

# STANLEY®

# MHP3 DIESEL TRACHORSE



## USER MANUAL Safety, Operation and Maintenance



© 2014 Stanley Black & Decker, Inc.  
New Britain, CT 06053  
U.S.A.  
69887 10/2014 Ver. 5



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## IMPORTANT

To fill out a Product Warranty Validation form, and for information on your warranty, visit [Stanleyhydraulics.com](http://Stanleyhydraulics.com) and select the Company tab, Warranty.  
(NOTE: The warranty Validation record must be submitted to validate the warranty).

**SERVICING:** This manual contains safety, operation, and routine maintenance instructions. Stanley Hydraulic Tools recommends that servicing of hydraulic tools, other than routine maintenance, must be performed by an authorized and certified dealer. Please read the following warning.

## ⚠ WARNING

**SERIOUS INJURY OR DEATH COULD RESULT FROM THE IMPROPER REPAIR OR SERVICE OF THIS TOOL.**

**REPAIRS AND / OR SERVICE TO THIS TOOL MUST ONLY BE DONE BY AN AUTHORIZED AND CERTIFIED DEALER.**

For the nearest authorized and certified dealer, call Stanley Hydraulic Tools at the number listed on the back of this manual and ask for a Customer Service Representative.



# SAFETY PRECAUTIONS

Tool operators and maintenance personnel must always comply with the safety precautions given in this manual and on the stickers and tags attached to the machine.

These safety precautions are given for your safety. Review them carefully before operating the machine and before performing general maintenance or routine service.

Supervising personnel should develop additional precautions relating to the specific work area and local safety regulations. If so, place the added precautions in the space provided in this manual.

**If you have not read this manual or the engine manual, you are not ready to operate the MHP3. Read and understand this manual and any stickers and tags attached to the machine before operation. Failure to do so can result in equipment damage, personal injury, or death.**



- Operate the machine in a work area WITHOUT BY-STANDERS. The operator must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.
- DO NOT operate the machine ACROSS excessive slopes or unstable terrain where “tip over” is a hazard.
- DO NOT operate the machine in confined areas where there may be a risk of crushing the operator between the machine and another object.
- DO NOT OPERATE THE TRACHORSE IN ENCLOSED SPACES. Inhalation of engine exhaust can be fatal.
- DO NOT WEAR LOOSE CLOTHING that can get entangled in the working parts of the machine or hydraulic tools.
- DO NOT add fuel to the machine while it is running or still hot.
- DO NOT operate the machine if a fuel odor is present.
- DO NOT operate the machine within 3.3 ft./1 m of buildings, obstructions, or flammable objects.
- Allow the engine to cool before storing the machine in an enclosure.
- DO NOT RIDE ON, OR ALLOW ANYONE ELSE TO RIDE ON, THE MACHINE AT ANY TIME.
- Establish a training program for all operators to ensure safe operation.
- DO NOT operate the machine unless thoroughly trained or under the supervision of an instructor.
- Always wear safety equipment such as goggles, ear, head protection, respiratory and safety shoes at all times when operating the TracHorse and hydraulic tools.
- DO NOT inspect or clean the machine while the engine is running. Accidental engagement of the machine can cause serious injury or death.
- Wear a homologated respirator when cutting or breaking masonry, concrete, asbestos and other materials that produce dust.
- The hydraulic circuit control levers must be in the “OFF” position when coupling or uncoupling hydraulic tools. Wipe all couplers clean before connecting. Use only lint-free cloths. Failure to do so may result in damage to the quick couplers and cause overheating of the hydraulic system.
- Before operating hydraulic tools, read and understand the operation manual furnished with the tool.
- DO NOT operate a damaged, or improperly adjusted, machine. DO NOT operate with guards removed.
- DO NOT weld or cut with an acetylene torch any surface or component of the equipment. Consult with the Stanley factory before performing any welding or acetylene cutting of the equipment.
- Prevent possible personal injury or equipment damage by having all repair, maintenance and service performed only by authorized and properly trained personnel.
- DO NOT exceed the rated limits of the equipment or use the equipment for applications beyond its design capacity.
- Always keep critical markings, such as labels and warning stickers legible.
- Always replace parts with replacement parts recommended by Stanley Hydraulic Tools.
- Keep all body parts away from working parts of the TracHorse.
- Be aware of surrounding hazards. Noise created by the TracHorse and the tools it operates may mask early indications of approaching hazards.

## SAFETY PRECAUTIONS

- Only use the TracHorse in well-ventilated areas. DO NOT operate in explosive atmospheres, in closed environments or near flammable substances.
- Always be well-rested and mentally alert when operating the TracHorse and tools. DO NOT operate if affected by medications, drugs or alcohol.
- Keep clear of hot (engine) parts and exhaust.
- DO NOT use flammable solvents around the engine.
- DO NOT reverse tool rotation by changing fluid flow direction.
- Always use hose and fittings rated for 2500 psi/172 bar with a 4 to 1 safety factor. Be sure all hose connections are tight.
- Be sure all hoses are correct for current flow direction to and from the tool being used.
- DO NOT inspect hoses and fittings for leaks by using bare hands. "Pin-hole" leaks can penetrate the skin.
- DO NOT operate tools if oil temperature exceeds 140 °F/60 °C. Operation at high temperatures can cause higher than normal temperatures at the tools which can result in operator discomfort.
- Disconnect battery before servicing electrical components. Electrocution or burns could result from improper contact.

# TOOL STICKERS & TAGS





Refer to the parts illustrations for correct location of stickers.

**TO START:**  
 BOTH HYDRAULIC VALVES OFF  
 TURN KEY TO START, HOLD  
 TO CRANK ENGINE.  
 RELEASE KEY TO RUN.  
**NOTE: FOR COLD STARTS,**  
 TURN KEY TO ON, PRESS  
 AND HOLD GLOW PLUG  
 BUTTON FOR 10-15 SEC  
 BEFORE CRANKING.

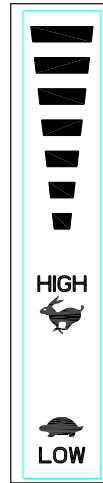
**TO STOP:**  
 BOTH HYDRAULIC VALVES OFF  
 ENGINE THROTTLE TO SLOW  
 TURN SWITCH KEY OFF

**TO OPERATE TOOLS:**  
 CONNECT TOOL(S)  
 TURN VALVE(S) ON

35677  
 Start Sticker

<b>⚠ DANGER</b>	
	Use in well ventilated areas only. Exhaust contains chemicals known to the state of California to cause cancer, birth defects, and other reproductive harm.
	Contact with high pressure fluid at leak or burst resulting from improper handling, operation, or maintenance will cause oil injection to body.
	Engine, exhaust, and other surfaces of tool may be hot. Avoid accidental contact with hot surfaces. Allow tool to cool before maintenance or storage.
	All operators must read, understand, and follow ALL safety precautions and operating instructions found in owners manual before operating tool.

59126  
 Dash Decal



68335  
 Throttle Sticker

**ON**

**CAUTION**

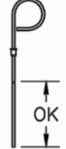
CERTAIN PARTS OF  
 THE POWER UNIT  
 WILL BE HOT.  
 AVOID CONTACT  
 WITH THOSE PARTS  
 TO PREVENT  
 INJURY.

**OFF**

Hot Parts Sticker  
 P/N-28047

**ON**

CHECK HYDRAULIC  
 FLUID LEVEL AND  
 ADD FLUID WHEN  
 ENGINE IS OFF



HYDRAULIC OIL  
 ISO GRADE 32

OK

**OFF**

51297  
 Fluid Level Sticker

**DANGER**

OPERATE UNIT ONLY IN A  
 WELL VENTILATED AREA.  
 ENGINES PRODUCE CARBON  
 MONOXIDE WHICH IS AN  
 ODORLESS DEADLY POISON.

28046  
 Carbon Monoxide Sticker

CALIFORNIA  
 PROPOSITION 65 WARNING

ENGINE EXHAUST CONTAINS CHEMICALS KNOWN TO  
 THE STATE OF CALIFORNIA TO CAUSE CANCER,  
 BIRTH DEFECTS AND OTHER REPRODUCTIVE HARM.

29133  
 California Proposition Sticker

**LIMIT ENGINE SPEED  
 DURING REVERSE TRAVEL  
 DO NOT USE HIGH RANGE  
 DURING REVERSE TRAVEL**

68334  
 Limit Engine Speed Sticker



47352  
 Lift Point Sticker

**HYDRAU-  
 LIC FLUID**

35686  
 Hydraulic Fluid Sticker

FOR ONE OR TWO 5 GPM  
 TOOLS, PUSH THE COMBINER  
 KNOB IN. FOR ONE 10 GPM  
 TOOL, PULL THE COMBINER  
 KNOB OUT AND TURN BOTH  
 TOOL VALVES ON.

28045  
 Combiner Knob Sticker

# HOSE TYPES

The rated working pressure of the hydraulic hose must be equal to or higher than the relief valve setting on the hydraulic system. There are three types of hydraulic hose that meet this requirement and are authorized for use with Stanley Hydraulic Tools. They are:

**Certified non-conductive** — constructed of thermoplastic or synthetic rubber inner tube, synthetic fiber braid reinforcement, and weather resistant thermoplastic or synthetic rubber cover. *Hose labeled **certified non-conductive** is the only hose authorized for use near electrical conductors.*

**Wire-braided** (conductive) — constructed of synthetic rubber inner tube, single or double wire braid reinforcement, and weather resistant synthetic rubber cover. *This hose is **conductive** and must never be used near electrical conductors.*

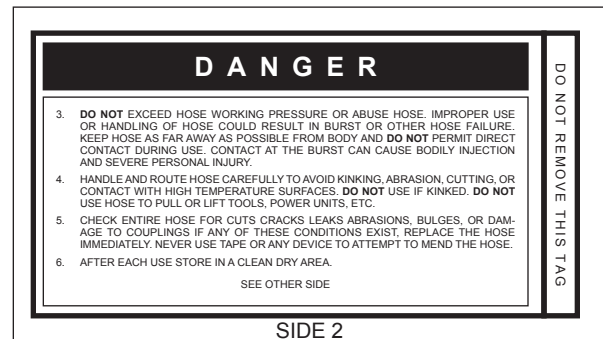
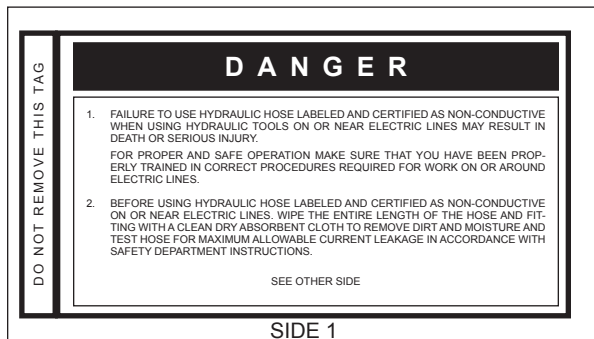
**Fabric-braided** (not certified or labeled non-conductive) — constructed of thermoplastic or synthetic rubber inner tube, synthetic fiber braid reinforcement, and weather resistant thermoplastic or synthetic rubber cover. *This hose is **not certified non-conductive** and must never be used near electrical conductors.*

## HOSE SAFETY TAGS

To help ensure your safety, the following DANGER tags are attached to all hose purchased from Stanley Hydraulic Tools. **DO NOT REMOVE THESE TAGS.**

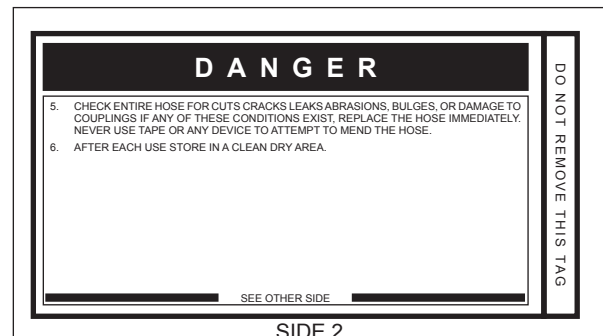
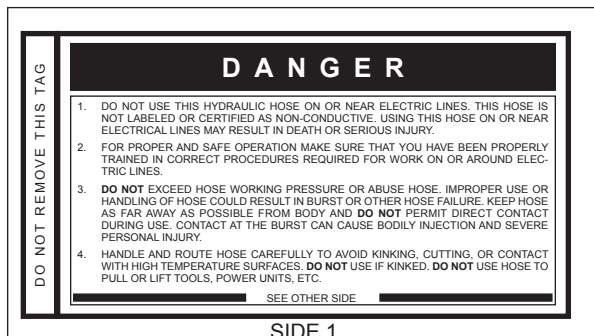
If the information on a tag is illegible because of wear or damage, replace the tag immediately. A new tag may be obtained from your Stanley Distributor.

