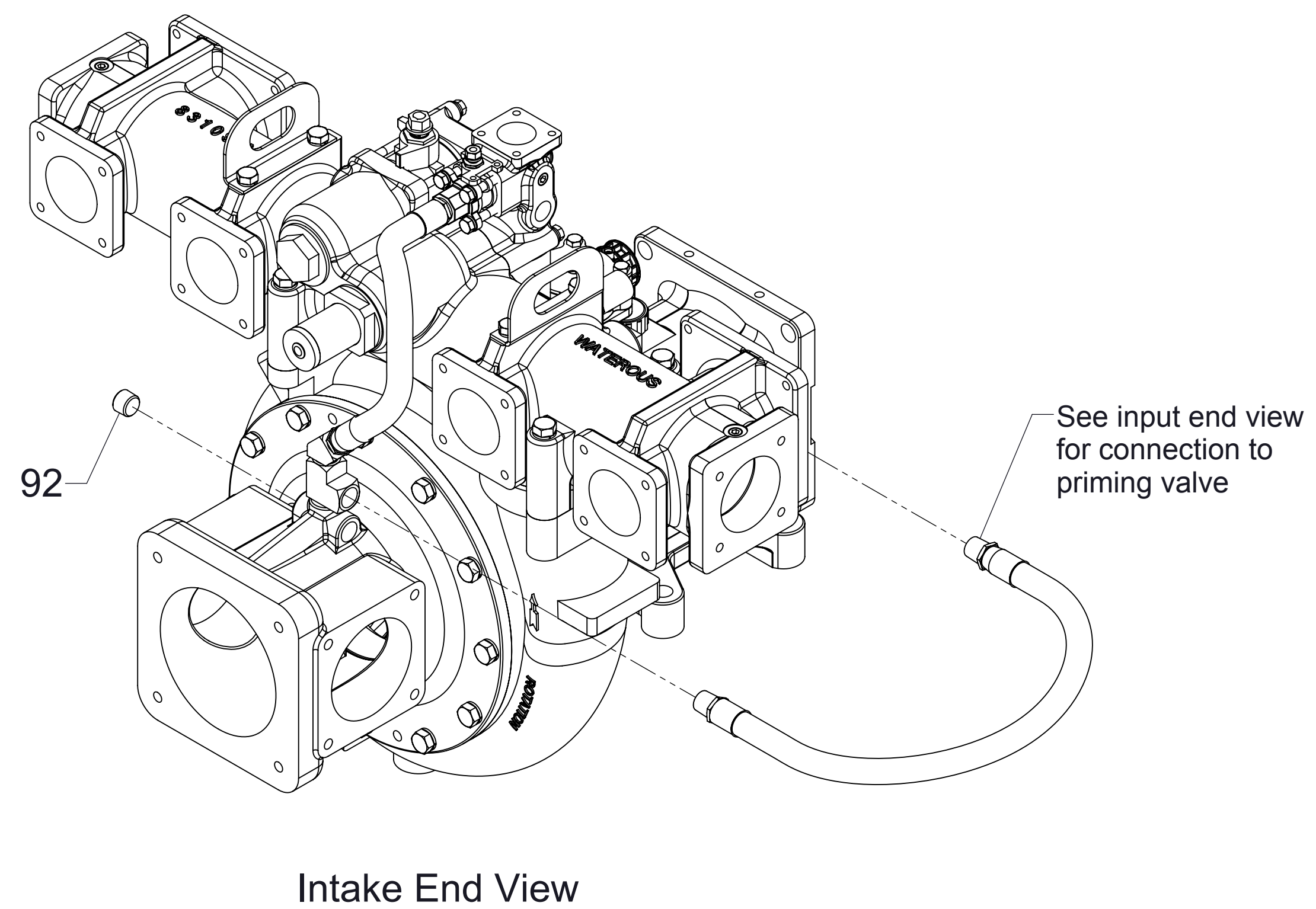
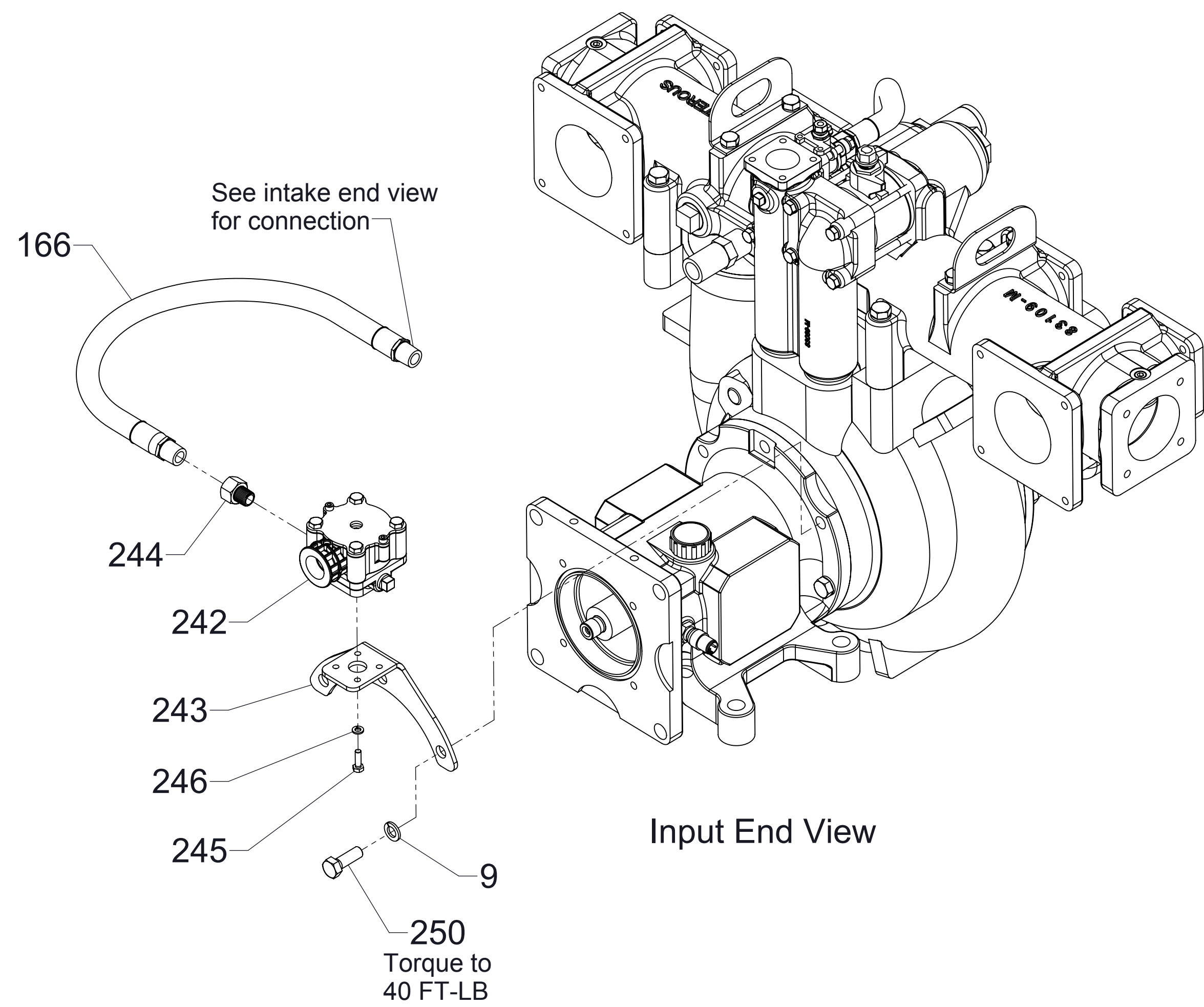


Without VAP  
(No priming pump ordered)

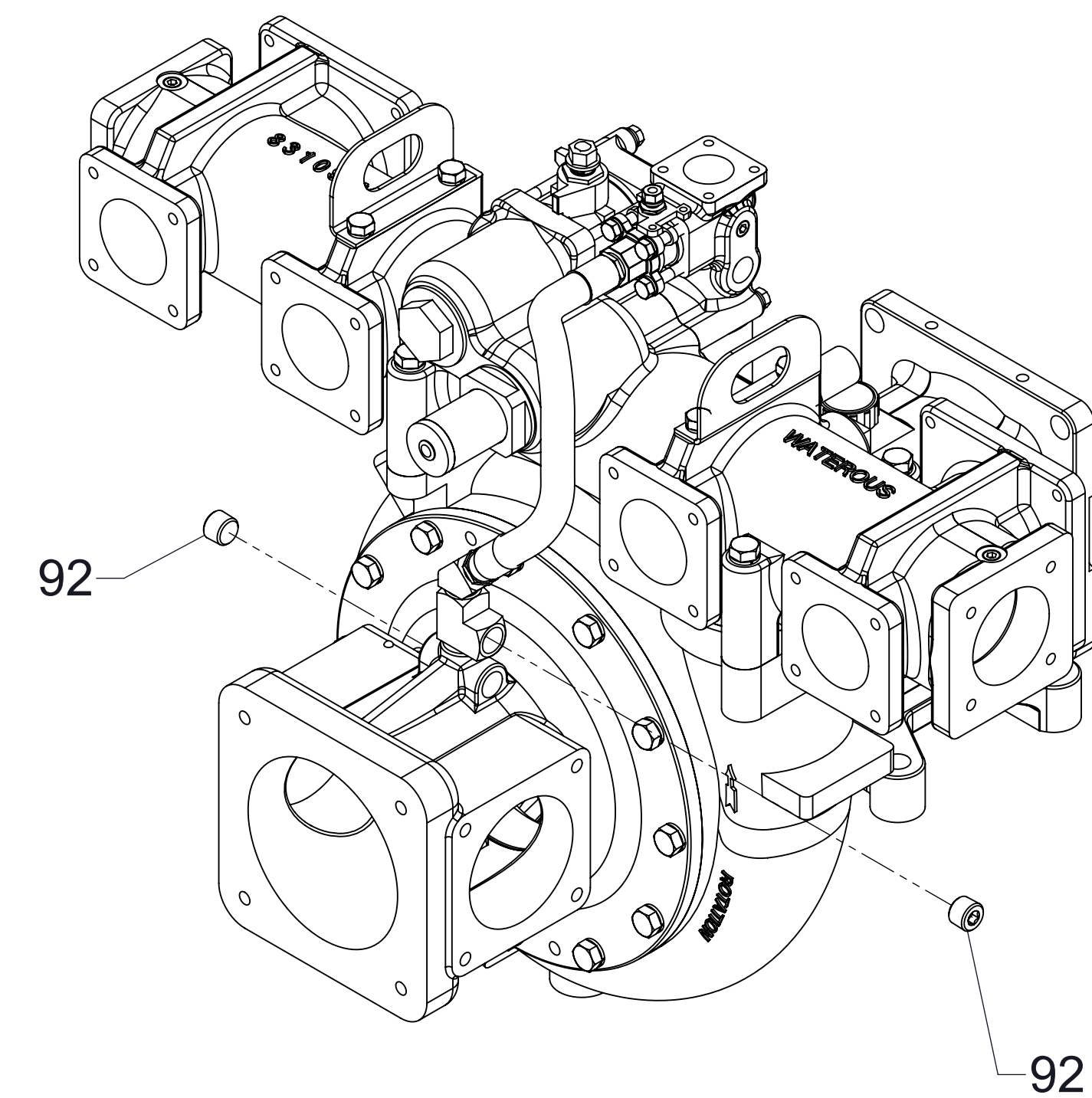
**Priming System**  
**VPOS and Mounted VAP**  
 Model HLUK

