



M1571107F.1

ITEM NUMBER: 1571107, 1571108, 1571109

SERIAL NUMBER: _____

Owner's Manual

Pressure Washer: Machine that cleans dirty surfaces with high pressure water.

Instructions for Installation/Set-up, Operation, Maintenance, & Storage

This pressure washer produces cold-water high-pressure spray. Cleaning chemicals may be incorporated into the spray if desired. The pressure pump for this equipment is powered by an electric motor.

⚠ WARNING

SPECIAL HAZARDS

- **Injection Injury:** High-pressure spray can pierce skin and underlying tissues, leading to serious injury and possible amputation. Such an injection injury can result in blood poisoning and/or severe tissue damage.
- **Flying Debris:** High-pressure spray can cause flying debris and possible surface damage.
- **Electric Shock:** Operating equipment in wet conditions or near water can cause electric shock.
- **Chemical Exposure:** Cleaning chemical vapors or contact with skin may be hazardous.
- **Fire/Explosion:** Motor sparking can ignite fuel or other flammable liquids or vapors in the vicinity.
- **Burns:** Pressure washer pump and motor are hot surfaces that can cause burn injuries.

Detailed safety information about these hazards appears throughout this manual.

Equipment Protection Quick Facts

Inspect Upon Delivery: FIRST! Inspect for missing or damaged components. See "Initial Set-Up" section for where to report missing or damaged parts.

Pump: Pump is shipped with oil. Check pump oil level before starting. Remove shipping plug and install oil cap.

Water Flow Requirements: Make sure your supply water flow rate is 20% higher than the pressure washer's flow rate (see "Operations" section for detail) and that your water is clean and particle free. Maximum inlet water temp. 180°F (82°C) for 1571107 and 185°F (85°C) for 1571108 & 1571109.

Chemical Spraying: Use only approved pressure washer chemicals designed for high-pressure use.

Storage: Do not allow water to freeze in the pump, hose, or spray gun(s). See "Storage" for more information.

Maintenance Schedule: Motor and pump require periodic inspection and servicing to keep pressure washer functioning efficiently. See "Maintenance Schedule Summary" for frequency of servicing.

Any Questions, Comments, Problems, or Parts Orders
Call NorthStar Product Support 1-800-270-0810

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About Your Pressure Washer

Thank you for purchasing a NorthStar Pressure Washer! It is designed for long life, dependability, and top performance.

Intended Use. Produce a high-pressure water spray. Incorporate cleaning chemicals into a low-pressure water spray.

Note: Do not use for other purposes, as unforeseen hazards or equipment damage may result.

Power Source. The pressure washer is powered by an electric motor.

Supplies Required. Normal operation will require you to supply:

- Pressure Washer pump oil
- Electric supply
- Personal Protection Equipment

See “*Specifications*” section of this manual for more detail.

Personal Protection. Wear safety apparel during operation, including safety glasses with side and top protection. Ear protection is also recommended if working near any operating machine. Other safety apparel includes waterproof, insulated gloves and non-slip protective footwear. Cleaning chemicals may require the use of respiration mask; refer to the chemical label for further instruction.

Adult Control only. Only trained adults should set up and operate the pressure washer. Do not let children operate the pressure washer.

Under the Influence. Never operate, or let anyone else operate, the pressure washer while fatigued or under the influence of alcohol, drugs, or medication.

Keep this manual for reference and review.

ATTENTION: Rental Companies and Private Owners who loan this equipment to others!

All persons to whom you rent/loan this pressure washer to must have access to and read this manual. Keep this owner's manual with the pressure washer at all times and advise all persons who will operate the pressure washer to read it. You must also provide personal instruction on how to safely set-up and operate the pressure washer and remain available to answer any questions a renter/borrower might have. Owner's Manuals are available from NorthStar at 1-800-270-0810.

Specifications

1571107	
FLOW OUTPUT	
PSI (bar)	1500 (103.4)
GPM (l/min)	2.0 (7.6)
Max Water Temp	180° F (82°C)
MOTOR	
Motor Horsepower	2 HP
Ampere	20A
Voltage	120V
DIMENSIONS/COMPONENTS	
Length	24.35"
Width	21.00"
Height	19.00"
Pump Model	CAT 5CP
Pump Oil Capacity	17 oz
Nozzle orifice Size	#3.5
SUPPLIES REQUIRED (not included)	
Pump Oil (Shipped with oil but refills required)	SAE 30 Non-Detergent Oil or Cat Pump Oil (Part# 22158)
Circuit Type (Volts/Amps/Phase)	120V/20A/1ph

1571108	
FLOW OUTPUT	
PSI (bar)	2500 (172.36)
GPM (l/min)	3.0 (11.4)
Max Water Temp	185°F (85°C)
MOTOR	
Motor Horsepower	6.2 HP
Ampere	30A
Voltage	230V
DIMENSIONS/COMPONENTS	
Length	24.35"
Width	21.00"
Height	19.00"
Pump Model	GP EPHT1813S
Pump Oil Capacity	14 oz
Nozzle orifice Size	#3.5
SUPPLIES REQUIRED (not included)	
Pump Oil (Shipped with oil but refills required)	SAE 30 Non-Detergent Oil or Pressure washer Pump Oil (Part# 4043)
Circuit Type (Volts/Amps/Phase)	230V/30A/1ph

1571109	
FLOW OUTPUT	
PSI (bar)	3000 (207)
GPM (l/min)	4.0 (15.1)
Max Water Temp	185°F (85°C)
MOTOR	
Motor Horsepower	8.2 HP
Ampere	50A
Voltage	230V
DIMENSIONS/COMPONENTS	
Length	24.35"
Width	21.00"
Height	19.00"
Pump Model	GP EPHT1812S
Pump Oil Capacity	14 oz
Nozzle orifice Size	#4.5
SUPPLIES REQUIRED (not included)	
Pump Oil (Shipped with oil but refills required)	SAE 30 Non-Detergent Oil or Pressure washer Pump Oil (Part# 4043)
Circuit Type (Volts/Amps/Phase)	230V/50A/1ph

Component Identification

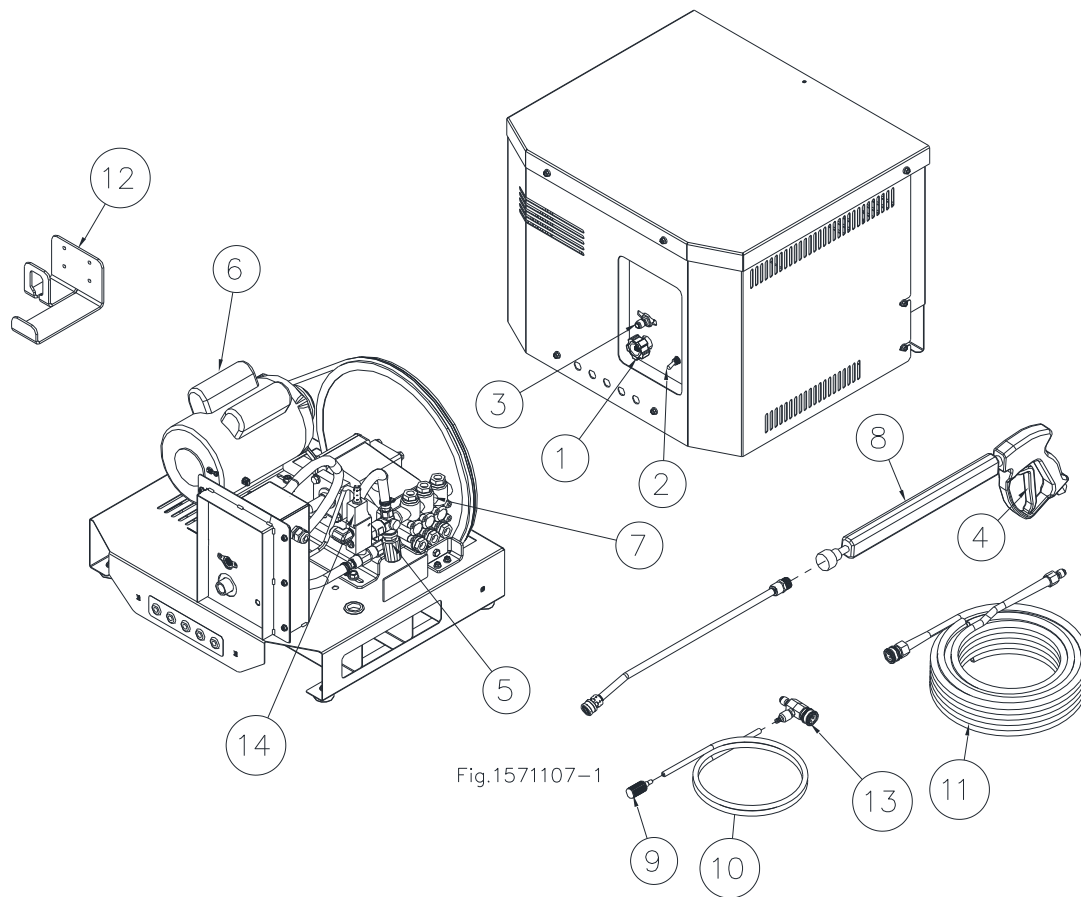


Fig.1571107-1

- 1. Inlet Filter:** Filter that will prevent particles and debris from entering the pump. Clean regularly.
- 2. On/Off Switch:** Toggle switches that will power or shut down unit.
- 3. High Pressure Outlet:** Connect your high pressure hose.
- 4. Trigger:** Actuate to allow pressurized water to flow out of spray gun.
- 5. Unloader:** Pressure Adjustment valve that regulates pressure and directs flow into bypass when trigger is closed.
- 6. Motor:** Motor provides years of reliable use and powers the pump.
- 7. Pump:** A device that moves fluid through a combination of suction and displacement.
- 8. Spray Gun:** Always use two hands for safe operation.
- 9. Chemical Strainer:** Must be fully submerged in cleaning chemical to draw fluid.
- 10. Chemical Hose:** Submerge in cleaning solution.
- 11. Pressure Hose:** Attach to gun and water outlet.
- 12. Hose and Gun Bracket:** Attaches on another surface suitable for storing the pressure hose.
- 13. Chemical Injector:** Inject chemicals into a system at the required pressure for the system
- 14. Total Start / Stop Switch:** Automatically shuts motor off when not spraying.

See "Parts Explosion" for more details

Safety

Hazard Signal Word Definitions



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER (red) indicates a hazardous situation, which if not avoided, will result in death or serious injury.

WARNING (orange) indicates a hazardous situation, which if not avoided, could result in death or serious injury.

CAUTION (yellow) used with the safety alert symbol, indicates a hazardous situation, which if not avoided, could result in minor or moderate injury.

CAUTION (yellow) without the safety alert symbol, is used to address practices not related to personal injury.

NOTICE is used to address practices not related to personal injury.

Safety Labeling

Safety Decal Locations

WARNING

ALWAYS make sure safety labels are in place and in good condition. If a safety label is missing or not legible, order new labels from NorthStar Product Support at 1-800-270-0810.