### THE TAG SHOWN BELOW IS ATTACHED TO “CERTIFIED NON-CONDUCTIVE” HOSE



(Shown smaller than actual size)

### THE TAG SHOWN BELOW IS ATTACHED TO “CONDUCTIVE” HOSE.



(Shown smaller than actual size)



# HOSE RECOMMENDATIONS

## Tool to Hydraulic Circuit Hose Recommendations

The chart to the right shows recommended minimum hose diameters for various hose lengths based on gallons per minute (gpm)/liters per minute (lpm). These recommendations are intended to keep return line pressure (back pressure) to a minimum acceptable level to ensure maximum tool performance.

This chart is intended to be used for hydraulic tool applications only based on Stanley Hydraulic Tools tool operating requirements and should not be used for any other applications.

All hydraulic hose must have at least a rated minimum working pressure equal to the maximum hydraulic system relief valve setting.

**All hydraulic hose must meet or exceed specifications as set forth by SAE J517.**

Oil Flow		Hose Lengths		Inside Diameter		USE (Press/Return)	Min. Working Pressure	
GPM	LPM	FEET	METERS	INCH	MM		PSI	BAR
<b>Certified Non-Conductive Hose - Fiber Braid - for Utility Bucket Trucks</b>								
4-9	15-34	up to 10	up to 3	3/8	10	Both	2250	155
<b>Conductive Hose - Wire Braid or Fiber Braid -DO NOT USE NEAR ELECTRICAL CONDUCTORS</b>								
4-6	15-23	up to 25	up to 7.5	3/8	10	Both	2500	175
4-6	15-23	26-100	7.5-30	1/2	13	Both	2500	175
5-10.5	19-40	up to 50	up to 15	1/2	13	Both	2500	175
5-10.5	19-40	51-100	15-30	5/8	16	Both	2500	175
5-10.5	19-40	100-300	30-90	5/8	16	Pressure	2500	175
10-13	38-49	up to 50	up to 15	3/4	19	Return	2500	175
10-13	38-49	51-100	15-30	5/8	16	Both	2500	175
10-13	38-49	100-200	30-60	3/4	19	Pressure	2500	175
13-16	49-60	up to 25	up to 8	5/8	16	Return	2500	175
13-16	49-60	26-100	8-30	3/4	19	Pressure	2500	175
				1	25.4	Return	2500	175
				5/8	16	Pressure	2500	175
				3/4	19	Return	2500	175
				3/4	19	Pressure	2500	175
				1	25.4	Return	2500	175

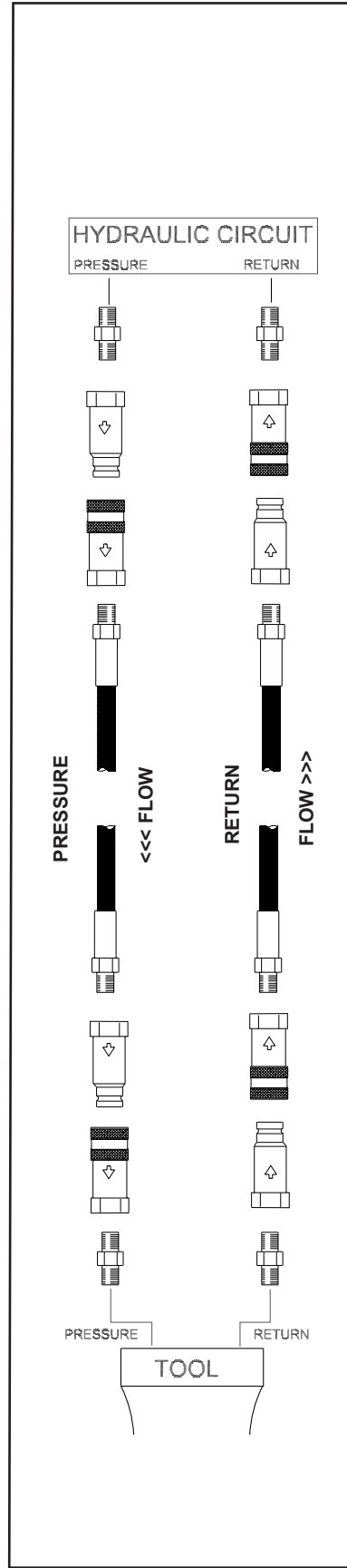


Figure 1. Typical Hose Connections

# HTMA / EHTMA REQUIREMENTS

## HTMA / EHTMA REQUIREMENTS

### HTMA

#### HYDRAULIC SYSTEM REQUIREMENTS

### TOOL TYPE

**TYPE I      TYPE II      TYPE RR      TYPE III**

Flow Range	4-6 gpm (15-23 lpm)	7-9 gpm (26-34 lpm)	9-10.5 gpm (34-40 lpm)	11-13 gpm (42-49 lpm)
Nominal Operating Pressure (at the power supply outlet)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)
System relief valve setting (at the power supply outlet)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2200-2300 psi (152-159 bar)	2100-2250 psi (145-155 bar)
Maximum back pressure (at tool end of the return hose)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)
Measured at a max. fluid viscosity of: (at min. operating temperature)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)
Temperature: Sufficient heat rejection capacity to limit max. fluid temperature to: (at max. expected ambient temperature)	140° F (60° C)	140° F (60° C)	140° F (60° C)	140° F (60° C)
Min. cooling capacity at a temperature difference of between ambient and fluid temps	3 hp (2.24 kW) 40° F (22° C)	5 hp (3.73 kW) 40° F (22° C)	6 hp (5.22 kW) 40° F (22° C)	7 hp (4.47 kW) 40° F (22° C)
<b>NOTE:</b> Do not operate the tool at oil temperatures above 140° F (60° C). Operation at higher temperatures can cause operator discomfort at the tool.				
Filter Min. full-flow filtration Sized for flow of at least: (For cold temp. startup and max. dirt-holding capacity)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)
Hydraulic fluid Petroleum based (premium grade, anti-wear, non-conductive) Viscosity (at min. and max. operating temps)	100-400 ssu*	100-400 ssu* (20-82 centistokes)	100-400 ssu*	100-400 ssu*
<b>NOTE:</b> When choosing hydraulic fluid, the expected oil temperature extremes that will be experienced in service determine the most suitable temperature viscosity characteristics. Hydraulic fluids with a viscosity index over 140 will meet the requirements over a wide range of operating temperatures.				
*SSU = Saybolt Seconds Universal				

### EHTMA HYDRAULIC SYSTEM REQUIREMENTS

### CLASSIFICATION

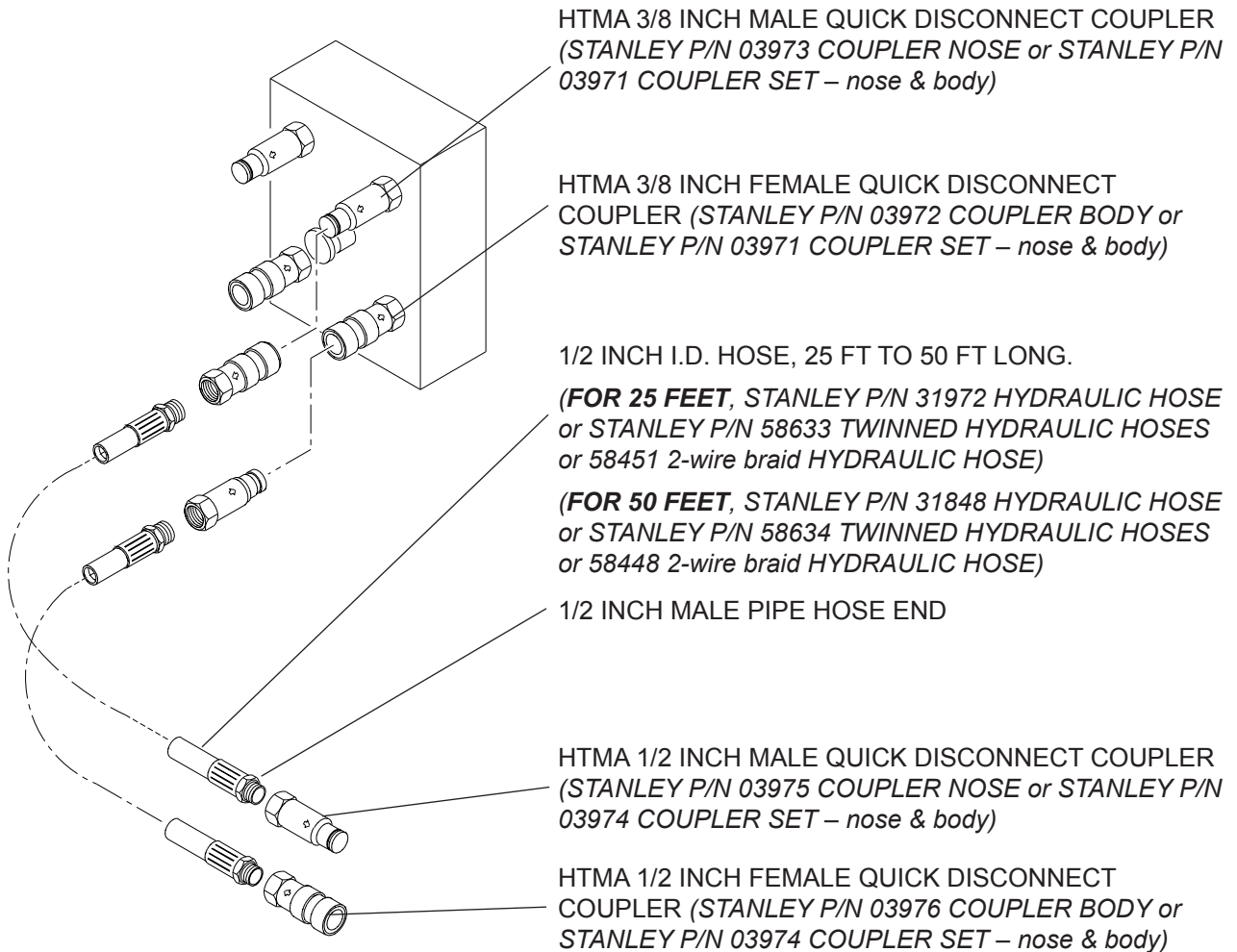


Flow Range	3.5-4.3 gpm (13.5-16.5 lpm)	4.7-5.8 gpm (18-22 lpm)	7.1-8.7 gpm (27-33 lpm)	9.5-11.6 gpm (36-44 lpm)	11.8-14.5 gpm (45-55 lpm)
Nominal Operating Pressure (at the power supply outlet)	1870 psi (129 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)
System relief valve setting (at the power supply outlet)	2495 psi (172 bar)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)