Ref No.	Description
9	Lock Washer, 12 mm
92	Headless Pipe Plug, 1/2 NPT
166	Hose Assembly, 1/2 NPT x 20 in.
242	Priming Valve Subassembly
243	VAP Mounting Bracket

Ref No.	Description
244	Fitting, 1/2 NPTF x 3/8 NPTM
245	Hex Head Screw, M6-1 x 20 mm
246	Lock Washer, 6 mm
250	Hex Head Screw, M12-1.75 x 35 mm



VAP  
(When VPOS is ordered)



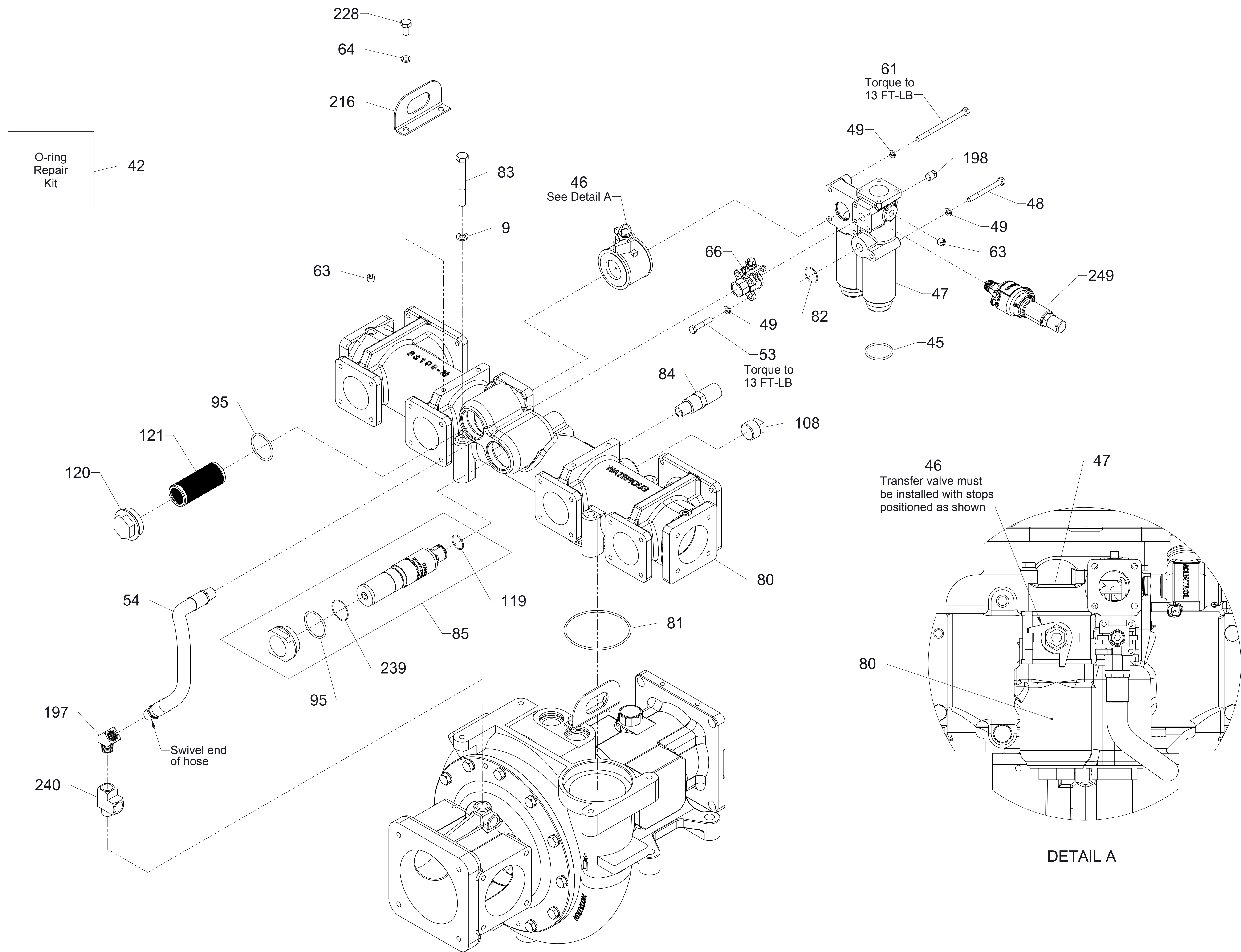
Without VAP  
(No priming pump ordered)

## Discharge Manifold

HLUD - CW Input rotation (CCW impeller rotation)  
 HLUK - CCW Input rotation (CCW impeller rotation)

Ref No.	Description
9	Lock Washer, 12 mm
42	O-ring Repair Kit (Includes 45, 81, 82, 89, 95, 119, 239 plus O-rings for Intake and Discharge Fittings, See Ref No. 42 on SPL83156 for additional O-rings furnished)
45	O-ring, 1-3/4 x 2 in.
46	Transfer Valve, 1-1/2 in. (Includes 7/16-14 UNC Hex Nut and Lockwasher)
47	Interstage Manifold
48	Hex Head Screw, M8-1.25 x 80 mm
49	Lock Washer, 8 mm
53	Hex Head Screw, M8-1.25 x 45 mm
54	Hose Assembly, 1/2 NPT x 14 in.
61	Hex Head Screw, M8-1.25 x 120 mm
63	Pipe Plug, 1/4 in. BSP
64	Lock Washer, 10 mm
66	Ball Valve, 1/2 in. NPT (Includes 3/8-16 UNC Hex Nut and Lockwasher)
80	Discharge Manifold
81	O-ring, 4-1/2 x 4-3/4 in.

Ref No.	Description
82	O-ring, 1-1/8 x 1-1/4 in.
83	Hex Head Screw, M12-1.75 x 100 mm
84	Thermal Relief Valve
85	Discharge Relief Valve Assembly (Includes 95, 119, 239)
95	O-ring, 1-7/8 x 2-1/8 in.
108	Pipe Plug, 1 in. NPT
119	O-ring, 1 x 1-1/8 in.
120	Strainer End Cap
121	Strainer
197	Street Elbow, 45°, 1/2 NPT
198	Square Head Pipe Plug, 1/4 in. NPT
216	Lifting Bracket
228	Hex Head Screw, M10 x 1.50 x 20 mm
239	O-ring, 1-1/2 x 1-5/8 in.
240	Street Tee, 1/2 in. NPT
249	Discharge Relief Valve



**Discharge Manifold**

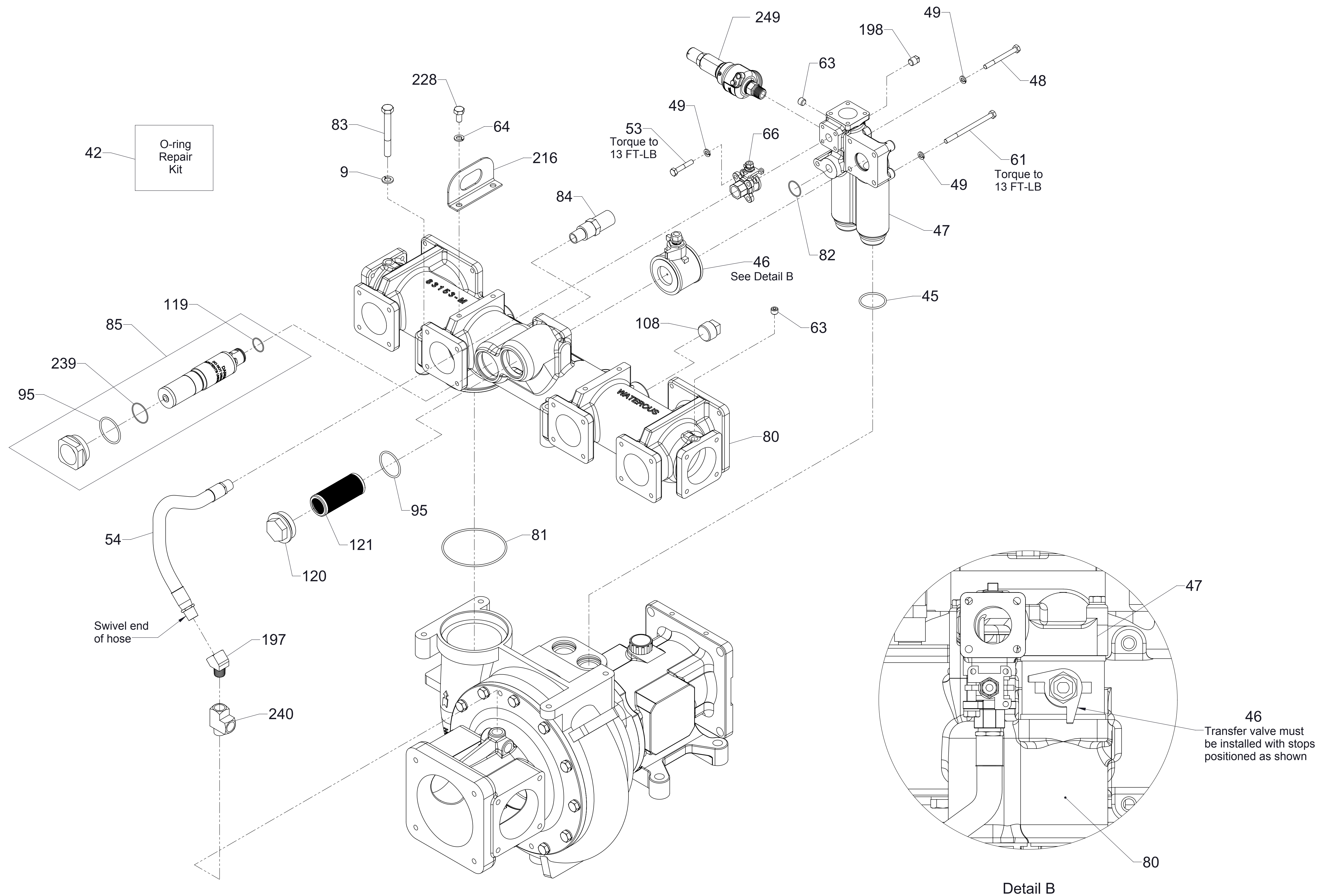
HLUD - CW Input rotation (CCW impeller rotation)  
HLUK - CCW Input rotation (CCW impeller rotation)

