

# PARTS LIST FOR ***HVS SERIES*** (AFTER SERIAL #15100089)

ENGINE OIL GRADE:		BTU INPUT:	
HONDA:	ABOVE 50°F = SAE30	HVS-3008	513,800
KOLHER/KUBOTA:	SAE10W30, API CI-4 OR BETTER	HVS-3005, 3006, 3505, 3506, 4005	471,800
VANGUARD:	ABOVE 40°F = SAE30	HVS-4004, 3504	386,400
	BELOW 40°F = SAE10W-30		
PUMP OIL GRADE:	SAE 20 OR 30 NON-DETERGENT	PRESSURE NOZZLE SIZE:	
PUMP OIL CAPACITY:	SEE INDIVIDUAL	HVS-3005:	5.5
	MACHINE SPECIFICATIONS	HVS-3006:	6.5
FUEL NOZZLE:		HVS-3504, 4004:	4.0
HVS-3008	3.0 80°B DELAVAN	HVS-3505:	5.0
HVS-3005, 3006, 3505, 3506, 4005	2.75 90°B DELAVAN	HVS-3506:	6.0
HVS-4004, 3504	2.25 80°B DELAVAN	HVS-3008	9.0
		HVS-4005:	4.5

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 operating the machine, DO NOT leave the pressurized unit unattended. Shut off the unit and release trapped pressure before leaving.

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**NOTES**

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**SERIAL BREAK NUMBER:**

**SERIAL BREAK EXPLANATION:**

# 15008085	BURNER ASSEMBLY CHANGE - ADDING CORD SET (4-0017)
# 15009856	HVS-3005/3504-0MGK ONLY: CHANGED ENGINE FROM 850-0291 TO 850-0332.
# 15009977	HVS-3504-0K6G/0V6G ONLY: CHANGED UNLOADER FROM 850-0304 TO 850-0345.
# 15009085	HVS-3505-0K6G ONLY: CHANGED ENGINE FROM 850-0292 TO 850-0333.
# 15010604	HVS-4004-0K6A ONLY: CHANGED ENGINE FROM 850-0292 TO 850-0333.
# 15011230	HVS-3505-0H6G AND HVS-4004-0H6A ONLY: CHANGED ENGINE FROM 850-0300 TO 850-0349.
# 15013076	HVS-3005/3006/3504/3505/3506: ADDED HEAT EXCHANGER PLUMBING STEAM OPTION DRAWING.
# 15013196	HVS-3506-0H6G ONLY: CHANGED ENGINE FROM 1-0128 TO 1-0143.
4-6-04	ADDED DRAWING- PLUMBING: ADJUSTABLE THERMOSTAT OUTLET OPTION (HX-0145)
#15019140	3-0213 PUMP REVISED - ADDED PART #'S 46-1200 & 46-1201
10-19-05	CHANGED GUN FROM 16-0001 TO 16-0392. CHANGED LANCE FROM 16-0390 TO 16-0417.
6-11-06	OBSOLETE UNIT: HVS-3006-0R7G ADDED NEW MACHINES: HVS-3006/3505/4005-0B7G
#15008463	BURNER ASSEMBLY CHANGE - ADDING CORD SET (4-0018)
#15045000	CHANGED PRESSURE SEAL ON PUMPS 3-0202 AND 3-0203
#15100089	03-17-15 CHANGED UNLOADER 8-0511 TO 8-0634

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**NOTES**

## SPECIFICATIONS FOR HVS-3005-0K6G/0V6G

HVS-3005-0K6G/0V6G		
<b>MODEL NUMBER</b>	HVS-3005-0K6G	HVS-3005-0V6G
<b>Operating Pressure (PSI/Bar):</b>	3000 / 206.8 (+/- 5%)	
<b>Water Volume (GPM/lpm):</b>	4.8 / 18.2 (+/- 5%)	
<b>Outlet Water Temperature (F/C):</b>	130°F / 54°C (+/- 10°F) rise above inlet ambient (210°F / 99°C maximum)	
<b>High Pressure Nozzle</b>	5.5	
<b>Engine:</b>	Kohler	Briggs and Stratton
Horsepower	CH620	Vanguard 16
Engine Type	4 Stroke, Overhead Valve, Twin Cylinder	
Oil Type	SAE10-30W	Above 40°F = SAE30 / Below 40°F = SAE10W-30
Oil Capacity (oz./liter)	64 / 1.89	56 / 1.66
Low Oil Protection	Oil Sentry™	Oil Guard™
Fuel Type	Refer to Engine Owner's Manual	
Fuel Capacity (gal./liter)	10 / 37.8	
Starting	12 Volt Electric	
Maximum No Load RPM	3600 (+/- 100)	
<b>High Pressure Pump:</b>	Belt Driven, Oil Bath, Triplex Piston	
Oil Type	SAE20 or 30 Non-Detergent	
Oil Capacity (oz./liters)	41 / 1.2	
Plungers	Ceramic	
Manifold	Forged Brass	
Valves	Stainless Steel	
Unloader	Flow Sensitive - Pre-set at the factory	
Heat Dump Valve	Relieves heated water during unloader bypass stage	
<b>Water System:</b>		
Inlet Water Strainer	Removable Thimble for inspection and cleaning of Stainless Steel Screen	
Float Tank Strainer	Removable Strainer for inspection and cleaning of Stainless Steel Screen	
Float Tank Capacity (gal. / liters)	4.75 / 18.0	
Heat Dump Valve	Protects pump against damaging heat in recirculated and inlet water.	
<b>Burner Fuel System:</b>		
Fuel Type	No.1 or No.2 Fuel Oil, Diesel or Kerosene	
Fuel Capacity (Gal. / liters)	10 / 37.8	
Fuel Filter/ Water Separator	Spin on (10 micron) filter / E-Z water drain	
Fuel Pump	Two Line, Single Stage	
Fuel Pressure (PSI / BAR)	150 / 10.4	
Fuel Nozzle	2.75 90° B Delavan	
Fuel Consumption (GPH / LPH)	3.37 / 12.75 Cont. Burning	
<b>Burner Electrical System:</b>		
Voltage	115	
Amps	3.0	
<b>Heat Exchanger:</b>	Horizontal, Side Fired, Pancake Coil	
BTU Input	471,800	
Efficiency	75% with #2 Fuel Oil / Diesel	
Smoke Density	0-3 per ASTM D2156	
<b>Safety System:</b>		
Pressure Switch	Shuts off burner fuel supply upon trigger release.	
Fuel Solenoid Valve	115 Volt, controls fuel supply to burner	
Safety Relief	Relieves excess system pressure	
<b>Hi-Limit Switch:</b>	Shuts off burner fuel supply when outlet water temperature exceeds 225°F/107°C	
<b>Unit Net Weight (Lbs/kg):</b>	750 / 342	
<b>Unit Shipping Weight (Lbs/kg):</b>	854 / 387	
<b>Unit Net Dimension (In/cm):</b>	49.5L x 33.5W x 44.5H / 125.7L x 85.1W x 113H	
<b>Unit Shipping Dimension (In/cm):</b>	57.5L x 35.5W x 59.5H / 146.1L x 90.2W x 151.1H	

## SPECIFICATIONS FOR HVS-3504-0K6G/0V6G

HVS-3504-0K6G/0V6G		
MODEL NUMBER	HVS-3504-0K6G	HVS-3504-0V6G
<b>Operating Pressure (PSI/Bar):</b>	3500 / 241.3 (+/- 5%)	
<b>Water Volume (GPM/lpm):</b>	3.8 / 14.4 (+/- 5%)	
<b>Outlet Water Temperature (F/C):</b>	130°F / 54°C (+/- 10°F) rise above inlet ambient (210°F / 99°C maximum)	
<b>High Pressure Nozzle</b>	4.0	
<b>Engine:</b>	Kohler	Briggs and Stratton
Model	CH620	Vanguard 16
Engine Type	4 Stroke, Overhead Valve, Twin Cylinder	
Oil Type	SAE10-30W	Above 40°F = SAE30 / Below 40°F = SAE10W-30
Oil Capacity (oz./liter)	64 / 1.89	56 / 1.66
Low Oil Protection	Oil Sentry™	Oil Guard™
Fuel Type	Refer to Engine Owner's Manual	
Fuel Capacity (gal./liter)	10 / 37.8	
Starting	12 Volt Electric	
Maximum No Load RPM	3600 (+/- 100)	
<b>High Pressure Pump:</b>	Belt Driven, Oil Bath, Triplex Piston	
Oil Type	SAE20 or 30 Non-Detergent	
Oil Capacity (oz./liters)	41 / 1.2	
Plungers	Ceramic	
Manifold	Forged Brass	
Valves	Stainless Steel	
Unloader	Flow Sensitive - Pre-set at the factory	
Heat Dump Valve	Relieves heated water during unloader bypass stage	
<b>Water System:</b>		
Inlet Water Strainer	Removable Thimble for inspection and cleaning of Stainless Steel Screen	
Float Tank Strainer	Removable Strainer for inspection and cleaning of Stainless Steel Screen	
Float Tank Capacity (gal. / liters)	4.75 / 18.0	
Heat Dump Valve	Protects pump against damaging heat in recirculated and inlet water.	
<b>Burner Fuel System:</b>		
Fuel Type	No.1 or No.2 Fuel Oil, Diesel or Kerosene	
Fuel Capacity (Gal. / liters)	10 / 37.8	
Fuel Filter/ Water Separator	Spin on (10 micron) filter / E-Z water drain	
Fuel Pump	Two Line, Single Stage	
Fuel Pressure (PSI / BAR)	150 / 10.4	
Fuel Nozzle	2.25 80° B Delavan	
Fuel Consumption (GPH / LPH)	2.76 / 10.43 Cont. Burning	
<b>Burner Electrical System:</b>		
Voltage	115	
Amps	3.0	
<b>Heat Exchanger:</b>	Horizontal, Side Fired, Pancake Coil	
BTU Input	386,400	
Efficiency	75% with #2 Fuel Oil / Diesel	
Smoke Density	0-3 per ASTM D2156	
<b>Safety System:</b>		
Pressure Switch	Shuts off burner fuel supply upon trigger release.	
Fuel Solenoid Valve	115 Volt, controls fuel supply to burner	
Safety Relief	Relieves excess system pressure	
<b>Hi-Limit Switch:</b>	Shuts off burner fuel supply when outlet water temperature exceeds 225°F/107°C	
<b>Unit Net Weight (Lbs/kg):</b>	750 / 342	
<b>Unit Shipping Weight (Lbs/kg):</b>	854 / 387	
<b>Unit Net Dimension (In/cm):</b>	49.5L x 33.5W x 44.5H / 125.7L x 85.1W x 113H	
<b>Unit Shipping Dimension (In/cm):</b>	57.5L x 35.5W x 59.5H / 146.1L x 90.2W x 151.1H	



## SPECIFICATIONS FOR HVS-3505-1H6G/0K6G/0V6G

HVS-3505-0H6G/0K6G/0V6G			
MODEL NUMBER	HVS-3505-1H6G	HVS-3505-0K6G	HVS-3505-0V6G
Operating Pressure (PSI/Bar):	3500 / 241.3 (+/- 5%)		
Water Volume (GPM/lpm):	4.7 / 17.7 (+/- 5%)		
Outlet Water Temperature (F/C):	130°F / 54°C (+/- 10°F) rise above inlet ambient (210°F / 99°C maximum)		
High Pressure Nozzle	5.0		
Engine:	Honda	Kohler	Briggs and Stratton
Model	GX630	CH640	Vanguard 21
Engine Type	4 Stroke, Overhead Valve, Twin Cylinder		
Oil Type	Above 50°F = SAE30	SAE10-30W	Above 40°F = SAE30 / Below 40°F = SAE10W-30
Oil Capacity (oz./liter)	24 / .71	64 / 1.89	56 / 1.66
Low Oil Protection	Oil Switch	Oil Sentry™	Oil Guard™
Fuel Type	Refer to Engine Owner's Manual		
Fuel Capacity (gal./liter)	10 / 37.8		
Starting	12 Volt Electric		
Maximum No Load RPM	3600 (+/- 100)		
High Pressure Pump:	Belt Driven, Oil Bath, Triplex Piston		
Oil Type	SAE20 or 30 Non-Detergent		
Oil Capacity (oz./liters)	41 / 1.2		
Plungers	Ceramic		
Manifold	Forged Brass		
Valves	Stainless Steel		
Unloader	Flow Sensitive - Pre-set at the factory		
Heat Dump Valve	Relieves heated water during unloader bypass stage		
Water System:			
Inlet Water Strainer	Removable Thimble for inspection and cleaning of Stainless Steel Screen		
Float Tank Strainer	Removable Strainer for inspection and cleaning of Stainless Steel Screen		
Float Tank Capacity (gal. / liters)	4.75 / 18.0		
Heat Dump Valve	Protects pump against damaging heat in recirculated and inlet water.		
Burner Fuel System:			
Fuel Type	No.1 or No.2 Fuel Oil, Diesel or Kerosene		
Fuel Capacity (Gal. / liters)	10 / 37.8		
Fuel Filter/ Water Separator	Spin on (10 micron) filter / E-Z water drain		
Fuel Pump	Two Line, Single Stage		
Fuel Pressure (PSI / BAR)	150 / 10.4		
Fuel Nozzle	2.75 90° B Delavan		
Fuel Consumption (GPH / LPH)	3.37 / 12.75 Cont. Burning		
Burner Electrical System:			
Voltage	115		
Amps	3.0		
Heat Exchanger:	Horizontal, Side Fired, Pancake Coil		
BTU Input	471,800		
Efficiency	75% with #2 Fuel Oil / Diesel		
Smoke Density	0-3 per ASTM D2156		
Safety System:			
Pressure Switch	Shuts off burner fuel supply upon trigger release.		
Fuel Solenoid Valve	115 Volt, controls fuel supply to burner		
Safety Relief	Relieves excess system pressure		
Hi-Limit Switch:	Shuts off burner fuel supply when outlet water temperature exceeds 225°F/107°C		
Unit Net Weight (Lbs/kg):	750 / 342		
Unit Shipping Weight (Lbs/kg):	854 / 387		
Unit Net Dimension (In/cm):	49.5L x 33.5W x 44.5H / 125.7L x 85.1W x 113H		
Unit Shipping Dimension (In/cm):	57.5L x 35.5W x 59.5H / 146.1L x 90.2W x 151.1H		

## SPECIFICATIONS FOR HVS-3506-1H6G/0K6G

HVS-3506-0H6G/0K6G		
MODEL NUMBER	HVS-3506-1H6G	HVS-3506-0K6G
Operating Pressure (PSI/Bar):	3500 / 241.3 (+/- 5%)	
Water Volume (GPM/lpm):	5.6 / 21.2 (+/- 5%)	
Outlet Water Temperature (F/C):	130°F / 54°C (+/- 10°F) rise above inlet ambient (210°F / 99°C maximum)	
High Pressure Nozzle	6.0	
Engine:	Honda	Kohler
Model	GX630	CH730
Engine Type	4 Stroke, Overhead Valve, Twin Cylinder	
Oil Type	Above 50°F = SAE30	SAE10-30W
Oil Capacity (oz./liter)	24 / .71	64 / 2.0
Low Oil Protection	Oil Switch	Oil Sentry™
Fuel Type	Refer to Engine Owner's Manual	
Fuel Capacity (gal./liter)	10 / 37.8	
Starting	12 Volt Electric	
Maximum No Load RPM	3600 (+/- 100)	
High Pressure Pump:	Belt Driven, Oil Bath, Triplex Piston	
Oil Type	SAE20 or 30 Non-Detergent	
Oil Capacity (oz./liters)	32 / .95	
Plungers	Ceramic	
Manifold	Forged Brass	
Valves	Stainless Steel	
Unloader	Flow Sensitive - Pre-set at the factory	
Heat Dump Valve	Relieves heated water during unloader bypass stage	
Water System:		
Inlet Water Strainer	Removable Thimble for inspection and cleaning of Stainless Steel Screen	
Float Tank Strainer	Removable Strainer for inspection and cleaning of Stainless Steel Screen	
Float Tank Capacity (gal. / liters)	4.75 / 18.0	
Heat Dump Valve	Protects pump against damaging heat in recirculated and inlet water.	
Burner Fuel System:		
Fuel Type	No.1 or No.2 Fuel Oil, Diesel or Kerosene	
Fuel Capacity (Gal. / liters)	10 / 37.8	
Fuel Filter/ Water Separator	Spin on (10 micron) filter / E-Z water drain	
Fuel Pump	Two Line, Single Stage	
Fuel Pressure (PSI / BAR)	150 / 10.4	
Fuel Nozzle	2.75 90° B Delavan	
Fuel Consumption (GPH / LPH)	3.37 / 12.75 Cont. Burning	
Burner Electrical System:		
Voltage	115	
Amps	3.0	
Heat Exchanger:	Horizontal, Side Fired, Pancake Coil	
BTU Input	471, 800	
Efficiency	75% with #2 Fuel Oil / Diesel	
Smoke Density	0-3 per ASTM D2156	
Safety System:		
Pressure Switch	Shuts off burner fuel supply upon trigger release.	
Fuel Solenoid Valve	115 Volt, controls fuel supply to burner	
Safety Relief	Relieves excess system pressure	
Hi-Limit Switch:	Shuts off burner fuel supply when outlet water temperature exceeds 225°F/ 107°C.	
Unit Net Weight (Lbs/kg):	750 / 342	
Unit Shipping Weight (Lbs/kg):	854 / 387	
Unit Net Dimension (In/cm):	49.5L x 33.5W x 44.5H / 125.7L x 85.1W x 113H	
Unit Shipping Dimension (In/cm):	57.5L x 35.5W x 59.5H / 146.1L x 90.2W x 151.1H	

## SPECIFICATIONS FOR HVS-3008-1H6G/0K6G/0B7G

Model Number	HVS-3008-1H6G	HVS-3008-0K6G	HVS-3008-0B7G
Operating Pressure (PSI/Bar):	3000 / 206.8 (+/-5%)		
Water Volume (GPM/lpm):	7.8 / 29.5 (+/-5%)		
Outlet Water Temperature (F/C)	130°F / 54°C (+/- 10°F) rise above inlet ambient (210°F / 99°C maximum)		
High Pressure Nozzle	9.0		
Engine:	Honda	Kohler	Kubota
Horsepower	GX690	CH730	D902
Engine Type	4 Stroke, overhead valve, twin cylinder		4 Stroke, FL Diesel, Liquid Cooled
Oil Type	Above 50°F = SAE30	SAE10-30W	SAW10W40, API C1-4 or better
Oil Capacity (Oz./Liter)	24 / .71	64 / 2.0	125.4/3.7
Low Oil Protection	Oil switch	Oil sentry™	
Fuel Type	Refer to engine owner's manual		
Fuel Capacity (Gal./Liter)	10 / 37.8		
Starting	12 Volt electric		
Maximum No Load RPM	3600 (+/- 100)		
High Pressure Pump:	Belt driven, oil bath, triplex piston		
Oil Type	SAE20 or 30 non-detergent		
Oil Capacity (Oz./Liter)	31 / .92		
Plungers	Ceramic		
Manifold	Forged brass		
Valves	Stainless steel		
Unloader	Flow sensitive - pressure trapping		
Heat Dump Valve	Relieves heated water during unloader bypass stage		
Water System:			
Inlet Water Strainer	Removable thimble for inspection and cleaning of stainless steel screen		
Float Tank Strainer	Removable strainer for inspection and cleaning of stainless steel screen		
Float Tank Capacity (Gal./Liter)	4.75 / 18.0		
Heat Dump Valve	Protects pump against damaging heat in recirculated and inlet water		
Burner Fuel System			
Fuel Type	No 1 or no 2 fuel oil, diesel or kerosene		
Fuel Capacity (Gal./Liter)	10 / 37.8		
Fuel Filter/Water Separator	Spin on (10 micron) filter / e-z water drain		
Fuel Pump	Two line, single stage		
Fuel Pressure (PSI/ Bar)	150 / 10.4		
Fuel Nozzle	3.00 80° B Delavan		
Fuel Consumption (GPH / LPH)	3.67 / 13.9 Cont. Burning		
Burner Electrical System			
Voltage	115		
Amps	3.0		
Heat Exchanger	Horizontal, side fired, pancake coil		
Btu Input	513,800		
Efficiency	75% With #2 fuel oil/diesel		
Smoke Density	0-3 Per ASTM D2156		
Safety System			
Pressure Switch	Shuts off burner fuel supply upon trigger release		
Fuel Solenoid	115 Volt, controls fuel supply to burner		
Safety Relief	Relieves excess system pressure		
Hi-Limit Switch	Shuts off burner fuel supply when outlet water temperature exceeds 250°F / 121°C		
Unit Net Weight (Lbs/Kg)	830 / 377		933 / 424
Unit Shipping Weight (Lbs/Kg)	934 / 425		1037 / 471
Unit Net Dimensions (In/Cm)	49.5L x 33.5W x 44.5H / 125.7L x 85.1W x 113h		59.5L x 33.75W x 46H / 151.2L x 85.7W x 116.8H
Unit Shipping Dimensions (In/Cm)	57.5L x 35.5W x 59.5H / 146.1L x 90.2W x 151.1H		59.5L x 35.5W x 51.5H / 151.2L x 90.2W x 130.8H

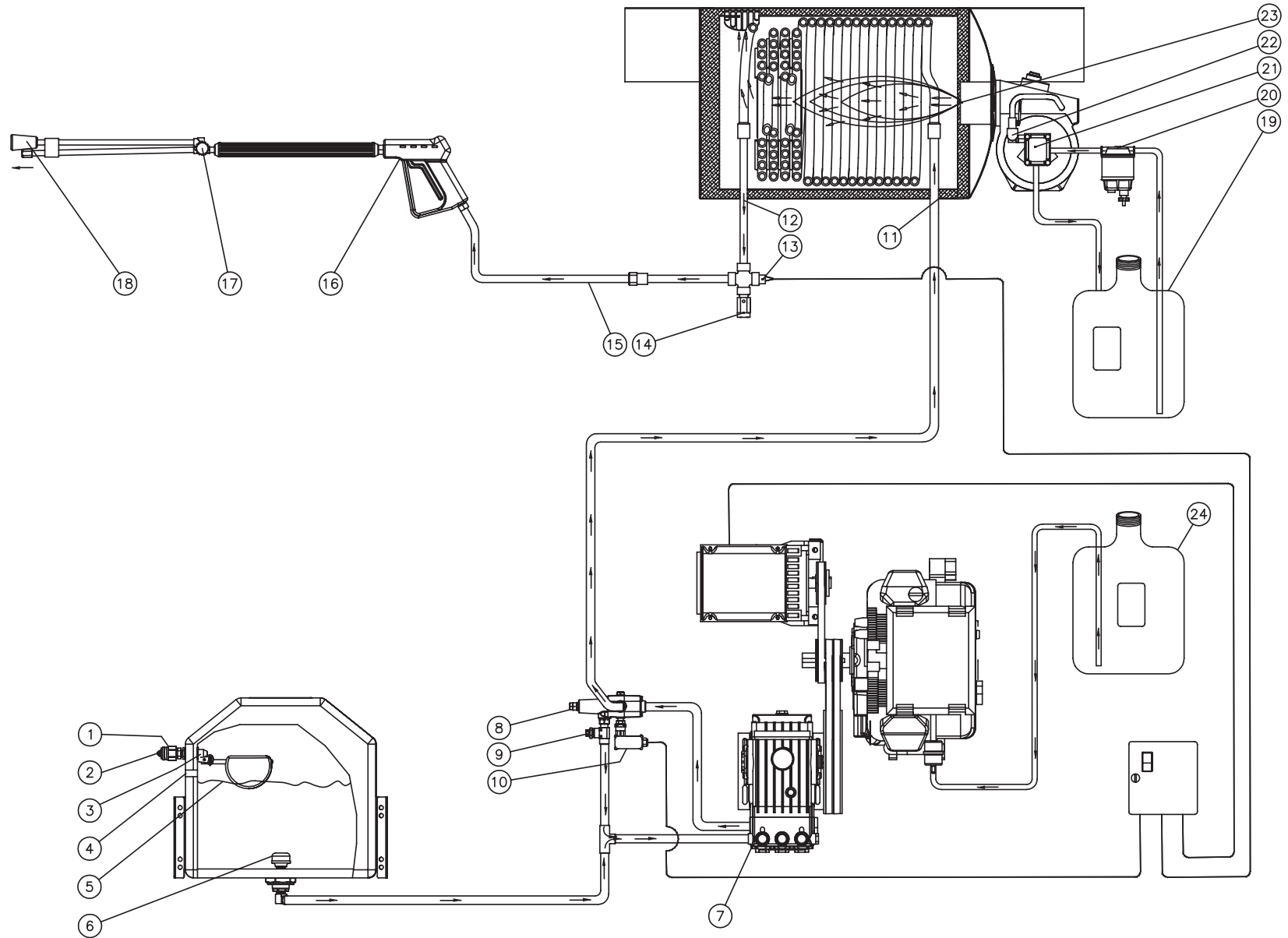
## SPECIFICATIONS FOR HVS-4004-0K6A/0V6A

HVS-4004-0K6A/0V6A		
MODEL NUMBER	HVS-4004-0K6A	HVS-4004-0V6A
<b>Operating Pressure (PSI/Bar):</b>	4000 / 275.8 (+/- 5%)	
<b>Water Volume (GPM/lpm):</b>	4.0 / 15.1 (+/- 5%)	
<b>Outlet Water Temperature (F/C):</b>	130°F / 54°C (+/- 10°F) rise above inlet ambient (210°F / 99°C maximum)	
<b>High Pressure Nozzle</b>	5.0 / 3.5 Wet Steam	
<b>Engine:</b>	Kohler	Briggs and Stratton
Model	CH640	Vanguard 21
Engine Type	4 Stroke, Overhead Valve, Twin Cylinder	
Oil Type	SAE10-30W	Above 40°F = SAE30 / Below 40°F = SAE10W-30
Oil Capacity (oz./liter)	64 / 2.0	56 / 1.67
Low Oil Protection	Oil Sentry™	Oil Guard
Fuel Type	Refer to Engine Owner's Manual	
Fuel Capacity (gal./liter)	10 / 37.8	
Starting	12 Volt Electric	
Maximum No Load RPM	3600 (+/- 100)	
<b>High Pressure Pump:</b>	Belt Driven, Oil Bath, Triplex Piston	
Oil Type	SAE20 or 30 Non-Detergent	
Oil Capacity (oz./liters)	32 / .95	
Plungers	Ceramic	
Manifold	Forged Brass	
Valves	Stainless Steel	
Unloader	Pressure Trapping - Pre-set at the factory	
Heat Dump Valve	Relieves heated water during unloader bypass stage	
<b>Water System:</b>		
Inlet Water Strainer	Removable Thimble for inspection and cleaning of Stainless Steel Screen	
Float Tank Strainer	Removable Strainer for inspection and cleaning of Stainless Steel Screen	
Float Tank Capacity (gal. / liters)	4.75 / 18.0	
Heat Dump Valve	Protects pump against damaging heat in recirculated and inlet water.	
Detergent System	Adjustable Metering Valve	
<b>Burner Fuel System:</b>		
Fuel Type	No.1 or No.2 Fuel Oil, Diesel or Kerosene	
Fuel Capacity (Gal. / liters)	10 / 37.8	
Fuel Filter/ Water Separator	Spin on (10 micron) filter / E-Z water drain	
Fuel Pump	Two Line, Single Stage	
Fuel Pressure (PSI / BAR)	150 / 10.4	
Fuel Nozzle	2.25 80° B Delavan	
Fuel Consumption (GPH / LPH)	2.76 / 10.4 Cont. Burning	
<b>Burner Electrical System:</b>		
Voltage	115	
Amps	3.0	
<b>Heat Exchanger:</b>	Horizontal, Side Fired, Pancake Coil	
BTU Input	386,400	
Efficiency	75% with #2 Fuel Oil / Diesel	
Smoke Density	0-3 per ASTM D2156	
<b>Safety System:</b>		
Pressure Switch	Shuts off burner fuel supply upon trigger release.	
Fuel Solenoid Valve	115 Volt, controls fuel supply to burner	
Safety Relief	Relieves excess system pressure	
<b>Hi-Limit Switch:</b>	Shuts off burner fuel supply when outlet water temperature exceeds 225°F/107°C	
<b>Unit Net Weight (Lbs/kg):</b>	750 / 342	
<b>Unit Shipping Weight (Lbs/kg):</b>	854 / 387	
<b>Unit Net Dimension (In/cm):</b>	49.5L x 33.5W x 44.5H / 125.7L x 85.1W x 113H	
<b>Unit Shipping Dimension (In/cm):</b>	57.5L x 35.5W x 59.5H / 146.1L x 90.2W x 151.1H	

## SPECIFICATIONS FOR HVS-3006/4005-0B7G

MODEL NUMBER	HVS-3006-0B7G	HVS-4005-0B7G
Operating Pressure (PSI/Bar):	3000 / 206.8 (+/- 5%)	4000 / 275.8 (+/- 5%)
Water Volume (GPM/lpm):	5.6 / 21.2 (+/- 5%)	4.5 / 17.0 (+/- 5%)
Outlet Water Temperature (F/C):	130°F / 54°C (+/- 10°F) rise above inlet ambient (210°F / 99°C maximum)	
High Pressure Nozzle	6.5	4.5
Engine:	Kubota	
Model	Z602	
Engine Type	4 Stroke, FI Diesel, Liquid Cooled	
Oil Type	SAE10W30, API CI-4 or better	
Oil Capacity (oz./liter)	84.5 / 2.5	
Fuel Type	Refer to Engine Owner's Manual	
Fuel Capacity (gal./liter)	10 / 37.8	
Starting	12 Volt Electric	
Maximum No Load RPM	3600 (+/- 100)	
High Pressure Pump:	Belt Driven, Oil Bath, Triplex Piston	
Oil Type	SAE20 or 30 Non-Detergent	
Oil Capacity (oz./liters)	32 / .95	31 / .92
Plungers	Ceramic	
Manifold	Forged Brass	
Valves	Stainless Steel	
Unloader	Flow Sensitive - Pre-set at the factory	
Heat Dump Valve	Relieves heated water during unloader bypass stage	
Water System:		
Inlet Water Strainer	Removable Thimble for inspection and cleaning of Stainless Steel Screen	
Float Tank Strainer	Removable Strainer for inspection and cleaning of Stainless Steel Screen	
Float Tank Capacity (gal. / liters)	4.75 / 18.0	
Heat Dump Valve	Protects pump against damaging heat in recirculated and inlet water.	
Detergent System	Adjustable Metering Valve	
Burner Fuel System:		
Fuel Type	No.1 or No.2 Fuel Oil, Diesel or Kerosene	
Fuel Capacity (Gal. / liters)	10 / 37.8	
Fuel Filter/ Water Separator	Spin on (10 micron) filter / E-Z water drain	
Fuel Pump	Two Line, Single Stage	
Fuel Pressure (PSI / BAR)	150 / 10.4	
Fuel Nozzle	2.75 90° B Delavan	
Fuel Consumption (GPH / LPH)	3.37 / 12.75 Cont. Burning	
Burner Electrical System:		
Voltage	115	
Amps	3.0	
Heat Exchanger:	Horizontal, Side Fired, Pancake Coil	
BTU Input	471, 800	
Efficiency	75% with #2 Fuel Oil / Diesel	
Smoke Density	0-3 per ASTM D2156	
Safety System:		
Pressure Switch	Shuts off burner fuel supply upon trigger release.	
Fuel Solenoid Valve	115 Volt, controls fuel supply to burner	
Safety Relief	Relieves excess system pressure	
Hi-Limit Switch:	Shuts off burner fuel supply when outlet water temperature exceeds 225°F/107°C	
Unit Net Weight (Lbs/kg):	836 / 380	
Unit Shipping Weight (Lbs/kg):	940 / 427	
Unit Net Dimension (In/cm):	56.5L x 33.5W x 44.5H / 143.5L x 85.1W x 113H	
Unit Shipping Dimension (In/cm):	57.5L x 35.5W x 59.5H / 146.1L x 90.2W x 151.1H	

# FLOW CHART FOR HS-3005/3006/3504/3505/3506



HS-3005/3006/3504/3505/3506 FLOW DIAGRAM-033005-RZ

## GENERAL THEORY OF OPERATION FOR HS-3005/3006/3504/3505/3506

**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 INLET WATER STRAINER (2) and then through a FLOAT VALVE (3) into a WATER FLOAT TANK (5). If the water rises above the OVERFLOW HOLES (4), the excess water will drain out the unit.

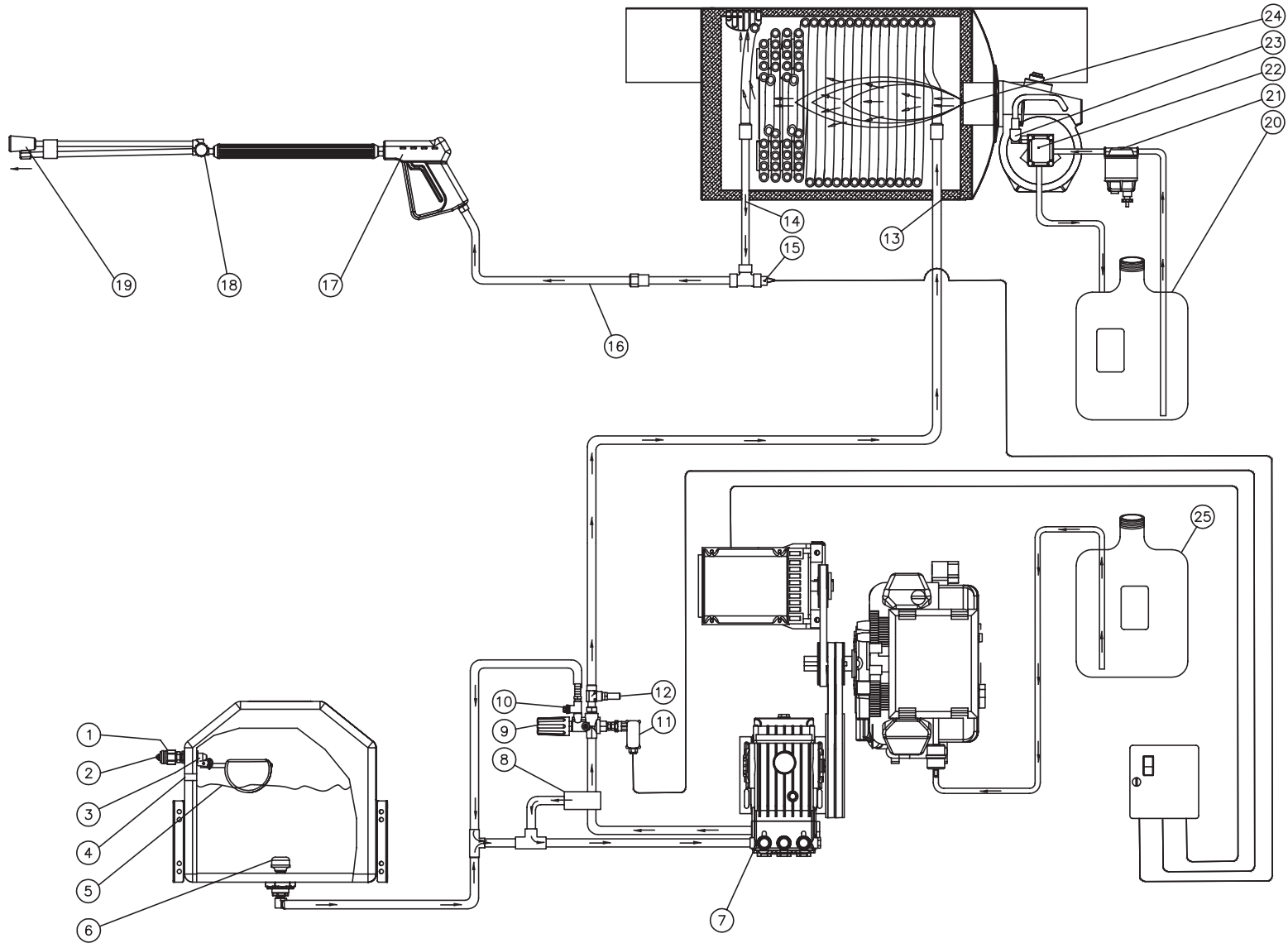
The water is then drawn through the WATER STRAINER (6) and into the TRIPLEX HIGH PRESSURE PUMP (7) which has an UNLOADER (8) that bypasses the water when the trigger gun is closed. To protect the pump from heated water during this bypass stage, a HEAT DUMP VALVE (9) will open at 140°F/60°C allowing the heated water to escape. The Heat Dump Valve automatically resets when the water cools. The BURNER CONTROL PRESSURE SWITCH (10) controls the fuel supply to the burner.

From there, the water flows through 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 system also contains a HI-LIMIT TEMPERATURE SWITCH (13) which senses the water temperature and shuts off the fuel supply to the burner if the water gets too hot. If the unloader fails to bypass 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. The engine is operated by fuel drawn from the GAS TANK (HS-3005/3504/3505/3506) / FUEL TANK (HS-3006) (24).

# FLOW CHART FOR HS-4004/4005/3008



HS-4004 FLOW DIAGRAM-033005-RZ



## GENERAL THEORY OF OPERATION FOR HS-4004/4005/3008

**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 INLET WATER STRAINER (2) and then through a FLOAT VALVE (3) into a WATER FLOAT TANK (5). If the water rises above the OVERFLOW HOLES (4), the excess water will drain out the unit.

