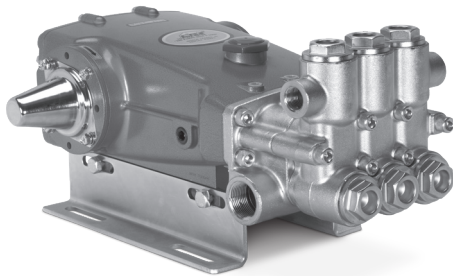


# DATA SHEET

## 25 FRAME PLUNGER PUMPS



**Brass Model:** **2510**  
**Stainless Steel Model:** **2511**



Model 2510 Shown  
 (Rails and shaft protector sold separately)

### FEATURES

- Triplex plunger design ensures 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.
- Belt-driven options provides precision flow setting.
- Direct-drive option offers a compact footprint for SAE hydraulic motors with a bell housing/flexible coupler assembly.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

SPECIFICATIONS	U.S. Measure	Metric Measure
<b>2510</b>		
Flow	20 gpm	76 lpm
Pressure Range	100–2000 psi	6.9–138 bar
<b>2511</b>		
Flow	20 gpm	76 lpm
Pressure Range	100–1500 psi	6.9–103 bar

COMMON SPECIFICATIONS	U.S.	Metric
Pump RPM*	1450 rpm	1450 rpm
Inlet Pressure Range	Flooded to 70 psi	Flooded to 4.8 bar
Max. Liquid Temperature (NBR)	160° F	71° C
Alternative seals available for higher temperature up to 190° F		
Bore	0.984"	25 mm
Stroke	1.516"	38.5 mm
Crankcase Capacity	84 oz	2.5 l
Inlet Ports (2)	1 1/4" NPT(F)	1 1/4" NPT(F)
Discharge Ports (2)	3/4" NPT(F)	3/4" NPT(F)
Pulley Mounting	Either side	Either side
Shaft Diameter	1.181"	30 mm
Weight (2510)	79 lbs	36 kg
(2511)	75 lbs	34 kg
Dimensions	20.45 x 15.04 x 8.46"	519 x 382 x 215 mm

\*Pump minimum is 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)
STHT	.3400	190° F (88° C)

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

$$\begin{aligned} \text{DETERMINING THE PUMP RPM} & \quad \frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{Desired gpm}}{\text{Desired rpm}} \\ \text{DETERMINING THE REQUIRED HP} & \quad \frac{\text{hp}}{\text{(Electric Brake)}} = \frac{\text{gpm} \times \text{psi}}{1460} \\ \text{DETERMINING MOTOR PULLEY SIZE} & \quad \frac{\text{Motor Pulley OD}}{\text{Pump rpm}} = \frac{\text{Pump Pulley OD}}{\text{Motor rpm}} \end{aligned}$$

