

# **NIECE**

**DO NOT** allow anyone to operate the equipment without first reading this document.

*Complete and send warranty registration card when tower is in operation.*

## **CONTACT INFORMATION**

620-223-0340 Office

800-252-6618 Toll Free

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

***NIECE***

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# NIECE

## Safety

Safety is your responsibility at all times.

It is YOUR responsibility to read, understand, and follow all directions.

Please be aware that this manual cannot cover all possible hazards relating to the operation, service, or lack of service of the tank and tank components.

This manual has been prepared using the latest information at the time of publication. If changes to the unit have been made since then, differences may exist between the content of this manual and the actual unit.

Graphics, pictures, line drawings, and other visual representations in this manual are used to show basic operating and service procedures. These may not represent the actual unit exactly in detail.

Niece reserves the right to change the information contained in this manual at any time and without notice.



**WARNING!** Designates a possible hazard that can cause severe personal injury or death and property damage.



**CAUTION!** Designates a possible hazard that can cause personal injury and property damage.

*Note: Designates an action that makes service easier.*

**DO NOT** allow anyone to operate the equipment without first reading this document.

**DO NOT** use tank or tank components for uses other than its intended design.

**DO NOT** use tank to transport water intended for human or animal consumption. Tank is for **NON POTABLE** water only.

**DO NOT** modify the tank without prior consent from Niece.

**DO NOT** mount or dismount the unit while unit is moving.

**DO NOT** overfill tank.

**DO NOT** allow anyone to operate the equipment without the proper training and experience necessary to safely perform the tasks needed.

**DO NOT** operate the unit until all unneeded personnel are away from the unit.

**DO NOT** operate spray heads or turret until all personnel are a safe distance away from truck.

**DO NOT** allow unauthorized personnel to operate the equipment.

**DO NOT** use hydraulic hoses as handles to mount the machine.

**DO NOT** touch hot or moving parts when attempting to service the tank or truck.



**DO NOT** inspect, adjust, or repair a drive line while the truck is running.

**DO NOT** inspect, adjust, or repair a PTO while the truck is running or system is engaged.

## **DO NOT FILL TANK WITH WATER WITHOUT ALL SAFETY PINS AND SAFETY CLIPS INSTALLED.**

**ALWAYS** wear appropriate PPE (personal protective equipment) while operating and servicing truck or tank.

**ALWAYS** be familiar with the vehicle dimensions with tank and any accessories are added.

**ALWAYS** follow the recommended service intervals.

**ALWAYS** mount and dismount the tank while facing toward the tank.

**ALWAYS** follow the truck manufacturer's recommended maintenance procedures.

**ALWAYS** use genuine *Niece* replacement parts when servicing tank and tank components.

**ALWAYS** keep unneeded personnel away from equipment.

**ALWAYS** check the components of the tank daily.

**ALWAYS** check for hydraulic leaks using a piece of cardboard or other like material.

**ALWAYS** use proper lifting equipment of required rating to perform operation.

**ALWAYS** check components for pressure before servicing. Contents under pressure may cause severe personal injury or death.

**ALWAYS** collect fluids into appropriate containers and dispose of in an environmentally safe way.

**ALWAYS** park the unit on safe and level ground before servicing the unit.

**ALWAYS** chock wheels before servicing the unit.

**ALWAYS** make sure ladder, steps, and handrails are free from slipping hazards.

**ALWAYS** follow the cold weather procedures listed in this manual.

**ALWAYS** properly support overhead objects when servicing tank.

## **ALWAYS USE ALL 8 SAFETY PINS AND 8 SAFETY CLIPS PROVIDED WHEN TANK IS RAISED.**

## **ALWAYS USE 6 SAFETY PINS AND 6 SAFETY CLIPS WHEN TRANSPORTING TANK.**



## Overview

Thank you for purchasing your new Niece Water Tower.

NPT 120 Features:

- 12,000 gallon capacity (**NON POTABLE** water only).
- (2) Double acting lift cylinders.
- 12" downspout.
- Air cooled gas engine.
- Filtered hydraulic system.
- 15 gallon hydraulic oil tank.

## Receiving

Your new Niece Product has been inspected multiple times to ensure that you receive a quality product.

Document damage or loss immediately by photographing the tank while on the carrier's truck. Email claim documentation to Niece Products of Kansas. Warranty claim forms are provided.

Fill out your warranty registration card and send it in. Delay can affect your warranty coverage.

### **Inspect the unit BEFORE unloading and check for:**

- Dents or scratches.
- Wiring or hoses torn loose.
- Broken or missing components.
- Cut wires.
- Loose parts in boxes attached to the unit.
- Ladders, top rails, and other attachments shipped under the unit.