## Discharge Manifold

HLUD - CCW Input rotation (CW impeller rotation)  
 HLUK - CW Input rotation (CW impeller rotation)

Ref No.	Description
9	Lock Washer, 12 mm
42	O-ring Repair Kit (Includes 45, 81, 82, 89, 95, 119, 239 plus O-rings for Intake and Discharge Fittings, See Ref No. 42 on SPL83156 for additional O-rings furnished)
45	O-ring, 1-3/4 x 2 in.
46	Transfer Valve, 1-1/2 in. (Includes 7/16-14 UNC Hex Nut and Lockwasher)
47	Interstage Manifold
48	Hex Head Screw, M8-1.25 x 80 mm
49	Lock Washer, 8 mm
53	Hex Head Screw, M8-1.25 x 45 mm
54	Hose Assembly, 1/2 NPT x 14 in.
61	Hex Head Screw, M8-1.25 x 120 mm
63	Pipe Plug, 1/4 in. BSP
64	Lock Washer, 10 mm
66	Ball Valve, 1/2 in. NPT (Includes 3/8-16 UNC Hex Nut and Lockwasher)
80	Discharge Manifold
81	O-ring, 4-1/2 x 4-3/4 in.

Ref No.	Description
82	O-ring, 1-1/8 x 1-1/4 in.
83	Hex Head Screw, M12-1.75 x 100 mm
84	Thermal Relief Valve
85	Discharge Relief Valve Assembly (Includes 95, 119, 239)
95	O-ring, 1-7/8 x 2-1/8 in.
108	Pipe Plug, 1 in. NPT
119	O-ring, 1 x 1-1/8 in.
120	Strainer End Cap
121	Strainer
197	Street Elbow, 45°, 1/2 NPT
198	Square Head Pipe Plug, 1/4 in. NPT
216	Lifting Bracket
228	Hex Head Screw, M10 x 1.50 x 20 mm
239	O-ring, 1-1/2 x 1-5/8 in.
240	Street Tee, 1/2 in. NPT
249	Discharge Relief Valve



**Discharge Manifold**

HLUD - CCW Input rotation (CW impeller rotation)  
 HLUK - CW Input rotation (CW impeller rotation)

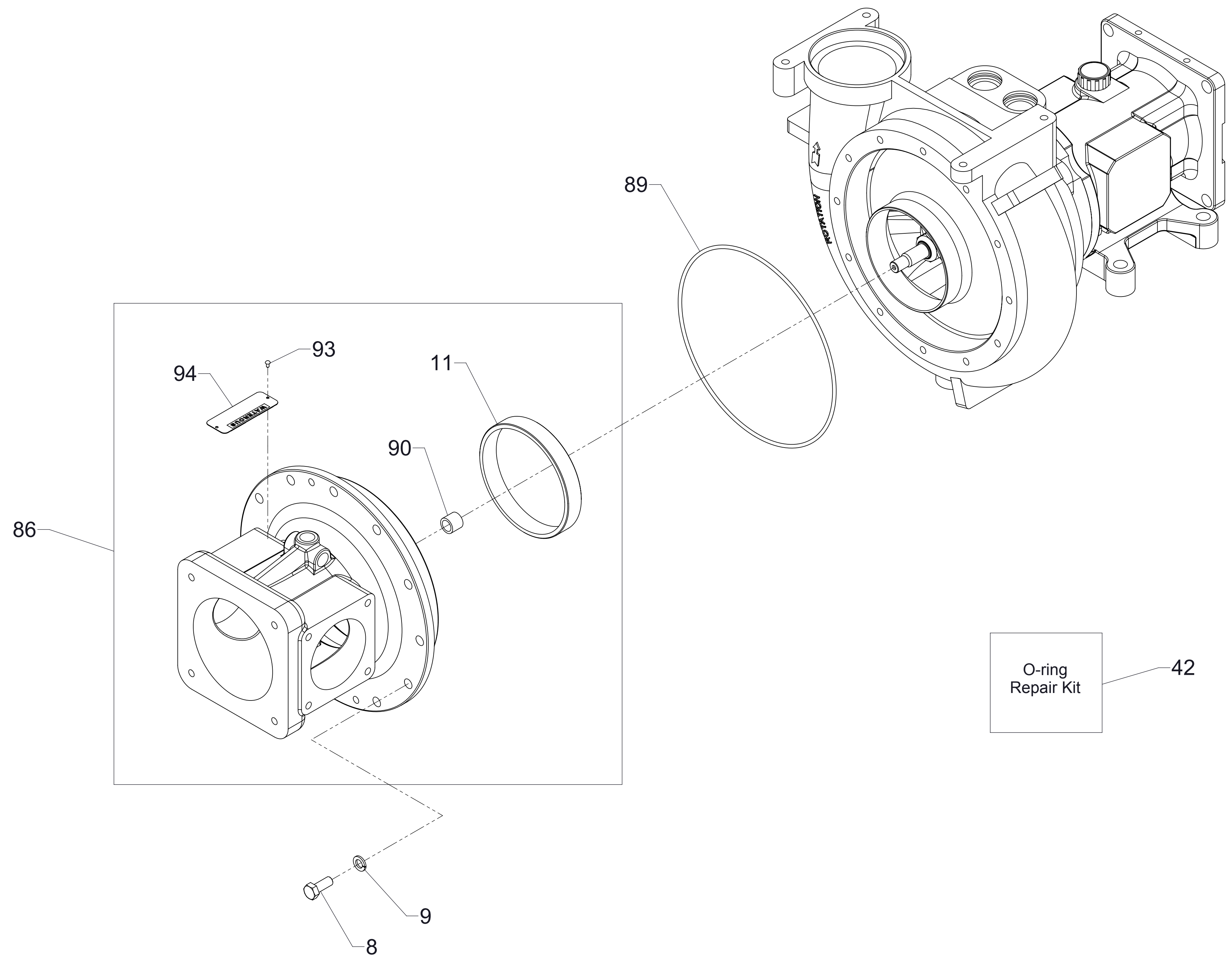
## Intake Adapter

All Models

Ref No.	Description
8	Hex Head Screw, M12-1.75 x 30 mm
9	Lock Washer, 12 mm
11	Wear Ring
42	O-ring Repair Kit (Includes 45, 81, 82, 89, 95, 119, 239 plus O-rings for Intake and Discharge Fittings, See Ref No. 42 on SPL83156 for additional O-rings furnished)
86	Intake Fitting Assembly (Includes 11, 90, 93, 94)

Ref. No.	Description
89	O-ring, 11 x 11-3/8 in.
90	Outboard Bearing
93	Drive Screw, No. 6 x 1/4 in.
94	Serial Plate





