

OM100710 – Owner’s Installation Manual, For all ULC S601-14 Tanks
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1) General

- a) Thank you for purchasing your new tank(s) from Huge L Steel Inc.
- b) This Owner’s Manual has been provided to ensure that you are aware of the best manner in which to install, operate and maintain your new tank.
- c) The documentation in this manual will acquaint you with several features of your new product.
- d) A decal on the tank indicates the Huge L Steel web site and a phone contact that you can use to get this manual. Installation of this tank should not proceed until this manual has been referenced.
- e) If you are a distributor for this product and will be reselling this product, you are responsible for ensuring that this manual is provided to your customer.
- f) For your convenience, if you should ever lose or misplace this document and/or your Huge L Steel warranty information, you can easily go onto our web site at (www.hugelsteel.com) to read and print the required information. You can also call our main office at 306-693-1003 and we’ll ensure you receive the information you need.
- g) We strongly encourage you to read this manual in full and to contact us in the event that you have questions. If you fail to install, operate and/or maintain this product as stated, the Huge L Steel Inc warranty will be void.

2) Basic Information

- a) This tank was manufactured to CAN/ULC-S601-14 Standard for Shop Fabricated Steel Aboveground Tanks for Flammable and Combustible Liquids.
- b) You must not use this tank for the storage of product not in compliance with this standard.
- c) The installer of this tank must consult with the “Authority Having Jurisdiction” to ensure that the requirements of CAN/ULC-S601-14 and all federal, provincial and local codes are being met prior to and during installation.
- d) All piping, valve and pump configurations and systems should be installed by a reputable installer of tanks in accordance with all applicable fire and environmental codes.
- e) This tank has been built as a non-pressure tank only.
- f) This tank must not be used for the storage of products not compatible with steel.

- g) Unless modified by Huge L Steel, this tank is not suitable for jet fuel.

3) Site Preparation

- a) Combined tank assemblies must be installed on a well-drained, level bed or base designed to support the tank plus 100% liquid loading.
- b) Dry soil is important to ensure soil stability and minimize the risk of tank corrosion.
- c) For proper foundation design and site preparation, consult a specialist in this area.
- d) Build-up of snow and ice on top of this tank may cause the tank emergency/normal vents to fail. Therefore, care should be exercised when locating this tank close to buildings and objects which could increase the chance of snow buildup.
- e) This tank must be located at distances away from buildings and property lines in accordance with all national and local fire and environmental codes. The tank installer is responsible for the suitable placement of the tank.
- f) A slope should also be made around the tank to ensure proper drainage.
- g) This tank should be protected with bollards and anchor lists as required by the authority having jurisdiction in your area.

4) Maintenance Inspection

- a) It is the responsibility of the purchaser and installer to conduct proper maintenance on this tank **PRIOR TO FIRST USE**, and as an **ongoing maintenance task**:
 - i) Check for internal moisture and debris, dents/punctures/leaks, or faulty fittings. Contact Huge L Steel immediately if you encounter any of these issues. While Huge L Steel vacuums each tank and drags a magnet over the tank floor to collect as much metallic debris as possible, it still needs to be inspected thoroughly prior to first use. Check both primary and secondary.
 - ii) Moisture in the tank must be checked regularly (every 4 months). **ALSO, PRIOR TO FIRST FILL**. Consult your bulk fuel dealer on how best to deal with moisture and water. Check both primary and secondary.
 - iii) With new bio diesel regulations incorporated by the federal government, it is imperative that this tank be equipped with a bio diesel compatible filter if being used for diesel. Proper filtering is required for gasoline usage as well.
 - iv) Warranty is void if appropriate filters are not used in conjunction with this tank.
 - v) Huge L Steel is not responsible for any damages resulting from water and debris in the tank. The Huge L Steel warranty does not cover damage resulting from water and debris in the tank.

5) Fill Limiting Device

- a) It is imperative that an operator be continuously present while filling this tank.
- b) Depending on the local authority having jurisdiction in your area, a fill-limiting device may be necessary. Follow the fill limiting device manufacturer’s installation instructions.

6) Care for Paint

- a) Painted surfaces must not be subjected to highly corrosive chemicals, abrasive cleaning solutions, harmful fumes, chemical solvents and or acid washes; doing so will void this warranty.
- b) Rust and perforation resulting from damage related to collisions, accidents, scratches, impacts, or normal and intended use of the product must be addressed immediately by sanding the trouble area and applying an applicable primer and paint approved by Huge L Steel.
- c) Huge L Steel paint warranty does not cover corrosive or aggressive atmospheric damage such as but not limited to salt spray. You must notify Huge L Steel if your tank is situated in such an area.
- d) You must protect your tank from fire, heat, explosion, and excessive temperature.
- e) The impact of pollution, the environment, mold and or animal waste can adversely affect the paint on your tank. Immediately wash off any such residue with a mild soap and water.

