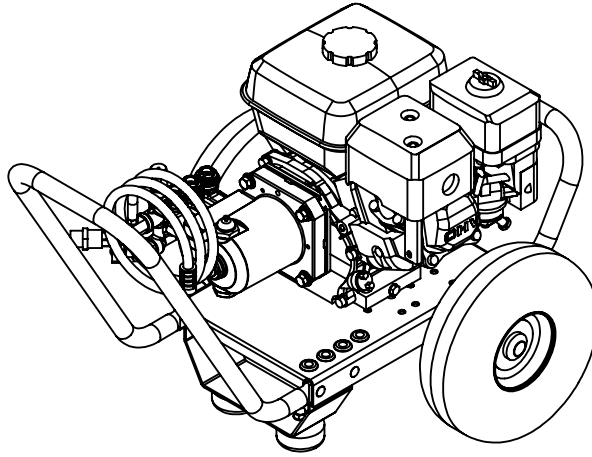


PRO POWER SERIES PARTS MANUAL
2700PSI TO 3300 PSI



VARIATIONS

REV 1.0 BEGINNING SERIAL NUMBER

MODEL NUMBER	GPM	PSI	ENGINE	PUMP
PPS2527HAI	2.5	2700	GC HONDA	AR
PPS2527KAI	2.5	2700	SH KOHLER	AR
PPS2530HAI	2.5	3000	GC HONDA	AR
PPS3030HCI	3.0	3000	GC HONDA	CAT
PPS3030KCI	3.0	3000	SH KOHLER	CAT
PPS2533HAI	2.5	3300	GX HONDA	AR
PPS2533KAI	2.5	3300	SH KOHLER	AR
PPS2533HCI	2.5	3300	GX HONDA	CAT

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PUMP BREAKDOWNS.....PG 14



EXTREMELY HAZARDOUS OR DANGEROUS SITUATION THAT WILL RESULT IN DEATH OR SERIOUS INJURY IF NOT OBEYED OR AVOIDED.



DO NOT FILL OR REFILL THE ENGINE WITH FUEL WHILE THE ENGINE IS RUNNING. STOP THE ENGINE, RELEASE THE PRESSURE IN THE HOSE AND ALLOW THE ENGINE TO COOL FOR AT LEAST 5 MINUTES BEFORE REFUELING.

DO NOT SMOKE WHEN REFILLING ANY FUEL TANKS.

DO NOT REFUEL INDOORS.

REFILL ONLY IN A WELL VENTILATED AREA.

DO NOT OVER FILL TANKS. REFILL TANKS SLOWLY TO AVOID SPILLING FUEL.

DO NOT RESTART MACHINE UNTILL ALL FUEL SPILLS HAVE BEEN THOROUGHLY CLEANED UP AND ANY RESIDUAL FUEL HAS EVAPORATED.

DO NOT STORE THE MACHINE NEAR OPEN FLAME, HEAT SOURCE OR ANY DEVICE THAT COULD CREATE A SPARK.



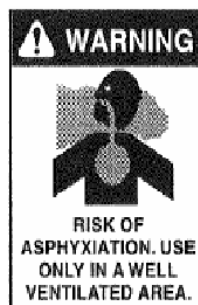
DO NOT SPRAY FLAMMABLE LIQUIDS.

DO NOT OPERATE PRESSURE WASHER IN THE PRESENCE OF FLAMMABLE LIQUIDS, VAPORS, GASSES, COMBUSTIBLE DUST OR ANY OTHER COMBUSTIBLE MATERIALS.

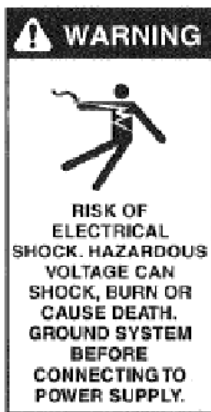
DO NOT USE CRANKCASE OR WASTE OIL.

DO NOT PUT GASOLINE IN ANY TANK INTENDED FOR FUEL OIL.

USE ONLY No.1 OR No.2 HEATING OIL OR DIESEL FUEL IN THE BURNER TANK.



DO NOT OPERATE PRESSURE WASHER IN AN ENCLOSED AREA. USE ONLY IN A WELL VENTILATED AREA. PROPER VENTILATION AND OXYGEN SUPPLY IS NEED TO SUSTAIN YOUR LIFE AND FOR THE SAFE AND EFFICIENT OPERATION OF THIS MACHINE.



DO NOT DIRECT THE WATER STREAM OR SPRAY AT ANY ELECTRICAL INSTALLATION OF ANY KIND INCLUDING LIGHTS.

DO NOT USE THE WATER STREAM TO CLEAN THE PRESSURE WASHER.

DO NOT USE EXTENSION CORDS. USE ADDITIONAL HOSES.

DO NOT USE THE PRESSURE WASHER IF THE GFCI, CIRCUIT BREAKER OR THERMAL OVERLOAD PROTECTOR TRIPS.

DO NOT USE WHILE RAINING.

DO NOT USE IF POWER SUPPLY CORD IS DAMAGED.

DO NOT REPAIR POWER SUPPLY CORD. REPLACE IT.

DO NOT ALLOW POWER CORD TO LAY IN STANDING WATER.

USE ONLY FACTORY SUPPLIED CORD SET WITH A PROPERLY GROUNDED RECEPTACLE THAT IS EQUIPPED WITH A GROUND FAULT CIRCUIT INTERRUPTER.

USE ONLY A PROPERLY SIZED AND ISOLATED ELECTRICAL SUPPLY CAPABLE OF THE FULL LOAD AMPERAGE THAT THE PRESSURE WASHER REQUIRES.



DO NOT USE THE PRESSURE WASHER WHILE STANDING ON A LADDER OR SCAFFOLDING.

DO NOT USE WHILE STANDING ON PITCHED ROOFS.

WET SURFACE IS SLIPPERY. DANGER OF SLIP AND FALL.



DO NOT POINT THE WATER STREAM AT ANY PERSONS OR ANIMALS.

DO NOT OPERATE IN THE VICINITY OF CHILDREN.

DO NOT USE THE WATER STREAM TO CLEAN ANY PROTECTIVE CLOTHING OR BOOTS.



USE ONLY FACTORY APPROVED IDENTICAL REPLACEMENT PARTS.

