HYDRA-TECH PUMPS

Operation and Maintenance Instructions
Parts List

HT74DJV Power Unit

HYDRA-TECH PUMPS
167 Stock Street, Nesquehoning, PA 18240 **Phone:** 570-645-3779 **Fax:** 570-645-4061
Website: www.hydra-tech.com **E-Mail:** htpump@hydra-tech.com

Hydra-Tech Pumps
Hydraulic Power Unit
Model HT74DJV

Specifications:

Dimensions: OAL: 135", OAW: 70", OAH: 79"

Weight (Dry): (Skid) 2580 lbs. [1170 Kg]
Weight w/Hyd. Oil: 3390 lbs. [1537 kg]

Engine: John Deere 4045TFC03 liquid cooled diesel **(EPA Tier 4 Final)**

Horsepower: 74 @ 2300 RPM.

Fuel Capacity: 82 gallons (77 usable)

Fuel Consumption: Approx. 3 gal/hour @ full load

Engine Controls: LOFA Can Plus 750

- Variable speed throttle
- Emergency shutdown system for high engine temp. low oil pressure, low hyd. oil level, high hyd. oil temp.
- Digital Display for all engine functions

Hydraulic Output: Variable maximum 29 GPM

Operating Pressure: Maximum 2900 PSI.

Hose Ports: Pressure: 1" male quick disconnect coupler, wing nut style.
Return: 1" male quick disconnect coupler, wing nut style.
Case Drain: 1/2" NPT port (optional)

Hyd. Oil Capacity: 50-gallon reservoir (approx. 48 gallons oil)

Filters:
Fuel: (John Deere) Primary RE551507, Final RE551508
Engine Oil: (John Deere) RE504836
Air: (Donaldson) ECC105003
Hydraulic Oil: (Zinga) SE10, (NAPA) 1759, (Donaldson) P550388

IMPORTANT SAFETY INFORMATION

SAFETY ALERT SYMBOL

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

⚠DANGER

Immediate hazards which, if not avoided, WILL result in severe injury or death.

⚠WARNING

Hazards which, if not avoided, COULD result in severe injury or death.

⚠CAUTION

Hazards or unsafe practices which, if not avoided, MAY result in injury or property damage.

⚠WARNING

Before operating this tool, see the safety information and operating instructions in the Operation Manual.

⚠WARNING

Do not operate the pump if the impeller blades are exposed. After assembly, install the inlet screen before operating the pump.

Failure to observe this warning could result in severe injury or death.

⚠WARNING

Do not inspect, adjust, or clean tool when it is connected to a power source. Accidental startup could result in serious injury.

⚠WARNING

Skin injection hazard:

Oil under pressure easily punctures skin causing serious injury, gangrene or death. If you are injured by escaping oil, seek medical attention immediately.

- Do not use fingers or hands to check for leaks.
- Do not hold hose or couplers while operating the power source.
- Depressurize the hydraulic system before servicing.

IMPORTANT SAFETY INFORMATION

⚠WARNING

Wear eye protection when operating or servicing this tool.

Failure to wear eye protection could result in serious eye injury from flying debris or hydraulic oil.

⚠WARNING

Do not exceed the maximum hydraulic flow, pressure relief or back pressure listed in the Specifications and Parts manual.

Failure to observe this warning could result in severe injury or death.

⚠WARNING

Do not disconnect tool, hoses, or fittings while the power source is running or if the hydraulic fluid is hot. Hot hydraulic fluid could cause serious burns.

⚠CAUTION

Hydraulic oil can cause skin irritation.

- Handle the tool and hoses with care to prevent skin contact with hydraulic oil.
- In case of accidental skin contact with hydraulic oil, wash the affected area immediately to remove the oil.

Failure to observe these precautions may result in injury.

IMPORTANT

Do not reverse hydraulic flow. Operation with hydraulic flow reversed can cause tool malfunction. Connect the supply (pressure) hose and return (tank) hose to the proper tool ports.

IMPORTANT

Procedure for disconnecting hydraulic hoses, fittings or components:

1. Move the flow lever on the hydraulic power source to the OFF position.
2. Stop the power source.
3. Follow the sequence under Disconnecting Hoses to prevent pressure buildup. In case some pressure has built up, loosen hoses, fittings or components slowly.

HYDRAULIC POWER UNIT SAFETY PRECAUTIONS

Hydraulic Power Unit operators and maintenance personnel must always comply with the safety precautions given in this manual and on the stickers and tags attached to the power unit and hose. These safety precautions are given for your safety. Review them carefully before operating the pump and before performing general maintenance or repairs. 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.

All Hydra-Tech hydraulic power units will provide safe and dependable service if operated in accordance with the instructions given in this manual. Read and understand this manual and any stickers and tags attached to the power unit and hoses before operation. Failure to do so could result in personal injury or equipment damage.

• Operator must start in a work area without bystanders. The operator must be familiar with all prohibited work areas such as excessive slopes, dangerous terrain conditions, and confined spaces.
• Establish a training program for all operators to ensure safe operations.
• Do not operate the power unit unless thoroughly trained or under the supervision of an instructor.
• Always wear safety equipment such as goggles, head protection, hearing protection, and safety shoes at all times when operating the power unit.
• Do not inspect or clean the hydraulic pump or hydraulic tool while the hydraulic power source is engaged. Disconnect both hydraulic hoses before attempting to clean or inspect the pump or hydraulic tool. Accidental engagement of the power unit can cause serious injury.
• Always disconnect the battery cable before attempting any repair.
• Do not operate this power unit without first reading and understanding the Operating Instructions.
• Never operate the power unit near energized transmission lines. Know the location of buried or covered services before starting work.
• Do not wear loose fitting clothing when operating the power unit. Loose fitting clothing may get entangled with the power unit and cause serious injury.
• Supply hoses must have a minimum working pressure rating of 3000 psi/204 bar.
• The hydraulic circuit control valve must be in the “OFF” position when coupling or uncoupling the hydraulic hoses. Wipe all couplers clean before connecting. Failure to do so may result in damage to the quick couplers and cause overheating. Use only lint-free cloths.
• Be sure all hose connections are tight.
• Do not operate the power unit at oil temperatures above 140° F/60° C. Operation at higher oil temperatures can cause operator discomfort and may cause damage to the equipment.
• Do not operate a damaged, improperly adjusted, or incompletely assembled power unit.
• To avoid personal injury or equipment damage, all power unit repair, maintenance and service must only be performed by authorized and properly trained personnel.
• Do not exceed the rated limits of the power unit or use the power unit for applications beyond its design capacity.
• Always keep critical power unit markings, such as labels and warning stickers legible.
• Always replace parts with replacement parts recommended by Hydra-Tech Pumps.
• Check fastener tightness often and before each daily use.
• **NEVER** put your hands or any other body part into the area near the cooling fan and belts while the power unit is running.
• Only lift the power unit by the lifting bracket and be sure the lifting equipment is suitable for the rated weight of the power unit. Do not lift with hydraulic hoses attached.
• Do not touch the engine, exhaust piping, or muffler – these surfaces are hot and will burn you. Keep any flammable material away from these surfaces.
• When moving power units mounted on trailers always insure that the towing vehicle is suitable for the weight of the power unit. Always insure that the safety chains are securely fastened to the tow vehicle and the trailer lights are operating properly.
• DO NOT OPERATE THIS POWER UNIT NEAR FLAMMABLE LIQUIDS OR FLAMMABLE VAPORS OR GASES.

POWER UNIT OPERATION

PREOPERATION PROCEDURES

CHECK HYDRAULIC EQUIPMENT BEING OPERATED

1. Make sure the power unit hydraulic flow and pressure are appropriate for the equipment being powered. Flow and/or pressure in excess of the maximum rated flow of the equipment will damage the equipment.

CONNECTING HYDRAULIC HOSES

1. Wipe all hose couplers with a clean lint free cloth before making connections. Do not connect pressure to the return port.
2. Connect the hoses from the power unit to the couplers on the equipment being operated. It is a good practice to connect return hose first and disconnect it last to minimize or avoid trapped pressure within the pump motor.

    Note: If uncoupled hoses are left in the sun, pressure increase inside the hoses might make them difficult to connect. Whenever possible, connect the free ends of the hoses together.

3. Make sure the hydraulic hoses are connected to ensure that the flow is in the proper direction.

POWER UNIT OPERATION OVERVIEW

1. Observe all safety precautions.
2. Fill hydraulic reservoir to sight glass with specified hydraulic fluid. Use only biodegradable oil in any environmentally sensitive area.
3. Check engine fluid levels and fill engine fuel tank.
4. Connect hydraulic hoses from the power unit to the equipment being operated. **Be sure to completely connect the hydraulic couplings or damage will result to the hydraulic system.** Insure that the pressure and return hoses are connected to the correct port. Always be sure the connections are clean before assembling.
5. Turn hydraulic control valve counter-clockwise until the handle rotates freely. This de-energizes the hydraulic system to permit easy starting of the engine and also allows the operator to turn off the pump without stopping the engine.
6. Insure that any equipment being powered by the power unit is turned off so it will not start unexpectedly.
7. Start the engine and allow it to warm up for a few minutes before engaging the hydraulic system.
8. Turn the hydraulic control valve clockwise until it stops. This energizes the hydraulic system. **Do not attempt to use the hydraulic control valve to regulate hydraulic pressure – this valve is on/off only.**
9. Engine speed may be adjusted to provide appropriate flow to the equipment being operated. **Never exceed recommended operating pressure!**
10. To stop the power unit you must first de-energize the hydraulic system (turn hydraulic control valve counter-clockwise).
11. To stop the hydraulic power unit slow the engine down before stopping the engine.
12. Always recheck the level of the hydraulic fluid. Filling the hydraulic hoses during initial start-up will cause the hydraulic fluid level to drop slightly.