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

# PARTS LIST

ITEM	PART NUMBER	MATL	PART NUMBER	MATL	DESCRIPTION	QTY
	<b>2510</b>		<b>2511</b>			
5	<b>126544</b>	STCP R	<b>125753</b>	S	Screw, HHC Sems (M8 x 25) (See Tech Bulletin 074)	8
8	134966	ALE	134966	ALE	Cover, Bearing (See Tech Bulletin 118, 135)	2
10	27772	NBR	27772	NBR	O-Ring, Bearing Cover-70D	2
11	27771	NBR	27771	NBR	Seal, Oil, Crankshaft-70D	2
15	26512	STL R	26512	STL R	Bearing, Ball	2
20	48613	TNM	48613	TNM	Assembly, Rod, Connecting (Includes: Lockwasher, Washer, Screw) (See Tech Bulletin 074)	3
21	126562	STCP R	126562	STCP R	Washer, Locking	3
25	49795	FCM	49795	FCM	Crankshaft, Dual-End	1
32	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	O-Ring, Oil Filler Cap-70D	1
36	129343	RBR	129343	RBR	Gasket, Flat	1
37	92241	PC	92241	PC	Gasket, Oil, Bubble with Gasket-80D	1
38	44428	NBR	44428	NBR	Gasket, Flat, Oil Guage-80D	1
39	27769	ABS	27769	ABS	Dip Stick	1
40	<b>126544</b>	STCP R	<b>125753</b>	S	Screw, HHC Sems (M8 x 25) (See Tech Bulletin 074)	8
48	25625	STCP	25625	STCP	Plug, Drain (1/4" x 19 BSP)	1
49	23170	NBR	23170	NBR	O-Ring, Drain Plug-70D	1
50	133582	ALE	133582	ALE	Cover, Rear (See Tech Bulletin 118, 126)	1
51	27767	NBR	27767	NBR	O-Ring, Rear Cover-70D	1
53	133609	ALE	133609	ALE	Crankcase with Guide Pins (See Tech Bulletin 118, 135)	1
54	27488	S	27488	S	Pin, Guide	2
56	27790	POP	27790	POP	Pan, Oil	1
59	<b>125824</b>	STCP R	<b>92538</b>	S	Screw, HHC Sems (M6 x 16)	2
64	27784	CM	27784	CM	Pin, Crosshead	3
65	48719	SSHS	48719	SSHS	Rod, Plunger	3
70	27785	NBR	27785	NBR	Seal, Crankcase Oil-70D	3
75	110669	S	110669	S	Slinger, Barrier	3
88	110670	S	110670	S	Washer, Keyhole	3
90	48535	CC	48535	CC	Plunger, Ceramic (M25 x 110)	3
95	<b>126549</b>	STCP R	<b>48679</b>	SS	Stud, Plunger Retainer (M7 x 103)	3
96	20184	PTFE	20184	PTFE	Backup Ring, Plunger Retainer	3
97	14190	NBR	14190	NBR	O-Ring, Plunger Retainer-70D	3
98	44069	SS	44069	SS	Gasket, Plunger Retainer	3
99	44068	SS	44068	SS	Retainer, Plunger (M7) (See Tech Bulletin 074)	3
100	49788	NY	49788	NY	Retainer, LPS, Front [03/11]	3
	49789	NY	49789	NY	Retainer, LPS, Rear [03/11]	3
101	48487	—	48487	—	Wick, Long Tab	3
106	44086	NBR	44086	NBR	Seal, LPS with SS-Spring	3
107	<b>48537</b>	BB	<b>48668</b>	SS	Washer, LPS	3
110	<b>48536</b>	BBCP	<b>48667</b>	SS	Manifold, Inlet	1
112	11379	NBR	11379	NBR	O-Ring, Inlet Manifold-70D	3
117	<b>126510</b>	STCP R	<b>88398</b>	S	Screw, HSH (M12 x 35 and M12 x 40) (See Tech Bulletin 074)	4
126	<b>48538</b>	BB	<b>48669</b>	D	Adapter, Female	3
	—	—	<b>76667</b>	SS	<i>Adapter, Female</i>	3
127	44610	STG	44610	STG	V-Packing	6
128	<b>48539</b>	BB	<b>113025</b>	SS	Adapter, Male	3
141	48672	SS	48672	SS	Spring, Coil	18
142	<b>48550</b>	BB	<b>48670</b>	SS	Spacer with Coil Springs	3
155	17629	NBR	17629	NBR	O-Ring, Spacer - Rear-80D	3
156	28243	PTFE	28243	PTFE	Backup Ring, Spacer-Rear	3
158	28243	PTFE	28243	PTFE	Backup Ring, Spacer-Front	3
159	17629	NBR	17629	NBR	O-Ring, Spacer - Front-80D	3
162	48363	D	48363	D	Backup Ring, Seat	6
163	26142	NBR	26142	NBR	O-Ring, Seat-80D	6
164	<b>48544</b>	S	<b>48676</b>	SS	Seat	6
166	45839	SS	45839	SS	Valve	6
167	45840	SS	45840	SS	Spring	6
168	110682	PVDF	110682	PVDF	Retainer, Spring	6
170	44794	SS	44794	SS	Washer, Spring Retainer	6
171	48689	SS	48689	SS	Spring, Coil	6
172	17667	NBR	17667	NBR	O-Ring, Valve Plug-80D	6
174	<b>120693</b>	BBCP	<b>49295</b>	SSZZ	Plug, Valve (With O-Ring Model 2510 Only) (See Tech Bulletin 074)	6
185	<b>48543</b>	BBCP	<b>48674</b>	SS	Manifold, Discharge	1
188	<b>126511</b>	STCP R	<b>88399</b>	S	Screw, HSH (M12 x 80) (See Tech Bulletin 074)	6

