MERIDIAN®

OPERATOR'S MANUAL

LISTED
HOMOLOGUÉ
CAN/ULC-S601-14

CERTIFIED
CSA W47.1

FUEL TANKS

2300L • 4595L Split • 4600L

SIGN-OFF FORM

Meridian Manufacturing Inc. follows the general Safety Standards specified by the American Society of Agricultural Engineers (ASAE), and the Occupational Safety and Health Administration (OSHA). Anyone who will be using or maintaining the bin must read and clearly understand ALL Safety and Maintenance information presented in this manual.

Review this information annually, before the season start-up.

Make these periodic reviews of SAFETY and USAGE a standard practice for all of your equipment.

This form is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in this manual. Copy this page to continue record.

Date	Employee's Signature	Employer's Signature

PRODUCT REGISTRATION FORM

Attention Dealers:
You can register products online through the Dealer Login: http://dealers.meridianmfg.com/login/

It is mandatory to register your product in order to qualify for future warranty claims that may arise. Knowingly falsifying information on this form will result in the voiding of the product warranty.

You may scan/photograph this completed form (must be legible), email it to: register@meridianmfg.com
A copy of this form may also be mailed to Meridian Manufacturing Inc.

Buyer's Name _____ Dealer's Name _____

Address _____ Address _____

City, Prov/State _____ City, Prov/State _____

Postal/Zip Code _____ Postal/Zip Code _____

Phone Number _____ Phone Number _____

Note: Registering a product in multiple entry format is only allowed when the product has the same model number and the same dealer, however each serial number must be legibly listed for each unit. Delivery dates for a multiple entry must be within a one month time frame.

Product Information _____

Model Number _____ Serial Number _____

Invoice Date _____

Important: Please send this form to the Meridian Manufacturing Inc. location which built this product being registered. If you require further assistance call you're dealer or the Meridian outlet nearest to your location.

We want to thank you for purchasing a Meridian manufactured product. Whether this is your first Meridian purchase or you have been a customer for years, you are now part of the Meridian community of customers and we appreciate your business.

It is important that you now complete the product registration information and this form indicating you have received delivery. This registration and information is necessary to ensure you have access to warranty and product updates in the event it be required in the future.

Registration can be completed by using this form or visiting your dealer who will complete the form online. You will be given access to the Meridian Community and become eligible for updates, special offers and prizes.

Again thank you for choosing Meridian.

I have thoroughly instructed the buyer on the above described equipment. The review included the content of this manual, equipment care, adjustments, safe operation and warranty policy.

Date _____ Dealer's Signature _____

The above equipment and this manual have been received by me. I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Date _____ Buyer's Signature _____

This page intentionally left blank

TABLE OF CONTENTS

This page intentionally left blank

Section 1: INTRODUCTION

Thank you for purchasing a Meridian® Fuel Tank and putting your trust in our hands. Setting the standard for excellence in the storage and fuel handling industry, our double wall fuel tanks meet and exceed all safety and environmental standards. Built with meticulous attention to detail by an enthusiastic and skilled production team our best references are thousands of customers, like you, who have placed their trust in our superior design and technology.

Codes, Regulations and Guidelines:
Built to exacting standards, your fuel tank is designed to give years of environmentally safe, trouble free use. To ensure this performance, it is critical that everyone who will be working around or maintaining the tank, read and understand the Safety, Operation and Maintenance information within this manual.

Fuel storage tanks fall under a variety of governmental jurisdictions; therefore the references in this manual are provided only as a general outline. You may be subject to different legislation and governing bodies in your specific location.

IT IS THE TANK OWNER'S RESPONSIBILITY TO DETERMINE WHAT CODES AND REGULATIONS MUST BE FOLLOWED IN YOUR LOCAL AREA

Meridian Manufacturing Inc. assumes no responsibility for any errors that may appear in this manual and shall not be liable under any circumstances for incidental, consequential or punitive damages in connection with, or arising from, the use of this manual. Information provided herein is of a descriptive nature. Consistent with Meridian's policy of continued research and development of our products, we reserve the right to modify the equipment design and specifications and change information contained in this publication without any preliminary notice.

1.1 SERIAL NUMBER

The serial number is located at the rear.

Have the serial number available when communicating with the dealer or factory and requesting service or asking for information.

Tank Model No: _____

Tank Serial No: _____

Auxiliary Equip: _____

Fig 1 - Serial number located at the rear of tank

The 2300L, 4595L Split Tank and 4600L fuel tanks are designed to meet CAN/ULC-S601-14 standards for strength and durability. They can accommodate a variety of fuel types and features a 100% containment system that is designed to prevent costly leaks.

These single and double walled steel lined tanks are also feature a long lasting durable powder coat paint finish. With proper care and handling this tank will provide many years of environmentally safe fuel storage.

Standard Features:
- CAN/ULC-S601-14 Approved
- 100% Secondary Containment
- Heavy Gauge Construction
- Lifting Lugs
- Emergency Vents
- Spare Fittings Ports
- Sturdy Cradle
- Premium Powder Coat Finish

Options:
- Sturdy cradle option or fully welded heavy duty saddle
- 4959L tank: 70/30 or 50/50 split options

Table 1 - 2300L Specifications

2300 LITRE FUEL TANK	SINGLE WALL		DOUBLE WALL	
	METRIC	IMPERIAL	METRIC	IMPERIAL
Volume	2,310 liters	508 gallons	2,310 liters	508 gallons
Outside Diameter	127.8 cm	50-5/16"	128.6 cm	50-5/8"
Inside Diameter x Length	127.3 x 184.2 cm	50-1/8" x 72-1/2"	127.3 x 184.2 cm	50-1/8" x 72-1/2"
Length (without Skid)	185.4 cm	73"	192.9 cm	75-5/16"
Length (with Skid)	201.8 cm	79-7/16"	236.2 cm	93"
Tank Weight (empty)	263 kg	579.8 lb	462 kg	1018 lb
Skid Weight	157.9 kg	348 lb	157.9 kg	348 lb

2300L Single Wall Utility Tank - Double Bottom

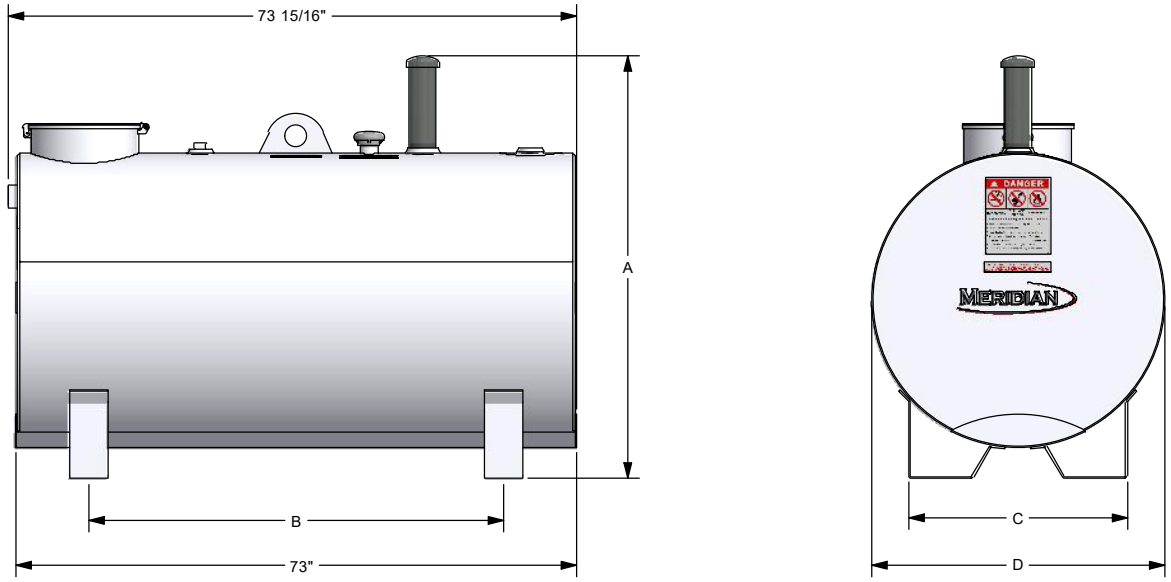


Table 2 - 2300L Single Wall Utility Tank Dimensions

TANK SIZE	ITEM #	DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION D	WEIGHT
2300L	64157	68-3/16"	47-1/2" C/C	40-3/4"	50-5/16"	713 lb

