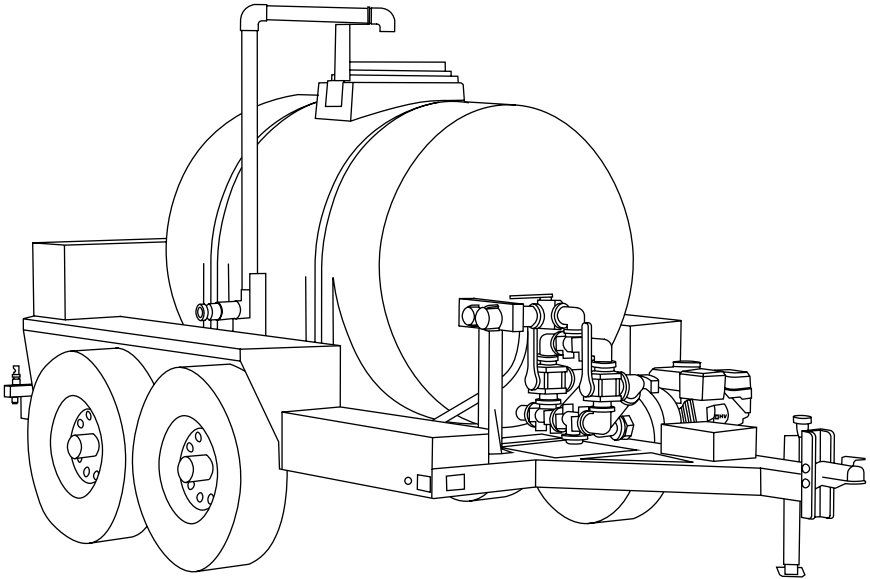





WATER TRAILER

USE AND CARE MANUAL



 **LOOK BEFORE YOU PUMP!**

Ethanol Percentage

<10% **OK** **NO** 15%–30%–85%



READ THIS MANUAL CAREFULLY BEFORE OPERATION

Failure to follow the instructions and safety precautions in this manual can result in property damage, serious injury and/or death.

If your unit is not working or if there are parts missing or broken, please **DO NOT RETURN IT TO THE PLACE OF PURCHASE**. Contact our Customer Service Department by calling **1-877-362-4271** or emailing cservice@fna-group.com

SAVE THIS MANUAL FOR FUTURE REFERENCE

NOTE: Photographs and line drawings used in this manual are for reference only and may not represent your specific model.

NOTES

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SAVE THIS MANUAL FOR FUTURE USE

Keep this manual for future reference. This manual should be considered a permanent part of the product and stay with it. This manual should be available to anyone operating the product(s) it covers. This manual should remain with the product(s) it covers if sold to a new owner. If the manual becomes damaged, lost, or otherwise unusable, you may download a new copy from the product pages at www.simpsoncleaning.com or contact customer support by calling 1-877-362-4271.

Write down the model number, serial number, and purchase date of this product in the spaces provided below then keep this manual with the purchase receipt(s) for future reference.

Model Number:

Serial Number:

Purchase Date:

TABLE OF CONTENTS

SAFETY INSTRUCTIONS	4
Read this Manual Before Operating	4
Additional Instructions	4
Hazard Alert Symbols	4
DISCLAIMERS	5
COMPONENT LOCATION	6
PRESSURE FILL PIPE INSTALLATION	8
PRESSURE FILLING THE TANK	9
SETTING THE FLOW VALVES	10
SETTING THE MANIFOLD VALVES	11
SIDE PORT (DISCHARGE OR SUCTION)	12
FILLING THE TANK FROM A STANDING WATER SOURCE	13
USING THE SIDE PORT OUTPUT	15
USING THE SPRAY BAR	16
DRAINING THE SYSTEM FOR STORAGE (WINTERIZE)	17
Draining the System	17
TRAILERING SYSTEM	18
Trailer Coupler	18
Adjusting the Trailer Coupler Height	19
Trailer Electrical System	20
OPERATING CHECKLIST	22
Location	22
High Altitude Operation	22
Operating Conditions	22
Checking the Engine Oil	24
Checking Fuel	25

STARTING THE ENGINE	27
TURNING THE ENGINE OFF	29
TROUBLESHOOTING	29
MAINTENANCE	30
Pump Maintenance	30
Exterior Pump Cleaning	30
Interior Pump Cleaning	31
Engine Maintenance	33
Plumbing Maintenance	33
Trailer Maintenance	33
ENGINE LONGTERM STORAGE	34
Storing for Two Months or Less	34
Storing for More Than Two Months	34
WARRANTY	35

SAFETY INSTRUCTIONS



READ THIS MANUAL BEFORE OPERATING

This manual contains important safety information and instructions. **Do not** operate this product until you have read, and completely understand all safety, operation, and maintenance instructions listed in this manual. Failure to follow the information contained in this manual will result in property damage, injury, and/or death.

NOTE: The warnings and precautions discussed in this manual cannot cover all conditions and situations that may occur. The operator must understand awareness and caution are factors which cannot be built into this product and so must be exercised by the operator.



ADDITIONAL INSTRUCTIONS

Along with this manual, be sure to read any additional instructions provided both on and with the product, attached equipment, accessories, and the engine powering the product. Pay careful attention to all additional safety rules and instructions on proper startup, operation, and shutdown procedures. Always use any recommended protective apparel that may be needed to operate the equipment safely.



HAZARD ALERT SYMBOLS

Be sure to understand the safety symbols and definitions listed below. Each symbol contains one of four words: **DANGER**, **WARNING**, **CAUTION**, **NOTICE**, indicating different levels of hazard severity. These symbols are used throughout this manual and are followed information about a specific hazard, the consequences of the hazard, and instructions on how to avoid the hazard. Failure to heed these symbols and follow the instructions provided with them will result in property damage, injury, and/or death.



Indicates an imminently dangerous situation, which if not avoided, will result in property damage, serious injury, and/or death.



Indicates a potentially hazardous situation, which if not avoided, could result in property damage, serious injury, and/or death.



Indicates a hazardous situation, which if not avoided, could result in property damage and/or minor to moderate injury.



Indicates information considered important, but not directly hazard related.



CALIFORNIA PROPOSITION 65 WARNING

This product and the engine exhaust can expose you to chemicals which are known to the state of California to cause cancer, birth defects, or other reproductive harm. For more information on California Proposition 65, go to www.P65Warnings.ca.gov.



POLYCYCLIC AROMATIC HYDROCARBON WARNING

The air filter element and air box assembly may contain polycyclic aromatic hydrocarbons (PAHs). Some PAHs may cause cancer. To avoid exposure to PAHs, wear gloves when performing air filter maintenance.

DISCLAIMERS



All information in this publication was based on the latest product information available at the time of printing. The FNA Group reserves the right to update, change, and/or improve the product and this document at any time, without notice and without incurring any obligation.



This manual may cover more than one machine. The pictures and figures in the manual should be used for reference only. There may be differences between your product and the pictures, drawings and diagrams in this manual.



If you loan, rent or sell this machine, be sure to include all instructional materials with the unit!



WARNING: FLUID USAGE

The SIMPSON Water Trailer is designed to be used only with fresh or gray water. Do not pump or transport effluent, black (sewage) water or any types of chemicals. Do not pump or transport any fluid that is intended for human consumption.