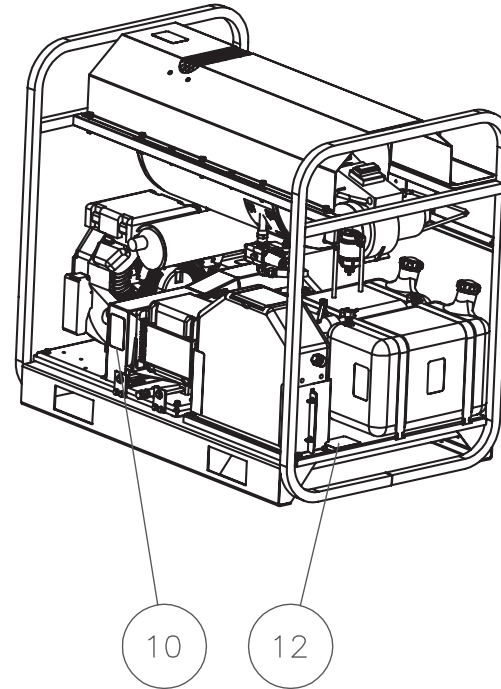
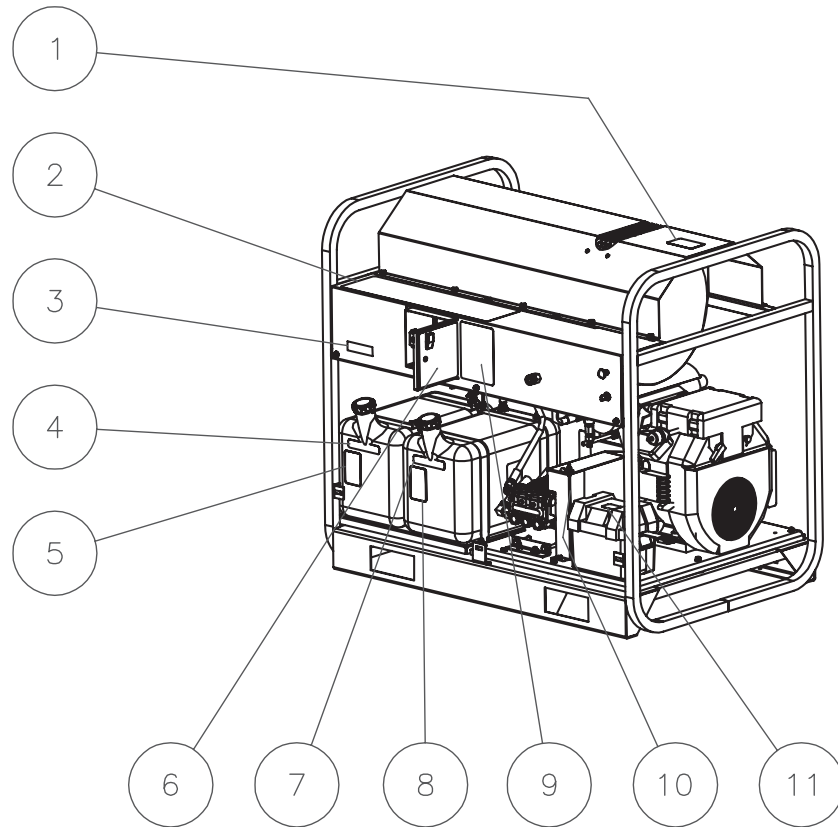
The water is then drawn through the WATER STRAINER (6) and into the TRIPLEX HIGH PRESSURE PUMP (7) which has an UNLOADER (9) that bypasses the water when the trigger gun is closed. To protect the pump from heated water during this bypass stage, a HEAT DUMP VALVE (10) will open at 140°F/60°C allowing the heated water to escape. The Heat Dump Valve automatically resets when the water cools. The EASY START VALVE (8) will allow the engine to start without a load. The water recirculates until pressure builds up and forces the seat closed. The BURNER CONTROL PRESSURE SWITCH (11) controls the fuel supply to the burner.

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

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

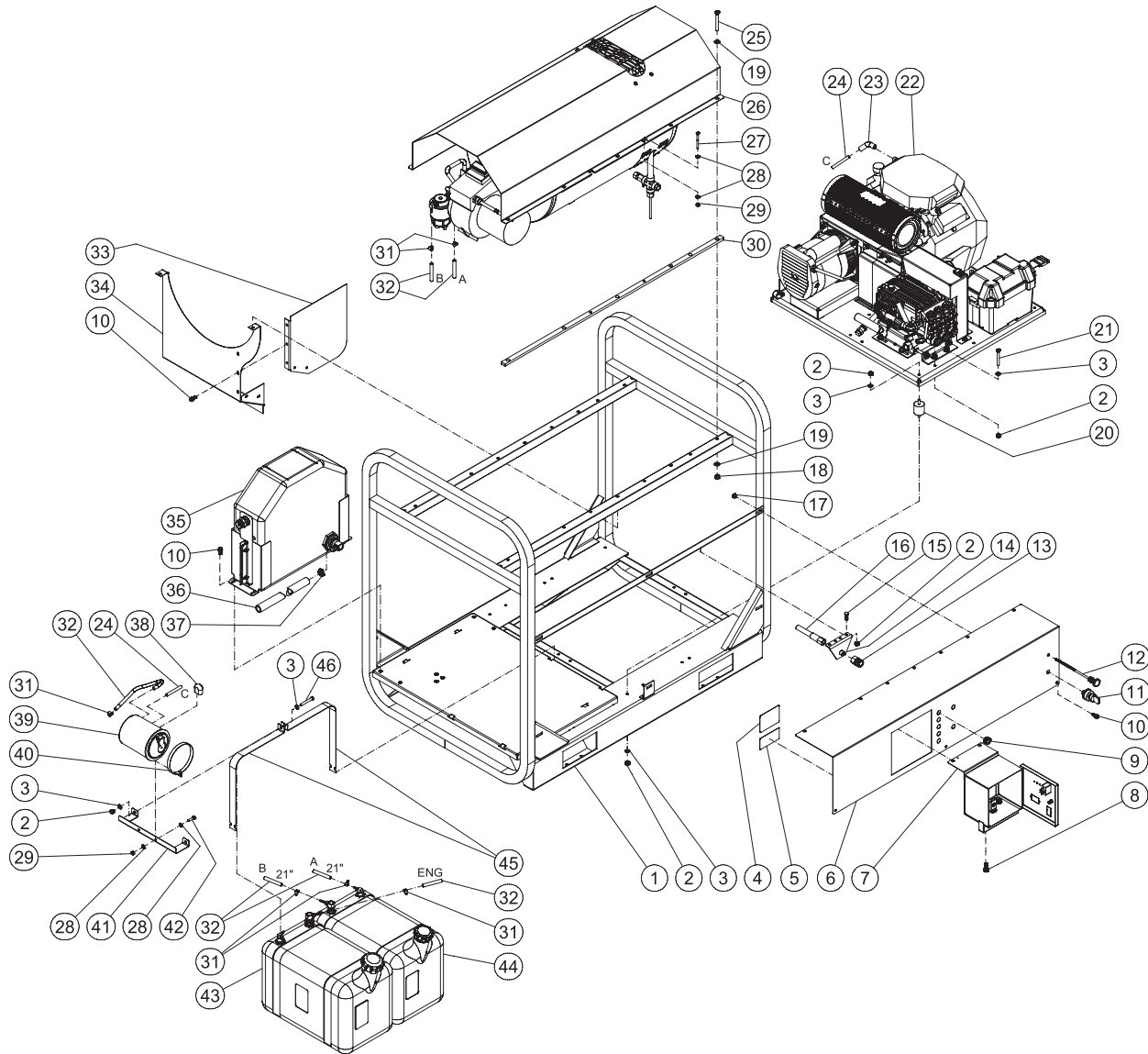
**FUEL FLOW:** The Fuel Pump draws fuel from the FUEL TANK (20) through a replaceable FUEL FILTER/WATER SEPARATOR (21) and into the FUEL PUMP (22). Fuel exits the fuel pump, into a FUEL SOLENOID VALVE (23) which controls fuel flow to the FUEL NOZZLE (24) where it ignites and burns in the heat exchanger. The engine is operated by fuel drawn from the GAS TANK (25).

# SAFETY DECAL PLACEMENT



SAFETY DECAL PLACEMENT			
REF. #	DESCRIPTION	PART #	QTY.
1	Decal- Warning: Hot Surface (See 71-0036)	N/A Sep.	1
2	Decal- Warning/Caution/Operation (See 71-0036)	N/A Sep.	1
3	Decal PSI- 3000 (HVS-3005, 3006)	34-2899	1
-	Decal PSI- 3500 (HVS-3504, 3505, 3506)	34-2900	1
-	Decal PSI- 4000 (HVS-4004, 4005)	34-2902	1
4	Decal- Gasoline Only (HVS-3005/3504/3505/3506/4004) (See 71-0036)	N/A Sep.	1
-	Decal- Diesel Only (HVS-3006/4005) (See 71-0036)	N/A Sep.	1
5	Decal- Caution: Risk of Fire- Do not use Diesel or Fuel Oil (HVS-3005/3504/3505/3506/4004) (See 71-0036)	N/A Sep.	1
-	Decal- Caution: Risk of Fire- Do not use Gasoline (HVS-3006/4005) (See 71-0036)	N/A Sep.	2
6	Decal- Electrical Box w/Burner (See 71-0036)	N/A Sep.	1
7	Decal- Diesel Only (See 71-0036)	N/A Sep.	1
8	Decal- Caution: Risk of Fire- Do not use Gasoline (HVS-3005/3504/3505/3506/4004) (See 71-0036)	N/A Sep.	1
9	Decal- Nozzles (See 71-0036)	N/A Sep.	1
10	Decal- Warning: Risk of Fire- Exposed Pulleys (See 71-0036)	N/A Sep.	2
11	Decal- Caution: Disconnect Battery (See 71-0036)	N/A Sep.	1
12	Decal- Data Plate	N/A	1
	Safety Decal Kit (Includes 1-2, 4-11)	71-0036	

# UNIT ASSEMBLY

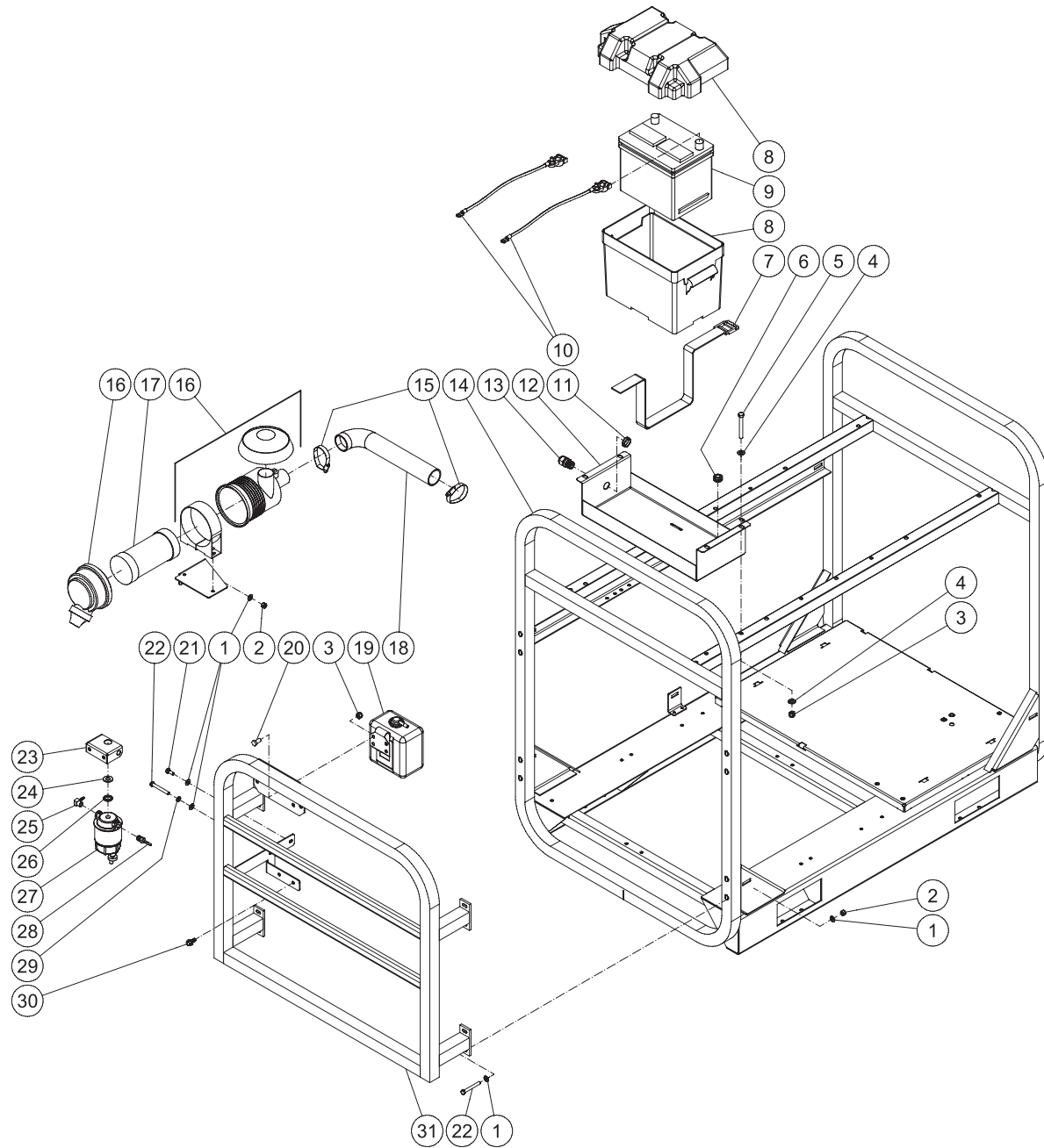


HS UNIT ASSY 02:1617 CH

UNIT ASSEMBLY				UNIT ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY	ITEM	DESCRIPTION	PART #	QTY
1	FRAME (GASOLINE MODELS)	5-0275A18	1	25	BOLT	27-0576	10
-	FRAME ASSEMBLY (DIESEL MODELS)	N/A	1	26	HEAT EXCHANGER ASSEMBLY (3005, 3006, 3504, 3505, 3506)	N/A	1
2	LOCKNUT	30-0157	22	-	HEAT EXCHANGER ASSEMBLY (4004, 4005)	N/A	1
3	WASHER	28-0003	22	-	HEAT EXCHANGER ASSEMBLY (3008)	N/A	1
4	DECAL - DATA PLATE	N/A	1	27	BOLT	27-0022	4
5	DECAL- SILVER STICKER	N/A	1	28	WASHER (GASOLINE MODELS)	28-0002	12
6	CONTROL PANEL (GASOLINE MODELS)	20-1095A18	1	-	WASHER (DIESEL MODELS)	28-0002	8
-	CONTROL PANEL ASSEMBLY (DIESEL MODELS)	N/A	1	29	LOCKNUT (GASOLINE MODELS)	30-0155	6
7	ELECTRIC BOX ASSEMBLY	N/A	1	-	LOCKNUT (DIESEL MODELS)	30-0155	4
8	BOLT	27-1201	2	30	SHIM (3008 DIESEL MODELS)	20-1289A18	2
9	GROMMET (GASOLINE MODELS)	33-0001	5	31	CLAMP WORM (GASOLINE MODELS)	42-0004	6
10	BOLT (3008 GASOLINE MODELS)	27-1200	12	-	CLAMP WORM (DIESEL MODELS)	42-0004	8
-	BOLT	27-1200	7	32	FUEL HOSE *(SIX FEET REQUIRED)	15-0008	3
11	KEY SWITCH	W/ENGINE	1	33	HEAT SHIELD SIDE (3008 GASOLINE MODELS)	20-1099A18	1
12	CHOKE CABLE (N/A ON DIESEL MODELS)	33-0081	1	34	HEAT SHIELD (3008 GASOLINE MODELS)	20-1098A18	1
13	QC SOCKET	17-0004	1	35	FLOAT TANK ASSEMBLY	N/A	1
14	WATER OUTLET BRACKET	13-0199A18	1	36	HOSE *(FOUR FEET REQUIRED)	15-0033	1
15	BOLT	27-0067	2	37	HOSE CLAMP	42-0003	1
16	HP HOSE	15-0202	1	38	BREATHER VENT COVER (GASOLINE MODELS)	62-0218	1
17	CLIP NUT	30-6027	3	39	CARB CANISTER (GASOLINE MODELS)	62-0212	1
18	LOCKNUT	30-0159	10	40	CARB CANISTER STRAP (GASOLINE MODELS)	20-1187A01	2
19	WASHER	28-0004	20	41	CARB CANISTER MOUNT (GASOLINE MODELS)	20-1197A18	1
20	ISOLATOR	14-0110	8	42	BOLT(GASOLINE MODELS)	27-0016	2
21	BOLT	27-0073	2	43	GAS TANK ASSEMBLY (GASOLINE MODELS)	N/A	1
22	ISOLATION PLATE ASSEMBLY (GASOLINE MODELS)	N/A	1	-	DIESEL FUEL TANK ASSEMBLY (DIESEL MODELS)	N/A	1
-	ISOLATION PLATE ASSEMBLY (DIESEL MODELS)	N/A	1	44	BURNER FUEL TANK ASSEMBLY	N/A	1
23	AIR CLEANER ADAPTER (HONDA MODELS)	62-0229	1	45	TANK STRAP	20-0585A18	4
24	FUEL HOSE *(SEVEN FEET REQUIRED) (GASOLINE MODELS)	15-0261	2	46	BOLT	27-0072	2

\*MUST ORDER IN ONE FOOT LENGTHS

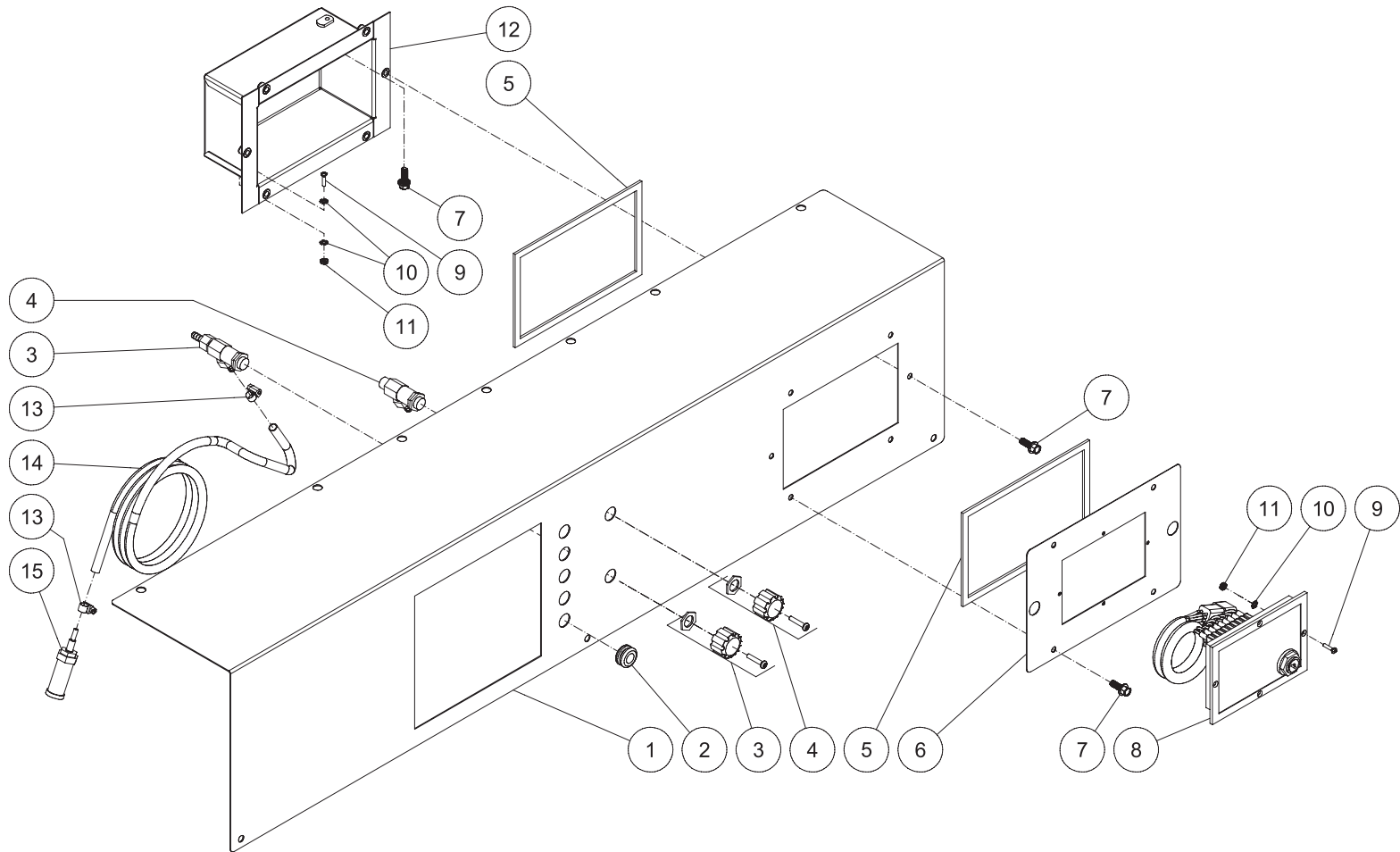
# FRAME ASSEMBLY (HVS-3006/3505/3008/4005-0B7G)



KUBOTA SKID FRAME ASSEMBLY 021317 CH

KUBOTA SKID FRAME ASSEMBLY 021317 CH			
KUBOTA SKID FRAME ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	WASHER	28-0003	20
2	LOCKNUT	30-0157	10
3	LOCKNUT (3006/3505/4005)	30-0159	6
-	LOCKNUT (3008)	30-0159	2
4	WASHER (3006/3505/4005)	28-0004	8
5	BOLT (3006/3505/4005)	27-0576	4
6	GROMMET (3006/3505/4005)	33-0001	2
7	STRAP (3006/3505/4005)	33-0089	1
8	BATTERY BOX (3006/3505/4005)	33-0093	1
9	BATTERY (HS MODELS)	32-0059	1
10	BATTERY CABLE (W/ ENGINE)	N/A	2
11	ELECTRICAL LOCKNUT (3006/3505/4005)	32-0108	1
12	BATTERY BOX (3006/3505/4005)	20-0872A18	1
13	STRAIN RELIEF (3006/3505/4005)	32-0437	1
14	FRAME	5-0313A18	1
15	HOSE CLAMP	42-0027	2
16	AIR CLEANER HOUSING	N/A	1
17	AIR FILTER	45-0122	1
18	HOSE	15-0262	1
19	RADIATOR OVER FLOW W/ ENGINE	45-0121	1
20	BOLT	27-0116	2
21	BOLT	27-0066	1
22	BOLT	27-0073	9
23	FUEL FILTER BRACKET	20-0873A18	1
24	WASHER	28-0006	1
25	ELBOW	23-0054	1
26	GARDEN HOSE GASKET	26-0001	1
27	FUEL FILTER / WATER SEPERATOR	19-0070	1
28	BARB	23-0051	1
29	LOCKWASHER	29-0007	1
30	BOLT	27-1202	2
31	FRAME EXTENSION (3006/3505/4005)	5-0276A18	1
-	FRAME EXTENSION (3008)	5-0311A18	1

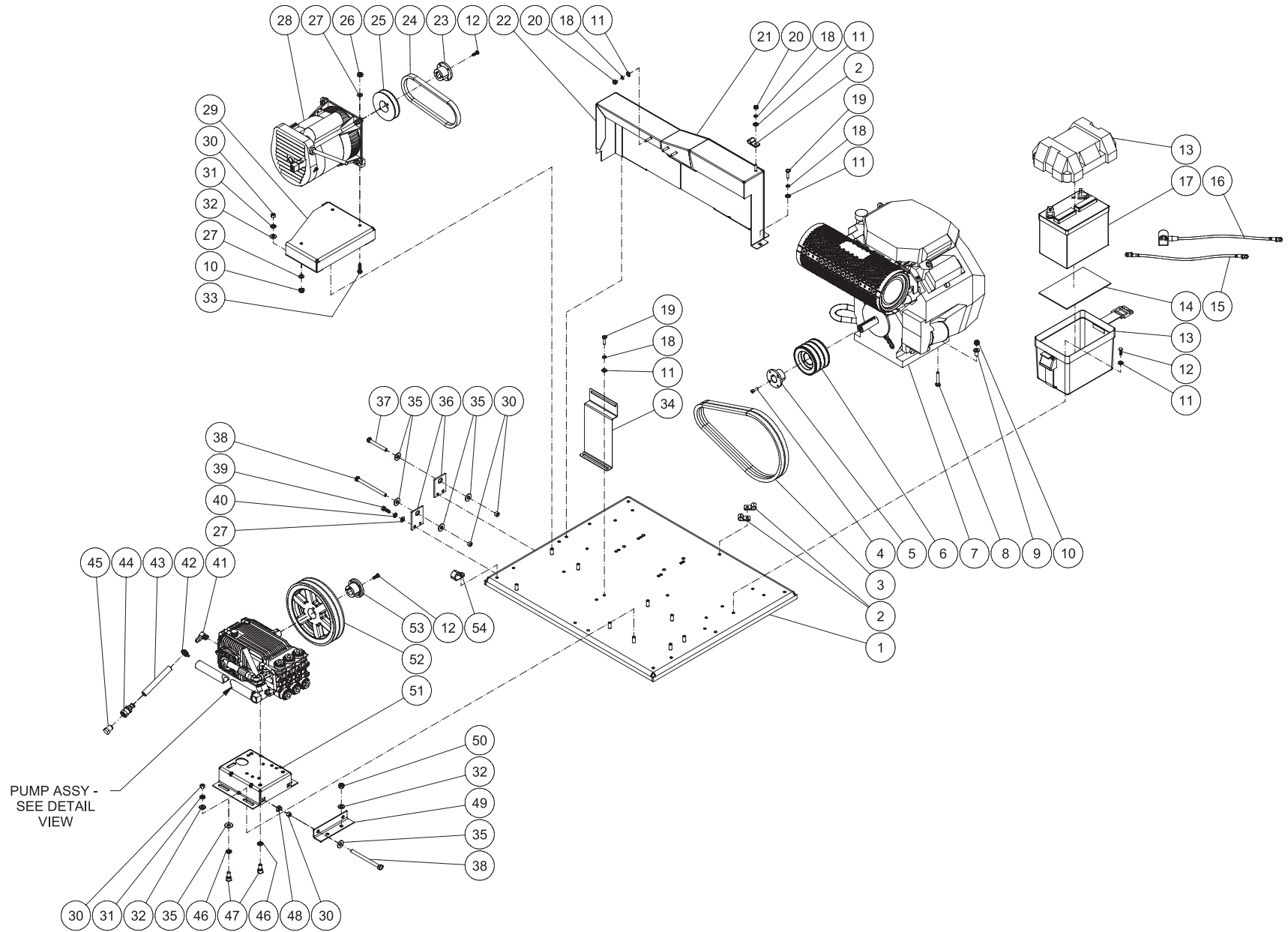
# CONTROL PANEL ASSEMBLY





KUBOTA CONTROL PANEL ASSY 021617 CH			
CONTROL PANEL ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	CONTROL PANEL	20-1096A18	1
2	GROMMET (3006/3505/4005)	33-0001	5
-	GROMMET (3008)	33-0001	4
3	DETERGENT VALVE (3006/3505/4005)	22-0226	1
4	STEAM VALVE (3006/3505/4005)	22-0329	1
5	GASKET	26-0248	2
6	ELECTRIC BOX PANEL (3006/3505/4005)	21-0227	1
-	ELECTRIC BOX PANEL (3008)	21-0308	1
7	BOLT	27-1200	7
8	ENGINE CONTROL PANEL Z602 (3006/3505/4005)	32-0970	1
-	SWITCH ONLY FOR 32-0970 (W/ENGINE) (3006/3505/4005)	32-0991	1
-	ENGINE CONTROL PANEL D902 (W/ENGINE) (3008)	32-1154	1
9	SCREW (3006/3505/4005)	27-8881	5
-	SCREW (3008)	27-8881	1
10	STAR WASHER (3006/3505/4005)	28-1009	6
-	STAR WASHER (3008)	28-1009	2
11	NUT (3006/3505/4005)	30-0052	5
-	NUT (3008)	30-0052	1
12	ELECTRIC BOX	20-1412A18	1
13	CLAMP WORM (3006/3505/4005)	42-0004	2
14	HOSE *(SIX FEET REQUIRED) (3006/3505/4005)	15-0021	1
15	STRAINER (3006/3505/4005)	19-0056	1
*MUST ORDER IN ONE FOOT LENGTHS			

# ISOLATION PLATE FOR HVS-3005/3006/3504/3505/3506/4004 (AFTER SERIAL #15022139)

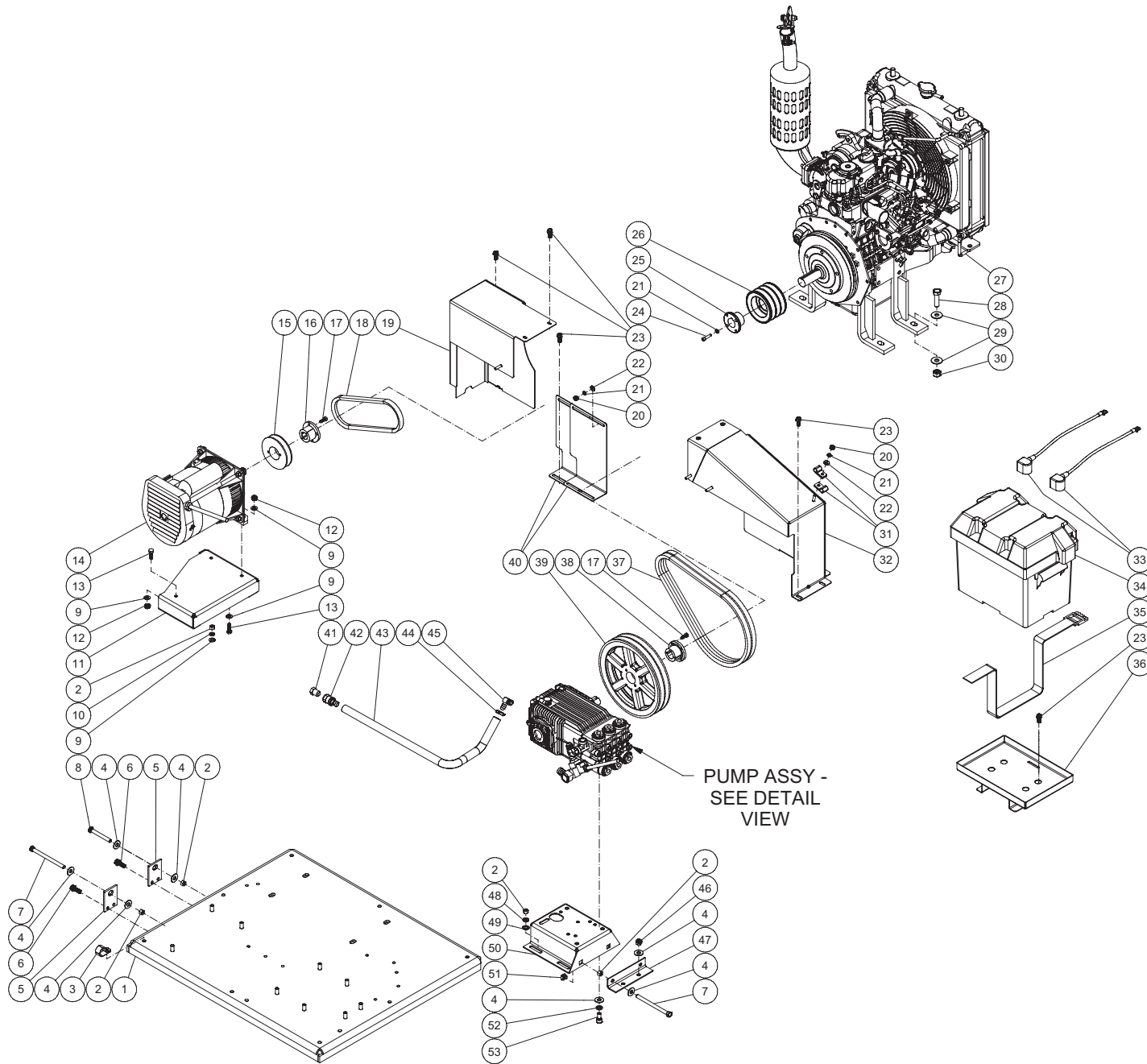


HVS ISOLATION PLATE 070612

## ISOLATION PLATE ASSEMBLY

ITEM	DESCRIPTION	PART #	QTY	ITEM	DESCRIPTION	PART #	QTY
1	ISOLATION PLATE	05-0170A18	1	24	ALT BELT	11-0048	1
2	CLIP	43-0003	3	-	ALT BELT (3008)	11-0074	1
3	BELT (3005, 3008, 3505)	11-0052	2	25	SHEAVE	10-0028	1
-	BELT (3504, 3506, 4004)	11-0050	2	-	SHEAVE (3008)	10-0039	1
4	BOLT	27-0771	2	26	LOCKNUT	30-0157	3
5	BUSHING (3005-0K6G, 3008-1H6G, 3504-0K6G)	9-0010	1	27	WASHER	28-0003	7
	BUSHING (3005-0V6G, 3504-0V6G, 3505-1H6G / 0V6G, 3506-1H6G, 4004-0V6A)	9-0005	1	28	ALTERNATOR	850-0352	1
	BUSHING (3008-0K6G, 3505-0K6G, 3506-0K6G, 4004-0K6A)	9-0007	1	29	ALTERNATOR HAT	20-0583A18	1
6	SHEAVE	10-0061	1	30	NUT	30-0006	11
-	SHEAVE (3008)	10-0011	1	31	LOCKWASHER	29-0008	7
7	ENGINE (3005-0K6G, 3504-0K6G) KOHLER	850-0332	1	32	WASHER	28-0004	9
-	ENGINE (3005-0V6G, 3504-0V6G) VANGUARD	850-0294	1	33	BOLT	27-0068	3
-	ENGINE (3008-1H6G) HONDA	850-0394	1	34	BELTGUARD COVER	20-0589A18	2
-	ENGINE (3008-0K6G, 3506-0K6G) KOHLER	850-0293	1	35	WASHER	28-0023	7
-	ENGINE (3505-1H6G, 3506-1H6G) HONDA	850-0393	1	36	TENSION BRACKET	20-0587A18	2
-	ENGINE (3505-0K6G, 4004-0K6A) KOHLER	850-0333	1	37	BOLT	27-0576	1
-	ENGINE (3505-0V6G, 4004-0V6A) VANGUARD	850-0295	1	38	BOLT	27-0133	3
8	BOLT (HONDA & VANGUARD ENGINES)	27-0070	4	39	BOLT	27-0067	4
-	BOLT (KOHLER ENGINE)	27-0120	4	40	LOCKWASHER	29-0007	4
9	ENGINE SHIM (HONDA ENGINE)	33-0169	4	41	ELBOW	23-0119	1
-	WASHER (VANGUARD ENGINE)	28-0003	4	42	HOSE CLAMP	42-0011	1
-	WASHER (KOHLER ENGINE)	28-0004	4	43	HOSE *(TWO FEET REQUIRED)	15-0007	1
10	LOCKNUT (HONDA & VANGUARD UNITS)	30-0157	4	44	HOSE BARB	23-0360	1
-	LOCKNUT (KOHLER UNITS)	30-0159	4	45	PLUG	23-0411	1
11	WASHER	28-0002	14	46	LOCKWASHER (A/R MODELS)	29-0055	4
12	BOLT	27-0015	8	-	LOCKWASHER (GENERAL MODELS)	29-0054	4
13	BATTERY BOX	33-0092	1	47	BOLT (A/R MODELS)	27-8471	4
14	RUBBER PAD	33-0509	1	-	BOLT (GENERAL MODELS)	27-8884	4
15	CABLE	32-9113	1	48	CLIP NUT	30-6025	2
16	CABLE	32-9114	1	49	TENSION BRACKET	20-0584A18	1
17	BATTERY	N/A	1	50	LOCKNUT	30-0159	2
18	LOCKWASHER	29-0006	10	51	PUMP HAT	05-0153A18	1
19	BOLT	27-0016	6	52	PUMP SHEAVE (3005, 3008, 3505)	10-0037	1
20	NUT	30-0002	4	-	PUMP SHEAVE (3504, 3506, 4004)	10-0012	1
21	PUMP BELTGUARD	06-0092A18	1	53	BUSHING	9-0017	1
22	GENERATOR BELTGUARD	06-0091A18	1	54	CLIP	33-0291	1
23	BUSHING	9-0033	1	*MUST ORDER IN ONE FOOT LENGTHS			