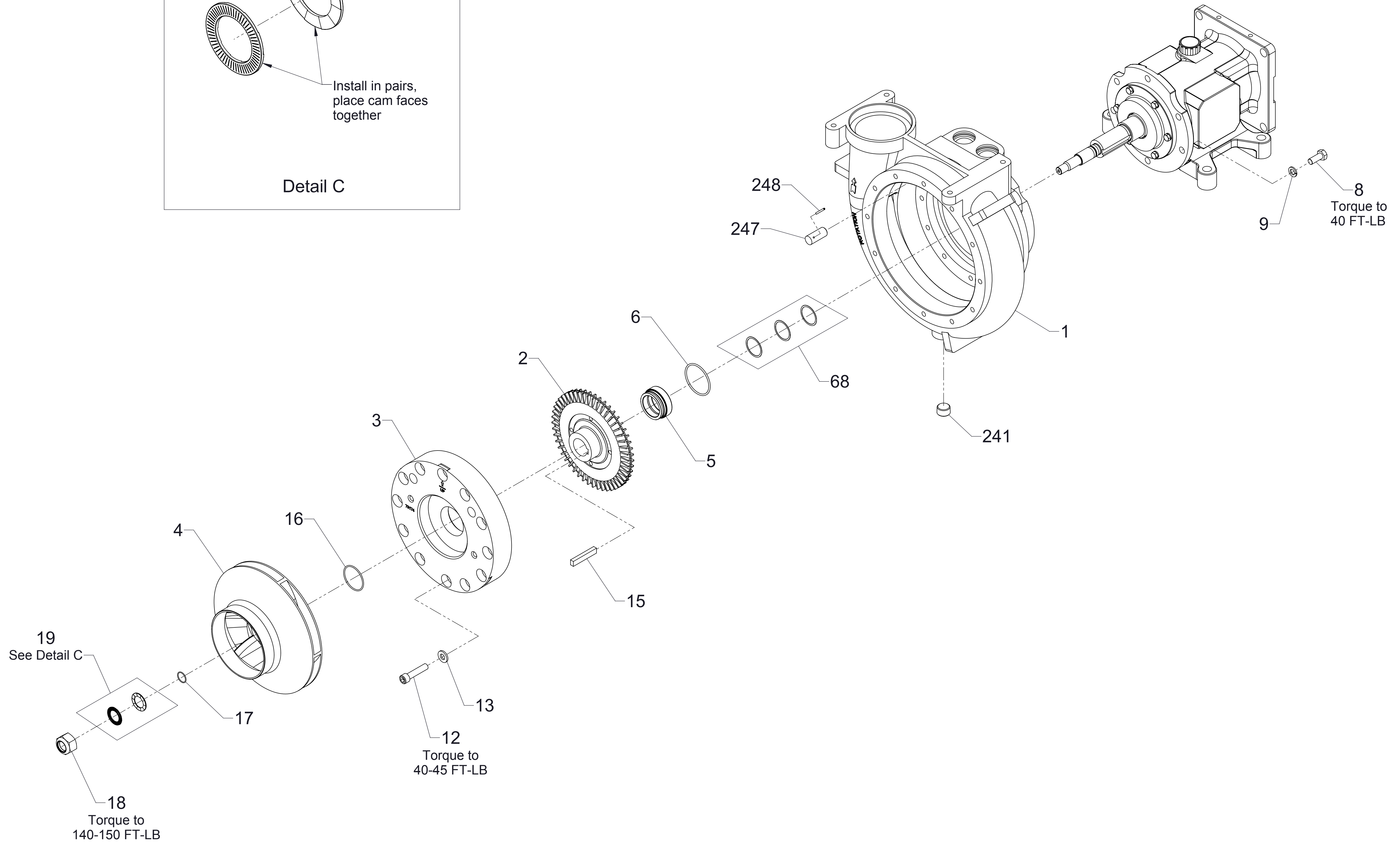
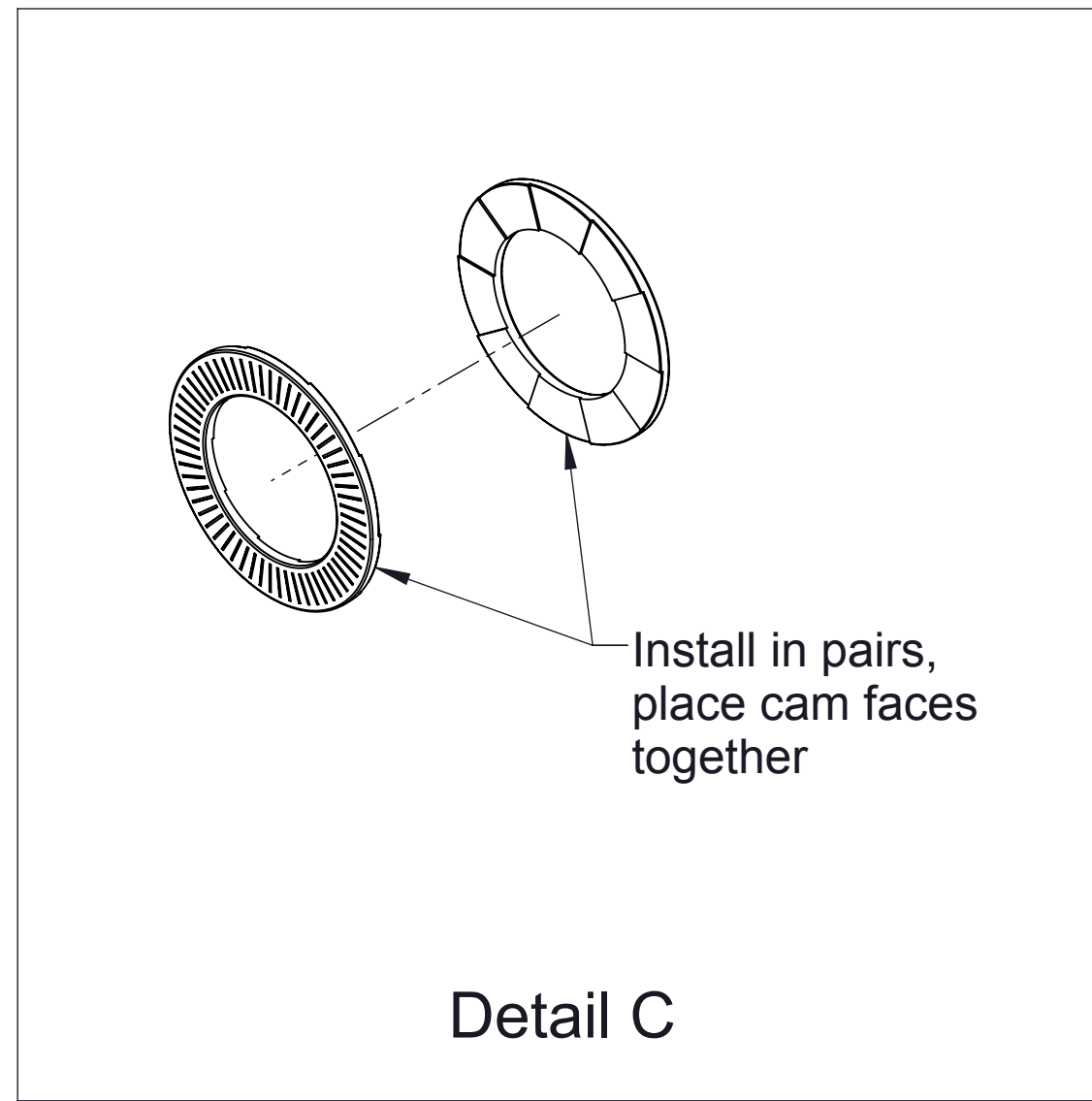
**Intake Adapter**  
 All Models  
 (HLUD, CCW Input Rotation Shown)

## Pump - Body and Impellers

All Models

Ref No.	Description
1	Volute Body
2	High Pressure Stage Impeller
3	Separator Plate
4	Main Stage Impeller
5	Mechanical Seal Repair Kit (Includes 6, 16, 17, 18, 19, 68, 89)
6	O-ring, 2-1/2 x 2-3/4 in.
8	Hex Head Screw, M12-1.75 x 30 mm
9	Lock Washer, 12 mm
12	Socket Head Screw, M12-1.75 x 55 mm
13	Flat Washer, 12mm

Ref No.	Description
15	Rectangular Key, 8 mm x 12 mm x 65 mm
16	O-ring, 2 x 2-3/16 in.
17	O-ring, 13/16 x 15/16 in.
18	Lock Nut, M24-3
19	Nord Lock Washer, 24 mm
68	High Pressure Impeller Shim Pack (Includes .002, .005, .010 Thick Shims) See Overhaul Instruction F-1031, Section 4321 for shimming Instructions
241	Headless Pipe Plug, 3/4 NPT
247	Primer Passageway Plug
248	Spirol Pin, 1/8 x 1-1/4 in.



