



# IRWINDALE INDUSTRIAL

## **Owner's Manual**

Instructions for Assembly, Testing, Operation, Servicing, and Storage.

**Portable Gas Pressure Washer:**

**For Outdoor Use Only!**



Irwindale Industrial Pressure Washer

## **TWC78-K6 Owner's Manual**

# Welcome



Thank you for your purchase of this quality Irwindale Industrial product. We wish you years of success using your new pressure washer. This machine is designed to clean dirty surfaces with high pressure cold water.

This manual contains general warnings about the inherent risks of operating pressure washers and specific warnings about the operation and maintenance of this particular pressure washer. In addition, it outlines important maintenance and storage procedures.

Please read it carefully before operating, maintaining, repairing, and storing your new pressure washer. Keep this owner's manual handy so you can refer to it at any time. This owner's manual is considered a permanent part of the pressure washer and should remain with the pressure washer if resold.

The information and specifications included in this publication were in effect at the time of approval for printing. IES reserves the right, however, to discontinue or change specifications or design at any time without notice and without incurring any obligation whatsoever. No part of this publication may be reproduced without written permission.

Thank you for your business.

	<b>WARNING:</b>	
<p><b>READ and UNDERSTAND the <u>Owner's Manual</u> completely before using this pressure washer.</b></p> <p>Assemble, test and use only in accordance with the Owner's Manual instructions.</p> <p><b>WEAR</b> personal protective gear when filling, using, cleaning, and servicing the pressure washer.</p> <p><b>DO NOT START</b> the pressure washer until you have read, understood, and followed the instructions in this manual. Improper use of the pressure washer could result in serious injury or illness to the operator or nearby persons/animals, and cause property damage.</p>		

## Quick Facts About Your Pressure Washer

**Inspect Upon Delivery:** FIRST! Inspect for missing or damaged components. See “Initial Set-Up” section of this manual for information on where to report missing or damaged parts.

**Add Engine Oil:** Engine is shipped without oil. See engine manual for instructions on capacity and viscosity recommendations as well as instructions and safety precautions for adding/changing engine oil.

**Replace Temporary Shipping Pump Oil Plug:** The pump is shipped with oil but with a temporary shipping plug to prevent leakage during shipping. Check pump oil level before starting, oil level should be half-way up the sight glass to the level pointed to by the indicator. Remove the RED shipping oil cap and install the BLACK permanent crankcase vent cap plug that is contained in the plastic bag containing this Owner’s Manual ( on select units only).

**Water Flow Requirements:** Make sure your supply water flow rate is 20% higher than the pressure washer’s flow rate (see “Operation” section for detail), and that your water is clean and particle free.

**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” section for more information.


**Maintenance Schedule:** Engine and pump require periodic inspection and servicing to keep pressure washer functioning efficiently. See “Maintenance Schedule” section for frequency of servicing.

### **Any Questions Contact Customer Service**

Consult an Authorized Service Dealer regarding maintenance or repair procedures.

Please contact us with service-related questions regarding operating and assembling your new pressure washer, including parts you may be missing.

Customer support: 1-888-980-4938  
Support@lrwindaleIND.com  
www.lrwindaleIND.com

	<p>Do not return unit to store. For questions, missing parts, and service contact Customer Service: 1-888-980-4938 <a href="http://www.lrwindaleInd.com">www.lrwindaleInd.com</a> IES, 1474 West 9th Street Upland, CA United States</p>
---	--

Retain for your records

Record your pressure washer's model number and serial number as well as the date you purchased the pressure washer below.

Retain this information for your records. You'll need to refer to this information when ordering parts and contacting customer service about maintaining your pressure washer and its warranty.

Model number:

\_\_\_\_\_

Serial number:

\_\_\_\_\_

Date purchased:

\_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year

**TWC34-K6 Nameplate**

PRODUCT INFORMATION	
MODEL	TWC78-K6
ENGINE MODEL	KOHLER SH265
PRESSURE RATING	3000 PSI
FLOW RATING	2.6 GPM
PUMP MODEL	RMV2.5G30D-EZ
DIMENSION (L x W x H)	24X26.3X39 INCH
DRY WEIGHT	92 LBS
SERIAL No.	
Manufacturer and Distributor Innovative Energy Solutions, Corp. Address: 1474 W. 9th Street, Suite A-3, Upland CA 91786 TEL: (888) 980-4938 website: <a href="http://www.irwindaleIND.com">www.irwindaleIND.com</a>	

## Contents

Welcome .....	1
Quick Facts About Your Pressure Washer.....	2
<b>Any Questions Contact Customer Service .....</b>	<b>2</b>
Important safety precautions .....	6
Pressure washer Safety .....	7
Safety Label Locations .....	9
Safety and Operation Labels:.....	10
Detailed Safety warnings.....	11
Carbon Monoxide WARNINGS .....	11
Injection Injury WARNINGS .....	12
Electrical Shock WARNINGS .....	12
About your pressure washer .....	13
Reference manual contains critical information.....	13
What's in the Box? .....	13
Pressure washer Major Components and Controls Diagram .....	14
Engine Major Components and Controls Diagram.....	15
Engine Controls.....	16
Initial Set-Up.....	17
Step 1, Inspect and Unpack .....	17
Step 2, Assembly .....	18
Step 3, Select Suitable Location .....	20
Pre-operation check and Safety Rules.....	22
Are you ready to get started? .....	22
Is your Pressure washer read to go? .....	26
Fuel Requirements .....	28
Always follow these general safety rules when fueling: .....	29
Fill Engine Fuel Tank.....	30
Inspect Fuel System/Check for Leaks.....	30
Inspect Spray System .....	31
Perform Scheduled Maintenance, As Needed .....	31
Connect Hoses, Water Supply, Spray Gun, and Spray Nozzle.....	31
Operation.....	36
Pressure washer Placement .....	36
Start-Up Procedures.....	36
Starting Engine. (See the engine owner's manual for more details.) .....	37

Applying Cleaning Chemical (If Desired).....	38
High Pressure Spraying .....	39
Shutdown Procedures .....	40
Maintenance.....	40
Importance of maintenance .....	40
Maintenance safety precautions.....	41
Pressure washer Maintenance Schedule .....	42
Detailed Instructions – Maintenance & Repair .....	43
Engine Maintenance.....	45
Pump Maintenance .....	45
Inspect Fuel System.....	45
Inspect & Clean Spark Arrestor (If equipped).....	46
Keep Pressure Washer Clean .....	46
Storing and transporting your pressure washer .....	47
Between-Use Storage .....	47
Long Term Storage Preparation: .....	48
Preparing Pressure Washer for Freezing Conditions .....	48
Troubleshooting.....	49
Pressure washer assembly and parts list: .....	52
Pump assembly and parts list: .....	53
Engine assembly and parts list:.....	53
Contact information for Technical and Customer Assistance.....	53
Locate an Authorized Service Dealer .....	53
Registration Card .....	54
Customer assistance.....	54
Limited Warranty .....	55



# Important safety precautions

This manual contains critical safety information. Please read the entire manual closely.


Because safety is paramount and using a pressure washer carries significant responsibilities, we have outlined warnings and the general hazards of operating pressure washers. In addition, we have summarized the recommended procedures for operating, repairing, maintaining, and storing your specific pressure washer to keep you and others safe.

Not following instructions or using poor judgment when using and maintaining your pressure washer can cause you or someone else to be **KILLED** or **SERIOUSLY INJURED**.

It would be impossible for us to warn you of each risk and all of the hazards involved in the use of pressure washers. Therefore, it's essential that you use your best judgment and take precautions when using, maintaining, repairing, and storing your pressure washer.

There are many safety warnings in this manual and on the pressure washer itself to guide you:

**Pressure washer safety labels:** The safety labels on your pressure washer warn of potential danger. It's critical that you read them. If any labels become difficult to read or have been removed, contact your dealer for a replacement label.

**Manual safety messages:** This manual contains specific instructions and severe warnings about the ramifications of using poor judgment and not following the instructions outlined in this manual. The ramifications range from serious injury and losing consciousness to death. These messages are preceded by a safety alert symbol  and one of three signal words, DANGER, WARNING, or CAUTION.

These signal words mean:



You **WILL** be KILLED or SERIOUSLY HURT if you don't follow instructions



You **CAN** be KILLED or SERIOUSLY HURT if you don't follow instructions



You **CAN** be HURT if you don't follow instructions

**Manual headings and sections:** We've devoted several sections of this manual to outline the risks, hazards, and warnings when using, repairing, maintaining, and storing your pressure washer.



**Instructions:** how to use this Pressure washer correctly and safely.

Pay attention to cautions such as, “**Carbon monoxide WARNINGS**” or “**Burn and fire WARNINGS.**”



Read manual before operating unit

## Pressure washer Safety

 <b>WARNING: SPECIAL HAZARDS</b> 	
<ul style="list-style-type: none"><li>• <b>CO Poisoning:</b> Exhaust from engine contains carbon monoxide, a poisonous gas that can cause carbon monoxide poisoning and possible death if inhaled.</li><li>• <b>Injection Injury:</b> High pressure water can pierce skin and underlying tissue, leading to serious injury and possible amputation. Such an injection injury can result in blood poisoning and/or severe tissue damage.</li><li>• <b>Flying Debris:</b> High-pressure water can cause flying debris and possible surface damage.</li><li>• <b>Electric Shock:</b> Operating equipment in wet conditions or near water can cause electric shock.</li><li>• <b>Chemical Exposure:</b> Cleaning chemical vapors or contact with skin may be hazardous.</li><li>• <b>Fire/Explosion:</b> Engine sparking can ignite fuel or other flammable liquids or vapors in the vicinity. Hot exhaust from engine can ignite combustible materials.</li><li>• <b>Burns:</b> Pressure washer pump and engine are hot surfaces that can cause burn injuries.</li></ul>	
* Detailed safety information about these hazards appears throughout this manual.	

### Important Safety Information

Irwindale Industrial pressure washers are designed to provide high pressure cold water spray. Cleaning chemicals may be incorporated into the low pressure spray if desired. The pressure pump for this equipment is powered by a gasoline internal combustions engine. Special precautions are necessary when using this equipment in order to safely operate this pressure washer. It is the user responsibility to read and understand this entire manual and to operate this pressure washer in a safe manner.

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

Most injuries or property damage can be prevented if you follow all instructions in this manual and on the pressure washer. The most common hazards are discussed below, along with the best way to protect yourself and others.



## **Operators Responsibility**

It is the operator's responsibility to provide the necessary safeguards to protect people and property. Know how to stop the pressure washer quickly in case of emergency. If you leave the pressure washer for any reason, always turn the engine off. Understand the use of all controls and connections.

Adult Control ONLY: Only trained adults should set up and operate the pressure washer. Be sure that anyone who operates the pressure washer receives proper instruction. Do not let children operate the pressure washer. Keep children and pets away from the area of operation.

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 engine.

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.

## **Pressure washer Operation**

This pressure washer is intended for outdoor use only.

This pressure washer is powered by a gasoline engine and therefore can only be operated outdoors.

This pressure washer will require you to supply and install the following fluids and equipment:

- Pump oil (as specified)
- Gasoline (as specified)
- Engine Oil (as specified)
- Personal Protection Equipment

\* See "Specifications" section of this manual for more details.

## **Refuel With Care**

Gasoline is extremely flammable, and gasoline vapor can explode. Refuel outdoors, in a well-ventilated area, with the engine stopped and the pressure washer on a level surface. Do not fill the fuel tank above the fuel strainer shoulder. Never smoke near gasoline, and keep other flames and sparks away. Always store gasoline in an approved container. Make sure that any spilled fuel has been wiped up before starting the engine.

## **Hot Exhaust**

The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. Let the engine cool down before transporting the pressure washer or storing it indoors.

To prevent fire hazards, keep the pressure washer at least 7 feet (2 meter) away from building walls and other equipment during operation. Do not place flammable objects close to the engine.