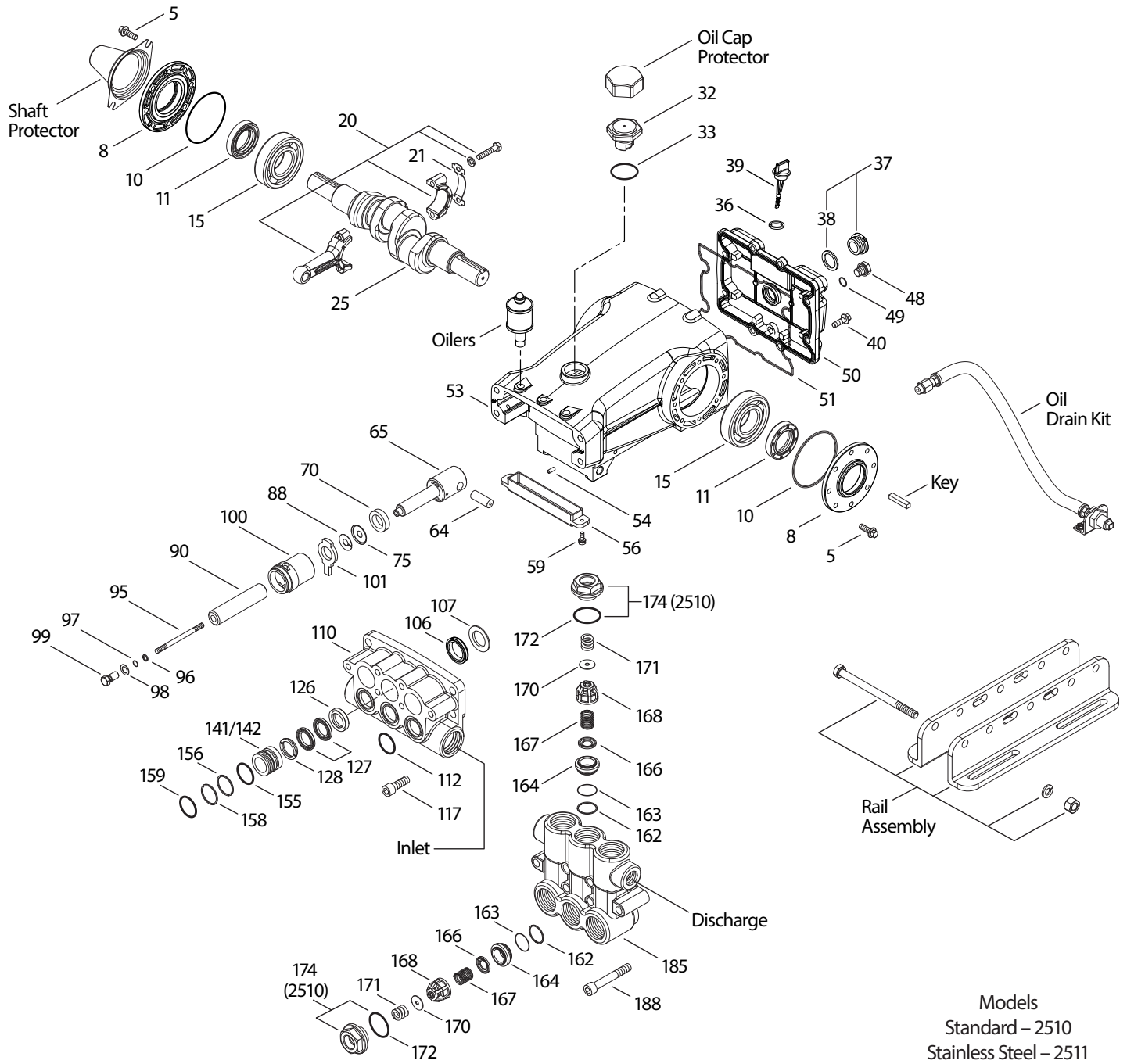
**Bold part numbers are unique to a particular pump model.**

*Italics are optional items.* [ ] Date of latest production change. R Components comply with RoHS Directive.

\* Review material codes for individual items (STG generally may be used as alternate). For additional technical information see [www.catpumps.com/literature/tech-bulletins](http://www.catpumps.com/literature/tech-bulletins)

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic ALE=Aluminum Epoxy BB=Brass BBCP=Brass/Chrome Plated CC=Ceramic CM=Chrome-Moly D=Acetal  
 FCM=Forged Chrome-Moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) NY=Nylon PC=Poly Carbonate PE=Polyethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene  
 PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SSHS=316SS/High Strength SSZZ=316/ZAMAK STCP=Steel/Chrome Plated STGP=Special Blend PTFE White  
 STHT=Special PTFE High Temp STL=Steel ST2=Special PTFE 2 STZP=Steel/Zinc Plated TNM=Special High Strength

