

**PARTS LIST FOR
HSP-2503-0MMM
2403/2503 SERIES
PORTABLE
GASOLINE DRIVEN/DIRECT DRIVE
TOP FIRED OIL HEATED
HOT WATER PRESSURE WASHER**

For parts Call 888-279-9274

OIL GRADE:	SAE 10W-30
OIL CAPACITY:	20 oz.
PUMP OIL GRADE:	15W20 DETERGENT
PUMP OIL CAPACITY:	16 oz.
FUEL NOZZLE:	1.25 60°B DELAVAN
BTU INPUT:	210,000 / HOUR
PRESSURE NOZZLE SIZE:	3.0

This Parts Listing has been compiled for your benefit. You can be assured your hot water pressure washer was constructed and designed with quality and performance in mind. Each component has been rigorously tested to insure the highest level of quality.

The contents of this Parts Listing are based on the latest product information available at the time of publication. The manufacturer reserves the right to make changes in price, color, materials, equipment, specifications or models at any time without notice.

WARNING

THIS IS A PROFESSIONAL HIGH PRESSURE, HOT WATER PRESSURE WASHER. CAUTION SHOULD BE OBSERVED WHEN USING OR REPAIRING THIS UNIT! READ AND FOLLOW THE SAFETY WARNINGS LISTED BELOW BEFORE ATTEMPTING ANY REPAIRS ON THIS PRESSURE WASHER!

SAFETY WARNINGS

1. NEVER alter or modify the equipment. Be sure any accessory items and system components being used will withstand the pressure developed. Use only genuine manufacturer parts for repair of your pressure washer. Failure to do so can cause hazardous operating conditions and will VOID warranty.
2. NEVER make adjustments on machinery while the unit is connected to the engine without first removing the ignition cable from the spark plug. Turning over the machinery by hand during adjustment or cleaning might start the engine and machinery with it, causing serious injury to the operator.
3. Know how to stop and bleed pressures quickly. Be thoroughly familiar with controls.
4. Before servicing the unit, turn unit off, relieve the water pressure and allow the unit to cool down. Do not make repairs while the unit is running. Service in a clean, dry, flat area. Block the wheels to prevent the unit from moving. Be especially careful to properly dispose of any flammable materials.
5. After testing the machine, DO NOT leave the pressurized unit unattended. Shut off the unit and release trapped pressure before leaving.

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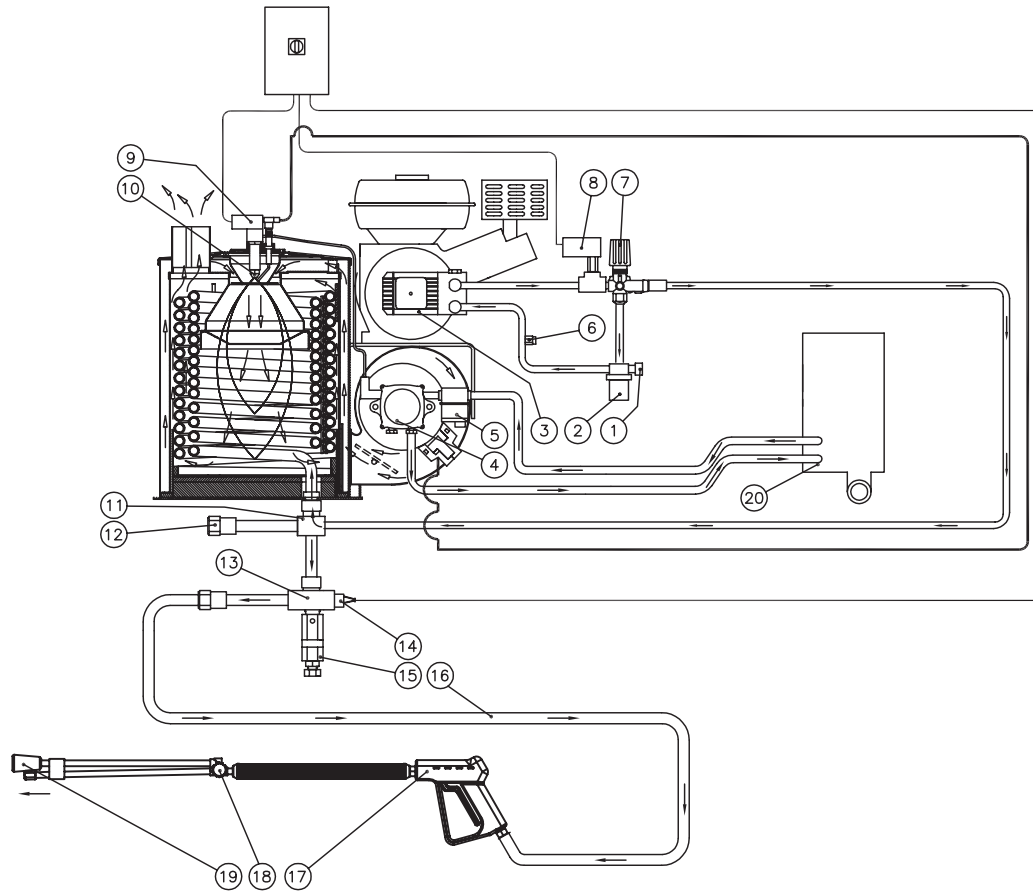
NOTES

DATE	SERIAL NUMBER	REASON FOR CHANGE
05/13/14	15091791	REDESIGN IDLER/BRACKET
06/17/15	15100771	CHANGED PUMP FROM 3-0385 TO 3-0417 (2503)
01/10/22		ADDED MITM ENGINE
01/24/23	15158003	REPLACED 3-0193 PUMP WITH 3-0417

SPECIFICATIONS

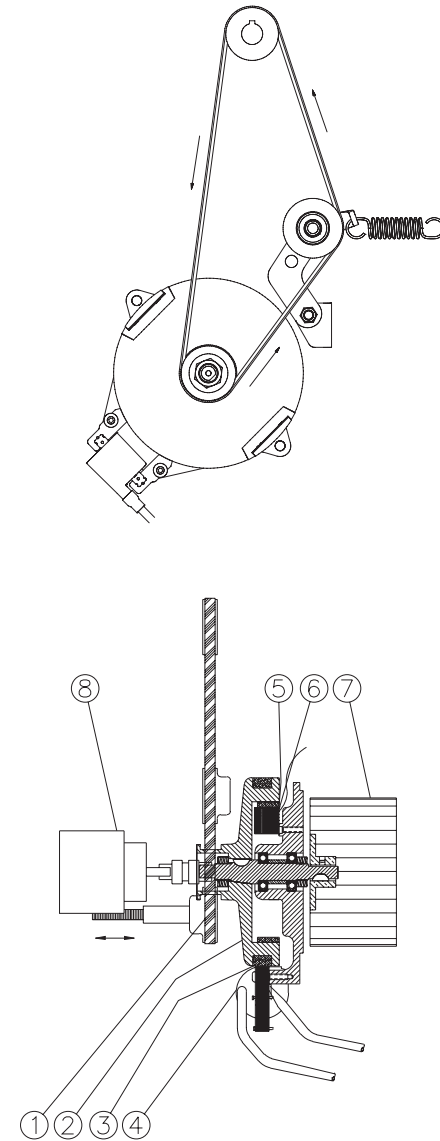
Operating Pressure (PSI/Bar):	2400/2500 172 (+/- 5%)		
Water Volume (GPM/lpm):	2.3/ 8.7 (+/- 5%)		
Outlet Water Temperature (F/C)	130°F / 54°C (+/- 20°F) rise above inlet ambient (210°F / 99°C maximum)		
Engine:	Honda	Kohler	Mi-T-M
Model	GX200	CH270	212cc
Engine Type	Four Stroke, Overhead Valve, Single Cylinder		
Oil Type	SAE 10W-30		
Oil Capacity (oz. / liter)	20/6		
Low Oil Protection	Oil Alert		
Fuel Type	Unleaded Gasoline 86 Octane Minimum		
Fuel Capacity (Gal./liters)	.95/3.6		
Starting	Recoil Rope		
Maximum No Load RPM	3600 (+/- 100)		
High Pressure Pump:	Direct Driven, Oil Bath, Triplex Piston		
Oil Type	Mi-T-M Pump Oil #AW-4085-0016		
Oil Capacity (oz. / liter)	16.9 / 0.5		
Plungers	Ceramic		
Manifold	Forged Brass		
Valves	Stainless Steel		
Unloader	Preset		
Inlet Water Strainer	Removable Clear Bowl for Inspection and cleaning of Stainless Steel Screen		
Heat Dump Valve	Relieves heated water during unloader bypass stage		
Burner Fuel System:			
Fuel Type	No. 1 or No. 2 Fuel Oil, Diesel or Kerosene		
Fuel Capacity (Gal./liters)	4.46 / 16.9		
Fuel Filter/ Water Separator	Spin On (10 Micron) Filter / E-Z Water Drain		
Fuel Pump	Two Line, Single Stage		
Fuel Pressure (PSI / BAR)	145 / 10		
Fuel Nozzle	1.25 60° B Delavan		
Fuel Consumption (GPH / LPH)	1.51 / 5.7 Cont. Burner		
Electro Magnetic Firing (EMF) System:	Belt Driven (Patent # 5,954,494)		
Ignition	Transistorized Magneto		
Control Voltage	12 Volt DC		
Blower	Forced Air		
Heat Exchanger:	Vertical, Top Fired, Dual Spiral Coil		
BTU Input	210,000		
Efficiency	80-83% with #2 Fuel Oil / Diesel		
Smoke Density	0-3 per ASTM D2156		
Controls:			
On/ Off Switch	Industrial grade rocker switch		
Pressure Switch	Shuts off burner fuel supply upon trigger release		
High Limit Switch	Shuts off burner fuel supply when outlet water temp. exceeds 210°F / 99°C		
Fuel Solenoid:	12 Volt		
Safety Relief:	Relieves excess system pressure		
Unit Net Weight (Lbs/Kg)	295 / 131.8	274 / 124.3	263 / 119.3
Unit Shipping Weight (Lbs/Kg)	411 / 186.4	390 / 176.9	379 / 171.9
Unit Net Dimensions (In/Cm)	43L x 29.5W x 36.5H / 109.5L x 75W x 93H		
Unit Shipping Dimensions (In/Cm)	46.5L x 31.5W x 48.5H / 118L x 80W x 123H		

FLOW CHART



HSP WATER FUEL FLOW DIAGRAM 030613

EMF SYSTEM



HSP EMF SYSTEM 031113

GENERAL THEORY OF OPERATION

WATER FLOW: Connect a pressurized water source to the INLET GARDEN HOSE CONNECTION (1) and turn on the water supply. The water will flow through a WATER STRAINER (2) which has a clear inspection bowl.

The water then travels into the TRIPLEX HIGH PRESSURE PUMP (3) which has an UNLOADER (7) that bypasses the water when the trigger gun is closed. To protect the pump from heated water during this bypass stage, a HEAT DUMP VALVE (6) will open at 140°F/60°C allowing the heated water to escape. The Heat Dump Valve automatically resets when the water cools. The PRESSURE SWITCH (8) controls the fuel supply to the burner.

From there, the water may be allowed to flow out of the DRAIN PLUG (12) or through the HEAT EXCHANGER INLET (11) where it is heated when the burner is on. As the water exits the HEAT EXCHANGER OUTLET (13), it enters a safety system which protects the operator from danger. The safety system contains a HIGH TEMPERATURE LIMIT SWITCH (14) which senses the water temperature and shuts off the fuel supply to the burner if it gets too hot. If the unloader fails to bypass the water or the burner remains on when the trigger gun is closed, the SAFETY RELIEF (15) will relieve and allow water to exit safely.

The heated water then flows through the HIGH PRESSURE HOSE (16) and to the TRIGGER GUN ASSEMBLY (17) which allows the operator to control the water spray. When the trigger gun is open, the water flows through the ADJUSTABLE PRESSURE DUAL LANCE (18) and exits the NOZZLE (19).

FUEL FLOW: The Fuel Pump draws fuel from the FUEL TANK (20) through a replaceable FUEL FILTER /WATER SEPARATOR (5) and into the FUEL PUMP (4). Fuel exits the fuel pump, into a FUEL SOLENOID VALVE (9) which controls fuel flow to the FUEL NOZZLE (10) where it ignites and burns in the heat exchanger.

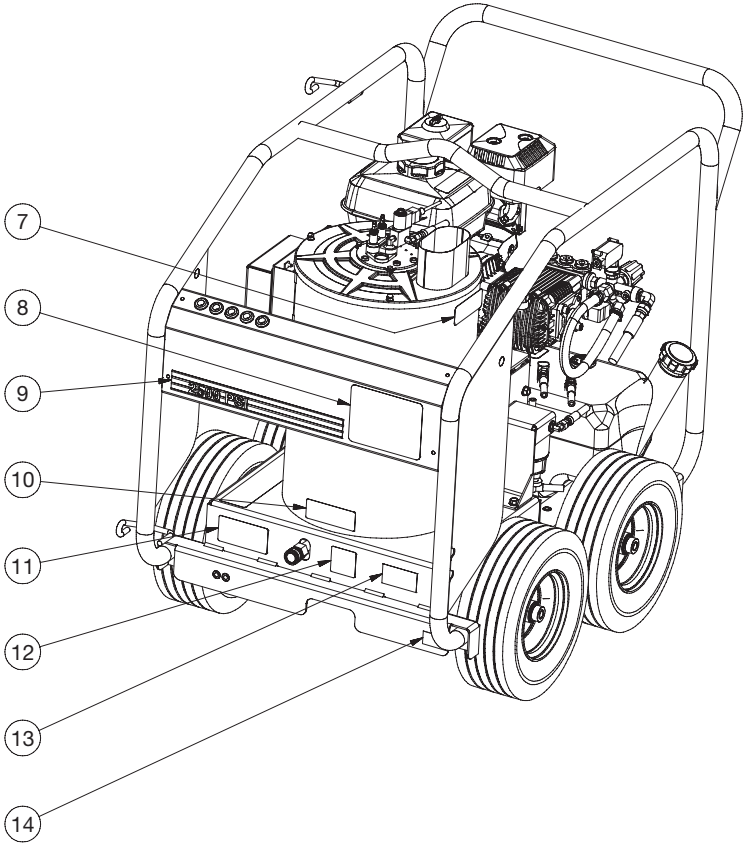
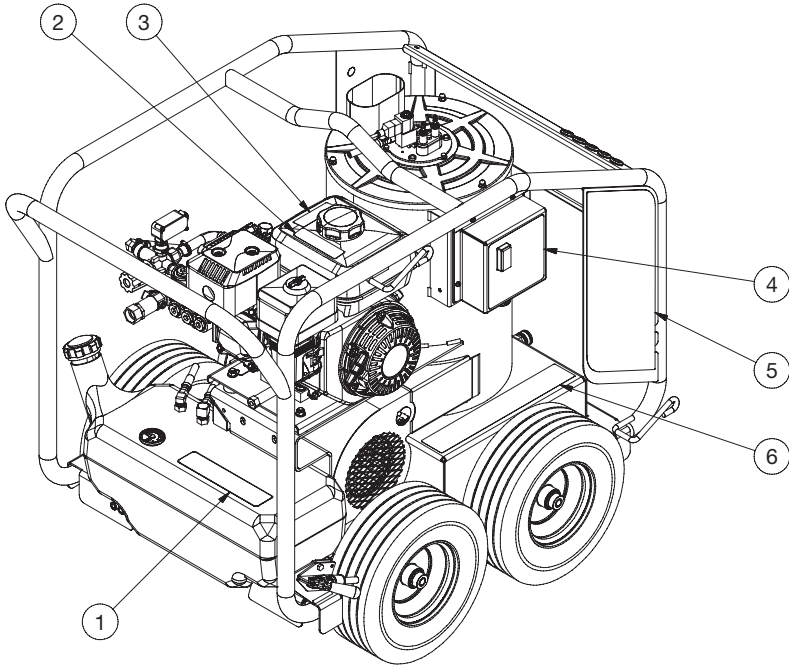
EMF SYSTEM: The patented Electro Magnetic Firing (EMF) System is an integrated system which gives all the requirements for combustion.