### Carbon Monoxide Hazard

Exhaust contains poisonous carbon monoxide, a colorless and odorless gas. Breathing carbon monoxide can cause loss of consciousness and may lead to death.

If you run the pressure washer in an area that is confined, or even partly enclosed, the air you breathe could contain a dangerous amount of exhaust gas.

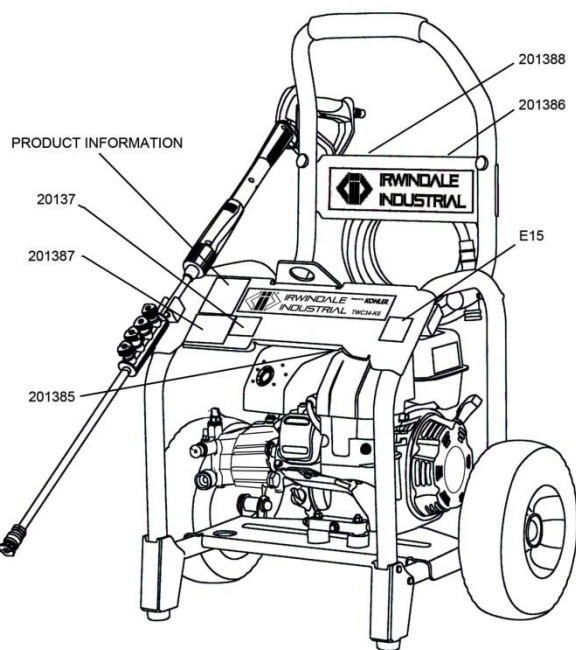
Never run the engine inside a closed garage, house, or confined area.

## NOTICE:

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




- All persons to whom you rent/loan this pressure washer 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 machine to read and understand 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 Irwindale Industrial Customer Support at 1-888-980-4938 or Support@IrwindaleIND.com

### Safety Label Locations










On Product Warning Labels	
Part Number	Description
201386	Fuel Explosion Hazard
20137	Burn Hazard
201388	Operational Warnings
201385	Explosion/CO2 Warning
201387	Operation Instructions
E15	E15 Warning

## Safety and Operation Labels:

<b>⚠ WARNING</b>	
	<b>Fuel Fire/ Explosion Hazard</b> <b>Fuel is flammable and explosive.</b>
	Never fuel a running or hot engine. Clean up fuel spills immediately. Ensure there are no fuel leaks before starting. Keep sources of sparks and flames away. Hot exhaust may also ignite spilled fuel. No Smoking. Keep a fire extinguisher nearby.
	
Label no.201386	

<b>⚠ WARNING</b>	
	<b>Burn Hazard</b> Do not touch hot muffler. muffler may be hot even if the unit is stopped. Allow unit to cool before servicing.
20137	

<b>⚠ WARNING</b>	
	1.) Skin puncture hazard. Do not direct spray at people or animals. Seek IMMEDIATE surgical treatment
	2.) Risk of fire and explosion. Do not add fuel when engine is running or still hot.
	3.) Breathing hazard Poisonous fumes from engine can kill you. Do not operate indoors even if ventilated.
	4.) Risk of electrocution. Keep water away from electric outlets and electric devices.
	5.) Read owner's manual. Serious injury or death can result if safety instructions are not followed.
201388	

<b>⚠ WARNING</b>			
	<b>Fuel Fire/ Explosion Hazard</b> <b>Fuel is flammable and explosive.</b>		
			
			
<b>⚠ DANGER</b> <b>Using a gasoline pressure washer indoors CAN KILL YOU IN MINUTES. Pressure washer exhaust contains carbon monoxide. This is a poison you cannot see or smell.</b>			
			
<b>NEVER use inside a home or garage, EVEN IF doors and windows are open.</b>		<b>Only use OUTSIDE and far away from windows,</b>	
IES, Corp 1-888-980-4938		www.irwindaleIND.com	
		Label no.201385	

<b>OPERATION INSTRUCTIONS:</b>	
<b>START UP</b> 1. Attach garden hose. 2. Attach pressure hose. 3. Attach gun and lance. 4. Turn water supply ON. 5. Squeeze trigger to purge air from pump. 6. Insert nozzle. 7. Start engine.	<b>SHUT DOWN</b> 1. Turn engine OFF. 2. Turn water supply OFF. 3. Squeeze trigger to relieve system pressure. 4. Remove garden hose. 5. Remove pressure hose. 6. Turn fuel valve off (if required).
For questions, replacement parts or labels contact product support at: Call (888) 980-4938 or www.irwindaleIND.com	
201387	

<b>WARNING</b>
<b>FEDERALL LAW</b> prohibits the use of E15 in small engines. Per the EPA, E15 should <b>ONLY</b> be used in 2001 and newer passenger vechiles.

E15

**To order replacement safety labels, call Irwindale Industrial Customer Support at**

**1-888-980-4938.**

# Detailed Safety warnings

## Carbon Monoxide WARNINGS

**Only operate your pressure washer outdoors.**

The exhaust from your pressure washer contains carbon monoxide. Breathing this poisonous gas, which is odorless and colorless, can cause unconsciousness and could even kill you.

Operating a pressure washer carries serious responsibility. There are precautions that you need to take when operating a pressure washer:

- Never operate your pressure washer indoors or near any windows or doors.
- Never operate your pressure washer in an enclosed or a partially enclosed area such as a garage.
- Do not let the exhaust from your pressure washer build up to dangerous levels.
- Do not breathe the poisonous gas in your pressure washer's exhaust.
- Become familiar with your pressure washer. Understand all of your pressure washer's controls, connections, and outputs. Know how to quickly stop your pressure washer in case of an emergency.
- If anyone else operates your pressure washer, be sure he/she is properly instructed.
- Do not let children play with or operate your pressure washer.
- Keep your pressure washer at least three feet away from flammable materials.



## **WARNING: Engine Exhaust Chemicals**



The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

## Burn and Fire/Explosion WARNINGS

Your pressure washer's exhaust system becomes hot enough that it could ignite some materials and cause severe burns. Gasoline is highly flammable and can be explosive, so use extreme caution when refueling and operating your



Operating a pressure washer carries serious responsibility. There are precautions that you need to take when operating a pressure washer to avoid fire, burns, or explosions:

- Stop engine when refueling.
- Do not smoke when refueling your pressure washer.
- Keep your pressure washer at least seven feet (or 2 meters) away from buildings and equipment.
- Keep flammable materials away from your pressure washer.
- Do not allow sparks or flames near your pressure washer when it's refueled and keep them away from your stored gasoline.
- Fuel vapors are highly flammable, so they could ignite after your pressure washer is started. Wipe up any spilled fuel before you restart your pressure washer.
- Do not operate your pressure washer in enclosed or partially enclosed areas.
- Avoid touching your pressure washer's muffler. It becomes extremely hot when your pressure washer is in use. It remains hot for quite a while after you turn your pressure washer off, so wait to move your pressure washer into storage until the muffler has completely cooled to avoid severe burns.

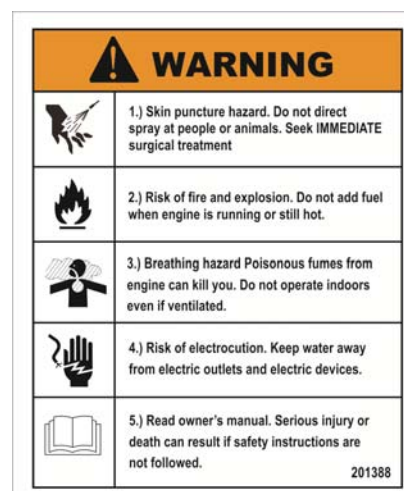


## Injection Injury WARNINGS

This pressure washer produces a high pressure water spray that 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. Never direct the spray at people or animals. **Seek IMMEDIATE medical /surgical treatment 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.

## Electrical Shock WARNINGS

Water can conduct electricity, when operating the pressure washer keep water away from electrical outlets and electric devices.





# About your pressure washer

## Reference manual contains critical information

It's recommended that you keep this Owner's Manual near your pressure washer, so you can refer to it while operating and maintaining it. If you resell your pressure washer, this manual is considered to be a part of the pressure washer and should be passed along with it to the new owner.

The information contained in this manual as well as the specifications outlined in it were in effect upon approval for publishing this manual. Irwindale Industrial reserves the right to change the specifications and instructions. Irwindale Industrial also reserves the right to discontinue and modify the design of the pressure washer at any point without incurring any obligation and without providing notice. This document may not be reproduced in whole or in part without written permission from Irwindale Industrial.

### **Attention: All Rental Companies and Private Owners who loan this equipment to others!**

*All persons to whom you rent/loan this pressure washer 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 machine to read it. You must also provide personal instruction on how to safely operate the pressure washer and be available to answer any questions a renter/borrower might have.

This pressure washer is a machine designed for outdoor pressure washer applications primarily used in cleaning surfaces. The technical specifications for your pressure washer are provided in the "Specifications" section of this manual.

## What's in the Box?

Below is a summary of the components included in your pressure washer package. It's recommended that you review the items listed below and confirm they were all included in your purchase.

Name of Component	Quantity
Pressure Washer	1
Owner's Manual	1
Engine Manual	1
Pump Manual	1

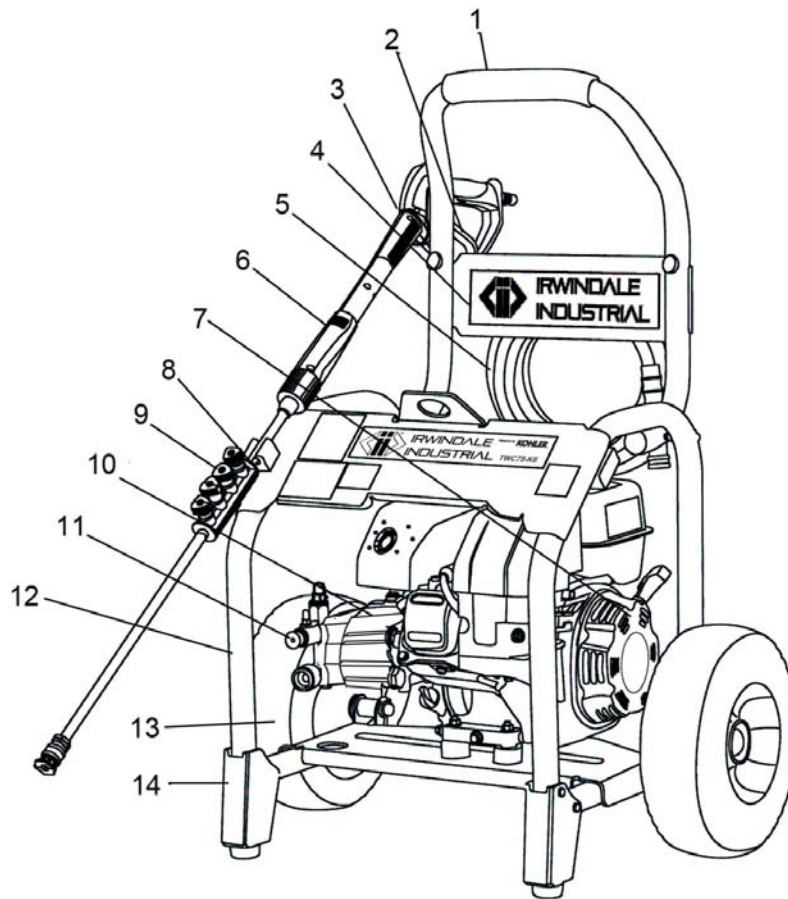


Do not return unit to store.  
For questions, missing parts, and service contact  
Customer Service:  
1-888-980-4938

[www.IrwindaleInd.com](http://www.IrwindaleInd.com)  
IES, 1474 West 9th Street  
Upland, CA United States

# Pressure washer Major Components and Controls Diagram

Below are diagrams of your pressure washer's major components and controls:



