

**PARTS LIST FOR**  
**3004/3504/4004 SERIES**  
**PORTABLE**  
**GASOLINE DRIVEN/DIRECT DRIVE**  
**TOP FIRED OIL HEATED**  
**HOT WATER PRESSURE WASHER**  
**ELECTRIC START**

GH-3004-0EGM Replacement Parts

For parts Call 888-279-9274

ENGINE OIL GRADE:  
HONDA/SUBARU/KOHLER:  
VANGUARD:  
ENGINE OIL CAPACITY:  
HONDA (GX390):  
SUBARU (EX27, EX40):  
KOHLER (CH440):  
VANGUARD (408cc):  
Mi-T-M (420cc):

SAE10W-30  
SAE10W-30  
37 oz.  
40.6 oz.  
44.8 oz.  
32 oz.  
37.2 oz.

PUMP OIL GRADE:  
PUMP OIL CAPACITY:  
4004  
3004 / 3504  
BTU INPUT:  
3004 / 3504 / 4004  
PRESSURE NOZZLE SIZE:  
3504 / 4004  
3004

PUMP OIL #AW-4085-0016  
18.5 oz.  
15 oz.  
294,000 / hour  
3.5  
4.0

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

**SERIAL BREAK NUMBER:**

#15010743

**SERIAL BREAK EXPLANATION:**

ADDED BRAKE ASSEMBLY TO UNIT.

05/02/05

CHANGED GUN FROM 850-0181 TO 16-0001.  
CHANGED LANCE FROM 850-0180 TO 16-0417.

#15048210

CHANGES WITH IN 850-0226

02/15/2012

#15070469

ADDED KOHLER ENGINE

04/30/2012

#15074024

IGNITION COIL ASSEMBLY UPDATE. EMF CHANGES NEW STATOR COIL/HUB ASSEMBLY

03/07/2018

#11057621

REMOVED SUBARU ENGINES

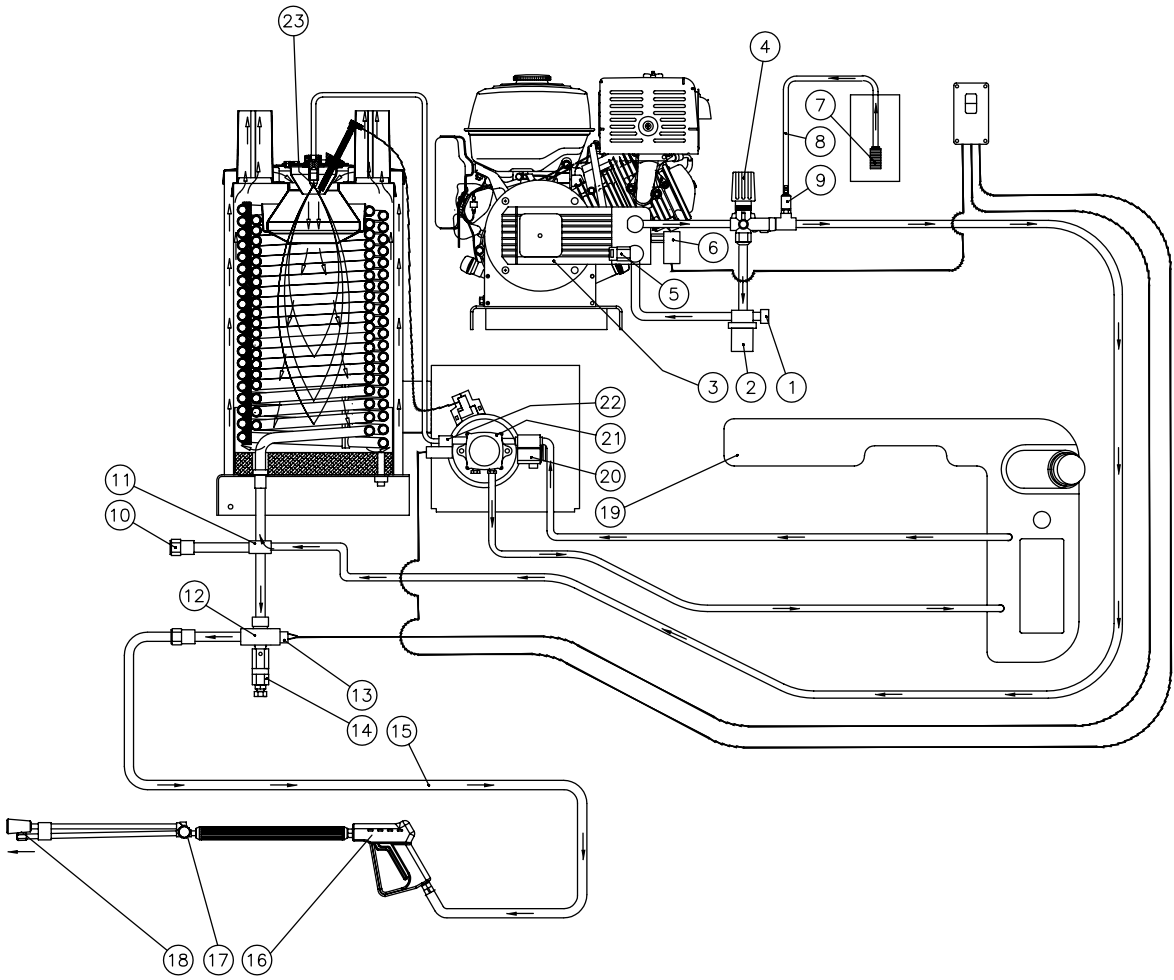
04/06/2021

ADDED MITM AND VANGUARD ENGINES

## SPECIFICATIONS

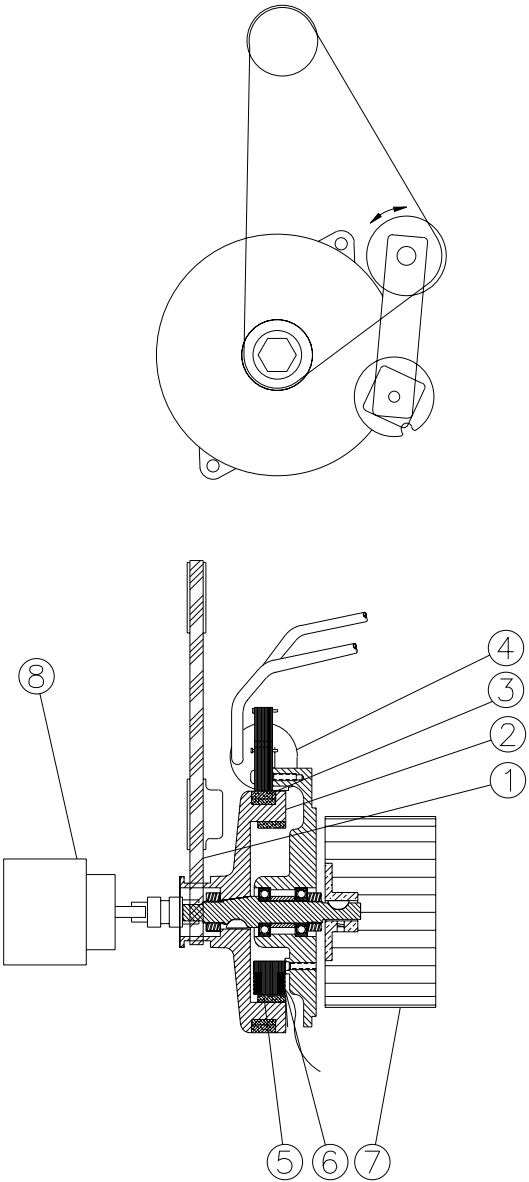
|                                       |                                                                            |             |                   |             |            |            |                   |
|---------------------------------------|----------------------------------------------------------------------------|-------------|-------------------|-------------|------------|------------|-------------------|
|                                       | 4004                                                                       | 4004        | 3504              | 3504        | 3504       | 3504       | 3004              |
| Operating Pressure (PSI/Bar):         | 4000/276 (+/-5%)                                                           |             | 3500/241 (+/- 5%) |             |            |            | 3000/207 (+/- 5%) |
| Water Volume (GPM/lpm):               | 3.3/12.5 (+/- 5%)                                                          |             |                   |             |            |            | 3.5/13.2(+/- 5%)  |
| Outlet Water Temperature (F/C):       | 140°F/78°C (+/- 20°F) rise above inlet ambient (210°F/ 99°C maximum)       |             |                   |             |            |            |                   |
| Engine:                               | Honda                                                                      | Kohler      | Honda             | Kohler      | Mi-T-M     | Vanguard   | Honda             |
| Model                                 | GX390                                                                      | CH440       | GX390             | CH440       | 420cc      | 408cc      | GX390             |
| Engine Type                           | Four Stroke, Overhead Valve, Single Cylinder                               |             |                   |             |            |            |                   |
| Oil Type                              | SAE10W-30                                                                  |             |                   |             |            |            |                   |
| Oil Capacity (oz./ liter)             | 37/1.1                                                                     | 44.8/1.3    | 37/1.1            | 44.8/1.3    | 37.2/1.1   | 32/0.95    | 37/1.1            |
| Low Oil Protection                    | Oil Alert™                                                                 | Oil Sentry™ | Oil Alert™        | Oil Sentry™ | Oil Alert™ | Oil Sensor | Oil Alert™        |
| Fuel Type                             | Unleaded Gasoline 86 Octane Minimum                                        |             |                   |             |            |            |                   |
| Fuel Capacity (gal./ liter)           | 1.72/6.5                                                                   | 1.85/7.0    | 1.72/6.5          | 1.85/7.0    | 1.8/6.8    | 1.5/5.7    | 1.72/6.5          |
| Starting                              | Recoil Rope                                                                |             |                   |             |            |            |                   |
| Maximum No Load RPM                   | 3600 (+/- 100)                                                             |             |                   |             |            |            |                   |
| High Pressure Pump:                   | Direct Driven, Oil Bath, Triplex Piston                                    |             |                   |             |            |            |                   |
| Oil Type                              | SAE30W Non-Detergent                                                       |             |                   |             |            |            |                   |
| Oil Capacity (oz./liters)             | 18.5/55                                                                    |             | 15/44             |             |            |            |                   |
| 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                         |             |                   |             |            |            |                   |
| Detergent Injector:                   | Adjustable Low Pressure downstream from pump                               |             |                   |             |            |            |                   |
| Burner Fuel System:                   |                                                                            |             |                   |             |            |            |                   |
| 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 Continuous Burning                                                 |             |                   |             |            |            |                   |
| 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                             | 294,000                                                                    |             |                   |             |            |            |                   |
| Efficiency                            | 86% 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):             | 428/194                                                                    | 434/197     | 428/194           | 434/197     | 432/196    | 435/197    | 428/194           |
| Unit Shipping Weight (Lbs/kg):        | 551/250                                                                    | 557/253     | 551/250           | 557/253     | 555/252    | 558/253    | 551/250           |
| Unit Net Dimension (In/cm):           | 43Lx 30Wx 41H/109L x 76W x 104H                                            |             |                   |             |            |            |                   |
| Unit Shipping Dimension (In/cm):      | 46.5L x 31.5W x 48.5H/118L x 80W x 123H                                    |             |                   |             |            |            |                   |

# FLOW CHART



OMHSP090-040705-RZ

# 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 PRESSURE 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.

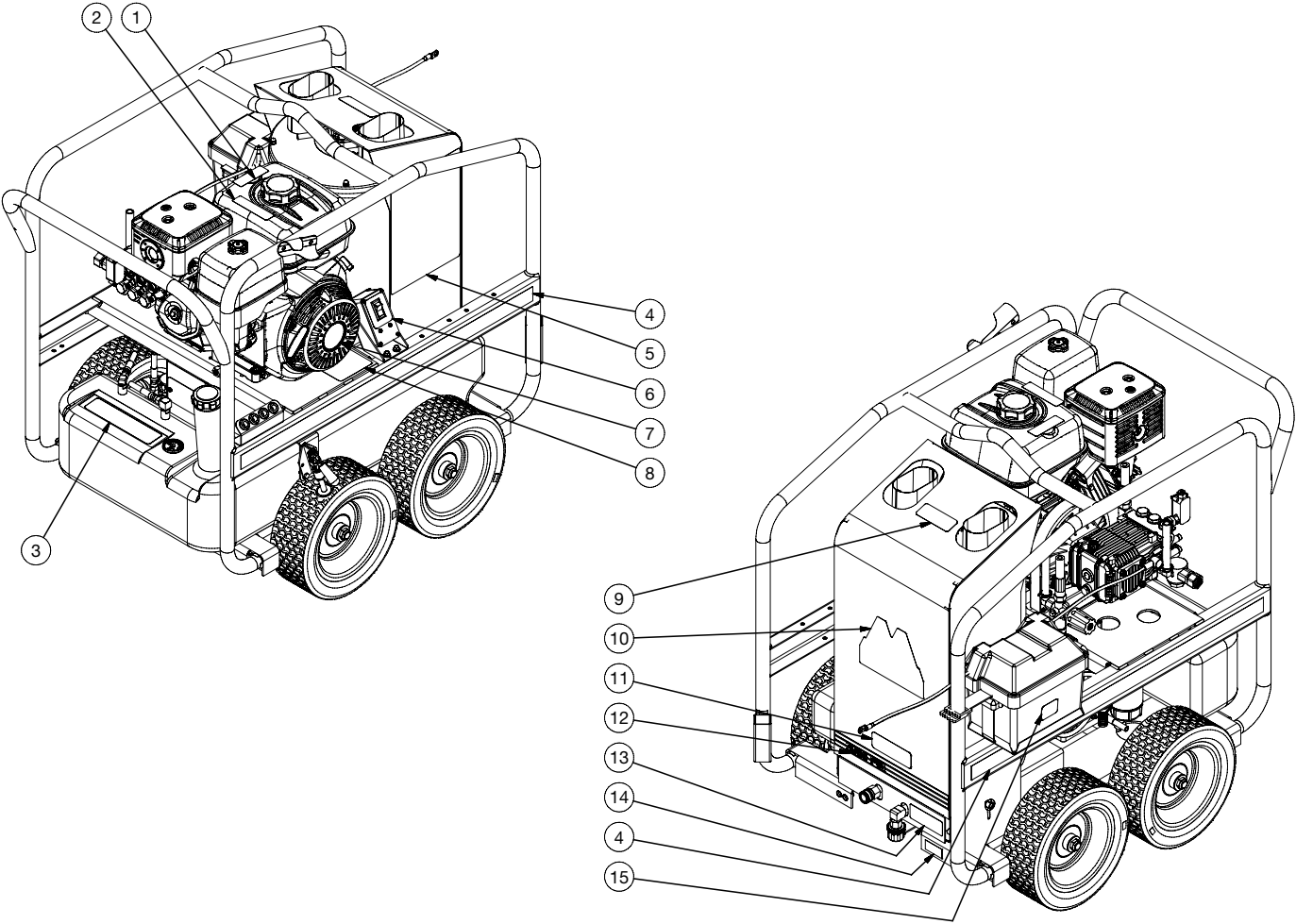
**EMF SYSTEM:** The patented Electro Magnetic Firing (EMF) System is an integrated system which gives all the requirements for combustion.

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 the hub by means of a flexible coupler.

