

Model 2530 Shown  
(Shaft protector and rails sold separately)

## 25 Frame Plunger Pump

**Standard Brass Models**      **2530, 2530E**

**Stainless Steel Model**      **2531**

**Nickel Aluminum Bronze Model**      **2537**

### FEATURES

- Triplex design delivers high efficiency and low pulsation.
- Durable high pressure seals are lubricated and cooled by pumped liquid.
- Pre-set Lo-Pressure seals provide secondary protection against external leaks and require no packing adjustments.
- Special high-density, polished, concentric plungers provide a true wear surface and extended seal life.
- Interchangeable inlet and discharge valves for easy servicing.
- Wet-end easily serviced without entering crankcase.

### COMMON SPECIFICATIONS

Inlet Pressure Range.....	Flooded to 70 psi	(Flooded to 4.9 bar)
Bore.....	1.260"	(32 mm)
Stroke.....	1.516"	(38.5 mm)
Crankcase Capacity.....	84 oz.	(2.5 l)
Maximum Liquid Temperature .....	160°F	(71°C)
For temperatures above 130°F call Cat Pumps for inlet conditions and elastomer recommendations.		
Inlet Ports (2).....	1-1/4" NPTF	(1-1/4" NPTF)
Discharge Ports (2).....	3/4" NPTF	(3/4" NPTF)
Pulley Mounting .....	Either Side	(Either Side)
Shaft Diameter .....	1.181"	(30 mm)
Weight.....	82 lbs.	(37.1 kg)
Dimensions.....	19.11 x 15.04 x 7.8"	(485.44 x 382 x 198 mm)

#### **⚠ 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/cautions-warnings](http://www.catpumps.com/cautions-warnings) or can be requested directly from CAT PUMPS.

#### **WARRANTY**

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

### SPECIFICATIONS

U.S. Measure

Metric Measure

#### MODELS 2530, 2530E, 2531

Flow.....	25 gpm	(95 lpm)
Pressure Range.....	100 to 1000 psi	(7 to 70 bar)
RPM.....	1025 rpm	(1025 rpm)

#### MODEL 2537

Flow .....	21 gpm	(80 lpm)
Pressure Range.....	100 to 1200 psi	(7 to 85 bar)
RPM .....	860 rpm	(860 rpm)

### ELECTRIC HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE			RPM			
			psi	psi	psi				
			800	1000	1200				
2530, 2530E	U.S. gpm	lpm	bar	bar	bar	1025			
			55	70	85				
2531	25	95	13.7	17.1	N/A	861			
			11.5	14.4	17.3				
2537	21	80	11.5	14.4	17.3	860			
			18	68	9.9		12.3	14.8	737
			15	57	8.2		10.3	12.4	