DO NOT CHANGE OR TAMPER WITH FACTORY PRESET

ADJUSTMENTS. NEVER DEFEAT OR DISABLE ANY SAFETY DEVICES ON THE MACHINE.



DO NOT OPERATE THE UNIT WITH A MALFUNCTIONING BURNER OR BURNER CONTROL. INSPECT BURNER AND BURNER CONTROL OPERATION BEFORE EACH USE. FAILURE TO DO SO MAY RESULT IN AN EXPLOSION OR FIRE. IF YOU SUSPECT A

PROBLEM WITH THE BURNER, DISCONTINUE USE IMMEDIATELY AND CONTACT YOUR LOCAL AUTHORIZED DISTRIBUTOR.

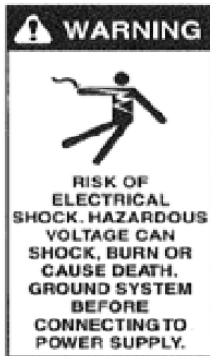
WARNING! (Liquid Petroleum or Natural Gas Fired Units)

FOR YOUR SAFETY, IF YOU SMELL GAS:

1. OPEN WINDOWS.
2. DO NOT TOUCH ELECTRICAL SWITCHES.
3. TURN OFF BREAKER SWITCH SUPPLYING POWER TO UNIT. CLOSE GAS SUPPLY VALVE TO UNIT.
4. EXTINGUISH ANY OPEN FLAME.
5. IMMEDIATELY EVACUATE PREMISES AND CALL YOUR GAS SUPPLIER.
6. MACHINES CAN CAUSE AN EXPLOSION WHEN OPERATED NEAR FLAMMABLE MATERIALS AND VAPORS. DO NOT- USE THIS MACHINE WITH OR NEAR FUELS, GRAIN DUST, SOLVENTS, THINNERS OR OTHER FLAMMABLE MATERIALS.
7. THIS UNIT MUST BE INSTALLED IN COMPLIANCE WITH ALL APPLICABLE GAS CODES. FAILURE TO DO SO COULD RESULT IN INJURY OR DEATH TO YOU OR TO OTHER PERSONNEL.
8. USE NO. 1 OR NO. 2 FUEL OIL ONLY IN OIL FIRED MACHINES. NEVER INTRODUCE GASOLINE TO THE FUEL OIL TANK. DOING SO COULD RESULT IN AN EXPLOSION OR FIRE. KEEP THE PROPER FUEL IN THE PROPER TANK.



POTENTIALLY HAZARDOUS SITUATION THAT COULD RESULT IN DEATH OR SERIOUS INJURY IF NOT OBEYED OR AVOIDED.



DISCONNECT POWER BEFORE SERVICING THE PRESSURE WASHER.

DISCONNECT SPARK PLUG BEFORE SERVICING THE PRESSURE WASHER.

DO NOT DIRECT THE WATER STREAM OR SPRAY AT ANY ELECTRICAL INSTALLATION OF ANY KIND INCLUDING LIGHTS.



DO NOT TOUCH HOT SURFACES. EG. MUFFLER, BURNER, ENGINE, HEAT EXCHANGER, EXHAUST HEAD.

USE ONLY INSULATED EXTENSION WAND WITH HOT WATER.

DO NOT ALLOW HOSES TO TOUCH HOT SURFACE.



DO NOT USE PRESSURE WASHER WITHOUT PROPER PROTECTIVE WEAR. USE EYE PROTECTION, RUBBER GLOVES, RUBBER BOOTS, AND PROTECTIVE CLOTHING.

DO NOT USE CORROSIVE OR AGGRESSIVE CHEMICALS WITHOUT PROPER PROTECTIVE WEAR.

THIS MACHINE PRODUCES HOT WATER AT VERY HIGH PRESSURES. USE ONLY APPROVED ACCESSORIES RATED FOR HOT WATER AND HIGH PRESSURE.



POTENTIALLY HAZARDOUS SITUATION THAT COULD RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE IF NOT OBEYED OR AVOIDED.

DO NOT LEAVE THE PRESSURE WASHER RUNNING UNATTENDED. TURN THE MACHINE OFF AND RELEASE ALL PRESSURE FROM THE SYSTEM.

DO NOT DEFEAT THE TRIGGER GUN SAFETY

DO NOT LOCK THE TRIGGER IN THE OPEN POSITION IN ANY WAY.

KNOW THE MACHINE CONTROLS AND HOW TO QUICKLY SHUT DOWN AND RELEASE ALL PRESSURE IN THE SYSTEM.

DO NOT OPERATE THE MACHINE WITHOUT ALL GUARDS AND PROTECTIVE COVERS IN PLACE.

DO NOT ALLOW ANY PART OF PERSONS OR HOSES TO CONTACT HOT SURFACES.

DO NOT HAVE ENGINE EXHAUST POINTING AT FLAMMABLE MATERIALS.

INSPECT THE PRESSURE WASHER AND HOSES FOR DAMAGED PARTS DAILY.

REPAIR LEAKS AS THEY HAPPEN TO PREVENT FURTHER DAMAGE.

DO NOT OPERATE WITH ANY FAULTY OR DAMAGED COMPONENTS.

DISCONNECT POWER CORD, BATTERY NEGATIVE AND SPARK PLUG BEFORE PERFORMING ANY SERVICE ON THE PRESSURE WASHER.

KEEP ALL HOSES AND POWER CORDS AWAY FROM VEHICLE TRAFFIC.

DO NOT MOVE THE MACHINE BY PULLING ON THE HOSE.

DO NOT LEAVE THE MACHINE EXPOSED TO HARSH ENVIRONMENTS.

DO NOT OPERATE THE MACHINE IN THE RAIN.

DO NOT DIRECT THE HIGH PRESSURE WATER STREAM AT FRAGILE OBJECTS.

DO NOT USE ANY ACCESSORIES UNLESS THEY ARE RATED AT OR ABOVE THE WORKING PRESSURE AND TEMPERATURE OF THE MACHINE.