# EXPLODED VIEW



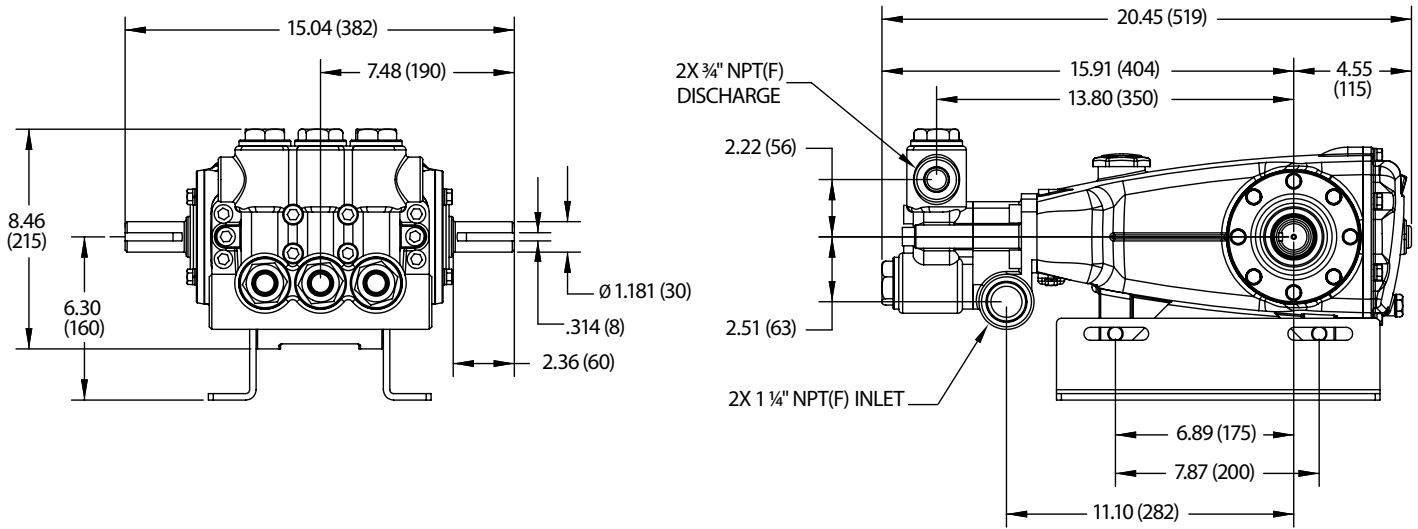
Models  
 Standard – 2510  
 Stainless Steel – 2511  
 June 2021

## OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
990036	Key (M8 x 7 x 40)	1
30614	Assembly, Rail	1
26516	Protector, Shaft	1
828710	Protector, Oil Cap with Foam Gasket	1
30278	Oiler (1 oz)	3
34334	Kit, Oil Drain (3/8" x 24")	1
30696	Pliers, Reverse (Not Shown)	1

## SERVICE PARTS

PART	DESCRIPTION	QTY
<b>31280</b>	Seal Kit – Standard NBR 2510	1
<b>76180</b>	Seal Kit – Standard NBR 2511	1
<b>31285</b>	Valve Kit – Standard NBR 2510	2
<b>31270</b>	Valve Kit – Standard NBR 2511	2
6107	Oil, Bottle (21 oz) ISO 68 Hydraulic	4
6119	Lubricant, Anti-Seize (2 oz) (2511)	1
6124	Gasket, Liquid (3 oz)	1
<b>816747</b>	Head, Complete – 2510 with NBR Seals and O-Rings	1
<b>816785</b>	Head, Complete – 2511 with NBR Seals and O-Rings	1



## SEAL KITS

One (1) seal kit required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ♦	STHT (.3400)
2510	<b>31280 *</b>	<b>31380 *</b>	<b>76200 *</b>	<b>76376</b>
2511	<b>76180</b>			

ITEM (Included in Seal Kits)					DESCRIPTION	QTY
97	14190	14161	48239	14190	O-Ring, Plunger Retainer	3
106	44086	45846	49196	76086	Seal, LPS with SS-Spring	3
112	11379	14183	701491	11379	O-Ring, Inlet Manifold	3
126	<b>48669</b>		<b>48669</b>		Adapter, Female (2511)	3
127	44610	44610		44610	V-Packing	6
155	17629	14183	701491	17629	O-Ring, Spacer, Rear	3
156	28243	28243	28243	28243	Backup Ring, Spacer, Rear	3
158	28243	28243	28243	28243	Backup Ring, Spacer, Front	3
159	17629	14183	701491	17629	O-Ring, Spacer, Front	3

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

## VALVE KITS

Two (2) valve kits required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ♦	STHT (.3400)
2510	<b>31285</b>	<b>31385</b>	<b>76197</b>	<b>31285</b>
2511	<b>31270</b>	<b>31275</b>	<b>76370</b>	<b>31270</b>

ITEM (Included in Valve Kits)					DESCRIPTION	QTY
162	48363	48363	48363	48363	Backup Ring, Valve Seat	3
163	26142	14330	701493	26142	O-Ring, Valve Seat	3
164	<b>48544</b>	<b>48544</b>	<b>48544</b>	<b>48544</b>	Seat, Stepped (2510)	3
	<b>48676</b>	<b>48676</b>	<b>48676</b>	<b>48676</b>	Seat, Stepped (2511)	3
166	45839	45839	45839	45839	Valve	3
167	45840	45840	45840	45840	Spring	3
168	110682	110682	110682	110682	Retainer, Spring	3
170	44794	44794	44794	44794	Washer, Spring Retainer	3
172	17667	11745	48240	17667	O-Ring, Valve Plug	3

♦ Silicone oil/grease required



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