

# DATA SHEET

## 38 FRAME BLOCK-STYLE PLUNGER PUMPS

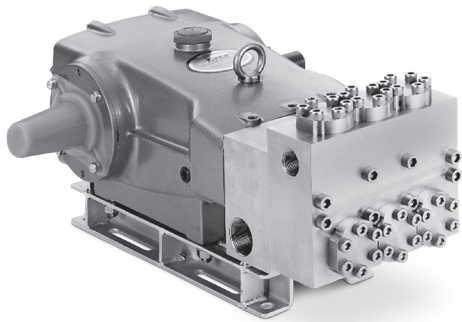


**Stainless Steel  
Models:**

**3801, 3811**

**Stainless Steel  
Flushed Models:**

**3801K, 3811K**



Model 3801 Shown  
(Shaft protector included and mounting rails sold separately)

### FEATURES

- Triplex design delivers high-efficiency and low-pulsation.
- Durable dual V-Packings are lubricated and cooled by pumped liquid.
- Pre-set low-pressure seals provide secondary protection against external leaks and require no packing adjustments.
- Special flushed inlet manifold on models 3801K and 3811K permits external flush for added cooling with high-temperature liquids or lubrication with low-lubricity liquids.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

### COMMON SPECIFICATIONS

	U.S.	Metric
Inlet Pressure Range	Flooded to 70 psi	Flooded to 4.8 bar
Max. Liquid Temp. (NBR)	160° F	71° C
<b>Alternative seals available for higher temperatures up to 200° F</b>		
Stroke	1.890"	48 mm
Crankcase Capacity	4.2 Qts	4 l
Inlet Ports (2)	1 ½" NPT(F)	1 ½" NPT(F)
Flush Ports (2)	½" NPT(F)	½" NPT(F)
Discharge Ports (2)	1" NPT(F)	1" NPT(F)
Pulley Mounting	Either Side	Either Side
Shaft Diameter	1.378"	35 mm
Weight	170 lbs.	77 kg
Dimensions	24.72 x 18.11 x 9.37"	628 x 460 x 238 mm

### SPECIFICATIONS

	U.S. Measure	Metric Measure
<b>3801, 3801K</b>		
Flow	10.0 gpm	38 lpm
Pressure Range	100–5000 psi	6.9–345 bar
Pump RPM*	915 rpm	915 rpm
Bore	0.787"	20 mm
<b>3811, 3811K</b>		
Flow	14 gpm	53 lpm
Pressure Range	100–3000 psi	6.9–210 bar
Pump RPM*	800 rpm	800 rpm
Bore	0.984"	25 mm

\*Pump is minimum 100 RPM

### ALTERNATIVE SEAL CONFIGURATION

MATERIAL	SUFFIX CODE	MAXIMUM TEMPERATURE
NBR	—	160° F (71° C)
FPM	.0110	180° F (82° C)
EPDM	.0220	160° F (71° C)
IPFE	.0770	200° F (93° C)

See **Tech Bulletin 002** for inlet conditions and RPM at high temperature.

<b>DETERMINING THE PUMP RPM</b>	Rated gpm	=	Desired gpm
	Rated rpm	=	Desired rpm
<b>DETERMINING THE REQUIRED HP</b>	HP (Electric Brake)	=	gpm x psi 1460
	<b>DETERMINING MOTOR PULLEY SIZE</b>	Motor Pulley OD Pump rpm	=

Refer to pump **Service Manual** for repair procedure and additional technical information.