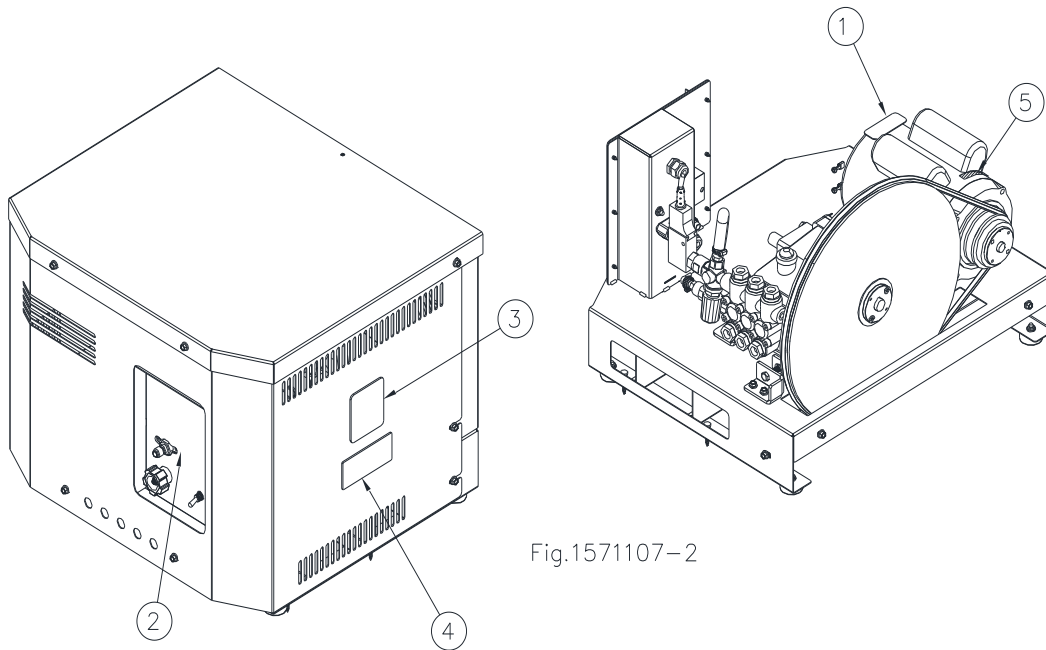
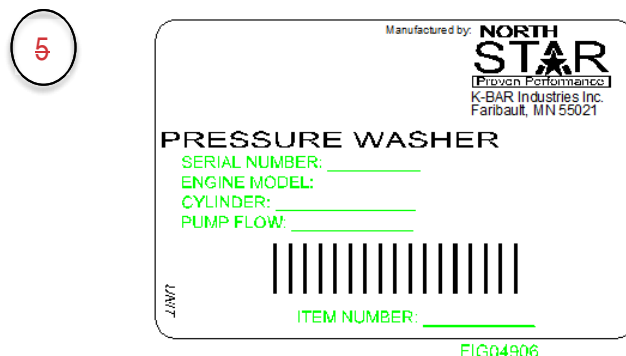
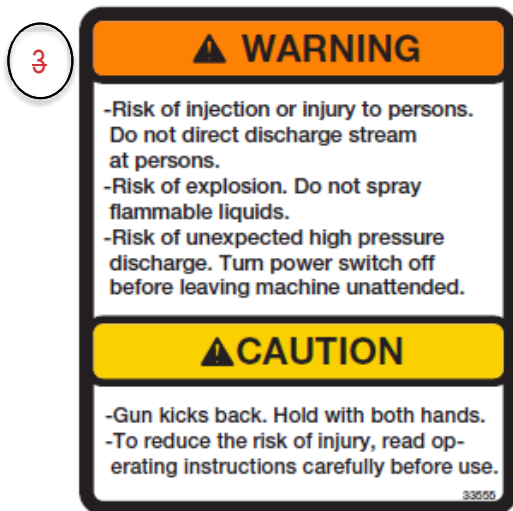
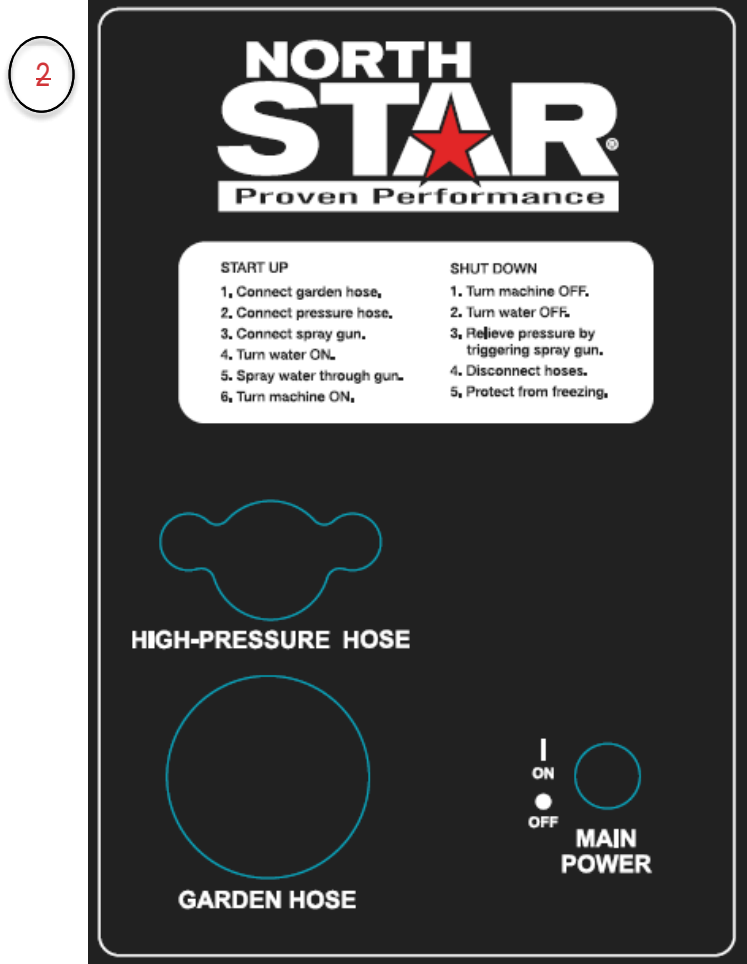


Fig.1571107-2

On-Product Warning Labels		
Location	Part Numbers	Description
1	35189	Warning, Rotating Equipment
2	803091	Start Up/Shut Down Instructions
3	33555	Risk Warning
4	802940	Total Start / Stop
5	NA	Serial Number

Safety Labeling

Safety Decals



To order replacement safety labels, call NorthStar Product Support at 1-800-270-0810.

Initial Set-Up

Step 1. Inspect & Unpack

Upon receiving your item check for missing or damaged parts.

See “*Component Identification*” section of this manual for a diagram of the pressure washer and its components.

- For missing or damaged components, contact Product Support at 1-800-270-0810.
- If complete, fill out product serial number information. See “*Limited Warranty*” section of this manual.

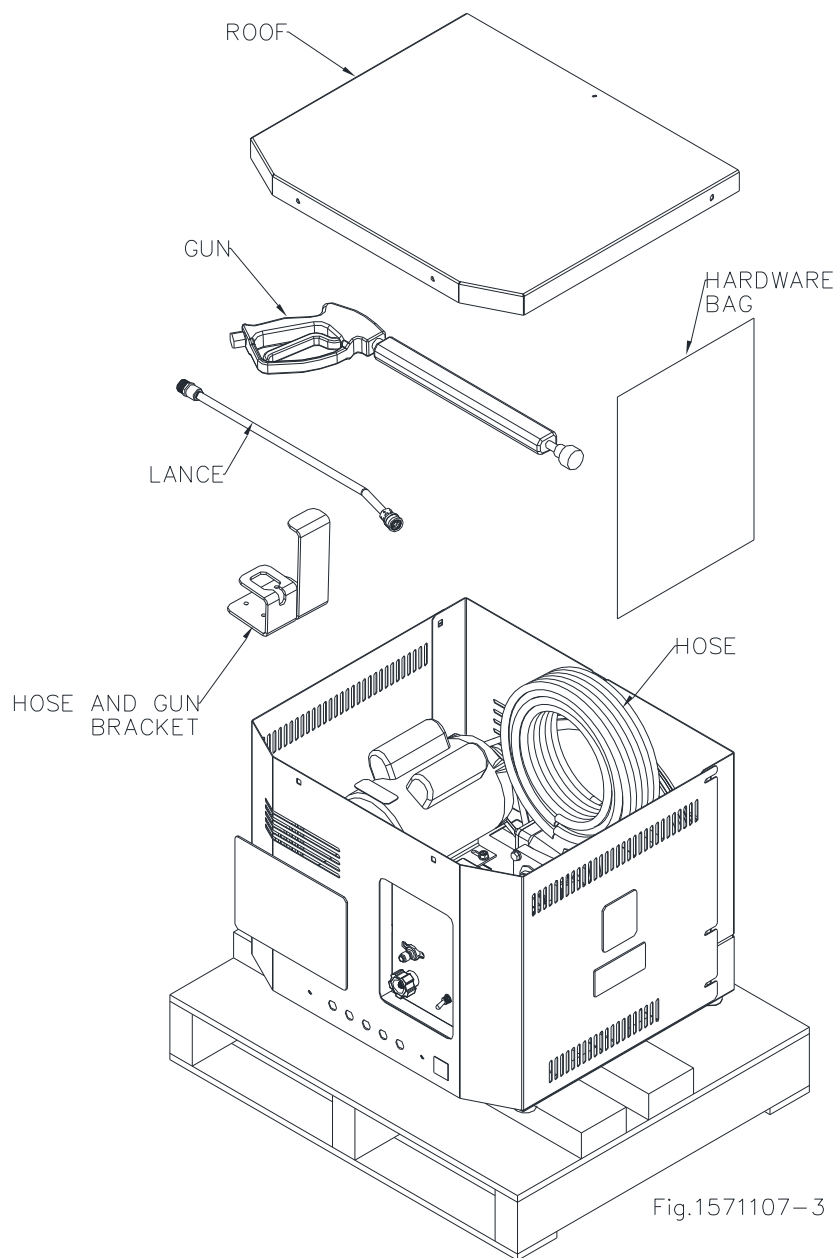


Fig.1571107-3

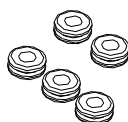
Any Questions, Comments, Problems or Parts Orders call NorthStar Product Support at 1-800-270-0810.

Initial Set-Up

Hardware Bag



NOZZLE 4 PACK
PART# 800111 (FOR 1571107, 08)
PART# 800653 (FOR 1571109)
QTY-1



GROMMETS
PART# 35198
QTY-5



RUBBER FEET
PART# 2215
QTY-4



1/4 - FLANGE BOLT
PART# 82009
QTY-4



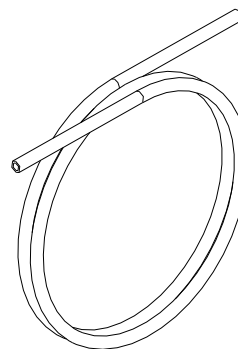
1/4 - FLANGE NUT
PART# 82013
QTY-4



STRAINER
PART# 221222
QTY-1



CHEMICAL INJECTOR
PART# 779613 FOR 1571108 & 09
PART# 803312 FOR 1571107
QTY-1



BRAIDED CHEMICAL HOSE
PART# 777165
QTY-4FT



OIL LEVEL DIP STICK CAP
FOR 1571108 & 09
QTY-1

Fig.1571107-7

Initial Set-up

Step 2. Assembly

Note: Remove contents from packaging to begin assembly.

Wiring Instructions

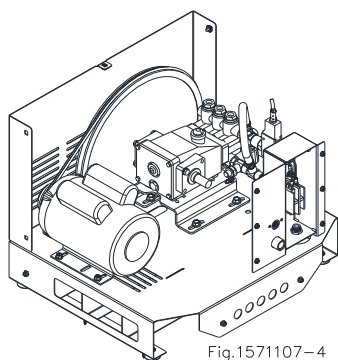
This pressure washer is shipped without a power cord and is intended to be hard wired into your electrical system. The following instructions will help you to hard wire this unit.

Electrical Requirements:

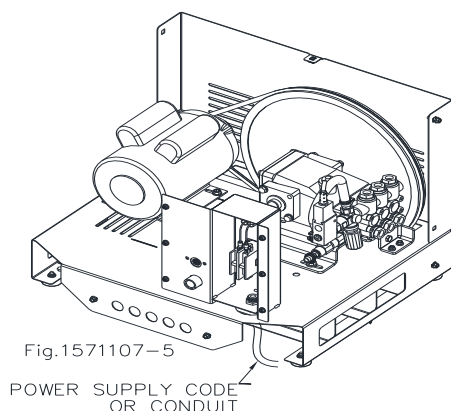
Item Number	Circuit Rating
1571107	120V/20A
1571108	230V/30A
1571109	230V/50A

WARNING: Make sure to use a dedicated circuit that includes a GFCI. Consult local electrical code for connection requirements.

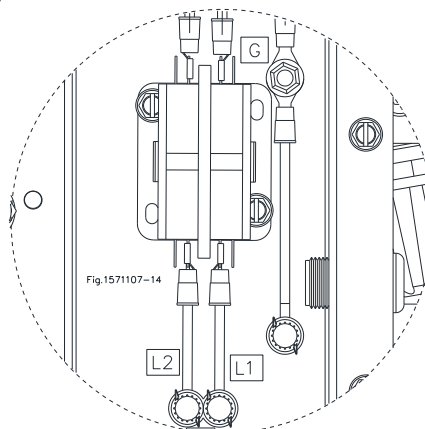
1. Using a 3/8" wrench, remove the roof and the front of the electrical housing. (Front panel not shown for clarity.)



2. Feed **power cord** through the strain relief nut on the bottom of the unit into the electrical housing.



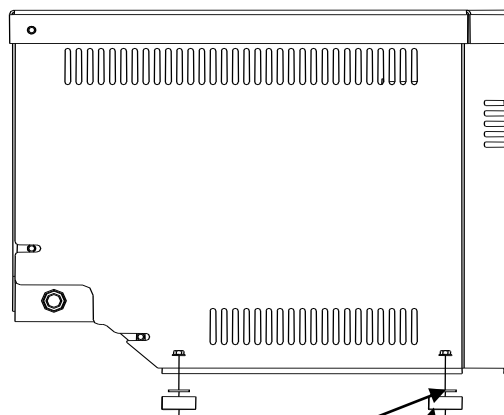
3. Use wires coming into control box and connect to existing wires using wire nuts included in control box for 1571107 & 1571108 only. For 1571109, connect power supply directly to contactor lugs and grounding terminals. Torque lugs on contactor to 40lb-in.



4. Clamp cord in strain relief nut (thru the side of the control box) by turning nut clockwise.
5. Re-attach the top of the electrical housing and the roof.