COLD WEATHER OPERATION

If the power unit is to be used during cold weather, preheat the hydraulic fluid by operating the power unit at low speed. When using the normally recommended fluids, fluid should be at or above 50°F/10° C (400 ssu/82 centistokes) before use. Damage to the hydraulic system or equipment seals can result from use with fluid that is too viscous or thick.

EQUIPMENT PROTECTION & CARE

• Make sure all couplers are wiped clean before connection.
• The hydraulic circuit control valve must be in the “OFF” position when coupling or uncoupling the hydraulic hoses. Failure to do so may result in damage to the quick couplers and cause overheating of the hydraulic system.
• Make sure the circuit PRESSURE hose and RETURN hose are connected correctly. Do not reverse circuit flow. This can cause damage to internal seals of equipment being powered.
• Always replace hoses, couplings and other parts with replacement parts recommended by Hydra-Tech Pumps. Supply hoses must have a minimum working pressure rating of 3000 psi/204 bar.
• Do not exceed the rated flow or pressure (refer to Specifications in this manual for correct flow rate and pressure). If specifications are exceeded, rapid failure of the internal seals may result.
• Always keep critical labels and markings, such as warning stickers and tags legible.
• Power Unit repair should be performed by experienced personnel only.
• Make certain that the recommended relief valves are installed in the pressure side of the system.

Operating Instructions

HT74DJV Power Unit

BEFORE STARTING:

1. Fill oil reservoir to the top of the sight glass with a good grade of hydraulic oil with anti-wear additives. Use oils recommended below (minimum viscosity of 150SSU @ 100 Deg. F. (38 Deg. C.) or their equivalent:

Pennzoil	Hydraulic Oil No. 46
Texaco	Rando HDAZ
Shell	Tellus Hydraulic Oils
Mobil	D.T.E. 20 Series
Chevron	EP Hydraulic Oils
Exxon	Univis N Hydraulic Oils

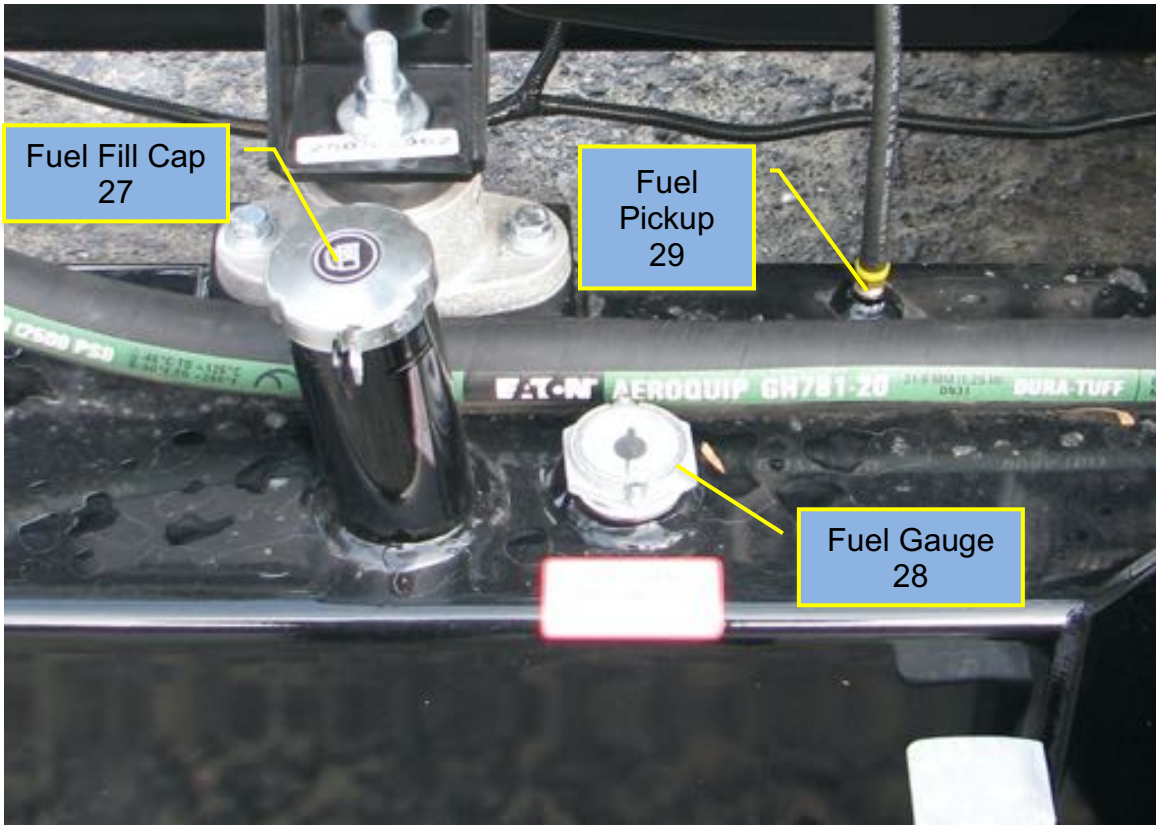
Note: When using this equipment in environmentally sensitive areas we recommend using biodegradable oil such as Chevron Clarity or Exxon Univis Bio 40.

2. Fill fuel tank with clean diesel fuel.

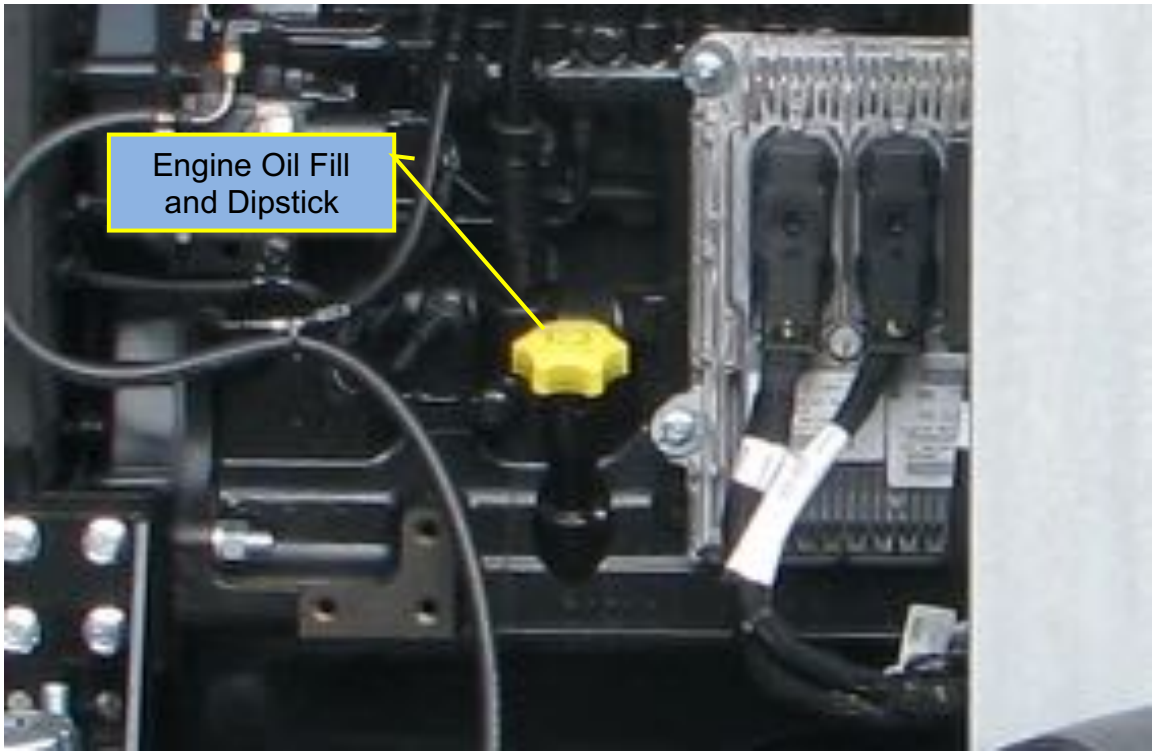
3. Check engine oil (See engine instruction manual for correct oil for each climate).

