



OWNER'S MANUAL



PPU 15 Personal Power Unit

This pump complies with NFPA-1936, standard on powered rescue tool systems, 1999 edition.

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1. Introduction

We congratulate you on this purchase. Be sure to read and understand this user manual before using the pump. The user manual covers all relevant aspects for safe and optimal use of this pump.

First of all check that your equipment is complete and undamaged. If it is not, notify your dealer immediately and do not use the equipment.

This equipment is designed for use by professional, fully trained fire and rescue personnel.

This pump is suitable only for driving double-acting hydraulic rescue equipment operating with mineral oil and designed for an allowable pressure of 720 bar. The pump allows two tool connection – one tool operation.

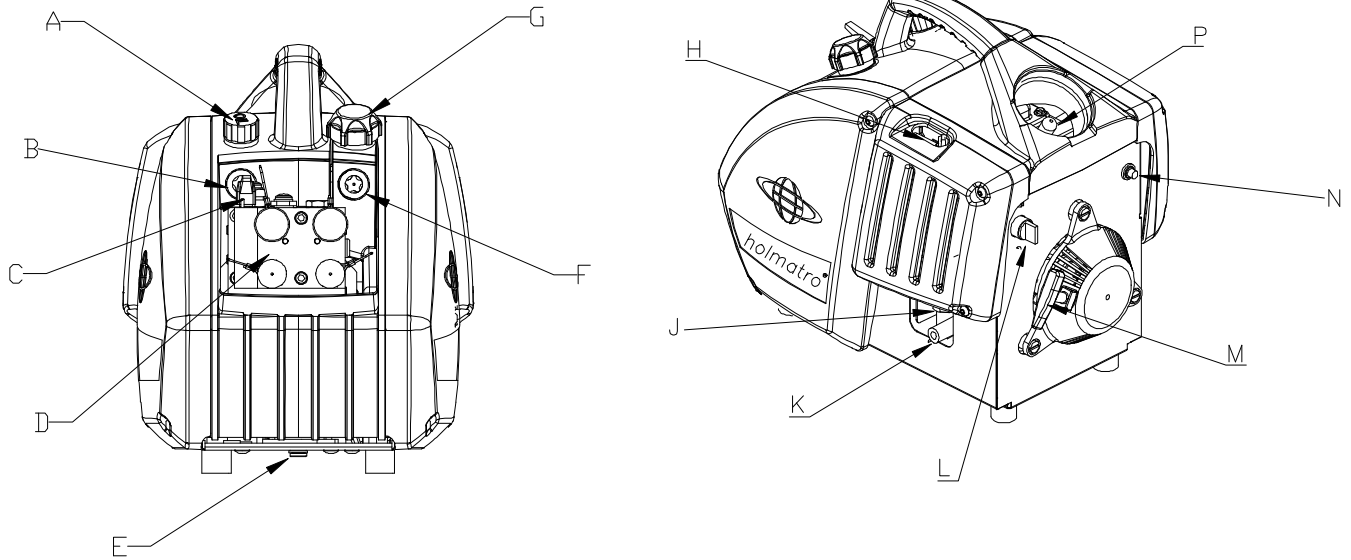
Follow these instructions to ensure your safety and to keep your equipment in good condition.