DECAL PLACEMENT

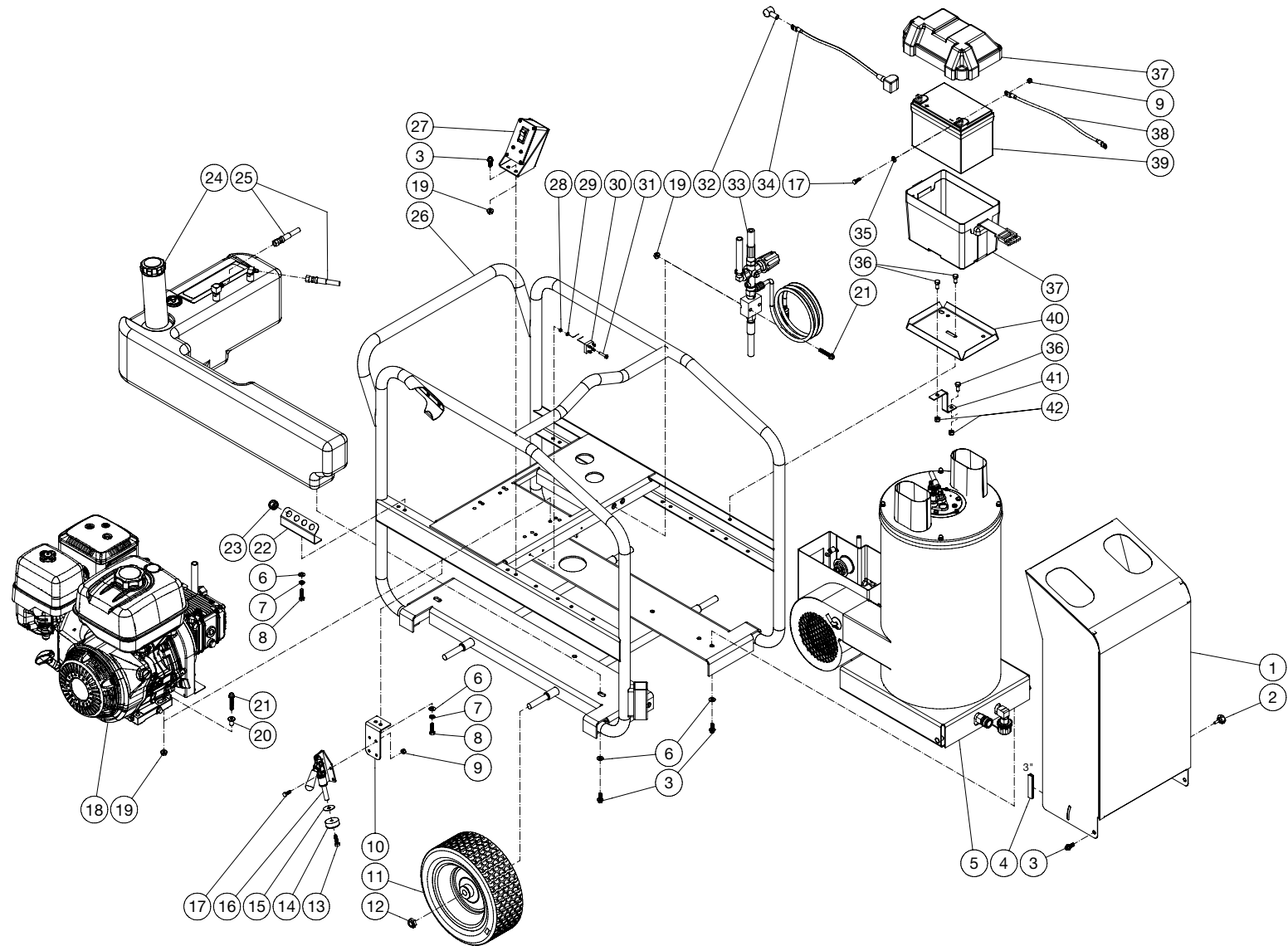


GH-3004\_3504\_4004-0EGH\_0EGM DECAL PLACEMENT 031824

## DECAL PLACEMENT

| GH-3004_3504_4004-0EGH_0EGM DECAL PLACEMENT 031824 |                                                  |         |     |
|----------------------------------------------------|--------------------------------------------------|---------|-----|
| DECAL PLACEMENT                                    |                                                  |         |     |
| ITEM                                               | DESCRIPTION                                      | PART #  | QTY |
| 1                                                  | DECAL - RISK OF FIRE (SEE 71-0010)               | N/A     | 1   |
| 2                                                  | DECAL - RISK OF BURNS (SEE 71-0010)              | N/A     | 1   |
| 3                                                  | DECAL - CAUTION: RISK OF FIRE (SEE 71-0010)      | N/A     | 1   |
| 4                                                  | DECAL - Mi-T-M STRIPE                            | N/A     | 2   |
| 5                                                  | DECAL - WARNING/CAUTION/OPERATION (SEE 71-0010)  | N/A     | 1   |
| 6                                                  | DECAL - BURNER ON/OFF (SEE 71-0010)              | N/A     | 1   |
| 7                                                  | DECAL - REWIND 420CC                             | 34-2865 | 1   |
| 8                                                  | DECAL - DATA PLATE                               | N/A     | 1   |
| 9                                                  | DECAL - HOT SURFACES (SEE 71-0010)               | N/A     | 1   |
| 10                                                 | DECAL - Mi-T-M                                   | N/A     | 1   |
| 11                                                 | DECAL - GRAINGER 800# LARGE (SEE 71-0010)        | N/A     | 1   |
| 12                                                 | DECAL - 14" STRIPE                               | N/A     | 1   |
| -                                                  | DECAL - 14" STRIPE W/3500PSI                     | N/A     | 1   |
| -                                                  | DECAL - 14" STRIPE W/4000PSI                     | N/A     | 1   |
| 13                                                 | DECAL - WARNING: RISK OF EXPLOSION (SEE 71-0010) | N/A     | 1   |
| 14                                                 | DECAL - MADE IN USA                              | 34-3553 | 1   |
| 15                                                 | DECAL - RISK OF INJURY (SEE 71-0010)             | N/A     | 1   |
| -                                                  | DECAL SET                                        | 71-0010 | 1   |

# FRAME ASSEMBLY

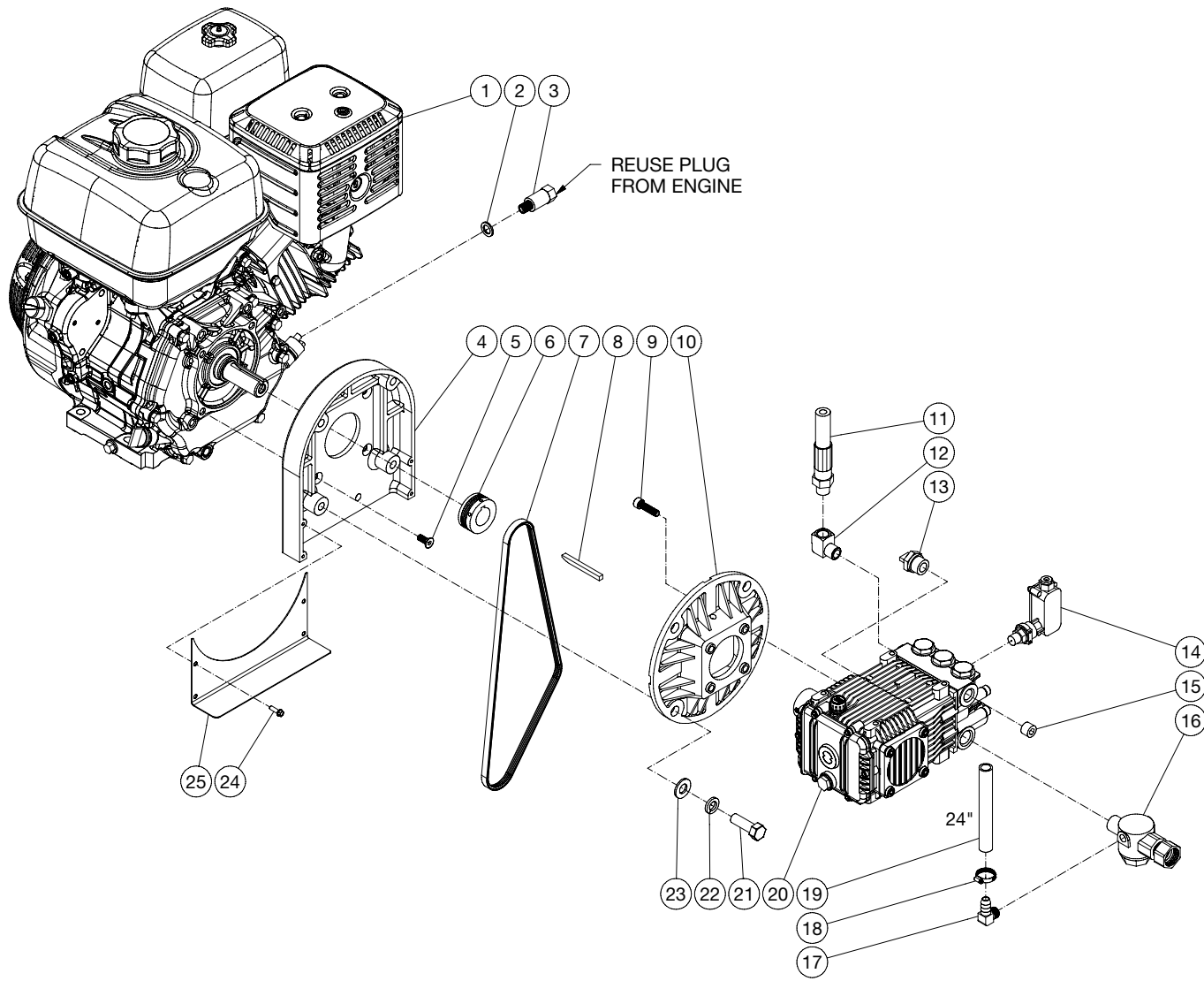


For parts Call 888-279-9274

## FRAME ASSEMBLY

| GH-3004_3504_4004-0EGH_0EGM UNIT ASSY 031824 |                               |            |     |
|----------------------------------------------|-------------------------------|------------|-----|
| FRAME ASSEMBLY                               |                               |            |     |
| ITEM                                         | DESCRIPTION                   | PART #     | QTY |
| 1                                            | HOOD                          | 20-0379A18 | 1   |
| 2                                            | KNOB                          | 62-0057    | 1   |
| 3                                            | BOLT                          | 27-9524    | 11  |
| 4                                            | EDGING *(ONE FOOT REQUIRED)   | 33-0020    | 1   |
| 5                                            | HEAT EXCHANGER / EMF ASSEMBLY | N/A        | 1   |
| 6                                            | WASHER                        | 28-0003    | 11  |
| 7                                            | LOCKWASHER                    | 29-0007    | 4   |
| 8                                            | BOLT                          | 27-0068    | 4   |
| 9                                            | LOCKNUT                       | 30-0155    | 4   |
| 10                                           | BRAKE BRACKET                 | 20-1358A18 | 1   |
| 11                                           | WHEEL                         | 14-0150    | 4   |
| 12                                           | LOCKNUT                       | 30-0117    | 4   |
| 13                                           | BOLT                          | 27-0067    | 1   |
| 14                                           | ISOLATOR                      | 14-0174    | 1   |
| 15                                           | WASHER                        | 28-0057    | 1   |
| 16                                           | PUSH/PULL TOGGLE CLAMP        | 33-0400    | 1   |
| 17                                           | BOLT                          | 27-0015    | 4   |
| 18                                           | ENGINE/ PUMP ASSEMBLY         | N/A        | 1   |
| 19                                           | NUT                           | 30-3023    | 8   |
| 20                                           | SHIM                          | 33-0169    | 4   |
| 21                                           | BOLT                          | 27-9529    | 6   |
| 22                                           | NOZZLE HOLDER                 | 20-1198A18 | 1   |
| 23                                           | GROMMET                       | 33-0001    | 4   |
| 24                                           | FUEL TANK ASSEMBLY            | 850-0193   | 1   |
| 25                                           | FUEL HOSE                     | 15-0147    | 2   |
| 26                                           | FRAME                         | 5-0120A18  | 1   |
| 27                                           | ELECTRIC BOX ASSEMBLY         | N/A        | 1   |
| 28                                           | NUT                           | 30-6001    | 1   |
| 29                                           | STAR WASHER                   | 28-1009    | 1   |
| 30                                           | BRIDGE RECTIFIER              | 32-1114    | 1   |
| 31                                           | BOLT                          | 27-8807    | 1   |
| 32                                           | TERMINAL PROTECTOR            | 33-0508    | 1   |
| 33                                           | UNLOADER/ MANIFOLD ASSEMBLY   | N/A        | 1   |
| 34                                           | CABLE                         | 32-9112    | 1   |
| 35                                           | WASHER                        | 28-0002    | 4   |
| 36                                           | BOLT                          | 27-0066    | 3   |
| 37                                           | BATTERY BOX                   | 33-0092    | 1   |
| 38                                           | CABLE                         | 32-9113    | 1   |
| 39                                           | BATTERY                       | 32-1077    | 1   |
| 40                                           | BATTERY RETAINER              | 20-0264A18 | 1   |
| 41                                           | BRACKET                       | 13-0124A18 | 1   |
| 42                                           | LOCKNUT                       | 30-0157    | 3   |

ENGINE/ PUMP ASSEMBLY (3004, 3504, 4004)

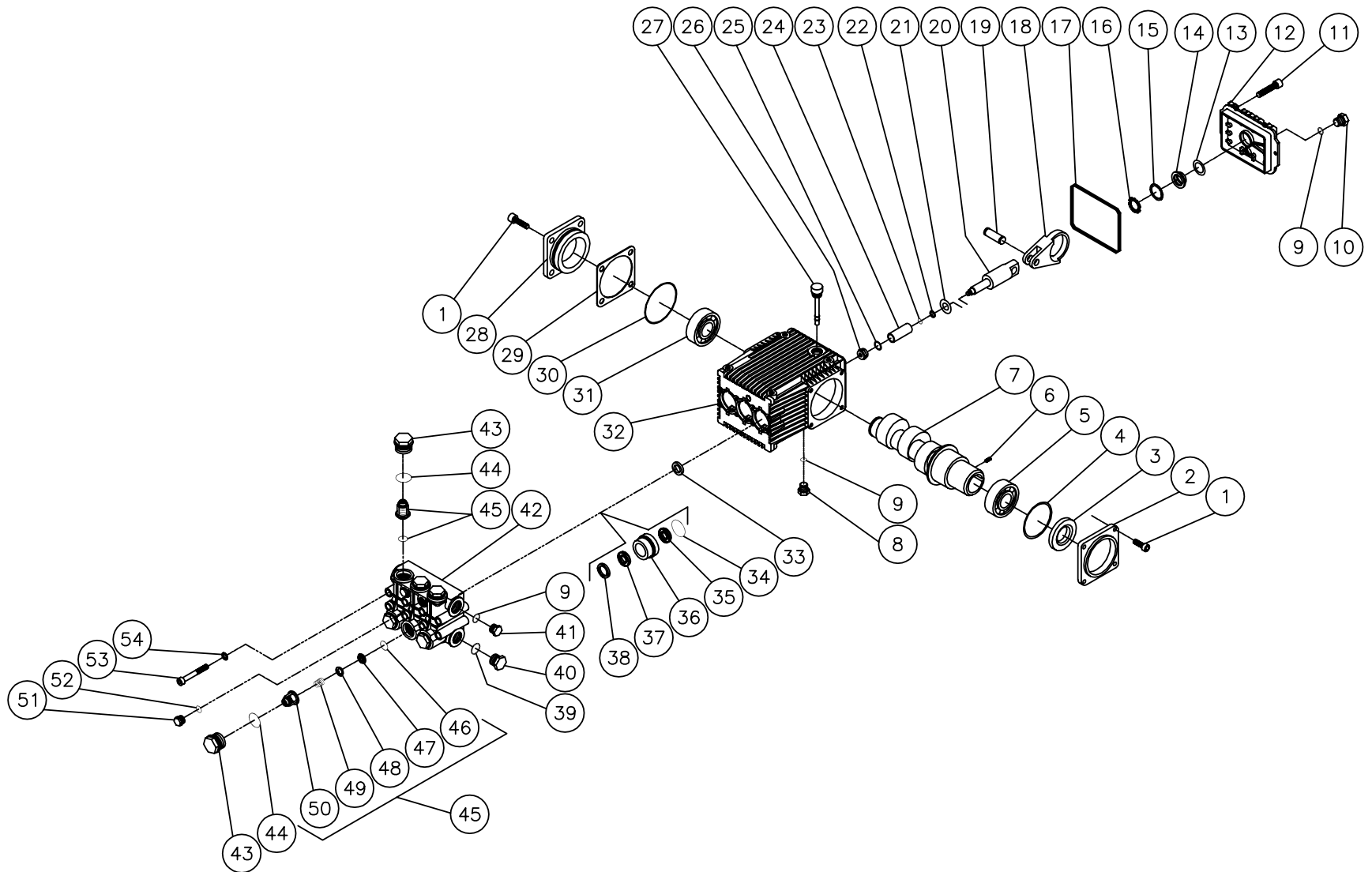


## ENGINE/ PUMP ASSEMBLY (3004, 3504, 4004)

For parts Call 888-279-9274

| HSP100 ELEC START 030624        |                           |            |     |
|---------------------------------|---------------------------|------------|-----|
| ENGINE/ PUMP ASSEMBLY           |                           |            |     |
| ITEM                            | TITLE                     | PART #     | QTY |
| 1                               | ENGINE - HONDA ELEC START | 1-0087     | 1   |
| -                               | ENGINE - MITM ELEC START  | 1-0216     | 1   |
| 2                               | WASHER                    | 28-0605    | 1   |
| 3                               | OIL DRAIN                 | 24-0143    | 1   |
| 4                               | ADAPTER FLANGE            | 38-0049    | 1   |
| 5                               | BOLT                      | 27-0418    | 4   |
| 6                               | SHEAVE                    | 10-0077    | 1   |
| 7                               | BELT                      | 11-0037    | 1   |
| 8                               | KEY                       | 43-0088    | 1   |
| 9                               | BOLT                      | 27-8434    | 4   |
| 10                              | ADAPTER PLATE             | 38-0051    | 1   |
| 11                              | HIGH PRESSURE HOSE        | 15-0194    | 1   |
| 12                              | ELBOW                     | 23-0034    | 1   |
| 13                              | RELIEF VALVE              | 22-0005    | 1   |
| 14                              | PRESSURE SWITCH           | 22-0171    | 1   |
| 15                              | PLUG                      | 23-0244    | 1   |
| 16                              | WATER FILTER              | 19-0096    | 1   |
| 17                              | ELBOW                     | 23-0119    | 1   |
| 18                              | HOSE CLAMP                | 42-0011    | 1   |
| 19                              | HOSE *(TWO FEET REQUIRED) | 15-0007    | 1   |
| 20                              | PUMP (3004 / 3504)        | 3-0194     | 1   |
| -                               | PUMP (4004)               | 3-0476     | 1   |
| 21                              | BOLT                      | 27-0218    | 4   |
| 22                              | LOCKWASHER                | 29-0010    | 4   |
| 23                              | WASHER                    | 28-0006    | 4   |
| 24                              | BOLT                      | 27-9526    | 4   |
| 25                              | BELTGUARD                 | 20-0384A18 | 1   |
| *MUST ORDER IN ONE FOOT LENGTHS |                           |            |     |