# ISOLATION PLATE (HVS-3006/3008/4005-0B7G)

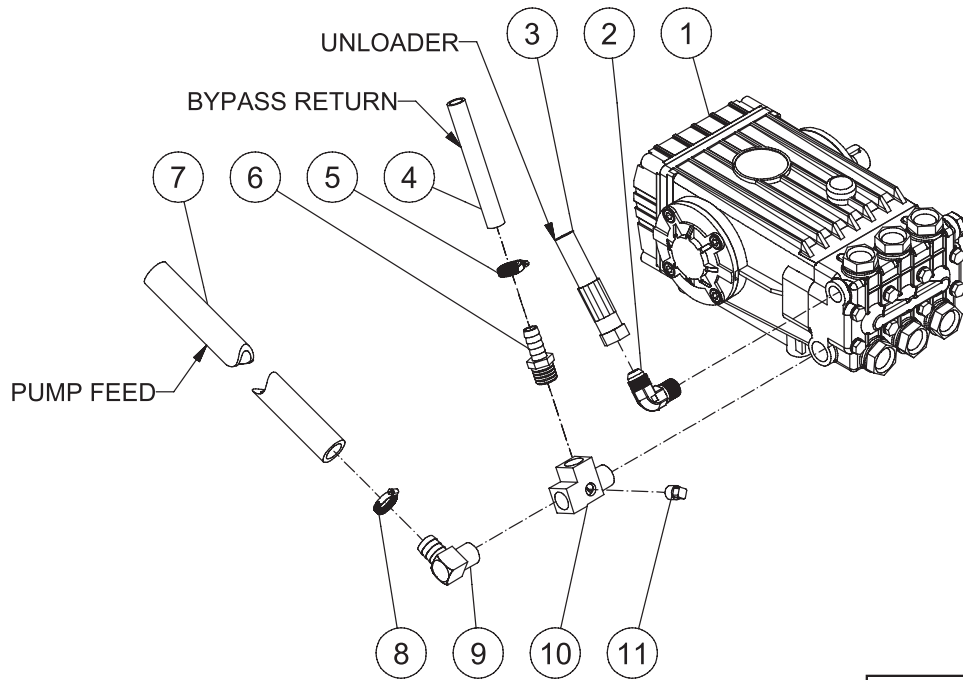


HDS\_HVS\_HS KUBOTA ISO PLATE 021317 CH

ISOLATION PLATE							
ITEM	DESCRIPTION	PART #	QTY	ITEM	DESCRIPTION	PART #	QTY
1	ISOLATION PLATE (3006/3505/4005)	5-0257A18	1	29	WASHER (3006/3505/4005)	28-0024	8
-	ISOLATION PLATE (3008)	5-0310A18	1	-	WASHER (3008)	28-0024	16
2	NUT	30-0006	11	30	NUT (3006/3505/4005)	30-0163	4
3	CLIP	33-0291	1	-	NUT (3008)	30-0163	8
4	WASHER	28-0023	12	31	CLIP	43-0003	2
5	TENSION BRACKET	20-0587A18	2	32	PUMP BELTGUARD (3006/3505/4005)	6-0159A18	1
6	BOLT	27-1201	4	-	PUMP BELTGUARD (3008)	6-0168A18	1
7	BOLT	27-0133	3	33	WIRE KIT (3008)	32-9106	2
8	BOLT	27-0576	1	34	BATTERY BOX (3008)	33-0093	1
9	WASHER	28-0003	8	35	STRAP (3008)	33-0089	1
10	LOCKWASHER	29-0007	3	36	BATTERY TRAY (3008)	20-1135A18	1
11	ALTERNATOR HAT	20-0583A18	1	37	BELT(3006)	11-0049	2
12	LOCKNUT	30-0157	3	-	BELT (3008)	11-0052	2
13	BOLT	27-0067	3	-	BELT (3505)	11-0101	2
14	ALTERNATOR	850-0352	1	-	BELT (4005)	11-0102	2
15	SHEAVE (3006/3505/4005)	10-0028	1	38	BUSHING	9-0017	1
-	SHEAVE (3008)	10-0039	1	39	SHEAVE (3505/3008)	10-0037	1
16	BUSHING	9-0033	1	-	SHEAVE (3006)	10-0012	1
17	BOLT	27-0015	4	-	SHEAVE (4005)	10-0046	1
18	BELT (3006/3505/4005)	11-0070	1	40	BELTGUARD COVER (3006/3505/4005)	6-0161A18	2
-	BELT (3008)	11-0097	1	-	BELTGUARD COVER (3008)	6-0170A18	2
19	ALTERNATOR BELTGUARD (3006/3505/4005)	6-0160A18	1	41	PLUG	23-0411	1
-	ALTERNATOR BELTGUARD (3008)	6-0169A18	1	42	HOSE BARB	23-0360	1
20	NUT	30-0002	4	43	HOSE *(TWO FEET REQUIRED)	15-0007	1
21	LOCKWASHER	29-0006	6	44	HOSE CLAMP	42-0011	1
22	WASHER	28-0002	4	45	ELBOW	23-0119	1
23	BOLT (3008)	27-1200	14	46	LOCKNUT	30-0159	2
-	BOLT (3006/3505/4005)	27-1200	10	47	TENSION BRACKET	20-0584A18	1
24	BOLT	27-0850	2	48	LOCKWASHER	29-0008	4
25	BUSHING	9-0010	1	49	WASHER	28-0030	4
26	SHEAVE (3006/3505/4005)	10-0061	1	50	PUMP HAT (3006/3505/4005)	5-0262A18	1
-	SHEAVE (3008)	10-0011	1	-	PUMP HAT (3008)	5-0338A18	1
27	ENGINE	850-0358	1	51	CLIP NUT (3006/3505/4005)	30-6025	2
-	ENGINE (3008)	850-0419	1	-	CLIP NUT (3008)	30-6029	2
28	BOLT (3006/3505/4005)	27-0219	4	52	LOCKWASHER	29-0055	4
-	BOLT (3008)	27-0219	8	53	BOLT	27-8471	4

\*MUST ORDER IN ONE FOOT LENGTHS

## PUMP PLUMBING (HVS-3005/3006/3504/3505/3506)

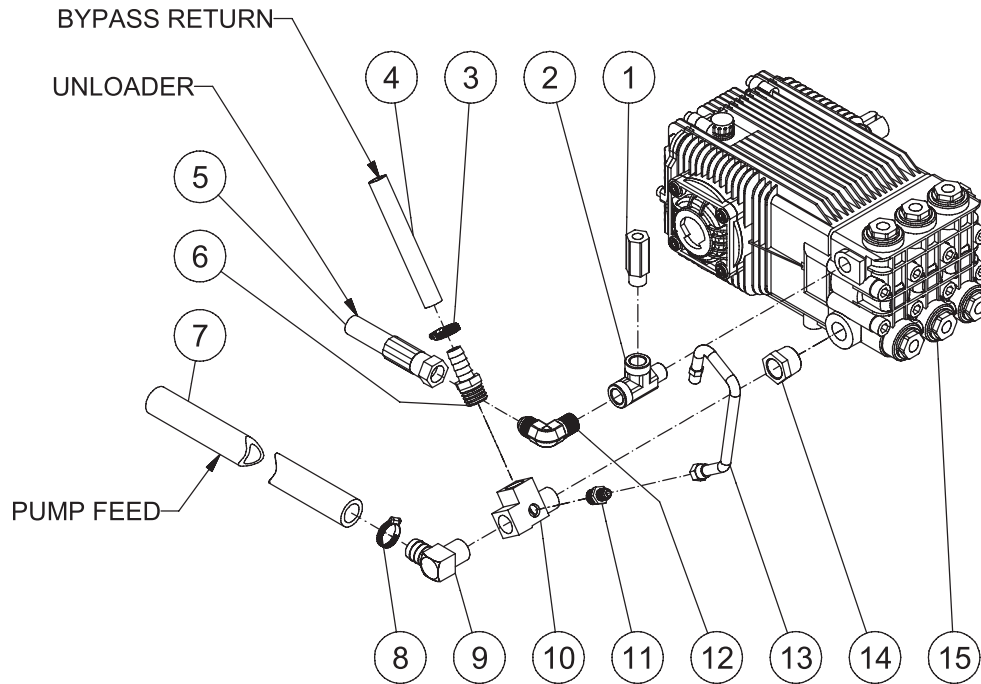


HDS HVS HS-30053006/3504/3505/3506 PUMP PLUMBING-073012-CH

HVS-3005_3006_3504_3505_3506 PUMP PLUMBING-073012-CH			
PUMP PLUMBING (HVS-3005/3006/3504/3505/3506)			
REF. #	DESCRIPTION	PART #	QTY.
1	Pump (HS-3504)	3-0203	1
-	Pump (HS-3005/3006/3505/3506)	3-0202	1
2	Elbow	24-0092	1
3	High Pressure Hose Assy	15-0221	1
4	Hose *(Three Feet Required)	15-0007	1
5	Hose Clamp	42-0011	1
6	Hose Barb	23-0045	1
7	Hose *(Four Feet Required)	15-0033	1
8	Hose Clamp	42-0003	1
9	Elbow	23-0037	1
10	Street Tee	23-0388	1
11	Plug	23-0238	1

\*Must Order in One Foot Lengths

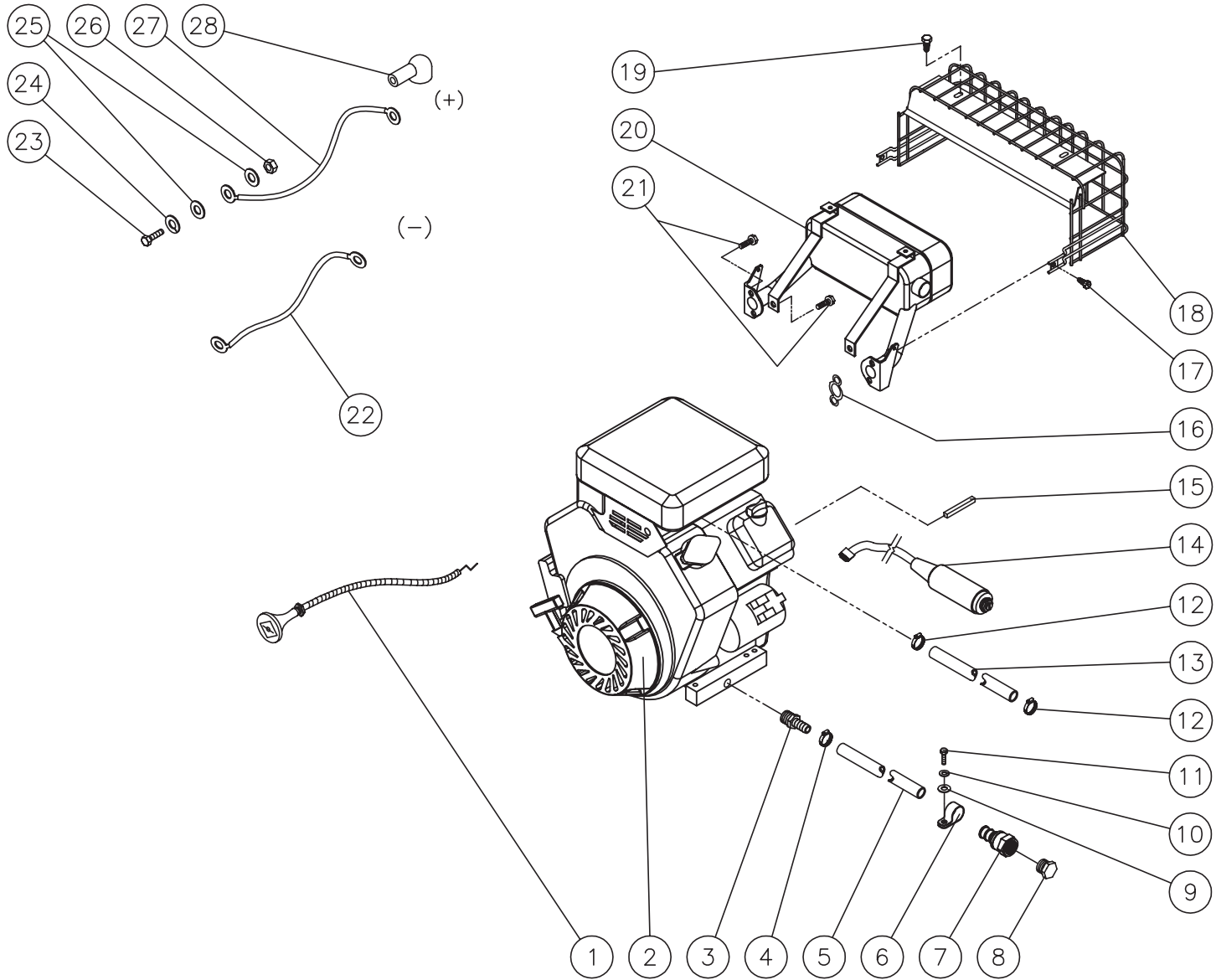
## PUMP PLUMBING (HVS-4004/4005/3008)



HVS\_HS\_PUMP\_PLUMBING DIAGRAM HS-4004 4005 3008 073012 CH

HVS HS 4004 4005 3008 PUMP PLUMBING 073012 CH			
PUMP PLUMBING			
ITEM	DESCRIPTION	PART #	QTY
1	EASY START VALVE	22-0242	1
2	STREET TEE	23-0058	1
3	HOSE CLAMP	42-0011	1
4	HOSE *(THREE FEET REQUIRED)	15-0007	1
5	HIGH PRESSURE HOSE ASSEMBLY	15-0221	1
6	BARB	23-0045	1
7	HOSE *(FOUR FEET REQUIRED)	15-0033	1
8	HOSE CLAMP	42-0003	1
9	ELBOW	23-0037	1
10	STREET TEE	23-0388	1
11	NIPPLE	23-0247	1
12	ELBOW	24-0092	1
13	EASY START HOSE	15-0140	1
14	BUSHING (3008)	23-0023	1
15	PUMP (4004)	3-0213	1
-	PUMP (3008)	3-0301	1
-	PUMP (4005)	3-0262	1
*MUST ORDER IN ONE FOOT LENGTHS			

# ENGINE ASSEMBLY (850-0294)



850-0294 021313 KMD

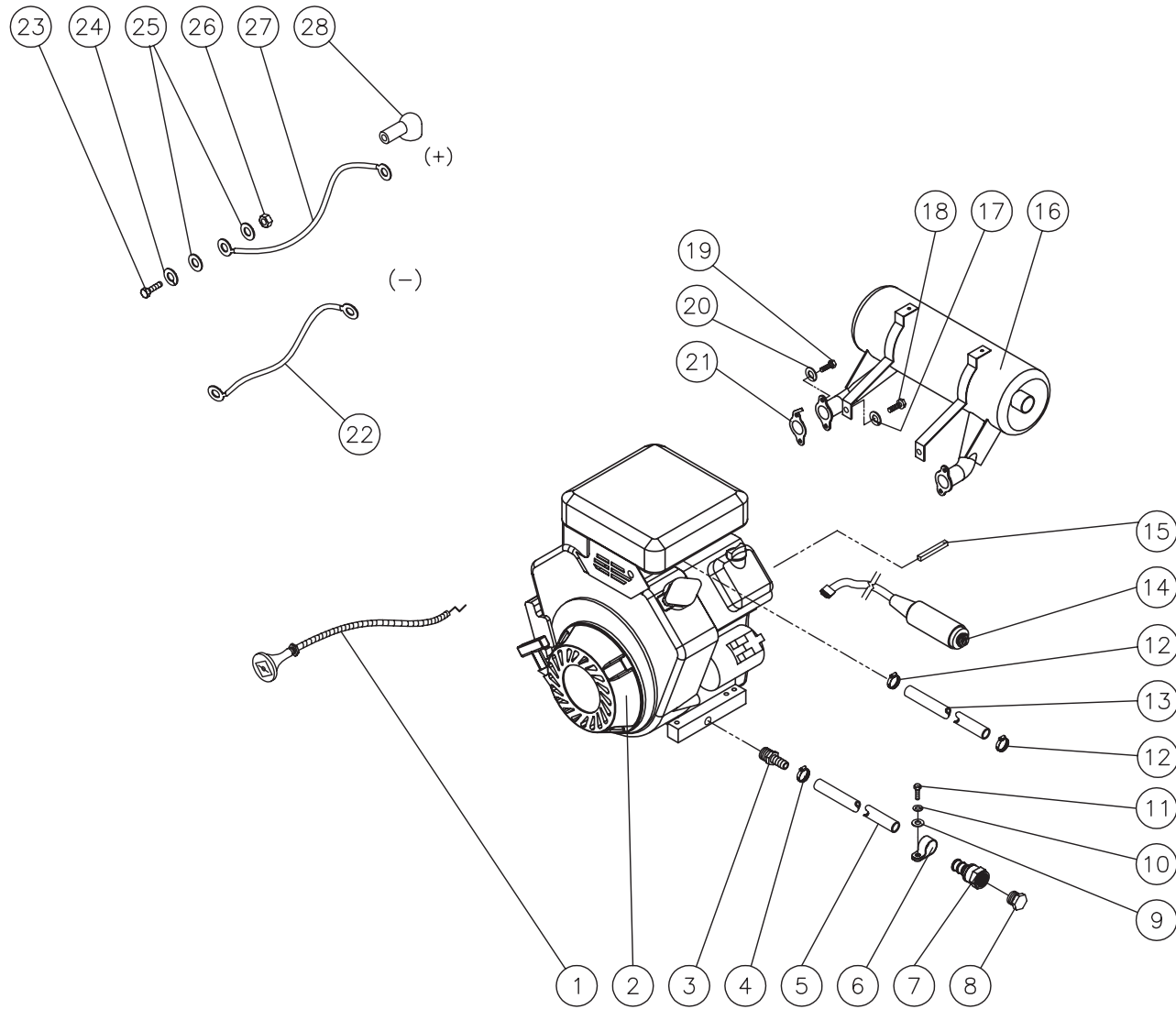


## ENGINE ASSEMBLY (850-0294)

REF #	DESCRIPTION	PART #	QTY	REF #	DESCRIPTION	PART #	QTY
1	Choke Cable	33-0081	1	15	Key	43-0078	1
2	Engine- 16HP Vanguard	1-0129	1	16	Gasket	45-0066	2
3	Hose Barb	23-0105	1	17	Screw	27-8966	2
4	Clamp Worm	42-0011	1	18	Muffler Guard	45-0067	1
5	Hose *(One Foot Required)	15-0007	1	19	Screw	27-8967	2
6	Tube Clip	33-0291	1	20	High Mount Muffler	45-0064	1
7	Hose Barb	23-0360	1	21	Screw	27-8968	4
8	Plug	23-0411	1	22	Cable- Black *(Two Feet Required)	32-9113	1
9	Washer	28-0002	1	23	Screw	27-0066	2
10	Lockwasher	29-0006	1	24	Lockwasher	29-0007	2
11	Screw	27-0015	1	25	Washer	28-0003	4
12	Clamp	42-0004	2	26	Nut	30-0005	2
13	Hose *(Six Feet Required)	15-0008	1	27	Cable- Red *(Three Feet Required)	32-9114	1
14	Key Switch Assembly	850-0302	1	28	Terminal Protector- Black	33-0273	1

\*Must Order in One Foot Lengths

# ENGINE ASSEMBLY (850-0295)



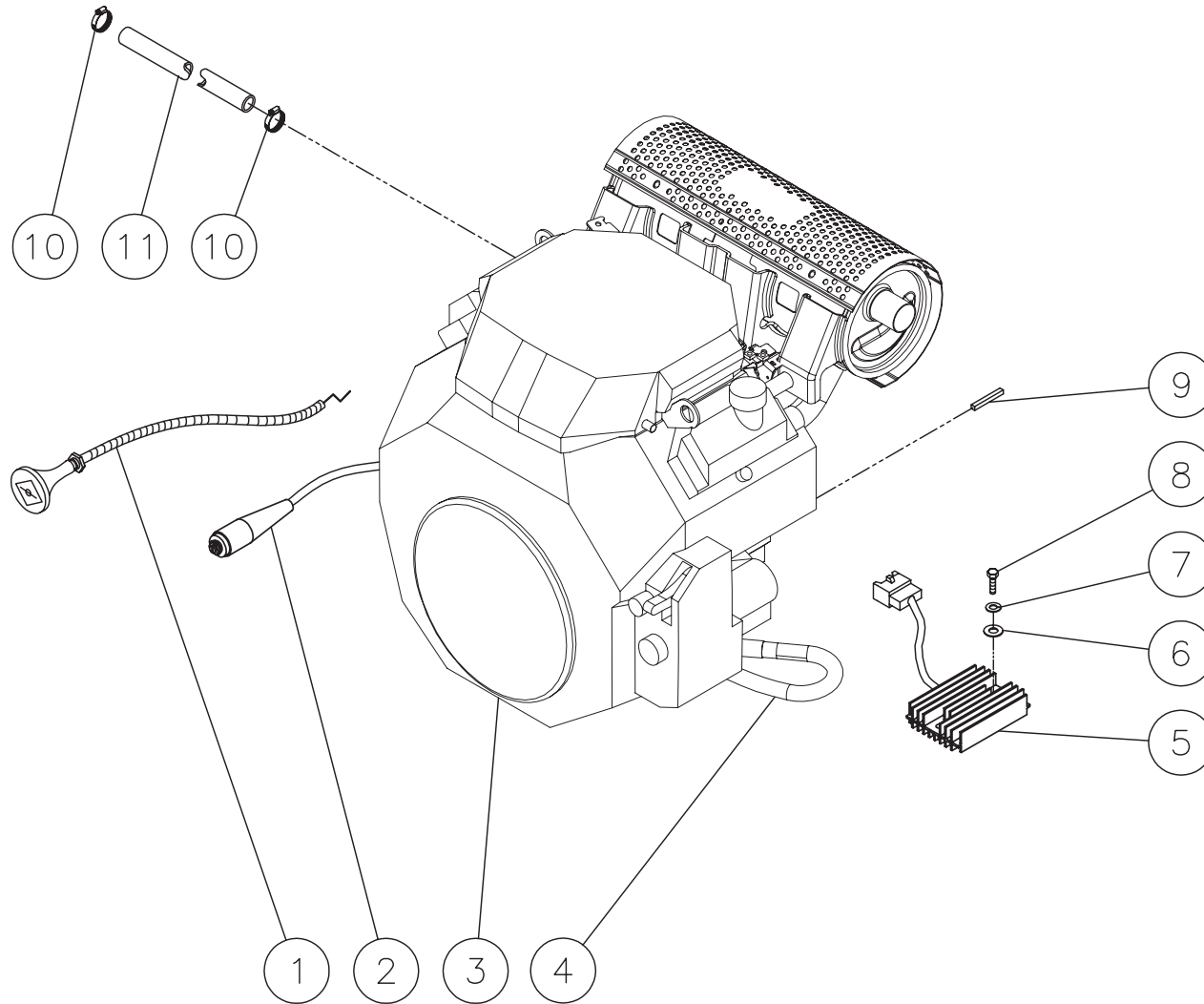
850-0295-021213-KMD

## ENGINE ASSEMBLY (850-0295)

REF #	DESCRIPTION	PART #	QTY	REF #	DESCRIPTION	PART #	QTY
1	Choke Cable	33-0081	1	15	Key	43-0078	1
2	Engine- Vanguard	1-0130	1	16	Muffler	45-0075	1
3	Hose Barb	23-0105	1	17	Lockwasher (w/Engine)	N/A Sep.	2
4	Clamp Worm	42-0011	1	18	Bolt (w/Engine)	N/A Sep.	2
5	Hose *(One Foot Required)	15-0007	1	19	Bolt (w/Engine)	N/A Sep.	2
6	Tube Clip	33-0291	1	20	Lockwasher (w/Engine)	N/A Sep.	2
7	Hose Barb	23-0360	1	21	Gasket (w/Engine)	N/A Sep.	2
8	Plug	23-0411	1	22	Cable Black	32-9113	3
9	Washer	28-0002	1	23	Screw	27-0066	2
10	Lockwasher	29-0006	1	24	Lockwasher	29-0007	2
11	Clamp	42-0004	2	25	Washer	28-0003	4
12	Hose *(Six Feet Required)	15-0008	1	26	Nut	30-0005	2
13	Screw	27-0015	1	27	Cable Red	32-9114	1
14	Key Switch Assembly	850-0302	1	28	Terminal Protector- Black	33-0273	1

\*Must Order in One Foot Lengths

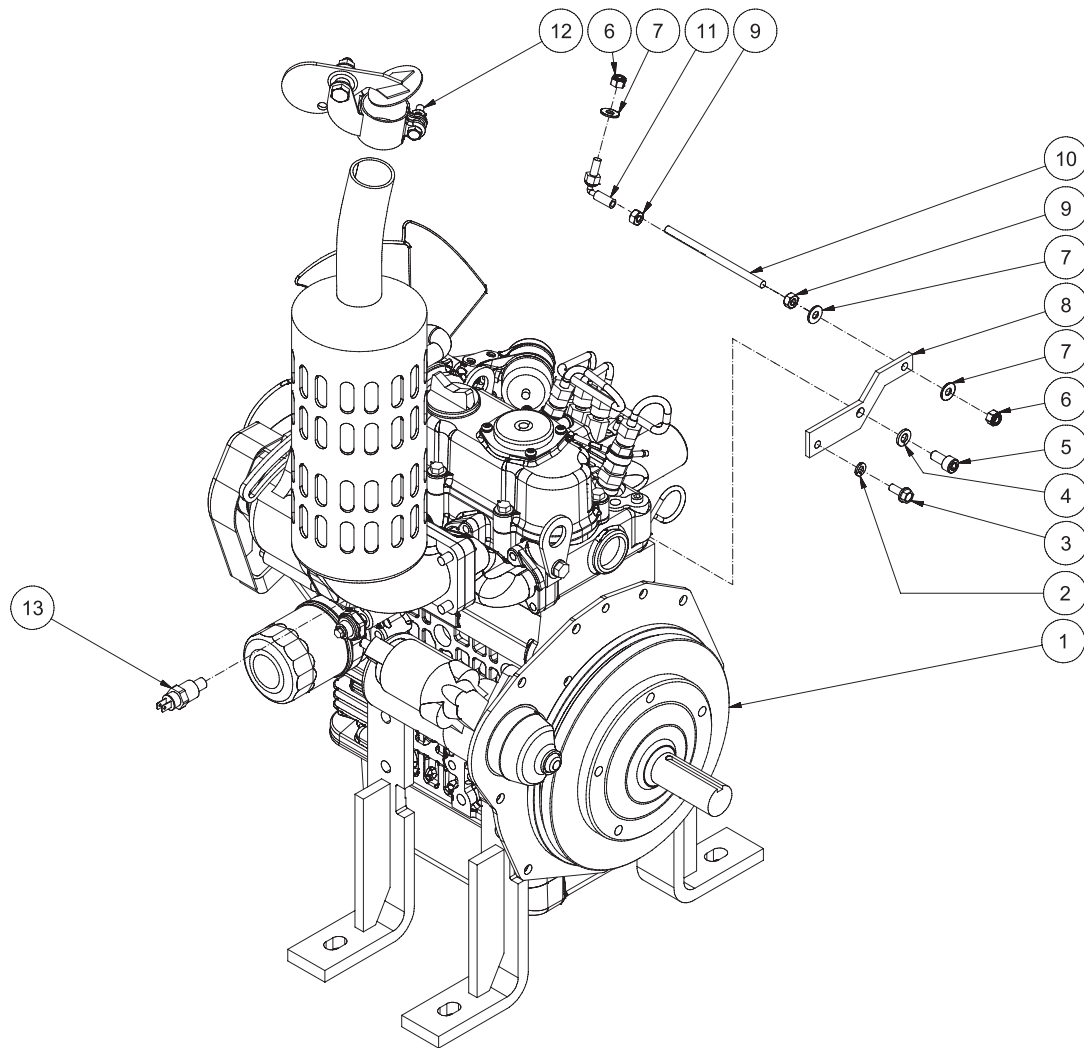
# ENGINE ASSEMBLY (850-0393 / 850-0394)



850-0393\_850-0394\_040615

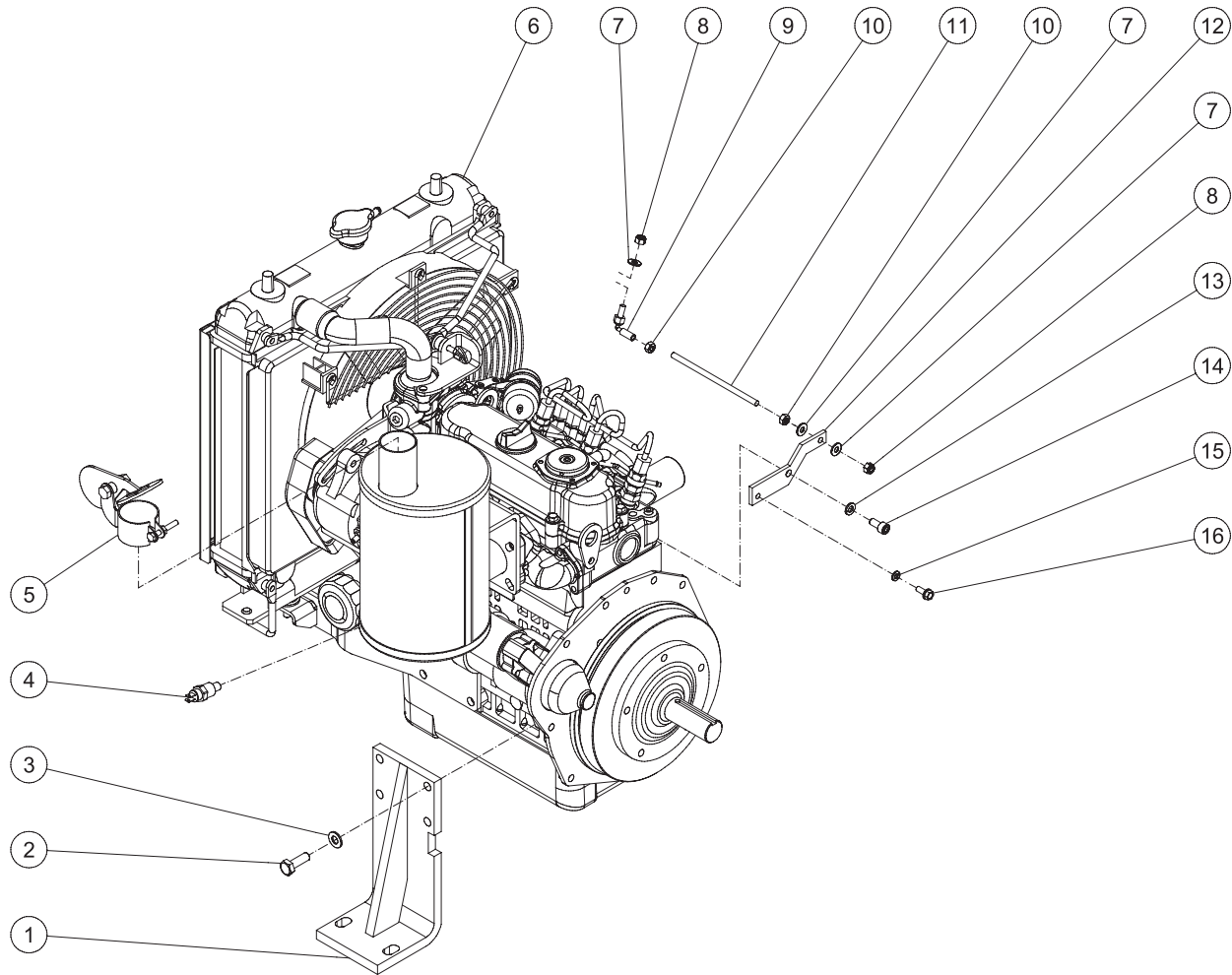
850-0393_850-0394 040615 MLK			
ENGINE ASSEMBLY			
REF.	DESCRIPTION	PART #	QTY.
1	CHOKE CABLE	33-0081	1
2	KEY SWITCH ASSEMBLY	45-0076	1
3	ENGINE (850-0393)	1-0186	1
-	ENGINE (850-0394)	1-0187	1
4	KIT/ENGINE OIL DRAIN	70-0555	1
5	RECTIFIER	N/A	1
6	WASHER	28-0002	2
7	LOCKWASHER	29-0006	2
8	SCREW	27-0016	2
9	KEY	43-0078	1
10	CLAMP	42-0004	2
11	HOSE *(FOUR FEET REQUIRED)	15-0008	1
*MUST ORDER IN ONE FOOT LENGTHS			

# ENGINE ASSEMBLY (850-0358)



850-0358-052312-JDK			
ENGINE ASSEMBLY (850-0358)			
REF #	DESCRIPTION	PART #	QTY
1	KUBOTA DIESEL ENGINE	1-0163	1
2	LOCKWASHER	29-0006	1
3	BOLT	27-8001	1
4	LOCKWASHER	29-0007	1
5	BOLT	27-8884	1
6	LOCKNUT	30-0155	2
7	WASHER	28-0002	3
8	THROTTLE PLATE	13-0177A18	1
9	HEX NUT	30-0002	2
10	THREADED ROD *(ONE FOOT REQUIRED)	54-0046	1
11	BALL JOINT LINKAGE	33-0440	1
12	MUFFLER RAIN CAP	33-0441	1
13	ENGINE TEMP SWITCH	45-0408	1
*MUST ORDER IN ONE FOOT LENGTHS			

# ENGINE ASSEMBLY (850-0419)



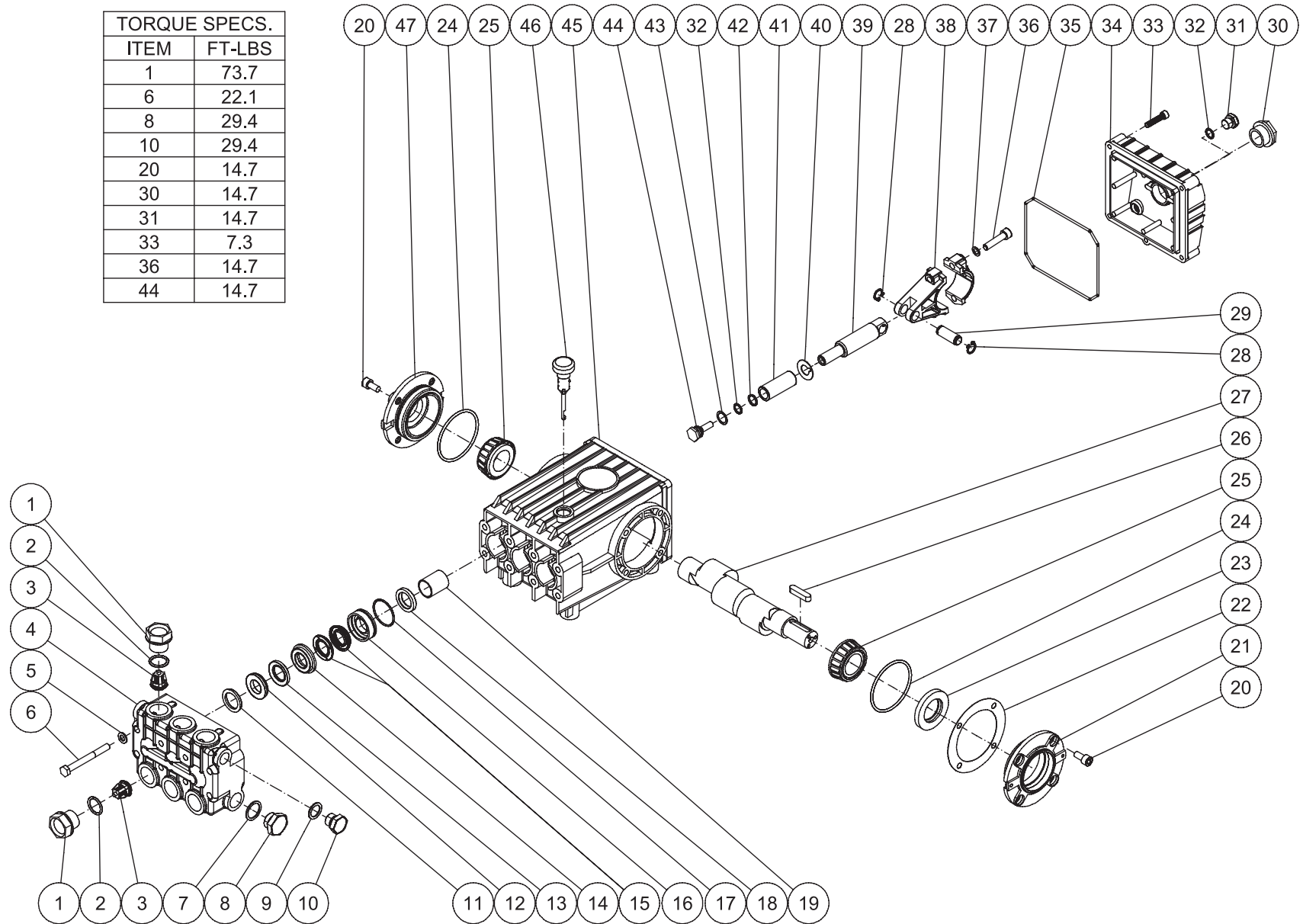
850-0419 020614 JDK



850-0419 020614 JDK			
ENGINE ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	ENGINE FOOT MOUNT	20-1261A18	4
2	BOLT	27-8078	12
3	WASHER	28-0004	12
4	TEMP SWITCH	45-0408	1
5	RAIN CAP	33-0545	1
6	ENGINE	1-0203	1
7	WASHER	28-0002	3
8	LOCKNUT	30-0155	2
9	BALL JOINT LINKAGE	33-0440	1
10	NUT	30-0002	2
11	THREADED ROD (ONE FOOT REQUIRED)	54-0046	1
12	THROTTLE PLATE	13-0177A18	1
13	LOCKWASHER	29-0007	1
14	BOLT	27-8884	1
15	LOCKWASHER	29-0006	1
16	BOLT	27-8001	1
*MUST ORDER IN ONE FOOT LENGTHS			