Rubber Feet Assembly

1. Install four rubber feet onto base with four 1/4" x 3/4" flange bolts and four flange nuts. Use the same bolts to install cross members when installing the rubber feet.
2. The Hose and Gun Bracket can be bolted to the mounting surface. Once affixed, use the lag bolts provided to attach to a supportive surface suitable for nozzle and pressure hose storage.



BRACE

RUBBER FEET

FIG0235

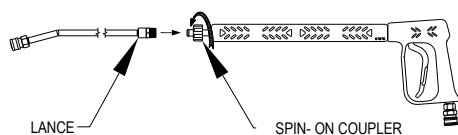
Initial Set-up

Spray Gun Assembly

Attach the Lance to Spray Gun

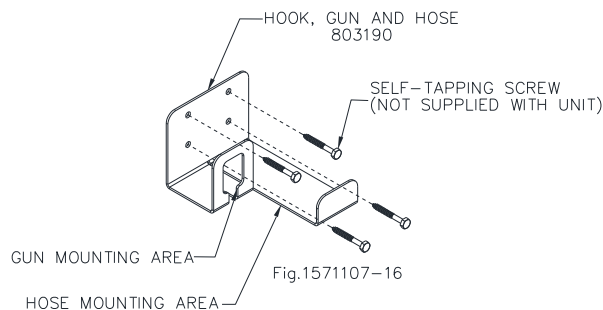
Tighten spin-on coupler hand tight.

Note: The O-rings create a seal so there is no need to tighten with a wrench



Wall Mount Hook, Gun and Hose Assembly

1. Install wall mount Hook, gun and hose # 803190 using self-tapping screws qty-4 (Screws are not supplied with unit) against flat surface of the wall.
2. Store gun after removing lance and hose on hook.



- Only lift the pressure washer by the base. Do not use the pump or motor as lifting point. See component identification for lifting point locations.

Positioning:

1. The pressure washer should be positioned on a firm, level (less than 3-degree slope), heat-resistant surface with good drainage and a nearby water supply.
2. The pressure washer should be placed within garden hose distance of a continuous water supply. Ensure that the pressure washer sits level and will not slide or shift during operation.

Airflow:

1. Situate so there is adequate clearance around pressure washer to allow for airflow – at least 7 feet from any non-combustible wall or obstruction.
2. Do not operate with a tarp, blanket, or cover surrounding the pressure washer.
3. Do not place any objects against or on top of the pressure washer.
4. The pressure washer needs adequate, unobstructed flow of air to allow for adequate cooling. Cooling ventilation is required to prevent overheating of the pressure washer and possible fire.
5. Keep a fire extinguisher rated “ABC” nearby.

Step 3. Select Suitable Location

Moving and Handling

WARNING

Lifting Hazard

The pressure washer is heavy. It can crush and cause serious injury if it rolls out of control or tips over. Follow the instructions below for safely moving the pressure washer.

Elevating or lowering your pressure washer

- To reduce risk of injury, it is recommended that two adults lift the pressure washer, or a lifting device is used such as an overhead hoist or forklift.

Step 4. Verify Electrical Connection

Grounding

Product must be grounded. The supply cord is equipped with an equipment-grounding conductor and a grounding plug. This plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Ground Fault Circuit Interrupter Protection

Connecting the pressure washer through some type of ground fault circuit interrupter (GFCI) protector is required to comply with the National Electric Code (NFPA 70) and to provide additional protection from the risk of electric shock.

Initial Set-up

Note: Before use, your GFCI should be tested at either built-in or receptacle base.

DANGER: Electrocutation hazard

Improper connection of the equipment or grounding conductor can result in a risk of electrocution. Check with qualified electrician or service personnel if you are in doubt as to whether an outlet is properly grounded. Do not modify the plug provided with the product. If it will not fit the outlet, have a proper outlet installed by a qualified electrician. Do not use any type adapter with this product.

Extension Cord

If the appliance cord is not equipped with a GFCI, the appliance and any extension cord used should be connected only to a GFCI-protected power source.

1. Use only extension cords that have grounding-type plugs and female cord connectors that accept the plug from the product.
2. Use only extension cords that are intended for outdoor use. These extension cords are identified on the packaging or on the cord by a marking "Acceptable for use with outdoor appliances; store indoors while not in use."
3. Use only extension cords having an electrical rating not less than the rating of the product.
4. Do not use a damaged extension cord. Examine extension cord before using and replace if damaged.
5. Do not abuse extension cord and do not yank on a cord to disconnect.
6. Keep cord away from heat and sharp edges.
7. Always disconnect the extension cord from the receptacle before disconnecting the product from the extension cord.

WARNING

To reduce the risk of electrocution, use only a GFCI-protected extension cord or plug into GFCI outlet. Keep all connections dry and off the ground. Do not touch plug with wet hands.

SAVE THESE INSTRUCTIONS

Operation

Follow Safety Rules for Operation

After you have checked the equipment and positioned it in a suitable worksite, it is time to start your pressure washer. The following are the procedures necessary for safe, successful operation of your pressure washer.



WARNING

Failure to follow safety rules may result in serious injury or death to the operator or bystanders.

Instruct Operators. Owner must instruct all operators in safe set-up and operation. Do not allow anyone to operate the pressure washer who has not read the Owner's Manual and been instructed on safe use practices.

Safety Equipment/Controls. Always operate with all safety covers, guards, and barriers in place and in good working order, and all controls properly adjusted for safe operation.

Moving Parts. Keep hands, feet, hair, and apparel away from moving parts. Air vents may cover moving parts and should be avoided as well. Never remove any guards while the pressure washer is operating.

Ear Protection. Hearing can be damaged from prolonged, close-range exposure to the type of noise produced by this pressure washer. The use of ear plugs or other hearing protection devices is recommended for persons working within 15-20 feet of the running pressure washer for an extended period of time.

Eye Protection. Wear ANSI "Z87.1" required safety glasses when operating or servicing the pressure washer. Pressurized spray from this pressure washer can cause severe injury to the eyes. Small objects can become airborne as the spray contacts them.

NOTE!

Before starting the pressure washer, review the following general safety rules for operation:

Conditions for Use

Know How to Stop. Be thoroughly familiar with proper use of the equipment and all controls and connections. Know how to stop the pressure washer and depressurize the system quickly if needed.

Instruct All Operators. The pressure washer's owner must instruct all operators and potential renters in safe set-up and operation. Do not allow anyone to operate the pressure washer who has not read the Owner's Manual and been instructed on its safe use.

Adult Control only. Only trained adults should set up and operate the pressure washer. Do not let children operate. Pressure washers can generate forces greater than children can control and require judgment beyond what can be expected of children.

Under the Influence. Never operate, or let anyone else operate, the pressure washer while fatigued or under the influence of alcohol, drugs, or medication.

Safety Equipment / Controls in place. Do not operate the pressure washer unless all safety covers, guards, and barriers are in place and in good working order, and all controls are properly adjusted for safe operation.

Damaged. Do not operate the pressure washer with damaged, missing, or broken parts. Never attempt to repair a high-pressure hose or component. Always replace it with a part that is rated at or above the pressure rating of the pressure washer.

Modifications. Do not modify the pressure washer in any way or deactivate any safety device. Fire, explosion, or other serious safety hazards will also void the warranty.

During Use

Stay alert. Watch what you are doing at all times.

Clear work area. Clear the work area of all bystanders.

Keep children and pets away.

Keep spray away from electrical wiring. Spray contact with electrical wiring will likely result in severe electrical shock or electrocution.

Do not point gun at people or animal. It may result in serious injury or death.

Do not direct spray at this pressure washer. Do not attempt to clean this pressure washer with its own spray. Motor damage will result. Cleaning should be done with a damp sponge with the motor OFF.

Operation

Never pull by hose. Do not move this pressure washer by pulling on the hose. Hose or connections could fail and result in catastrophic high-pressure release of fluid as well as hose whipping.

Avoid sharp objects. Keep hose away from sharp objects. Bursting hoses may cause injury.

No load bearing. Do not use the pump to support other items of equipment that impose unacceptable loads on the pump. Do not attempt to use this pressure washer as a prop.

Lock trigger safety latch when not spraying. Spray gun is equipped with a built-in trigger safety latch to guard against accidental trigger release. Rotate safety latch to the locked position when not spraying.

Leaving unattended. Always turn off the pressure washer and relieve system pressure before leaving the sprayer unattended.

Prompt Emergency Response

Seek medical aid for suspected injection injury. If injured by high-pressure fluid, no matter how small the wound is, see a doctor at once. A typical injection injury may be a small puncture wound that does not look serious. However, severe infection or reaction can result if proper medical treatment is not administered immediately by a doctor who is familiar with injection injuries.

Wear Personal Protective Gear

⚠ WARNING

Wear personal protective gear to prevent:

- Eye and skin injection injury from high pressure spray
- Eye injury from flying debris

1. Wear waterproof gloves, ANSI Z87.1 compliant safety goggles, face protection, and protective clothing when operating the pressure washer. If spraying pressure washer specific chemicals, wear a respirator mask to avoid inhalation of vapors if directed on the chemical label.
2. Wear non-slip, protective footwear. Use of pressure washer can create puddles and slippery surfaces. Wear footwear capable of maintaining a good grip on wet surfaces.

Preparing for Operation

Make sure that any regular maintenance has been performed as prescribed in *"Maintenance & Repair"*

CAUTION

Pump	Model	Oil Type
CAT 5CP	1571107	SAE 30 Non-Detergent Oil or Cat Pump Oil part # 22158
EPHT1813S	1571108	SAE 30 Non-Detergent Oil or Pressure washer Pump Oil (Part# 4043)
EPHT1812S	1571109	
Never run the pump without sufficient lubrication!		

section.

Check/Add Oil to Pump

1. Model 1571107: Remove label and shipping plug from oil cap and reinstall oil cap. On models 1571108/1571109: Removed non-vented shipping plug and install oil level dip stick cap.
2. Check oil level. Model 1571107: Verify that oil level is halfway up the sight glass. Models 1571108/1571109: use oil level dip stick cap to ensure oil level is in operating range.
3. If oil level is low, use the oil type from above table.

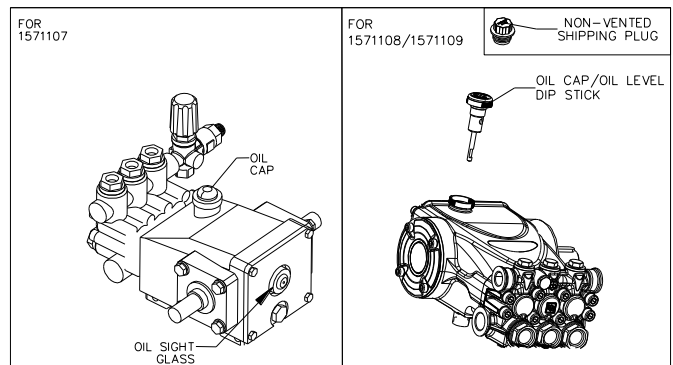


Fig.1571107-12

Operation

Inspect Spray System

Always inspect spray system for damage and leaks before each use. Do not start pressure washer until all

WARNING

High Pressure Fluid Injection Hazard

High-pressure fluid discharge from leaks (even pin-sized) or ruptured components can pierce skin and inject fluid into the body. Injection injury can result in blood poisoning and/or severe tissue damage leading to infection, gangrene, and possibly amputation.

- Never use a finger or skin to check for leaks.
- Never operate pressure washer with damaged or missing hoses/parts.
- Never attempt to repair a high-pressure hose or component – Always replace it with a part that is rated at or above the pressure rating of this pressure washer.

needed repairs have been completed.

Perform Scheduled Maintenance, As needed

Make sure that any other regular maintenance has been performed as prescribed in this manual in the "Maintenance Schedule Summary" section. Refer to the motor maintenance instructions.

Connect Hoses, Water Supply, and Spray Nozzle

Position Pressure Washer for Use

- For detailed instruction on positioning your pressure washer for use, turn to the "Initial Set-Up" section of this manual and reference "Step 3: Select Suitable Location".
- Where no flammable vapors, dusts, and gases are present.
- Where there is adequate, unobstructed ventilation airflow.
- With adequate clearance from combustible materials.
- On a firm, level, heat-resistant surface with good drainage and nearby access to a continuous water supply.

Attach Garden Hose to Water Inlet

1. Make sure the water supply is clean. Debris can cause excess pump wear and reduce performance.
2. An insufficient water supply will damage your pump. Make sure the water supply is steady and is 20% over the rated flow of your pump. Use a stopwatch

to time how long it takes to fill a 5-gallon bucket with your garden hose. The bucket must fill faster than the times listed in the table below.

