## Pressure Washer Limited Warranty

This product is under warranty to the original retail consumer against defects in material and workmanship for a period of 1 (one) year on machine, 90 days on gun and hose assembly, from the date of retail purchase and is not transferable. Warranty covers replacement parts. This limited one year warranty applies only to products used in consumer applications and does not apply to rental or commercial applications.

### *Warranty Returns*

Items returned for warranty consideration must have a Returned Merchandise Authorization (RMA) number and proof of purchase. All unauthorized returns will be refused and shipped back to sender. Call 1-866-815-2036 Monday through Friday 8:00 a.m. - 5:00 p.m (Central Standard Time). Or E-Mail to: info@arnorthamerica.com 24 hours a day.

A.R. North America
Attn: Pressure Washer Warranty Department
140 - 81st Avenue NE
Fridley, MN 55432

# AR620 & AR63

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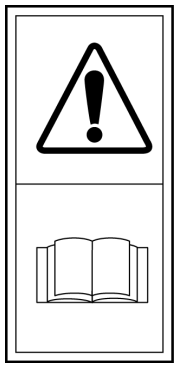
## Use • Maintenance Manual



***Warning:*** This manual must be read before installation or use of the unit.

***Important Notice:*** *Winter storage or long time storage.* Drain all water out of the pump. Flush the pressure washer with a 50% antifreeze solution, and relieve the pressure. Flush the pressure washer before you use it again to remove the antifreeze.

BLUE CLEAN Power Washer

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# Safety Instructions

Read and understand these instructions because they have to do with safety. Pay particular attention to the safety symbol throughout this manual. Failure to comply with these instructions may result in personal injury or property damage. DO NOT allow children to operate or play on or around this equipment.

## Before Operating:

1. Plug the unit into a 3-prong outlet that is properly grounded. Improper grounding can result in electrical shock.
2. Do not operate the machine in or around an explosive environment.
3. Never spray flammable liquids.
4. Always wear safety glasses or goggles and appropriate clothing when operating the unit.
5. Understand all safety precautions and first aid for chemicals being used.
6. Follow the chemical manufacturer's recommendations when using chemicals in the soap injector.
7. Do not alter the machine from the manufacturer's design.
8. Keep all safety devices active on the machine.
9. Locate the machine so it is protected from external damage.
10. Always place the machine on a level surface.
11. Never spray any part of this pressure washer or any other electrical machine.
12. Never use an undersized discharge nozzle.
13. Do not adjust the unloader relief valve.
14. Never operate the unit with broken or missing parts.
15. Always check and maintain proper oil levels described in the Maintenance section of this manual.