The BELT (1) from the power source turns the HUB (2) which has two EXTERIOR MAGNETS (3) attached. As these magnets spin past the IGNITION MODULE (4), a magnetic flux is created from which the ignition module produces a high voltage. This voltage arcs across the electrodes giving the spark that is needed for ignition.

This hub has an INTERNALLY MOUNTED MAGNET (5) which spins past a STATOR (6) that produces the voltage that controls the fuel supply to the heat exchanger. In addition to this, the hub also spins the BLOWER FAN (7) that forces the air into and through the heat exchanger.

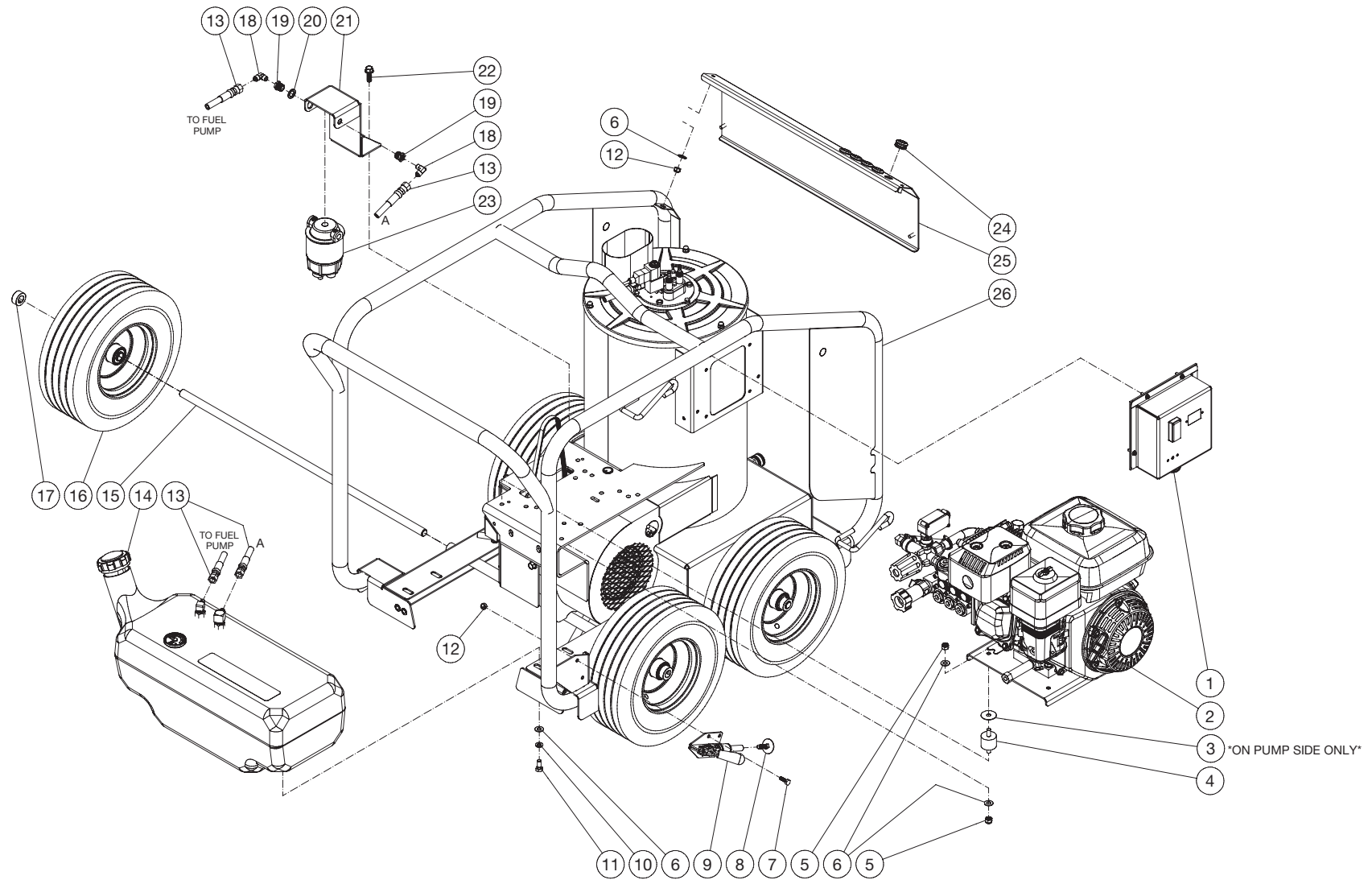
The FUEL PUMP (8) is also connected to the hub by means of a flexible coupler.

DECAL PLACEMENT



HSP_DH SMALL - DECAL PLACEMENT 011019 JVA			
DECAL PLACEMENT			
ITEM	DESCRIPTION	PART #	QTY
1	DECAL - CAUTION: RISK OF FIRE (SEE 71-0009)	N/A	1
2	DECAL - RISK OF BURNS (SEE 71-0009)	N/A	1
3	DECAL - RISK OF FIRE (SEE 71-0009)	N/A	1
4	DECAL - BURNER ON/OFF (SEE 71-0009)	N/A	1
5	DECAL - OPERATIONS (SEE 71-0009)	N/A	1
6	DECAL - CAUTION: RISK OF INJURY (SEE 71-0009)	N/A	1
7	DECAL - HOT SURFACES (SEE 71-0009)	N/A	1
8	DECAL - LOGO	N/A	1
9	DECAL - 14" STRIPE	N/A	1
10	DECAL - WARNING: RISK OF EXPLOSION (SEE 71-0009)	N/A	1
11	DECAL - SILVER STICKER	N/A	1
12	DECAL - COIL DRAIN (SEE 71-0009)	N/A	1
13	DECAL	N/A	1
14	DECAL - MADE IN USA	34-3553	1
-	DECAL SET	71-0009	1

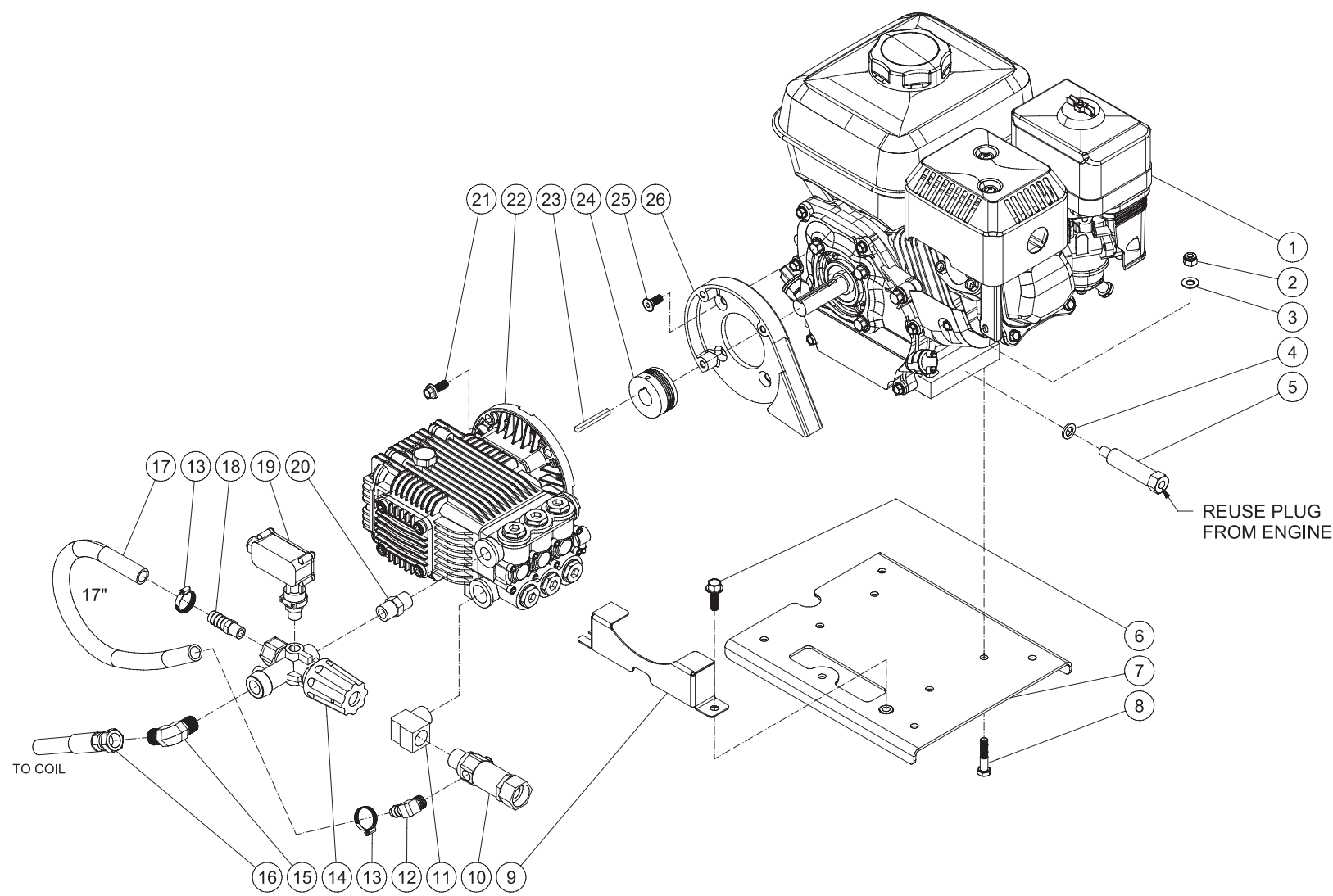
FRAME ASSEMBLY



For parts Call 888-279-9274

SMALL UNIT ASSEMBLY 051225			
UNIT ASSEMBLY			
ITEM	TITLE	PART #	QTY
1	ELECTRIC BOX ASSEMBLY	N/A	1
2	ISOLATION PLATE/PUMP PLUMBING ASSEMBLY	N/A	1
3	WASHER	28-0057	3
4	ISOLATOR	14-0177	5
5	LOCKNUT	30-0157	10
6	WASHER	28-0003	18
7	BOLT	27-0015	2
8	BOLT	27-9550	1
9	PUSH/PULL TOGGLE CLAMP	33-0400	1
10	LOCKWASHER	29-0007	4
11	BOLT	27-0066	4
12	LOCKNUT	30-0155	6
13	FUEL HOSE	15-0147	2
14	FUEL TANK ASSEMBLY	N/A	1
15	AXLE	20-1315	2
16	WHEEL	14-0150	4
17	COLLAR	33-0351	4
18	ELBOW	23-0287	2
19	REDUCER	23-0111	2
20	WASHER	28-0606	1
21	FUEL FILTER BRACKET	20-1300A18	1
22	BOLT	27-1201	2
23	FUEL FILTER / WATER SEPERATOR	19-0070	1
24	GROMMET	33-0001	5
25	FRONT PANEL	20-1303A18	1
26	HEAT EXCHANGER/ EMF SYSTEM ASSEMBLY	N/A	1

ENGINE/PUMP ASSEMBLY (BEFORE SERIAL #15100771)

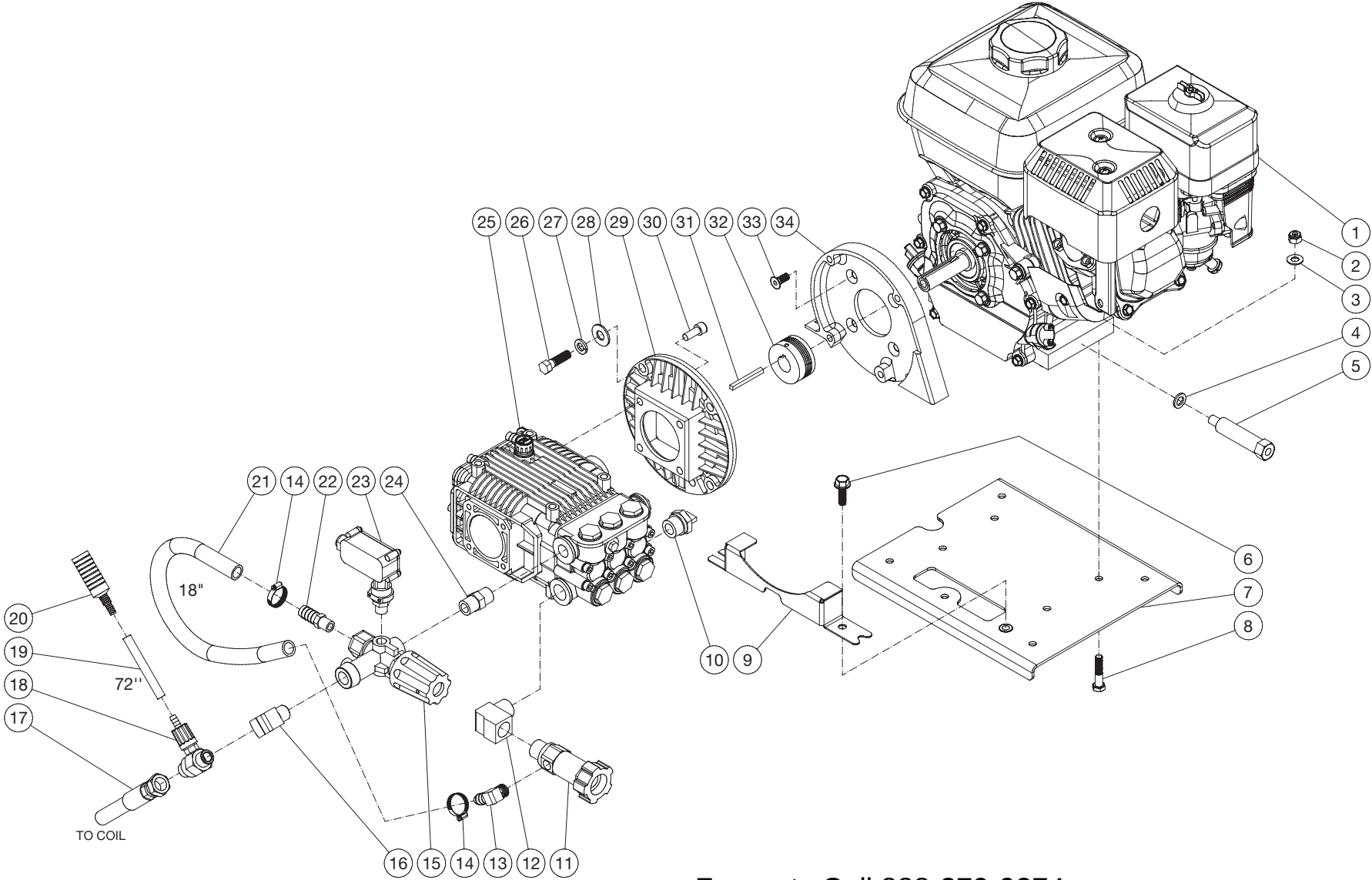


For parts Call 888-279-9274

HSP SMALL ISO PLATE_PUMP PLUMBING MITM 062113 CH

HSP SMALL ISO PLATE_PUMP PLUMBING_MITM 062113 CH			
ISOLATION PLATE/PUMP PLUMBING			
ITEM	DESCRIPTION	Mi-T-M #	QTY
1	ENGINE - HONDA GX200	1-0088	1
-	ENGINE-SUBARU 7HP RECOIL	1-0133	1
2	LOCKNUT	30-0157	4
3	WASHER	28-0003	4
4	WASHER (HONDA)	28-0604	1
-	WASHER (SUBARU)	28-0606	1
5	OIL DRAIN (HONDA)	24-0343	1
-	OIL DRAIN (SUBARU)	24-0344	1
6	BOLT	27-1201	1
7	ISOLATION PLATE	20-1324A01	1
8	BOLT	27-0069	4
9	BELTGUARD	20-1299A01	1
10	FILTER	19-0207	1
11	ELBOW	23-0035	1
12	ELBOW	23-0119	1
13	HOSE CLAMP	42-0011	2
14	UNLOADER	850-0252	1
15	ELBOW	24-0131	1
16	HIGH PRESSURE HOSE	15-0335	1
17	HOSE *(TWO FEET REQUIRED)	15-0007	1
18	HOSE BARB	23-0120	1
19	PRESSURE SWITCH	22-0243	1
20	NIPPLE	24-0010	1
21	BOLT	27-9524	3
22	PUMP	3-0385	1
23	KEY	43-0073	1
24	SHEAVE	10-0076	1
25	BOLT	27-0418	4
26	ENGINE EMF FLANGE	38-0069	1
*MUST ORDER IN ONE FOOT LENGTHS			