2. Safety Instructions

- * Study these operating instructions carefully before operating this equipment.
- * Use this equipment only for jobs for which it is designed. If in doubt or not clear, be sure to consult your supplier.
- * Always carry personal protection equipment such as safety goggles, helmet, gloves, protective clothing and safety shoes. Keep spectators at sufficient distance.
- * In the event of oil leakage, stop immediately and consult the troubleshooting list.
- * In the event of unfamiliar noise, vibration or other unusual behaviour, stop immediately and consult your dealer.
- * Never disconnect the quick-action couplings when the pump is in operation and when the directional valve of the pump is in either of the "Operation" positions – 1 or 2.
- * Use only original Holmatro accessories and parts.
- * Observe the maintenance instructions.
- * Only trained service technicians certified by Holmatro are allowed to repair this equipment.
- * Replace safety symbols/pictograms and/or information labels if illegible, damaged or removed.
- * Always place the pump on a stable firm base which is free of protrusions or loose matter (gravel, dust)
- * Use the pump at a minimum distance of 3 feet (1 metre) from buildings/structures.
- * Never use the pump in an enclosed space and always ensure sufficient ventilation.
- * Never inhale exhaust gas. It contains Carbon Monoxide, a colorless and odorless gas which can cause loss of consciousness or death.
- * Keep the exhaust discharge free of foreign objects.
- * Never refill fuel when the engine is running.
- * Never refill or even use near open fire.
- * Fill the fuel tank to the sight glass level. Never overfill.
- * Remove fuel spillage before starting the engine.
- * Never lift the pump with chains or steel wire ropes on the carrying handle.
- * The vehicle or object must be stabilized before beginning any extrication technique.
- * Never use the relief device tool on pressurized hoses, valve blocks, or rescue tools that are attached to an operating power unit. The pressure relief device is designed for use only on hoses that are disconnected from the pump unit. (See section 5.2.3)

3. Description

3.1 Product identification



A. Hydraulic oil fill cap	H. Choke lever
B. Hydraulic oil level indicator	J. Engine oil fill port
C. Directional valve	K. Engine oil drain pipe
D. Valve block w/ couplings	L. Fuel shutoff valve
E. Hydraulic oil drain	M. Starter recoil
F. Fuel level indicator	N. Engine stop button
G. Fuel cap	P. Spark plug

3.2 Specifications

Power unit, model: PPU-15

Allowable operating pressure	:	10,500 psi	(720 bar)
Fuel tank capacity	:	1.32 qt.	(1250 cc)
Hydraulic oil contents	:	2.43 qt	(2300 cc)
Usable hydraulic oil contents	:	2.1 qt.	(2000 cc)
Dimensions (LxWxH)	:	17 ¾" x 12" x 15"	(451 x 305 x 381 mm)
Weight, ready for use	:	35 lbs.	(15.9 kg)

4. Operation

The engine drives a two-stage radial piston pump which is able to deliver the allowable pressure given in the table at a specific oil volume.

5. Use

5.1 Initial use (first time only)

Check the equipment for damage. Do not use the equipment if it is not in good condition. Notify the supplier. Check whether the guarantee registration card has been supplied and filled in. This must be sent back to Holmatro to register your warranty.

When you receive the pump it must first be made ready for operation. Perform the following actions:

- * Remove the red shipping cap from the hydraulic tank and replace it with the orange breather cap.
Note: Keep the red cap and label for future shipping.
- * Check the pump for external damage.
- * Check whether the bottle with engine oil has been supplied.
- * Fill the crankcase with the specified amount of engine oil – 0.26qt (0.25 L)
- * Fill the fuel tank with lead-free gasoline up to the required level in the sight glass.
- * Switch the directional valve to its “Neutral – 0” position.
- * Switch the choke lever to its CHOKE position.
- * Turn fuel shutoff valve to the “OPEN” position.
- * Pull the cord until resistance is felt, let the cord be retracted and then pull fast. Repeat this if the engine does not start the first time. This unit may require 10 to 12 pulls to start the engine when it is received new from the factory. After the initial start-up the engine should start after 2 – 3 pulls of the recoil.
- * Guide the starting cord back after starting.

Switch the choke lever to “RUN” when the engine has warmed up after approx. 20 - 30 sec. (begins to run irregularly).

After verifying that the equipment operates, turn off the engine by pressing the “ENGINE STOP” button and holding for 2-3 seconds. Turn the fuel shutoff valve to “CLOSED”.

The pump is now ready for use.

5.2 Connecting hoses and rescue equipment/use of pump.

5.2.1 Checklist:

Check the engine oil level every time before use.