**NOTE:** These are general hydraulic system requirements. See tool specification page for tool specific requirements

# HOSE FITTINGS & CONNECTIONS

## HOSE & FITTING CONNECTIONS FOR SINGLE TOOL CIRCUIT

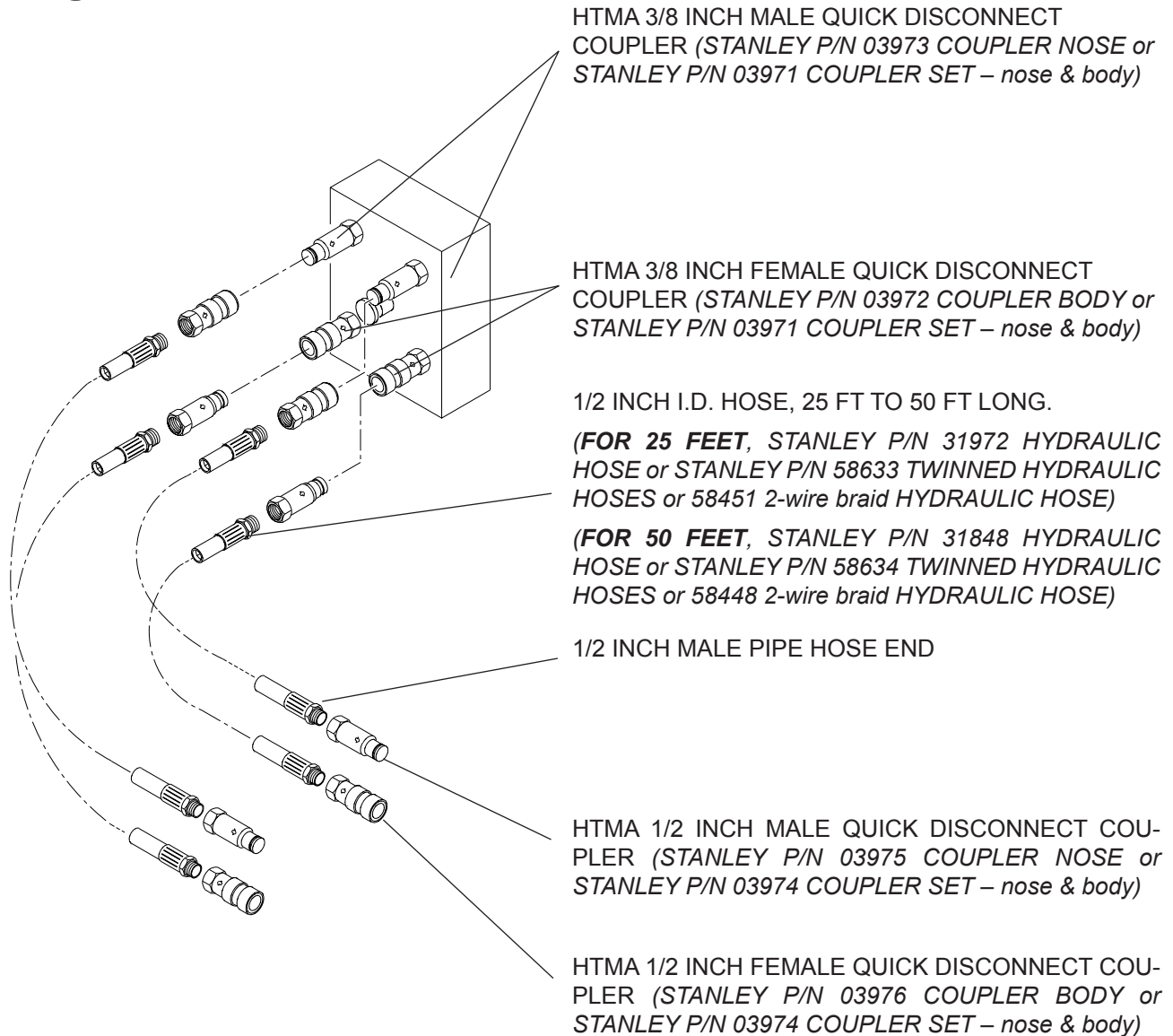


### **⚠ CAUTION**

Before disconnecting hydraulic tools, ensure the tool circuit control levers are in the down position and the throttle is in the "SLOW" position.

# HOSE FITTINGS & CONNECTIONS

## HOSE & FITTING CONNECTIONS FOR DUAL TOOL CIRCUIT



### **CAUTION**

Before disconnecting hydraulic tools, ensure the tool circuit control levers are in the down position and the throttle is in the "SLOW" position.

# OPERATION

## PREPARATION FOR USE ENGINE

### NOTICE

Do not operate the TracHorse until you have read the engine operating and maintenance instructions manual furnished in addition to this manual.

#### 1. Engine Crankcase Oil Level

Always check the oil level before starting the engine. Make sure the oil level is at the FULL MARK on the dipstick. Do not overfill. Use oil as specified in the engine operating and maintenance manual.

### NOTICE

The engine oil sump must never be overfilled. Overfilling can cause the engine to overheat and cause crankshaft seal damage.

#### 2. Engine Fuel Level

Check the fuel level. If low, fill with DF-1 or DF-2 diesel fuel (A.S.T.M. D975-66T No. 1 or no. 2 dark).

### NOTICE

Shut the engine off before attempting to add fuel to the fuel tank. Do not remove the fuel cap while the engine is running. Do not add fuel to the tank while the engine is hot. Do not fill the fuel tank to a point of overflowing.

## HYDRAULIC FLUID

Check the sight gauge in the hydraulic fluid reservoir for the proper fluid level.

## RECOMMENDED HYDRAULIC OILS

Below is a list of recommended oils by brand.

Brand	Biodegradable	Description
CITGO	No	Hydurance AW32
AMS Oil	No	HVH 32
Exxon Mobil	No	Univis HVI26*
Exxon Mobil	No	DTE 10 Excel
Shell	No	S2 V 32
Chevron	No	Rando HDZ 32
Conoco Phillips	No	Unax AW-WR-32
Clarion (CITGO)	Yes	Green Bio 32
Exxon Mobil	Yes	EAL 224H
Chevron	Yes	Clarity AW32
Terresolve	Yes	Envirologic 132
Shell	Yes	Naturelle HF-E-32

\*Recommended for extreme cold temperatures

## BATTERY

The supplied battery is maintenance free.

### NOTE:

**Before starting the engine make sure the tool circuit switch is in the OFF position.**

## DUAL CIRCUIT OPERATION

Facing the panel, the male quick disconnect fittings are the PRESSURE FLUID OUT fitting. The female quick disconnect fittings are the RETURN FLUID IN (*RETURN*) fitting.

The "Dual Circuit" control panel contains connections for two 5 GPM tool circuits. In addition, the two circuits may be combined into one 10 GPM tool circuit.

1. If using one 5 GPM tool circuit, select either circuit and connect the PRESSURE FLUID OUT hose to the male coupler and connect the RETURN FLUID IN (*RETURN*) to the female coupler near to it. Connect the other ends of the hoses to the tool.

If using both 5 GPM tool circuits, connect PRESSURE FLUID OUT hoses to the male couplers and connect the RETURN FLUID IN (*RETURN*) hoses to the female couplers. Connect the other ends of the hoses to the tools.

2. Ensure the throttle control is depressed fully to the idle position.

# OPERATION



3. Ensure the tool circuit levers are in the OFF position.
4. If starting the engine in cold weather conditions turn the start switch until the battery charge light comes on. Then press and hold the glow plug button for 10-15 seconds. Release the glow plug button and turn the start switch to the third start position to crank the engine.
5. Turn the start switch clockwise to begin cranking the engine. Use short starting cycles (15 seconds per minute) to prolong starter life. Extended cranking can damage the starter motor.
6. After the engine starts, allow it to warm-up.

## NOTE:

**Hydraulic fluids are thicker in cold weather. It is recommended that the engine be operated at low idle long enough to allow the fluid temperature to warm to a minimum of 50 °F.**

7. When the engine is warmed up the throttle may be advanced and the hydraulic tool circuits may be used.

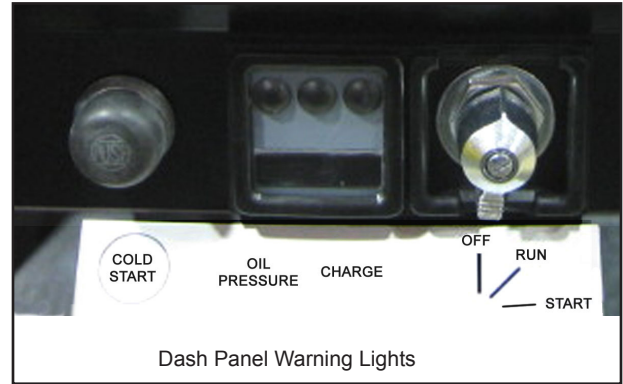
## INSTRUMENTS

### BATTERY CHARGE LIGHT

A problem with the charging circuit exists if the battery charge light remains on after the engine has started.

### OIL PRESSURE LIGHT

A problem with the engine oil lubricating system exists if the oil pressure light remains on after the engine has started. Shutdown the engine and then have the lubricating system serviced by a qualified technician.



## NOTICE

If the engine runs out of fuel or dies during operation or if the stop knob is pulled and the ignition switch is left in the **ON** position, the battery may become discharged. Make sure the start switch is returned to the **OFF** position.

## COLD WEATHER STARTUP

1. Use the procedures described under “Starting The Engine” and then follow the procedures below.
2. Hydraulic fluids are thicker in cold weather, therefore, it is recommended that the engine be run at low idle long enough to bring the fluid temperature up to a minimum of 50 °F/10 °C or until the top of the hydraulic filter feels warm.
3. If the tools and tool hoses are cold, it is recommended to allow hydraulic fluid to circulate through the tool hoses until warm before using the tools.

## ENGINE SHUTDOWN

Place both control levers in the **OFF** position. Push the throttle control completely in. Allow the engine to idle for approximately one minute, turn the switch to **OFF**, and then pull the stop knob to shutdown the unit. Make sure the start switch is in the off position.

## HYDRAULIC TOOL CIRCUIT CONTROLS

The MHP3 TracHorse provides two circuits, each with an oil flow of 5 gpm/19 lpm up to 2000 psi/140 bar. Or the two circuits may be combined into one circuit provid-



# OPERATION

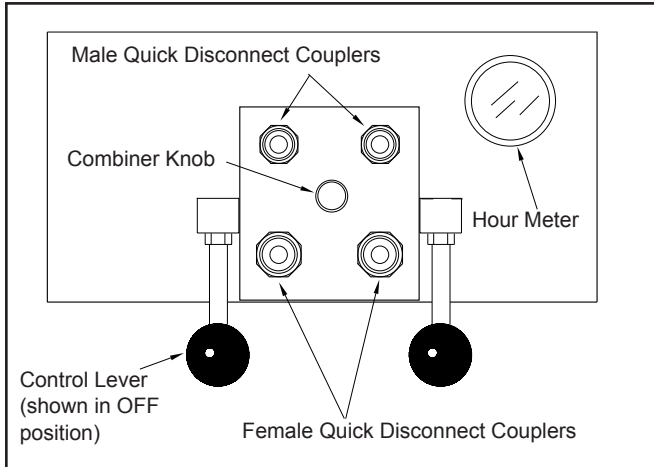
ing 10 gpm/38 lpm up to 2000 psi/140 bar.

The MHP3 TracHorse contains a hydraulic pump with two sections. Each pump section will provide 5 gpm/19 lpm at the maximum, governed engine throttle. The output (5 gpm/19 lpm) of each pump section is directed to the panel control valve assembly. It is the position of the hydraulic circuit combiner knob on the panel control valve assembly which keeps the output of each pump section separated or combined.

When the hydraulic circuit combiner knob is pulled out, the two circuits are combined into one 10 gpm/38 lpm circuit. One hydraulic tool may be connected to one circuit. The other circuit must not have a tool connected to it or have the hoses connected. The circuit is activated by pushing both control levers up.

When the hydraulic circuit combiner knob is pushed in, the two circuits are not combined and each circuit provides 5 gpm/19 lpm. One hydraulic tool may be connected to each circuit. Each circuit is activated by pushing the circuit lever up.

Oil flow is regulated by pulling the throttle control to the full throttle position. This setting will produce 10 gpm/38 lpm up to 2000 psi/140 bar.



## ADJUSTING THROTTLE FOR

## VARIOUS TYPES OF WORK

### **⚠ WARNING**

When first learning to operate the Track Horse, position the throttle to the "SLOW" position. More experienced operators may use higher throttle settings.

## FORWARD TRAVEL

- The throttle can be positioned anywhere between slow and fast for traveling forward depending on the weight of the load being carried. Heavy loads will require higher throttle settings and low range in order for the engine to provide enough power to move the load.
- A switch mounted on the control provides two-speed (FAST & SLOW) operation.



