



# Mi-T-M<sup>®</sup> CORPORATION

8650 Enterprise Drive, Peosta IA 52068

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## PARTS LIST FOR

### ***HSP-3504-1MGH/1MGV***

**(After Serial #27872)**

**ENGINE OIL GRADE:**

**HONDA:**

**SAE 10W-30**

**VANGUARD:**

**ABOVE 40°F=SAE30**

**BELOW 40°F=SAE10W-30**

**ENGINE OIL CAPACITY:**

**HONDA:**

**37 OZ.**

**VANGUARD:**

**51 OZ.**

**PUMP OIL GRADE:**

**Mi-T-M PUMP OIL #AW-4085-0016**

**PUMP OIL CAPACITY:**

**23.7 OZ.**

**FUEL NOZZLE:**

**1.75 60°B DELAVAN**

**BTU INPUT:**

**294,000/HOUR**

**PRESSURE NOZZLE SIZE:**

**3.5**

This Parts Listing has been compiled for your benefit. You can be assured your Mi-T-M 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. Mi-T-M 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 Mi-T-M 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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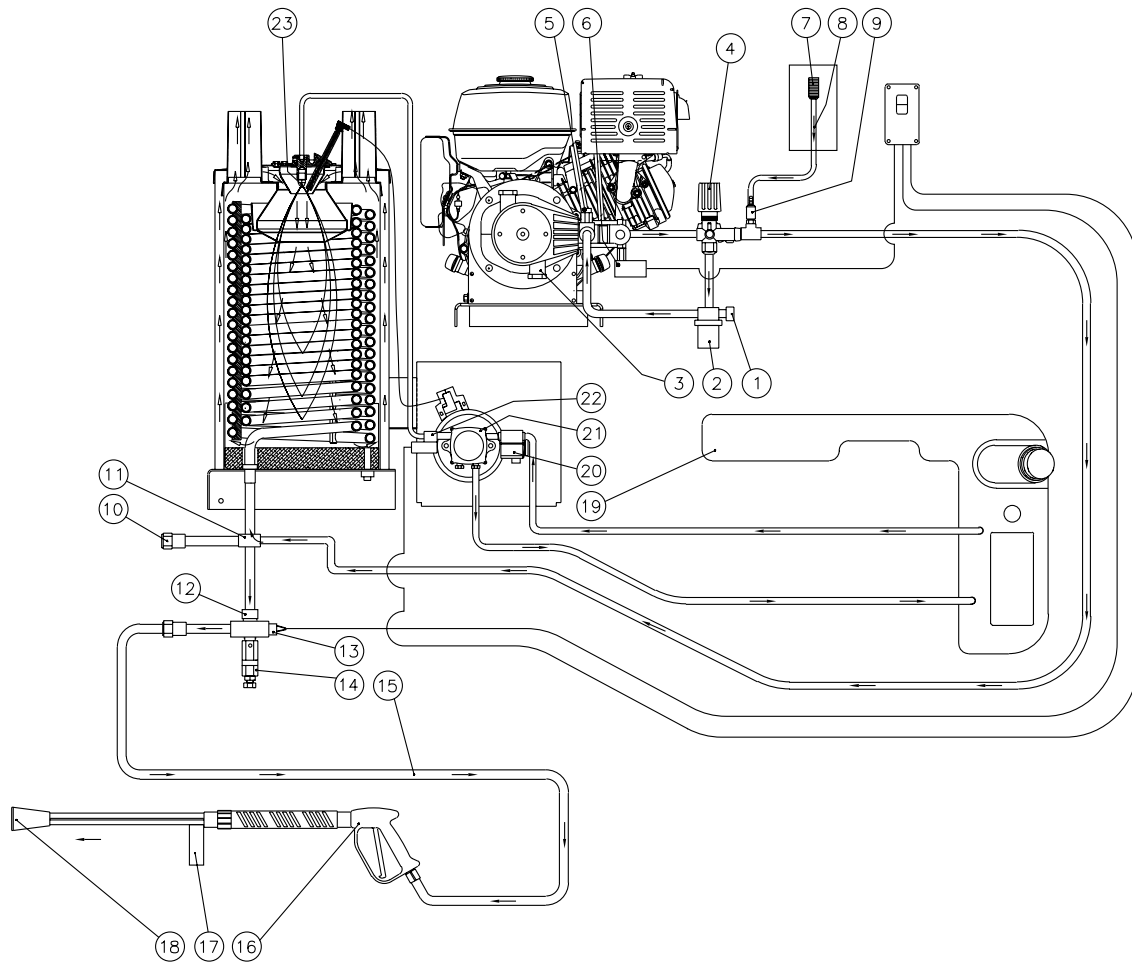
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# SPECIFICATIONS

HSP-3504-1MGH/GV

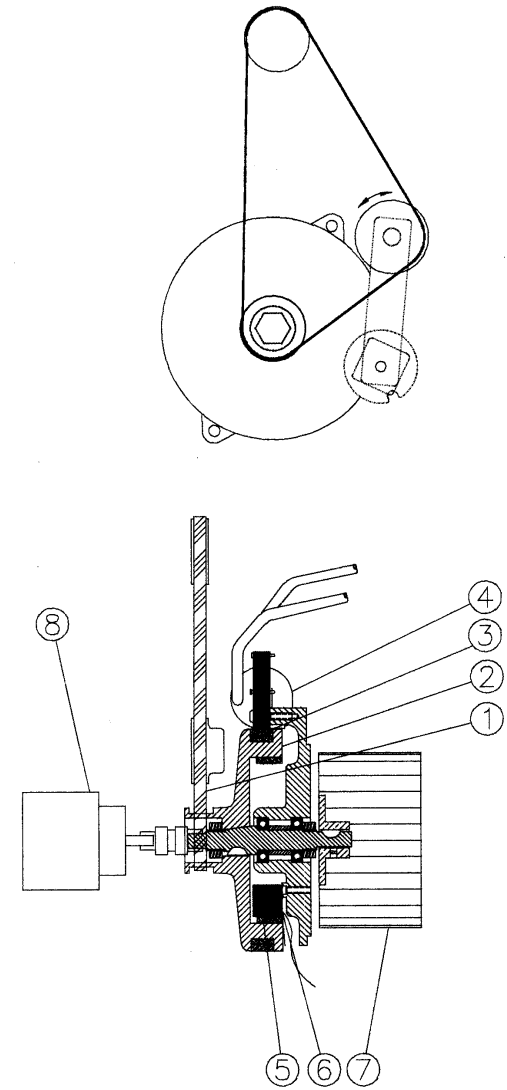
MODEL NUMBER	HSP-3504-1MGH	HSP-3504-1MGV
<b>Operating Pressure (PSI/Bar):</b>	3500/ 241 (+/- 5%)	
<b>Water Volume (GPM/lpm):</b>	3.3/12.5 (+/- 5%)	
<b>Outlet Water Temperature (F/C):</b>	140 F/ 78 C (+/- 20 F) rise above inlet ambient (210 F/ 99 C maximum)	
<b>Engine:</b>	Honda	Briggs & Stratton Vanguard
Horsepower	13	13
Engine Type	Four Stroke, Overhead Valve, Single Cylinder	
Oil Type	SAE 10W-30	Above 40 F=SAE30/ Below 40 F=SAE 10W-30
Oil Capacity (oz./liter)	37/1.1	51/1.5
Low Oil Protection	Oil Alert™	Oil Guard™
Fuel Type	Unleaded Gasoline 86 Octane Minimum	
Fuel Capacity (gal./liter)	1.72/6.5	1.8/6.8
Starting	Recoil Rope	
Maximum No Load RPM	3600 (+/- 100)	
<b>High Pressure Pump:</b>	Direct Driven, Oil Bath, Triplex Piston	
Oil Type	Mi-T-M Pump Oil #AW-4085-0016	
Oil Capacity (oz./liters)	23.7/0.7	
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	
<b>Detergent Injector:</b>	Adjustable Low Pressure downstream from pump	
<b>Burner Fuel System:</b>		
Fuel Type	No.1 or No.2 Fuel Oil, Diesel or Kerosene	
Fuel Capacity (gal./liters)	5.5/21	
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	1.75 60 B Delavan	
Fuel Consumption (GPH/ LPH)	2.1 GPH Continous Burning	
<b>Electro Magnetic Firing (EMF) System:</b>	Belt Driven (Patent Pending)	
Ignition	Transistorized Magneto	
Control Voltage	12 Volt DC	
Blower	Forced Air	
<b>Heat Exchanger:</b>	Vertical, Top fired, Dual Spiral Coil	
BTU Input	294,000	
Efficiency	86% with #2 Fuel Oil/ Diesel	
Smoke Density	0-3 per ASTM D2156	
<b>Controls:</b>		
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	
<b>Fuel Solenoid:</b>	12 Volt	
<b>Safety Relief:</b>	Relieves excess system pressure	
<b>Unit Net Weight (Lbs/kg):</b>	428/194	430/195
<b>Unit Shipping Weight (Lbs/kg):</b>	551/250	553/251
<b>Unit Net Dimension (In/cm):</b>	43L x 30W x 41H/109L x 76W x 104H	
<b>Unit Shipping Dimension (In/cm):</b>	46.5L x 31.5W x 48.5H/118L x80W x123H	

## FLOW CHART



OMHSP045-042699-BAR

## EMF SYSTEM



OMHSP046-072996-BAR

## 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 (4) 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 (5) will open at 140°F/60°C allowing the heated water to escape. The Heat Dump Valve automatically resets when the water cools. The PRES-SURE SWITCH (6) controls the fuel supply to the burner.

When using detergents, the solution passes through the DETERGENT STRAINER (7) located on the DETERGENT HOSE (8). The detergent solution then travels into the ADJUSTABLE LOW PRESSURE DETERGENT INJECTOR (9).

From there, the water may be allowed to flow out of the DRAIN PLUG (10) or through the HEAT EXCHANGER INLET (11) where it is heated when the burner is on. As the water exits the HEAT EXCHANGER OUTLET (12), it enters a safety system which protects the operator from danger. The safety system contains a HIGH TEMPERATURE LIMIT SWITCH (13) which senses the water temperature and shuts off the fuel supply to the burner if it gets too hot. If the unloader fails to by pass the water or the burner remains on when the trigger gun is closed, the SAFETY RELIEF (14) will relieve and allow water to exit safely.

The heated water then flows through the HIGH PRESSURE HOSE (15) and to the TRIGGER GUN ASSEMBLY (16) which allows the operator to control the water spray. When the trigger gun is open, the water flows through the ADJUSTABLE PRESSURE DUAL LANCE (17) and exits the NOZZLE (18).

**FUEL FLOW:** The Fuel Pump draws fuel from the FUEL TANK (19) through a replaceable FUEL FILTER/WATER SEPARATOR (20) and into the FUEL PUMP (21). Fuel exits the fuel pump, into a FUEL SOLENOID VALVE (22) which controls fuel flow to the FUEL NOZZLE (23) where it ignites and burns in the heat exchanger.