| Pos. | Code | Description | Qty. |
|---|---|---|---|
| 1 | 1981780 | Knob | 1 |
| 2 | 1540560 | Grub screw | 1 |
| 3 | 1980300 | Nut | 1 |
| 4 | 1980390 | Handle insert | 1 |
| 5 | 1980220 | Spring plate | 2 |
| 6 | 1271070 | Spring | 1 |
| 7 | 1080041 | Upper piston | 1 |
| 8 | 1080401 | Ring | 1 |
| 9 | 1080250 | O-Ring | 1 |
| 10 | 1080070 | Pin | 2 |
| 11 | 1980210 | Piston guide | 1 |
| 12 | 880830 | O-Ring | 1 |
| 13 | 740290 | O-Ring | 1 |
| 14 | 800560 | O-Ring | 1 |
| 15 | 1080190 | O-Ring | 3 |
| 16 | 1271160 | Lower piston | 1 |
| 17 | 1080121 | By-pass seat | 1 |
| 18 | 1260570 | Washer | 1 |
| 19 | 390080 | O-Ring | 2 |
| 20 | 1540270 | Brass screw | 1 |
| 21 | 1270790 | Sticker scale | 1 |
| 22 | 395370 | Grower | 2 |
| 23 | 395270 | Screw | 2 |
| 24 | 1260530 | Pressure gauge cap | 1 |
| 25 | 1260520 | Index | 1 |
| 26 | 1270080 | Valve housing | 1 |
| 27 | 770140 | O-Ring | 2 |
| 28 | 1180140 | O-Ring | 1 |
| 29 | 1260540 | Inlet fitting | 1 |
| 30 | 1260560 | Washer | 1 |
| 31 | 880270 | O-Ring | 1 |
| 32 | 1540260 | Screw | 1 |
| 33 | 2639 | Suction fitting | 1 |
| 38 | 480480 | O-Ring | 3 |
| 39 | 1260670 | Detergent fitting | 1 |
| 40 | 720030 | O-Ring | 1 |
| 41 | 1262940 | Valve cage | 1 |
| 42 | 1250270 | Valve spring | 1 |
| 43 | 1250280 | Inox ball | 1 |
| 44 | 880840 | O-Ring | 1 |
| 46 | 1269041 | Injector housing | 1 |
| 48 | 1269010 | Complete knob | 1 |
| 49 | 1981770 | Knob plug | 1 |
| 51 | 1460430 | O-Ring | 1 |
| 52 | 1540170 | Jet | 1 |
| 53 | 1080091 | Spring | 1 |
| 54 | 394280 | O-Ring | 1 |
| 55 | 1200690 | O-Ring | 1 |
| 56 | 1270100 | Detergent injector | 1 |
| 57 | 1260820 | O-Ring | 1 |
| 58 | 1264070 | Ring | 1 |
| 59 | 1264060 | Pressure gauge piston | 1 |
| 60 | 1264090 | Pressure gauge spring | 1 |
| 61 | 1264080 | Plug | 1 |
| 70 | 1271170 | Ring | 1 |

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## Repair Kits

O-Rings
Kit 2715

| Pos. | Qty. | Pos. | Qty. |
|---|---|---|---|
| 8 | 1 | 40 | 1 |
| 9 | 1 | 41 | 1 |
| 12 | 1 | 42 | 1 |
| 13 | 1 | 43 | 1 |
| 14 | 3 | 44 | 1 |
| 15 | 2 | 51 | 1 |
| 19 | 2 | 54 | 1 |
| 27 | 1 | 55 | 1 |
| 28 | 1 | 57 | 1 |
| 31 | 3 | 70 | 1 |
| 38 | 1 | | |

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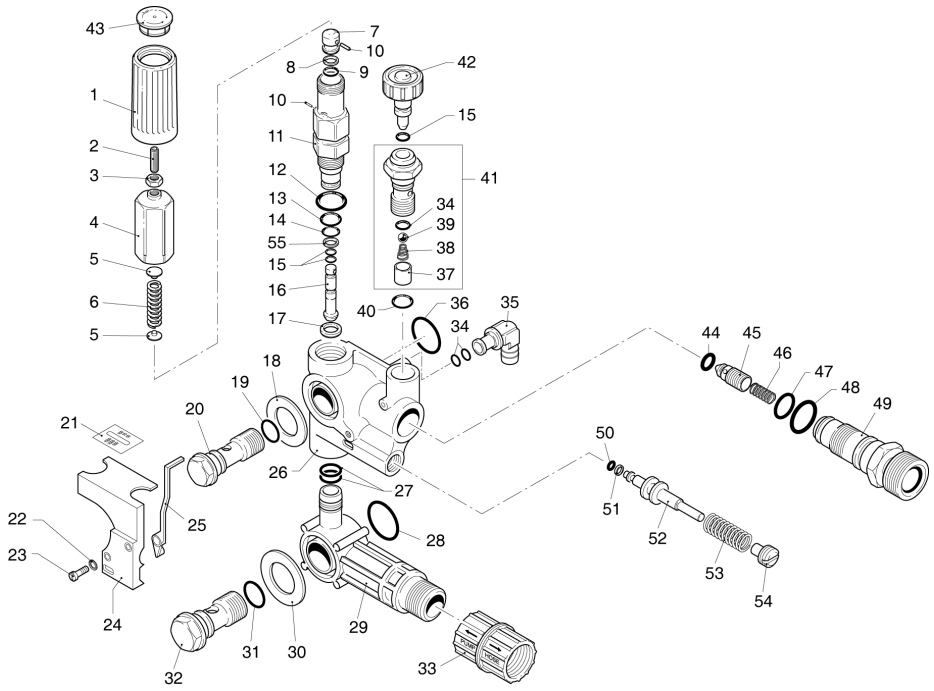
# Combiset