4. Connect hydraulic hoses from power unit to submersible pump.

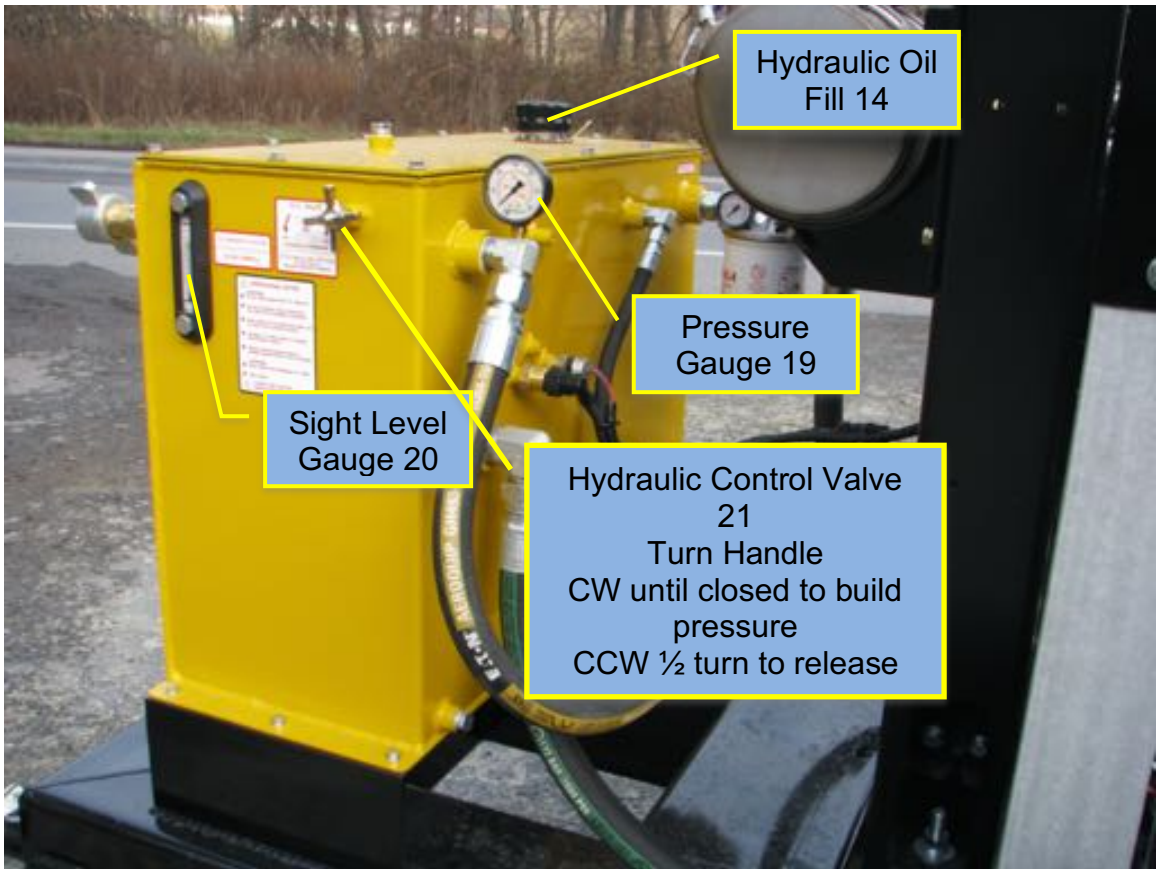
Be sure to completely connect the hydraulic couplings or damage will result to the hydraulic system and the submersible pump. Pressure and return hoses cannot be connected incorrectly because the couplings are incompatible. **Always be sure the connections are clean before assembling.**



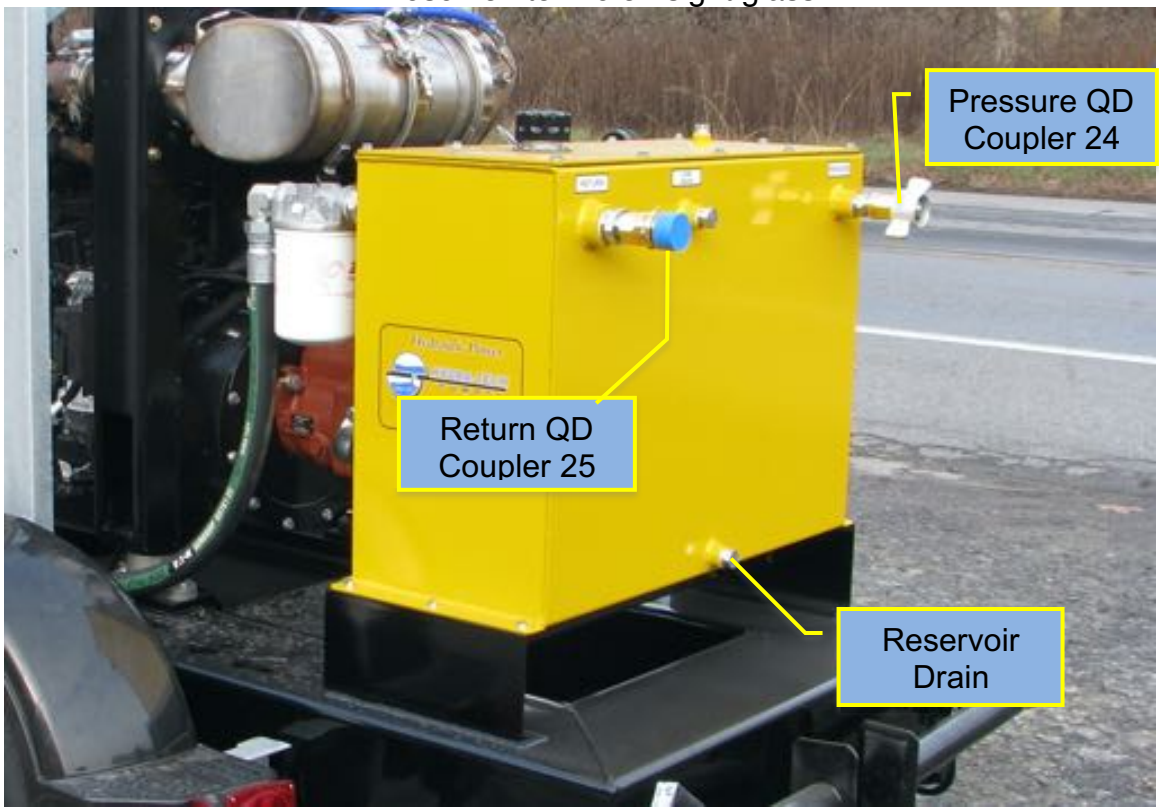
Fill Tank with Clean Diesel Fuel



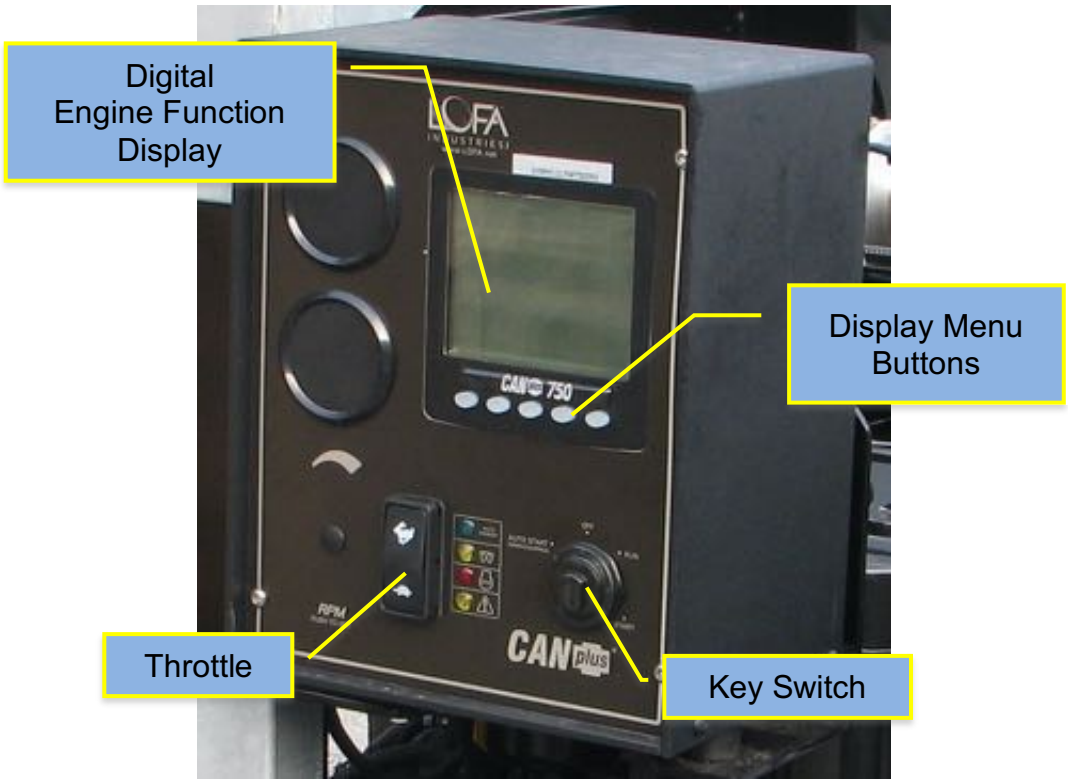
Check Engine Oil



Fill reservoir to line on sight glass



Connect hydraulic hoses



Engine Panel (See Lofa manual for more information)

Connections on back of panel

STARTING PROCEDURE: (Manual Mode)
(For more information on the engine controls see the LOFA Manual)

1. Place submersible pump away from the power unit for a dry test on land.

2. Start engine (Turn key switch to Start/Run position) and let warm up for one or two minutes at 800 RPM.

3. Turn the Hydraulic Control Valve (#21) to the **ON** position. This energizes the hydraulic system.

4. Check submersible pump to be sure it is operating.

5. De-energize the hydraulic system (Turn the Hydraulic Control Valve to the **OFF** position), connect the discharge hose to the pump and lower into the water.