- * Remove the dipstick and check the level. See Honda Owner’s Manual. Refill if the level is too low. Use only the recommended engine oil described in the Honda manual.
- * Check the fuel level. Fill to sight glass level if low.
- * Use only lead-free gasoline.
- * Do not overfill the tank.
- * Immediately remove any gasoline that spills.

Caution: Check the level only when the pump is in horizontal position and the engine is switched off. Ensure sufficient ventilation. Do not check near open fire or sparks.

5.2.2 Coupling:

The unit is equipped with different quick-action couplings, i.e. "male" and "female".

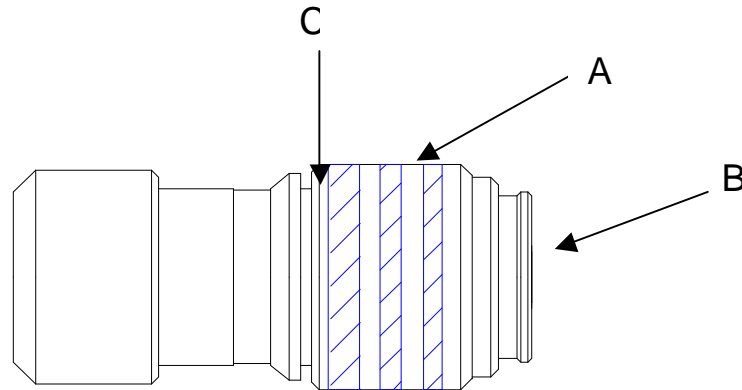
Caution: Never connect or disconnect the quick-action coupling when the pump is in operation. Set the pump relief valve to its "neutral" position before coupling or uncoupling hoses and/or tools.

To couple the hoses using the flat face coupler:

1. Remove the dust caps from both the male and female couplers.
2. Insert the male coupler into the female coupler and push.
3. The coupler's locking ring (A) will move forward to show the coupler is locked.
4. Check to make sure the connection is made by pulling on the two couplers.

To uncouple the hoses using the flat face coupler:

1. Turn the locking ring (A) of the coupler ¼ turn counterclockwise when holding it in your hand pointing away from you (direction of large arrow on coupler) **and** pull back on the locking ring (direction of small arrow on coupler).



2. Remove the male coupler from the female coupler if it has not released completely.
3. Make sure you put the dust caps back onto the couplers when not in use. This is an important step to keep dirt and foreign objects from getting into the coupler.

Clean the female coupler by removing any dirt, oil, etc. with a clean dry rag. To ensure the automatic locking capability of the coupler, the coupler should be checked periodically and cleaned by following the simple steps below:

1. Rinse the coupler with lukewarm water and a soft soap solution.
2. When the coupling is dry and free from water, lubricate the flat end of the coupling (B) with hydraulic oil or by spraying WD-40 onto the end.
3. Lubricate the locking sleeve by spraying WD-40 carefully in the area (C) between the back part and the locking sleeve.
4. Connect the nipple into the coupling and see if the locking sleeve easily turns itself to the lock position. Check by pulling the locking sleeve straight back. The nipple should not disconnect.
5. To disconnect the nipple, turn the locking sleeve and pull it backward.
6. Repeat steps 4 and 5 a few times to assist internal lubrication of the locking sleeve.

5.2.3 Pressure relief device

A pressure relief device is provided for relieving pressure in the hydraulic hose. The pressure relief device is only used to relieve pressure in hoses caused by elevated temperatures (i.e. if the hoses are left lying in the hot sun). Follow the operation instructions below for proper use of the relief device and observe all warnings

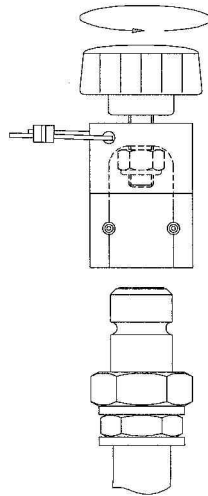
PRESSURE RELIEF DEVICE INSTRUCTIONS.

