

Model 3507 Shown

FEATURES

Superior Design

- Triplex plunger design gives smoother liquid flow.
- V-Packings are completely lubricated and cooled by the liquid being pumped.
- Inlet and discharge valve assemblies interchange for easier maintenance.
- Lubricated Lo-Pressure Seals provide double protection against external leakage.
- Oil bath crankcase assures optimum lubrication.
- Close tolerance concentricity of the ceramic plunger maximizes seal life.

Quality Materials

- Precision design 316 stainless steel valves and seats are hardened and polished for ultimate seating and extended valve life.
- Nickel Aluminum Bronze manifolds are strong and corrosion resistant.
- Special concentric, high-density, polished, solid ceramic plungers provide a true wear surface and extended seal life.
- Specially formulated, CAT PUMP exclusive, V-Packings offer unmatched performance and seal life.
- Die cast aluminum crankcase provides high strength, minimum weight and precision tolerance control.
- Chrome-moly crankshaft gives unmatched strength and surface hardness.
- Oversized crankshaft bearings with greater loading capacity means longer bearing life.

Easy Maintenance

- Wet-end is easily serviced without entering crankcase, requiring less time and effort.
- Valve assemblies are accessible without disturbing piping, for quick service.
- Preset packings mean no packing gland adjustment is necessary, reducing maintenance costs.

⚠ WARNING

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

35 Frame Plunger Pumps

**Nickel Aluminum
Bronze Models**

**3507
3517**

SPECIFICATIONS

U.S. Measure

Metric Measure

MODEL 3507

Flow 9.0 GPM (34 L/M)
 Pressure Range 100 to 5000 PSI (7 to 345 BAR)
 Bore 0.787" (20 mm)
 Discharge Ports (2) 3/4" NPTF (3/4" NPTF)

MODEL 3517

Flow 14 GPM (53 L/M)
 Pressure Range 100 to 3000 PSI (7 to 210 BAR)
 Bore 0.984" (25 mm)
 Discharge Ports (2) 1" NPTF (1" NPTF)

COMMON SPECIFICATIONS

Inlet Pressure Range Flooded to 70 PSI (Flooded to 4.9 BAR)
 RPM 800 RPM (800 RPM)
 Stroke 1.890" (48 mm)
 Crankcase Capacity 4.2 Qts. (4 L)
 Maximum Liquid Temperature 160°F (71°C)

Above 130°F call CAT PUMPS for inlet conditions and elastomer recommendations.

Inlet Ports (2) 1-1/2" NPTF (1-1/2" NPTF)
 Pulley Mounting Either Side (Either Side)
 Shaft Diameter 1.378" (35 mm)
 Weight 152 lbs. (69 kg)
 Dimensions 24.51 x 18.11 x 9.72" (623 x 460 x 247 mm)

ELECTRIC HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE						RPM
	U.S. GPM	L/M	PSI 2000	PSI 2500	PSI 3000	PSI 4000	PSI 4500	PSI 5000	
			BAR 140	BAR 175	BAR 210	BAR 275	BAR 310	BAR 345	
3507	9	34	N/A	N/A	N/A	24.7	27.8	30.8	800
	8	30	N/A	N/A	N/A	22.0	24.7	27.4	711
	7	27	N/A	N/A	N/A	19.2	21.6	24.0	622
3517	14	53	19.2	24.0	28.8	N/A	N/A	N/A	800
	12	45	16.5	20.6	24.7	N/A	N/A	N/A	685
	10	38	13.7	17.2	20.6	N/A	N/A	N/A	571

**DETERMINING
THE PUMP R.P.M.**

Rated G.P.M. = "Desired" G.P.M.
Rated R.P.M. "Desired" R.P.M.

**DETERMINING
THE REQUIRED H.P.**

GPM x PSI = Electric Brake
 1460 H. P. Required

**DETERMINING
MOTOR PULLEY SIZE**

Motor Pulley O.D. = Pump Pulley O.D.
Pump R.P.M. Motor R.P.M.

