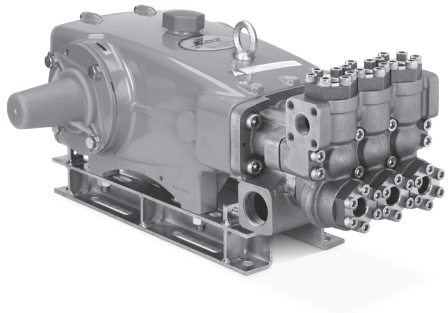
DATA SHEET
35 FRAME PLUNGER PUMPS

The Pumps with Nine Lives

Nickel Aluminum Bronze Model: 3517HS

Flushed Model: 3517CHS



Model 3517HS Shown
(Shaft protector included, mounting rails sold separately)

FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- Advanced connecting rod and plunger rod materials optimize drive-end operation for continuous-duty applications.
- V-packings and low-pressure seals are completely lubricated and cooled by pumped liquid, greatly increasing service life.
- Model 3517CHS offers an external flush for high-temperature or low-lubricity fluids.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

SPECIFICATIONS	U.S. Measure	Metric Measure
Flow	14 gpm	53 lpm
Pressure Range	100–3000 psi	6.9–207 bar
Pump RPM*	800 rpm	800 rpm
Inlet Pressure Range	Flooded to 70 psi	Flooded to 4.8 bar
Max. Liquid Temp. (NBR)	160° F	71° C
Alternative seals available for higher temperature up to 200° F		
Bore	0.984"	25 mm
Stroke	1.890"	48 mm
Crankcase Capacity	4.2 qts	4 l
Inlet Ports (2)	1½" NPT(F)	1½" NPT(F)
Flush Ports (2)	¼" NPT(F)	¼" NPT(F)
Discharge Ports (2)	1" NPT(F)	1" NPT(F)
Shaft Diameter	1.378"	35 mm
Pulley Mounting	Either Side	Either Side
Weight	152 lbs	69 kg
Dimensions	24.61 x 18.11 x 9.72"	625 x 460 x 247 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)
FFKM	.0770	200° F	(93° C)
HT	.3000	180° F	(82° C)
STHT	.3400	190° F	(88° C)

See **Tech Bulletin 002** for inlet conditions and RPM at higher temperatures.

DETERMINING THE PUMP RPM

$$\frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{Desired gpm}}{\text{Desired rpm}}$$

DETERMINING THE REQUIRED HP

$$\frac{\text{Hp (Electric Brake)}}{} = \frac{\text{gpm x psi}}{1460}$$

DETERMINING MOTOR PULLEY SIZE

$$\frac{\text{Motor Pulley OD}}{\text{Pump rpm}} = \frac{\text{Pump Pulley OD}}{\text{Motor rpm}}$$

