HYDRA-TECH PUMPS

Operation and Maintenance Instructions
Parts List

HT20DQP 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

HT20DQP Power Unit Specifications

Dimensions: OAL: 52” (132 cm), OAW: 37” (94 cm), OAH: 42” (107 cm)

Weight (Dry): 653 lbs. (296 kg)

Engine: Yanmar 3TNM74F-SAWM (EPA Tier 4 Final)

Horsepower: 22 @ 3000 RPM

Engine Controls:
- Variable speed throttle
- Shutdowns for low engine oil pressure, high engine temp., low hydraulic oil level and high hydraulic oil temp.
- Tachometer

Hydraulic Controls:
- Variable Flow Control
- Solenoid OFF/ON Switch
- Direct Reading Flow Meter

Hydraulic Output*: Variable maximum 8 GPM (30 LPM)

Operating Pressure*: Maximum 2500 PSI (170 Bar)

Hose Ports: (Pressure and Return) 1/2" NPT (1/2” HTMA QD’s)
(Case Drain) 3/8” NPT (3/8” HTMA QD)

Hydraulic Oil Capacity: 9 gallons (34Liters)

Fuel Capacity: 9 gallons (34Liters)

Engine V Belt: Yanmar 25132-003500
Engine Oil Filter: Yanmar 119305-35151
Water Separator Filter: Yanmar 171081-55910
Final Fuel Filter: Yanmar 129053-55670
Air Filter: Yanmar 119655-12560

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

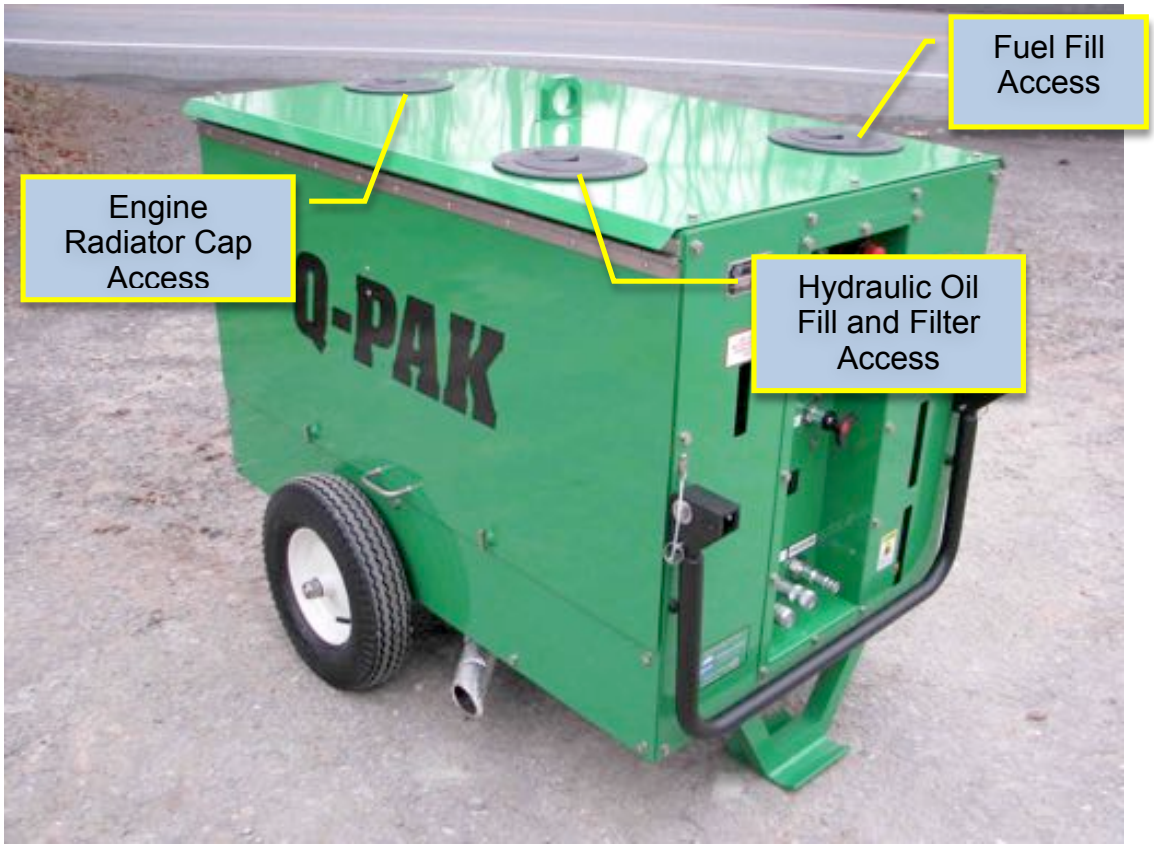
1. Observe all safety precautions.
2. Fill hydraulic reservoir to sight glass with specified hydraulic fluid. Use only biodegradable oil in any environmentally sensitive area.
3. Check engine fluid levels and fill engine fuel tank.
4. Connect hydraulic hoses from the power unit to the equipment being 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.



Access Hatches (#34)

