

CHICAGO
Electric[®] Power Tools
INDUSTRIAL

**PRESSURE WASHER WITH
ROBIN 6 HP ENGINE**

Model 91142

SET UP AND OPERATING INSTRUCTIONS



Diagrams within this manual may not be drawn proportionally.

Due to continuing improvements, actual product may differ slightly from the product described herein.

Distributed exclusively by Harbor Freight Tools[®].

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**Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.**

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For technical questions or replacement parts, please call 1-800-444-3353.

Cover Revised 07i

Specifications

Gas Engine	Robin , OHV Engine 6 HP, unleaded gas, recoil, 3400 RPM, low oil shut-down; Oil capacity: 20 oz. (0.6 L); Gas capacity: 4 quarts (3.8 Liter) Refer to the Robin maintenance manual for further details
Pressure Washer Gun	2900 PSI Maximum, Safety trigger activated gun, 60 -140 Deg .F . Temp. Maximum (use cold water only).
Water Pressure	2,200 PSI rated, 2.500 PSI maximum
Water Output	2.2 GPM maximum; unloader valve
Water Supply Requirements	3+ GPM recommended; 1.62 GPM <u>minimum</u>
High Pressure Hose	27 feet
Water Nozzle	Safety Trigger Handle with lock-off, spray output adjustment; 150-Bar/2,175 PSI
Wheels	2 - Pneumatic wheels
Garden Hose Fitting	Quick connect, fitting coupler, ¾ inch I.D.

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Keep work area well lighted. Do not use powered tools in the presence of flammable gases or liquids.
3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
4. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
6. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair. Wear protective boots able to withstand high pressure water contact.

7.  **Use eye and ear protection.** Always wear ANSI approved impact safety goggles and heavy rubber boots. During pressure washing, debris can fly back into your face. Wear an ANSI approved dust mask or respirator when working around chemical dusts and mists.
8. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
9. **Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool hoses periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.
10. **Turn power off.** Turn off engine when not in use.
11. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before turning engine on.
12. **Avoid unintentional starting.** Be sure that the water handle switch is in the Off position when not in use and before turning engine on. Do not carry spray handle with your finger on the trigger, whether engine is turn on or not.
13. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
14. **Take caution as some woods contain preservatives such as copper chromium arsenate (CCA) which can be toxic.** When high pressure spraying these materials extra care should be taken to avoid inhalation and minimize skin contact.
15. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.
16. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
17. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels if taking prescription medicine to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
18. **Maintenance.** For your safety, service and maintenance should be performed regularly by a qualified technician.
19. **Use tools with both hands when required.** This tool requires the use of both hands when operating. This helps maintain tool stability and keeps hands away from the working area of the tool.
20. **People with pacemakers should consult their physician(s) before use.** Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. Caution is necessary when near engine's magneto or recoil starter.