6. Energize the hydraulic system again and adjust engine speed to achieve the desired pump output.

⚠ **NOTE: If maximum pump performance is not required, it is best to slow engine speed to meet the needed flow. This saves fuel and extends the life of the equipment.**

⚠ **Do not increase engine speed once you reach 2900 PSI operating pressure.**

STOPPING PROCEDURE:

1. To stop the submersible pump, de-energize the system (Turn the Hydraulic Control Valve to the **OFF** position).

2. To stop the engine, slow down to idle speed and turn the key switch to the **OFF** position.

⚠ **CAUTION:** ***Be sure the key switch is in the OFF position and the key removed before attempting any service work.***

STARTING PROCEDURE: (Auto Mode)

(For more information on the engine controls see the LOFA Manual)

1. Connect float level switches to the proper connections on the bottom of the control panel.

2. Make sure that the level switches are correctly installed in the sump and the submersible pump is connected properly and submerged.

3. Make sure the desired engine speed is set using the Manual Starting method above then shut the unit off without slowing the engine so that the engine will start and run at the set speed in Auto mode.

4. Turn the Key Switch to the Auto Start position to operate in the Auto mode.

⚠ **CAUTION:** ***Stay clear of the unit and do not attempt any work on the unit when it is in the AUTO mode. Serious injury could result! Only access the control panel in this mode. Be sure the key switch is in the OFF position and the key removed before attempting any service work.***

MAINTENANCE INSTRUCTIONS

HT74DJV Power Unit

ENGINE:

Maintain engine as per John Deere Diesel instruction booklet provided with each unit.

HYDRAULIC PUMP: (#5)

1. The hydraulic pump is a Kawasaki pressure compensated piston unit capable of giving a long and dependable service life as long as the hydraulic oil is kept clean and the filters are changed at regular intervals.

2. To check the hydraulic output, energize the system with the hydraulic pump high-pressure port plugged (if equipped with valve quick disconnect couplers, simply disconnect the hydraulic hose) and read the pressure gauge supplied on the unit. This reading should always be above 2000 PSI at full throttle (the reading will normally be between 2500-3000 PSI).

⚠ **NOTE* Maximum flow and pressure points are adjustable. The settings above represent factory set points at time of delivery. Before making any volume or pressure adjustments to this unit contact Hydra-Tech Pumps.**

3. Pump is not field-serviceable. If pump failure is suspected, be sure to check suction strainer, oil level in the reservoir and the relief valve before determining the hydraulic pump is bad.

4. If service is required, consult nearest Kawasaki Hydraulics Dealer or Hydra-Tech Pumps.

SUCTION STRAINER: (#7)

1. The suction strainer is mounted inside the reservoir and may be removed for cleaning by draining the oil from the reservoir and removing the top cover. Strainer may then be removed and cleaned.

2. Clean the strainer with solvent or kerosene and dry with compressed air, then re-install, making sure dirt does not enter the reservoir. Make certain the pipe connection is tight.

3. The strainer should be removed and cleaned when cleaning the reservoir (every 1000 hours).

SIGHT GLASS/TEMPERATURE GAUGE: (#20)

1. Always maintain the hydraulic oil level to the top of the sight glass

2. Be sure the operating temperature never exceeds 170 degrees F (77 degrees C). **If the temperature becomes excessive**, shut down the system and let cool. Check for insufficient oil in reservoir, kinked hydraulic hoses, inadequate ventilation of the reservoir or oil cooler, clogged return line filter (gauge on filter will read above 50 PSI), or blocked hydraulic circuit **(e.g. submersible pump impeller jammed or hydraulic hose couplings improperly connected)** causing excess pressure to open the relief valve and dump hot oil into the reservoir.

HYDRAULIC CONTROL VALVE (H.C. Valve): (#21)

1. The control valve is mounted on the side of the reservoir along side the sight glass.

2. The function of the control valve is to energize the relief valve by means of closing off the vent port, in turn, creating pressure in the hydraulic system.

3. The control valve should be almost maintenance free.

4. When checking the relief valve, check the control valve and tubing for leaks. Replace valve, tubing or tube fittings at the first sign of leakage.

FILLER CAP AND STRAINER: (#14)

1. The filler cap is mounted on top of the reservoir.

2. It is equipped with a strainer to prevent debris from entering the reservoir when filling. Keep clean at all times.

COLD OIL BY-PASS VALVE: (#26)

The cold oil by-pass valve allows cold oil to re-circulate into the reservoir until the oil is warm enough to pass through the cooler. No maintenance should be required on this valve.

HYDRAULIC OIL FILTER: (#17)

1. The hydraulic oil filter is located on the front of the oil reservoir. It has an indicator gauge mounted on the side that lets you know when to change the filter cartridge (or every 250 Hours).

2. When the system is in operation, notice the needle on the indicator. This should remain below 50 PSI when oil is warm. If this reading is above 50

PSI, the filter cartridge must be replaced. The cartridge is the "spin on" type.

3. Use only the exact replacement filter cartridges with 10-micron filtration.

4. Filter cartridges must be replaced when changing hydraulic oil in the reservoir.

5. If the hydraulic oil becomes emulsified or visibly dirty, change the oil and filter regardless of the indicator reading or service interval.

RESERVOIR:

1. The hydraulic oil reservoir is designed for maximum cooling characteristics and ease of maintenance.

2. The oil in the reservoir should be changed every 1000 hours of running time for maximum component life. The reservoir should be cleaned every 1000 hours.

3. The reservoir capacity is 50 U.S. gallons (189 liters).

4. A drain located at the lower rear of the reservoir allows easy removal of the hydraulic oil.

5. As always, keep dirt from entering the hydraulic system.

LOW OIL SHUTDOWN SWITCH: (#22)

The low oil shutdown switch is mounted on the front of the hydraulic oil reservoir (on units equipped with emergency shutdown packages). It will shut down the engine in the event of loss of hydraulic oil to protect against damage to the system.

HIGH OIL TEMP SHUTDOWN SWITCH: (#23)

1. The high hydraulic oil temperature shutdown switch is located on the front of the oil reservoir. It will shut down the engine in the event of overheating of the hydraulic oil to protect against damage to the system.

2. If the unit shuts down for this reason, let the unit cool down then check for and repair the cause of overheating the oil. Re-start and test the unit to make sure the hydraulic oil does not overheat.

HYDRAULIC OIL COOLER: (#1)

The hydraulic oil cooler is mounted on the front of the engine. The oil is cooled by the flow of air pulled through it by the engine fan. Be sure the cooler fins are kept clean at all times.

RELIEF VALVE: (#30)

1. The relief valve is mounted inside the reservoir and is the "remote vent" type.

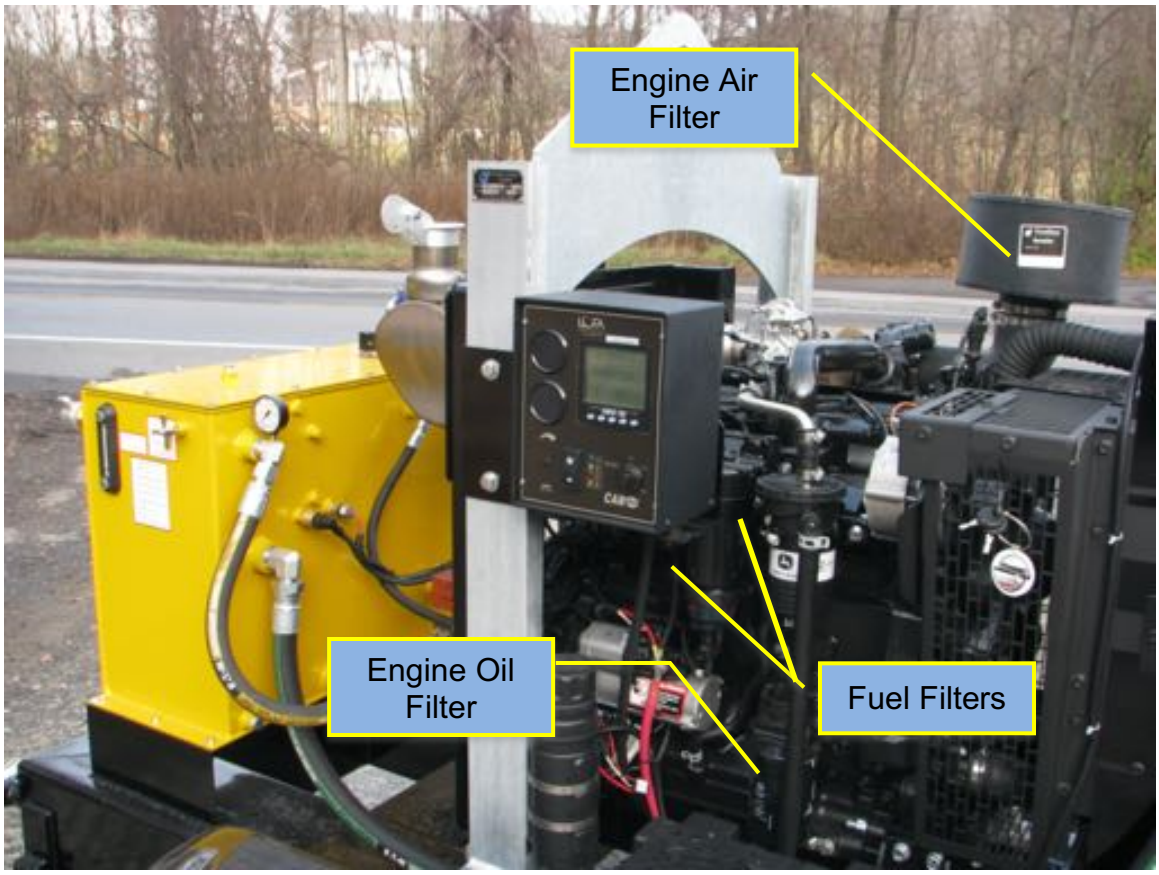
2. The valve is preset at 3000 PSI (204 Bar) to prevent damage to any hydraulic components in the system. Do NOT set valve above this pressure!