## PARTS LIST

ITEM	PN	MATL	PN	MATL	PN	MATL	PN	MATL	DESCRIPTION	QTY
	<b>3801</b>		<b>3801K</b>		<b>3811</b>		<b>3811K</b>			
5	96049	S	96049	S	96049	S	96049	S	Screw, HH Sems (M10 x 25) (See Tech Bulletin 074, 125)	8
8	134604	ALE	134604	ALE	134604	ALE	134604	ALE	Cover, Bearing (See Tech Bulletin 118, 125)	2
9	815279	FBR	815279	FBR	815279	FBR	815279	FBR	Shim, Split 2-Piece (See Tech Bulletin 125)	0-2
10	12398	NBR	12398	NBR	12398	NBR	12398	NBR	O-Ring, Bearing Cover-70D	2
11	13296	NBR	13296	NBR	13296	NBR	13296	NBR	Seal, Oil, Crankshaft	2
12	855049	S	855049	S	855049	S	855049	S	Shim, Split 2-Piece	0-2
15	29326	STL	29326	STL	29326	STL	29326	STL	Bearing, Roller	2
20	121467	TNM	121467	TNM	121467	TNM	121467	TNM	Rod, Connecting Assembly (Includes: 21, 22, 23) (See Tech Bulletin 074)	3
21	126749	STCP R	126749	STCP R	126749	STCP R	126749	STCP R	Washer, Locking (M10)	3
22	126593	STCP R	126593	STCP R	126593	STCP R	126593	STCP R	Washer, Flat (M10)	6
23	122045	STZP	122045	STZP	122045	STZP	122045	STZP	Screw, HH (M10 x 55)	6
25	29325	FCM	29325	FCM	29325	FCM	29325	FCM	Crankshaft, Dual End (M48)	1
31	828710	PE	828710	PE	828710	PE	828710	PE	Protector, Oil Cap with Foam Gasket	1
32	43211	ABS	43211	ABS	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	14177	NBR	14177	NBR	O-Ring, Oil Filler Cap-70D	1
34	126743	STCP R	126743	STCP R	126743	STCP R	126743	STCP R	Bolt, Eye (M12 x 1.75) (For Lifting Pump Only)	1
37	92241	PC	92241	PC	92241	PC	92241	PC	Gauge, Oil, Bubble with Gasket-80D (See Tech Bulletin 074)	1
38	44428	NBR	44428	NBR	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge-80D	1
40	125753	S	125753	S	125753	S	125753	S	Screw, HH Sems (M8 x 25) (See Tech Bulletin 074)	8
48	25625	STCP	25625	STCP	25625	STCP	25625	STCP	Plug, Drain (1/4" x 19BSP)	1
49	23170	NBR	23170	NBR	23170	NBR	23170	NBR	O-Ring, Drain Plug - 70D	1
50	45936	ALE	45936	ALE	45936	ALE	45936	ALE	Cover, Rear (See Tech Bulletin 118)	1
51	16612	NBR	16612	NBR	16612	NBR	16612	NBR	O-Ring, Cover - 70D	1
53	134784	ALE	134784	ALE	134784	ALE	134784	ALE	Crankcase Assembly (Includes: 34, 54) (See Tech Bulletin 118, 125)	1
54	27488	S	27488	S	27488	S	27488	S	Pin, Guide	2
56	27790	POP	27790	POP	27790	POP	27790	POP	Pan, Oil	1
59	92538	S	92538	S	92538	S	92538	S	Screw, HHC Sems (M6 x 16)	2
64	43864	CM	43864	CM	43864	CM	43864	CM	Pin, Crosshead	3
65	<b>45118</b>	SSZZ	<b>45118</b>	SSZZ	<b>45116</b>	SSZZ	<b>45116</b>	SSZZ	Rod, Plunger	3
69	126587	STCP R	126587	STCP R	126587	STCP R	126587	STCP R	Washer, Oil Seal	3
70	100488	NBR	100488	NBR	100488	NBR	100488	NBR	Seal, Oil, Crankcase	3
	44739	FPM	44739	FPM	44739	FPM	44739	FPM	Seal, Oil, Crankcase	3
75	<b>43506</b>	S	<b>43506</b>	S	<b>43865</b>	S	<b>43865</b>	S	Slinger, Barrier	3
88	<b>45675</b>	S	<b>45675</b>	S	<b>45676</b>	S	<b>45676</b>	S	Washer, Keyhole	3
90	<b>43945</b>	CC	<b>43945</b>	CC	<b>43866</b>	CC	<b>43866</b>	CC	Plunger (M20 x 145) (M25 x 145)	3
95	<b>89779</b>	S	<b>89779</b>	S	<b>89778</b>	SS	<b>89778</b>	SS	Stud, Plunger Retainer (M7 x 123) (M10 x 135)	3
96	<b>20184</b>	PTFE	<b>20184</b>	PTFE	<b>20189</b>	PTFE	<b>20189</b>	PTFE	Back-up Ring, Plunger Retainer	3
97	<b>14190</b>	NBR	<b>14190</b>	NBR	<b>11345</b>	NBR	<b>11345</b>	NBR	O-Ring, Plunger Retainer-70D	3
98	<b>44069</b>	SS	<b>44069</b>	SS	<b>44085</b>	SS	<b>44085</b>	SS	Gasket, Plunger Retainer	3