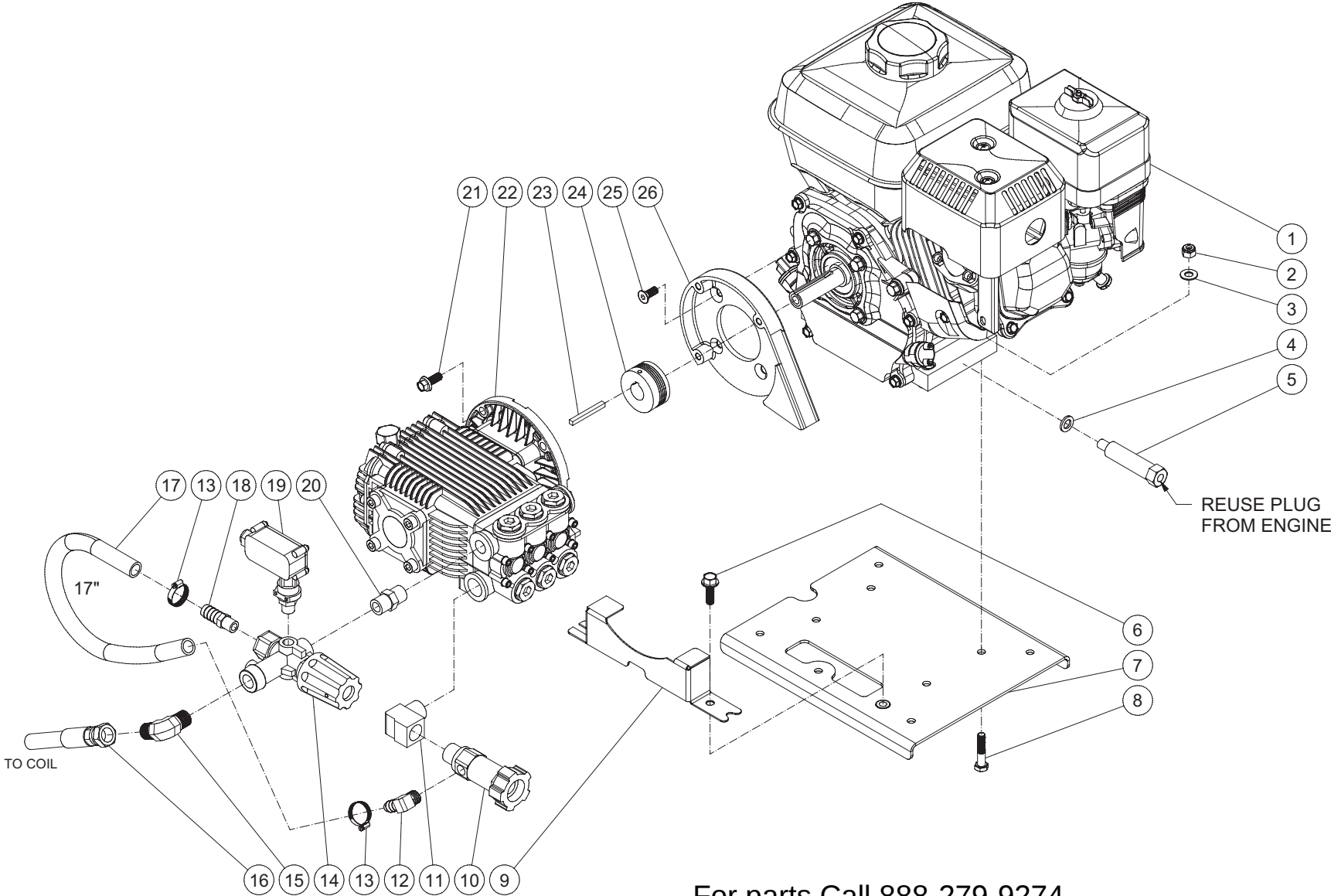
ENGINE/PUMP ASSEMBLY FOR 2403 (AFTER SERIAL #15100771)



For parts Call 888-279-9274

HSP SMALL - ISO PLATE_PUMP PLUMBING_AR 102921 CAN			
ISOLATION PLATE/PUMP PLUMBING			
ITEM	TITLE	PART #	QTY
1	ENGINE - HONDA GX200	1-0088	1
2	LOCKNUT	30-0157	4
3	WASHER	28-0003	4
4	WASHER	28-0604	1
5	OIL DRAIN	24-0343	1
6	BOLT	27-1201	1
7	ISOLATION PLATE	20-1324A18	1
8	BOLT	27-0069	4
9	BELTGUARD	20-1352A18	1
10	RELIEF VALVE	22-0005	1
11	FILTER	19-0207	1
12	ELBOW	23-0035	1
13	ELBOW	23-0119	1
14	HOSE CLAMP	42-0011	2
15	UNLOADER	850-0252	1
16	ELBOW	23-0034	1
17	HIGH PRESSURE HOSE	15-0335	1
18	CHEMICAL INJECTOR	50-0052	1
19	HOSE *(SIX FEET REQUIRED)	15-0021	1
20	STRAINER	19-0050	1
21	HOSE *(TWO FEET REQUIRED)	15-0007	1
22	HOSE BARB	23-0120	1
23	PRESSURE SWITCH	22-0243	1
24	NIPPLE	24-0010	1
25	PUMP	3-0193	1
26	BOLT	27-0118	4
27	LOCKWASHER	29-0008	4
28	WASHER	28-0023	4
29	ADAPTER FLANGE	38-0054	1
30	SCREW	27-8432	4
31	KEY	43-0073	1
32	SHEAVE	10-0076	1
33	BOLT	27-0418	4
34	ENGINE EMF FLANGE	38-0071	1
*MUST ORDER IN ONE FOOT LENGTHS			

ENGINE/PUMP ASSEMBLY FOR 2503 (AFTER SERIAL #15100771)

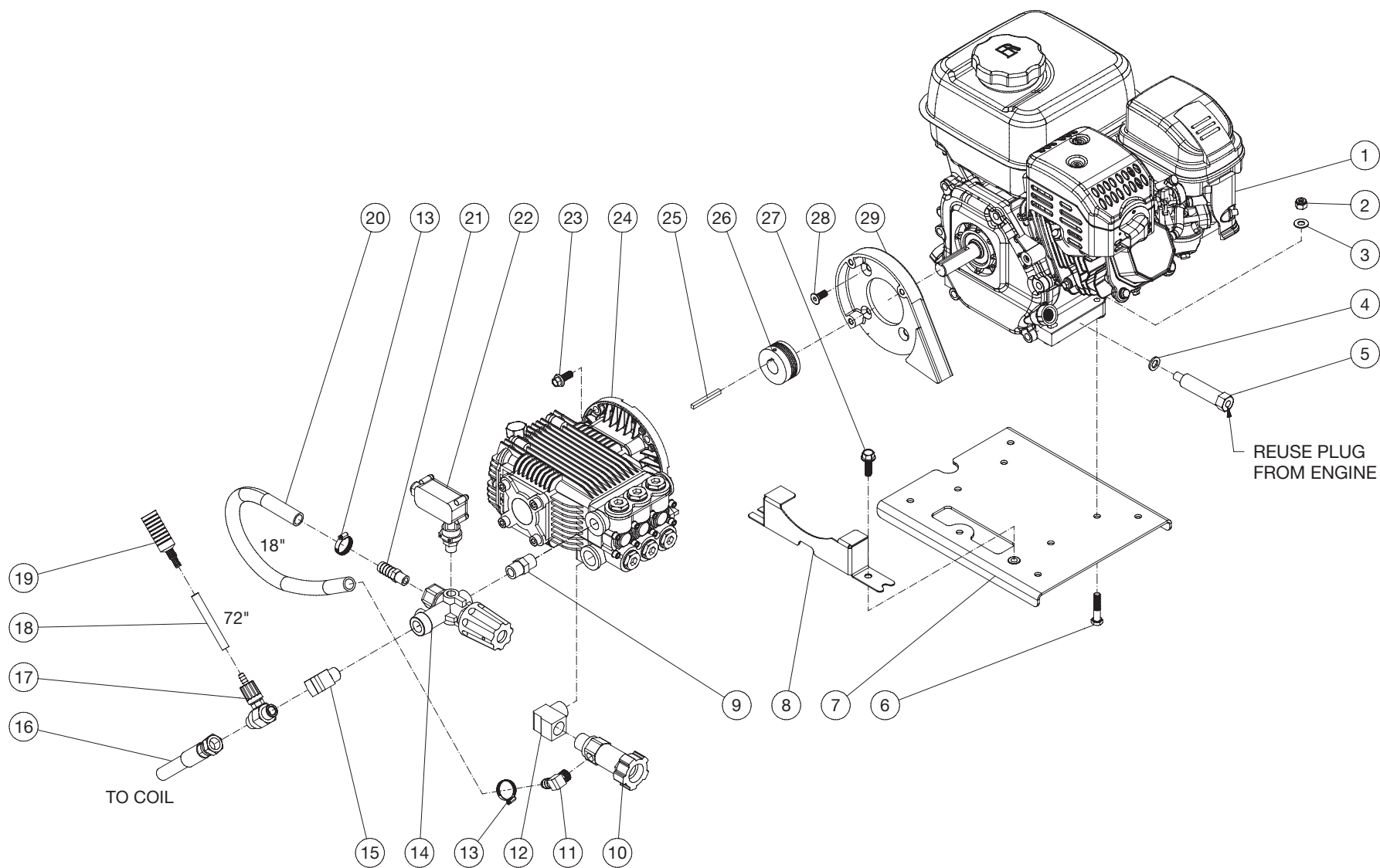


For parts Call 888-279-9274

HSP SMALL - ISO PLATE_PUMP PLUMBING_MITM 040721

HSP SMALL - ISO PLATE_PUMP PLUMBING_MITM 040721 ATL			
ENGINE/PUMP ASSEMBLY			
ITEM	TITLE	PART #	QTY
1	ENGINE-HONDA	1-0088	1
-	ENGINE-SUBARU	1-0133	1
-	ENGINE-KOHLER	1-0221	1
-	ENGINE-MI-T-M	1-0206	1
2	LOCKNUT	30-0157	4
3	WASHER	28-0003	4
4	WASHER-HONDA/MI-T-M/KOHLER	28-0604	1
-	WASHER-SUBARU	28-0606	1
5	OIL DRAIN-HONDA/MI-T-M/KOHLER	24-0343	1
-	OIL DRAIN-SUBARU	24-0344	1
6	BOLT	27-1201	1
7	ISOLATION PLATE	20-1324A18	1
8	BOLT	27-0069	4
9	BELTGUARD	20-1299A18	1
10	FILTER	19-0207	1
11	ELBOW	23-0035	1
12	ELBOW	23-0119	1
13	HOSE CLAMP	42-0011	2
14	UNLOADER	850-0252	1
15	ELBOW	24-0131	1
16	HIGH PRESSURE HOSE	15-0335	1
17	HOSE *(TWO FEET REQUIRED)	15-0007	1
18	HOSE BARB	23-0120	1
19	PRESSURE SWITCH	22-0243	1
20	NIPPLE	24-0010	1
21	BOLT	27-9524	3
22	PUMP	3-0417	1
23	KEY	43-0073	1
24	SHEAVE	10-0076	1
25	BOLT	27-0418	4
26	ENGINE EMF FLANGE	38-0069	1
*MUST ORDER IN ONE FOOT LENGTHS			

ENGINE/PUMP ASSEMBLY FOR 2403 AND 2503 (AFTER SERIAL #15158003)



For parts Call 888-279-9274

GH-2503-0GMM ISO PLATE_PUMP PLUMBING 020422 JRC			
ISOLATION PLATE/PUMP PLUMBING			
ITEM	TITLE	PART #	QTY
1	ENGINE MI-T-M 212cc	1-0221	1
2	LOCKNUT	30-0157	4
3	WASHER	28-0003	4
4	WASHER	28-0604	1
5	OIL DRAIN	24-0343	1
6	BOLT	27-0069	4
7	ISOLATION PLATE	20-1324A01	1
8	BELTGUARD	20-1299A01	1
9	NIPPLE	24-0010	1
10	FILTER	19-0207	1
11	ELBOW	23-0119	1
12	ELBOW	23-0035	1
13	HOSE CLAMP	42-0011	2
14	UNLOADER	850-0252	1
15	ELBOW	23-0034	1
16	HIGH PRESSURE HOSE	15-0335	1
17	CHEMICAL INJECTOR	50-0052	1
18	HOSE *(SIX FEET REQUIRED)	15-0021	1
19	STRAINER	19-0050	1
20	HOSE *(TWO FEET REQUIRED)	15-0007	1
21	HOSE BARB	23-0120	1
22	PRESSURE SWITCH	22-0243	1
23	BOLT	27-9524	4
24	PUMP	3-0417	1
25	KEY	43-0073	1
26	SHEAVE	10-0076	1
27	BOLT	27-1201	1
28	BOLT	27-0418	4
29	ENGINE EMF FLANGE	38-0069	1
*MUST ORDER IN ONE FOOT LENGTHS			

TORQUE SPECS.