21. **Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.**

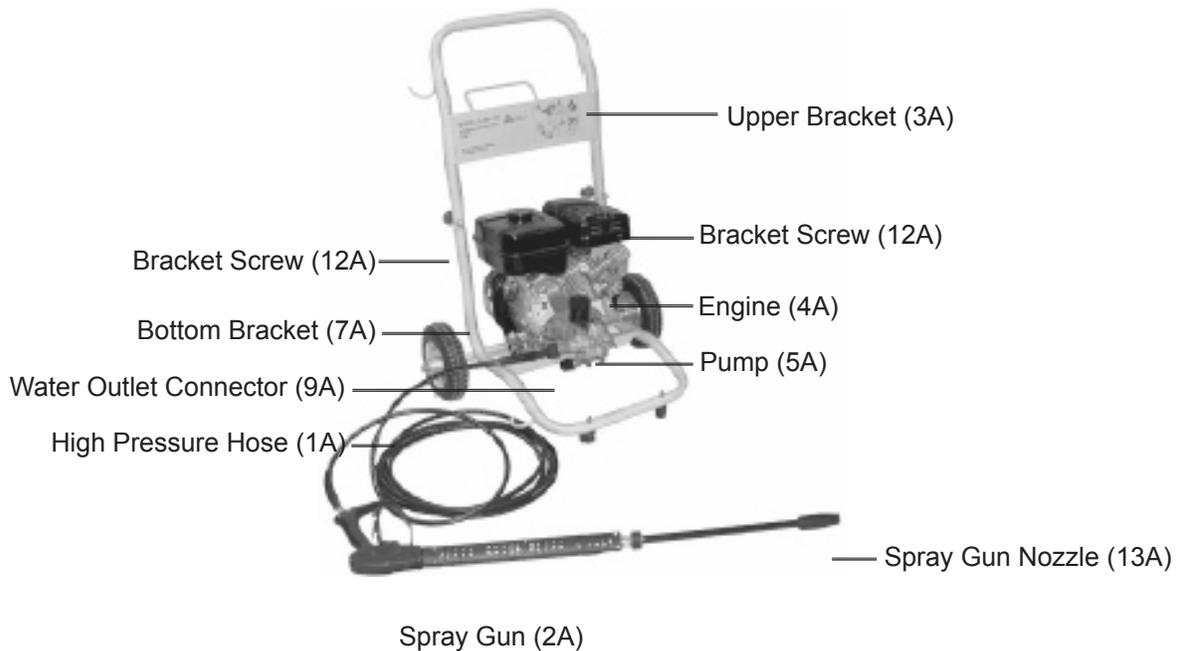


High Pressure Washer Safety Precautions

1.  **Fire Hazard!** Do not fill gas tank when the engine is running. Do not operate if gasoline has been spilled. Clean spilled gasoline before starting the engine. Do not operate near a pilot light or open flame.
2. **Operate the Pressure Washer in well ventilated outdoor areas only. Carbon monoxide is produced during operation and is DEADLY in a closed environment.** Early signs of carbon Monoxide poisoning resemble the flu, with headaches, dizziness, or nausea. If you have these signs, the engine may not be working properly, or is being used indoors. Get fresh air immediately.
3.  **Injection hazard!** The high pressure water jet can be dangerous and cut skin if misused. Do not spray toward other people, animals, electrical boxes or outlets, or the machine itself.
4. **Use only cold water as the active propellant in the Pressure washer.** Do not use acids, alkalines, solvents, or any other flammable materials in this machine. Chemicals can harm you and permanently damage the Pressure Washer.
5.  Avoid burns from the engine. Certain parts of the engine become very hot during use. Do not touch the engine until it cools down after use.
6. During use, do not allow the high pressure hose to come in contact with any part of the (hot) engine. Damage to the hose could occur causing it to burst under high pressure.
7. In case of emergency during use, release the trigger on spray handle to stop the spray, then shut off the gas supply valve on the engine. Refer to the Operation section.
8. Avoid tipping the Pressure Washer during use. Place only on a flat, stable surface.

Unpacking

When unpacking, check and make sure that the following parts are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.



Assembly

1. Insert the Upper Bracket (3A) onto the Bottom Bracket (7A) and secure with Bracket Screws (12A) as shown above. Tighten securely.
2. Screw on the High Pressure Hose (1A) to the Water Outlet Connector (9A). Tighten securely.
3. Screw on the other end of the High Pressure Hose to the Spray Gun (2A) handle. Tighten securely.
4. Attach the Spray Gun Nozzle (13A) to the Spray Gun (2A). Tighten securely.

Operation

Important Guidelines

- **Do leave the engine running without spraying water.** If it is left on for more than three minutes without discharging the high pressure water, damage could occur to the internal pump and high pressure hose.
- **The water hose should provide at least 3 gallons per minute for the Pressure Washer to operate at maximum performance.** Use only 3/4 (dia.) inch water hose supply. A smaller diameter hose limits the amount of water to the pump. Test by filling a five gallon bucket with the water supply hose. It should fill the bucket in three minutes or less.
- **Always use clean water through the Pressure Washer.** Debris in dirty water could damage the internal pump.