# PUMP ASSEMBLY (3-0202 AND 3-0203) (AFTER SERIAL #15045000)

TORQUE SPECS.	
ITEM	FT-LBS
1	73.7
6	22.1
8	29.4
10	29.4
20	14.7
30	14.7
31	14.7
33	7.3
36	14.7
44	14.7



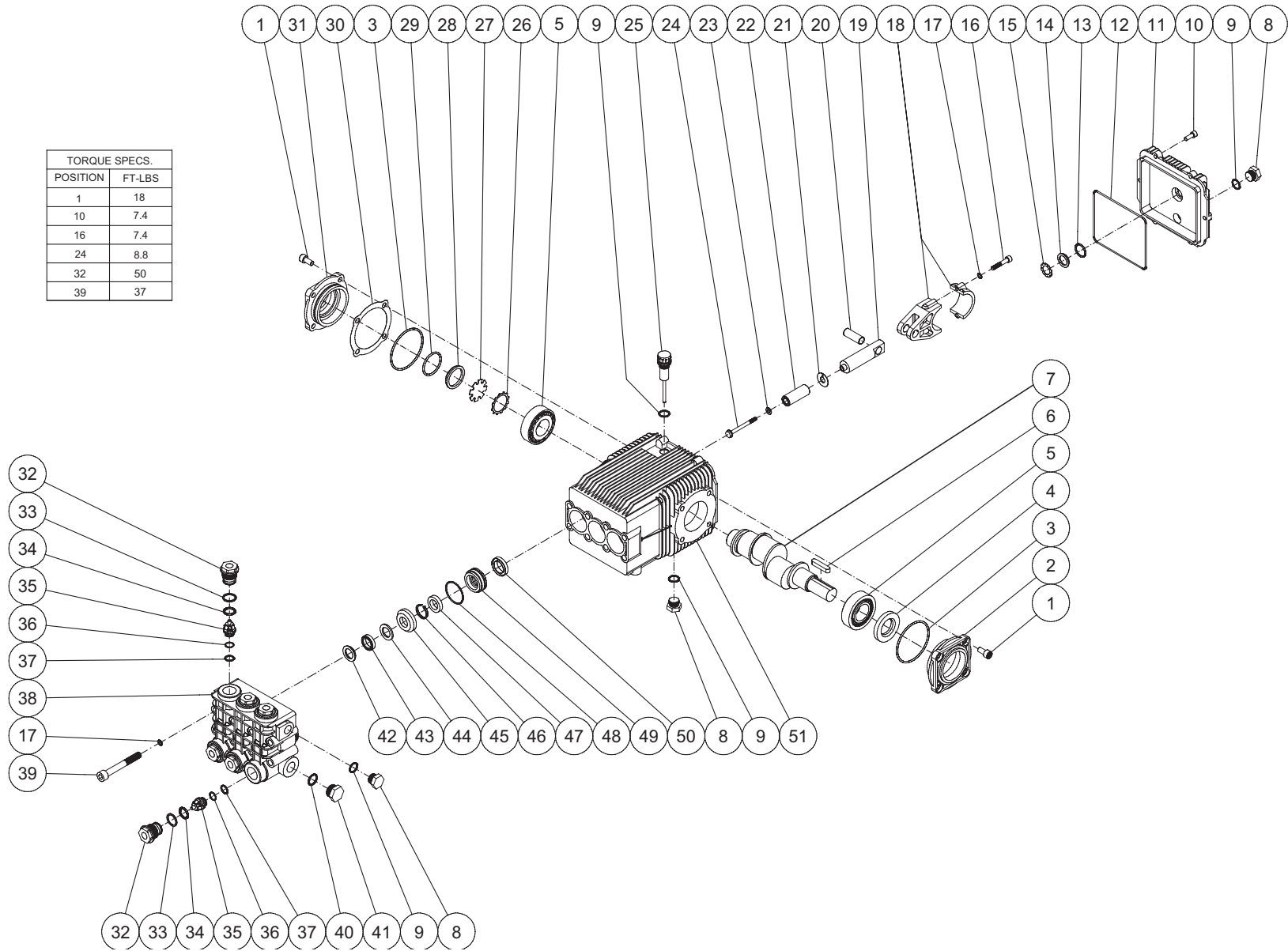
3-0202\_3-0203 082713 JDK

PUMP ASSEMBLY							
ITEM	DESCRIPTION	PART #	QTY	ITEM	DESCRIPTION	PART #	QTY
1	VALVE CAP	46-0889	6	25	BEARING	48-0012	2
2	O-RING	25-0012	6	26	KEY	43-0048	1
3	VALVE (SEE KIT 70-0009)	SEE KIT	6	27	CRANKSHAFT	N/A	1
4	MANIFOLD	46-0890	1	28	RETAINING RING	46-0103	6
5	WASHER	28-1039	8	29	CONNECTING ROD PIN	43-0032	3
6	BOLT	27-8185	8	30	OIL LEVEL INDICATOR	46-0114	1
7	WASHER	28-1038	2	31	PLUG	39-0017	1
8	PLUG	39-0019	2	32	O-RING	25-0014	4
9	WASHER	28-1002	2	33	BOLT	27-8404	5
10	PLUG	39-0018	2	34	CRANKCASE OPEN COVER	46-0295	1
11	HEAD RING (SEE KIT 70-0030 AND 852-0122)	SEE KIT	3	35	O-RING	25-0339	1
12	V-PACKING SUPPORT (SEE KIT 70-0147 AND 852-0122)	SEE KIT	3	36	BOLT	27-8435	6
13	O-RING (SEE KIT 70-0147 AND 70-0148 AND 852-0122)	SEE KIT	3	37	LOCKWASHER	29-0154	6
14	HIGH PRESSURE INTERMEDIATE SEAL RETAINER (SEE KIT 70-0148)	SEE KIT	3	38	CONNECTING ROD	46-0051	3
15	PRESSURE SEAL (SEE KIT 70-0147 AND 852-0122)	SEE KIT	3	39	PISTON ROD	46-0056	3
16	LOW PRESSURE SEAL RETAINER	46-0057	3	40	SLINGER WASHER	46-0146	3
17	O-RING (SEE KIT 852-0122)	SEE KIT	3	41	PLUNGER	46-0052	3
18	OIL SEAL	26-0047	3	42	BACK-UP RING	46-0109	3
19	BUSHING	9-0029	3	43	WASHER	28-0400	3
20	BOLT	27-8431	8	44	NUT / PISTON	46-0069	3
21	CRANKCASE COVER	46-0296	1	45	CRANKCASE	46-0047	1
22	SHIM	46-0113	1	46	OIL DIP STICK	46-0144	1
23	OIL SEAL	26-0049	1	47	CRANKCASE COVER	46-0336	1
24	O-RING	25-0013	2				

REPLACEMENT KITS				
KIT#	DESCRIPTION	ITEMS	# OF ASSEMBLIES	# OF CYLINDERS
70-0009	VALVES	3	6	3
70-0030	HEAD RING	11	3	3
70-0147	V-PACKING	12, 13, 15	3	3
70-0148	INTERMEDIATE RETAINER	13, 14	3	3
852-0122	V-PACKING ASSY	11-13, 15, 17	3	3

# PUMP ASSEMBLY (3-0213) (AFTER SERIAL #15019140)

TORQUE SPECS.	
POSITION	FT-LBS
1	18
10	7.4
16	7.4
24	8.8
32	50
39	37



3-0213 061113

## PUMP ASSEMBLY

ITEM	DESCRIPTION	Mi-T-M #	QTY	ITEM	DESCRIPTION	Mi-T-M #	QTY
1	BOLT	27-8884	8	28	OIL SIGHT GLASS	46-0926	1
2	COVER	46-0909	1	29	O-RING	25-0514	1
3	O-RING	25-0512	2	30	SHIM - .05mm	46-0947	1
4	OIL SEAL	26-0243	1	-	SHIM - .10mm	46-0948	0
5	BEARING	48-0073	2	-	SHIM - .19mm	46-0949	0
6	PUMP KEY	43-0091	1	-	SHIM - .25mm	46-0950	0
7	CRANKSHAFT	46-0944	1	31	COVER	46-0918	1
8	PLUG	39-0203	3	32	VALVE CAP	39-0201	6
9	O-RING	25-0510	4	33	BACK-UP RING	25-0509	6
10	BOLT	27-8888	6	34	O-RING	25-0386	6
11	COVER	46-0912	1	35	VALVE (SEE KIT 70-0314)	22-0318	6
12	O-RING	25-0513	1	36	BACK-UP RING (SEE KIT 70-0314)	25-0516	6
13	O-RING	25-0370	1	37	O-RING (SEE KIT 70-0314)	25-0407	6
14	OIL SIGHT GLASS	46-0670	1	38	PUMP MANIFOLD	46-0900	1
15	SPRING RETAINER	46-0671	1	39	BOLT	27-8470	8
16	BOLT	27-8892	6	40	O-RING	25-0372	1
17	LOCKWASHER	29-0153	14	41	PLUG	39-0202	1
18	CONNECTING ROD	46-0913	3	42	SUPPORT RING (SEE KIT 70-0317)	46-0901	3
19	PLUNGER ROD	46-0915	3	43	HIGH PRESSURE SEAL (SEE KIT 70-0317)	46-0902	3
20	PIN	46-0914	3	44	BACK-UP RING (SEE KIT 70-0317)	46-0903	3
21	WASHER	46-0916	3	45	GUIDE	46-1201	3
22	PISTON	46-0917	3	46	BACK-UP RING (SEE KIT 70-0317)	46-0905	3
23	WASHER	29-0014	3	47	LOW PRESSURE SEAL (SEE KIT 70-0317)	46-0906	3
24	BOLT	27-8965	3	48	O-RING (SEE KIT 70-0317)	25-0511	3
25	DIPSTICK	39-0204	1	49	GUIDE REAR	46-1200	3
26	RETAINER	46-0924	1	50	OIL SEAL	26-0242	3
27	PUMP	46-0925	1	51	CRANKCASE	46-0911	1

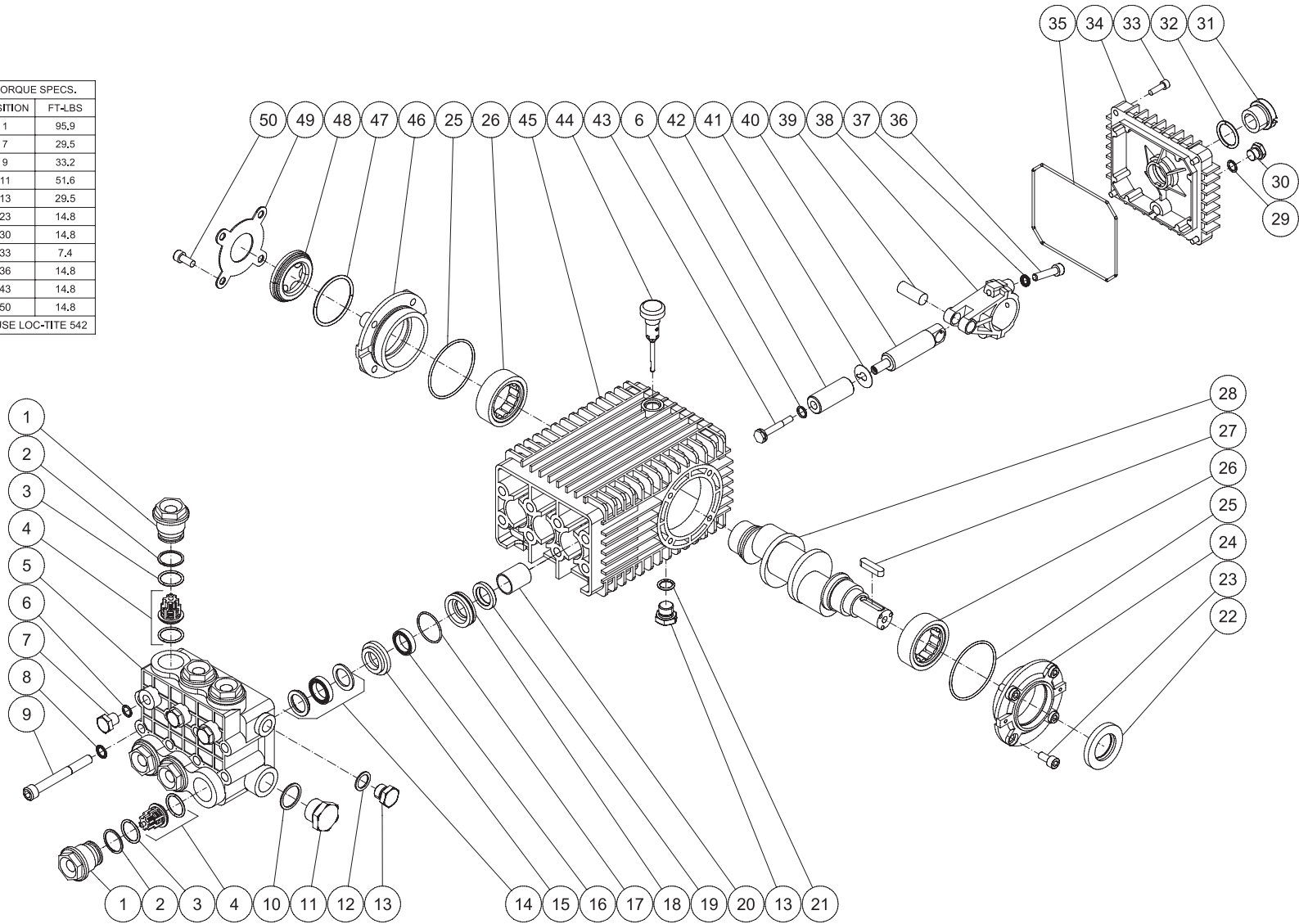
## REPLACEMENT KITS

Mi-T-M KIT #	DESCRIPTION	ITEMS	# OF ASSEMBLIES	# OF CYLINDERS
70-0317	KIT - WATER SEALS	42-44, 46-48	3	3
70-0314	KIT - VALVES	35, 36, 37	6	3

# PUMP ASSEMBLY (3-0301)

TORQUE SPECS.	
POSITION	FT-LBS
1	95.9
7	29.5
9	33.2
11	51.6
13	29.5
23	14.8
30	14.8
33	7.4
36	14.8
43	14.8
50	14.8

\*\* USE LOC-TITE 542



3-0301 041414 ALC

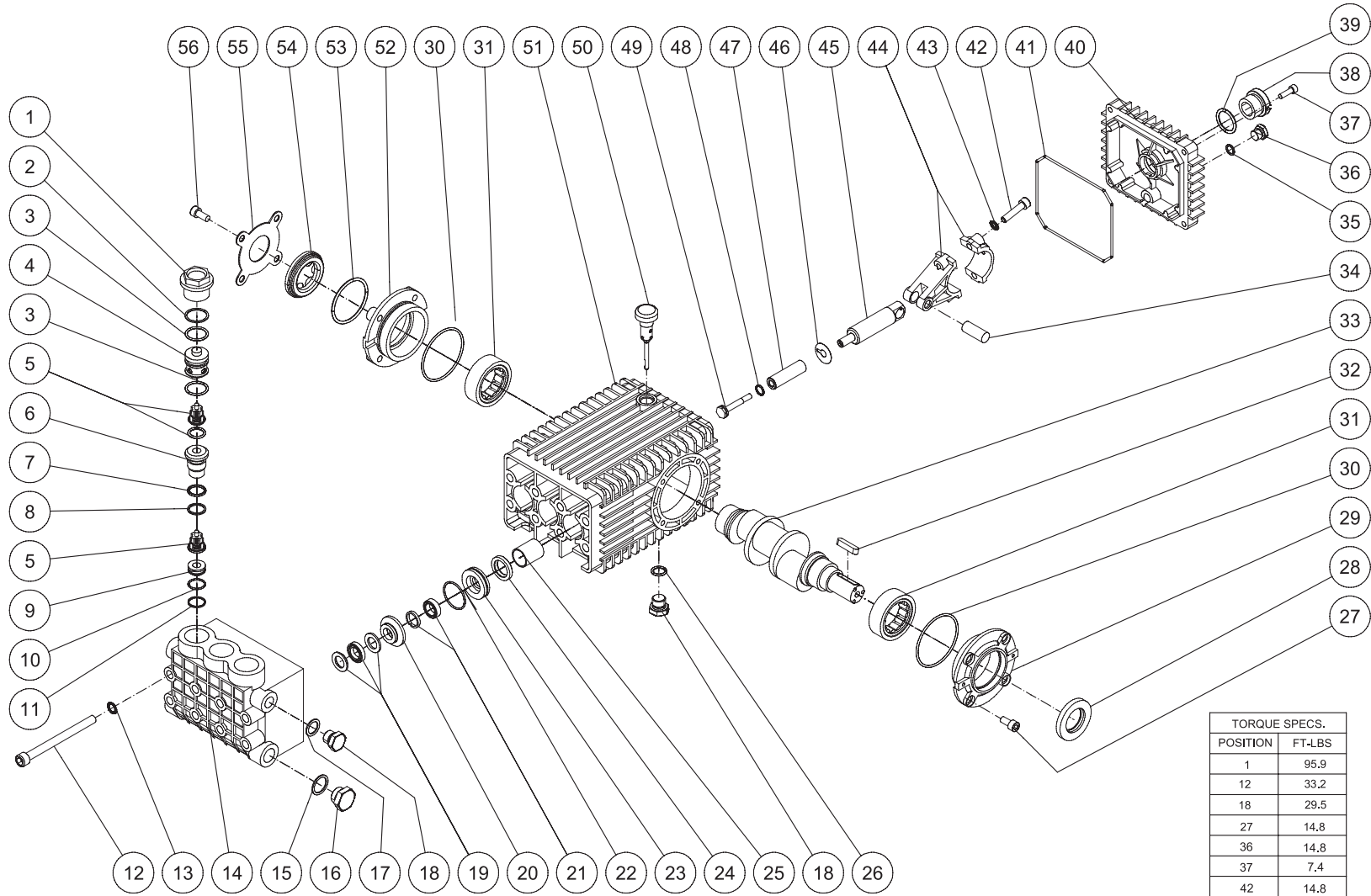
## PUMP ASSEMBLY

ITEM	DESCRIPTION	PART #	QTY	ITEM	DESCRIPTION	PART #	QTY
1	VALVE CAP	46-1222	6	26	BEARING	48-0085	2
2	RING	25-0592	6	27	KEY	46-0602	1
3	O-RING	25-0139	6	28	CRANKSHAFT	46-1344	1
4	VALVE ASSEMBLY (SEE KIT 70-0439)	SEE KIT	6	29	O-RING	25-0014	1
5	MANIFOLD	46-1220	1	30	PLUG	39-0017	1
6	O-RING	25-0310	6	31	SIGHT GLASS	46-1163	1
7	PLUG	39-0222	3	32	O-RING	25-0059	1
8	LOCKWASHER	29-0155	8	33	BOLT	27-8812	4
9	BOLT	27-9595	8	34	CRANKCASE COVER	46-1212	1
10	GASKET	28-1051	1	35	O-RING	25-0339	1
11	PLUG	39-0221	1	36	BOLT	27-8435	6
12	WASHER	28-1002	1	37	LOCKWASHER	29-1014	6
13	PLUG	39-0018	2	38	CONNECTING ROD	46-1211	3
14	HP SEAL (SEE KIT 70-0440 AND 70-0441)	SEE KIT	3	39	CONNECTING ROD PIN	43-0118	3
15	HP RING (SEE KIT 70-0441)	SEE KIT	3	40	PLUNGER ROD	46-1213	3
16	LP SEAL (SEE KIT 70-0440 AND 70-0441)	SEE KIT	3	41	SLINGER WASHER	46-1214	3
17	O-RING (SEE KIT 70-0441)	25-0015	3	42	PLUNGER	46-1221	3
18	LP SEAL (SEE KIT 70-0441)	SEE KIT	3	43	BOLT / PISTON	46-1216	3
19	OIL SEAL (SEE KIT 70-0432)	26-0047	3	44	OIL DIP STICK	46-0144	1
20	BUSHING	9-0029	3	45	CRANKCASE	46-1209	1
21	O-RING	25-0052	1	46	CRANKCASE COVER	46-1208	1
22	OIL SEAL	26-0049	1	47	O-RING	25-0060	1
23	BOLT	27-8431	4	48	OIL LEVEL INDICATOR	46-0574	1
24	CRANKCASE COVER OPEN	46-1217	1	49	SIGHTGLASS COVER	46-1207	1
25	O-RING	25-0590	2	50	BOLT	27-8433	4

## REPLACEMENT PARTS

KIT #	DESCRIPTION	ITEMS	# OF ASSEMBLIES	# OF CYLINDER
70-0432	OIL SEAL KIT	19	3	3
70-0439	VALVE KIT	4	6	3
70-0440	LOW/HIGH PRESSURE SEALS	14, 16	3	3
70-0441	PACKING KIT	14-18	3	1

# PUMP ASSEMBLY (3-0262)



TORQUE SPECS.	
POSITION	FT-LBS
1	95.9
12	33.2
18	29.5
27	14.8
36	14.8
37	7.4
42	14.8
49**	14.8
56	14.8
** USE LOC-TITE 542	

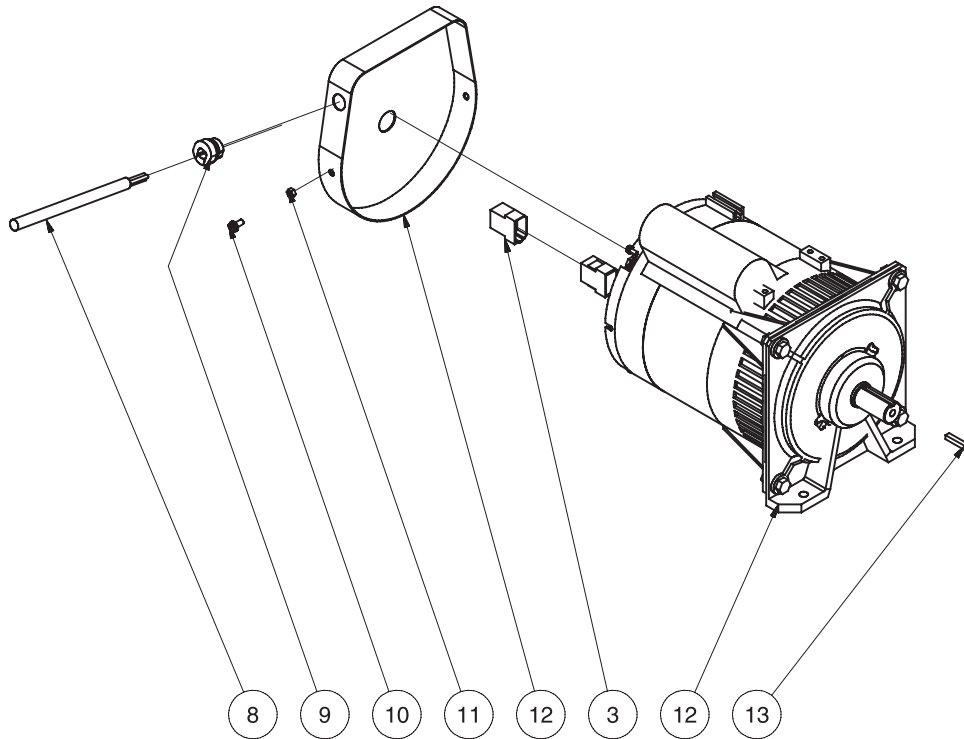
3-0262 061113 MLK



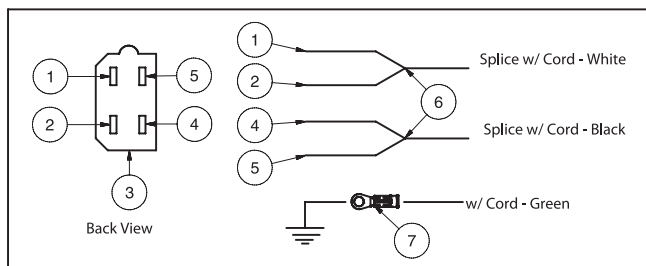
PUMP ASSEMBLY							
ITEM	DESCRIPTION	Mi-T-M #	QTY	ITEM	DESCRIPTION	Mi-T-M #	QTY
1	VALVE PLUG	46-1203	3	29	CRANKCASE COVER OPEN	46-1217	1
2	RING	25-0592	3	30	O-RING	25-0590	2
3	O-RING	25-0139	6	31	BEARING	48-0085	2
4	CAP	46-1206	3	32	KEY	46-0602	1
5	VALVE ASSEMBLY (SEE KIT 70-0431)	70-0431	6	33	CRANKSHAFT	46-1210	1
6	GUIDE	46-1205	3	34	CONNECTING ROD PIN	43-0118	3
7	O-RING	25-0160	3	35	O-RING	25-0014	1
8	BACKUP RING	25-0430	3	36	PLUG	39-0017	1
9	SPACER	46-1204	3	37	BOLT	27-8812	4
10	O-RING	25-0130	3	38	SIGHT GLASS	46-1163	1
11	BACKUP RING	25-0591	3	39	O-RING	25-0059	1
12	BOLT	27-8073	8	40	CRANKCASE COVER	46-1212	1
13	LOCKWASHER	29-0155	8	41	O-RING	25-0339	1
14	MANIFOLD	46-1218	1	42	BOLT	27-8435	6
15	WASHER	28-1038	1	43	LOCKWASHER	29-1014	1
16	PLUG	39-0019	1	44	CONNECTING ROD	46-1211	3
17	WASHER	28-1002	1	45	PLUNGER ROD	46-1213	3
18	PLUG	39-0018	2	46	SLINGER WASHER	46-1214	3
19	HIGH PRESSURE SEAL ASSEMBLY (SEE KIT 70-0435 & 70-0436)	SEE KIT	3	47	PLUNGER	46-1219	3
20	HIGH PRESSURE INTERMEDIATE SEAL RETAINER (SEE KIT 70-0435)	SEE KIT	3	48	O-RING	25-0310	3
21	LOW PRESSURE SEAL OD 26 X ID 10 X 5MM (SEE KIT 70-0435 & 70-0436)	SEE KIT	3	49	BOLT / PISTON	46-1216	3
22	O-RING (SEE KIT 70-0435)	25-0015	3	50	OIL DIP STICK	46-0144	1
23	LOW PRESSURE SEAL RETAINER (SEE KIT 70-0435)	SEE KIT	3	51	CRANKCASE	46-1209	1
24	OIL SEAL (SEE KIT 70-0432)	26-0047	3	52	CRANKCASE COVER	46-1208	1
25	BUSHING	9-0029	3	53	O-RING	25-0060	1
26	O-RING	25-0052	1	54	OIL LEVEL INDICATOR	46-0574	1
27	BOLT	27-8431	4	55	SIGHTGLASS COVER	46-1207	1
28	OIL SEAL	26-0049	1	56	BOLT	27-8433	4

REPLACEMENT KITS				
Mi-T-M KIT#	DESCRIPTION	ITEMS	# OF ASSEMBLIES	# OF CYLINDERS
70-0432	OIL SEAL KIT	24	3	3
70-0431	VALVE KIT	5	6	3
70-0436	LOW/HIGH PRESSURE SEALS	19, 21	3	3
70-0435	PACKING KIT	19-23	3	3

## GENERATOR (850-0352)



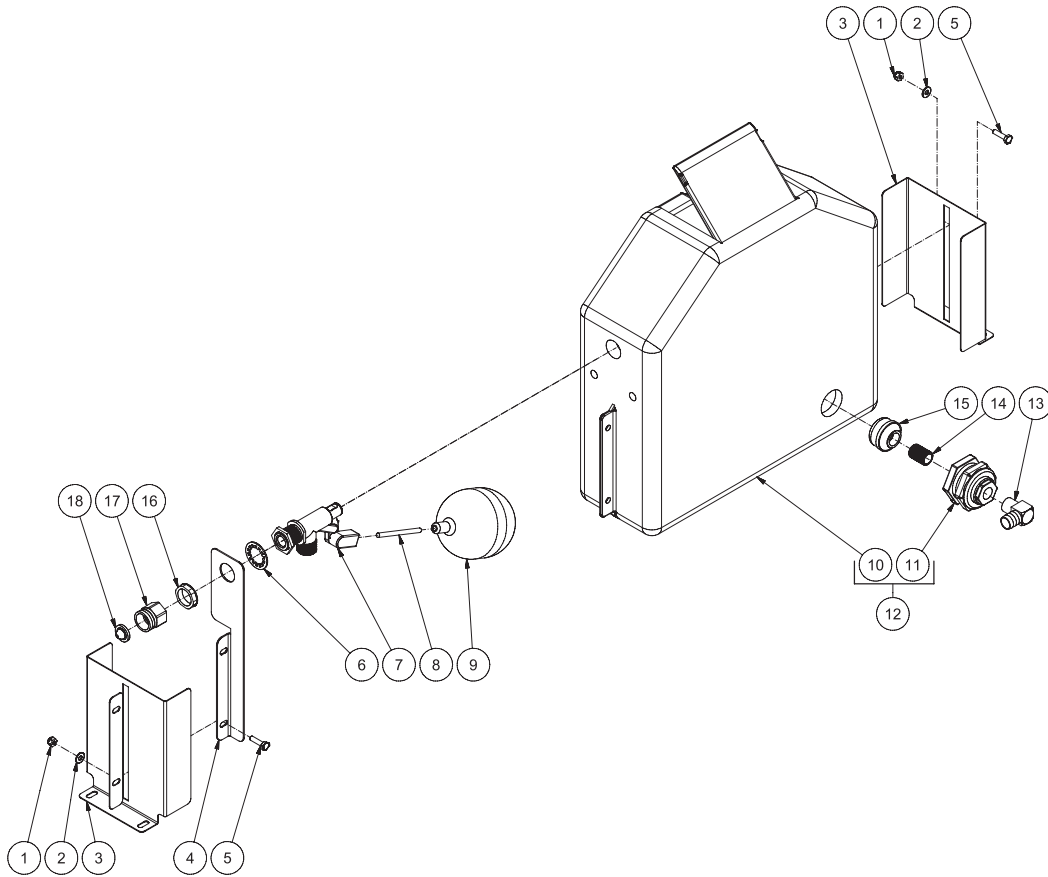
850-0352-070605-RZ



GENERATOR (850-0352)			
REF #	DESCRIPTION	PART #	QTY
1	Wire - White *(One Foot Required)	32-0452	1
2	Wire - Black *(One Foot Required)	32-0091	1
3	Connector- Male (See 32-0895)	N/A Sep.	1
4	Wire - Red *(One Foot Required)	32-0178	1
5	Wire - Yellow *(One Foot Required)	32-0853	1
6	Crimp Slice	32-0417	2
7	Terminal Ring	32-0099	1
8	Cord *(Six Feet Required)	32-0440	1
9	Bushing	9-0045	1
10	Screw	27-9593	2
11	Hex Nut	30-6001	2
12	Alternator Shaft Drive	32-0895	1
13	Key	43-0085	1
-	Capacitor	32-0913	1
	Generator (Includes 1-12)	850-0352	

850-0352-070605-RZ

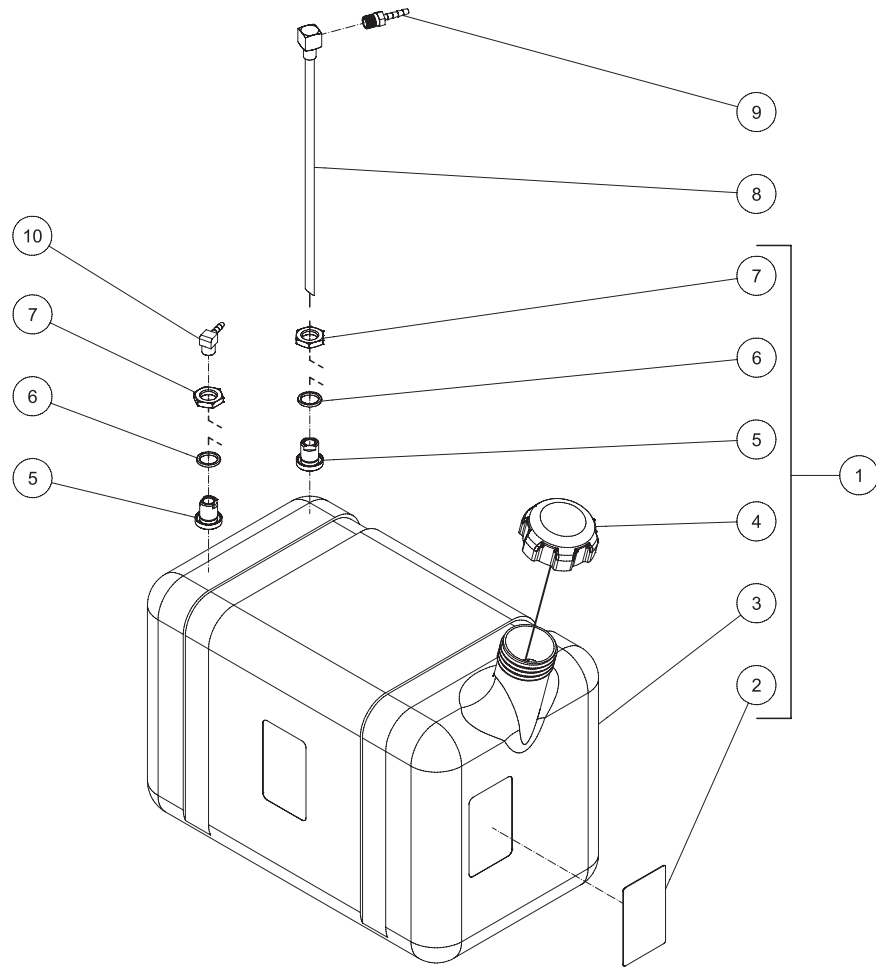
# FLOAT TANK ASSEMBLY



HDS FLOAT TANK ASSY-082809-CH

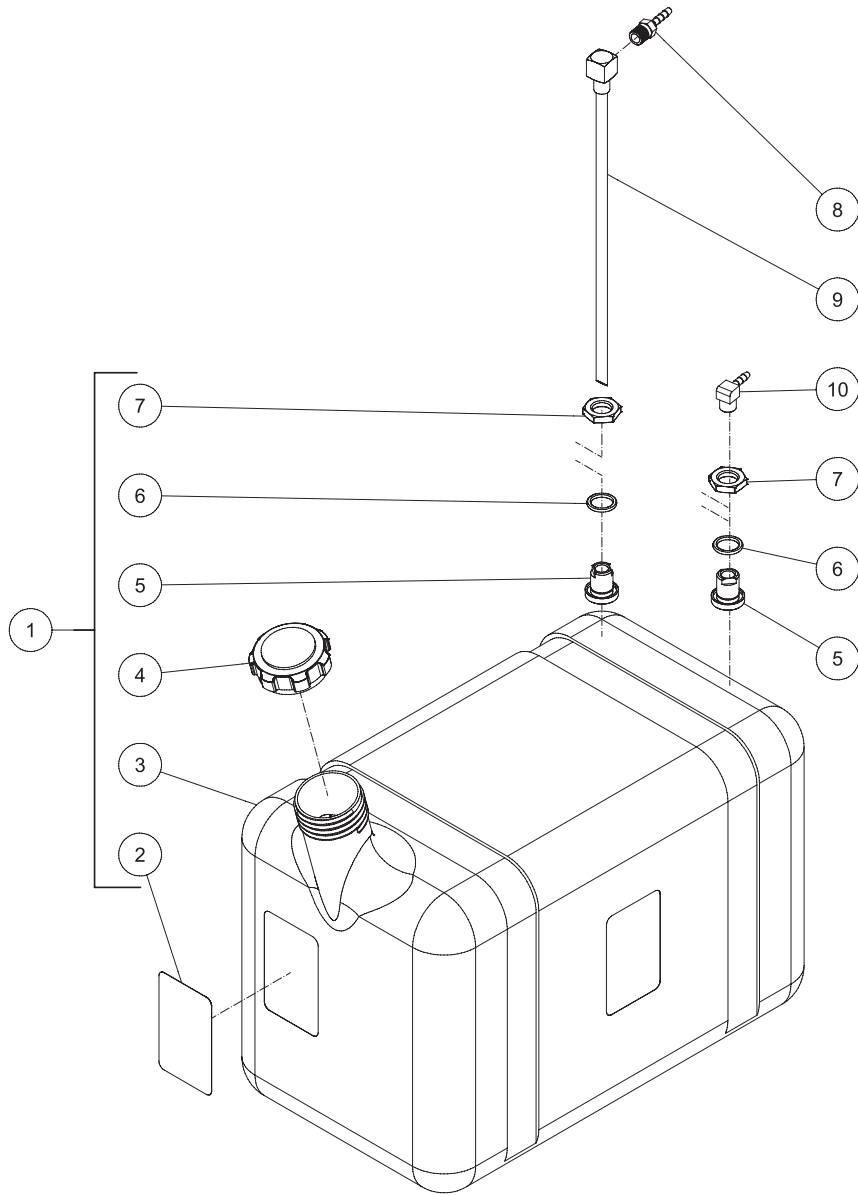
HDS FLOAT TANK ASSY 082809-CH			
FLOAT TANK ASSY			
ITEM	DESCRIPTION	PART #	QTY
1	LOCKNUT	30-0155	4
2	WASHER	28-0002	4
3	FLOAT TANK INLET BRACKET	20-0586A18	2
4	BRACKET	20-0912A18	1
5	BOLT	27-0016	4
6	LOCKWASHER	29-0074	1
7	FLOAT VALVE	22-0317	1
8	BALL FLOAT STUD	31-3320	1
9	FLOAT	22-0059	1
10	FLOAT TANK	N/A	1
11	BULKHEAD	55-0886	1
12	FLOAT TANK ASSEMBLY (INC. 10-11)	850-0322	1
13	ELBOW	23-0037	1
14	NIPPLE	23-0019	1
15	STRAINER	19-0203	1
16	LOCKNUT	23-0428	1
17	GARDEN HOSE INLET	23-0021	1
18	FILTER	19-0001	1

# GAS TANK ASSEMBLY (850-0306)



HDS GAS TANK ASSY 051012 CH			
GAS TANK ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	GAS TANK ASSY (INC 2-7)	850-0306	1
2	DECAL- CAUTION: GASOLINE ONLY (SEE 71-0034)	N/A	1
3	FUEL TANK - RED	N/A	1
4	FUEL CAP - SEALED/TETHERED	12-0220	1
5	BULKHEAD FITTING	23-0408	2
6	O-RING	25-0427	2
7	NUT	23-0409	2
8	FUEL PICK-UP	33-0352	1
9	BARB	23-0051	1
10	ELBOW	23-0054	1