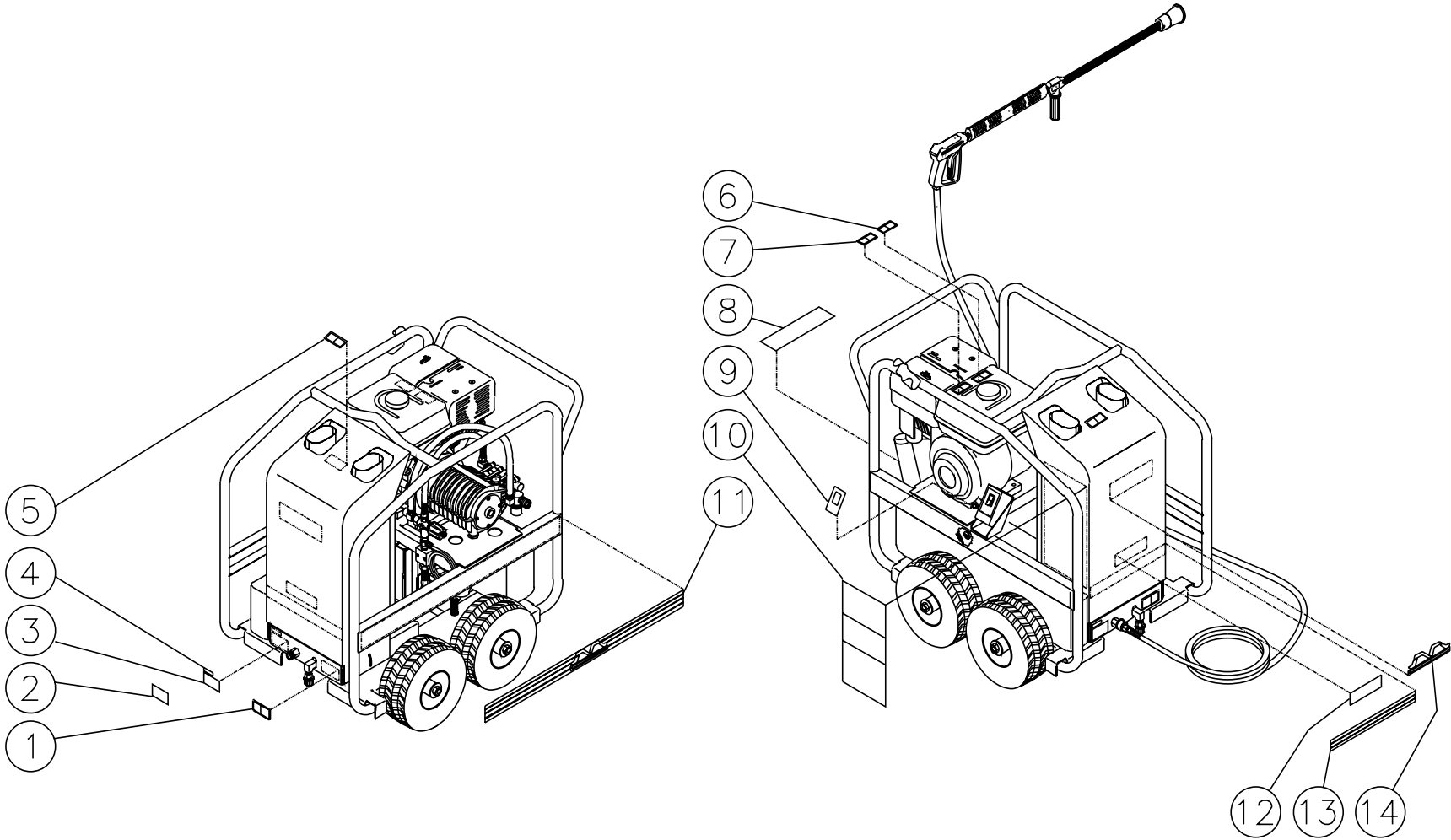
**EMF SYSTEM:** The patent pending Electro Magnetic Firing (EMF) System is an integrated system which gives all the requirements for combustion.

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 the hub by means of a flexible coupler.

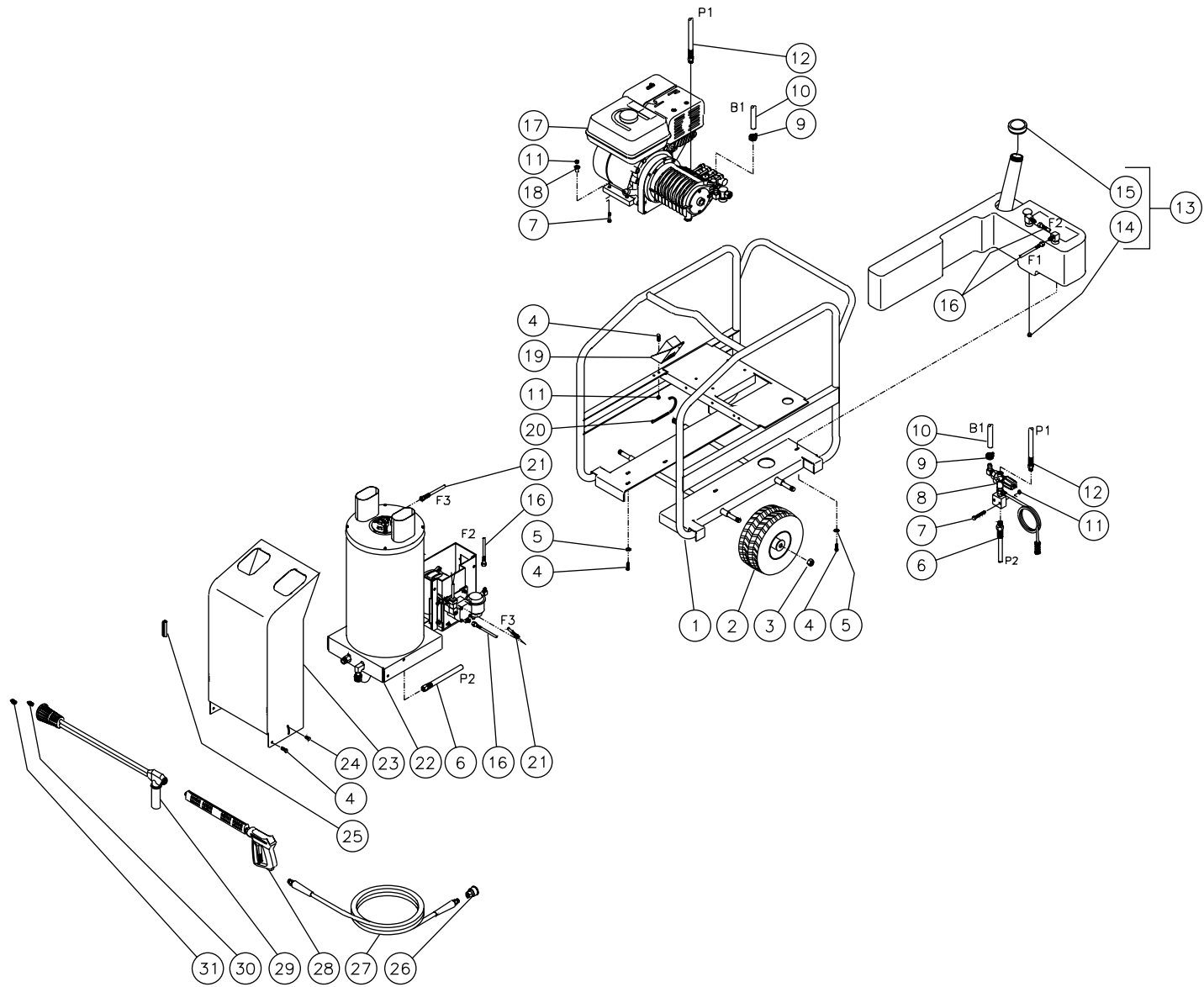
# DECAL PLACEMENT



HSP-3504-IMGH/GV-031799-BAR

<b>DECAL PLACEMENT</b>			
<b>REF. #</b>	<b>DESCRIPTION</b>	<b>PART #</b>	<b>QTY.</b>
1	Decal- Warning : Don't Modify Plumbing (E/S)	34-0807	1
2	Decal- Clear Laminate	N/A	1
3	Decal- Data Plate	N/A	1
4	Decal- Serial Number	N/A	1
5	Decal- Warning : Hot Coil Exhaust (E/S)	34-0808	1
6	Decal- Allow to Cool (E/S)	34-0599	1
7	Decal- Hot Surface (E/S)	34-0598	1
8	Decal- Risk of Fire (E/S)	34-0806	1
9	Decal- Burner On/Off (E/S)	34-0849	1
10	Decal- Warning/ Caution/ Operation (E/S)	34-0847	1
11	Decal- Stripe Logo	34-0725	2
12	Decal-White Die Cut	34-0034	1
13	Decal- Stripe Logo	34-0560	1
14	Decal- Mi-T-M Logo	62-0093	1

