15 Frame Plunger Pump

Standard Brass Model **1530**

Stainless Steel Model **1531**

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 304 and 316 stainless steel valves and seats are hardened and polished for ultimate seating and extended life.
- Forged Brass or Stainless Steel manifolds are strong and corrosion resistance.
- 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 mean longer bearing life.

Easy Maintenance

- Wet-end is easily serviced without entering crankcase, requiring less time and effort.
- 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.

SPECIFICATIONS

	U.S. Measure	Metric Measure
Flow	15.6 GPM	(59 L/M)
Pressure Range	100 to 1500 PSI	(7 to 105 BAR)
RPM	1450 RPM	(1450 RPM)
Inlet Pressure Range	Flooded to 70 PSI	(Flooded to 4.9 BAR)
Bore	0.984"	(25 mm)
Stroke	1.181"	(30 mm)
Crankcase Capacity	42 oz.	(1.26 L)
Maximum Liquid Temperature	140°F	(60°C)
Above 130°F call CAT PUMPS for inlet conditions and elastomer recommendations.		
Inlet Ports (2)	1" NPTF	(1" NPTF)
Discharge Ports (2)	3/4" NPTF	(3/4" NPTF)
Pulley Mounting	Either Side	(Either Side)
Shaft Diameter	1.181"	(30 mm)
Weight (1530)	55 lbs.	(25 kg)
(1531)	53 lbs.	(24 kg)
Dimensions	17.24 x 13.0 x 7.4"	(438 x 330 x 188 mm)

ELECTRIC HORSEPOWER REQUIREMENTS

FLOW		PRESSURE			RPM
		PSI 1000	PSI 1200	PSI 1500	
U.S. GPM	L/M	BAR 70	BAR 85	BAR 105	
15.6	59	10.7	12.8	16.0	1450
14.0	53	9.6	11.5	14.4	1301
12.0	45	8.2	9.9	12.4	1115

DETERMINING THE PUMP R.P.M. $\frac{\text{Rated G.P.M.}}{\text{Rated R.P.M.}} = \frac{\text{"Desired" G.P.M.}}{\text{"Desired" R.P.M.}}$

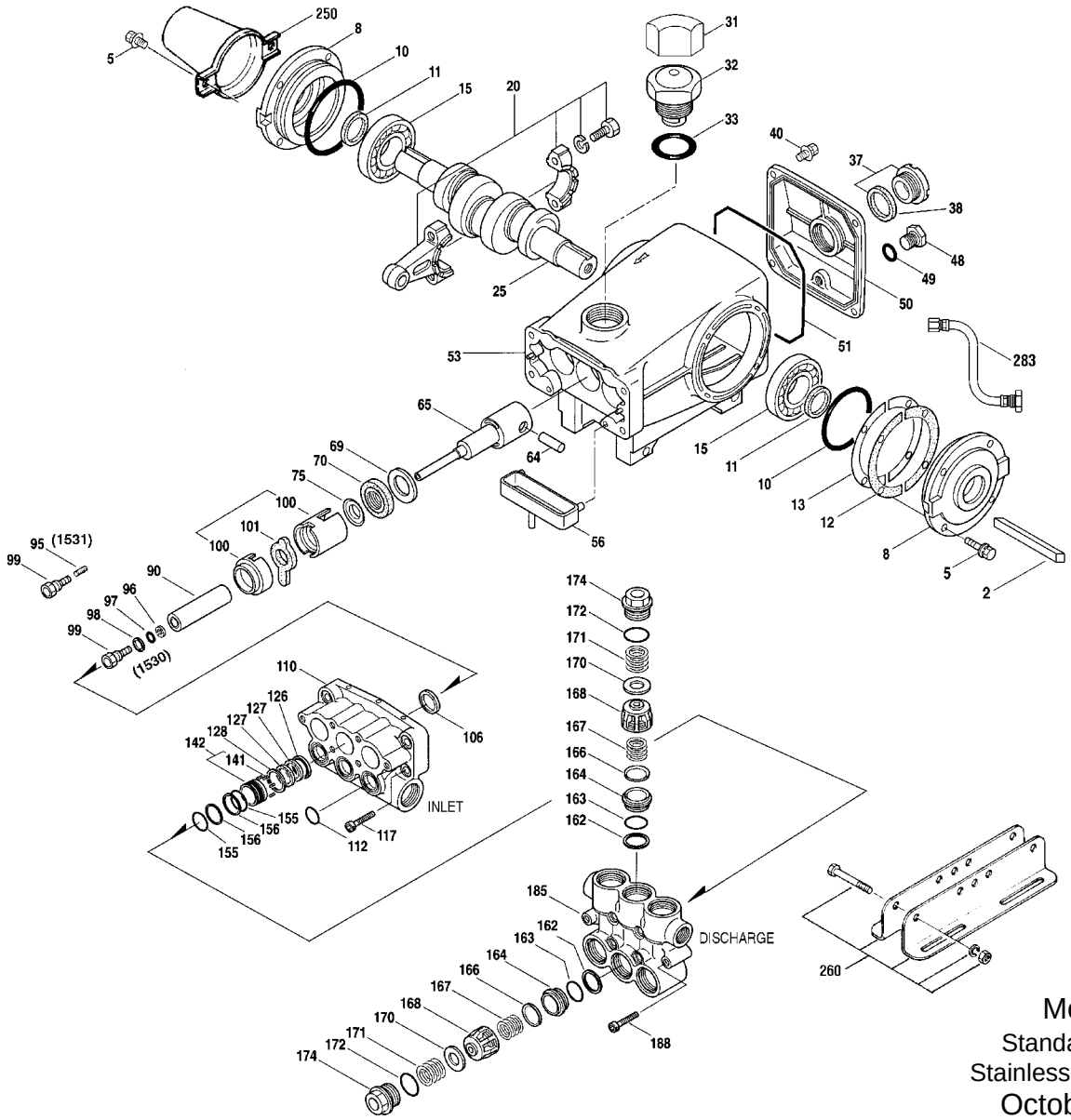
DETERMINING THE REQUIRED H.P. $\frac{\text{GPM x PSI}}{1460} = \text{Electric Brake H. P. Required}$