Model#	Time to Fill 5 Gallon Bucket
1571107	125 sec
1571108	80 sec
1571109	60 sec

3. The water supply garden hose must have an inside diameter of at least 5/8". If the hose is more than 100 ft. long, the diameter must be at least 3/4".
4. Never use a reservoir tank as a water source. Drawing water out of a tank may cause pump cavitation and damage to your pump. This pressure washer is designed for a pressurized water source such as a city water faucet. However, the water source pressure must not exceed:

Model#	Max. Inlet psi
1571107	60 psi
1571108	125 psi
1571109	125 psi

5. Always use a flexible rubber hose for your water supply. Do not use rigid piping.

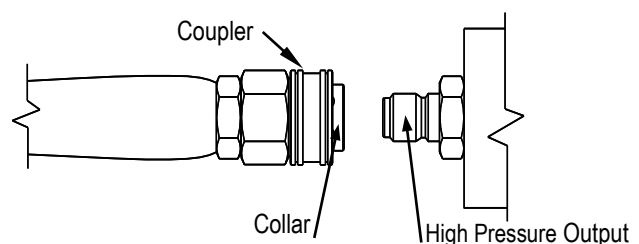
Attach High Pressure Hose to Spray Gun and Water Outlet

WARNING

High Pressure

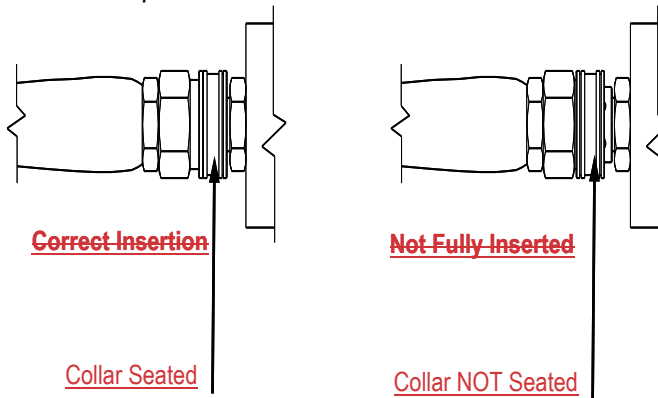
NEVER operate this pump with components (such as hose, connections, and spray gun) rated for lower pressure and/or temperature limits than the pressure washer's maximum rated pressure and temperature, or component could rupture and cause serious personal injury from escaping high pressure fluids.

1. See "Component Identification" section of this manual for location of the pressure washer's water outlet.
2. Your pressure washer hose is equipped with quick couplers. Simply pull the collar back and push the coupler onto the water outlet nipple. The collar should slide over the ball bearings



Operation

3. Release the collar, making sure it springs back and re-seats to its original (non-retracted) position. *Check the connection by pulling on the hose to ensure a positive connection.*



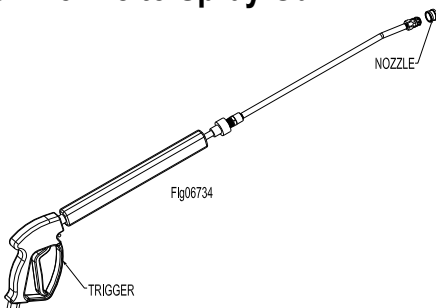
Select Nozzle for Spray Gun

Your pressure washer is equipped with high-pressure nozzles and one low-pressure nozzle. Additional nozzles can be purchased by following the Nozzle Orifice size in the specification. Generally, the wider the spray angle of the nozzle, the lower the spray impact produced. Select the appropriate nozzle for the job based on the following table:

Color of Nozzle:	Spray Angle	Used For
Yellow	15	Tough Stains/Stripping
Green	25	General
White	40	Light Cleaning
Black (Low Pressure)	65	Chemicals

NOTE: You must use the low-pressure black nozzle for spraying chemicals.

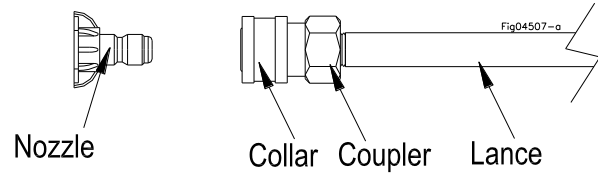
Attach Nozzle to Spray Gun



WARNING

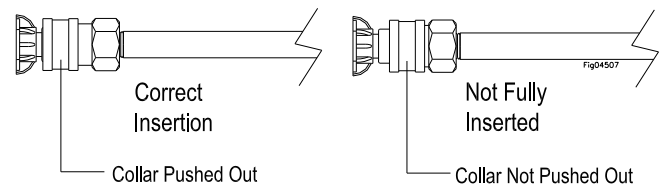
Depressurize First

Any time you remove/install/change a nozzle, you must depressurize hose line by squeezing the spray gun trigger while the motor is off. Even if the motor



has been off for a long period of time, the hose may remain dangerously pressurized.

1. Make sure the motor is off and the hose line is depressurized.
2. To install the nozzle, pull the collar back and twist the nozzle firmly into the coupler on the end of the wand.
3. Release the collar, making sure it springs back and re-seats to its original (non-retracted) position. *Check the connection by pulling on the nozzle to ensure a tight connection -- if correctly inserted, nozzle will rotate but not pull out.*



Prime the Water Supply

Turn On Water Supply and Squeeze the Trigger

CAUTION: Water Pressure

Never run the pump without the water supply connected and turned on. Operating the pressure washer without sufficient incoming flow of water will damage the pump.

- Turn on the water supply. Make sure the water supply is steady and flowing at a rate 20% over the rated flow of your pump. (Reference the flow rate table under the "Connect Hoses, Water Supply, and Nozzle" section.)
Purge air from the water supply hose by squeezing the trigger until a steady stream of water flows out of the nozzle at low pressure. (Air in the hoses can cause damage to the pump, so always make sure all the air is out of the hoses before starting the pressure washer motor.)
- Make sure the water supply hose is not kinked. A kinked hose will provide insufficient water supply to the pump and reduce its life. Make sure the hose remains unkinked after moving the pressure washer.

Operation

Set Up for Chemical Spray (if desired)

Prepare for Chemical Spray (if planning to use)

Using the proper cleaning chemical for the application can speed up cleaning jobs tremendously.

Your pressure washer is equipped with a chemical injection point on the downstream side of the pump for introducing cleaning chemicals into the water stream. A braided chemical hose is provided to connect at this point. Suction pressure at this connection automatically draws the chemical solution in through the hose, mixing in 1-part chemical to 15 parts water. Adequate suction pressure is created only when the low pressure (black) spray nozzle is used.

The introduction of cleaning chemicals via the chemical injection point affords the following advantages:

- It protects the pump from damage because no chemical passes through the pump.
- It mixes the cleaning chemical into a low-pressure spray. Cleaning chemicals applied under low pressure adhere better to the surface being cleaned, allowing the formula time to react and remove dirt more effectively.

Note: An external *upstream chemical injector* is not recommended for use with this pressure washer, and if used would obviously alter the 15-to-1 dilution ratio and may cause pump damage.

CAUTION

Chemicals Containing Muriatic Acid

Certain chemicals, such as bleach or those containing muriatic acid, will cause pump damage if introduced upstream through the pump's water inlet. Use of chemicals not intended for pressure washers will void pump warranty.

⚠ WARNING

Chemical Spraying

- Never spray acids, corrosives, or abrasive or flammable liquids. Breathing hazards, surface burns/corrosion, or fire/explosion could result.
- Follow the chemical manufacturer's label instructions for proper use and handling of the chemical. Understand all safety hazards and first aid for all chemicals being used. Always wear protective gloves when handling and cleaning with chemicals, and wear other protective gear as directed by chemical manufacturer. Always dispose of hazardous fluids per local, state, and national guidelines.

Acquire Cleaning Chemical

Use only approved pressure washer chemicals or chemicals specifically formulated for use with pressure washers.

CAUTION

Non-approved Chemicals

Non-approved chemicals can damage pressure washer components (seals, wand, hoses, pump, etc.) and be harmful to the environment.

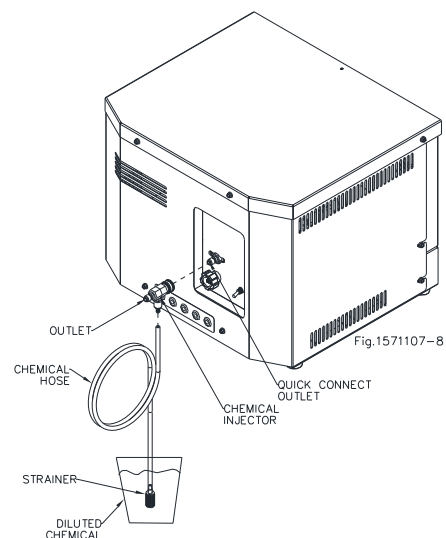
Prepare for Chemical Spray (If Planning to Use)

Prepare the pressure washer for chemical spraying using the following steps:

1. Prepare (dilute) chemical cleaning solution as required for the job.

Note: the chemical solution will be automatically mixed with the water at a ratio of 15 parts water to 1-part chemical solution.

2. Press the braided chemical hose over the chemical injector and connect to the quick connect outlet.
3. Submerge the suction strainer connected to the braided chemical hose into a bucket containing the chemical solution.



Operation

Start-Up Procedures

Start the Motor to Power the Pump

1. Make sure water supply is connected and primed.

CAUTION

Warranty Void

Running the pump dry will cause damage and void the warranty.

2. To prevent accidental spraying, engage the safety latch on spray gun trigger by rotating it to the locked position.

Apply Cleaning Chemical (if desired)

1. Make sure the chemical injector is properly set up according to the instructions. Reference “Set Up for Chemical Spray” on the previous page.
2. Make sure the low-pressure BLACK nozzle is attached before beginning to spray chemicals. *Only the low-pressure black nozzle will allow chemicals to be drawn through the chemical injector into the water stream.*
3. Apply chemicals by squeezing the spray gun trigger. The chemical injector will draw the chemical into the water stream.
4. Apply chemicals evenly to the cleaning surface. Never use more chemical than is necessary to clean the surface.
5. Allow the chemicals time to react with the dirt before rinsing.
6. Prepare to rinse by changing to a high-pressure nozzle. Changing the nozzle from the low-pressure black nozzle to a high-pressure nozzle will stop the flow of chemicals into the water stream.

Instructions for selecting a nozzle can be referenced in the “Connect Hoses, Water Supply, and Spray Nozzle” section. See the subsection “Select Nozzle for Spray Gun”.

7. Rinse with high-pressure spray as instructed below:

Begin High Pressure Spray

⚠ WARNING

High - Pressure Spraying Safety

- **Keep spray away from people.** Never direct discharge stream at or near any person. Do not allow any part of the body to come in contact with the fluid stream. High-pressure spray can cause serious skin, eye, or falling injuries. Injection injury will occur if high-pressure spray pierces the skin, injecting liquid under the skin. Injection injury can result in blood poisoning and/or severe tissue damage leading to infection, gangrene and possibly amputation. Seek medical attention.
- **Do not secure trigger open.** To reduce risk of injury, do not attempt to secure the spray gun open by blocking or tying the spray gun in the open position.
- **Prevent slips / loss of balance.** High-pressure spray could cause you to lose balance from kickback forces, and wet surfaces can be slippery.
 - Keep good footing and balance at all times. Do not overreach.
 - Do not stand on unstable support when spraying.
 - If spraying from an elevated surface, use fall protection because spray gun kickback can propel you off the elevated surface. When spraying from a ladder or scaffolding, ensure it is firmly anchored from sway or tip-over.
 - Be aware of puddles and slippery surfaces. Ensure there is adequate drainage to prevent pooling of water.
- **Prevent surface damage & flying debris.** Surfaces being sprayed must be strong enough to withstand high-pressure spray or damage may result. In addition, high-pressure spray will dislodge unsecured objects as well as surface chips and debris, resulting in hazardous flying objects that can cause personal injury or property damage. Do not spray brittle surfaces or breakable, fragile, or unsecured objects such as:
 - stucco or laminar flagstone
 - some painted surfaces
 - windows or glass doors, or mailboxes they may break)
 - light fixtures, flowerbeds, mailboxes
 - unsecured, lightweight objects

Operation

Procedure:

1. Install the high-pressure spray nozzle (always relieve system pressure first and follow instructions for attaching a nozzle).



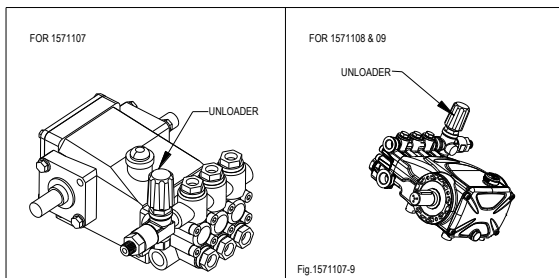
WARNING

High Pressure Fluid Injection Hazard

High-pressure fluid discharge from leaks (even pin sized) or ruptured components can pierce skin and inject fluid into the body. Injection injury can result in blood poisoning and/or severe tissue damage leading to infection, gangrene, and possibly amputation.