### **Unloading precautions:**

- DO NOT unload on a grade.
- Keep unneeded personnel away from the unloading area.
- Only allow experienced operators to unload/load.



## Setup




### WARNING!

- **DO NOT** attempt to raise or lower tank with water in tank.
- **DO NOT** use tank to transport water.
- **DO NOT** set the unit on loose soil.
- Keep away from crush points (lower frame rails).
- Tank is designed for **NON POTABLE WATER ONLY**.
- Severe damage will result from improper use, voiding all warranties.

## Selecting a Site

Set the tank on a solid, level, and hard-packed surface with clearance around the tower for the movement of machinery. Make sure the surface has good drainage. The ideal location for the tank is a smooth and level solid rock or concrete base, with a minimum of 150 feet of clearance on all sides.

## Disconnecting From Truck


1. Turn engine fuel valve ON.
2. Start engine.  
 **WARNING!** Keep away from crush points (lower frame rails)!
3. Raise tower slightly to remove pressure from safety pins.
4. Remove safety clips from safety pins.
5. Remove safety pins.
6. Raise tower just enough to plant firmly on ground.
7. Disconnect truck air and electric lines from tower.
8. Disconnect unit from truck.
9. Lower tank completely.
10. Install safety pins and safety clips.
11. Install sock to down spout.
12. Ensure tank base is in full contact with the ground. Failure to do so will damage tank.
13. Check for sinking. Relocate if necessary.



**WARNING! DO NOT FILL TANK WITH WATER WITHOUT ALL 8 SAFETY PINS AND ALL 8 SAFETY CLIPS INSTALLED.**



## Moving the Tank

 **CAUTION! DO NOT** move, raise, or lower the tank with water inside tank.

If tank is not lowered, lower the tank. See "*Lowering the Tank.*"

1. Check fuel and oil in the hydraulic unit. Add if necessary.
2. Turn engine fuel valve ON.
3. Start the engine.
4. Raise tank slightly to remove pressure from pins.
5. Remove pins.
6. Raise tank enough for truck hitch.
7. Back truck hitch under tank.
8. Hitch tank to truck.
9. Connect wiring and air lines.
10. Retract tower legs.
11. Secure chains and pull handles to tank frame.
12. Install all safety pins.
13. Install all safety clips to safety pins.
14. Stop engine.
15. Turn engine fuel valve OFF.
16. Inspect tank for loose objects and clear any dirt or rocks from landing gear.
17. Check all lights.
18. Check tire pressure on tank.
19. Check brakes for proper operation.



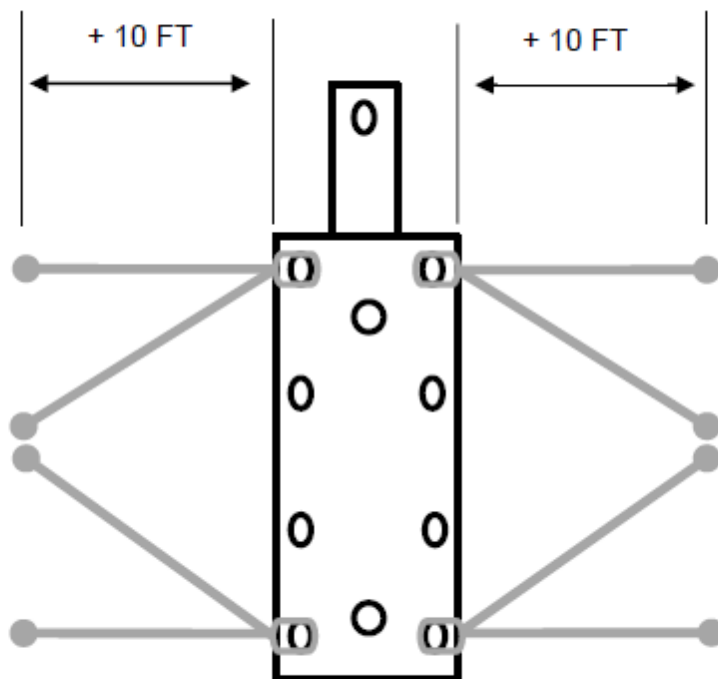
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## Anchoring the Tank

Anchoring the tank is required in areas with high wind. Tie-down points are built into the structure of the tank.

Proper tie downs include:

- Large concrete blocks with imbedded heavy steel loops.
- Pilings driven in at an angle pointing away from tank.
- Screw-in tie-downs.
- Anchors embedded in a stone or concrete slab.