## REVERSE TRAVEL

### **⚠ WARNING**

DO NOT attempt to travel in reverse with the throttle positioned above "SLOW". This may result in loss of control and result in injury or death to the operator.

- Always position the throttle to a slow position for reverse travel to permit increased control and safety.

# OPERATION

- Always switch the two-speed control to “LOW” speed operation when moving in reverse.

## SLOPE OPERATION

- DO NOT operate the machine on slopes exceeding 60 percent (30°) in the travel direction or across slopes exceeding 45 percent (24°).
- Depending on the load carried in the bed, it may be preferable to back up steep slopes.
- If traversing over large obstructions such as railroad rail or curbs, travel at an angle (45 degrees) to the obstruction. In some cases it may be easier to back over them.
- Avoid turning on slopes. If you must turn, turn slowly downhill, if possible.
- DO NOT operate the machine near drop-offs, ditches, or embankments. The machine could suddenly turn over if a track goes over the edge or if an edge collapses.
- DO NOT try to stabilize the machine if it is tipping over. Let go of the machine and get out of its way.

## TRAVELING FORWARD OR REVERSE



Track Steering Controls

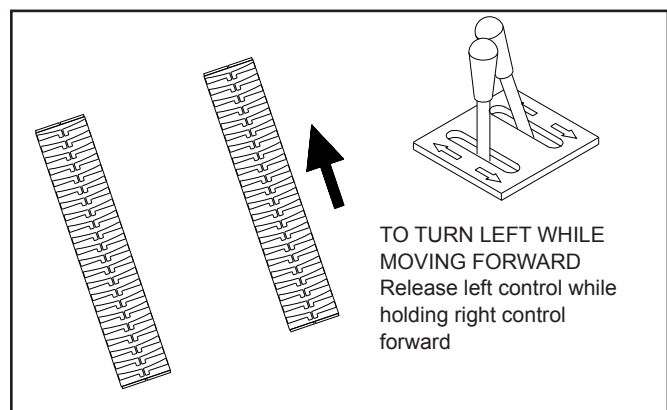
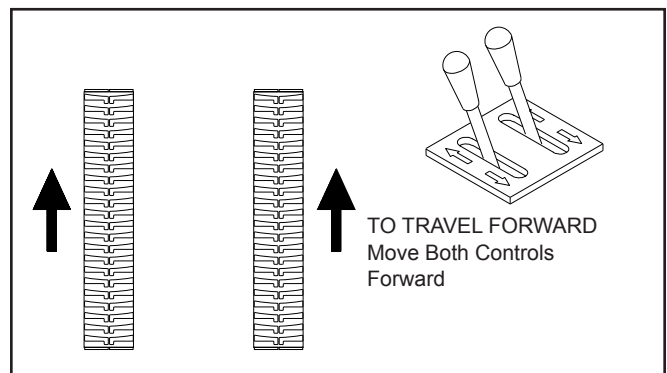
To travel forward, reverse, turn left, or turn right, do the following:

### FORWARD TRAVEL

- **TO MOVE FORWARD IN A STRAIGHT LINE:** Move both the left and right track controls forward at the same time.
- **TO TURN LEFT WHILE MOVING FORWARD:** Release the left track control while pushing forward on

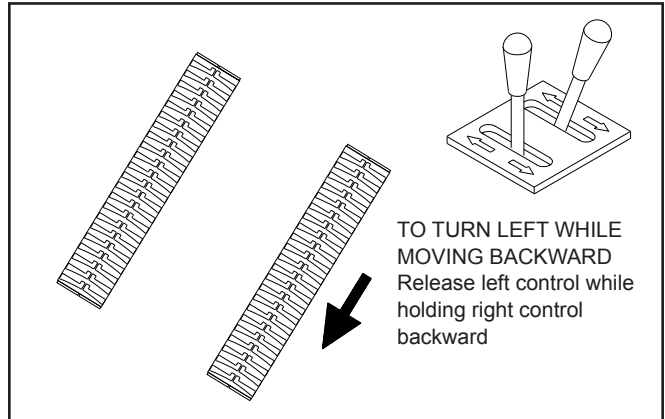
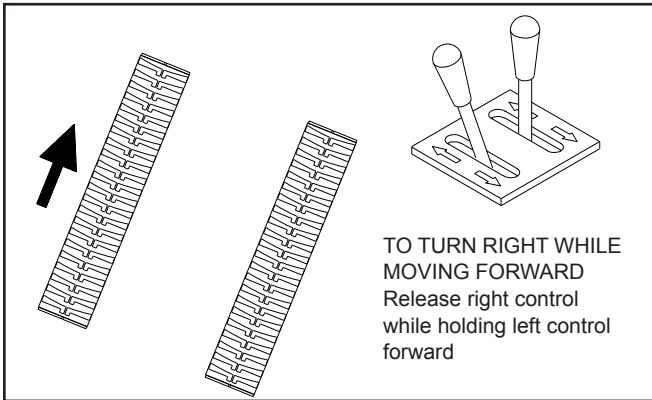
the right track control. Resume pushing forward on the left track control to move forward in a straight line.

- **TO TURN RIGHT WHILE MOVING FORWARD:** Release the right track control while pushing forward on the left track control. Resume pushing forward on the right track control to move forward in a straight line.





# OPERATION

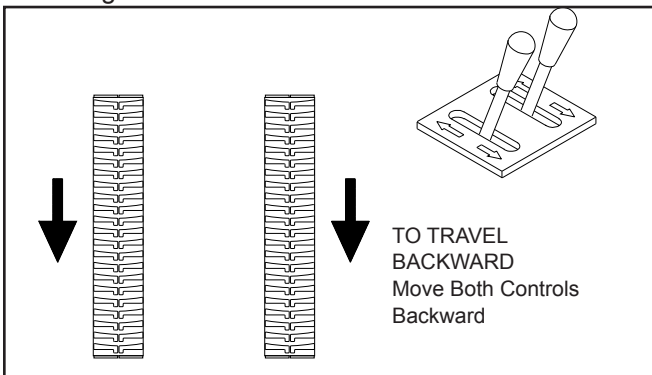


## REVERSE TRAVEL

### **⚠ WARNING**

DO NOT attempt to travel in reverse with the throttle positioned above "SLOW". This may result in loss of control and result in injury or death to the operator.

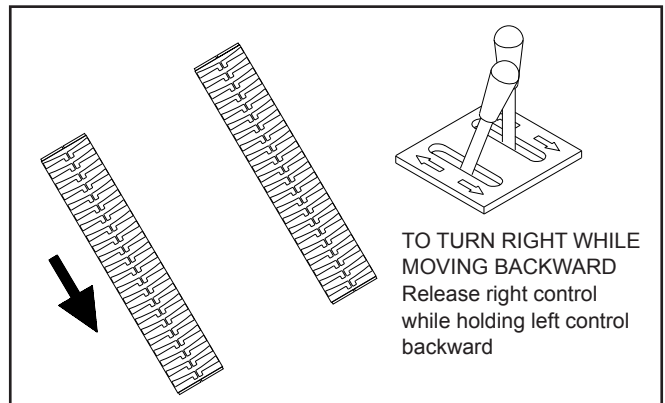
- **TO MOVE BACKWARDS IN A STRAIGHT LINE:** Move both the left and right track controls backward at the same time.
- **TO TURN LEFT WHILE MOVING BACKWARD:** Release the left track control while pulling backward on the right track control. Resume pulling backward on the left track control to move backward in a straight line.



- **TO TURN RIGHT WHILE MOVING BACKWARD:** Release the right track control while pulling backward on the left track control. Resume pulling backward on the right track control to move backward in a straight line.

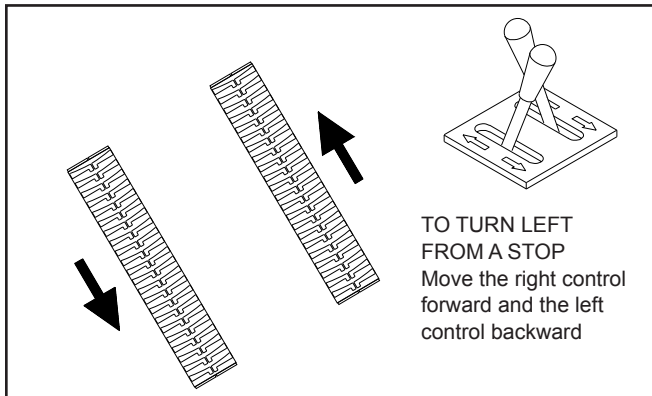
## TURNING FROM A STOP

- **TO TURN LEFT FROM A STOP:** Moving the right track control forward and moving the left track control backward at the same time will increase the

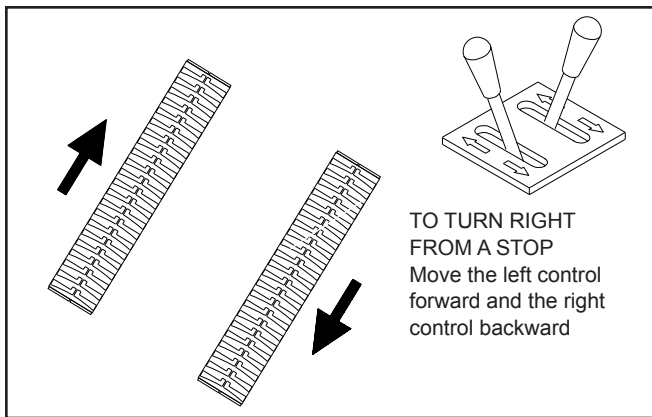


turning rate.

# OPERATION



- **TO TURN RIGHT FROM A STOP:** Moving the left track control forward and moving the right track control backward at the same time will increase the turning rate.



## LOADING AND UNLOADING

1. Use loading ramps or a loading dock to load and unload the machine. Ensure loading ramps are strong enough to support the load. When using ramps, do not exceed a 15 degree incline (27 percent).
2. Ensure the wheels of the trailer and the tow vehicle have been chocked front and rear.
3. Use the "SLOW" throttle setting when loading or unloading. Always switch the two-speed control to "LOW" speed operation when moving in reverse.



## DANGER

Loading and unloading of any type of machine is dangerous. Never attempt to load or unload the machine without loading ramps or a loading dock. Loading ramps must be strong enough, have a low angle, and correct height. Load and unload the machine on a level surface. Never attempt to load or unload the machine if the ramp incline exceeds 15 degrees. Failure to follow these instructions may result in serious injury or death.

4. Drive the machine onto the trailer backwards (engine first). This will help prevent instability and keeps the operator "up hill" from the machine during loading and unloading.
5. After loading, place chocks at the front and rear of the tracks.

## LIFTING

The unloaded TracHorse can be lifted using the single central lift point. Some safety rules may require 3-point lifting. (Center lift point plus 2-points on forward side of rails.)

If lifting with any items in the bed, a 3-point lift is required. (A 3-point lifting sling is available, refer to Accessories page.)

## TRANSPORTING

1. Read the instructions for loading and unloading in this section.
2. Use chains and binders to secure the load to the trailer.

## ROUTINE MAINTENANCE

Good maintenance practices will keep the machine on the job and increase its service life.

A very important maintenance practice is to keep the hydraulic fluid clean at all times. Contaminated hydraulic

# MAINTENANCE

fluid causes rapid wear and/or failure of internal parts.

Follow the maintenance instructions contained in the engine manual.

## ENGINE MAINTENANCE

Follow the maintenance schedule and general maintenance instructions in the engine maintenance and operation manual furnished with the unit. Normal maintenance includes:

- Check the air filter daily. Clean if necessary.
- Replace dry air filter every 200 hours of operation.
- Replace fuel filter every 100 hours of operation.
- Change engine oil after first 50 hours of operation, then after every 200 hours of operation. Change more often if cold, moist, or dusty conditions exist.
- Check oil level daily.
- Change oil filter when engine oil is changed.
- Remove dirt and debris from engine with a cloth or brush daily. Do not use water spray.

## HYDRAULIC SYSTEM MAINTENANCE

Observe the following for maximum performance and service life from the hydraulic system.