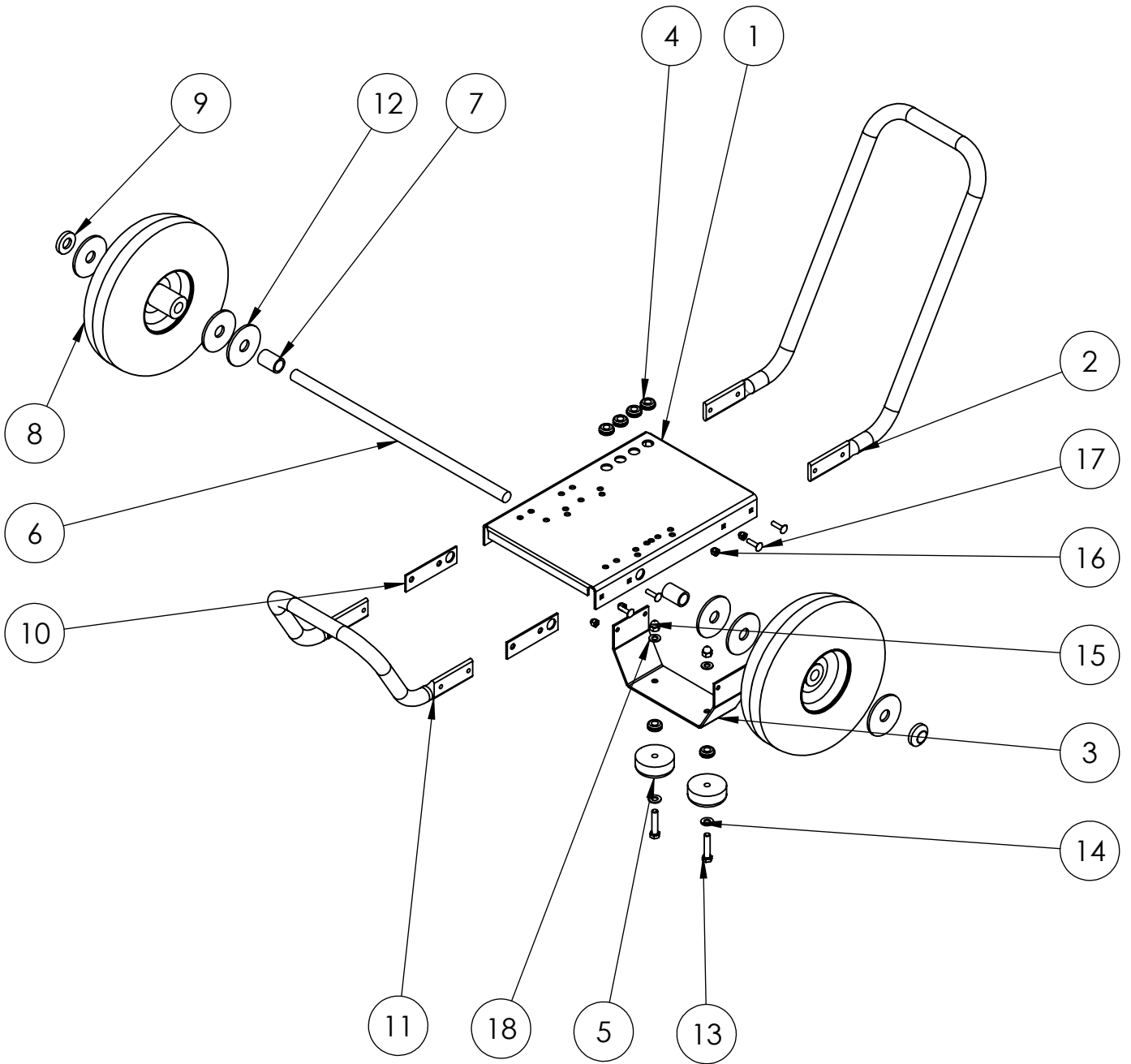
ALWAYS USE EYE, FACE, HAND, FOOT, HEARING, AND BODY PROTECTIVE WEAR.

DO NOT OPERATE PRESSURE WASHER IF FATIGUED OR UNDER THE INFLUENCE OF ALCOHOL OR DRUGS. **BE ALERT AT ALL TIMES.**

MACHINE VARIATIONS

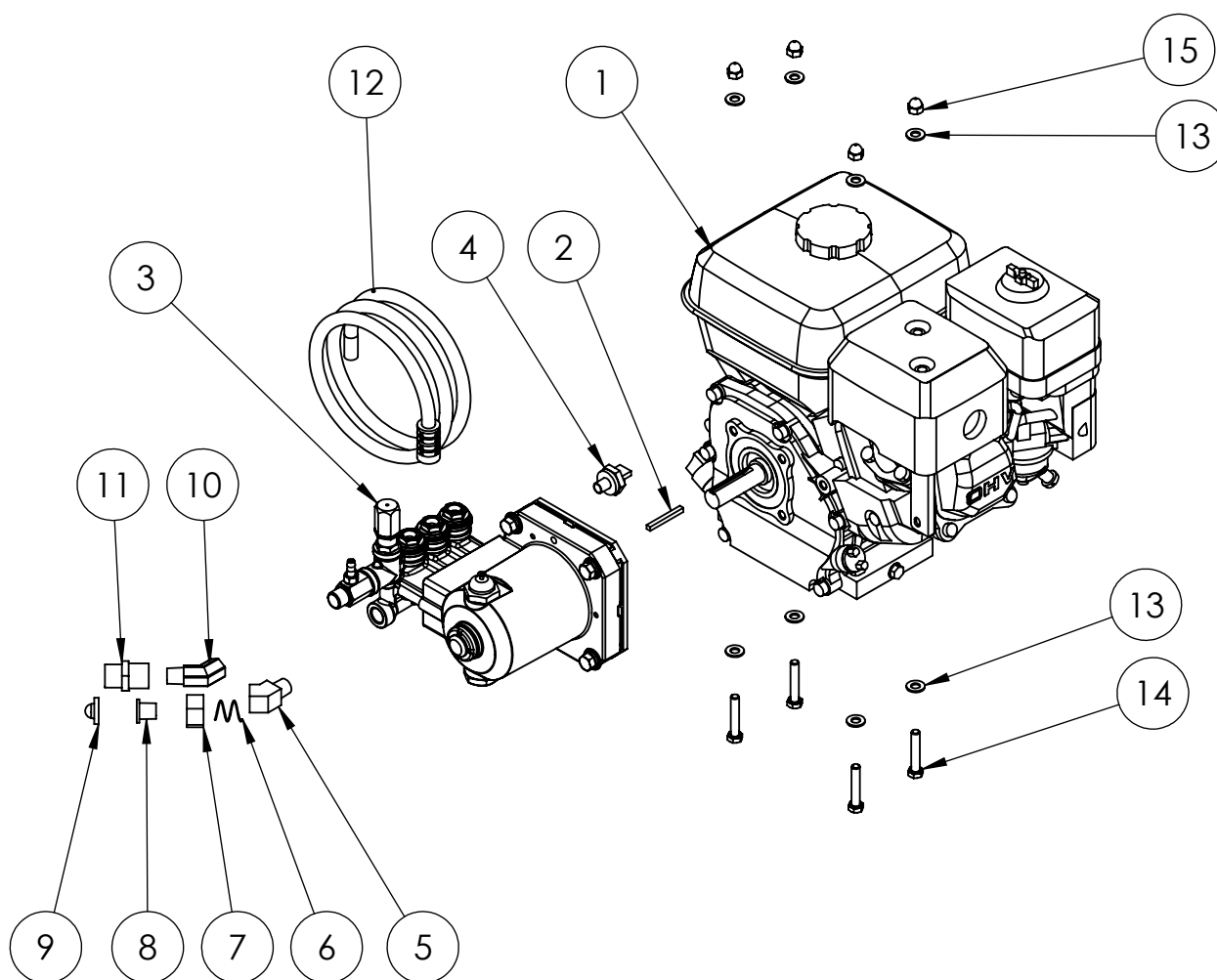
MODEL NUMBER	ENGINE	PUMP	PLUMBING KIT	SPRAY NOZZLES
PPS2527HAI	GC190LAQHGF	RMV25G24D	NA	3.0
PPS2527KAI	SH265	RMV25G24D	NA	3.0
PPS2530HAI	GC190LAQHGF	RMV25G30D	NA	2.75
PPS3030HCI	GC190LAQHGF	4PPX30GSI	KPL057/22MM	3.0
PPS3030KCI	SH265	4PPX30GSI	KPL057/22MM	3.0
PPS2533HAI	GX200UTQX2	RMV25G30D	KPL066-PPS	2.75
PPS2533KAI	SH265	RMV25G30D	KPL066-PPS	2.75
PPS2533HCI	GX200UTQX2	4PPX30GSI	KPL057/22MM	2.75