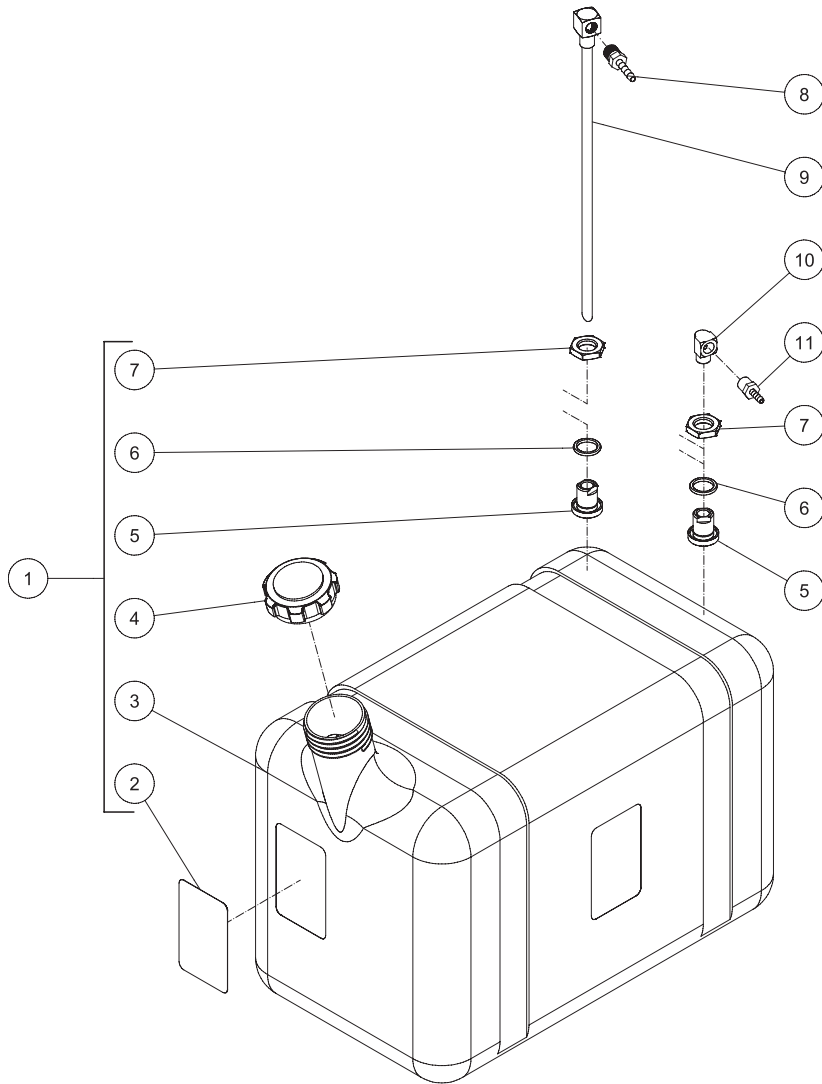
## BURNER FUEL TANK (850-0307)



BURNER FUEL TANK ASSY-021313-KMD

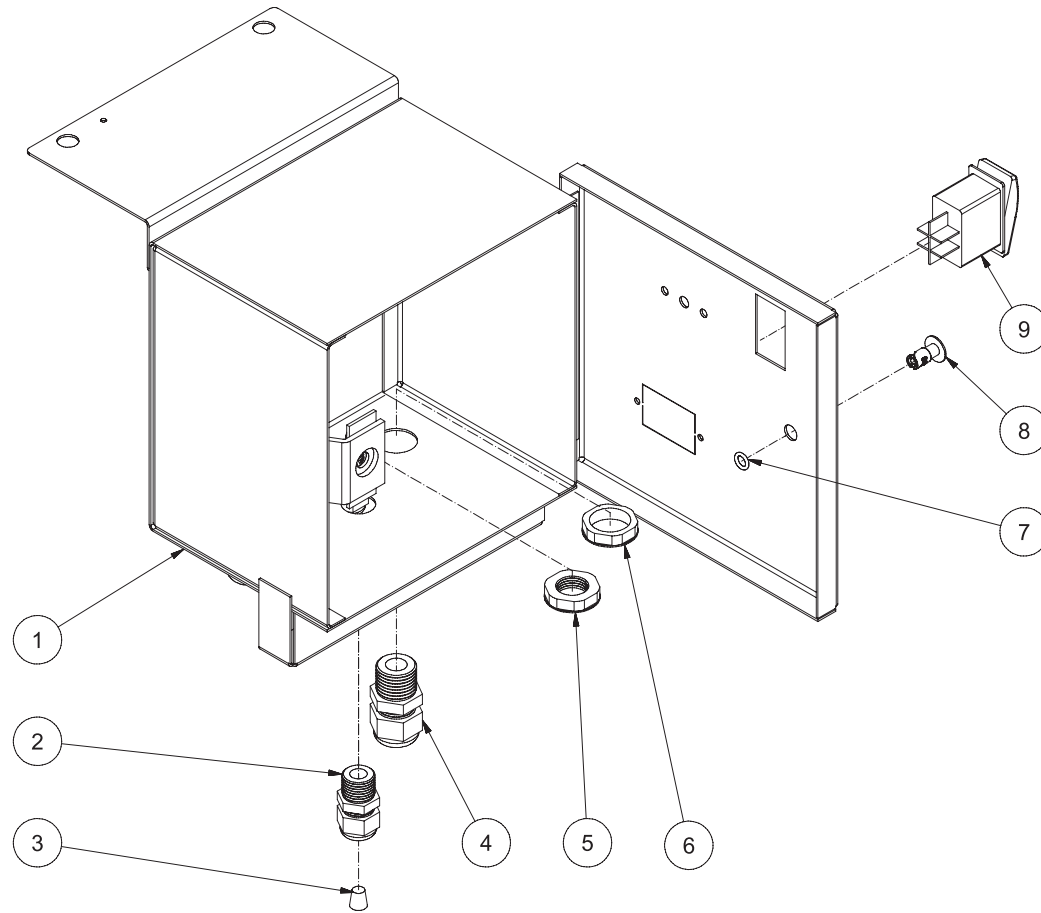
HDS BURNER FUEL TANK ASSY-021313-KMD			
BURNER FUEL TANK			
REF. #	DESCRIPTION	PART #	QTY.
1	Fuel Tank Assembly (Inc. 2-7)	850-0307	1
2	Decal- Caution: Risk of Fire	34-1034	1
3	Fuel Tank (See 850-0307)	N/A Sep.	1
4	Fuel Cap	12-0033	1
5	Bulkhead Fitting	23-0408	2
6	O-ring	25-0427	2
7	Nut	23-0409	2
8	Hose Barb	23-0051	1
9	Fuel Pickup	33-0352	1
10	Elbow	23-0054	1

## DIESEL FUEL TANK



HDS DIESEL FUEL TANK ASSY-031313-KMD			
DIESEL FUEL TANK			
REF. #	DESCRIPTION	PART #	QTY.
1	Fuel Tank Assembly (Inc. 2-7)	850-0307	1
2	Decal- Caution: Risk of Fire	34-1034	1
3	Fuel Tank (See 850-0307)	N/A Sep.	1
4	Fuel Cap	12-0033	1
5	Bulkhead Fitting	23-0408	2
6	O-ring	25-0427	2
7	Nut	23-0409	2
8	Hose Barb	23-0051	1
9	Fuel Pickup	33-0352	1
10	Elbow	23-0014	1
11	Hose Barb	23-0455	1

# ELECTRICAL BOX ASSEMBLY

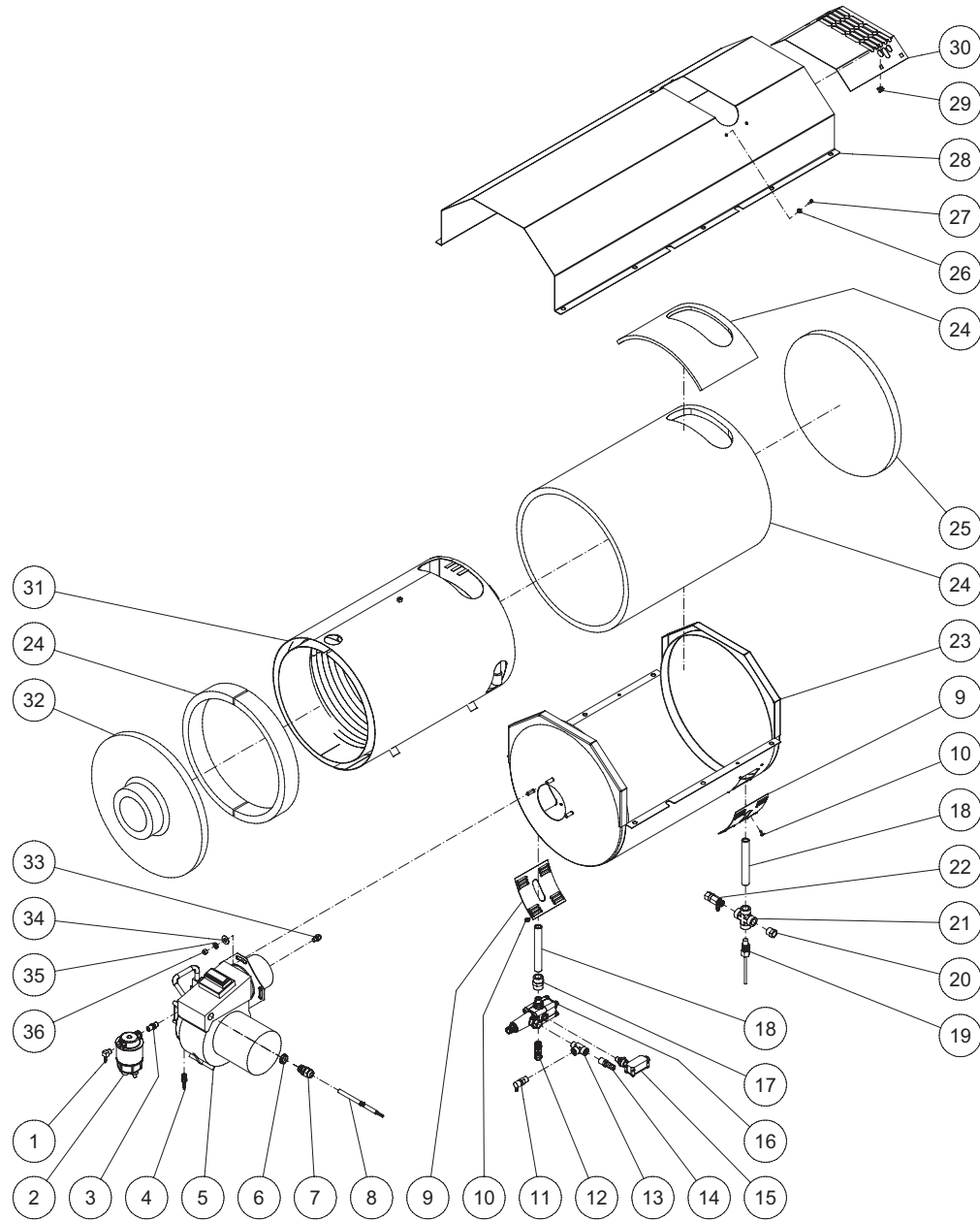


HS ELECTRICAL BOX ASSY-072211-CH



HS ELECTRIC BOX ASSEMBLY 072211 CH			
ELECTRIC BOX ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	ELECTRIC BOX	20-1097A18	1
2	STRAIN RELIEF	32-0586	3
3	STRAIN RELIEF PLUG	32-0708	1
4	STRAIN RELIEF	32-0437	2
5	ELECTRICAL LOCKNUT	32-0587	3
6	ELECTRICAL LOCKNUT	32-0108	2
7	O-RING	25-0209	1
8	FASTENER	33-0197	1
9	ROCKER SWITCH	32-0669	1

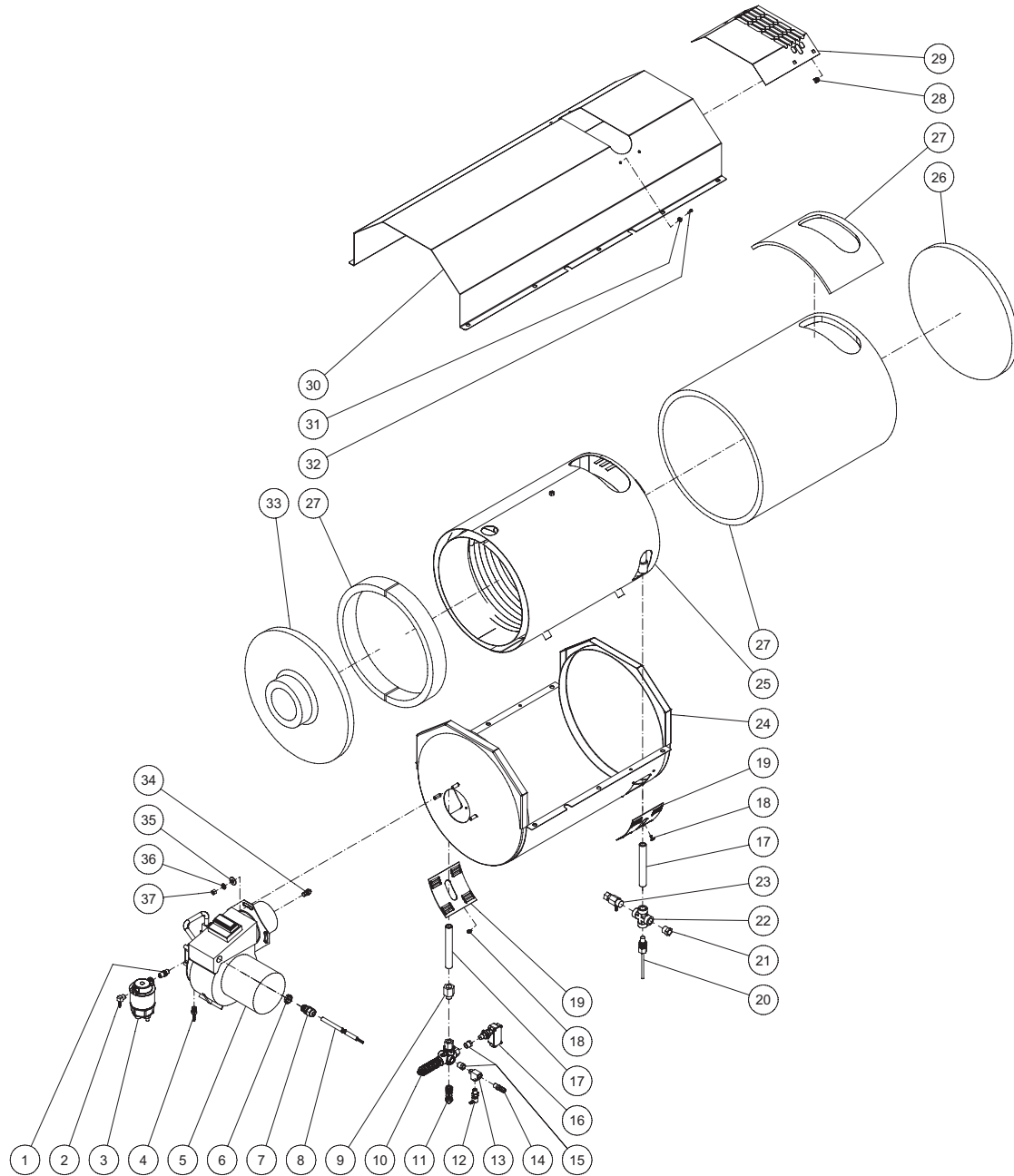
# HEAT EXCHANGER ASSEMBLY FOR HVS-3005/3006/3504/3505/3506 (AFTER SERIAL #15009977)



HS 3005 3006 3504 3505 3506 HEAT EXCHANGER ASSY 072517 072517 JRC

HS-3005 3006 3504 3505 3506 HEAT EXCHANGER 072517 JRC			
HEAT EXCHANGER			
ITEM	DESCRIPTION	PART #	QTY
1	ELBOW	23-0054	1
2	FUEL FILTER / WATER SEPERATOR	19-0070	1
3	NIPPLE	24-0145	1
4	BARB	23-0051	1
5	BURNER	4-0017	1
6	ELECTRICAL LOCKNUT	32-0108	1
7	STRAIN RELIEF	32-0437	1
8	CORD *(FOUR FEET REQUIRED)	32-0247	1
9	PATCH PLATE	20-0537A18	2
10	BOLT	27-3062	8
11	HEAT DUMP VALVE	22-0432	1
12	ELBOW	24-0092	1
13	STREET TEE	23-0058	1
14	HOSE BARB	23-0105	1
15	PRESSURE SWITCH	22-0243	1
16	UNLOADER (3006/3506)	850-0304	1
-	UNLOADER (3005/3505)	8-0013	1
-	UNLOADER (3504)	850-0345	1
17	ADAPTER	24-0243	1
18	PIPE NIPPLE	24-0254	2
19	HI-LIMIT SWITCH	32-0667	1
20	REDUCER BUSHING	23-0016	1
21	CROSS	24-0241	1
22	SAFETY RELIEF VALVE	22-0309	1
23	BOTTOM WRAP	20-0666A18	1
24	INSULATION FOR HS HEAT EXCHANGER	850-0314	1
25	INSULATION DISC	33-0346	1
26	WASHER	28-0001	4
27	SCREW	27-8912	4
28	TOP WRAP	20-0664A18	1
29	CLIP NUT	30-6028	4
30	EXHAUST GUARD	21-0171	1
31	COIL	66-0014	1
32	INSULATION DRUM HEAD	33-0345	1
33	FUEL NOZZLE	18-0361	1
-	NOZZLE SOLID OIL (3504)	18-0090	1
34	WASHER	28-0023	3
35	LOCKWASHER	29-0008	3
36	NUT	30-0006	3
*MUST ORDER IN ONE FOOT LENGTHS			

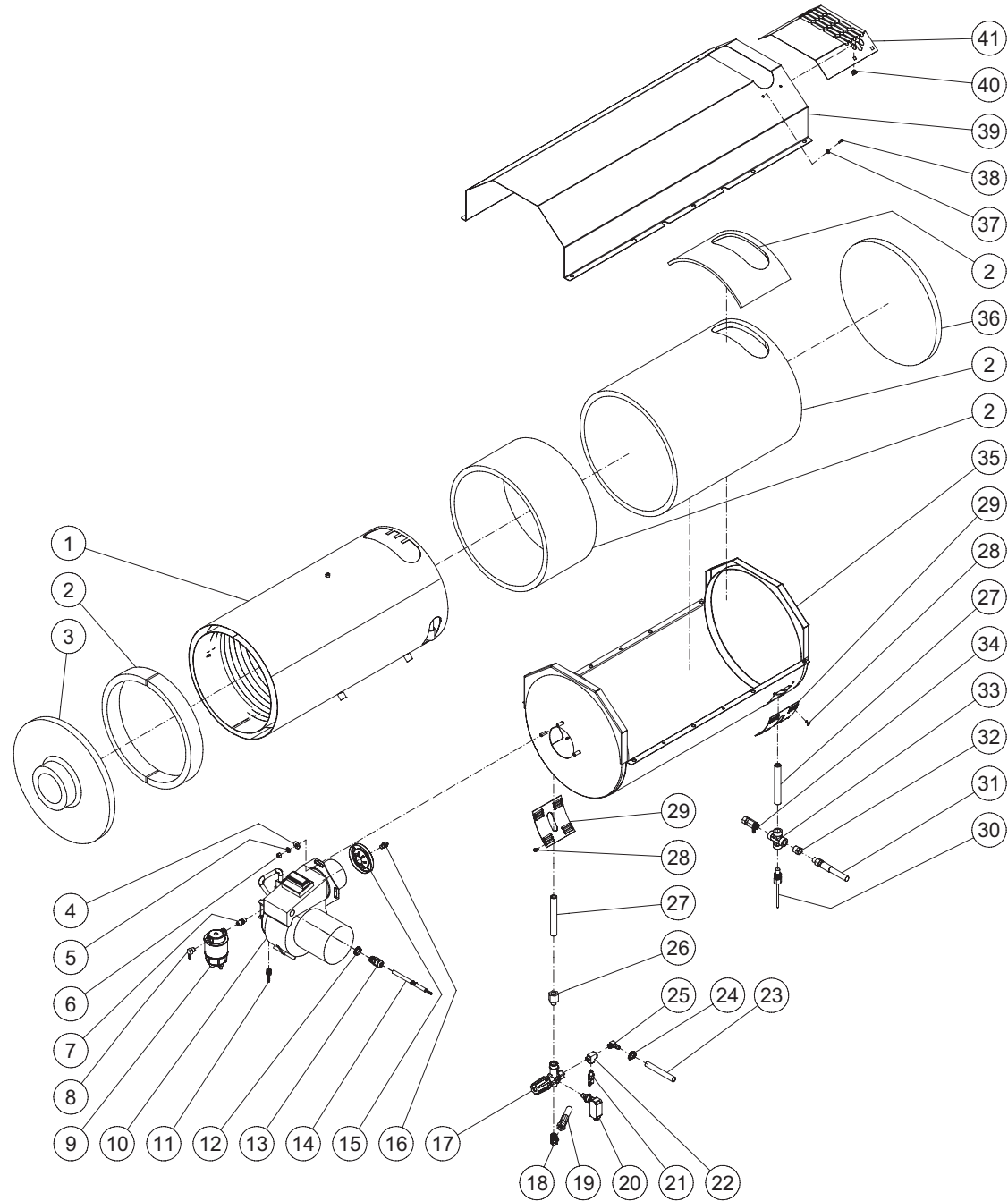
# HEAT EXCHANGER ASSEMBLY FOR HVS-4004/4005 (AFTER SERIAL #15100089)



HS 4004\_4005 HEAT EXCHANGER ASSY 072517 JRC

HEAT EXCHANGER			
ITEM	DESCRIPTION	PART #	QTY
1	NIPPLE	24-0145	1
2	ELBOW	23-0054	1
3	FUEL FILTER / WATER SEPERATOR	19-0070	1
4	BARB	23-0051	1
5	BURNER	4-0017	1
6	ELECTRICAL LOCKNUT	32-0108	1
7	STRAIN RELIEF	32-0437	1
8	CORD *(FOUR FEET REQUIRED)	32-0247	1
9	REDUCER	24-0048	1
10	UNLOADER	8-0634	1
11	ELBOW	24-0092	1
12	HEAT DUMP VALVE	22-0408	1
13	TEE	23-0127	1
14	HOSE BARB	23-0120	1
15	REDUCER	23-0017	2
16	PRESSURE SWITCH	22-0243	1
17	PIPE NIPPLE	24-0254	2
18	BOLT	27-3062	8
19	PATCH PLATE	20-0537A18	2
20	HI-LIMIT SWITCH	32-0667	1
21	REDUCER BUSHING	23-0016	1
22	CROSS	24-0241	1
23	SAFETY RELEIF VALVE	22-0434	1
24	BOTTOM WRAP	20-0666A18	1
25	COIL	66-0014	1
26	INSULATION FOR HS HEAT EXCHANGER	850-0314	1
27	INSULATION DISC	33-0346	1
28	CLIP NUT	30-6028	4
29	EXHAUST GUARD	21-0171	1
30	TOP WRAP	20-0664A18	1
31	WASHER	28-0001	4
32	SCREW	27-8912	4
33	INSULATION DRUM HEAD	33-0345	1
34	FUEL NOZZLE	18-0090	1
-	NOZZLE SOLID OIL (4005)	18-0361	1
35	WASHER	28-0023	3
36	LOCKWASHER	29-0008	3
37	NUT	30-0006	3
*MUST ORDER IN ONE FOOT LENGTHS			

# HEAT EXCHANGER ASSEMBLY FOR HVS-3008

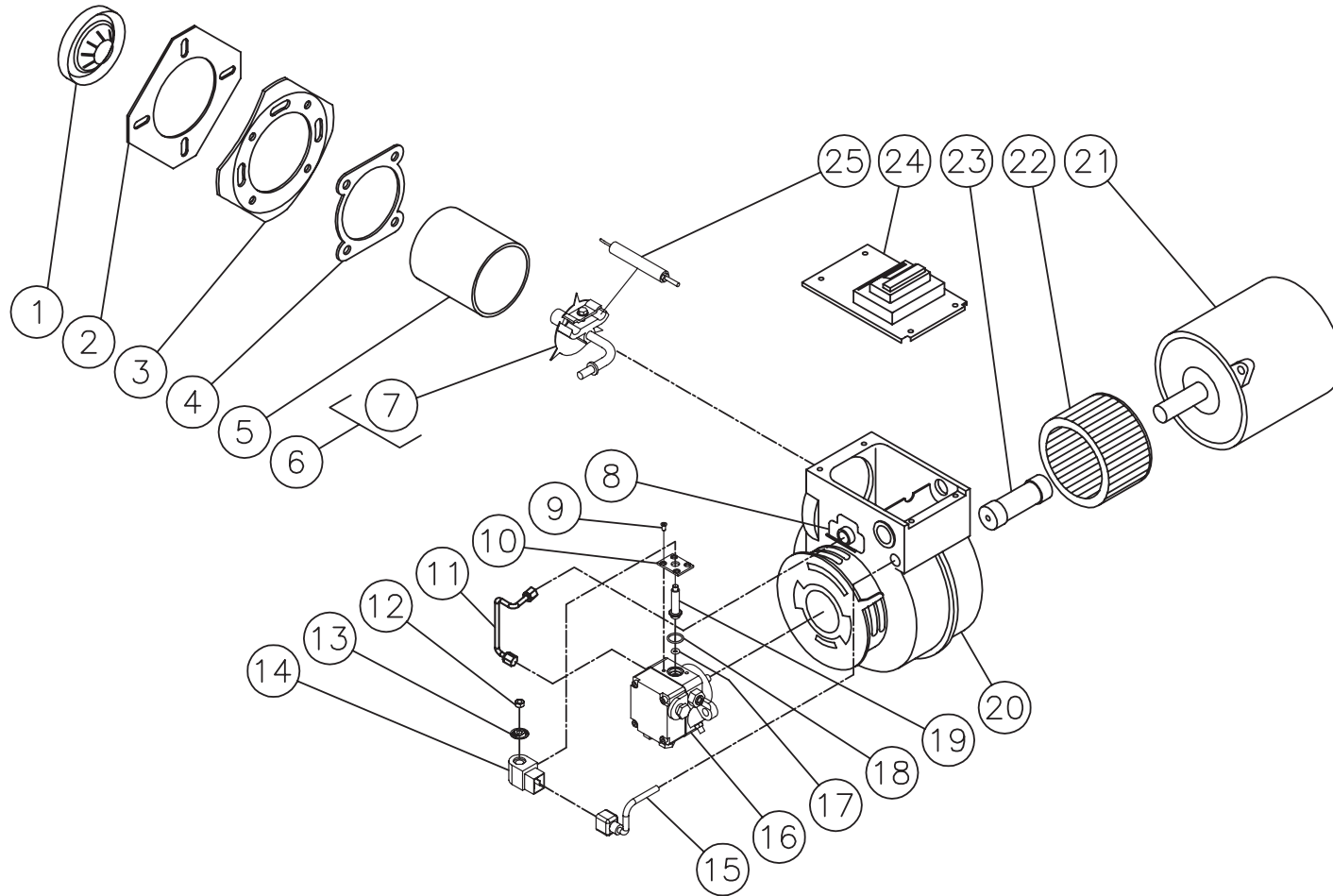


HVS 3008 HEAT EXCHANGER ASSY 072517 JRC

HVS 3008 HEAT EXCHANGER 072517 JRC			
HEAT EXCHANGER			
ITEM	DESCRIPTION	PART #	QTY
1	COIL	66-0021	1
2	INSULATION FOR HVS HEAT EXCHANGER	850-0323	1
3	INSULATION DRUM HEAD	33-0345	1
4	WASHER	28-0023	3
5	LOCKWASHER	29-0008	3
6	NUT	30-0006	3
7	NIPPLE	24-0145	1
8	ELBOW	23-0054	1
9	FUEL FILTER / WATER SEPERATOR	19-0070	1
10	BURNER	4-0017	1
11	BARB	23-0051	1
12	ELECTRICAL LOCKNUT	32-0108	1
13	STRAIN RELIEF	32-0437	1
14	CORD *(FOUR FEET REQUIRED)	32-0247	1
15	COMBUSTION HEAD	44-0162	1
16	FUEL NOZZLE	18-0175	1
17	UNLOADER	850-0252	1
18	ELBOW	24-0092	1
19	HIGH PRESSURE HOSE ASSEMBLY	15-0221	1
20	PRESSURE SWITCH	22-0119	1
21	HEAT DUMP VALVE	22-0408	1
22	TEE	23-0127	1
23	HOSE *(TWO FEET REQUIRED)	15-0007	1
24	HOSE CLAMP	42-0011	1
25	ELBOW	23-0119	1
26	REDUCER	24-0048	1
27	PIPE NIPPLE	24-0254	2
28	BOLT	27-3062	8
29	PATCH PLATE	20-0537A18	2
30	HI-LIMIT SWITCH	32-0667	1
31	HP HOSE	15-0202	1
32	REDUCER BUSHING	23-0016	1
33	CROSS	24-0241	1
34	SAFETY RELIEF VALVE	22-0309	1
35	BOTTOM WRAP	20-1091A18	1
36	INSULATION DISC	33-0346	1
37	WASHER	28-0001	4
38	SCREW	27-8912	4
39	TOP WRAP	20-1090A18	1
40	CLIP NUT	30-6028	4
41	EXHAUST GUARD	21-0171	1

\*MUST ORDER IN ONE FOOT LENGTHS

# BURNER ASSEMBLY (4-0017) (AFTER SERIAL #15008085)



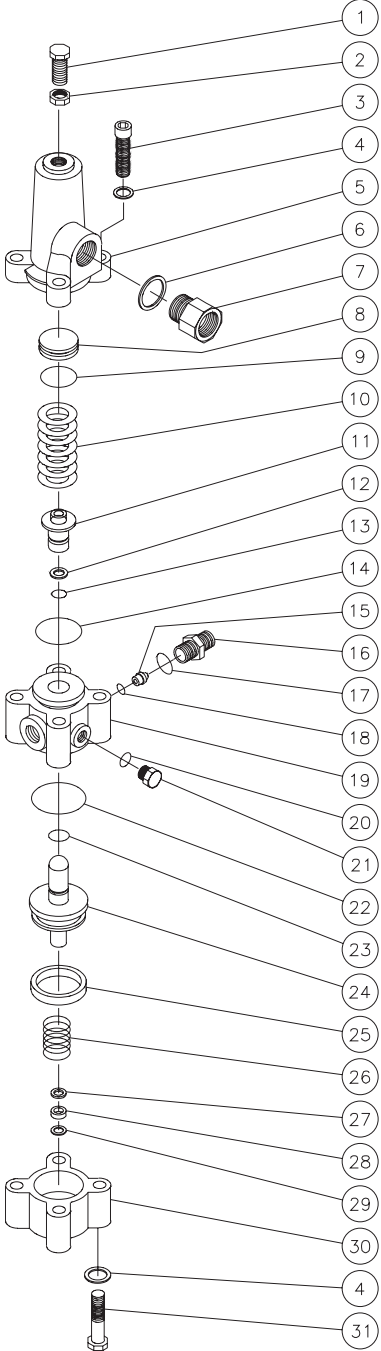
4-0017\_4-0018 081413 ALC



## BURNER ASSEMBLY (4-0017 AFTER SERIAL #15008085 &amp; 4-0018 AFTER SERIAL #15008463)

REF.	DESCRIPTION	PART #	QTY.	REF.	DESCRIPTION	PART #	QTY.
1	BURNER HEAD	44-0011	1	16	FUEL PUMP	3-0236	1
2	MOUNTING GASKET	44-0108	1	17	O-RING	N/A	1
3	FLANGE	44-0109	1	18	O-RING	N/A	1
4	GASKET	26-0138	1	19	SOLENOID PISTON	46-1343	1
5	AIR TUBE	44-0110	1	20	BURNER HOUSING	44-0033	1
6	NOZZLE LINE ASSEMBLY	44-0113	1	21	MOTOR (4-0017)	2-0068	1
7	ELECTRODE KIT	44-0114	1	-	MOTOR (4-0018)	2-0067	1
8	ESCUTCHEON PLATE	44-0031	1	22	BLOWER WHEEL	44-0071	1
9	SCREW	N/A	1	23	COUPLER	44-0014	1
10	BASE PLATE	46-1004	1	24	IGNITION TRANSFORMER (4-0017)	44-0017	1
11	FUEL LINE	44-0026	1	-	IGNITION TRANSFORMER (4-0018)	44-0015	1
12	PISTON NUT	46-1016	1	25	ELECTRODE	44-0114	2
13	SPRING WASHER	N/A	1		COMPLETE BURNER (INCLUDES 1-17)	4-0017	
14	FUEL SOLENOID	46-1020	1		COMPLETE BURNER (INCLUDES 1-17)	4-0018	
15	CORD SET	44-0122	1				

# UNLOADER ASSEMBLY (850-0304)

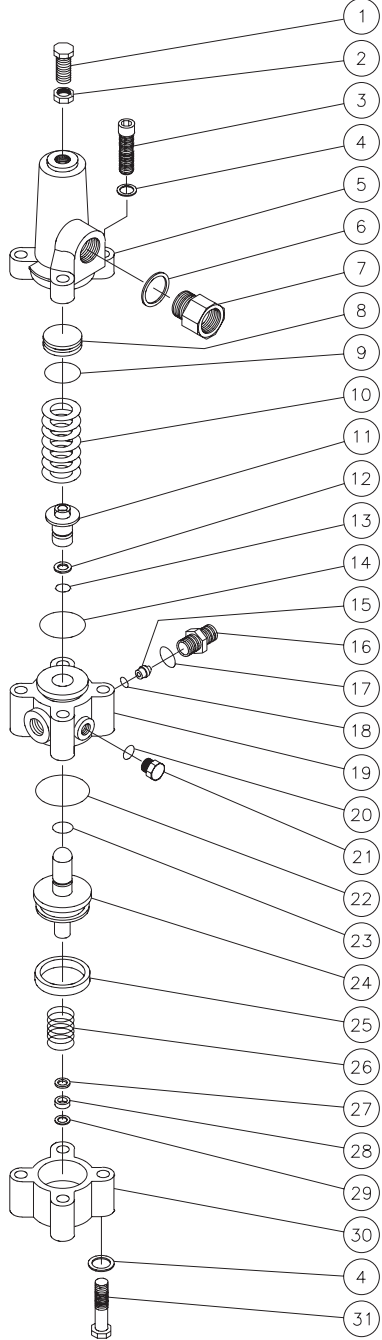


OMGEN066-081303-KZ

## UNLOADER ASSEMBLY (850-0304)

REF. #	DESCRIPTION	PART #	QTY.	REF. #	DESCRIPTION	PART #	QTY.
1	Bolt	27-8077	1	18	O-ring	25-0119	1
2	Hex Nut	30-3010	1	19	Middle Body	8-0137	1
3	Bolt	27-8434	4	20	O-ring	25-0114	2
4	Lockwasher	29-0154	8	21	Hex Plug	39-0017	2
5	Upper Body	8-0138	1	22	O-ring	25-0056	1
6	Washer	8-0277	1	23	O-ring	25-0120	1
7	By-Pass Restrictor	8-0124	1	24	Piston Assembly	8-0136	1
8	Spring Guide	8-0135	1	25	Seal	26-0104	1
9	O-ring	25-0118	1	26	Spring	49-0027	1
10	Spring	49-0026	1	27	Washer	8-0139	1
11	Valve Seat	8-0145	1	28	Seal	26-0105	1
12	Back-up Ring	8-0141	1	29	Back-up Ring	8-0140	1
13	O-ring	25-0121	1	30	Lower Body	8-0134	1
14	O-ring	25-0117	1	31	Bolt	27-8037	4
15	Flow Balancer (8-0012)	8-0126	1		Unloader Repair Kit (Inc. 9, 11, 13, 14, 17, 18, 20, 22-26, 28, 29)	70-0013	
-	Flow Balancer (8-0013)	8-0128	1		Unloader Orifice Kit (Inc. 1 each of 7, 15, 16)	852-0014	
-	Flow Balancer (8-0014, 850-0304)	8-0127	1		Unloader Orifice Kit (Inc. 1 each of 7, 15, 16)	852-0015	
16	Nipple(8-0014, 850-0304)	8-0131	1		Unloader Orifice Kit (Inc. 1 each of 7, 15, 16)	852-0017	
-	Nipple (8-0012, 8-0013)	8-0130	1		Unloader Orifice Kit (Inc. 1 each of 7, 15, 16)	852-0157	
17	O-ring	25-0052	1				

UNLOADER ASSEMBLY (850-0345)

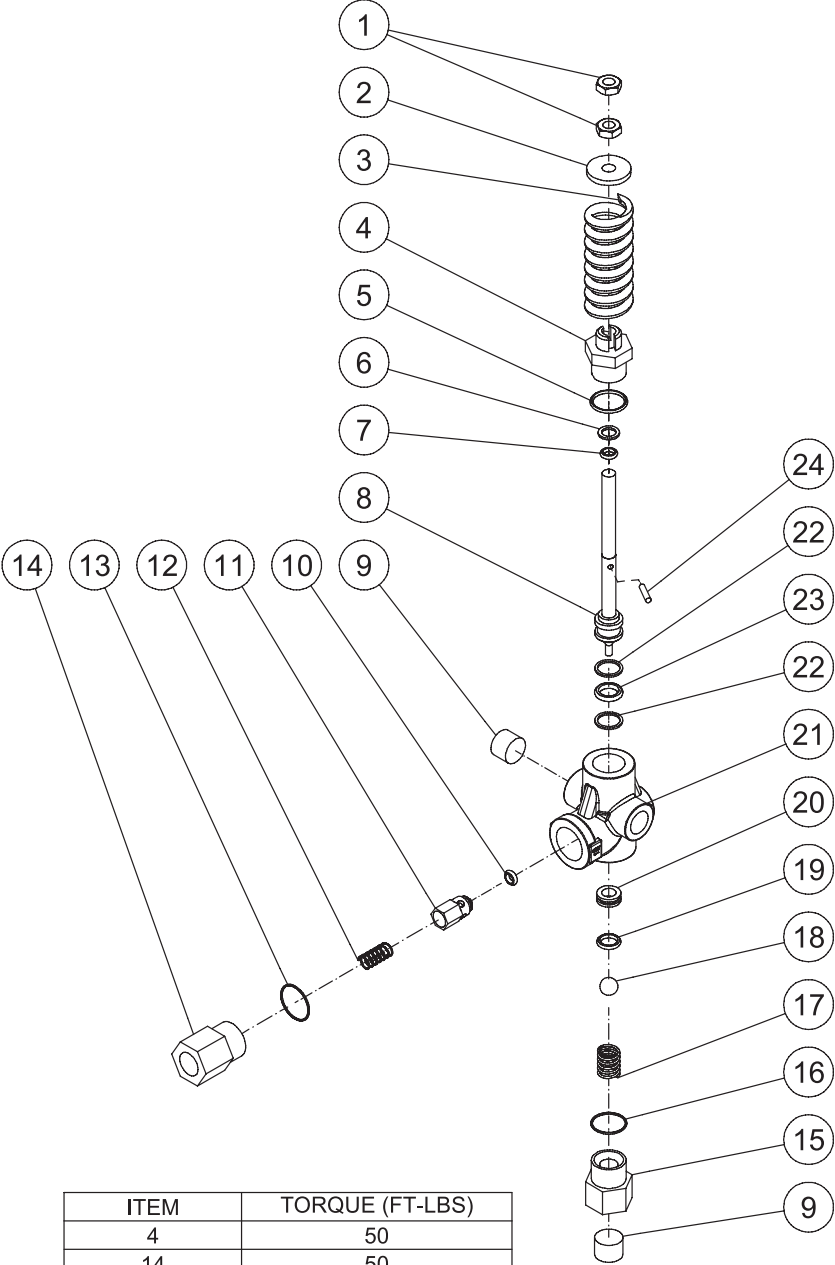


OM/GEN066-081303-KZ

## UNLOADER ASSEMBLY (850-0345)

REF. #	DESCRIPTION	PART #	QTY.	REF. #	DESCRIPTION	PART #	QTY.
1	Bolt	27-8077	1	18	O-ring	25-0119	1
2	Hex Nut	30-3010	1	19	Middle Body	8-0137	1
3	Bolt	27-8434	4	20	O-ring	25-0114	2
4	Lockwasher	29-0154	8	21	Hex Plug	39-0017	2
5	Upper Body	8-0138	1	22	O-ring	25-0056	1
6	Washer	8-0277	1	23	O-ring	25-0120	1
7	By-Pass Restrictor	8-0125	1	24	Piston Assembly	8-0136	1
8	Spring Guide	8-0135	1	25	Seal	26-0104	1
9	O-ring	25-0118	1	26	Spring	49-0027	1
10	Spring	49-0026	1	27	Washer	8-0139	1
11	Valve Seat	8-0145	1	28	Seal	26-0105	1
12	Back-up Ring	8-0141	1	29	Back-up Ring	8-0140	1
13	O-ring	25-0121	1	30	Lower Body	8-0134	1
14	O-ring	25-0117	1	31	Bolt	27-8037	4
15	Flow Balancer	8-0128	1		Unloader Repair Kit (Inc. 9, 11, 13, 14, 17, 18, 20, 22-26, 28, 29)	70-0013	
16	Nipple	8-0130	1		Unloader Orifice Kit (Inc. 7, 15, 16)	852-0116	
17	O-ring	25-0052	1				

