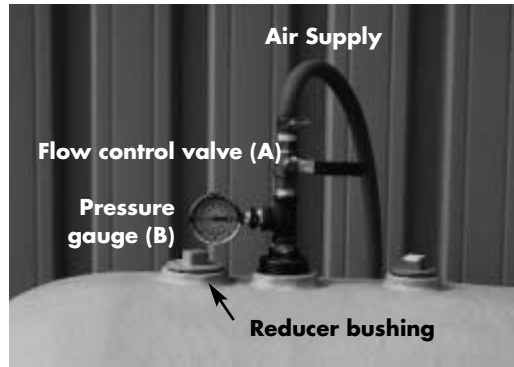


## PNEUMATIC (AIR) TESTING

Should pneumatic (air) testing be required, test at a maximum of 5 psi (35 kPa). Refer to the following special instructions for details.

Warning: Pneumatic testing using air pressure should only be performed by a qualified technician familiar with this test method. DO NOT overpressurize the tank!

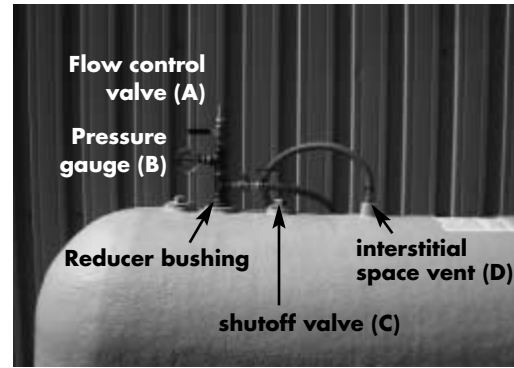


### For single wall tanks

1. Cap off all piping connections.
2. Use a flow control valve connected to a 0–15 psi gauge to slowly and gradually pressurize the primary tank to a maximum of 5 psi (35 kPa).
3. Close the flow control valve and remove the pressure source.
4. Apply a 40:1 water / dish soap solution on all threaded connections and observe for any soap bubble formation at the connections. Should continuous bubble formation be observed, carefully tighten the pipe connection until no more bubbles form.
5. If a steady decline in air pressure is observed, contact ZCL Composites for further instructions.

### For double wall tanks

Testing of double wall tanks requires two separate test stages. The first stage tests the primary tank and fittings and the second stage tests the interstitial space between the inner and outer tank walls.



### Primary tank test

1. Cap off all piping connections.
2. Using a reducing bushing on a primary tank fitting, install a test tree consisting of a flow control valve (A), a 0–15 psi pressure gauge (B) a shutoff valve (C) connected by flexible air line the double wall interstitial space vent (D).
3. Close the shutoff valve (C) to isolate the interstitial space from the primary tank.
4. Pressurize the primary tank to a maximum of 5 psi (35 kPa) by slowly and gradually opening the flow control valve (A).
5. When the pressure is 5 psi, close flow control valve (A) and remove the pressure source.
6. Apply a 40:1 water / dish soap solution on all threaded piping connections and observe for any soap bubble formation at the connections.
7. If continuous bubbling is observed at any fitting, carefully tighten the pipe connection until no more bubbles form.
8. If a steady decline in air pressure is observed, contact ZCL Composites for further instructions.

### Interstitial space test

9. Following the primary tank test, open the shutoff valve (C) and allow the interstitial space to pressurize with air from the primary tank.
10. Apply soap solution to any untested threaded connections.

11. Observe for any bubble formation and tighten the connections if necessary.
12. Observe the tank pressure over a span of thirty (30) minutes. If a steady decline in air pressure is observed, contact ZCL Composites for further instructions.

## OPERATION

Use this tank only for fuel oil storage or diesel fuel for emergency standby generators.

This tank is intended for use vented to atmosphere. For outdoor applications, install a weatherproof vent hood or cap on the vent riser pipe and on the interstitial space vent of double wall tanks.

The fuel supplier shall confirm that the vent whistle and, if accessible, the fill gauge are functioning properly at the time of fuel oil fill-ups.

## MAINTENANCE

The exterior of the tank should be inspected for evidence of damage or leakage on a periodic basis and at least once per year,

Should any visible damage as described in the Handling section or if any leakage from the tank is observed, contact the tank installer for additional assistance.

Visually inspect the interstitial monitoring sight glass on double wall tanks, observing for the presence of fluid accumulation. Do not remove or loosen the sight glass. It has been factory installed and tested for seal. In the unlikely event of a primary tank leak, fuel oil can be identified by the presence of a dark liquid (fuel oil) in the sight glass.

On tanks located outdoors, an annual exterior washing using a water/soap solution is recommended to maintain the exterior appearance. Application of an exterior wax/polish will rejuvenate and further protect the exterior finish on the tank.

Pressure Testing – Warning – This test must be performed by a technician trained in pneumatic testing procedures.

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COMPOSITES INC.



Installation and Maintenance of  
Fibreglass Reinforced Plastic  
(FRP) Fuel Oil Tanks

manufactured by

ZCL COMPOSITES INC.