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**While Operati**

16. Always use water that is clear and fi

17. Always point the wand nozzle away from people and animals, the high pressure the unit generates is very dangerous.

18. Keep the pressure hose connected to the machine and wand while unit is pressurized.

19. Never leave the wand unattended while the machine is running.

20. Always seek emergency medical care immediately **if any fluid penetrates the skin**. The cut may be deeper and more serious than it appears.

21. Never run preheated water into the machine.

22. **Do not** secure the wand in the squeezed, "ON" position.

23. No smoking when operating the machine.

24. Never use the unit when under the influence of drugs, alcohol or medication.

25. Do not adjust the unloader.

26. Do not move the unit by pulling on the hose or electrical cord.

27. Only operate the machine with sufficient water supply to the pump.

28. Do not let the machine run with the wand in the not-squeezed, "OFF" position for more than 2 minutes (30 seconds with the water temperature above 80° F). This causes bypass water temperature to increase which damages the pump.

29. Protect your machine from freezing during storage. Follow the instructions to protect your pressure washer from freezing storage temperatures.

30. Always follow all other guidelines and safety instructions described in this manual.

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# Assembly Instructions

## Pre-Assembly Checklist

1. The pressure washer should be as close as possible to the water supply.

2. Locate the pressure washer on a solid, level surface with a gentle slope to prevent water from building up in the work area. Excess water can make surfaces slippery.

3. Position the unit so the operator has easy access to the pressure washer and its controls.

4. To prevent damage and excessive hose wear, locate the pressure washer so the hose does NOT extend across traffic areas. Make sure there are no kinks or twists in the hose.

5. Use extension cords of at least 12-3 gauge for lengths up to 50 feet or 10-3 gauge for lengths up to 100 feet. Check the extension cord to make sure it is not damaged or frayed. The outlet should have an amperage rating of 20 amps or greater and should have a Ground Fault Circuit Interrupter (GFCI).

6. Do not use the pressure washer outdoors if it is raining, and do not spray the motor or any of its connections.

7. Do not use chemicals or agents which are not compatible with the Buna-N and PVC (polyvinyl) or neoprene covering of the hose.

8. Do not run acids or hard caustics through the pump.

9. Check to determine if the water supply is capable of exceeding the output of the pump. The output of this unit is 2.1 gpm (gallons per minute), so the water supply **must** deliver *at least* 2.5 gpm.

   Calculate gpm flow rate by running the water supply into a pail for one minute. Measure the gallons in the pail. If it is at least 2.5 gallons in the minute, your supply is adequate. Your water supply must be clean and free of debris. Use water with a temperature of less than 140° F.