# UNLOADER ASSEMBLY (8-0634)



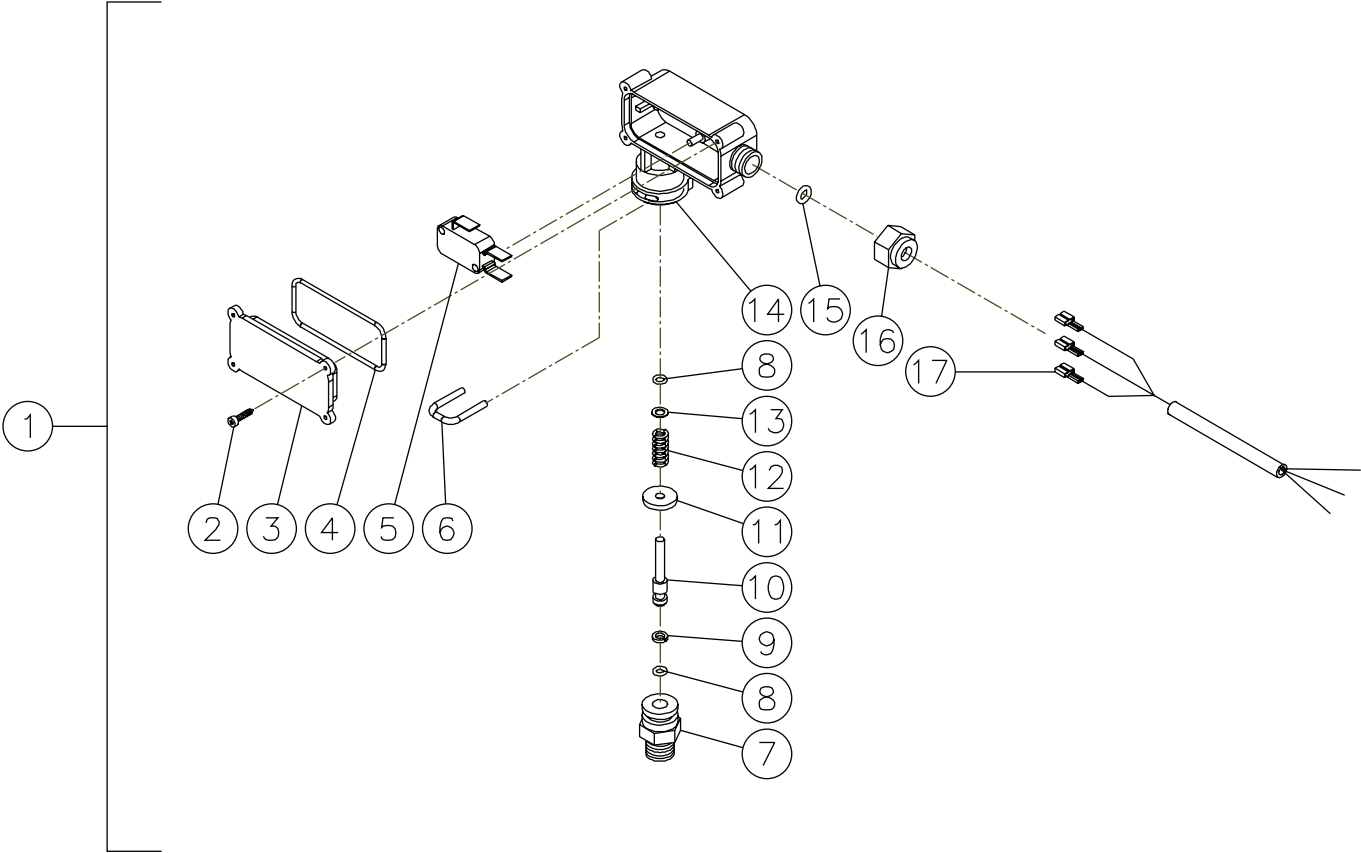
ITEM	TORQUE (FT-LBS)
4	50
14	50
15	50

8-0634 052213 JDK

UNLOADER ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	NUT	8-0293	2
2	SPRING SPACER	46-1527	1
3	SPRING	49-0171	1
4	FITTING	46-1529	1
5	O-RING (SEE KIT 70-0625)	SEE KIT	1
6	O-RING (SEE KIT 70-0625)	SEE KIT	1
7	O-RING (SEE KIT 70-0625)	SEE KIT	1
8	STEM	46-1530	1
9	PLUG	23-0244	2
10	O-RING (SEE KIT 70-0624)	SEE KIT	1
11	POPPET (SEE KIT 70-0624)	SEE KIT	1
12	SPRING (SEE KIT 70-0624)	SEE KIT	1
13	O-RING	25-0672	1
14	OUTLET FITTING	46-1531	1
15	INLET FITTING (SEE KIT 70-0625)	SEE KIT	1
16	O-RING (SEE KIT 70-0625)	SEE KIT	1
17	SPRING	49-0172	1
18	BALL (SEE KIT 70-0625)	SEE KIT	1
19	O-RING (SEE KIT 70-0625)	SEE KIT	1
20	SEAT	46-1532	1
21	FORGING	46-1533	1
22	BACKUP RING (SEE KIT 70-0625)	SEE KIT	2
23	O-RING (SEE KIT 70-0625)	SEE KIT	1
24	PIN (SEE KIT 70-0625)	SEE KIT	1

REPLACEMENT KITS			
KIT #	DESCRIPTION	ITEMS	QTY
70-0624	KIT - CHECK VALVE	10-12	1, 1, 1
70-0625	KIT - UNLOADER REBUILD	5-7, 15-16, 18-19, 22-24	1, 1, 1, 1, 1, 1, 1, 2, 1, 1

**PRESSURE SWITCH (22-0171 & 22-0243)**



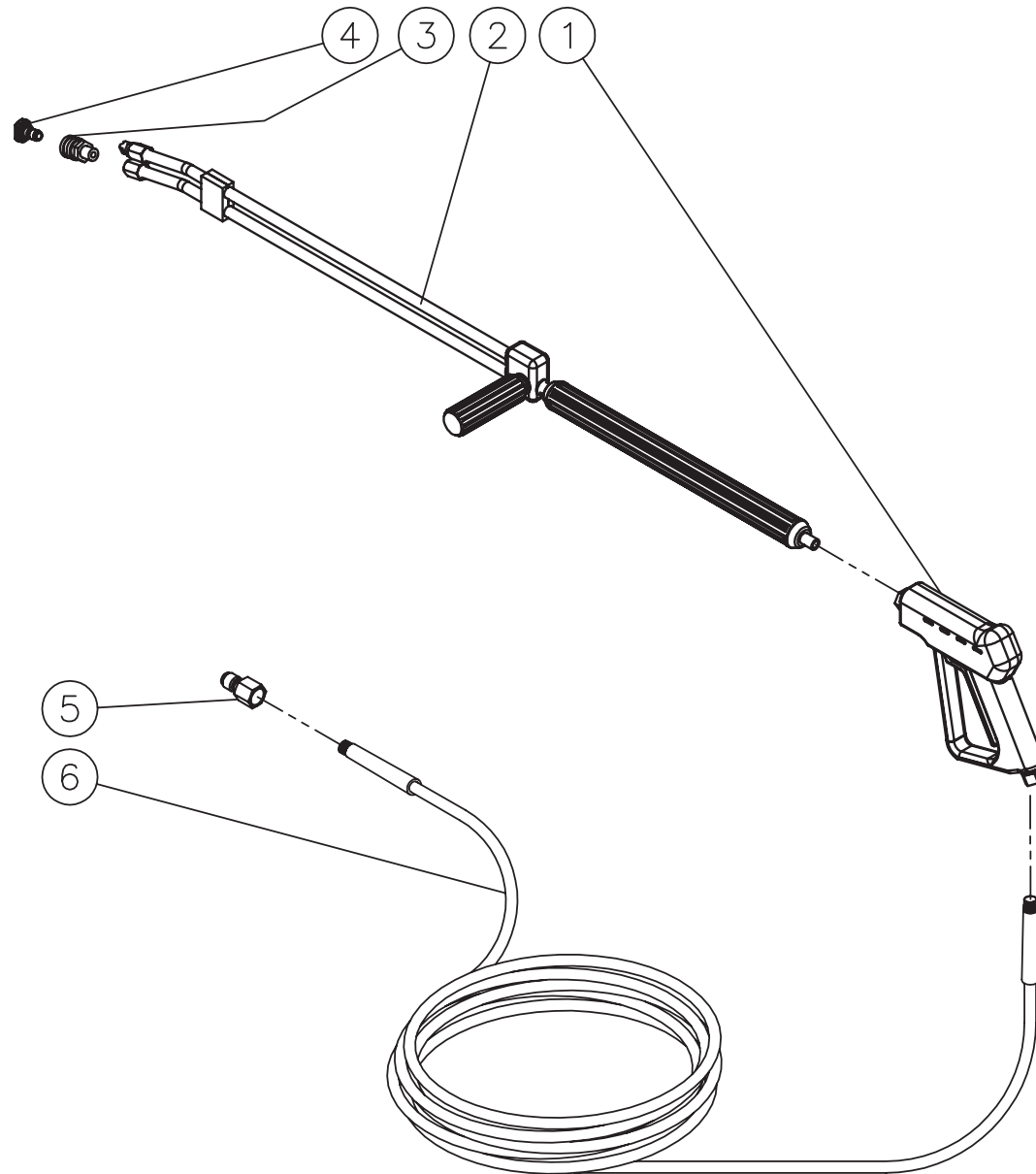
22-0171 & 22-0243-120799-BAR



## PRESSURE SWITCH

REF. #	DESCRIPTION	PART #	QTY.	REF. #	DESCRIPTION	PART #	QTY.
1	Pressure Switch- 15 BAR	22-0171	1	11	Washer	N/A	1
-	Pressure Switch- 25 BAR	22-0243	1	12	Spring- 15 BAR	49-0144	1
2	Screw	N/A	4	-	Spring- 25 BAR	49-0145	1
3	Cover	N/A	1	13	Washer	N/A	1
4	O-ring (See 70-0306)	N/A Sep.	1	14	Plastic Housing	N/A	1
5	Micro Switch	N/A	1	15	O-ring (See 70-0306)	N/A Sep.	1
6	Retainer Clip	N/A	1	16	Nut- 15 BAR	N/A	1
7	Body	N/A	1	-	Nut- 25 BAR	N/A	1
8	O-ring (See 70-0306)	N/A Sep.	2	17	Wire Assembly	N/A	1
9	Back-up Ring (See 70-0306)	N/A Sep.	1		O-ring Repair Kit (Inc. 4, 8-9, 15)	70-0306	
10	Piston	N/A	1				

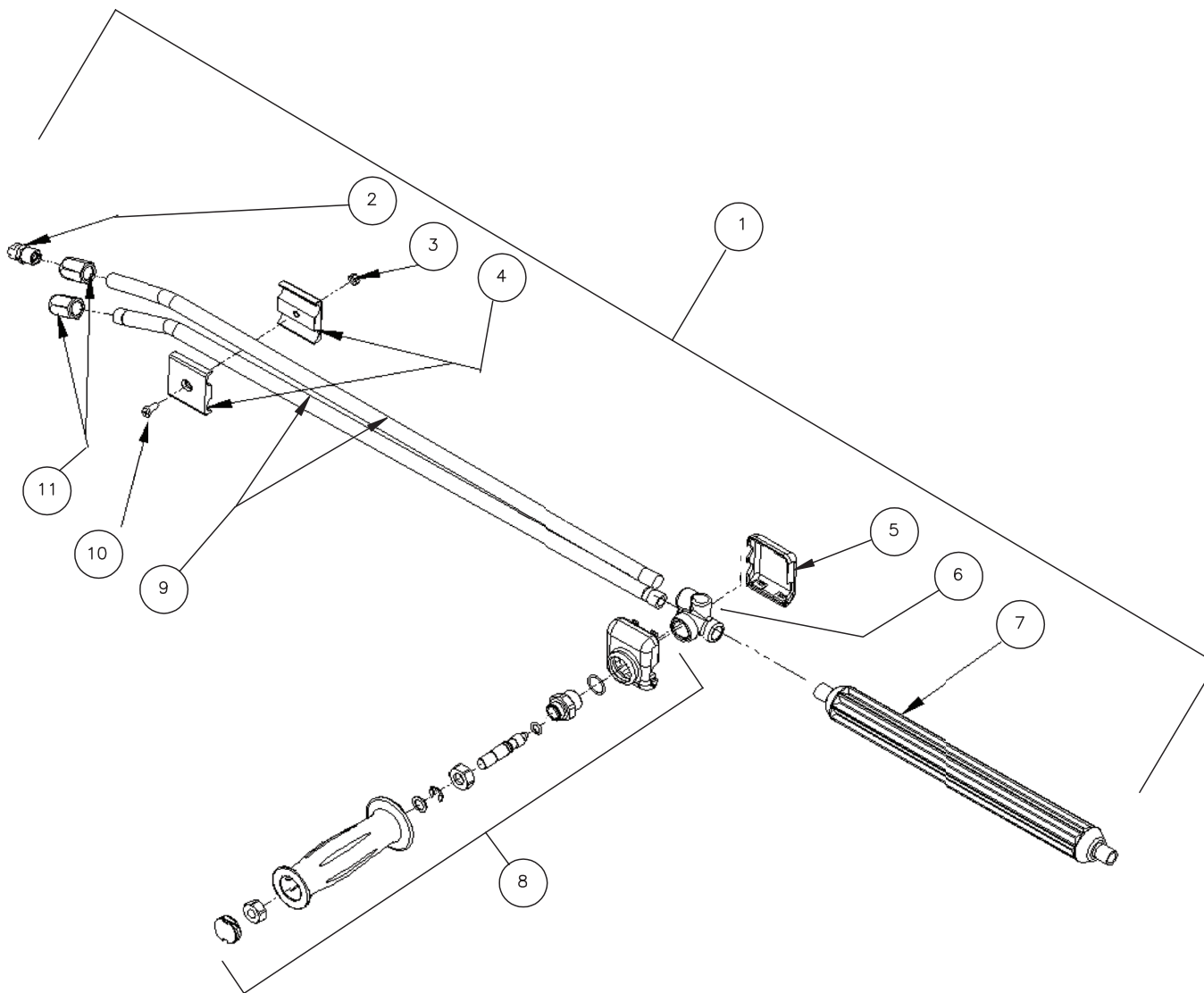
# GUN/WAND/HOSE ASSEMBLY



HS GUN WAND HOSE ASSEMBLY 030317-CH

GUN/WAND/HOSE ASSEMBLY							
REF. #	DESCRIPTION	PART #	QTY.	REF. #	DESCRIPTION	PART #	QTY.
1	Gun Assembly	16-0446	1	-	Nozzle- 2509 (HVS-3008)	18-0173	1
2	Lance Extension	16-0417	1	-	Nozzle- 4009 (HVS-3008)	18-0174	1
3	Quick Connect	17-0028	1	-	Nozzle- 0004 (HVS-3504/4004)	18-0397	1
-	Quick Connect (3008/3006)	17-0017	4	-	Nozzle- 1504 (HVS-3504/4004)	18-0399	1
4	Nozzle- 0005 (HVS-3505)	18-0406	1	-	Nozzle- 2504 (HVS-3504/4004)	18-0400	1
-	Nozzle- 1505 (HVS-3505)	18-0407	1	-	Nozzle- 4004 (HVS-3504/4004)	18-0401	1
-	Nozzle- 2505 (HVS-3505)	18-0408	1	-	Nozzle- 0006.5 (HVS-3006)	18-0328	1
-	Nozzle- 4005 (HVS-3505)	18-0409	1	-	Nozzle- 1506.5 (HVS-3006)	18-0329	1
-	Nozzle- 0005.5 (HVS-3005)	18-0410	1	-	Nozzle- 2506.5 (HVS-3006)	18-0330	1
-	Nozzle- 1505.5 (HVS-3005)	18-0411	1	-	Nozzle- 4006.5 (HVS-3006)	18-0331	1
-	Nozzle- 2505.5 (HVS-3005)	18-0412	1	-	Nozzle- 0004.5 (HVS-4005)	18-0402	1
-	Nozzle- 4005.5 (HVS-3005)	18-0413	1	-	Nozzle- 1504.5 (HVS-4005)	18-0403	1
-	Nozzle- 0006 (HVS-3506)	18-0414	1	-	Nozzle- 2504.5 (HVS-4005)	18-0404	1
-	Nozzle- 1506 (HVS-3506)	18-0415	1	-	Nozzle- 4004.5 (HVS-4005)	18-0405	1
-	Nozzle- 2506 (HVS-3506)	18-0416	1	5	Quick Connect Plug	17-0006	1
-	Nozzle- 4006 (HVS-3506)	18-0417	1	6	High Pressure Hose Assembly	15-0166	1
-	Nozzle- 1509 (HVS-3008)	18-0147	1	-	High Pressure Hose Assembly (3008)	15-0056	1
-	Nozzle- 0009 (HVS-3008)	18-0172	1				

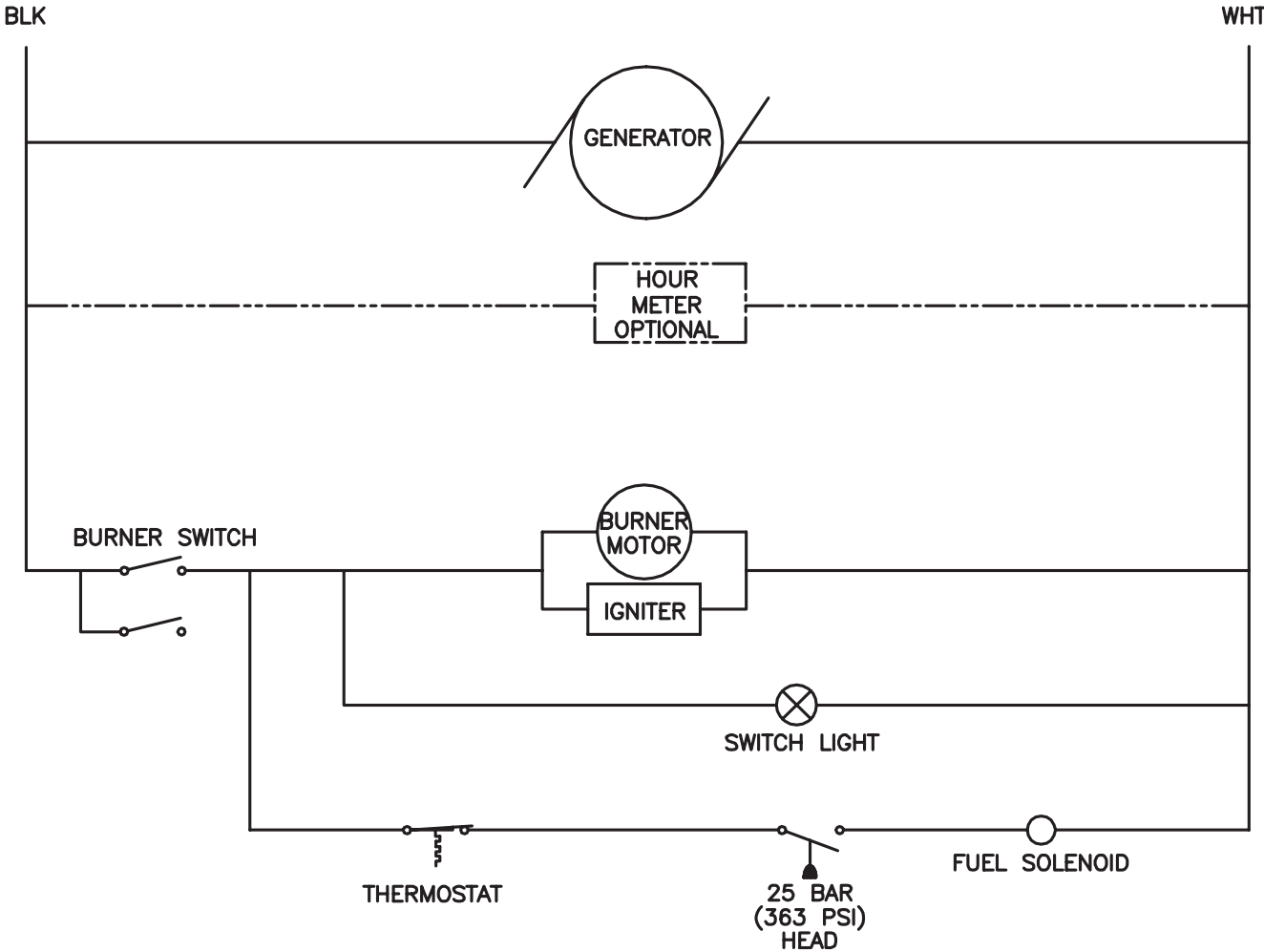
# DUAL LANCE ASSEMBLY (16-0417)



16-0416\_16-0417-102405-RZ

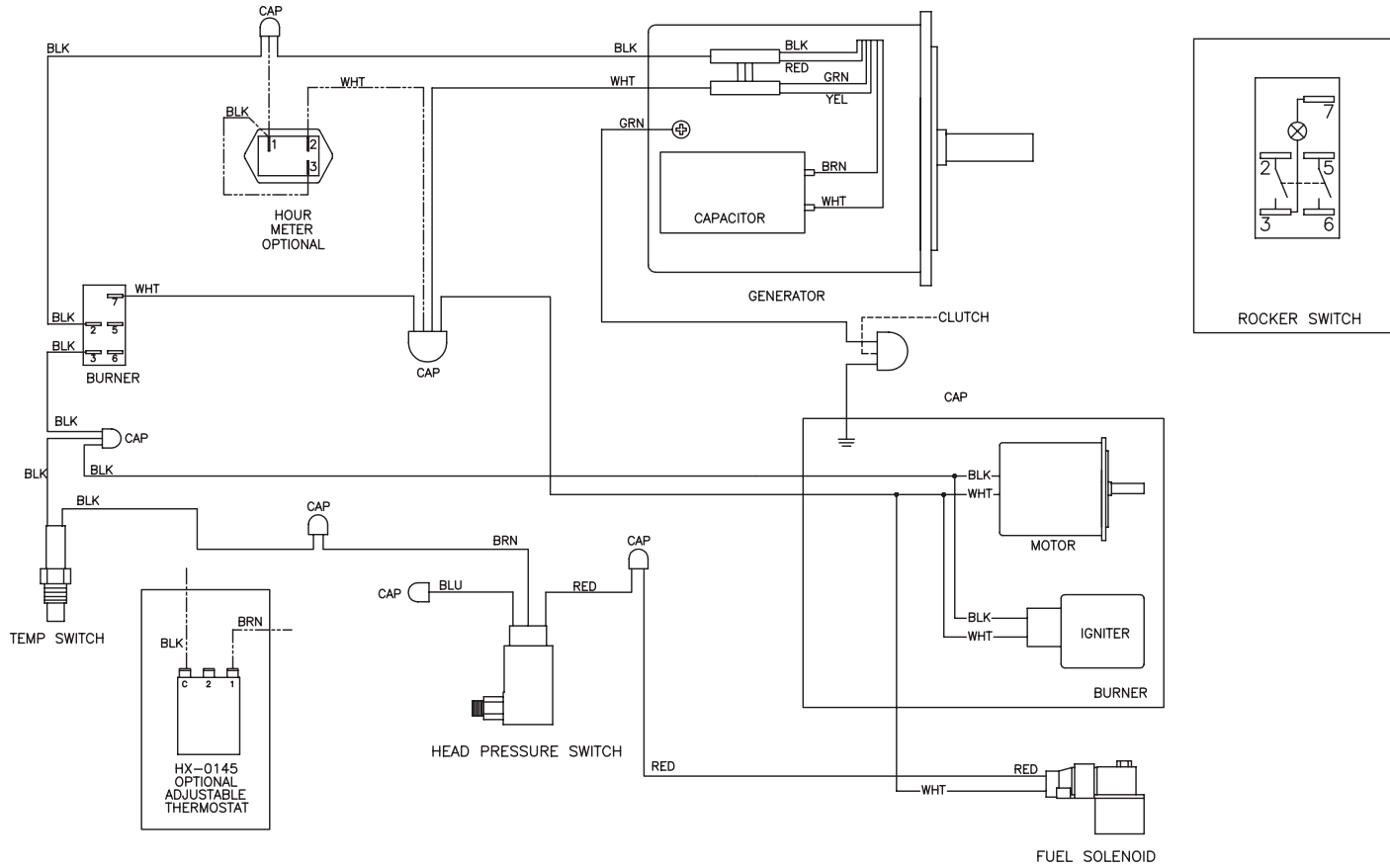
<b>DUAL LANCE ASSEMBLY (16-0417)</b>			
<b>REF. #</b>	<b>DESCRIPTION</b>	<b>PART #</b>	<b>QTY.</b>
1	Dual Lance Assembly - 48" (Inc. 2-11)	16-0417	1
2	Detergent Nozzle	18-0110	1
3	Nut	30-6001	1
4	Clamp	16-0420	2
5	Lower Valve Cover (See 16-0417)	N/A Sep.	1
6	Housing (See 16-0417)	N/A Sep.	1
7	Lance	16-0419	1
8	Handle Repair Kit	70-0419	1
9	Lance (See 16-0417)	N/A Sep.	2
10	Screw	27-8196	1
11	Nozzle Adapter	24-0280	2

# WIRING SCHEMATIC



HVS WIRE SCHEMATIC STANDARD UNITS - CLUTCH 032316 MLK

# WIRING DIAGRAM



HVS WIRE DIAGRAM STANDARD UNITS - CLUTCH 032316 MLK

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NOTES



## OPTIONS

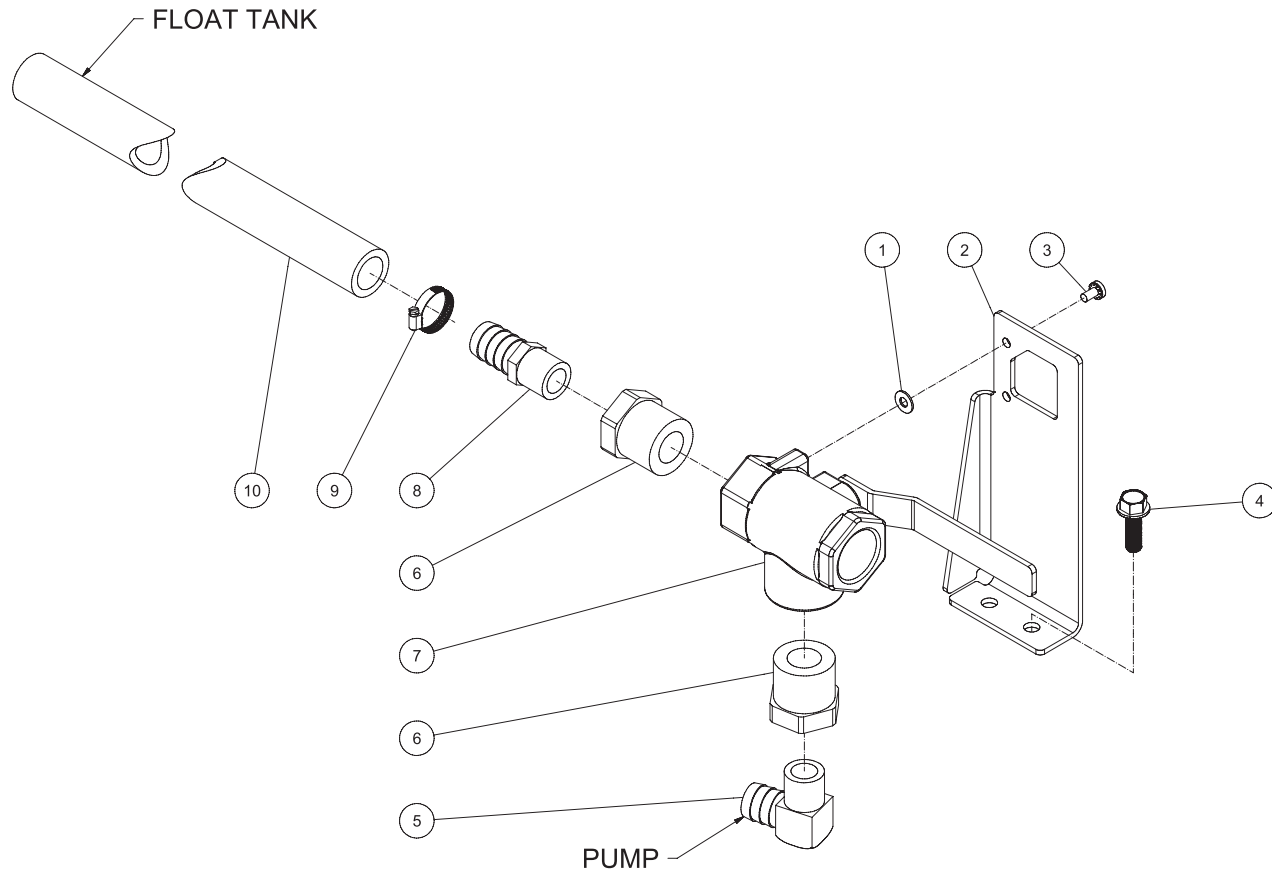
### OPTIONS

HX-0130  
HX-0131  
HX-0132  
HX-0133  
HX-0135  
HX-0136  
HX-0137  
HX-0138  
HX-0139  
HX-0140  
HX-0141  
HX-0142  
HX-0143  
HX-0144  
HX-0145  
HX-0146  
HX-0147  
HX-0148  
HX-0227  
HX-0228  
HX-0213

### DESCRIPTION

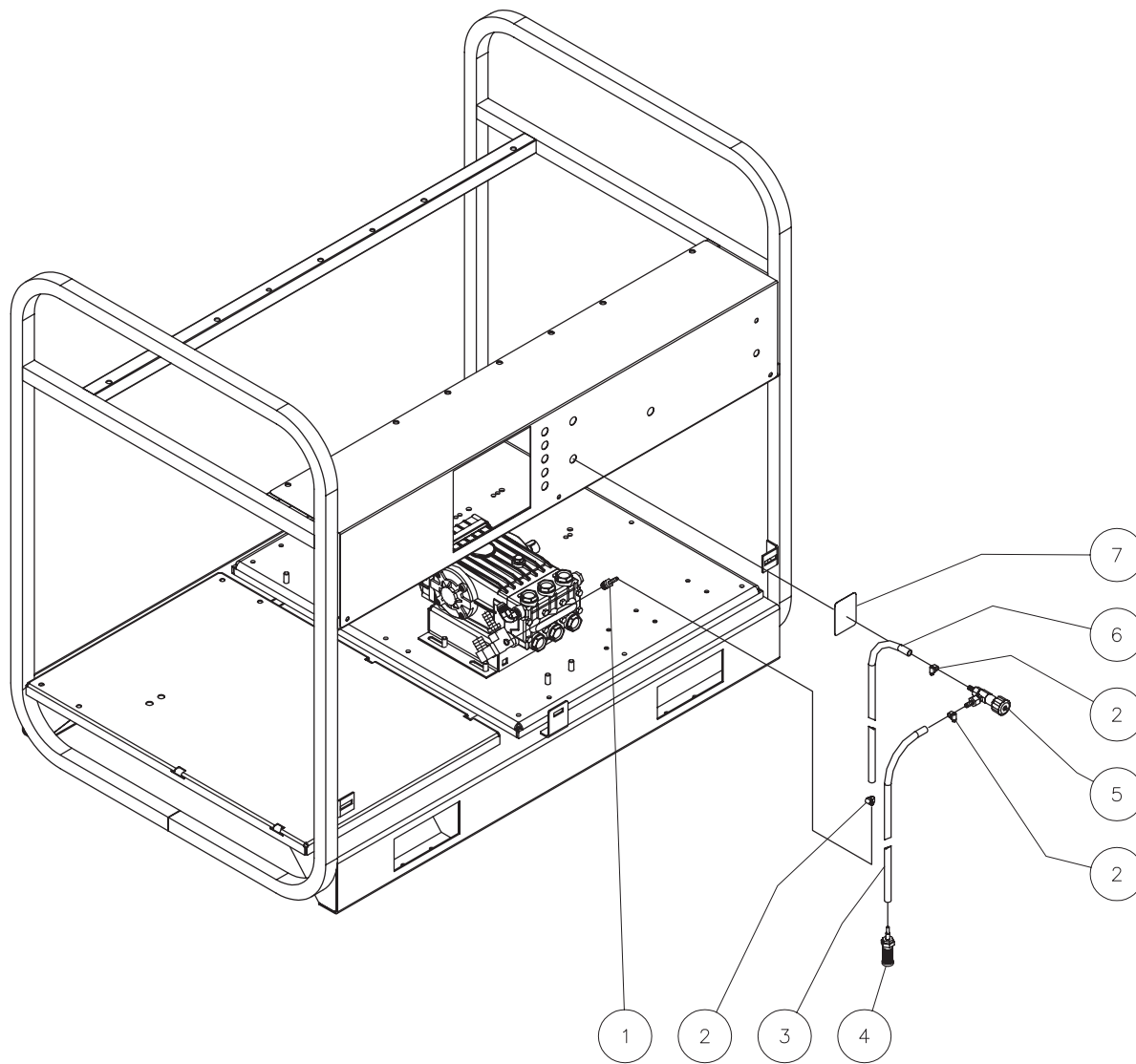
3 WAY BALL VALVE  
DETERGENT VALVE  
STEAM- HVS-3504  
STEAM- HVS-3005/3505  
STEAM- HVS-3506  
STEAM- HVS-3006  
STEAM- HVS-3504 (Requires HX-0143 or HX-0148)  
STEAM- HVS-3005 (Requires HX-0143 or HX-0148)  
STEAM- HVS-3505 (Requires HX-0143 or HX-0148)  
STEAM- HVS-3506 (Requires HX-0143 or HX-0148)  
STEAM- HVS-3006 (Requires HX-0143 or HX-0148)  
STEAM- HVS-4004  
PRESSURE TRAPPING UNLOADER (HVS-3005/3006/3504/3505/3506)  
DUAL GUN (HVS-3006/3506)  
ADJUSTABLE THERMOSTAT  
HOURMETER  
LIFTING HOOK  
DETERGENT VALVE- PRESSURE TRAPPING UNLOADER (Requires HX-0143)  
CLUTCH DRIVEN PUMP (3005)  
CLUTCH DRIVEN PUMP (3505)  
DUAL GUN (HVS-3008)

### 3-WAY BALL VALVE OPTION (HX-0130)



BALL VALVE ASSEMBLY 021317 CH			
BALL VALVE ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	WASHER	28-0001	2
2	BRACKET	20-0560A01	1
3	SCREW	27-9533	2
4	BOLT	27-1201	2
5	ELBOW	23-0037	1
6	REDUCER	23-0226	2
7	BALL VALVE	22-0321	1
8	HOSE BARB	23-0036	1
9	HOSE CLAMP	42-0003	1
10	HOSE *(ONE FOOT REQUIRED)	15-0033	1
*MUST ORDER IN ONE FOOT LENGTHS			