- Never use a finger or skin to check for leaks.
- Never operate pressure washer with damaged or missing hoses/parts.
- Never attempt to repair a high-pressure hose or component—Always replace it with a part that is rated at or above the pressure rating of this pressure washer.

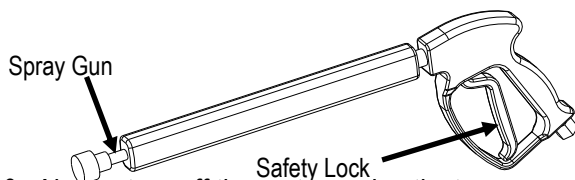
2. Clear the cleaning area of all persons. Keep children and pets away.
3. Hold the spray gun firmly with two hands and a sturdy stance -- Gun kicks back when triggered.
4. Wash from the bottom to the top, using side-to-side motions. This washes away heavy dirt and allows the detergent to soak as you work toward the top.
5. Use the width of the spray pattern to wash a wide path. Overlap spray paths for complete coverage.
6. The nozzle should be 12" to 24" from the work, closer for tough areas.
7. Small parts should be washed in a basket, so the pressure does not push them away. Larger, lightweight parts should be clamped down.
8. The pressure washer is set and locked to the maximum rated pressure when it leaves the factory. To reduce the pressure, turn the unloader knob counterclockwise. To return to maximum pressure turn knob clockwise.



9. If temporarily interrupting spraying, rotate trigger safety latch downward to the locked position to guard against accidental trigger release.

Spray Gun Safety Lock

When not spraying, use the spray gun safety lock to prevent accidental high-pressure discharge.



10. Always turn off the motor and activate spray gun trigger to relieve system pressure when:
 - the sprayer is unattended, or
 - disconnecting hoses, installing/cleaning nozzles, or servicing the pump.



WARNING

Warranty Void

Do not attempt to alter the unloader valve's maximum pressure. Excess pressure could cause serious injury from escaping high-pressure fluids and/or pump damage. Any alteration other than turning the adjustment knob will void your warranty.

! WARNING

Injury

Always turn off the motor and relieve system pressure when finished spraying or when leaving sprayer unattended. Serious injury could result from unintentional release of high-pressure spray.

Shutdown

Stop the motor using the following steps:

1. Turn motor OFF.
2. Unplug the power cord.
3. Turn water supply OFF.
4. Squeeze trigger to relieve system pressure.
5. Remove garden hose.
6. Remove pressure hose.

! WARNING

Injury

Never disconnect the high-pressure hose from the pump or spray gun while the system is pressurized. Relieve pressure by squeezing the spray gun trigger after the motor is turned OFF.

Storage

When you are finished using the pressure washer, you must prepare the pressure washer for storage and store it in a proper location.

Between Use Storage

Perform periodic maintenance as directed in this manual to keep the pressure washer in safe working condition.

Choose a storage location that is:

- Clean and dry.
- Away from sources of heat, open flames, sparks, or pilot lights, even if the pressure washer's motor is off.

Away from extreme high or low temperatures. Do not store the pressure washer in freezing conditions unless it is prepared as directed below for those conditions.

Note:

- **If you will be storing the pressure washer in freezing conditions**, follow the instructions for preparing the sprayer for storage in freezing conditions.
- **If you will not be using the pressure washer again for 30 days or more**, follow the instructions for preparing for long-term storage.

Prepare Pressure Washer for Freezing Conditions

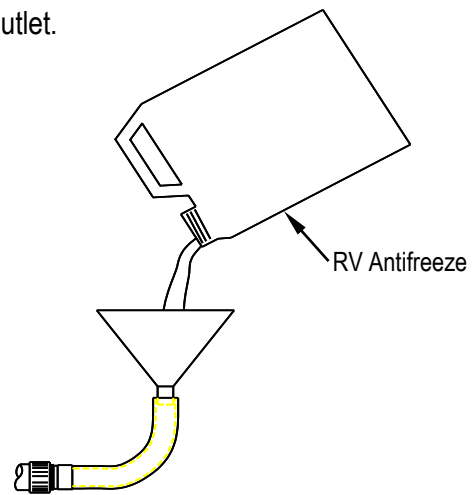
If you will be storing the pressure washer in freezing temperatures, you must properly prepare the pressure washer to prevent water from freezing in the system.

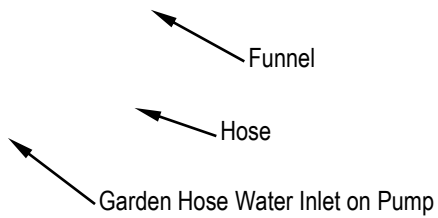
! WARNING

Freezing Conditions

Do not allow water to freeze in the pressure washer, high pressure hose, or spray gun. Freezing water can cause damage to the equipment and cause the spray gun to fail in the open position. A spray gun that has failed in the open position can whip around and cause personal injury when the pressure washer is started.

1. Drain the water from the high-pressure hose and spray gun by depressing the trigger on the spray gun until all water drains out.
2. Disconnect the plumbing that connects to the pump outlet.
3. Obtain the materials you will need:
 - 12" piece of garden hose or equivalent,
 - Funnel, and
 - approximately 6 oz. of RV antifreeze.
4. Attach the 12" garden hose piece with the funnel to the pump inlet.
5. Pour RV antifreeze into the funnel, then pull the recoil a few times until antifreeze comes out of the pump outlet.





OR

1. Obtain the materials you will need:
 - 1579000 NorthStar Pressure Washer Pump Freeze Guard.
2. Attach bottle of freeze guard to pump inlet.

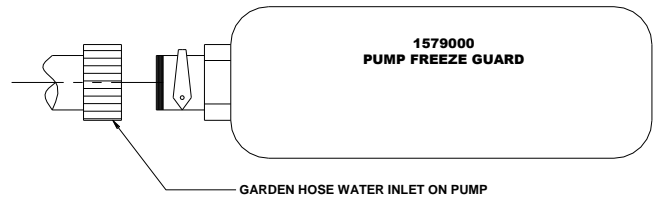
3. Squeeze freeze guard bottle until antifreeze comes out of the pump outlet.

Prepare Pressure Washer for Storage

1. Make sure the motor start switch is OFF.
2. Disconnect the motor power cord if you haven't already done so.
3. Disconnect the high-pressure hose, garden hose, and spray gun.

Move Pressure Washer to Storage Location

Let motor cool for 5 minutes before moving the pressure washer to its storage location.



Maintenance & Repair

WARNING

Maintenance Hazards

ALWAYS shut off water supply, bleed water pressure, and turn off motor before cleaning, adjusting, or servicing the pressure washer. After servicing, make sure all guards and cover shields are replaced before using.

Maintenance Schedule Summary

Item	Frequency
Remove dust/debris accumulation	As needed
Inspect spray system	Each use
Clean inlet filter	Each use
Check pump oil level	Each use
Change pump oil	<ul style="list-style-type: none">• After first 50 hours of use• Every 3 months or 500 hours of use after that

See detailed instructions for each maintenance item below.

(Note: For end-of-the-season storage instructions, see the "Storage" section of this manual.)

Detailed Instructions – Maintenance & Repair

No modifications. Never modify or alter the pressure washer in any way. Modifications can create serious safety hazards and will also void the warranty.

Follow Safety Rules

Read and follow these safety rules whenever you will be servicing the pressure washer:

- **Turn off / relieve pressure first.** Always turn off pressure washer and relieve system pressure before inspection or maintenance.
- **Replace guards.** Make sure all guards and cover shields are replaced after servicing the pressure washer.
- **Major repair.** Major service, including the installation or replacement of parts, should be performed only by a qualified service technician. Obtain factory approved parts from NorthStar Product Support at 1-800-270-0810.
- **Replacement parts.** If a part needs replacement, only use factory approved repair parts. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the pressure washer and will void the warranty.

Keep Pressure Washer Clean

If dust or debris accumulates on the pressure washer, clean the pressure washer with a damp cloth or soft bristle brush. Do not allow air intakes to become blocked.

CAUTION

Do not spray pressure washer with a garden hose or pressure washer. Water may enter the pressure washer and cause damage.

Inspect Spray System

Inspect spray system for damage and leaks before each use.

Do not start pressure washer until all needed repairs have been completed.

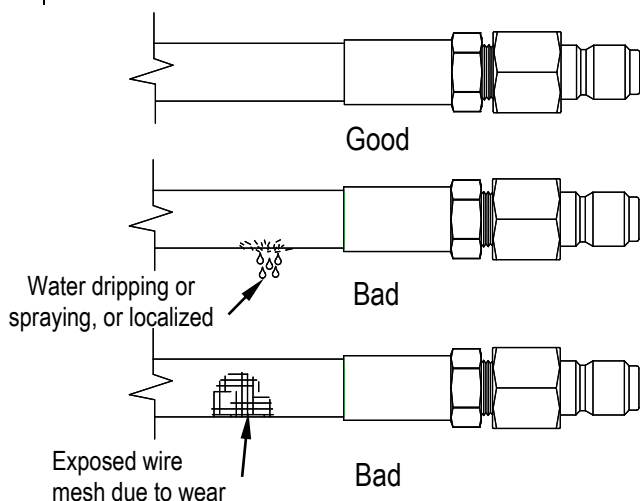
Maintenance & Repair

WARNING

High Pressure Fluid Injection Hazard

High pressure fluid discharge from leaks (even pin-sized) or ruptured components can pierce skin and inject fluid into the body. Injection injury can result in blood poisoning and/or severe tissue damage leading to infection, gangrene, and possibly amputation.

- Never use a finger or skin to check for leaks.
- Never operate pressure washer with damaged or missing hoses/parts.
- Never attempt to repair a high-pressure hose or component – Always replace it with a part that is rated at or above the pressure rating of this pressure washer.
- Check hoses, fittings, wand, trigger gun and connections for signs of wear, cracks, looseness, or leaks. Replace as required.
- Check and clean the nozzle orifice.



Clean Inlet Filter

Clean the inlet filter before each use.

WARNING

Filter Disposal

When cleaning filters, check whether dangerous chemicals have been used with the filter and take any precautions that may be recommended by the manufacturer of these chemicals. Always dispose of hazardous fluids per local, state, and national guidelines.

1. Unscrew garden hose from water inlet (if connected).
2. Remove filter screen.

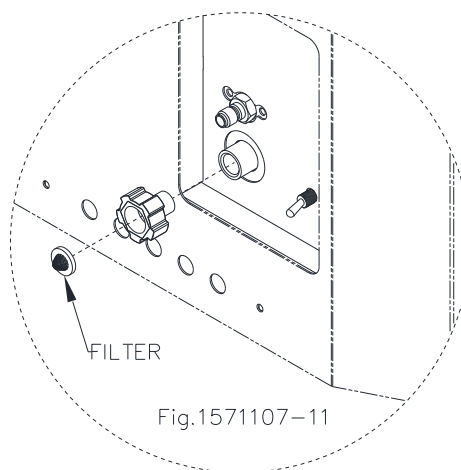


Fig.1571107-11

3. Run water through filter screen to clean.
4. Reassemble.

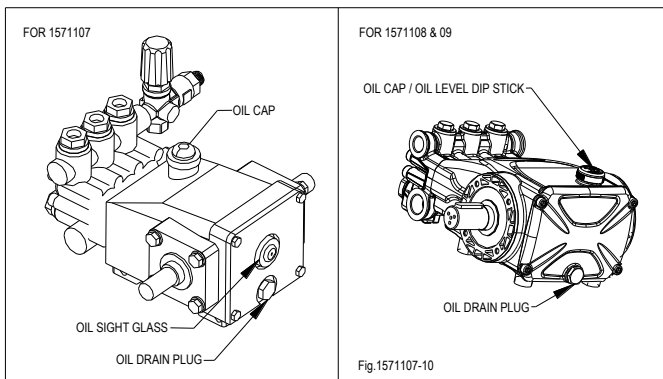
Do not start pressure washer until all needed repairs have been completed.

Maintenance & Repair

Change Pump Oil

Change the pump oil after the first 50 hours of use, and then after every 3 months or 500 hours of use after that.

1. Remove drain plug from pump.
2. Drain pump oil into suitable container and dispose of responsibly.
3. Reinstall oil drain plug.
4. Make sure pressure washer is sitting level.
5. Reference the "Specifications" section of this manual to determine the oil type and quantity needed for your pump model.
6. Remove oil cap.
7. Fill with correct oil.
8. Model 1571107: Verify oil level is in operating range with sight glass.
Models 1571108/1571109: Verify oil level is in operating range with oil level dip stick attached to cap.
9. Replace oil cap.



NOTICE:

Dispose of used motor and pump oil in a manner that is compatible with the environment and in accordance with local, state, and federal laws and regulations.

- Take used oil in a sealed container to your local recycling center or service station for reclamation.
- Do not throw it in the trash, pour it on the ground, or pour it down a drain.