- Always keep hydraulic system and fluids clean.
- Keep water out of fluid. (See 1. below.)
- Keep air out of hydraulic lines. Hydraulic system overheating and foam at the hydraulic tank breather indicate air is present in the lines. Keep all suction line fittings and clamps tight.
- Hydraulic system wear is noted by increased heat during tool operation, reduced tool performance and eventual system breakdown.
- Operate with the fluid temperature at 50–140 °F/10–60 °C for improved seal and hose life, and maximum efficiency.

### 1. Filling The Reservoir

Make sure the engine is stopped before opening the filler cap. Add fluid as needed. Fill slowly with the recommended fluid.

Stop filling when the sight gauge shows full. Fluid

must be visible in the sight gauge at all times.

Secure the filler cap before restarting the engine.

- Change the hydraulic filter element every 200 hours of operation. Change more often if cold, moist or dusty conditions exist.
- Check oil cooler for debris. Remove debris with air pressure.

### 2. Removing Condensed Moisture From Hydraulic Fluid

Condensation is a frequent problem with cool mobile hydraulic circuits. This condition occurs in moist or cold climates. When warm air in the hydraulic tank draws moisture from the cooler air outside, water accumulates in the tank.

- Check hydraulic fluid level daily. Add fluid per specifications in this manual (Refer to Hydraulic Fluid in this section).
- Remove condensed moisture from the hydraulic fluid by pumping the hydraulic fluid into a 5 gal/20 l container through the pressure hose. Make sure the engine is at idle when performing this procedure. When the hydraulic reservoir is empty, turn the engine OFF immediately.
- Allow the fluid to sit long enough for the water to settle to the bottom of the container. Slowly pour the fluid back into the hydraulic tank, avoiding the water at the bottom of the container.

### 3. Checking Suction Hose

Make sure the suction hose (from the hydraulic tank to the pump inlet) is not kinked and is clamped securely. This reduces the risk of pump cavitation and sucking air into the system. All pump fittings should be tight.

### 4. Checking Hydraulic Lines and Fittings

Check for loose fittings, leaks, etc., throughout the hydraulic circuit.

- Check hydraulic lines and fittings for leaks, kinks, etc. daily. Do not use your hand to perform this check.

# TESTING & TROUBLESHOOTING

## GENERAL

Tests and adjustments should be performed periodically to ensure the TracHorse is operating at maximum efficiency. Stanley Circuit Tester (P/N 04182) is recommended. This tester can be used to isolate problems in both the engine and hydraulic system prior to any TracHorse disassembly.

## TESTING THE HYDRAULIC CIRCUIT

The following tests can be performed to ensure that the hydraulic pump is supplying the correct flow and pressure and that the system relief valve is operating properly.

During these tests, make sure the engine is warm and operating smoothly. If test results are not as specified, refer to the troubleshooting table given in this section for possible causes.

### TESTING THE 5 GPM EHTMA TYPE C CIRCUITS

To test either of the two circuits, proceed as follows:

1. Set both Circuit Control Levers to the **OFF** (down) position. Push the Combiner Knob **IN** to separate the two circuits.
2. Connect the Stanley Circuit Tester across two hose ends (where the tool would normally be connected) of one circuit.
3. Fully open the tester restrictor valve (counter clockwise).
4. Start the engine and allow it to run until warm.
5. Pull the engine throttle control completely **OUT** so that the engine is running at full RPM.
6. Move the Circuit Control Lever for the circuit to be tested to the **ON** (up) position.
7. With the engine at high speed, the test flow gauge should read 4–5 gpm/15–19 lpm.
8. Slowly turn the restrictor valve clockwise while watching the pressure gauge. The flow rate should stay at 4–5 gpm/15–19 lpm as the pressure gauge reaches 2100–2200 psi/148–155 bar.
9. At 2100–2200 psi/148–155 bar the relief valve should begin to open. The pressure at which the relief valve just begins to open is commonly referred to as the “cracking pressure”. At the “cracking pressure”, the flow rate should start to drop because the relief valve is allowing fluid to bypass to the hydraulic reservoir. The “cracking pressure” is preset at the factory and if it is not within the above range, the relief valve must be reset as follows:

- a. Access to the relief valves can be gained through the front of the dash behind the two plugs (item 54, major assy). Use a socket and ratchet wrench to loosen the locknut on the relief valve.
- b. Use an Allen wrench to adjust the relief valve. Turn clockwise to raise the pressure and counterclockwise to reduce the pressure.
- c. Tighten the locknut and test for 2100–2200 psi/148–155 bar as described above.
- d. Repeat the above test with the hoses and tester connected to the other circuit.

### TESTING THE 10 GPM EHTMA TYPE D CIRCUIT

The 10 gpm circuit is formed when the combiner knob is pulled out and both circuit control levers are set to the **ON** (up) position. This allows the output of both pump sections to be combined at one set of fittings to provide 10 gpm/38 lpm flow to a single tool. To test the circuit, proceed as follows:

1. Perform Steps 1 through 5 under “Testing The 5 gpm EHTMA Type C Circuits”. Make sure a tool and hoses **ARE NOT CONNECTED** to the other tool circuit.
2. Pull the combiner knob **OUT** to combine the two circuits.
3. Raise both control levers to the **ON** position.
4. With the engine at high speed, the test flow gauge should read 9–10 gpm/34–38 lpm as the pressure gauge reaches 2100–2200 psi/148–155 bar.
5. Perform Step 9 under “Testing The 5 gpm EHTMA Type C Circuits”.

## ADJUSTING TRACK TENSION

- The track tension is adjusted with the unit lifted off the ground. Between the drive wheel and front idler wheel, there are 3 smaller rollers.
- Once the unit is lifted off the ground, adjust the track tension to achieve 3/8” to 1/2” sag below the center small roller.

# TROUBLESHOOTING

If symptoms of poor performance develop, the following chart can be used as a guide to correct the problem.

When diagnosing faults in operation of the machine or tool, always check that the hydraulic power source is supplying the correct hydraulic flow and pressure as listed in the table. Use a flowmeter known to be accurate. Check the flow with the hydraulic oil temperature at least 80 °F/27 °C.

Problem	Cause	Solution
Machine will not start.	Fuel filter plugged.	Replace fuel filter.
	No fuel.	Add fuel.
	Tool circuit switch is on.	Turn tool circuit switch off.
	Battery not connected.	Attach battery cables, check wires.
	Weak battery.	Test battery, charge or replace.
	Solenoid not working.	Check solenoid operation and electrical connections.
Fluid blowing out of fluid reservoir vent.	Hydraulic tank overfilled.	Correct fluid level.
	Pump suction leak.	Check suction connections.
Machine stalls when track controls are pushed.	Not enough throttle.	Increase throttle setting / use low range.
	Heavy load.	Increase throttle setting / use low range.
	Over maximum pay load.	Max load 1000/454 kg.
Hydraulic tool will not operate.	Tool circuit lever is <b>OFF</b> .	Turn tool circuit lever <b>ON</b> .
	Not enough throttle.	Move throttle to FAST position.
	Incorrect tool/hose connection.	Check for correct connections.
	Incorrect hose connection to tool.	Make sure the tool hose circuit goes from left (pressure) fitting to tool and back to the right fitting (return). Fluid always flows from the male to female fittings.
	Quick disconnect fittings.	Detach from hose, connect set together and check for free flow.
	Pump coupling defective.	With the engine not running.
		Check the coupling between the pump and engine that it is engaged and is not damaged. Caution: Keep hands clear of rotating objects.
	Suction hose kinked.	Make sure suction hose from fluid reservoir to pump inlet has a smooth curve.
	Tool is defective.	Refer to tool manual.
Relief valve defective	Have machine serviced.	
Machine cannot be moved using hydraulic controls.	Defective gear box(es).	Have machine serviced.
	One or more defective hydraulic component.	Have machine serviced.
	Hydraulic fluid level low.	Check for correct level.
	Pump coupling defective.	Have machine serviced.
	Relief valve stuck open.	Have machine serviced.

# SPECIFICATION

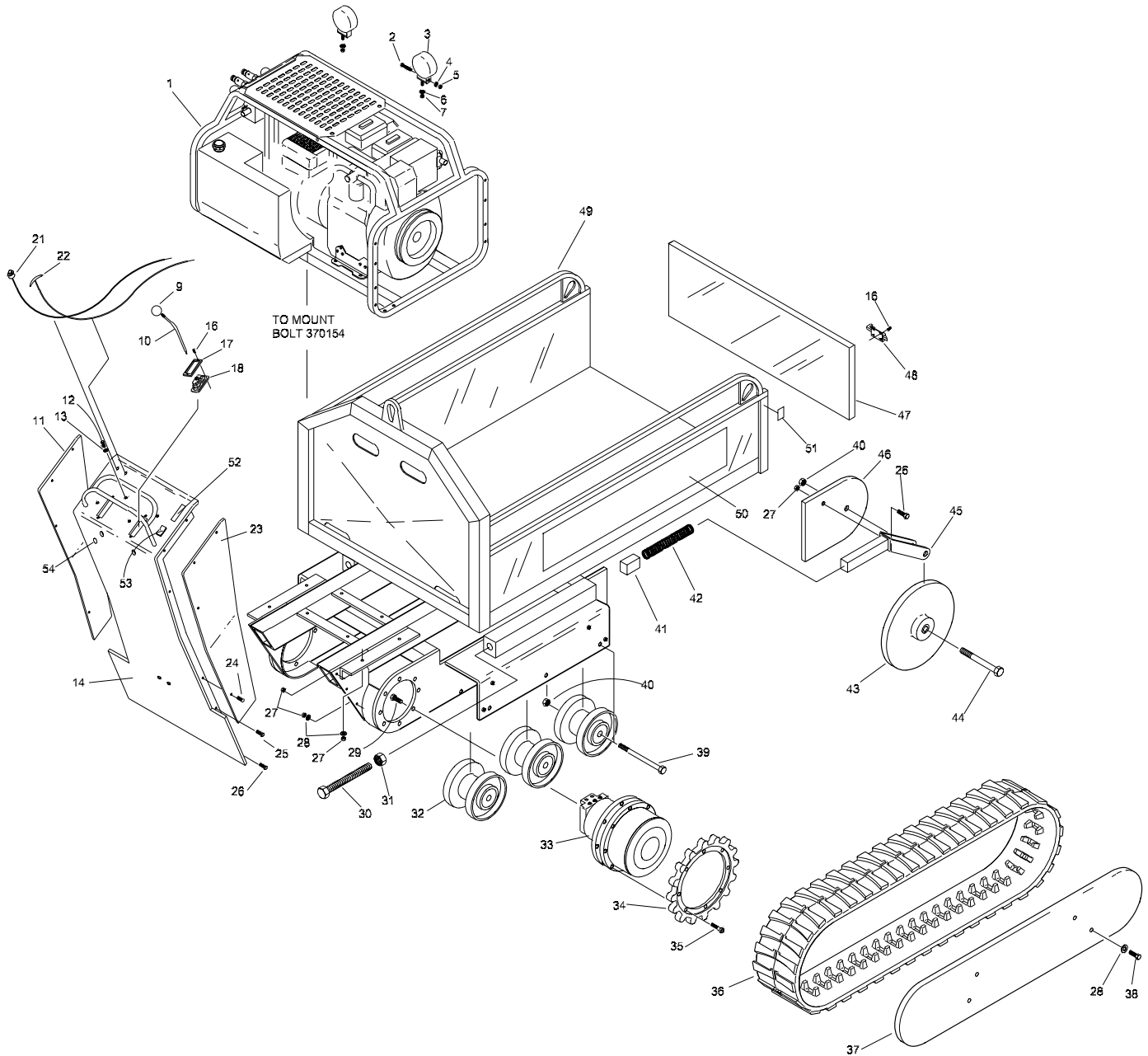
Engine .....	Ruggerini MD191 19 h.p.
Fuel Capacity.....	4.2 gal/16 ltr
Fuel Type.....	Diesel
Pressure Range.....	2000 psi/140 bar
Flow Range .....	2 ea 5 gpm/20 lpm or 10 gpm/38 lpm
Couplers .....	HTMA/EHTMA Flush Face Type Male & Female
Connect Size and Type .....	-8 SAE
Weight .....	1316 lb/597 Kg
Maximum Pay Load.....	1000 lb/523 Kg
Overall Length .....	93 in/109 cm
Overall Width .....	36 in/92 cm
Overall Height.....	43.5 in/110.5 cm
Hydraulic Oil Capacity .....	2.7 gpm/11 ltr

## ACCESSORIES

DESCRIPTION	PART NUMBER
Fuel Filter.....	40457
Oil Filter .....	40455
Air Filter .....	40456
Hydraulic Oil Filter Element.....	40408
Hydraulic Oil Filter Assy.....	40080
Coupler Nose, 3/8 Port, Bruning.....	03972
Coupler Body, 3/8 Port, Bruning.....	03973
Coupler Set, 3/8 Port , Bruning (includes nose & body).....	03971
Coupler Nose, 1/2 Port, Bruning.....	03975
Coupler Body, 1/2 Port, Bruning.....	03976
Coupler Set, 1/2 Port, Bruning (includes nose & body).....	03974
Hose Assy, 50 ft., with couplers (2 wire braid RR).....	58448
Hose Assy, 50 ft., with couplers.....	31848
Hose Assy, 25 ft., with couplers.....	31972
Hose Assy, 25 ft., with couplers (2 wire braid RR).....	58451
3-Point Lift Sling .....	68358

# MHP3 DIESEL PARTS

## MHP3 DIESEL MAJOR ASSY PARTS ILLUSTRATION



### ADJUSTING TRACK TENSION

- The track tension is adjusted with the unit lifted off the ground. Between the drive wheel and front idler wheel, there are 3 smaller rollers.
- Once the unit is lifted off the ground, adjust the track tension to achieve  $\frac{3}{8}$ " to  $\frac{1}{2}$ " sag below the center small roller.