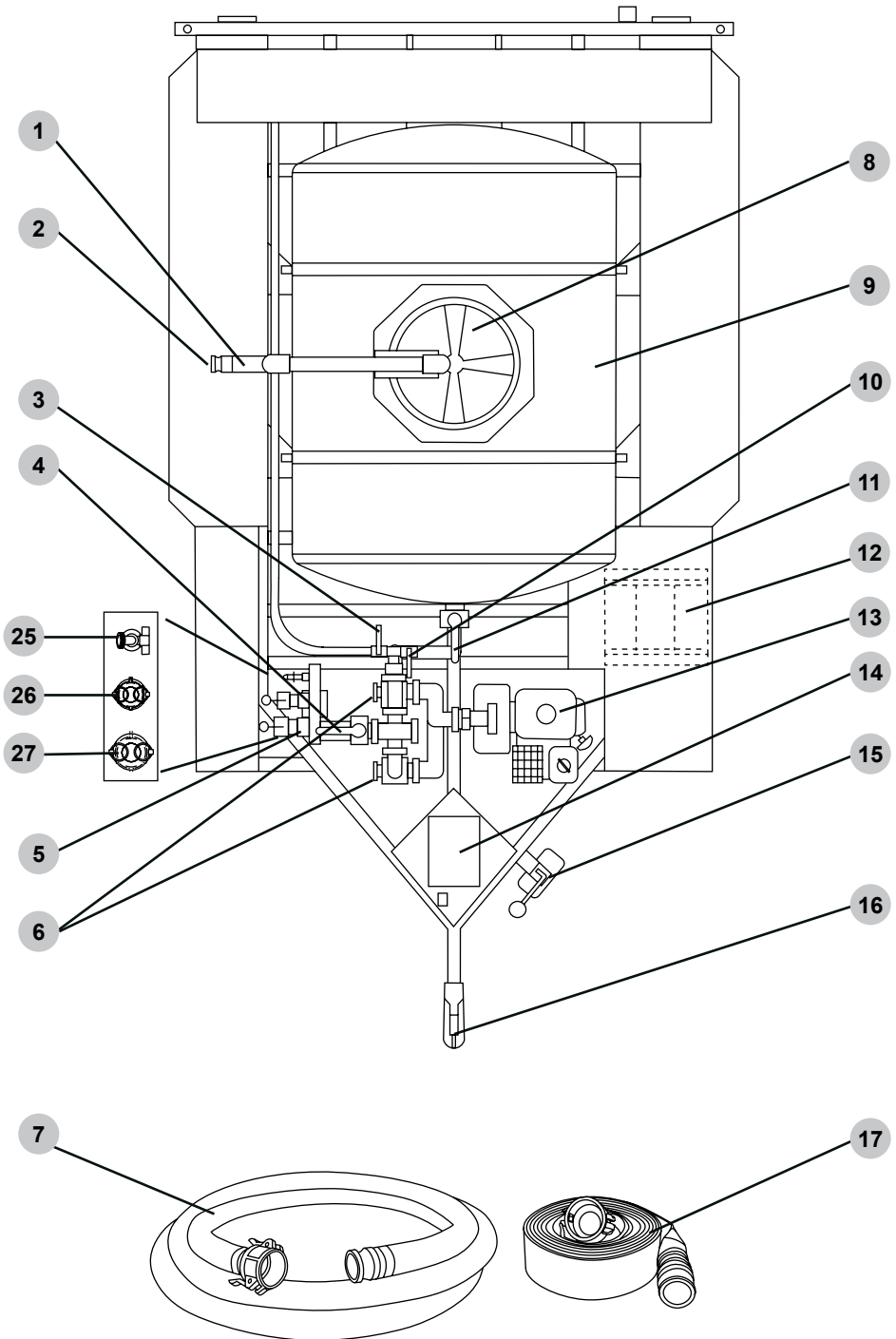


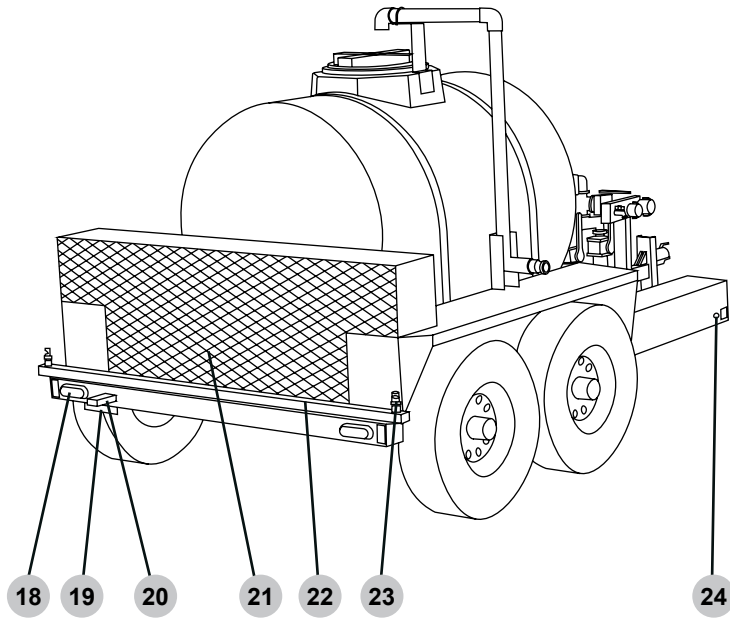
WARNING: OPERATING CHECKLIST

Attempting to start the engine incorrectly or using the unit incorrectly can result in engine and/or pump failure and may cause serious injury or death. To avoid these hazards, be sure to read, understand, and follow the steps outlined in the OPERATING CHECKLIST section of the owner's manual before starting the engine and follow all the guidelines for proper use of the unit.

SAVE THIS MANUAL FOR FUTURE USE.

COMPONENT LOCATION





- | | |
|--|---|
| 1. Pressure fill pipe, see pages 8 & 9. | 15. Trailer jack. |
| 2. Pressure fill pipe 2" hose connector. | 16. Trailer coupler, see page 18. |
| 3. Spray bar control valve, see page 11. | 17. 50ft (15.2M) lay flat discharge hose. |
| 4. Side port control valve, see page 11. | 18. Red turn/brake light. |
| 5. Side port, see page 12. | 19. License plate holder. |
| 6. Flow control valves, see page 10. | 20. License plate light. |
| 7. 20ft (6.1M) Suction rated hose. | 21. Hose storage bin. |
| 8. Vented tank cover. | 22. Spray bar assembly, see page 16. |
| 9. Tank. | 23. Spray nozzle (one of two). |
| 10. Hose reel (optional) valve, see page 11. | 24. Amber marker light. |
| 11. Tank valve, see page 11. | 25. Side port garden hose bibb. |
| 12. Hose reel (optional). | 26. Side port 1.5" connector. |
| 13. Gasoline powered pump, see page 27 | 27. Side port 2" connector. |
| 14. Protective cover for electrical components including the break-away system control, see page 21. | |

PRESSURE FILL PIPE INSTALLATION

The following tools are required:

- (2) 1/2" open end wrenches
- (1) 9/16" open end wrench

Please locate the pressure fill pipe in the hose storage bin at the rear of the trailer. Along with it will be a bag containing the required hardware and U-bolts. Unwrap the protective plastic from the pipe.

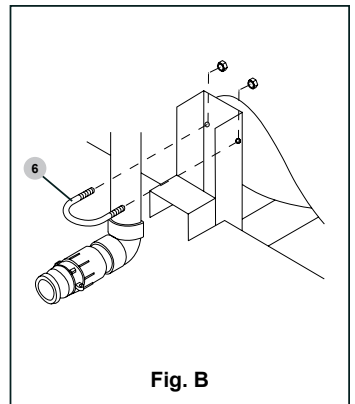
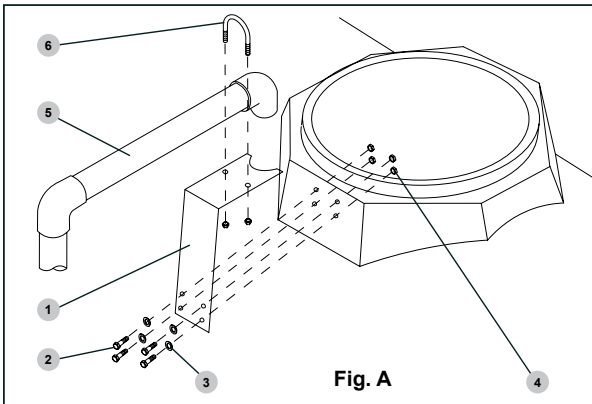
Step 1: Remove the cover from the top of the tank.

Step 2: Using the 5/16" hex bolts (2), 5/16" flat washers (3) and 5/16" nylon insert lock nuts (4), attach the fill pipe bracket (1) to the tank using 1/2" open end wrenches (**Fig. A**).

Step 3: Place the pressure fill pipe (5) allowing the elbow to fit into the circular relief of the bracket (**Fig. A**). Attach using one of the included U-bolts (6). At this time, only hand thread the nuts, do not tighten.

Step 4: Using the remaining U-bolt (6), attach the pressure fill pipe to the lower bracket (**Fig. B**). Tighten both U-bolts using a 9/16" open end wrench.

Step 5: Place the cover back onto the tank.

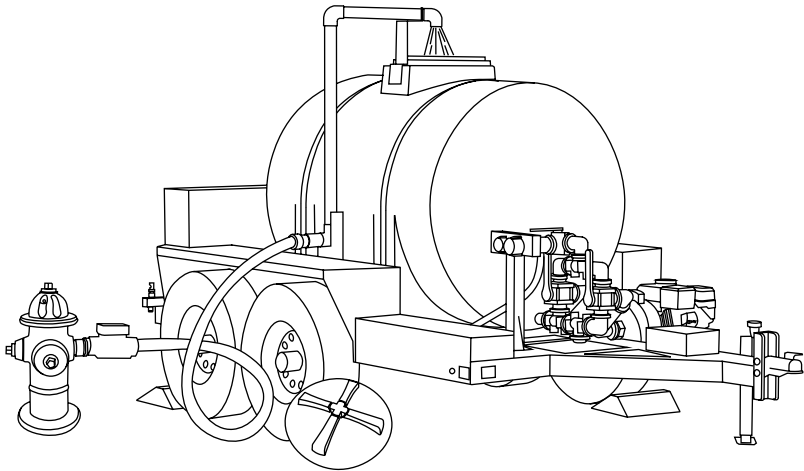


PRESSURE FILLING THE TANK

⚠ CAUTION: TRAILER MOVEMENT

Whenever the trailer is disconnected from the tow vehicle, the trailer should be parked on a level surface and with the wheels chocked (not included). Trailers with non-chocked wheels can roll when parked on non-level pavement or when accidentally bumped from another vehicle leading to injury/death and property damage.