3. This valve is energized by the hydraulic control valve and re-circulates oil back to the reservoir when it is de-energized or subjected to pressures over 3000 PSI (204 Bar).

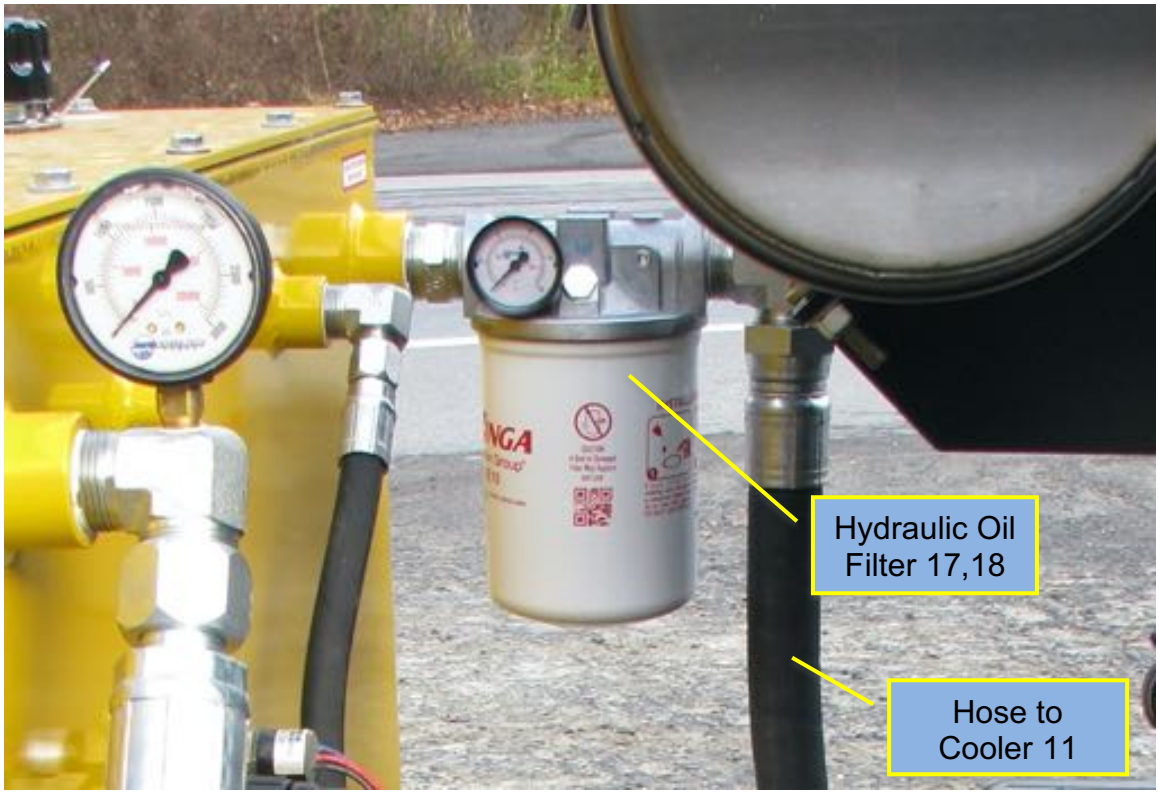
4. The relief valve pressure can be tested (up to the pressure setting of the hydraulic pump) by energizing the power unit without being connected to the submersible pump. (Hydraulic hoses disconnected from the power unit)

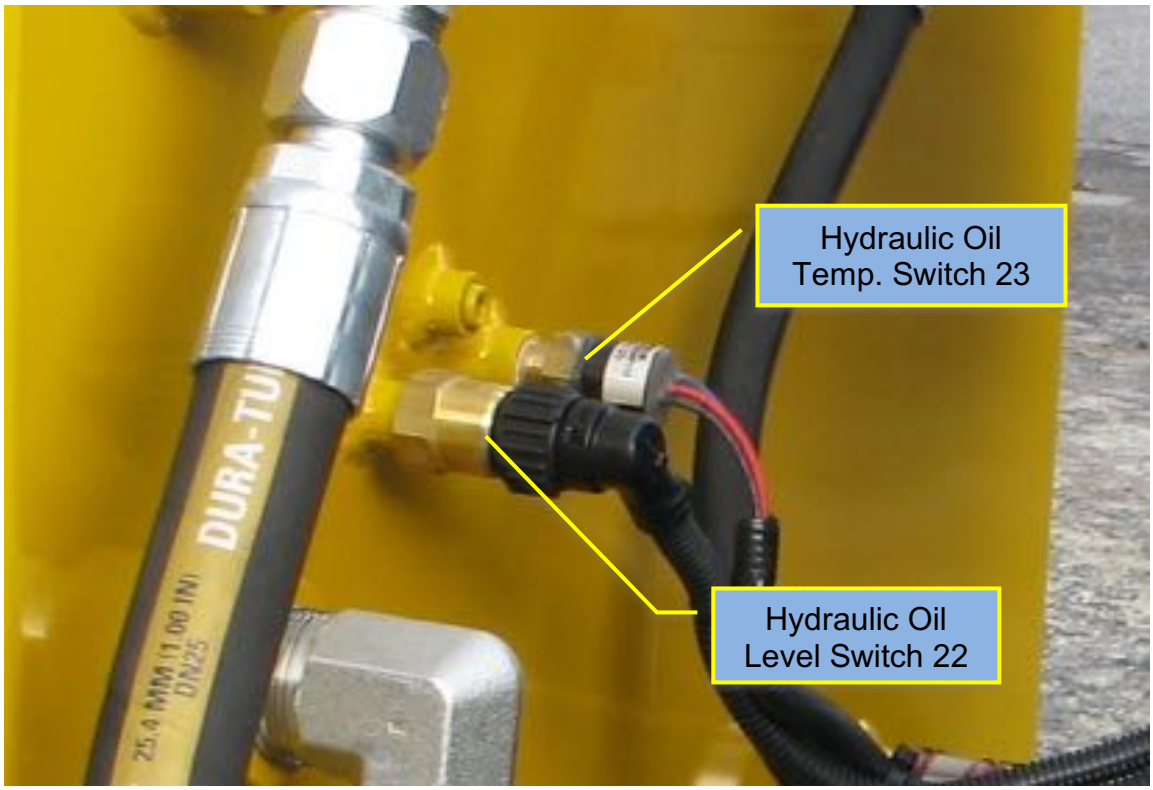
5. If reading is below 2300 PSI, remove cartridge from relief valve body and inspect for damage or debris caught between valve seats inside cartridge. If debris is found, remove it and re-install cartridge in valve body and check pressure reading again. If any visual damage is present (e.g. cracks, excessive wear, etc.), replace cartridge. The valve body should not need replacement unless visible damage such as cracks or damaged threads occurs.

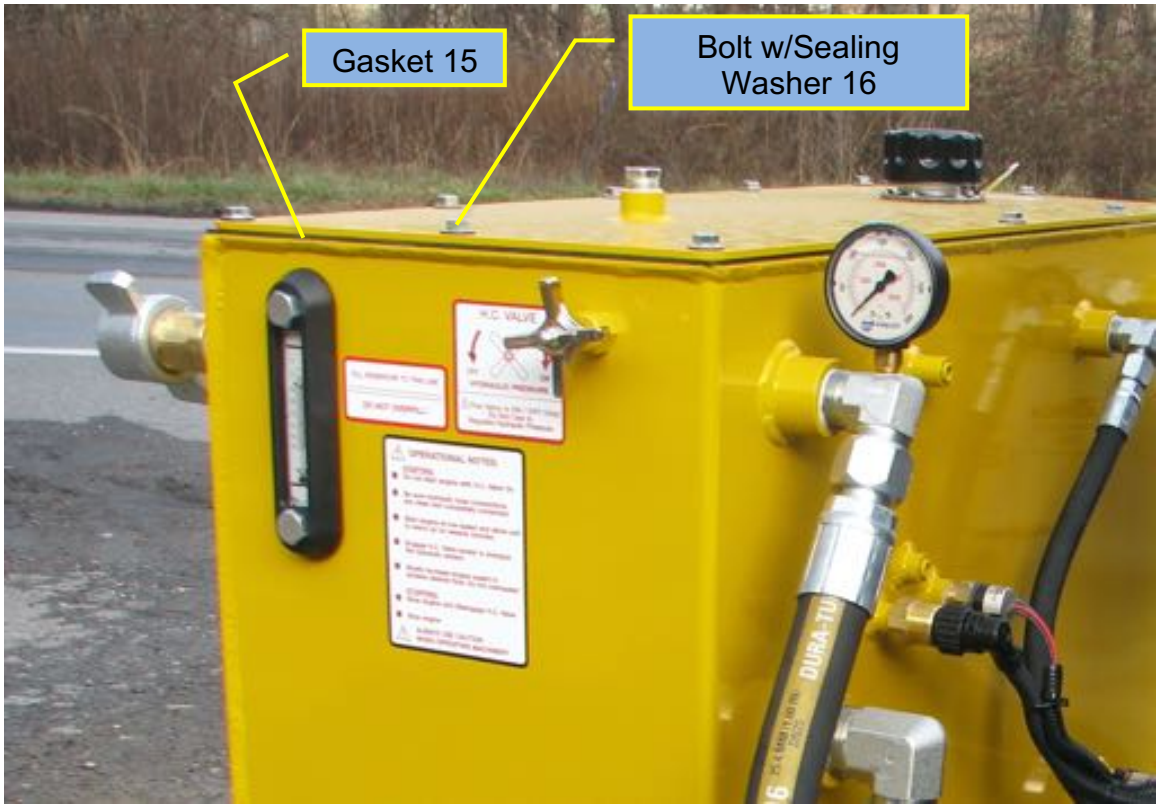
6. If the relief valve is suspected to be faulty and cannot be adjusted or cleaned to correct the problem, a replacement cartridge should be installed.