## HIGH PRESSURE PUMP (3-0194)



For parts Call 888-279-9274

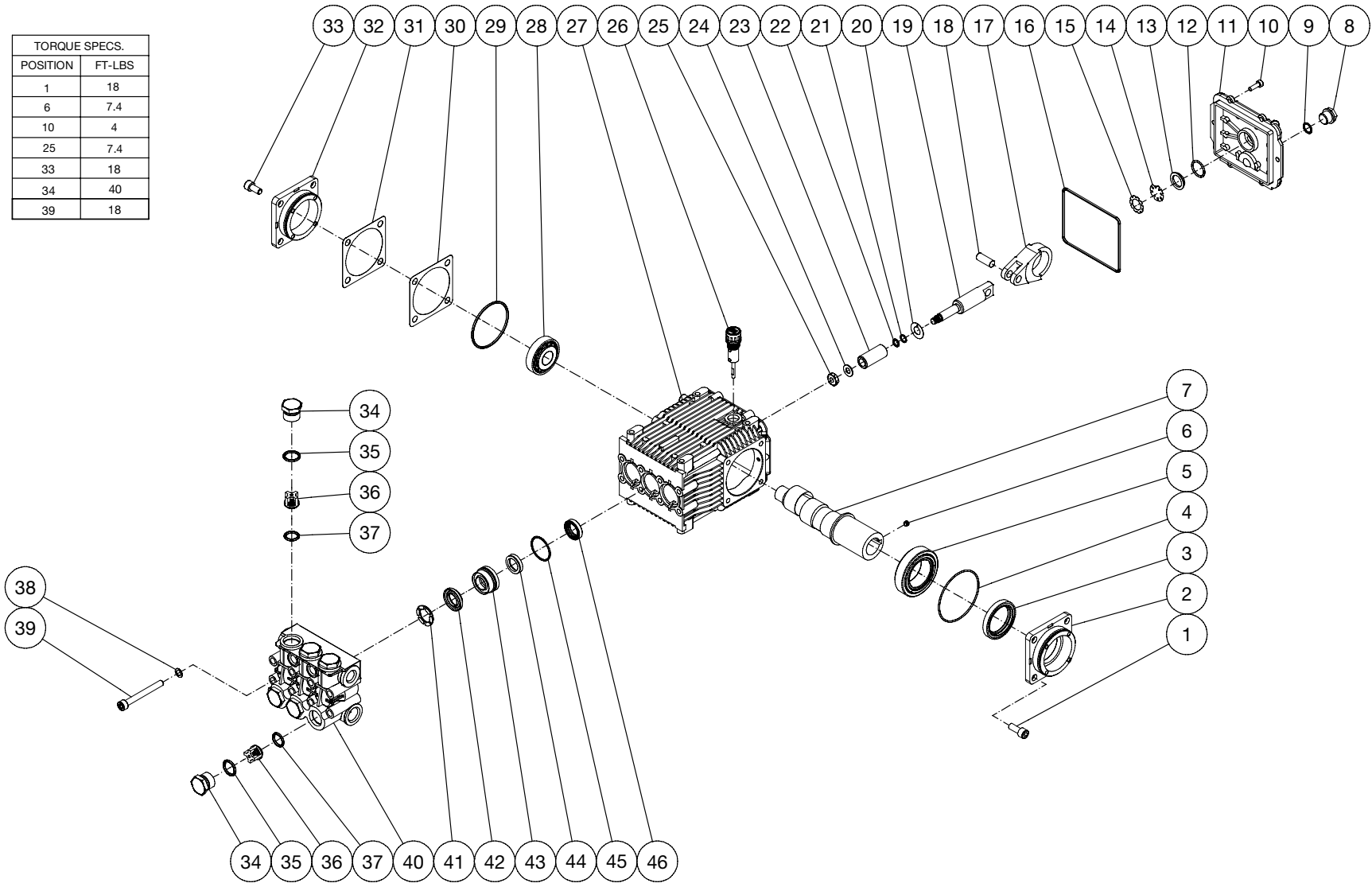
## HIGH PRESSURE PUMP (3-0194)

| 3-0194-070214 ALC |                                       |         |      |      |                                     |          |      |
|-------------------|---------------------------------------|---------|------|------|-------------------------------------|----------|------|
| PUMP ASSEMBLY     |                                       |         |      |      |                                     |          |      |
| REF.              | DESCRIPTION                           | PART #  | QTY. | REF. | DESCRIPTION                         | PART #   | QTY. |
| 1                 | BOLT                                  | 27-8884 | 8    | 29   | SHIM- 0.1MM (QTY. VARIES 1-3)       | 46-0704  | -    |
| 2                 | SHAFT COVER                           | 46-0713 | 1    | -    | SHIM- 0.2MM (QTY. VARIES 1-3)       | 46-0705  | -    |
| 3                 | OIL SEAL (SEE KIT 70-0337)            | 26-0194 | 1    | 30   | O-RING (SEE KIT 70-0337)            | 25-0380  | 1    |
| 4                 | O-RING (SEE KIT 70-0337)              | 25-0397 | 1    | 31   | BEARING (AFTER SERIAL #28511)       | 48-0072  | 1    |
| 5                 | BEARING                               | 48-0062 | 1    | -    | BEARING (BEFORE SERIAL #28511)      | 48-0061  | 1    |
| 6                 | SET SCREW                             | 27-8886 | 1    | 32   | CRANKCASE                           | 46-0811  | 1    |
| 7                 | CRANKSHAFT (AFTER SERIAL #28511)      | 46-0959 | 1    | 33   | OIL SEAL (SEE KIT 70-0337)          | 46-0931  | 3    |
| -                 | CRANKSHAFT (BEFORE SERIAL #28511)     | 46-0734 | 1    | 34   | O-RING (SEE KIT 70-0177)            | 25-0384  | 3    |
| 8                 | PLUG                                  | 39-0102 | 1    | 35   | LOW PRESSURE SEAL (SEE KIT 70-0177) | 46-0707  | 3    |
| 9                 | O-RING                                | 25-0325 | 3    | 36   | PACKING RETAINER                    | 46-0708  | 3    |
| 10                | PLUG                                  | 39-0086 | 1    | 37   | V-PACKING (SEE KIT 70-0177)         | 46-0709  | 3    |
| 11                | BOLT                                  | 27-8885 | 6    | 38   | SUPPORT RING (SEE KIT 70-0178)      | 46-0710  | 3    |
| 12                | CRANKCASE COVER                       | 46-0719 | 1    | 39   | O-RING                              | 25-0372  | 1    |
| 13                | O-RING                                | 25-0370 | 1    | 40   | PLUG                                | 39-0088  | 1    |
| 14                | OIL SIGHT GLASS                       | 46-0670 | 1    | 41   | PLUG                                | 39-0086  | 1    |
| 15                | REFLECTOR                             | 46-0824 | 1    | 42   | MANIFOLD                            | 46-0711  | 1    |
| 16                | RETAINER                              | 46-0671 | 1    | 43   | VALVE CAP BRASS                     | 39-0095  | 6    |
| 17                | O-RING (SEE KIT 70-0337)              | 25-0398 | 1    | -    | VALVE CAP STAINLESS STEEL           | 39-0105  | -    |
| 18                | CONNECTING ROD (AFTER SERIAL #28511)  | 46-0922 | 3    | 44   | O-RING                              | 25-0160  | 6    |
| -                 | CONNECTING ROD (BEFORE SERIAL #28511) | 46-0697 | 3    | 45   | VALVE ASSEMBLY KIT (INC. 46-50)     | 70-0179  | 1    |
| 19                | PISTON PIN                            | 46-0698 | 3    | 46   | O-RING (SEE KIT 70-0179)            | 25-0386  | 6    |
| 20                | PLUNGER ROD                           | 46-0699 | 3    | 47   | VALVE SEAT (SEE KIT 70-0179)        | N/A Sep. | 6    |
| 21                | SLINGER WASHER (SEE KIT 70-0352)      | 46-0700 | 3    | 48   | VALVE PLATE (SEE KIT 70-0179)       | N/A Sep. | 6    |
| 22                | BACK-UP RING (SEE KIT 70-0352)        | 25-0404 | 3    | 49   | VALVE SPRING (SEE KIT 70-0179)      | N/A Sep. | 6    |
| 23                | O-RING (SEE KIT 70-0352)              | 25-0382 | 3    | 50   | VALVE CAGE (SEE KIT 70-0179)        | N/A Sep. | 6    |
| 24                | PISTON (SEE KIT 70-0352)              | 46-0701 | 3    | 51   | PLUG                                | 39-0096  | 2    |
| 25                | WASHER (SEE KIT 70-0352)              | 26-0191 | 3    | 52   | O-RING                              | 25-0387  | 2    |
| 26                | NUT (SEE KIT 70-0352)                 | 30-6020 | 3    | 53   | BOLT                                | 27-8440  | 8    |
| 27                | OIL DIPSTICK                          | 39-0090 | 1    | 54   | LOCKWASHER                          | 29-0154  | 8    |
| 28                | BEARING CAP                           | 46-0703 | 1    |      |                                     |          |      |

| REPLACEMENT KITS |                           |                  |                 |                |
|------------------|---------------------------|------------------|-----------------|----------------|
| KIT #            | DESCRIPTION               | ITEMS            | # OF ASSEMBLIES | # OF CYLINDERS |
| 70-0177          | KIT - HIGH PRESSURE SEALS | 34, 35, 37       | 3               | 3              |
| 70-0178          | KIT - SUPPORT RINGS       | 38               | 3               | 3              |
| 70-0179          | KIT - VALVE KIT           | 46-50            | 6               | 3              |
| 70-0337          | KIT - OIL SEALS KIT       | 3, 4, 17, 30, 33 | 1,1,1,1,3       | 3              |
| 70-0352          | KIT - PISTON KIT          | 21-26            | 3               | 3              |

# HIGH PRESSURE PUMP (3-0476)

| TORQUE SPECS. |        |
|---------------|--------|
| POSITION      | FT-LBS |
| 1             | 18     |
| 6             | 7.4    |
| 10            | 4      |
| 25            | 7.4    |
| 33            | 18     |
| 34            | 40     |
| 39            | 18     |



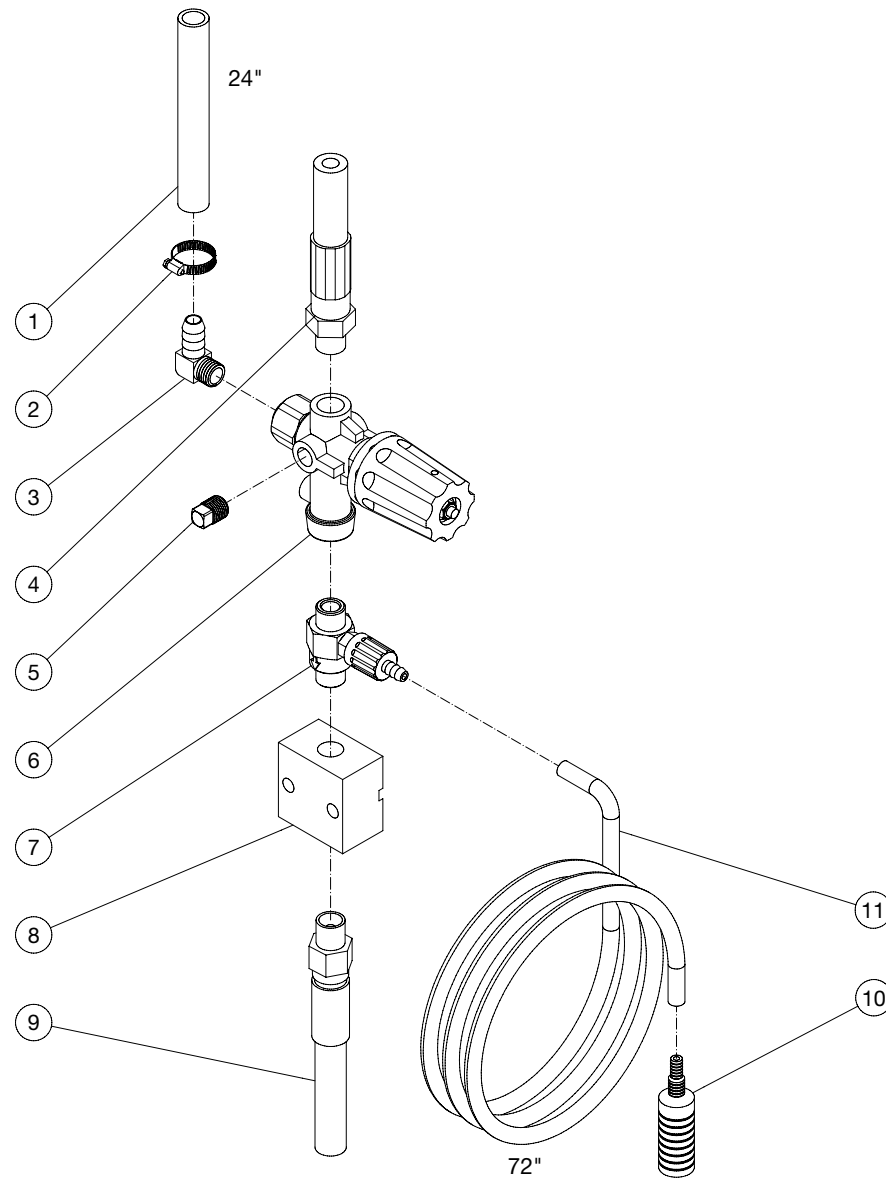
For parts Call 888-279-9274

## HIGH PRESSURE PUMP (3-0476)

| 3-0476 120123 |                                          |         |     |  |      |                                     |               |
|---------------|------------------------------------------|---------|-----|--|------|-------------------------------------|---------------|
| PUMP ASSEMBLY |                                          |         |     |  |      |                                     |               |
| ITEM          | DESCRIPTION                              | PART #  | QTY |  | ITEM | DESCRIPTION                         | PART # QTY    |
| 1             | SCREW                                    | 27-8432 | 4   |  | 24   | WASHER/GASKET (SEE KIT 70-0352)     | 26-0191 3     |
| 2             | SHAFT COVER - ELECTRIC (SEE KIT 70-0337) | 46-0713 | 1   |  | 25   | NUT (SEE KIT 70-0352)               | 30-6020 3     |
| 3             | OIL SEAL (SEE KIT 70-0337)               | 26-0194 | 1   |  | 26   | OIL DIPSTICK                        | 39-0090 1     |
| 4             | O-RING                                   | 25-0397 | 1   |  | 27   | CRANKCASE                           | 46-1198 1     |
| 5             | BEARING                                  | 48-0062 | 1   |  | 28   | BEARING                             | 48-0072 1     |
| 6             | SET SCREW                                | 27-8886 | 1   |  | 29   | O-RING (SEE KIT 70-0337)            | 25-0380 1     |
| 7             | CRANKSHAFT                               | 46-0959 | 1   |  | 30   | SHIM                                | 46-0705 (1-3) |
| 8             | PLUG                                     | 39-0086 | 1   |  | 31   | SHIM                                | 46-0704 (1-3) |
| 9             | O-RING                                   | 25-0325 | 1   |  | 32   | BEARING CAP/SUPPORT                 | 46-0703 1     |
| 10            | BOLT                                     | 27-8885 | 6   |  | 33   | BOLT                                | 27-8884 4     |
| 11            | CRANKCASE COVER                          | 46-0719 | 1   |  | 34   | VALVE CAP                           | 39-0095 6     |
| 12            | O-RING                                   | 25-0370 | 1   |  | 35   | O-RING                              | 25-0160 6     |
| 13            | OIL SIGHT GLASS                          | 46-0670 | 1   |  | 36   | VALVE (SEE KIT 70-0179)             | SEE KIT 6     |
| 14            | OIL REFLECTOR                            | 46-0824 | 1   |  | 37   | O-RING (SEE KIT 70-0179)            | 25-0386 6     |
| 15            | SPRING RETAINER                          | 46-0671 | 1   |  | 38   | LOCKWASHER                          | 29-0154 8     |
| 16            | O-RING (SEE KIT 70-0337)                 | 25-0398 | 1   |  | 39   | BOLT                                | 27-8440 8     |
| 17            | CONNECTING ROD                           | 46-0922 | 3   |  | 40   | MANIFOLD - 18mm BRASS               | 46-0711 1     |
| 18            | PISTON PIN                               | 46-0698 | 3   |  | 41   | SUPPORT RING (SEE KIT 70-0178)      | 46-0710 3     |
| 19            | PLUNGER ROD                              | 46-0699 | 3   |  | 42   | V PACKING (SEE KIT 70-0177)         | 46-0709 3     |
| 20            | SLINGER WASHER (SEE KIT 70-0352)         | 46-0700 | 3   |  | 43   | PACKING RETAINER                    | 46-0708 3     |
| 21            | O-RING (SEE KIT 70-0352)                 | 25-0404 | 3   |  | 44   | LOW PRESSURE SEAL (SEE KIT 70-0177) | 46-0707 3     |
| 22            | O-RING (SEE KIT 70-0352)                 | 25-0382 | 3   |  | 45   | O-RING (SEE KIT 70-0177)            | 25-0384 3     |
| 23            | PISTON (SEE KIT 70-0352)                 | 46-0701 | 3   |  | 46   | OIL SEAL (SEE KIT 70-0337)          | 46-0931 3     |

| REPLACEMENT KITS |                     |              |                 |                |
|------------------|---------------------|--------------|-----------------|----------------|
| KIT              | DESCRIPTION         | ITEMS        | # OF ASSEMBLIES | # OF CYLINDERS |
| 70-0337          | OIL SEALS           | 3,4,16,29,46 | 1,1,1,1,3       | -(3)           |
| 70-0352          | PISTONS             | 20-25        | 3               | 3              |
| 70-0177          | HIGH PRESSURE SEALS | 42,44,45     | 3               | 3              |
| 70-0178          | SUPPORT RINGS       | 41           | 3               | 3              |
| 70-0179          | VALVES              | 36,37        | 6               | 3              |