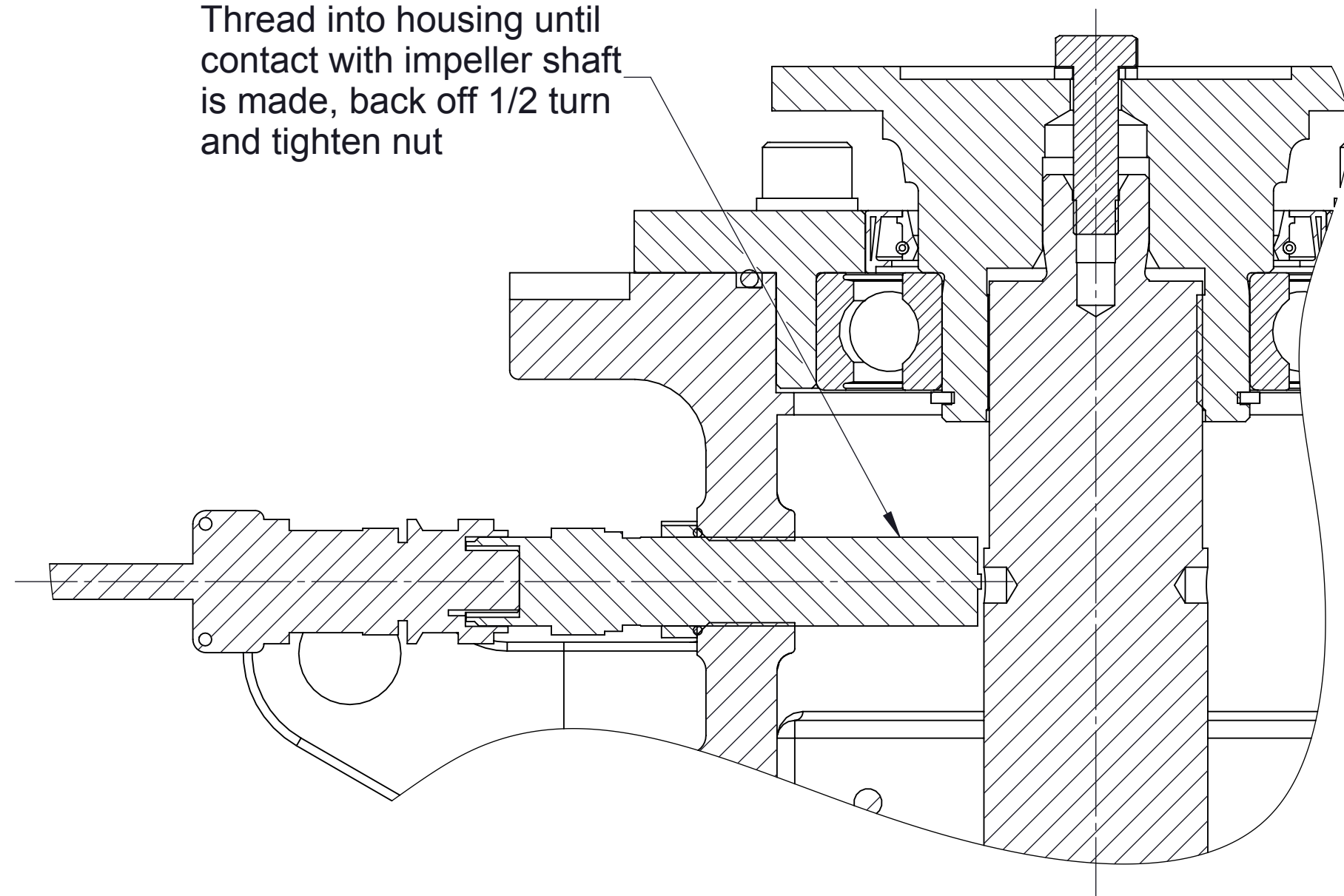
## Pump - Impeller Shaft and Pedestal

Model HLU D

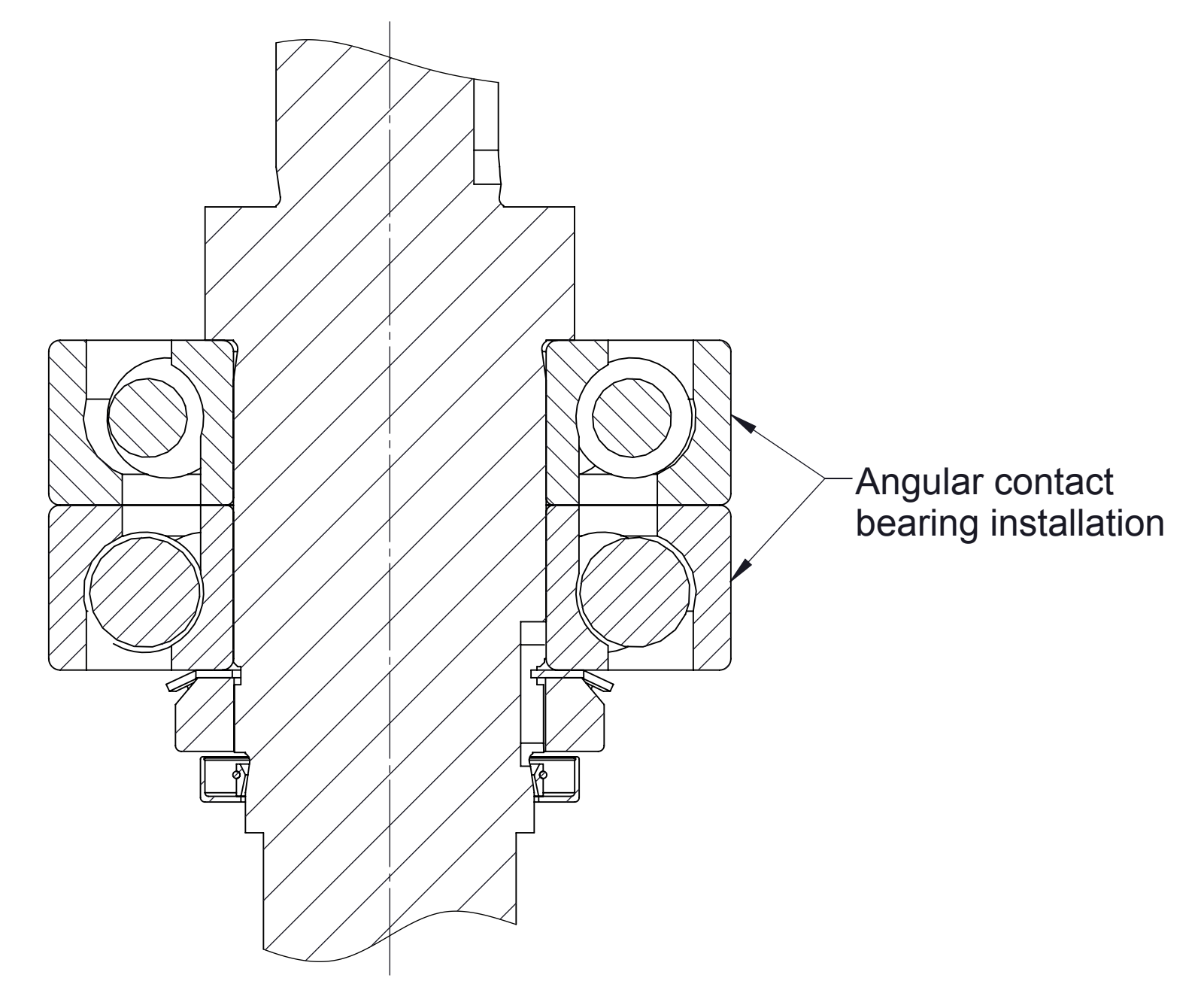
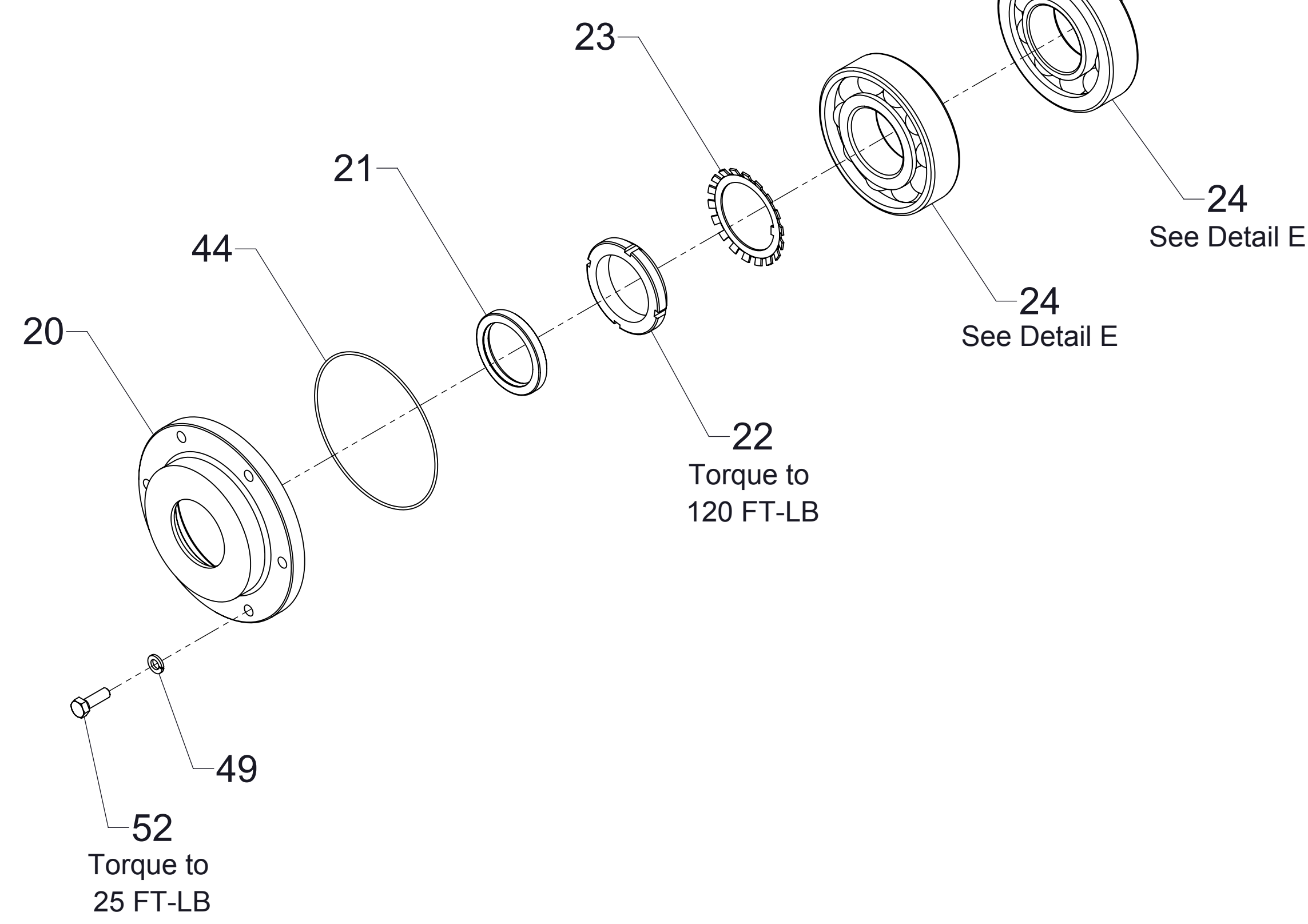
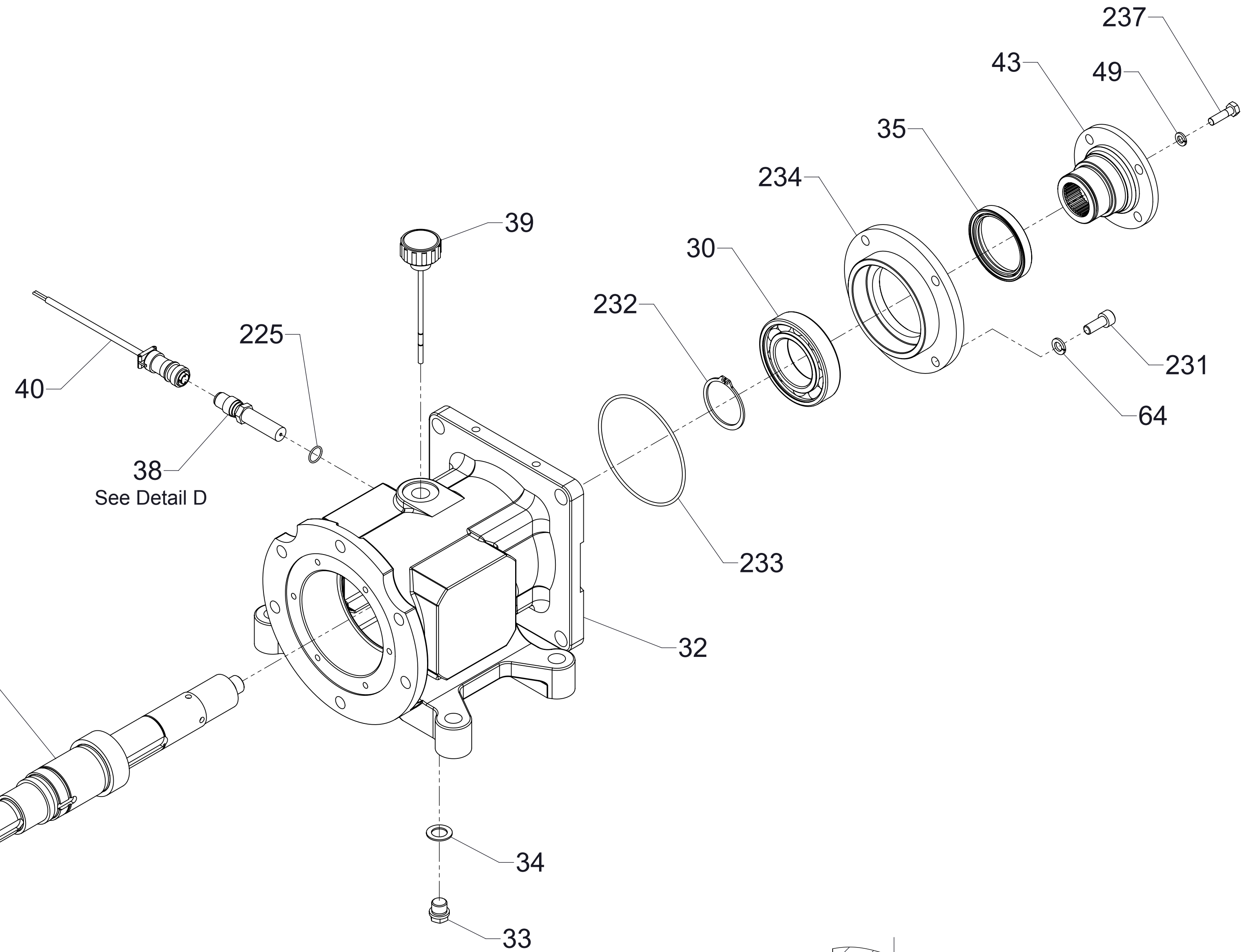
Ref No.	Description
20	Oil Seal Housing
21	Oil Seal, 2 x 2-5/8 x 5/16 in.
22	Bearing Lock Nut (N11)
23	Bearing Lock Washer (W11)
24	Ball Bearing, Angular Contact
25	Impeller Shaft
30	Single Row Ball Bearing
32	Pedestal Body
33	Hex Drain Plug, 16 mm
34	Copper Flat Washer, 5/8 in.
35	Oil Seal, 2-1/2 x 3-1/4 x 7/16 in.
38	Magnetic Tachometer Pick Up
39	Dip Stick