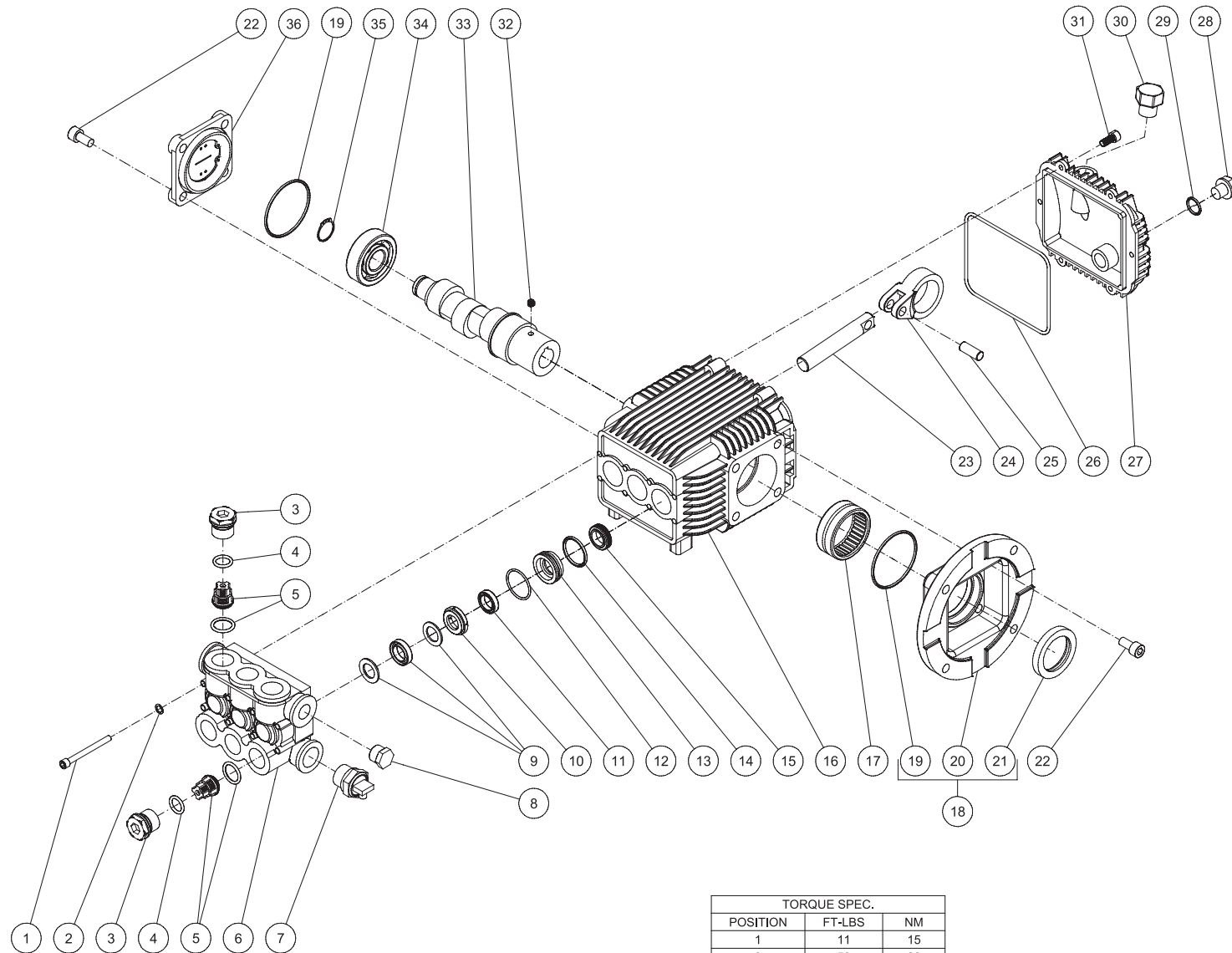
POSITION	FT-LBS
1	11
2	37
21	18
30	7,4

EX-9928-061625

3-0385 011713 CH			
PUMP ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	BOLT	27-0898	8
2	VALVE PLUG	39-0231	6
3	O-RING	25-0622	6
4	VALVE ASSEMBLY	70-0502	6
5	MANIFOLD HEAD	46-1503	1
6	HEAT DUMP VALVE	22-0414	1
7	OUTLET PLUG	39-0203	1
8	HIGH PRESSURE PACKING (SEE KIT 70-0501)	SEE KIT	3
9	SEAL COMPACTION RING	46-1311	3
10	LOW PRESSURE SEAL (SEE KIT 70-0501)	SEE KIT	3
11	O-RING (SEE KIT 70-0501)	SEE KIT	3
12	RETAINER RING	46-1312	3
13	O-RING	25-0663	3
14	OIL SEAL	46-1313	3
15	CRANKCASE	N/A	1
16	NEEDLE BEARING	48-0096	1
17	FLANGE (INCLUDES 19-21)	38-0067	1
18	O-RING	25-0603	1
19	FLANGE	N/A	1
20	OIL SEAL	26-0320	1
21	BOLT	27-8431	4
22	PLUNGER GUIDE	46-1504	3
23	CONNECTING ROD	N/A	3
24	PISTON	46-1505	3
25	O-RING	25-0604	1
26	CRANKCASE COVER	46-1317	1
27	GASKET	26-0322	1
28	DRAIN PLUG	39-0232	1
29	BOLT	27-8401	10
30	DIPSTICK W/ O-RING	70-0503	1
31	SET SCREW	27-8886	1
32	CRANKSHAFT	N/A	1
33	BALL BEARING	48-0063	1
34	SNAP RING	46-1506	1
35	O-RING	25-0603	1
36	CRANKSHAFT COVER	46-1507	1

REPLACEMENT KITS				
MI-T-M KIT #	DESCRIPTION	ITEMS	# OF ASSEMBLIES	# OF CYLINDERS
70-0501	KIT - PACKINGS	8, 10, 11	3, 3, 3	3
70-0502	KIT - VALVES W/ O-RING	4	6	3

HIGH PRESSURE PUMP FOR 2503 (3-0417)



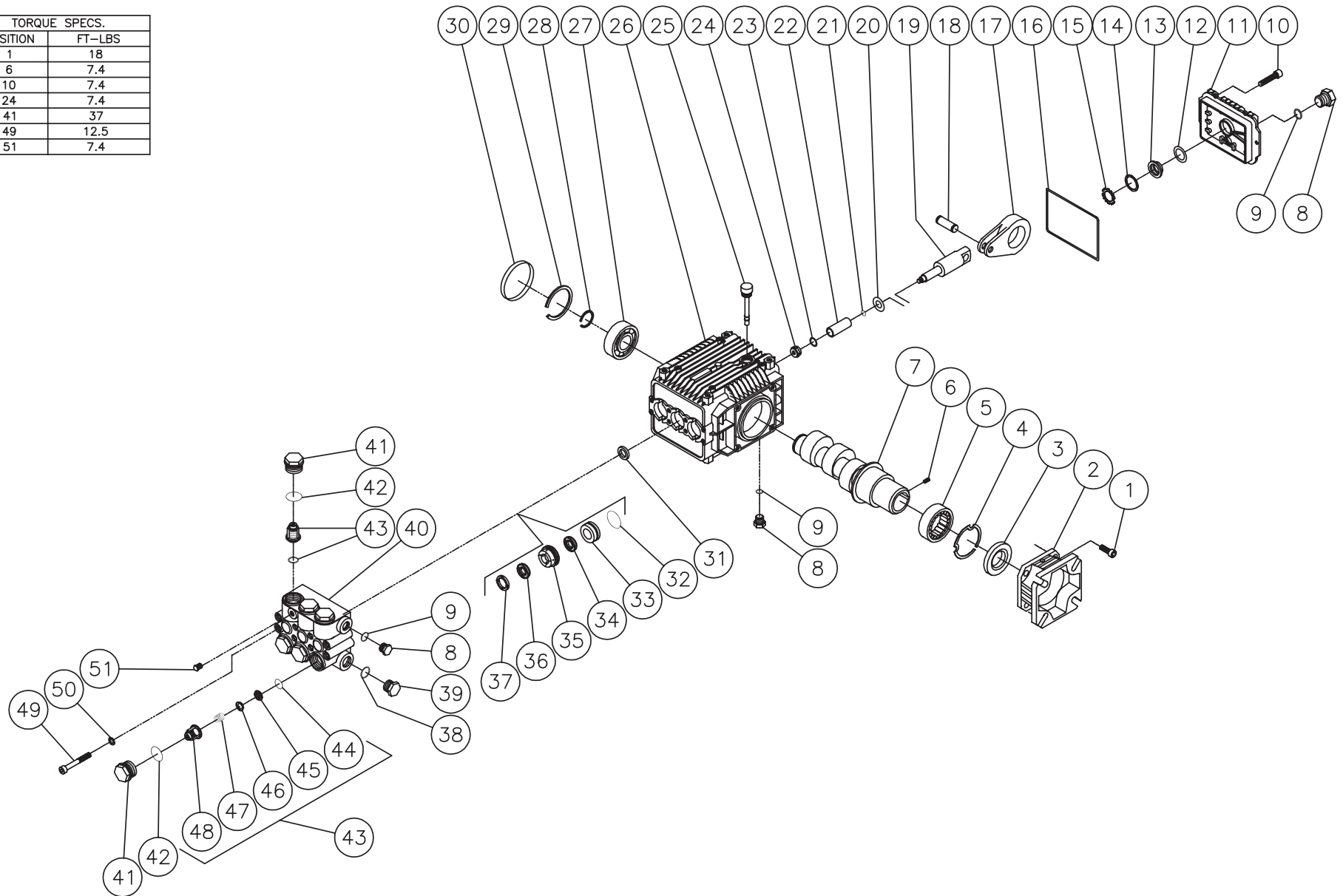
TORQUE SPEC.		
POSITION	FT-LBS	NM
1	11	15
3	59	80
22	18	24.4
30	7.4	10

3-0417 052215 JDK			
PUMP ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	BOLT	27-0898	8
2	WASHER	28-0203	8
3	VALVE PLUG	39-0231	6
4	O-RING	25-0622	6
5	VALVE ASSEMBLY (SEE KIT 70-0502)	70-0502	6
6	MANIFOLD HEAD	46-1503	1
7	RELIEF VALVE	22-0005	1
8	PLUG	39-0102	1
9	HIGH PRESSURE PACKING (SEE KIT 70-0501)	N/A	3
10	SEAL COMPACTION RING	46-1311	3
11	LOW PRESSURE SEAL (SEE KIT 70-0501)	N/A	3
12	O-RING (SEE KIT 70-0501)	N/A	3
13	RETAINER RING	46-1312	3
14	O-RING	25-0663	3
15	OIL SEAL	46-1313	3
16	CRANKCASE	N/A	1
17	NEEDLE BEARING	48-0096	1
18	FLANGE - PUMP W/OIL SEAL & O-RING	38-0067	1
19	O-RING	25-0634	2
20	FLANGE	N/A	1
21	OIL SEAL	26-0320	1
22	BOLT	27-8431	8
23	PISTON - COATED	46-1504	3
24	CONNECTING ROD	46-1595	3
25	PISTON - PIN	46-1505	3
26	O-RING	25-0604	1
27	CRANKCASE COVER	46-1594	1
28	DRAIN PLUG	39-0376	1
29	O-RING	25-0606	1
30	OIL CAP	46-1593	1
31	BOLT	27-8401	6
32	SET SCREW	27-8886	1
33	CRANKSHAFT	N/A	1
34	BALL BEARING	48-0102	1
35	SNAP RING	46-1596	1
36	SIGHT GLASS ASSEMBLY	46-1597	1

REPLACEMENT KITS				
KIT #	DESCRIPTION	ITEMS	# OF ASSEMBLIES	# OF CYLINDERS
70-0501	KITS - PACKINGS	9, 11, 12	3, 3, 3	3
70-0502	KITS - VALVES W/ O-RING	5	6	3

HIGH PRESSURE PUMP FOR 2403 (3-0193)

TORQUE SPECS.	
POSITION	FT-LBS
1	18
6	7.4
10	7.4
24	7.4
41	37
49	12.5
51	7.4



3-0193 050213 CH

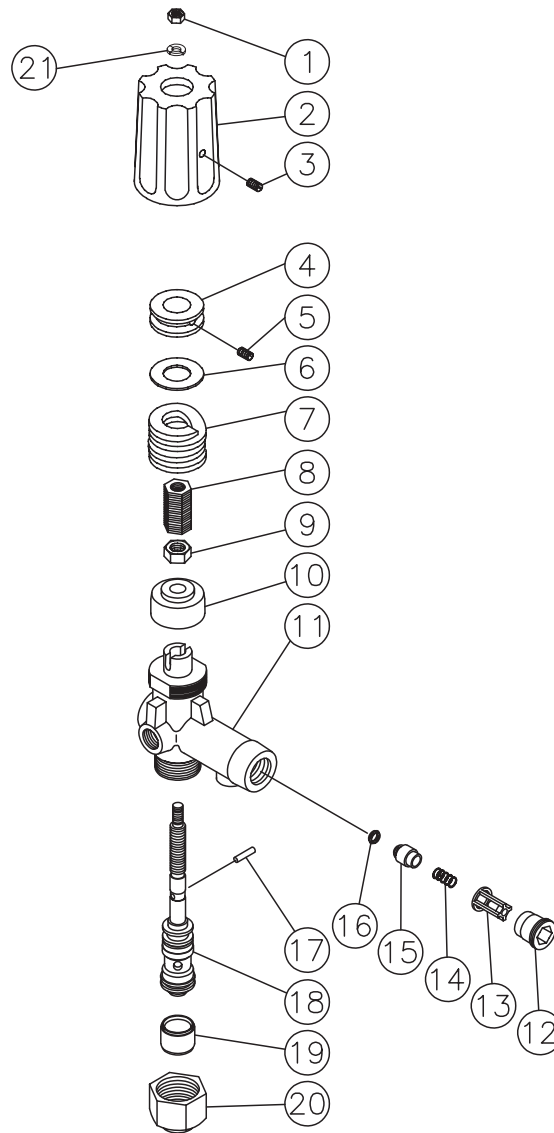
HIGH PRESSURE PUMP (3-0193)

REF.	DESCRIPTION	PART #	QTY.	REF.	DESCRIPTION	PART #	QTY.
1	BOLT	27-8432	4	27	BEARING	48-0063	1
2	FLANGE	46-0715	1	28	RETAINING RING	46-0732	1
3	OIL SEAL	26-0192	1	29	RETAINING RING	46-0676	1
4	RETAINING RING	46-0667	1	30	BEARING CAP	46-0725	1
5	BEARING	48-0059	1	31	OIL SEAL	26-0193	3
6	SET SCREW	27-8886	1	32	O-RING (SEE 70-0181)	SEE KIT	3
7	CRANKSHAFT	46-0718	1	33	RETAINER	46-0726	3
8	PLUG	39-0086	3	34	LOW PRESSURE SEAL (SEE 70-0181)	SEE KIT	3
9	O-RING	25-0325	3	35	PACKING RETAINER	46-0728	3
10	BOLT	27-8888	6	36	V-PACKING (SEE 70-0181)	SEE KIT	3
11	CRANKCASE COVER	46-0719	1	37	SUPPORT RING	70-0182	3
12	O-RING	25-0370	1	38	O-RING	25-0372	1
13	O-RING SIGHT GLASS	46-0670	1	39	PLUG	39-0088	1
14	REFLECTOR	46-0824	1	40	MANIFOLD	46-0730	1
15	RETAINER	46-0671	1	41	VALVE CAP	39-0087	6
16	O-RING	25-0398	1	42	O-RING	25-0160	6
17	CONNECTING ROD	46-0720	3	43	SINGLE VALVE ASSEMBLY (INC. 44-48) (SEE 70-0161)	SEE KIT	6
18	PISTON PIN	46-0721	3	44	O-RING (SEE 70-0161)	SEE KIT	6
19	PLUNGER ROD	46-0722	3	45	VALVE SEAT (SEE 70-0161)	SEE KIT	6
20	WASHER	28-1027	3	46	VALVE PLATE (SEE 70-0161)	SEE KIT	6
21	O-RING	25-0371	3	47	VALVE SPRING (SEE 70-0161)	SEE KIT	6
22	PISTON	46-0723	3	48	VALVE CAGE (SEE 70-0161)	SEE KIT	6
23	WASHER	26-0187	3	49	BOLT	27-8875	8
24	NUT	30-6016	3	50	LOCKWASHER	29-0153	8
25	OIL DIPSTICK	39-0090	1	51	PLUG	39-0097	1
26	CRANKCASE	46-0724	1				