2300L Double Wall Utility Tank - Integral Contained

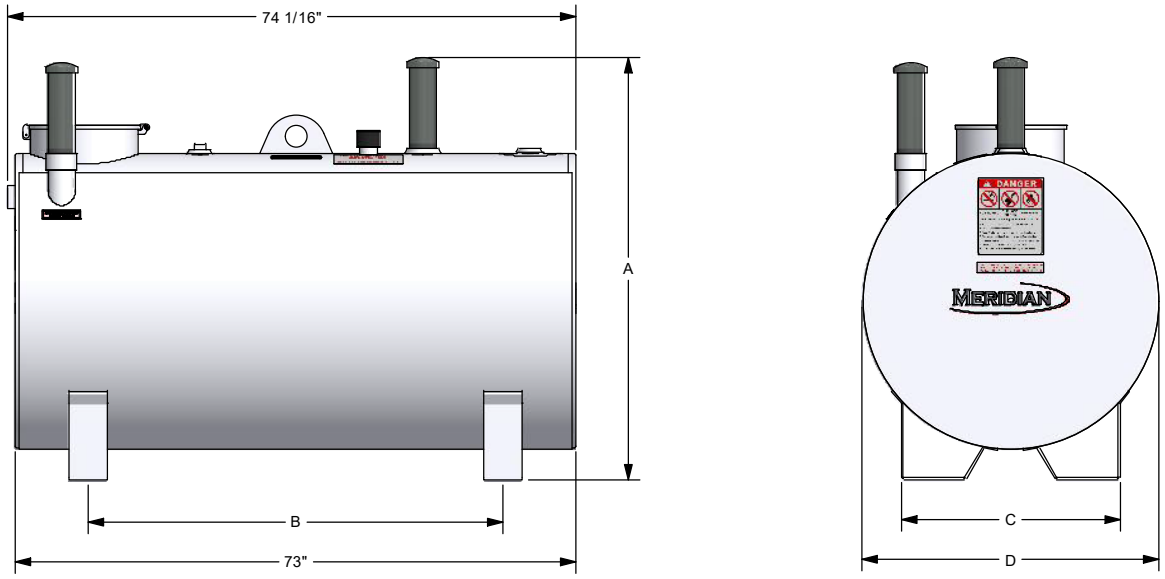


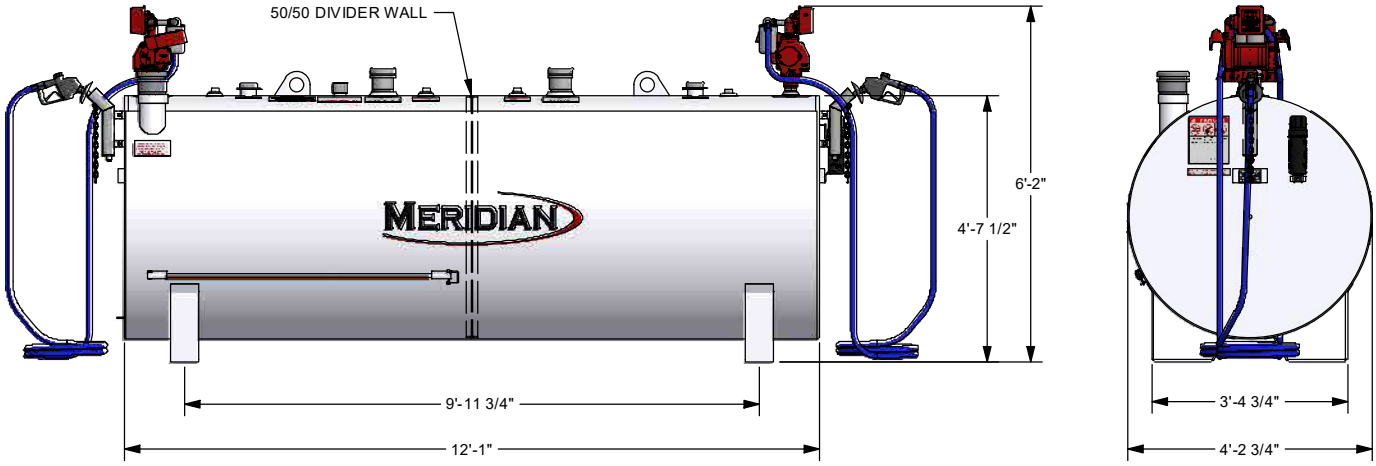
Table 3 - 2300L Double Wall Utility Tank Dimensions

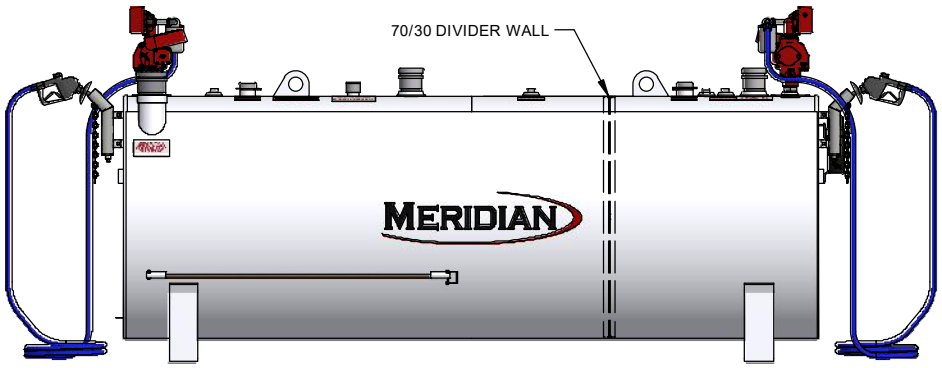
TANK SIZE	ITEM #	DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION D	WEIGHT
2300L	64156	68-3/16"	47-1/2" C/C	40-3/4"	50-13/16"	1112 lb

Table 4 - 4595L Split Tank Specifications

70/30 or 50/50 SPLIT TANKS	METRIC	IMPERIAL
Outside Diameter	128.3 cm	50-1/2"
Volume 70% Compartment	3241 liters	712 Gallons
70% Comp I.D. x Length	127.3 x 256.5 cm	50-1/8 x 101"
Volume 50% Compartment	2295 liters	505 Gallons
50% Comp I.D. x Length	127.3 x 183.2 cm	50-1/8 x 72-1/8"
Volume 30% Compartment	1351 liters	297 Gallons
30% Comp I.D. x Length	127.3 x 109.9 cm	50-1/8 x 43-1/4"
Outside Diameter	128.3 cm	50-1/2"
Length (without Skid)	366.7 cm	144-3/8"
Length (with Skid)	406.4 cm	160"
Tank Weight (empty)	830 kg	1829 lb
Skid Weight	196.9 kg	434 lb

4595L Split Double Wall Utility Tank - Integral Contained



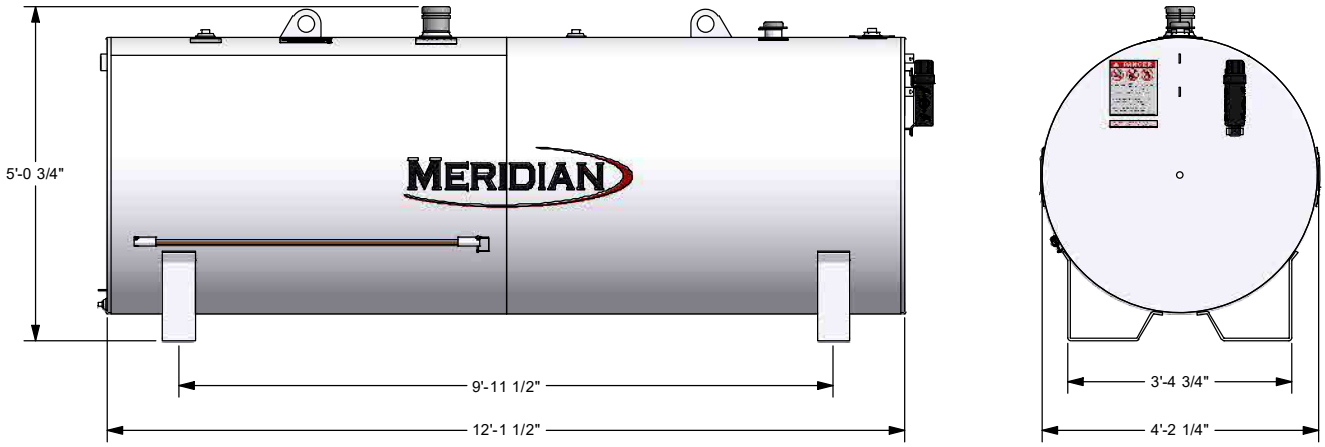


Images are displayed with the optional pump package

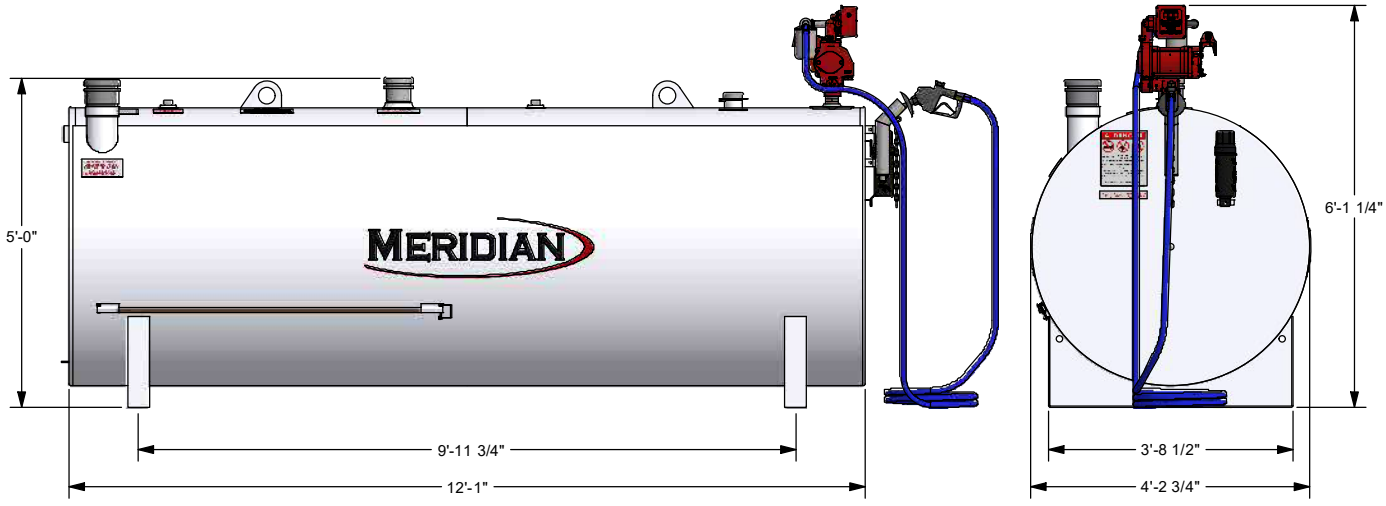
Table 5 - 4600L Specifications

4600 LITRE FUEL TANK	SINGLE WALL		DOUBLE WALL	
	METRIC	IMPERIAL	METRIC	IMPERIAL
Volume	4,607 liters	1,217.4 gallons	4,507 liters	1,013.4 gallons
Diameter	127.8 cm	50-5/16"	128.3 cm	50-1/2"
Inside Diameter x Length	127.3 x 367 cm	50-1/8 x 144-1/2"	127.3 x 367 cm	50-1/8 x 144-1/2"
Length (without Skid)	368.3 cm	145"	366.7 cm	144-3/8"
Length (with Skid)	384.6 cm	151-7/16"	406.4 cm	160"
Tank Weight (empty)	426 kg	939.16 lb	728 kg	1,604.8 lb
Skid Weight	196.87 kg	434.03 lb	196.87 kg	434.03 lb

4600L Single Wall Utility Tank



4600L Double Wall Tank - Integral Contained



Images are displayed with the optional pump package

This page intentionally left blank

Section 2: SAFETY

The Safety Alert Symbol means:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

3 Big Reasons why safety is important to you:

- Accidents Disable and Kill
- Accidents Cost
- Accidents Can Be Avoided

The Safety Alert Symbol identifies important safety messages on the fuel tank and in this manual.