Ref No.	Description
40	Tachometer Cable
43	Companion Flange, 1410 Series
44	O-ring, 124 mm x 128 mm
49	Lock Washer, 8 mm
52	Hex Head Screw, M8-1.25 x 25 mm
64	Lock Washer, 10 mm
225	O-ring, 5/8 x 3/4 in.
231	Socket Head Screw, M10-1.5 x 25 mm
232	Retaining Ring
233	O-ring, 4-3/4 x 5 in.
234	Bearing Housing
237	Hex Head Screw, M8-1.25 x 30 mm

Thread into housing until contact with impeller shaft is made, back off 1/2 turn and tighten nut



**Detail D**  
Tachometer Pickup  
Installation



**Detail E**

**Pump - Impeller Shaft and Pedestal**  
Model HLU D

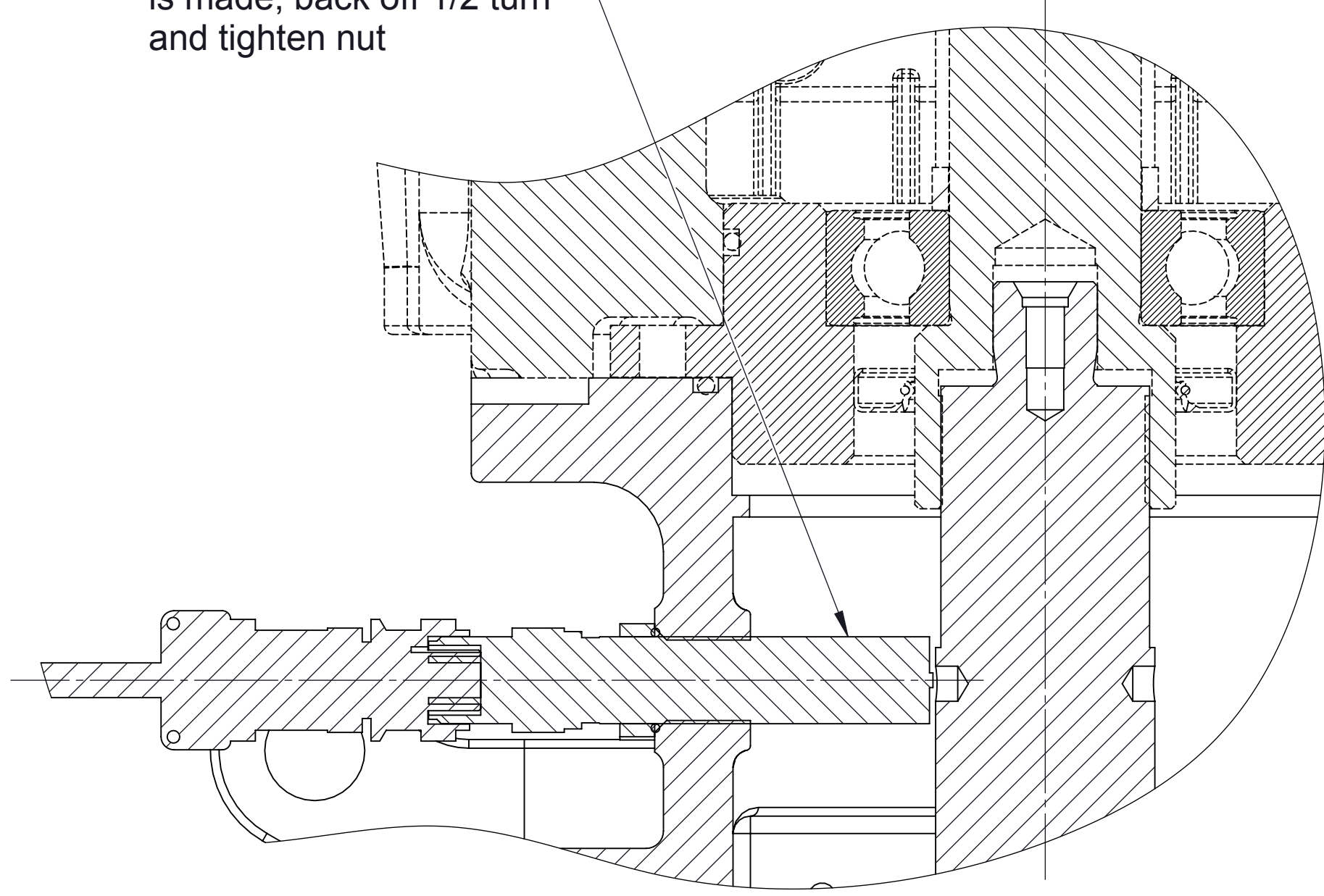
## Pump - Impeller Shaft and Pedestal

Model HLUK

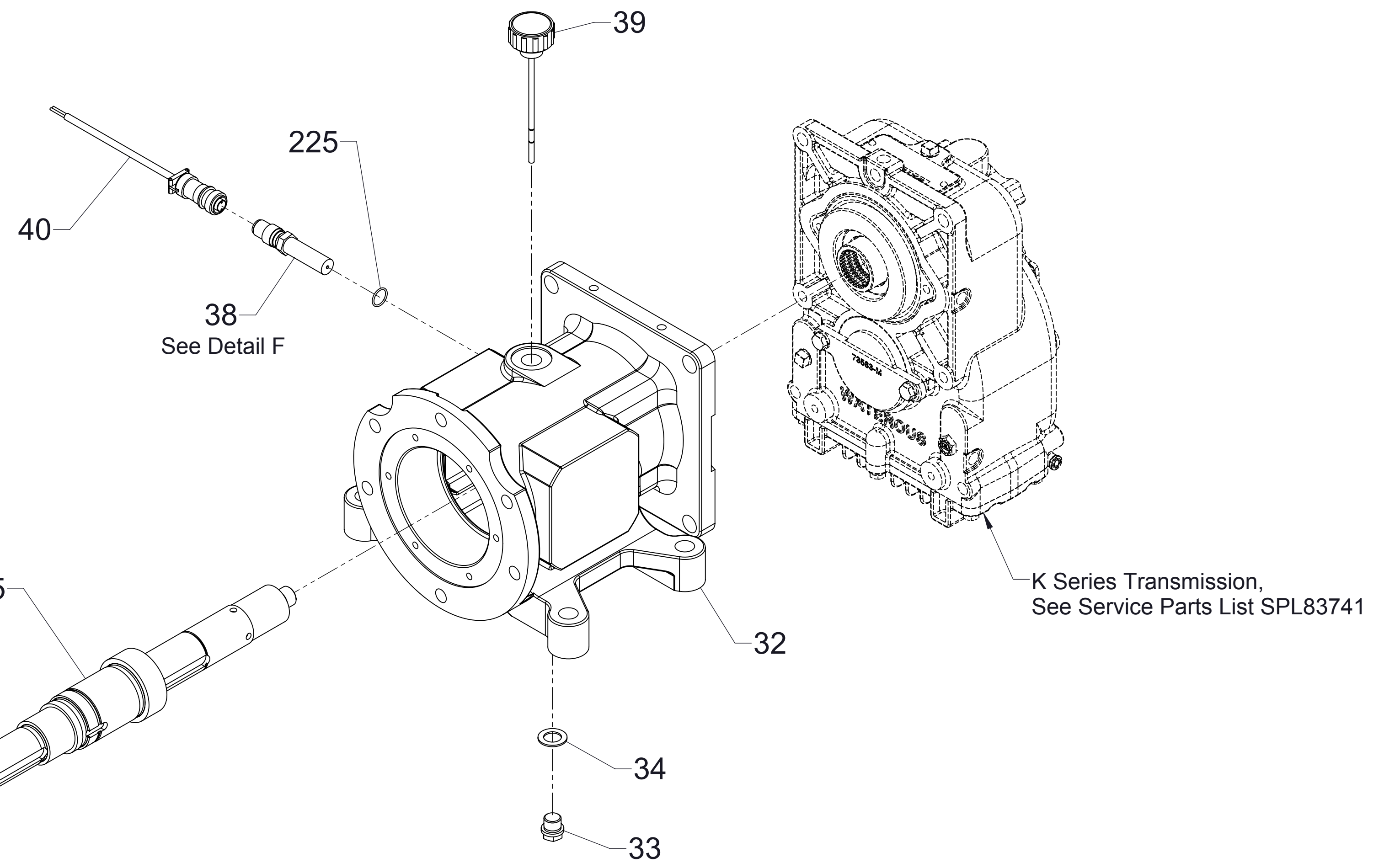
Ref No.	Description
20	Oil Seal Housing
21	Oil Seal, 2 x 2-5/8 x 5/16 in.
22	Bearing Lock Nut (N11)
23	Bearing Lock Washer (W11)
24	Ball Bearing, Angular Contact
25	Impeller Shaft
32	Pedestal Body
33	Hex Drain Plug, 16 mm

Ref No.	Description
34	Copper Flat Washer, 5/8 in.
38	Magnetic Tachometer Pick Up
39	Dip Stick
40	Tachometer Cable
44	O-ring, 124 mm x 128 mm
49	Lock Washer, 8 mm
52	Hex Head Screw, M8-1.25 x 25 mm
225	O-ring, 5/8 x 3/4 in.