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

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

**DETERMINING THE REQUIRED H.P.**

$$\frac{\text{gpm x psi}}{1460} = \text{Electric Brake H. P. Required}$$

**DETERMINING MOTOR PULLEY SIZE**

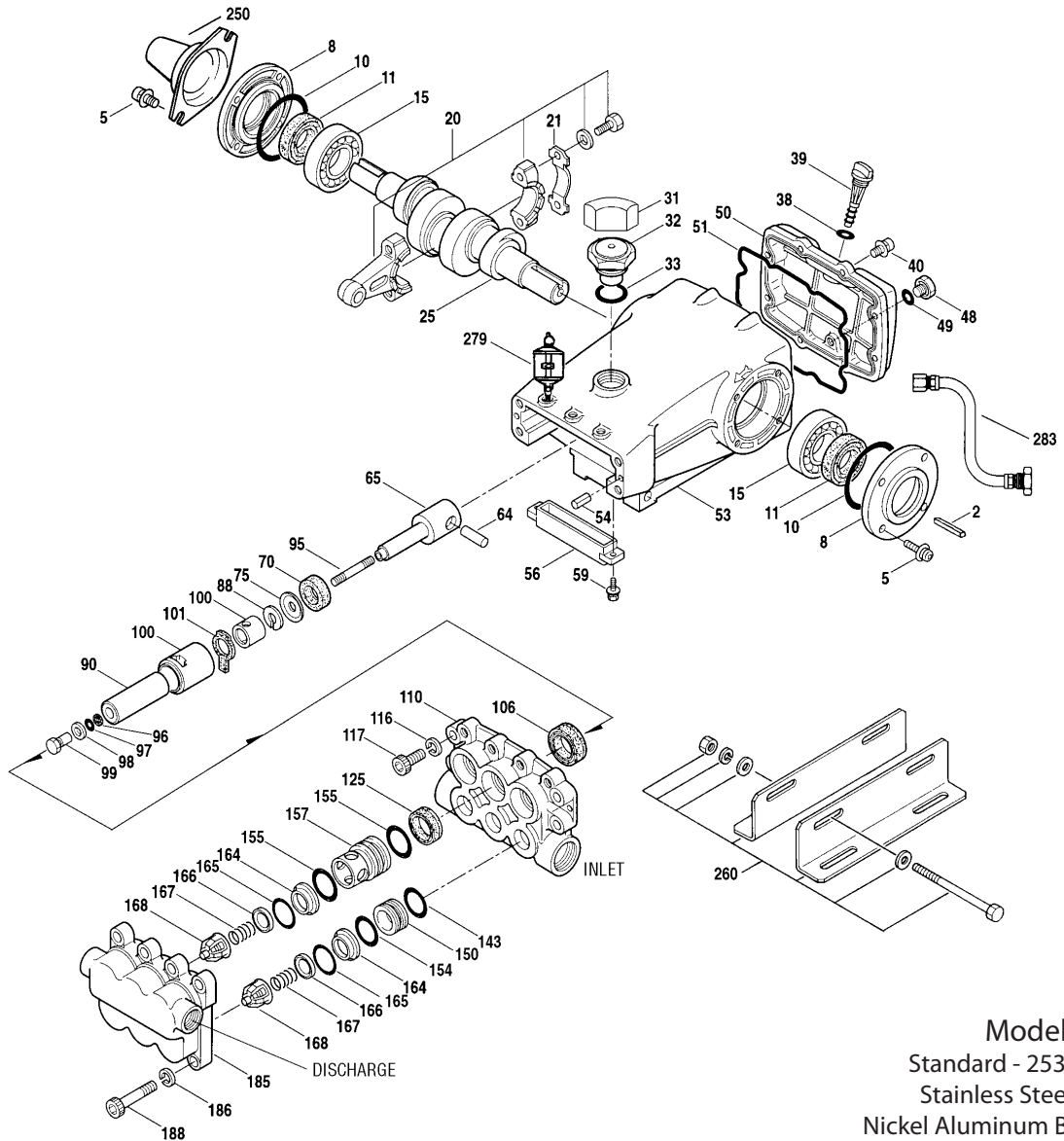
$$\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$$