Setup

1. Fill with engine oil. Never run this Pressure Washer with low or no oil.

With Pressure Washer on a flat surface, carefully unscrew the Oil Cap Dip Stick (A). Add oil. Carefully screw in the Oil Cap Dip Stick (A). If the (plastic) threads on the Oil Cap do not seat correctly with the (metal) threads on the oil fill neck, the plastic threads can be stripped. Refer to the Robin® Engine Maintenance Manual for the recommended oil weight.

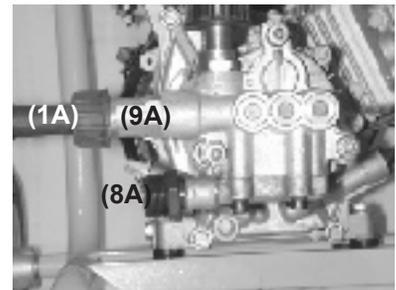


(A)

2. Fill the gasoline tank (B) with unleaded gasoline. See engine photo on the next page.

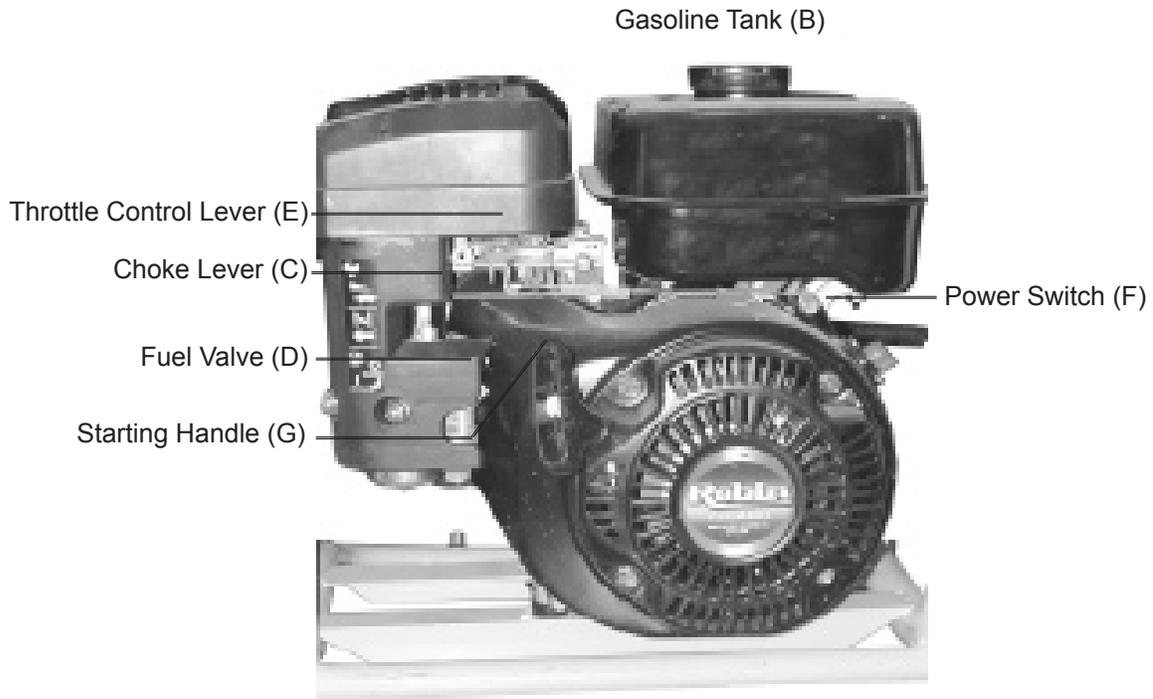
Do not use leaded gasoline. Be careful not to spill any gasoline on the engine or pavement. Wash down any spilled gasoline.