**1. Handle:** Foldable handle that locks into place for ease of mobility and storage.

**2. Trigger:** Controls the release of high pressure water.

**3. Upper Wand Holder:** To store wand on the frame for transport and storage.

**4. Upper Support:** Provides hose storage and displays safety/operation warnings.

**5. High Pressure Hose:** High pressure hose for connect pressure washer to the wand.

**6. Gun Assembly:** Houses the trigger and connects to the wand to form the entire gun/wand assembly.

**7. Engine:** Shipped WITHOUT engine oil. Refer to engine owner's manual for proper engine oil and capacity.

**8. Lower Wand/Lance Holder:** Secures the lower wand and lance to the frame for transport and storage.

**9. Nozzle holder:** Securely holds the nozzles not currently in use and provides easy access for changing nozzles.

**10. High Pressure Pump:** pressurizes water

**11. High Pressure Hose Connection:** Connection for high pressure hose.

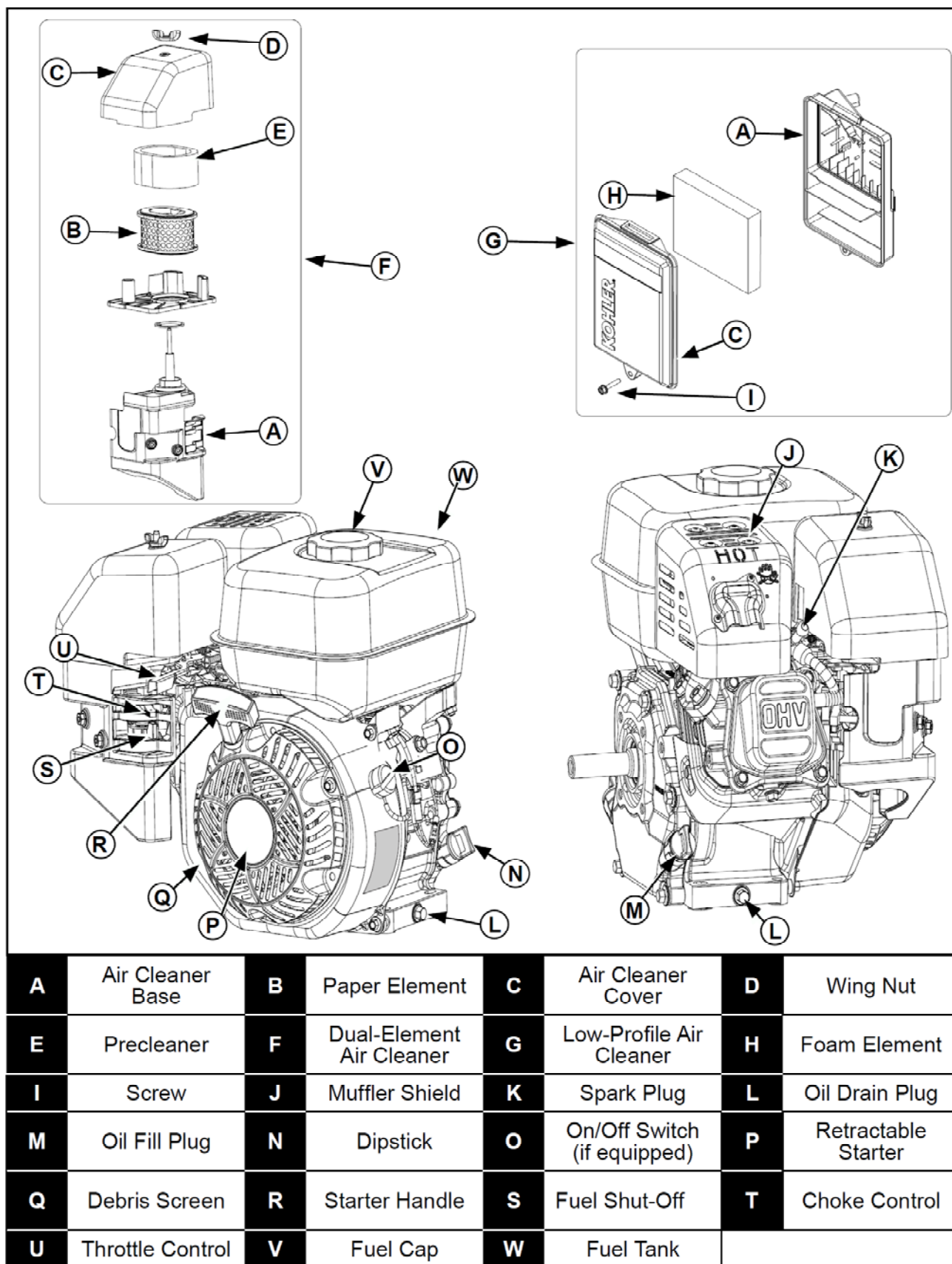
**12. Frame:** Solid tubular frame.

**13. Run-Flat Tires:** Provide ease of mobility, no maintenance.

**14. Support Legs:** Provide stable support for pressure washer.



# Engine Major Components and Controls Diagram



# Engine Controls

## Fuel Shut Off

The fuel shut off valve opens and closes the connection between the fuel tank and the carburetor. The fuel shut off valve lever must be in the ON position for the engine to run. When the engine is not in use, leave the fuel valve lever in the OFF position to prevent flooding and to reduce the possibility of fuel leaks.

## On/Off Switch

The ignition On/Off switch controls the ignition system. The ignition switch must be in the ON position for the engine to run. Turning the ignition switch to the OFF position stops the engine.

## Choke Control

The choke control lever opens and closes the choke valve in the carburetor. The CLOSED position enriches the fuel mixture for starting a cold engine. The OPEN position provides the correct fuel mixture for operation after starting, and for restarting a warm engine.

## Throttle Control

The throttle control lever controls engine speed. Moving the lever toward the fast position makes the engine run faster and moving the lever towards the slow position makes the engine run slower. Pressure washer output is controlled by adjusting the throttle lever. At fastest throttle position, the Pressure washer will deliver the highest output volume. Moving the throttle control lever to toward the slow position will decrease the output volume of the Pressure washer.

## Starting Handle

Pulling the starting handle operates the recoil starter to crank the engine for starting.

## Oil Sentry (if equipped)

This switch is designed to prevent engine from starting in low oil or no oil condition. Oil Sentry may not shut down a running engine before damage occurs. In some applications this switch may activate a warning signal.

# Initial Set-Up

## Step 1, Inspect and Unpack

Upon receipt, inspect pressure washer for missing or damaged parts. Verify that is the Pressure Washer you ordered.

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

- For *missing components*, contact Irwindale Support at 1-888-980-4938.
- For *damage components*, contact the freight company that delivered the unit and file a claim.
- If complete, fill out the product serial number information. See *Limited Warranty* section of this manual.
- IMPORTANT NOTE: This pressure washer is heavy and 2 (two) people will be required to unpack and assemble the unit.
- Tools required: Rubber Mallet, #3 or #2 Phillips head screwdriver, wrenches (2- 10 mm or 2-3/8 inch, 1 – 22mm or 7/8 inch, 1-19mm or ¾ inch, 1-18mm or 11/16).

### UNPACK:

- a) Carefully cut the straps and tape on the top of the box and open.
- b) Remove the luan top cover and place on the floor.
- c) Remove the cardboard cover and place it on the floor on top of the luan, this will be used as an assembly base for the next steps.
- d) Remove the components that are individually packed and set aside.
- e) With the help of another person (two people are required for this step), carefully remove the pressure washer main unit from the box and set it upon the cardboard cover as shown below.



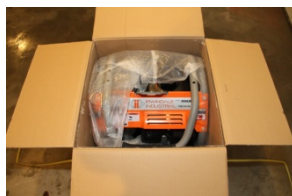
**Step a, cut the straps and tape on top of box**



**Step b, remove luan cover and place on floor**



**Step c, remove cardboard cover and place on luan for work surface**



**Step d, carefully remove the individually wrapped components and set aside**



**Step d, with the aid of a second person, remove the main unit and set it on the work surface.**

Individual components:



**Figure 1,  
Axle Hardware**



**Figure 2, Wheels**



**Figure 3, Upper Support**



**Figure 4, Rubber Feet  
and Brackets**



**Figure 5, handle  
lock hardware**



**Figure 7, hose, gun,  
lance, and nozzles**



**Figure 8, Kohler  
engine manual**



**Figure 9, AR pump  
manual**

## Step 2, Assembly

### 1. Attach Rubber Feet and Brackets.

- Using the bolts supplied attach the brackets with the rubber feet on to the frame as shown in the pictures below. Insert the bolts from the outside of the unit towards the inside and secure the bolts with the cap nuts provided using 10mm wrenches. Do not over-tighten. A second person should steady the frame for this step.



### 2. Assemble Wheels and Axle Hardware.

- Place large diameter washer on to the axle shaft and insert the axle into the wheel/tire assembly as shown in figure a., you may have to use a rubber mallet to tap the axle through the wheel opening.
- Slide the axle wheel assembly onto the frame assembly and place a washer onto the axle and secure with a cotter key as shown in figure b. A second person should steady the frame for this step.



**Figure a.,  
axle/washer/wheel/tire  
assembly**



**Figure b, insert washer and  
secure with cotter pin,  
bend pins so they do not  
extend past the washer**

3. Install the Handle Locking Hardware.
  - a. Separate the nut from the spring lock as shown in Figure a.
  - b. Insert the spring lock as shown in Figure b.
  - c. Secure the lock to the frame with the nut as shown in Figure c. You will need to use a  $\frac{3}{4}$  inch wrench (or 19mm) to hold the spring lock and secure the nut with a  $\frac{7}{8}$  inch wrench (or 22mm). Do not over-tighten.



**Figure a, separate the nut from the spring lock**



**Figure b; insert the spring lock into the frame**



**Figure c, secure the nut on to the spring lock**

4. Attach Upper Support.
  - a. Using the 4 bolts provided, insert the bolts through the front of the frame handle support as shown in figure f. Next hold the Upper support against the back of the frame handle support and secure the bolts using a #3 or #2 Phillips head screwdriver into the Upper Support as shown in figure g. Be careful to make sure the bolt does not cross-thread into the upper support. Do not over-tighten.



**Figure f.**



**Figure g.**



**Figure h.**

5. Attach the wand to the gun.
  - a. Insert the wand with the nozzles attached into the gun, figure a.
  - b. Tighten the black nut on the gun until the wand is secured as shown in figure b.



**Figure a, insert the wand into the gun nut and tighten the nut.**



**Figure b, tight the nut until the wand is secured fully as shown.**

6. Fill the engine with the required engine oil as specified in the Kohler manual included with your pressure washer. Please follow the instructions closely from the Kohler manual and also familiarize yourself with the engine operation as described.



### Step 3, Select Suitable Location



#### **WARNING: LOCATION HAZARDS**



Choose a suitable site for operating your Pressure Washer to prevent possible death from carbon monoxide poisoning or injury from fire/explosion, hot surfaces, or equipment tip-over. It can crush and cause serious injury if it rolls out of control or tips over. Follow the instructions for safely moving the pressure washer.

#### **Moving and Handling**

To move the pressure washer around:

- Use the handles to manually move the pressure washer.
- Push the pressure washer in front of you as you walk.
- To turn, push down slightly on the handles and pivot the pressure washer on its wheels.

Elevating or lowering your pressure washer:

- To reduce risk of injury, it is recommended that two adults lift the pressure washer.
- Only lift the pressure washer by the front and rear tubular frame. Do not use the pump or engine as a lifting point.



#### **WARNING: LIFTING HAZARD**



The pressure washer is heavy. Ensure that proper lifting equipment is available to unload and move pressure washer. It can crush and cause serious injury if it rolls out of control or tips over.