The tank can be filled from a pressurized water source by using the 2" tank fill on the passenger's side of the trailer. *NOTE:* Do not use a fire hydrant unless you have contacted your local municipality. Typically the water will need to be metered and a back flow preventer may need to be placed with the meter by the municipal water department.



1. Remove the cover of the tank.
2. Connect a 2" hose from the pressurized water source to the fill connector.
3. Turn on the water source allowing the tank to fill to the required level.
4. Turn off the water source then disconnect the hose from the fill pipe.
5. Place the cover back onto the tank, secure.

SETTING THE FLOW VALVES

Along with the ability to pump water out (to the spray bar, for example), the SIMPSON Water Trailer also has the capability to fill its tank from a standing water source such as a lake, stream or pond.

The flow valves are what routes the water through the pump. The valves must be set so the water can either be sent to, or taken from, the tank.

To pump water from the tank (pump position) the valve handles must be set in the upward position, (Fig. 1).

In order to fill the tank (draw position) the valve handles must be set in the downward position, (Fig. 2).

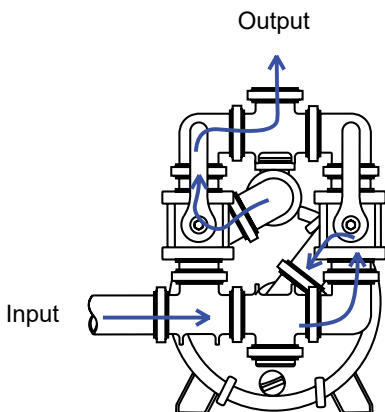


Fig. 1 (Pump Position)

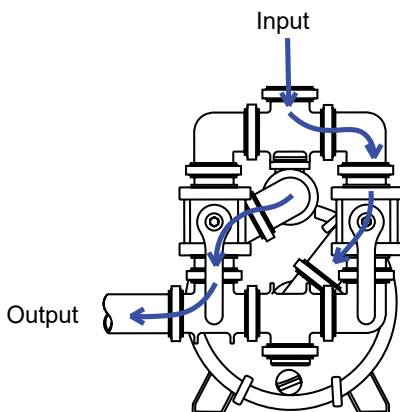


Fig. 2 (Draw Position)

CAUTION: PUMP DAMAGE

Failure to properly set the valves can cause damage to the pump and the piping. Always set the valves and verify the pump is properly primed before starting the engine.

NOTICE PUMP PRIMING

This pump will not prime when dry. Running the pump dry without priming can damage the pump assembly and seals. Damage caused by running dry is not covered by warranty. To avoid damaging the seals and pump assembly, do not run the pump when it is dry without priming.

SETTING THE MANIFOLD VALVES

Above the pump is a horizontal manifold (Fig. 3) that contains two valves (spray bar valve and the passenger's port side valve). See USING THE SPRAY BAR or USING THE SIDE PORT, to determine which valve to use. Below the horizontal manifold is the tank valve.

The valve is open (water flows through) when the handle is in-line with the valve body. The valve is closed (water cannot flow) when the handle is perpendicular to the valve body. (See Fig. 4)

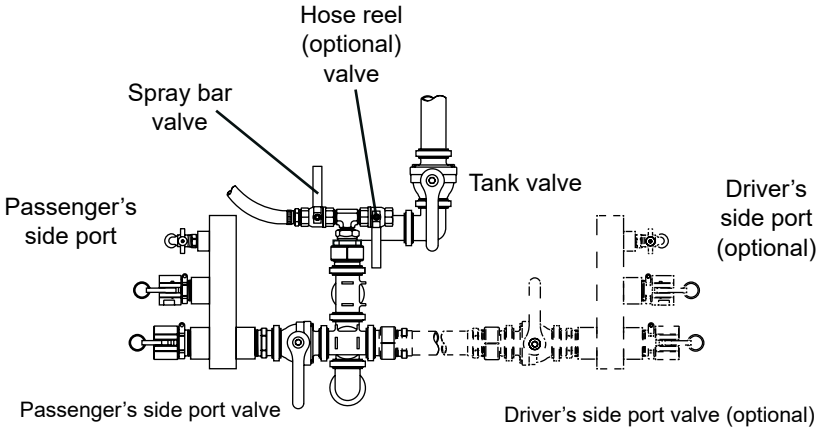


Fig. 3

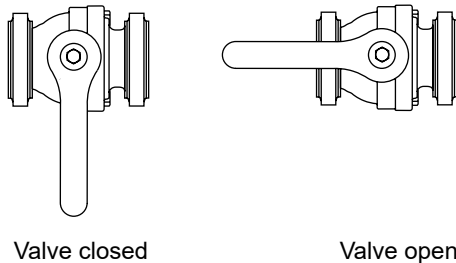


Fig. 4

SIDE PORT (DISCHARGE or SUCTION)

The side ports allows you to send water out to a hose (for example, irrigation) or using a hose to draw water into the tank (1.5 or 2" only).

The port assembly contains a 1.5" hose connector, a 2" hose connector and a standard 3/4" garden hose bibb. (See Fig. 5)

The 1.5" and 2" hose connectors have cam lever dust covers (Fig. 6) that are chained to the side port for retention. Always have the covers in place and locked before moving the trailer. Loose covers may come free at highway speeds leading to injury.

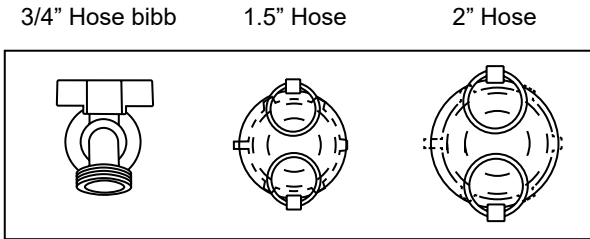
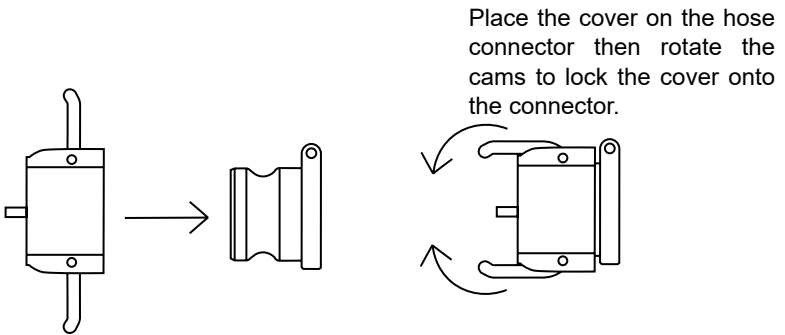


Fig. 5



Place the cover on the hose connector then rotate the cams to lock the cover onto the connector.

Fig. 6

⚠ CAUTION: PUMP DAMAGE

When pumping from a standing source using the side port, only use the 1.5" or 2" hose connectors. The 3/4" hose bibb is too restrictive and could damage the pump due to insufficient water flow.

⚠ WARNING: DUST COVERS

Always have the dust covers in place and locked before moving the trailer. Loose covers may come free at highway speeds leading to injury. Make it a point each time you will be moving the trailer to inspect the dust covers and verify they are properly locked.

FILLING THE TANK FROM A STANDING WATER SOURCE

CAUTION: TRAILER MOVEMENT

Whenever the trailer is disconnected from the tow vehicle, the trailer should be parked on a level surface and with the wheels chocked (not included). Trailers with non-chocked wheels can roll when parked on non-level pavement or when accidentally bumped from another vehicle leading to injury/death and property damage.

Besides filling the tank from a pressurized sources of water, you also have the ability to fill the tank from a standing source of water (Fig. 7) such as a lake, stream or pond. In order to do this, you will need to use the 2" rigid suction hose and the on-board pump. We recommend using a strainer / filter (not included) on the suction hose.

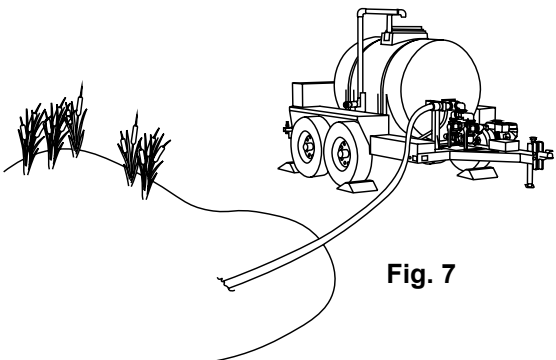


Fig. 7

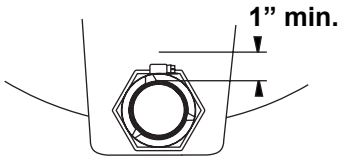


Fig. 8

1. In order to fill the tank from a standing source, you must have water in the tank at a minimum of 1" above the outlet pipe (Fig. 8). If you do not have a sufficient amount of water in the tank, you will need to fill the tank from a pressurized source; see **PRESSURE FILLING THE TANK**.