3. Connect the 3/4 inch garden hose from a cold water garden faucet to the Water Inlet Connector (8A). Tighten securely. See photo to right. Turn on the water faucet valve all the way (counterclockwise).



Use

4. Pick up the Spray Gun (2A) and point it away from you. Squeeze the Trigger Handle until all internal air is released, and a steady flow of water comes out. Release the Trigger Handle.
5. Move the Choke Lever (C) to the closed (left) position. See engine photo below.
6. Turn the Fuel Valve (D) to the open (down) position.
7. Move the Throttle Control Lever (E) 1/3 to the left.
8. Turn the red Power Switch (F) to the ON position.



9. Pull the Starting Handle (G) lightly until you feel resistance. Then, pull it completely out. The engine should start up. Slowly release the Starting Handle. Make sure the Pressure Washer is on a level surface so it does not roll.
10. Adjust the Throttle Control Lever (E) for the desired speed and subsequent output water pressure. Open the Choke Lever (C) to the right. If the engine does not start after a few tries, refer to Troubleshooting Tips on the next page.
11. Hold the Spray Gun (2A) with both hands and begin spraying.

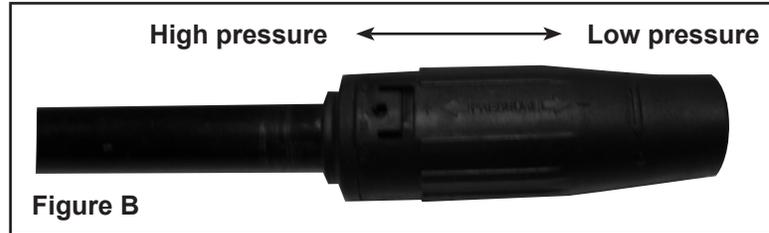
Do not allow the engine to run for more the three minutes without spraying. Adjust the Spray Gun Nozzle (13A) to the desired spray pattern.



Using Detergent

CAUTION! To avoid injury, ONLY run pressure washer detergent through the Detergent Suction Hose.

1. Place the end of the transparent Detergent Suction Hose into the detergent container or bottle.



2. Do not dilute the detergent. The detergent sprays out at low pressure only. Slide the Spray Nozzle out for low pressure. The pressure washer will draw the detergent up through the Detergent Suction Hose and mix the water and detergent automatically, at about a 6% detergent 94% water ratio. **See Figure B.**

Shutting Down the Pressure Washer

1. Move the Throttle Control Lever (E) all the way to the right.
2. Turn the Power Switch (F) to the OFF position. The engine will stop.
3. Turn the Fuel Valve (D) up to the closed position.
4. Turn off the water supply faucet.
5. Press the Spray Gun Trigger Handle to release water and pressure.
6. Disconnect the water supply hose from the Water Inlet Connector (8A).
7. Disconnect the High Pressure Hose (1A) from the Water Outlet Connector (9A).
8. Engage the Spray Gun Trigger safety lock.
9. Coil the High Pressure Hose and secure to the Upper Bracket (3A).
10. With the Fuel Valve (D) off, and the Power Switch (F) on, restart the engine for only a few seconds. This will clear water from the pump, and gas and oil residue from the engine.

Maintenance

1. Wipe down the entire unit with a clean cloth. Do not use any solvents.
2. Store the unit in a clean and dry location, away from anything flammable.
3. Read and follow maintenance instructions for the engine in the Robin Subaru 6 HP Engine Maintenance Manual.
4. If water is leaking from connections during operation, shut down the Pressure Washer and retighten all connections.