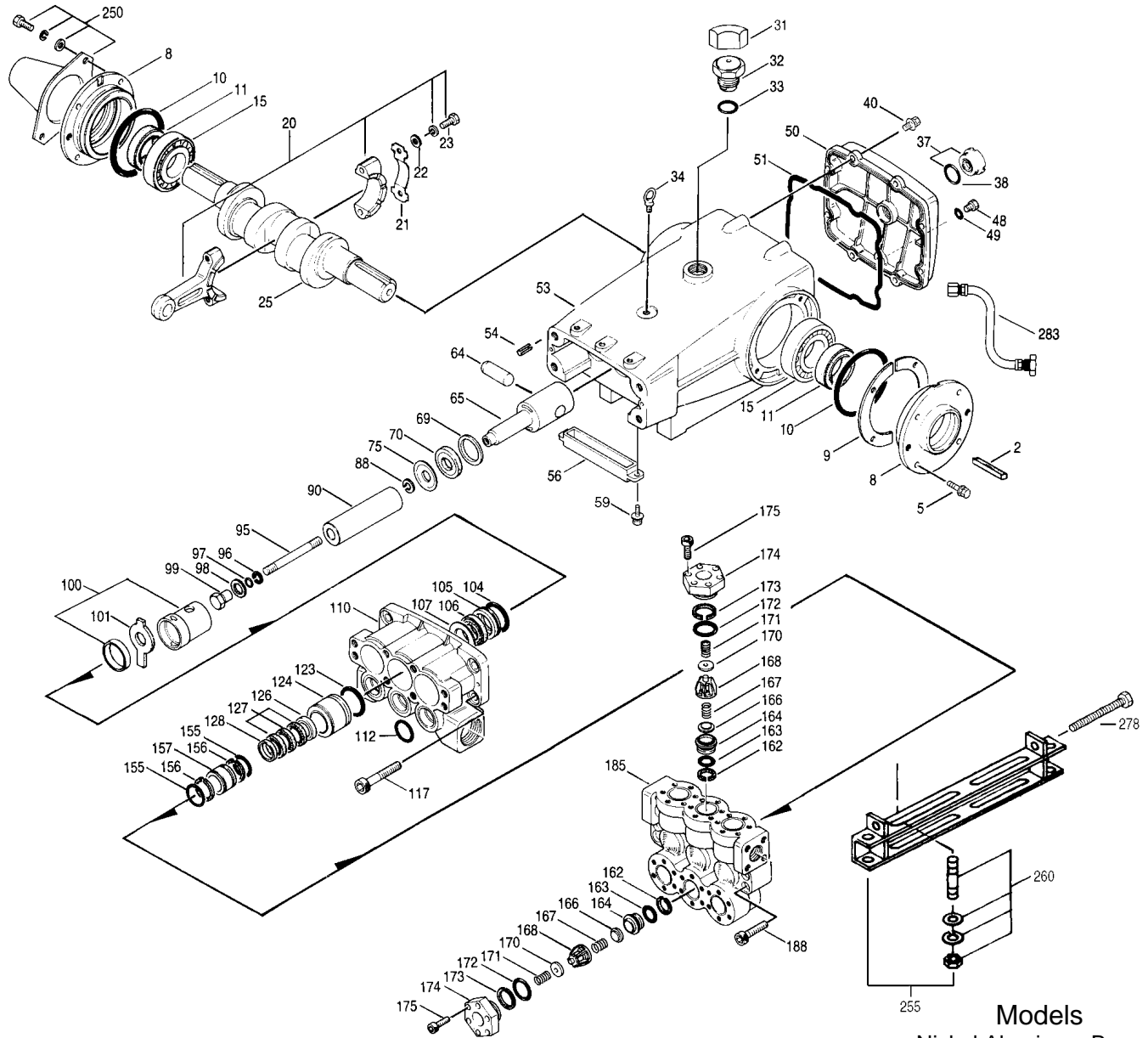
See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 003.
 Refer to pump **Service Manual** for repair procedure, additional technical information and **pump warranty**.