99	<b>44068</b>	SS	<b>44068</b>	SS	<b>44084</b>	SS	<b>44084</b>	SS	Retainer, Plunger (M7) (M10) (See Tech Bulletin 074)	3
100	814279	PVDF	814279	PVDF	814279	PVDF	814279	PVDF	Retainer, Seal (See Tech Bulletin 105)	3
101	44095	—	44095	—	44096	—	44096	—	Wick	3
104	43875	NBR	43875	NBR	43875	NBR	43875	NBR	O-Ring, Inlet Adapter-70D	3
105	<b>701344</b>	SS	<b>701344</b>	SS	<b>701323</b>	SS	<b>701323</b>	SS	Adapter, Inlet	3
106	<b>44071</b>	NBR	<b>44071</b>	NBR	<b>44086</b>	NBR	<b>44086</b>	NBR	Seal, LPS with SS-Spring	3
107	<b>44074</b>	SS	<b>44074</b>	SS	<b>44089</b>	SS	<b>44089</b>	SS	Washer, LPS	3
110	<b>701286</b>	SS	—	—	<b>701286</b>	SS	—	—	Manifold, Inlet, Block-Style	1
	—	—	<b>701408</b>	SS	—	—	<b>701408</b>	SS	Manifold, Inlet, Block-Style, Flushed (1/2" Inlet Port) 3801K, 3811K	1
111	701116	SS	701116	SS	701116	SS	701116	SS	Plug, Inlet (1 1/2" NPT)	1
112	701794	NBR	701794	NBR	701794	NBR	701794	NBR	O-Ring, Inlet Spacer-70D	6
113	701319	PTFE	701319	PTFE	701319	PTFE	701319	PTFE	Backup Ring, Inlet Spacer	6
114	701317	SS	701317	SS	701317	SS	701317	SS	Spacer, Inlet	3
117	701252	SS	701252	SS	701252	SS	701252	SS	Screw, HSH (M14 x 100) (See Tech Bulletin 074)	4
118	<b>701077</b>	SS	—	—	<b>701077</b>	SS	—	—	Plug (1/4" NPT)	3
123	12391	NBR	12391	NBR	12391	NBR	12391	NBR	O-Ring, V-Packing Cylinder-70D	3
124	<b>701336</b>	SS	<b>701336</b>	SS	<b>701448</b>	SS	<b>701448</b>	SS	Cylinder, V-Packing	3
126	<b>44164</b>	SS	<b>44164</b>	SS	<b>701325</b>	SS	<b>701325</b>	SS	Adapter, Female	3
127	<b>44607</b>	STG	<b>44607</b>	STG	<b>44610</b>	STG	<b>44610</b>	STG	V-Packing	9-6
128	<b>44165</b>	SS	<b>44165</b>	SS	<b>701326</b>	SS	<b>701326</b>	SS	Adapter, Male	3
141	—	—	—	—	<b>45113</b>	SS	<b>45113</b>	SS	Spring, Coil	15
142	—	—	—	—	<b>701447</b>	SS	<b>701447</b>	SS	Spacer with Coil Springs	3
155	<b>17622</b>	NBR	<b>17622</b>	NBR	<b>11379</b>	NBR	<b>11379</b>	NBR	O-Ring, V-Packing Spacer	6
156	<b>28675</b>	PTFE	<b>28675</b>	PTFE	<b>28243</b>	PTFE	<b>28243</b>	PTFE	Backup Ring, V-Packing Spacer	6
157	<b>701352</b>	SS	<b>701352</b>	SS	<b>701385</b>	SS	<b>701385</b>	SS	Spacer, V-Packing	3
162	21985	PTFE	21985	PTFE	21985	PTFE	21985	PTFE	Backup Ring, Seat	6
163	26089	NBR	26089	NBR	26089	NBR	26089	NBR	O-Ring, Seat-80D	6
164	44080	SS	44080	SS	44080	SS	44080	SS	Seat	6
166	44081	SS	44081	SS	44081	SS	44081	SS	Valve	6
167	44082	SS	44082	SS	44082	SS	44082	SS	Spring	6
168	44735	PVDF	44735	PVDF	44735	PVDF	44735	PVDF	Retainer, Spring	6
170	44794	SS	44794	SS	44794	SS	44794	SS	Washer, Spring Retainer	6
171	44793	SS	44793	SS	44793	SS	44793	SS	Spring, Coil, Valve Plug	6
172	15853	NBR	15853	NBR	15853	NBR	15853	NBR	O-Ring, Valve Plug-70D	6
173	20224	PTFE	20224	PTFE	20224	PTFE	20224	PTFE	Backup Ring, Valve Plug	6
174	701260	SS	701260	SS	701260	SS	701260	SS	Plug, Valve	6
175	87951	S	87951	S	87951	S	87951	S	Screw, HSH, Valve Plug (M10 x 30) (See Tech Bulletin 074)	36
185	<b>701314</b>	SS	<b>701314</b>	SS	<b>701785</b>	SS	<b>701785</b>	SS	Manifold, Discharge, Block-Style	1
188	701279	S	701279	S	701279	S	701279	S	Screw, HSH, (M12 x 100) (See Tech Bulletin 074)	12
196	701342	SS	701342	SS	701342	SS	701342	SS	Plug, Discharge (1" NPT) Not Shown	1
250	855042	NY	855042	NY	855042	NY	855042	NY	Protector, Shaft with 2 - Screws, Lockwashers and Washers (Included with Pump) (See Tech Bulletin 125)	1