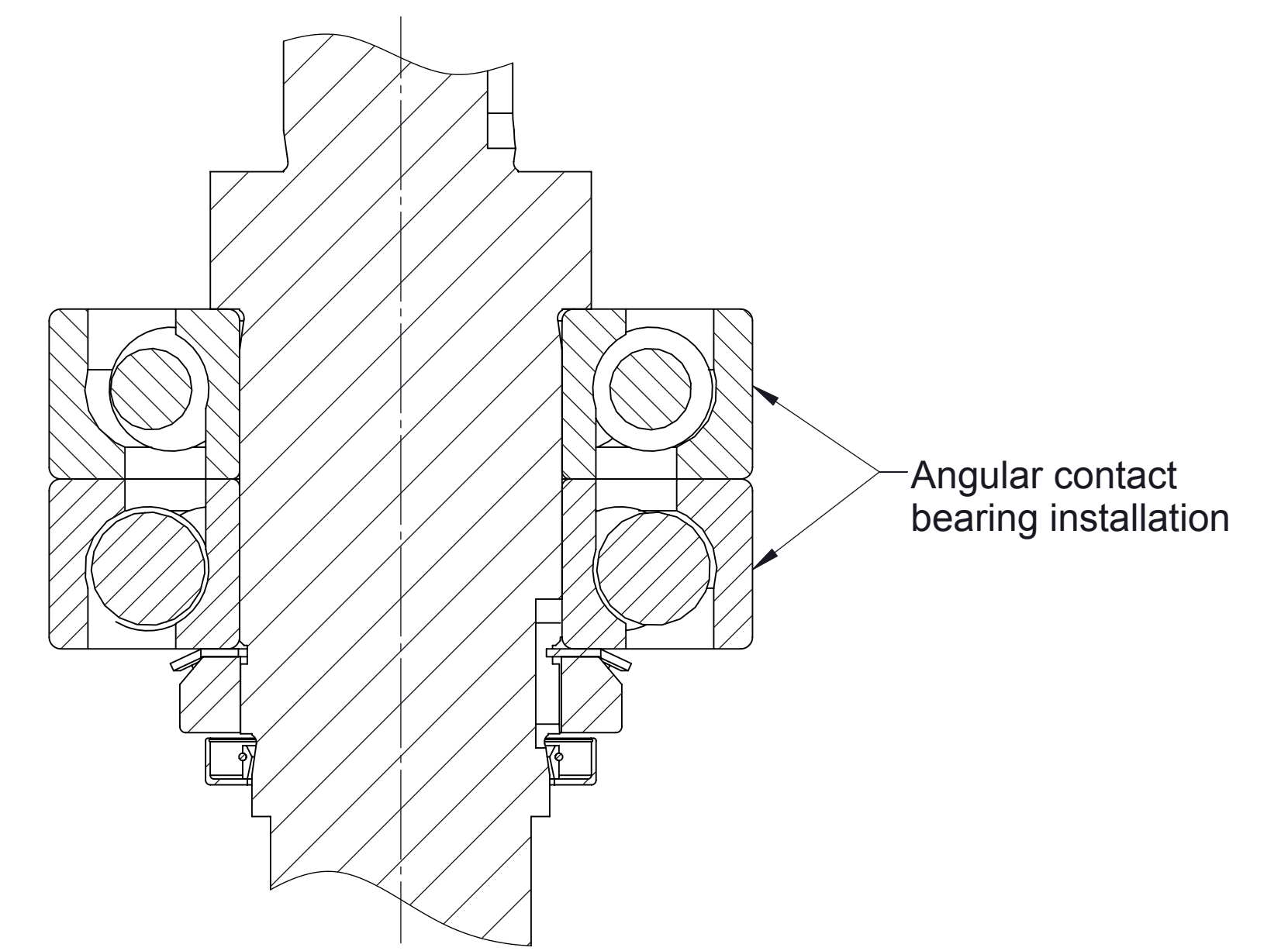
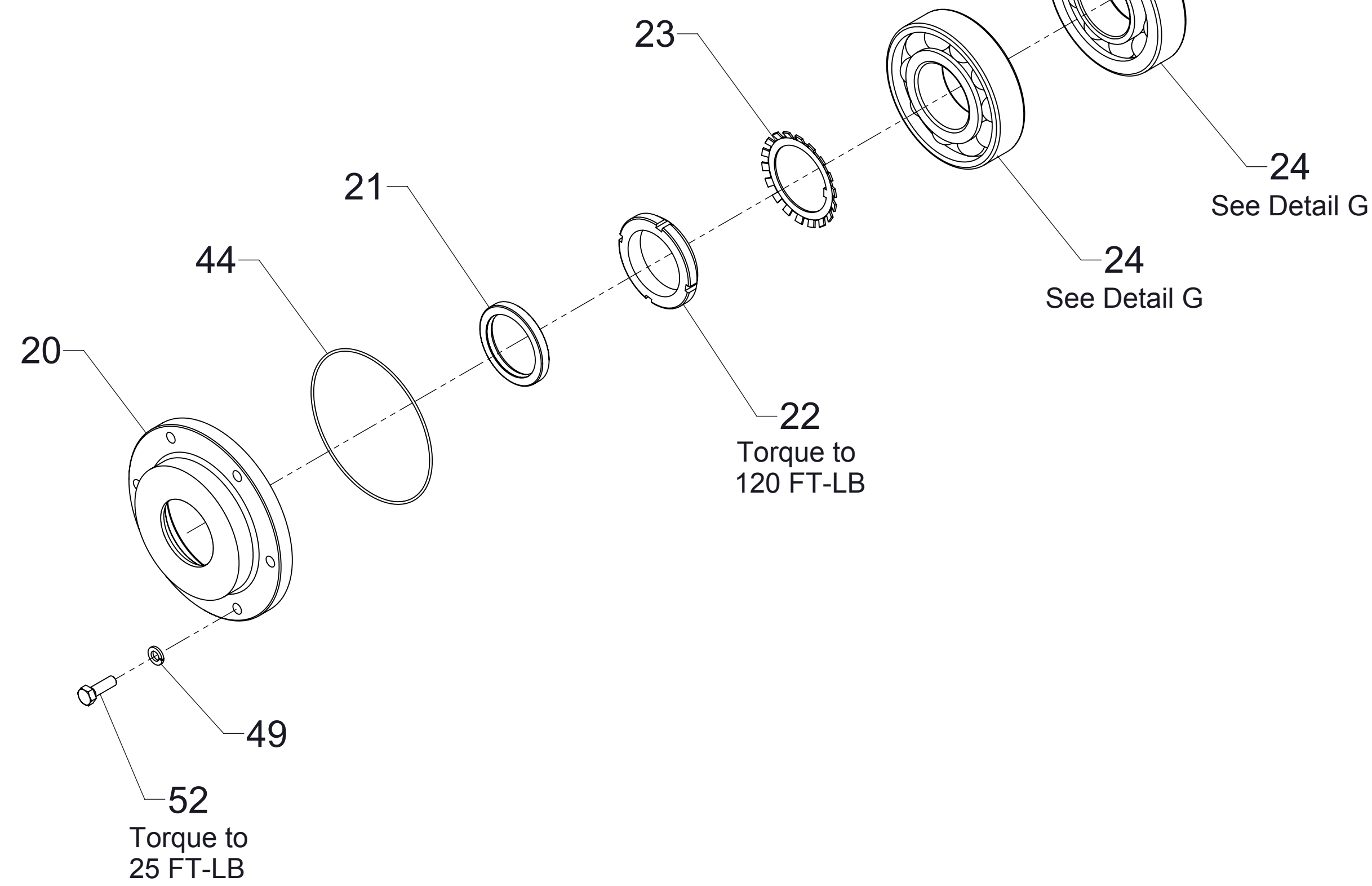
Thread into housing until contact with impeller shaft is made, back off 1/2 turn and tighten nut