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

# PARTS LIST

ITEM	2530	MATL	2531	MATL	2537	MATL	DESCRIPTION	QTY
2	990036	STL	990036	STL	990036	STL	Key (M8x7x40) [2/00]	1
5	<b>126544</b>	<b>STCP R</b>	<b>125753</b>	<b>S</b>	<b>125753</b>	<b>S</b>	Screw, HHC, Sems (M8x25)	8
8	27773	AL	27773	AL	27773	AL	Cover, Bearing	2
	<b>49533</b>	<b>ALE</b>	—	—	—	—	Cover, Bearing (2530E Only)	2
10	27772	NBR	27772	NBR	27772	NBR	O-Ring, Oil Seal Case - 70D	2
11	27771	NBR	27771	NBR	27771	NBR	Seal, Oil, Crankshaft - 70D	2
15	26512	STL	26512	STL	26512	STL	Bearing, Ball	2
20	48613	TNM	48613	TNM	48613	TNM	Rod, Connecting	3
21	126562	STCP R	126562	STCP R	126562	STCP R	Washer, Locking	3
25	49795	FCM	49795	FCM	49795	FCM	Crankshaft - Dual End [3/11]	1
31	828710	PE	828710	PE	828710	PE	Protector, Oil Cap w/Gasket	1
32	43211	ABS	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	14177	NBR	O-Ring, Oil Filler Cap -70D	1
38	129343	RBR	129343	RBR	129343	RBR	Gasket, Flat	1
39	27769	ABS	27769	ABS	27769	ABS	Dipstick	1
40	<b>126544</b>	<b>STCP R</b>	<b>125753</b>	<b>S</b>	<b>125753</b>	<b>S</b>	Screw, HHC, Sems (M8x25)	8
48	25625	STCP	25625	STCP	25625	STCP	Plug, Drain (1/4"x19BSP)	1
50	27768	AL	27768	AL	27768	AL	Cover, Rear	1
	<b>49531</b>	<b>ALE</b>	—	—	—	—	Cover, Rear (2530E Only)	1
51	27767	NBR	27767	NBR	27767	NBR	O-Ring, Rear Cover - 70D	1
53	27762	AL	27762	AL	27762	AL	Crankcase w/Guide Pins	1
	<b>49528</b>	<b>ALE</b>	—	—	—	—	Crankcase w/Guide Pins (2530E Only)	1
54	27488	S	27488	S	27488	S	Pin, Guide	2
56	27790	POP	27790	POP	27790	POP	Pan, Oil	1
59	<b>92519</b>	<b>STZP</b>	<b>92538</b>	<b>S</b>	<b>92538</b>	<b>S</b>	Screw, HHC, Sems (M6x16)	2
	<b>125824</b>	<b>STCP R</b>	—	—	—	—	Screw, HHC, Sems (M6x16)	2
64	27784	CM	27784	CM	27784	CM	Pin, Crosshead	3
65	48719	SSHS	48719	SSHS	48719	SSHS	Rod, Plunger	3
70	27785	NBR	27785	NBR	27785	NBR	Seal, Crankcase Oil -70D	3
75	110669	S	110669	S	110669	S	Slinger, Barrier	3
88	110670	S	110670	S	110670	S	Washer, Keyhole	3
90	45749	CC	45749	CC	45749	CC	Plunger (M32x93)	3
95	† 89835	SS	† 89835	SS	† 89835	SS	Stud, Retainer (M7x87)	3
96	20184	PTFE	20184	PTFE	20184	PTFE	Back-up-Ring, Plunger Retainer	3
97	14190	NBR	14190	NBR	14190	NBR	O-Ring, Plunger Retainer - 70D	3
	14161	FPM	14161	FPM	14161	FPM	O-Ring, Plunger Retainer - 70D	3
	◆ 48239	EPDM	◆ 48239	EPDM	◆ 48239	EPDM	O-Ring, Plunger Retainer	3
98	44069	SS	44069	SS	44069	SS	Gasket, Plunger Retainer	3
99	44068	SS	44068	SS	44068	SS	Retainer, Plunger (M7) [7/02]	3
100	49788	NY	49788	NY	49788	NY	Retainer, LPS, Front	3
	49789	NY	49789	NY	49789	NY	Retainer, LPS, Rear	3
101	110796	—	110796	—	110796	—	Wick, Long Tab (M32)	3
106	† 44098	NBR	† 44098	NBR	† 44098	NBR	Seal, LPS w/SS-Spg	3
	44827	FPM	44827	FPM	44827	FPM	Seal, LPS w/SS-Spg	3
	◆ 48244	EPDM	◆ 48244	EPDM	◆ 48244	EPDM	Seal, LPS w/SS-Spg	3
	76298	ST2	76298	ST2	76298	ST2	Seal, LPS	3
110	<b>49265</b>	<b>CFBB</b>	<b>48583</b>	<b>SS</b>	<b>45830</b>	<b>NAB</b>	Manifold, Inlet	1
116	<b>126570</b>	<b>STCP R</b>	<b>19085</b>	<b>S</b>	<b>19085</b>	<b>S</b>	Lockwasher, Split	4
117	<b>126518</b>	<b>STCP R</b>	<b>88398</b>	<b>S</b>	<b>88398</b>	<b>S</b>	Screw, HSH (M12x40)	4
125	† 45832	SNG	† 45832	SNG	† 45832	SNG	Seal, HPS w/SS	3
	48220	HT*	48220	HT*	48220	HT*	Seal, HPS w/SS, 2-PC w/S-Support	3
143	14203	NBR	14203	NBR	14203	NBR	O-Ring, Adapter, LPS, Rear-70D	3
	11731	FPM	11731	FPM	11731	FPM	O-Ring, Adapter, LPS, Rear	3
	◆ 48241	EPDM	◆ 48241	EPDM	◆ 48241	EPDM	O-Ring, Adapter, LPS, Rear	3
150	<b>45752</b>	<b>BB</b>	<b>45835</b>	<b>SS</b>	<b>45835</b>	<b>SS</b>	Adapter, LPS	3
154	18690	NBR	18690	NBR	18690	NBR	O-Ring, Adapter, LPS, Front -70D	3
	11744	FPM	11744	FPM	11744	FPM	O-Ring, Adapter, LPS, Front	3
	◆ 48242	EPDM	◆ 48242	EPDM	◆ 48242	EPDM	O-Ring, Adapter, LPS, Front	3
155	14520	NBR	14520	NBR	14520	NBR	O-Ring, Adapter, Valve -70D	6
	11745	FPM	11745	FPM	11745	FPM	O-Ring, Adapter, Valve	6
	◆ 48240	EPDM	◆ 48240	EPDM	◆ 48240	EPDM	O-Ring, Adapter, Valve	6
157	<b>45751</b>	<b>BB</b>	<b>45834</b>	<b>SS</b>	<b>45834</b>	<b>SS</b>	Adapter, Valve	3
164	† 46857	SS	† 46857	SS	† 46857	SS	Seat [11/95] (See Tech Bulletin 076)	6
165	14014	NBR	14014	NBR	14014	NBR	O-Ring, Seat	6
	48238	FPM	48238	FPM	48238	FPM	O-Ring, Seat	6
	◆ 48243	EPDM	◆ 48243	EPDM	◆ 48243	EPDM	O-Ring, Seat	6
166	† 45839	SS	† 45839	SS	† 45839	SS	Valve	6
167	† 45840	SS	† 45840	SS	† 45840	SS	Spring	6
168	110682	PVDF	110682	PVDF	110682	PVDF	Retainer, Spring	6
185	<b>49267</b>	<b>CFBB</b>	<b>48585</b>	<b>SS</b>	<b>45836</b>	<b>NAB</b>	Manifold, Discharge	1
186	<b>126570</b>	<b>STCP R</b>	<b>19085</b>	<b>S</b>	<b>19085</b>	<b>S</b>	Lockwasher, Split	8
188	<b>126517</b>	<b>STCP R</b>	—	—	—	—	Screw, HSH (M12x65)	8
250	26516	STCP	26516	STCP	26516	STCP	Protector, Shaft	1
260	30614	STZP R	30614	STZP R	30614	STZP R	Mount, Rail, Assy.	1
269	30206	F	30206	F	30206	F	Pulley (10") [See Tech Bulletin 003]	1
270	30059	STL	30059	STL	30059	STL	Hub, "H", M30 (Keyway M8) [See Tech Bulletin 003] [2/00]	1
279	30278	STZP	30278	STZP	30278	STZP	Oilers (1 oz.)	3
281	30967	—	30967	—	30967	—	Glass, Oiler	3