## UNLOADER/MANIFOLD ASSEMBLY

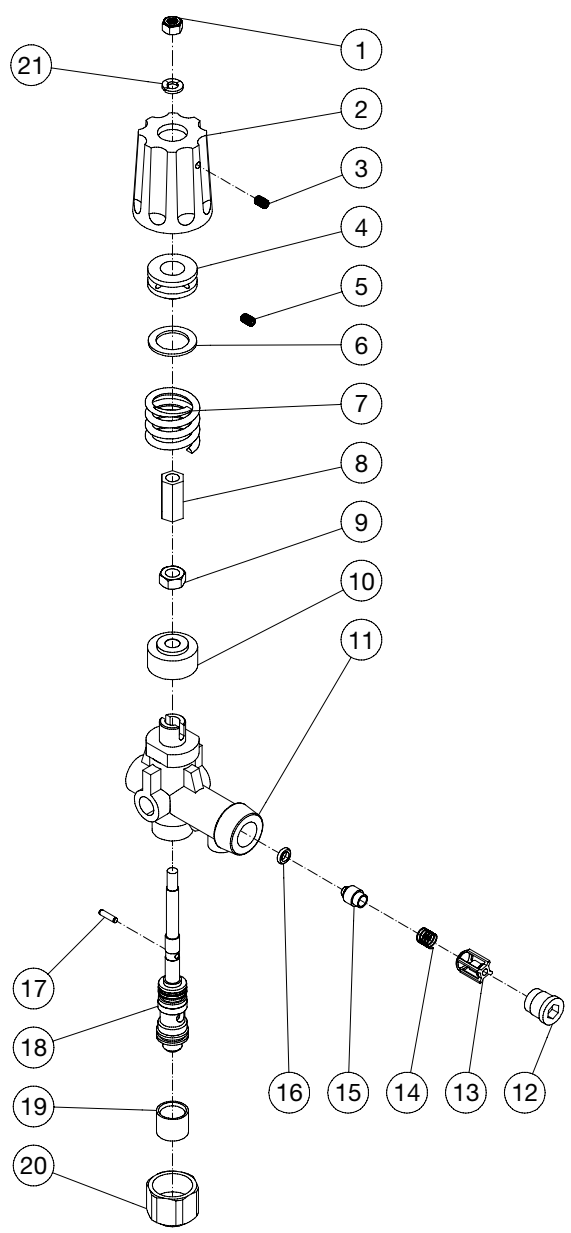


## UNLOADER/MANIFOLD ASSEMBLY

For parts Call 888-279-9274

| 0MHSP080 080524                 |                                    |          |     |
|---------------------------------|------------------------------------|----------|-----|
| UNLOADER/MANIFOLD ASSEMBLY      |                                    |          |     |
| ITEM                            | DESCRIPTION                        | PART #   | QTY |
| 1                               | HOSE *(TWO FEET REQUIRED)          | 15-0007  | 1   |
| 2                               | HOSE CLAMP                         | 42-0011  | 1   |
| 3                               | ELBOW                              | 23-0119  | 1   |
| 4                               | HIGH PRESSURE HOSE                 | 15-0194  | 1   |
| 5                               | PLUG                               | 24-0009  | 1   |
| 6                               | UNLOADER                           | 850-0252 | 1   |
| 7                               | CHEMICAL INJECTOR                  | 50-0052  | 1   |
| 8                               | MANIFOLD BLOCK                     | 51-0026  | 1   |
| 9                               | HP HOSE                            | 15-0202  | 1   |
| 10                              | STRAINER                           | 19-0050  | 1   |
| 11                              | CHEMICAL HOSE *(SIX FEET REQUIRED) | 15-0021  | 1   |
| *MUST ORDER IN ONE FOOT LENGTHS |                                    |          |     |

UNLOADER (850-0252)



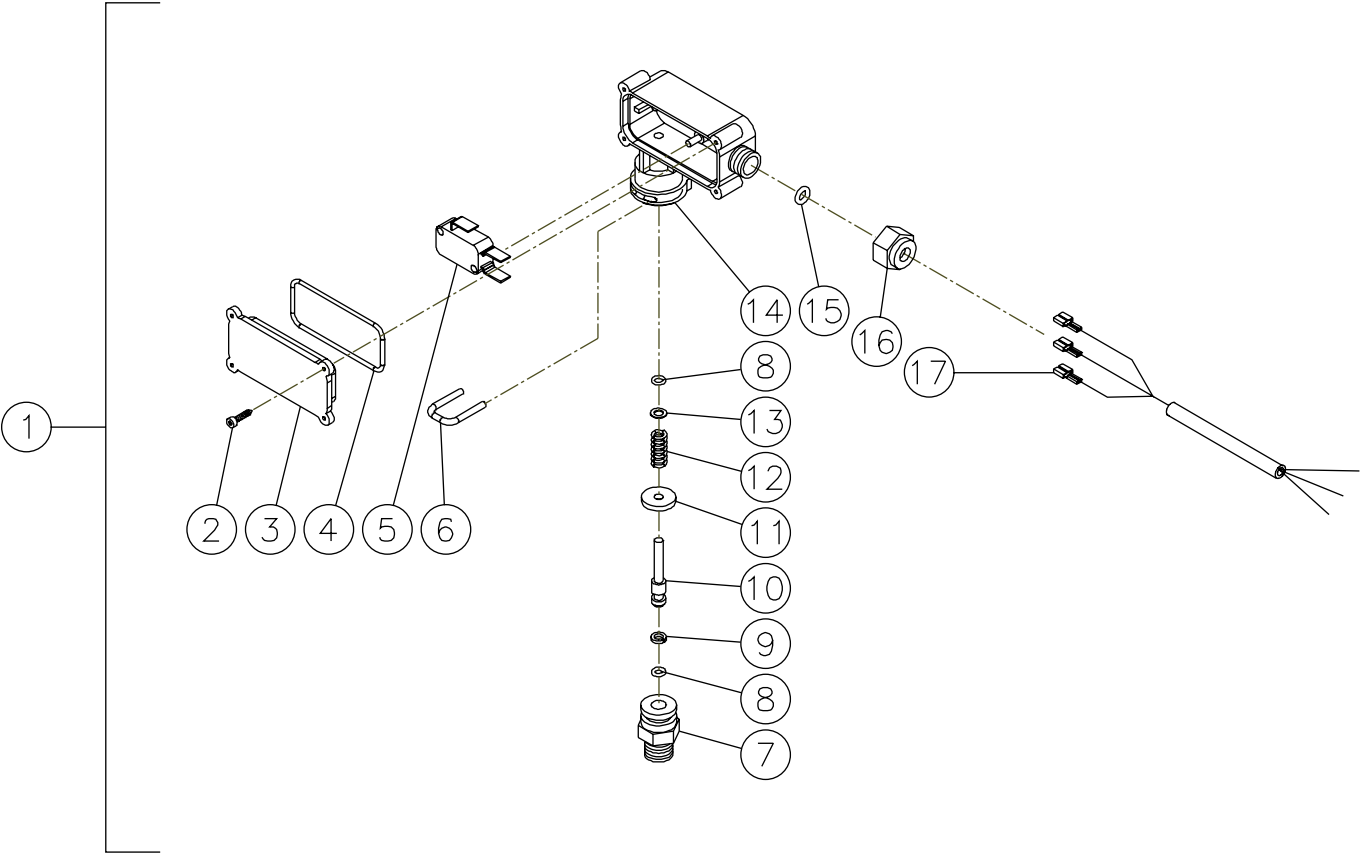
850-0252 070723

## UNLOADER (850-0252)

| 850-0252 070723 |                           |         |     |
|-----------------|---------------------------|---------|-----|
| UNLOADER        |                           |         |     |
| ITEM            | TITLE                     | PART #  | QTY |
| 1               | NUT                       | 8-0362  | 1   |
| 2               | UNLOADER                  | 7-0098  | 1   |
| 3               | SCREW                     | 27-4280 | 1   |
| 4               | NUT                       | 8-0364  | 1   |
| 5               | SCREW                     | 8-0365  | 1   |
| 6               | RING                      | 8-0366  | 1   |
| 7               | SPRING                    | 49-0104 | 1   |
| 8               | INSERT                    | 8-0363  | 1   |
| 9               | NUT                       | 8-0367  | 1   |
| 10              | BUSHING                   | 8-0368  | 1   |
| 11              | UNLOADER                  | 8-0369  | 1   |
| 12              | RETAINER                  | 8-0269  | 1   |
| 13              | HOUSING (SEE KIT 70-0244) | 8-0104  | 1   |
| 14              | SPRING (SEE KIT 70-0244)  | 49-0023 | 1   |
| 15              | VALVE (SEE KIT 70-0244)   | 8-0105  | 1   |
| 16              | O-RING (SEE KIT 70-0244)  | 25-0036 | 1   |
| 17              | PIN                       | 8-0372  | 1   |
| 18              | PISTON ASSEMBLY           | 70-0243 | 1   |
| 19              | SPACER                    | 8-0371  | 1   |
| 20              | NUT                       | 8-0157  | 1   |
| 21              | LOCKWASHER                | 29-0006 | 1   |

| KIT #   | DESCRIPTION            | ITEMS       | # OF ASSEMBLIES |
|---------|------------------------|-------------|-----------------|
| 70-0243 | PISTON ASSY REPAIR KIT | 18          | 1               |
| 70-0244 | CHECK VALVE KIT        | 13,14,15,16 | 1               |

**PRESSURE SWITCH (22-0171)**

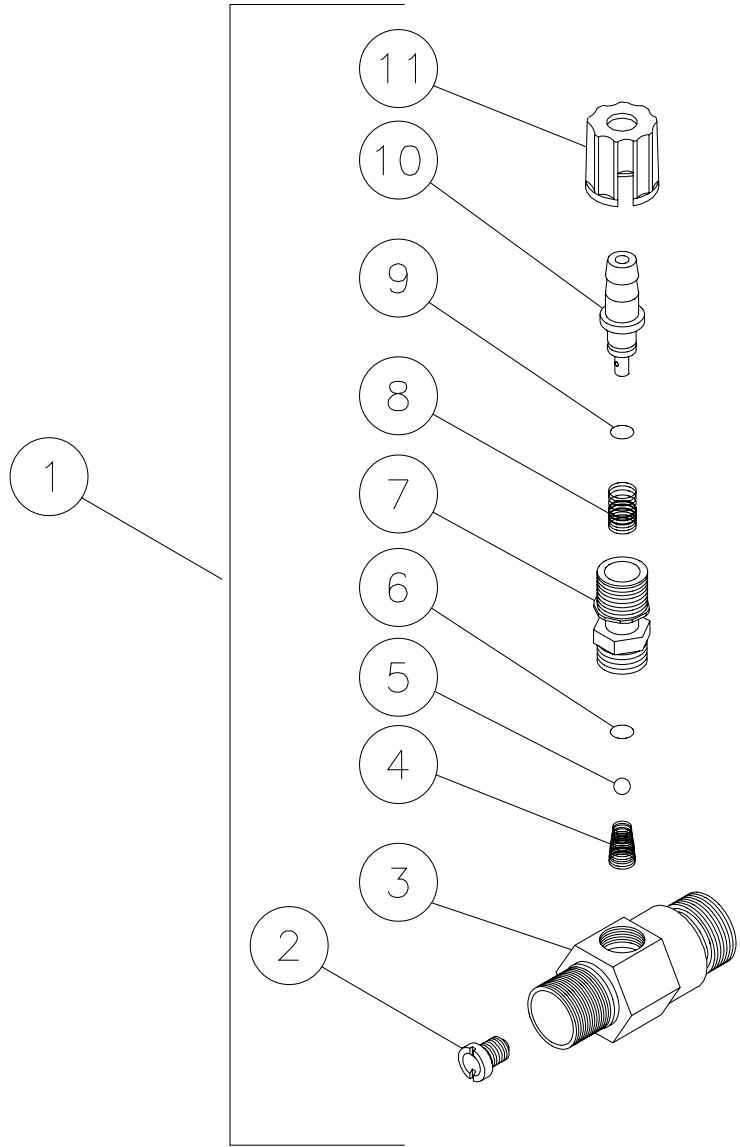


## PRESSURE SWITCH (22-0171)

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  |      |

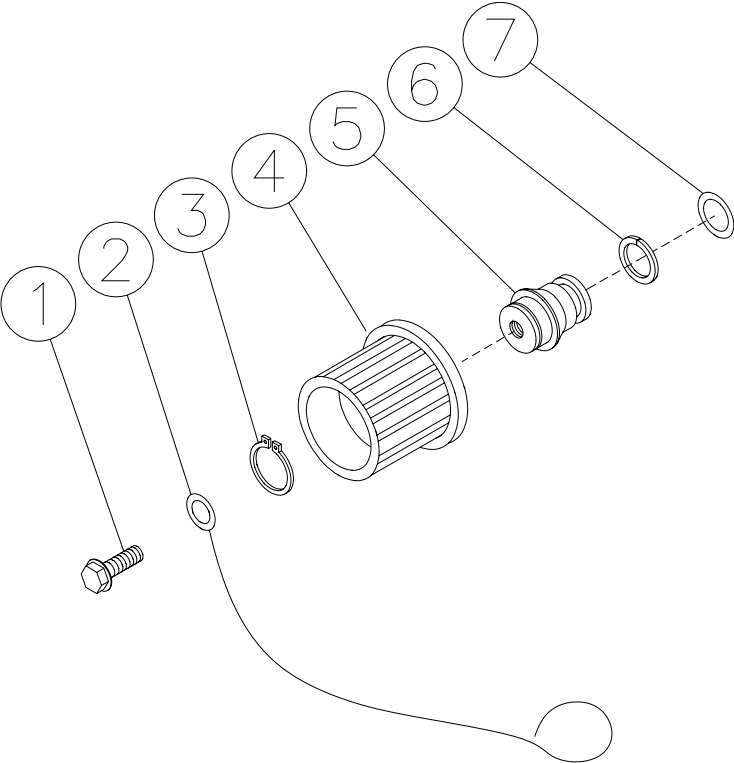
DETERGENT INJECTOR (50-0052)



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 |      |

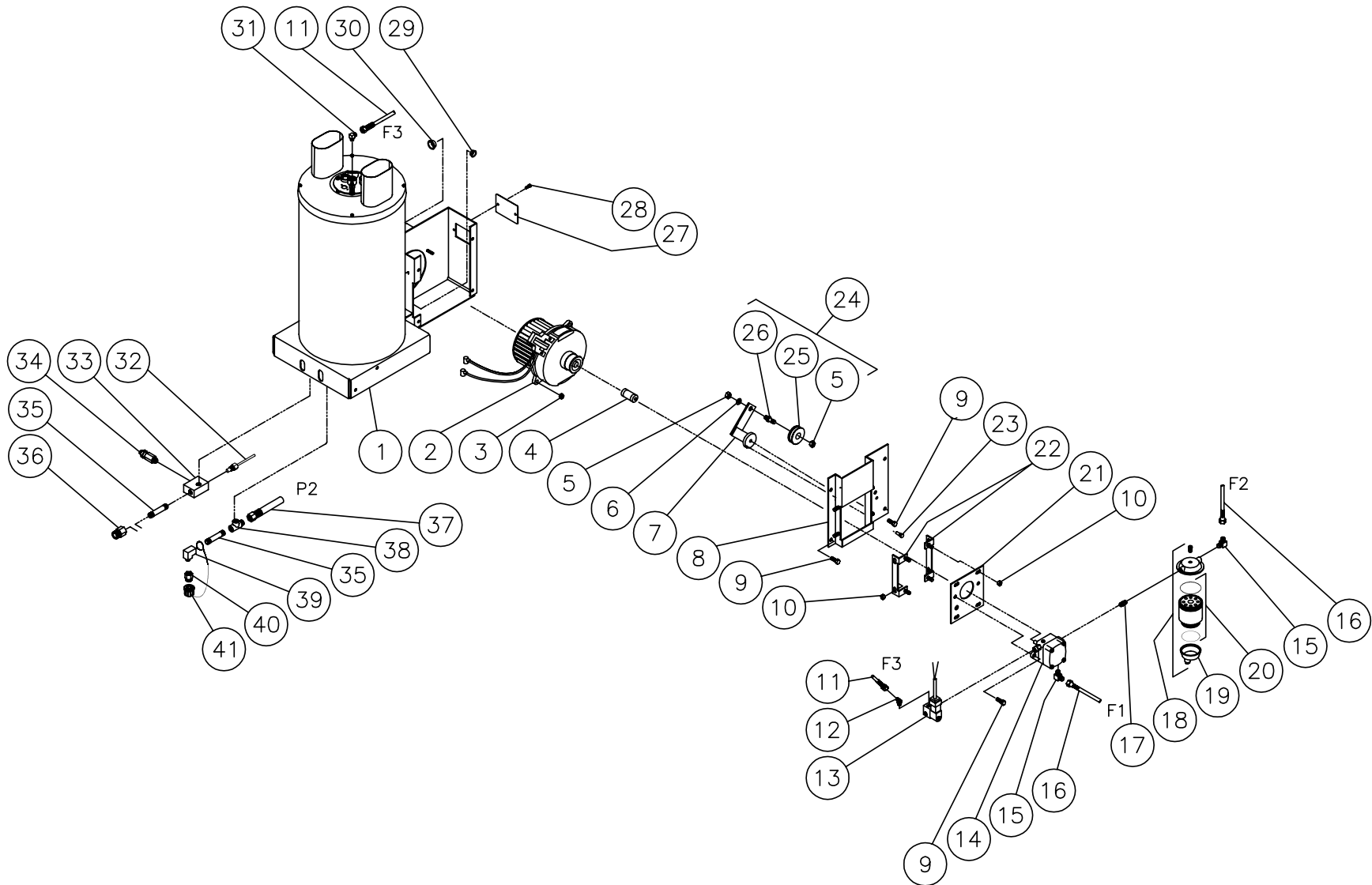
COIL DRAIN PLUG (850-0218)