| Pos. | Code | Description | Qty. |
|---|---|---|---|
| 1 | 1260273 | Black rear casing | 1 |
| 2 | 1261551 | Screw | 8 |
| 3 | 180030 | Screw | 4 |
| 4 | 1260710 | Black handle | 1 |
| 5 | 1261760 | Fan cowling | 1 |
| 6 | 1264623 | Black front casing | 1 |
| 7 | 1260470 | Screw | 4 |
| 8 | 1260830 | Base | 2 |
| 9 | 1260780 | Screw | 4 |
| 10 | 1262790 | Detergent hose | 1 |
| 11 | 1341030 | Suction filter | 1 |
| 12 | 1269115 | Detergent hose w/filter | 1 |
| 13 | 1260360 | Scew extension | 1 |
| 14 | 1260300 | Fan | 1 |
| 15 | 1260970 | Washer seal | 1 |
| 16 | 1260810 | Screw | 1 |
| 17 | 1263550 | Capacator 80uF | 1 |
| 18 | 1265080 | Switch gasket | 1 |
| 19 | 1261240 | Switch | 1 |
| 20 | 1261560 | Screw | 4 |
| 21 | 1262370 | Cord guide | 1 |
| 22 | 1261410 | Switch box | 1 |
| 23 | 1260400 | Switch box gasket | 1 |
| 24 | 1269100 | Ground terminal | 1 |
| 25 | 1261820 | Cord | 1 |
| 26 | 1269090 | Cord screw guide | 1 |
| 27 | 1260950 | Bearing | 1 |
| 28 | 1260960 | Motor plate | 1 |
| 29 | 4747 | Electric motor | 1 |
| 30 | 1340280 | Clamp | 1 |
| 31 | 1260760 | Screw | 6 |
| 32 | 1269101 | Rear cover | 1 |
| 33 | 1260040 | Rear cover gasket | 1 |
| 34 | 1260480 | Oil cap | 1 |
| 35 | 1260170 | Crankshaft | 1 |
| 36 | 180400 | Bearing | 1 |
| 37 | 1260770 | Circlip | 1 |
| 38 | 1260790 | Circlip | 1 |
| 39 | 1260750 | Seal | 1 |
| 40 | 1380520 | Key | 1 |
| 41 | 1260080 | Piston pin | 3 |
| 42 | 1260070 | Guiding piston | 3 |
| 43 | 1260091 | Spacer | 3 |
| 44 | 480480 | O-Ring | 3 |
| 45 | 1260120 | Piston | 3 |
| 46 | 1260100 | Piston washer | 3 |
| 47 | 1260110 | Nut | 3 |
| 48 | 1260060 | Con-rod (Alum.) | 3 |
| | 1320140 | Con-rod (Bronze) | 3 |
| 49 | 1260162 | Valve plug | 6 |
| 50 | 960160 | O-Ring | 6 |
| 51 | 1269050 | Complete valve | 6 |
| 52 | 880830 | O-Ring | 6 |
| 53 | 1262220 | Pump head | 1 |
| 54 | 1281550 | Washer | 6 |
| 55 | 680570 | Screw | 6 |
| 56 | 180101 | O-Ring | 1 |
| 57 | 820361 | Plug | 1 |
| 58 | 880530 | Plug | 2 |
| 59 | 740290 | O-Ring | 2 |
| 60 | 1260140 | Gasket support ring | 3 |
| 61 | 1260130 | H.P. gasket | 3 |
| 62 | 1260151 | Piston guide | 3 |
| 63 | 1260420 | O-Ring | 3 |
| 64 | 1260440 | L.P. gasket | 3 |
| 65 | 1260460 | Seal | 3 |
| 66 | 1260010 | Pump housing | 1 |
| 67 | 1260050 | Roller bearing | 1 |

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## Repair Kits for Pump

| Water Seals Kit 1866 | | Valves Kit 1864 | | Pistons Kit 2628 | | Oil Seals Kit 1865 | |
|---|---|---|---|---|---|---|---|
| Pos. | Qty. | Pos. | Qty. | Pos. | Qty. | Pos. | Qty. |
| 60 | 3 | 51 | 6 | 43 | 3 | 33 | 1 |
| 61 | 3 | 52 | 6 | 44 | 3 | 39 | 1 |
| 63 | 3 | | | 45 | 3 | 65 | 3 |
| 64 | 3 | | | 46 | 3 | | |
| | | | | 47 | 3 | | |

| O-Rings Kit 2767 | |
|---|---|
| Pos. | Qty. |
| 44 | 3 |
| 50 | 6 |
| 52 | 6 |
| 56 | 1 |
| 59 | 3 |
| 63 | 3 |