7) Tank Piping Requirements and General Use

- a) Depending on the local authority having jurisdiction in your area, an anti-siphon device may be necessary. Follow the anti-siphon device manufacturer’s installation instructions. The anti-siphon valve shuts off product flow when lines are broken **BELOW** the tank liquid level, preventing fuel spillage and fire hazards.
- b) Paint any piping with white paint to minimize the build-up of heat in the pipes.
- c) Ensure that this tank is properly grounded when electrical equipment is being installed. A patch of paint should be removed from the ground area. Once the ground connection has been made, coat the connection area with sealer.
- d) Only lifting lugs supplied with the tank are to be used for off-loading and moving of the tank. **The tank is to be lifted only when empty.**
- e) Never transport this tank when there is product in the tank.

- f) The normal and emergency vents must not be removed or tampered with. The normal vent must be designed in a manner that does not allow flame impingement onto the surface of the tank in the event of vapor ignition. The normal and emergency vents installed on this tank incorporates a weatherproof hood and must not be removed.
- g) Ensure that the normal and emergency vents can lift freely and they are not obstructed by snow or ice.
- h) Ensure that the normal and emergency vents are not plugged by snow, ice or any other debris.
- i) To maximize the life of this tank, routinely inspect for water at the bottom of the tank with a gauge stick. Draw off any water immediately. (Refer to more notes on water below).
- j) The owner/user takes full responsibility for any damage done to this tank while moving the tank around by the skids.
- k) The ladder, if supplied, must have stair treads that are free of snow, ice and debris.

8) New Bio Diesel Legislation

- a) The government of Canada has mandated that all diesel sold must contain an annual average of 2% renewable content, such as biodiesel. Therefore, some months of the year will contain 5% biodiesel and some months will be free of this content.
- b) It is important to know that water does not separate as well from biodiesel as compared to regular diesel. Biodiesel may also absorb free water from the bottom of your tank and pass it on to your equipment. Therefore it is imperative that your tank be kept dry. Wet biodiesel may plug filters. This means that your tank **must be DRY prior to biodiesel being filled into your tank**. This is your responsibility.
- c) It is your responsibility to ensure that your tank is equipped with a biodiesel compatible filter.
- d) Biodiesel is a solvent that will remove deposits in your tank. This may cause fuel filter plugging and vehicle damage. Since biodiesels may pick up residues and may contain low level insoluble from plant matter, it is mandatory to use filters on your tank.
- e) **Filters used for conventional diesel are typically inadequate for biodiesel blends containing up to B5.** Consult your bulk fuel dealer before deciding what filters you will install.

9) Water Monitoring, General for all tanks

- a) The removal of water in a tank is vitally important
 - i) Neglecting important maintenance procedures in the monitoring and removal of water from storage tanks can lead to a number of significant problems, such as;

- (1) Damage to fuel quality
- (2) Decreases in vehicle performance
- (3) Damage to vehicles and sub-assemblies
- (4) microbial contamination in the tank
- (5) damage to the tank
- (6) and damage to all tank accessories

ii) This pertains to all storage tanks, irrespective of tank material and/or the product stored. It especially applies to the following stored products;

- (1) gasoline
- (2) diesel
- (3) heating oils
- (4) jet fuel

iii) The entire storage tank system is potentially at risk if water is allowed to enter a tank.

iv) Owners of storage tanks and systems must conduct routine and regular maintenance for the monitoring and removal of water. This is their exclusive responsibility. Huge L Steel assumes no liability for any problems associated with water in tanks.

b) Ways in which water can enter a tank

(1) Water can enter a storage tank system by;

- (a) The fuel that is put in the tank
- (b) damaged fill accessories
- (c) loose, broken or missing fill caps and associated accessories
- (d) loose, broken or missing fittings or plugs
- (e) any tank openings that are not water and vapor tight
- (f) air entering through vents and subsequently condensing
- (g) and condensation caused by fuel temperature fluctuations

c) Preventing Water Problems

i) The following practices will assist in preventing water damage;

- (1) Having a qualified person check the inside of your tank and remove any water and sludge if necessary
- (2) Inspecting your fuel product for water
- (3) Inspecting fill caps for damages and replacing if required

- (4) Ensuring all openings are properly closed, except normal vents
- (5) Inspecting spill containment boxes for water build-up and disposing if required
- (6) Using fuel filters that can handle small amounts of water
- (7) Treating your storage tank with biocide on a regular basis
- (8) Cleaning your tank on a regular basis
- (9) Using a water draw off pipe to suck out water from bottom of tank

d) Signs of bacteria in your tank (indicating the presence of water)

- i) If any of the following symptoms are noticed, you should contact a qualified person to inspect your tank and, if necessary, develop a treatment plan using a suitable biocide.

- (1) Plugged fuel filters and lines
- (2) Slow flow rates
- (3) Fluctuating gauge readings
- (4) Odors
- (5) Visual recognition

e) Locating water in your tank and having it removed

- i) When you first purchase your tank, inspect the tank with a flash light to determine if water is present. If water is found, contact your bulk fuel dealer for advice on how to remove it.
- ii) On a routine basis, take fuel samples from your tank and have them analyzed for water.