DETERMINING MOTOR PULLEY SIZE $\frac{\text{Motor Pulley O.D.}}{\text{Pump R.P.M.}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor R.P.M.}}$

See complete Drive Packages [Incldes: Pulleys, Belts, Hubs, Key] Tech Bulletin 003.

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

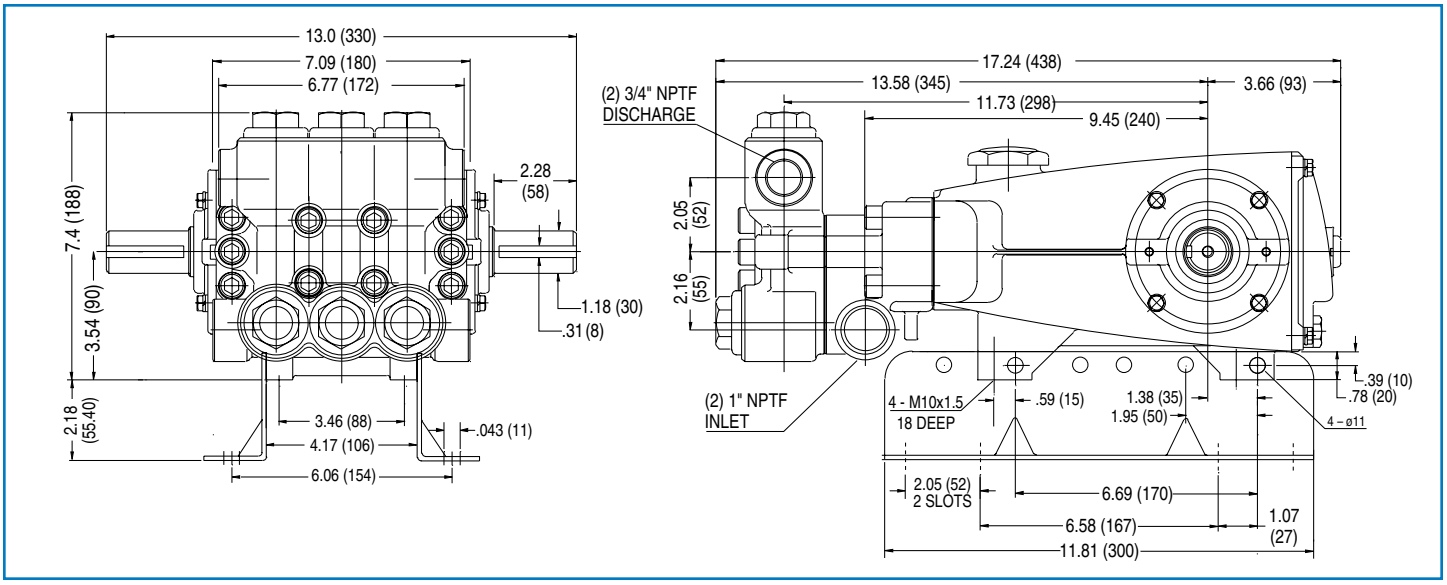
ITEM	PART NUMBER				DESCRIPTION	QTY
	1530	**MATL**	**1531**	**MATL**		
2	*990036*	*STL*	*990036*	*STL*	*Key (M8x7x40)*	*1*
	30067	*STL*	*30067*	*STL*	*Key (M8x7.5x25)*	*1*
5	**92519**	**STZP**	**92538**	**S**	Screw, Sems HHC (M6x16)	8
	125824	***STCP R***	—	—	*Screw, Sems HHC (M6x16)*	*8*
8	43496	AL	43496	AL	Cover, Bearing	2
10	11340	NBR	11340	NBR	O-Ring, Bearing Cover - 70D	2
11	43495	NBR	43495	NBR	Seal, Oil, Crankshaft - 70D	2
12	815281	FBR	815281	FBR	Shim, Split 2 pc	0-6
13	814800	S	814800	S	Shim, Split 2 pc	0-4
15	39060	STL	39060	STL	Bearing, Roller	2
20	48600	TNM	48600	TNM	Rod, Connecting Assembly	3
25	43494	FCM	43494	FCM	Crankshaft, Dual-End	1
31	*828710*	—	*828710*	—	*Protector, Oil Cap w/Foam Gasket*	*1*
32	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	O-Ring, Filler Cap - 70D	1
37	92241	—	92241	—	Gauge, Oil, Bubble w/Gasket - 80D	1
38	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge - 80D	1
40	**92520**	**STZP**	**92542**	**S**	Screw, Sems HHC (M6x20)	4
	126541	***STCP R***	—	—	*Screw, Sems HHC (M6x20)*	*4*
48	25625	STCP	25625	STCP	Plug, Drain (1/4"x19BSP)	1
49	23170	NBR	23170	NBR	O-Ring, Drain Plug - 70D	1
50	43491	AL	43491	AL	Cover, Rear	1
51	44834	NBR	44834	NBR	O-Ring, Rear Cover - 70D	1
53	115471	AL	115471	AL	Crankcase w/Guide Pins	1
56	44664	POP	44664	POP	Pan, Oil	1
64	43507	CM	43507	CM	Pin, Crosshead	3
65	**48228**	**SHS**	**48360**	**SSHS**	Rod, Plunger	3
69	126592	STCP R	126592	STCP R	Washer, Oil Seal	3
70	43500	NBR	43500	NBR	Seal, Oil Crankcase - 80D	3
75	43506	S	43506	S	Slinger, Barrier	3
90	48606	CC	48606	CC	Plunger, Ceramic (M25x92)	3
96	43235	PTFE	43235	PTFE	Back-up-Ring, Plunger Retainer	3
95	—	—	**89651**	**SS**	Stud, Plunger Retainer (M6x70)	1
97	17399	NBR	17399	NBR	O-Ring, Plunger Retainer - 80D	3
	14160	*FPM*	*14160*	*FPM*	*O-Ring, Plunger Retainer - 70D*	*3*