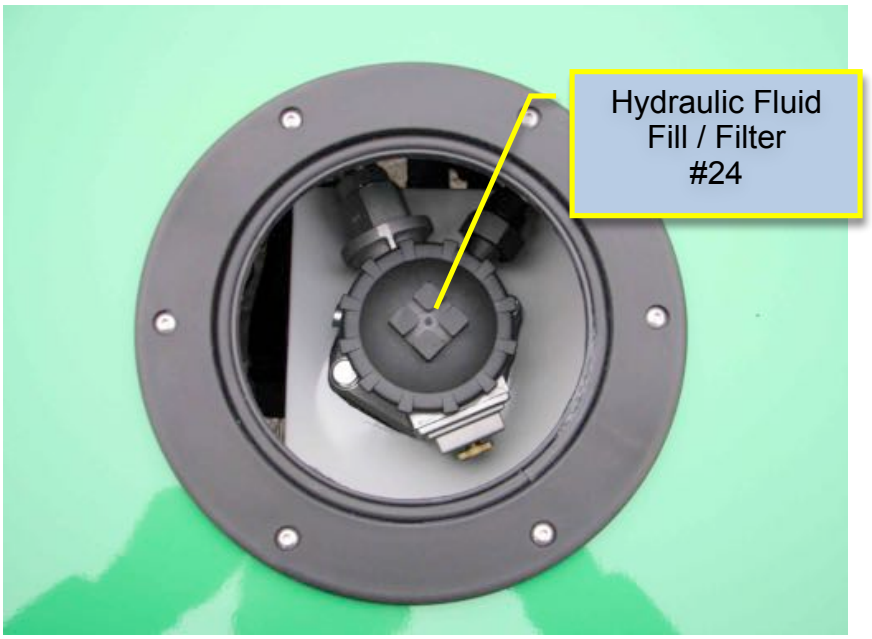
Handling

Operating Instructions

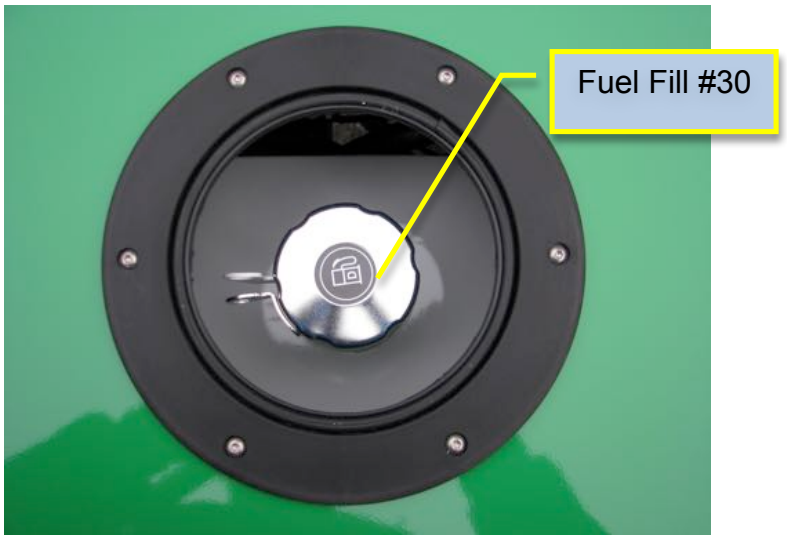
HT20DQP Power Unit

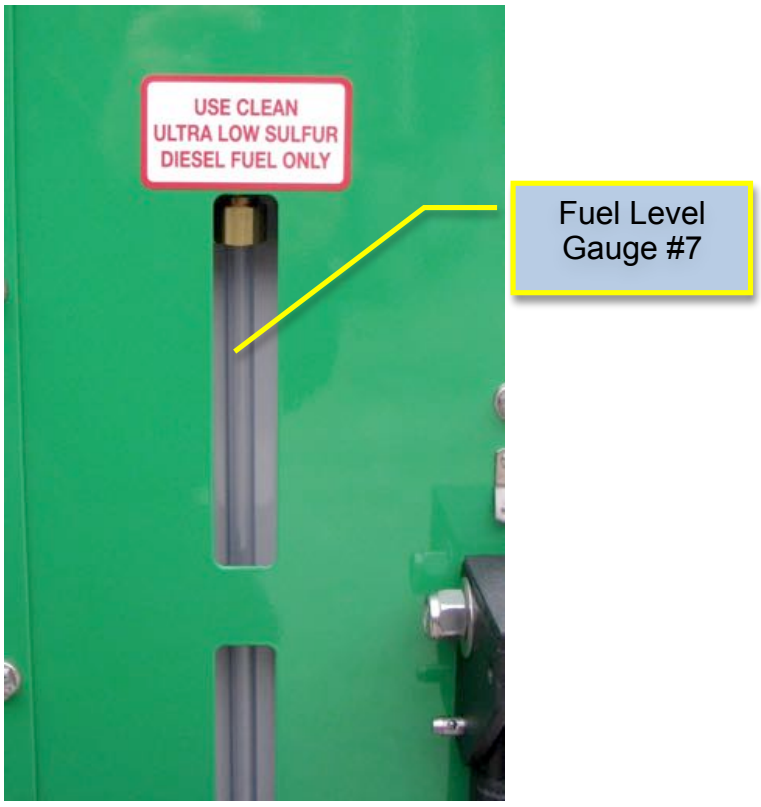
BEFORE STARTING:

1. Fill reservoir to the top of the sight glass with a good grade biodegradable hydraulic oil with anti-corrosion additives such as Sunvis 646 or equivalent.

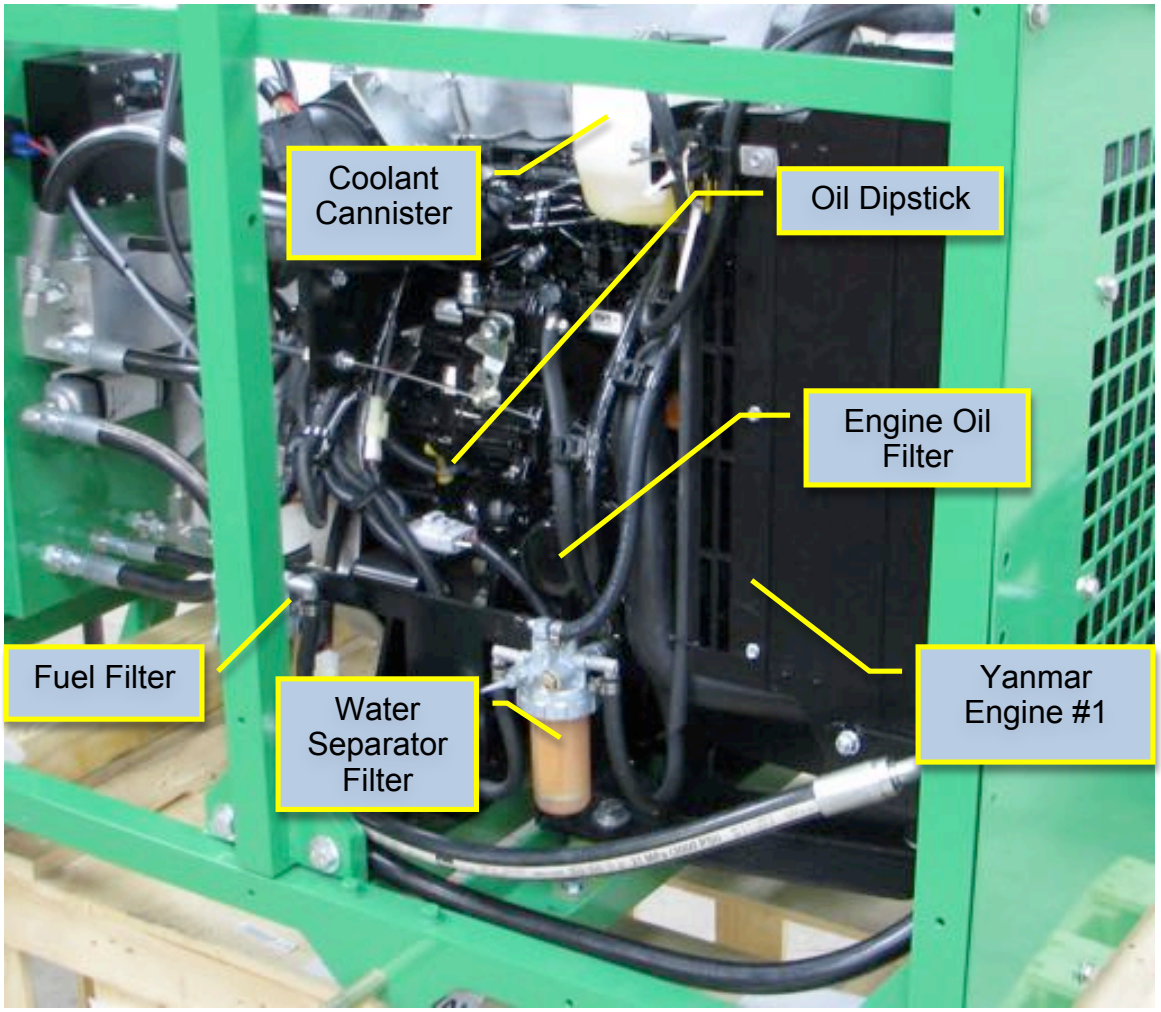


2. Fill fuel tank with clean diesel fuel as per engine manufacturers recommendations. (See Engine Manual)





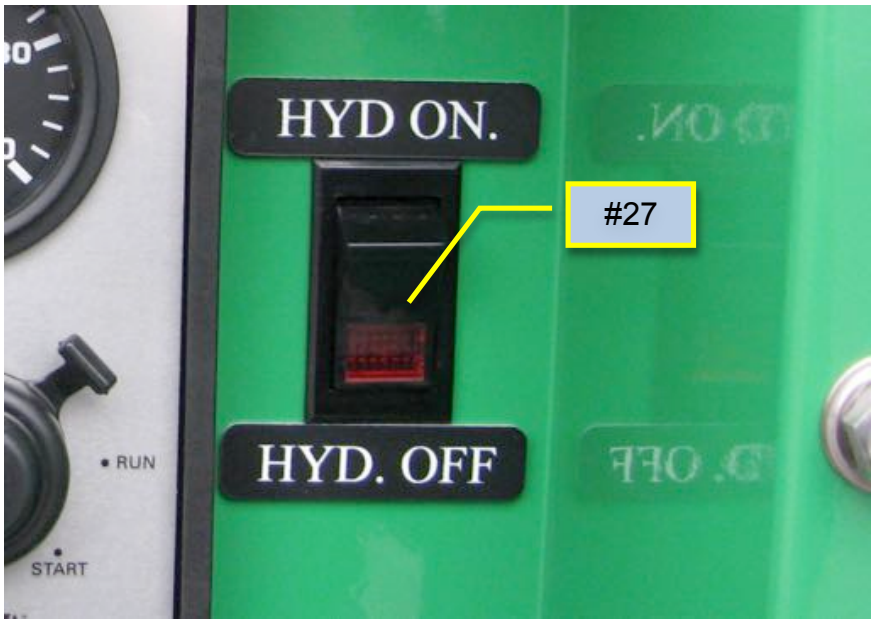
3. Check engine oil (See engine instruction manual for correct oil for each climate).