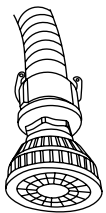


Fig. 9

2. Place a filter / strainer (not included) onto the end of the rigid suction hose (Fig. 9), before placing the hose into the water. **NOTE:** The total lift from the filter / strainer to the level of the side port must not exceed 25 feet (7.6 meters).

3. Connect the other end of the hose to the side port (Fig. 5).

NOTICE PUMP DAMAGE

We recommend having a filter (not included) on the end of the suction hose. Not using a filter can introduce debris into the pump and the tank that may cause damage. Always place the filter at a depth where air cannot be introduced into the system, but do not allow it to sit on the muddy bottom of the source.

4. Remove the primer cover on the pump (Fig. 10) then fill the pump with water. Place the cover back onto the funnel, tighten.

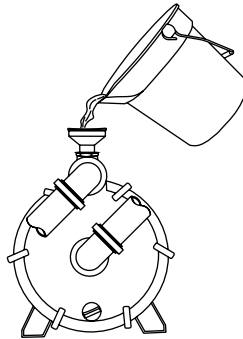


Fig. 10

CAUTION: PUMP DAMAGE

In order to fill the tank with the DRAW function, you must have at least one inch of water above the outlet pipe of the tank. Water below this level may not be sufficient to prime the suction hose.

5. Move the tank valve to OPEN (Fig. 3).
6. Move the flow valves to the DRAW position (Fig. 2).
7. Make sure the spray bar and side port valves are CLOSED (Figs. 3 & 4).
8. Using the STARTING THE ENGINE instructions, start the engine of the pump.
9. Move the side port valve to OPEN (Fig. 4). You may notice air bubbles in the tank as the water starts to flow. If the pump fails to prime, stop the engine and repeat step 4.
10. Wait until the tank is filled to the required level.
11. Once the tank is filled, move the side port valve to CLOSED.
12. Shut off the engine by using the SHUTDOWN instructions.
13. Move the tank valve to the CLOSED position.
14. Disconnect the hose then place the cover on the hose bard; lock into place (Fig. 6).

USING THE SIDE PORT OUTPUT

The side port outputs can be used for a variety watering uses. As talked about in SIDE PORT (DISCHARGE or SUCTION), you have the ability to use a standard 3/4" garden hose, a 1.5" or a 2" hose as the output. In order to use these outputs, make sure the tank is fully filled or has enough water for your application. Do not allow the pump to go dry as damage may occur.

CAUTION: PUMP DAMAGE

Never allow the tank water level to fall below a level of one inch above the outlet pipe of the tank. If the tank fully drains, pump damage may occur from lack of water and you will only be able to refill the tank from a pressurized water source.

1. Move the tank valve to OPEN (Fig. 3).
2. Ensure the pump is primed. If you start to remove the primer cover and water begins to flow out, it is primed. If not, remove the cover and fill the pump with water (Fig. 10). Thread the cover back onto the funnel, tighten.
3. Move the flow valves to the PUMP position (Fig. 1).
4. Make sure the spray bar and side port valves are closed (Figs. 3 & 4).
5. Connect the hose to the appropriate side port connection (1.5", 2" or 3/4" garden hose).(Fig. 5).
6. If using a 3/4" garden hose, rotate the hose bibb handle to ON (Fig. 11).

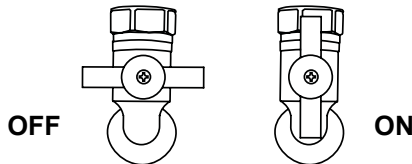
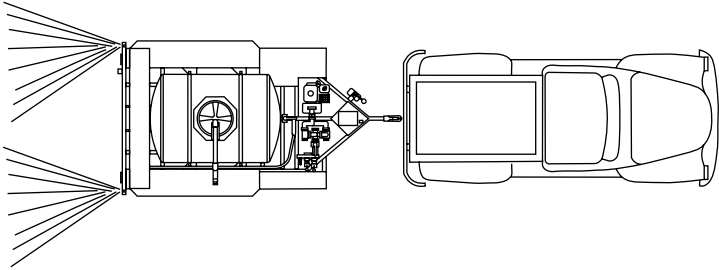


Fig. 11

7. Using the STARTING THE ENGINE instructions, start the engine of the pump.
8. Move the side port valve to OPEN (Fig. 4).
9. Use the output until your application is completed or you have met the minimum allowed amount of water in the tank. DO NOT allow the tank to pump dry.
10. Move the side port valve to CLOSED.
11. Shut off the engine by using the SHUTDOWN instructions.
12. Move the tank valve to CLOSED.
13. Disconnect the hose then place the cover on the hose bard, lock into place (Fig. 6)
-or- rotate the hose bibb handle to CLOSED.

USING THE SPRAY BAR

The spray bar allows you to water down areas for dust reduction as well as washing the pavement of loose dirt and debris. In order to use the spray bar, make sure the tank is fully filled or has enough water for your application. Do not allow the pump to go dry as damage may occur.



⚠ CAUTION: PUMP DAMAGE

Never allow the tank water level to fall below a level of one inch above the outlet pipe of the tank. If the tank fully drains, pump damage may occur from lack of water and you will only be able to refill the tank from a pressurized water source.

1. Move the tank valve to OPEN (Fig. 3).
2. Ensure the pump is primed. If you start to remove the primer cover and water begins to flow out, it is primed. If not, remove the cover and fill the pump with water (Fig. 10). Place the cover back onto the funnel, tighten.
3. Move the flow valves to the PUMP position (Fig. 1).
4. Make sure the spray bar and side port valves are closed (Figs. 3 & 4).
5. Using the STARTING THE ENGINE instructions, start the engine of the pump.
6. Move the spray bar valve to OPEN (Fig. 4).
7. Use the spray bar until your application is completed or you have met the minimum allowed amount of water in the tank. DO NOT allow the tank to pump dry.
8. Move the spray bar valve to CLOSED.
9. Shut off the engine by using the SHUTDOWN instructions.
10. Move the tank valve to CLOSED.

DRAINING THE SYSTEM FOR STORAGE (WINTERIZE)

When you will not be using the trailer for an extended period of time or there is a chance of freezing weather, you should drain the system.

DRAINING THE SYSTEM

1. Ensure the trailer is as level as possible.
2. Using a screw or nut driver, loosen the worm screw clamp (Fig. 12-A). Carefully remove it and the manifold plug from the tee flange.
3. Remove the drain plug on the bottom of the pump (Fig. 12 - B).
4. Open the tank valve to allow the tank to empty
4. Remove the primer cover from the pump allowing air into the pump (Fig. 12 - C).
5. As the system drains, operate the flow valves (Figs. 1 & 2) to allow any trapped water to drain.
6. Once the water has stopped flowing, replace the caps and manifold plug; tighten.
7. Move the tank valve to the CLOSED position.

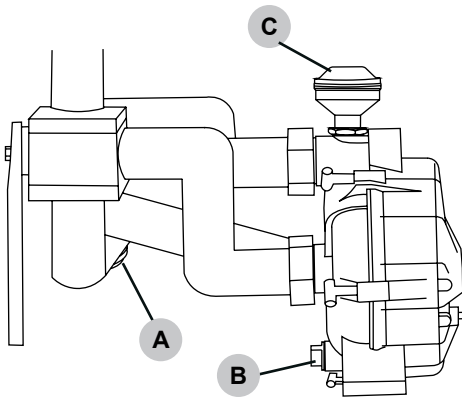


Fig. 12

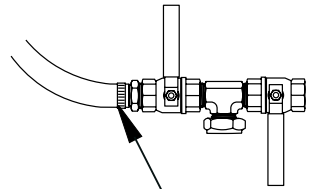


Fig. 13

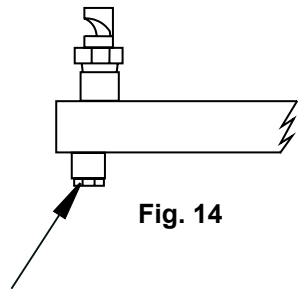


Fig. 14

8. Using a screw or nut driver, loosen the hose clamp (Fig. 13). Carefully remove the hose and lower it allowing residual water to drain.
9. Remove the drain plugs from the bottom of the spray bar near each nozzle (Fig. 14).
10. Allow any trapped water to drain from the hose and the spray bar.
11. Thread in the drain plugs; tighten.
12. Align the hose assembly back with the manifold, position the clamp and tighten.