	◆ *46204*	*EPDM*	◆ *46204*	*EPDM*	*O-Ring, Plunger Retainer - 70D*	*3*
98	**45891**	**CU**	**44041**	**SS**	Gasket, Plunger Retainer	3
99	**104360**	**S**	**44031**	**SS**	Retainer, Plunger	3
100	899509	POP	899509	POP	Retainer, Seal 2-Pc [07/06]	3
101	48716	—	48716	—	Wick, Long Tab	3
106	44086	NBR	44086	NBR	Seal, LPS w/SS-Spg	3
	45846	*FPM*	*45846*	*FPM*	*Seal, LPS w/SS-Spg*	*3*
	◆ *49196*	*EPDM*	◆ *49196*	*EPDM*	*Seal, LPS w/SS-Spg*	*3*
110	**48608**	**FBB**	**48683**	**SS**	Manifold, Inlet	1
112	14200	NBR	14200	NBR	O-Ring, Inlet Manifold - 70D	3
	11719	*FPM*	*11719*	*FPM*	*O-Ring, Inlet Manifold*	*3*
	◆ *48907*	*EPDM*	◆ *48907*	*EPDM*	*O-Ring, Inlet Manifold*	*3*
117	**87933**	**STZP**	**87952**	**S**	Screw, HSH (M10x55)	4
	126515	***STCP R***	—	—	*Screw, HSH (M10x55)*	*4*
126	**48538**	**BB**	**48669**	**SS**	Adapter, Female	3
127	44610	STG*	44610	STG*	V-Packing	6
128	**48539**	**BB**	**113025**	**SS**	Adapter, Male	3
141	48672	SS	48672	SS	Spring, Coil [12/02]	18
142	**48550**	**BB**	**48670**	**SS**	Spacer w/Coil Springs	3
155	17629	NBR	17629	NBR	O-Ring, Spacer - 80D	6
	14183	*FPM*	*14183*	*FPM*	*O-Ring, Spacer*	*6*
	◆ *701784*	*EPDM*	◆ *701784*	*EPDM*	*O-Ring, Spacer*	*6*
156	28243	PTFE	28243	PTFE	Back-up-Ring, Spacer	6
162	48363	D	48363	D	Back-up-Ring, Seat	6
163	26142	NBR	26142	NBR	O-Ring, Seat - 80D	6
	14330	*FPM*	*14330*	*FPM*	*O-Ring, Seat*	*6*
	◆ *701493*	*EPDM*	◆ *701493*	*EPDM*	*O-Ring, Seat*	*6*
164	**48596**	**S**	**48688**	**SSL**	Seat, Q.V. Stepped	6
166	48686	SSL	48686	SSL	Valve, Q.V.	6
167	48687	SS	48687	SS	Spring, Valve [12/02]	6
168	44735	PVDF	44735	PVDF	Retainer, Spring	6
170	44794	SS	44794	SS	Washer, Spring Retainer	6
171	48689	SS	48689	SS	Spring, Coil [12/02]	6
172	17629	NBR	17629	NBR	O-Ring, Valve Plug - 80D	6
	14183	*FPM*	*14183*	*FPM*	*O-Ring, Valve Plug*	*6*
	◆ *701784*	*EPDM*	◆ *701784*	*EPDM*	*O-Ring, Valve Plug*	*6*
174	**48597**	**FBB**	**49294**	**SS**	Plug, Valve	6
185	**48610**	**FBB**	**48685**	**SS**	Manifold, Discharge	1
188	**89980**	**STCP**	**89981**	**S**	Screw, HSH (M12x70)	6
	126519	***STCP R***	—	—	*Screw, HSH (M12x70)*	*6*