# FRAME



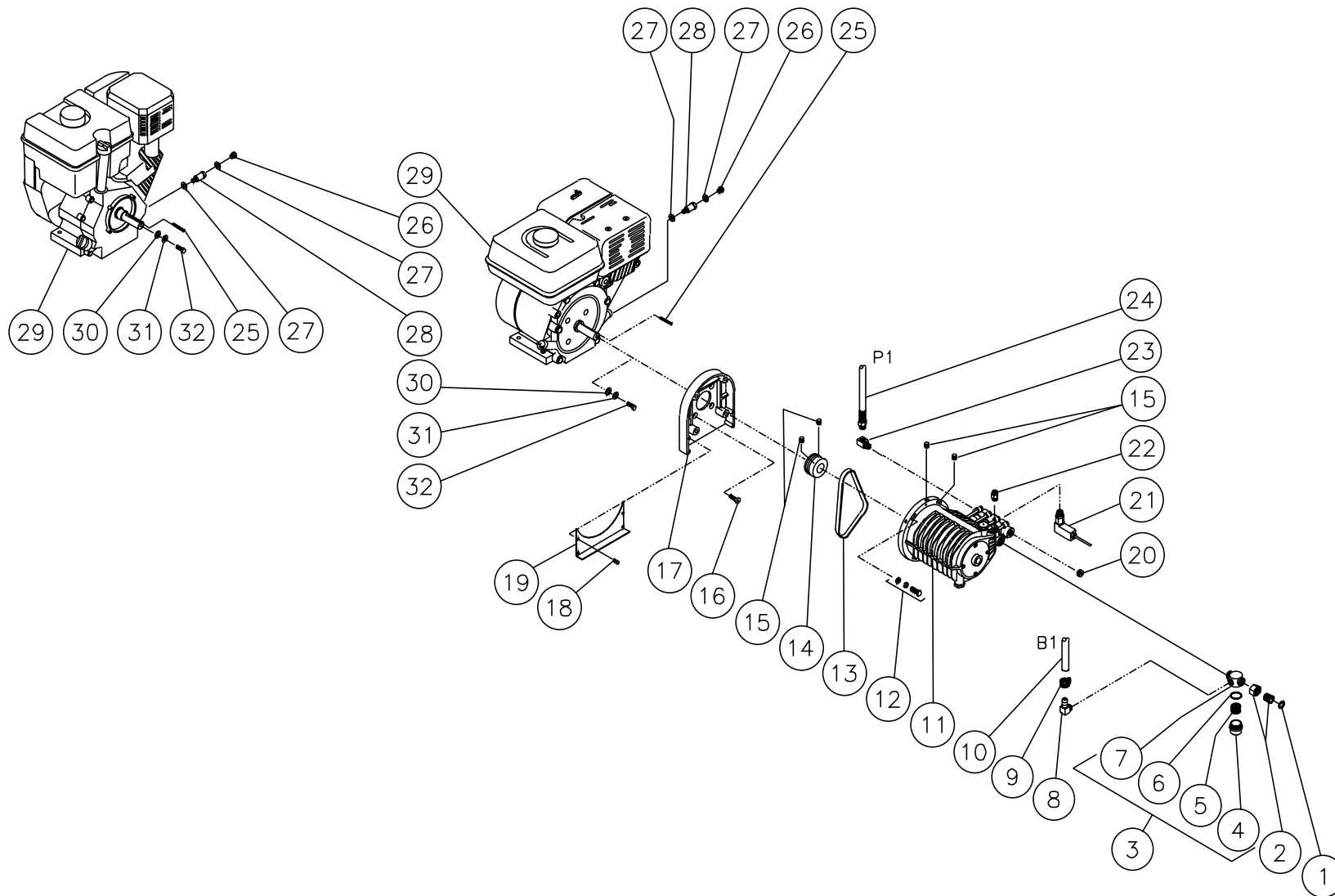
HSP105-031699-BAR



## FRAME

REF. #	DESCRIPTION	PART #	QTY.	REF. #	DESCRIPTION	PART #	QTY.
1	Frame Assembly	5-0120A01	1	17	Engine/Pump Assembly (See exploded drawing)	N/A Sep.	1
2	Wheel	14-0006	4	18	Shim	33-0169	4
3	Jam Nut	30-0117	4	19	Electric Box Assembly (See exploded drawing)	N/A Sep.	1
4	Bolt	27-9524	12	20	Wire Tie	33-0022	4
5	Flatwasher	28-0022	8	21	Fuel Hose Assembly	15-0165	1
6	High Pressure Hose Assembly	15-0202	1	22	Heat Exchanger/ EMF Assembly (See exploded drawing)	N/A Sep.	1
7	Bolt	27-9529	6	23	Hood Assembly	850-0194	1
8	Unloader/Manifold Assembly (See exploded drawing)	N/A Sep.	1	24	Hand Knob	62-0057	1
9	Hose Clamp	42-0011	2	25	Trim Lock *(One Foot Required)	33-0129	1
10	Hose	15-0007	2	26	Screw Connect	17-0035	1
11	Hex Nut	30-3023	8	27	Hose Assembly	15-0166	1
12	High Pressure Hose Assembly	15-0194	1	28	Gun/Lance Assembly	850-0181	1
13	Fuel Tank Assembly (Includes 14, 15)	850-0248	1	29	Dual Lance Assembly	850-0180	1
14	Hex Head Plug	23-0296	1	30	Nozzle- 1503.5	18-0254	1
15	Fuel Cap	12-0033	1	31	Nozzle- 4060	18-0110	1
16	Fuel Hose	15-0147	2	*Must Order in One Foot Lengths			

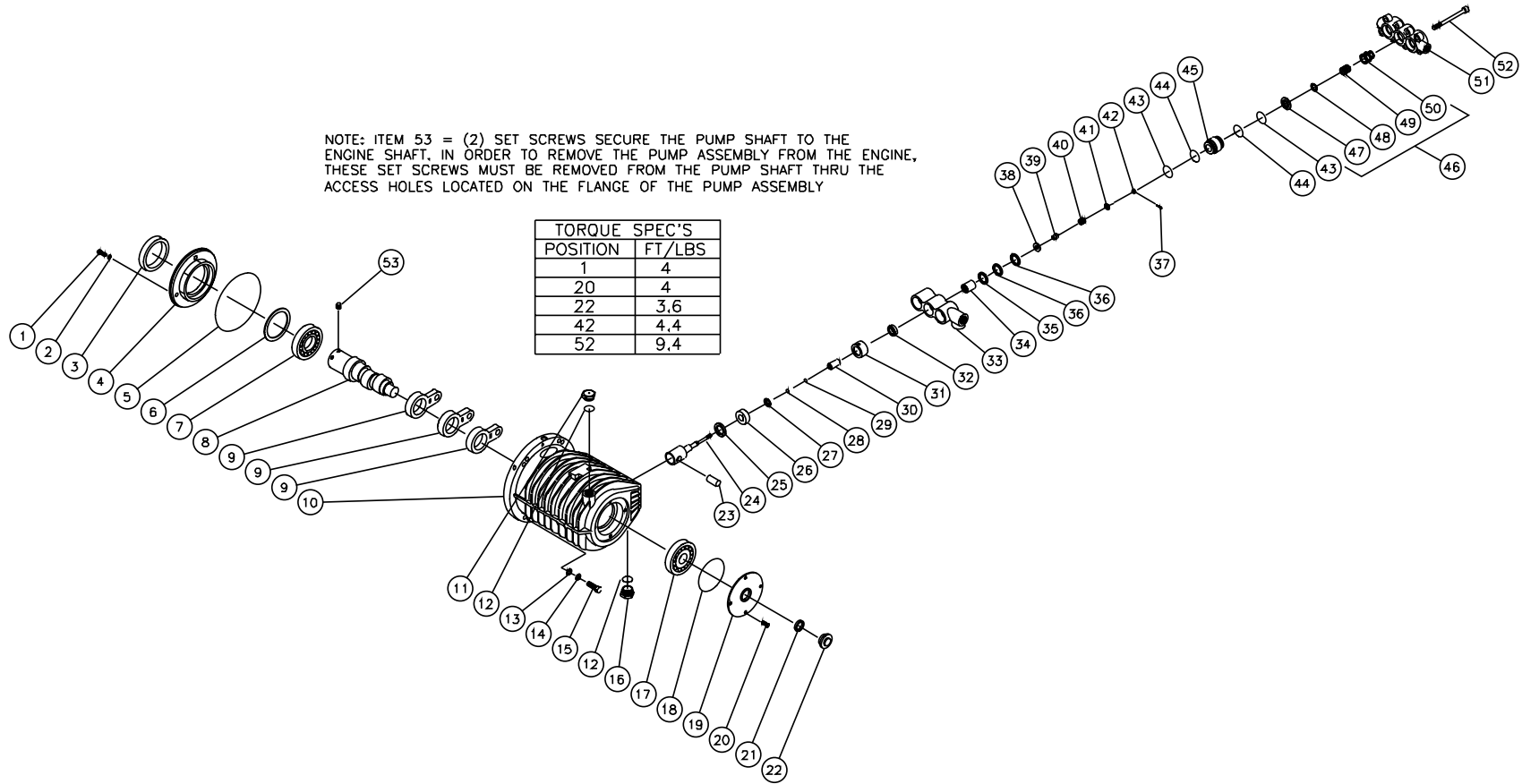
# ENGINE/PUMP ASSEMBLY



ENGINE/PUMP ASSEMBLY									
REF #	DESCRIPTION	PART #	QTY 1MGH	QTY 1MGV	REF #	DESCRIPTION	PART #	QTY 1MGH	QTY 1MGV
1	Hose Gasket	26-0001	1	1	21	Pressure Switch	22-0171	1	1
2	Hose Swivel	23-0095	1	1	22	Thermo Valve	22-0114	1	1
3	Strainer Complete (Includes 4-7)	19-0096	1	1	23	Elbow	23-0034	1	1
4	Strainer Bowl	19-0103	1	1	24	High Pressure Hose Assembly	15-0194	1	1
5	Stainless Steel Screen	19-0104	1	1	25	Key- Honda	43-0088	1	-
6	Strainer Gasket	25-0056	1	1	-	Key- Vanguard	43-0089	-	1
7	Strainer Body	19-0105	1	1	26	Oil Drain Plug w/Engine	N/A	1	1
8	Elbow	23-0119	1	1	27	Washer- Honda	28-0605	2	-
9	Hose Clamp	42-0011	1	1	-	Washer- Vanguard	28-0606	-	2
10	High Pressure Hose	15-0007	2	2	28	Oil Drain Port- Honda	24-0143	1	-
11	Pump	3-0144	1	1	-	Oil Drain Port- Vanguard	24-0142	-	1
12	Bolt Kit	70-0170	1	1	29	Engine- 13 H.P. Honda	1-0086	1	-
13	Belt	11-0037	1	1	-	Engine- 13 H.P. Vanguard	1-0090	-	1
14	Sheave	10-0077	1	1	30	Washer- Honda	28-1029	1	-
15	Set Screw	27-8895	4	4	-	Washer- Vanguard	28-0005	-	1
16	Bolt	27-0418	4	4	31	Lockwasher- Honda	29-0008	1	-
17	Flange Pump	38-0049	1	1	-	Lockwasher- Vanguard	29-0009	-	1
18	Bolt	27-9526	4	4	32	Bolt- Honda	27-0141	1	-
19	Beltguard	20-0384A01	1	1	-	Bolt- Vanguard	27-0190	-	1
20	Plug	23-0244	1	1	*Must Order in One Foot Lengths				

# HIGH PRESSURE PUMP (3-0144)

NOTE: ITEM 53 = (2) SET SCREWS SECURE THE PUMP SHAFT TO THE ENGINE SHAFT. IN ORDER TO REMOVE THE PUMP ASSEMBLY FROM THE ENGINE, THESE SET SCREWS MUST BE REMOVED FROM THE PUMP SHAFT THRU THE ACCESS HOLES LOCATED ON THE FLANGE OF THE PUMP ASSEMBLY