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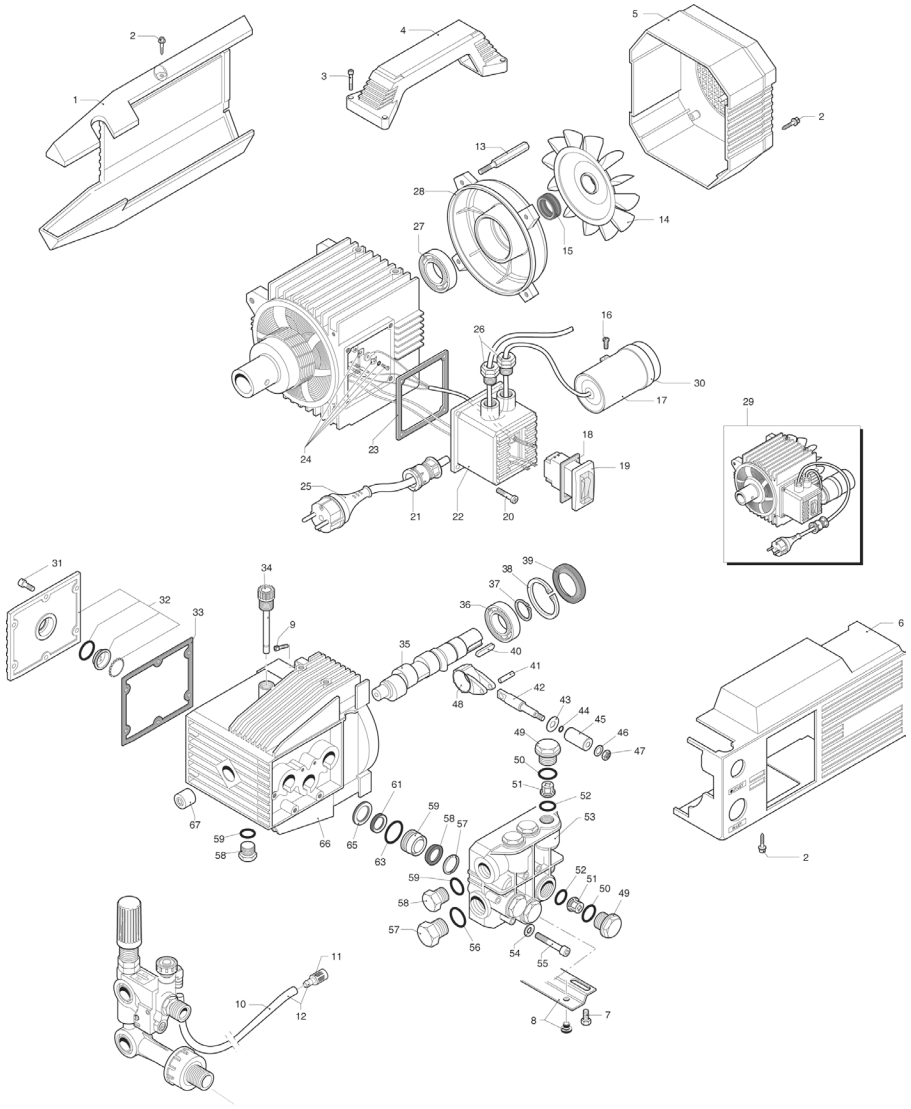
# AR620 / AR630



## Assembling

1. Connect the high pressure hose to t[illegible]e twist fast coupler and tighten securely. Fasten wand and gun together and connect gun/wand to high pressure hose.

> Tighten all connections and replace worn parts before starting the machine. Sudden release of high pressure streams may result if connections detach during use. This can cause serious injury. Never disconnect any part of the unit while the machine is running or before relieving system pressure, it is dangerous. Seek medical attention if an injury ever occurs.

2. Remove the red plug from the pump crankcase and install the black dipstick. Always check that the oil level is full before operating.