4. Check engine coolant level. The level in the cannister should be between MIN and MAX level points. If coolant is required use a 50/50 mixture of ethylene glycol and fresh water (distilled water is preferred).

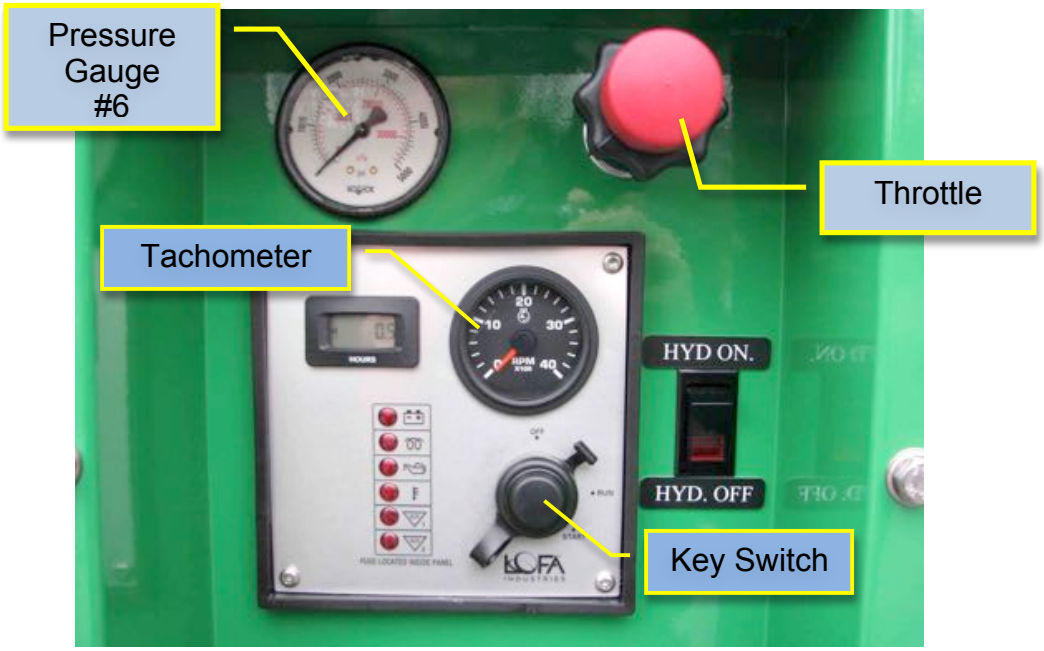
5. Connect hydraulic hoses from power unit to equipment to be powered. **Be sure to completely connect the hydraulic couplings or damage will result to the hydraulic system. Always be sure the connections are clean before assembling.**

6. Place the Hydraulic ON/OFF switch into the OFF position. This will allow starting of the engine without being under load.



STARTING PROCEDURE:

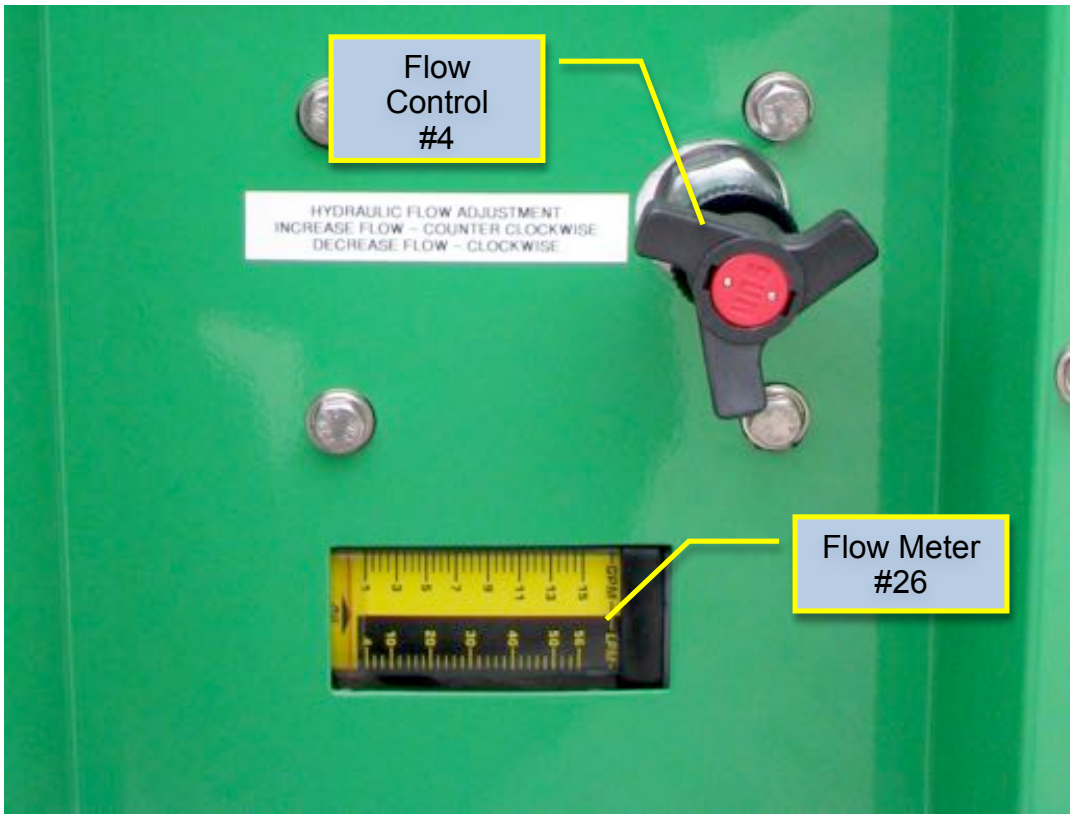
1. Start engine and adjust speed to 1000 RPM and let warm up for 1-2 minutes.



2. Place the Hydraulic ON/OFF switch into the ON position. This will allow the hydraulic system to energize.

3. Adjust engine speed to 2000 RPM. Adjust flow control to achieve the desired hydraulic output flow (Read the flow meter).

4. If the flow reading does not meet the desired flow, increase engine speed until the desired flow is reached. Fine tuning of the flow can be acomplished using the flow control.



NOTE: If maximum 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.

STOPPING PROCEDURE:

1. To stop the power unit, decrease engine speed and place the Hydraulic ON/OFF switch into the OFF position.

2. To stop the engine turn the key-switch to the off position.

3. After initially starting the system, check the hydraulic oil level in the reservoir. Filling the hoses initially will cause the level to drop slightly.

Maintenance Instructions

HT20DQP Power Unit

ENGINE: (#1)

Maintain engine as per "Yanmar Instruction Booklet" provided with each unit.

HYDRAULIC PUMP: (#2)

1. The hydraulic pump is a gear pump capable of giving a long and dependable service life as long as the hydraulic fluid is kept clean.

2. If hydraulic pump failure is suspected, be sure to check operation of the relief valve (on the control manifold). If pump is still not functioning properly, replace pump .

RESERVOIR:

1. Since this unit only contains 9 gallons of hydraulic fluid, it is recommended the fluid be changed every 250 hours of operation. When changing the fluid the suction strainer must be cleaned. There is a drain plug on the bottom of the reservoir.

SUCTION STRAINER (#9)

1. The suction strainer is mounted inside the reservoir and may be removed for cleaning by draining the oil from the reservoir. Remove the suction hose and clamps. The strainer may then be removed from the outside of the reservoir and cleaned.

2. Clean the strainer with solvent and dry with compressed air, then re-install, making sure dirt does not enter the reservoir. Make certain the O ring is in good condition when re-installing. Make sure the O ring is compressed properly when tightening.

SIGHT GLASS: (#5)

1. Maintain the hydraulic fluid level to the top line of the sight glass. The empty space above this line is used to allow expansion of the hydraulic oil when the oil warms up.

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 blocked hydraulic circuit **(e.g. tool jammed or hydraulic hose couplings improperly connected)** causing excess pressure to open the relief valve and dump hot fluid into the reservoir.