#### **For Outdoor Use ONLY**

##### **Select a Suitable Outdoor Location:**

1. Never run the pressure washer in an enclosed or partially enclosed location such as a building, garage, barn, shed, or house. These spaces can trap poisonous gases. Running a fan or opening windows will not provide adequate ventilation to prevent dangerous CO build-up.
2. Only use the pressure wash outdoors and far away from open windows, doors, and building or vehicle vents.
3. Place the pressure washer so that the exhaust fumes will not be directed towards people or building air leaks and at least 7 feet away from combustible materials.
4. Do not locate and use the pressure washer in the presence of flammable vapors, dust, gases, or other potentially combustible materials.
5. Ensure that working, battery-operated or battery back-up carbon monoxide alarms are used in any dwelling/structure that is in close proximity to the running pressure washer.

6. Note that this pressure washer is NOT designed or approved for use in vehicles or marine applications. Never run the pressure washer inside RV's or other vehicles, on boats, or on pick-up truck beds.

### **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. If applicable, block the pressure washer's wheels to prevent movement.
3. Situate the unit so there is adequate pulling room for starting the engine using the recoil starter of the engine. Attempting to pull at an odd angle or in confined space could rip off the cord grip and/or cause muscular injuries to the operator.

### **Airflow:**

1. Situate the unit so there is adequate clearance around the pressure washer to allow for proper 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 machine.
4. The pressure washer needs adequate, unobstructed airflow to allow for proper combustion and adequate cooling. Proper combustion can only be obtained when there is a sufficient supply of oxygen available for the amount of fuel being burned. Cooling ventilation is required to prevent overheating of the engine and pressure pump and/or the possibility of fire.
5. Situate the machine away from other heat generating equipment and do not allow debris to accumulate or block airflow to the engine or pump.

### **Exhaust:**



## **WARNING: Exhaust Modification Hazard**



Never attempt to attach ductwork to the muffler system to allow for installation inside an enclosure. This could cause heat build-up and increased exhaust back-pressure, resulting in possible exhaust leakage or damage to the Pressure Washer.

1. Place the unit so that the exhaust fumes will not be directed towards people or building air intakes.
2. Keep a fire extinguisher rated "ABC" nearby which is properly charged. Be familiar with its use.
3. The exhaust gas from your pressure washer is extremely hot and can cause combustible materials to catch on fire.
4. Make sure the engine is at least 7 feet from all combustible materials and buildings/structures during operation.



## Install Spark Arrestor (if Required)

Equip engine with spark arrestor if machine will be used near any ignitable forest, brush, or grassy land. (See engine Owner's Manual provided to determine if the engine is already equipped.) Make sure you comply with applicable local, state, and federal codes.



## **DANGER: Carbon Monoxide Hazard**



Exhaust fumes from the engine contain carbon monoxide (CO), a poisonous gas you cannot see, smell, or taste. The CO generated by the engine can rapidly accumulate, even in areas that appear to be well ventilated, resulting in dangerous and fatal concentrations within minutes. NEVER run air inside any enclosed or semi-enclosed spaces, including homes, garages, basements, sheds, boxes, pick-up truck beds, RV's, or boats. These spaces can trap poisonous gases, EVEN if you run a fan or open windows. If you start to feel sick, dizzy, or weak while using the pressure washer, shut off the engine and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.

## Pre-operation check and Safety Rules

Are you ready to get started?

*Your safety is your responsibility. A little time spent in preparation will significantly reduce your risk of injury.*

### Knowledge

Read and understand this manual. Know what the controls do and how to operate them.

Familiarize yourself with the pressure washer and its operation before you begin using it. Know what to do in case of emergencies.

Before starting the Pressure Washer, review the safety rules found below and throughout the manual.



## **WARNING:**



**READ and UNDERSTAND this owner's manual** completely before using the pressure washer.

***Improper use of the pressure washer could result in serious injury or illness for the operator or nearby persons/animals, or cause damage to the environment. Failure to follow safety rules may result in serious injury or death to the operator or bystanders.***

## **Follow Safety Rules for Operation:**

### **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 its safe use.

### **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. Wear safety apparel during operation, including safety glasses with side and top protection. Ear protection and other safety apparel include waterproof insulated gloves, non-slip protective footwear, and respirator.

### **Moving Parts**

Keep hand, 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 unit is operating.

### **Ear Protection**

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

### **Eye Protection**

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

### **Respirator**

Always wear a respirator when spraying chemicals that require a respirator and spray in a well-ventilated area to prevent health and fire hazards.

## **Conditions for Use:**

### **Know How to Stop the Machine**

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, such as in an emergency situation.

## **Instruct All Operators**

The pressure washer's owner must instruct all operators and potential renter 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 this pressure washer. 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 it with a part that is not rated at or above the pressure rating of the machine. Always replace damaged or missing parts with parts designed specifically for this machine. Please contact Irwindale Industrial customer service to get replacement parts.

## **Modifications**

Do not modify the pressure washer in any way or deactivate any safety device. Do not change or add to fuel tank, fuel line, or exhaust system. Modifications can result in hazards related to carbon monoxide poisoning, fuel leaks, fire, explosion or other serious safety hazards, and will also VOID the warranty.

## **Conditions during Use:**

### **Stay Alert**

Watch what you are doing at all times and be aware of your environment and what is going on around you.

### **Clear Work Area**

Keep a clear work area and make sure no bystanders are in the work area.

## **Keep Children and Pets Away from the Work Area.**

### **Keep Spray Away From Electrical Wiring**

Spray contact with electrical wiring will likely result in severe electrical shock or electrocution. Keep spray away from electrical outlets, devices, and equipment.

### **Hot Exhaust Parts**

Stay clear of engine exhaust and do not touch the pump casing during operation. Never touch hot engine exhaust muffler, or other hot surfaces. All are very hot and will burn you.



## **WARNING: IF TRIGGER DOES NOT RELEASE**



**If you release the trigger and the gun does not shut off the high pressure spray, hold the gun in a safe direction and carefully shut off the engine to avoid injury to yourself and others.**

**If the gun does not release do not set the gun down and make sure the spray is in a safe direction at all times and make sure the pressure washer is shut down completely before setting down the gun.**

### **Do Not Direct Spray at This Machine**

Do not attempt to clean this machine with its own spray. Engine damage will result. Cleaning should be done with a damp sponge and cloth with then engine off and cool.

**Let the engine cool at least three minutes before refueling.**

### **Avoid Inhalation of Exhaust**

This product emits CO and chemicals know to the State of California to cause cancer, birth defects or other reproductive harm.

### **Never Pull by Hose**

Do not move this machine by pulling on the hose. Hose or connections could fail and result in catastrophic high pressure release of fluids as well as hose whipping.

### **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 machine 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 lock 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.

## Seek Medical aid for suspected carbon monoxide poisoning

The running engine gives off carbon monoxide, a poisonous gas that can kill you. If you start to feel sick, dizzy, or weak while using the pressure washer, shut off the engine and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.

## Wear Personal Protective Gear

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

	<b>WARNING: Personal Protective Gear</b>	
Use personal protective gear to prevent:		
<ul style="list-style-type: none"><li>• Eye and skin injection injury from high pressure spray</li><li>• Eye injury from flying debris</li></ul>		

## Is your Pressure washer read to go?

For your safety, and to maximize the service life of your equipment, it is very important to take a few moments before you operate the pressure washer to check its condition. Be sure to take care of any problem you find, or have your servicing dealer correct it, before you operate the pressure washer. Make sure that any regular maintenance has been performed as described in "Maintenance and Repair" section.



## **WARNING:**



Improperly maintaining this pressure washer, or failure to correct a problem before operation, could cause a malfunction in which you could be seriously injured.

Always perform a pre-operation inspection before each operation, and correct any problem.

To prevent a possible fire, keep the Pressure washer at least 7 feet (2 meter) away from building walls and other equipment during operation. Do not place flammable objection close to the engine.

Before beginning your pre-operation checks, be sure the pressure washer is on a level surface and the ignition switch is in the OFF position.

### **Check the General Condition of the pressure washer**

- Look around and underneath the pressure washer for signs of oil or gasoline leaks.
- Remove any excessive dirt or debris, especially around the engine, muffler, and recoil starter.
- Look for signs of damage.
- Check that all nuts, bolts, screws, hose connectors, and clamps are tightened.
- Refer to the engine Owner's Manual for engine maintenance instructions.
- Refer to the pump Owner's Manual for pump maintenance instructions.
- Check oil level in the engine and pump. See engine and pump owner's manuals.
- Ensure the area around the Pressure Washer is free from rags, tools, debris, and flammable or explosive materials.
- Ensure any belt guards and covers are securely in place.



## **WARNING: Entanglement Hazard**



Do NOT operate with protective covers or guards removed. Doing so could expose high speed moving components which could allow for the operator or bystander to become entangled. Entanglement in this equipment may result in serious injury, amputation, or death.

### **Check/Add Oil to Pump and Engine**



## **CAUTION: Inadequate Lubrication Hazard**



Never operate Pressure Washer with inadequate lubricant in the pump and engine. This will cause overheating and severe damage to the engine and pump.

### **Check the Pump**

Check the oil levels in the pump. The pump is shipped with a RED shipping cap which needs to be replaced by the permanent BLACK dip stick cap prior to use. Use dipstick and sight glass for the appropriate pump oil level. Add oil as needed. For all AR triplex pumps use Annovi-Reverberi pump oil part number AR64516.

Engine: See engine Owner's Manual for capacity and recommended oil type for your expected ambient conditions.

Pump: See pump Owner's Manual for capacity and recommended oil type for your pump.

\*Please note: Owner must use only approved pump oil to maintain warranty.

## Check the Engine

### IMPORTANT NOTE!

Engine is shipped without engine oil! Before operation, engine must be filled with the appropriate type and quantity of oil as specified by the engine manufacturer. Damage to the engine will result in running the engine without the proper type and quantity of oil. The warranty does NOT cover engine damage as a result of operation the engine without oil as specified by the manufacturer. Please refer to the engine owner's manual for the type, quantity and proper method for filling the engine with oil.

- Engine is shipped without oil. You must add oil before first use.
- Check the oil level (see engine manual). To avoid the inconvenience of an unexpected shutdown by the Oil Sentry system, always check the engine oil level before startup.
- Check the air filter (see engine manual). A dirty air filter will restrict air flow to the carburetor, reducing engine and Pressure washer performance.
- Check the fuel level (see monitoring fuel level in this manual). Starting with a full tank will help to eliminate or reduce operating interruptions for refueling.



### WARNING: Burn Hazard



Never open oil port while Pressure Washer is running. Hot oil can spray over face and body.

## Fuel Requirements

Use only unleaded gasoline to help minimize combustion chamber deposits.

Use only clean gasoline and oil. Never use gasoline or oil that is stale, contaminated, or poor quality. This could damage your pressure washer's engine. Keep your fuel tank and oil cup clear of impurities (e.g. dirt, dust, water).

Refer to the engine owner's manual for fuel specifications.

Any performance problems or damage to your pressure washer's engine as a result of using fuels other than those recommended in the engine owner's manual are not covered under warranty.





## **WARNING: Fuel Fire/Explosion Hazard**



Gasoline is highly flammable and explosive. Heat, sparks, and flames can ignite fuel vapors, which can become widespread during fueling. A flash fire and/or explosion could result and cause serious injury or death. Always use extreme care when handling fuels. Carefully follow all instructions to avoid the following conditions which could result in fuel ignition:



- Gas vapor collection inside enclosures
- Static electrical sparks
- Sparks from electrical wiring, batteries, electrical equipment, or running engines.
- Sources of heat (such as a hot engine exhaust)
- Open flames, including pilot lights.
- Fuel spills, clean up immediately
- Smoking

Refer to the engine owner's manual for specific instructions on filling and/or refilling the fuel tank.