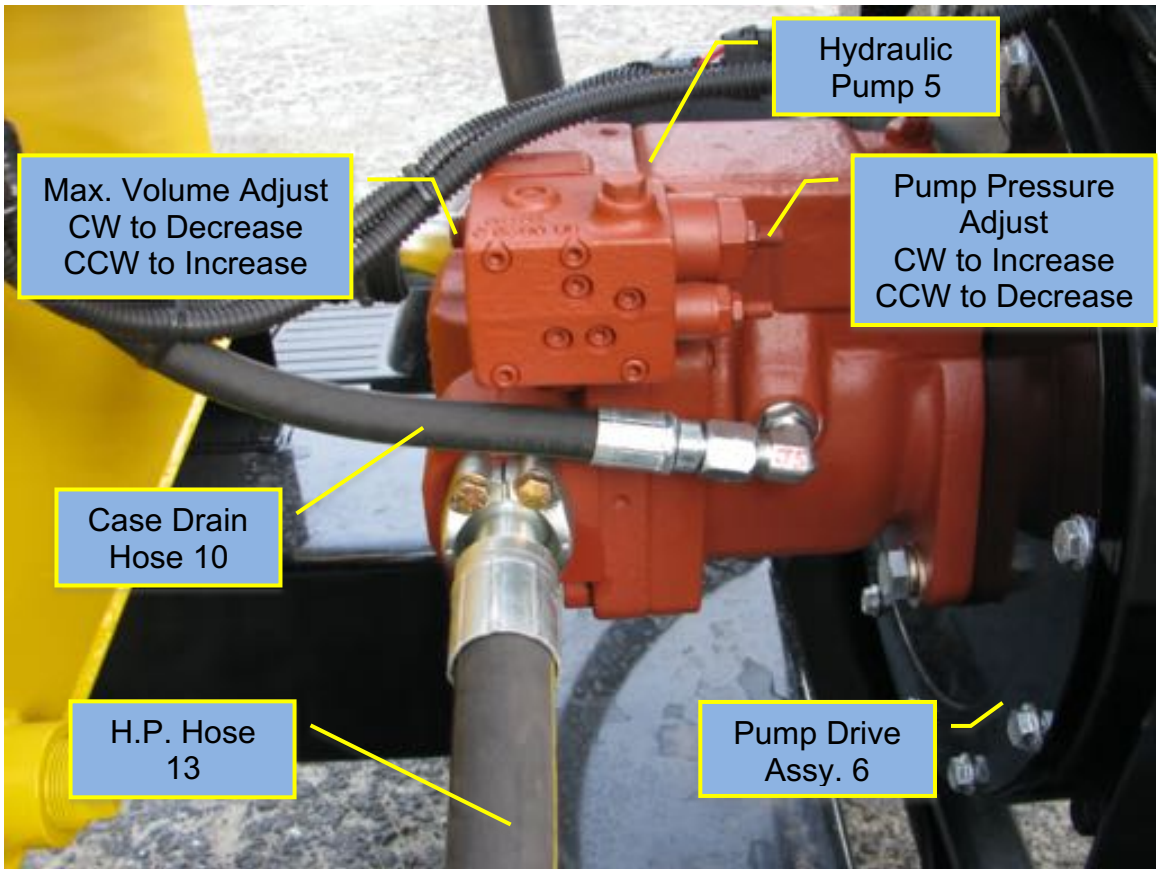


Service Points

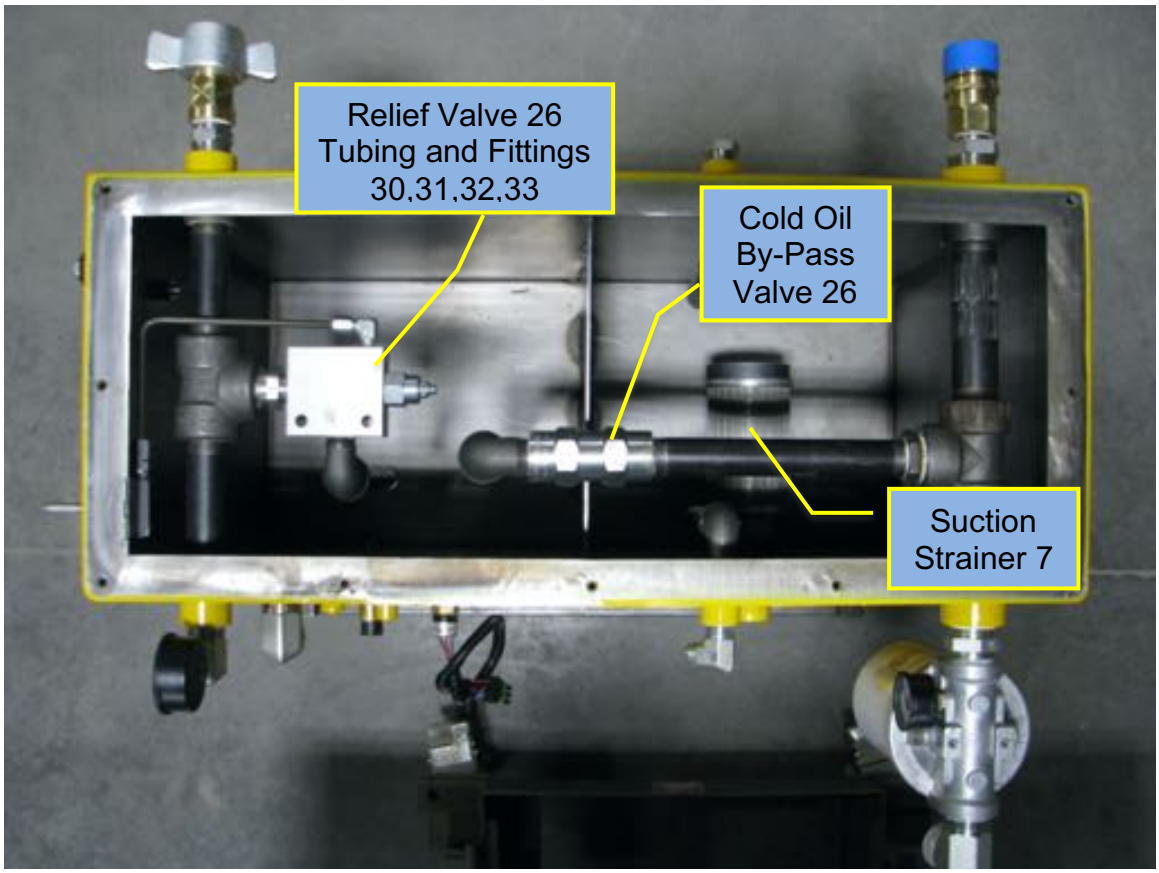


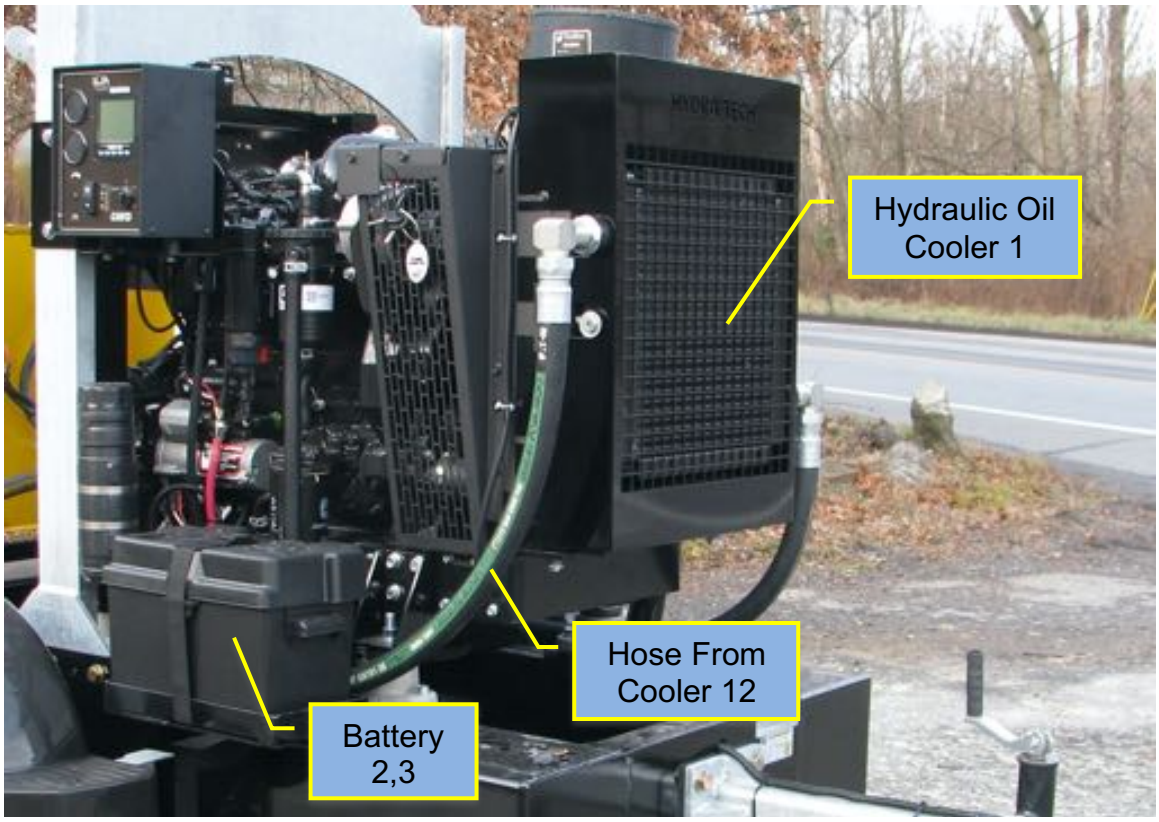

Hydraulic Oil
Temp. Switch 23
Hydraulic Oil
Level Switch 22

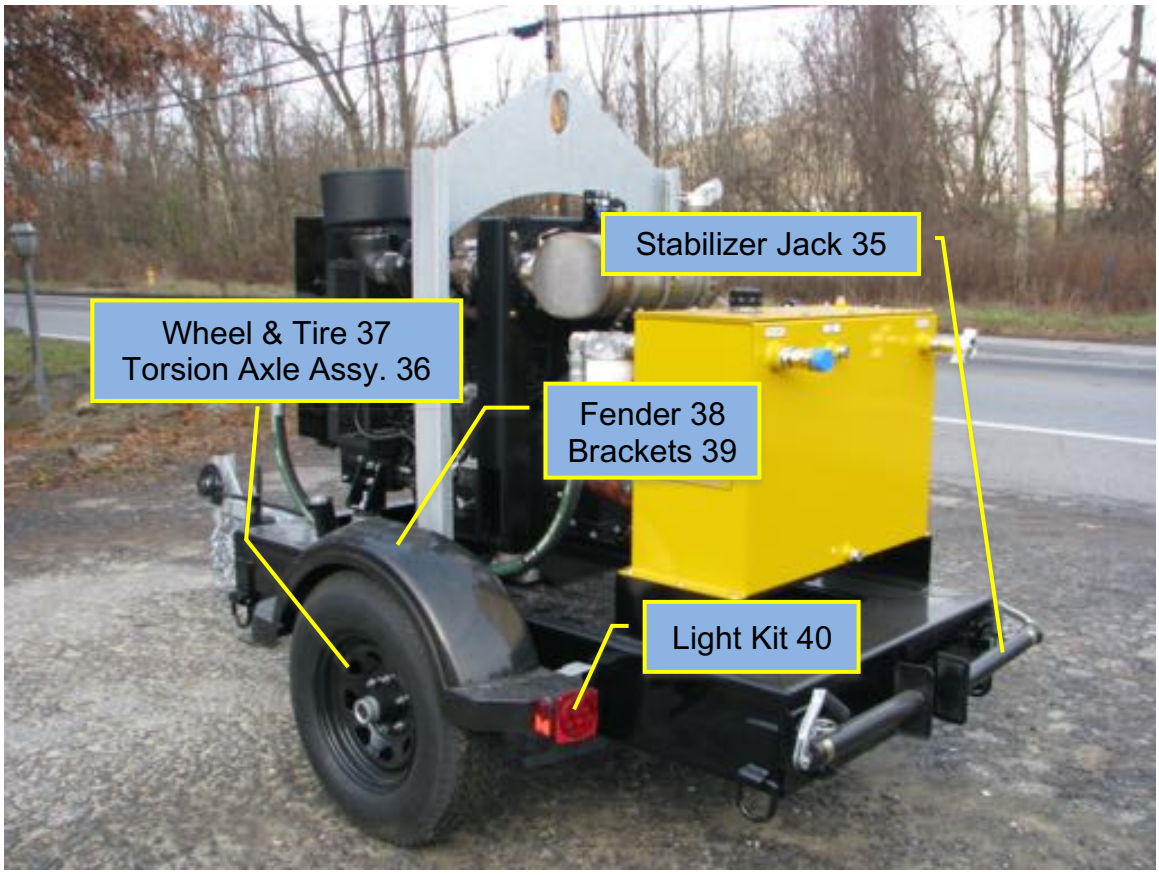

Gasket 15
Bolt w/Sealing
Washer 16