#### Models covered:

- 200 gallon / 900 litre single wall
- 200 gallon / 900 litre double wall
- 250 gallon / 1130 litre single wall
- 250 gallon / 1130 litre double wall

This manual contains important information about the installation, inspection and maintenance of a ZCL Composites Inc. FRP Fuel Oil Tank. The Owner should retain this manual for future reference with other documents pertaining to the oil fired equipment system.

**For warranty coverage, this tank must be installed by a qualified technician approved by the local authority having jurisdiction.**

This Product is intended to be used for the storage of or supply of fuel oil to oil-burning appliances or equipment in accordance with the Standard for the Installation of Oil-burning Equipment, NFPA 31. This product may also be used for storage of diesel fuel for stationary emergency equipment if approved by the local authority having jurisdiction.

**Install above ground in Outdoor or Indoor locations.**

### Product Information:

Tank Model No: \_\_\_\_\_

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

Installer: \_\_\_\_\_

Phone: \_\_\_\_\_

Date Installed: \_\_\_\_\_

*This product must be installed by a licensed installer knowledgeable with fuel oil tank installation and approved by the authority having jurisdiction. Installation shall be in accordance with the requirements and guidelines contained in NFPA 31 and/or local codes, rules and regulations.*



## PREFACE

These instructions pertain to non-metallic FRP Fuel Oil Tanks listed under UL 2258. The tanks are designed to resist the effects of internal and external corrosion and safely contain fuel oil.

The same principles used in the installation of traditional fuel storage tanks apply to the FRP Fuel Oil Tank. Review and understand these instructions completely before undertaking the installation of this product.

## HANDLING

Preplan any handling or movement of the tank prior to offloading. Moving the tank through narrow passageways or confined staircases may require special consideration. If necessary, consider using temporary cushioning material attached to the tank wall on potential contact surfaces.

Lift the tank using only the integral handles located on the tank. The use of hooks, clamps, cables (wire rope) or any mechanical devices may impart exterior damage to the tank wall.

The FRP fuel oil tank has been factory proof-tested for integrity and visually inspected prior to shipment. Upon receipt of the tank, perform a thorough visual examination of the exterior surface of the tank. Observe for evidence of damage or abuse in the form of bruises, impact cracks or deep scratches extending below the exterior coating on the tank wall.

Do not attempt any repairs or modifications to the tank. Consult the tank supplier should there be any question arising from this inspection.

## INSTALLATION

Do not modify this tank.

Place the tank on a stable non-combustible foundation in accordance with governing codes or regulations. This product is not intended to be suspended.

Although internal corrosion of the FRP tank due to the accumulation of water is not a factor, various codes and regulations prescribe sloping the tank towards the burner outlet. This can be accomplished by using shims or grout under the tank legs.

Multiple tank installations, where permitted, must be installed in accordance with the requirements of NFPA 31 and local codes and regulations.

### Outdoor Installation

This tank does not require any special enclosure for outdoor use. However, in traveled locations where collision from vehicles may arise, the use of a protective barrier or traffic bollards is recommended.

Provide adequate clearance around the tank for servicing and inspection. As a minimum, adopt clearances referred to in NFPA 31.

Consideration of soil stability under the tank foundation should be made for outdoor locations where soil movement could result in tank tipping or overturning.

Multiple interconnected tanks, where permitted, must be mounted on a common foundation.

Vent the primary tank to atmosphere in accordance with the requirements of the authority having jurisdiction. The vent pipe diameter must be sized to prevent a positive or negative pressure condition inside the tank. Provide a suitable weather cap to prevent the intrusion of precipitation. Vent caps and overfill signaling devices in the vent pipe shall not reduce the venting rate below that of the filling rate.

### Indoor Installation

Locate the tank indoors in accordance with applicable codes and/or regulations taking into consideration minimum horizontal clearances from heat sources

and/or the oil burning appliance as prescribed in Chapter 7 of NFPA 31. Provide sufficient clearances around the tank for service and inspection.

### Piping connections

The standard tank is fabricated with steel fill, vent and level gauge NPT connections and an NPT steel end burner connection. These fittings are intended for use with industry standard piping.

All connections are shipped with temporary shipping plugs. If a particular fitting will not be used, remove the shipping plug and replace it with a suitable plumbing plug prior to commissioning of the tank.

Use suitable sealants or pipe compounds to make liquid-tight connections. Excessive torque is not required to form a seal.

Install an approved tank over-fill device such as a vent whistle in the vent connection.

Terminate the tank vent with a weatherproof vent hood or cap to minimize the ingress of precipitation and blockage by foreign matter such as insects or ice build-up.

On double wall tanks, vent the interstitial space vent to atmosphere by removing the shipping plug. For tanks located outdoors, provide a weatherproof vent hood or cap to minimize the ingress of precipitation and blockage by foreign matter such as insects or ice build-up.

## COMMISSIONING

FRP tanks have been factory leak-tested to ensure tank integrity. Damage may occur during transit, handling or installation. For this reason, the tanks should be commissioned in accordance with the requirements of the authority having jurisdiction.

If the tank has not been tested after installation, during the first fuel filling operation, either the installer or an agreed-upon representative from the fuel oil supplier must be on hand to observe for any leakage of the tank system.