# MHP3 DIESEL PARTS

## MHP3 DIESEL MAJOR ASSY PARTS LIST

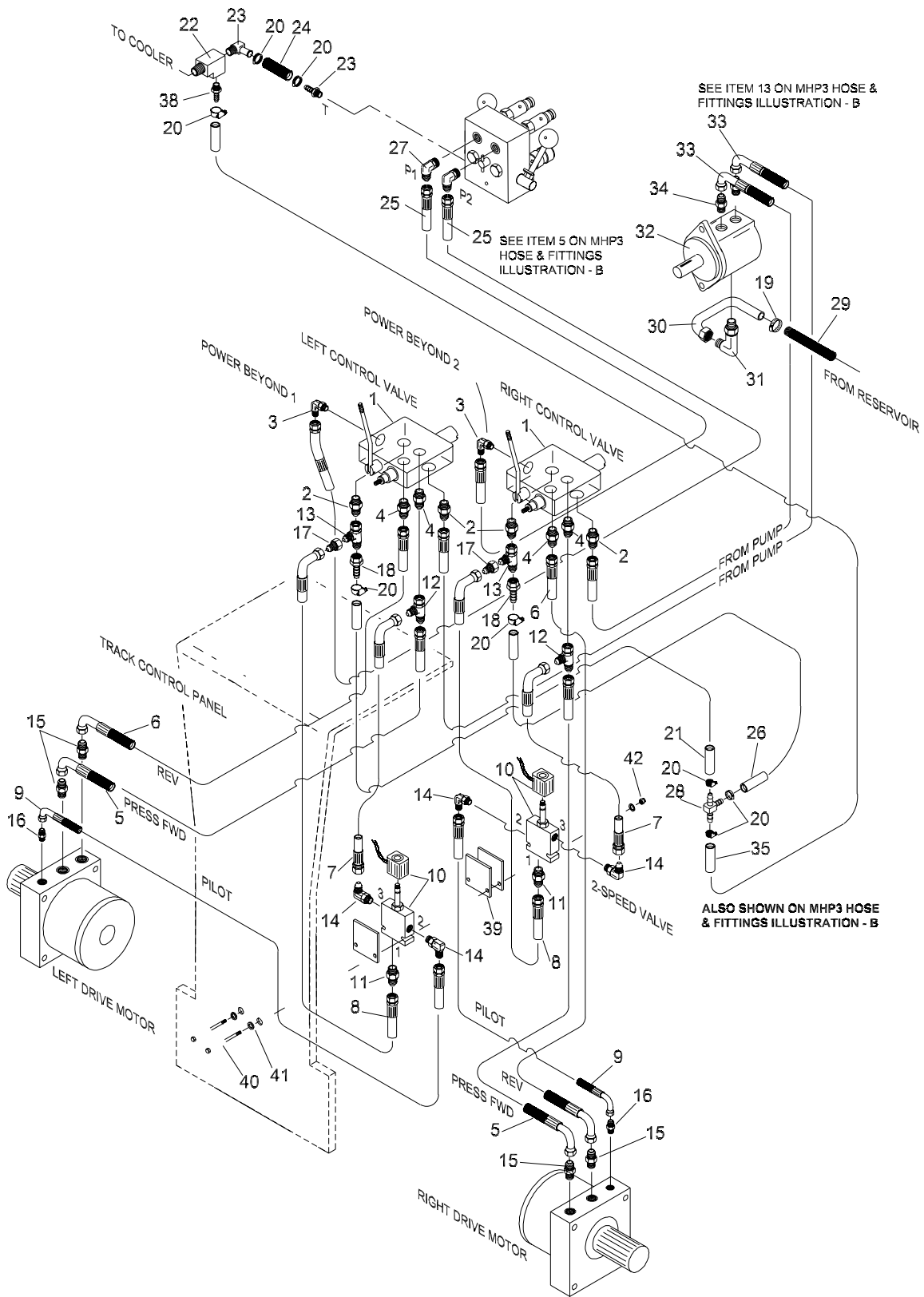
ITEM	P/N	QTY	DESCRIPTION
1	GTR20H12	1	DIESEL POWER UNIT
2	21319	2	CAPSCREW
3	69477	2	LIGHTS – 5" MULTIPURPOSE
4	—	—	NO ITEM
5	00719	4	NUT (PART OF ITEM 3)
6	04539	2	WASHER
7	—	—	NUT (PART OF ITEM 3)
8	—	—	NO ITEM
9	69488	2	KNOB
10	69753	2	VALVE HANDLE
11	69465	1	DASH SIDE COVER (L)
12	15661	4	CAPSCREW
13	04539	4	WASHER
14	69463	1	DASH
15	—	—	NO ITEM
16	69483	10	SCREW
17	39076	3	BOOT PLATE
18	38549	3	BOOT
19	—	—	NO ITEM
20	—	—	NO ITEM
21	56634	1	STOP CABLE ASSY
22	21715	1	THROTTLE CABLE ASSY
20	04539	4	WASHER
23	69464	1	DASH SIDE COVER (R)
24	69484	8	SCREW
25	370162	4	CAPSCREW
26	370154	2	CAPSCREW
26	370154	2	CAPSCREW
27	04353	12	NUT
28	371067	14	WASHER
29	69491	16	CAPSCREW
30	69467	2	TENSIONER STUD
31	371513	2	NUT
32	69459	6	ROLLERS
33	69472	2	DRIVE MOTOR
34	69474	2	SPROCKET

ITEM	P/N	QTY	DESCRIPTION
35	24367	18	CAPSCREW
36	69473	2	RUBBER TRACK
37	69468	1	ROCK GUARD OUTER (R)
	69469	1	ROCK GUARD OUTER (L) (NOT SHOWN)
38	370151	8	CAPSCREW
39	69492	6	CAPSCREW
40	371514	8	NUT
42	69481	2	TENSIONER SPRING
43	69458	2	IDLER
44	68520	2	CAPSCREW
45	69466	2	IDLER YOKE
46	69470	2	ROCK GUARD INNER
47	69462	1	TAIL GATE
48	69482	2	LATCH
49	69461	1	MAIN BODY
50	59046	2	MODEL STICKER
51	47352	3	LIFT POINT STICKER
52	68335	1	THROTTLE STICKER
55	—	—	NO ITEM
53	69486	2	2 SPEED/LIGHT SWITCH
54	69487	2	PLUG
56	69489	2	EXHAUST CLAMP
57	69480	1	EXHAUST TURN-DOWN
58	69479	1	MUFFLER
59	69478	1	EXHAUST PIPE
	68334	1	LIMIT ENGINE SPEED STICKER
	00719	2	NUT, VALVE TO DASH (NOT SHOWN)
	370154	4	CAPSCREW



# MHP3 DIESEL PARTS

## MHP3 DIESEL HOSE & FITTINGS ILLUSTRATION – A



# MHP3 DIESEL PARTS

## MHP3 DIESEL HOSE & FITTINGS PARTS LIST – A

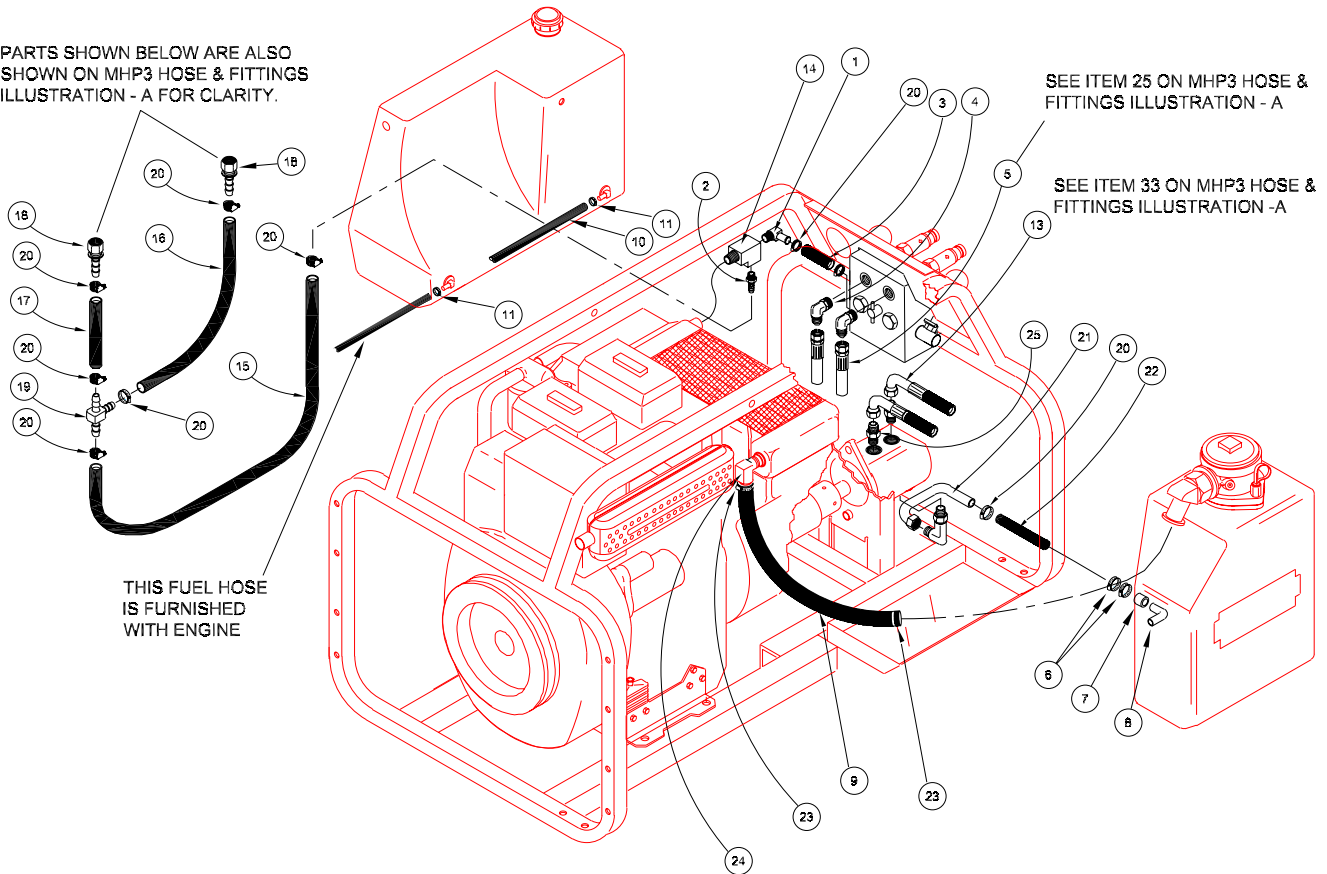
ITEM	P/N	QTY	DESCRIPTION
1	69493	2	CONTROL VALVE
2	69495	4	STRAIGHT THREAD ADAPTOR
3	69496	2	STRAIGHT THREAD ELBOW
4	69497	4	STRAIGHT THREAD ADAPTOR
5	69503	2	HOSE ASSEMBLY
6	69504	2	HOSE ASSEMBLY
7	69505	2	HOSE ASSEMBLY
8	69506	2	HOSE ASSEMBLY
9	69507	2	HOSE ASSEMBLY
10	69494	2	SOLENOID VALVE
11	18556	2	STRAIGHT THREAD CONNECTOR
12	69500	2	SWIVEL NUT RUN TEE
13	350044	2	SWIVEL NUT RUN TEE
14	350059	4	STRAIGHT THREAD ELBOW
15	69501	4	STRAIGHT THREAD ADAPTOR BSPP-37JIC
16	69502	2	STRAIGHT THREAD ADAPTOR BSPP-37JIC
17	69498	2	REDUCER
18	69499	2	FEMALE JIC 37° SWIVEL
19	62199	4	HOSE CLAMP
20	08045	4	HOSE CLAMP
21	69741	1	HOSE, 1/2", 5.5 IN. LONG
22	69747	1	STREET TEE
23	07821	1	90° ELBOW
24	69740	1	HOSE 4-1/4 IN. LONG
25	69738	2	HOSE ASSY
26	69742	1	HOSE, 1/2", 10.5 IN. LONG
27	27767	2	ADJUSTABLE ELBOW, 90°
28	69744	1	BARBED TEE, 1/2"
29	27783	1	SUCTION HOSE
30	27782	1	INLET TUBE ASSY