Troubleshooting Tips

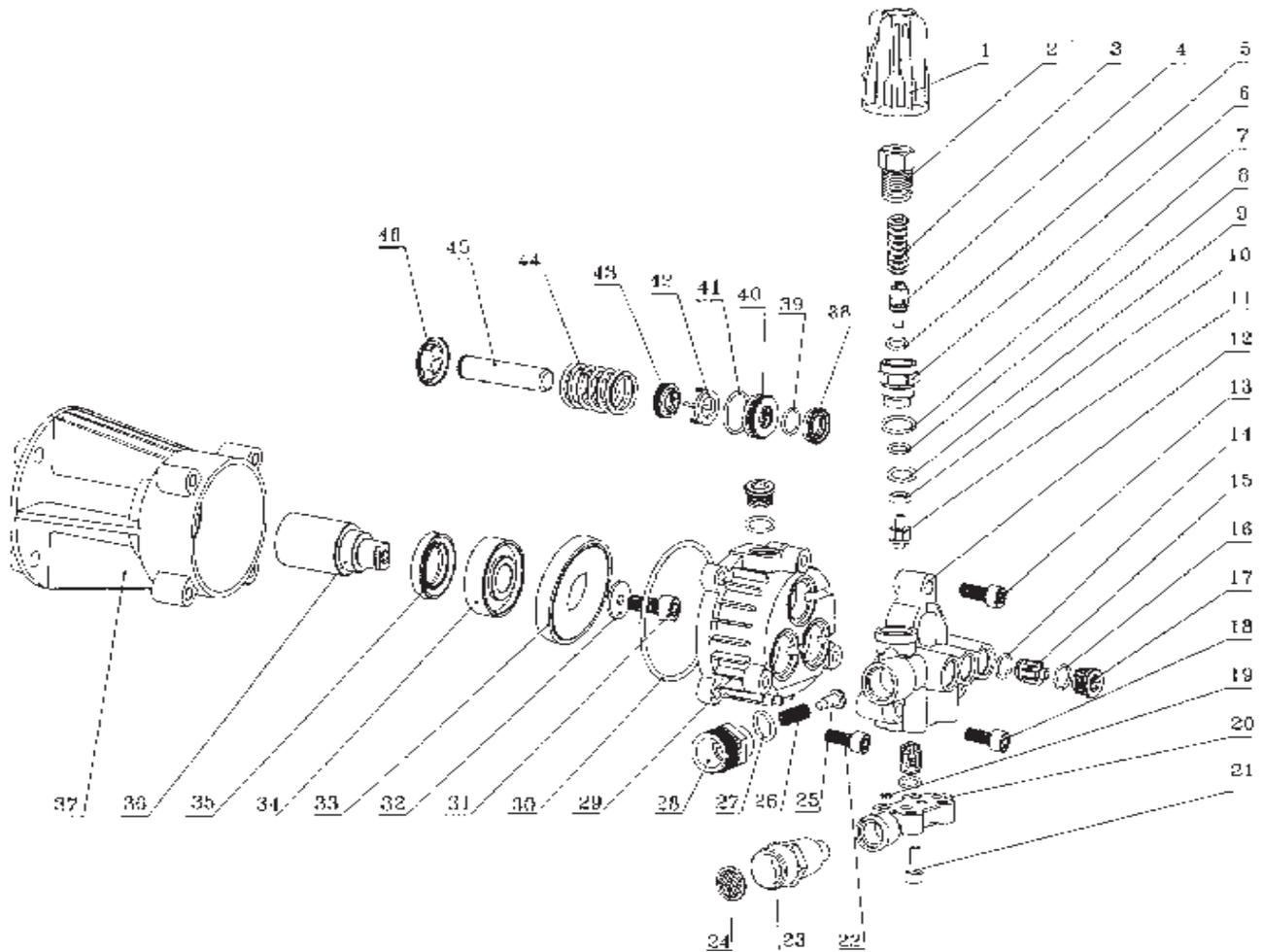
Symptom	Possible Cause	Solution
Engine will not start	<ol style="list-style-type: none"> 1. Gas tank empty 2. Low oil level 3. Choke is not in correct position 4. Engine throttle set too low 5. Pressure build up in pump 	<ol style="list-style-type: none"> 1. Fill gas tank 2. Add oil 3. Close choke 4. Increase throttle setting 5. Squeeze trigger to release pressure
Does not produce high pressure	<ol style="list-style-type: none"> 1. Diameter of water supply hose too small 2. Water supply is restricted 3. Not enough water supply 	<ol style="list-style-type: none"> 1. Replace garden hose with a ¾ inch hose 2. Check water supply hose for kinks, leaks, or blockage 3. Open water faucet all the way
Output pressure varies	<ol style="list-style-type: none"> 1. Not enough water supply 2. Water inlet screen is clogged 3. Nozzle is clogged 4. Nozzle has mineral build up 	<ol style="list-style-type: none"> 1. Check water supply hose for kinks, leaks, or blockage. Open faucet all the way 2. Remove inlet screen and rinse out 3. Remove nozzle and clean 4. Remove nozzle and clean with vinegar