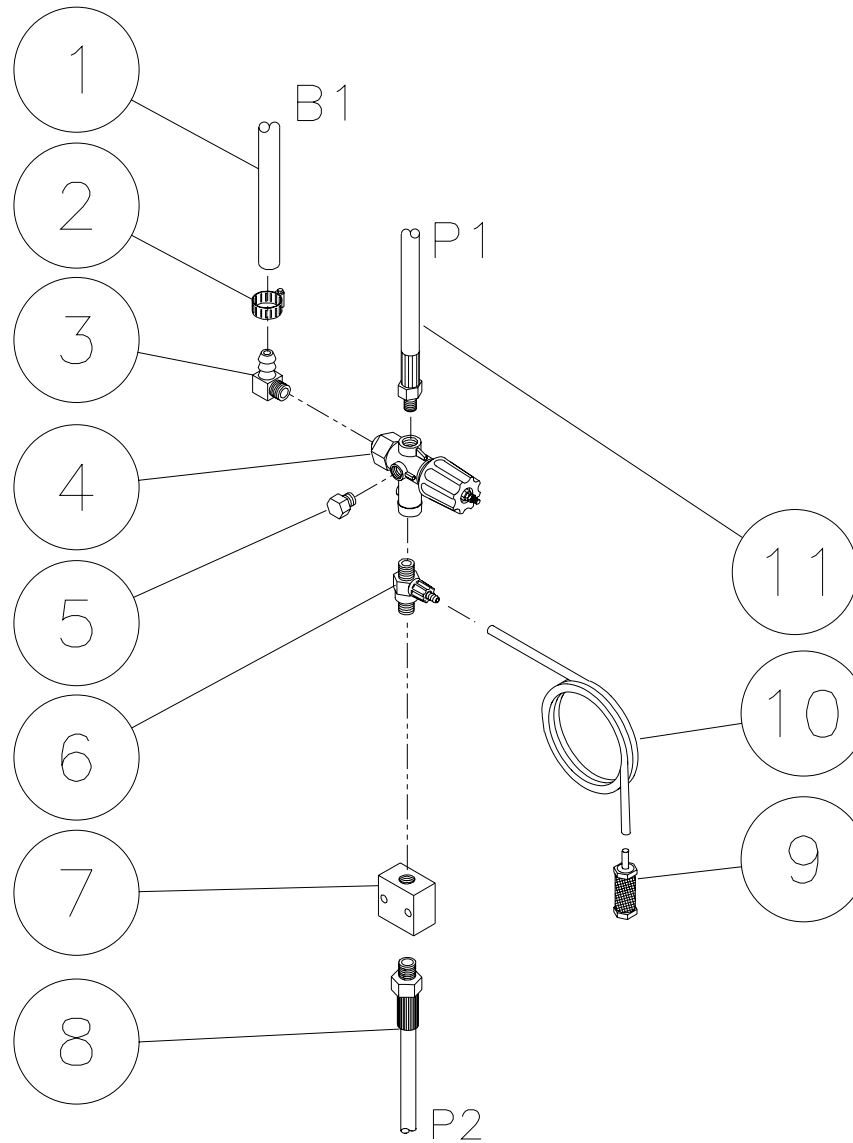


TORQUE SPEC'S	
POSITION	FT/LBS
1	4
20	4
22	3.6
42	4.4
52	9.4

## HIGH PRESSURE PUMP (3-0144)

REF. #	DESCRIPTION	PART #	QTY.	REF. #	DESCRIPTION	PART #	QTY.	REF. #	DESCRIPTION	PART #	QTY.
1	Bolt	27-8380	4	20	Bolt	27-8381	4	39	Spacer (See 70-0173)	N/A Sep.	3
2	Washer	26-0159	4	21	Gasket	26-0139	1	40	Spring (See 70-0173)	N/A Sep.	3
3	Oil Seal	46-0538	1	22	Oil Sight Gauge	22-0123	1	41	Washer (See 70-0173)	N/A Sep.	3
4	Bearing Case	46-0498	1	23	Piston Pin	46-0502	3	42	Slotted Nut	46-0317	3
5	O-ring	25-0298	1	24	Piston Rod	46-0688	3	43	O-ring	25-0297	6
6	Washer	46-0499	1	25	Seal Washer	46-0484	3	44	Back-up Ring	25-0294	6
7	Bearing	46-0500	1	26	Oil Seal	46-0485	3	45	Spacer Adapter	46-0510	3
8	Crankshaft	46-0687	1	27	Washer	46-0689	3	46	Valve Assembly (Includes 47-50) (See 70-0174)	N/A Sep.	3
9	Connecting Rod	46-0521	3	28	Backup Ring	25-0378	3	47	Valve Seat (See 70-0174)	N/A Sep.	3
10	Crankcase	46-0497	1	29	Spacer Adapter	25-0377	3	48	Valve (See 70-0174)	N/A Sep.	3
11	Oil Fill Cap	46-0523	1	30	Sleeve	46-0690	3	49	Spring (See 70-0174)	N/A Sep.	3
12	O-ring	25-0199	2	31	Seal Retainer	46-0504	3	50	Valve Cage (See 70-0174)	N/A Sep.	3
13	Washer (See 70-0170)	N/A Sep.	4	32	Low Pressure Seal (See 70-0172)	N/A Sep.	3	51	Outlet Manifold	46-0511	1
14	Lockwasher (See 70-0170)	N/A Sep.	4	33	Inlet Manifold	46-0506	1	52	Cap Screw	46-0533	8
15	Bolt (See 70-0170)	N/A Sep.	4	34	Plunger	46-0528	3	53	Set Screw	27-8895	2
16	Oil Drain Plug	39-0057	1	35	Adapter- Female	46-0508	3		Bolt Mounting Kit (Includes 4 each 3-15)	70-0170	
17	Bearing	46-0501	1	36	V-packing (See 70-0172)	N/A Sep.	6		Seal Kit (Includes 3 each 32, 36-37, 43)	70-0172	
18	O-ring	25-0293	1	37	Cotterpin	43-0064	3		Inlet Valve Kit (Includes 3 each 37-41, 43)	70-0173	
19	Cover	46-0525	1	38	Inlet Valve (See 70-0173)	N/A Sep.	3		Valve Kit (Includes 3 each 43, 44, 47-50)	70-0174	

# UNLOADER/MANIFOLD ASSEMBLY

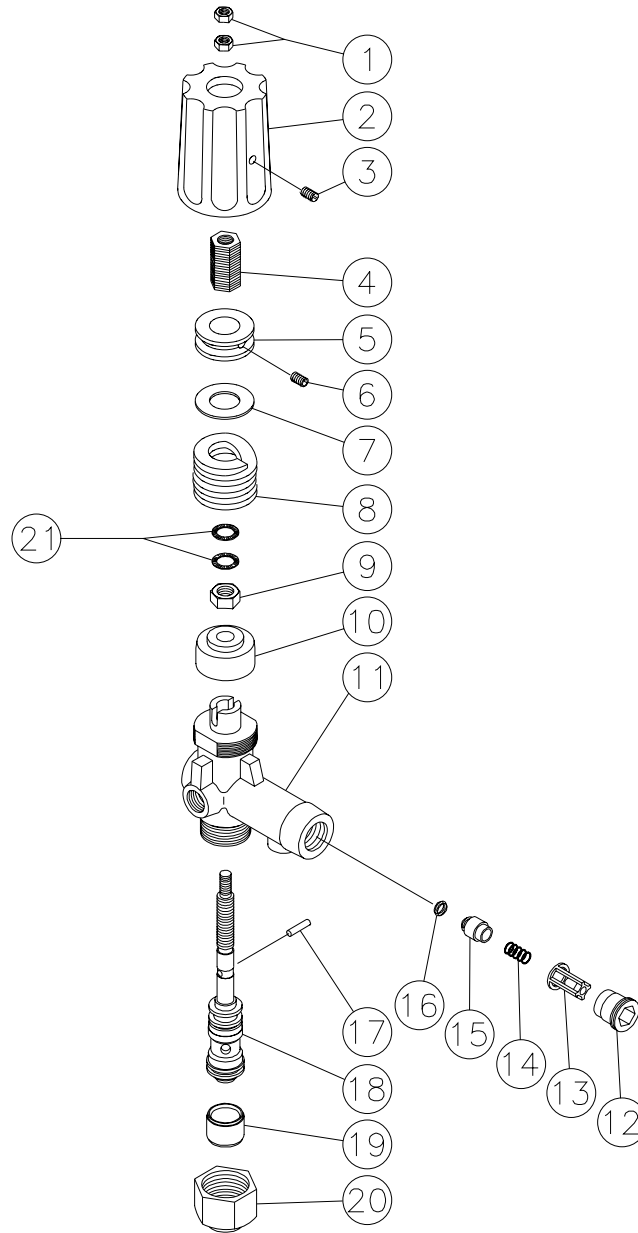


OMHSP080-120498-BAR

OMHSP080-120498-BAR

<b>UNLOADER/MANIFOLD ASSEMBLY</b>			
<b>REF. #</b>	<b>DESCRIPTION</b>	<b>PART #</b>	<b>QTY.</b>
1	Hose *(Two Feet Required)	15-0007	1
2	Hose Clamp	42-0011	1
3	Elbow	23-0119	1
4	Unloader Assembly	850-0252	1
5	Plug	23-0238	1
6	Detergent Injector	50-0052	1
7	Manifold Block	51-0026	1
8	High Pressure Hose Assembly	15-0202	1
9	Detergent Strainer	19-0050	1
10	Detergent Hose *(Six Feet Required)	15-0021	1
11	High Pressure Hose Assembly	15-0194	1
*Must Order in One Foot Lengths			

# UNLOADER (850-0252)

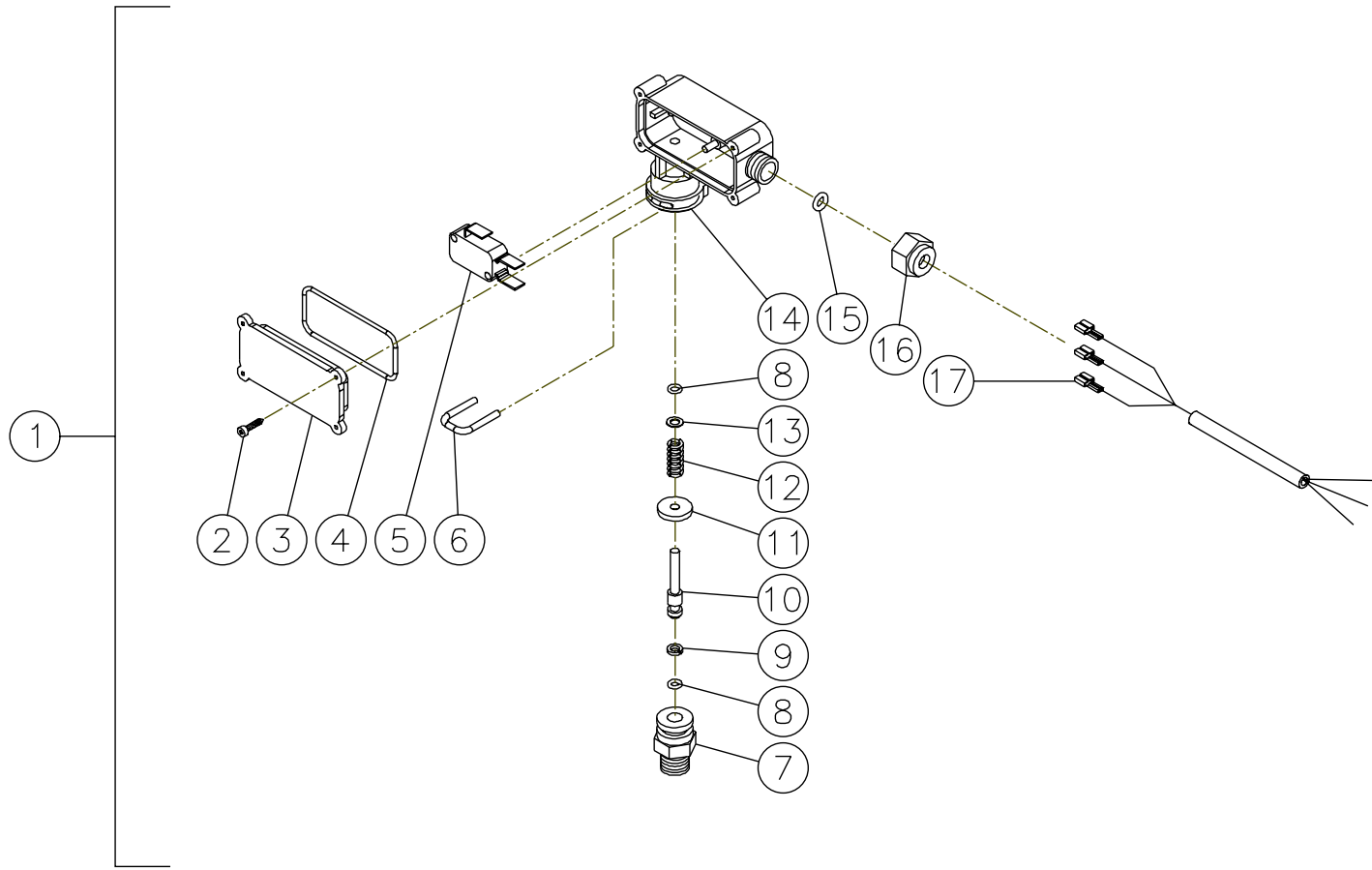


OMGEN163-101298-BAR



UNLOADER (850-0252)			
REF. #	DESCRIPTION	PART #	QTY.
1	Hex Nut	8-0362	2
2	Cover	7-0098	1
3	Set Screw	27-4280	1
4	Adjusting Insert- Brass	8-0363	1
5	Adjustment Nut	8-0364	1
6	Set Screw	8-0365	1
7	Glide Ring	8-0366	1
8	Spring	49-0104	1
9	Hex Nut	8-0367	1
10	Bushing	8-0368	1
11	Unloader Body	8-0369	1
12	Retainer	8-0269	1
13	Valve Housing	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 Repair Kit	70-0243	1
19	Spacer	8-0371	1
20	Stop Nut	8-0157	1
21	Washer	29-0154	2
	Check Valve Repair Kit (Includes 13-16)	70-0244	
	Unloader Complete	850-0252	