The following signal words are used in this manual to express the degree of hazard for areas of personal safety.

When you see the symbol and/or the signal words described below, obey the accompanying message to avoid possible injury or death.

DANGER — Indicates a hazardous situation that, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations. Typically for machine components which, for functional purposes, cannot be guarded.

WARNING — Indicates a hazardous situation, if not avoided, could result in death or serious injury. This word identifies hazards that are exposed when guards are removed. It may be used to alert against unsafe practices.

CAUTION — Indicates a hazardous situation, if not avoided, could result in minor or moderate injury. It may be used to alert against unsafe practices.

NOTICE — Indicates practices or situations which may result in the malfunction of, or damage to equipment.

SAFETY INSTRUCTIONS — Safety instructions (or equivalent) signs indicate specific safety-related instructions or procedures.

2.1 SAFETY ORIENTATION

YOU are responsible for the SAFE usage and maintenance of your Meridian® Fuel Tank. Be sure that everyone who will maintain or work around it, is familiar with the safety, maintenance procedures.

This manual will take you step-by-step through your working day. It will alert you to all the safe practices that should be adhered to while using the tank.

It has been said, "The best safety feature is an informed, careful worker" Good safety practices not only protect you but also the people around you. Make these practices a dynamic part of your workday.

Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Fuel tank owners must give instructions to employees before allowing them to use the tank.

  Procedures must be reviewed annually thereafter, as per OSHA (Occupational Safety and Health Administration) regulation 1928.57.

- Develop a comprehensive safety program for your work area.

- The most important safety device is a SAFE worker. It is their responsibility to understand all safety and usage instructions in this document, and to follow them.

- An untrained worker exposes himself and bystanders to possible serious injury or death.

- Think SAFETY! Work SAFELY!

2.2 GENERAL SAFETY

- Read and understand the owner's manual and all safety decals before using or maintaining the fuel tank.

- Only trained, competent persons shall use the tank. An untrained person is not qualified to use it and operate its auxiliary equipment.

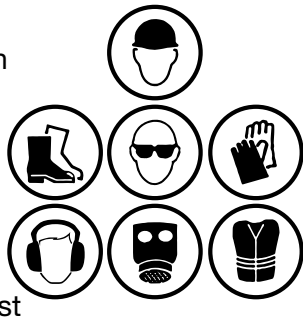
- Have a first-aid kit available for use should the need arise.

- Provide a fire extinguisher for use in case of an accident. Store in a highly visible place.

- Use this fuel tank for its intended purpose only.

- This tank is not intended for use by children.

- Wear personal protective equipment (PPE). This list may include but is not limited to:
  - Hard hat
  - Protective shoes with slip resistant soles
  - Eye protection
  - Work gloves
  - Hearing protection
  - Respirator or filter mask
  - Hi-Visibility safety vest



- Stay away from power lines. Electrocution can occur without direct contact.

- Never use alcoholic beverages or drugs which can hinder alertness or coordination while using the equitpment.

  Consult your doctor about operating machine while taking prescription medications.

- If the elderly are assisting with farm work, their physical limitations need to be recognized and accommodated.

2.3 EQUIPMENT SAFETY GUIDELINES

- Safety of the workers and bystanders is one of the main concerns when designing and developing this fuel tank. However, every year many accidents occur which could have been avoided by a few seconds of thought, and a more careful approach to handling equipment.

- Do not allow personnel to use this tank until they have read this manual. They should have a thorough understanding of the safety precautions.

  Review the safety instructions with all users annually.

- In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with safety guards removed.

  Equipment should never be used in this condition. All guards must be in place. If removal becomes necessary for repairs, replace the guard prior to use.

- This equipment is dangerous to children and persons unfamiliar with its operation.

  The operator must be responsible, properly trained and physically able. You should be familiar with farm machinery in general.

- DO NOT lift or attempt to transport the tank, containing fluid, at any time.

- Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - DO NOT TRY IT.

- Do not modify the equipment in any way. Unauthorized modification result in serious injury or death and may impair the function and life of the equipment.

2.4 SAFETY DECALS

- Keep safety decals clean/legible at all times.

- Replace safety decals that are missing or have become illegible.

- All safety decals have a part number in the lower right hand corner. Use this part number when ordering replacements.

- Safety decals are available from your authorized distributor, dealer's parts department or from the factory.

2.4.1 Applying Decals:

1. Be sure the application area is clean and dry. Ensure the surrounding temperature is above 10°C (50°F).
   - Remove all dirt, grease, wax from the surface.
   - Clean with a non-ammonia based cleaner.
   - Wipe the clean surface with isopropyl alcohol on paper towel, and allow to dry.

2. Determine the exact position before you remove the backing paper.

3. Peel a small portion of the split backing paper.

4. Align the decal over the specified area. Use a squeegee to carefully press the small portion, with the exposed adhesive backing, into place.

5. Slowly peel back the remaining paper and carefully smooth the rest of the decal into place.

6. Small air pockets can be pierced with a pin and smoothed out using the squeegee, or a piece of sign backing paper.

2.5 SAFETY DECAL LOCATION

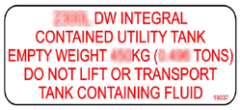
The following illustrations show the general location of safety decals on fuel tanks. The position of decals may vary depending on the tank's options. Decals are not shown at actual size.

1. ULC Plate (part #20027)
   Located on rear of tank

2. Serial Number Decal
   Located below ULC Plate

3. Emergency Venting Decal (part #20105)
   Located below emergency vents

4. Containment Inspection Warning Decal (part #20045)
   Located below containment inspection port

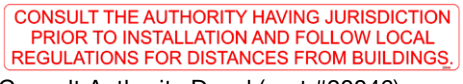


5. Lifting Lug Warning Decal (part #19037)
   Located below lifting lug

6. Vent Warning Decal (part #20026)
   Located below 3" port

7. Fill Warning Decal (part #20022)
   Located below vented fill cap

8. Danger Safety Decal (part #20048)
   Located on both ends of tank



9. Consult Authority Decal (part #20046)
   Located on front, below safety decal

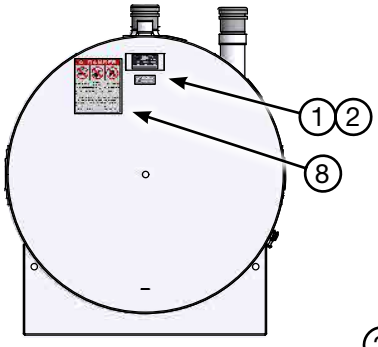
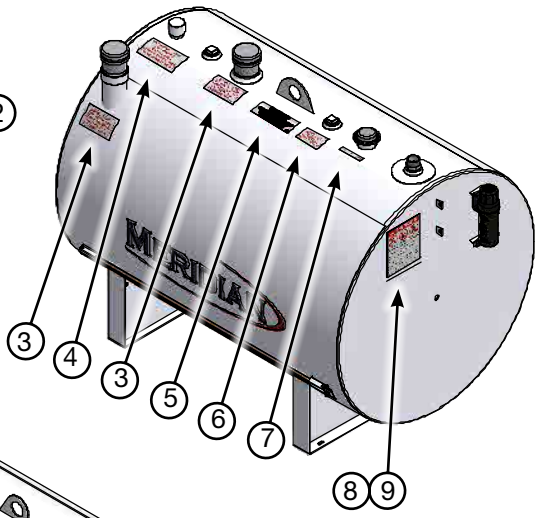


Fig 2 - Rear of fuel tank

Fig 3 - 2300 L decal location



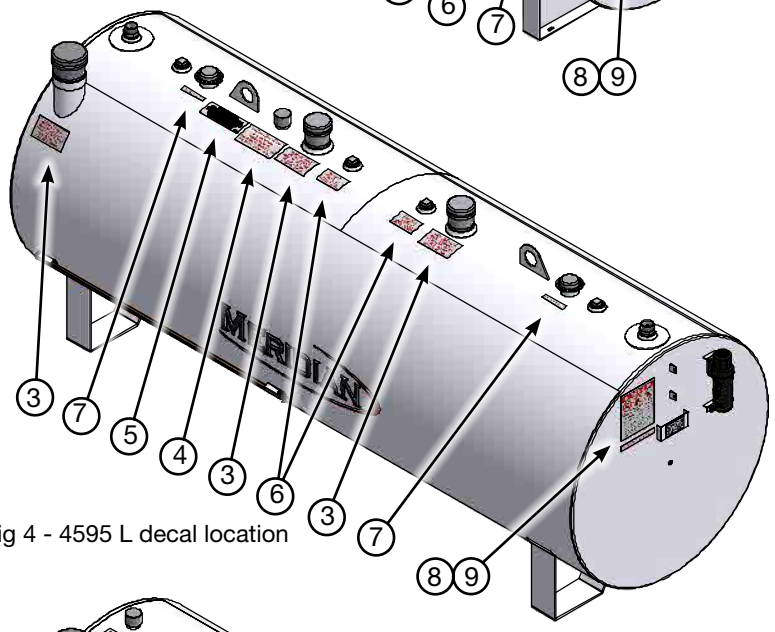


Fig 4 - 4595 L decal location

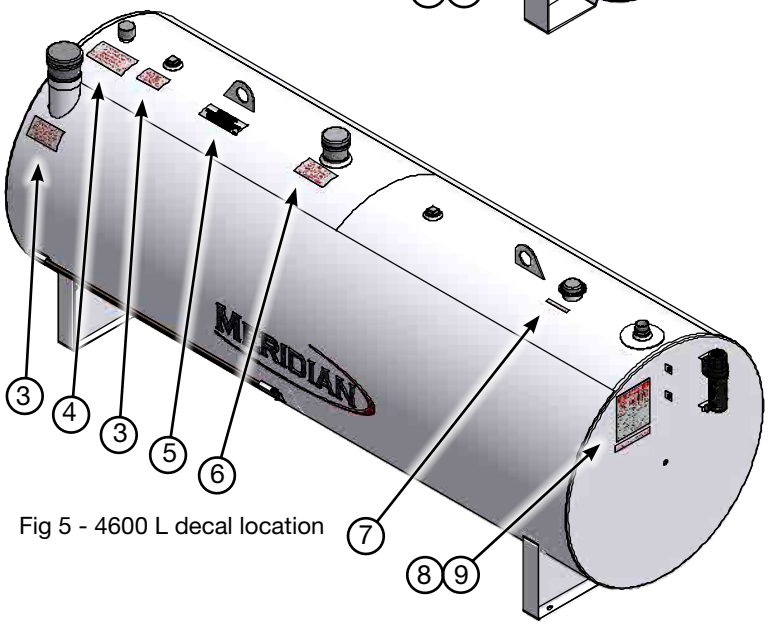


Fig 5 - 4600 L decal location

2.6 ENVIRONMENTAL REGULATIONS

- The fuel tank installer shall ensure that all environmental requirements are taken and implemented in accordance with the local authority having jurisdiction.