NOTE TO COMMERCIAL USERS:

All mechanical equipment, no matter how well designed, will need maintenance and repairs. A NorthStar pressure washer is no exception. At times, a NorthStar pressure washer may become inoperable because repairs are required. NorthStar Product Support will assist in these repairs as needed, but if an inoperable pressure washer creates a major expense to your business, then we strongly recommend the following:

- Have a staff person become familiar with the mechanical operation of the pressure washer and capable of making minor repairs and performing all preventative maintenance procedures.
- Keep a stock of recommended service parts for maintenance and minor repairs.

IMPORTANT: Replacement Parts

If a part needs replacement, only use parts that meet the manufacturer's part number specifications. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the pressure washer.

**Contact NorthStar Product Support at
1-800-270-0810 for any
questions, problems, or parts orders.**

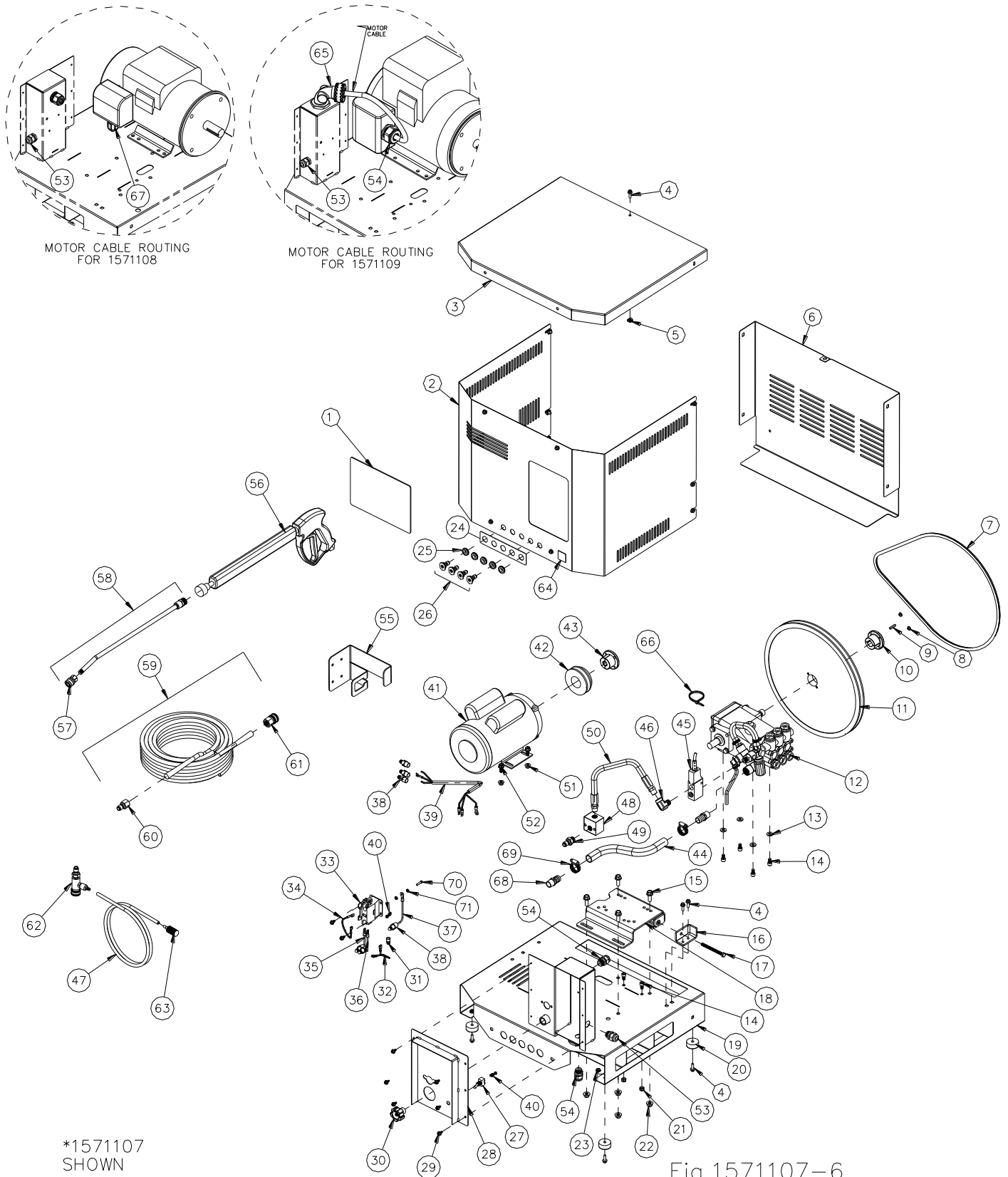
Troubleshooting

The manufacturer reserves the right to make improvements in design and/or changes in specifications at any time

Problem	Solution
Motor will not start	SOLUTION: A, B, M, N, O
Low/Surging pressure or no water flow	SOLUTION: C, D, E, F, G, H
No chemical injection	SOLUTION: I, J, K, L
Cause	Solution
A- Tripped GFCI cord	Reset GFCI cord
B- Tripped motor relay	Reset motor
C- Insufficient water supply	See water supply section of this manual
D- Plugged pump inlet filter	See maintenance section of this manual
E- Wrong nozzle	Make sure high-pressure nozzle is being used
F- Plugged nozzle	Remove nozzle, check for blockage
G- Worn nozzle	Replace nozzle
H- Leak in pressure hose	Replace pressure hose
I- Wrong nozzle	Make sure chemical nozzle is being used
J- Back pressure from extra-long discharge hose	Try shorter hose
K- Leak in chemical siphon hose	Replace hose – use hose clamps if necessary
L- Chemical strainer not submerged	Make sure strainer is completely submerged
M- Tripped circuit breaker	Make sure breaker is rated to 120V/15A for 1571101 & 120V/20A for 1571102 only
	Make sure breaker is rated to 230V/30A for 1571103 & 1571104 and 230V/50A for 1571105 only
N- Extension cord too long	Use extension cord with an appropriate rating for distance
O- Debris in flow switch	Clean flow switch

without incurring any obligation to install them on units previously sold.

Parts Explosion- REV F.1



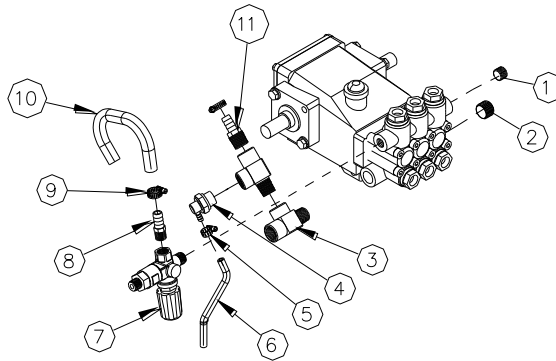
Parts List – REV F.1

REF#	PART#	DESCRIPTION	QTY	MODEL
1	803066	DECAL, NORTHSTAR	1	ALL
2	802865	FRONT PANEL	1	ALL
3	802866	ROOF	1	ALL
4	82009	BOLT, 1/4" FLANGED	19	ALL
5	777220	NUT, CAGE 1/4"-20	15	ALL
6	802867	REAR PANEL	1	ALL
7	803069	BELT, BX52-PW	1	1571107
	803318	BELT, BX33- PW		1571108
	803317	BELT, BX32- PW		1571109
8	82084	WASHER, SPLIT	4	1571107, 08, 09
9	34885	KEY, PUMP	1	1571107
10	313100	BUSHING, H-20 MM	1	1571107
	777419	BUSHING, H X 24MM	1	1571108, 09
11	802824	SHEAVE, BK160H	1	1571107
	2005	SHEAVE, 2BK36H		1571108
	803340	SHEAVE, 2BK47H		1571109
12	A1571107	PUMP, CAT 5CP3120.3000	1	1571107
	A1571108	PUMP, GP EPHT1813S		1571108
	A1571109	PUMP, GP EPHT1812S		1571109
13	82047	WASHER	4	ALL
14	82293	SHCS, M8-1.25 X 14MM	6	ALL
15	82624	BOLT, 3/8 -16	4	1571107
			8	1571108, 09
16	802768	BRACKET, TENSIONER	1	ALL
17	82096	BOLT, 5/16-18 X 3.5"	1	ALL
18	801602	PUMP MOUNT	1	ALL
19	802862	BASE WELDMENT	1	1571107
	802771		1	1571108
	803213		1	1571109
20	2215	RUBBER BUMPER	4	ALL
21	777495	NUT, M8-1.25	2	ALL
22	82631	NUT, 3/8-16	4	1571107
			8	1571108, 09
23	82013	NUT, SERRATED FLANGE	4	ALL
24	803070	DECAL, NOZZLE	1	ALL
25	35198	RUBBER GROMMET	5	ALL
26	803863	NOZZLE 4 PACK, #3.5	1	1571107, 08
	803866	NOZZLE, 4 PACK, #4.5		1571109
27	777855	TOGGLE SWITCH	1	ALL
28	802784	WLDT, FRONT COVER	1	ALL
29	82071	SCREW, 1/4 X 1/2	8	ALL
30	800783	INLET FILTER	1	ALL
31	5265	NUT, WIRE	1	ALL
32	35383	WIRE, 45924 ASSEMBLY (B2) -AC	1	ALL
33	778151	DP CONTACTOR	1	1571107
	778152			1571108
	802887			1571109
34	778139	WIRE LEAD, WHITE, PW	1	ALL

35	803170	WIRE, WHITE LEAD, 12AWG - PW	1	1571107
	803175	WIRE, WHITE LEAD, 10AWG - PW		1571108
36	803169	WIRE, TERMINATED, 12AWG - PW	1	1571107
	803174	WIRE, TERMINATED, 10AWG - PW		1571108
37	803173	WIRE, GREEN LEAD, 12AWG - PW	1	1571107
	803176	WIRE, GREEN LEAD, 10AWG - PW		1571108
	803179	WIRE, GREEN LEAD, 8 AWG - PW		1571109
38	35408	NUT, WIRE RED - AC 459242	6	1571107, 08
			4	1571109
39	802409	MOTOR CORD, 12/3	1	1571107
	803071	MOTOR CORD, 10/3		1571108
	803072	MOTOR CORD, 8/3		1571109
40	305276	INSULATED FEM SPADE	2	ALL
41	803226	MOTOR, 2 HP-16.8A	1	1571107
	802780	MOTOR, 6.2 HP		1571108
	802877	MOTOR, 8.2 HP		1571109
42	33561	SHEAVE, BK 34	1	1571107
	791528	SHEAVE, 2BK57H		1571108
	803340	SHEAVE, 2BK47H		1571109
43	802823	BUSHING, H 5/8	1	1571107
	34750	BUSHING, 1 1/8"		1571108, 09
44	805636	INLET HOSE – 11.5"	1	ALL
45	803068	SWITCH, FLOW	1	ALL
46	777410	STREET ELBOW, 3/8"	1	ALL
47	805557	CHEMICAL HOSE – 36"	1	ALL
48	777409	BLOCK, UNLOADER	1	ALL
49	777913	NIPPLE, QC 3/8"	1	ALL
50	777378	HOSE, ASSY 3/8" X 18"	1	ALL
51	82630	NUT, 5/16-18	4	1571107
52	82621	BOLT, 5/16-18 X 3/4"	4	1571107
53	22502	STRAIN RELIEF	1	ALL
54	22502	STRAIN RELIEF	2	1571107
	803129	STRAIN RELIEF, 3/4" (.492-.709") - PW	2	1571108
	803097	STRAIN RELIEF, 1-1/4" NPT - PW	2	1571109
55	803190	HOOK, GUN AND HOSE BRACKET	1	ALL
56	779165	GUN WITH LANCE	1	ALL
57	791308	COUPLER, 1/4 QC X 1/4 FPT, EPDM	1	ALL
58	803709	18.5" LANCE EXTENSION	1	ALL
59	38525	3/8 X 50' HOSE ASSEMBLY	1	ALL
60	777915	NIPPLE, FEMALE	1	ALL
61	777914	COUPLER, QC	1	ALL
62	803312	CHEMICAL INJECTOR	1	1571107
	779613		1	1571108, 09
63	221222	CHEMICAL STRAINER	1	ALL
64	801058	DECAL, MADE IN USA	1	ALL
65	803098	STRAIN RELIEF, 1-1/4" NPT 90 ° - PW	1	1571109
66	82155	TIE, CABLE BLACK, 50# 11	1	ALL
67	803099	STRAIN RELIEF, 1" NPT, 10GA CORD-PW	1	1571108
68	782706	HOSE BARB 3/4" X 1/2" NPT	2	ALL
69	17141	HOSE CLAMP, 3/4"	2	ALL
70	82007	SHCS, 10-32 X 3/4 YELLOW ZINC	1	ALL
71	82008	NUT, 10-32 KEPS	2	ALL