Use flexible steel aircraft cable of at least 3/8 inch diameter and 14,000-pound breaking strength.

- Install at least 3 clamps to loop of each cable.
- Place anchors at least 10 feet away from base of tank.
- Place loops around top leg support housings.

## Raising the Tank

- Cut and discard the cable ties from the dispensing handles.



- Place the red handle and red handle cable to the out side of the kingpin neck.
- Place the green handle and green handle cable to the outside of the kingpin neck.
- Place the dispensing handles and cables on the ground.
- Empty tank of all water.
- Attach fill hose to tower.

Adjust ball valve  $\frac{1}{4}$ - $\frac{1}{2}$  turn open



- Pull the camlock handles down.
- Remove the camlock plug.
- Connect fill hose to fill line.
- Pull camlock handles up to lock hose.

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## IMPORTANT\*\*

Float ball and arm are packed and shipped loose, and must be installed before operation and removed for transportation.

That arm needs to be installed away from the manhole opening.

Arm will point to the rear passenger side corner.

When Empty, arm will hang at a side downward angle.

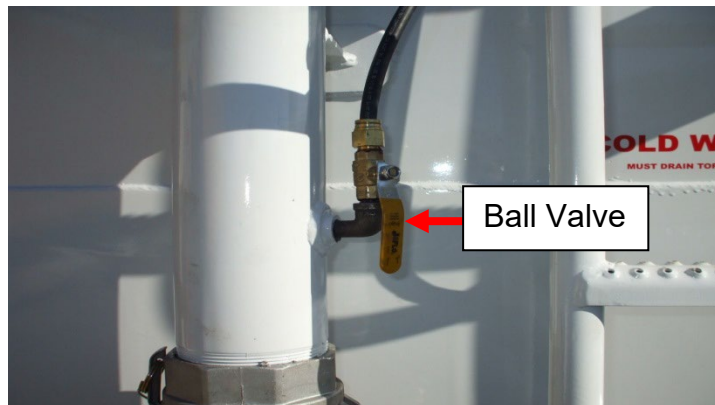
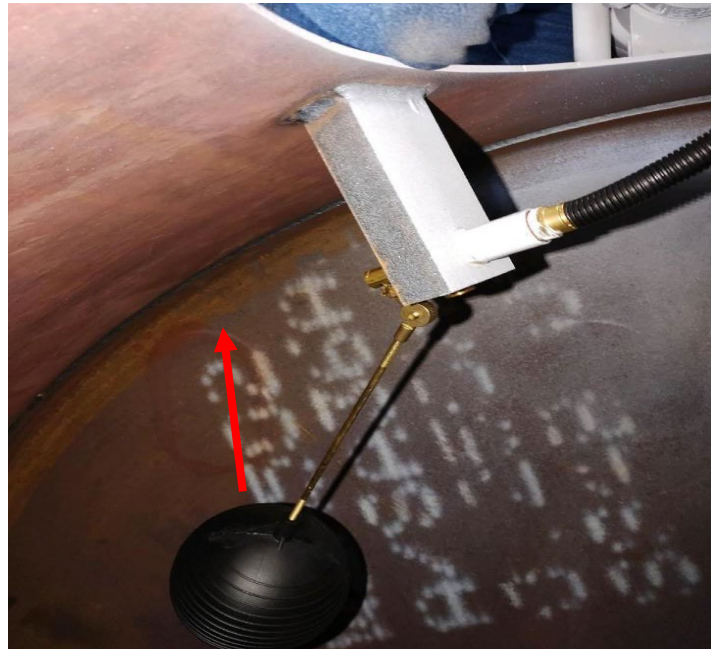
Insure when tank is full the arm will not come into contact with the rear or sidewall.

Always use proper and approved safety equipment when working from an elevated position.

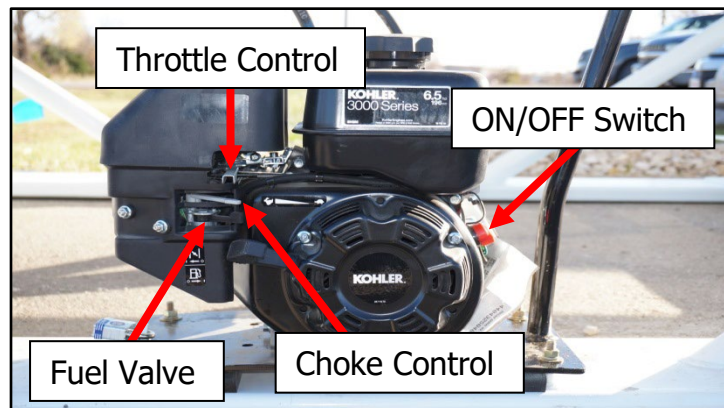
- Open ball valve.