"Customer confidence is our greatest asset"

PARTS LIST

ITEM	PART NUMBER		DESCRIPTION	QTY		
	3507	MATL	3517	MATL		
2	34021	STL	34021	STL	Key (M10x8x70)	1
5	118824	S	118824	S	Screw, Sems HH (M8x25)	8
8	44542	AL	44542	AL	Cover, Bearing	2
9	815279	FBR	815279	FBR	Shim, Split, 2 pc	2
10	12398	NBR	12398	NBR	O-Ring, Bearing Cover - 70D	2
11	13296	NBR	13296	NBR	Seal, Oil, Crankshaft	2
15	29326	STL	29326	STL	Bearing, Roller	2
20	121467	TNM	121467	TNM	Rod, Connecting Assy (Incls: 21, 22, 23) [10/00]	3
21	44940	STZP	44940	STZP	Washer, Locking (M10)	3
22	12490	STZP	12490	STZP	Washer, Flat (M10)	6
23	122045	STZP	122045	STZP	Screw, HH (M10x55)	6
25	29325	FCM	29325	FCM	Crankshaft, Dual End (M48)	1
31	828710	—	828710	—	Protector, Oil Cap	1
32	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	O-Ring, Oil Filler Cap - 70D	1
34	44319	STZP	44319	STZP	Bolt, Eye (M12x1.75) (For Lifting Pump Only)	1
37	92241	—	92241	—	Gauge, Bubble Oil w/Gasket	1
38	44428	NBR	44428	NBR	Gasket, Flat Oil Gauge - 80D	1
40	118824	S	118824	S	Screw, Sems HH (M8x25)	8
48	25625	STCP	25625	STCP	Plug, Drain (1/4"x19BSP)	1
49	23170	NBR	23170	NBR	O-Ring, Drain Plug - 70D	1
50	45936	AL	45936	AL	Cover, Rear	1
51	16612	NBR	16612	NBR	O-Ring, Cover - 70D	1
53	44487	AL	44487	AL	Crankcase Assy (Incls: 34, 35)	1
54	27488	S	27488	S	Pin, Guide	2
56	27790	POP	27790	POP	Pan, Oil	1
59	92519	STZP	92519	STZP	Screw, Sems HHC (M6x16)	2
64	43864	CM	43864	CM	Pin, Crosshead	3
65	45118	SSZZ	45118	SSZZ	Rod, Plunger	3
69	29338	STZP	29338	STZP	Washer, Oil Seal	3
70	100488	NBR	100488	NBR	Seal, Plunger Rod Oil	3
75	43506	S	43865	S	Slinger, Barrier	3
88	45675	SS	45676	SS	Washer, Keyhole (M12)	3
90	43945	CC	—	—	Plunger (M20x145)	3
	—	—	43866	CC	Plunger (M25x145)	3
95	89779	S	89778	SS	Stud, Retainer (M7x123) or (M10x135)	3
96	20184	PTFE	20189	PTFE	Back-up-Ring, Plunger Retainer	3
97	14190	NBR	11345	NBR	O-Ring, Plunger Retainer - 70D	3
	14161	FPM	11375	FPM	O-Ring, Plunger Retainer	3
98	44069	SSL	44085	SS	Gasket (M7) or (M10)	3
99	44068	SSL	44084	SS	Retainer, Plunger (M7) or (M10)	3
100	814279	PVDF	814279	PVDF	Retainer, Seal, 2 Pc.	3
101	44095	—	44096	—	Wick	3
104	43875	NBR	43875	NBR	O-Ring, Adapter - 70D	3
	44826	FPM	44826	FPM	O-Ring, Adapter - 70D	3
105	44073	NAB	44088	NAB	Adapter, LPS	3
106	44071	NBR	44086	NBR	Seal, LPS w/SS-Spg	3
	44381	FPM	45846	FPM	Seal, LPS w/SS-Spg	3
107	44074	SS	44089	SS	Washer, LPS	3
110	44206	NAB	44206	NAB	Manifold, Inlet	1
112	11379	NBR	11379	NBR	O-Ring, Inlet Manifold - 70D	3
	14183	FPM	14183	FPM	O-Ring, Inlet Manifold	3
117	44585	S	44585	S	Screw, HSH (M14x40)	4
123	12391	NBR	12391	NBR	O-Ring, V-Packing Cylinder - 70D	3
	13266	FPM	13266	FPM	O-Ring, V-Packing Cylinder - 70D	3
124	44075	NAB	44090	NAB	Cylinder, V-Packing	3
126	44076	NAB	44091	NAB	Adapter, Female	3
127	44607	STG*	44610	STG*	V-Packing	9/6
128	44077	NAB	44092	NAB	Adapter, Male	3
155	17622	NBR	11379	NBR	O-Ring, V-Packing Spacer	6
	11719	FPM	14183	FPM	O-Ring, V-Packing Spacer	6
156	28675	PTFE	28243	PTFE	Back-up-Ring, V-Packing Spacer	6
157	46668	SS	44093	NAB	Spacer, V-Packing	3
162	21985	PTFE	21985	PTFE	Back-up-Ring, Seat	6
163	26089	NBR	26089	NBR	O-Ring, Seat - 80D	6
	11377	FPM	11377	FPM	O-Ring, Seat - 80D	6
164	44080	SS	44080	SS	Seat	6
166	44081	SS	44081	SS	Valve	6
167	44082	SS	44082	SS	Spring	6
168	44735	PVDF	44735	PVDF	Retainer, Spring	6
170	44794	SS	44794	SS	Washer, Spring Retainer	6
171	44793	SS	44793	SS	Spring, Coil, Valve Plug	6
172	15853	NBR	15853	NBR	O-Ring, Valve Plug - 70D	6
	11720	FPM	11720	FPM	O-Ring, Valve Plug - 70D	6
173	20224	PTFE	20224	PTFE	Back-up-Ring, Valve Plug	6
174	44795	NAB	44795	NAB	Plug, Valve	6
175	87951	S	87951	S	Screw, HSH (M10x30)	36
185	46561	NAB	46565	NAB	Manifold, Discharge [10/99]	1
188	89981	S	89981	S	Screw, HSH(M12x70)	8
250	44516	NY	44516	NY	Protector, Shaft, w/2 Screws (89283) (Included with Pump)	1
255	34018	STZP	34018	STZP	Mount, Direct	1
—	34039	SS	34039	SS	Mount, Direct	1
260	92674	STZP	92674	STZP	Box Mounting Assy-Course	1
275	990013	STL	990013	STL	Hub, 'B' 35mm [See Drive Packages, Tech Bulletin 003]	1