### **Always follow these general safety rules when fueling:**

1. Turn off pressure washer and allow for it to cool for at least 3 minutes before removing any fuel cap. Note: A running or still hot engine is hot enough to ignite fuel.
2. Always fill fuel tank OUTDOORS – never indoors. Fuel vapors can ignite if they collect inside an enclosure and explosion can result.
3. Stay away from all sources of heat, sparks, and flames. DO NOT SMOKE.
4. Never pump fuel directly into the gas tank at a gas station – it could cause a static electric spark. Follow these steps to avoid static electric sparking during fueling:
  - a. Use an approved portable container to transfer fuel to the pressure washer's tank. (A portable container made of metal or conductive plastic is preferred because it dissipates charge to ground more readily.)
  - b. Always place container on the ground to be filled. Never fill the portable gas container while it is sitting inside a vehicle, trailer, trunk, or pick-up truck bed.
  - c. Dissipate static charge from your body before beginning the fueling process by touching a grounded metal object at a safe distance from the fuel source.
  - d. Keep nozzle in contact with the container while filling. Do not use a nozzle lock-open device.
5. Clean up fuel spills/splashes immediately.
  - a. If possible, move the pressure washer away from spilled fuel on the ground.
  - b. Wipe up spilled fuel and wait 5 minutes for excess fuel to evaporate before starting the engine.
  - c. Fuel soaked rags are extremely flammable and should be disposed of properly.
  - d. If fuel is spilled on your skin or clothes, change clothes and wash skin immediately.

Note: Damage caused by spilled fuel is not covered under warranty.

	 <b>WARNING</b>
	<b>Explosive Fuel can cause fires and severe burns.</b> Do not fill the fuel tank while the engine is hot or running.

## Fill Engine Fuel Tank

Check the gasoline tank level on the engine and fill tank if needed with fresh unleaded gasoline from a portable container:

1. Turn the pressure washer engine off and let it cool for 3 minutes before removing the engine gas cap.
2. Make sure the engine is cool and then remove engine fuel tank cap.
3. Add gasoline through the fill opening:
  - a. Use only a UL-approved portable gasoline container to transfer the gasoline to the engine's fuel tank.
  - b. Use only fuel recommended by the engine manufacturer, see engine Owner's Manual for details.
  - c. Do not overfill the gasoline tank. Allow at least  $\frac{1}{2}$  inch of empty space below the fill neck to allow for fuel expansion. Do not fill above the upper level mark "A" in figure 5.
  - d. Replace the fuel tank cap before starting the engine.
  - e. Store extra gasoline in a cool, dry, place in a UL approved tightly sealed container



### **DO NOT OVERFILL FUEL TANK**

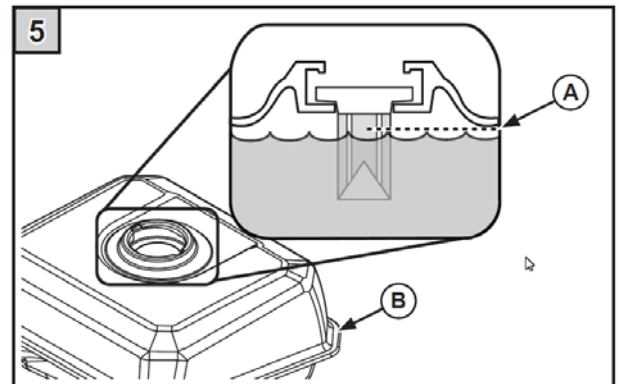
Note: Refer to the engine owner's manual for special warnings and detailed instruction on refueling the engine.

### Inspect Fuel System/Check for Leaks



Inspect fuel system for leaks BEFORE starting Pressure Washer.

Look for:

- Signs of leaks or deterioration
- Chafed or spongy fuel hose
- Loose connections
- Loose or missing fuel hose clamps
- Damaged gasoline tank
- Selective gasoline shut-off valve



Do NOT start Pressure Washer until all needed repairs have been completed.

	<b>WARNING: Fuel Leak Hazard</b>	
<p>Gasoline fuel is highly explosive and fuel leaks can result in a fire or explosion. You can be burned or seriously injured if the fuel system is not properly hooked up or there is a fuel leak when you start the engine.</p>		

## Inspect Spray System

Always inspect the spray system for damage and leaks before each use. Do not start pressure washer until needed repairs have been completed.



### **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 possible amputation.

- Never use a finger or skin to check for leaks.
- Never operate machine 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 machine.

## Perform Scheduled Maintenance, As Needed

Make sure that any other regular maintenance has been performed as prescribed in this manual as outlined in the Maintenance Schedule as well as the maintenance described in the Engine Owner's manual and the Pump Owner's manual. Please refer to the Engine Owner's manual and the Pump Owner's manual for further information and instructions.

## Connect Hoses, Water Supply, Spray Gun, and Spray Nozzle

Position the pressure washer for use as described in the Initial Set-up section of this manual, see Step 3: Select Suitable Location.

### Step 1: Attach Garden Hose to Water Inlet

1. Make sure the water supply is clean and free of debris. Debris can cause excessive pump wear and reduce performance by clogging filters.
2. An insufficient water supply will damage your pump. Make sure the water supply is steady and is 20% above 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 a 5 Gallon Bucket
TWC78-K6	90 Seconds

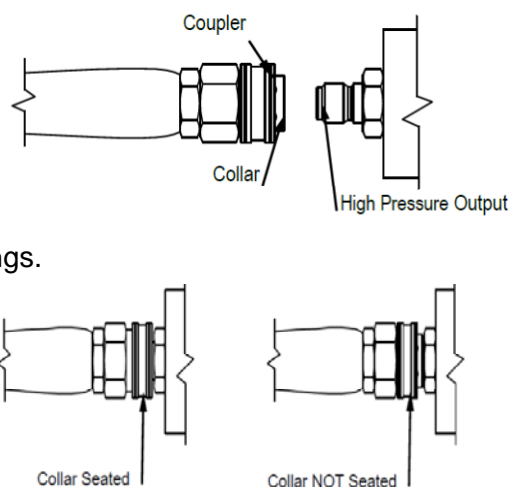
3. The water supply garden hose must have an outside diameter of at least 5/8". If the hose is more than 100 feet long, the diameter must be at least 3/4".
4. Never use a reservoir tank as a water source. Drawing water out of a tank may cause pump cavitation and damage to your pump. This pressure washer is designed for a pressurized water source such as a city water faucet or a pressurized well system. However the water source must not exceed 115 psi (8 bar).
5. Always use a flexible rubber hose for your water supply. Do not use rigid piping.

## Step 2: Attach the High Pressure Hose to Spray Gun and Pump Outlet

### **WARNING: High Pressure Fluid Hazard**

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

1. See "Major Component and Control Diagram" 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.
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.



## Step 3: Select Nozzle for Spray Gun

Your pressure washer is equipped with four high pressure nozzles and one low pressure soap/chemical nozzle. 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	Use:
Red	0°	Highest impact
Yellow	15°	Tough Stains and Stripping
Green	25°	General Purpose
White	40°	Light Cleaning
Black (Low Pressure)	65°	Soap and Chemicals

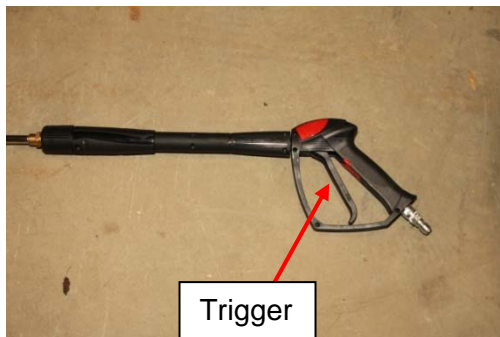
NOTE: You must use the low pressure BLACK nozzle for spraying soap and chemicals.



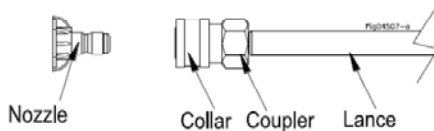
## WARNING: Depressurize Hose FIRST



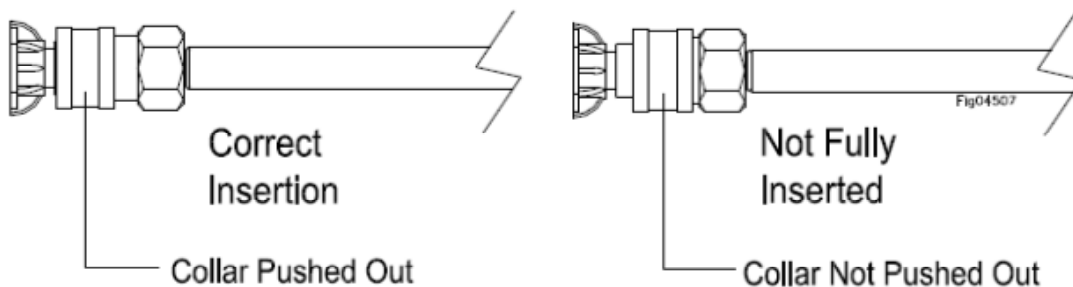
Any time you remove/install/change a nozzle, you must first depressurize the high pressure hose line by squeezing the spray gun trigger while the engine is off. Even if the engine has been off for a long period of time, the hose may remain dangerously pressurized.



### Step 4: Attaching Nozzle to Spray Gun



1. Make sure the engine is off and the hose line is depressurized. To depressurize the hose squeeze the spray gun trigger while the engine is off.
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.



## Step 5: Prime the Water Supply



### **CAUTION: Adequate Water Pressure**



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



1. 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. Refer to the flow table under the “Connect Hoses, Water Supply, Spray Gun, and Spray Nozzle” section above.
2. Purge air from the water supply hose by squeezing the gun trigger with the engine off 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 engine.)
3. 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.

Step 6: Set Up for Chemical or Soap spray (if desired) and Prepare for Chemical Spray (if planning to use for such purpose).



Using the proper cleaning chemical for the application can speed up cleaning jobs tremendously. However, you must use extra caution when spraying chemicals with your pressure washer.

Your pressure washer is equipped with a chemical injection port on the downstream side of the pump for introducing cleaning chemicals into the water stream. A chemical hose is provided with a filter screen to attach to this injection port. Suction at this injection port will automatically draw in the chemical solution through the hose, mixing at a rate of 1 part chemical to 15 parts water. Adequate suction will be created only when the low pressure (BLACK) spray nozzle is connected to the spray gun. The introduction of cleaning chemicals via the chemical injection port affords the following benefits:

- It protects the pump from damage because no chemical passes through the pump.
- It mixes the cleaning chemicals 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 alter the 15 to 1 dilution ratio and may cause pump damage or failure.

**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 and will void 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 and MSDS information 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.

#### Step 7: Acquire Cleaning Chemicals

Use only approved pressure washer chemicals designed for high pressure use.

**CAUTION: Non-Approved Chemicals**

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

#### Step 8: Prepare for Chemical Spray (If planning to use for this purpose)

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

1. Prepare (dilute) chemical cleaning solution as required for the specific application or job. (Note: the chemical solution will be automatically mixed with water at a ratio of 15 parts water to 1 part chemical injection solution.)
2. Press the chemical injection hose over the barbed chemical injection port to secure it to the pump.
3. Submerge the suction strainer connected to the chemical hose into the bucket containing the chemical solution.
4. **Note:** Adding accessories such as telescoping wands, extra length of high pressure hose, non-factory triggers, etc. will effect chemical injector performance or cause it not to operate at all.

Chemical Injection Port





# Operation

## Pressure washer Placement



### For Outdoor Use ONLY

Select a suitable outdoor location:

- Where it will NOT be exposed to rain, snow, or direct sunlight.
- Where no flammable vapors, dust, and gases are present.
- At least 7 feet away from combustible materials.
- Away from building windows or other air intakes.
- Away from other heat generating equipment.
- Away from dusty/dirty conditions.



## Start-Up Procedures

1. Make sure water supply is connected and primed.

	<b>CAUTION: Warranty VOID</b>	
Running the pump dry or with insufficient water flow will cause damage to the pump and void the warranty.		