TRAILERING SYSTEM



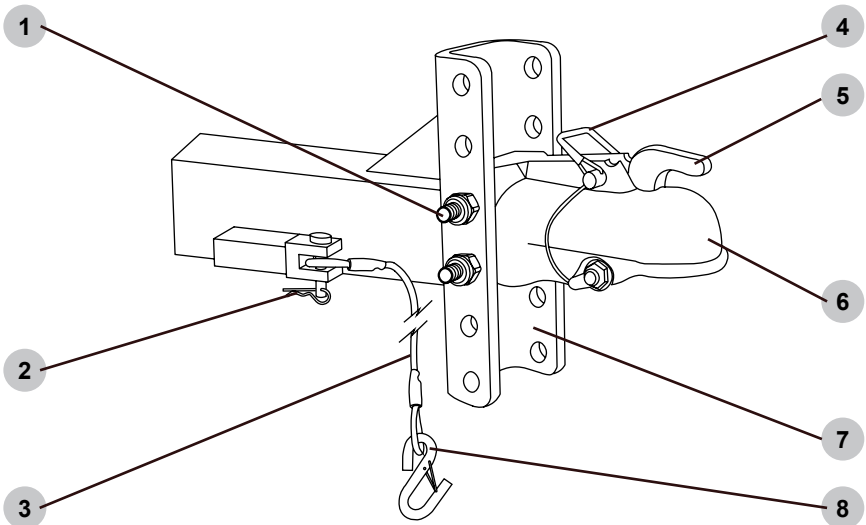
CAUTION:

TRAILER MOVEMENT

Whenever the trailer is disconnected from the tow vehicle, the trailer should be parked on a level surface and with the wheels chocked (not included). Trailers with non-chocked wheels can roll when parked on non-level pavement or when accidentally bumped from another vehicle leading to injury/death and property damage.

TRAILER COUPLER

The trailer coupler of the SIMPSON Water Trailer is adjustable in height. It is important to keep the trailer as level as possible with the tow vehicle. This is accomplished by raising or lowering the coupler within the channel.



1. Coupler retaining bolt and nylon-insert locknut
2. Safety cable retaining hair pin -or- cotter pin
3. Safety cable assembly
4. Safety pin and lanyard
5. Latch
6. Coupler
7. Coupler channel
8. Snap hook

NOTICE

When the trailer was ordered, you should have picked the coupler that matched your hitch. If you did not specify a coupler or did not receive one, please contact our Customer Service Department by calling 1-877-362-4271 or emailing cservice@fna-group.com



WARNING:

MATCHING TRAILER AND HITCH

The use of a hitch with a load rating less than the load rating of the trailer can result in loss of control and may lead to death or injury. Using a tow vehicle with a towing capacity lower than the load rating of the trailer can result in loss of control and may result in injury or death. Be sure your hitch and tow vehicle are rated for the Gross Vehicle Weight Rating (GVWR) of your trailer.



WARNING:

LOAD DISTRIBUTION

Improper front / rear load distribution can lead to poor trailer sway stability or poor tow vehicle handling. The water trailer has been designed to have the proper tongue weight regardless of the tank being empty or full. Adding items or storing items in or on the trailer may exceed GVWR of the axles and GTW which will change the tongue weight distribution and cause an unsafe traveling condition. DO NOT modify or add to the trailer.

ADJUSTING THE TRAILER COUPLER HEIGHT

1. With the trailer on level pavement and the tank empty, connect the trailer to the tow vehicle; raise the jack.
2. Place a spirit level on the tongue behind the coupler channel (Fig. 15).

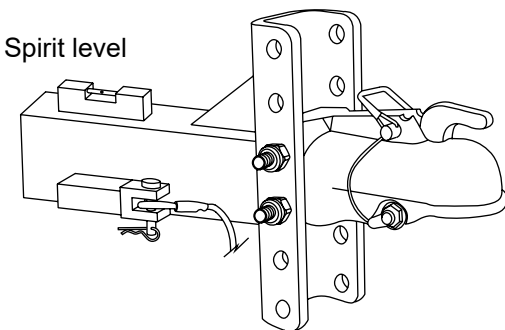


Fig. 15

3. The trailer should be as level as possible with the tow vehicle. If it is not, go to step 4.
4. Lower the jack to allow the tow vehicle to be moved away from the trailer.
5. Using two open end wrenches, loosen the coupler retaining bolts. Remove the nuts.
6. If the spirit level bubble was toward the vehicle (Fig. 16), the coupler is set too low. If the bubble was toward the trailer, the coupler is set too high.
7. While holding the coupler with one hand, remove the bolts being careful not to allow the coupler to fall to the ground.
8. Raise or lower the coupler as required to level the trailer to the tow vehicle.

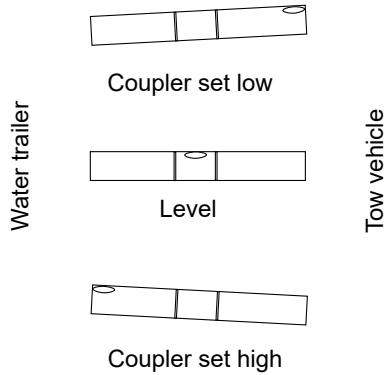


Fig. 16

9. Insert the bolts then hand thread the nuts until snug. Do not fully tighten.
10. Once again connect the tow vehicle and rise the jack.
11. Using the spirit level, check for level by placing it on the tongue.
12. If the trailer is now level to the tow vehicle, lower the jack to release pressure off of the coupler.
13. Using open end wrenches, tighten the nuts.
14. If the trailer was not level in Step 12, repeats Steps 4 through 12 until it is. Once the level as been made as close as possible, tighten the nuts as outlined in Step 13.

TRAILER ELECTRICAL SYSTEM

The SIMPSON Water Trailer is equipped with an electrical braking system as well as an emergency break-away braking system. The tow vehicle must be equipped with a seven pin trailer receptacle wired to the SAE J2863 standard for proper operation. The pinout of the trailer connector is shown in (Fig. 17).

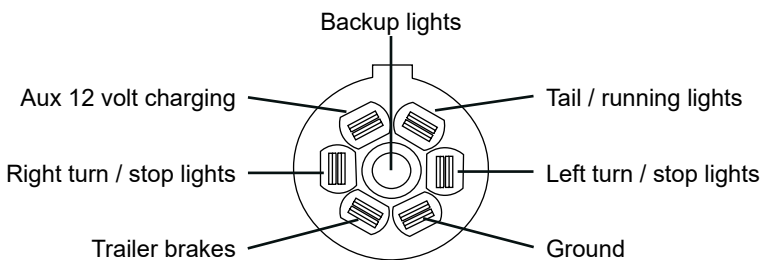


Fig. 17

The controls and battery for the break-away braking system are located within the housing (Fig. 18) behind the trailer tongue. The battery is charged by the tow vehicle but should be checked periodically and after long-term storage of the trailer. The charge status of the battery can be determined by pushing the test button (Fig. 19).

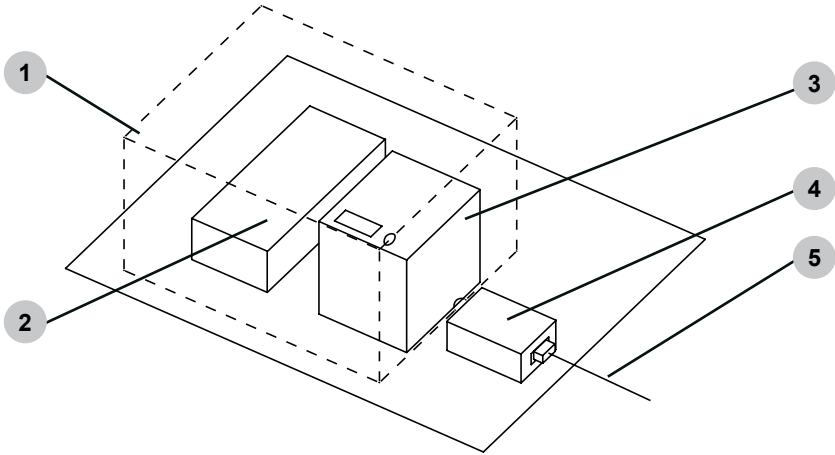


Fig. 18

1. Housing cover.
2. Wiring harness junction box.
3. Break-away controller and battery.
4. Break-away switch.
5. Break-away cable.

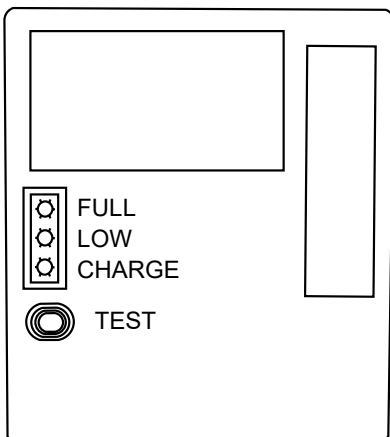


Fig. 19

To test the battery, press the TEST button on the controller housing. A green LED indicates the battery is fully charged. A red LED indicates the battery must be charged before the trailer is used. A steady yellow LED indicates the trailer is connected to the tow vehicle and the battery is being charged.

The battery should be fully charged before each use of the trailer. **NOTE:** A discharged or low battery will not operate the brakes in a break-away situation.

When trailering, you must secure the break-away cable to the tow vehicle for the system to operate correctly in the situation of a break-away trailer.

OPERATING CHECKLIST

Location

Being that this is a trailer based device, it is understood that the trailer could be used in many different locations. Never operate the gasoline powered pump inside any structure or close to any structure. Fumes can easily enter the structure causing carbon monoxide poisoning.