REPLACEMENT KITS

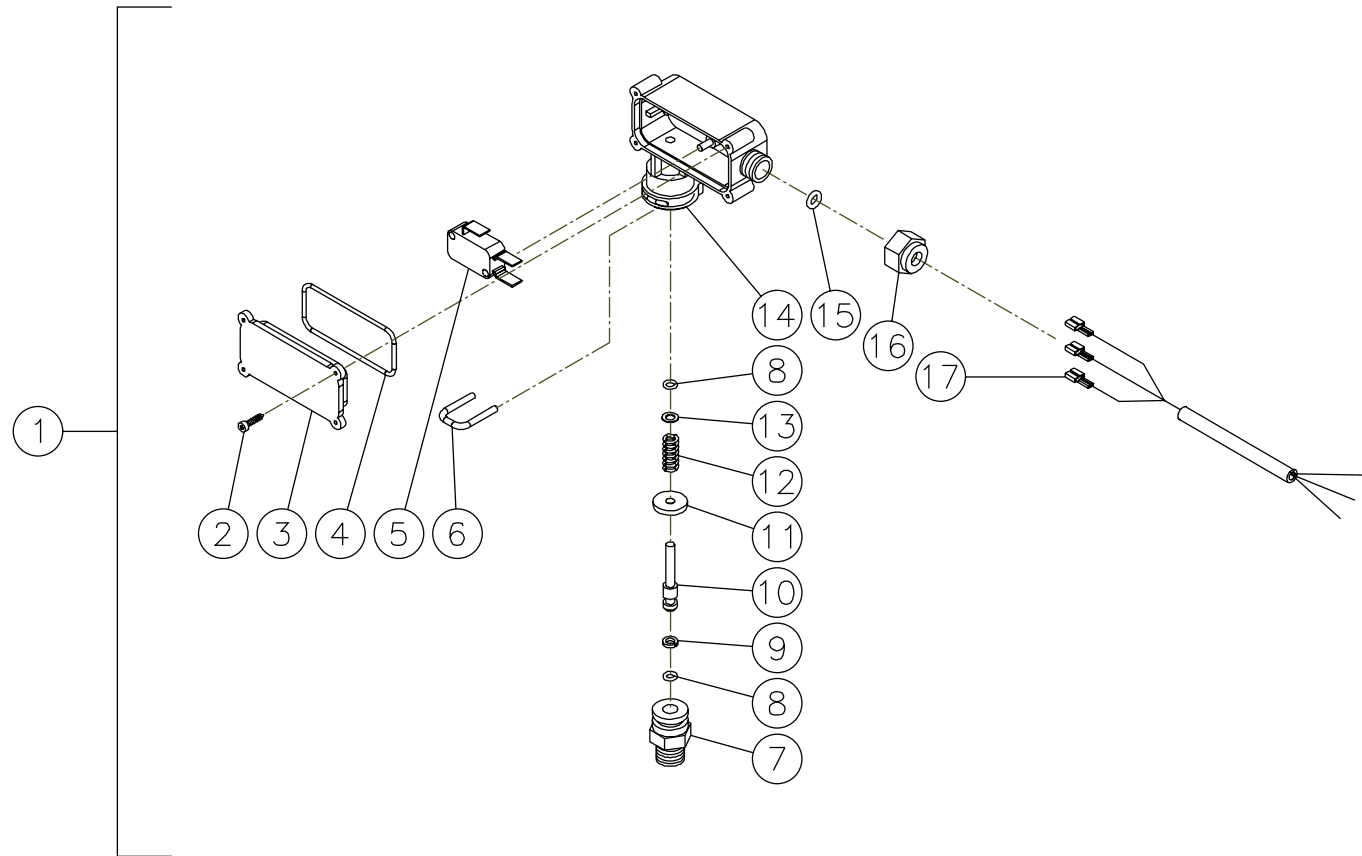
KIT #	DESCRIPTION	ITEMS	# OF ASSEMBLIES	# OF CYLINDERS
70-0181	KITS - SEAL KIT	32, 34, 36	3, 3, 3	3
70-0182	KITS - SUPPORT RINGS	37	3	3
70-0161	KITS - VALVE KIT	44, 45, 46, 47, 48	6	3

UNLOADER (850-0252)



850-0252 080520 TJM			
UNLOADER ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	HEX NUT	8-0362	1
2	ADJUSTMENT KNOB	7-0098	1
3	SET SCREW	27-4280	1
4	ADJUSTMENT NUT	8-0364	1
5	SET SCREW	8-0365	1
6	GLIDE RING	8-0366	1
7	SPRING	49-0104	1
8	ADJUSTMENT INSERT	8-0363	1
9	HEX NUT	8-0367	1
10	BUSHING	8-0368	1
11	UNLOADER BODY	8-0369	1
12	RETAINER	8-0269	1
13	CHECK VALVE	8-0104	1
14	SPRING	49-0023	1
15	VALVE	8-0105	1
16	O-RING	25-0036	1
17	CYLINDER PIN	8-0372	1
18	PISTON ASSEMBLY	70-0243	1
19	SPACER	8-0371	1
20	STOP NUT	8-0157	1
21	LOCKWASHER	29-0006	1

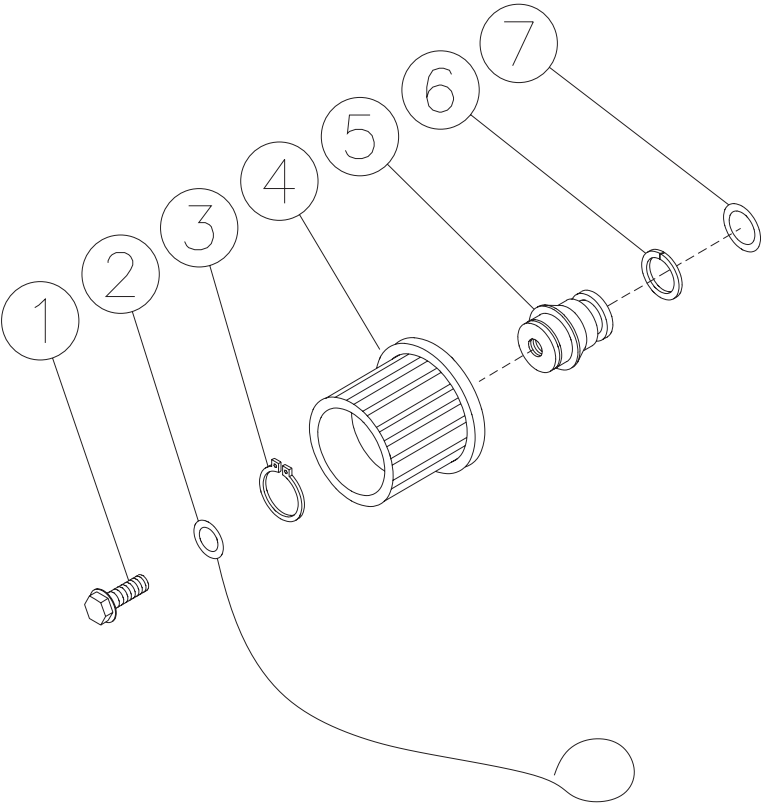
PRESSURE SWITCH (22-0243)



22-0243-120799-BAR

PRESSURE SWITCH (22-0243)			
REF. #	DESCRIPTION	PART #	QTY.
1	Pressure Switch	22-0243	1
2	Screw	N/A	4
3	Cover	N/A	1
4	O-ring (See 70-0306)	N/A Sep.	1
5	Micro Switch	N/A	1
6	Retainer Clip	N/A	1
7	Body	N/A	1
8	O-ring (See 70-0306)	N/A Sep.	2
9	Back-up Ring (See 70-0306)	N/A Sep.	1
10	Piston	N/A	1
11	Washer	N/A	1
12	Spring	49-0145	1
13	Washer	N/A	1
14	Plastic Housing	N/A	1
15	O-ring (See 70-0306)	N/A Sep.	1
16	Nut	N/A	1
17	Wire Assembly	N/A	1
	O-ring Repair Kit (Inc. 4, 8, 9, 15)	70-0306	

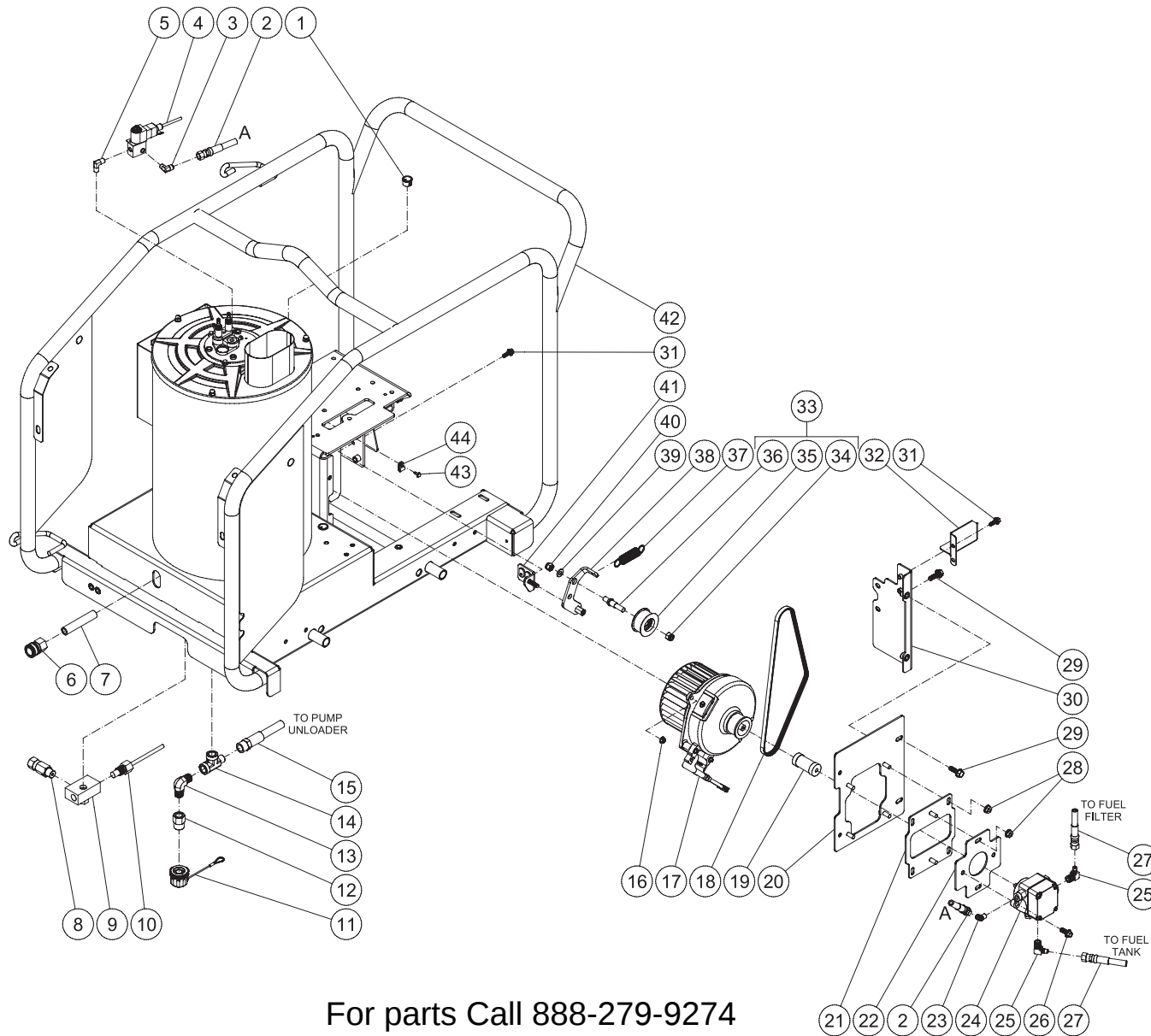
COIL DRAIN PLUG (850-0218)



850-0218-041597-BAR

COIL DRAIN PLUG (850-0218)			
REF. #	DESCRIPTION	PART #	QTY.
1	Bolt	27-9526	1
2	Retaining Cable	33-0260	1
3	Snap Ring	33-0261	1
4	Hand Wheel	16-0239	1
5	Plug	24-0147	1
6	Back-up Ring	25-0424	1
7	O-ring	25-0423	1

HEAT EXCHANGER/EMF SYSTEM (BEFORE SERIAL #15091791)

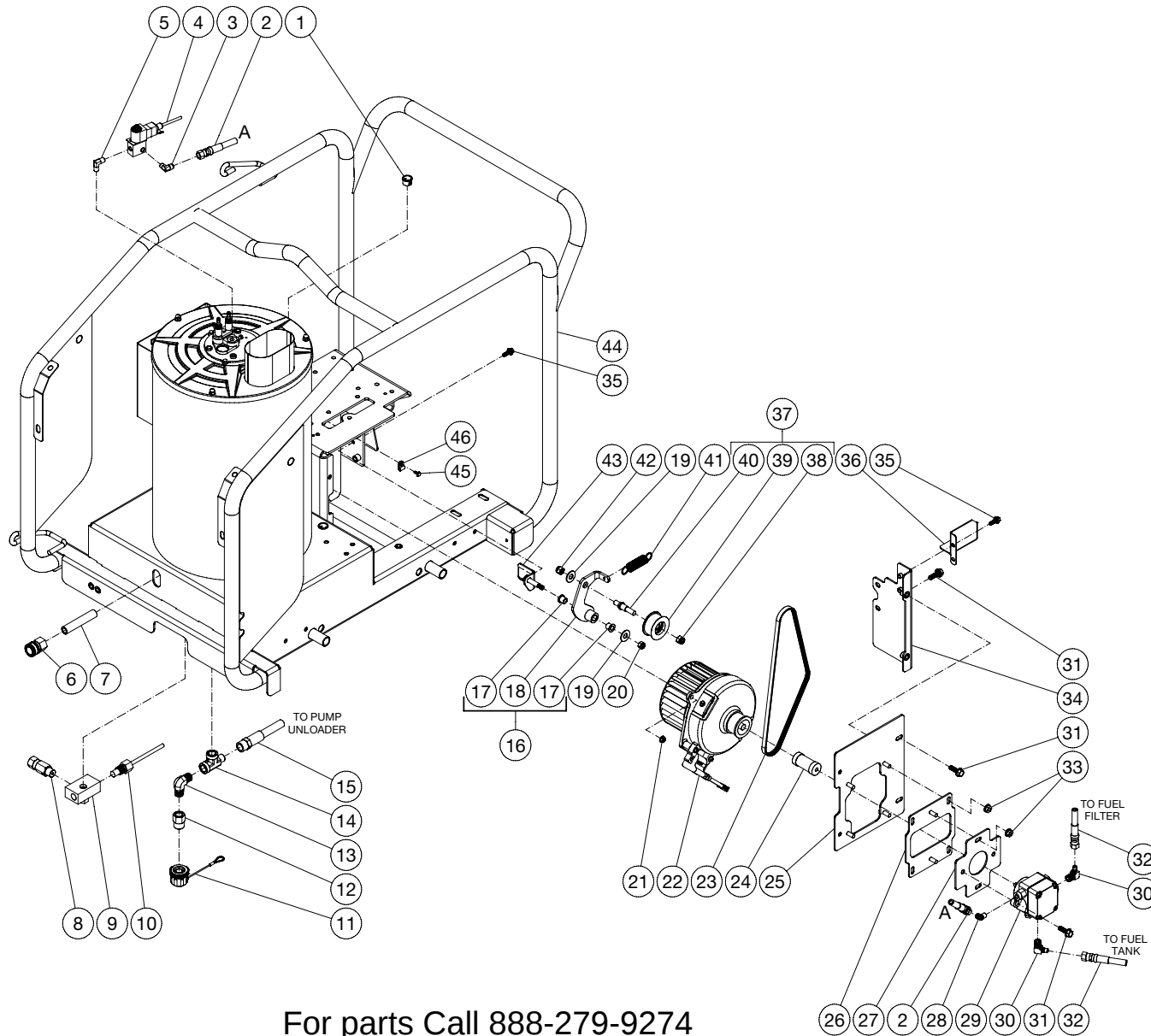


For parts Call 888-279-9274

HEAT EXCHANGER / EMP SYSTEM

ITEM	DESCRIPTION	Mi-T-M #	QTY	ITEM	DESCRIPTION	Mi-T-M #	QTY
1	CORD BUSHING	32-0465	2	23	ELBOW	23-0288	1
2	FUEL HOSE	15-0333	1	24	FUEL PUMP	3-0020	1
3	ELBOW	23-0287	1	25	ELBOW	23-0237	2
4	FUEL SOLENOID	44-0098	1	26	BOLT	27-9524	2
5	ELBOW	23-0249	1	27	FUEL HOSE	15-0147	2
6	QC SOCKET	17-0004	1	28	NUT	30-3023	6
7	PIPE NIPPLE	24-0165	1	29	BOLT	27-1201	6
8	PRESSURE RELIEF VALVE	22-0272	1	30	BELTGUARD SIDE	20-1295A01	1
9	OUTLET CONNECTOR	24-0138	1	31	BOLT	27-1200	4
10	HI LIMIT SWITCH	32-0798	1	32	SPRING COVER	20-1338A01	1
11	DRAIN PLUG ASSEMBLY	850-0218	1	33	SHEAVE/SHAFT ASSEMBLY	850-0166	1
12	ADAPTER	23-0279	1	34	LOCKNUT	30-0159	1
13	ELBOW	24-0131	1	35	SHEAVE ASSEMBLY	850-0177	1
14	STREET TEE	23-0058	1	36	IDLER SHAFT	33-0212	1
15	HIGH PRESSURE HOSE	15-0335	1	37	SPRING	49-0169	1
16	NUT	30-3022	2	38	IDLER ARM	20-1326A01	1
17	EMF ASSEMBLY	850-0403	1	39	WASHER	28-0003	2
18	BELT	11-0094	1	40	LOCKNUT	30-0159	1
19	COUPLING	33-0225	1	41	IDLER MOUNTING BRACKET	20-1325A01	1
20	FUEL PUMP MOUNTING PLATE	20-1296A01	1	42	BOILER ASSEMBLY	N/A	1
21	PLATE/FUEL PUMP	20-1297A01	1	43	BOLT	27-3062	1
22	PLATE/FUEL PUMP	20-1298A01	1	44	CLAMP	32-0428	1