**Detail F**  
Tachometer Pickup  
Installation



K Series Transmission,  
See Service Parts List SPL83741



**Detail G**

Angular contact  
bearing installation

**Pump - Impeller Shaft and Pedestal**  
Model HLUK

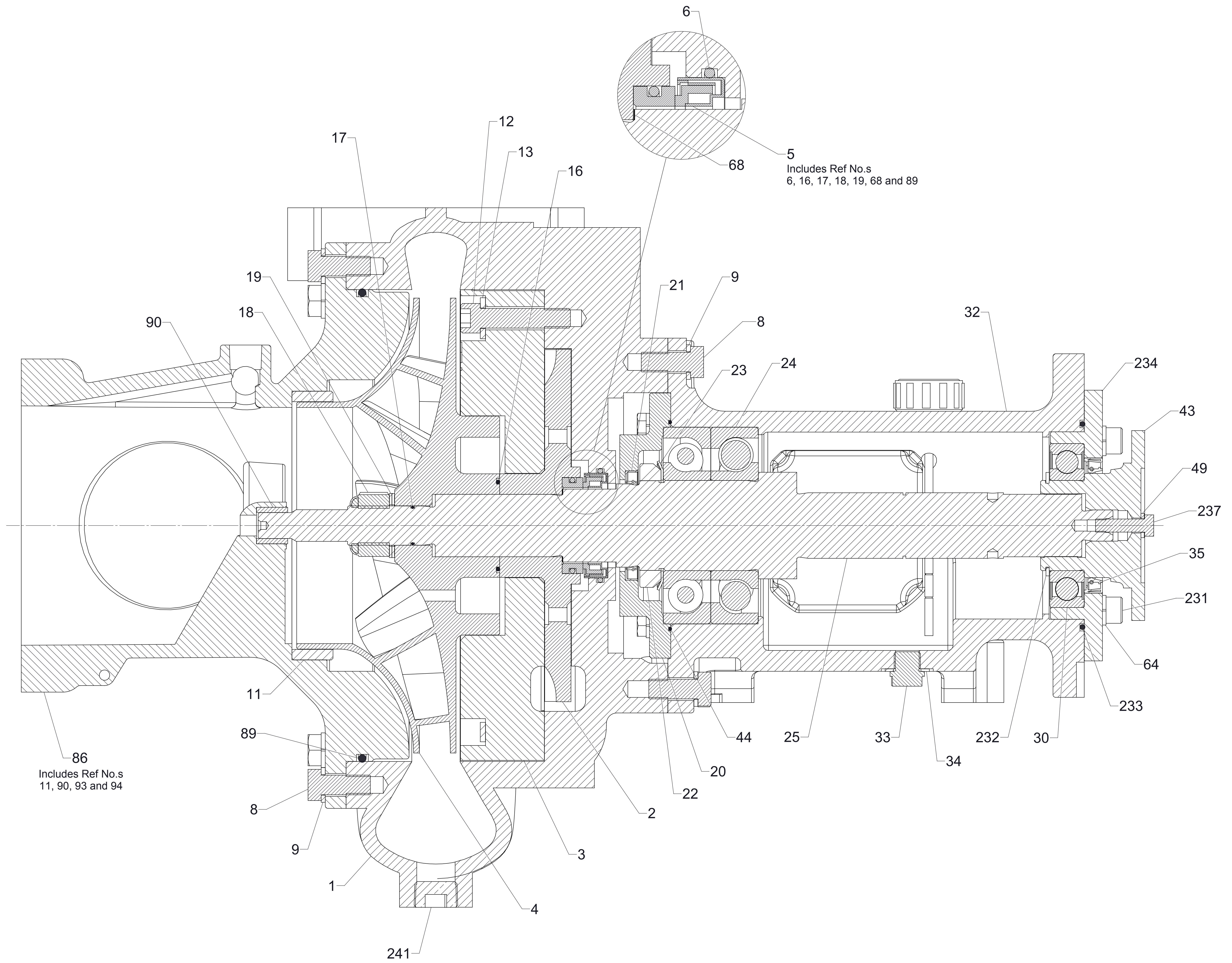
## Pump - Cross Section View

Model HLU D

Ref No.	Description
1	Volute Body
2	High Pressure Stage Impeller
3	Separator Plate
4	Main Stage Impeller
5	Mechanical Seal Repair Kit (Includes 6, 16, 17, 18, 19, 68, 89)
6	O-ring, 2-1/2 x 2-3/4 in.
8	Hex Head Screw, M12-1.75 x 30 mm
9	Lock Washer, 12 mm
11	Wear Ring
12	Socket Head Screw, M12-1.75 x 55 mm
13	Flat Washer, 12 mm
16	O-ring, 2 x 2-3/16 in.
17	O-ring, 13/16 x 15/16 in.
18	Lock Nut, M24-3
19	Nord Lock Washer, 24 mm
20	Oil Seal Housing
21	Oil Seal, 2 x 2-5/8 x 5/16 in.
22	Bearing Lock Nut (N11)
23	Bearing Lock Washer (W11)
24	Ball Bearing, Angular Contact

Ref No.	Description
25	Impeller Shaft
30	Single Row Ball Bearing
32	Pedestal Body
33	Hex Drain Plug, 16 mm
34	Copper Flat Washer, 5/8 in.
35	Oil Seal, 2-1/2 x 3-1/4 x 7/16 in.
43	Companion Flange, 1410 Series
44	O-ring, 124 mm x 128 mm
49	Lock Washer, 8 mm
64	Lock Washer, 10 mm
68	High Pressure Impeller Shim Pack (Includes .002, .005, .010 Thick Shims) See Overhaul Instruction F-1031, Section 4321 for Shimming Instructions
86	Intake Fitting Assembly (Includes 11, 90, 93, 94)
89	O-ring, 11 x 11-3/8 in.
90	Outboard Bearing
231	Socket Head Screw, M10-1.5 x 25 mm
232	Retaining Ring
233	O-ring, 4-3/4 x 5 in.
234	Bearing Housing
237	Hex Head Screw, M8-1.25 x 30 mm
241	Headless Pipe Plug, 3/4 NPT





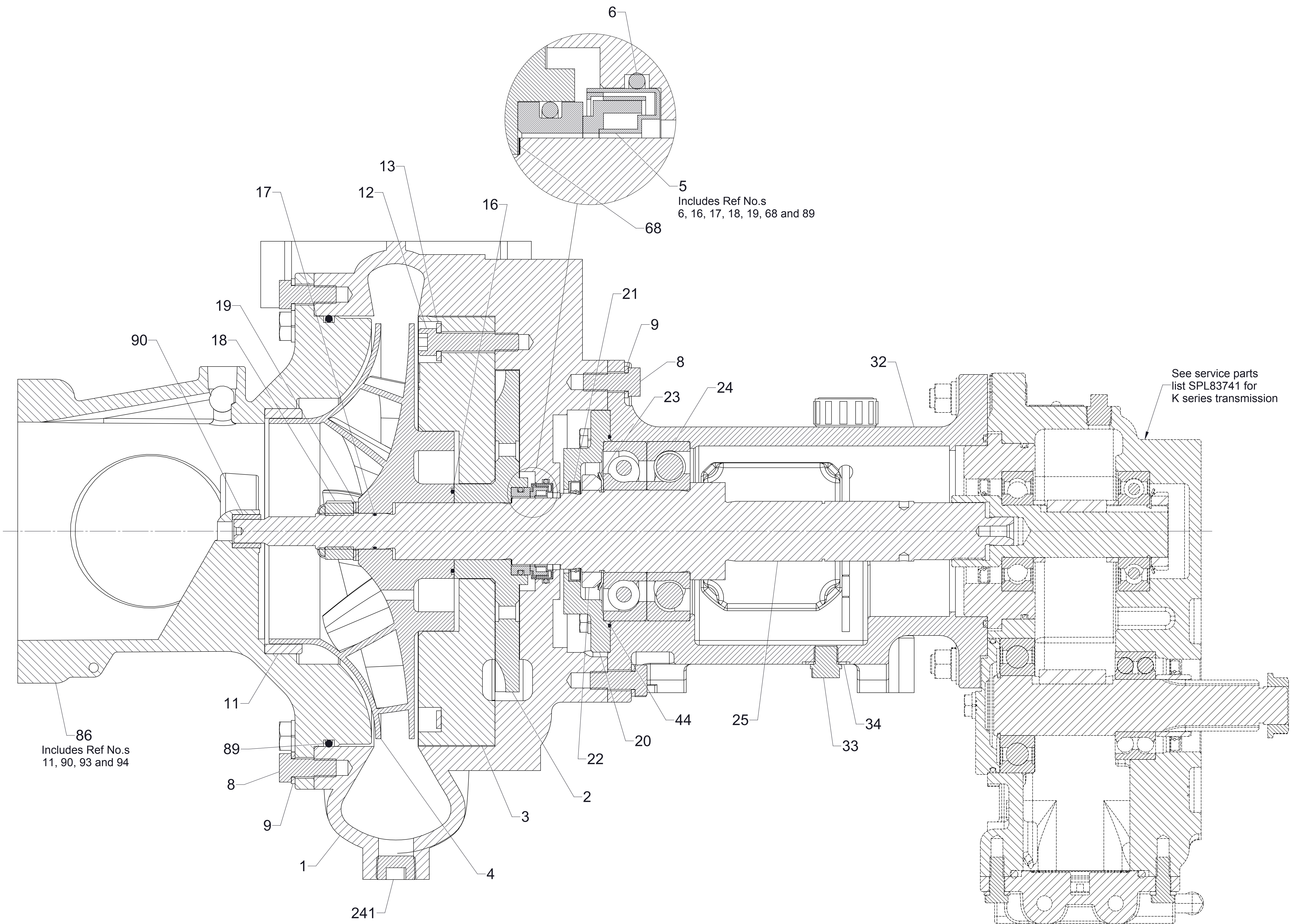
**Pump - Cross-Section View**  
Model HLU D

## Pump - Cross Section View

Model HLUK

Ref No.	Description
1	Volute Body
2	High Pressure Stage Impeller
3	Separator Plate
4	Main Stage Impeller
5	Mechanical Seal Repair Kit (Includes 6, 16, 17, 18, 19, 68, 89)
6	O-ring, 2-1/2 x 2-3/4 in.
8	Hex Head Screw, M12-1.75 x 30 mm
9	Lock Washer, 12 mm
11	Wear Ring
12	Socket Head Screw, M12-1.75 x 55 mm
13	Flat Washer, 12 mm
16	O-ring, 2 x 2-3/16 in.
17	O-ring, 13/16 x 15/16 in.
18	Lock Nut, M24-3
19	Nord Lock Washer, 24 mm

Ref No.	Description
20	Oil Seal Housing
21	Oil Seal, 2 x 2-5/8 x 5/16 in.
22	Bearing Lock Nut (N11)
23	Bearing Lock Washer (W11)
24	Ball Bearing, Angular Contact
25	Impeller Shaft
32	Pedestal Body
33	Hex Drain Plug, 16 mm
34	Copper Flat Washer, 5/8 in.
44	O-ring, 124 mm x 128 mm
68	High Pressure Impeller Shim Pack (Includes .002, .005, .010 Thick Shims) See Overhaul Instruction F-1031, Section 4321 for Shimming Instructions
86	Intake Fitting Assembly (Includes 11, 90, 93, 94)
89	O-ring, 11 x 11-3/8 in.
90	Outboard Bearing
241	Headless Pipe Plug, 3/4 NPT



5  
Includes Ref No.s  
6, 16, 17, 18, 19, 68 and 89

86  
Includes Ref No.s  
11, 90, 93 and 94

See service parts  
list SPL83741 for  
K series transmission

**Pump - Cross-Section View**  
Model HLUK