- This tank must be installed by a qualified tank installer who shall consult with the proper authorities with jurisdiction to ensure all requirements of CAN/ULC-S601-14 and all Federal, Provincial and Local codes are being met prior to installation. Failure to do so, could void your warranty.

- Protect Fuel Tank Against Vehicle Traffic:
  The installer is to ensure that the fuel tank is adequately protected against damage from vehicular traffic in compliance with all Federal, Provincial and Local Codes.

- Regular Inspection and Maintenance:
  The fuel tank is to be inspected annually and any repairs to the exterior coating shall be made at the time of inspection in accordance with the coating manufacturer's instructions.

2.7 FUEL TANK SAFETY

- Do not lift or transport the tank when it contains fluid.

- Install the tank away from buildings, property lines, public paths or high traffic areas.

- Protect the tank against damage from vehicular traffic in compliance with all Federal, Provincial and Local Codes.

- Install the tank on a well prepared, level base designed to hold the tank full of liquid.

2.8 FUEL TRANSFER SAFETY

- Procedures must be in place when transferring fuel from a delivery vehicle to the tank. Although some transfer procedures are unique to some facilities, the following general safety procedures must always be followed:
  - Read operator manual before using fuel tank.
  - DO NOT smoke when operating or refueling the fuel tank.
  - Keep sparks, flames & hot material away from the fuel tank.
  - Turn vehicle ignition off and remove key from ignition before refueling.
  - Keep vehicles at least 1.5 m (5') away from the fuel tank at all times.
  - Never leave the tank unattended while refueling is in process.
  - DO NOT overfill. 95% capacity is the maximum legal limit.
  - Always turn pump off when finished fueling operations.
  - Always store pump nozzle in drip pot when not in operation.

- ALWAYS determine how much fuel your tank can safely hold. Over filling the tank will cause spills. Check the fuel level by dip checking the tank prior to any fuel transfer. Instructions on the correct procedure for dip checking a tank can be found in this manual.

- DO NOT OVERFILL. Determine a Safe Gauge Height (SGH) this is how much fuel a tank can hold allowing for expansion due to temperature variations. A good rule of thumb is in summer months the tank should not be more than 90% full and in winter the tank should not be more than 95% full.

- ALWAYS start the fuel transfer at a reduced rate. This reduces the potential for the build up of static electricity.

- ALWAYS maintain good communication with the driver of the delivery vehicle. Poor communication between the tank operator and the delivery driver often leads to spills and accidents.

This page intentionally left blank

Section 3: SITE AND INSTALLATION

⚠ WARNING

- Read and understand the Operator's Manual, and all safety decals, before using.
- Never lift or attempt to transport tanks containing fluid.
- Inspected the fuel tank annually.
- Ensure that all environmental requirements are taken and implemented in accordance with the local authority having jurisdiction.
- Ensure that the fuel tank is adequately protected against damage from vehicular traffic in compliance with all Federal, Provincial and Local Codes.

This document only covers general installation instructions. Consult the correct authority having jurisdiction in your area prior to tank installation.

IMPORTANT:

This tank must be installed by a qualified tank installer who shall consult with the proper authorities with jurisdiction to ensure all requirements of CAN/ULC-S601-14 and all Federal, Provincial and Local codes are being met prior to installation. Failure to do so, could void your warranty.

Note:

All timber/crates used in shipping must be completely removed from the tank prior to installation.

Choosing a Location:

The tank shall be placed at a safe distance from buildings, other tanks, roadways, waterways, property lines and all public paths. Refer to local authorities for applicable codes.

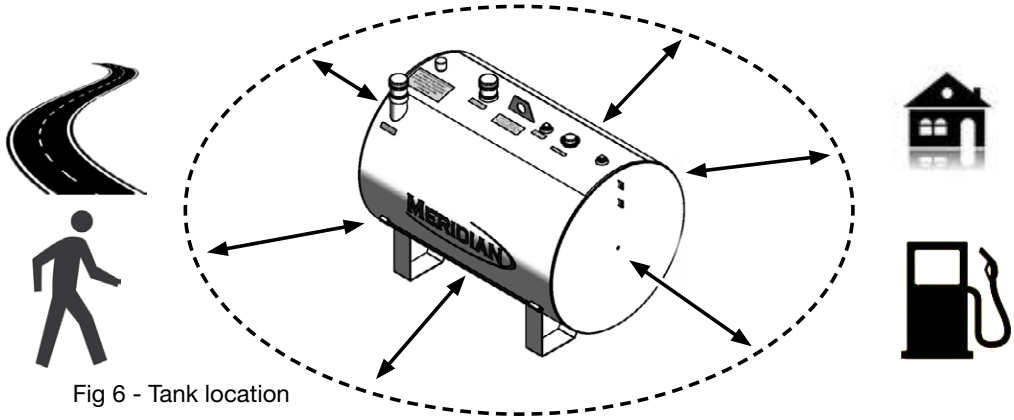


Fig 6 - Tank location

Installing the Fuel Tank Base:
The tank must be installed on a level base designed to support the tank weight plus 100% liquid loading.

The tank skid, saddle or cradle shall be the only part of the tank in contact with the foundation or base.

Fig 7 - Level base

Lifting and Transporting Fuel Tanks:
Only the lifting lug weldments on the tank shall be used for unloading or transporting the empty fuel tank. DO NOT lift or transport tanks containing fluid at any time.

Inspecting Fuel Tanks:
The tank installer shall ensure that all fittings, have not loosened during transportation. They must be sealed and tight.

Check all painted areas of the tank for damage due to shipping and also at final installation. All scratched or scuffed areas must be touched up with paint prior to use. If the damages are deemed to affect the integrity of the tank, contact your distributor or dealer prior to putting any product in the tank.

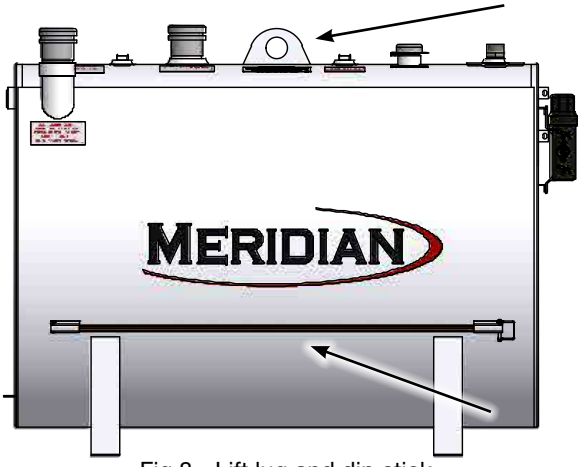


Fig 8 - Lift lug and dip stick

Installation of Tank Venting:
All primary and secondary, normal and emergency vents are to be installed before the tank is placed into service. The design of the normal vent will not allow flame impingement onto the surface of the tank in the event of vapor ignition.

Inspecting Fuel Tank Containment System:
The containment should be checked on a regular basis, to confirm that neither product nor water has accumulated therein. Take immediate remedial action if product or water is found. The disposal of any liquid found in the containment shall be disposed of in accordance with the requirements of the authority having jurisdiction.

Environmental Regulations:
The fuel tank installer shall ensure that all environmental requirements are taken and implemented in accordance with the local authority having jurisdiction.

Protect Fuel Tank Against Vehicle Traffic:
The installer is to ensure that the fuel tank is adequately protected against damage from vehicular traffic in compliance with all Federal, Provincial and Local Codes.

Regular Inspection and Maintenance:
The fuel tank is to be inspected annually. All repairs to the exterior coating shall be made at the time of inspection in accordance with the coating manufacturer's instructions.

This page intentionally left blank

Section 4: OPERATION

⚠ WARNING

- Read and understand the Operator's Manual, and all safety decals, before using.
- DO NOT smoke when operating/refueling the fuel tank.
- Keep sparks, flames & hot material away from the fuel tank.
- Turn vehicle ignition off and remove key from ignition before refueling.
- Keep vehicles at least 1.5 m (5') away from the fuel tank at all times.
- NEVER leave the tank unattended while refueling is in process.
- ALWAYS turn pump off when finished fueling.
- DO NOT OVERFILL. 95% capacity is the maximum legal limit.
- ALWAYS store pump nozzle in drip pot when not in operation.
- ALWAYS determine how much fuel your tank can safely hold. Over filling the tank will cause spills. Check the fuel level by dip checking the tank prior to any fuel transfer.
- ALWAYS start the fuel transfer at a reduced rate. This reduces the potential for the build up of static electricity.
- ALWAYS maintain good communication with the driver of the delivery vehicle.

It is the responsibility of the owner and operators to read this manual and to train all personnel before they start working with this tank. Follow all safety instructions exactly - it is everyone's business. By following recommended procedure, a safe working environment is provided for the operator, co-workers and bystanders in the area around the work site.