ITEM	P/N	QTY	DESCRIPTION
31	21335	1	ELBOW
32	27695	1	HYD PUMP
33	69739	2	HOSE ASSY
34	350104	1	STRAIGHT THREAD CONNECTOR
35	69743	1	HOSE, 1/2", 25.5 IN LONG
36	—	—	NO ITEM
37	—	—	NO ITEM
38	07822	2	HOSE BARB, 1/2 IN × 1/2 IN NPT
39	69508	3	PLATE
40	03947	2	CAPSCREW
41	04539	4	WASHER
42	00719	2	NUT
	69798	1	SLEEVE (NOT SHOWN)

# MHP3 DIESEL PARTS

## MHP3 DIESEL HOSE & FITTINGS ILLUSTRATION & PARTS - B

PARTS SHOWN BELOW ARE ALSO SHOWN ON MHP3 HOSE & FITTINGS ILLUSTRATION - A FOR CLARITY.

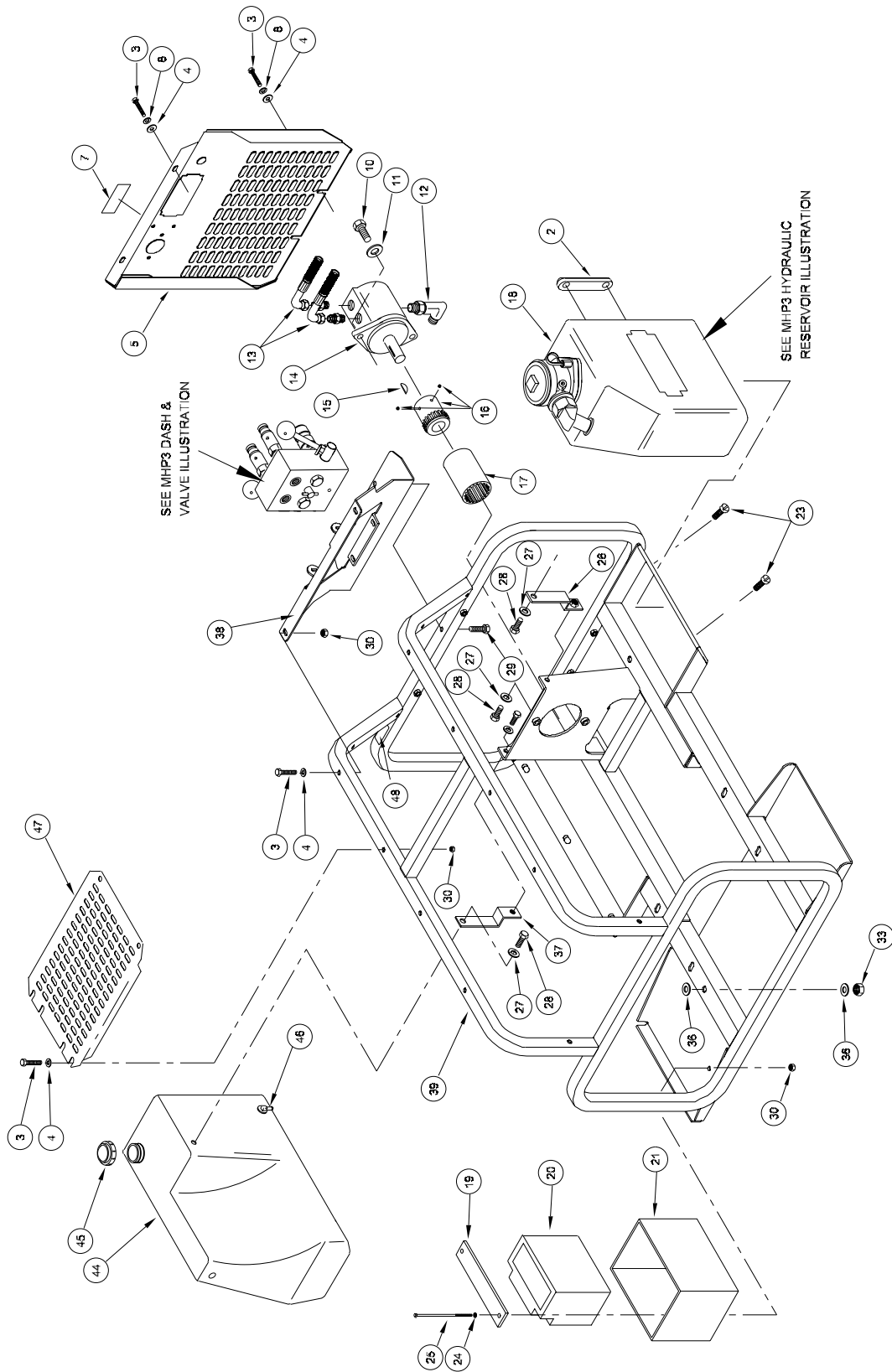


ITEM	P/N	QTY	DESCRIPTION
1	07821	2	90° ELBOW
2	07822	1	HOSE BARB, 1/2" × 1/2" NPT
3	69740	1	HOSE, 1/2", 4-1/4" LONG
4	27767	2	ADJUSTABLE ELBOW
5	69738	2	HOSE ASSY
6	11179	2	HOSE CLAMP
7	07747	1	SLEEVE, SUCTION
8	27781	1	TUBE, SUCTION
9	4306	1	HOSE
10	56696	1	HOSE, FUEL RETURN
11	04317	2	HOSE CLAMP
12	—	—	NO ITEM
13	69739	2	HOSE ASSY
14	69747	1	STREET TEE
15	69743	1	HOSE, 1/2", 25.5 IN LONG

ITEM	P/N	QTY	DESCRIPTION
16	69742	1	HOSE, 1/2", 10.5 IN LONG
17	69741	1	HOSE, 1/2", 5.5 IN LONG
18	69745	2	HOSE SWIVEL
19	69744	1	BARBED TEE, 1/2"
20	08045	8	HOSE CLAMP
21	27782	1	INLET TUBE ASSY
22	27783	1	SUCTION HOSE
23	—	2	HOSE CLAMP, 1-1/4"
24	40413	1	90° ELBOW, 1/2" NPT × 3/4 HOSE
25	350104	2	STRAIGHT THREAD CONNECTOR

# MHP3 DIESEL PARTS

## MHP3 DIESEL POWER UNIT FRAME ILLUSTRATION



# MHP3 DIESEL PARTS

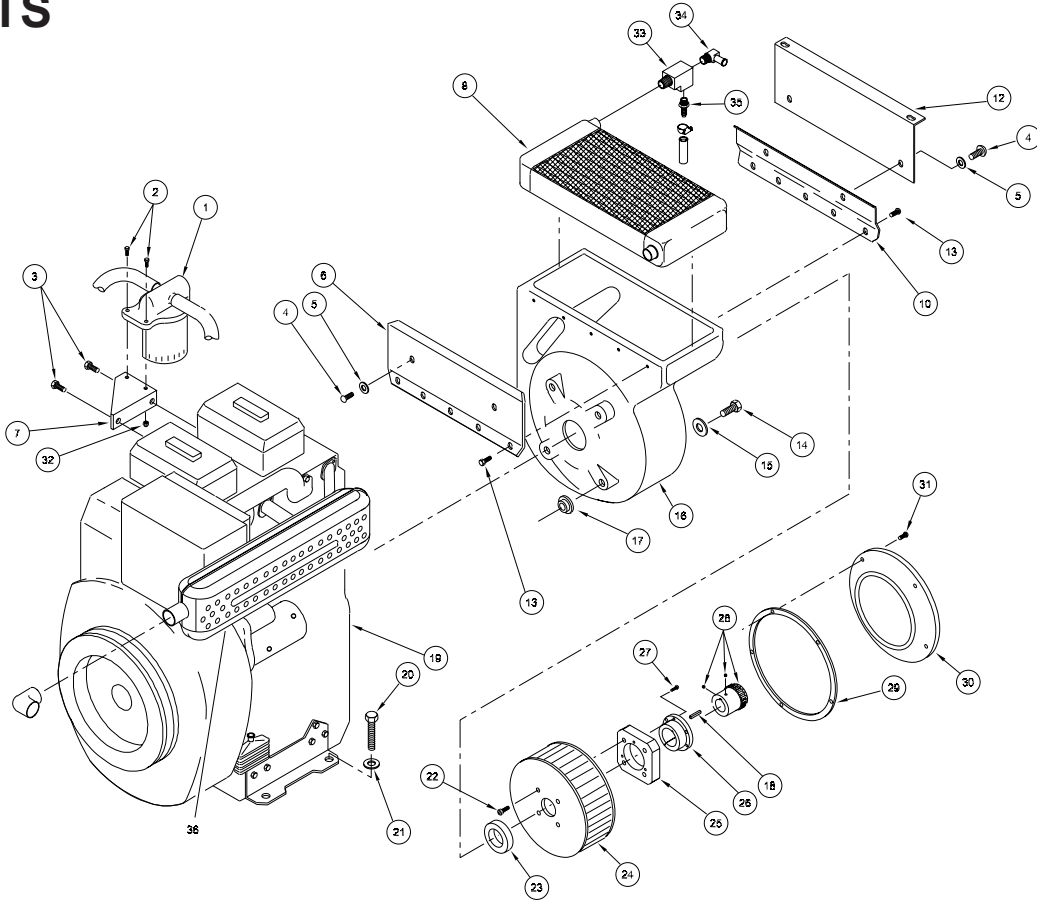
## MHP3 DIESEL POWER UNIT FRAME PARTS LIST

ITEM	P/N	QTY	DESCRIPTION
1	—	—	NO ITEM
2	66788	1	SIGHT GAUGE
3	21319	11	CAPSCREW
4	04539	15	WASHER
5	66475	1	GRILLE ASSY
6	—	—	NO ITEM
7	29133	1	WARNING STICKER
8	01219	4	LOCK WASHER
9	—	—	NO ITEM
10	02116	2	CAPSCREW
11	01459	2	LOCK WASHER
12	21335	1	ELBOW
13	69739	2	HOSE ASSY
14	27695	1	PUMP
15	—	1	KEY (INCLUDED WITH PUMP)
16	21687	1	COUPLING ASSY (INCL ITEMS 17)
17	—	1	PART OF ITEM 16
18	69749	1	HYDRAULIC TANK
19	69746	1	BATTERY HOLD DOWN
20	59136	1	BATTERY
21	69737	1	BATTERY BOX W/LID
22	—	—	NO ITEM
23	31241	5	CAPSCREW
24	04539	4	WASHER
25	56671	2	CAPSCREW
26	56644	1	TANK SUPPORT
27	03031	10	WASHER
28	04416	3	CAPSCREW