Pump Assemblies

FOR
A1571107



FOR A1571108
& A1571109

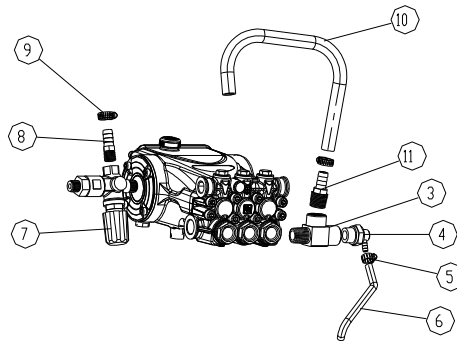
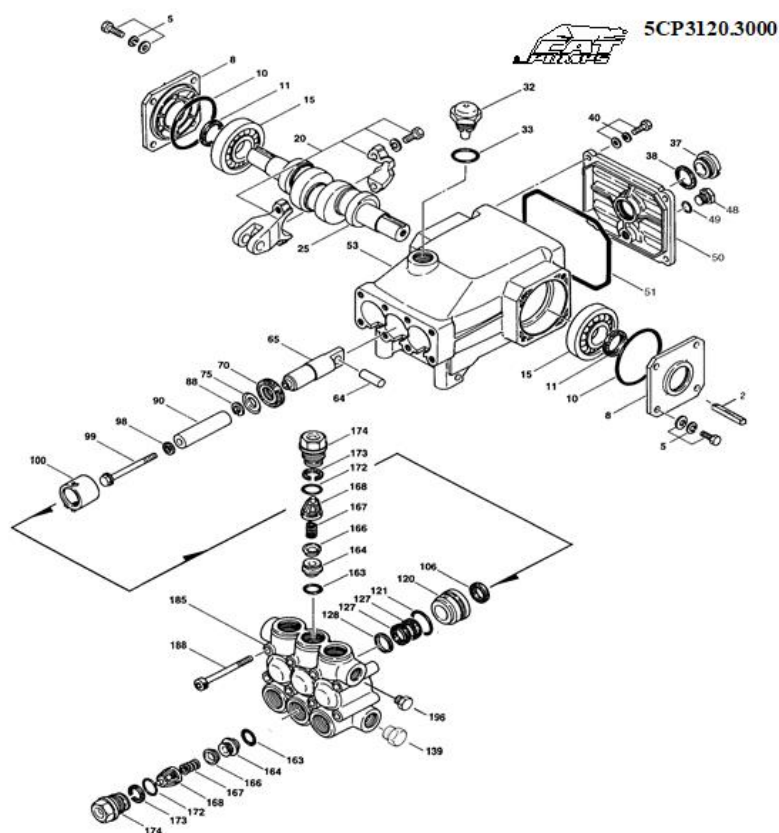


Fig.1571107-13

Ref#	Part#	Description	Qty	Model#
1	777837	PLUG, 3/8"	1	A1571107
2	30511	PLUG, 1/2"	1	A1571107
3	777639	TEE, STREET 1/2"	2	A1571107
			1	A1571108 / A1571109
4	803209	THERMAL PROTECTOR, 1/2"	1	ALL
5	777834	HOSE CLAMP, 1/4"	1	ALL
6	805553	CHEMICAL HOSE - 6"	1	ALL
7	788420	UNLOADER	1	ALL
8	777839	3/8NPT X 1/2 HOSE BARB	1	ALL
9	777119	HOSE CLAMP, 1/2"	2	ALL
10	805690	BLACK BYPASS HOSE, 1/2" - 15"	1	ALL
11	2294	HOSE BARB 1/2" X 1/2" NPT	1	ALL

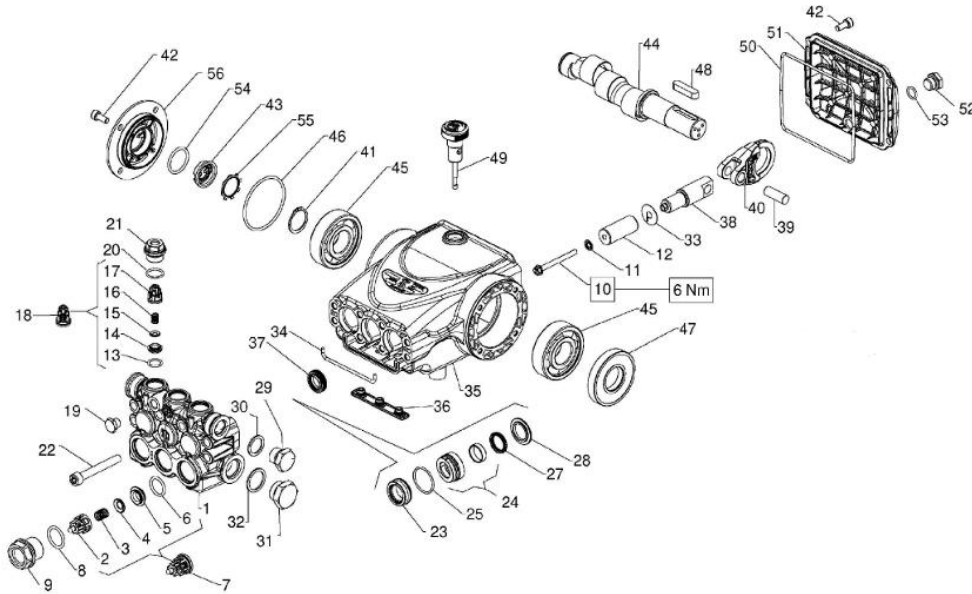
Pump Exploded View – Cat 5CP3120.3000



ITEM	PART #	DESCRIPTION	QTY
2	CA30057	Key (M6)	1
5	CA96031	Screw, Sem HC M8x16	8
8	CA46910	Cover Bearing	2/1
10	CA14028	O-Ring \, Bearing Cover	2
11	CA43222	Seal, Oil, Crankshaft	2
15	CA14480	Bearing	2
20	CA46743	Rod, Connecting Assembly	3
25	Not Available	Crankshaft, Dual End	1
30	CA48224	Cover, Bearing Blind	1
31	CA828710	Protector, Oil Cap	1
32	CA46798	Cap, Oil Filler, Domed	1
33	CA14179	O-Ring, Oil Filler Cap	1
37	CA43987	Gauge, Oil, Bubble	1
38	CA44428	gasket, Flat, Oil Gauge	1
40	CA92519	Screw, Sems HHC (M6x16)	4
48	CA25625	Plug, Drain	1
49	CA23170	O-Ring, Drain Plug	1
50	CA46940	Cover, Crankcase	1
51	CA14044	O-Ring, Crankcase Cover	1
53	Not Available	Crankcase	1
64	CA46746	Pin, Rist	3
65	CA48458	Rod, Plunger	3
70	CA46838	Seal, Oil, Crankcase	3
75	CA43900	Slinger, Barrier	3
88	CA45697	Washer, Keyhole (M18)	3

ITEM	PART #	DESCRIPTION	QTY
90	CA46884	Plunger (M50)	3
98	CA46730	Washer, Seal	3
99	CA46729	Retainer, Plunger w/Stud (M7)	3
100	CA46749	Retainer, Seal	3
106	CA43316	Seal, LPS w/S-Spg	3
120	CA46888	Case, Seal, Press-in-style	3
121	CA13978	O-Ring, Seal Case	3
127	CA46287	V-Packing	6
128	CA46618	Adapter, Male	3
139	CA22179	Plug, Inlet (1/2")	1
163	CA17547	O-Ring, Seat	6
164	CA46658	Seat	6
166	CA46429	Valve	6
167	CA43750	Spring	6
168	CA46583	Retainer, Spring	6
172	CA17549	O-Ring, Valve Plug	6
173	CA48365	Back-up-ring, Valve Plug	6
174	CA45900	Plug, Valve	6
185	CA46886	Manifold, Head	1
188	CA87872	Bolt, HSH (M8x70), Manifold Head	8
196	CA22187	Plug, Discharge (3/8")	1
KIT#1	CA31665	Seal Kit Includes: 98, 106, 121, 127, 128	1
KIT#2	CA33060	Valve Kit Includes: 163, 164, 166, 167, 168, 172, 173	2

Pump Exploded View – GP EPHT1812S

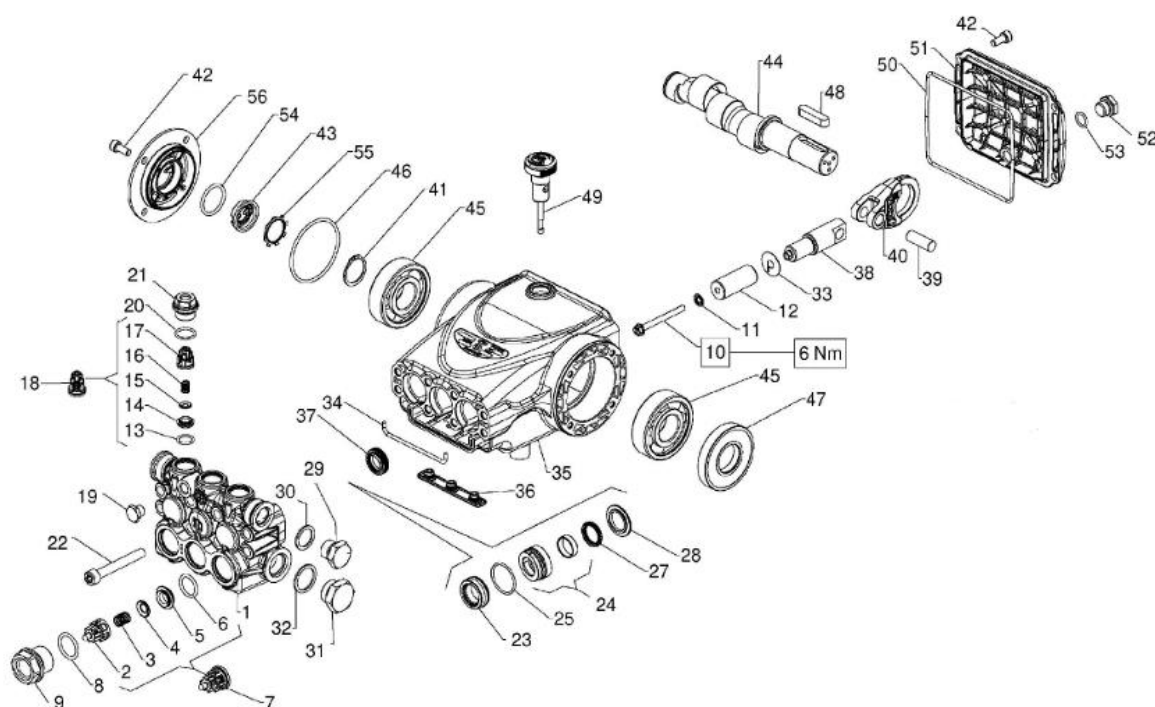


ITEM	PART #	DESCRIPTION	QTY
1	Not Available	Manifold, 18mm	1
2	GP36202551	Valve Cage	3
3	GP94737600	Spring, 9.4mm x 14.8	3
4	GP36200176	Valve	3
5	GP36200366	Valve Seat	3
6	GP701115	O-ring, 17.13x2.62	3
7	GP36726201	Valve Spring	3
8	GP90384750	O-ring, Ø20.24x2.62	3
9	GP98222500	Valve Cap, M24x1.5x16.7	3
10	GP99169000	Plunger Bolt, M5x55	3
11	GP96690500	Washer, Ø 5x11.5x0.4	3
12	GP58040209	Plunger, Ø 18x42	3
13	GP90367450	O-ring, Ø 12.42x1.78	3
14	GP36211366	O-ring, Ø 12.42x1.78	3
15	GP36211276	Outlet Valve Poppet	3
16	GP94733300	Spring, Ø 6.2x10.4	3
17	GP36211151	Outlet Valve Cage Guide	3
18	GP36729801	Complete Outlet Valve	3
19	GP98196700	Plug	3
20	GP701016	O-ring, Ø 15.6x1.78	3
21	GP98213750	Outlet Valve Cap, M18x1.5x10	3
22	GP99317500	Screw, M8x60	8
23	GP90221000	Head Ring, Ø 18	3
24	GP58606401	Packing, Ø 18, HT	3
25	GP90360650	Anti-ext. Ring, Ø 18	3
27	GP90220000	Intermed. Ring, Ø 18	3
28	GP58211270	Support Ring, Ø 18	3
29	GP98209900	Plug, G3/8"x13	1