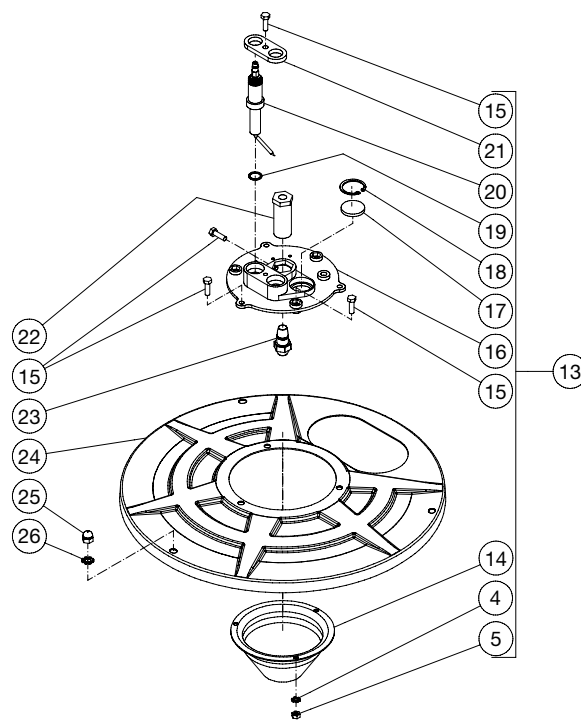
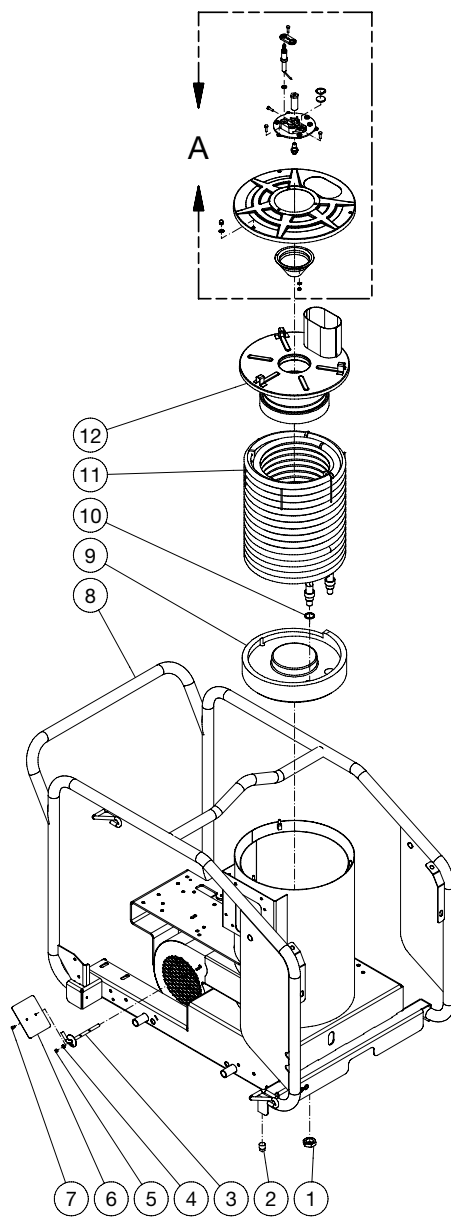
HEAT EXCHANGER/EMF SYSTEM (AFTER SERIAL #15091791)



For parts Call 888-279-9274

HSP SMALL - HEAT EXCHANGER_EMF SYSTEM 042920							
HEAT EXCHANGER/EMF SYSTEM							
ITEM	TITLE	PART #	QTY		ITEM	TITLE	PART # QTY
1	CORD BUSHING	32-0465	2		24	COUPLING	33-0225 1
2	FUEL HOSE	15-0333	1		25	FUEL PUMP MOUNTING PLATE	20-1296A18 1
3	ELBOW	23-0287	1		26	PLATE/FUEL PUMP	20-1297A18 1
4	FUEL SOLENOID	44-0098	1		27	PLATE/FUEL PUMP	20-1298A18 1
5	ELBOW	23-0249	1		28	ELBOW	23-0288 1
6	QC SOCKET	17-0004	1		29	FUEL PUMP	3-0020 1
7	PIPE NIPPLE	24-0165	1		30	ELBOW	23-0237 2
8	PRESSURE RELIEF VALVE	22-0272	1		31	BOLT	27-1201 8
9	OUTLET CONNECTOR	24-0138	1		32	FUEL HOSE	15-0147 2
10	HI LIMIT SWITCH	32-0798	1		33	NUT	30-3023 6
11	DRAIN PLUG ASSEMBLY	850-0218	1		34	BELTGUARD SIDE	20-1295A18 1
12	ADAPTER	23-0279	1		35	BOLT	27-1200 4
13	ELBOW	24-0131	1		36	SPRING COVER	20-1338A18 1
14	STREET TEE	23-0058	1		37	SHEAVE/SHAFT ASSEMBLY	850-0166 1
15	HIGH PRESSURE HOSE	15-0335	1		38	LOCKNUT	30-0159 1
16	IDLER ARM WITH BEARINGS	850-0421	1		39	SHEAVE ASSEMBLY	850-0177 1
17	BRONZE SLEEVE BEARING	48-0101	2		40	IDLER SHAFT	33-0212 1
18	IDLER ARM	20-1383A53	1		41	SPRING	49-0169 1
19	WASHER	28-0023	2		42	LOCKNUT	30-0159 1
20	LOCKNUT	30-0157	1		43	IDLER MOUNTING BRACKET	20-1382A53 1
21	NUT	30-3022	2		44	BOILER ASSEMBLY	N/A 1
22	EMF ASSEMBLY - SMALL	850-0405	1		45	BOLT	27-3062 1
23	BELT	11-0094	1		46	CLAMP	32-0428 1

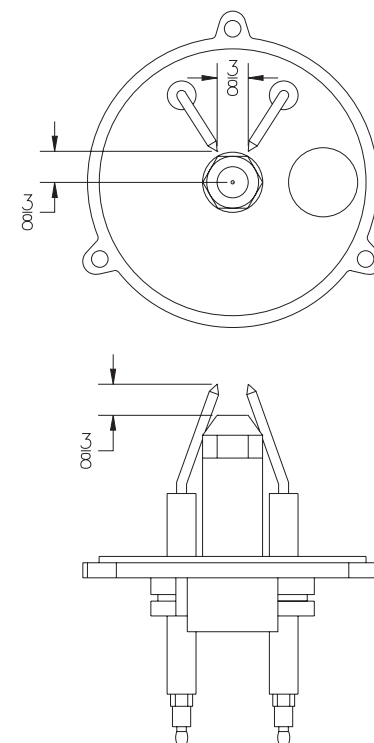
BOILER ASSEMBLY



DETAIL A

For parts Call 888-279-9274

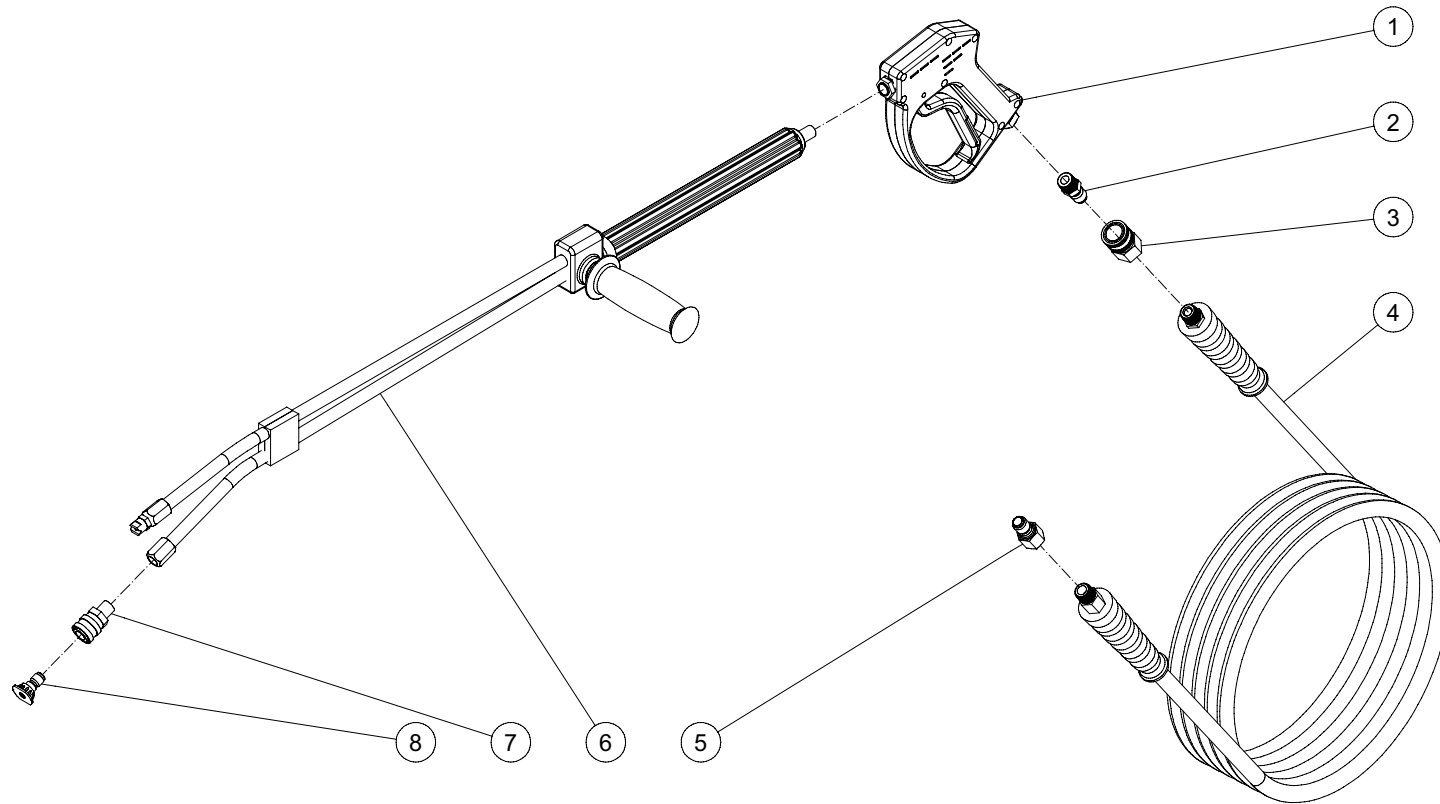
ELECTRODE GAP SETTINGS



HSP071-082698-BAR

HSE_HSP SMALL - BOILER ASSY 032720 JC			
BOILER ASSEMBLY			
ITEM	TITLE	PART #	QTY
1	NUT	30-0121	2
2	PLUG	24-0034	1
3	AIR DIVERTER STEM	20-0377A18	1
4	STAR WASHER	28-1009	4
5	NUT	30-6001	4
6	AIR DIVERTER	20-0378A18	1
7	BOLT	27-8879	2
8	FRAME	5-0325A18	1
9	INSULATION	33-0267	1
10	WASHER	28-0521	2
11	HEAT EXCHANGER COIL	66-0009	1
12	EXHAUST CHIMNEY	20-1264	1
13	ELECTRODE ASSEMBLY (INC 4, 5, 14-22)	850-0415	1
14	CONE	20-0373	1
15	BOLT	27-8878	8
16	ELECTRODE PLATE	38-0065	1
17	SIGHT GLASS	33-0252	1
18	SNAP RING	33-0254	1
19	WASHER	28-0523	2
20	ELECTRODE	32-0987	2
21	ELECTRODE BRACKET	20-1094A18	1
22	FUEL NOZZLE HOLDER	23-0292	1
23	FUEL NOZZLE (2003, 2503)	18-0310	1
-	NOZZLE-FUEL 1.00 60 DEG B (1502)	18-0321	1
-	NOZZLE-FUEL 1.10 60 DEG B (1002)	18-0268	1
24	TOP PAN	20-1263	1
25	ACORN NUT	30-6002	3
26	LOCKWASHER	28-1028	3