2. To prevent accidental spraying, engage the safety latch on spray gun trigger by rotating it to the locked position.
3. Turn the unloader counter-clockwise to reduce the pump pressure during starting.
4. Follow the instructions in the Engine Manual for starting the engine. A summary of the starting procedure is provided below.

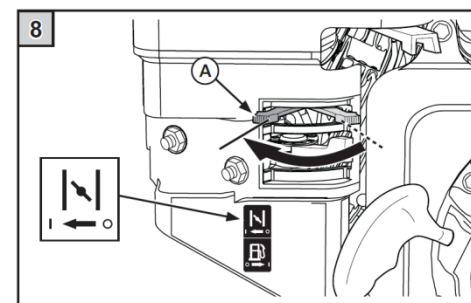
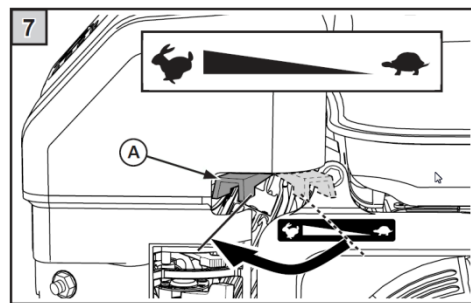
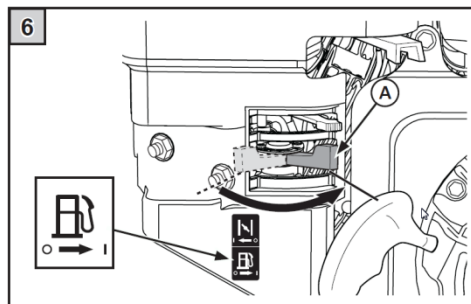
Note: If the engine doesn't start on the first try, pressure could build up in the pump. However we have included an EZ Start valve to relieve this pressure buildup during starting. If the valve fails to operate and pressure builds up, relieve pressure by squeezing the spray gun trigger before attempting to start engine again. This will make starting easier. If this problem persists please contact customer service for corrective action.

	<b>DANGER: Carbon Monoxide Hazard</b>	
Exhaust fumes from the engine contain carbon monoxide (CO), a poisonous gas you cannot see, smell, or taste. The CO generated by the engine can rapidly accumulate, even in areas that appear to be well ventilated, resulting in dangerous and fatal concentrations within minutes. NEVER run air inside any enclosed or semi-enclosed spaces, including homes, garages, basements, sheds, boxes, pick-up truck beds, RV's, or boats. These spaces can trap poisonous gases, EVEN if you run a fan or open windows. If you start to feel sick, dizzy, or weak while using the pressure washer, shut off the engine and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.		

## Starting Engine. (See the engine owner's manual for more details.)

### 1. Start Engine

- a) Turn the fuel shut-off valve (A) to the ON position. See Figure 6.
- b) For a **Cold Engine** – Place the throttle control (A) midway between the **SLOW** and **FAST** positions. See Figure 7. Place the choke control (A) into the ON position. See Figure 8.  
For a **Warm Engine (Normal Operating Temperatures)** – Place the throttle control (A) midway between the SLOW and FAST positions. A warm engine usually does not require the choke on. See Figure 7.



NOTE: The choke position for starting may vary depending upon temperatures and other factors. Once engine is running and warm, turn choke to the OFF position (A). See Figure 9.

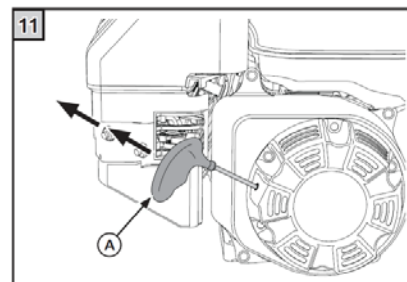
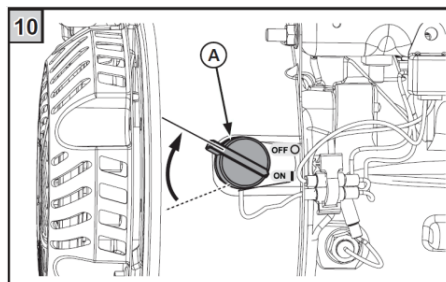
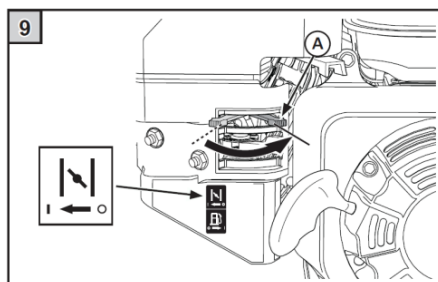
- c) Start the engine as follows:
  - i) For Retractable Start Engine (Recoil) – Turn engine On/Off switch (A) to the ON position. See Figure 10.
  - ii) SLOWLY pull the starter handle (A) until just past compression – STOP! Return starter handle, and pull firmly with a smooth, steady motion to start. Pull the handle straight out to avoid excessive rope wear from the starter rope guide. See Figure 11.

NOTE: Extend the starting rope periodically and check its condition. If the rope is frayed, have it replaced immediately by your Kohler Engine Service Center.

- 2) Gradually return the choke control to the OFF position (A) after the engine starts and warms up. See Figure 9.

The engine/equipment may be operated during the warm-up period, but it may be necessary to leave the choke partially on until the engine warms up.

- 3) After the engine has started, turn the unloader valve clockwise to the desired operating pump pressure.
- 4) The Pressure Washer is now ready to use.



## Applying Cleaning Chemical (If Desired)

1. Make sure the chemical injector is properly set up according to the instructions. Refer to “Set-Up for Chemical Spray” section in this manual.
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 port into the water stream.*
3. Apply chemicals by squeezing the spray gun trigger. The chemical injector will draw the chemical from the bucket containing the chemical solution 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, Spray Gun, and Spray Nozzle” section of this manual.
7. Rinse with high-pressure spray as instructed below.



### **WARNING: High Pressure Spraying Safety**



- **Keep spray away from people and animals.** Never direct discharge stream at or near any person or animal. 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 immediate medical attention.
- **Do not secure spray gun 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.
- **Prevent Surface Damage and 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 (because they may break)
  - Light fixtures, flowerbeds, mailboxes
  - Unsecured, lightweight objects

# High Pressure Spraying

## Procedure:

1. Put on one of the high-pressure spray nozzles (always relieve system pressure first and follow instructions for attaching a nozzle).
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 trigger is pulled.
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 towards 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 surface, closer for tough areas. Do not get too close since the gun will move forward if you release the trigger.
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.



## **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.

If temporarily interrupting spraying, rotate trigger safety latch on the spray gun 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.

Trigger Safety Latch



9. Always turn off the engine and activate spray gun trigger to relieve system pressure when:
  - a. the sprayer is unattended
  - b. disconnecting hoses
  - c. installing nozzles
  - d. servicing pump
  - e. refueling
  - f.



## **WARNING: High Pressure Injury**



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



### **WARNING: Pressurized System**



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 engine is turned OFF.

Stop the engine and shut down the pressure washer by following the steps below:

1. Turn engine OFF, reduce the throttle to minimum, shut off the fuel valve, and turn the on/off switch to the OFF position.
2. Turn water supply OFF.
3. Actuate the spray gun trigger to release system pressure.
4. Remove garden hose.
5. Remove pressure hose.
6. Remove nozzle from spray gun.
7. Verify the fuel valve is in the closed position.
8. If chemicals were used, remove chemical injector tube from the pump.
9. Cool engine at least five minutes before storing, a hot engine is a fire hazard.

## **Maintenance**

### **Importance of maintenance**

Proper maintenance is critical for smooth operation of your pressure washer and safety.

Below are guidelines including a maintenance schedule and inspection procedures. There are additional procedures that are more complicated or require special tools that are best performed by certified technicians and qualified mechanics.

Improperly maintaining your pressure washer or failing to correct a problem before use can cause malfunction that could cause serious injury or even death. Always follow the maintenance procedures and schedule.



### **WARNING: Maintenance Hazard**



Always shut off engine, disconnect the spark plug wire from the spark plug, shut off water supply, bleed water pressure, before cleaning, adjusting, or servicing the pressure washer. Make sure all guards and shields are replaced before re-starting.

The maintenance procedures and schedule apply to “normal” operating conditions. If your pressure washer is used more heavily or in extreme conditions (e.g. sustained high-load, high-temperature, dusty or wet environments), consult your Service Dealer for recommendations that are applicable to your specific needs and usage. Maintenance, replacement, and repair of your pressure washer’s emission control devices and its systems can be performed by any engine repair establishment or repairperson, using parts that are certified to EPA standards.

**Note:** Your Authorized Service Dealer is knowledgeable about your pressure washer, and is best equipped to maintain and repair it. To ensure smooth, economical, and trouble-free operations, use only new, genuine Irwindale Industrial pressure washer parts or their equivalents when repairing your pressure washer and replacing its parts.

## Maintenance safety precautions

Critical safety precautions are summarized below. Read the maintenance instructions before you begin and confirm that you have the necessary skills and proper tools to perform the procedures.

Since we couldn’t possibly warn you of every possible hazard that could arise while maintaining your pressure washer, it’s essential that you use good judgment when deciding which procedures should be performed and use care when performing the procedures.

**Turn pressure washer off before servicing:** Confirm that your pressure washer’s Engine Switch is turned to the OFF position and remove the spark plug cap before beginning any maintenance and repairs.

**Exhaust contains carbon monoxide:** Never operate your pressure washer in an enclosed or partially enclosed area. Be sure there is adequate ventilation. The engine exhaust contains carbon monoxide, a poisonous gas that is odorless and colorless. Be sure to have adequate ventilation when operating your pressure washer and never allow the gas to build up.

**Pressure washers get extremely hot:** To avoid severe burns always allow the engine and the exhaust system to completely cool before touching, moving, and storing.

**Gasoline is flammable:** Use extreme care when working with gasoline to avoid the possibility of fires and explosions. Use only nonflammable solvents when cleaning parts. DO NOT use gasoline to clean your pressure washer’s parts. Keep sparks, cigarettes, and flames away from all fuel, your pressure washer, and any fuel-related components.

**Guards and Shields:** Make sure all guards and shields are replaced after servicing the pressure washer.

**Keep your pressure washer upright:** Never lay your pressure washer on its side while moving, storing, or using it. Oil could leak and damage your pressure washer’s engine and surrounding areas.

**Comply with local and current regulations:** There may be local codes, ordinances, or federal or state Occupational Safety and Health Administration (OSHA) regulations that



apply to the use of your pressure washer. There may be additional regulations that apply if your pressure washer is used on construction sites.

Failure to follow maintenance precautions, procedures, and guidelines can cause you to be seriously injured or killed.

## Pressure washer Maintenance Schedule

Item	Frequency
Remove dust/debris accumulation	As needed or required
Inspect fuel system	Each use
Inspect spray system	Each use
Clean inlet filter	Each use
Check tire pressure	Each use
Perform engine maintenance (Refer to Engine Owner's Manual)	As specified in the Engine Owner's manual Change engine oil: <ul style="list-style-type: none"><li>• After first 5 hours of use</li><li>• Every year or 100 hours of use after break-in period.</li></ul>
Perform pump maintenance (Refer to Pump Owner's Manual)	As specified in the Pump Owner's manual

NOTE: PLEASE REFER TO ENGINE MANUAL FOR MAINTENANCE SCHEDULE FOR ALL ENGINE MAINTENANCE.

NOTE: PLEASE REFER TO THE PUMP MANUAL FOR MAINTENANCE SCHEDULE FOR PUMP MAINTENANCE.

NOTE: Failure to follow this maintenance schedule could result in non-warrantable failures.