*Note: Ball valve will adjust the water pressure. Fully open = more water pressure.*

- Open hydrant valve.



- Turn engine fuel valve ON.
- Turn ON/OFF switch ON.
- Adjust choke control to desired position.
- Start engine.



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**WARNING!** Keep away from crush points!

Two control handles are provided for lifting the tank.



- Attach a magnetic level to the center of the tank.
- Raise and lower the tank while maintaining level.

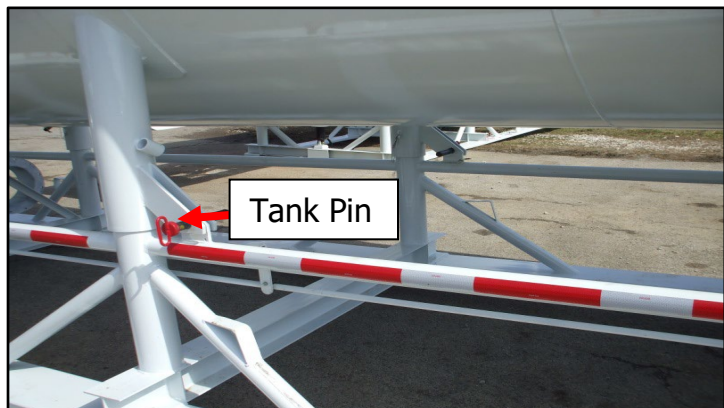


Moving control handles backward (away from tank) will raise tank.

- Slightly raise or lower tank to remove pressure on pins.



- Remove safety clips.
- Remove pins.
- Ensure tank base is in full contact with the ground. Failure to do so will damage tank.



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- Raise tank two feet.
- Check base for level. The tank cannot lean.

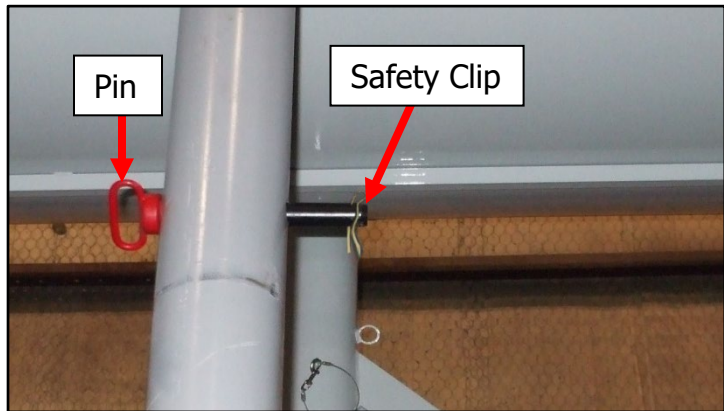


- Check for sinking. Relocate if necessary.
- Raise tank to desired height.

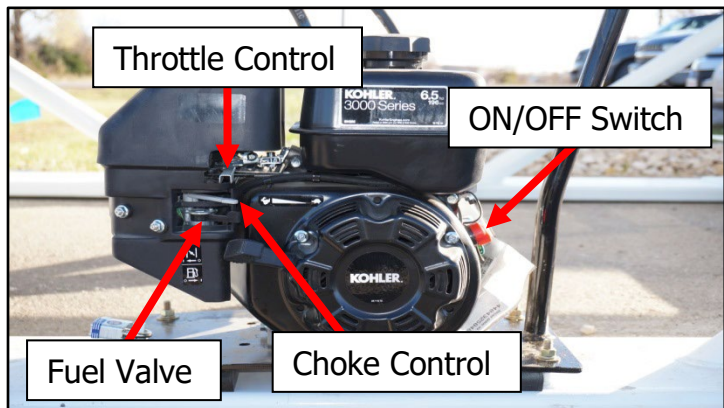


- Insert pins in legs
- Lock pins with safety clips.

**⚠ WARNING! DO NOT FILL TANK WITH WATER WITHOUT ALL 8 SAFETY PINS AND ALL 8 SAFETY CLIPS INSTALLED.**



- Turn engine off.
- Turn engine fuel valve OFF.



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- Work controls to relieve any back pressure.



- Close the dispensing valve by pulling the red handle down.
- Fill tank with water.



**WARNING!** Observe tank while filling. Stop filling if tank starts to sink or lean. DO NOT raise tank during this step.