VALVE MANIFOLD, FLOW CONTROLVALVE / RELIEF VALVE: (#4)

1. The valve manifold is used to turn the hydraulic system on and off, control the flow and pressure relief functions.

2. This unit has a built-in solenoid valve, flow control valve and relief valve. The relief valve is preset at 2500 PSI. To prevent damage to any hydraulic components in the system, do not set this valve above 2500 PSI.

RETURN FILTER: (#24)

1. The hydraulic return filter is located on the top of the oil reservoir. The filter has a replaceable cartridge. Replace the filter cartridge every 250 hours or sooner if the oil appears discolored or the red indicator on the filter pops out.

HYDRAULIC OIL LEVEL SWITCH: (#8)

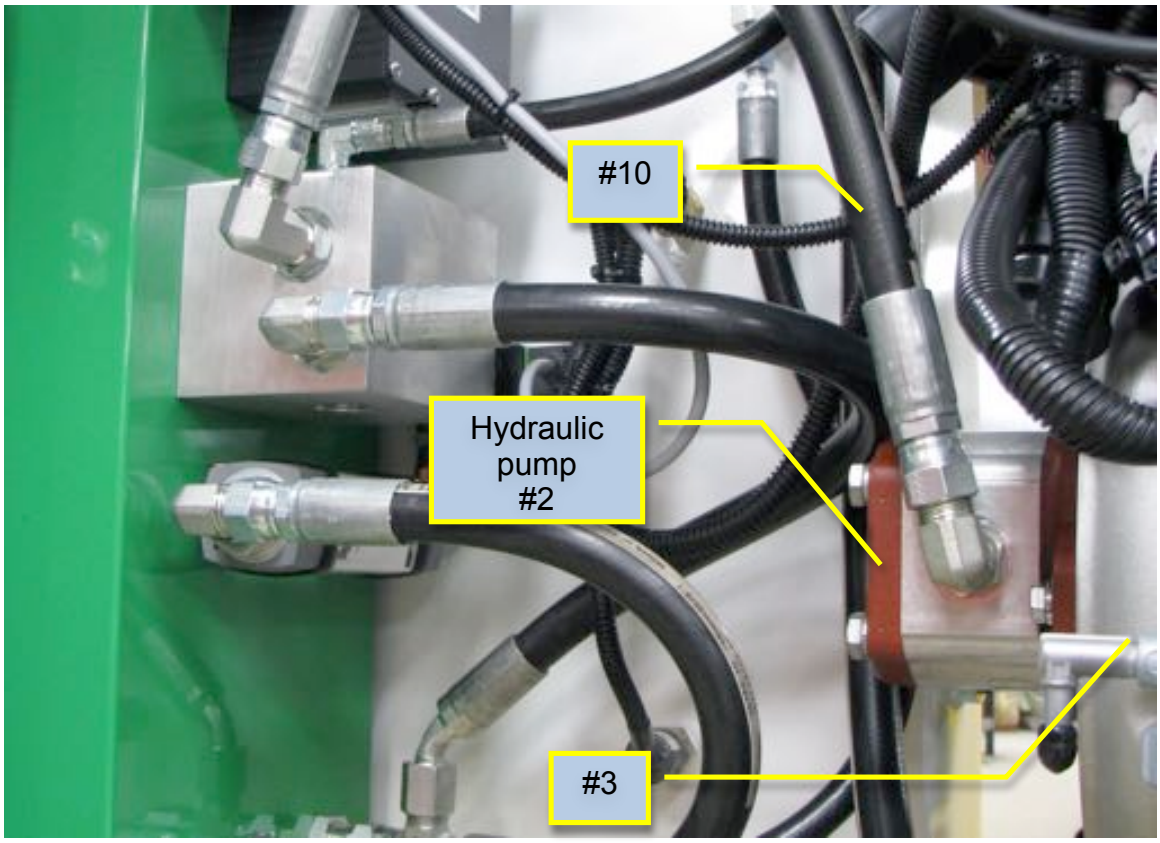
1. The fluid Level switch is located on the side of the reservoir. The function of this switch is shut down the engine if the fluid level falls. If the unit shuts down for this reason, find the cause and take corrective action.

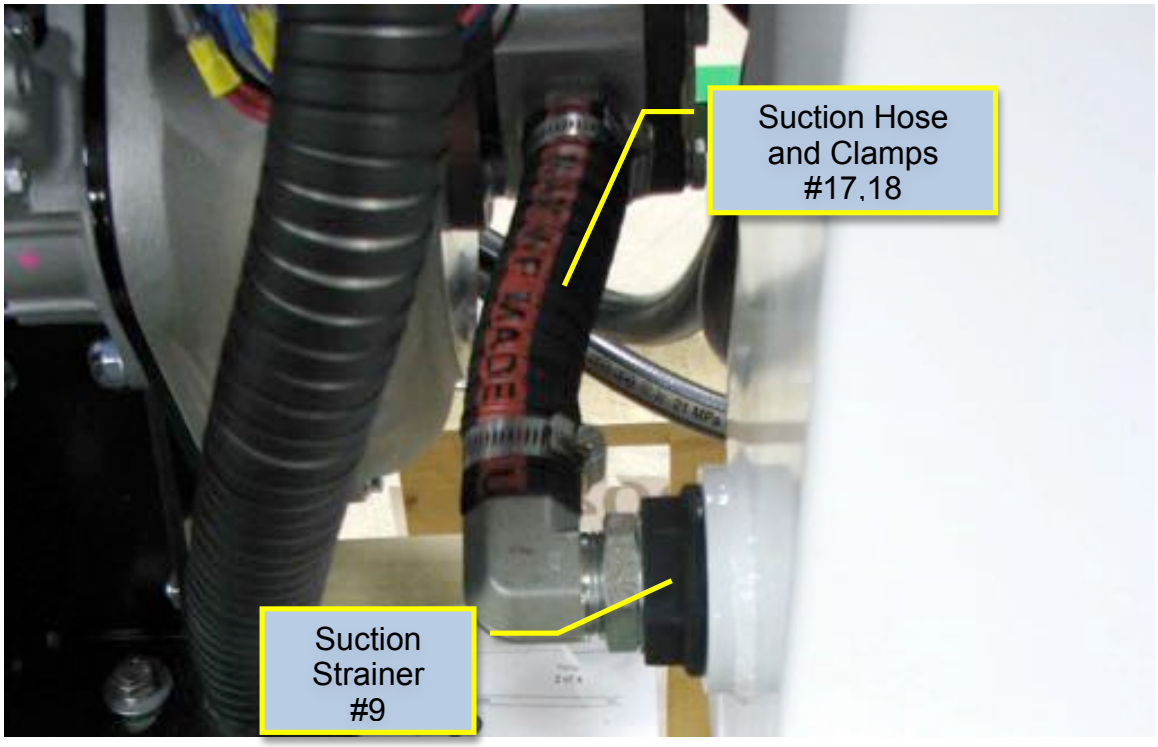
HYDRAULIC OIL TEMPERATURE SWITCH: (#23)