EXPLODED VIEW



Models
Nickel Aluminum Bronze
3507, 3517
August 2005

	3507	MATL	3517	MATL		
278	80540	ZP	80540	ZP	Screw, HH (M12x100) (Rail Adjusting Screw)	1
279	30278	STZP	30278	STZP	Oiler (1 oz.)	3
281	30967	—	30967	—	Glass, Oiler	3
282	10069	NBR	10069	NBR	Gasket, Oiler	3
283	34334	—	34334	—	Kit, Oil Drain	1
290	6104	—	6104	—	Gasket, Liquid (1 oz.)	1
299	816755	NAB	816750	NAB	Head, Complete	1
300	31037	NBR*	31038	NBR*	Kit, Seal (Incls: 97, 104, 106, 112, 123, 127, 155, 156)	1
	33265	FPM*	31266	FPM*	Kit, Seal (Incls: 97, 104, 106, 112, 123, 127, 155, 156)	1
310	34151	NBR	34151	NBR	Kit, Valve (Incls: 162, 163, 164, 166, 167, 168, 170, 172, 173)	2
	701798	FPM	701798	FPM	Kit, Valve (Incls: 162, 163, 164, 166, 167, 168, 170, 172, 173)	2
390	711500	SS	711500	SS	C.A.T. (For R.O. or Industrial Applications)	1
391	711506	SS	711506	SS	Adapter (2 per C.A.T.) (See Data Sheet for complete selection)	2
—	819000	F	819000	F	Assy, Crankcase, Cast Iron Conversion	1
—	6575	—	6575	—	Plunger Pump Servicing DVD	1
—	6105	—	6105	—	Oil, Twin Pack (Two 2.5 Gal.) ISO 68 Multi-viscosity Hydraulic (Fill to specified crankcase capacity prior to start-up)	1

Bold print part numbers are unique to a particular pump model. Italics are optional items. [] Date of latest production change.