3. Oil level can be checked in two places. First, on back side of pump sight glass, level should be half way. Second, on dip stick oil should read between the indentation on the dip stick.

## Operating Instructions

### Before Starting the Pressure Washer

1. Read all safety instructions throughout the manual.

2. Place unit on dry, firm, level ground for optimum lubrication of pump.

3. Check oil levels prior to each use.

4. Tighten all hoses and connections. Check parts and replace if needed.

5. When the unit is attached to a pressure main and the nozzle is in the low pressure setting, purge air from system by squeezing gun trigger before starting machine. Let water run until there is a steady stream of water coming out of the nozzle.

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## Starting the Pressure Washer

1. Turn on the water supply to the proper gpm flow rate.
2. Plug power cord into properly grounded outlet.
3. Turn nozzle to low pressure and squeeze trigger.
4. Turn "ON/OFF" switch to the "ON" position and wait until a constant stream of water comes out. Adjust nozzle sleeves to achieve proper pressure and coverage area.

## During Operation

1. Observe all safety instructions through this manual.
2. **Do not** allow the machine to run with the wand not squeezed, "OFF", for more than 2 minutes (30 seconds with water temperature above 80° F.)

When the wand trigger is released the pump **does not** stop pumping. Water is routed through a bypass circuit which builds up heat. If the water temperature becomes too high, damage to the seals, packings and other parts may result.

3. Check pump, connections and hose for water and oil leaks. Replace worn parts.

## Stopping the Pressure Washer

1. Rinse and close the downstream chemical injector.
2. Turn the motor power switch to the "OFF" position.
3. Turn off water supply.
4. Squeeze the trigger on the wand to relieve the system water pressure and drain as much water as possible.
5. Spray the backside of the nozzle with a lubricant and work the nozzle back and forth from high pressure to low pressure. This will help keep the nozzle from sticking.
6. Follow this procedure each time the machine is stopped. Having the nozzle set at low pressure and squeezing the trigger on the gun when you start the unit will reduce the startup load of the unit.

## Troublesho

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| Low Nozzle Pressure<br>Causes | Solutions |
|---|---|
| Plugged nozzle. | Clean and check for blockage. |
| Insufficient flow of water to the pump. | Increase water flow to the pump. |
| Plugged inlet screen. | Pull out and clean screen carefully. |
| Using restrictive supply hose. | Use larger diameter supply hose. |
| **Surging Pressure**<br>**Causes** | **Solutions** |
| Restricted supply by under-sized fittings or inlet. | Use larger fittings and clean the inlet screen. |
| Insufficient flow of water to the pump. | Increase water flow to the pump. |
| Air trapped in the pump head. | Set nozzle on low pressure setting, squeeze gun trigger before starting machine. Start engine and run water until air is purged out of the system. |
| **Soap Injector Not Working**<br>**Causes** | **Solutions** |
| Adjustable nozzle set on high pressure mode. | Set nozzle to low pressure. Injector only works on low pressure setting. |
| Back pressure from the addition of extra hose. | Do not use additional high pressure hose. |
| Detergent adjustment knob turned off. | Turn detergent adjustment knob counter-clockwise to open. |
| Plugged injector valve. | Check and clean the injector. |

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## Using the Soap Injector

Your pressure washer is supplied with a downstream low pressure soap/chemical injector. Soap is added after the water flows through the pump. The injector is used to add liquids to the water. The injector works only on low pressure.

To draw soap/chemical into the pressure washer, insert the filter end of the pick-up hose into the soap/chemical. Adjust the nozzle to the low pressure position. **Do not** use powders, granulars, high viscosity detergents or acidic based detergents/chemicals in the injector.

To shutdown the injector, remove pick up tube and filter from detergent/chemical tank and place it in a container of clear water. Run water through the entire system to wash out the chemical you were using.