WARNING

THE PRESSURE RELIEF DEVICE HANGING ON FRONT OF THE HYDRAULIC RESCUE PUMP IS ONLY TO BE USED ON PRESSURISED HOSE CAUSED BY ELEVATED TEMPERATURES (i.e. IF HOSES ARE LYING IN THE HOT SUN). NEVER USE THE PRESSURE RELIEF DEVICE ON THE HYDRAULIC PUMP VALVE CONTROL, ON HOSES OR ON RESCUE TOOLS WHEN THE HYDRAULIC PUMP IS IN OPERATION AND IS GENERATING PRESSURE. THE RELIEF DEVICE WILL BE DAMAGED AND SERIOUS INJURY WILL OCCUR TO THE OPERATOR.

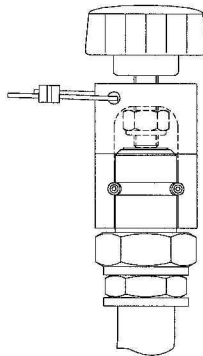
INSTRUCTION 1

OPEN KNOB ALL THE WAY OUT.



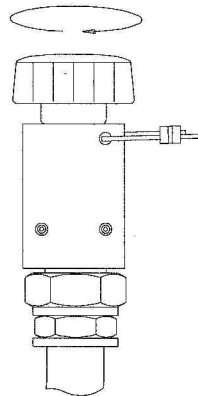
INSTRUCTION 2

POSITION MALE COUPLER ON HYDRAULIC HOSE IN DEVICE AND BETWEEN THE ROLL PINS.



INSTRUCTION 3

ALWAYS TURN THE RELIEF DEVICE OVER TO PREVENT OIL SQUIRTING UPWARDS IN THE OPERATORS EYES. TURN THE HANDLE OIL WILL SQUIRT OUT OF THE MALE COUPLER AND PRESSURE WILL BE RELIEVED IN THE HOSE.



5.2.4 Starting:

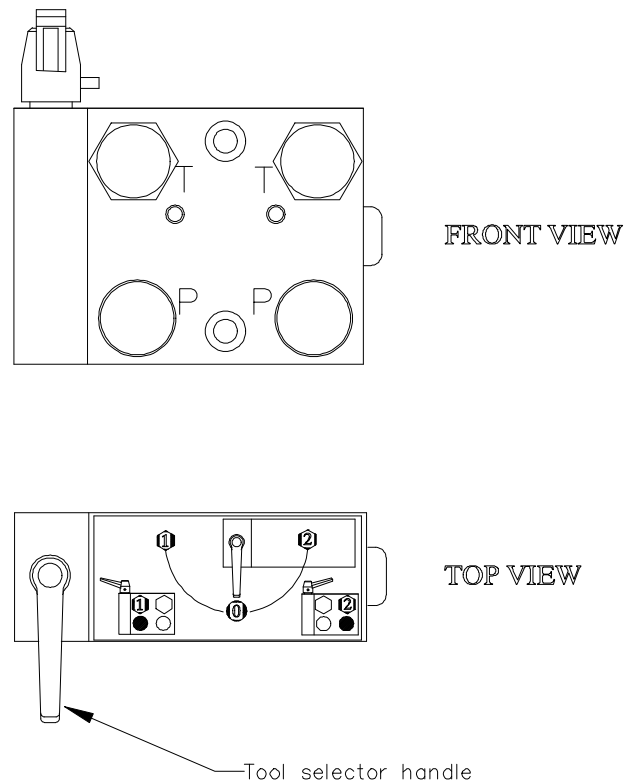
- * Switch the directional valve to its “Neutral –0” position.
- * Switch the choke lever to its “CHOKE” position.
- * Turn fuel shutoff valve to the “OPEN” position.
- * Pull the cord until resistance is felt, let the cord be retracted and then pull fast. Repeat this if the engine does not start the first time.
- * Guide the starting cord back after starting.