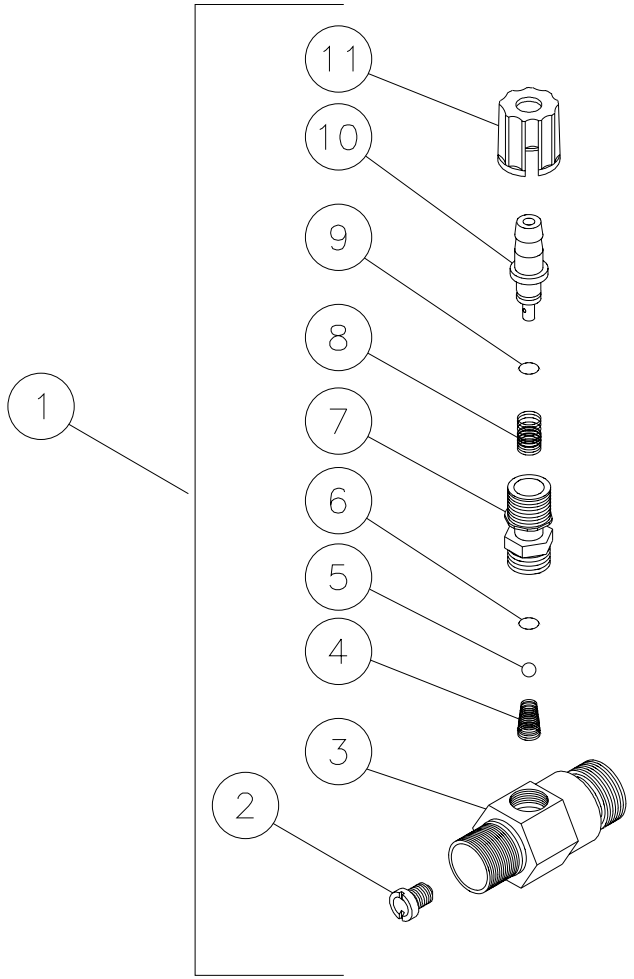
# PRESSURE SWITCH (22-0171)



22-0171-120799-BAR

PRESSURE SWITCH (22-0171)			
REF. #	DESCRIPTION	PART #	QTY.
1	Pressure Switch	22-0171	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	49-0144	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	

## DETERGENT INJECTOR (50-0052)

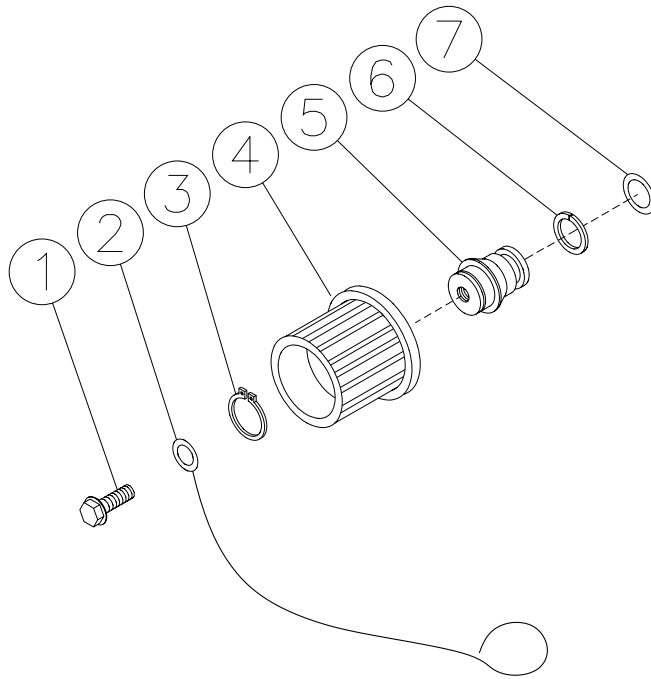


50-0052-072701-RD

DETERGENT INJECTOR (50-0052)			
REF. #	DESCRIPTION	PART #	QTY.
1	Detergent Injector (inc. 2-11)	50-0052	1
2	Orifice (2.1mm)	50-0057	1
3	Injector Body	N/A	1
4	Spring (See 852-0056)	N/A Sep.	1
5	Ball (See 852-0056)	N/A Sep.	1
6	O-ring (See 852-0056)	N/A Sep.	1
7	Piston Retainer	50-0156	1
8	Spring	49-0056	1
9	O-ring (See 852-0056)	N/A Sep.	1
10	Adjustable Shutter Barb	50-0157	1
11	Adjustment Knob	50-0158	1
	Injector Repair Kit (Includes 4-6, 8)	852-0056	

50-0052-072701-RD

## COIL DRAIN PLUG (850-0218)

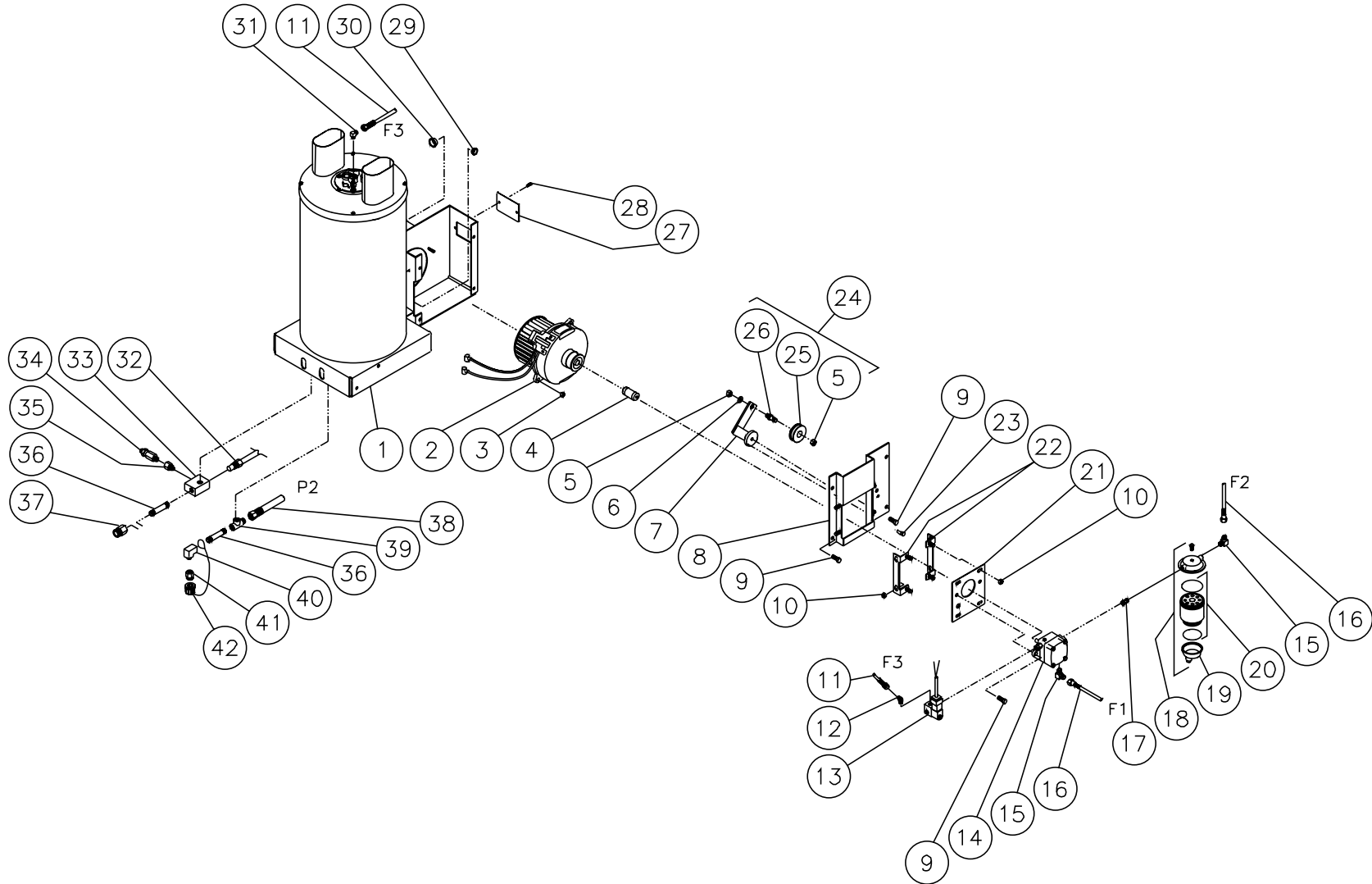


850-0218-041597-BAR

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

850-0218-041597-BAR

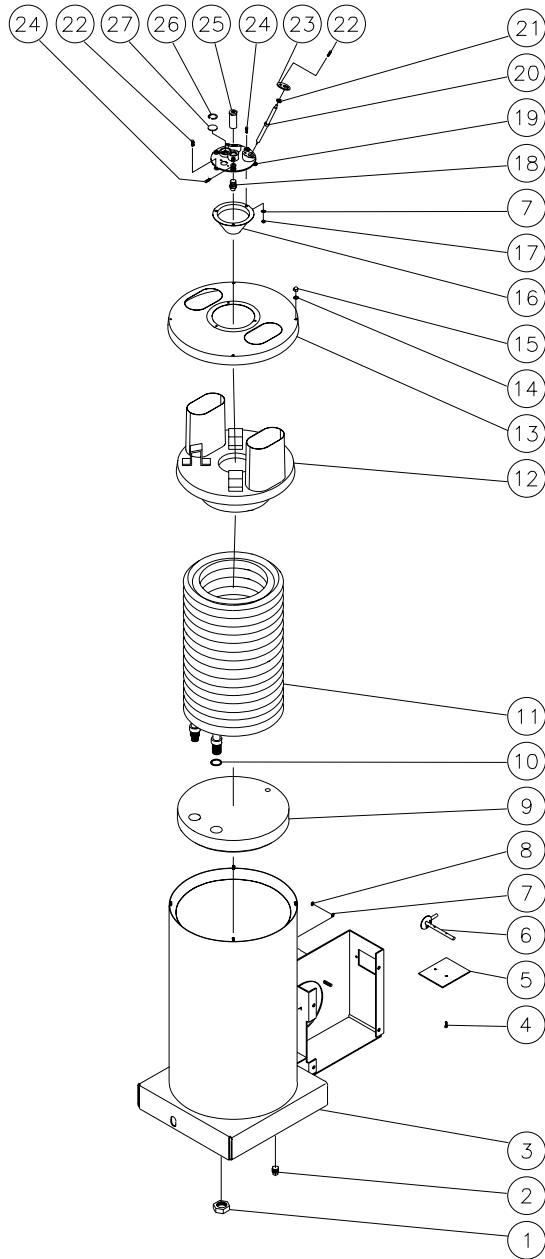
# HEAT EXCHANGER/EMF SYSTEM



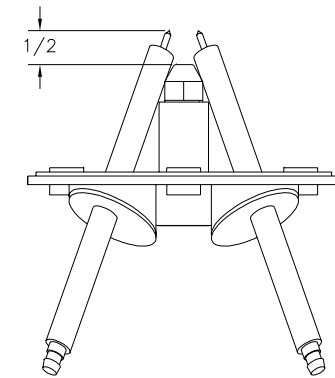
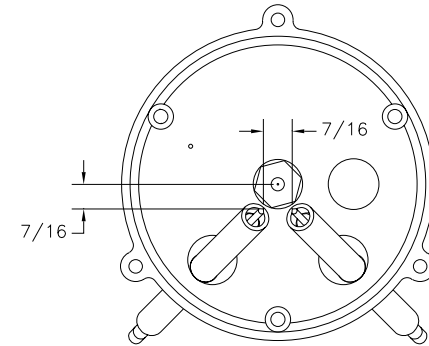
HSP083-032900-BAR