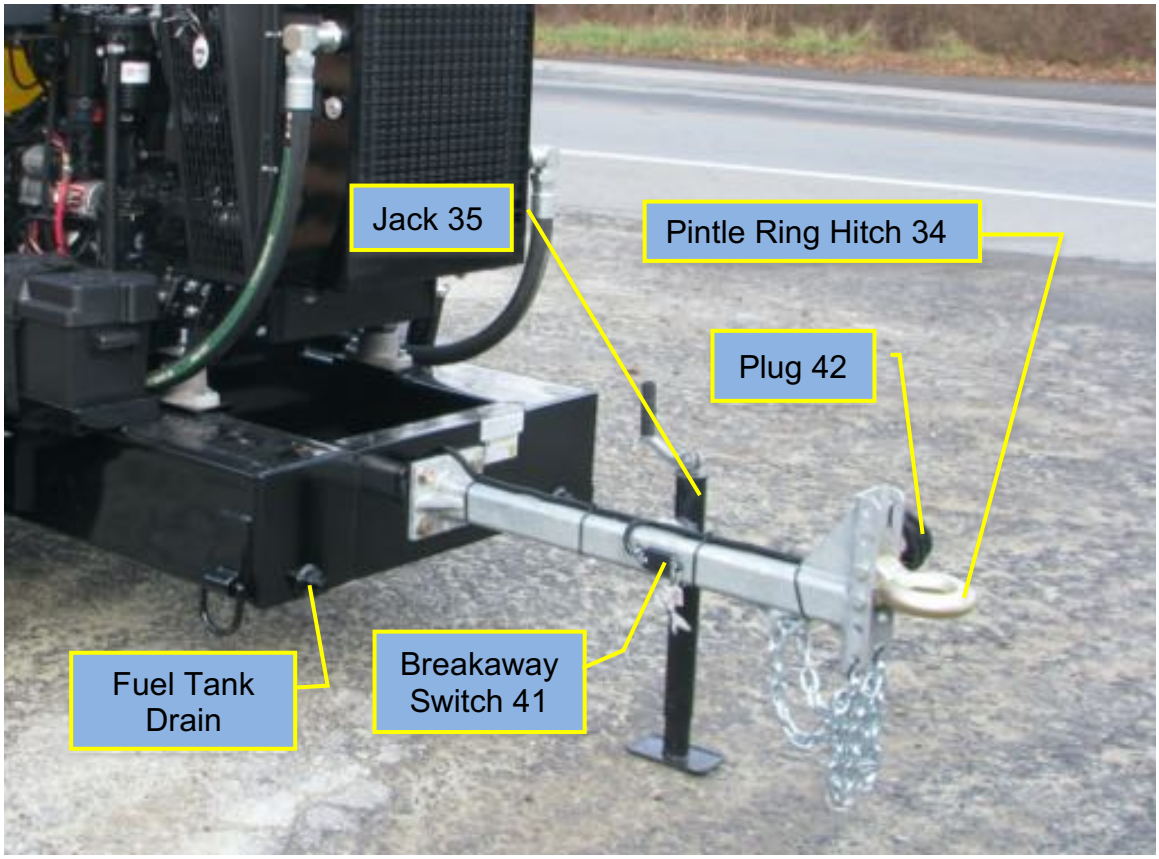


Hydraulic Pump


Relief Valve 26
Tubing and Fittings
30,31,32,33
Cold Oil
By-Pass
Valve 26
Suction
Strainer 7


Hydraulic Oil
Cooler 1
Hose From
Cooler 12
Battery
2,3


Stabilizer Jack 35
Wheel & Tire 37
Torsion Axle Assy. 36
Fender 38
Brackets 39
Light Kit 40