Switch the choke lever to “RUN” when the engine has warmed up after approx. 20 - 30 sec. (begins to run irregularly).

NOTE: Start in the “RUN” position if the engine is still warm. Start in the “CHOKE” position if the engine is cold or runs out of gasoline during operation.

5.2.5 Operating:

The directional valve can be set to either of the OPERATION positions – 1 or 2 as soon as the engine is running regularly and a tool is connected. Use the tool selector handle to choose the position for the tool that is required to be used. The oil now flows through the discharge hose to the tool and back to the pump. The tool can perform its function by operating the tool’s dead-man control. The pump automatically supplies the required pressure.



5.2.6 Shutting Down:

The pump can be shut down after completion of the work.

- * Close the tool(s) being operated with the pump. (Partially re-open the tool to relieve any pressure)
- * Check that the pump relief valve is in its "neutral" position. (before uncoupling hoses).
- * Press the "ENGINE STOP" button to stop the engine.
- * Close the fuel valve.
- * Remove any dirt from the couplings and the dust caps to prevent penetration into the hydraulic system.
- * Take the dust caps apart and place them on the power unit's couplings.

5.2.7 Cleaning and storage

Clean the unit and any accessories used before storage.

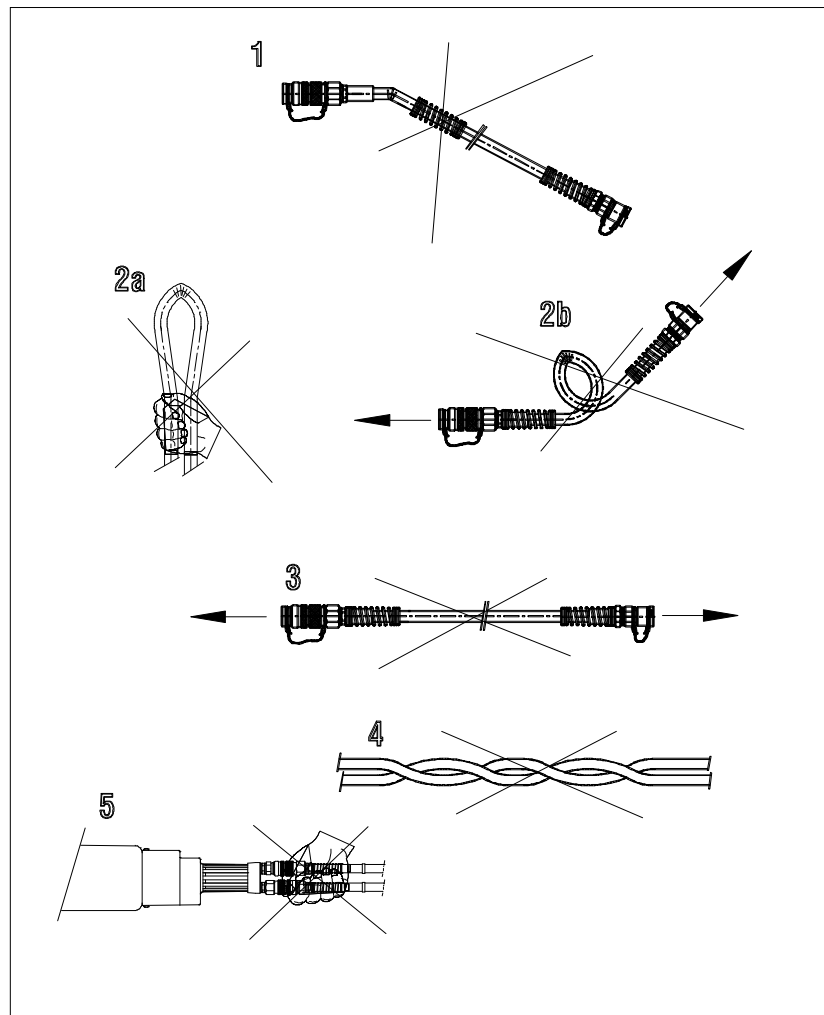
- * Clean all quick-action couplings. Ensure that the dust caps are installed
- * Check the pump for external damage and/or oil leakage.
- * Always store the pump in a horizontal position.
- * Ensure that the pump cannot tilt during transport. This can cause leakage of hydraulic oil or gas.