! WARNING: TOXIC FUMES

Engine exhaust contains carbon monoxide, an odorless, colorless, poisonous gas. Running an engine indoors will kill you in minutes. Never use this product inside a garage or any other kind of enclosure even if doors and windows are open. Run engine outside at least 20 feet (6 meters) away from windows, doors, and vents. Carefully consider wind direction and air currents when using this product outside to avoid breathing in engine exhaust. Always use a carbon monoxide detector in any occupied buildings near the running engine.

High Altitude Operation

This engine will have proper engine performance and emission control when it is operated at or below an altitude of 5000 feet (1524 meters). This engine requires a high-altitude carburetor kit to ensure proper engine performance and emission control when operated at altitudes above 5000 feet (1524 meters). Operating the machine with the wrong engine configuration above 5000 feet (1524 meters) may increase its emissions, decrease fuel efficiency, and hurt performance. To obtain a high altitude carburetor kit, contact your nearest authorized service center.



NOTICE ALTITUDE

Operating the engine with a high-altitude carburetor jet kit at an altitude below 5000 feet (1524 meters) will cause the engine to run too hot. Overheating the engine could result in serious engine damage. To avoid this hazard, make sure the correct carburetor kit is installed and the air/fuel mixture is set correctly for your altitude.

Operating Conditions

Before each use, check for loose or damaged parts, leaks, and/or any other condition that may affect proper operation. Repair or replace all damaged and/or defective parts immediately. Always keep all safety guards in place and in proper working order. For safety reasons, the manufacturer recommends all maintenance and repairs be performed by an authorized service center.

Before starting the engine, remove any excessive dirt and debris from cooling vents, exhaust, and starter recoil areas. If you have questions about the proper use of your pump, please contact customer support at 1-877-362-4271 or cservice@fna-group.com.



! WARNING: UNTRAINED OPERATION

Untrained persons, young children, and pets can be seriously injured or killed if allowed to operate or play with the water trailer. Do not let children operate the water trailer. Keep young children and pets away from the trailer while it is being used. Always turn off the pump before leaving the area. Do not move the trailer with children or pets present.



! WARNING: INSPECT BEFORE OPERATING

Failure to inspect this product before use could create a hazardous situation resulting in product damage, serious injury, and/or death. To avoid these hazards, inspect the trailer before each use. Check for loose or damaged parts, signs of oil or fuel leaks, missing guards, plugged cooling vents, or any other condition that may affect proper operation. Repair or replace all damaged or defective parts and keep all safety guards in place and in proper working order before using the trailer.



! CAUTION: HOT SURFACES

A running engine produces heat. The surfaces of the engine, other related components, and engine exhaust gas can get hot enough to cause moderate burns or ignite materials on contact. To avoid burns, do not touch engine surfaces or exhaust gases while operating and allow engine to cool completely before moving, touching, or performing any maintenance. To avoid a fire, keep all flammable materials at least five feet away from all sides of the engine. Do not store extra fuel on the trailer.



! WARNING: MOVING PARTS

This product has many parts that move at high speeds. Moving parts can cause crushing injuries, broken bones, severe lacerations, and/or traumatic amputations. To prevent injury, never place fingers, hands, feet, or other body parts near running engine. Never operate product with covers, shrouds, or other guards removed. Do not wear loose-fitting clothing, dangling drawstrings, or any other hanging items that could become entangled in moving parts while operating. Tie up long hair and remove jewelry before operating.

Checking the Engine Oil



CAUTION: HOT OIL

Hot oil can cause serious burns. To prevent getting burned when changing or checking the engine oil, wear gloves and change the oil when the engine is warm but not hot.



NOTICE LOW OIL SENSOR

The low oil sensor (if equipped) will automatically stop the engine when the oil level falls below the safe limit. To avoid an unexpected shutdown, check the oil level regularly, fill to the upper limit, and always operate engine on a level surface.



NOTICE FILL ENGINE BEFORE USE

The engine is shipped from the factory without oil. Running the engine without oil will result in severe engine damage and void the warranty. To avoid causing engine damage and voiding the warranty, fill the engine with the recommended oil type before starting.



NOTICE USE CORRECT ENGINE OIL

Oil is a major factor in the performance and service life of any engine. Using the incorrect oil may damage the engine and void the warranty. To avoid causing engine damage and voiding the warranty, check and change oil as required using the correct engine oil.

1. Check the oil with the trailer on level pavement.
2. Unscrew the engine oil dipstick (Fig. 20), remove it and wipe the dipstick clean.
3. Place the dipstick into the filler neck leaving it to rest on the lip; do not thread in.
4. Remove the dipstick from the filler neck then check the oil level. Oil level should be at the upper oil limit on the dipstick (Fig. 21).
5. If the level is low, add the recommended oil to the crankcase until the level reaches the upper limit of the dipstick. Do not overfill. See Engine Owner's Manual for the recommended oil.
6. Thread in the dipstick, hand tighten.

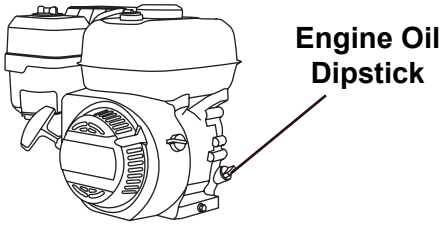


Fig. 20

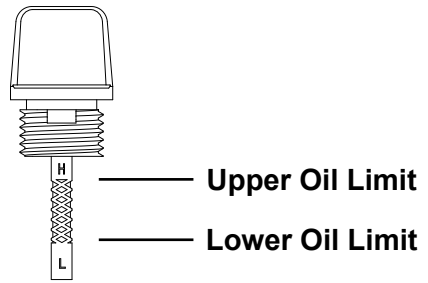


Fig. 21

Checking Fuel



WARNING: REFUELING

Gasoline is highly flammable and gasoline vapors are extremely explosive. Fire and explosions can cause severe burns and/or death. Keep gasoline away from flames, sparks, and other ignition sources. Refuel outdoors in a well-ventilated area with the engine stopped and cool. Wipe up any spilled gasoline and allow engine to dry before starting. Keep a fire extinguisher handy while refueling. Do not operate engine with leaks in the fuel system. Do not store gasoline near other flammable materials.



NOTICE

OLD GASOLINE

Old gasoline can create deposits that clog fuel systems causing hard starting and poor performance. Damage caused by old fuel is not covered by warranty. To minimize deposits, avoid old fuel related performance issues, and prevent costly repair work, do not use gasoline that is older than 30 days.



NOTICE

ALCOHOL BLENDS

Using gasoline with an alcohol blend greater than 10% (E10) will damage the engine. Damage caused by using an alcohol blend of 15% (E15), 85% (E85), or any other alcohol blend higher than 10% (E10) is not covered under warranty. To avoid engine damage caused by an alcohol blend that is too high, use gasoline with 10% (E10) alcohol or lower.



NOTICE

GASOLINE ADDITIVES

The use of fuel system cleaning additives can damage the engine and fuel systems. Damage caused by the use of fuel system cleaning additives is not covered by warranty. To avoid engine and fuel system damage, do not use any fuel system cleaning additives.



! CAUTION: FUEL TANK PRESSURE

Gasoline vapor can build up inside the fuel tank creating pressure. This pressure may increase when the engine is hot from running. Opening the fuel tank under pressure can cause rapid escape of flammable vapors and possible fuel spills that may ignite from contact with hot engine surfaces resulting in burn hazard. To avoid these hazards, always allow the engine to cool for at least 2 minutes before removing fuel cap and loosen the fuel cap slowly to relieve any pressure in the tank.



NOTICE GASOLINE STORAGE

It is important to prevent gum deposits from forming in essential fuel system parts, such as the carburetor, fuel filter, fuel hose or tank during storage. Alcohol-blended fuels (also called gasohol, ethanol, or methanol) attract moisture, which leads to separation and formation of acids during storage. Acidic fuel and gum deposits can damage the engine's fuel system while in storage. Damage caused by the use of old, stale, or contaminated fuel are not covered under warranty.

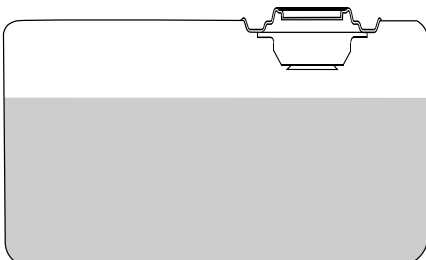


NOTICE DO NOT OVERFILL FUEL TANK

Overfilling the fuel tank can result in carbon canister damage (if equipped), poor engine performance, and void the warranty. To avoid these hazards, do not fill the fuel tank above the maximum level.