ITEM	P/N	QTY	DESCRIPTION
29	21319	1	CAPSCREW
30	00719	10	LOCKNUT
31	—	—	NO ITEM
32	—	—	NO ITEM
33	04353	12	NUT
34	—	—	NO ITEM
35	—	—	NO ITEM
36	04585	8	WASHER
37	56645	1	TANK SUPPORT
38	69595	1	DASH PANEL
39	69564	1	FRAME WELDMENT
40	—	—	NO ITEM
41	—	—	NO ITEM
42	—	—	NO ITEM
43	—	—	NO ITEM
44	56635	1	FUEL TANK
45	68644	1	FUEL TANK CAP
46	—	—	SUPPLIED WITH ITEM 44
47	69735	1	TOP GRILLE
48	35686	1	DECAL, HYD. FLUID

# MHP3 DIESEL PARTS

## MHP3 DIESEL POWER UNIT ENGINE ILLUSTRATION & PARTS

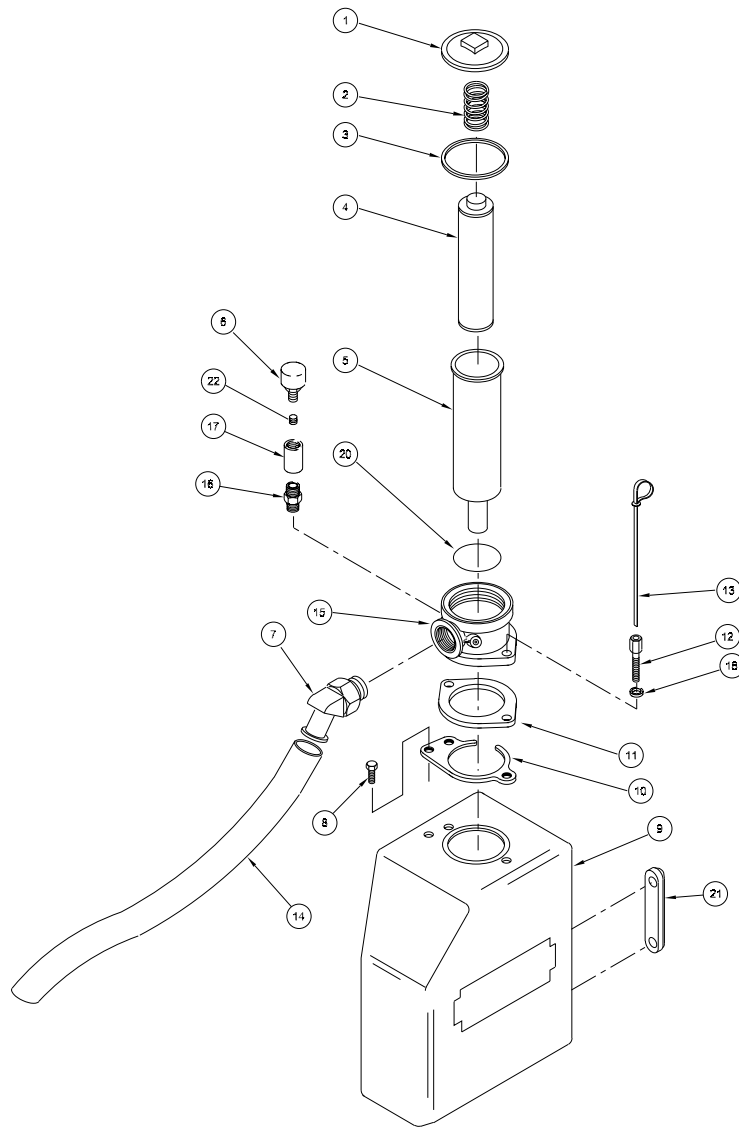


ITEM	P/N	QTY	DESCRIPTION
1	—	1	FILTER ASSY (INCL W/ ITEM 19)
2	370508	2	CAPSCREW
3	—	2	CAPSCREW (INCL W/ ITEM 19)
4	31241	4	CAPSCREW
5	03031	4	LOCK WASHER
6	40053	1	COOLER MOUNT
7	56670	1	FUEL FILTER BRACKET
8	40078	1	COOLER
9	—	—	NO ITEM
10	40054	1	COOLER MOUNT
11	—	—	NO ITEM
12	56637	1	COOLER BRACE
13	08668	10	SHEET METAL SCREW
14	02474	4	CAPSCREW
15	02477	8	WASHER
16	07783	1	BLOWER HOUSING
17	21681	4	SPACER
18	07818	1	KEY

ITEM	P/N	QTY	DESCRIPTION
19	56641	1	ENGINE, RUGGERINI MD191
20	14876	4	CAPSCREW
21	04585	AR	WASHER
22	32232	4	CAPSCREW
23	38878	1	SPACER
24	56640	1	BLOWER WHEEL
25	38877	1	BLOWER HUB
26	39057	1	QD BUSHING
27	—	4	CAPSCREW (INCL W/ ITEM 26)
28	21687	1	COUPLING ASSY
29	08669	1	GASKET
30	56691	1	INLET RING
31	08667	5	TAPPING SCREW
32	03906	2	LOCKNUT
33	69747	1	STREET TEE
34	07821	1	90° ELBOW, 1/2" HOSE, 1/2" NPT
35	07822	1	HOSE BARB, 1/2" HOSE, 1/2" NPT
36	59144	1	MUFFLER BRKT. (NOT SHOWN)

# MHP3 DIESEL PARTS

## MHP3 DIESEL POWER UNIT RESERVOIR ILLUSTRATION & PARTS

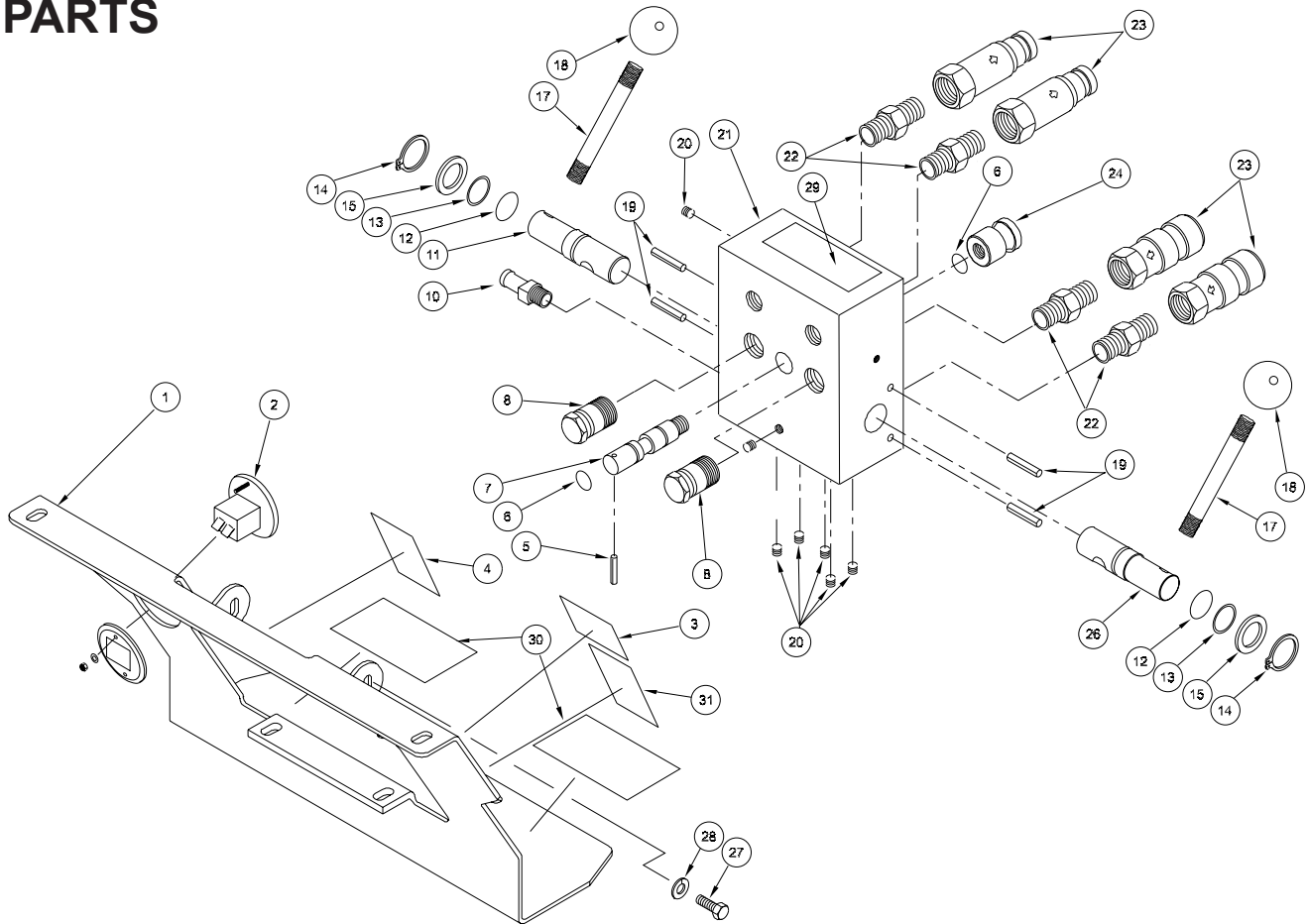


ITEM	P/N	QTY	DESCRIPTION
1	52774	1	LID
2	52775	1	SPRING
3	01202	1	O-RING
4	40408	1	FILTER ELEMENT
	40080	1	FILTER ASSY (INCL ITEMS 1-5, 11-13, 15, 18, 20)
5	58487	1	FILTER BOWL
6	69799	1	BREATHER VENT
7	40364	1	ELBOW, 45°
8	43688	1	CAPSCREW
9	69749	1	TANK
10	40133	1	GRIP PLATE
11	52782	1	GASKET

ITEM	P/N	QTY	DESCRIPTION
12	52773	1	DIPSTICK BOLT
13	52772	1	DIPSTICK
14	04306	1	HOSE
15	58486	1	FILTER HEAD
16	03044	1	NIPPLE
17	58460	1	COUPLING
18	58489	1	PLASTIC WASHER
19	11179	1	HOSE CLAMP
20	01258	1	O-RING
21	66788	1	SIGHT GAUGE
22	69796	1	ORIFICE PLUG
	43592	1	SERVICE KIT

# MHP3 DIESEL PARTS

## MHP3 DIESEL POWER UNIT VALVE ILLUSTRATION & PARTS



ITEM	P/N	QTY	
1	69595	1	DASH PANEL
2	20606	1	HOUR METER
3	28046	1	DECAL, CARBON MONOXIDE
4	28047	1	DECAL, HOT PARTS
5	07492	4	SPIROL PIN
6	00016	2	O-RING
7	05848	1	COMBINER SPOOL
8	69736	2	PORT PLUG
9	—	—	NO ITEM
10	07822	1	ELBOW, HOSE BARB
11	05844	1	ON/OFF SPOOL, LH
12	06989	2	O-RING
13	06988	2	BACK-UP RING
14	04313	2	RETAINING RING
15	04216	2	WASHER
16	—	—	NO ITEM

ITEM	P/N	QTY	
17	24291	2	ROD
18	02633	2	KNOB
19	07492	4	SPIROL PIN
20	01545	7	PIPE PLUG
21	27661	1	CONTROL BLOCK
22	69748	2	ADAPTER
			-10 SAE x 3/8 MALE NPT
23	03971	2	COUPLER SET
24	05847	1	COMBINER KNOB
25	—	—	NO ITEM
26	05843	1	ON/OFF SPOOL, RH
27	27931	4	CAPSCREW
28	04539	4	WASHER
29	28045	1	DECAL, CIRCUIT 1 OR 2
30	35677	1	DECAL, TO START
31	51297	1	DECAL, CHECK HYDRAULICS





# **STANLEY®**

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