Pump Assembly Parts List

Item	Description	Qty.	Item	Description	Qty.
1	Adjusting Cap, PA66	1	24	Filter Screen, 1Cr18Ni9	1
2	High Pressure Screw Cap, 59-1	1	25	Valve, Unilateral, 1013B	1
3	Adjusting Spring, 65 Mn	1	26	Spring, Unilateral Valve, 4Cr13	1
4	Valve Core, 59-1	1	27	O-ring, $\phi 22 \times 2.4$	1
5	O-ring, $\phi 11 \times 1.9$	1	28	Joint, Water Outlet, 59-1	1
6	Junction Screw Cap, 59-1	1	29	Pump Body, Y104	1
7	O-ring, $\phi 22 \times 1.9$	1	30	O-ring, $\phi 86 \times 2.4$	1
8	O-ring, $\phi 9 \times 1.9$	1	31	Bolt, M8x25	1
9	O-ring, $\phi 16 \times 1.9$	1	32	Gasket, M8	4
10	Air-proof Ring, 59-1	1	33	Bearing	1
11	Pressing Group Cap, 59-1	1	34	Bearing, 303	1
12	Pump Head, Y104	1	35	Seal, Oil Frame, NBR	1
13	Bolt, M8x30	2	36	Drive Shaft, 45#	1
14	O-ring, GB1235-76, $\phi 14 \times 1.9$	6	37	Base, Y104	1
15	Valve, Water Inlet-Outlet, POM	6	38	V-ring, NBR	3
16	O-ring, GB1235-76, $\phi 16 \times 1.9$	4	39	O-ring, GB1235-76, $\phi 18 \times 1.9$	3
17	Cap, Water Inlet Valve, 59-1	4	40	Ring, Interspace, 59-1	3
18	Bolt, M8x36	1	41	O-ring, GB1235-76, $\phi 28 \times 2$	3
19	O-ring, GB1235-76, $\phi 10 \times 1.9$	1	42	Ring, Interspace Separating, 59-1	3
20	Housing, Water Inlet, Y104	1	43	Seal, Frame Oil, NBR	3
21	Bolt, M6x25	4	44	Spring, Plunger, 65Mn	3
22	Bolt, M8x25	4	45	Plunger, 2Cr13	3
23	Joint, Water Inlet, PA66	1	46	Plunger Clip, 65Mn	3

Note: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

Pump Assembly Drawing



PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Major Assembly Parts List

Item	Description	Qty.
1A	Hose, High Pressure	1
2A	Spray Gun	1
3A	Bracket, Upper	1
4A	Engine, Gas	1
5A	Pump	1
6A	Wheel, Left	1
7A	Bracket, Bottom	1
8A	Connector, Water Inlet	1
9A	Connector, Water Outlet	1
10A	Wheel, Right	1
11A	Screw	2
12A	Screw, Bracket	2
13A	Nozzle, Spray Gun	1

Major Assembly Drawing