KCA007-4H



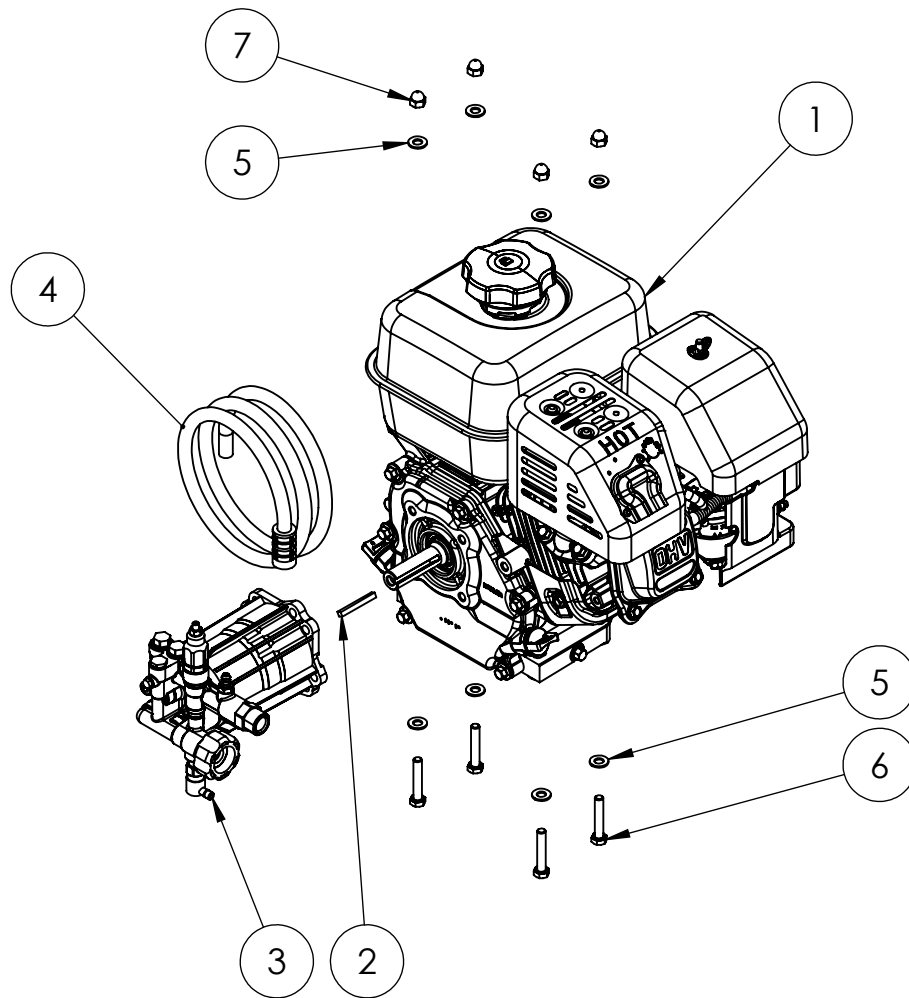
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1803	BASE, 10 X 15, 4 HOLE	1
2	1439D	HANDLE, LONG (CD)	1
3	1802	BRACKET, FOOT, UAD	1
4	2860	GROMMET, BLACK FOR 1/8 METAL	6
5	613	2-1/2" RUBBER FOOT	2
6	PAX050	AXLE, 19.25"	1
7	PPAX001	AXLE SPACER	2
8	PP8702H2	WHEEL ASSY, 10"	2
9	17-47247-P	AXLE END CAP 3/4"	2
10	1463	AXLE SUPPORT	2
11	1434D	HANDLE, SHORT (FOR1431)	1
12	101 075 000 100	SAE FLAT WASHER, 3/4	6
13	105 061 601 750	HHCS USS 3/8 X 1-3/4	2
14	111 037 500 100	FLAT WASHER, USS, 3/8	2
15	130 061 600 000	NYLOCK NUT, USS, 3/8-16	2
16	130 042 000 000	NYLOCK NUT, USS 1/4-20	8
17	104 042 001 000	1/4-20 X 1 CARRIAGE BOLT	8
18	111 037 500 100	FLAT WASHER, USS 3/8	2