- Position the truck tank fill port under the downspout.



- Pull the green painted handle down to allow water to flow.
- Monitor the truck tank fill level.



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- Pull the red painted handle down to stop water flow.

Handles are provided with cables and clips to hold the handles away from trucks intering and exiting filling area.

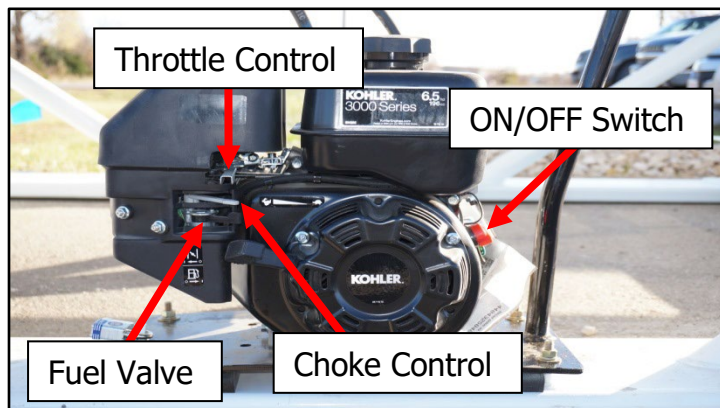
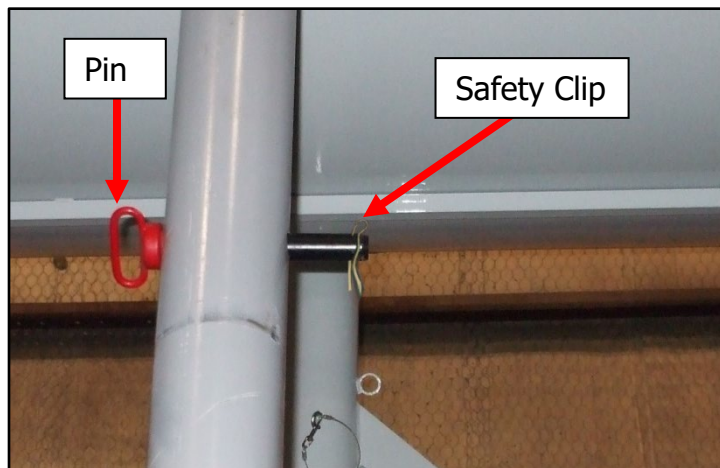


## Lowering the Tank

- Empty tank of all water.
- ⚠ **WARNING! DO NOT** lower the tank with water inside the tank.
- Remove safety clips.
- Remove pins from tower legs.

⚠ **WARNING! DO NOT FILL TANK WITH WATER WITHOUT ALL 8 SAFETY PINS AND ALL 8 SAFETY CLIPS INSTALLED.**

- Turn engine fuel valve ON.
- Turn ON/OFF switch ON.
- Adjust choke control to desired position.
- Start engine.



# NIECE



**WARNING!** Keep away from crush points!

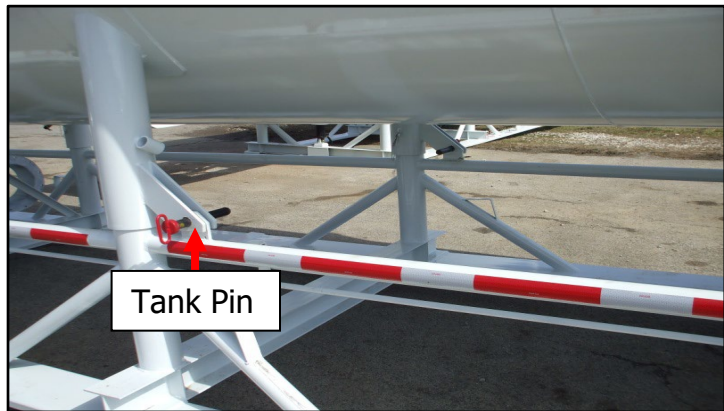
- Move control handles forward (toward tank).



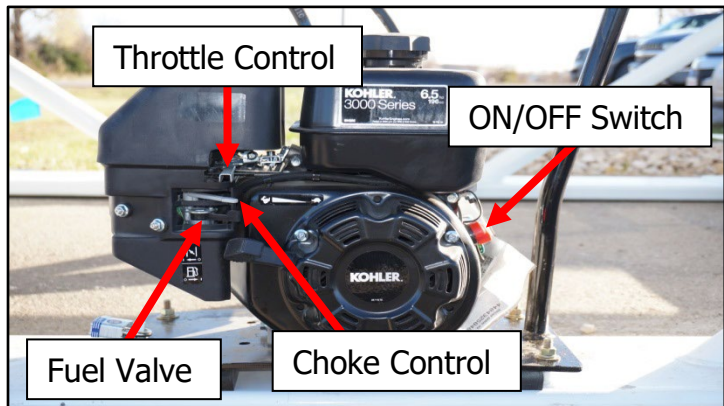
- Lower the tank while maintaining level.