The design and configuration of this tank includes safety decals and equipment. Hazard controls and accident prevention are dependent upon the personnel operating and maintaining it. Their awareness, concern, prudence and proper training are crucial.

4.1 TANK COMPONENTS

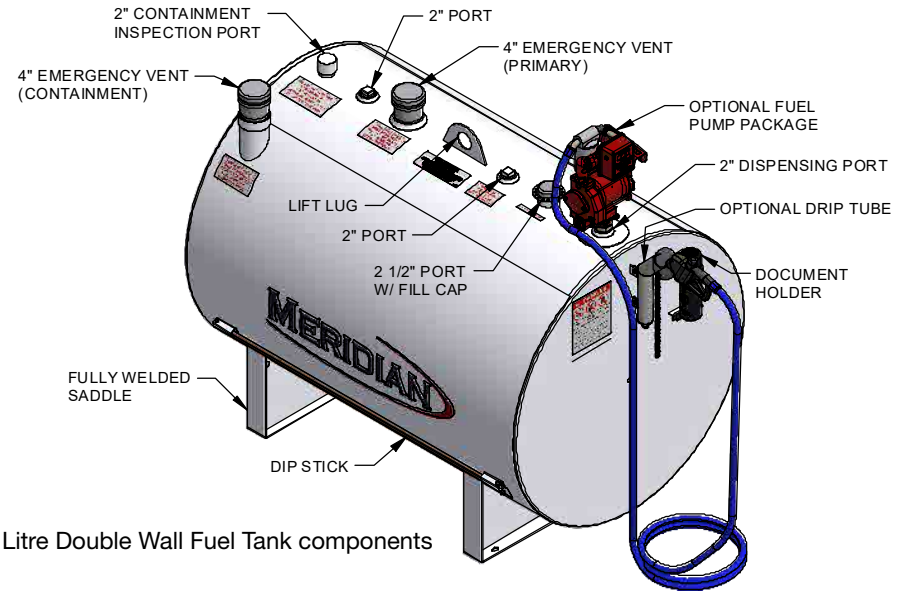


Fig 9 - 2300 Litre Double Wall Fuel Tank components

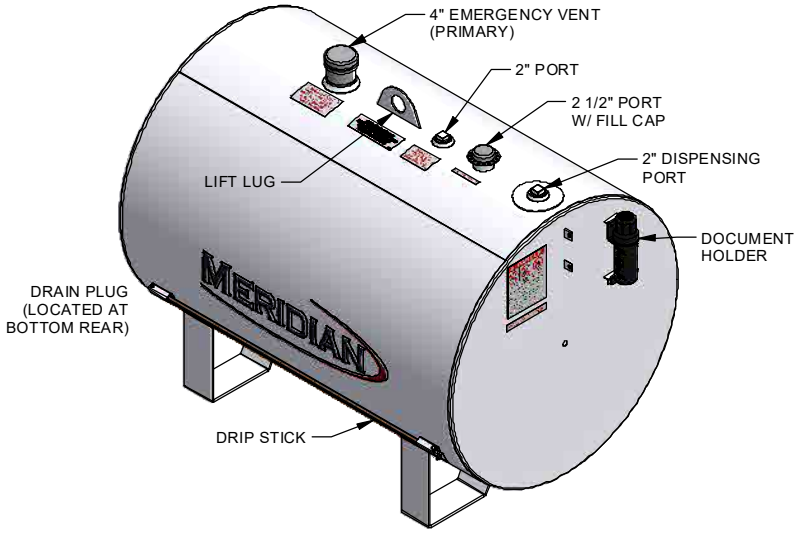


Fig 10 - 2300 Litre Single Wall Utility Tank components

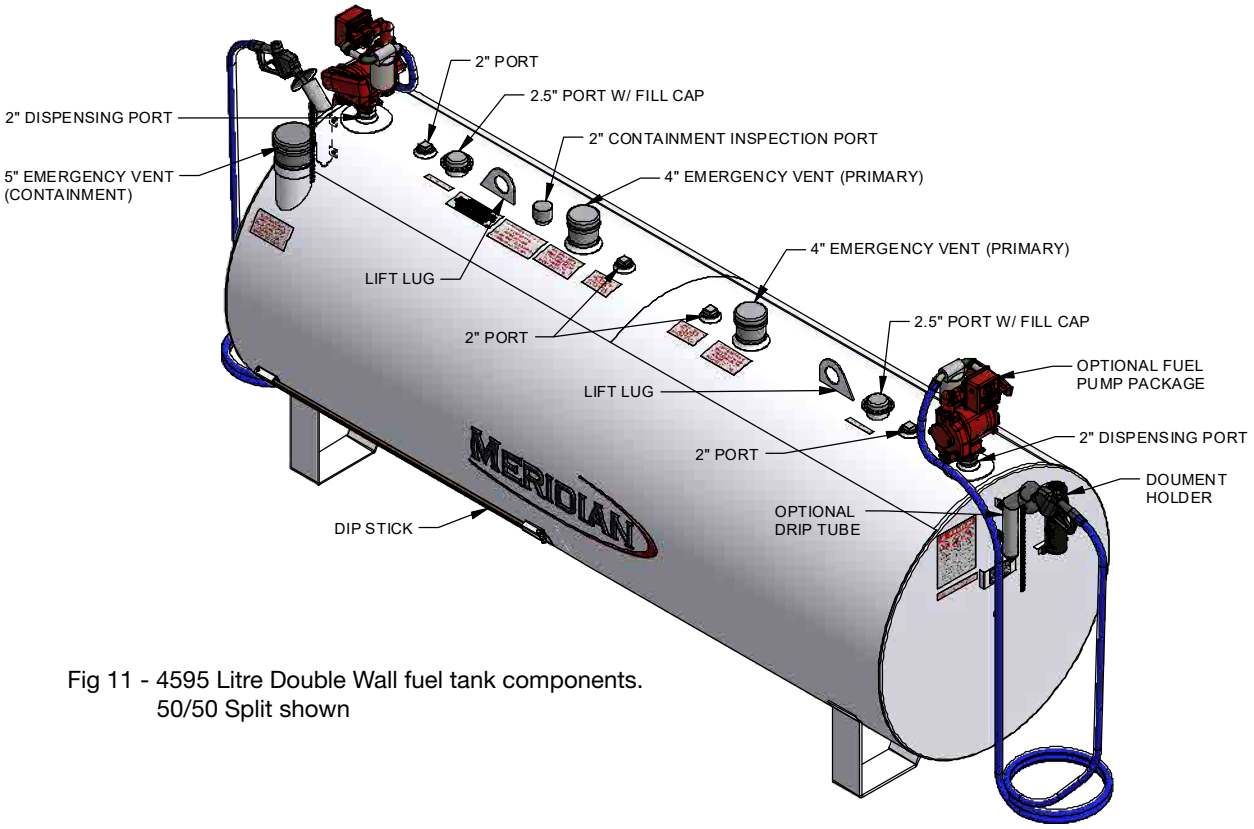


Fig 11 - 4595 Litre Double Wall fuel tank components.
50/50 Split shown

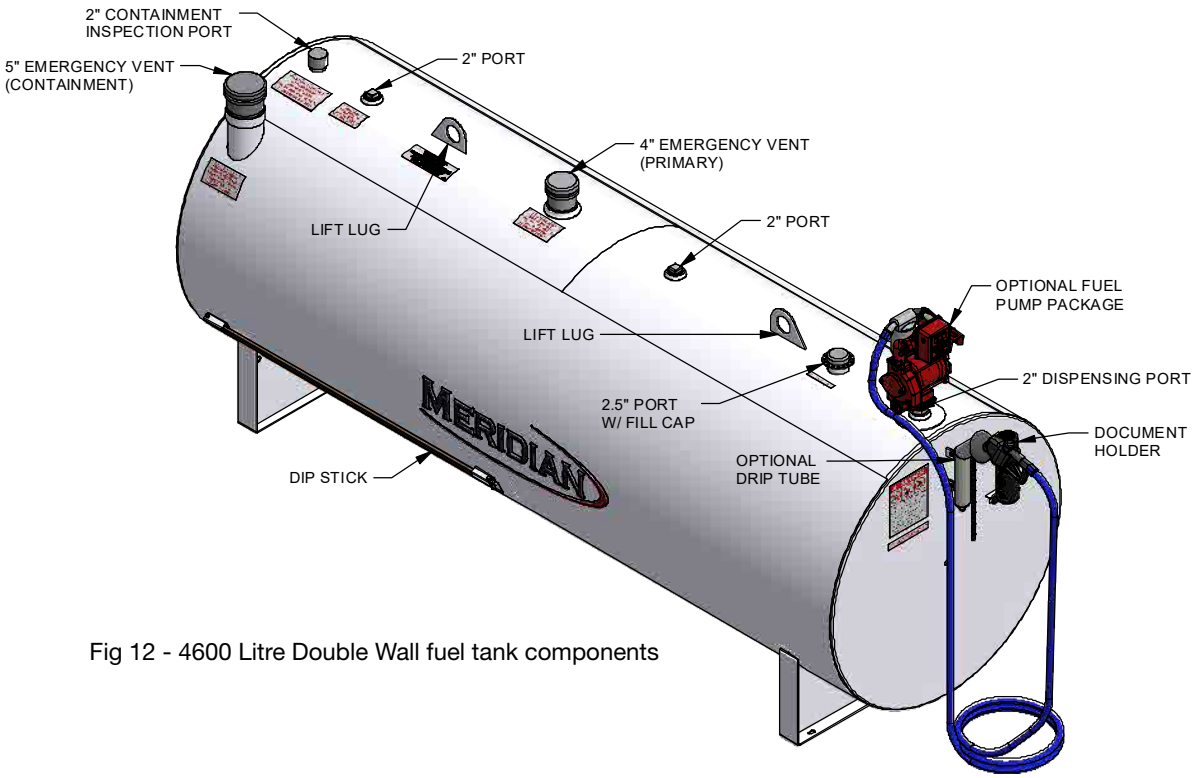


Fig 12 - 4600 Litre Double Wall fuel tank components

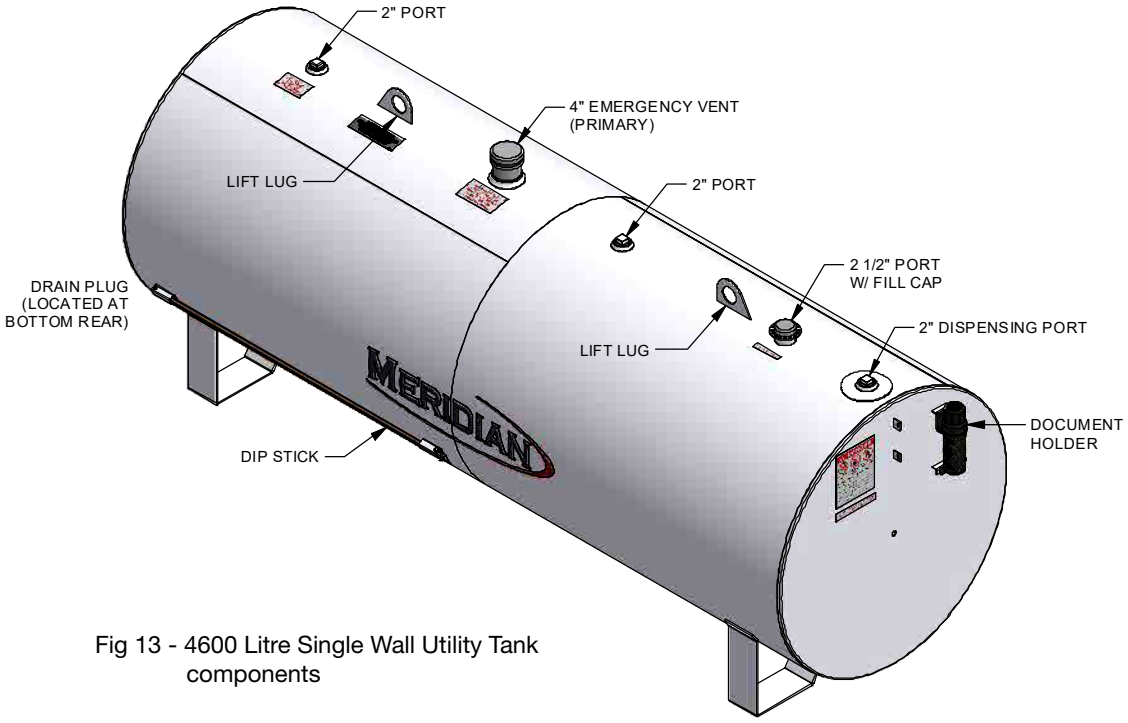


Fig 13 - 4600 Litre Single Wall Utility Tank components

4.2 INSTRUCTIONS FOR SPILL CONTAINMENT DEVICE

1. The delivery personnel shall ensure that all applicable Federal, Provincial and Local Codes are met during the filling of the tank.

2. The delivery personnel shall be familiar with, and trained on, proper above ground tank filling procedures.

3. The delivery personnel responsible for transferring product to an above ground tank shall take all reasonable steps to prevent spillage.

4. The delivery personnel shall remain in constant view of the transfer nozzle and fill pipe and shall be in constant attendance at the discharge control valve when the tank vehicle is being unloaded.

4.3 TOP FILL FUEL TRANSFER

⚠ WARNING

DO NOT dispense fuel when transfer is in process

1. Have a pre-transfer meeting with the operator of the delivery vehicle to determine the correct product is being transferred into the correct tank.
   - Check the tank's fuel level to confirm the amount of fuel to be added.

2. Inspect the tank:
   - Check that the vents are unobstructed.
   - Check the transfer hose for leaks, cracks or damage. If leaks are present or later appear, stop transfer, repair as necessary.

3. Wipe area around the vented fill cap with a clean cloth or rag to remove risk of fuel contamination. See Figure 16

4. Open vented fill cap and place cap in a clean secure location. Insert the delivery nozzle into the fill port See Figure 16

Note:
2300L, 4595L and 4600L tank models operate with a fill port.
Tank models over 10,000L this is replaced with a 3 inch male cam and drop tube.