1. Check the fuel with the engine off and the trailer on level pavement.
2. Remove the fuel tank cap, check level then fill fuel tank if needed. For the fuel cap location see the FEATURES AND CONTROLS section of the Engine Owner's Manual.
3. Do not use gasoline that is older than 30 days. Use only fresh unleaded gasoline with a minimum octane rating of 87 and no more than 10% ethyl alcohol. Do not mix oil with the gasoline.
4. Do not fill the fuel tank above the maximum fuel level to allow room for fuel expansion.
5. Replace fuel tank cap. Never run engine without the fuel cap in place and tightened.

NOTE: Using a fuel stabilizer (sold separately) when storing gasoline can help prevent problems related to storing ethanol alcohol blended gasoline. Always follow the instructions provided by the fuel stabilizer manufacturer to mix and use correctly.



Maximum Fuel Level

STARTING THE ENGINE



! WARNING:

OPERATING CHECKLIST

Attempting to start the engine incorrectly can result in engine and/or pump damage, and may cause serious injury or death. To avoid these hazards, be sure to read, understand, and follow the steps outlined in the OPERATING CHECKLIST section of the owner's manual before starting the engine, and follow all the guidelines for proper use of the SIMPSON Water Trailer.



NOTICE

PUMP PRIMING

This pump will not prime when dry. Running the pump dry without priming can damage the pump assembly and seals. Damage caused by running dry is not covered by warranty. To avoid damaging the seals and pump assembly, do not run the pump when it is dry without priming.

Starting the Engine

1. Complete the steps in the OPERATING CHECKLIST section of this manual before starting the engine. Failure to do so could cause damage to the engine. If needed, refer to your Engine Owner's Manual for specific starting instructions. Lastly, make sure the pump is primed and the trailer is ready for the desired operation.
2. Turn the engine switch to the ON position.



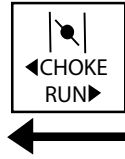
3. Slide the fuel valve to the ON position.



4. Slide the throttle to the RUN position.

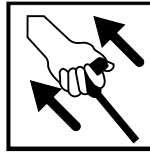


5. Slide the choke to CHOKE for starting a COLD engine. Slide to RUN for a warm engine



NOTE: The starting position of the choke will vary depending on the engine temperature. If starting a cold engine, move the choke lever towards the CHOKE position. If starting a warm engine, move the choke lever towards the RUN position.

6. Pull the recoil slowly until resistance is felt, then pull rapidly to start the engine.



WARNING: RAPID RETRACTION

Rapid retraction (also known as kickback) of the engine recoil starter cord will pull your hand and arm towards the engine faster than you can let go of the handle resulting in sprains, broken bones, lacerations, and/or traumatic amputations. Kickback is caused by damage to the engine crankshaft key, compression release failure, and/or improper starting techniques. To avoid kickback follow the appropriate maintenance schedule, starting instructions and have repair work done by an authorized service center.

7. Once the engine starts, slowly move the choke lever to RUN as the engine runs. If the engine falters, move the choke toward CHOKE until the engine has warmed up.

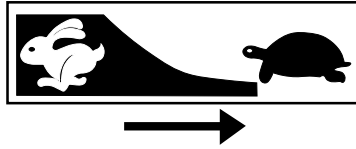


NOTICE PUMP DAMAGE

Never allow the tank water level to fall below a level of one inch above the outlet pipe of the tank. If the tank fully drains, pump damage may occur from lack of water and you will only be able to refill the tank from a pressurized water source. When you approach this level, TURN OFF THE ENGINE.

TURNING THE ENGINE OFF

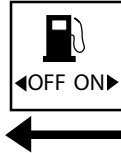
1. Slide the throttle to the SLOW position. Allow the speed of the engine to decrease.



2. Turn the engine switch to OFF.



3. Slide the fuel switch to OFF.



TROUBLE SHOOTING

ISSUE	POSSIBLE CAUSE	SOLUTION
Engine will not start. Refer to the Engine Owner's Manual for more engine troubleshooting information.	The fuel tank is empty.	Add fresh fuel.
	Engine switch is in the OFF position.	Turn the engine switch to the ON position.
	Engine fuel valve is turned OFF.	Turn fuel valve ON.
	Engine choke is in the wrong position.	Refer to the STARTING THE ENGINE section of this manual for the correct choke position.
	The spark plug lead is not attached to the plug.	Connect spark plug lead.
	Engine oil is low. If the engine is equipped with a Low Oil Sensor, the engine will not start.	Check engine oil level. Fill per the Engine Owner's Manual.

MAINTENANCE

For safety reasons, the manufacturer recommends all service and repairs be performed by an authorized service center. All warranty replacement and repairs must be performed by an authorized distribution or service center. To find an authorized service center near you, to make a warranty claim or for authorized warranty repair, call 1-877-362-4271 or contact through email at cservice@fna-group.com

It is the responsibility of the owner and / or operator to have all scheduled maintenance completed before transporting or operating the SIMPSON Water Trailer. Be sure to follow the inspection and maintenance recommendations as listed in all of the manuals that came with this unit.

Pump Maintenance

Before each use, check the pump for loose or damaged parts and any other condition that may affect proper operation. Be sure all safety guards are in place and in proper working order. Inspect all air vents and cooling slots to ensure they are clean and unobstructed. For safety reasons, the manufacturer recommends all service and repairs be performed by an authorized service center. To find an authorized service center near you, to make a warranty claim or for authorized warranty repair, call 1-877-362-4271 or contact through email cservice@fna-group.com

CAUTION: MAINTENANCE

Improper engine and pump maintenance as well as failing to correct problems before operation could void the warranty and may result in property damage and injury. To prevent these hazards, follow the maintenance procedures listed in this manual and any other manual that came with the product.

Exterior Pump Cleaning

Always clean the pump with the engine off and cool. To clean the pump, first use an air compressor set at 25 PSI to clear dirt and debris from the pump surfaces, vents and cooling slots. Next, wipe the exterior with a damp cloth.

NOTICE CLEANING

Water can damage the engine components if allowed to enter through cooling slots or other holes. Damage caused by water intrusion is not covered under warranty. To avoid engine water damage, do not use a pressure washer, garden hose, or any other sources of running water to clean the engine and never submerge the pump/engine in any liquids.

Interior pump cleaning



NOTICE

CHEMICAL CLEANERS

Using chemical cleaners and/or corrosive liquids can damage the pump seals and internal components. Damage caused by chemical cleaners and corrosive liquids is not covered under warranty. To avoid damaging pump seals and components, do not use chemical cleaners or corrosive liquids to clean the components inside the pump housing.



WARNING:

MOVING PARTS

This product has many parts that move at high speeds. Moving parts can cause crushing injuries, broken bones, severe lacerations, and/or traumatic amputations. To prevent injury, never place fingers, hands, feet, or other body parts near running engine. Never operate product with covers, shrouds, or other guards removed. Do not wear loose-fitting clothing, dangling drawstrings, or any other hanging items that could become entangled in moving parts while operating. Tie up long hair and remove jewelry before operating.

Keeping the pump clean will allow it to perform its best and prolong the life of the pump. Never pump water from a standing source without using a filter / screen. Do not store the pump without draining the pump housing. Do not allow dirt or debris to dry inside the pump housing. You can clean the interior of the pump by following the steps below:

1. Disconnect the spark plug lead from the engine. Place it to the side of the plug.
2. Drain the system as outlined in DRAINING THE SYSTEM FOR STORAGE section of this manual.
3. Using a screw or nut driver, loosen the worm screw clamps (Fig. 22). Carefully remove them from the flanges then slide them to the right.

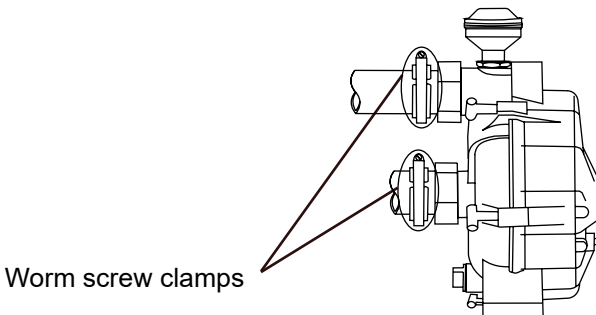


Fig. 22

4. Using an open end wrench, loosen and remove the six nuts (four under the engine, two under the pump) that hold the unit to the vibration mounts (Fig. 23).

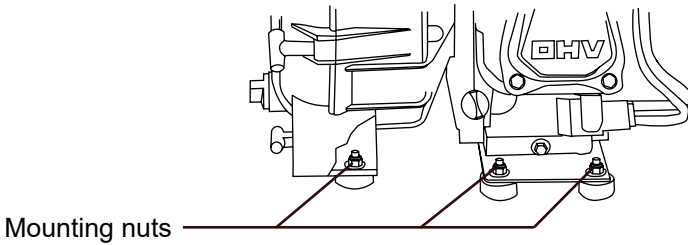


Fig. 23

5. With the assistance of another person, lift the engine/pump assembly off of the vibration mounts and turn it 180 degrees so the pump faces the driver's side of the trailer. Make a note not to lose or damage the o-rings on the manifold connectors.
6. Remove the outer pump housing cover bolts (Fig. 24 - A)
7. Remove the outer pump housing cover (Fig. 24 - B) and its rubber seal (Fig. 24 - C).
8. Remove the check valve (Fig. 24 - D).
9. Remove the impeller/volute (Fig. 24 - E).