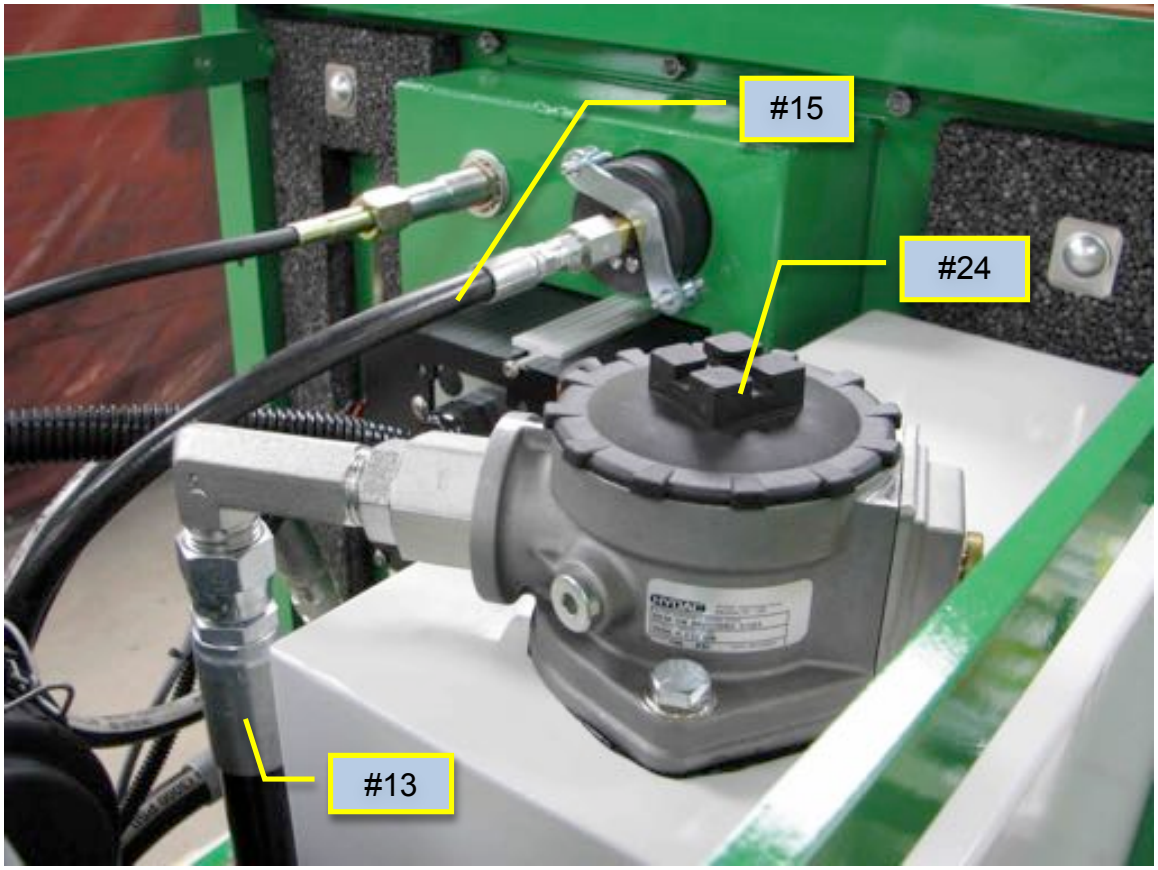
1. The hydraulic oil temperature switch is located on the side of the reservoir. The function of this switch is shut down the engine if the oil temperature exceeds 190°F. If the unit shuts down for this reason, find the cause and take corrective action.

HYDRAULIC OIL COOLER: (#25)