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



## 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 the drain.

**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 and those of the engine and pump owner's manuals whenever you will be servicing the pressure washer:

- Turn off / relieve system pressure first. Always turn pressure washer off and relieve system pressure before inspection or maintenance. Remove spark plug or spark plug wire to prevent accidental starting.
- Close fuel valve. Turn fuel off by closing the fuel valve as shown in the engine owner's manual before transporting or servicing the pressure washer.
- 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 Irwindale Industrial customer service at 888-980-4938.
- Replacement parts. If a part needs replacement, only use factory approved repair parts. Replacement parts that do not meet specifications may result in safety hazard or poor operation of the pressure washer and will void the warranty.

## **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 and will VOID the warranty. Major service, including installation or replacement of parts, should be made by a qualified service technician.

- **Contact Irwindale Industrial customer support at**

**1-888-980-4938 for any questions, problems, or parts orders.**

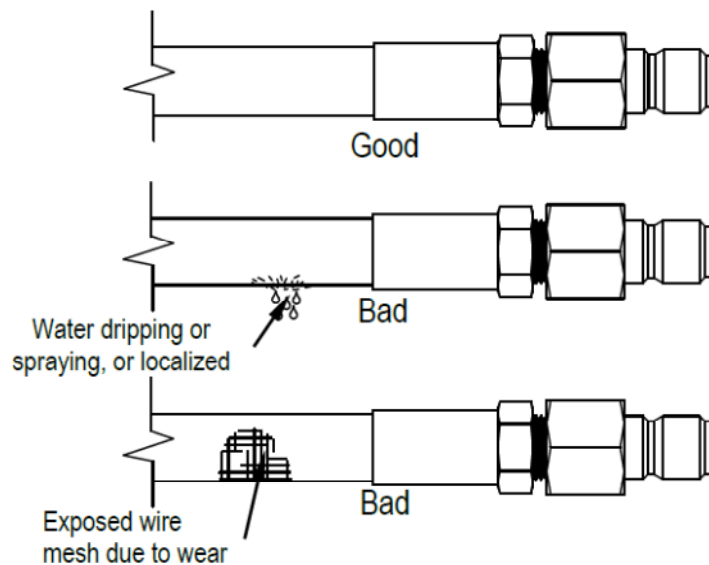
## Inspect Spray System

Inspect the spray system for damage and leaks before each use. Do not start pressure washer until all needed repairs have been completed.

### **⚠ 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 machine 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 machine.
1. Check hoses, fittings, wand, trigger gun and connections for signs of wear, cracks, looseness, or leaks. Replace as required.'
  2. Check and clean the nozzle orifice only when removed from lance.





## **WARNING: Filter Disposal (Chemical)**



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 the chemicals and MSDS. Always dispose of hazardous fluids per local, state, and national guidelines.

1. Unscrew garden hose from water inlet (if connected).
2. Unscrew inlet filter.
3. Remove filter screen.
4. Run water through filter screen to clean.
5. Reassemble.

Inlet Filter Screen



### **Engine Maintenance**

Perform engine maintenance as specified in the engine owner's manual. Items include:

- Change oil after the first 5 operating hours, and at least every 100 hours of use after that. Please refer to the engine owner's manual for details.



## **WARNING: Burn Hazard**



Never open oil port while Pressure Washer is running. Hot oil can spray over face and body.

- Air filter check/replacement.
- Spark plug cleaning/replacement.
- Fuel filter check/replacement.
- Fuel tank cleaning.
- Inspecting and cleaning muffler (and spark arrestor if equipped).

### **Pump Maintenance**

Perform pump maintenance as specified in the pump owner's manual. Reference pump owner's manual for the correct oil type and quantity needed for your pump model.

### **Inspect Fuel System**

Inspect the engine fuel system and check for leaks before each use. Do not start pressure washer until all needed repairs have been completed.



## **WARNING: Filter Disposal (Fuel)**



Gasoline fuel is highly explosive and fuel leaks can result in fire or explosions. You can be burned and seriously injured if the fuel system is not properly hooked up or there is a fuel leak when you start the engine.

Inspect fuel system by looking for:

- Signs of leaks or deterioration,
- Chafed or spongy fuel hose,
- Loose connections,
- Loose or missing fuel hose clamps,
- Damaged fuel tank, or
- Defective gasoline shut-off valve.

### **Inspect & Clean Spark Arrestor (If equipped)**

Equip engine with spark arrestor if machine will be used near any ignitable forest, brush, or grassy land. (See engine owner's manual provided to determine if the engine is already equipped.) Make sure you comply with applicable local, state, and federal codes.

If the engine is equipped with a spark arrestor, clean and inspect it regularly following manufacturer's service instructions. Replace if damaged.

### **Keep Pressure Washer Clean**

Do NOT allow air intakes to become blocked. If dust or debris accumulates in the Pressure Washer, clean the Pressure Washer with a damp cloth or soft bristle brush.

Note: Do NOT spray Pressure Washer with a garden hose or pressure washer. Water may enter the Pressure Washer and cause damage to the engine and pump.

## **CAUTION: Cleaning Pressure Washer**

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

### **NOTE TO COMMERCIAL USERS:**

All mechanical equipment, no matter how well designed, will need maintenance and repairs. An Irwindale Industrial pressure washer is no exception. At times, an Irwindale Industrial pressure may become inoperable because repairs are needed. Irwindale Industrial 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 and minor repairs.
- 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 and will VOID the warranty. Major service, including installation or replacement of parts, should be made by a qualified service technician.

**Contact Irwindale Industrial customer support at  
1-888-980-4938 for any questions, problems, or parts orders.**



Do not return unit to store.  
For questions, missing parts, and service contact  
Customer Service:  
1-888-980-4938

[www.irwindaleind.com](http://www.irwindaleind.com)  
IES, 1474 West 9th Street  
Upland, CA United States

## **Storing and transporting your pressure washer**

Keep your pressure washer upright at all times.

Never lay your pressure washer on its side while moving, storing, or using it.

Oil could leak and damage your pressure washer's engine and surrounding areas.

### **Between-Use Storage**

**Allow to cool:** Your pressure washer can get very hot when in use. A hot engine and exhaust system could cause severe burns and even ignite some materials. So, allow it to cool for at least fifteen minutes before moving or storing it.

**Keep upright:** To avoid damaging your pressure washer and spilling fuel, the pressure washer should remain in an upright position at all times.

**Turn OFF:** Confirm that the Engine Switch is in the OFF position and turn the fuel shut off lever to the off/closed position and make sure that the Fuel Tank Cap is closed.





**Remove Spark Plug Wire:** When machine is not in use, remove spark plug wire to prevent unintentional starting or operation by untrained persons.

**Protect your pressure washer:** Never drop your pressure washer and protect it from getting damaged when using, transporting, or storing it. Never lay heavy objects on your pressure washer.

**Carefully select storage area:** While in storage, your pressure washer needs to be free of dust and not exposed to high-humidity conditions. Select a clean and dry area that is away from sources of heat, open flames, sparks, or pilot lights, even if gas tank is empty. Residual gasoline could ignite. Select area that is away from extreme high and low temperatures. So, examine the storage area closely to be sure it's an appropriate storage area.

**NOTE:** DO NOT STORE THE PRESSURE WASHER IN FREEZING CONDITIONS UNLESS IT IS PREPARED AS DIRECTED BELOW FOR THOSE CONDITIONS.

### Long Term Storage Preparation:

	<b>WARNING: Flammable Materials</b>	
<ul style="list-style-type: none"><li>• Fuel and its vapors can ignite and cause a fire. Select a well-ventilated storage area away from sources of heat, flame, or sparks.</li><li>• A hot engine can ignite flammable materials. Always let the engine cool at least 15 minutes before storing.</li></ul>		

Prepare engine for long-term storage if you will not be using the machine again for more than 30 days. Fuel can become stale when stored over 30 days. Stale fuel causes acid and gum deposits to form in the fuel system which can cause engine malfunction. Please refer to the engine owner's manual for storage procedures for the specific engine you have on your Pressure Washer. In general there are two options:

- Remove all gasoline from the tank and carburetor, see engine owner's manual
- Or
- Add fuel stabilizer to the gasoline as per the engine manufacturer owner's manual
- Disconnect the spark plug wire and remove spark plug
- Add one teaspoon of oil through spark plug hole.
- Place rag over spark plug hole and pull the recoil starter handle a few times lightly to lubricate the combustion chamber.
- Replace spark plug, but do not reconnect the spark plug wire.
- Pull the recoil slowly until the highest resistance is felt.
- Return the recoil handle gently.
- Confirm all pressure is released from the receiving tank and the valves are closed.

### Preparing Pressure Washer for Freezing Conditions

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

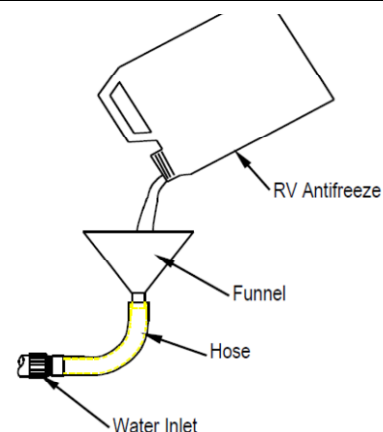


## WARNING: Freezing Conditions



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 the 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
  - Approximately 6 oz. of RV antifreeze.
4. Attach the 12" piece of garden hose with the funnel to the pump water inlet.
5. Pour RV antifreeze into the funnel, and then have another person slowly pull the recoil a few times with the engine switch off and the fuel valve closed, until the antifreeze comes out of the pump outlet.



## Troubleshooting

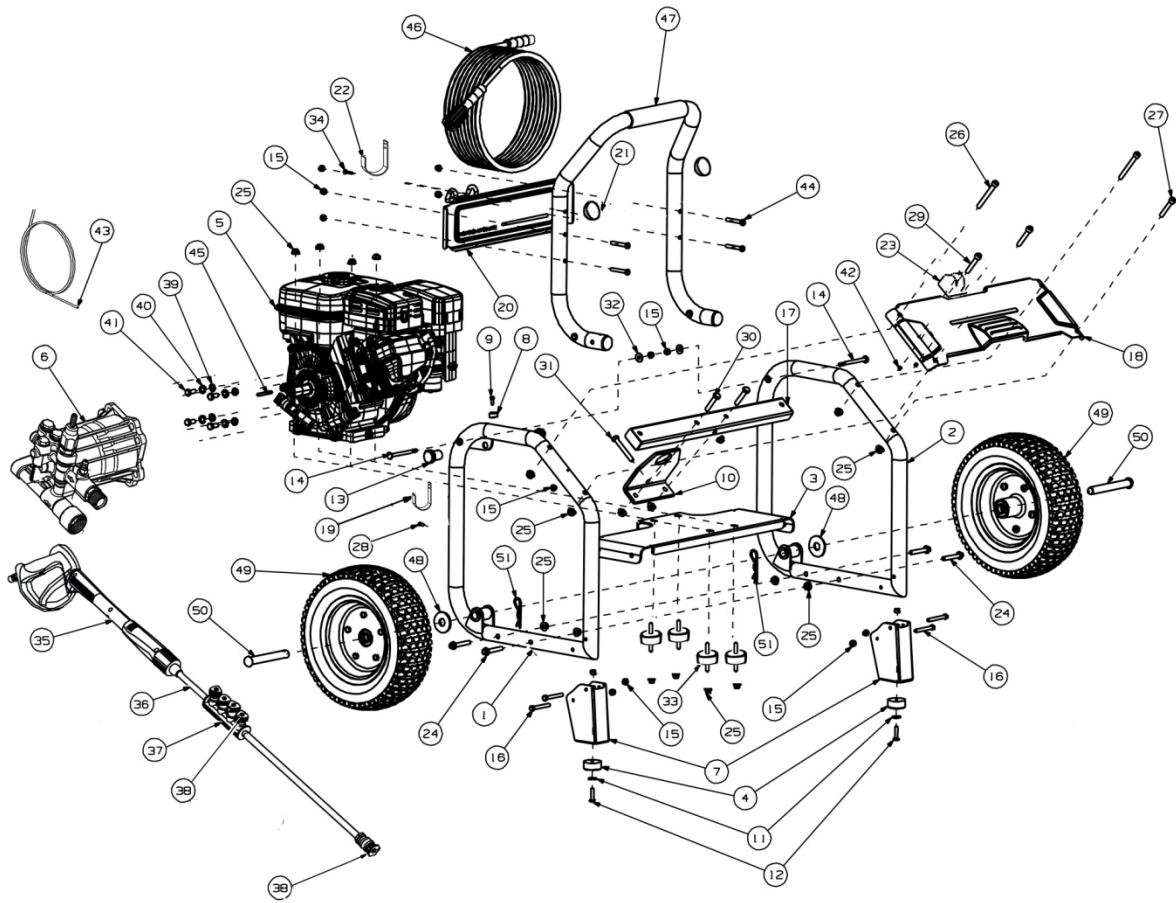
Problem	Cause	Solution
Engine Will Not Start	Fuel tank is empty.	Refill gasoline to proper level.
	Fuel shut-off valve is in OFF/closed position.	Move fuel shut-off valve lever to ON/Open position.
	Choke is in the OFF position.	Place the choke in the ON position unless the engine is warm.
	Engine On/Off switch is in the OFF position.	Turn the engine On/Off switch to the ON position.
	Spark Plug defective, dirty, or disconnected.	Check that spark plug wire is connected properly. Clean or replace spark plug with properly gapped spark plug.
	Spark plug wet with fuel (flooded engine).	Dry and reinstall spark plug. Start engine with throttle lever in FAST position.
	Bad fuel; Pressure washer stored without treating or draining gasoline, or refueled with bad gasoline.	Drain fuel and carburetor and refuel with fresh gasoline. Please contact customer service if you believe this could be the problem for instruction on a service center