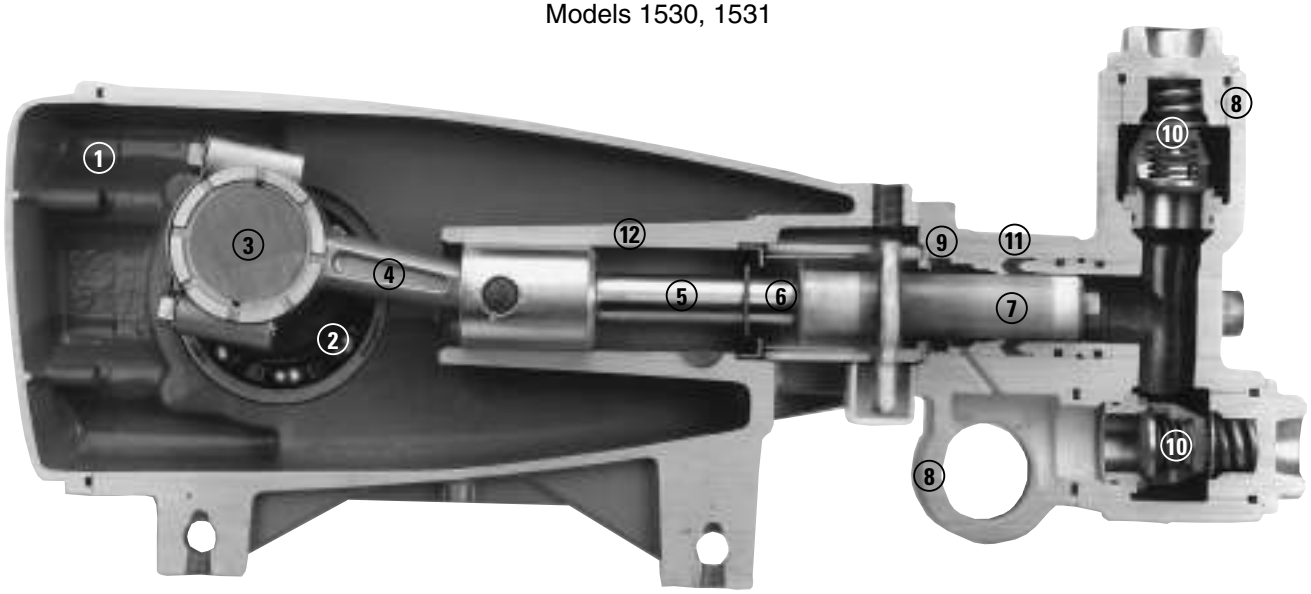
Models
Standard - 1530
Stainless Steel - 1531
October 2007