1. The hydraulic oil cooler is located on the front of the unit. The cooler has a built-in 30 PSI by-pass check valve to allow cold oil to by-pass the cooler until the oil warms up.




Suction Hose
and Clamps
#17,18
Suction
Strainer
#9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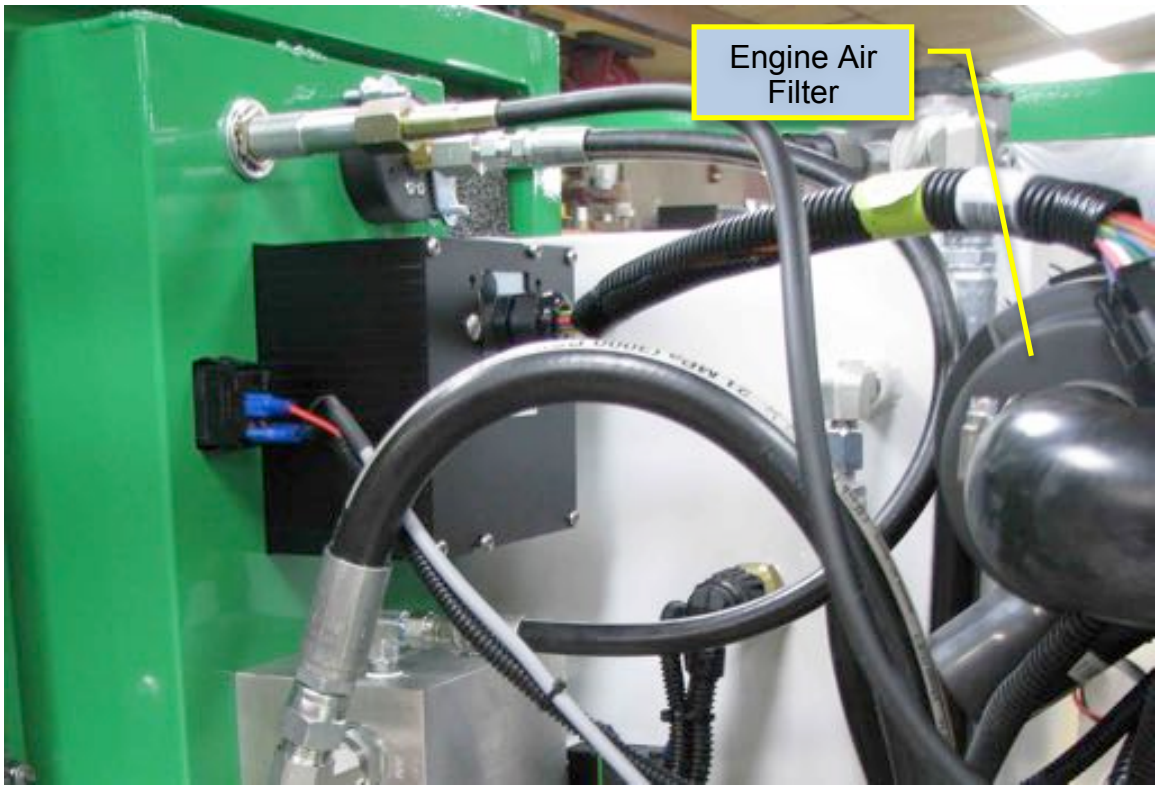
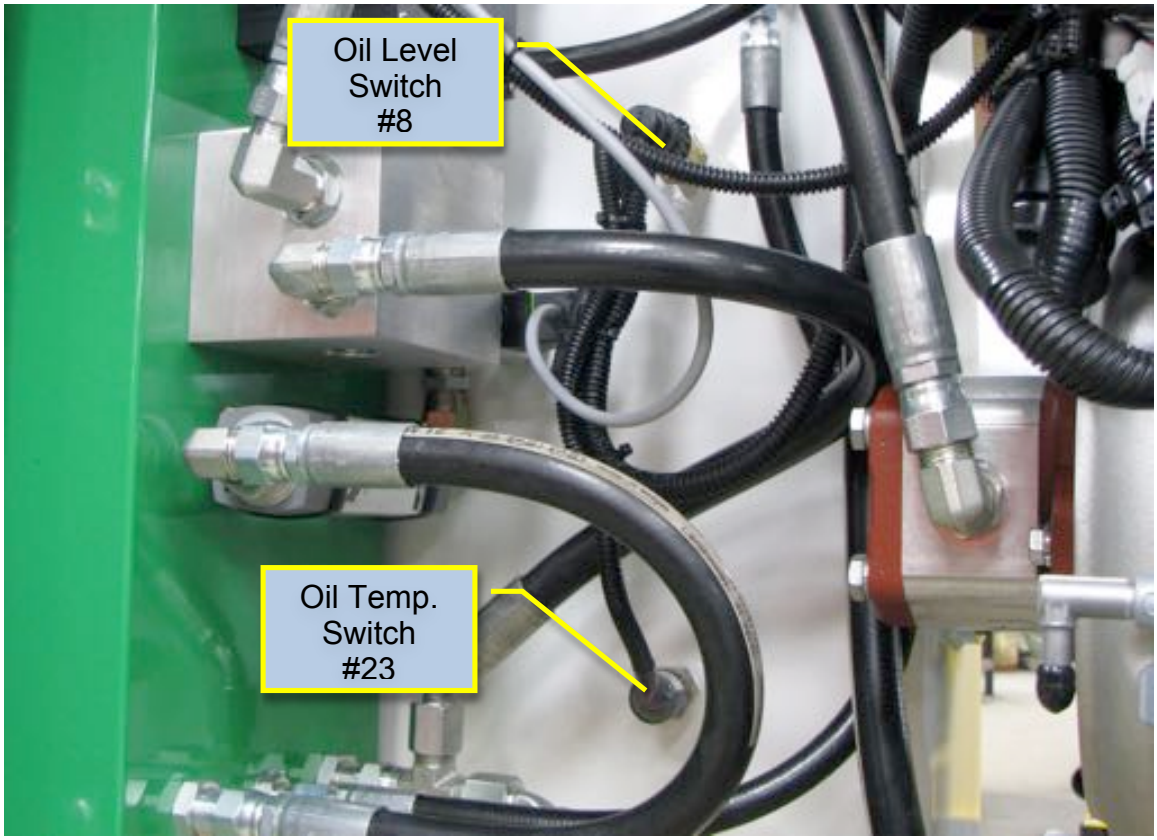
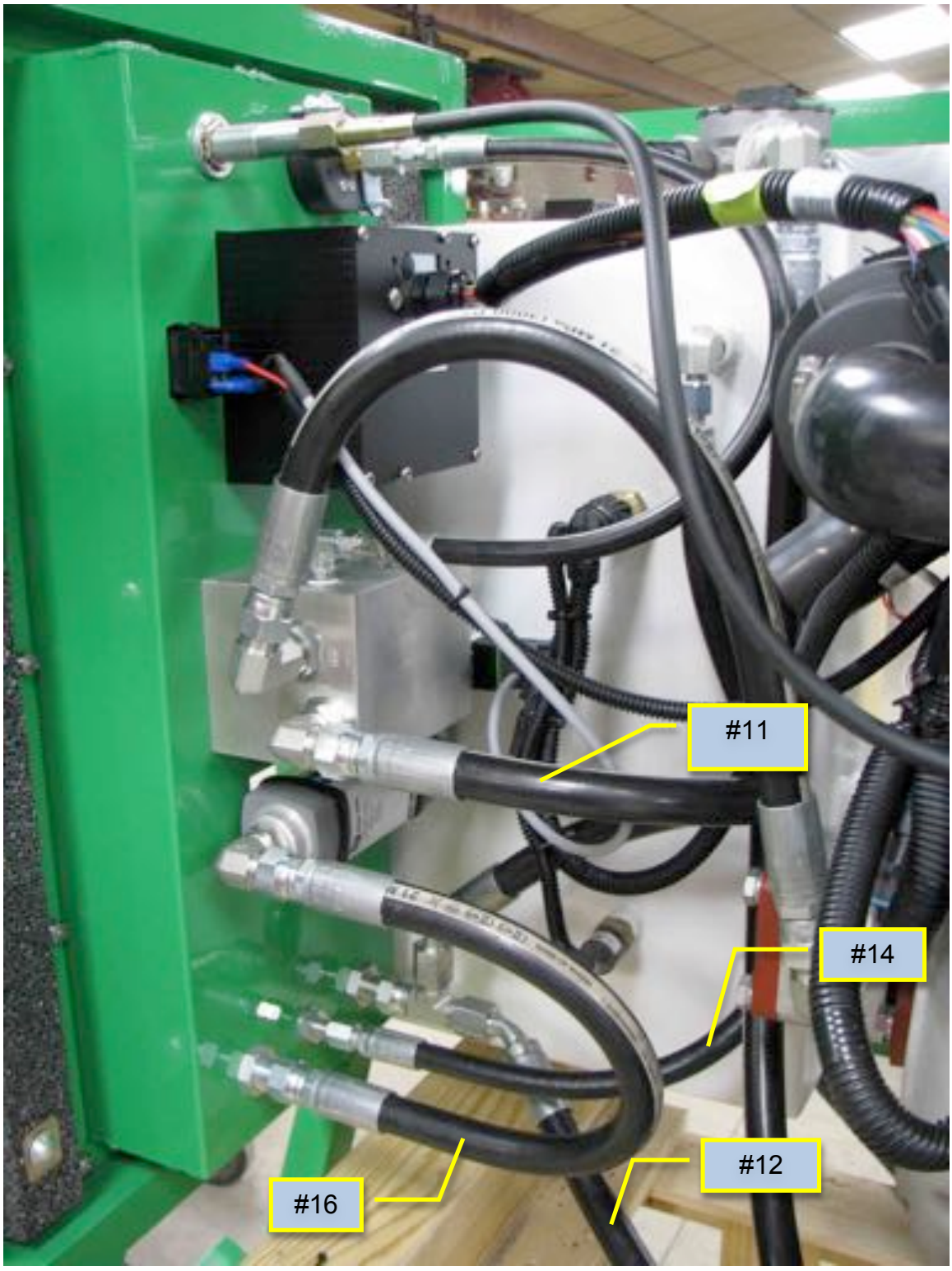
#24
#13