HEAT EXCHANGER/EMF SYSTEM							
REF. #	DESCRIPTION	PART #	QTY.	REF. #	DESCRIPTION	PART #	QTY.
1	Boiler Assembly Complete	850-0226	1	22	Bracket	20-0360A01	2
2	EMF Assembly	850-0257	1	23	Pin	33-0211	1
3	Hex Nut	30-3022	2	24	Tensioner Sheave Shaft Assembly (Inc. 5, 25, 26)	850-0166	1
4	Fuel Pump Coupler	33-0225	1	25	Sheave Assembly	850-0177	1
5	Nut	30-0159	2	26	Shaft	33-0212	1
6	Flatwasher	28-0022	1	27	Access Panel	20-0386A01	1
7	Tensioner Base	10-0071	1	28	Bolt	27-9526	2
8	Fuel Pump Bracket	20-0381A01	1	29	Grommet	32-0426	1
9	Bolt	27-9524	7	30	Gromment	32-0427	1
10	Hex Nut	30-3023	8	31	Elbow	23-0287	1
11	Fuel Hose Assembly	15-0165	1	32	High Limit Switch	32-0423	1
12	Elbow	23-0288	1	33	Outlet Connector Block	24-0138	1
13	Fuel Solenoid- 12 Volt	44-0100	1	34	Pressure Relief Valve	22-0273	1
14	Fuel Pump	3-0020	1	35	Adapter	23-0369	1
15	Elbow	23-0237	2	36	Nipple	24-0165	2
16	Fuel Hose	15-0147	2	37	Hex Reducer	23-0197	1
17	Hex Nipple	24-0145	1	38	High Pressure Hose Assembly	15-0202	1
18	Filter Fuel Water Seperator	19-0070	1	39	Street Tee	23-0058	1
19	Fuel Water Seperator Replacement Bowl	19-0071	1	40	Elbow	23-0306	1
20	Fuel Water Seperator Replacement Filter	19-0053	1	41	Adapter	23-0279	1
21	Plate	20-0363A01	1	42	Drain Plug Assembly	850-0218	1

# BOILER ASSEMBLY (850-0226)



## ELECTRODE GAP SETTINGS

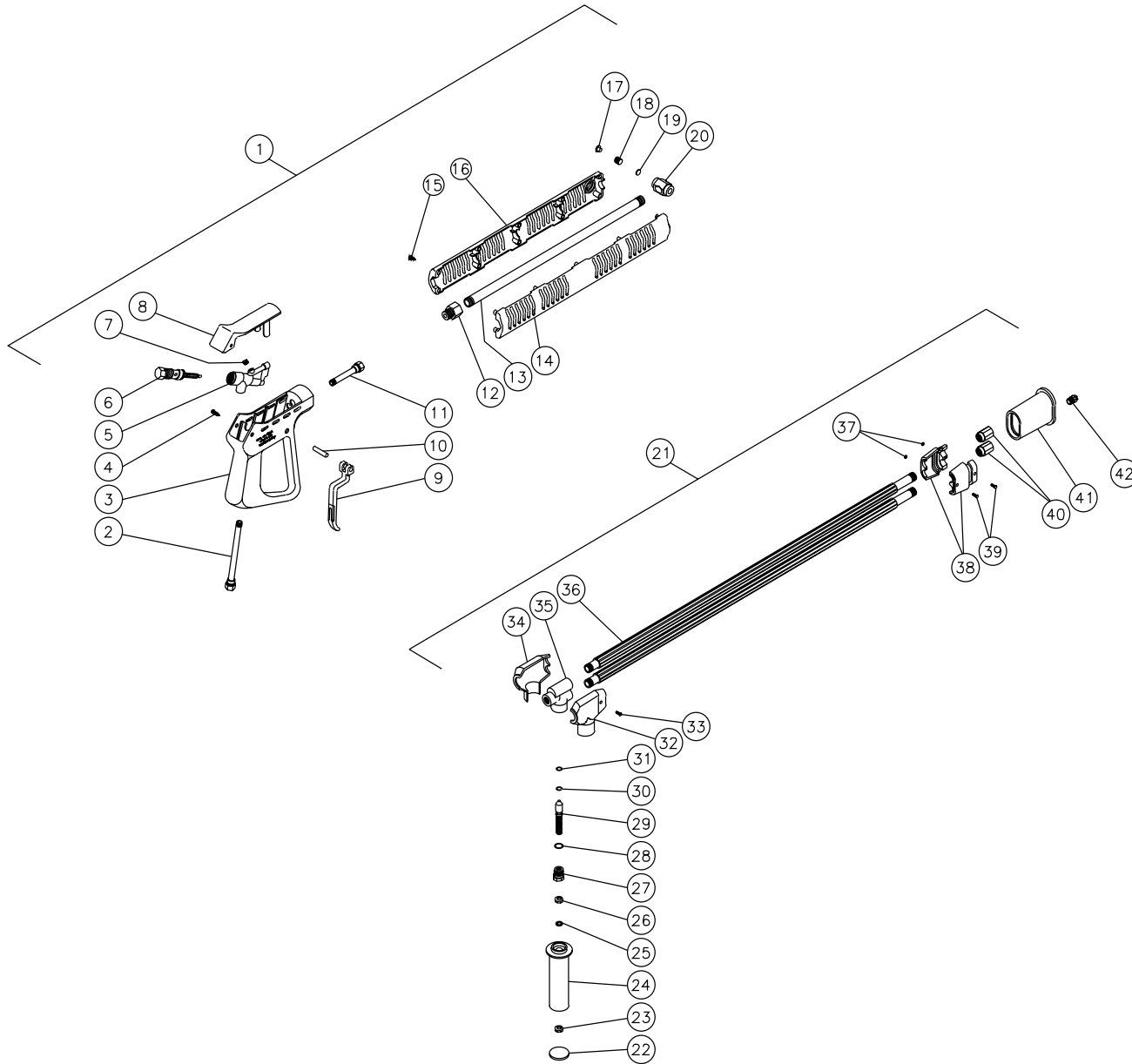




**BOILER ASSEMBLY (850-0226)**

REF. #	DESCRIPTION	PART #	QTY.	REF. #	DESCRIPTION	PART #	QTY.
1	Hex Nut	30-0121	2	15	Acorn Nut	30-6002	4
2	Plug	24-0034	1	16	Cone	20-0373	1
3	Heat Exchanger Outer Wrap- Black	20-0376A01	1	17	Nut	30-6001	3
4	Bolt	27-8879	2	18	Fuel Nozzle	18-0308	1
5	Air Diverter Plate- Black	20-0378A01	1	19	Electrode Plate	38-0046	1
6	Air Diverter Stem Assembly- Black	20-0377A01	1	20	Washer	28-0523	4
7	Lockwasher	28-1009	4	21	Electrode	32-0420	2
8	Hex Nut	30-0137	1	22	Bolt	27-9526	5
9	Bottom Insulation	33-0250	1	23	Electrode Mounting Clip- Black	20-0383A01	2
10	Washer	28-0521	2	24	Bolt	27-8878	4
11	Heat Exchanger Coil Assembly	66-0011	1	25	Nozzle Holder	23-0292	1
12	Inner Pan Assembly	20-0372	1	26	Snap Ring	33-0254	1
13	Top Pan Assembly- Black	20-0371A01	1	27	Sight Glass	33-0252	1
14	Lockwasher	28-1028	4		Boiler Assembly Complete (Inc. 1-27)	850-0226	

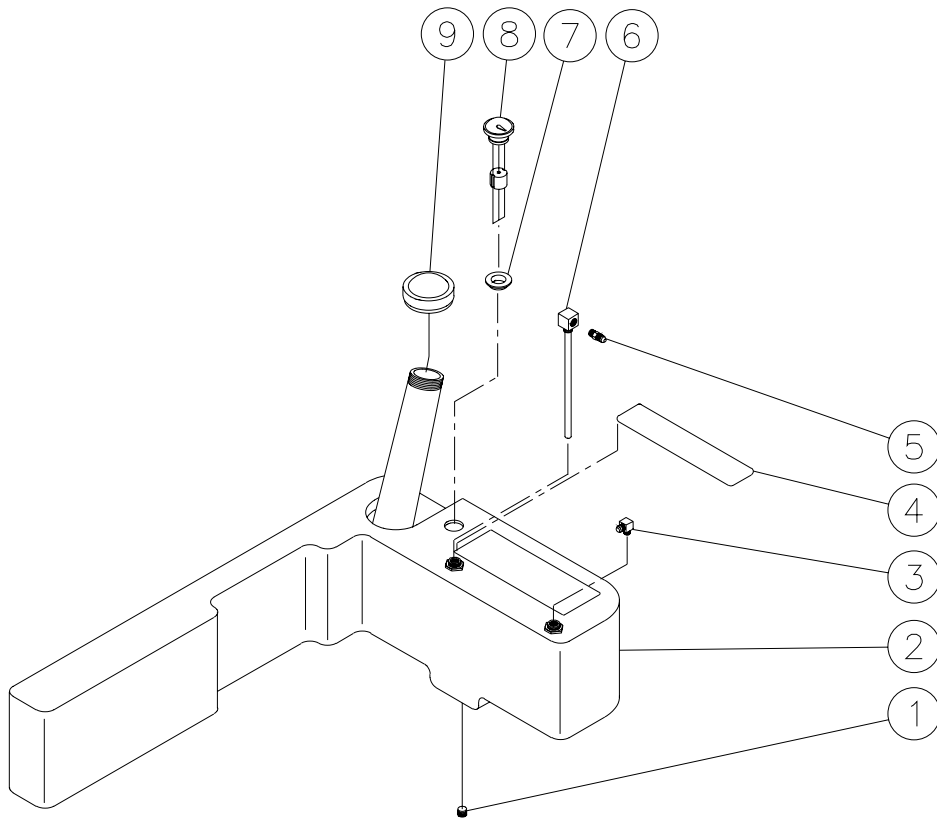
# GUN (850-0181) & ADJUSTABLE PRESSURE DUAL LANCE (850-0180)