PPS2533HCI MOTOR PUMP ASSY



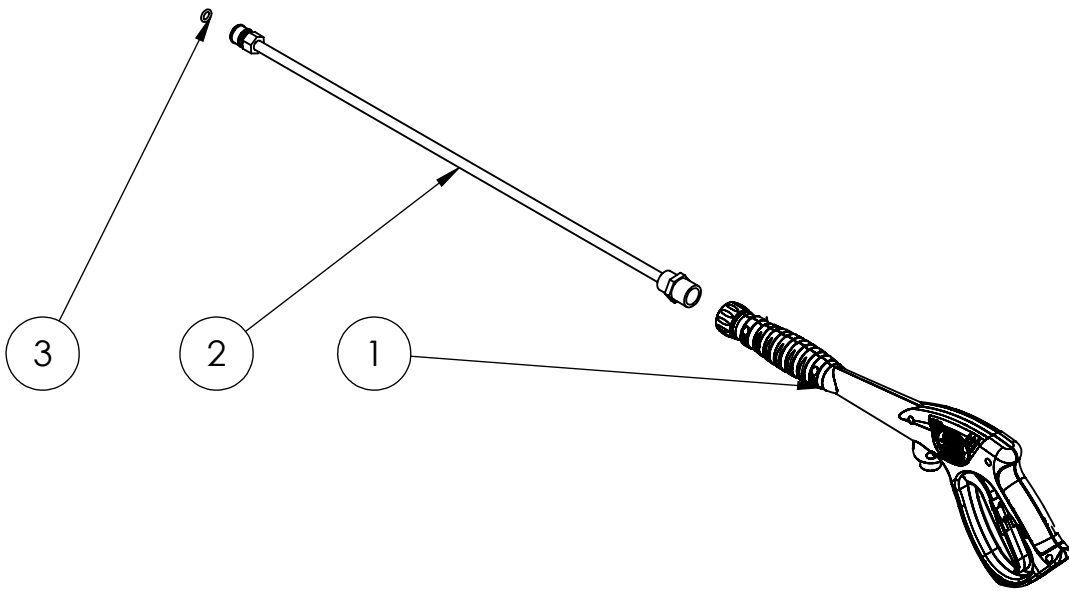
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GX200UTQX2	ENGINE, HONDA, 6.5 HP	1
2	0187	KEYSTOCK, 3/16 X 1 3/4 LONG	1
3	4PPX25GSI	PUMP, CAT, 2.5 GPM, INTEGRAL UNLOADER	1
4	100556	THERMAL RELIEF, 1/4"	1
5	3350-06-06	ST ELL, 45 DEG, 3/8	1
6	720039	GHA SPRING	1
7	510228	GARDEN HOSE ADAPTER NUT	1
8	510031	GARDEN HOSE ADAPTER, 3/8 NPT-M	1
9	700004	GHA WASHER/FILTER	1
10	5503-06-06	HP ST ELL 45, 3/8F X 3/8M	1
11	D10024	QC PLUG, 3/8"NPTF X 22MM	1
12	ACI900	INJECTOR HOSE ASSEMBLY	1
13	111 031 200 100	FLAT WASHER, USS, 5/16	8
14	105 051 801 750	HHCS, GR5, 5/16-18 X 1 3/4	4
15	130 051 800 000	NUT, NYLOCK, 5/16-18	4

PPS2533KAI MOTOR PUMP ASSY

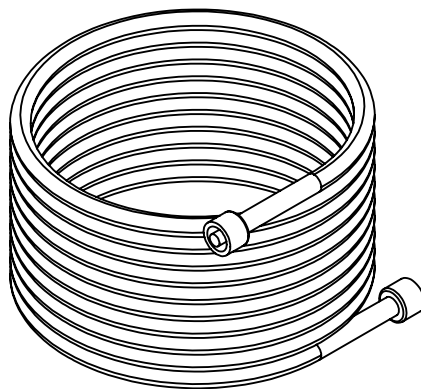


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	SH265	ENGINE, KOHLER 6.5 HP, 3/4" SHAFT, MANUAL START	1
2	0187	KEYSTOCK, 3/16 X 1 3/4 LONG	1
3	RMV25G30D	PUMP, 2.5 @ 3000, 3400 RPM, 3/4" HOLLOW SHAFT	1
4	ACI900	INJECTOR HOSE ASSEMBLY	1
5	111 031 200 100	FLAT WASHER, USS, 5/16	8
6	105 051 801 750	HHCS, GR5, 5/16-18 X 1 3/4	4
7	130 051 800 000	NUT, NYLOCK, 5/16-18	4

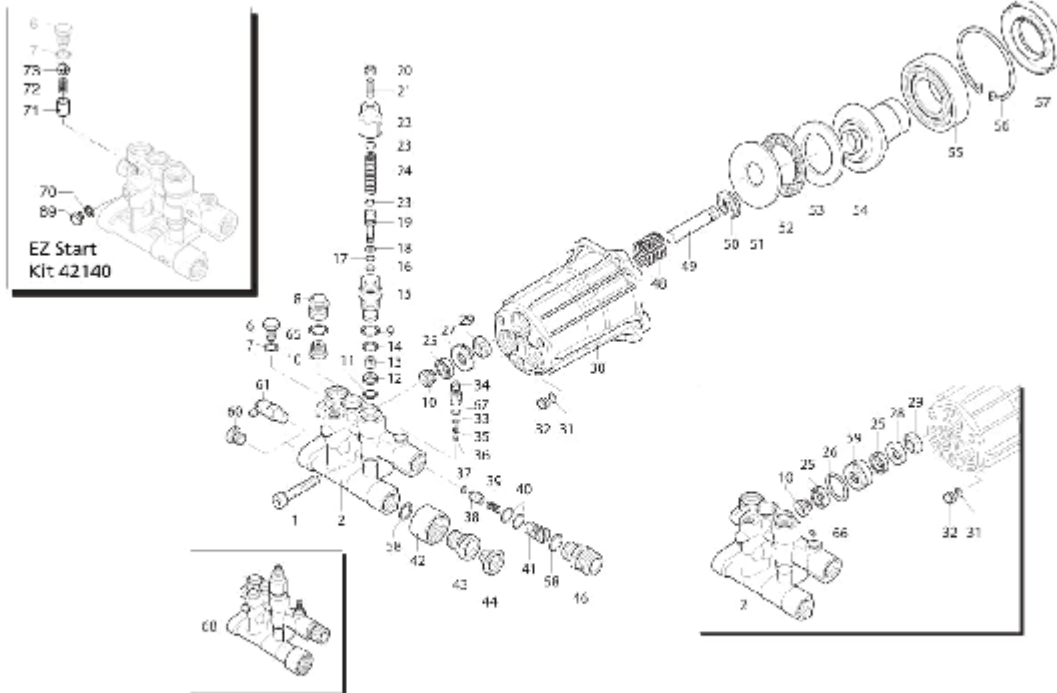
AGU036PPS



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	PPS-GUNM22	GUN, MOLDED LANCE, 3200 PSI, M22 X M22	1
2	2100291	LANCE ASSY, 24", W/D10001 & D10022 FITTINGS	1
3	OR-110-BN-70-BLACK	O-RING, 1/4" QC	1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	989400014	HOSE, GRAY, 25', 22M X 22M	1