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

PARTS LIST

ITEM	PART NUMBER 3517HS/3517CHS	MATL	DESCRIPTION	QTY
5	96049	S	Screw, HH Sems (M10x25) (See Tech Bulletin 074)	8
8	134604	ALE	Cover, Bearing	2
9	815279	FBR	Shim, Split, 2 Piece	2
10	12398	NBR	O-Ring, Bearing Cover–70D	2
11	13296	NBR	Seal, Oil, Crankshaft	2
12	855049	S	Shim, Split, 2 Piece	0–2
15	29326	STL	Bearing, Roller	2
20	126725	BZ	Rod, Connecting Assembly (Includes: 21, 22, 23) (See Tech Bulletin 074)	3
21	126749	STCP R	Washer, Locking (M10)	3
22	126593	STCP R	Washer, Flat (M10)	6
23	122045	STZP	Screw, HH (M10 x 55)	6
25	29325	FCM	Crankshaft, Dual End (M48)	1
31	828710	PE	Protector, Oil Cap with Foam Gasket	1
32	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	O-Ring, Oil Filler Cap–70D	1
34	126743	STCP R	Bolt, Eye (M12 x 1.75) (For Lifting Pump Only)	1
37	92241	PC	Gauge, Bubble Oil with Gasket–80D (See Tech Bulletin 074)	1
38	44428	NBR	Gasket, Flat Oil Gauge–80D	1
40	125753	S	Screw, HH Sems (M8 x 25) (See Tech Bulletin 074)	8
48	25625	STCP	Plug, Drain (¼" x 19 BSP)	1
49	23170	NBR	O-Ring, Drain Plug–70D	1
50	45936	ALE	Cover, Rear	1
51	16612	*NBR*	O-Ring, Cover–70D	1
53	134784	ALE	Crankcase Assembly (Includes: 54)	1
54	27488	S	Pin, Guide	2
56	27790	POP	Pan, Oil	1
59	92538	S	Screw, HHC Sems (M6 x 16)	2
64	43864	CM	Pin, Crosshead	3
65	49166	SSHB	Rod, Plunger	3
69	126587	STCP R	Washer, Oil Seal	3
70	100488	NBRS	Seal, Oil, Crankcase	3
75	43865	S	Slinger, Barrier	3
88	45676	S	Washer, Keyhole	3
90	43866	CC	Plunger (M25 x 145)	3
95	89778	SS	Stud, Retainer (M10 x 135)	3
96	20189	PTFE	Backup Ring, Plunger Retainer	3
97	11345	NBR	O-Ring, Plunger Retainer–70D	3
98	44085	SS	Gasket, Plunger Retainer (M10)	3
99	44084	SS	Retainer, Plunger (M10) (See Tech Bulletin 074)	3
100	814279	PVDF	Retainer, Seal	3
101	44096	—	Wick	3
104	43875	NBR	O-Ring, Adapter–70D	3
105	44088	NAB	Adapter, Low-Pressure	3
106	44086	NBR	Seal, Low-Pressure with SS-Spring	3
107	44089	SS	Washer, Low-Pressure Seal	3
110	**44206**	NAB	Manifold, Inlet	1
	125970	NAB	Manifold, Inlet, Flushed (Model 3517CHS)	1
112	11379	NBR	O-Ring, Inlet Manifold–70D	3
117	44585	S	Screw, HSH (M14 x 40)	4
123	12391	NBR	O-Ring, V-Packing Cylinder–70D	3
124	44090	NAB	Cylinder, V-Packing	3
126	44091	NAB	Adapter, Female	3
127	44610	STG	V-Packing	6
128	44092	NAB	Adapter, Male	3
155	11379	NBR	O-Ring, V-Packing Spacer	6
156	28243	PTFE	Backup Ring, V-Packing Spacer	6
157	44093	NAB	Spacer, V-Packing	3
162	21985	PTFE	Backup Ring, Seat	6
163	26089	NBR	O-Ring, Seat–80D	6
164	44080	SS	Seat	6
166	44081	SS	Valve	6
167	44082	SS	Spring	6
168	44735	PVDF	Retainer, Spring	6
170	44794	SS	Washer, Spring Retainer	6
171	44793	SS	Spring, Coil, Valve Plug	6
172	15853	NBR	O-Ring, Valve Plug–70D	6
173	20224	PTFE	Backup Ring, Valve Plug	6
174	44795	NAB	Plug, Valve	6
175	87951	S	Screw, HSH (M10 x 30) (See Tech Bulletin 074)	36
185	46565	NAB	Manifold, Discharge	1
188	89981	S	Screw, HSH (M12 x 70) (See Tech Bulletin 074)	8
250	855042	NY	Protector, Shaft, with Two (2) Screws, Lockwashers and Washers	1