- Lower tank completely.
- Install pins.
- Install safety clips.



- Turn engine off.
- Turn engine fuel valve OFF.





- Work controls to relieve any back pressure.

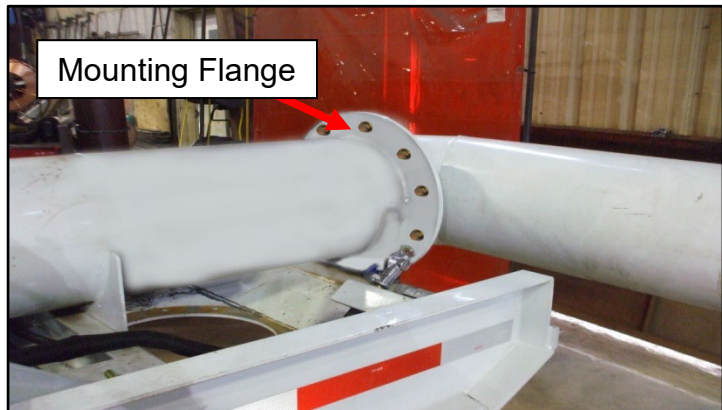


## Dispensing Tube Extension Installation (If Equipped)

- Attach proper lifting equipment to the lift eye of the extension tube.
- Lift the extension tube into position.



- Install bolts and flat washers to mounting flange.



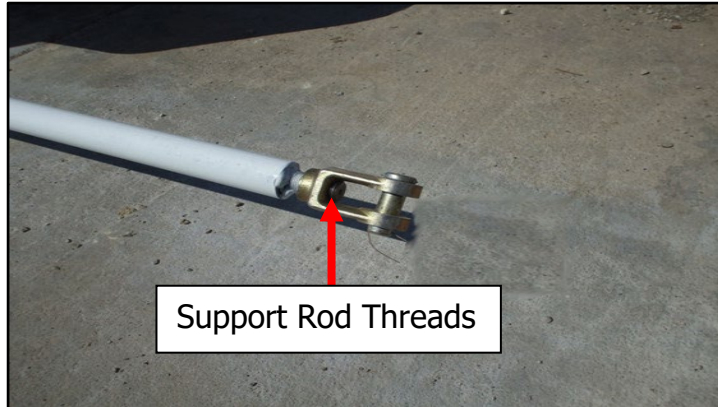
- Install lock washers and nuts.
- Tighten nuts 1/4 turn after lock washers compress.



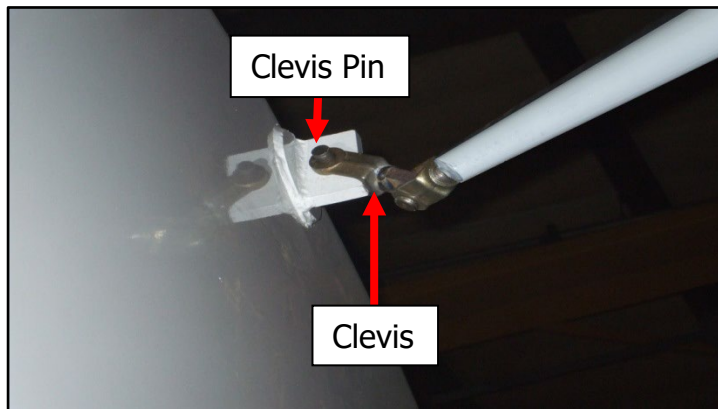
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- Install clevises to ends of support rod.

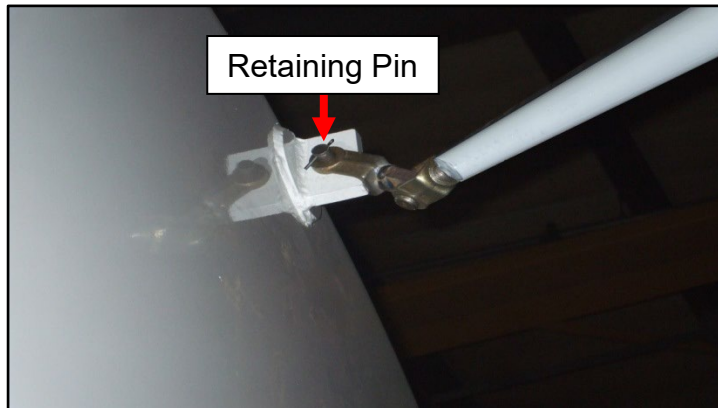
*Note: Make sure the support rod threads are flush with or past the clevis mouth.*