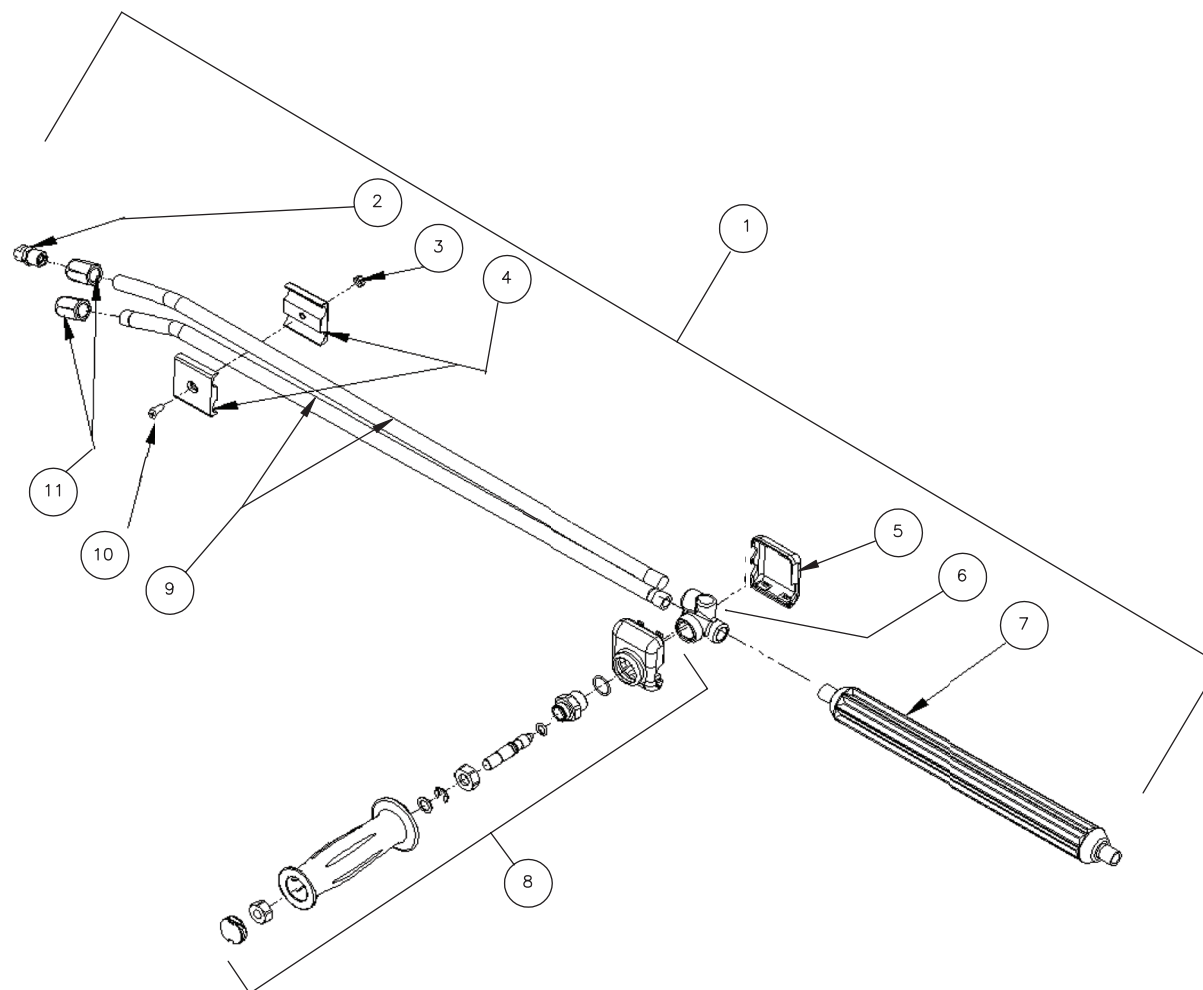
GUN WAND/HOSE ASSEMBLY



For parts Call 888-279-9274

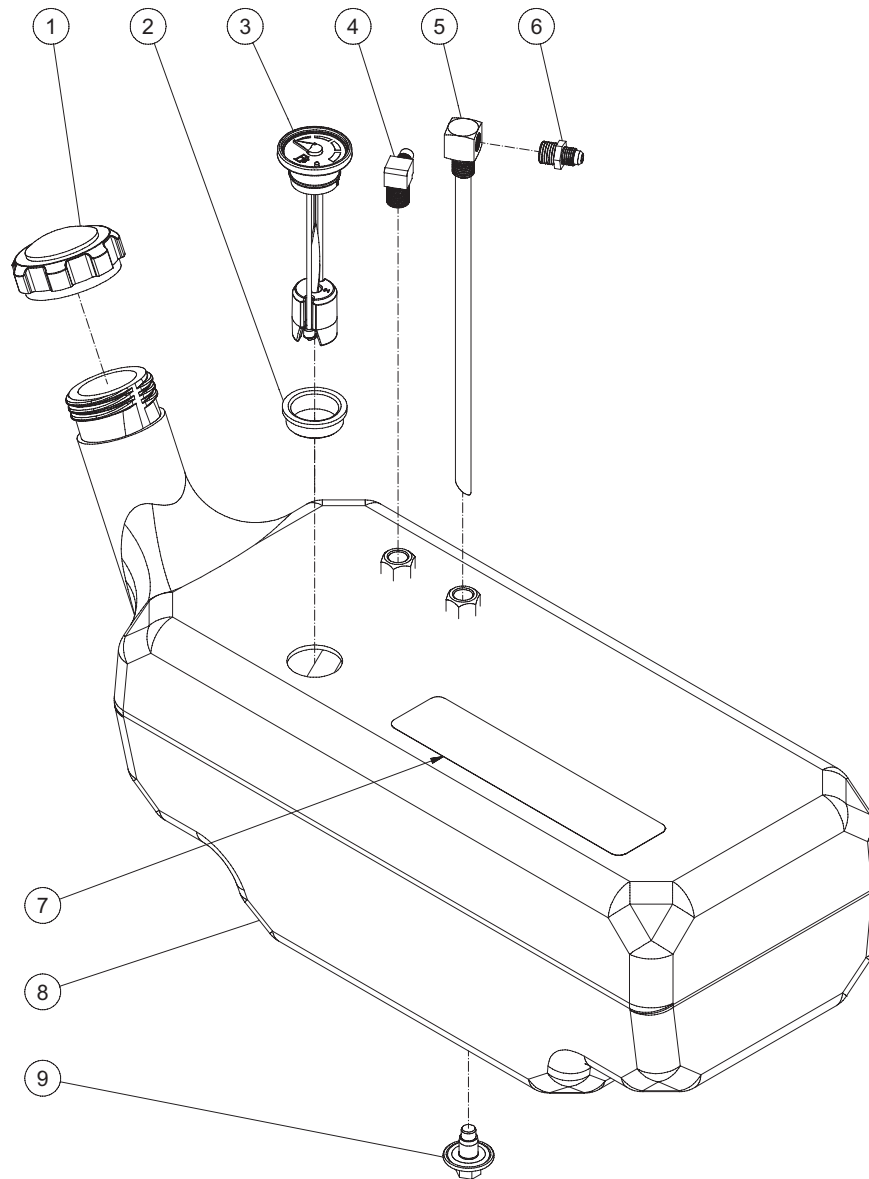
SMALL-GUN-WAND-HOSE ASSY 110719 ATL			
GUN / WAND / HOSE ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	GUN	16-0446	1
2	QUICK CONNECT	17-0005	1
3	QC SOCKET	17-0004	1
4	HOSE	15-0146	1
5	QUICK CONNECT	17-0006	1
6	DUAL LANCE	16-0416	1
7	QC SOCKET	17-0028	1
8	NOZZLE 00030	18-0387	1
-	NOZZLE 15030	18-0388	1
-	NOZZLE 25030	18-0390	1
-	NOZZLE 40030	18-0391	1

DUAL LANCE ASSEMBLY (16-0416)



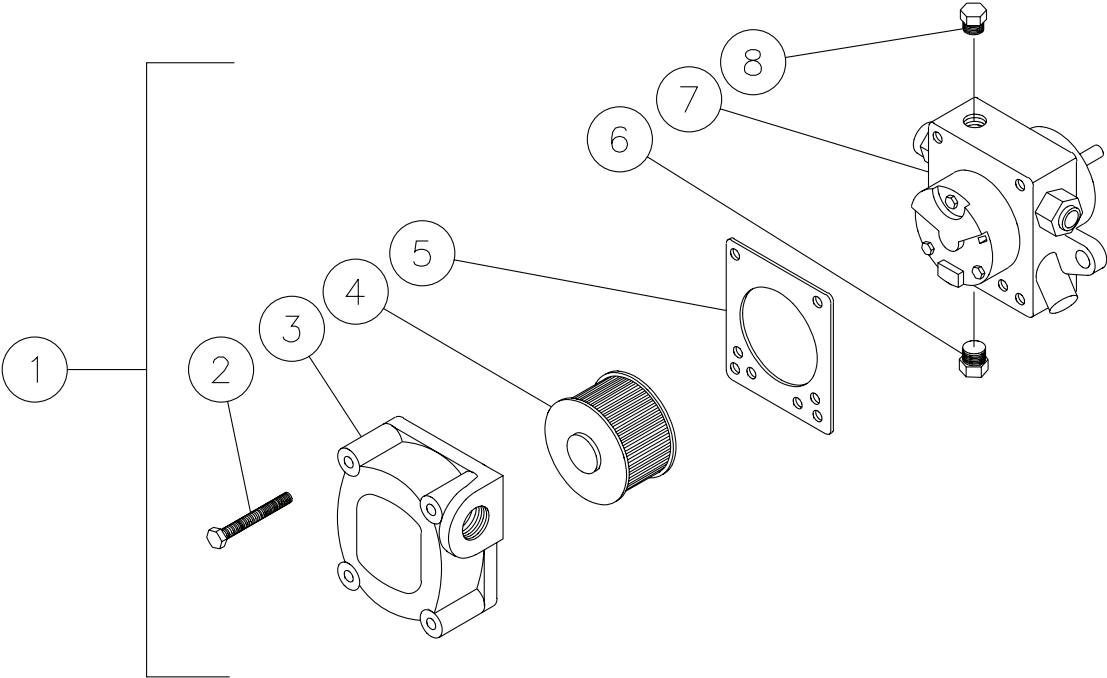
DUAL LANCE ASSEMBLY (16-0416)			
REF. #	DESCRIPTION	PART #	QTY.
1	Dual Lance Assembly - 36" (Inc. 2-11)	16-0416	1
2	Detergent Nozzle	18-0110	1
3	Nut	30-6001	1
4	Clamp	16-0420	2
5	Lower Valve Cover (See 16-0416)	N/A Sep.	1
6	Housing (See 16-0416)	N/A Sep.	1
7	Lance	16-0419	1
8	Handle Repair Kit	70-0419	1
9	Lance (See 16-0416)	N/A Sep.	2
10	Screw	27-8196	1
11	Nozzle Adapter	24-0280	2

FUEL TANK



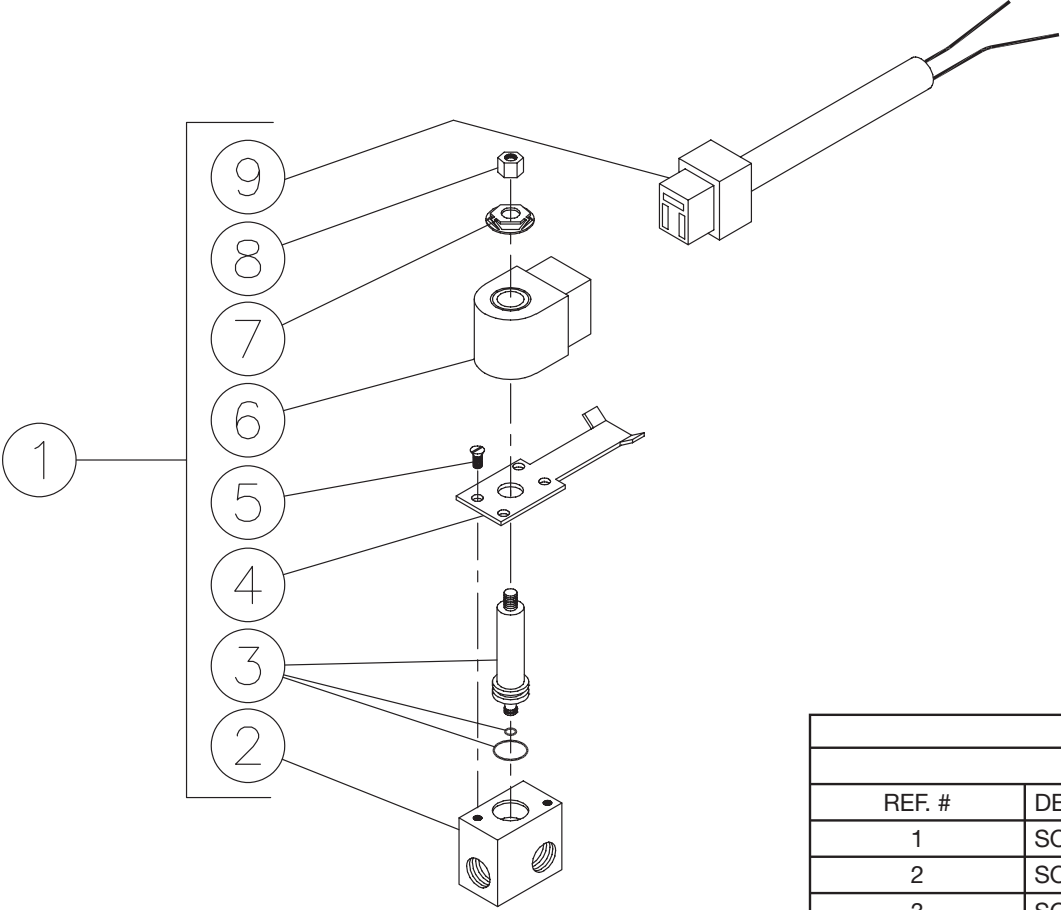
SMALL FUEL TANK ASSY 042222 ADR			
FUEL TANK ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	FUEL CAP	12-0033	1
2	FUEL GAUGE GROMMET	33-0669	1
3	FUEL GAUGE	22-0475	1
4	ELBOW	23-0237	1
5	FUEL PICK UP	33-0296	1
6	NIPPLE	23-0247	1
7	DECAL - CAUTION: RISK OF FIRE (SEE 71-0058)	N/A	1
8	FUEL TANK	12-0242	1
9	DRAIN PLUG	68-3204	1

FUEL PUMP (3-0020)



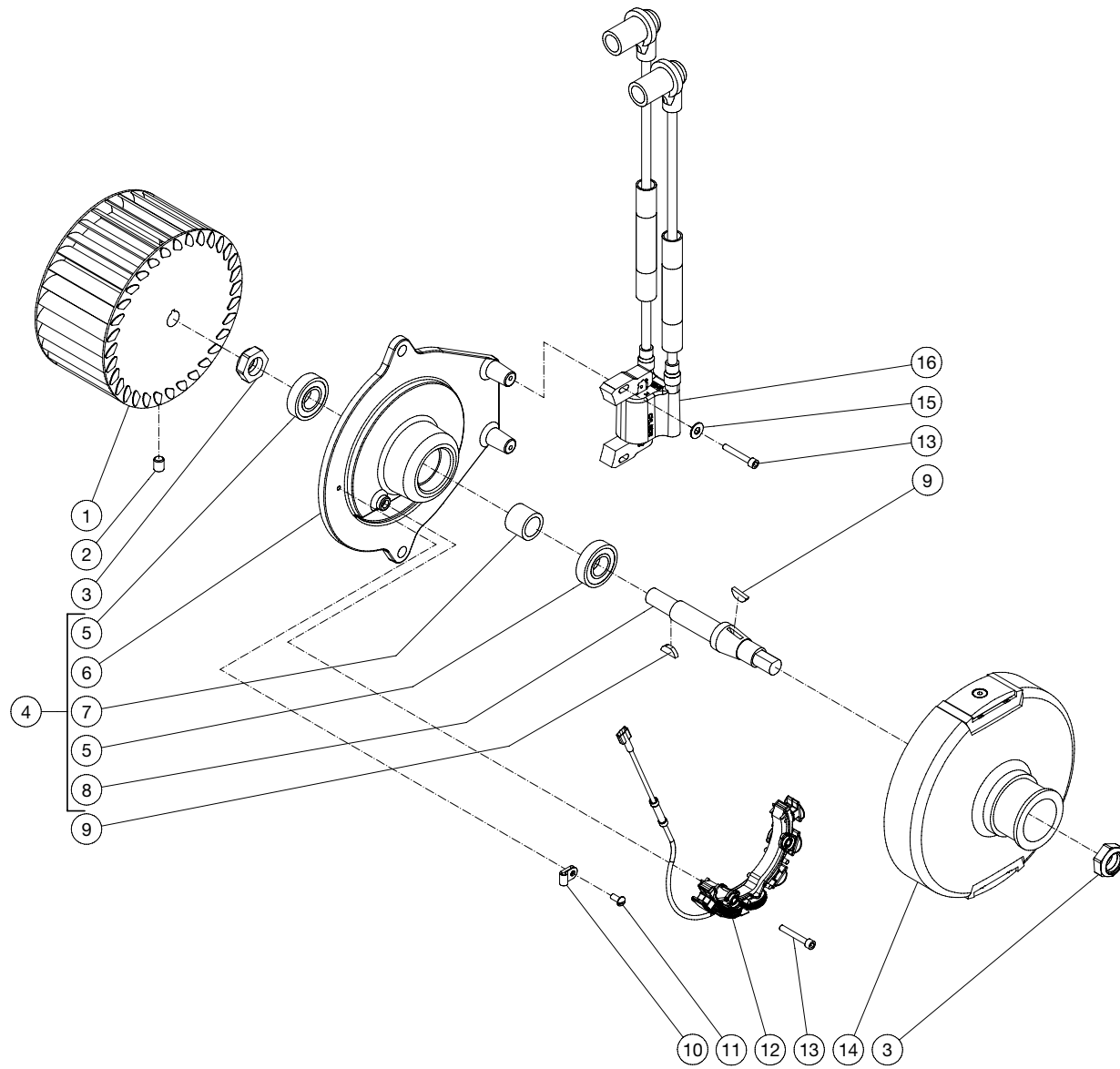
3-0129 021720 RIGHT HANDED JRC			
FUEL PUMP			
REF #	DESCRIPTION	PART #	QTY.
1	FUEL PUMP COMPLETE-RIGHT HAND	3-0020	1
2	COVER SCREW	46-1006	4
3	COVER-RIGHT HAND	N/A	1
4	STRAINER	19-0034	1
5	COVER GASKET	26-0109	1
6	PLUG	N/A	3
7	BODY	N/A	1
8	PLUG	24-0082	1