# EXPLODED VIEW



Models  
 Standard - 2530, 2530E  
 Stainless Steel - 2531  
 Nickel Aluminum Bronze - 2537  
 June 2013

ITEM	PART NUMBER			DESCRIPTION	QTY			
282	10069	NBR	10069	NBR	10069	NBR	Gasket, Oiler	3
283	34334	—	34334	—	34334	—	Kit, Oil Drain (3/8"x24") (See Individual Data Sheet)	1
	76144	—	76144	—	76144	—	Kit, Oil Drain (3/8"x24") (See Individual Data Sheet)	1
290	6124	—	6124	—	6124	—	Gasket, Liquid (3 oz.) (See Tech Bulletin 053)	1
299	<b>814838</b>	<b>BB</b>	<b>816735</b>	<b>SS</b>	<b>816538</b>	<b>NAB</b>	Head, Complete	1
300	30952	NBR	30952	NBR	30952	NBR	Kit, Seal (Incls: 97,106,125,143,154,155)	1
	33607	FPM*	33607	FPM*	33607	FPM*	Kit, Seal (Incls: 97,106,125,143,154,155)	1
	◆ 33608	EPDM*	◆ 33608	EPDM*	◆ 33608	EPDM*	Kit, Seal (Incls: 97,106,125,143,154,155)	1
310	33952	NBR	33952	NBR	33952	NBR	Kit, Valve (Incls: 143,154,155,164,165,166,167,168)	2
	31267	FPM	31267	FPM	31267	FPM	Kit, Valve (Incls: 143,154,155,164,165,166,167,168)	2
	◆ 31268	EPDM	◆ 31268	EPDM	◆ 31268	EPDM	Kit, Valve (Incls: 143,154,155,164,165,166,167,168)	2
390	714500	SS	714500	SS	714500	SS	C.A.T. (Inlet pressure stabilizer for RO and boosted inlet applications)	1
391	714505	SS	714505	SS	714505	SS	Adapter (2 per C.A.T.) (See Data Sheet for complete selection)	2
392	701828	SS	701828	SS	701828	SS	Elbow Assy Used With Adapter Assy 714505	1
—	6575	—	6575	—	6575	—	Plunger Pump Servicing DVD	1
—	—	—	<b>6119</b>	—	—	—	Lubricant, Antiseize (2 oz.) (See Tech Bulletin 095)	1
—	<b>701931</b>	—	—	—	—	—	Sealant, Silicone (3 oz.) (2530E Only)	1
—	6100	—	6100	—	6100	—	Oil, Case (12 Bottles) ISO 68 Hydraulic (Fill to specified crankcase capacity prior to start-up)	1