	1530	MATL	1531	MATL		
250	*30764*	*NY*	*30764*	*NY*	*Protector, Shaft w/2 Screws*	*1*
260	*30613*	*STZP*	*30613*	*STZP*	*Rail, Angle Assy*	*1*
269	*30206*	*F*	*30206*	*F*	*Pulley (10") **[See Drive Packages, Tech Bulletin 003]***	*1*
270	*30059*	*STL*	*30059*	*STL*	*Hub, "H", M30 (Keyway M8) **[See Drive Packages, Tech Bulletin 003]***	*1*
	990012	*STL*	*990012*	*STL*	*Hub, "B", M30 (Keyway M8) **[See Drive Packages, Tech Bulletin 003]***	*1*
283	*34334*	*—*	*34334*	*—*	*Kit, Oil Drain*	*1*
290	*6124*	*—*	*6124*	*—*	*Liquid Gasket, Hylomar (3 oz.)*	*1*
299	***816762***	***FBB***	***816783***	***SS***	*Head, Complete*	*1*
300	*31355*	*NBR*	*31355*	*NBR*	*Kit, Seal (Incldes: 97,106,112,127,155,156)*	*1*
	31455	***FPM****	***31455***	***FPM****	*Kit, Seal (Incldes: 97,106,112,127,155,156)*	*1*
	◆ *31753*	*EPDM*	◆ *31753*	*EPDM*	*Kit, Seal (Incldes: 97,106,112,127,155,156)*	*1*
310	***31360***	***NBR***	***31271***	***NBR***	*Kit, Valve (Incldes: 162,163,164,166,167,168,170,172)*	*2*
	31460	***FPM***	***31281***	***FPM***	*Kit, Valve (Incldes: 162,163,164,166,167,168,170,172)*	*2*
	◆ *31773*	*EPDM*	◆ *31773*	*EPDM*	*Kit, Valve (Incldes: 162,163,164,166,167,168,170,172)*	*2*
—	*711500*	*SS*	*711500*	*SS*	*C.A.T. (inlet pressure stablizer for RO and boosted inlet applications)*	*1*
—	*711504*	*SS*	*711504*	*SS*	*Adapter (2 per C.A.T.) (See Data Sheet for complete selection)*	*2*
—	*6100*	*—*	*6100*	*—*	*Oil, Case (12 Bottles) ISO 68 Multi-viscosity Hydraulic (Fill to specified crankcase capacity prior to start-up)*	*1*
—	*—*	*—*	*6119*	*—*	*Lubricant, Antiseize (1 oz.)*	*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.
R Components comply with RoHS Directive. ***** Review material codes for individual items (STG generally may be used as alternate).
See Tech Bulletins 002, 003, 024, 035, 036, 043, 053, 074, 077, 083, 085, 095 and 098 for additional information.
C. A.T. highly recommended for pressurized inlet, R.O. and Industrial applications.
MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BB=Brass CC=Ceramic CM-Chrome-moly CU=Copper D=Acetal F=Cast Iron FBB=Forged Brass FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) NY=Nylon POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SHS=304SS/High Strength SS=316SS SSHS= 316SS/High Strength SSL=316SS/Low Carbon STCP=Steel/Chrome Plated STG=Special Blend PTFE White STL=Steel STZP=Steel/Zinc Plated TNM=Special High Strength



Models 1530, 1531



1 Die cast aluminum **crankcase** means high strength, light weight, 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 high strength **connecting rods** are noted for superior 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 a high strength forged brass or stainless steel 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 of seals.

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.

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PN 993115 Rev C 9705