Jack 35
Pintle Ring Hitch 34
Plug 42
Fuel Tank
Drain
Breakaway
Switch 41

PARTS LIST

HT74DJV POWER UNIT

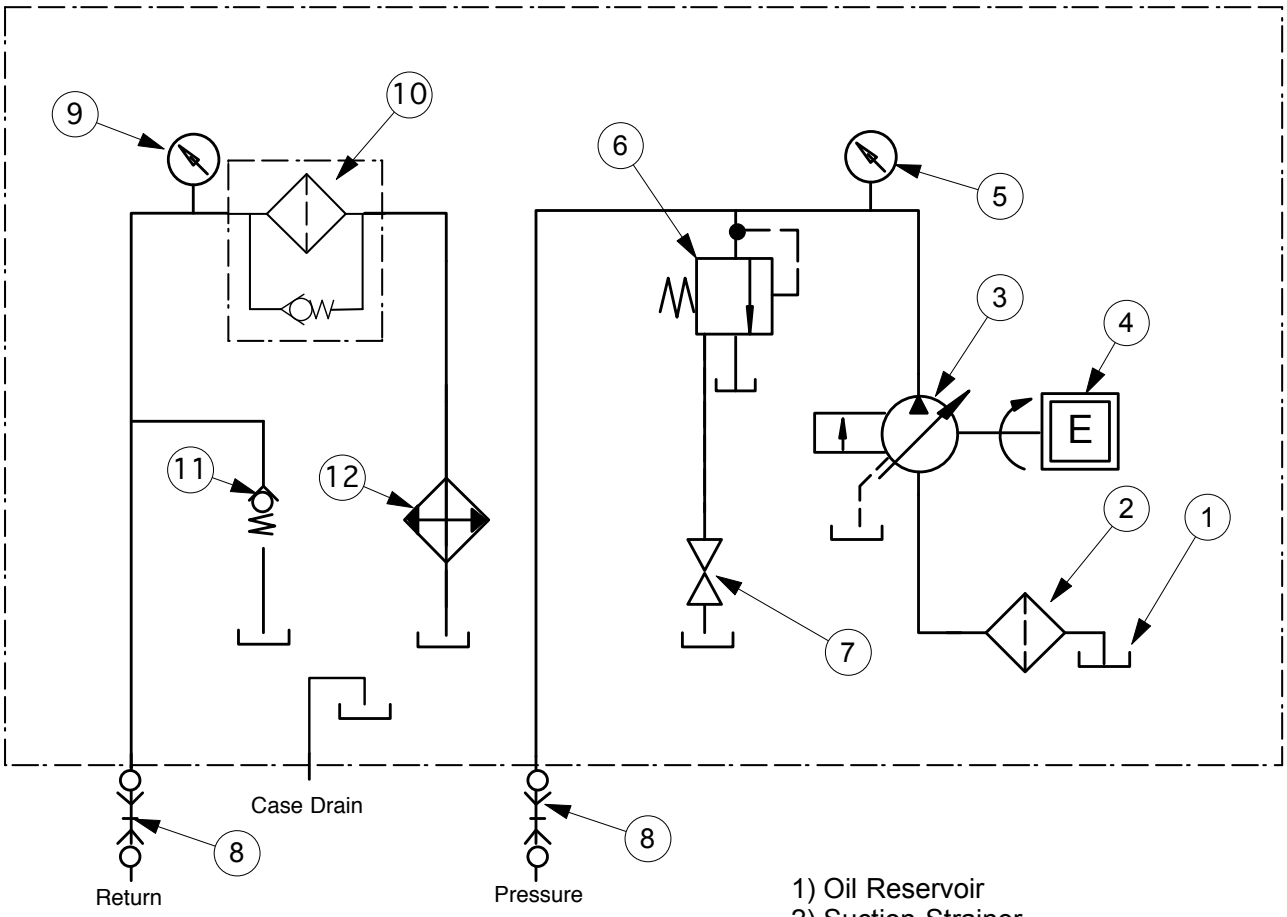
Always mention serial # of unit when ordering parts

Item	Part #	Description
1.	1141A	Hydraulic oil cooler
2.	6382	Battery (12 volt)
3.	9140	Battery box
4.	7112	Engine Isolator Mount (4 req)
5.	10714	Hydraulic pump, K3VL80
6.	11569	Hyd. pump drive assy.
7.	8048	Suction strainer
8.	10240	Oil suction hose
9.	4043	Hose clamp (2 req)
10.	11523	Case drain hose
11.	12697	Hyd. hose (filter to cooler)
12.	12698	Hyd. hose (cooler to reservoir)
13.	12832	Hyd. hose (pressure)
14.	1526	Filler cap/Strainer
15.	8029	Gasket, oil reservoir
16.	10465 10581	Hex head bolt (12 req) Sealing washer (12 req)
17.	8050 8051	Hydraulic oil filter (complete) Filter (spin-on cartridge only)
18.	8052	Gauge, filter wear
19.	8030	Pressure gauge, 3000 PSI
20.	1529	Sight level/Temperature gauge
21.	1521 1706	Control valve assy. Gasket for control valve
22.	8040A	Oil level shutdown switch
23.	7118	Oil temperature shutdown switch
24.	0184	1" female Q.D. coupler
25.	0182	1" male Q.D. coupler
26.	1311	Cold Oil By-Pass Valve
27.	8061	Fuel filler cap
28.	9209	Fuel gauge assy.
29.	6187	Fuel pickup tube
30.	1524	Relief valve (complete)
31.	1522	Tube fitting, 90°
32.	8159	1/4" tubing
33.	9385	Tube fitting

Trailer Parts

Item	Part #	Description
34.	8250	Pintle ring hitch
	8251	Ball hitch, 2-5/16" (optional)
35.	11514	Stabilizer Jack (3 req)
36.	11435	Torsion Axle Assy. w/electric brakes.
37.	6252B	Wheel & tire assy. (2 req)
38.	11513	Fender, plastic (2 req)
39.	11505L 11505R	Fender Bracket, LH Fender Bracket, RH
40.	0223LED	Trailer Lighting Kit
41.	2880	Breakaway Switch
42.	6381	Trailer Plug

HYDRAULIC SCHEMATIC
HT74DJV Power Unit



1) Oil Reservoir
2) Suction Strainer
3) Pressure Compensated Hydraulic Pump
4) Diesel Engine
5) Pressure Gauge
6) Pilot Controlled System Relief Valve
7) Vent Valve (H.C. Valve--On/Off)
8) Quick Disconnect Coupling
9) Return Filter Wear Indicator Gauge
10) Return Filter w/ By-Pass Valve
11) Cold Oil By-Pass Valve
12) Hydraulic Oil Cooler

HYDRA-TECH PUMPS

167 Stock Street, Nesquehoning PA 18240
Phone: (570) 645-3779 Fax: (570) 645-4061
Email: htpump@hydra-tech.com
Website: www.hydra-tech.com

Hydra-Tech Pumps Limited Warranty

Hydraulic Power Units Only

Hydra-Tech Pumps warrants to the original purchaser only that this product is free from defects in material and workmanship, and agrees to repair or replace, at Hydra-Tech's option, any part found to be defective within **12 months or 500 hours of use (whichever comes first) from the date of purchase.** This warranty is not transferable.

THIS WARRANTY DOES NOT COVER DAMAGES RESULTING FROM NORMAL WEAR, ABUSE, CARELESS HANDLING, IMPROPER INSTALLATION, LACK OF SERVICE / PROPER PREVENTATIVE MAINTENANCE, IMPROPER FUELING, IMPROPER APPLICATION AND IMPROPER OPERATION. WARRANTY COVERAGE IS NORMALLY NOT AVAILABLE FOR SUCH ITEMS AS: Tires, hoses, (fuel, oil, hydraulic oil) filters, batteries, and paint.

Hydra-Tech **does not** warranty engines – warranty claims on engines must be handled through your local engine distributor.

Any modification or alteration of this equipment will void the warranty. Any claim for warranty damage must be accompanied by digital photos of the defective part or parts, the serial number from the equipment, and a detailed description of the defect and possible causes. All warranty claims should be emailed to htpump@hydra-tech.com or mailed to Hydra-Tech Pumps, 167 Stock Street, Nesquehoning, Pennsylvania 18240 USA.

Power Units judged by Hydra-Tech Pumps to have been defective in workmanship or materials when shipped from the factory and within the warranty period will be either repaired or replaced at Hydra-Tech's option free of charge including motor freight both ways, within the continental United States.

HYDRA-TECH MAKES NO WARRANTY EXPRESSED OR IMPLIED INCLUDING WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE EXCEPT AS STATED ABOVE. HYDRA-TECH SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES ARISING OUT OF ANY BREACH OF WARRANTY AND WHETHER OR NOT ARISING OUT OF OR BASED ON HYDRA-TECH'S NEGLIGENCE, WHETHER ACTUAL OR IMPLIED, AND FOR DAMAGES TO ANY PROPERTY OR PERSON ARISING OUT OF THE PURCHASE OR THE USE, OPERATION OR MAINTENANCE OF THE EQUIPMENT. HYDRA-TECH SHALL NOT BE RESPONSIBLE FOR REPAIRS OR ALTERATIONS MADE BY OTHERS.

No person is authorized to make any representations or warranties on behalf of Hydra-Tech and no other person is authorized to alter or extend any of the conditions contained in this warranty.

Jan 2017