*Review material codes for individual items (STG generally may be used as alternate). **C.A.T. highly recommended for pressurized inlet, R.O. and Industrial applications.**

See Tech Bulletins 002, 003, 024, 035, 036, 041, 043, 052, 053, 068, 069, 074, 077, 080 and 083 for additional information.

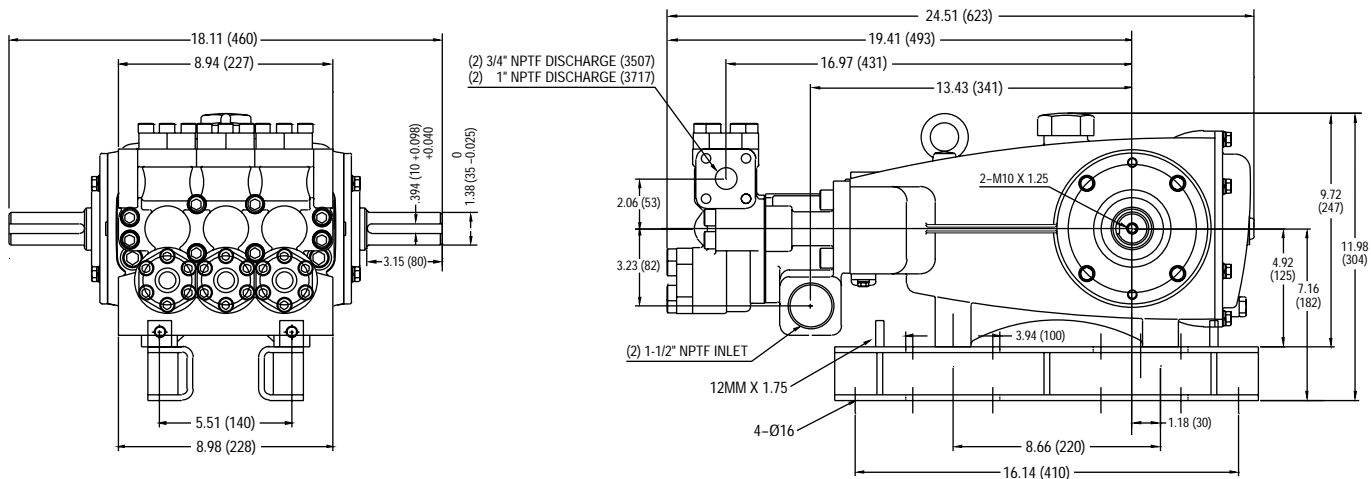
MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BB=Brass BCCP=Brass/Chrome Plated CC=Ceramic CM=Chrome-Moly F=Cast Iron

FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NAB=Nickel Aluminum Bronze NBR=Medium Nitrile (Buna-N)