Repair Kits



Pos	Code	Description	Qty	Pos	Code	Description	Qty	Pos	Code	Description	Qty
	380410	Screw (221 in/lbs) \square 3	3	30	2840230	Pump body	1	57	2841050	Ring	1
	800220	Screw (221 in/lbs) \square 3	3	31	480560	O-Ring ϕ 6.75x1.78	1	58	284C890	O-Ring ϕ 1.4x2	2
	2841730	Head	1	32	2840710	Plug	1	59	1683500	Oil seal	3
	2840022	Head	1	33	480480	O Ring ϕ 4.48x1.78	1	60	284C840	Plug	1
	2840870	Head	1	34	1982520	Hose tail ϕ 8 (35 in/lbs)	1	61	48C650	Washer	1
	2841520	Head	1	35	3700240	Hose tail ϕ 8 (35 in/lbs)	1	62	TPP14014A	Thermal relief valve	1
6	2840830	Screw (88 in/lbs) \square 1	1	36	1250280	Ball	1	63	106C100	Ball	1
7	600180	O-Ring ϕ 7.66x1.78	1	37	1560520	Spring	1	64	284C440	Seat	1
8	2841530	Valve cap (221 in/lbs) \square 3	3	38	1460431	O-Ring ϕ 4x2.5	1	65	284C550	Spring	1
9	740250	O-Ring ϕ 1.4x1.78	1	39	2841150	Shutter	1	66	2841520	O-Ring ϕ 13.5x1.8	3
10	2849051	Complete Valve	1	40	3700220	Jet	1	67	340C650	Plug	1
11	2849050	Complete Valve	1	41	1343580	Spring	1	68	48C650	Washer	1
12	1470210	O-Ring ϕ 8x1	1	42	800560	O-Ring ϕ 8.73x1.78	2	69	2849784	Complete head assembly	1
13	2840770	Seat	1	43	2840340	Injector	1	70	284C840	Plug (EZ start pump only)	1
14	2841080	Seal	1	44	3700200	Delegent injector	1	71	48C650	Washer (EZ start pump only)	1
15	2840760	Shutter (22 in/lbs) \square 1	1	45	2840770	Filling	1	72	284C441	Seat (EZ start pump only)	1
16	820510	O-Ring ϕ 10.82x1.78	1	46	2841220	Fitting 3/4" NH	1	73	284C450	Spring (EZ start pump only)	1
17	2840750	Piston guide (177 in/lbs) \square 1	1	47	2841230	Fitting Aluminum (221 in/lbs) \square 1	1				
18	2760210	Ring	1	48	2840390	Fitting Brass (221 in/lbs) \square 1	1				
19	660190	O-Ring ϕ 6.07x1.78	1	49	7369	Filter	1				
20	2260100	O-Ring ϕ 6.02x2.62	1	50	2840400	Fitting 3/8" GM (221 in/lbs) \square 1	1				
21	2841140	Piston	1	51	2841380	Fitting (221 in/lbs) \square 1	1				
22	1060120	Nut M6	1	52	2841120	Filling (221 in/lbs) \square 1	1				
23	392340	Screw M6x15	1	53	2840060	Spring	3				
24	2760480	Insert	1	54	2840040	Piston ϕ 12	1				
25	1980220	Wobble plate	2	55	2840530	Piston ϕ 12	1				
26	2760410	Spring	1	56	2840050	Lock	3				
27	2200141	Water seal	1	57	1980130	Fifth wheel	1				
28	2200141	Water seal	1	58	1980250	Fifth wheel	1				
29	770260	O-Ring ϕ 23.52x1.78	3	59	1980240	Fifth wheel	1				
30	770390	O-Ring ϕ 21.95x1.78	3	60	2840050	Wobble plate	1				
31	2840561	Bushing ϕ 12	3	61	2840900	Wobble plate	1				
32	2840550	Bushing ϕ 12	3	62	2840720	Wobble plate	1				
33	2840540	Bushing ϕ 12	3	63	2840730	Wobble plate	1				
34	2840561	Bushing	3	64	161060	Bearing	1				
35	1683500	Oil seal	3	65	161050	Ring ϕ 73	1				