FUEL SOLENOID (44-0098)



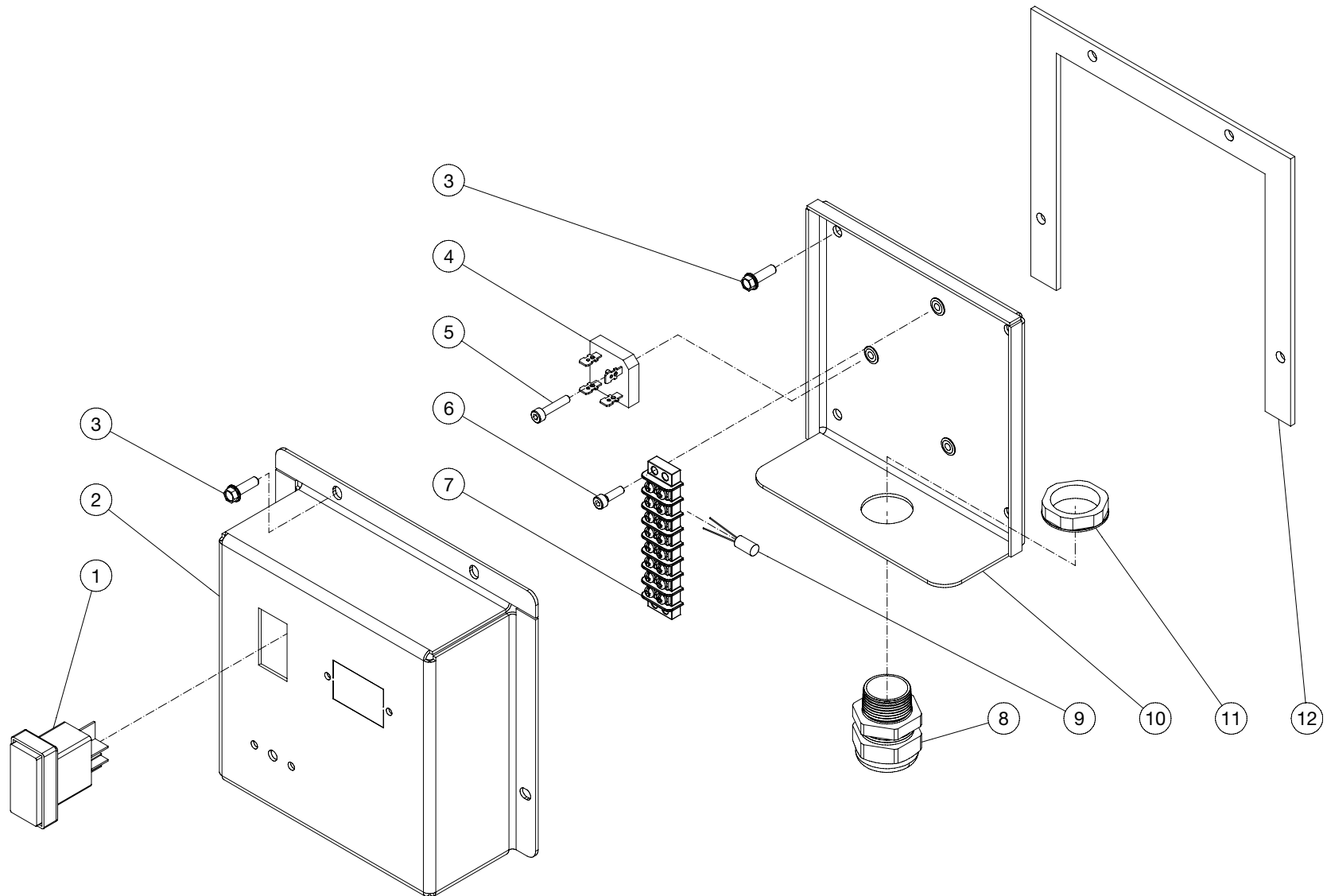
44-0098 12V 021720 JRC			
FUEL SOLENOID			
REF. #	DESCRIPTION	PART #	QTY.
1	SOLENOID COMPLETE+12V	44-0098	1
2	SOLENOID BODY	N/A	1
3	SOLENOID PISTON	46-1012	1
4	SOLENOID BASE	N/A	1
5	SCREW (SEE 44-0098)	N/A SEP.	2
6	SOLENOID COIL-120V	46-1020	1
7	SPRING (SEE 44-0098)	N/A SEP.	1
8	PISTON NUT	46-1016	1
9	DIN CONNECTOR CORD	32-0443	1

EMF SYSTEM (850-0405)



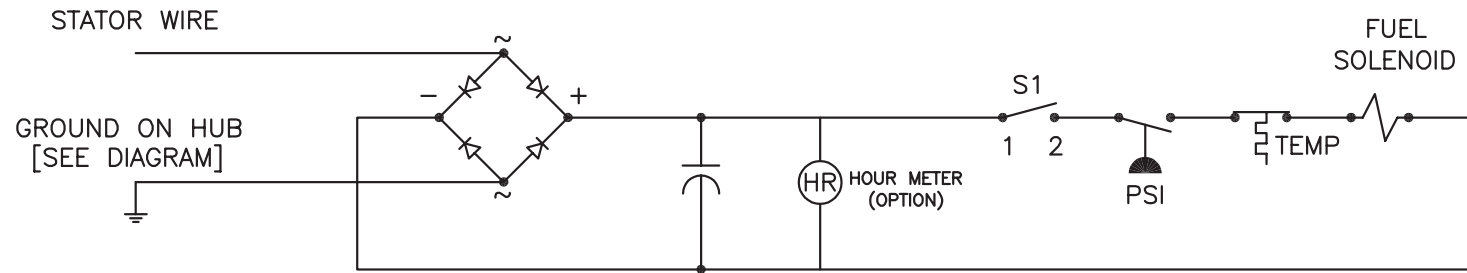
850-0405 111319 ATL			
EMF SYSTEM			
ITEM	DESCRIPTION	PART #	QTY
-	EMF ASSEMBLY	850-0405	1
1	BLOWER FAN	44-0099	1
2	SET SCREW	27-4264	1
3	LOCKNUT	30-0177	2
4	BLOWER FLANGE ASSEMBLY	850-0402	1
5	SEALED BEARING	48-0041	2
6	BLOWER FLANGE	38-0066	1
7	SPACER	33-0206	1
8	BLOWER SHAFT	20-0347	1
9	WOODRUFF KEY	43-0080	2
10	CLAMP	32-0403	1
11	SCREW	27-2070	1
12	STATOR ASSEMBLY	850-0401	1
13	BOLT	27-0740	4
14	HUB	38-0041	1
15	WASHER	28-0001	2
16	IGNITION ASSEMBLY	850-0414	1

ELECTRIC BOX ASSEMBLY

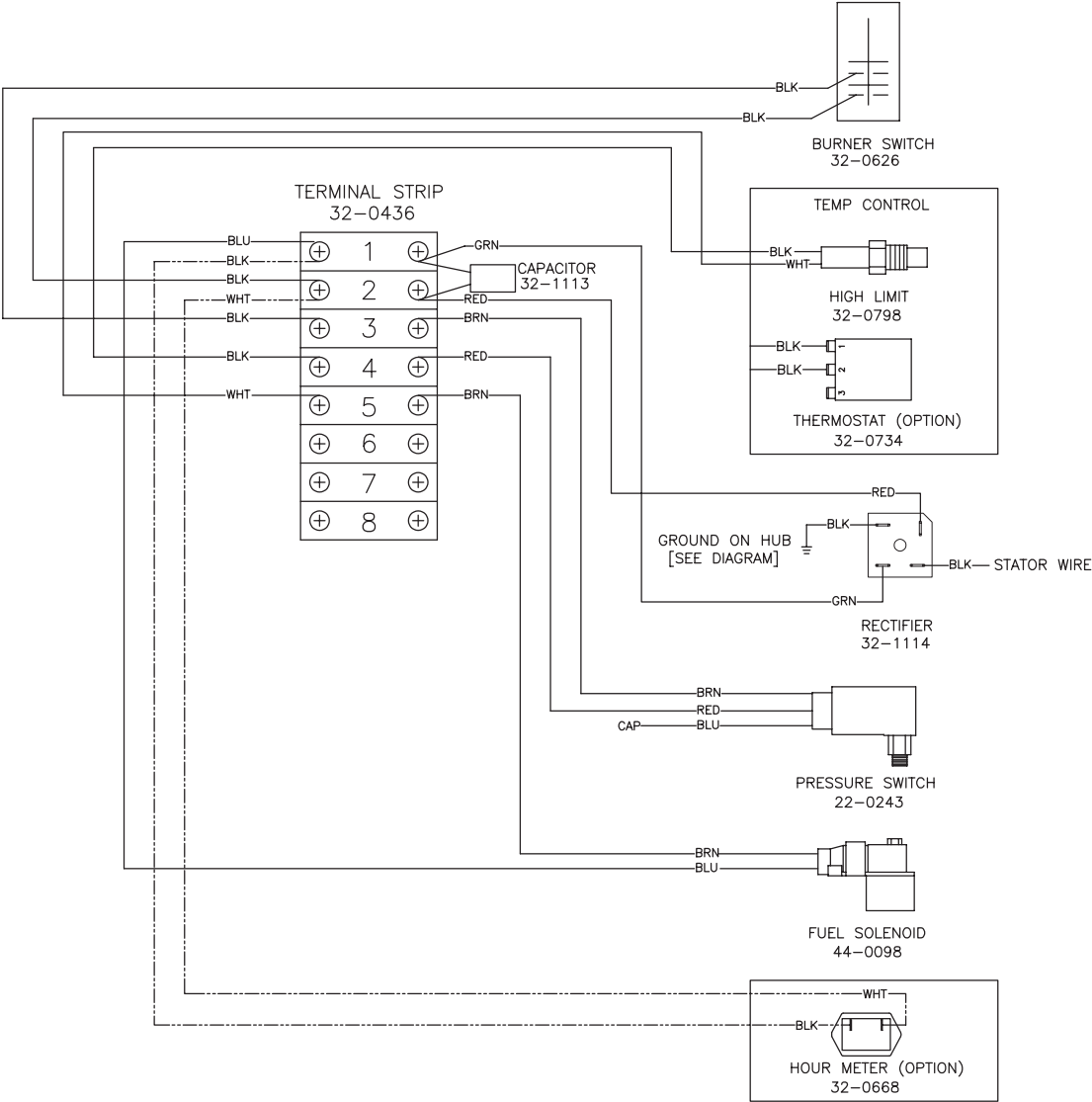


HSP SMALL - E-BOX ASSY 042820 JRC			
ELECTRIC BOX ASSEMBLY			
ITEM	TITLE	PART #	QTY
1	ROCKER SWITCH	32-0626	1
2	ELECTRIC BOX COVER	20-1302A18	1
3	BOLT	27-9526	8
4	BRIDGE RECTIFIER	32-1114	1
5	BOLT	27-8930	1
6	SCREW	27-8835	2
7	TERMINAL STRIP	32-0436	1
8	CORD RELIEF	9-0046	1
9	CAPACITOR	32-1113	1
10	ELECTRIC BOX BACK	20-1301A18	1
11	ELECTRICAL LOCKNUT	32-0292	1
12	GASKET	26-0384	1

WIRING SCHEMATIC



WIRING DIAGRAM



ACCESSORIES

OPTIONS

HX-0233

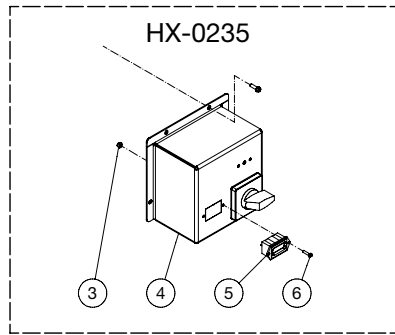
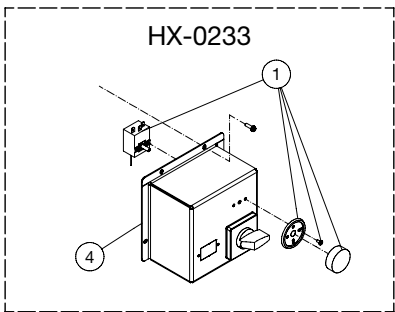
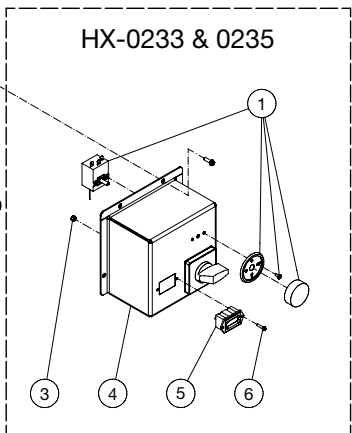
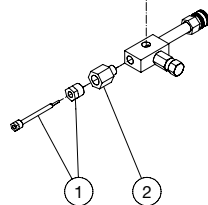
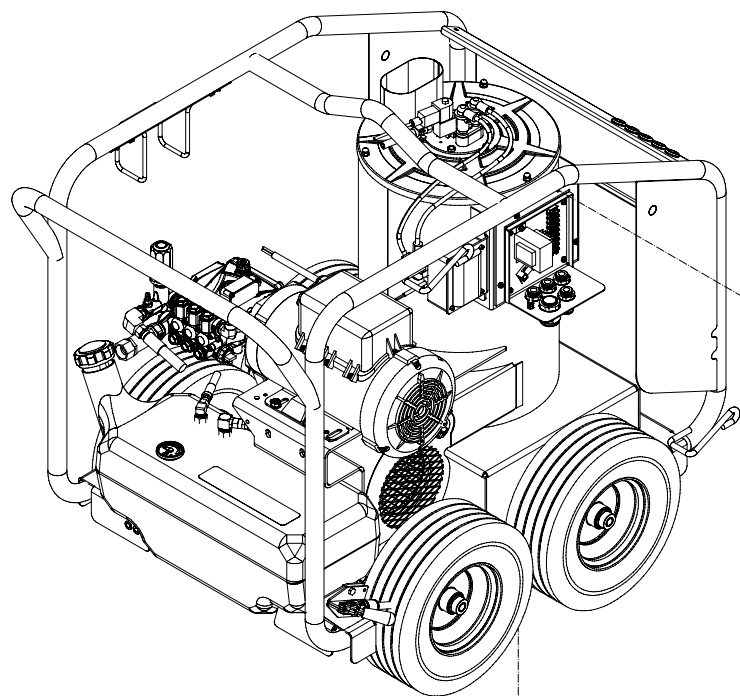
HX-0236

DESCRIPTION

ADJUSTABLE THERMOSTAT

HOUR METER

OPTION- ADJUSTABLE THERMOSTAT AND HOUR METER



HSE SMALL - ADJ THERM_HR METER 033020 JRC			
OPTION-ADJUSTABLE THERMOSTAT AND HOUR METER			
ITEM	DESCRIPTION	PART #	QTY
1	ADJUSTABLE THERMOSTAT	32-0962	1
2	REDUCER	24-0048	1
3	LOCKNUT	30-0152	2
4	ELECTRIC BOX COVER	20-1309A18	1
5	HOUR METER	32-0668	1
6	SCREW	27-8881	2

For parts Call 888-279-9274