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 #15070469)



For parts Call 888-279-9274

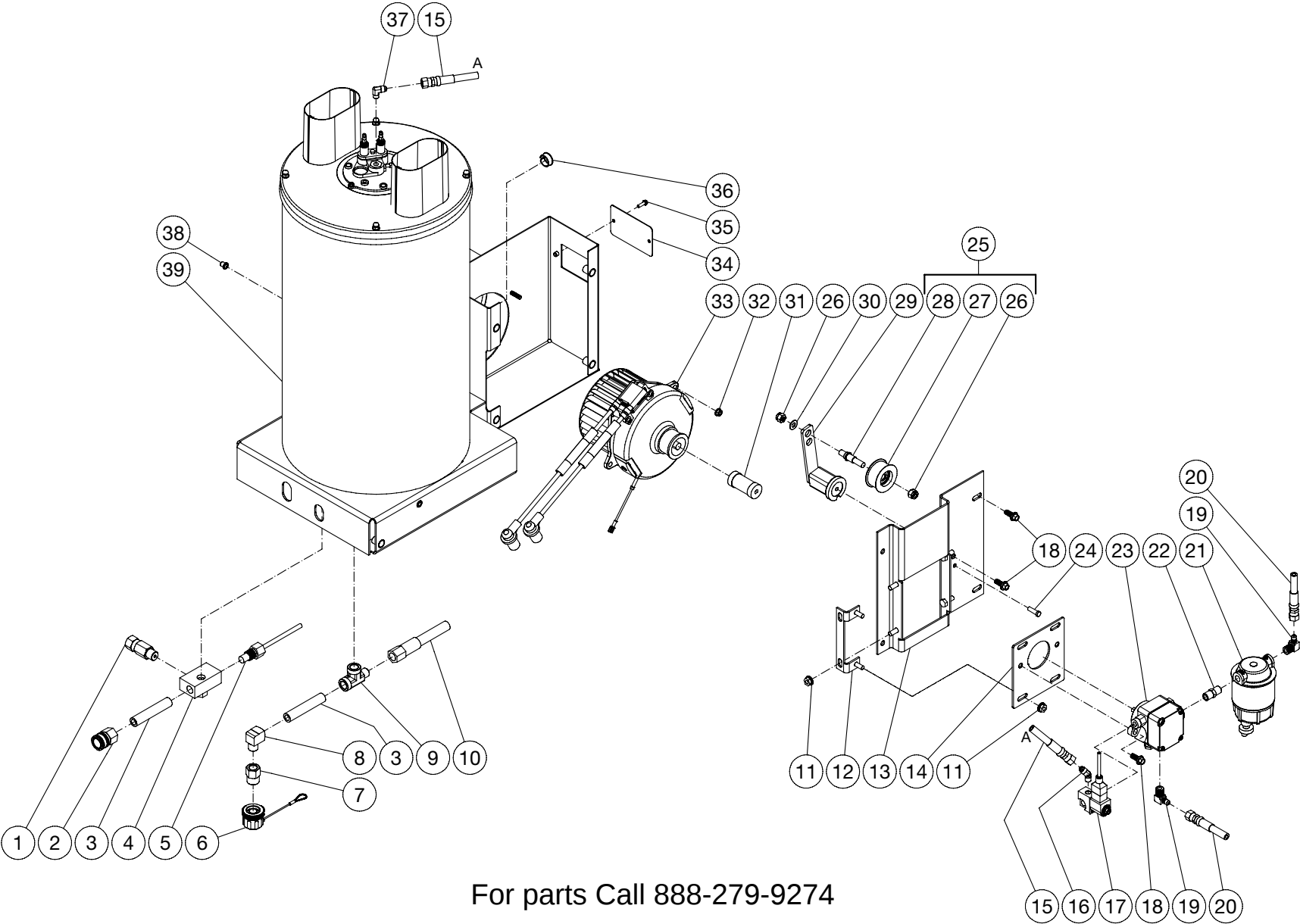
# HEAT EXCHANGER/EMF SYSTEM (BEFORE SERIAL #15070469)

For parts Call 888-279-9274

OMHSP083\_850-0226-0802307 CH

| 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     | Grommet                                          | 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     | Nipple                                           | 24-0165    | 2    |
| 15                        | Elbow                                   | 23-0237    | 2    |  | 36     | Hex Reducer                                      | 23-0197    | 1    |
| 16                        | Fuel Hose                               | 15-0147    | 2    |  | 37     | High Pressure Hose Assembly                      | 15-0202    | 1    |
| 17                        | Hex Nipple                              | 24-0145    | 1    |  | 38     | Street Tee                                       | 23-0058    | 1    |
| 18                        | Filter Fuel Water Seperator             | 19-0070    | 1    |  | 39     | Elbow                                            | 23-0034    | 1    |
| 19                        | Fuel Water Seperator Replacement Bowl   | 19-0071    | 1    |  | 40     | Adapter                                          | 23-0279    | 1    |
| 20                        | Fuel Water Seperator Replacement Filter | 19-0053    | 1    |  | 41     | Drain Plug Assembly                              | 850-0218   | 1    |
| 21                        | Plate                                   | 20-0363A01 | 1    |  |        |                                                  |            |      |

HEAT EXCHANGER/EMF SYSTEM (AFTER SERIAL #15070469)



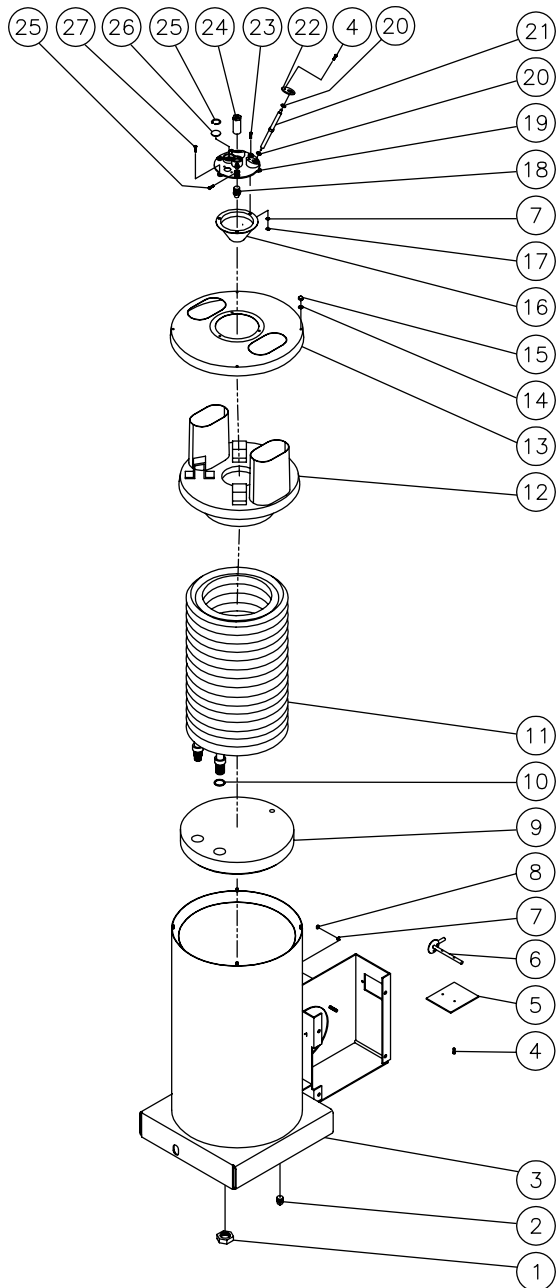
HSP083 072324

For parts Call 888-279-9274

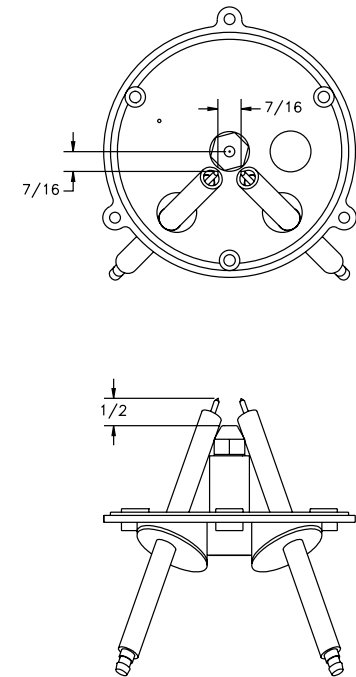
## HEAT EXCHANGER/EMF SYSTEM (AFTER SERIAL #15070469)

| HSP083 072324               |                                     |            |     |
|-----------------------------|-------------------------------------|------------|-----|
| HEAT EXCHANGER / EMF SYSTEM |                                     |            |     |
| ITEM                        | TITLE                               | PART #     | QTY |
| 1                           | PRESSURE RELIEF VALVE (4004)        | 22-0541    | 1   |
| -                           | PRESSURE RELIEF VALVE (3003 / 3504) | 22-0273    | 1   |
| 2                           | QUICK CONNECT SOCKET                | 17-0004    | 1   |
| 3                           | PIPE NIPPLE                         | 24-0165    | 2   |
| 4                           | OUTLET CONNECTOR                    | 24-0138    | 1   |
| 5                           | HI LIMIT SWITCH                     | 32-0798    | 1   |
| 6                           | DRAIN PLUG ASSEMBLY                 | 850-0218   | 1   |
| 7                           | ADAPTER                             | 23-0279    | 1   |
| 8                           | ELBOW                               | 23-0034    | 1   |
| 9                           | STREET TEE                          | 23-0058    | 1   |
| 10                          | HP HOSE                             | 15-0202    | 1   |
| 11                          | NUT                                 | 30-3023    | 8   |
| 12                          | BRACKET                             | 20-0360A18 | 2   |
| 13                          | FUEL PUMP BRACKET                   | 20-0381A18 | 1   |
| 14                          | FUEL PUMP PLATE                     | 20-1698A18 | 1   |
| 15                          | HP FUEL HOSE                        | 15-0165    | 1   |
| 16                          | ELBOW                               | 23-0288    | 1   |
| 17                          | FUEL SOLENOID                       | 44-0100    | 1   |
| 18                          | BOLT                                | 27-9524    | 7   |
| 19                          | ELBOW                               | 23-0237    | 2   |
| 20                          | FUEL HOSE                           | 15-0147    | 2   |
| 21                          | FUEL FILTER / WATER SEPERATOR       | 19-0070    | 1   |
| 22                          | NIPPLE                              | 24-0145    | 1   |
| 23                          | FUEL PUMP                           | 3-0020     | 1   |
| 24                          | IDLER PIN                           | 33-0211    | 1   |
| 25                          | TENSIONER SHEAVE SHAFT ASSEMBLY     | 850-0166   | 1   |
| 26                          | LOCKNUT                             | 30-0159    | 2   |
| 27                          | SHEAVE ASSEMBLY                     | 850-0177   | 1   |
| 28                          | IDLER SHAFT                         | 33-0212    | 1   |
| 29                          | TENSIONER                           | 10-0071    | 1   |
| 30                          | WASHER                              | 28-0003    | 1   |
| 31                          | COUPLING                            | 33-0225    | 1   |
| 32                          | NUT                                 | 30-3022    | 2   |
| 33                          | EMF ASSEMBLY                        | 850-0403   | 1   |
| 34                          | ACCESS PANEL                        | 20-0386A18 | 1   |
| 35                          | BOLT                                | 27-9526    | 2   |
| 36                          | ELECTRICAL BUSHING                  | 32-0427    | 2   |
| 37                          | ELBOW                               | 23-0287    | 1   |
| 38                          | ELECTRICAL BUSHING                  | 32-0426    | 1   |
| 39                          | HEAT EXCHANGER ASSEMBLY             | 850-0226   | 1   |

# **BOILER ASSEMBLY (850-0226) BEFORE SERIAL #15048210**



## **ELECTRODE GAP SETTINGS**



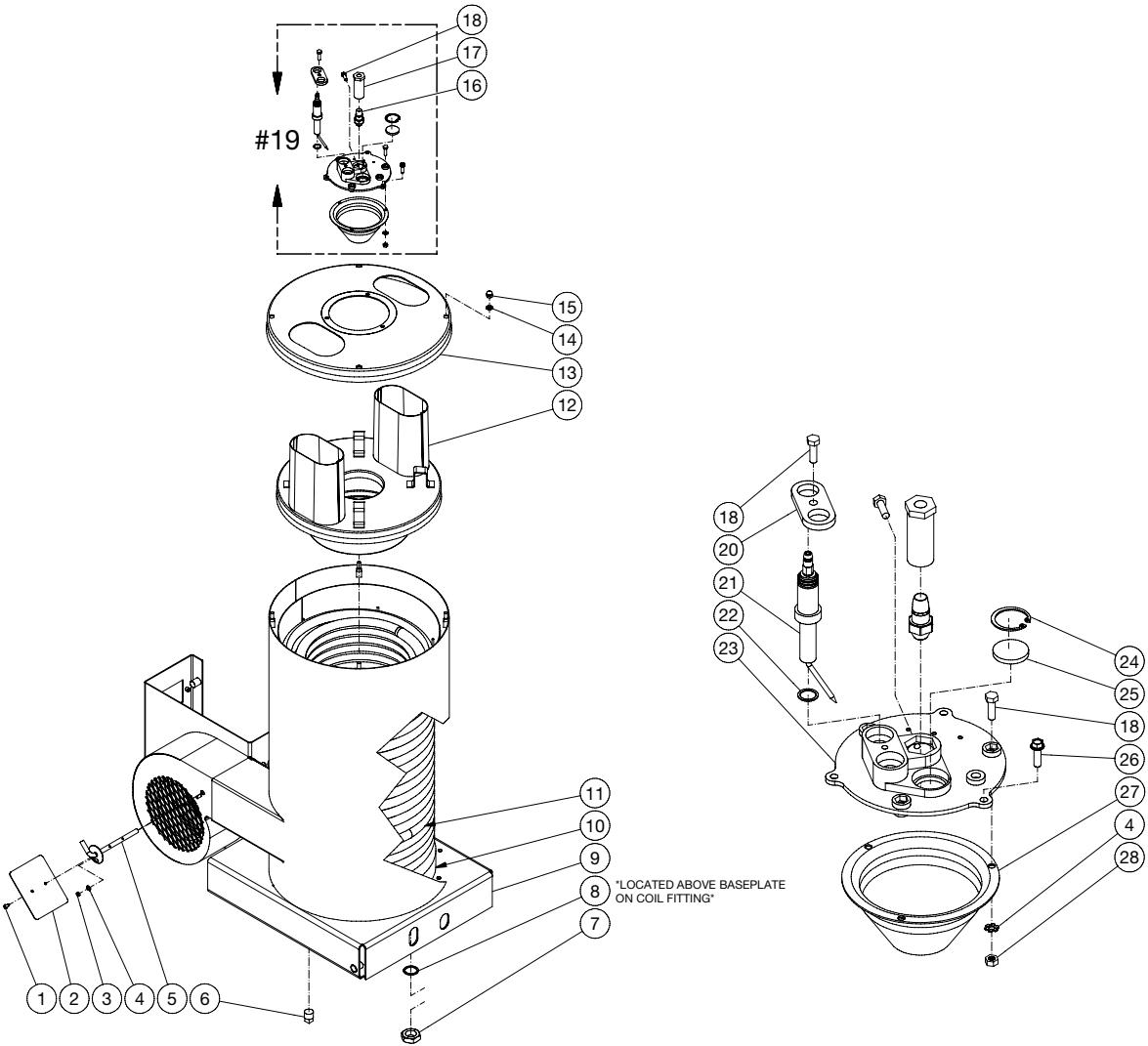
HSP111-042799-BAR

# **BOILER ASSEMBLY (850-0226) BEFORE SERIAL #15048210**

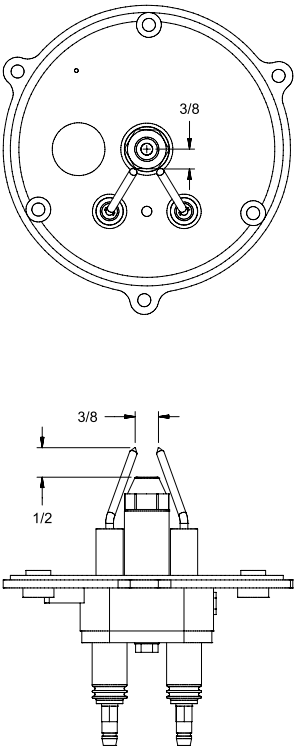
850-0226-090606-PO

| 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     | Electrode Mounting Clip- Black       | 20-0383A01 2 |
| 9                          | Bottom Insulation                 | 33-0250    | 1    |  | 23     | Bolt                                 | 27-8878 4    |
| 10                         | Washer                            | 28-0521    | 2    |  | 24     | Nozzle Holder                        | 23-0292 1    |
| 11                         | Heat Exchanger Coil Assembly      | 66-0011    | 1    |  | 25     | Snap Ring                            | 33-0254 1    |
| 12                         | Inner Pan Assembly                | 20-0372    | 1    |  | 26     | Sight Glass                          | 33-0252 1    |
| 13                         | Top Pan Assembly- Black           | 20-0371A01 | 1    |  | 27     | Bolt                                 | 27-9526 3    |
| 14                         | Lockwasher                        | 28-1028    | 4    |  |        | Boiler Assembly Complete (Inc. 1-27) | 850-0226     |