5. Start delivery vehicle pump, depress delivery nozzle handle and slowly begin fuel transfer. Only increase the flow of the product from the delivery vehicle when you are sure there are no problems.

6. DO NOT WALK AWAY DURING TRANSFER.
   - Continuously monitor the transfer of fuel.
   - At all times, keep open communication between the delivery vehicle and tank operator.

7. Regularly check fuel tank levels.
   - Reduce fuel transfer rates when nearing the top of the tank to avoid overfilling the tanks.
   - Notify the delivery vehicle operator when the transfer procedure is almost complete.

8. Release the handle on the delivery nozzle.

9. Turn off the delivery vehicle delivery pump.

10. Remove delivery nozzle from the fill port.
    - Secure hose and nozzle on delivery vehicle.

11. Conduct a post-transfer meeting between the delivery operator and tank operator.

12. Dip tanks and record amount of fuel delivered.

13. Replace vented fill cap over the fill port.

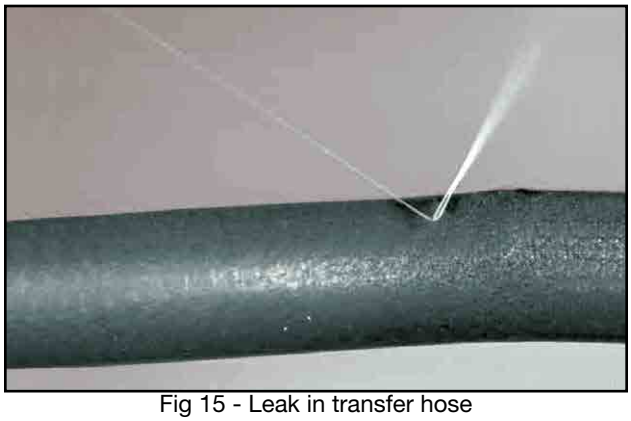


Fig 15 - Leak in transfer hose

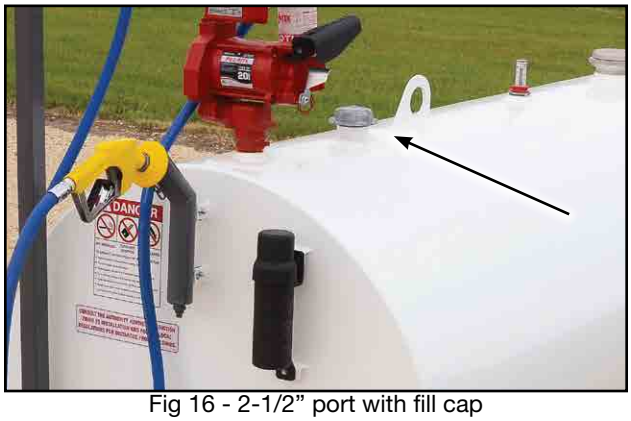


Fig 16 - 2-1/2" port with fill cap

4.4 MEASURING FUEL TANK LEVEL

⚠ DANGER

Never smoke around the fuel tank or expose the tank to direct flame.

Note:
For more accurate results wait 30 - 60 mins after refueling then dip check the tanks. This allows fuel to settle and will give more accurate readings.

1. Remove the dip stick from its storage location at the side of the tank.
   - Wipe off the stick to remove dust and debris, so the tank will not be contaminated.
2. Remove the vented fill cap and insert the dip stick into the tank until it reaches the bottom.

Note:
Ensure the dip stick is inserted with the lowest number on the dip stick placed toward the bottom of the tank.

3. Take note of the amount of fuel, in centimeters (cm), that is showing on the stick.
4. Replace the vented fill cap.
5. Compare the number of centimeters on the dip stick with the Fuel Tank Dip Chart in this manual to determine the amount of fuel in the tank. Refer to the charts in Section 6.

Fig 17 - Dip stick location

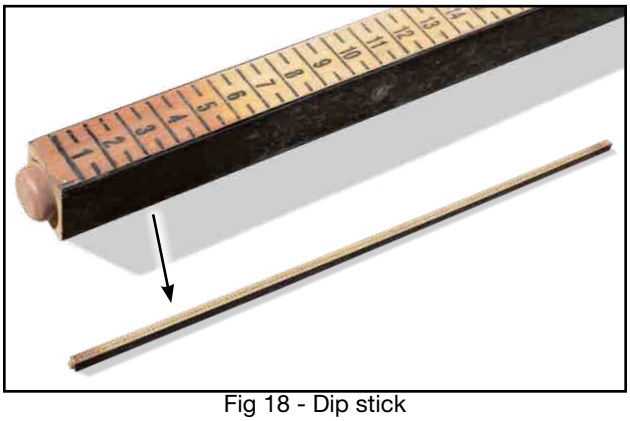


Fig 18 - Dip stick

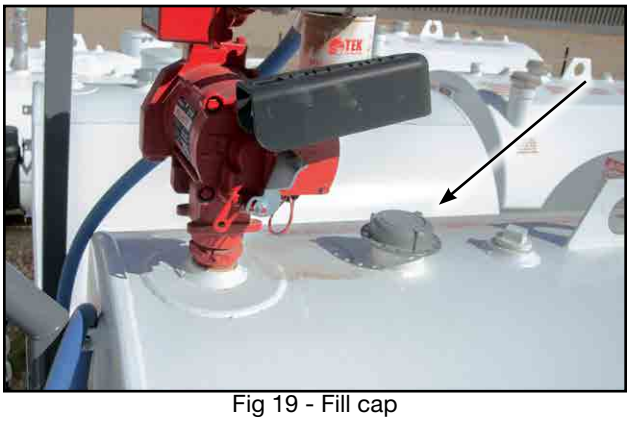


Fig 19 - Fill cap

4.5 PUMP OPERATION

⚠ WARNING

Always keep the nozzle in contact with the container being filled during the filling process to minimize the possibility of static electricity build up.