5.3 Important additional user information

Hoses

The hydraulic hoses belonging to the hydraulic system need attention. Observe the following points:

1. Do not use hoses without proper anti-kink devices and prevent kinking behind the attachment.
2. Prevent kinking of the hoses and never bend the hoses beyond their minimum bending radius - 89 mm (3 ½").
3. Do not pull the hoses to move tools or pumps.
4. Prevent torsion of the hose.
5. Do not use the hoses to keep the equipment in position and especially not if the hoses are pressurized.



6. Troubleshooting

6.1 The engine fails to start

Check position of the choke switch	➔	Cold engine in "CHOKE" position. Hot engine in "RUN" position..
Check the fuel level	➔	If empty, refill making sure not to spill any fuel.
Check the spark plug.	➔	Make sure cap is tight, if tight remove spark plug and check for contamination or defect.
Check the position of the directional valve.	➔	Check the position of the directional valve which must be in the NEUTRAL position.
Check the fuel shutoff valve	➔	Set the fuel shutoff valve to the "OPEN" position

6.2 The connected equipment is not operating - or not properly.

Check the position of the directional valve.	➔	Reposition handle to "OPERATION" position 1 or 2 that the equipment is connected to.
Check the pump oil level.	➔	Refill with hydraulic oil if low.
Check the connections(quick-action couplings)	➔	Relieve the pressure (neutral position) and connect the couplings again.
The quick-action couplings cannot be connected	➔	Release pressure at pump by switching handle to the "NEUTRAL" position. Reconnect the connections.
Check the vent shutoff valve	➔	The vent shutoff valve should be CLOSED. The valve is closed when the tab is perpendicular to the connected vent line tube. <u>If this valve is OPEN, contact your dealer.</u>

6.3 The engine suddenly stops.

Check the fuel level	➔	If empty, refill making sure not to spill any fuel.
Is the pump not in a horizontal position?	➔	Move the pump. The maximum incline is 20°.

Consult your dealer in case of other problems or if the solutions provided above do not have the required results.

Caution: If the pump must be returned to an authorized repair facility, ensure that the fuel tank is empty and the engine oil removed.

ALWAYS SHIP THE PPU15 POWER UNIT IN ITS ORIGINAL SHIPPING BOX WITH FOAM INSERTS.

Ship the pump with the red shipping cap on the hydraulic tank and re-attach the caution label. Also ship the orange oil breather cap with the unit.

7. Maintenance

Wear personal protection equipment during maintenance. Ensure that any spent replaced hydraulic oil is collected and disposed of in a responsible manner, think of the environment.

7.1 Regular maintenance (minimum every 3 months)

Depending on the use, it is necessary to carry out regular maintenance. Increased use will necessitate more frequent maintenance intervals. Consult your dealer.

- * Check whether the safety symbols and product identification labels are still present. If not, consult your dealer.
- * Check the hoses, quick-action couplings and dust caps.
- * Check the operation of the equipment.
- * Check the spark plug. Replace if necessary.

7.2 Annual maintenance

With the proper care and correct preventive maintenance this unit will ensure many years of safe use. We recommend having the unit checked at least once a year by a trained technician with the proper knowledge and the necessary tools. Your dealer can carry out the annual maintenance on a contract basis on your behalf, if desired. This will ensure good and safe operation.