HSP051-051597-JTR

GUN (850-0181) & ADJUSTABLE PRESSURE DUAL LANCE (850-0180 AND 850-0185)							
REF. #	DESCRIPTION	PART #	QTY.	REF. #	DESCRIPTION	PART #	QTY.
1	Gun/Lance Assembly (Includes 2-20)	850-0181	1	24	Handle	16-0313	1
2	Pipe Assembly	16-0016	1	25	Washer	28-1021	1
3	Plastic Housing	16-0008	1	26	Nut	30-3010	1
4	Screw	27-3230	2	27	Adaptor	23-0271	1
5	Housing	16-0012	1	28	O-ring	25-0351	1
6	Gun Repair Kit	70-0055	1	29	Piston	16-0314	1
7	Plug	39-0024	1	30	Back-up Ring	25-0352	1
8	Cover	16-0009	1	31	O-ring	25-0353	1
9	Trigger Safety Lock-off	16-0010	1	32	Upper Protector	16-0315	1
10	Trigger Pin	16-0063	1	33	Screw	27-8862	1
11	Pipe Assembly	16-0013	1	34	Lower Protector	16-0316	1
12	Adaptor	16-0283	1	35	Body	23-0272	1
13	Pipe	16-0277	1	36	Lance w/Protective Cover 36"	16-0328	2
14	Guard Lance (Right Side)	16-0320	1	-	Lance w/Protective Cover 48"	16-0317	2
15	Screw	27-8382	6	37	Nut	30-3060	2
16	Guard Lance (Left Side)	16-0321	1	38	Pipe Clamp	16-0318	2
17	Plug	39-0076	1	39	Screw	27-8861	2
18	Screw	49-0103	1	40	Nipple	24-0127	2
19	Spacer	16-0282	1	41	Nozzle Protector	16-0319	1
20	Lance Holder (See 16-0306)	N/A Sep.	1	42	Nozzle- 4060	18-0110	1
21	Dual Lance Assembly (Includes 22-42) 36"	850-0185	1		Gun Assembly ( Includes 12-20)	16-0001	
-	Dual Lance Assembly (Includes 22-42) 48"	850-0180	1		Lance Assembly (Includes 13-21)	16-0306	
22	Handle Plug	16-0312	1		O-ring Kit (Includes 28, 30, 31)	70-0143	
23	Nut	30-3002	1				

## FUEL TANK (850-0248)

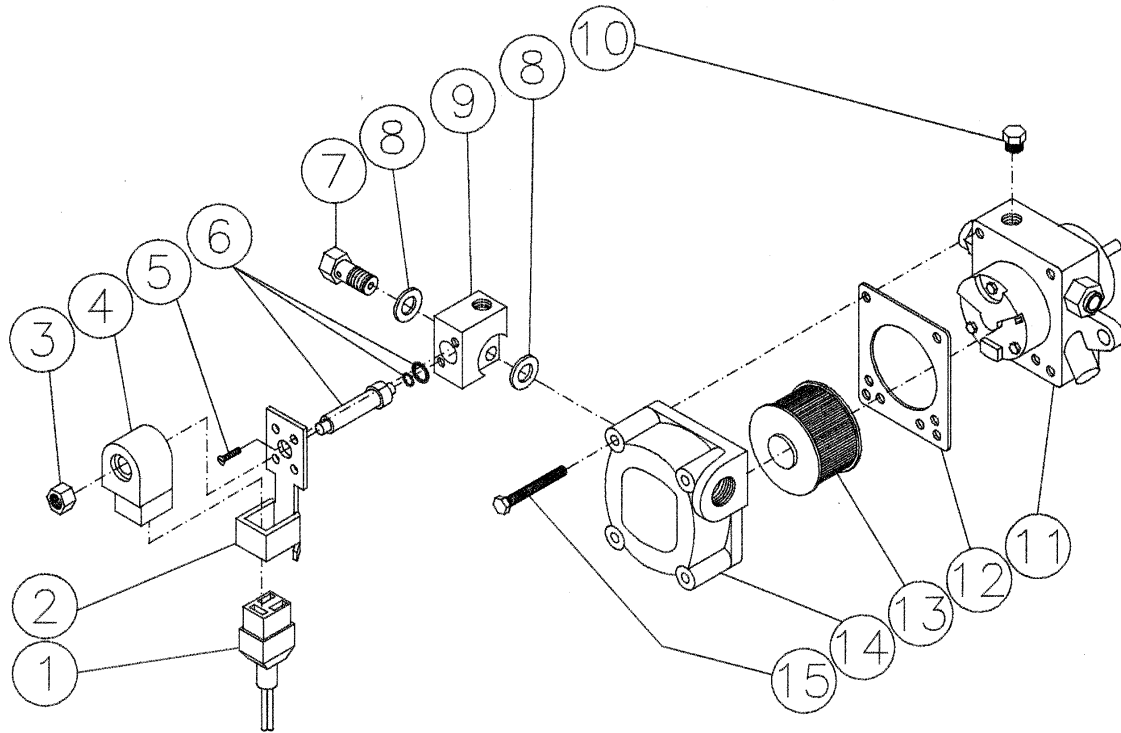


850-0193A-012098-BAR

FUEL TANK (850-0248)			
REF. #	DESCRIPTION	PART #	QTY.
1	Plug	23-0296	1
2	Fuel Tank (See 850-0193)	N/A Sep.	1
3	Elbow	23-0237	1
4	Decal-Warning: Risk of Fire (E/S)	34-0806	1
5	Flare	23-0247	1
6	Fuel Pick-up Line	33-0270	1
7	Bushing	33-0255	1
8	Fuel Indicator Gauge	22-0215	1
9	Fuel Cap-Vented	12-0033	1

850-0193-012098-BAR

## FUEL PUMP (3-0020) & FUEL SOLENOID (44-0100)



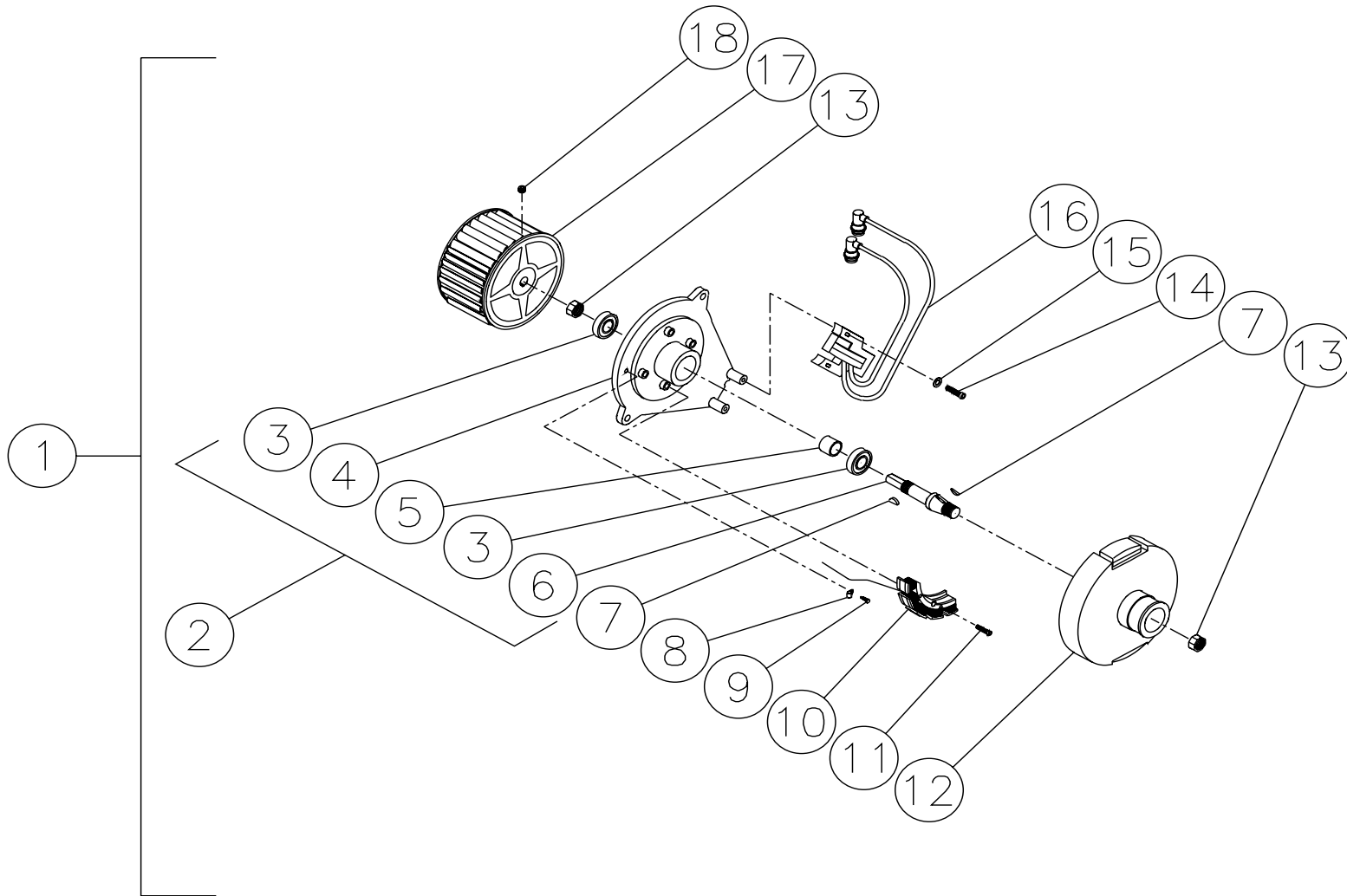
0MHSP049/071796/BAR

**FUEL PUMP (3-0020) & FUEL SOLENOID (44-0100)**

REF. #	DESCRIPTION	PART #	QTY.
1	Cord-Din Connector	46-1017	1
2	Base Plate	46-1014	1
3	Nut	46-1016	1
4	Solenoid Coil- 12 Volt	46-1015	1
5	Screw	N/A	2
6	Piston	46-1012	1
7	Bolt	46-1009	1
8	Washer	26-0150	2
9	Solenoid Body	N/A	1
10	Plug	24-0082	1
11	Fuel Pump Body	N/A	1
12	Cover Gasket	26-0109	1
13	Fuel Oil Strainer	19-0034	1
14	Fuel Pump Cover	46-1005	1
15	Fuel Pump Cover Screw	46-1006	4