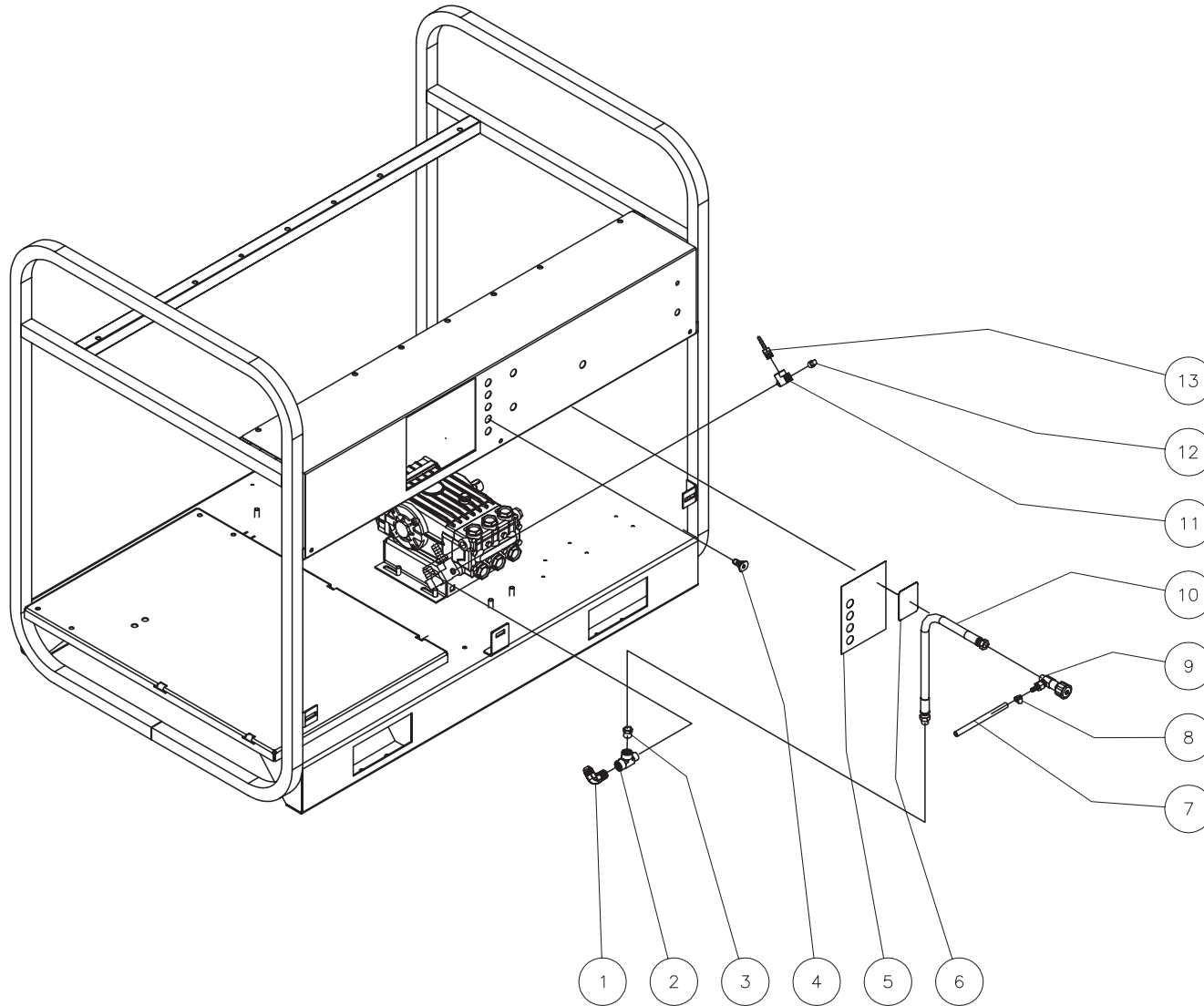
# DETERGENT VALVE OPTION (HX-0131) (HVS-3005/3006/3504/3505/3506)



HS DETERGENT VALVE ASSY-041608-CH

HS/HVS DETERGENT VALVE OPTION-041608-CH			
DETERGENT VALVE OPTION (HX-0131) (HS-3005/3008/3006/3504/3505/3506)			
REF. #	DESCRIPTION	PART #	QTY.
1	Hose Barb	23-0051	1
2	Clamp Worm	42-0004	3
3	Hose *(Six Feet Required)	15-0021	2
4	Detergent Strainer	19-0056	1
5	Detergent Valve	22-0226	1
6	Hose *(Two Feet Required)	15-0079	1
7	Decal- Detergent Valve	34-1297	1
*Must Order in One Foot Lengths			

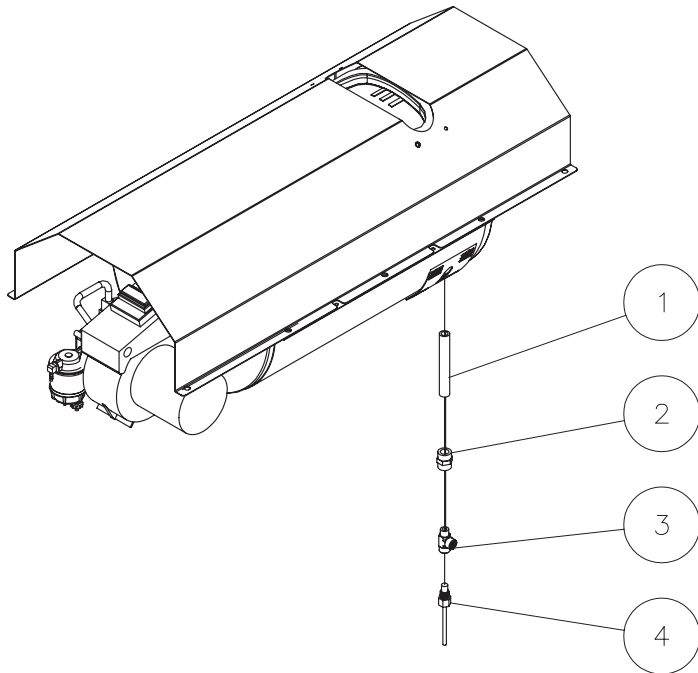
# STEAM OPTION (HX-0132, HX-0133, HX-0135 AND HX-0136)



HS K7 STEAM OPTION-010808-KZ

HS K7 STEAM OPTION-010808 CH			
STEAM OPTION (HX-0132, HX-0133, HX-0135 AND HX-0136)			
REF. #	DESCRIPTION	PART #	QTY.
1	Elbow	24-0092	1
2	Tee	23-0058	1
3	Reducer	23-0017	1
4	Nozzle- 2506 (HX-0136)	18-0416	1
-	Nozzle- 2505 (HX-0133)	18-0408	1
-	Nozzle- 2505.5 (HX-0135)	18-0412	1
-	Nozzle- 2506 (HX-0132)	18-0416	1
5	Decal- Nozzle w/Steam (See 34-9024)	N/A Sep.	1
6	Decal- Steam Nozzle (See 34-9024)	N/A Sep.	1
7	Fuel Hose	15-0008	1
8	Clamp Worm	42-0004	2
9	Steam Valve	22-0329	1
10	High Pressure Hose Assembly	15-0225	1
11	Tee	23-0127	1
12	Plug	23-0238	1
13	Hose Barb	23-0051	1
	Safety Decal Kit (Includes 5, 6)	34-9024	

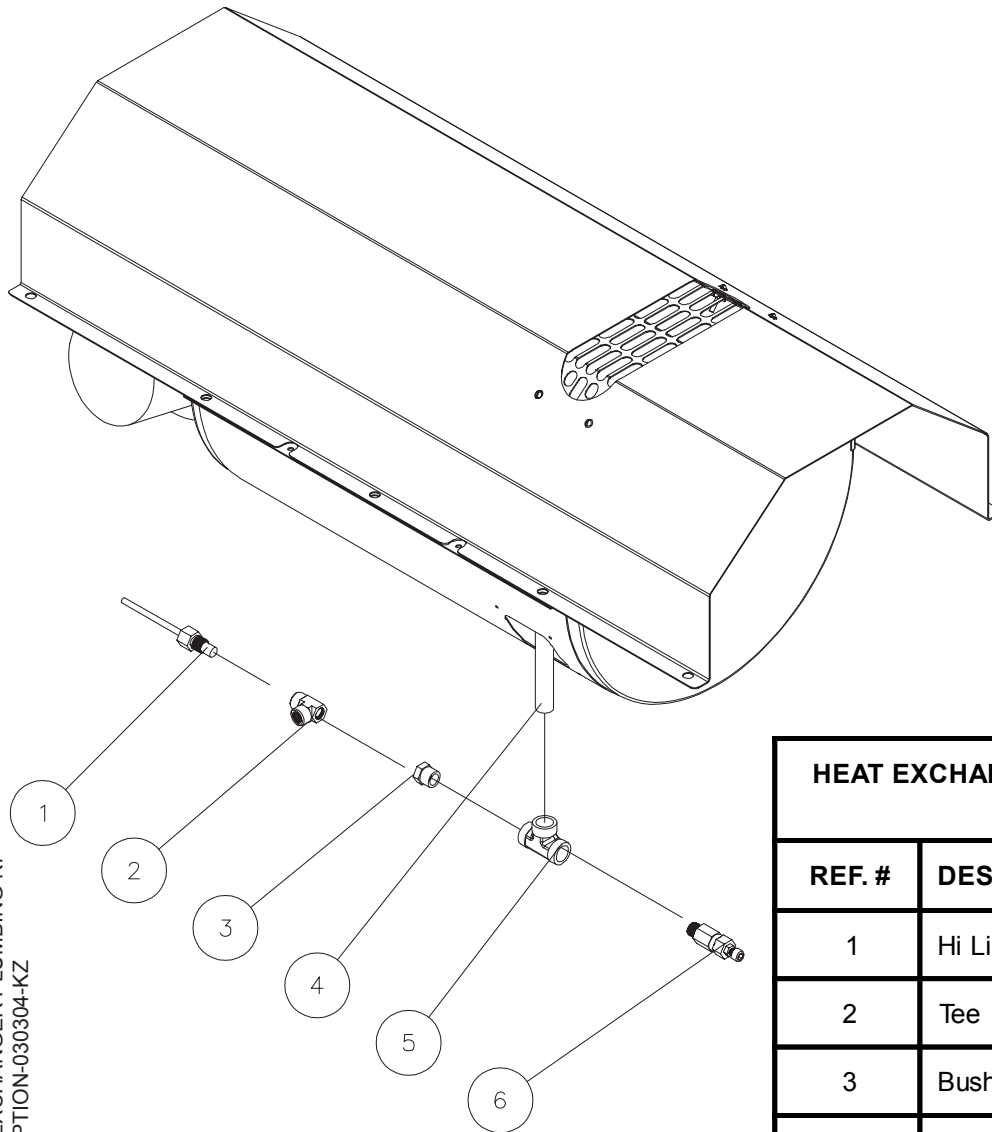
**STEAM OPTION (HX-0137, HX-0138, HX-0139, HX-0140, HX-0141 AND HX-0142)**



HS_HVS STEAM OPTION-062408-CH			
STEAM OPTION (HX-0137 - HX-0142)			
REF. #	DESCRIPTION	PART #	QTY.
1	Pipe Nipple	24-0254	1
2	Adapter	24-0243	1
3	Street Tee	23-0058	1
4	Hi Limit Switch	32-0798	1
-	Nozzle- 2503.5 (HX-0137, HX-0142)	18-0395	1
-	Nozzle- 2505 (HX-0138)	18-0408	1
-	Nozzle- 2504.5 (HX-0139)	18-0404	1
-	Nozzle- 2504 (HX-0140)	18-0400	1
-	Nozzle- 2506 (HX-0141)	18-0416	1



**HEAT EXCHANGER PLUMBING: STEAM OPTION (HX-0132, HX-0133, HX-0135 AND HX-0136) (AFTER SERIAL #15013076)**



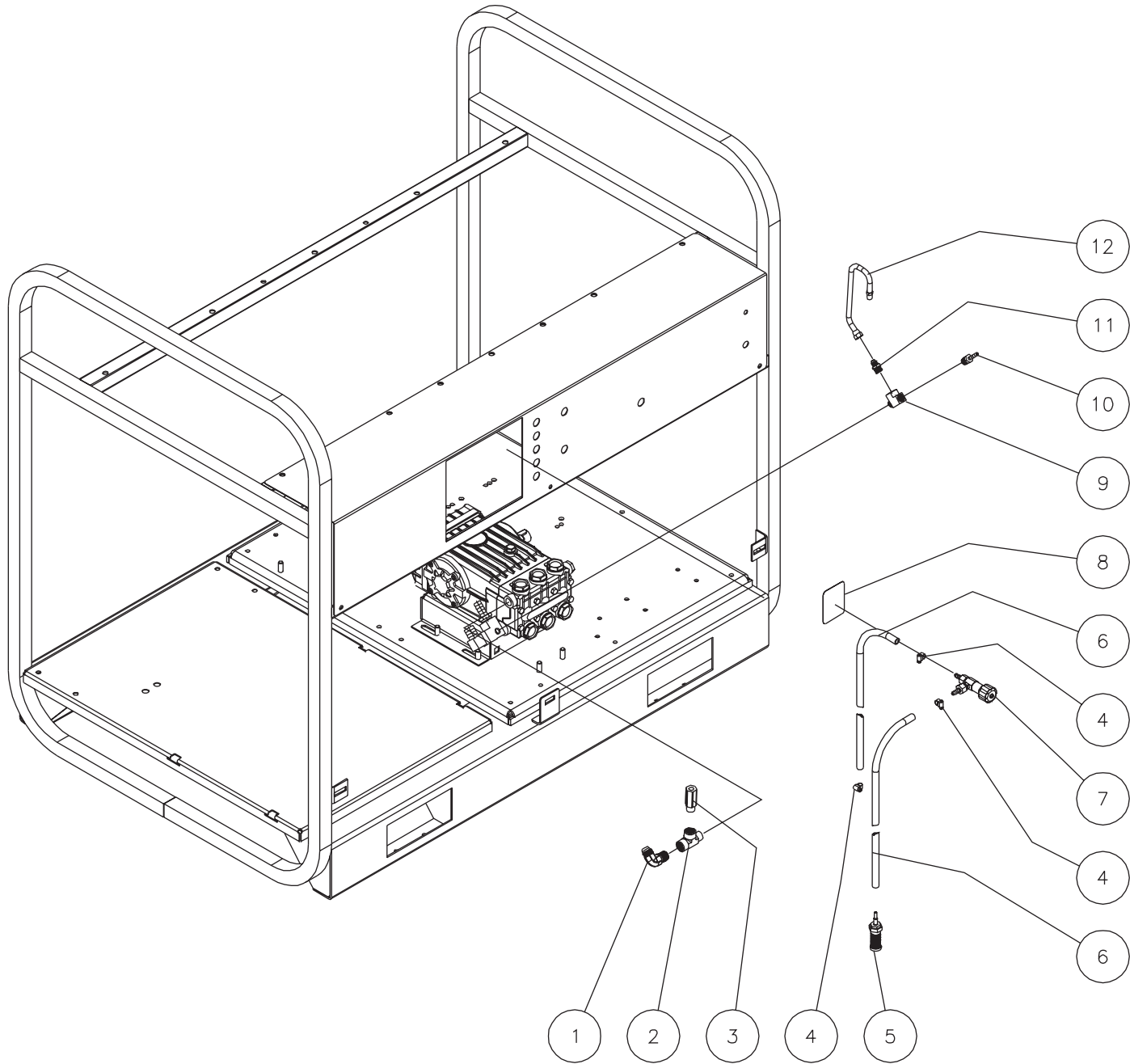
HS HEAT EXCHANGER PLUMBING K7  
STEAM OPTION-030304-KZ

HS HEAT EXCHANGER PLUMBING K7 STEAM OPTION-030304-KZ

HEAT EXCHANGER PLUMBING: STEAM OPTION (HX-0132, HX-0133, HX-0135 AND HX-0136) (AFTER SERIAL #15013076)			
REF. #	DESCRIPTION	PART #	QTY.
1	Hi Limit Switch	32-0798	1
2	Tee	23-0058	1
3	Bushing	23-0016	1
4	Pipe Nipple	24-0254	1
5	Tee	24-0055	1
6	Safety Relief Valve	22-0309	1

# DETERGENT VALVE: PRESSURE TRAPPING UNLOADER OPTION (HX-0143 & HX-0148)

HS PRESSURE TRAPPING DETERGENT VALVE OPTION-091210 CH

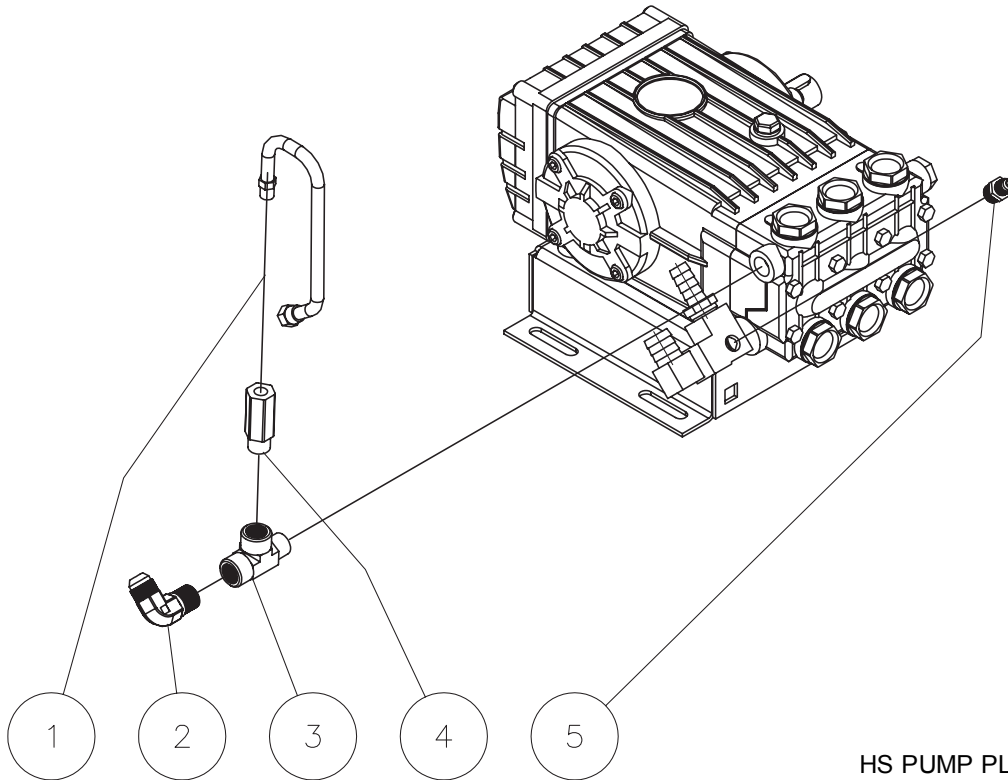


## HVS PRESSURE TRAPPING DETERGENT VALVE OPTION-091210-CH

## DETERGENT VALVE: PRESSURE TRAPPING UNLOADER OPTION (HX-0143 &amp; HX-0148)

REF. #	DESCRIPTION	PART #	QTY.
1	Elbow	24-0092	1
2	Tee (HX-0143) (HVS-3005/3006/3504/3505/3506)	23-0058	1
3	Easy Start Valve (HX-0143) (HVS-3005/3006/3504/3505/3506)	22-0242	1
4	Clamp Worm (HX-0148)	42-0004	3
5	Detergent Strainer (HX-0148)	19-0056	1
6	Hose (HX-0148)	15-0021	2
7	Detergent Valve (HX-0148)	22-0226	1
8	Decal- Detergent Valve (HX-0148) (See 71-0036)	34-1297	1
9	Tee (HX-0148)	23-0127	1
10	Hose Barb (HX-0148)	23-0051	1
11	Adapter (HX-0143) (HVS-3005/3006/3504/3505/3506)	23-0247	1
12	Easy Start Hose Assembly (HX-0143) (HVS-3005/3006/3504/3505/3506)	15-0140	1
	Safety Decal Kit (Includes 8)	71-0036	

**PUMP PLUMBING: PRESSURE TRAPPING UNLOADER OPTION (HX-0143) (HVS-3005/3006/3504/3505/3506)**

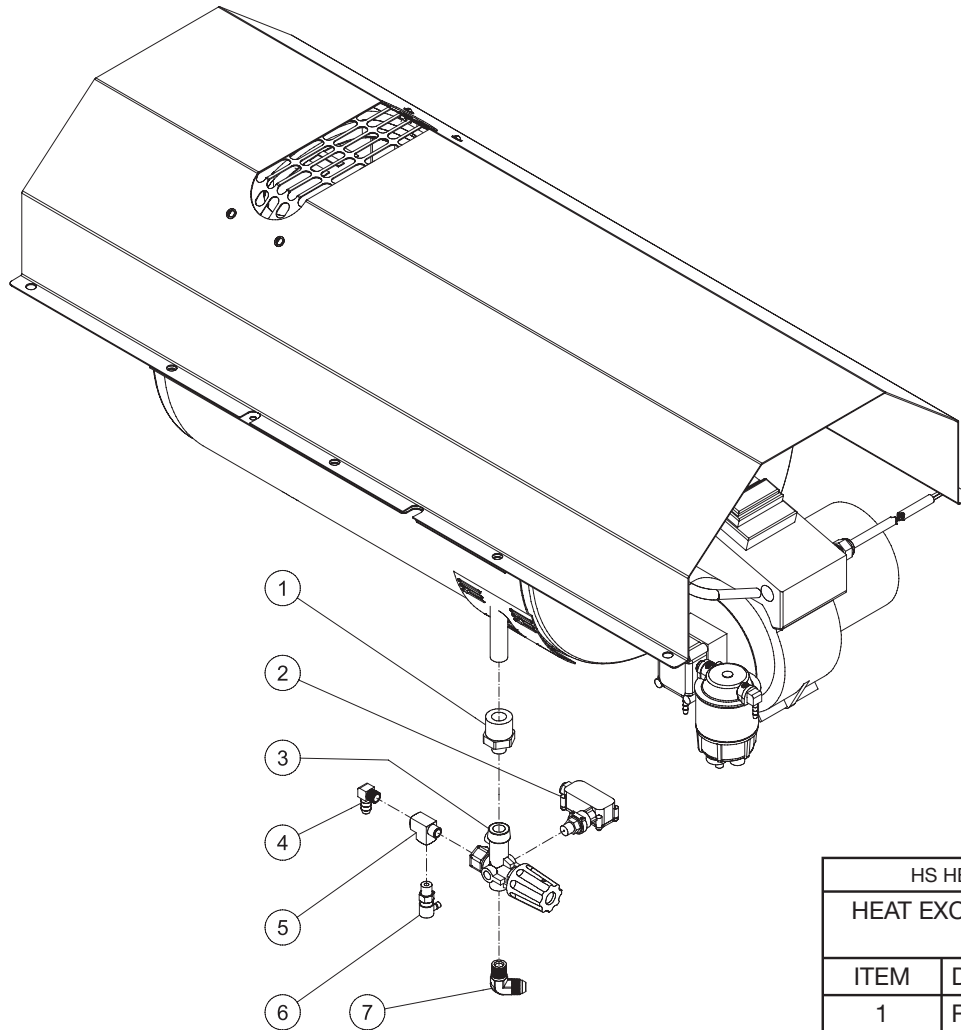


HS PUMP PLUMBING PRESSURE TRAPPING  
UNLOADER OPTION-010808-CH

HS PUMP PLUMBING PRESSURE TRAPPING UNLOADER OPTION-010808-CH

PUMP PLUMBING: PRESSURE TRAPPING UNLOADER OPTION (HX-0143, HX-0200, HX-0201)			
REF. #	DESCRIPTION	PART #	QTY.
1	Easy Start Valve Assembly	15-0140	1
2	Elbow	24-0092	1
3	Tee	23-0058	1
4	Easy Start Valve	22-0242	1
5	Adapter	23-0247	1

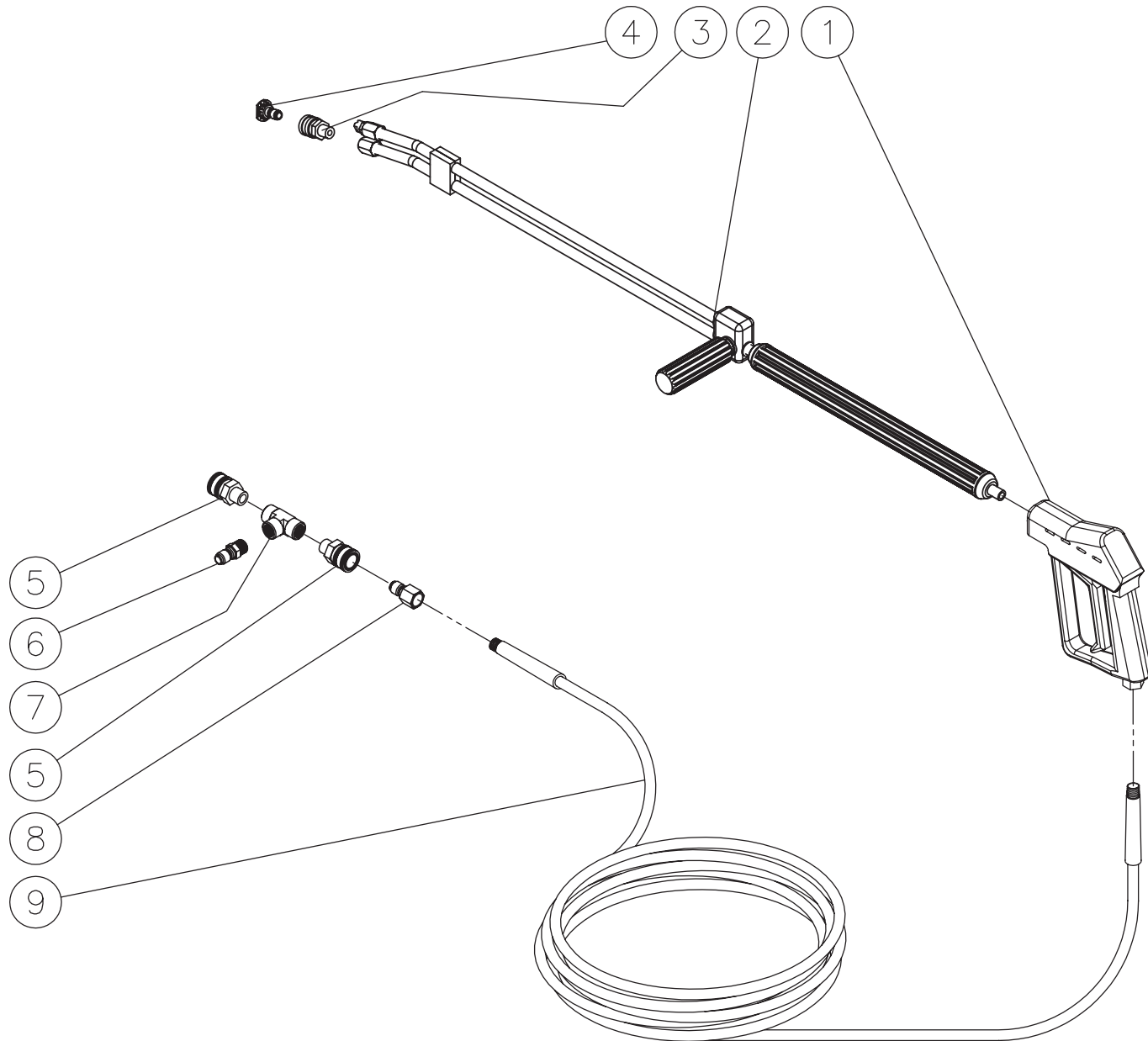
# HEAT EXCHANGER PLUMBING: PRESSURE TRAPPING UNLOADER OPTION (HX-0143) (HVS-3005/3006/3504/3505/3506)



HS HEAT EXCHANGER PLUMBING PRESSURE TRAPPING UNLOADER OPTION-020510-CH

HS HEAT EXCHANGER PLUMBING PRESSURE TRAPPING UNLOADER OPTION 020510 CH			
HEAT EXCHANGER PLUMBING: PRESSURE TRAPPING UNLOADER OPTION (HX-0143, HX-0200, HX-0201)			
ITEM	DESCRIPTION	PART #	QTY
1	REDUCER	24-0048	1
2	PRESSURE SWITCH	22-0243	1
3	UNLOADER	850-0252	1
4	ELBOW	23-0119	1
5	TEE	23-0127	1
6	HEAT DUMP VALVE	22-0408	1
7	ELBOW	24-0092	1

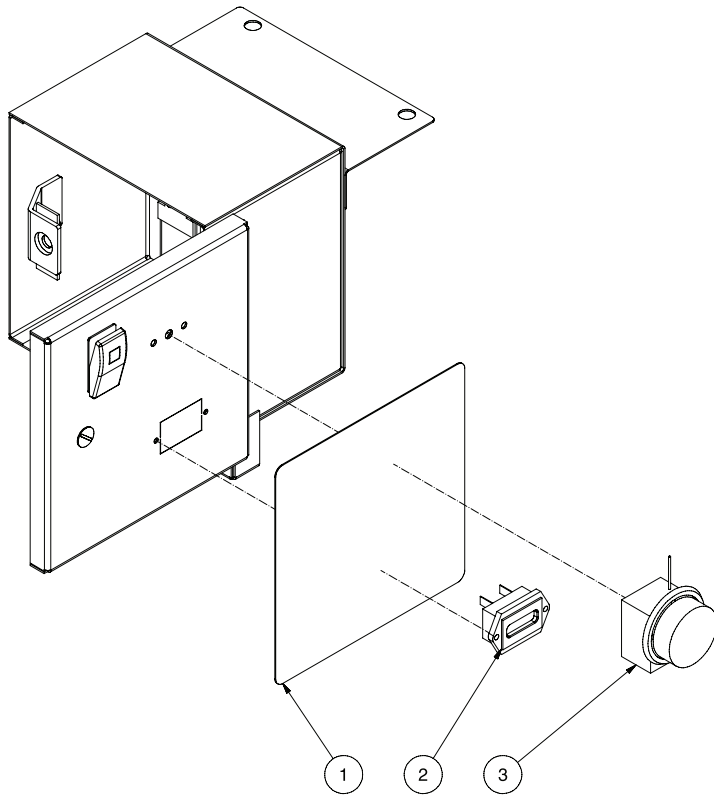
# DUAL GUN OPTION (HX-0144 & HX-0213) (HVS-3006/3506/3008)



HVS DUAL GUN OPTION 030317 CH

HVS DUAL GUN OPTION-030317-CH			
DUAL GUN OPTION (HX-0144) (HVS-3006/3506/3008)			
REF. #	DESCRIPTION	PART #	QTY.
1	Gun Assembly	16-0392	1
2	Lance Extension	16-0417	1
3	Socket	17-0028	1
4	Nozzle- 0003 (HX-0144)	18-0387	2
-	Nozzle- 1503 (HX-0144)	18-0388	2
-	Nozzle- 2503 (HX-0144)	18-0390	2
-	Nozzle- 4003 (HX-0144)	18-0391	2
-	Nozzle- 00045 (HX-0213)	18-0402	2
-	Nozzle- 15045 (HX-0213)	18-0403	2
-	Nozzle- 25045 (HX-0213)	18-0404	2
-	Nozzle- 40045 (HX-0213)	18-0405	2
5	Socket	17-0007	2
6	Plug	17-0005	1
7	Tee	24-0026	1
8	Plug	17-0006	1
9	Hose Assembly (HX-0144)	15-0166	1
-	Hose Assembly (HX-0213)	15-0056	1

## ADJUSTABLE THERMOSTAT & HOURMETER OPTION (HX-0145 & HX-0146)

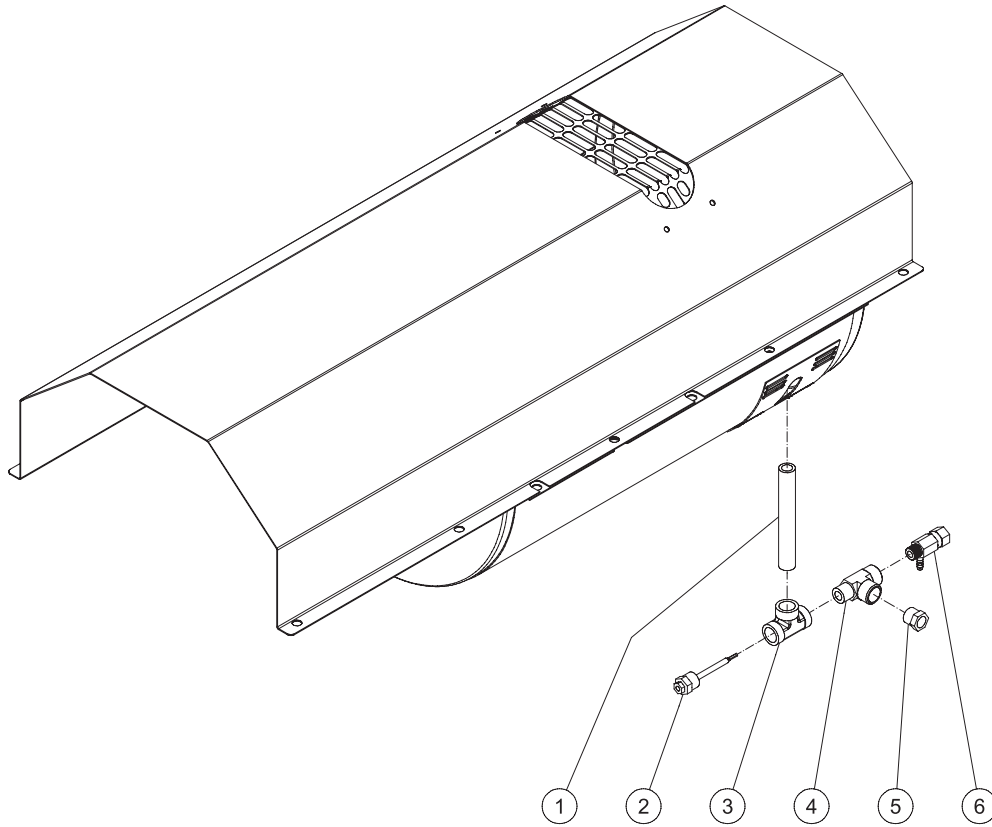


HS ADJUSTABLE THERMOSTAT & HOURMETER OPTION-110206-PO

HS ADJ. THER. & HOURMETER OPTION-110206-PO			
ADJUSTABLE THERMOSTAT & HOURMETER OPTION (HX-0145 & HX-0146)			
REF. #	DESCRIPTION	PART #	QTY.
1	Decal- Electrical Box w/ Burner/ Hourmeter (HX-0146) (See 34-9024)	N/A Sep.	1
-	Decal- Electrical Box w/ Buner/ Adj. Thermostat/ Hourmeter (HX-0145 & HX-0146) (See 34-9024)	N/A Sep.	1
-	Decal- Electrical Box w/ Buner/ Adj. Thermostat (HX-0145) (See 34-9024)	N/A Sep.	1
2	Hourmeter (HX-0145)	32-0431	1
-	Hourmeter (HX-0146)	32-0668	1
3	Adjustable Thermostat (HX-0145)	32-0962	1



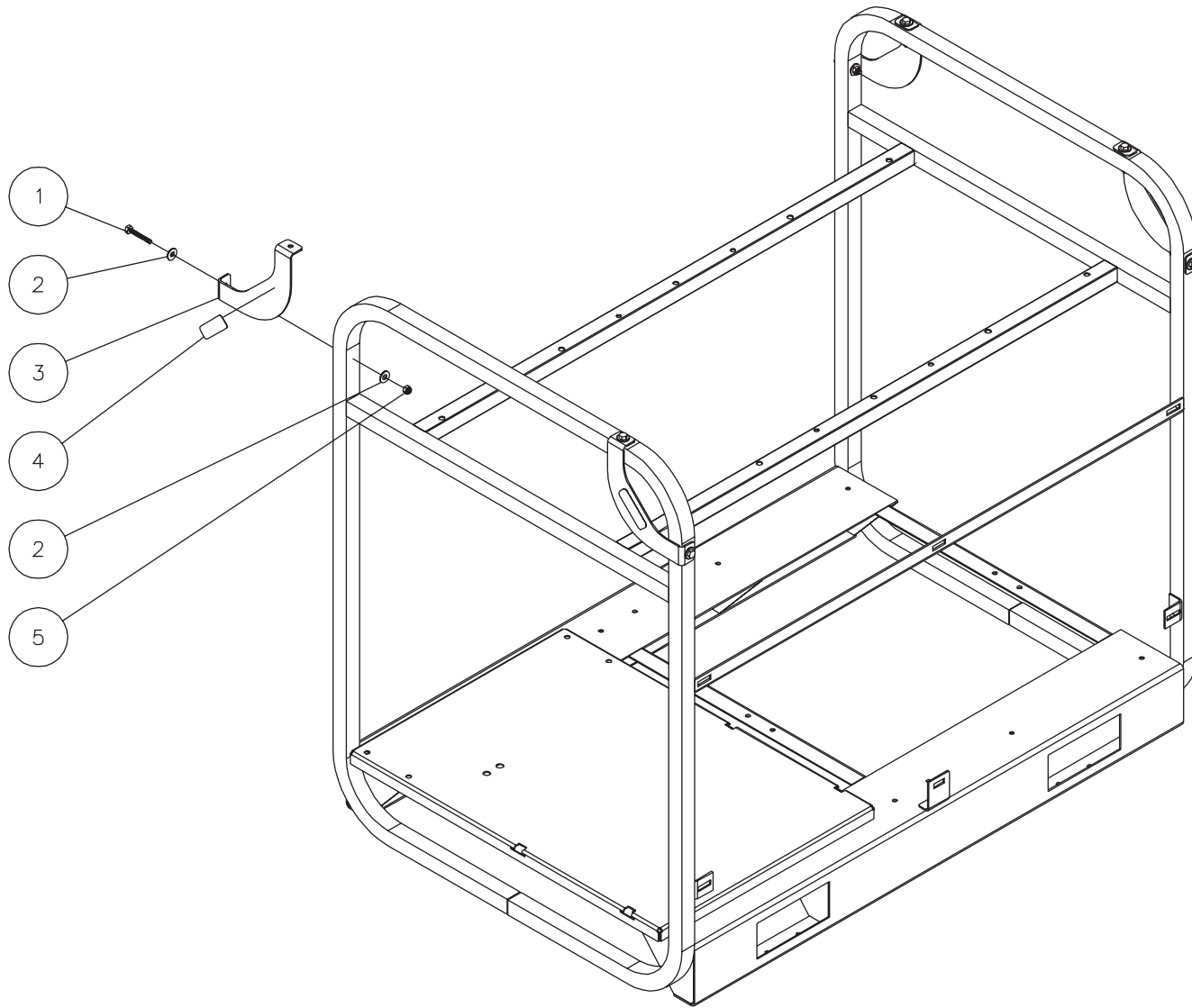
## PLUMBING: ADJUSTABLE THERMOSTAT OUTLET OPTION (HX-0145)