**BOILER ASSEMBLY (850-0226) AFTER SERIAL #15048210**



**ELECTRODE GAP SETTINGS**



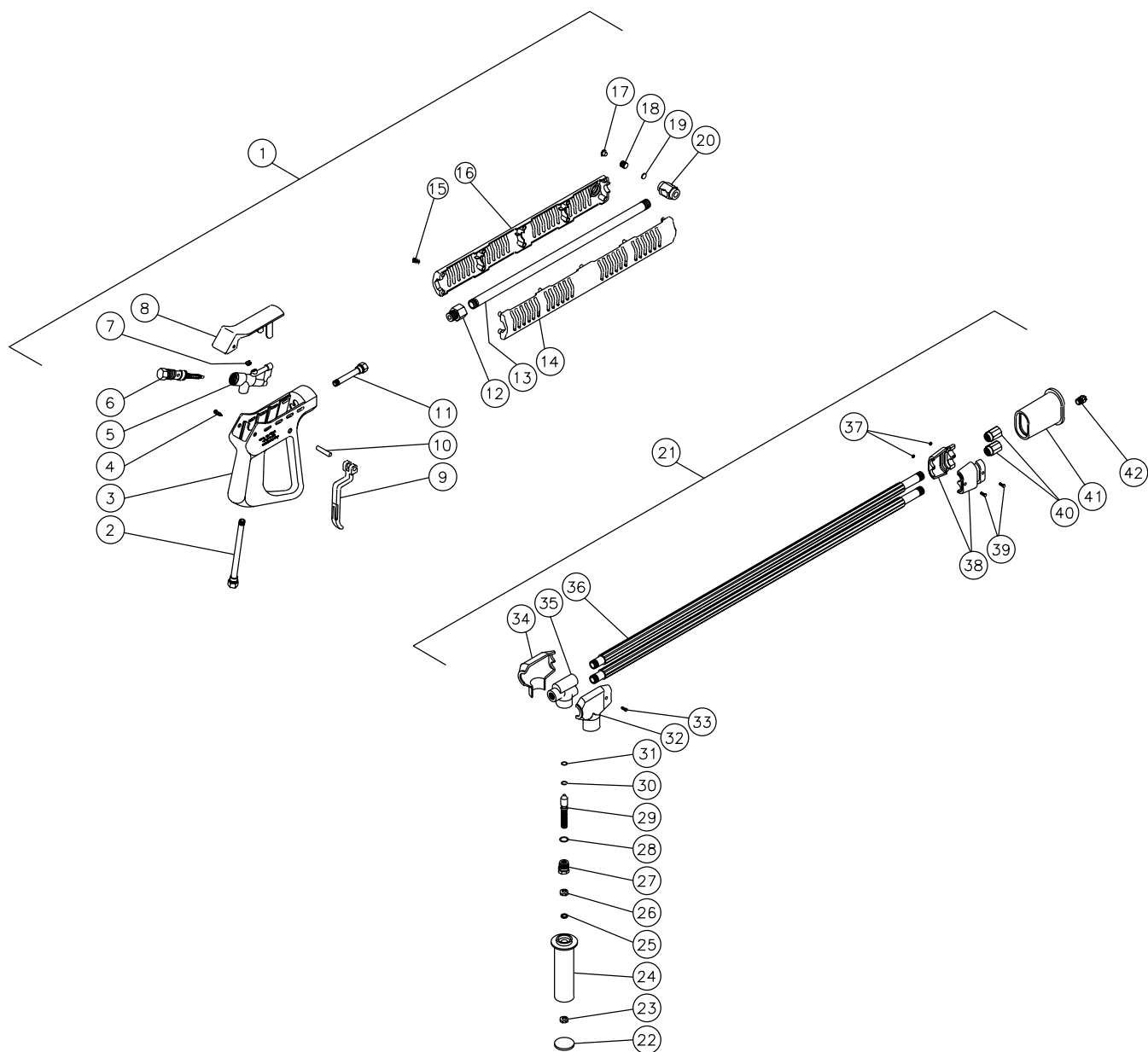
ELECTRODE PLATE ASSY 062308-CH

For parts Call 888-279-9274

## BOILER ASSEMBLY (850-0226) AFTER SERIAL #15048210

| 850-0226 112923 |                                            |            |     |
|-----------------|--------------------------------------------|------------|-----|
| BOILER ASSEMBLY |                                            |            |     |
| ITEM            | DESCRIPTION                                | PART #     | QTY |
| 1               | BOLT                                       | 27-8879    | 2   |
| 2               | AIR DIVERTER                               | 20-0378A18 | 1   |
| 3               | NUT                                        | 30-0137    | 1   |
| 4               | STAR WASHER                                | 28-1009    | 4   |
| 5               | AIR DIVERTER STEM                          | 20-0377A18 | 1   |
| 6               | PLUG                                       | 24-0034    | 1   |
| 7               | NUT                                        | 30-0121    | 2   |
| 8               | WASHER                                     | 28-0521    | 2   |
| 9               | OUTER WRAP                                 | 20-0376A18 | 1   |
| 10              | INSULATION                                 | 33-0250    | 1   |
| 11              | HEAT EXCHANGER COIL                        | 66-0011    | 1   |
| 12              | INNER PAN ASSEMBLY                         | 20-0372    | 1   |
| 13              | TOP PAN                                    | 20-0371A18 | 1   |
| 14              | LOCKWASHER                                 | 28-1028    | 4   |
| 15              | ACORN NUT                                  | 30-6002    | 4   |
| 16              | FUEL NOZZLE (3004 / 3500/ 3504 / 4004))    | 18-0308    | 1   |
| -               | NOZZLE-OIL (3000/ 3003)                    | 18-0368    | 1   |
| 17              | FUEL NOZZLE HOLDER                         | 23-0292    | 1   |
| 18              | BOLT                                       | 27-8878    | 5   |
| 19              | ELECTRODE ASSEMBLY KIT (INC. 4, 18, 20-29) | 850-0351   | 1   |
| 20              | ELECTRODE BRACKET                          | 20-1094A18 | 1   |
| 21              | ELECTRODE                                  | 32-0987    | 2   |
| 22              | WASHER                                     | 28-0523    | 2   |
| 23              | ELECTRODE PLATE                            | 38-0065    | 1   |
| 24              | SNAP RING                                  | 33-0254    | 1   |
| 25              | SIGHT GLASS                                | 33-0252    | 1   |
| 26              | BOLT                                       | 27-9526    | 3   |
| 27              | CONE                                       | 20-0373    | 1   |
| 28              | NUT                                        | 30-6001    | 3   |

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

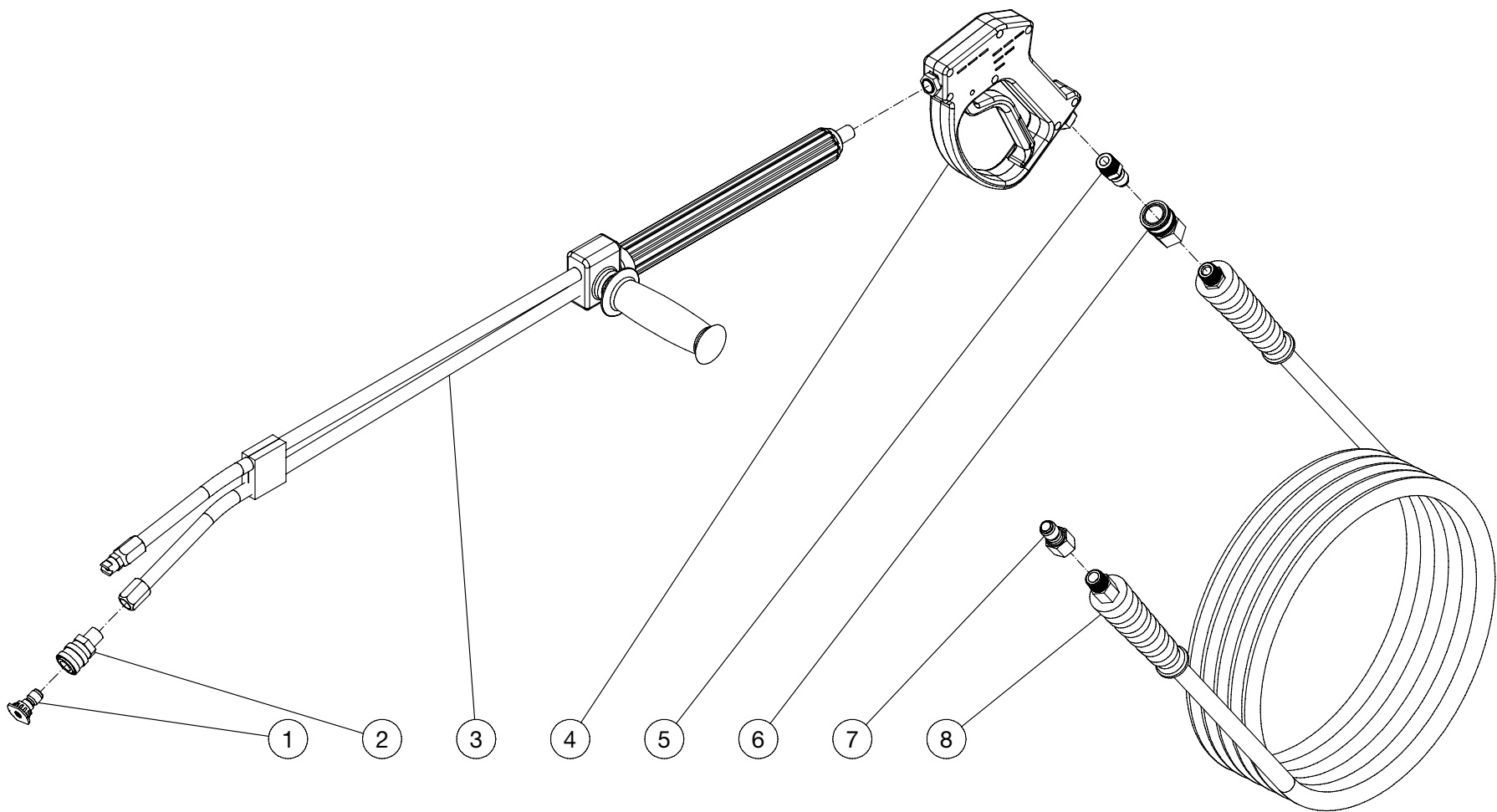


## GUN (850-0181) & ADJUSTABLE PRESSURE DUAL LANCE (850-0180)

OMHSP031\_850-0180-051597-JTR

| GUN/WAND (850-0181) & ADJUSTABLE PRESSURE DUAL LANCE (850-0180) |                                          |          |      |  |        |                                  |             |
|-----------------------------------------------------------------|------------------------------------------|----------|------|--|--------|----------------------------------|-------------|
| 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 48"     | 16-0317 2   |
| 14                                                              | Guard Lance (Right Side)                 | 16-0320  | 1    |  | 37     | Nut                              | 30-3060 2   |
| 15                                                              | Screw                                    | 27-8382  | 6    |  | 38     | Pipe Clamp                       | 16-0318 2   |
| 16                                                              | Guard Lance (Left Side)                  | 16-0321  | 1    |  | 39     | Screw                            | 27-8861 2   |
| 17                                                              | Plug                                     | 39-0076  | 1    |  | 40     | Nipple                           | 24-0127 2   |
| 18                                                              | Screw                                    | 49-0103  | 1    |  | 41     | Nozzle Protector                 | 16-0319 1   |
| 19                                                              | Spacer                                   | 16-0282  | 1    |  | 42     | Nozzle- 4060                     | 18-0110 1   |
| 20                                                              | Lance Holder (See 16-0306)               | N/A Sep. | 1    |  |        | Gun Assembly ( Includes 12-20)   | 16-0001     |
| 21                                                              | 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    |  |        |                                  |             |

GUN / WAND / HOSE ASSEMBLY



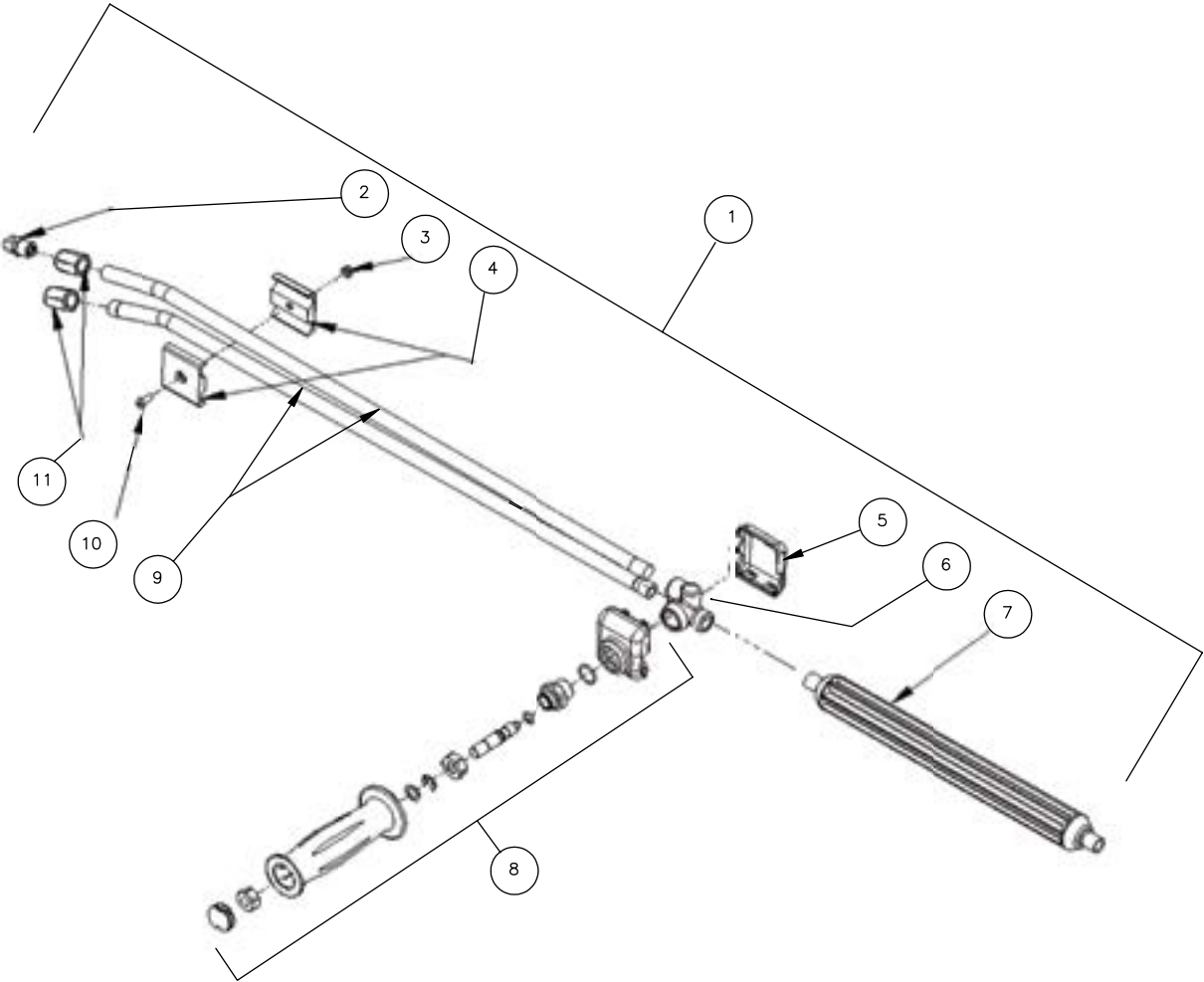
HSP LG - GUN\_WAND\_HOSE ASSY 112723

## GUN / WAND / HOSE ASSEMBLY

For parts Call 888-279-9274

| HSP LG-GUN WAND HOSE ASSY 112723 |                                  |         |     |
|----------------------------------|----------------------------------|---------|-----|
| GUN/WAND/HOSE ASSEMBLY           |                                  |         |     |
| ITEM                             | DESCRIPTION                      | PART #  | QTY |
| 1                                | NOZZLE                           | 18-0392 | 1   |
| -                                | NOZZLE 15035 QC                  | 18-0393 | 1   |
| -                                | NOZZLE 25035 QC                  | 18-0395 | 1   |
| -                                | NOZZLE 40035 QC                  | 18-0396 | 1   |
| 2                                | QC SOCKET                        | 17-0028 | 1   |
| 3                                | DUAL LANCE (3003)                | 16-0416 | 1   |
| -                                | DUAL LANCE - 48.00" (3504, 4004) | 16-0417 | 1   |
| 4                                | GUN                              | 16-0446 | 1   |
| 5                                | QUICK CONNECT                    | 17-0005 | 1   |
| 6                                | QUICK CONNECT SOCKET             | 17-0004 | 1   |
| 7                                | QUICK CONNECT                    | 17-0006 | 1   |
| 8                                | HOSE (3504, 4004)                | 15-0166 | 1   |
| -                                | HOSE (3003)                      | 15-0146 | 1   |