0MHSP049-071796-BAR

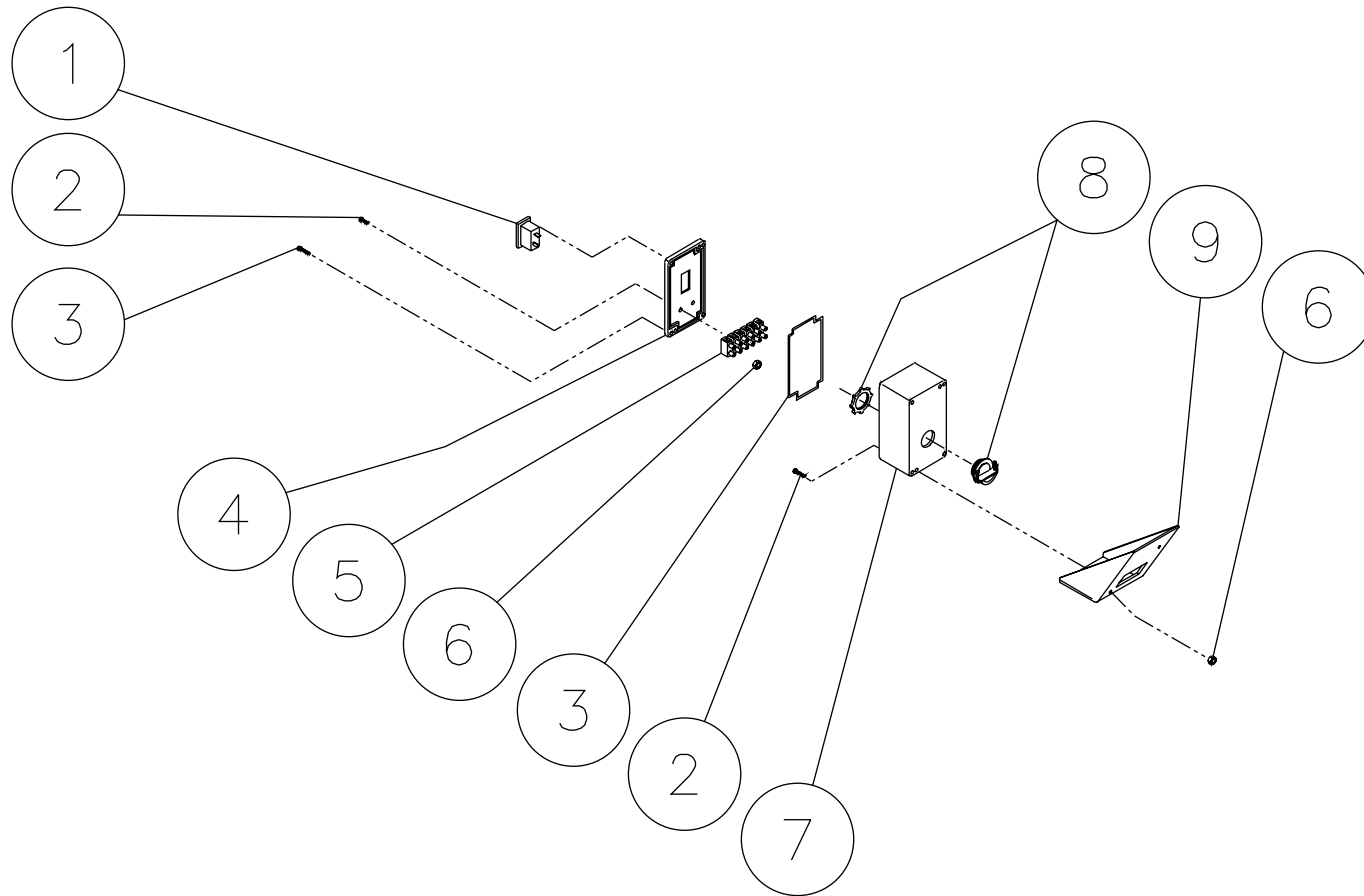
# EMF SYSTEM (850-0257)



OMHSP072-113099-BAR

<b>EMF SYSTEM (850-0257)</b>			
<b>REF. #</b>	<b>DESCRIPTION</b>	<b>PART #</b>	<b>QTY.</b>
1	EMF Assembly	850-0257	1
2	Blower Flange Assembly	850-0258	1
3	Bearing	48-0041	2
4	Flange Blower	38-0040	1
5	Spacer	33-0206	1
6	Shaft- Blower/ Electric	20-0347	1
7	Woodruff Key	43-0080	2
8	Cable Clamp	32-0403	1
9	Screw	27-2070	1
10	Stator Coil	850-0201	1
11	Screw	27-0740	2
12	Flange Magnet Hub	38-0041	1
13	Hex Nut	30-0177	2
14	Bolt	27-8898	2
15	Flatwasher	28-0002	2
16	Ignition Coil Assembly	850-0191	1
17	Blower Fan	44-0099	1
18	Screw Set w/ Fan	30-3021	1

# ELECTRIC BOX

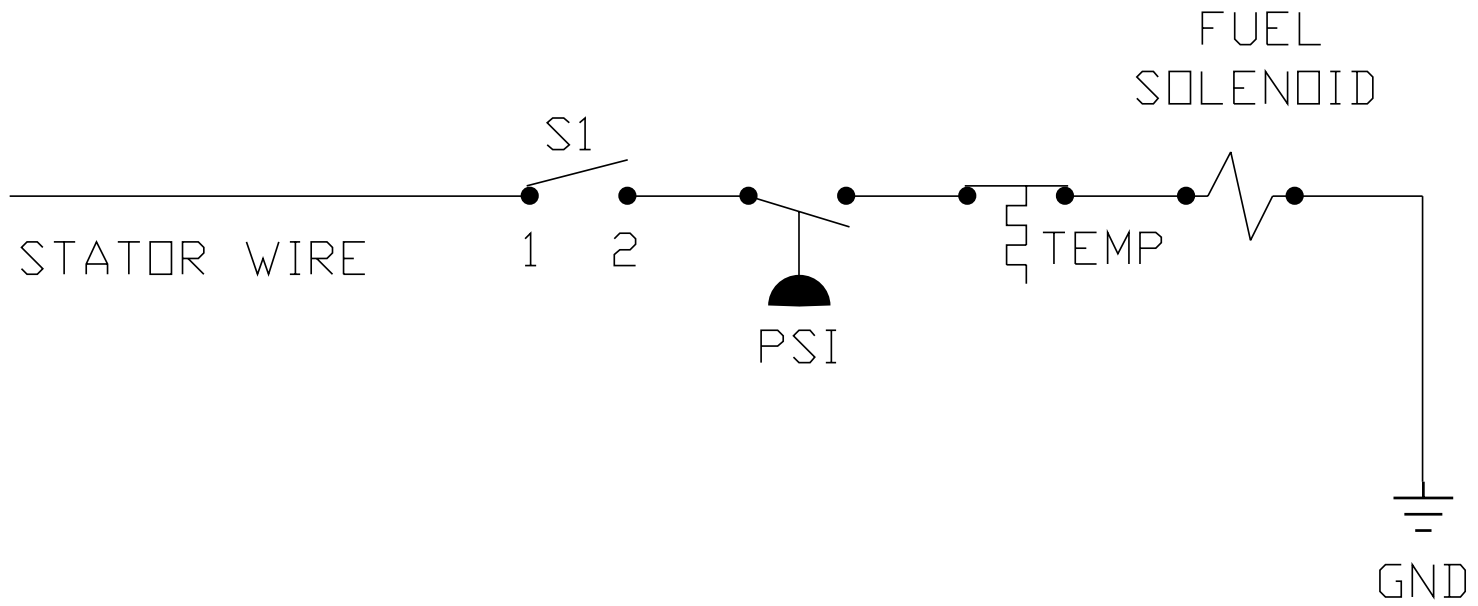




OMHSP082-120498-BAR

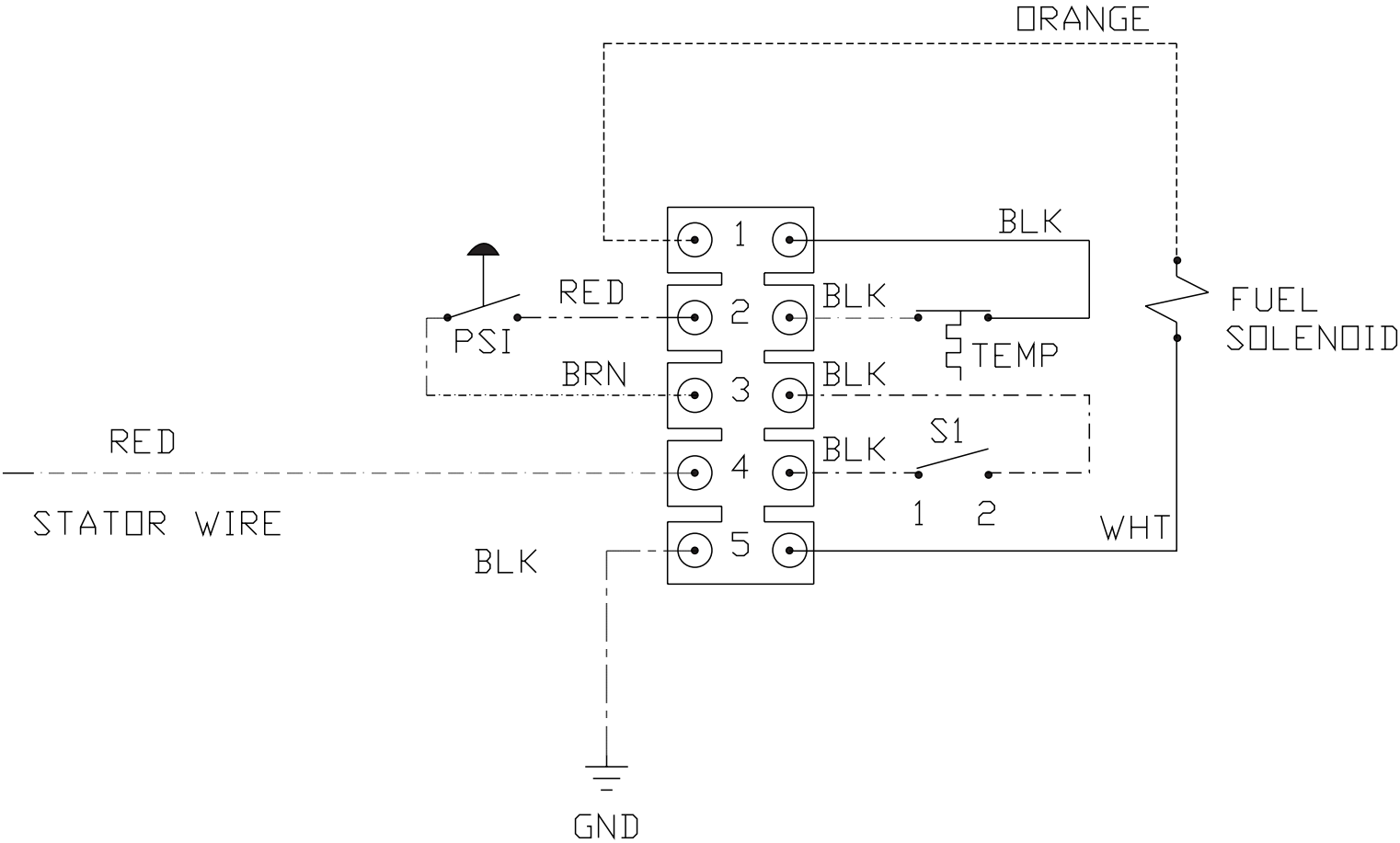
<b>ELECTRIC BOX</b>			
<b>REF. #</b>	<b>DESCRIPTION</b>	<b>PART #</b>	<b>QTY.</b>
1	Switch/ Rocker	32-0422	1
2	Bolt	27-8881	4
3	Bolt and Gasket Kit	70-0169	1
4	Electric Box Lid- Black	32-0430A01	1
5	Terminal Strip	32-0394	1
6	Hex Nut	30-0152	4
7	Electric Box- Black	32-0429A01	1
8	Electrical Connector	32-0085	1
9	Electric Box Bracket- Black	20-0380A01	1

# WIRING SCHEMATIC



OMHSP050A-051697-BAR

# WIRING DIAGRAM



OMHSP050B-051697-BAR