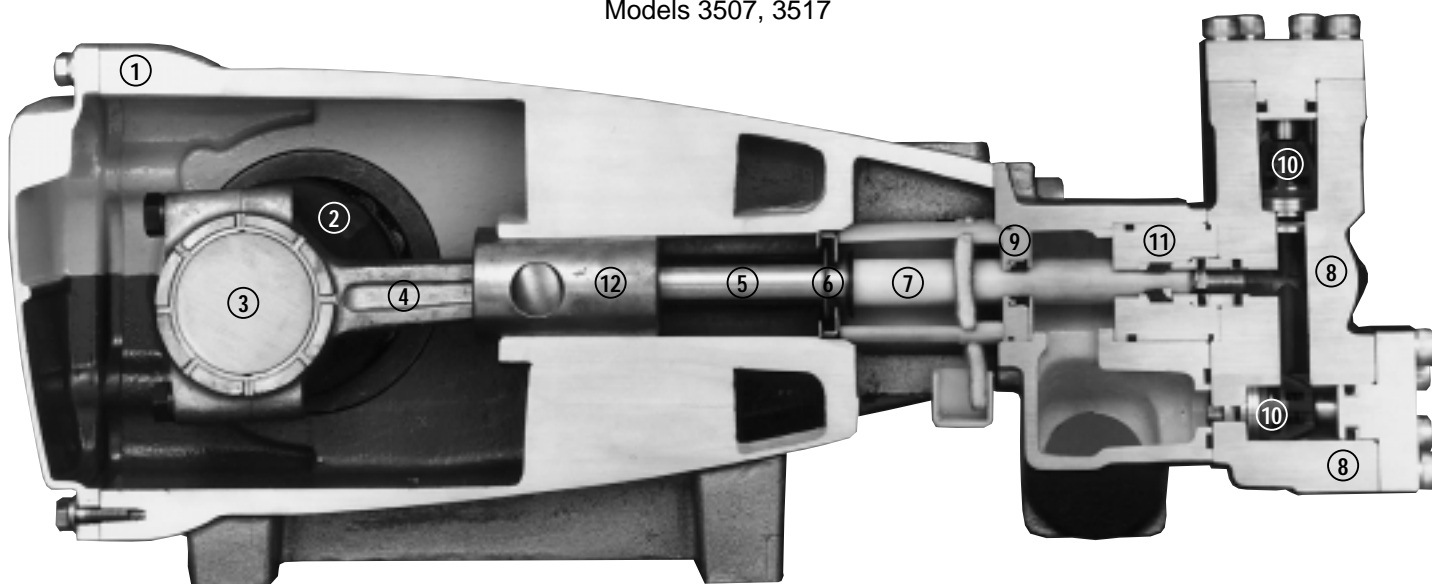
NBRS=Buna, Silicone Free NY=Nylon POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS

SSL=316SS/Low Carbon STG=Special Blend PTFE White SSZZ=316SS/Zamak STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated

TNM=Special High Strength ZP=Zinc Plated



Models 3507, 3517



- 1 Die cast aluminum **crankcase** means high strength, lightweight, and excellent tolerance control.
- 2 Oversized crankshaft **bearings** provide extended bearing life and pump performance.
- 3 Chrome-moly **crankshaft** provides unmatched strength and surface hardness for long life.
- 4 Matched oversized TNM **connecting rods** noted for superior tensile strength and bearing quality.
- 5 Special stainless steel **plunger rods** with high strength crossheads for longevity and corrosion resistance.
- 6 The stainless steel **slinger** provides back-up protection for the crankcase seal, keeping pumped liquids out of the crankcase.
- 7 Special concentric, high-density, polished, solid ceramic **plungers** provide a true wear surface and extended seal life.
- 8 **Manifolds** are high tensile strength nickel aluminum bronze for long term, continuous duty.
- 9 100% **wet seal** design adds to service life by allowing pumped liquids to cool and lubricate on both sides.
- 10 Stainless steel **valves, seats and springs** provide corrosion-resistance, ultimate seating and extended life.
- 11 Specially formulated, CAT PUMP exclusive, **V-Packings** offer unmatched performance and seal life.
- 12 **Crossheads** are 360° supported for uncompromising alignment.

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

World Headquarters

CAT PUMPS

1681 - 94th Lane N.E. Minneapolis, MN 55449-4324

Phone (763) 780-5440 — FAX (763) 780-2958

e-mail: techsupport@catpumps.com

www.catpumps.com

International Inquiries

FAX (763) 785-4329

e-mail: intlsales@catpumps.com



The Pumps with Nine Lives

CAT PUMPS (U.K.) LTD.

1 Fleet Business Park, Sandy Lane, Church Crookham, Fleet

Hampshire GU52 8BF, England

Phone Fleet 44 1252-622031 — Fax 44 1252-626655

e-mail: sales@catpumps.co.uk

N.V. CAT PUMPS INTERNATIONAL S.A.

Heiveldekens 6A, 2550 Kontich, Belgium

Phone 32-3-450.71.50 — Fax 32-3-450.71.51

e-mail: cpi@catpumps.be www.catpumps.be

CAT PUMPS DEUTSCHLAND GmbH

Buchwiese 2, D-65510 Idstein, Germany

Phone 49 6126-9303 0 — Fax 49 6126-9303 33

e-mail: catpumps@t-online.de www.catpumps.de