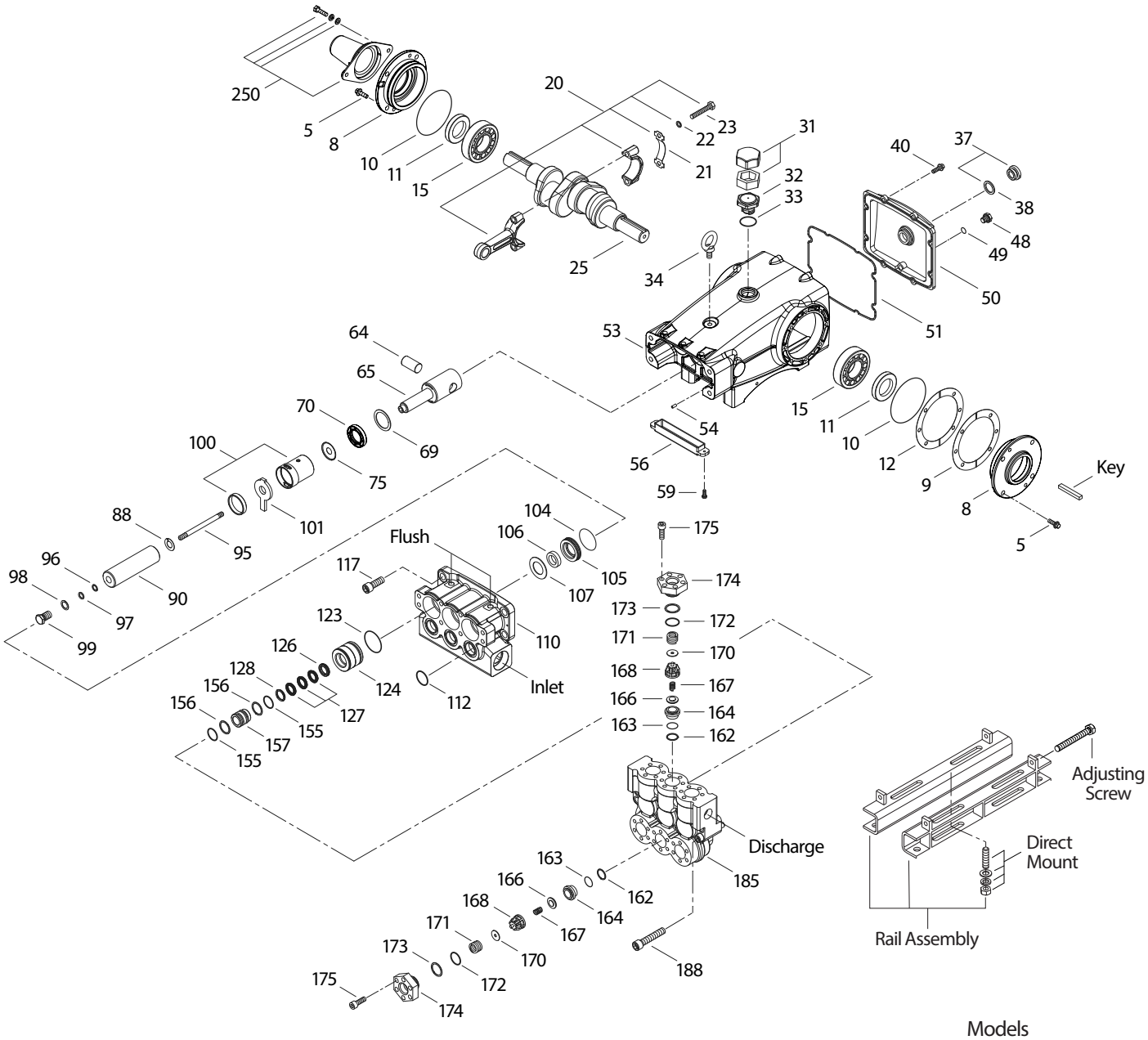
Bold print part numbers are unique to a particular pump model. *Italics are optional items.*

R Components comply with RoHS Directive.For additional technical information see www.catpumps.com/literature/tech-bulletins.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic ALE=Aluminum Epoxy BZ=Bronze CC=Ceramic CM=Chrome-Moly EPDM=Ethylene Propylene Diene Monomer F=Cast Iron FBR=Fiber FCM=Forged Chrome-moly FFKM=Perfluoroelastomer FPM=Fluorocarbon NAB=Nickel Aluminum Bronze NBR=Medium Nitrile (Buna-N) NBRS=Buna, Silicone Free NY=Nylon PC=Poly Carbonate PE=Polyethylene POP=Polyproplene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS STG=Special Blend PTFE White STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated ZP=Zinc Plated

Optional Parts and Accessories and Service Parts listed on page 3. Standard and Optional Seal and Valve Kits listed on page 4.