		near you or further instructions.
	Low oil level caused by Oil Sentry to stop engine.	Add oil to proper level, see engine manual.
	Fuel filter clogged, carburetor malfunction, ignition malfunction, valves struck, etc.	Take engine to an authorized servicing dealer and/or contact customer service for instructions.
Engine Lacks Power	Air filter clogged	Clean or replace filter
	Throttle control is in the slow position	Move throttle control to fast position.
	Fuel filter clogged, carburetor malfunction, ignition malfunction, valves struck, etc.	Take engine to an authorized servicing dealer and/or contact customer service for instructions.
	Bad fuel; Pressure washer stored without treating or draining gasoline, or refueled with bad gasoline.	Drain fuel and carburetor and refuel with fresh gasoline. Please contact customer service if you believe this could be the problem for instruction on a service center near you or further instructions.
Low or Surging Pressure	Insufficient water supply.	Increase water flow – check for kinked or pinched hose.
	Plugged inlet screen.	Pull out and clean screen carefully.
	Need to use high pressure nozzle.	Change to the green, yellow, white, or red nozzle.
	Clogged / plugged nozzle.	Safely remove nozzle as outlined in this manual and check for blockage.
	Worn nozzle.	Replace nozzle.
	Leak in high pressure line.	Fix leaks.
No Chemical Injection	Need to use different nozzle.	Change to the BLACK nozzle.
	Back pressure from extra-long hose.	Try shorter high pressure hose.
	Leak in clear chemical hose.	Replace hose. Use hose clamps if necessary.
	Chemical strainer not submerged.	Make sure strainer is completely submerged in solution.
	Chemical strainer clogged.	Clean chemical strainer.

Pressure washer specifications:

<b>Model</b>		<b>TWC78-K6</b>
<b>Pressure washer</b>	Type	Gas Powered Portable Pressure washer
	Maximum Pressure Rating	3000 PSI ( 20.7 Bar)
	Volume Rating	2.6 GPM ( 9.8 lpm)
	Maximum Water Temperature	140° F (60° C)
	Length	19 inches / 48 cm
	Width	28 inches/ 71 cm
	Height	40 inches / 102 cm handle extended 31 inches /79cm handle folded
	Weight	99 lbs. / 45 kg.
<b>Engine</b>	Model	Kohler SH265
	Cooling system	Air-cooled
	Engine Speed (rpm)	3000-3300
	Displacement	196 cc
	Maximum output	6.5 HP (4.9 kW)
	Maximum torque (N-m)	8.5 ft.lb. (11.5 N-m) @ 2800 rpm
	Fuel	Unleaded
	Fuel Tank capacity	3.8 quarts / 3.6 liters
	Oil Capacity	0.63 qt. ( 0.60 L)
	Starting system	Recoil starter
	Ignition system	Electronic intelligent ignition
	Spark plug: type and gap	Champion RC12YC or equivalent Spark plug gap: 0.03in (0.76 mm)
	Shaft Rotation	Counterclockwise
<b>Misc.</b>	Pressure Washer Pump Model	AR RMV2.5G30EZ
	Gasoline	Refer to engine owner's manual
	Engine Oil	Refer to engine owner's manual

## Pressure washer assembly and parts list:



No	Description	Part Number	Qty
1	Right Frame	308938003	1
2	Left Frame	308937002	1
3	Engine Plate	638385005	1
4	Rubber Feet	56145400100099-A	1
5	Kohler SH265 Engine	SH265	1
6	AR Triplex Pump RCVU3G25D	RMV2.5G30EZ	1
7	Foot	638236002	2
8	Handle Bump Stop	570712001-01	1
9	Self Tapping Screw M5	660733003-01	1
10	Lifting Hook	308936001	1
11	SAE Flat Washer 1/4" (w)	638128004-01	2
12	Hex head bolt M6x25	661503001-01	2
13	Quick Release Pin	308910001-A	1
14	Connection Pin	678016004-A	2
15	¼-20 SAE Selflock (nyloc) nut	678016006-01	14
16	Hex Head Bolt ¼-20x52mm	660869005	4
17	Hook Bracket	638676001	1
18	Face Plate	638676001	1
19	Holder	518930001-B	1
20	Logo Face Plate Hose Rack	638672001-A	1
21	Rubber Bumper	56145400100099-B	2
22	Upper Wand Holder	518930001-A	1
23	Lower Wand Holder	518955001	1

24	Hex Flange Bolt M8x50	661505003-01	4
25	Nut, Self Locking M8x1.25	678774001-01	19
26	Hexagon Socket Head Cap Bolt M8x70	661554002	2
27	Hexagon Socket Head Cap Bolt M8x46	661554001	2
28	T-25 Torx Drive Truss Machine Screw M4x55	66075200100099-B	2
29	Hex Socket Button Head Bolt M4x55	661555002	1
30	Hex Head Bolt M8x42	660973012	2
31	Hex Head Bolt M8x62	660973013	1
32	Flat Washer ¼	638128004-01	2
33	Rubber Feet	56145400100099-C	4
34	T-25 Torx drive Truss Machine Screw M4x16	66075200100099-A	2
35	Gun AL13	ARAL13	1
36	Lance AL248-CB	ARAL248-Cb	1
37	5 Nozzle Storage Holder	570727002	1
38	Nozzle	ARNZ6540QCSB	1
39	Flat Washer D16*D8.5*T1.5	63864300100099-A	4
40	Spring Washer D14.5*D8*T2.2	63864400100099-A	4
41	Hex Head Bolt 5/16"x19	66059100100099-A	4
42	Flange Nut M4	678610002	2
43	Chemical Siphon Tube w/ Filter	ARDETHOSE-FIL5	1
44	T-30 Torx Drive Truss Machine Screw ¼-20x1.77	661556001	4
45	Engine Key	67842400100099-A	1
46	High Pressure Hose 25'	Hose-01	1
47	Handle Assembly	308940001	1
48	Flat Washer 5/8	63812800100099-00	2
49	Wheel Assembly	308710004-01	2
50	Axle	62050500100099-01	2
51	Hitch Pin M3.0	67814600200099-00	2

## Pump assembly and parts list:

(Please refer to the pump owner's manual for the parts list and assembly diagram.)

## Engine assembly and parts list:

(Please refer to the engine owner's manual for the parts list and assembly diagram.)

## Contact information for Technical and Customer Assistance

### Locate an Authorized Service Dealer

For assistance in finding an Authorized Service Dealer, contact Irwindale Industrial Customer Service at 1-888-980-4938 or Support@IrwindaleIND.com. Visit our web site at [www.IrwindaleIND.com](http://www.IrwindaleIND.com).



## Registration Card

Please fill out the registration card, and return back to us within 30 days of the purchase date. Registration card can be found in the same plastic bag as your manual.

## Customer assistance

Authorized Service Dealers are trained professionals who are familiar with your pressure washer. They can answer most of your questions and help you with any problems that you may encounter. If you are not satisfied with the service you received from your representative, ask to personally speak with the Service Manager or the Dealer's General Manager. The majority of questions and issues are resolved at the local Dealership.

However, if you are not satisfied with the information or response you received from your Service Dealer, you may contact Irwindale Industrial Customer Service office:

Irwindale Industrial  
1474 West 9<sup>th</sup> Street, Suite A3  
Upland, CA 91761

[www.IrwindaleIND.com](http://www.IrwindaleIND.com)

1-888-980-4938

When you contact us, please provide the following so that we may help you most effectively:

Your pressure washer's model and serial numbers

Name of Dealer who sold the pressure washer to you initially

Name and address of the Service Dealer who services your pressure washer

Date you initially purchased your pressure washer

Your name, address, and phone number

A detailed summary of the issue

## Limited Warranty

Irwindale Industrial pressure washers are manufactured and distributed by Innovative Energy Solutions, Inc. Innovative Energy Solutions, Inc. (IES) 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:

Irwindale Industrial Brand		
Model Number	Consumer Warranty Period	Commercial Warranty Period
TWC78-K6	Engine Warranty 2 years / Pump Warranty 1 year from the date of purchase by the user	90 days from the date of purchase by the user

This warranty applies to the original purchaser of the equipment and is non transferable. Verification of purchase is the responsibility of the buyer in the form of a sales receipt for the specific product. Parts will be replaced or repaired at no charge, except when the equipment has failed due to lack of proper maintenance or abuse. 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 Innovative Energy Solution, Inc.

**NOTE:** Some services performed by parties other than IES may void warranty. Always contact Irwindale Industrial Customer Support at 1-888-980-4938 prior to having any service or warranty work performed, as some services performed by parties other than IES approved service centers may void warranty.

This warranty covers parts only. It will not provide for replacement of complete products due to defective parts. Components not manufactured by IES such as engines are guaranteed by their manufacturer and can be serviced at factory-authorized locations near you. The engine warranty is covered under the terms and conditions as outlined by the engine manufacturers warranty contained herein and is the sole responsibility of the engine manufacturer. Normal engine maintenance such as spark plugs, air filters, adjustments, fuel system cleaning and obstructions due to build up is not covered by this IES warranty. IES will not provide for replacement of complete products due to defective parts. Any costs incurred due to replacement or repair of items outside of an IES 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 buyer/customer. IES can supply you with the service center location in your area by contacting Irwindale Industrial customer support at the number below.

For warranty service, find the nearest Authorized Service Dealer by calling: 888-980-4938.

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 IES 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 engine.

Warranty does not cover items subject to normal wear such as tires, receptacles or any part subject to direct physical contact by the public. 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.

THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTY EXPRESSED OR IMPLIED AND INNOVATIVE ENERGY SOLUTIONS INC. ASSUMES NO OTHER RESPONSIBILITY OR LIABILITY OUTSIDE THAT EXPRESSED WITHIN THIS WARRANTY.

THERE IS NO OTHER EXPRESSED WARRANTY. ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. LIABILITY FOR CONSEQUENTIAL DAMAGES UNDER ANY AND ALL WARRANTIES ARE EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW.

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

Customer Number:

---

Date of Purchase:

---

Serial Number: \_\_\_\_\_

Model Number:

---