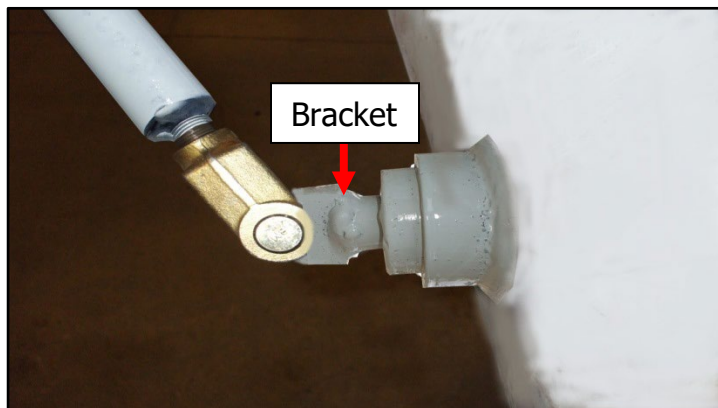
- Attach support rod clevis to tank support bracket.
- Install clevis pin.



- Install retaining pin.
- Bend at least one leg of retaining pin.

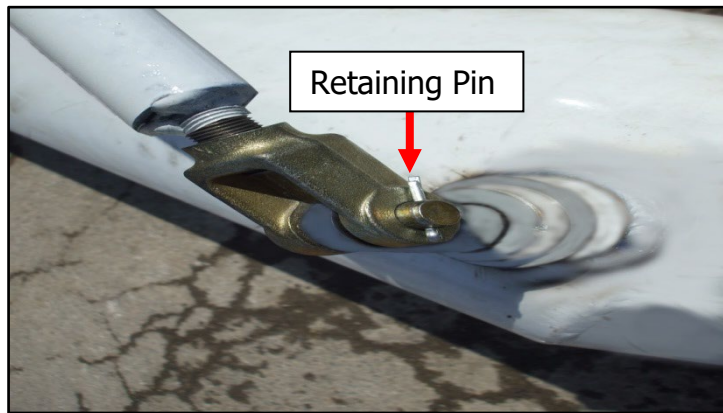


- Attach other end of support bar clevis to downspout extension tube bracket.
- Install clevis pin.
- Adjust support bar to provide adequate tension to the downspout extension tube.



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- Install retaining pin.
- Bend at least one leg of retaining pin.
- Remove lifting equipment from dispensing tube.
- Attach downspout sock to downspout.



## Adjusting Water Float

### WITH TANK FULLY LOWERED

- Start filling the tank with water.
- Test the float shut off valve by manually lifting the float up to where water stops flowing out of valve.
- Water should stop flowing out of fill pipe.
- Release float and water should start to flow again.  
If water does not fully shut off with float, adjust lower ball valve to accommodate fill line pressure.

*Note: Make sure the float does not hit the back of tank or the top of tank. Adjust the float if necessary.*

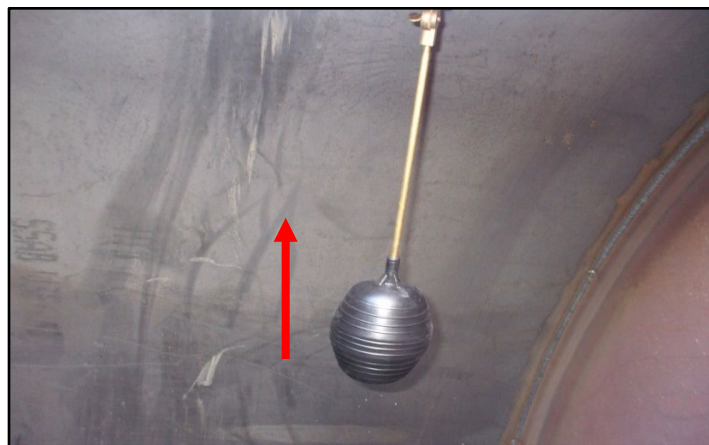
- Empty tank of water.

**⚠ CAUTION! DO NOT** raise the tank with any water inside tank.

- Close hydrant valve when not in use.

ATTN: Float may need to be installed after transport and before use.