EXPLODED VIEW



Models
3517HS, 3517CHS
September 2023

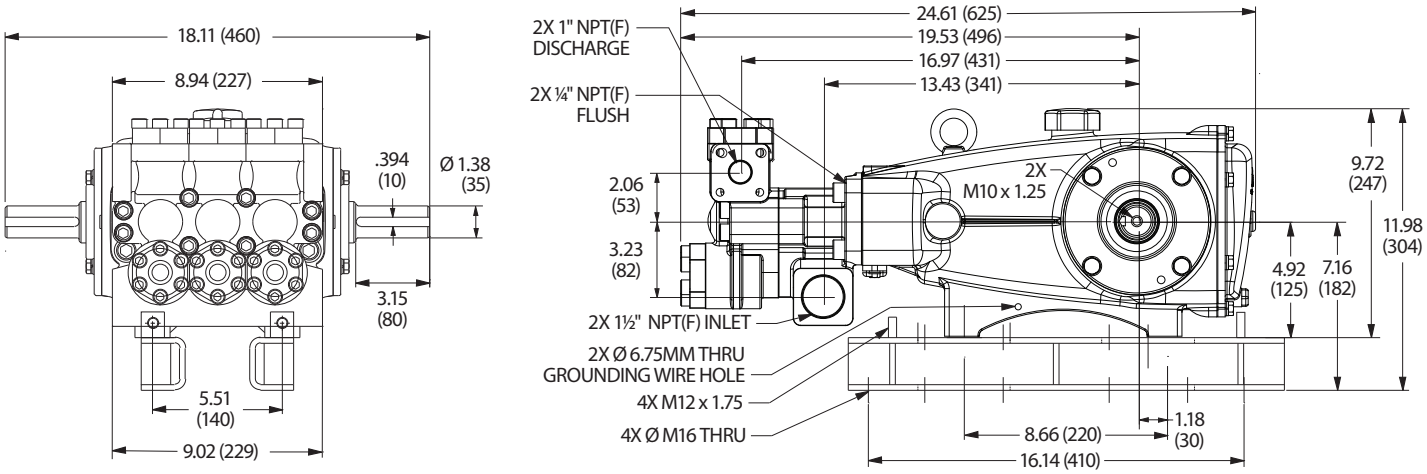
OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
34021	Key (M10 x 8 x 70)	1
92674	Mount, Rail Assembly (STZP R) (Includes: 34018)	1
34018	Mount, Direct (STZP R)	1
76514	Mount, Rail Assembly (S) (Includes: 34039)	1
34039	Mount, Direct (S)	1
990013	Hub, "B", 35 mm (STL)	1
80540	Screw, Adjusting (M12 x 100)	2
30278	Oiler (1 oz) (Not Shown)	3
34314	Kit, Oil Drain (⅜" x 48") (Not Shown)	1
76795	Plug, Valve with ¼" NPT(F) (Not Shown)	1
819000	Assembly, Crankcase, Cast Iron Conversion	1

SERVICE PARTS

PART	DESCRIPTION	QTY
31038	Kit, Seal – Standard NBR	1
34151	Kit, Valve – Standard NBR	2
6100	Oil, Case (12–21 oz bottles) (Fill to Specified Crankcase Capacity Prior to Start-up)	1
6139	Lubricant, Anti-Seize (8 oz) (See Tech Bulletin 095)	1
6124	Gasket, Liquid (3 oz)	1
32273	Crankcase Oil Seal Removal and Installation Kit (Not Shown) (Includes: Oil Seals, Guide Tool, Screws, Washers, Driver)	1
30696	Reverse Pliers (Not Shown)	1
816750	Head, Complete with NBR Seals and O-Rings (Model 3517HS)	1

Kits – NBR, FPM (.0110), EPDM (.0220), FFKM (.0770), STHT (.3400) listed on page 4.



Models 3517HS, 3517CHS

SEAL KITS One (1) seal kit required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220)◆
3517HS, 3517CHS	**31038***	**31266***	**76138***

ITEM (Included in Seal Kits)				DESCRIPTION	QTY
97	11345	11375	701490	O-Ring, Plunger Retainer	3
104	43875	44826	701656	O-Ring, Adapter	3
106	44086	45846	49196	Seal, Low-Pressure with SS-Spring	3
112	11379	14183	701491	O-Ring, Inlet Manifold	3
123	12391	13266	701657	O-Ring, V-Packing Cylinder	3
127	44610	44610	44610	V-Packing	6
155	11379	14183	701491	O-Ring, V-Packing Spacer	6
156	28243	28243	28243	Backup Ring, V-Packing Spacer	6

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

VALVE KITS Two (2) valve kits required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220)◆
3517HS, 3517CHS	**34151**	**701798**	**701799**

ITEM (Included in Valve Kits)				DESCRIPTION	QTY
162	21985	21985	21985	Backup Ring, Valve Seat	3
163	26089	11377	46647	O-Ring, Valve Seat	3
164	44080	44080	44080	Seat	3
166	44081	44081	44081	Valve	3
167	44082	44082	44082	Spring	3
168	44735	44735	44735	Retainer, Spring	3
170	44794	44794	44794	Washer, Spring Retainer	3
172	15853	11720	701481	O-Ring, Valve Plug	3
173	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 (e.g. regulator, unloader) and a secondary pressure relief device (e.g. 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 or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty online at www.catpumps.com/literature/cat-pumps-limited-warranty

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