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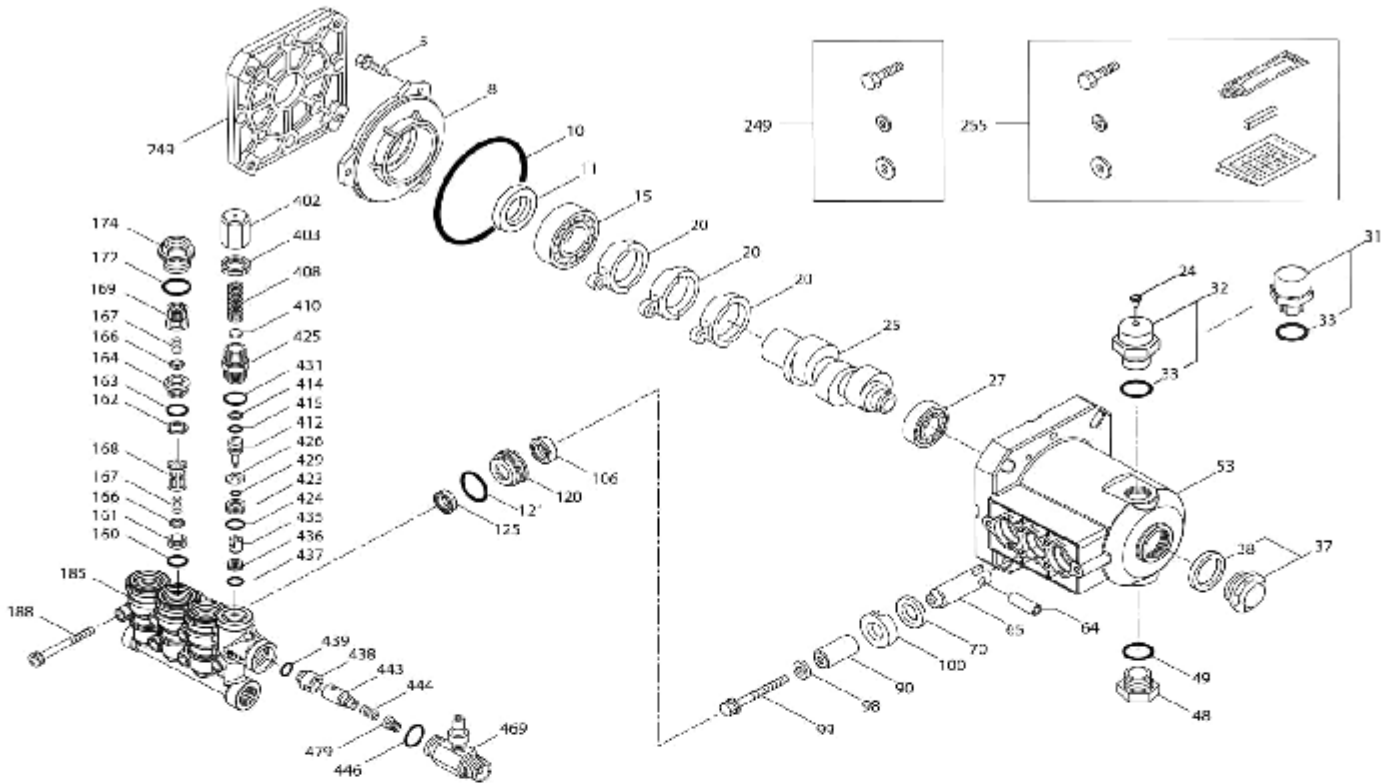
Legend		
ϕ 12	ϕ 12	ϕ 12
For \square	For \bullet	For \square
RMV2C25 (Brass)	RMV25G30 (Brass)	RMV22C25-EZ (Brass)
	RMV25G30-EZ (Brass)	
For \blacksquare		For ∇
RMV25G24 (Alum)		RMV22C24 (Alum)

EXPLODED VIEW

February 2013

PLUNGER PUMP MODELS

4PPX25GSI, 4PPX30GSI



PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY	ITEM	P/N	MATL	DESCRIPTION	QTY
5	549360	STCP R	Screw, HH (M6x14)	3	106	49816	NBR	Seal, LPS	3
8	547153	AL	Cover, Bearing	1	120	49804	BB	Case, Seal	3
10	14041	NBR	O-Ring, Bearing Cover - 70D	1	121	13976	NBR	C-Ring, Seal Case - 70D	3
11	55337	NBR	Seal, Oil - 70D	1	125	49824	BP	Seal, HPS	3
15	14486	STL	Bearing, Ball - Inner	1	160	17428	NBR	C-Ring, Inlet Seat - 80D	3
20	547048	TNM	Rod, Connecting	3	161	547077	S	Seat, Inlet	3
24	549608	LDPE	Plug, Oil Cap	1	162	48361	D	Back-up Ring, Discharge Seat	1
25	49883	CM	Crankshaft, 3450 RPM, 3/4", 6.8 mm (4PPX25GSI)	1	163	43358	NBR	C-Ring, Discharge Seat - 70D	3
	49882	CM	Crankshaft, 3450 RPM, 3/4", 7.2 mm (4PPX30GSI)	1	164	547076	S	Seat, Discharge	3
27	15710	STL	Bearing, Ball	1	166	547058	S	Valve	6
31	549726	—	Cap, Vented w/O-Ring (Rain Cap)	1	167	46865	S	Spring	6
32	547961	RTP	Cap, Oil Filler w/O-Ring	1	168	543988	PVDF	Retainer, Spring, Inlet	3
33	14179	NBR	O-Ring, Oil Filler Cap - 70D	1	169	49764	PVDF	Retainer, Spring, Discharge	3
37	92241	—	Gauge, Bubble Oil w/Gasket	1	172	142807	NBR	O-Ring, Plug - 90D	3
38	44428	NBR	Gasket, Flat Flex, Oil Gauge - 80D	1	174	547104	DB	Plug, Valve w/C-Ring (M20x1.5)	3
48	44842	NY	Plug, Drain	1	185	49763	BB	Head, Manifold w/Integral Unloader Body	1
49	14179	NBR	O-Ring, Drain Plug - 70D	1	188	549357	STCP R	Screw, HSH (M6x60)	6
53	49801	AL	Crankcase	1	249	30520	—	Assy, Adapter Mount	1
64	46229	STL	Pin, Crosshead	3	255	30516	STZP R	Assy, Bolt Mount	1
65	542402	BB	Rod, Plunger	3	283	990394	—	Kit, Oil Drain (Not Shown)	1
70	47215	NBR	Seal, Oil - 70D	3	300	76124	NBR	Kit, Seal (Incls: 106 and 125)	1
90	547091	CC	Plunger (M14x25.5)	3	310	76134	NBR	Kit, Valve (Incls: 160,161,162,163,164,165,167,168,169,172)	1
98	46730	NBR	Washer, Seal - 90D	3	400	—	—	Unloader, integral (See Individual Parts)	1
99	542405	S	Retainer, Plunger (M6x35)	3	469	7322	BB	Injector, Chemical Fixed	1
100	46233	D	Retainer, Seal	3					

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.