ITEM	PART #	DESCRIPTION	QTY
30	GP96738000	Gasket, 17.5x23x1.5	1
31	GP98217900	Plug, 1/2" BSPx10	1
32	GP96751400	Gasket, Ø 21.5x27x1.5	1
33	GP96699000	Washer, Ø 7.5x15x0.5	3
34	GP58210582	Gasket, Ø 3x94	1
35	Not Available	Crankcase	1
36	GP58210451	Drip Cover	1
37	GP90156550	Oil Seal, Ø 15x24x5.7	3
38	GP58050066	Piston Guide	3
39	GP97734000	Piston Pin, Ø 10x29.5	3
40	GP58030022	Connecting Rod	3
41	GP90063500	Stop Ring Ø 25	1
42	GP99183700	Screw, M6x14	8
43	GP53210851	Oil Level Indicator	1
44	Not Available	Crankshaft, 12mm	1
45	GP91833100	Bearing, Premium	2
46	GP90389800	O-ring, Ø 56.82x2.62	1
47	GP90164100	Oil Seal, Ø 25x62x10	1
48	GP91489200	Key	1
49	GP98210500	Oil Dipstick	1
50	GP90392550	O-ring, Ø 113.97x2.62	1
51	GP58160022	Rear Cover	1
52	GP98204250	Plug, 1/4"x9	1
53	GP701013	O-ring, Ø 10.82x1.78	1
54	GP90385900	O-ring, Ø 25.07x2.62	1
55	GP90067100	Stop Ring	1
56	GP58150122	Side Cover	1

KIT NO	GP415	GP418	GP271	GP416	GP417
ITEM NO'S INCLUDED IN KIT	2, 3, 4, 5, 6, 13, 14, 15, 16, 17, (7), (18)	8, 9, 20, 21	37	23, 25, 27	23, 24, 25, 27, 28
NUMBER OF ASSY'S IN KIT	6	6	3	3	1
NO. OF CYLINDERS KIT SERVICES	3	3	3	3	1

Pump Exploded View – GP EPHT1813S



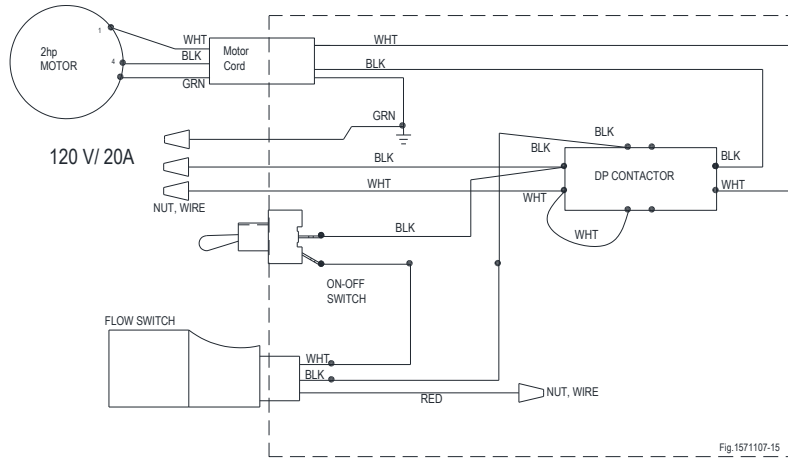
ITEM	PART #	DESCRIPTION	QTY
1	Not Available	Manifold, 18mm	1
2	GP36202551	Valve Cage	3
3	GP98204200	Spring, 9.4mm x 14.8	3
4	GP36200176	Valve	3
5	GP36200366	Valve Seat	3
6	GP71115	O-ring, 17.13x2.62	3
7	GP3672601	Valve Spring	3
8	GP90384750	O-ring, Ø20.24x2.62	3
9	GP98222500	Valve Cap, M24x1.5x16.7	3
10	GP99169000	Plunger Bolt, M5x55	3
11	GP96690500	Washer, Ø 5x11.5x0.4	3
12	GP58040209	Plunger, Ø 18x42	3
13	GP90367450	O-ring, Ø 12.42x1.78	3
14	GP36211366	O-ring, Ø 12.42x1.78	3
15	GP36211276	Outlet Valve Seat	3
16	GP94733300	Spring, Ø 6.2x10.4	3
17	GP36211151	Outlet Valve Cage Guide	3
18	GP36729801	Complete Outlet Valve	3
19	GP98196700	Plug	3
20	GP701016	O-ring, Ø 15.6x1.78	3
21	GP98213750	Outlet Valve Cap, M18x1.5x10	3
22	GP99317500	Screw, M8x60	8
23	GP90221000	Head Ring, Ø 18	3
24	GP58606401	Packing, Ø 18, HT	3
25	GP90360650	Anti-ext. Ring, Ø 18	3
27	GP90220000	Intermed. Ring, Ø 18	3
28	GP58211270	Support Ring, Ø 18	3
29	GP98209900	Plug, G3/8"x13	1

ITEM	PART #	DESCRIPTION	QTY
30	GP96738000	Gasket, 17.5x23x1.5	1
31	GP98217900	Plug, 1/2" BSPx10	1
32	GP96751400	Gasket, Ø 21.5x27x1.5	1
33	GP96699000	Washer, Ø 7.5x15x0.5	3
34	GP58210582	Gasket, Ø 3x94	1
35	Not Available	Crankcase	1
36	GP58210451	Drip Cover	1
37	GP90156550	Oil Seal, Ø 15x24x5.7	3
38	GP58050066	Piston Guide	3
39	GP97734000	Piston Pin, Ø 10x29.5	3
40	GP58030022	Connecting Rod	3
41	GP90063500	Stop Ring Ø 25	1
42	GP99183700	Screw, M6x14	8
43	GP53210851	Oil Level Indicator	1
44	Not Available	Crankshaft, 13mm	1
45	GP91833100	Bearing, Premium	2
46	GP90389800	O-ring, Ø 56.82x2.62	1
47	GP90164100	Oil Seal, Ø 25x62x10	1
48	GP91489200	Key	1
49	GP98210500	Oil Dipstick	1
50	GP90392550	O-ring, Ø 113.97x2.62	1
51	GP58160022	Rear Cover	1
52	GP98204250	Plug, 1/4"x9	1
53	GP701013	O-ring, Ø 10.82x1.78	1
54	GP90385900	O-ring, Ø 25.07x2.62	1
55	GP90067100	Stop Ring	1
56	GP58150122	Side Cover	1

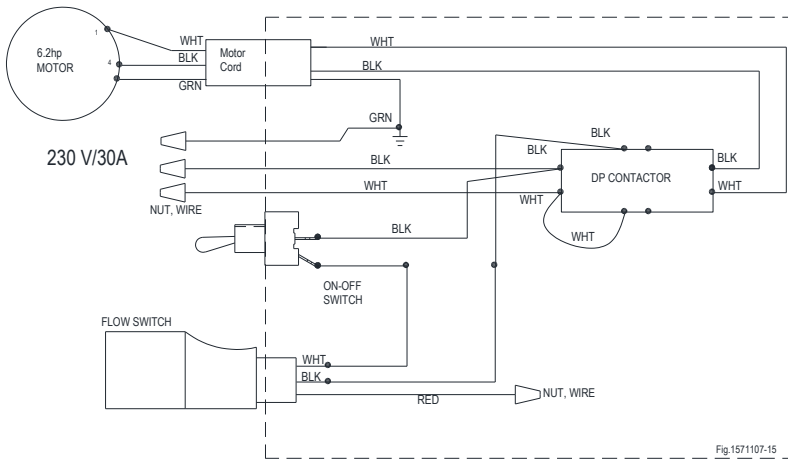
KIT NO	GPK415	GPK418	GPK271	GPK416	GPK417
ITEM NO'S INCLUDED IN KIT	2, 3, 4, 5, 6, 13, 14, 15, 16, 17, (7), (18)	8, 9, 20, 21	37	23, 25, 27	23, 24, 25, 27, 28
NUMBER OF ASSY'S IN KIT	6	6	3	3	1
NO. OF CYLINDERS KIT SERVICES	3	3	3	3	1

Wiring Diagram

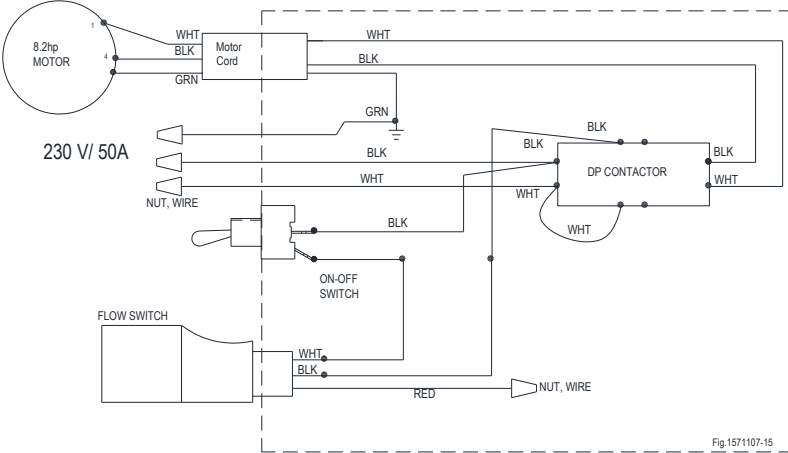
Model# 1571107



Model# 1571108



Model# 1571109



Limited Warranty

Dear Valued Customer:

The NorthStar Product you just purchased is built with the finest material and craftsmanship. Use this product properly and enjoy the benefits from its high performance. By purchasing a NorthStar product, you show a desire for quality and durability. Like all mechanical equipment this unit requires a due amount of care. Treat this unit like the high-quality piece of machinery it is. Neglect and improper handling may impair its performance. Please thoroughly read the instructions and understand the operation before using your product. Always contact NorthStar Product Support at 1-800-270-0810 prior to having any service or warranty work performed, as some services performed by parties other than NorthStar approved service centers may void this warranty. This warranty is in lieu of any other warranty expressed or implied and NorthStar assumes no other responsibility or liability outside that expressed within this warranty.

Limited Warranty

Limited Warranty

NorthStar shall warranty any piece of equipment manufactured, or parts of equipment manufactured, to be free from defects in material or workmanship for a period of:

Item Number	Item Name	Commercial/Consumer Warranty	Details
ALL	NorthStar	10 years from date of purchase	NorthStar shall warrant structural components from failure for a period of 10 years from the date of purchase by user. Structural parts include but are not limited to, cart, handle, billboard and bumper tube
ALL	Pump	5 years from date of purchase, Lifetime on pump manifold	NorthStar shall warrant the pressure washer pump to be free of defects in material and workmanship for a period of 5 years. NorthStar makes no warranty on standard wear items such as, but not limited to, seals, valves, seats, O-rings and pistons.
ALL	Motor	2 years from date of purchase	The motor warranty is covered under the terms and conditions as outlined by the motor manufactures warranty and is the sole responsibility of the motor manufacture. Normal motor maintenance such as system cleaning and obstruction due to build up is not covered by this NorthStar warranty.
ALL	Normal Wear Items	90 days from date of purchase	In addition to the normal warranty, NorthStar shall warrant any normal wear item from defects in material or workmanship for a period of 90 days from the date of purchase by user. Normal wear items include, but are not limited to, nozzles, quick connect fittings, valves, high- pressure hoses, O-rings, filter elements, Gun, Lance, Tires, and unloader valves

“Consumer use” means personal residential household use by a consumer. “Commercial use” means all other uses, including use for commercial, income producing or rental purposes or when purchased by a business.

This warranty applies to the original purchaser of the equipment (verification of purchase, in the form of a receipt, is the responsibility of the buyer), is non-transferable, and covers parts and labor. Parts will be replaced or repaired at no charge, except when the equipment has failed due to lack of proper maintenance. If a part is no longer available, the part may be replaced with a similar part of equal function. Any misuse, abuse, alteration or improper installation or operations will void warranty. Determining whether a part is to be replaced or repaired is the sole decision of NorthStar. NorthStar will not provide for replacement of complete products due to defective parts. Any costs incurred due to replacement or repair of items outside of a NorthStar approved facility is the responsibility of the buyer and not covered under warranty. Transportation costs to and from service center is the responsibility of the customer.

This warranty specifically excludes the following; failure of parts due to damage caused by accident, fire, flood, windstorm, acts of God, applications not approved by NorthStar in writing, corrosion caused by chemicals, use of replacement parts which do not conform to manufacturer's specifications, damage related to rodent and/or insect infestation and damage caused by vandalism. Additional exclusions: loss of running time, inconvenience, loss of income, or loss of use, including any implied warranty of merchantability of fitness for a specific use. Also, Outdoor Power Equipment needs periodic parts and service to perform well, and this warranty does not cover instances when normal use has exhausted the life of a component or the motor.

This warranty does not cover any personal injury or damage to surrounding property caused by failure of any part. Repair or replacement of parts does not extend the warranty period.

Limited Warranty Continued

The motor warranty is covered under the terms and conditions as outlined by the moto manufactures warranty contained herein and is the sole responsibility of the motor manufacture. Normal motor maintenance such as system cleaning and obstruction due to build up is not covered by this NorthStar warranty.

Please fill in the following information and have it on hand when you call in on a warranty claim.

Customer Number: _____

Date of Purchase: _____

NorthStar Serial Number: _____

Item Number: _____

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⚠ WARNING: This product can expose you to soots, tars, and mineral oils (untreated and mildly treated oils and used pump oils), which are known to the state of California to cause cancer.

For more information go to www.P65Warnings.ca.gov.



Assembled by
Northern Tool & Equipment Company, Inc.
Burnsville, MN 55306
NorthernTool.com