**Bold print part numbers are unique to a particular pump model.**

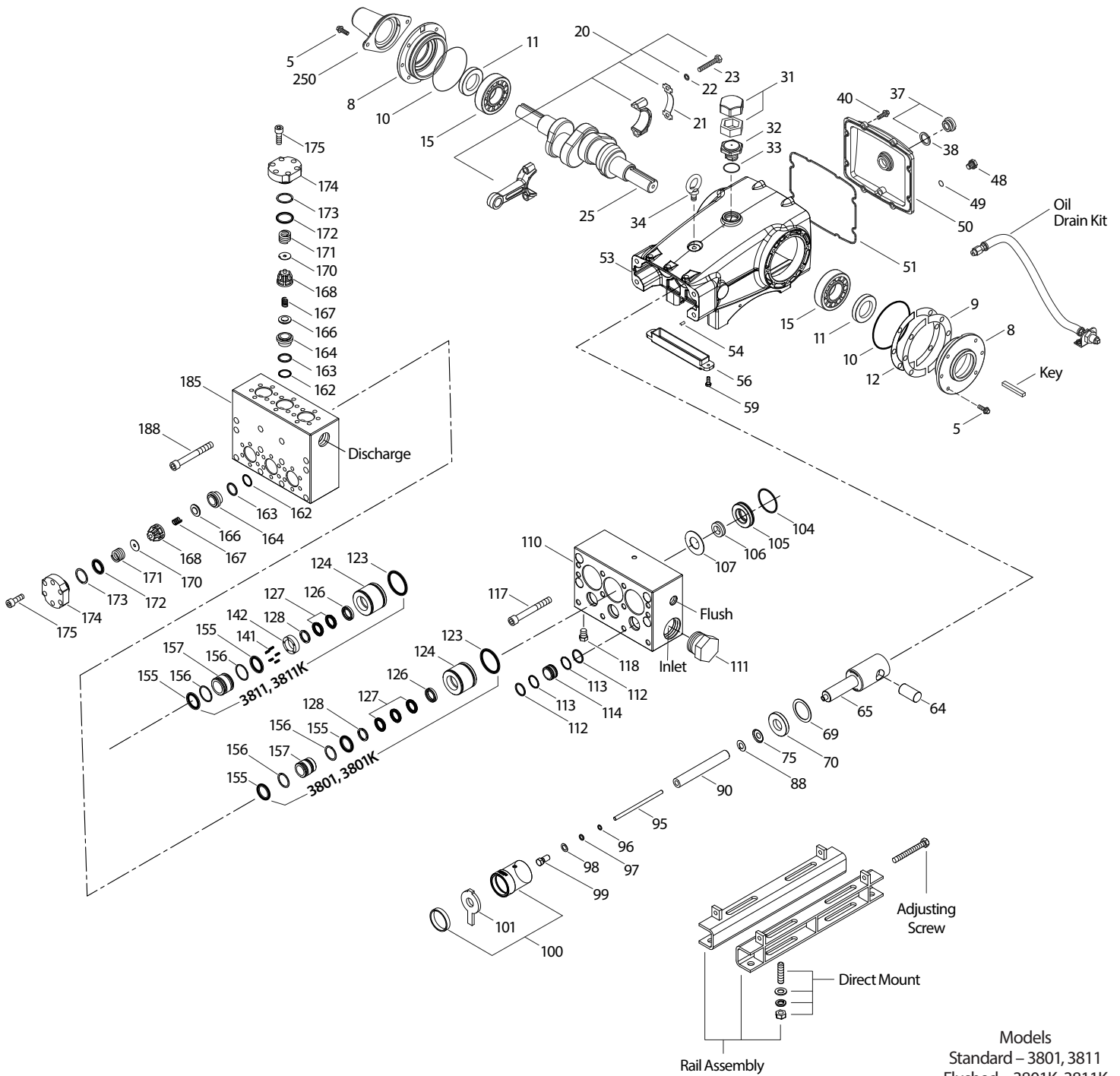
*Italics are optional items.* R Components comply with RoHS Directive.