## Storing the Pressure Washer

Severe damage could occur by water freezing inside the components. To prevent costly repairs, follow these steps:

1. Make sure the unit is "OFF", water supply is disconnected and system pressure has been relieved.

2. Install a suction hose from the pump inlet (garden hose fitting) into a gallon of NON-TOXIC RV anti-freeze. Following operating instructions start the machine and squeeze trigger on the spray gun allowing the pump to draw anti-freeze through the entire system. Once the anti-freeze appears at the end of the wand, turn the machine "OFF".

3. Squeeze gun trigger to relieve pressure from system. Disconnect the high pressure hose from the high pressure outlet and put the hose, gun/wand and owners manual in a secure place to prevent unauthorized people from using the machine.

4. When preparing to use the pressure washer again, simply reconnect the high pressure hose assembly and water supply to the unit, turn the water on and squeeze the trigger on the spray gun to send water through the system. Dispose of the anti-freeze/water solution safely where it will not be harmful to the environment, people or animals.

## Starting the Machine After A

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Long periods of non-use can cause calciu e the pump. Starting the machine could cause damage to the pump. Insert the allen key provided with the unit through the hole in the motor end housing and rotate the motor one revolution clockwise and counter-clockwise. Remove the key and start the motor. It should start up easily.

# Maintenance

Change oil after the first 50 hours of use. Use a SAE20 or 30 non-detergent oil. After that, change oil every 200 hours, once a year or when it looks milky, more frequently if used in demanding environments. Changing oil is one of the most important and least expensive maintenance items, it will prolong the life of your pressure washer.

### Routine Checks – do these before every use.

1. Check water inlet screens for signs of debris.

2. Check nozzle for debris and signs of extensive wear. Worn nozzle will result in poor performance. **Only check nozzle with the motor turned "OFF" and the pressure relieved from the system!**

3. Check all fittings and connections for leaks and worn areas.

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## Cleaning Tips

The gun nozzle supplied with the pressure washer provides optimum cleaning for universal cleaning applications if used properly.

Cleaning agents are most effective when the surface is rinsed first to loosen dirt. After pre-rinsing to loosen dirt, then clean with detergent.

Detergent should be applied from the bottom to the top of the washing area. Apply detergent and allow the detergent to react with the dirt, then rinse from the top to the bottom. This detergent applying and rinsing technique will help to avoid streaks and skips in the washing area.

Never use more detergent than is necessary to clean the surface.

Always follow directions supplied by the detergent manufacturer on the container.

For best spraying results, hold the gun 6-12" away from the washing surface and use long, slow deliberate side to side strokes, similar to using a paint sprayer. This technique will provide the most effective cleaning impact and minimize streaks and skips in the cleaning process. Waving the spray gun aimlessly across the surface wastes water and expensive detergent and prolongs the cleaning process.

If the pressure washer is used to apply wax, the gun should be held further from the surface to optimize the "misting" effect when applying the wax. For best results, follow the directions supplied by the wax manufacturer.

## Gun, Wand and Nozzle

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Hold the gun/wand in the normal opera
nozzle sleeve clockwise for a fan spray and counterclockwise for a stream. (Pull the nozzle sleeve forward for high pressure while pushing the sleeve away from the gun for low pressure.) After shutting down the unit and draining the hose, spray a lubricant, such as WD40, on the backside of the nozzle and work the nozzle back and forth from high to low pressure. This will help prevent the nozzle from sticking. Examine nozzle tip for blockage **only** with pressure washer "OFF" and pressure relieved from system.

## Setting Nozzle Pressure / Chemical Injection

### High Pressure

1. For high pressure pull back on nozzle. Make sure to keep all parts of hand away from out coming water.

   Diagram A

### Low Pressure

2. For low pressure and chemical suction push the nozzle forward. Keep all parts of hand away from out coming water.

   Diagram B

### Fan Spray

3. For adjusting the water spray pattern turn nozzle clockwise for wide spray fan pattern and counter clockwise for narrow stream spray pattern.

   Diagram C

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