DUAL LANCE ASSEMBLY



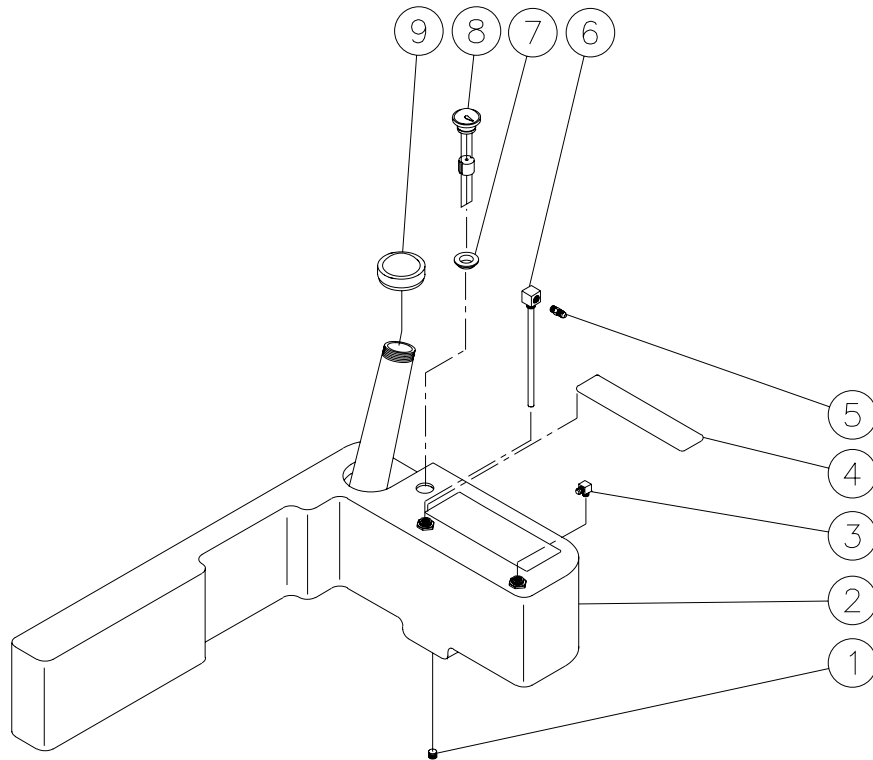
16-0416\_16-0417-102405-RZ

## DUAL LANCE ASSEMBLY

16-0416\_16-0417-102405-RZ

| DUAL LANCE ASSEMBLY (16-0416 & 16-0417) |                                            |          |      |
|-----------------------------------------|--------------------------------------------|----------|------|
| REF. #                                  | DESCRIPTION                                | PART #   | QTY. |
| 1                                       | Dual Lance Assembly - 36" (Inc. 2-11)      | 16-0416  | 1    |
| -                                       | Dual Lance Assembly - 48" (Inc. 2-11)      | 16-0417  | 1    |
| 2                                       | Detergent Nozzle                           | 18-0110  | 1    |
| 3                                       | Nut                                        | 30-6001  | 1    |
| 4                                       | Clamp                                      | 16-0420  | 2    |
| 5                                       | Lower Valve Cover (See 16-0416 or 16-0417) | N/A Sep. | 1    |
| 6                                       | Housing (See 16-0416 or 16-0417)           | 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    |
| -                                       | Lance (See 16-0417)                        | N/A Sep. | 2    |
| 10                                      | Screw                                      | 27-8196  | 1    |
| 11                                      | Nozzle Adapter                             | 24-0280  | 2    |

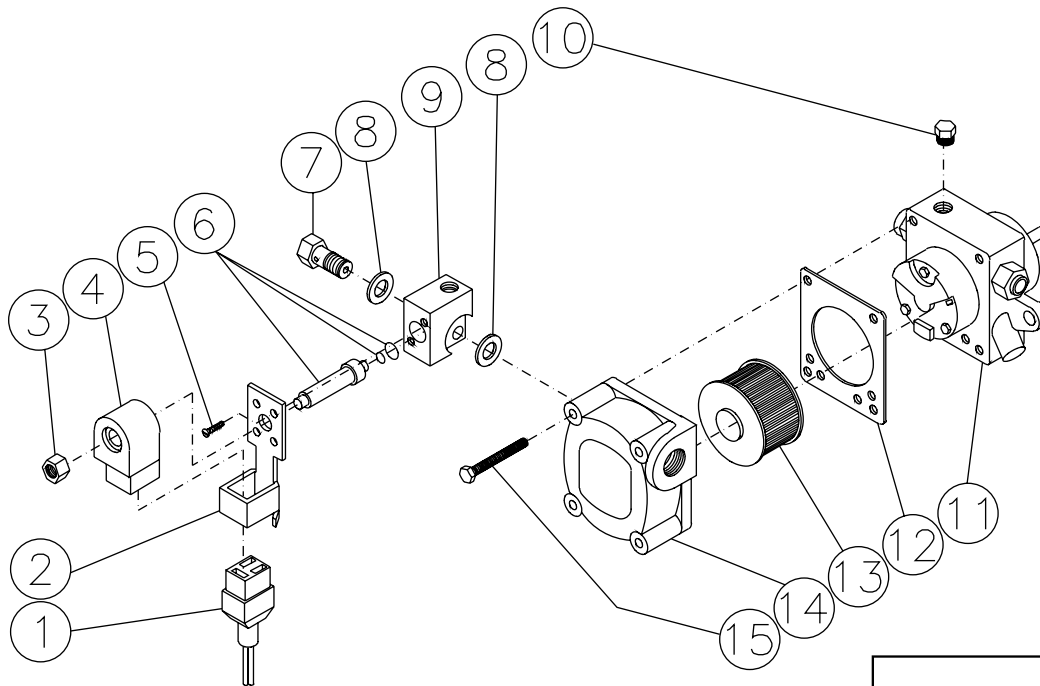
## FUEL TANK (850-0193)



850-0193-850-0248-012098-BAR

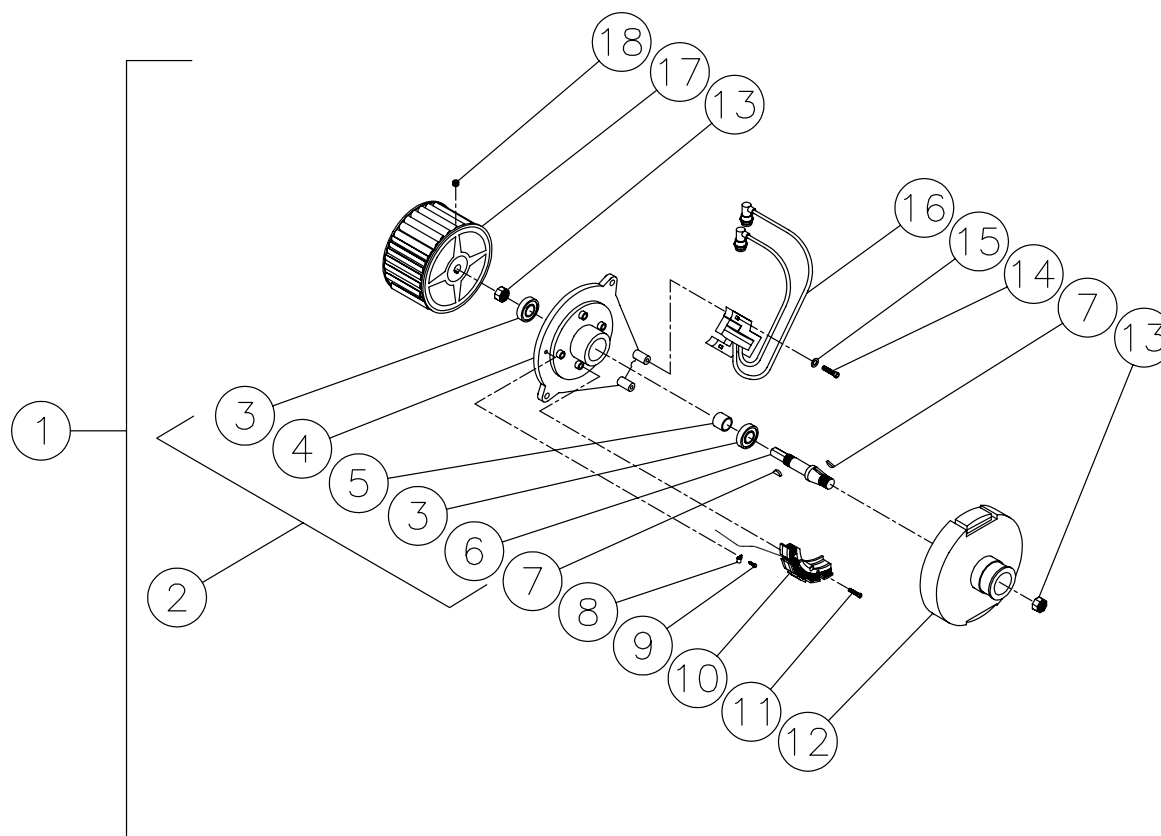
| FUEL TANK (850-0248) |                                                 |          |      |
|----------------------|-------------------------------------------------|----------|------|
| REF. #               | DESCRIPTION                                     | PART #   | QTY. |
| 1                    | Plug                                            | 23-0296  | 1    |
| 2                    | Fuel Tank (See 850-0248)                        | N/A Sep. | 1    |
| 3                    | Elbow                                           | 23-0237  | 1    |
| 4                    | Decal-Warning: Risk of Fire (E/S) (See 34-9001) | N/A Sep. | 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    |
|                      | Safety Decal Kit (Includes 4)                   | 34-9001  |      |

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



| 0MHSP049 052920                              |                        |         |      |
|----------------------------------------------|------------------------|---------|------|
| FUEL PUMP (3-0020) & FUEL SOLENOID (44-0100) |                        |         |      |
| REF. #                                       | DESCRIPTION            | PART #  | QTY. |
| 1                                            | CORD-DIN CONNECTOR     | 32-0443 | 1    |
| 2                                            | BASE PLATE             | N/A     | 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                   | N/A     | 1    |
| 8                                            | WASHER                 | N/A     | 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        | N/A     | 1    |
| 15                                           | FUEL PUMP COVER SCREW  | 46-1006 | 4    |

# EMF SYSTEM (850-0257) (BEFORE SERIAL #15070469)



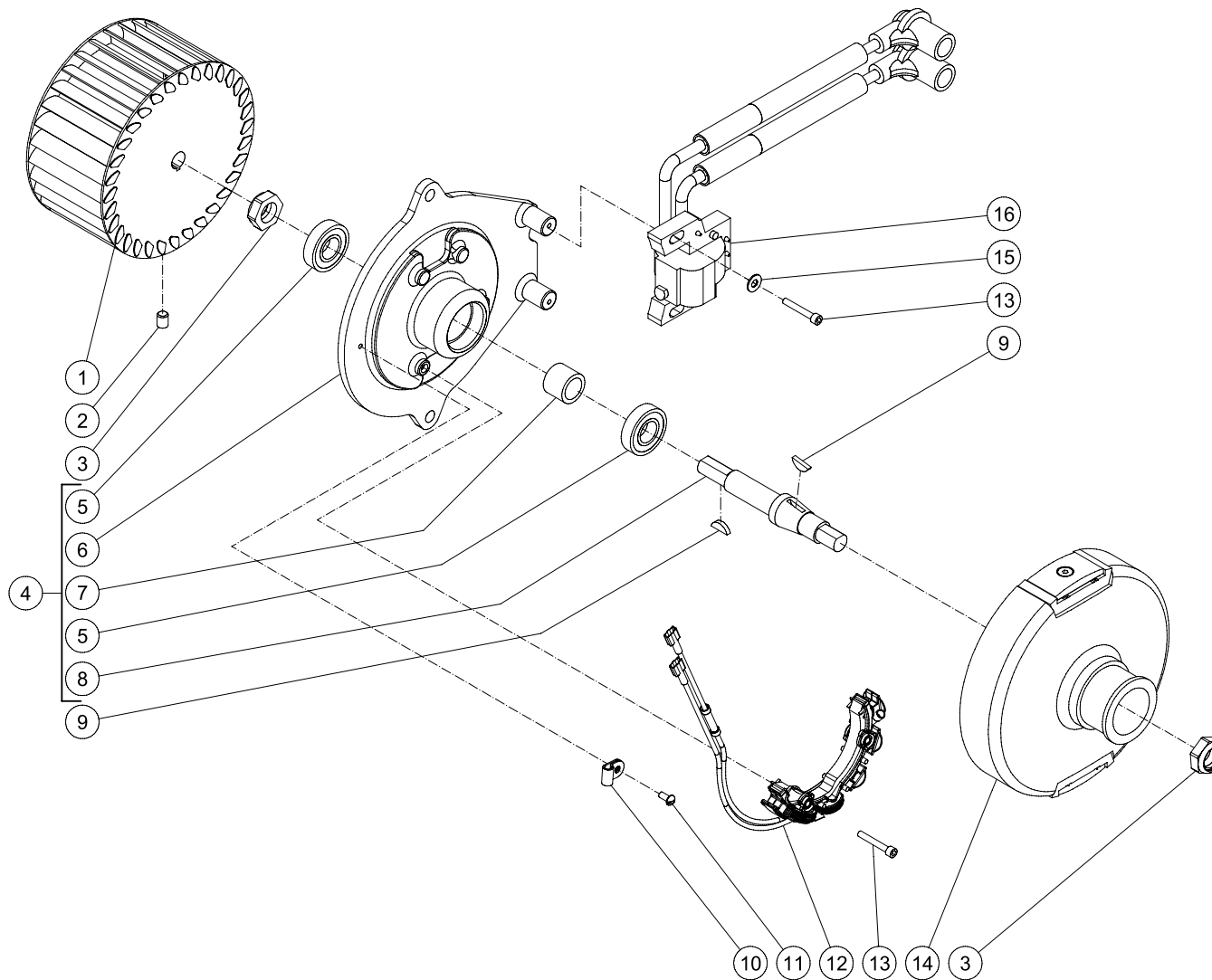
For parts Call 888-279-9274

## EMF SYSTEM (850-0257) (BEFORE SERIAL #15070469)

OMHSP072-052908-CH

| EMF SYSTEM (850-0257) |                         |          |      |
|-----------------------|-------------------------|----------|------|
| REF. #                | DESCRIPTION             | PART #   | QTY. |
| 1                     | EMF Assembly            | 850-0257 | 1    |
| 2                     | Blower Flange Assembly  | 850-0162 | 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    |

## EMF SYSTEM (850-0403) (AFTER SERIAL #15070469)

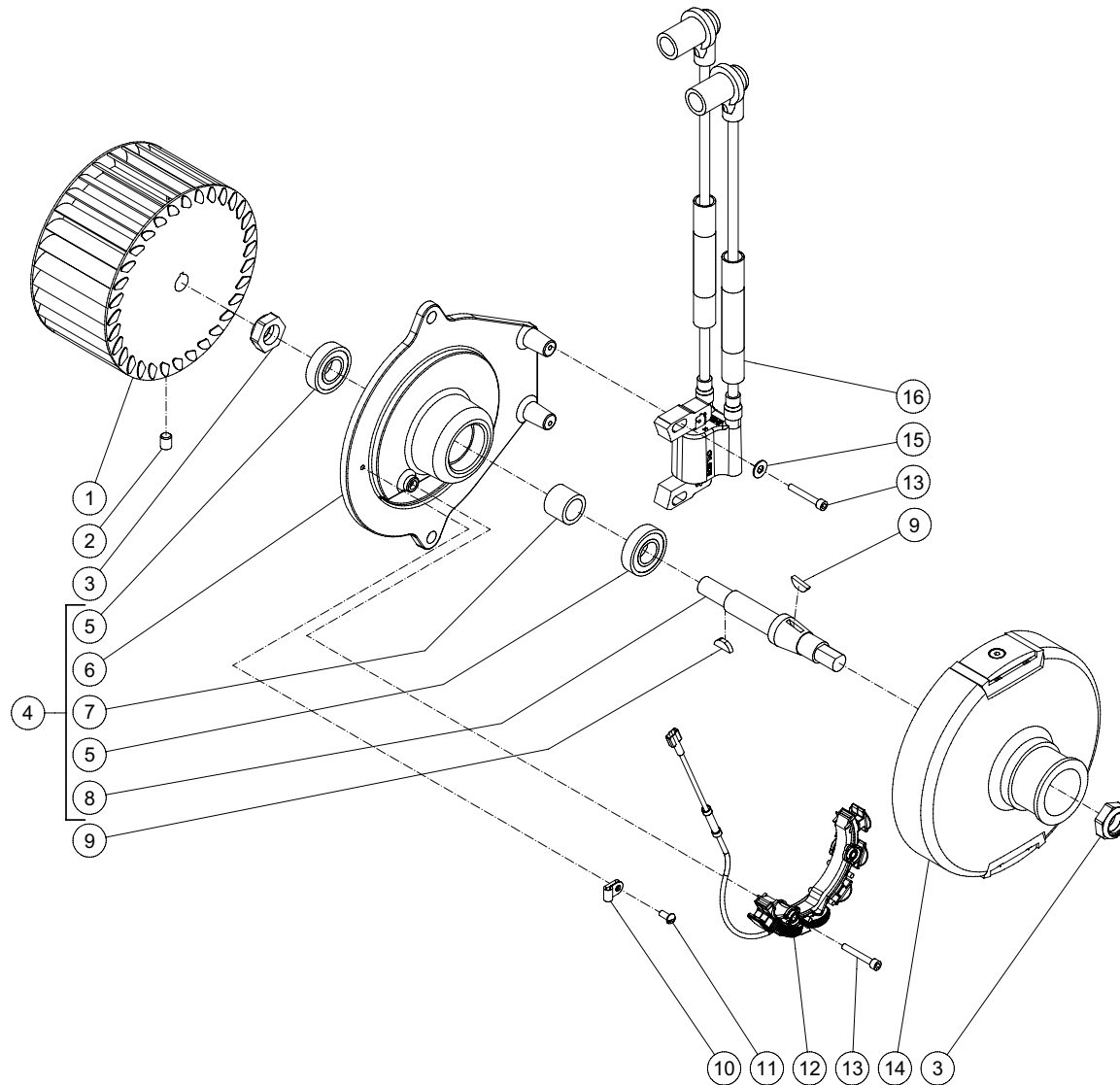


For parts Call 888-279-9274

### EMF SYSTEM (850-0403) (AFTER SERIAL #15070469)

| 850-0403 011112 CH |                        |          |     |
|--------------------|------------------------|----------|-----|
| EMF SYSTEM         |                        |          |     |
| ITEM               | DESCRIPTION            | PART #   | QTY |
| -                  | EMF ASSEMBLY           | 850-0403 | 1   |
| 1                  | BLOWERN FAN            | 44-0099  | 1   |
| 2                  | SET SCREW              | 30-3021  | 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                  | 32-0428  | 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      | 850-0191 | 1   |