Engine Air
Filter


Oil Level
Switch
#8
Oil Temp.
Switch
#23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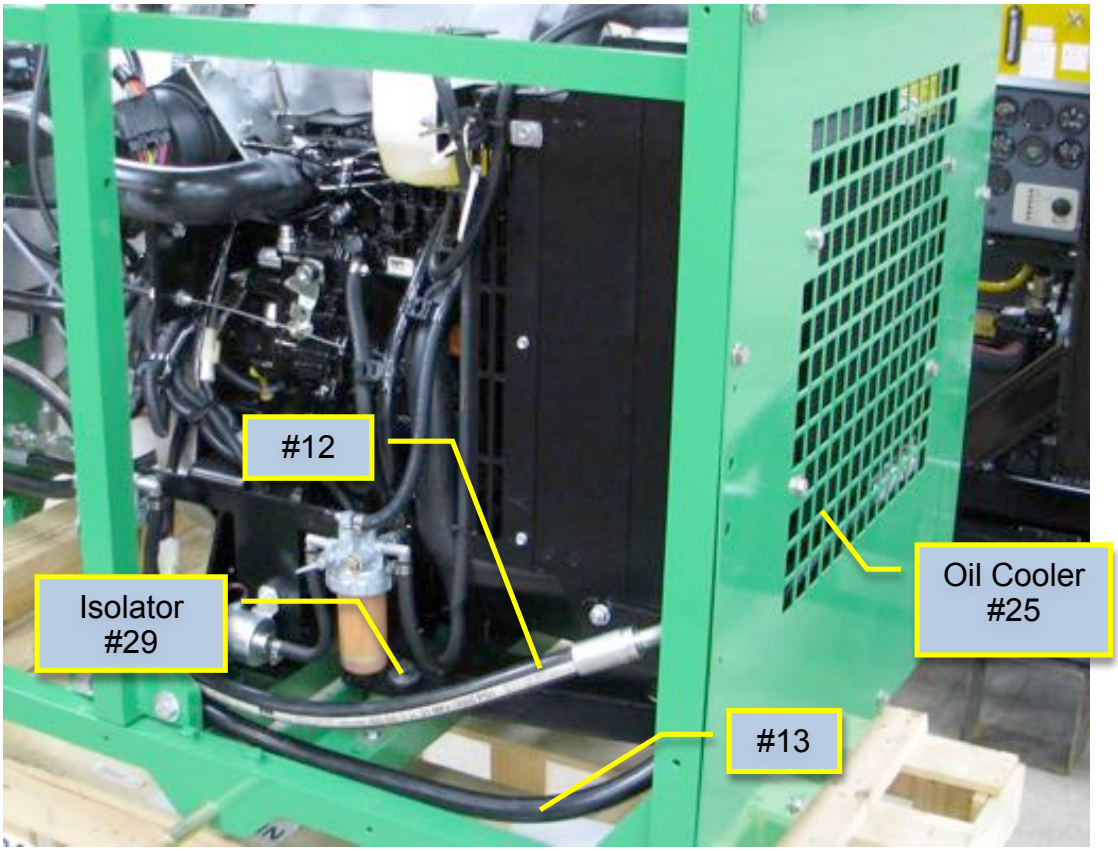
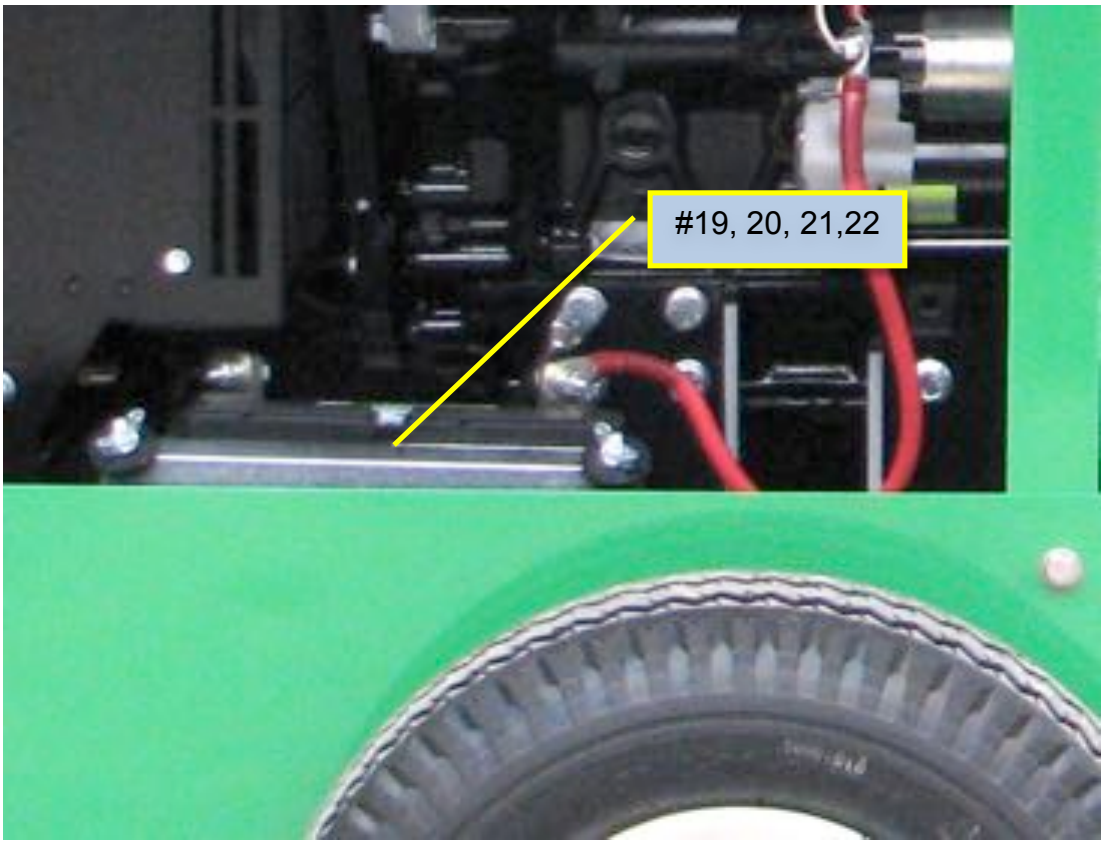
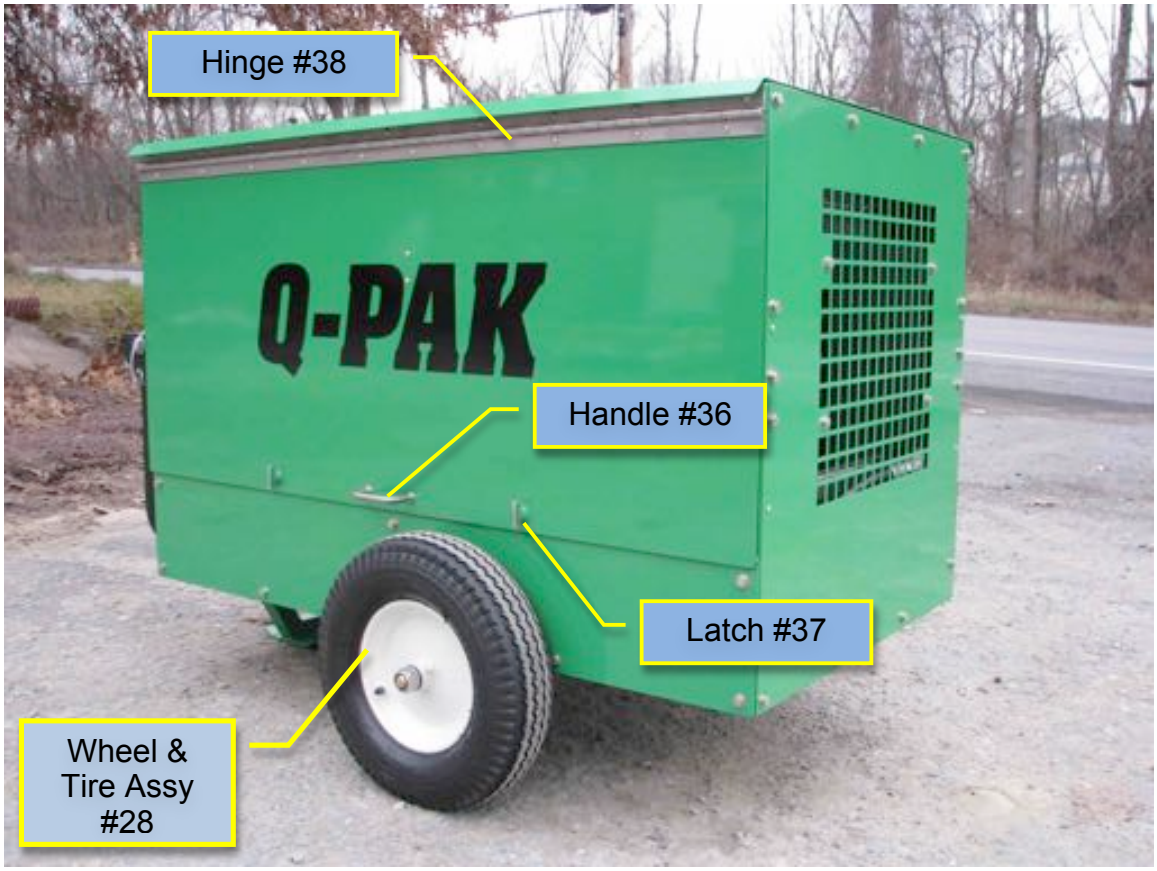