The 2300L and 4600L DW Fuel Tanks each come with three different pump options. Dependent on the pump option associated with your tank consult the correct Installation and Operator Manual provided at time of purchase for detailed pump installation, operation and maintenance procedures.

4.5.1 Dispensing Fuel (General):

1. Reset Meter to "0" (if applicable).
   - Do not reset meter while dispensing fuel.
2. Remove dispensing nozzle from the nozzle boot or drip pot.
3. Move the switch lever to the "ON" position to power the pump.
4. Insert the dispensing nozzle into the container to be filled.
5. Operate the nozzle to dispense fluid; release nozzle when the desired amount of fluid has been dispensed.
6. Move switch lever to the "OFF" position to stop the pump.
7. Remove the dispensing nozzle from the container and store it in the nozzle boot or drip pot.

4.5.2 Locking The Pump:

Dependent on the pump options selected, the pump nozzle can be pad locked for added security. With the pump turned off, and the nozzle in the stored position, a pad lock can be inserted through the locking link and the nozzle handle opening. This configuration prevents the nozzle from being removed from the nozzle cover.

Optional drip pots and chains are also available (see Figure 21). The chain can be wrapped around the nozzle and secured with a padlock. This secures the nozzle when not in use or when the tank is left unattended for long periods of time.

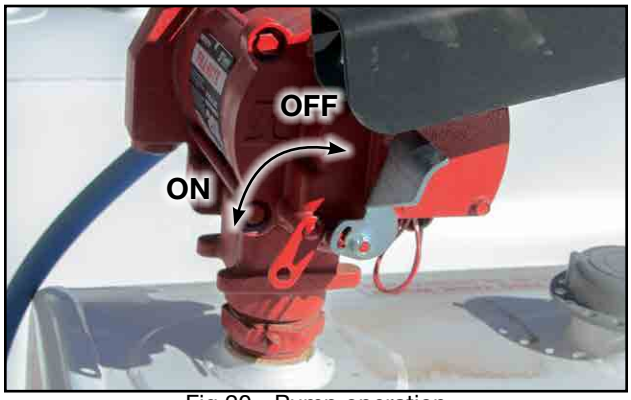


Fig 20 - Pump operation


Fig 21 - Nozzle boot

Section 5: SERVICE AND MAINTENANCE

⚠ WARNING

- Read and understand the Operator's Manual, and all safety decals.
- DO NOT smoke when inspecting the tank.
- Keep sparks, flames & hot material away from the fuel tank.
- Installed venting must meet industry standards.

5.1 TANK INSPECTION:

5.1.1 Daily:

- Check the tank for leaks.
- Inspect the emergency vent(s), including the seal area, for dust, debris, snow, or ice. Remove any obstruction that would prevent ventilation.

  Inspect all vent components and surfaces for damage, corrosion, or excessive wear. If any is found, replace the vent.

5.1.2 Annually:

- Check the internal tank for leakage.
- Check the pump and meter for proper operation.
- Check the calibration of the meter, if equipped.
- Make sure the anchor bolts are securely attached to the concrete pad.
- Thoroughly clean the tank and pump.

5.2 FUEL METER MAINTENANCE

5.2.1 Calibration:

For accurate measurement and to prevent meter damage, the meter and piping must always be filled with liquid and be free of air.

Typically, fuel meters can be calibrated for either Litres or U.S. gallons. Calibration is normally required before installation, after disassembly, after wear due to normal operation, or when changing from gallons to liters.

1. If equipped, verify whether the meter installed on the tank is factory calibrated for Litres or U.S. gallons.

2. Select a container of known volume; a five gallon container or larger should be used.

3. Fill a container to the known volume.

4. Check the reading on the meter.
   - If the meter is incorrect, adjust the calibration screw to obtain either more or less diesel fuel.
   - Follow the OEM instructions for the specific meter being used.

5. Repeat Steps 3 and 4 until the calibration is correct.

5.2.2 Maintenance:

The fuel meter should operate maintenance free. However, certain liquids can dry out while in the meter housing, causing the meter to stop functioning. If this occurs, the meter should be thoroughly cleaned, as per instructions below.

1. Remove the meter from the pump.

2. Pour a flushing fluid into the meter and allow it to penetrate the internal components.

3. If possible, pump the flushing fluid through the meter.

4. If the flushing procedure does not fix the problem, the meter should be repaired by an authorized dealer or replaced.
   - Disassembly of the meter is not recommended.

5. Calibrate the meter following the calibration instructions in this section.

5.2.3 Storage:

If the meter is to be stored for an extended period of time, clean it thoroughly to help protect the meter from internal damage.

Section 6: TROUBLESHOOTING

This section contains a list of common problems, causes and offers quick solutions to those pump issues. For detailed instructions about the pump installation and operation, consult the manuals that were provided with the pump at the time of sale.

⚠ WARNING

- DO NOT open or attempt to repair the motor. Opening the motor will compromise the integrity of the Explosion Proof Construction and will void any existing warranty and certification (UL listing).
- Enure all power to the pump is turned off prior to performing any service or maintenance.
- In "Skid Tank" applications, make sure the tank is properly secured so it cannot shift or move when the tank is empty or full.

Problem	Possible Cause	Possible Solution
Pump Won't Prime	Suction line problem	Check for leaks in suction line
	Bypass valve open	Remove and inspect valve. Must move freely and be free of debris
	Vanes sticking	Check vanes and slots for nicks, burrs and wear
	Excessive rotor or vane wear	Inspect rotor & vanes for excessive wear or damage. Replace if necessary
	Outlet blocked	Check pump outlet, hose, nozzle & filter for blockage
	Vapor Lock	Reduce vertical and horizontal distance from pump to liquid.
		Remove automatic nozzle
Low Capacity	Excessive dirt in screen	Remove and clean screen
	Suction line problem	Check suction line for leaks or restrictions; it may be too small, too long or not airtight
	Bypass valve sticking	Remove and inspect valve; must move freely & be free of debris
	Vanes sticking	Check vanes and slots for wear
	Excessive rotor or vane wear	Inspect rotor & vanes for excessive wear or damage. Replace if necessary

Problem	Possible Cause	Possible Solution
Low Capacity	Hose or nozzle damage	Replace hose or nozzle
	Plugged filter	Replace filter
	Low fluid level	Fill tank
Pump runs slowly	Incorrect voltage	Check incoming line voltage while pump is running
	Vanes sticking	Inspect vanes and slots for nicks, burrs and wear
	Wiring problem	Check for loose connections
	Motor problem	Return to place of purchase
Motor stalls	Bypass valve sticking	Remove and inspect valve. Must move freely and be free of debris
	Low voltage	Check incoming line voltage while pump is running
	Excessive rotor or vane wear	Check rotor & vanes for excessive wear or damage
	Debris in pump cavity	Clean debris from pump cavity
Motor overheats	Pumping high viscosity fluids	These fluids can only be pumped for short periods of time (less than 30 minutes duty cycle)
	Clogged screen	Remove and clean screen
	Restricted suction pipe	Remove and clean pipe
	Motor failure	Return to place of purchase
	Pump rotor lock-up	Clean and check pump rotor and vanes
Motor Inoperative	No power	Check incoming power
	Switch failure	Return to place of purchase
	Motor failure	Return to place of purchase
	Thermal protector failure	Return to place of purchase
	Incorrect/loose wiring	Check wiring
Fluid Leakage	Bad O-ring gasket	Check all O-ring gaskets
	Dirty Shaft Seal	Clean seal & seal cavity
	Bad Shaft Seal	Replace seal
	Incompatible Fluid	Refer wetted parts list to fluid manufacturer
	Loose fasteners	Tighten fasteners
Pump hums but will not operate	Dirt in Pump cavity	Clean out pump cavity
	Motor failure	Return to place of purchase
	Broken Key	Remove all debris & replace key

Section 7: REFERENCE

For information not included here, or for a digital copy of this manual, please call your dealer, or Meridian Manufacturing Inc. directly for assistance. Visit our website at: www.meridianmfg.com

Specifications and measurements are subject to change without notice.

2300 LITRE FUEL TANK DIP CHART

DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)
1	3	24	303	47	777	70	1305	93	1813	116	2213
2	8	25	322	48	800	71	1328	94	1833	117	2225
3	14	26	340	49	822	72	1351	95	1853	118	2238
4	22	27	359	50	845	73	1374	96	1873	119	2249
5	30	28	378	51	867	74	1397	97	1893	120	2260
6	40	29	397	52	890	75	1420	98	1913	121	2270
7	50	30	417	53	913	76	1443	99	1932	122	2280
8	61	31	437	54	936	77	1465	100	1951	123	2288
9	72	32	457	55	959	78	1488	101	1970	124	2296
10	85	33	477	56	982	79	1510	102	1988	125	2302
11	97	34	497	57	1005	80	1533	103	2007	126	2307
12	111	35	518	58	1028	81	1555	104	2025	127	2310
13	124	36	539	59	1051	82	1577	105	2042		
14	139	37	560	60	1074	83	1599	106	2060		
15	153	38	581	61	1097	84	1621	107	2077		
16	169	39	602	62	1120	85	1643	108	2094		
17	184	40	623	63	1143	86	1665	109	2110		
18	200	41	645	64	1167	87	1687	110	2126		
19	216	42	667	65	1190	88	1708	111	2141		
20	233	43	689	66	1213	89	1729	112	2157		
21	250	44	711	67	1236	90	1750	113	2171		
22	268	45	733	68	1259	91	1771	114	2186		
23	285	46	755	69	1282	92	1792	115	2199		