The following can be used for pumps not equipped with an operating hour meter: 50 operating hours \approx 6 months. Remember the personal protection equipment. Ensure that the pump is horizontal and never work on a pump that has not yet cooled down. Work in a well-ventilated area.

7.3 Maintenance after the first 20 operating hours.

These instructions apply only to new pumps.

- * Engine oil. Remove the dipstick for engine oil. Remove the engine oil drain plug and drain the oil into a drainage container intended for the purpose.
- * Replace the engine oil drain plug. Refill the crankcase with the correct engine oil to the proper level on dipstick. (See Honda manual). Firmly tighten the dipstick.
- * Hydraulic oil. Check the hydraulic oil level. Use only the hydraulic oil specified by HOLMATRO. Check with your Holmatro Dealer for the recommended hydraulic oil that may be used with Holmatro rescue tools.
- * Check the spark plug. Replace if necessary. (See Honda manual)

7.4 Maintenance after every 50 operating hours.

- * Air filter. Follow the instructions in the Honda instruction booklet provided.
- * Spark plug. Remove the spark plug lead and unscrew the spark plug. Check the spark plug and clean it with a steel brush. Remove any carbon deposits from the electrode. Check the gap between the electrodes (shown in the Honda instruction booklet) and adjust, if necessary. Replace the spark plug if the electrodes are excessively worn.

Caution: Work on the pump only after the muffler has cooled down.

7.5 Maintenance after every 100 operating hours

- * Carry out all the activities described under maintenance after every 50 hours.
- * Remove the drain plug at the bottom of the pump. Collect the oil in a container intended for the purpose. Firmly replace the drain plug and fill the tank with approx. 2.4 quarts (2.3 liters) of Holmatro hydraulic oil or equivalent. Check the level.

7.6 Five year maintenance and testing

- * We advise you to have the unit checked and tested by your dealer certified by Holmatro after a maximum of five years of use. Consult your dealer for further details.

7.7 Long-term storage

Carry out the following activities if the pump is not going to be used for 3 months or longer:

- * Empty the fuel tank. Remaining gasoline will age and may result in difficult starting.
- * Remove all gasoline from the carburetor. See Honda manual.
- * Replace the engine oil. See procedure under maintenance after 20 hours.
- * Clean the pump and re-tighten any screws that may have come loose.
- * Clean the air filter. See Honda manual.
- * Pull the starter cord until no more resistance is felt, release the cord and store the pump in that condition.
- * Store the pump in a dry, well-ventilated area. Use additional preservatives if the area is damp.

Also consult the instructions supplied by the engine manufacturer.

7.8 Changing hydraulic oil

- * Remove the drain plug underneath the pump and drain the hydraulic oil into a container intended for the purpose.
- * Replace the drain plug. Refill the tank with hydraulic oil specified by Holmatro for use with Holmatro rescue tools. Fill the tank until the oil reaches the center mark on the sight glass.
- * Cycle a tool with the pump to remove air from the system and check the level of the oil in the sight glass. Add oil to bring the level up to the center mark on the sight glass.
NOTE: DO NOT OVERFILL.

8. Scrapping

The unit can be scrapped at the end of its service life and the various parts may be re-used. Collect the hydraulic oil and dispose of it separately. The unit consists of steel, aluminium, neoprene (seals) and plastic. The unit does not contain any pressurized components.

Also consult your dealer about scrapping.

9. Technical information

Power unit PPU-15

Made in the USA

Only qualified persons authorized by Holmatro may make repairs to and/or service Holmatro® rescue tools. Only an active and presently authorized Holmatro dealer may disassemble the sealed parts. Contact your dealer for further advice if other problems occur. In the event that you are unable to contact your dealer, contact Holmatro at:

Holmatro, Inc.

505 McCormick Dr.
Glen Burnie, MD 21061

Fax: (410) 768-4878

Tel: (410) 768-9662

E-mail: info@holmatro-usa.com

Website: www.holmatro-usa.com

In the event that back-up equipment is not available and an extreme emergency occurs, phone Holmatro at (410) 768-9662 between 8:30 am and 5:00 pm Eastern Time. Inquiries should be directed to the customer service department.