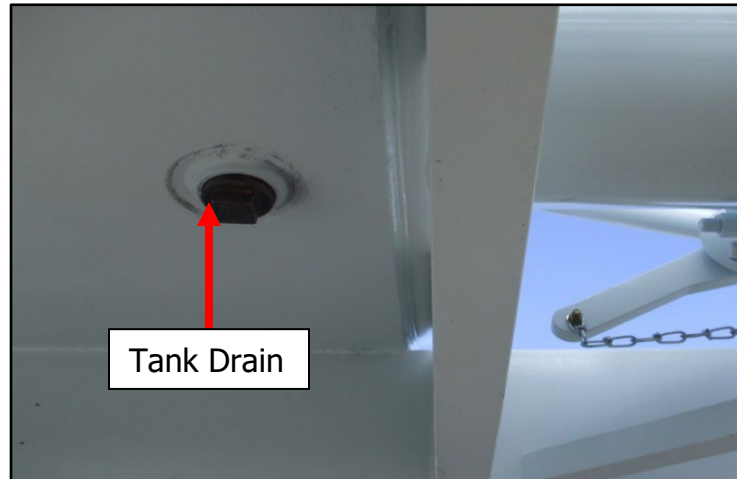
Float will ship in passenger side tool box



## Winterization

Perform these actions during cold weather, even between fills. Failure to do so may cause severe damage to the valves and fill lines.

- Remove tank drain.
- Remove fill line cap(s).
- Remove pipe plugs from valves.
- Open all petcocks.
- Leave ball valves open.



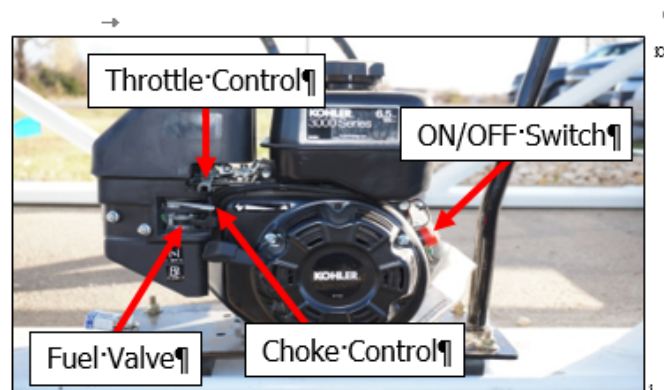
**NOTE: VALVES WILL BE ON TOP**

- Disconnect water shutoff line from the in line valve.
- Cover the manhole.

**NOTE: VALVES MAY BE IN A DIFFERENT LOCATION!**

- Fill the engine fuel tank to near full with FRESH fuel.
- Add fuel stabilizer to the fuel tank.
- Run engine for several minutes.
- Stop engine.

Turn fuel valve off.





## Repair Parts

Float Valve : 20040810000

Float Valve Ball: 26040810001

Float Valve Arm: 26040810000

Engine: 4500080000000

Buckeye Flange: 26020330000

Inline Control Valves

20010700000

Downspout Sock

9006081000000

Coupling Insert: 26050490000

Coupling Half (1/2" x

5/8"):26020490001

Coupling Half (3/4" x 1-

1/4"):26020490002

Oil Filter: 13022950018



## Maintenance

### Engine

- Check oil level and add if necessary with recommended viscosity and type.
- Make sure all components are in good operating condition.
- Start the hydraulic system engine before moving the unit to a remote site. Run for several minutes.
- Shut off engine.
- Shut off fuel valve.
- Follow the manufacturer's maintenance instructions (included).

### Hydraulics

- Check the fluid level in the reservoir before each use.
- Keep the controls clean.
- Check all hydraulic components monthly.
- Change the hydraulic filter twice a year.
- Check for loose and/or leaking fittings and tighten as necessary.
- If the unit is stationary for extended periods the hydraulic system should be "exercised" every 3 months to prevent cylinders from rusting.
- Check the oil level in the reservoir. Fill to required level with AW 32 hydraulic fluid or equivalent.
- Check for loose fittings.
- Check hoses condition.

### Air Brakes

- Check for proper operation before each use.
- Drain air tank daily.

## Troubleshooting

### Hydraulic system engine problems

- Check fuel valve.
- Check fuel level.
- Check spark plug.
- Check engine owner's manual.

### Lift problems

- Check fluid level.

### Fill problems

- In-line valves may need rebuilding or may be frozen.
- In-line valves may not be installed correctly. Make sure flow arrow is in the correct direction.

### Trailer brakes

- Check air supply.
- Drain air tank.

If you have any questions please contact Niece Products of Kansas: 800-252-6618.

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