For additional technical information see [www.catpumps.com/literature/tech-bulletins](http://www.catpumps.com/literature/tech-bulletins). See Service Bulletin 001.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic ALE=Aluminum Epoxy CC=Ceramic CM=Chrome-Moly D=Acetal EPDM=Ethylene Propylene Diene Monomer F=Cast Iron  
 FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) NBR5=Buna, Silicone Free NY=Nylon PC=Poly Carbonate PE=Polyethylene POP=Polypropylene  
 PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SFG=Special Blend FPM SS=316SS SSL=316SS/Low Carbon SHB=316SS/High-Strength Brass SSZZ=316SS/Zamak  
 STG=Special Blend PTFE White STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength ZP=Zinc Plated

**Standard and optional Seal Kits and Valve Kits listed on pages 3 and 4. Optional Parts and Accessories and Service parts listed on Page 3.**

# EXPLODED VIEW



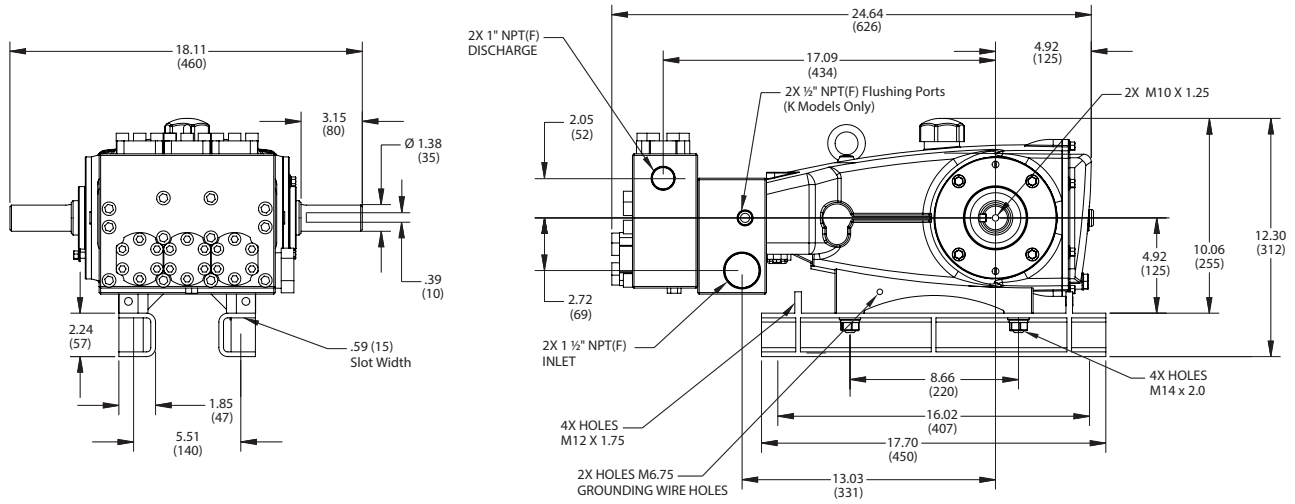
Models  
 Standard – 3801, 3811  
 Flushed – 3801K, 3811K  
 September 2020

## OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
34021	Key, (M10 x 8 x 70)	1
92674	Mount, Rail Assembly (STZP R)	1
76514	Mount, Rail Assembly (S)	1
34018	Mount, Direct (STZP R)	1
34039	Mount, Direct (S)	1
990013	Hub, "B", 35mm (STL)	1
80540	Screw, Adjusting (M12 x 100)	2
30278	Oiler (1 oz) (Not Shown)	3
34314	Kit, Oil Drain	1
30696	Pliers, Reverse	1
819000	Assembly, Crankcase, Cast Iron Conversion	1
990663	Assembly, Flushing, (3801K, 3811K)	1

## SERVICE PARTS

PART	DESCRIPTION	QTY
701786	Kit, Seal – Standard NBR (3801,3801K)	1
701793	Kit, Seal – Standard NBR (3811,3811K)	1
34151	Kit, Valve – Standard NBR	2
6100	Oil, Case (12–21 oz Bottles) ISO-68 Hydraulic	1
6119	Lubricant, Anti-seize (2 oz)	1
6124	Gasket, Liquid (3 oz)	1
901388	Head, Complete – 3801 with NBR Seals and O-Ring	1
901370	Head, Complete – 3811 with NBR Seals and O-Ring	1
901389	Head, Complete – 3801K with NBR Seals and O-Ring	1
901371	Head, Complete – 3811K with NBR Seals and O-Ring	1



Models 3801, 3801K, 3811, 3811K

**SEAL KITS** One (1) seal kit required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220)◆	IPFE (.0770)
3801, 3801K	701786*	33251*	33141*	
3811, 3811K	701793*	701802*	701803*	76793*

ITEM (Included in Seal Kits)					DESCRIPTION	QTY
97	14190	14161	48239		O-Ring, Plunger Retainer (3801,3801K)	3
	11345	11375	701490	702961	O-Ring, Plunger Retainer (3811,3811K)	3
104	43875	44826	701656	702977	O-Ring, Adapter	3
106	44071	44381	701974		Seal, LPS with SS-Spring (3801,3801K)	3
	44086	45846	701944	701944	Seal, LPS with SS-Spring (3811, 3811K)	3
112	701794	701318	701495	702969	O-Ring, Inlet Spacer	6
113	701319	701319	701319	701319	Backup Ring, Inlet Spacer	6
123	12391	13266	701657	703481	O-Ring, V-Packing Cylinder	3
127	44607	44607	44607		V-Packing (3801,3801K)	9
	44610	44610	44610	703050	V-Packing (3811, 3811K)	6
155	17622	11719	701654		O-Ring, V-Packing Spacer (3801,3801K)	6
	11379	14183	701491	702705	O-Ring, V-Packing Spacer (3811,3811K)	6
156	28675	28675	28675	28675	Backup Ring, V-Packing Spacer (3801, 3801K)	6
	28243	28243	28243	28243	Backup Ring, V-Packing Spacer (3811, 3811K)	6

◆ Silicone oil/grease required \*Review material codes for individual items (STG generally maybe used as alternative)

**VALVE KITS** Two (2) valve kits required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220)◆	IPFE (.0770)
3801, 3801K	34151	701798	701799	76171
3811, 3811K	34151	701798	701799	76171

ITEM (Included in Valve Kits)					DESCRIPTION	QTY
162	21985	21985	21985	21985	Backup Ring, Valve Seat	3
163	26089	11377	46647	703244	O-Ring, Valve Seat	3
164	44080	44080	44080	44080	Seat	3
166	44081	44081	44081	44081	Valve	3
167	44082	44082	44082	44082	Spring	3
168	44735	44735	44735	44735	Retainer, Spring	3
170	44794	44794	44794	44794	Washer, Spring Retainer	3
172	15853	11720	701481	702974	O-Ring, Valve Plug	3
173	20224	20224	20224	20224	Backup Ring, Valve Plug	3

◆ Silicone oil/grease required

**CAUTIONS AND WARNINGS**

All high-pressure systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high-pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high-pressure system. The CAUTIONS and WARNINGS are included in each Service Manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at [www.catpumps.com/dynamic-literature/cautions-and-warnings](http://www.catpumps.com/dynamic-literature/cautions-and-warnings) or can be requested directly from Cat Pumps.

**WARRANTY**

View the Limited Warranty on-line at [www.catpumps.com/literature/cat-pumps-limited-warranty](http://www.catpumps.com/literature/cat-pumps-limited-warranty)