HS ADJUSTABLE THERMOSTAT  
OPTION OUTLET PLUMBING-091709-CH

HS ADJUSTABLE THERMOSTAT OPTION OUTLET PLUMBING 091709			
PLUMBING: ADJUSTABLE THERMOTSAT OUTLET OPTION			
ITEM	DESCRIPTION	PART #	QTY
1	PIPE NIPPLE	24-0254	1
2	ADJUSTABLE THERMOSTAT	32-0962	1
3	TEE	24-0055	1
4	STREET TEE	24-0242	1
5	REDUCER BUSHING	23-0016	1
6	SAFETY RELIEF VALVE	22-0309	1

# LIFTING HOOK OPTION (HX-0147)

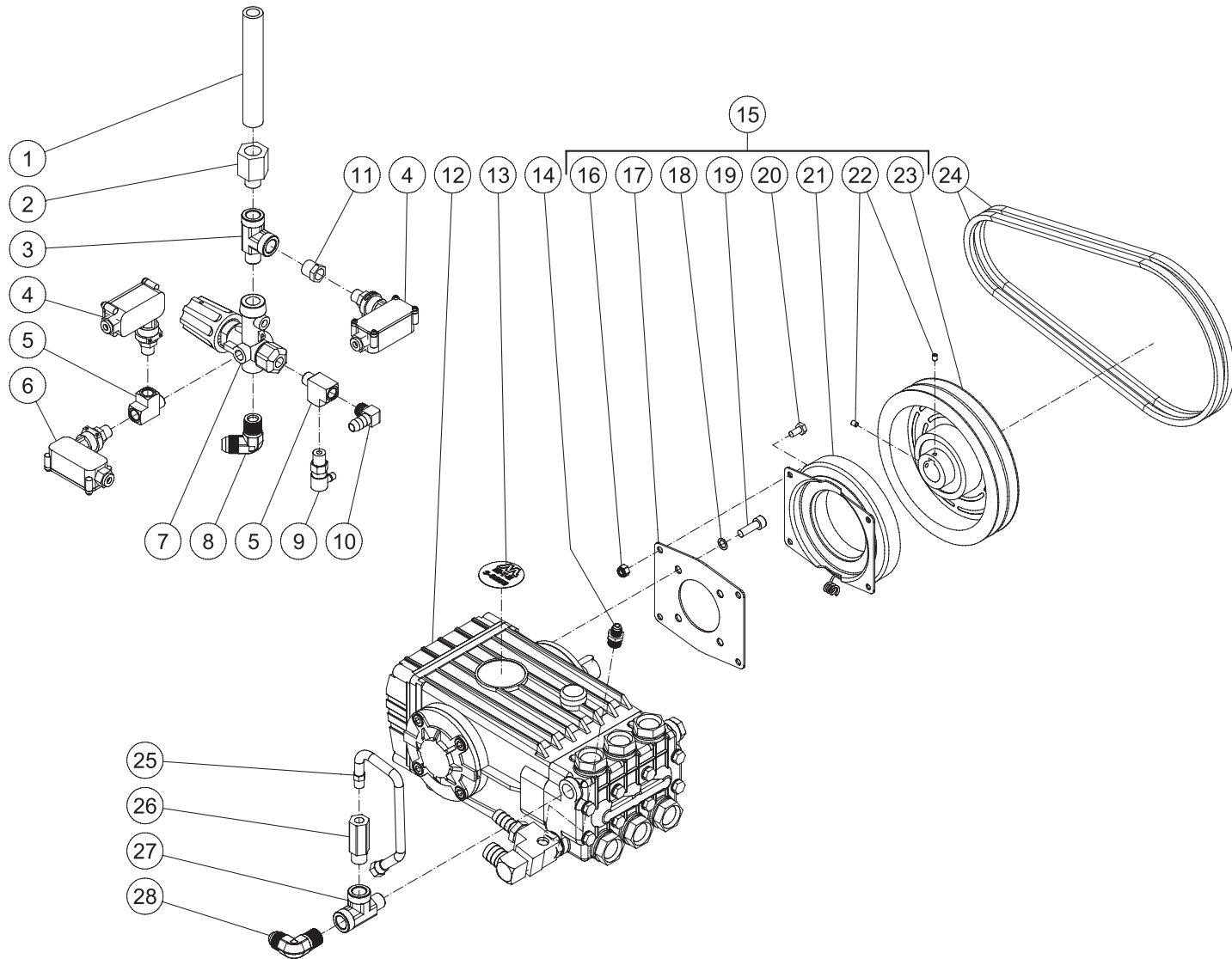


LIFTING HOOK OPTION-071502-BAR

HS LIFTING HOOK OPTION-071502-BAR

<b>LIFTING HOOK OPTION (HX-0147)</b>			
<b>REF. #</b>	<b>DESCRIPTION</b>	<b>PART #</b>	<b>QTY.</b>
1	Bolt	27-0071	8
2	Washer	28-0022	16
3	Lift Bracket	20-0665A18	4
4	Decal- Lift (See 34-9024)	N/A Sep.	4
5	Locknut	30-0157	8
	Safety Decal Kit (Includes 4)	34-9024	

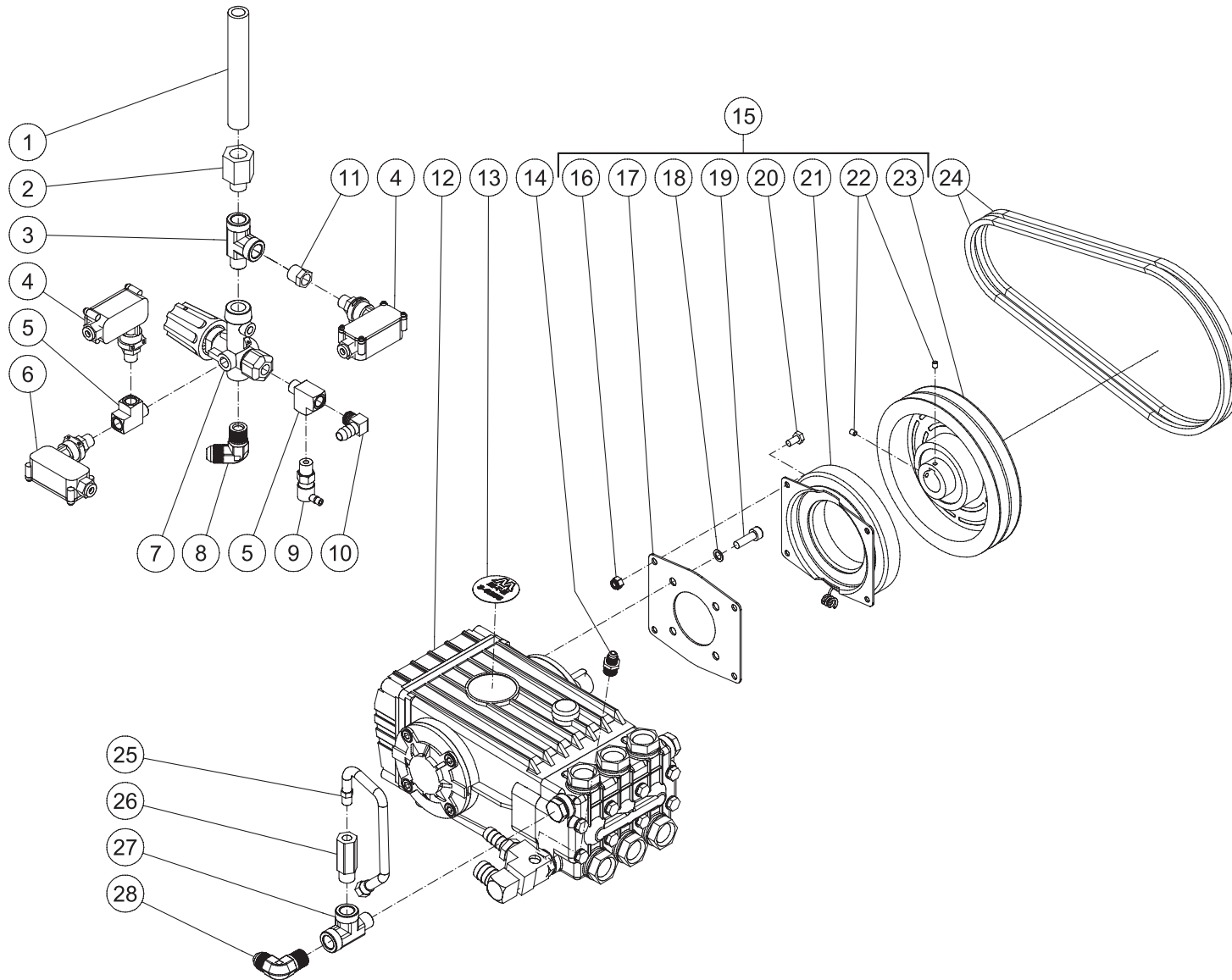
# CLUTCH DRIVE OPTION (3005) (HX-0257)



HX-0227 HX-0229 HX-0257 OPTION  
CLUTCH 021015 MLK

OPTION/CLUTCH			
ITEM	DESCRIPTION	PART #	QTY
1	PIPE NIPPLE	24-0246	1
2	REDUCER	24-0048	1
3	STREET TEE	23-0058	1
4	PRESSURE SWITCH	22-0243	2
5	TEE	23-0127	2
6	PRESSURE SWITCH	22-0171	1
7	UNLOADER	850-0252	1
8	ELBOW	24-0092	1
9	HEAT DUMP VALVE	22-0408	1
10	ELBOW	23-0119	1
11	REDUCER	23-0017	1
12	PUMP	3-0203	1
13	DECAL - PUMP	34-2290	1
14	NIPPLE	23-0247	1
15	CLUTCH	10-0156	1
16	LOCKNUT	30-0155	4
17	CLUTCH MOUNTING PLATE	N/A	1
18	LOCKWASHER	29-0154	4
19	BOLT	27-8194	4
20	BOLT	27-0014	4
21	CLUTCH	N/A	1
22	SET SCREW	27-8895	2
23	SHEAVE	N/A	1
24	BELT	11-0023	2
25	EASY START HOSE	15-0140	1
26	EASY START VALVE	22-0242	1
27	TEE	23-0058	1
28	ELBOW	24-0092	1
-	NOZZLE 00050 QC	18-0406	1
-	NOZZLE 15050 QC	18-0407	1
-	NOZZLE 25050 QC	18-0408	1
-	NOZZLE 40050 QC	18-0409	1

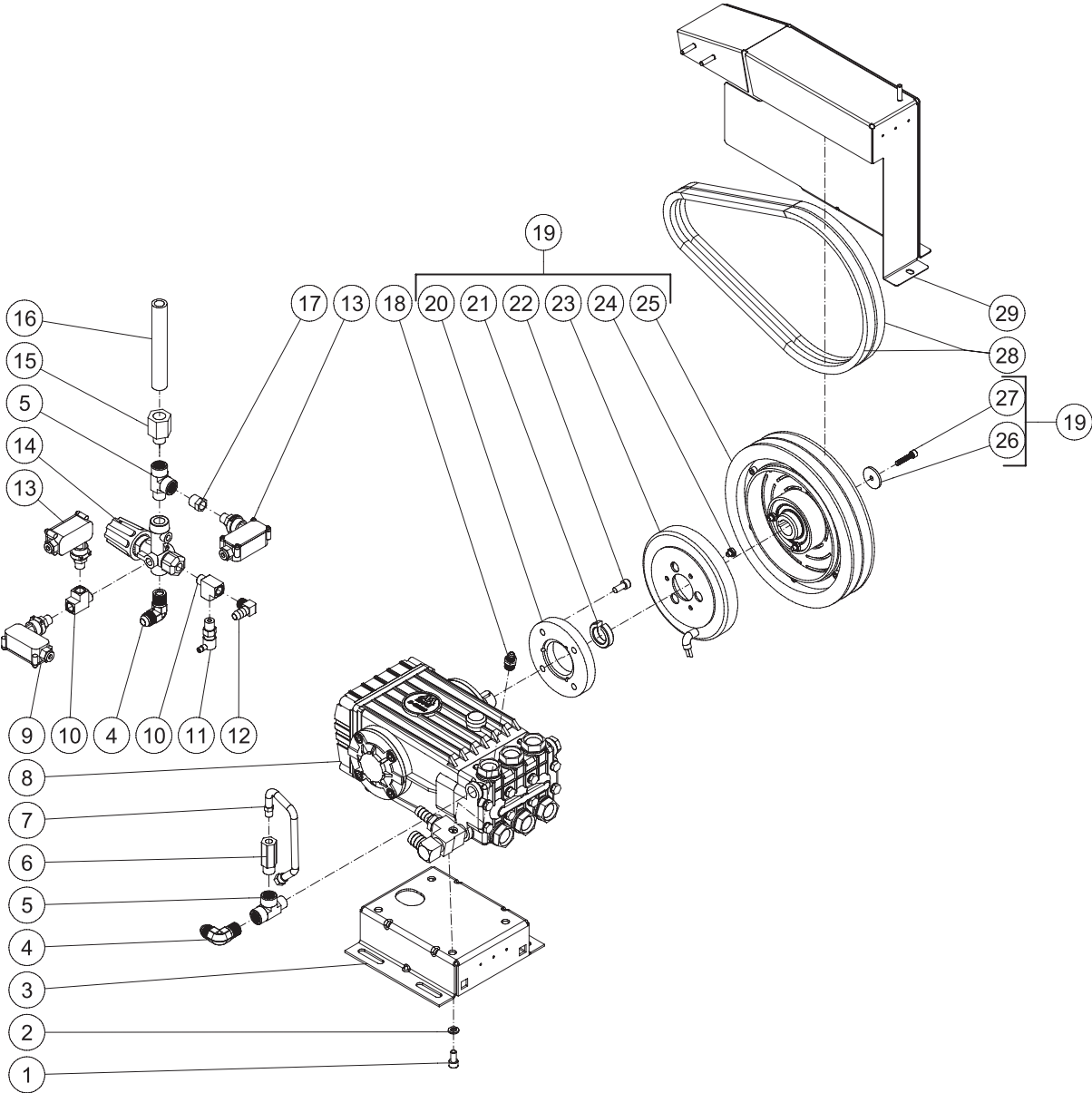
# CLUTCH DRIVE OPTION (3505) (HX-0258)



HX-0228\_HX-0230\_HX-0258\_OPTION\_  
CLUTCH\_012315\_MLK

OPTION/CLUTCH			
ITEM	DESCRIPTION	PART #	QTY
1	PIPE NIPPLE	24-0246	1
2	REDUCER	24-0048	1
3	STREET TEE	23-0058	1
4	PRESSURE SWITCH	22-0243	2
5	TEE	23-0127	2
6	PRESSURE SWITCH	22-0171	1
7	UNLOADER	850-0252	1
8	ELBOW	24-0092	1
9	HEAT DUMP VALVE	22-0408	1
10	ELBOW	23-0119	1
11	REDUCER	23-0017	1
12	PUMP	3-0203	1
13	DECAL - PUMP	34-2290	1
14	NIPPLE	23-0247	1
15	CLUTCH	10-0156	1
16	LOCKNUT	30-0155	4
17	CLUTCH MOUNTING PLATE	N/A	1
18	LOCKWASHER	29-0154	4
19	BOLT	27-8194	4
20	BOLT	27-0014	4
21	CLUTCH	N/A	1
22	SET SCREW	27-8895	2
23	SHEAVE	N/A	1
24	BELT	11-0023	2
25	EASY START HOSE	15-0140	1
26	EASY START VALVE	22-0242	1
27	TEE	23-0058	1
28	ELBOW	24-0092	1
			1
-	NOZZLE 00045 QC	18-0402	1
-	NOZZLE 15045 QC	18-0403	1
-	NOZZLE 25040 QC	18-0400	1
-	NOZZLE 40045 QC	18-0405	1

**CLUTCH DRIVE OPTION 9.75" HVS-3005 & 3505 (HX-264), HVS-3506 (HX-0265), HVS-3008 (HX-0263)**

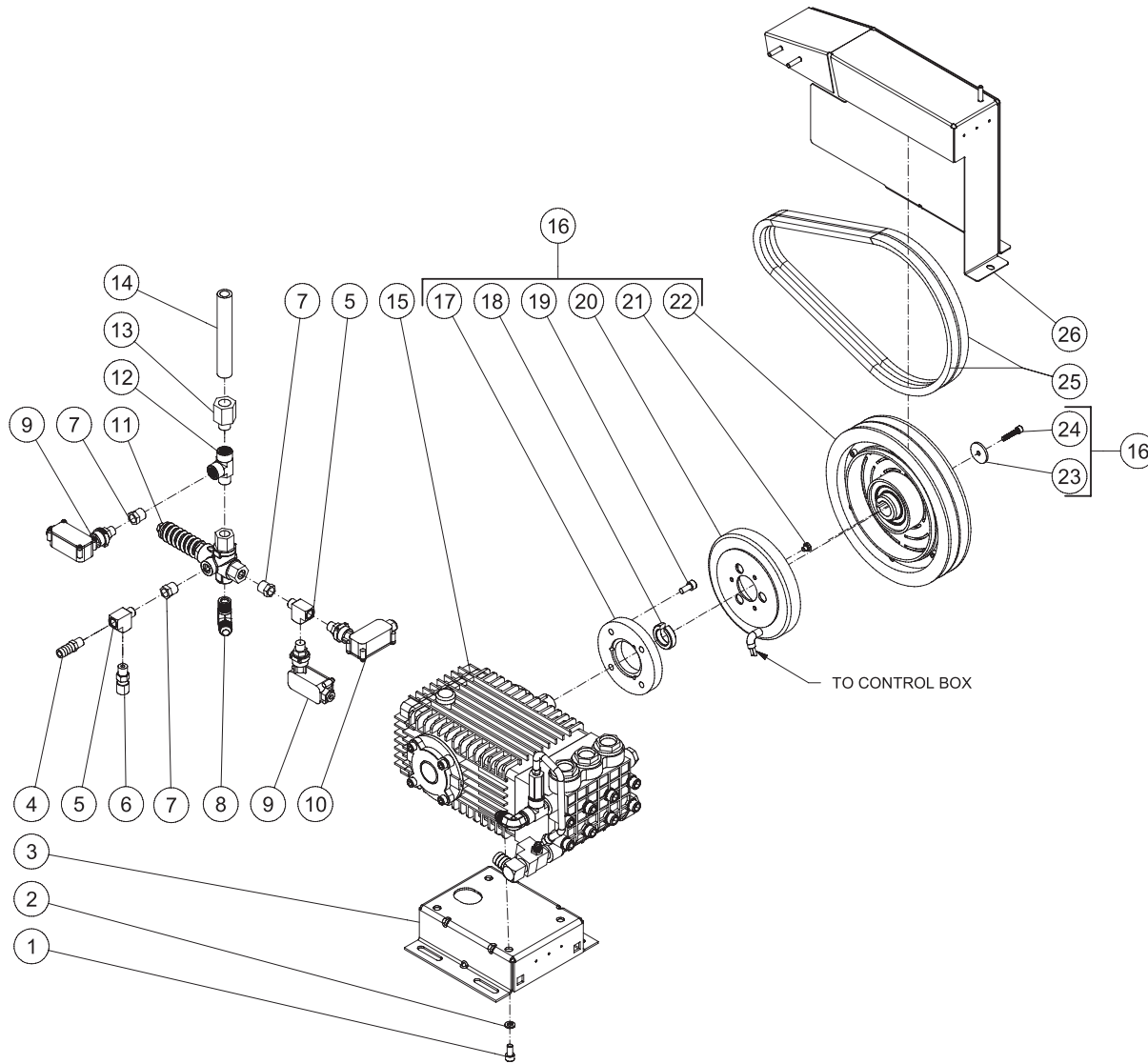


HX-0263, 0264, 0265 - HVS\_3008, 3005, 3505, 3506 041116 MLK



HX-0263, 0264, 02665, HVS-3008, 3005, 3505, 3506 041116 MLK			
OPTION / CLUTCH 9.75"			
ITEM	DESCRIPTION	PART #	QTY
1	BOLT	27-8884	4
2	LOCKWASHER	29-0054	4
3	PUMP HAT	5-0364A18	1
4	ELBOW	24-0092	2
5	STREET TEE	23-0058	2
6	EASY START VALVE	22-0242	1
7	EASY START HOSE	15-0140	1
8	PUMP	N/A SEP.	1
9	PRESSURE SWITCH	22-0171	1
10	TEE	23-0127	2
11	HEAT DUMP VALVE	22-0408	1
12	ELBOW	23-0119	1
13	PRESSURE SWITCH	22-0243	2
14	UNLOADER	850-0252	1
15	REDUCER	24-0048	1
16	PIPE NIPPLE	24-0246	1
17	REDUCER	23-0017	1
18	UNION	23-0247	1
19	CLUTCH ASSEMBLY	10-0167	1
20	PLATE	N/A	1
21	SPACER	N/A	1
22	BOLT	27-8433	4
23	COIL	N/A	1
24	SCREW	N/A	3
25	PULLEY ASSEMBLY	N/A	1
26	FENDER WASHER	N/A	1
27	BOLT	27-8404	1
28	BELT	11-0052	2
29	BELTGUARD (CLUTCH OPTION)	6-0184A18	1
-	ENGINE SHEAVE (3506) (NOT SHOWN)	10-0011	1
-	ALTERNATOR SHEAVE (3506) (NOT SHOWN)	10-0039	1
-	ALTERNATOR BELT (3506) (NOT SHOWN)	11-0100	1

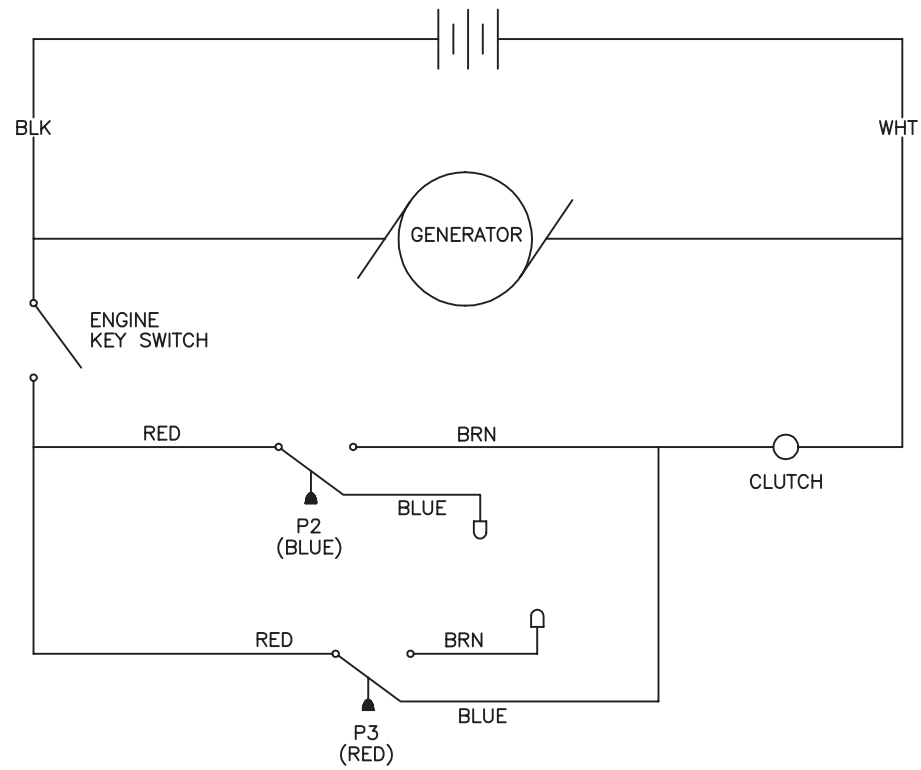
# CLUTCH DRIVE OPTION 9.75" HVS-4005 (HX-0263)



HX-0263, 0264, 0265 - HVS\_3008, 3005, 3505, 3506 041116 MLK

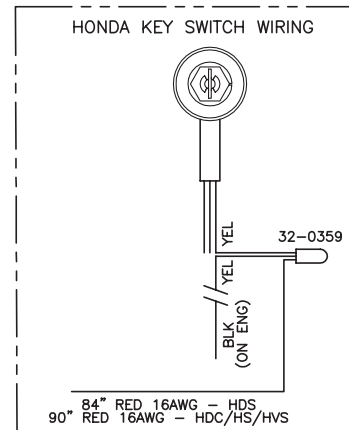
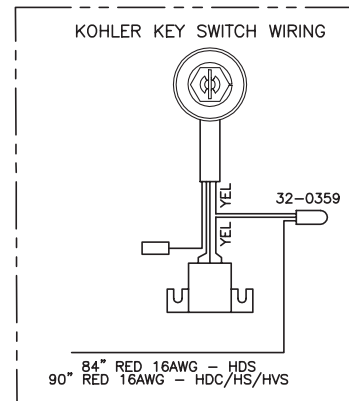
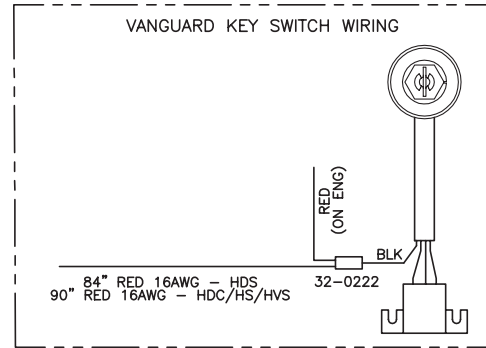
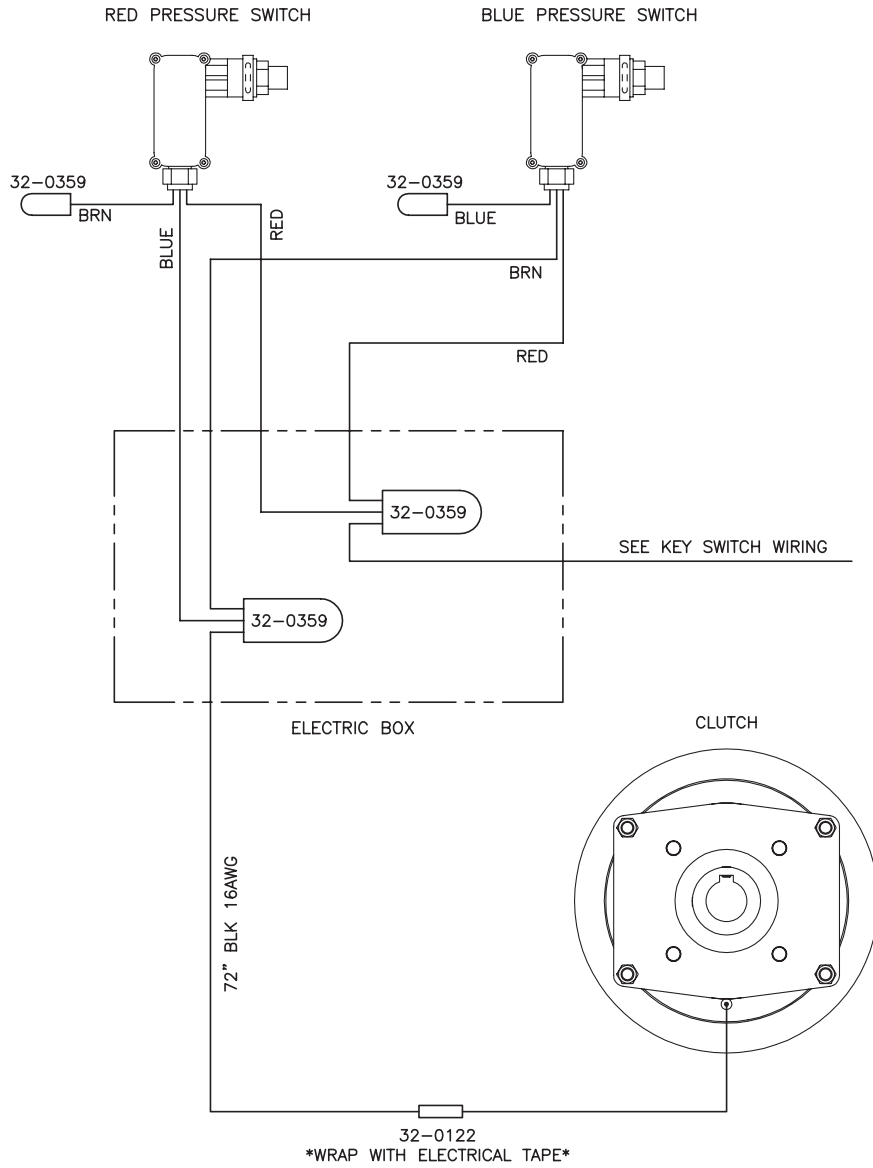
HX-0263 HDS_HVS-4005 030716 MLK			
OPTION / CLUTCH 9.75"			
ITEM	DESCRIPTION	PART #	QTY
1	BOLT	27-8884	4
2	LOCKWASHER	29-0054	4
3	PUMP HAT	5-0364A18	1
4	HOSE BARB	23-0120	1
5	TEE	23-0127	2
6	HEAT DUMP VALVE	22-0408	1
7	REDUCER	23-0017	3
8	ELBOW	24-0092	1
9	PRESSURE SWITCH	22-0243	2
10	PRESSURE SWITCH	22-0171	1
11	UNLOADER	8-0634	1
12	STREET TEE	23-0058	1
13	REDUCER	24-0048	1
14	PIPE NIPPLE	24-0246	1
15	PUMP ASSEMBLY	N/A SEP.	1
16	CLUTCH ASSEMBLY	10-0167	1
17	PLATE	N/A SEP.	1
18	SPACER	N/A SEP.	1
19	BOLT	27-8433	4
20	COIL	N/A SEP.	1
21	SCREW	N/A SEP.	3
22	PULLEY ASSEMBLY	N/A SEP.	1
23	FENDER WASHER	N/A SEP.	1
24	BOLT	27-8404	1
25	BELT	11-0052	2
26	BELTGUARD (CLUTCH OPTION)	6-0184A18	1

# WIRING SCHEMATIC (HX-0257 AND HX-0258)



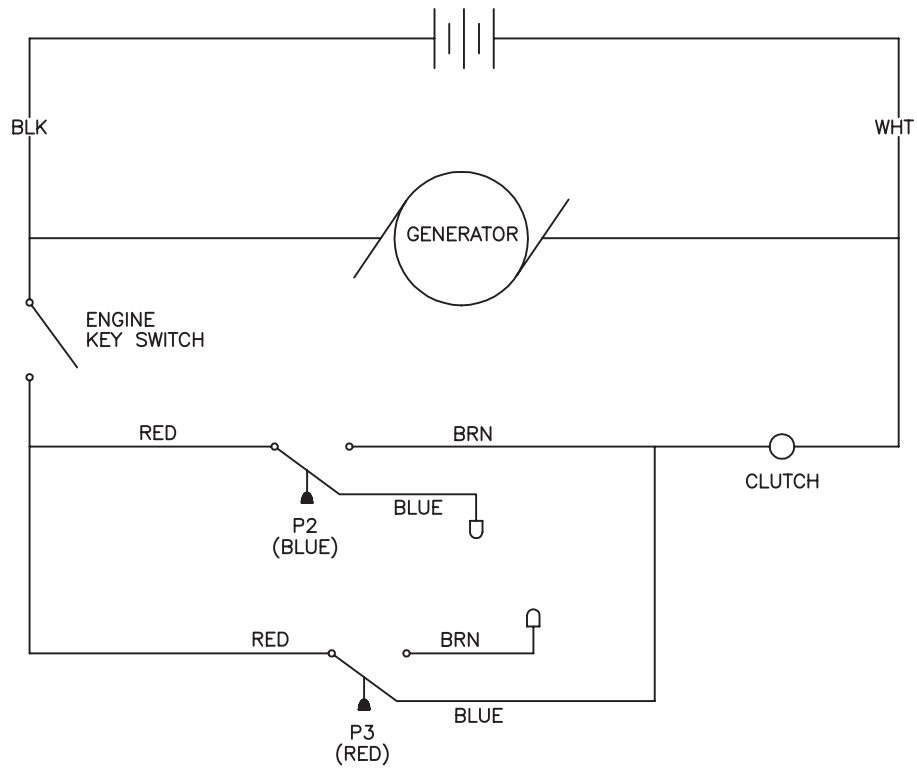
WIRE SCHEMATIC HX-0227\_0228 111511\_T

# WIRING DIAGRAM (HX-0257 AND HX-0258)



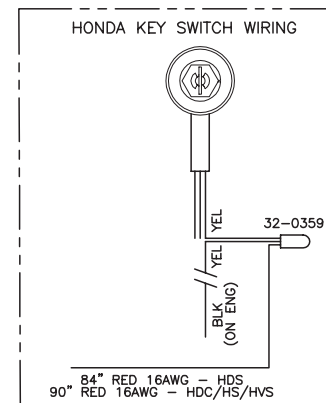
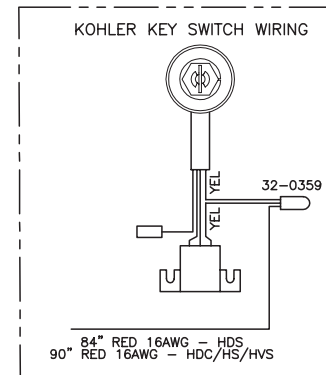
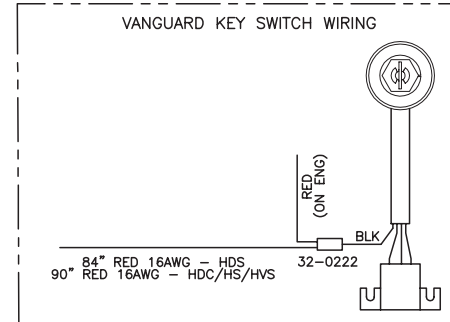
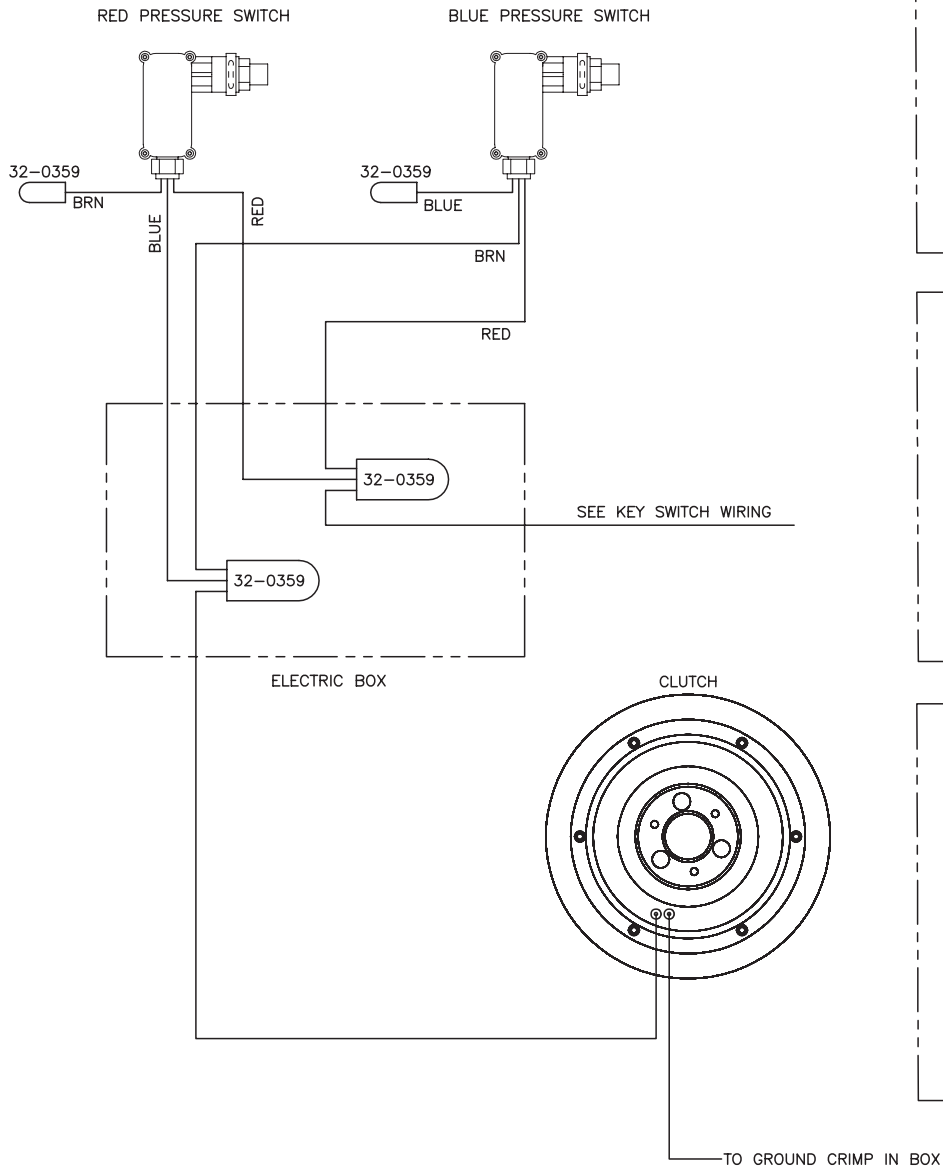
WIRE DIAGRAM HX-0227\_0228 111511\_T

# WIRING SCHEMATIC (HX-0263, HX-0264, HX-0265)



WIRING SCHEMATIC HX-0261\_0262\_0263\_0264\_0265\_032316 MLK

# WIRING DIAGRAM (HX-0263, HX-0264, HX-0265)



WIRING DIAGRAMHX-0261\_0262\_0263\_0264\_0265 032316 MLK

Manufactured by Mi-T-M  
50 Mi-T-M Drive, Peosta IA 52068  
563-556-7484/ Fax 563-556-1235