#12
Isolator
#29
Oil Cooler
#25
#13


#19, 20, 21,22

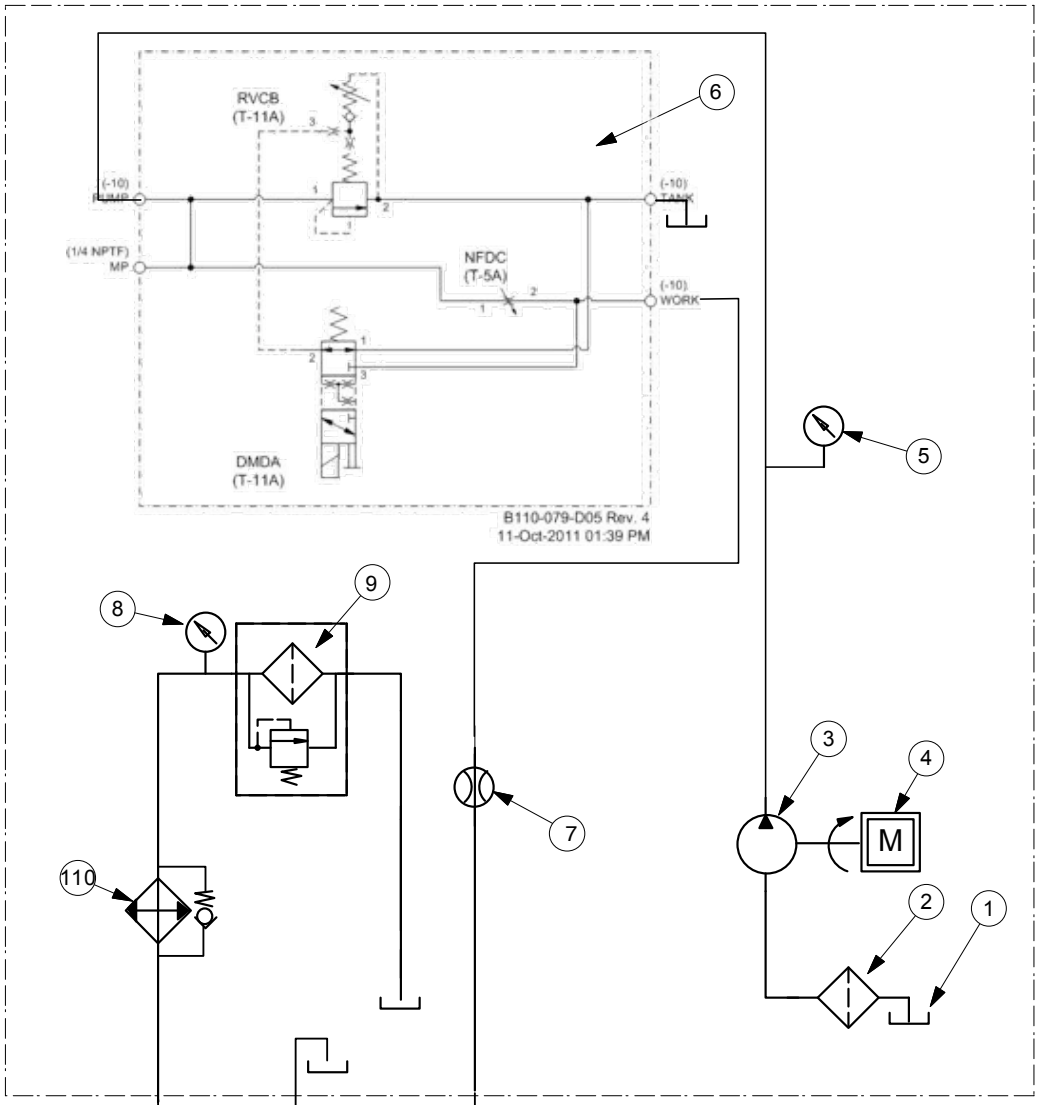

Hinge #38
Q-PAK
Handle #36
Latch #37
Wheel &
Tire Assy
#28


Pull Pins (#35)

PARTS LIST
HT20DQP Power Unit
(When ordering parts mention serial # of unit)

Item	Part #	Description
1.	3TNM74	Engine-Yanmar 3TNM74F-SAWM
2.	12821	Hydraulic Pump
3.	3TNM74-Drive	Hydraulic Pump Drive (Part of engine package)
4.	10690 10690A	Flow Control Manifold assy. Flow Control (Cartridge Only)
5.	1529	Sight Level /Temperature Gauge (Hydraulic Oil)
6.	7841A	Pressure Gauge, 0-5000 PSI
7.	11224	Fuel Gauge Tube
8.	8040A	Oil Level Switch
9.	10750	Suction Strainer w/O ring, SAE O ring Type
10.	10698	Hydraulic Hose, Pump to Control Manifold
11.	10704A	Hydraulic Hose, Control Manifold to Bulkhead Tee
12.	10818	Hydraulic Hose, Return Bulkhead to Cooler
13.	10703A	Hydraulic Hose, Cooler to Filter
14.	10701	Hydraulic Hose, Bulkhead Case Drain to Reservoir
15.	10697	Hydraulic Hose, Control Manifold to Gauge
16.	57110699	Hydraulic Hose, Flowmeter to Bulkhead
17.	10284	Suction Hose
18.	10824	Hose Clamp (2 req)
19.	9346B	Battery
20.	9390	Battery Hold Down Assy.
21.	BatRed4Ga	Battery Cable (Pos.)
22.	BatBl4Ga	Battery Cable (Neg.)
23.	7118	Oil Temperature Switch, 190°F
24.	10668 10668A	Return Filter Assy. (Complete) Return Filter (Element Only)
25.	1824A	Hydraulic Oil Cooler w/ 30 PSI By-pass Check Valve
26.	10689	Hydraulic Flow Meter, 0-15 GPM
27.	10693	Hydraulic Off/On Switch
28.	1612A	Wheel & Tire Assy. (2 req)
29.	10694	Motor Mount Isolators (4 req)
30.	8341	Fuel Cap
31.	9378	QD Coupler, Female (Return)
32.	9321	QD Coupler, Female (Case Drain)
33.	9320	QD Coupler, Male (Pressure)
34.	10760	Hatch Cover (3 req)
35.	10755	Pull Pins (2 req.)
36.	10753	Door Handle (2 req.)
37.	10762	Door Latch (4 req.)
38.	10752	Door Hinge (2 req.)

HYDRAULIC SCHEMATIC
HT20DQP Power Unit
w/Flow Control and Flow Meter



1) Oil Reservoir
2) Suction Strainer
3) Hydraulic Pump
4) Diesel Engine
5) Pressure Gauge
6) Valve Manifold Assy.
7) Flow Meter
8) Filter Pressure Gauge
9) Return Filter w/ By-Pass Valve
10) Hydraulic Oil Cooler w/By-Pass Valve
11) Quick-Disconnect Coupling

HYDRA-TECH PUMPS

WHO GIVES AND WHO RECEIVES THIS WARRANTY

YANMAR DIESEL ENGINE CO., LTD. ("YANMAR") warrants to the original retail purchaser only that each new YANMAR distributor, dealer, or other manufacturer (OEM, and their distributors and dealers) shall be free from defects in materials and workmanship under normal use and service during the Warranty Period set forth below.

This warranty gives you specific legal rights, and you may also have other rights which vary by country or from state to state.

WARRANTY PERIOD

The Warranty Period begins on the date of delivery to the original retail purchaser. The date of delivery and all other relevant information must be recorded on a Delivery Report.

The following table lists the warranted duration or total operation hours, whichever comes first, for each YANMAR industrial diesel engine and associated product.

ITEM	RENTAL USE	PERSONAL USE
Industrial diesel engines and/or Associated products	24 months/2,000 hours	24 months/2,000 hours

NOTE: Electric parts, such as starter motor, alternator, dynamo or turbochargers are covered for the first 12 months or 1000 hours, whichever occurs first.

The above warranties (by duration or operation hours) begin on the date of delivery recorded on the Delivery Report and are valid only for the original retail purchaser.

YANMAR shall honor a claim filed during the Warranty Period, duration of operation hours, whichever comes first; provided however, that operation hours shall apply only to YANMAR products equipped with an hour meter.

YANMAR HEREBY DISCLAIMS ALL IMPLIED WARRANTIES AFTER THE APPLICABLE EXPIRATION DATE OF THE EXPRESS LIMITED WARRANTY. Some states or countries do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

WHAT IS COVERED BY THIS WARRANTY

YANMAR will replace or repair, at its option, without charge for the parts or labor, at a place designed by YANMAR, any parts of a YANMAR engine/product covered by this Warranty found to be defective in material or workmanship.

WHAT IS NOT COVERED BY THIS WARRANTY

This Warranty does not cover parts affected, damaged or depreciated by misuse, abuse, improper maintenance, neglect, use of unsuitable attachments or non-genuine parts, ordinary wear, rust or corrosion, inadequate transportation, accident, or service by an unauthorized facility.

Expendable parts, such as all kinds of filters, belts, gaskets, rubber hoses, fuses, brushes, etc., and lubricants are excluded from this Warranty.

This Warranty does not obligate YANMAR to bear any fees for transportation of any YANMAR engine/product to and from the place designated by YANMAR for Warranty Service.

YANMAR MAKES NO OTHER EXPRESS WARRANTIES OTHER THAN SET FORTH ABOVE, AND ALL OTHER OBLIGATIONS OR LIABILITIES, INCLUDING SPECIAL OR CONSEQUENTIAL DAMAGES OR CONTINGENT LIABILITIES ARISING OUT OF THE FAILURE OF ANY YANMAR ENGINE/PRODUCT TO OPERATE PROPERLY, ARE HEREBY EXCLUDED.

No person is authorized to give any other Warranty or to assume any additional obligation on YANMAR's behalf.

Some states or countries do not allow the exclusion or limitation of incidental or consequential or special damages, so the above limitation or exclusion may not apply to you.

PROCEDURE FOR MAKING A WARRANTY CLAIM

For any defect covered by this Warranty, contact any authorized YANMAR distributor or dealer bo obtain the name, address, and telephone number of the nearest authorized Service and Repair Facility within thirty (30) days after discovery of such defect.

The YANMAR Warranty shall apply to YANMAR engines/products operated in any state or country regardless of the state or province in which the YANMAR engine/product was purchases, provided, however, that the YANMAR Warranty Handbook shall be presented and that Warranty service is provided by the YANMAR Service Network.

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