View Tech Bulletins 002, 024, 036, 043, 055, 074 and 083 for additional information.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass BP=Special Poly-Blend CC=Ceramic CM=Chrome-moly D=Acetal

LDPE=Low Density Polyethylene NBR=Medium Nitrile (Buna-N) NY=Nylon PVDF=Polyvinylidene Fluoride RTP=Reinforced Composite

S=304SS STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength

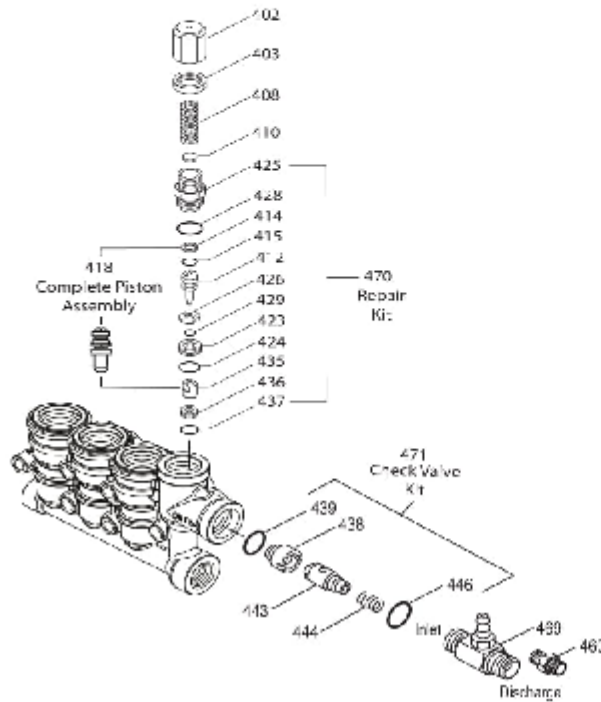
NOTE: Discard Key which may come standard with most motors and **use only the key included in this kit.**

Center raised pilot guide on the **Adapter Plate** assures proper alignment of pump and engine. Before mounting pump onto engine inspect engine for **recessed seal and bearing guide** to permit adapter to completely seat into recess and four bosses to be flush with engine face.

INTEGRAL UNLOADER

SPECIFICATIONS

	U.S. Measure	Metric Measure
Flow.....	3.0 gpm	(11.4 lpm)
PSI Range.....	100-3300 psi	(7-228 bar)
Inlet Port.....	3/8" NPTF	(3/8" NPTF)
Discharge Port w/Chemical Injector.....	3/8" NPTM	(3/8" NPTM)



PARTS LIST

ITEM	PN	MATL	DESCRIPTION	QTY
402	547798	BB	Cap, Adjusting	1
403	45370	BB	Nut, Lock (M18 x 1)	1
408	32394	STZP R	Spring, Pressure	1
410	549352	STCLP R	Retainer, Spring	1
417	45594	S	Stem, Piston	1
414	20184	PTTF	Back-up-Ring, Piston Stem	1
415	14190	NBR	O-Ring, Piston Stem - 70D	1
418	—	BS	Assy, Piston Included in Repair Kit	1
423	46249	BB	Retainer, Valve	1
424	13956	NBR	O-Ring, Valve Retainer (Outer) - 70D	1
425	547799	BB	Retainer, Piston	1
426	46250	S	Washer	1
428	26133	NBR	O-Ring, Piston Retainer - 80D	1
429	17339	NBR	O-Ring, Valve Retainer (Inner) - 80D	1
415	547800	S	Valve	1
436	49684	S	Seat	1
437	13953	NBR	O-Ring, Seat - 70D	1
438	46254	NY	Seat, Check Valve	1
439	13953	NBR	O-Ring, Check Valve Seat - 70D	1
443	49765	D	Valve, Check	1
444	45924	S	Spring	1
445	26133	NBR	O-Ring, Body - 80D	1
460	107887	BB	Fitting, Discharge (3/8" NPTM)	1
468	31767	NBR	Kit, O-Ring (Incls:415,415,423,428,429,437,439,446)	1
469	7332	BB	Injector, Chemical Fixed	1
470	76179	NBR	Kit, Repair (Incls:412,414,415,423,424,425,426,428,429,435,436,437)	1
471	76146	NBR	Kit, Check Valve (Incls:438,439,443,444,446)	1

Italics are optional items. R Components comply with RoHS Directive.

MATERIAL CODES (Not Part of Part Number):

BB=Brass D=Acetal NBR=Medium Nitrile (Buna-N) NY=Nylon
PTTF=Pure Polytetrafluoroethylene S=304SS STCLP=Steel/Chrome Plated
STZP=Steel/Zinc Plated

UNLOADER TYPE

An integral unloader with built-in by-pass is part of the discharge manifold to provide system pressure regulation and pump protection. This pump also includes a fixed chemical injector for chemical application.

OPERATION:

Pump should be purged of air before commencing operation. Liquid must flow through the pump without discharge restriction to assure full system pressure is reached.

Install a pressure gauge close to the manifold head of the pump to assist in setting system pressure and to periodically monitor system pressure.

Setting and adjusting the regulator pressure must be done with the system turned on. Start the system with the unloader backed off to the lowest pressure setting (counterclockwise direction). Squeeze the trigger and read the pressure on the gauge at the pump. Do not read pressure at the gun or nozzle. If more pressure is desired, turn adjusting cap one quarter turn in a clockwise direction. Squeeze the trigger and read the pressure. Repeat this process until the desired system pressure is reached. Thread locking nut up to adjusting cap.

NOTE: Pressure is not set at the factory.

SERVICE:

The unloader should be serviced on the same schedule as the seals in the pump. Refer to the Service Manual for start-up, servicing of seals and valves, torque requirements and diagnosis and maintenance chart.

7332 FIXED CHEMICAL INJECTOR

SPECIFICATIONS

	U.S. Measure	Metric Measure
Flow.....	3.0 gpm	(11.4 lpm)
Nozzle Orifice.....	2.1 mm	(2.1 mm)
Hose Barb.....	1/4"	(1/4")
Inlet Port.....	M18 x 1.0	(M18 x 1.0)
Discharge Port.....	3/8" NPTM	(3/8" NPTM)
Weight.....	5.3 oz.	(0.15 kg)
Dimensions.....	2 x 1 x 1.75"	(52 x 25 x 45 mm)

CHEMICAL INJECTOR PERFORMANCE CHART

Orifice Size	Maximum Injecting Pressure	Maximum Chemical Draw	Pressure Drop Across Injector At System Pressure (2850 psi)
2.1 mm	250 psi	37.2 oz/min	141 psi

Optimum performance of chemical injector occurs with 35 ft. high pressure hose and a minimum 3/8" I.D. The type of hose, extended lengths, reduced I.D. and fittings may create back pressure in excess of the low pressure nozzle rating and prevent the injector from drawing chemical. See hose friction loss chart in Service Manual. **Deduct hose friction loss from above low psi nozzle. Contact Cat Pumps for assistance with other options.**

CAUTION: Deduct the pressure drop shown in the performance chart from your desired system pressure to arrive at the maximum high pressure nozzle rating. This is essential to avoid over-pressurizing the pump.