# EMF SYSTEM (850-0403) (AFTER SERIAL #15074024)

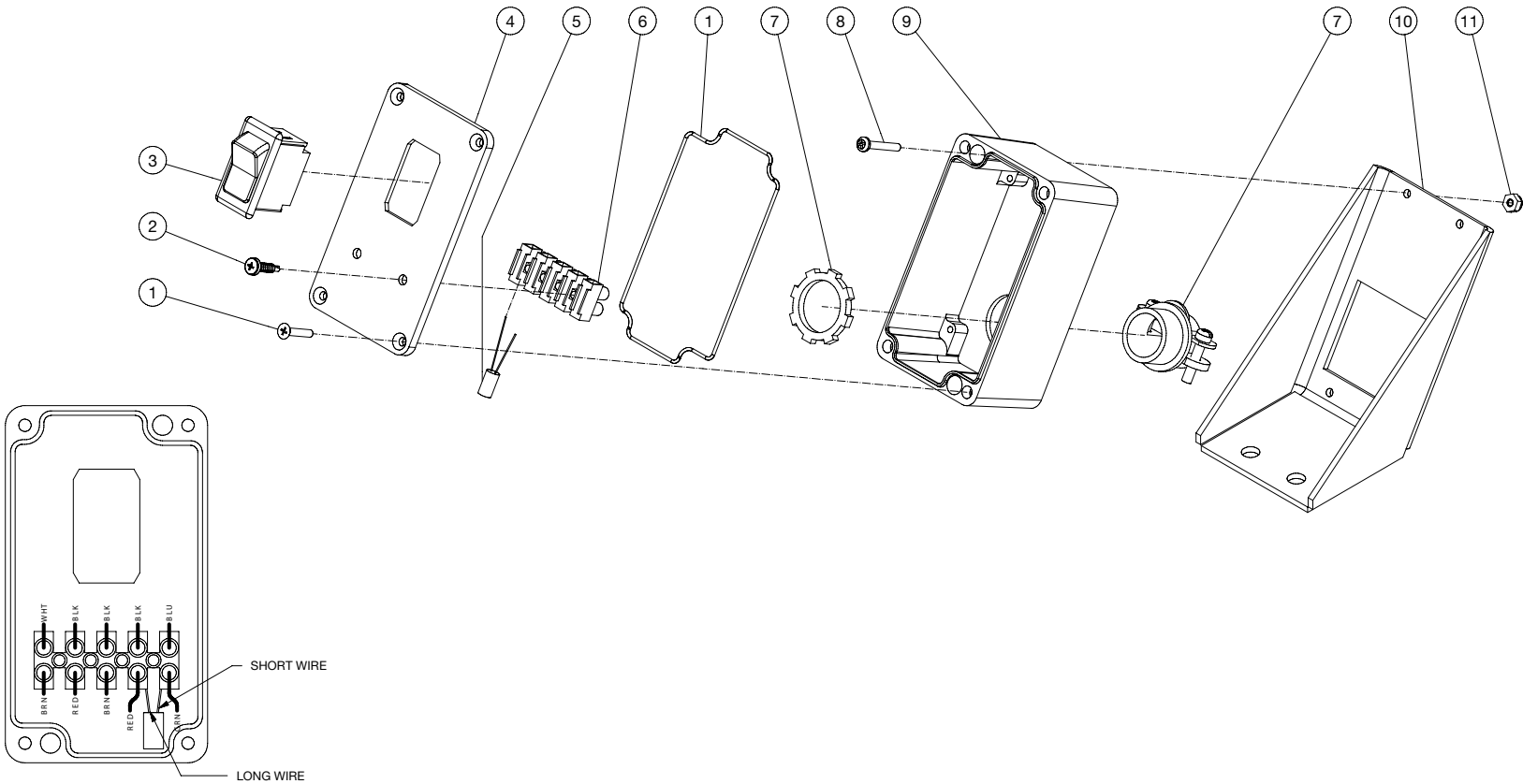


For parts Call 888-279-9274

### EMF SYSTEM (850-0403) (AFTER SERIAL #15074024)

| 850-0403 111319 ATL |                        |          |     |
|---------------------|------------------------|----------|-----|
| EMF SYSTEM          |                        |          |     |
| ITEM                | DESCRIPTION            | PART #   | QTY |
| -                   | EMF ASSEMBLY           | 850-0403 | 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      | 850-0413 | 1   |

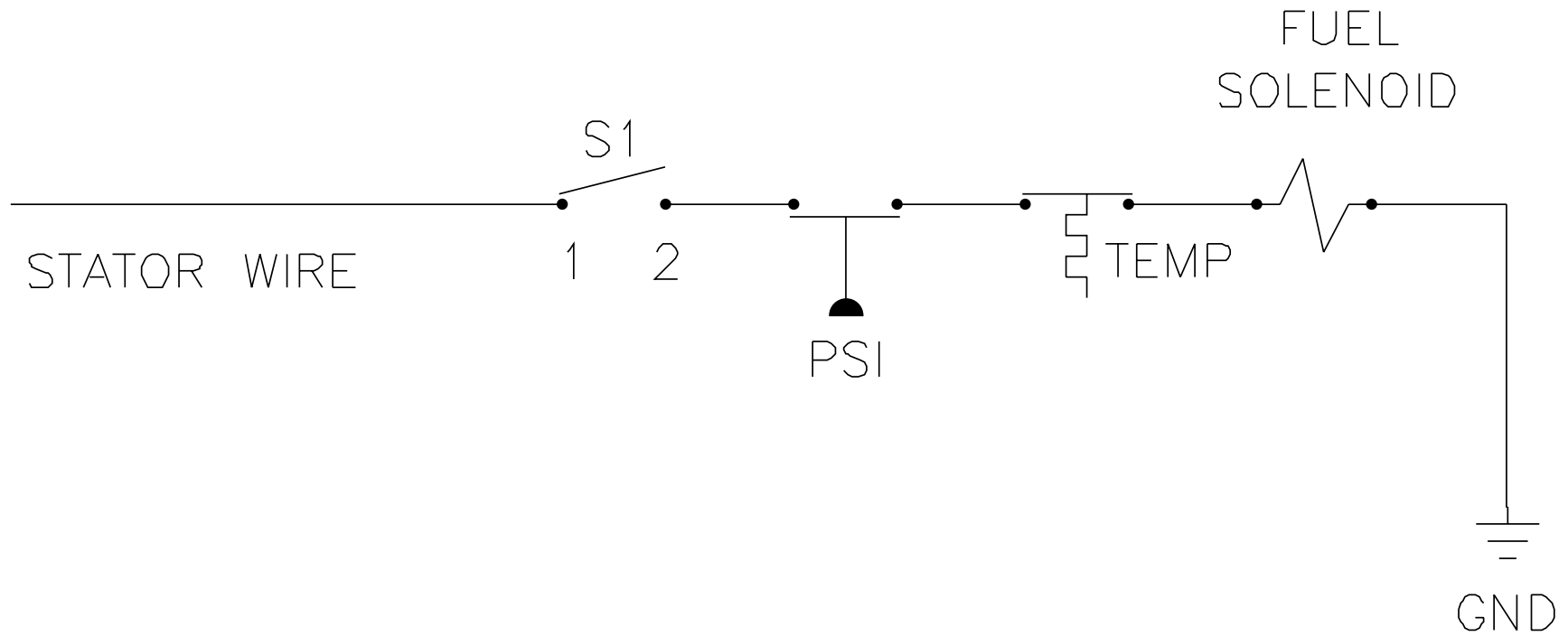
ELECTRIC BOX



## ELECTRIC BOX

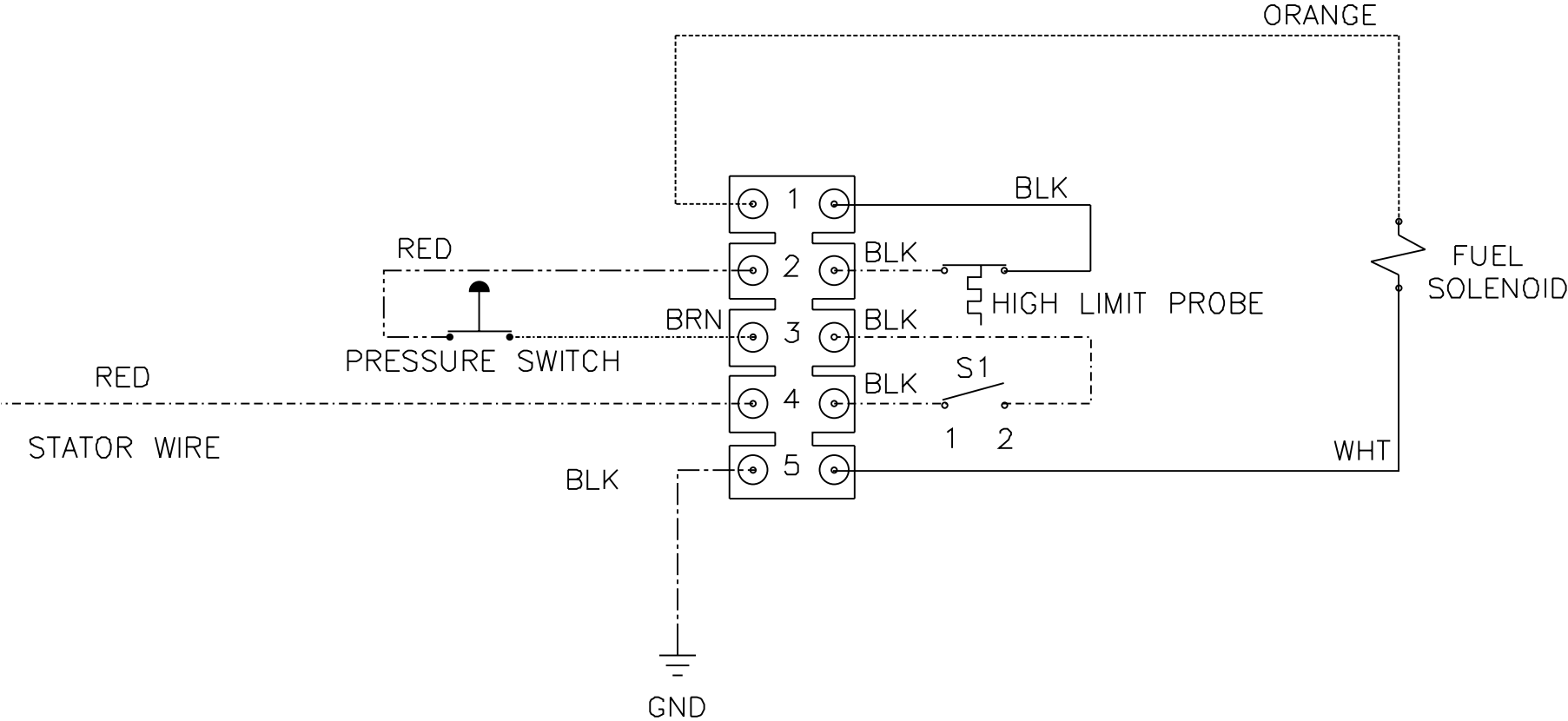
| OMHSP082 050520 JRC   |                           |            |     |
|-----------------------|---------------------------|------------|-----|
| ELECTRIC BOX ASSEMBLY |                           |            |     |
| ITEM                  | TITLE                     | PART #     | QTY |
| 1                     | ELECTRIC BOX HARDWARE KIT | 70-0169    | 1   |
| 2                     | SCREW                     | 27-3350    | 2   |
| 3                     | ROCKER SWITCH             | 32-0422    | 1   |
| 4                     | ELECTRIC BOX LID          | 32-0430A18 | 1   |
| 5                     | CAPACITOR                 | 32-1113    | 1   |
| 6                     | TERMINAL STRIP            | 32-0394    | 1   |
| 7                     | CONNECTOR                 | 32-0085    | 1   |
| 8                     | BOLT                      | 27-8497    | 2   |
| 9                     | ELECTRIC BOX              | 32-0429A18 | 1   |
| 10                    | ELECTRIC BOX BRACKET      | 20-0380A18 | 1   |
| 11                    | LOCKNUT                   | 30-0152    | 2   |

# WIRING SCHEMATIC (BEFORE SERIAL #15070469)



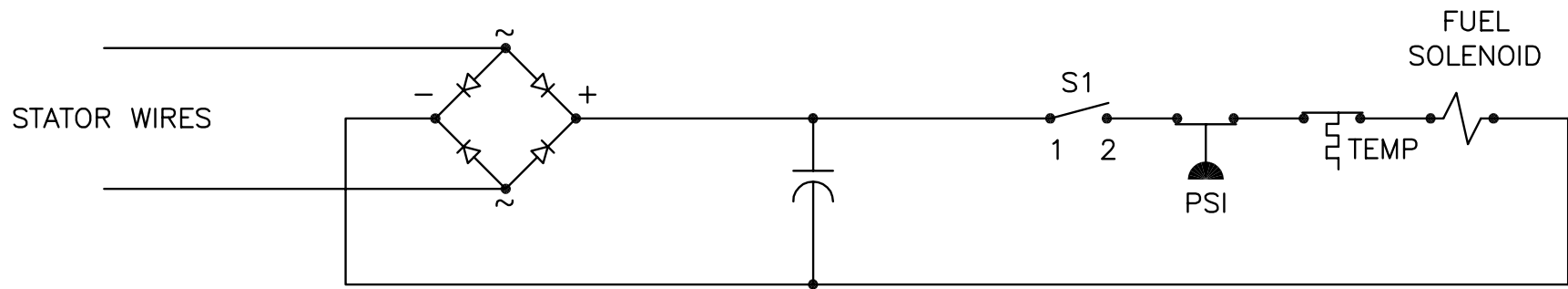
OMHSP050A-071797-BAR

WIRING DIAGRAM (BEFORE SERIAL #15070469)

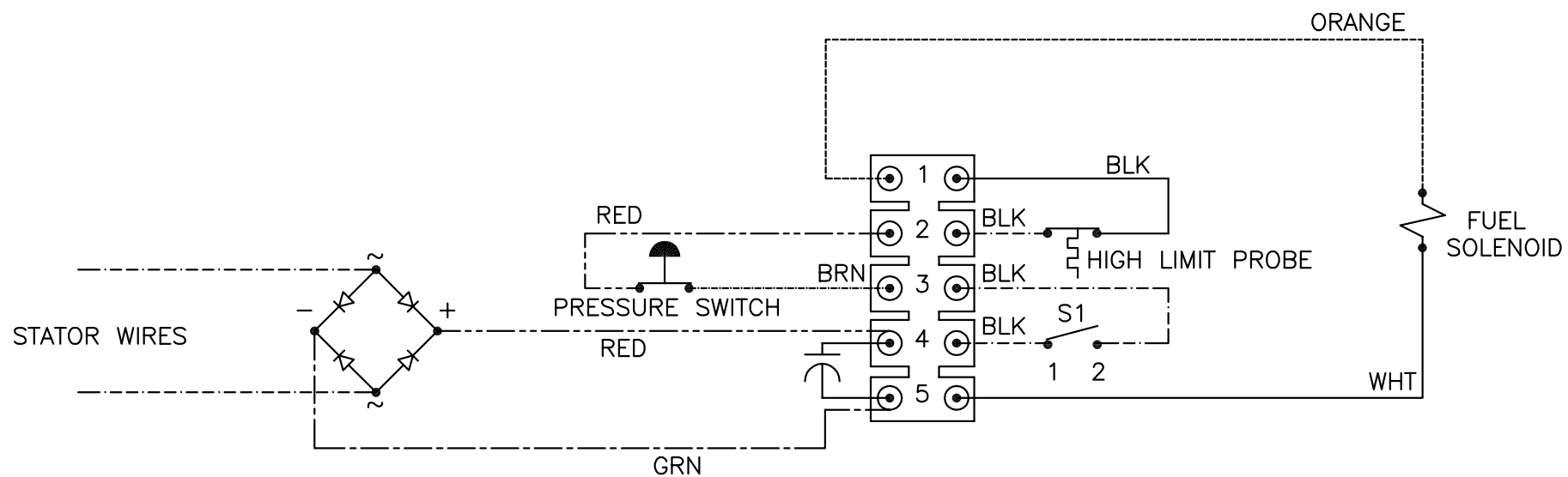


OMHSP050B-071797-BAR

## WIRING SCHEMATIC (AFTER SERIAL #15070469)



# WIRING DIAGRAM (AFTER SERIAL #15070469)



For parts Call 888-279-9274