04/01

SAMPLE

Certificate for Lifetime Warranty

for

Holmatro hydraulic rescue tools

Warranty:

Holmatro[®] hydraulic rescue tools, parts and accessories are guaranteed against defects in material and workmanship for as long as owned by the original purchaser.

The identity of the original purchaser and the date of purchase shall be established in each case by the return of the properly completed warranty registration card.

Warranty Terms:

The obligations of **Holmatro** under this warranty include free replacement of the necessary parts and the shipping costs to return the equipment to the user, provided the inspection of the equipment has proved that the parts were defective at the time of purchase or were improperly designed or manufactured. The warranty inspection can only be performed by a **Holmatro**[®] service center and shipping costs to a **Holmatro**[®] service center will be for purchaser's account. Said warranty shall remain in effect only if (1) such goods are used normally and properly in accordance with **Holmatro**[®] instructions as to maintenance and operation, whether given orally or set forth in manuals and instruction sheets furnished by **Holmatro**, and (2) the purchaser gives prompt notice to **Holmatro** of any such defects and preserves and turns over all allegedly defective goods, parts or items.

Exclusions:

This warranty covers all defects in material and workmanship except:

Any damage occurring during shipments of the goods (for which claims shall be presented to the carrier).

Normal wear and tear parts and consumable parts and items including (without limitation) with respect to hydraulic tools, wearable parts and accessories, all seal ring, plunger blocks, couplings and cutter blades.

Goods sold but not manufactured by **Holmatro**, such as the Briggs & Stratton engine (for which **Holmatro** shall make available to purchaser those warranties made available to **Holmatro** by the manufacturer).

Damage caused by abuse, improper use or corrosion.

Damage caused by repairs performed by persons other than a **Holmatro**[®] service center or an official **Holmatro**[®] factory-trained distributor or damage resulting from the use of parts other than genuine **Holmatro**[®] parts.

Damage as the result of improper or neglected reasonable maintenance.

THE WARRANTY STATED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, AND **HOLMATRO** EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES OF MERCHANTABILITY, FITNESS, PERFORMANCE OR SUITABILITY FOR A PARTICULAR PURPOSE.

Limitation of Damages:

Holmatro's obligation under this warranty is limited to repair and/or replacement, at **Holmatro's** option, of any defective **Holmatro**[®] tool, part, accessory or item, and under no circumstances, whether due to a breach of any warranty hereunder or any other cause, and whether arising in contract or in tort (including negligence or strict liability) shall **Holmatro** be liable for (1) consequential or indirect loss or damage including, but not limited to, loss of profits, loss of production, plant downtime, or liabilities to customers or other third parties, or (2) loss or damage arising out of the sole or contributory negligence of the purchaser, its employees or agents, or any third party, or (3) any special or punitive damages of any nature. If **Holmatro** determines, in its sole and final discretion, that the nature of the defect precludes remedy by repair and/or replacement, **Holmatro** reserves the right to satisfy any warranty obligation by refunding the full purchase price, on return of all defective goods to **Holmatro**, shipping costs prepaid. Any action for breach of warranty or other action must be commenced within **one** year after such cause of action arises, except where applicable law would prohibit any such time restriction on the bringing of such an action.

Notices:

For all notices, information and inquiries concerning this warranty or **Holmatro**[®] service centers contact:

Holmatro, Inc.
505 McCormick Drive
Glen Burnie, MD 21061
phone: 410-768-9662
fax: 410-768-4878



HOLMATRO DEALER:

TEL:

FAX:

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TOOL SERIAL NUMBER:

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SERVICE RECORD:

DATE	REPAIR/SERVICE DESCRIPTION	SERVICE TECHNICIAN

Please make copies of this sheet as needed for future use.