4595L 70% COMPARTMENT DIP CHART

DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)
1	4	44	997	87	2367
2	11	45	1028	88	2397
3	20	46	1059	89	2427
4	30	47	1091	90	2456
5	42	48	1122	91	2486
6	56	49	1154	92	2515
7	70	50	1185	93	2544
8	85	51	1217	94	2572
9	102	52	1249	95	2601
10	119	53	1281	96	2629
11	137	54	1313	97	2656
12	155	55	1345	98	2684
13	175	56	1378	99	2711
14	195	57	1410	100	2738
15	215	58	1442	101	2764
16	237	59	1475	102	2790
17	258	60	1507	103	2816
18	281	61	1539	104	2841
19	304	62	1572	105	2866
20	327	63	1604	106	2890
21	351	64	1637	107	2914
22	375	65	1669	108	2938
23	400	66	1702	109	2961
24	425	67	1734	110	2983
25	451	68	1767	111	3005
26	477	69	1799	112	3026
27	504	70	1832	113	3047
28	530	71	1864	114	3067
29	557	72	1896	115	3086
30	585	73	1928	116	3105
31	613	74	1960	117	3123
32	641	75	1992	118	3140
33	669	76	2024	119	3156
34	698	77	2056	120	3171
35	727	78	2088	121	3186
36	756	79	2119	122	3199
37	785	80	2151	123	3211
38	815	81	2182	124	3222
39	845	82	2213	125	3231
40	875	83	2244	126	3238
41	905	84	2275	127	3241
42	936	85	2306		
43	966	86	2336		

4595L 30% COMPARTMENT DIP CHART

DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)
1	2	44	415	87	986
2	5	45	428	88	999
3	8	46	441	89	1011
4	13	47	454	90	1023
5	18	48	468	91	1036
6	23	49	481	92	1048
7	29	50	494	93	1060
8	36	51	507	94	1072
9	42	52	520	95	1084
10	49	53	534	96	1095
11	57	54	547	97	1107
12	65	55	561	98	1118
13	73	56	574	99	1130
14	81	57	587	100	1141
15	90	58	601	101	1152
16	99	59	614	102	1163
17	108	60	628	103	1173
18	117	61	641	104	1184
19	127	62	655	105	1194
20	136	63	669	106	1204
21	146	64	682	107	1214
22	156	65	696	108	1224
23	167	66	709	109	1234
24	177	67	723	110	1243
25	188	68	736	111	1252
26	199	69	750	112	1261
27	210	70	763	113	1270
28	221	71	777	114	1278
29	232	72	790	115	1286
30	244	73	804	116	1294
31	255	74	817	117	1301
32	267	75	830	118	1308
33	279	76	844	119	1315
34	291	77	857	120	1322
35	303	78	870	121	1327
36	315	79	883	122	1333
37	327	80	896	123	1338
38	340	81	909	124	1342
39	352	82	922	125	1346
40	365	83	935	126	1349
41	377	84	948	127	1351
42	390	85	961		
43	403	86	974		

4595L 50% COMPARTMENT DIP CHART

DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)
1	3	44	706	87	1676
2	8	45	728	88	1697
3	14	46	750	89	1718
4	22	47	772	90	1739
5	30	48	795	91	1760
6	39	49	817	92	1781
7	50	50	839	93	1801
8	60	51	862	94	1821
9	72	52	884	95	1842
10	84	53	907	96	1861
11	97	54	930	97	1881
12	110	55	953	98	1900
13	124	56	975	99	1920
14	138	57	998	100	1939
15	152	58	1021	101	1957
16	167	59	1044	102	1976
17	183	60	1067	103	1994
18	199	61	1090	104	2012
19	215	62	1113	105	2029
20	232	63	1136	106	2047
21	249	64	1159	107	2064
22	266	65	1182	108	2080
23	283	66	1205	109	2096
24	301	67	1228	110	2112
25	319	68	1251	111	2128
26	338	69	1274	112	2143
27	357	70	1297	113	2157
28	376	71	1320	114	2172
29	395	72	1343	115	2185
30	414	73	1365	116	2199
31	434	74	1388	117	2211
32	454	75	1411	118	2223
33	474	76	1433	119	2235
34	494	77	1456	120	2246
35	515	78	1478	121	2256
36	535	79	1501	122	2265
37	556	80	1523	123	2274
38	577	81	1545	124	2281
39	598	82	1567	125	2288
40	619	83	1589	126	2292
41	641	84	1611	127	2295
42	662	85	1633		
43	684	86	1654		

4600L FUEL TANK DIP CHART

DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)	DEPTH (cm)	VOLUME (Litre)
1	5	44	1417	87	3363
2	15	45	1461	88	3406
3	28	46	1505	89	3448
4	43	47	1550	90	3491
5	60	48	1595	91	3532
6	79	49	1639	92	3574
7	100	50	1685	93	3615
8	121	51	1730	94	3656
9	144	52	1775	95	3696
10	169	53	1821	96	3736
11	194	54	1866	97	3775
12	221	55	1912	98	3814
13	248	56	1958	99	3853
14	277	57	2004	100	3891
15	306	58	2050	101	3928
16	336	59	2096	102	3965
17	367	60	2142	103	4002
18	399	61	2188	104	4038
19	432	62	2234	105	4073
20	465	63	2280	106	4108
21	499	64	2326	107	4142
22	534	65	2373	108	4175
23	569	66	2419	109	4207
24	605	67	2465	110	4239
25	641	68	2511	111	4270
26	678	69	2557	112	4301
27	716	70	2603	113	4330
28	754	71	2649	114	4358
29	792	72	2695	115	4386
30	831	73	2740	116	4412
31	871	74	2786	117	4438
32	911	75	2831	118	4462
33	951	76	2877	119	4485
34	992	77	2922	120	4507
35	1033	78	2967	121	4527
36	1074	79	3012	122	4546
37	1116	80	3057	123	4563
38	1158	81	3101	124	4578
39	1201	82	3145	125	4591
40	1243	83	3189	126	4601
41	1286	84	3233	127	4607
42	1330	85	3277		
43	1373	86	3320		

LIMITED WARRANTY STATEMENT

Meridian Manufacturing Inc., (hereinafter referred to as Meridian) hereby warrants the tank(s) sold by it to be free from any defect in material or workmanship under normal use and service for a period of two (2) years from the date of shipment. Meridian also warrants the structural integrity of the tanks(s) for a period of ten (10) years from the date of shipment. Meridian's obligation under this warranty shall be limited to the repair or replacement only, FOB the original point of shipment, of any defective parts or portions of the tank or accessories manufactured by Meridian. Any warranty claim must be reported to the Meridian within two (2) years for general and coating claims or ten (10) years for structural claims, from the date of shipment and in the manner as referred to in paragraph 2 herein.

THIS WARRANTY IS SUBJECT TO THE FOLLOWING LIMITATIONS, PROVISIONS AND CONDITIONS:

1. This warranty does not apply to:
   a. Any product sold by Meridian where it is used in areas exposed to corrosive or aggressive conditions including salt water, acids, alkaloid, ash, cement dust, animal waste or other corrosive chemicals.
   b. Failures or defects arising out of damage during shipment or during storage on site.
   c. Materials replaced or repaired under this warranty except to the extent of the remainder of th applicable warranty.
   d. Damage resulting from misuse, negligence, accident or improper site preparation by others.
   e. Products that have been altered or modified by others.
   f. (in the case of coating failures) failure as the result of damage, lack of proper maintenance or failure to remove road salt or other contaminants that may have come in contact with the tank surface.
   g. Products that have not been installed strictly in accordance with the Meridian's manuals and instructions.

2. The obligation of Meridian under this warranty shall not arise unless the Meridian is notified and this warranty is presented together with a written statement specifying the claim or defect within thirty (30) days after the failure is first detected or made known to the owner and within two (2) years for general and coating claims and ten (10) years for structural claims, from the shipment date. Meridian in its sole discretion shall determine if the claim is valid and whether correction of the defect or failure shall be made by repair or replacement of the materials.

3. The coating warranty is based on the Manufacturer's performance specification for polyester powder finishes and does not include repair of minor blemishes or rusting that is normally part of the general maintenance of the tank.

4. The obligation of Meridian hereunder extends only to the original owner and to the Meridian dealer to whom the materials may have been initially sold. This warranty shall not be subject to any assignment or transfer without the written consent of Meridian.

5. The customer shall acknowledge that it has made its own independent decision to approve the use of the supplied materials and also the specific fabrication and construction procedures utilized to complete the tank, and has satisfied itself as to the suitability of these products for this particular application.

6. The foregoing sets forth the only warranties applicable to said materials and said warranties are given expressly and in lieu of all other warranties, expressed or implied, statutory or otherwise, of merchantability or fitness for a particular purpose and all warranties which exceed or differ from said warranties herein are disclaimed by the Manufacturer.

7. The owners sole and exclusive remedy against Meridian shall be limited to the applicable warranty set forth herein and the endorsements, if any, issued together with this document and no other remedy (including but not limited to the recovery of assembly or disassembly costs, shipping costs, direct, incidental, special, indirect or consequential damages for lost profits, lost sales, injury to person or property or any other loss, whether arising from breach of contract, breach of warranty, tort, including negligence, strict liability or otherwise) shall be available to the owner or Meridian Dealer or any other person or entitles whether by direct action or for contribution or indemnity or otherwise.

8. The financial obligation of Meridian under this warranty shall be limited to the repair or replacement of the product as originally supplied and in no event shall exceed the original cost of the product supplied.

9. Meridian shall not have any obligation under any warranty herein until all accounts for materials, installation and erection of the said product thereof and for labor and other work performed by Meridian or its dealers have been paid in full by the owner.

Register your product at: www.merdianmfg.com
For warranty information send an email to: warranty@meridianmfg.com

WARRANTY REQUEST PROCEDURE

1. The product must be registered with Meridian Manufacturing Inc.

2. The purchaser must contact the dealer, from where the unit was purchased, immediately upon discovery of any defects.

3. A completed Warranty Request (Claim) Form must be submitted by the dealer to Meridian's warranty representative for review and any subsequent course of action.
   - Warranty requests must be completed with ALL required information in order it to be considered for approval.
   - Send photographs of the entire piece of equipment, and of the specific area of concern.

4. Warranty repair work will only be performed by Meridian or an approved representative of Meridian. Warranty work completed prior to Meridian's approval will NOT be honoured. Failure to follow this procedure may affect any or all of this warranty.

5. All warranty requests will be adjudicated at the sole discretion of Meridian and in accordance with the terms and conditions of the warranty.

Lethbridge, AB: (800) 661-1436
Winkler, MB: (800) 665-7259
www.meridianmfg.com | fueltanks@meridianmfg.com

Part No: 11202-REV1