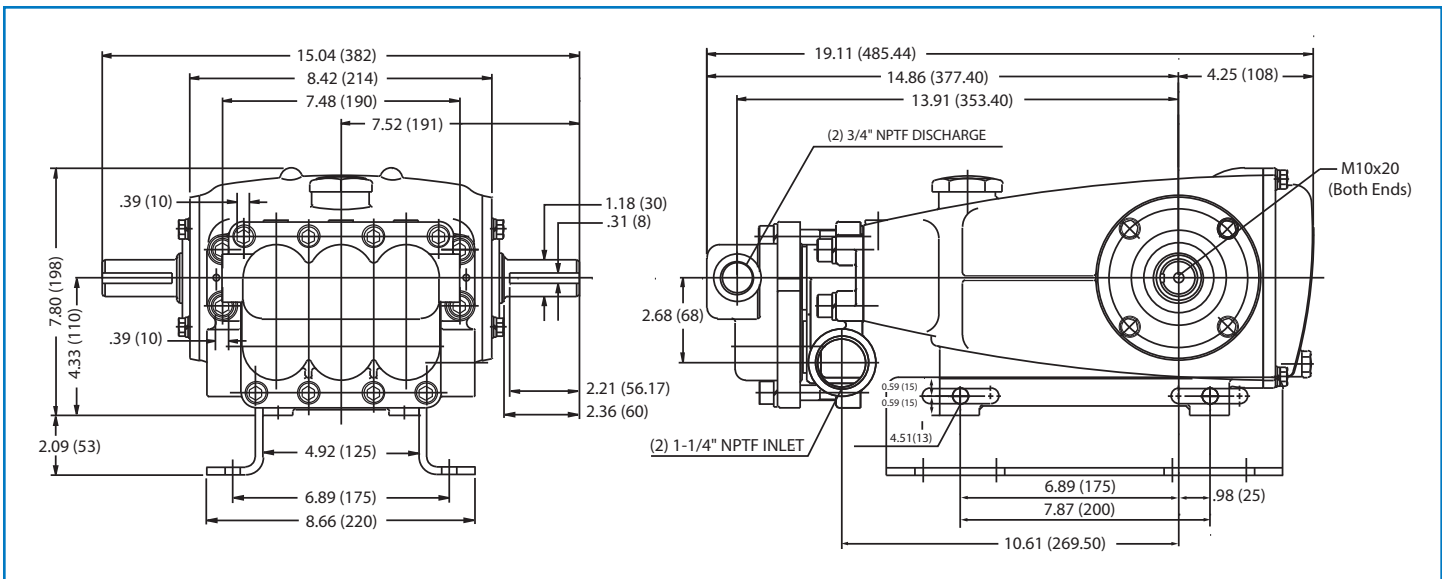
**Bold print part numbers are unique to a particular pump model.** *Italics are optional items.* [ ] Date of latest production change.

◆ Silicone oil/grease required. †Production parts different from service parts. R Components comply with RoHS Directive.

\*Review individual parts in each kit for material code identification.

Veiv Tech Bulletins 002,003,024,036,043,053,074,076,081,083,085 and 095 for additional information. MATERIAL CODES (Not Part of Part Number):

ABS=ABS Plastic AL=Aluminum ALE=Aluminum Epoxy BB=Brass CC=Ceramic CFBB=Chrome Forged Brass CM=Chrome-moly EPDM=Ethylene Propylene Diene Monomer  
 F=Cast Iron FCM=Forged Chrome-moly FPM=Fluorocarbon HT=High Temp (EPDM Alternative) NAB=Nickel Aluminum Bronze NBR=Medium Nitrile (Buna-N) NY=Nylon  
 PE=Polyethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SSSG=Special Blend (Buna) ST2=Special Blend PTFE Grey  
 STL=Steel SSSS=316SS/High Strength STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength



Models 2530, 2530E, 2531, 2537



- 1 Special concentric, high-density, polished, solid ceramic **plungers** provide a true wear surface and extended seal life.
- 2 **Manifolds** are a high tensile strength brass, 316 stainless steel or nickel aluminum bronze for long term, continuous duty.
- 3 100% wet **seal** design adds to service life by allowing pumped liquids to cool and lubricate on both sides.
- 4 Stainless steel **valves, seats and springs** provide corrosion-resistance, ultimate seating and extended life.
- 5 Specially formulated, Cat Pump exclusive, **Hi-Pressure Seals** offer unmatched performance and seal life.



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