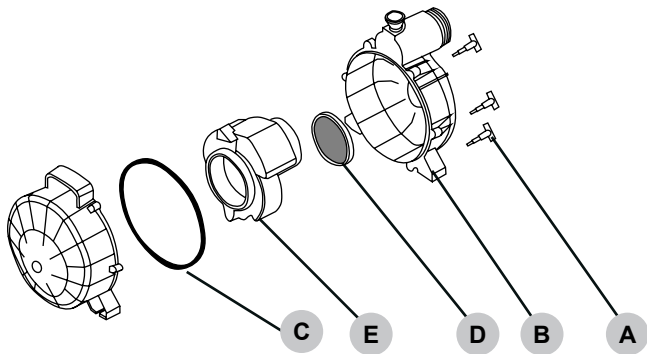


Fig. 24

10. Remove all dirt and debris from the components then rinse them clean with fresh water. Do not use chemicals to clean the internal pump components as they may damage the seals.
11. Reassemble the pump components making sure the rubber seals are in their proper locations and do not get pinched or damaged during reassembly.
12. Place the o-rings back into the manifold fittings (Fig. 25).

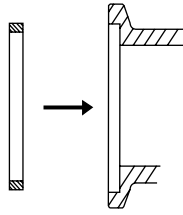


Fig. 25

13. With the assistance of another person, lift the engine/pump assembly and rotate it back into position. Place it back onto the vibration mounts being careful not to damage the o-rings on the manifold fittings.
14. Place the nuts back onto the mounting bolts. Tighten with an open end wrench.
15. Place the worm screw clamps back onto the fittings. Tighten.
16. Place the spark plug lead back onto the spark plug.

Engine Maintenance

Before each use, check the engine for loose or damaged parts, signs of oil or fuel leaks and/or any other condition that may affect proper operation. Always keep all safety guards in place and in proper working order. Repair or replace all damaged or defective parts immediately.

For safety reasons, the manufacturer recommends all engine service and repairs (including emission control devices and systems) to be performed by an authorized service center. All warranty replacements or repairs must be performed by an authorized distribution or service center. To find an authorized service center near you, obtain information about how to make a warranty claim or to make arrangements for authorized warranty repairs, please call 1-877-362-4271 or contact through email at service@fna-group.com

For all other information on engine maintenance, refer to your Engine Owner's Manual.

Plumbing Maintenance

The plumbing of the SIMPSON Water Trailer was designed to give years of worry-free life. However, it is important to monitor all connections for leaks. If the trailer is not to be used for an extended period of time, make sure to drain the trailer of water as talked about in the DRAINING THE SYSTEM FOR STORAGE section of the manual. It is of utmost importance to winterize the system if freezing weather is expected. Routinely rotate all valves to make sure they move freely without binding.

Inspect the nozzles on the spray bar for debris that may cause the spray pattern to be inconsistent. Remove large pieces of debris with needle-nosed pliers then sweep the orifice of the nozzle with a small bottle brush to remove any remaining particles.

Trailer Maintenance

For trailer maintenance, safety and towing information, please see the SIMPSON Trailer Operations Manual, part number 7114734.

ENGINE LONGTERM STORAGE

Storing for Two Months or Less

1. Fill the fuel tank per the OPERATING CHECKLIST section of this manual then add a fuel stabilizer per the manufacturer's recommendations.

NOTE: using a fuel stabilizer (sold separately) when storing gasoline may help prevent the problems related to alcohol blended fuels in outdoor power equipment engines. Always follow the instructions provided by the fuel stabilizer manufacturer to mix and use correctly.

2. Make sure the water tank has enough water to allow the pump to run for two minutes. DO NOT let the pump run dry.

3. Connect a garden hose to the side port outlet hose bibb. Turn the hose bibb on. Set the flow valves to PUMP (both hands pointing upward).

4. Start the engine per the STARTING THE ENGINE section of this manual. Open the side port valve.

Allow the engine to run for a minimum of two minutes to allow the fuel stabilizer to circulate throughout the fuel system. Monitor the water level in the tank, do not allow the pump to go dry.

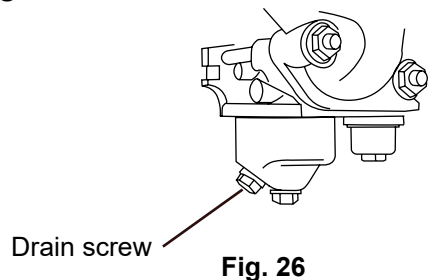
5. Turn the engine OFF.

6. Drain the tank, pump and plumbing system per the DRAINING THE SYSTEM FOR STORAGE section of this manual.

Storing for More Than Two Months

1. Make sure the engine is cool.

2. Using an appropriate container, completely drain the fuel system by removing the drain screw on the bottom of the carburetor (Fig. 26). Open the fuel tank cap to make sure all of the gasoline has drained from the system. Thread in the drain screw once the fuel is removed.



3. Change the engine oil; see the Engine Owner's Manual for reference.

4. Remove any dirt or debris from the area around the spark plug. Using a spark plug wrench, remove the spark plug.

5. Pour 0.5 ounces (15mL) of new engine oil into the engine combustion chamber. Slowly crank the engine by pulling on the recoil two times to distribute the oil and lubricate the cylinder.

6. Hand thread the spark plug then tighten with the spark plug wrench. Torque to meet the requirements set forth in the Engine Owner's Manual.

7. Drain the tank, pump and plumbing system per the DRAINING THE SYSTEM FOR STORAGE section of this manual.

LIMITED WARRANTY

Industrial / Rental Products

WARRANTY COVERAGE TERMS:

The manufacturer of this product agrees to repair or replace designated parts that prove defective within the warranty period listed below at the manufacturers sole discretion. Specific limitations/extensions and exclusions apply.

This warranty covers defects in material and workmanship and not parts failure due to normal wear, depreciation, abuse, accidental damage, negligence, improper use, maintenance, water quality and storage. To make a claim under the terms of the warranty, all parts said to be defective must be retained and available for return upon request to a designated Warranty Service Center for warranty inspection. The judgments and decisions of the manufacturer concerning warranty claims are final.

These warranties pass through to the end user and are non-transferable. As a factory authorized and trained Warranty Service Center, the factory will honor the terms of all component warranties and satisfy claims of the appropriate warranty provisions.

Normal wear items included, but are not limited to, items such as valve and seals, which are not covered by this warranty.

This warranty replaces all warranties, express or implied, including without limitation any warranties of merchantability or fitness for a particular purpose and all such warranties are hereby disclaimed and excluded by the manufacturer. The manufacturer's warranty obligation is limited to repair and replacement of defective products as provided herein and the manufacturer shall not be liable for any further loss, damages, or expenses - including damages from shipping, accident, abuse, acts of God, misuse, or neglect. Neither is damage from repairs using parts not purchased from the manufacturer or alterations performed by non-factory authorized personnel. Failure to install and operate equipment according to the guidelines put forth in the instruction manual shall void warranty.

THIS WARRANTY DOES NOT COVER:

Damage resulting from shipping (claims must be filed with freighter), accident, abuse, acts of God, misuse or neglect. This warranty also does not cover damage from repairs or alterations performed by non-factory authorized personnel or failure to install and operate equipment according to the guidelines put forth in the instruction manual. The manufacturer will not be liable to any persons for consequential damage, for personal injury or for commercial loss.

RESPONSIBILITY OF ORIGINAL PURCHASER (INITIAL USER):

To process a warranty claim on your SIMPSON® pressure washer, report the concern to 1-877-362-4271 or cservice@fna-group.com for authorization and direction to the nearest authorized service center in your area.

Retain original cash register receipt as proof of purchase for warranty work.

Use reasonable care in the operation and maintenance of the product as described in the Owner's Manual.

WHAT THIS WARRANTY DOES NOT COVER:

- Freight damage
- Damage due to chemical deterioration, scale build up, rust, corrosion or thermal expansion
- Freeze damage
- Damage caused by parts or accessories not obtained from an authorized dealer or not approved by the manufacturer
- Normal wear of moving parts or components affected by moving parts

WARRANTY COVERAGE PERIODS:

ENGINE AND EMISSIONS CONTROL SYSTEM

- Three (3) years from date of purchase (see engine manual for details).

PUMP (DEFECTS IN MATERIAL AND WORKMANSHIP)

- Three (3) years from date of purchase

FRAME (DEFECTS IN MATERIAL AND WORKMANSHIP)

- One (1) year from date of purchase

ACCESSORIES (DEFECTS IN MATERIAL AND WORKMANSHIP)

- Ninety (90) days from date of purchase

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READ THIS MANUAL CAREFULLY BEFORE OPERATION

Failure to follow the instructions and safety precautions in this manual can result in property damage, serious injury and/or death.

SAVE THIS MANUAL FOR FUTURE REFERENCE