

MERIDIAN[®]

FUEL TANKS

500 - 2000 Gallon



OPERATOR'S MANUAL

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, State _____	City, State _____
Zip Code _____	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.

Model # _____	Serial # _____
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 _____



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DEALER INSPECTION REPORT

Unit's Model Number _____ Unit's Serial Number _____

- Make sure the cap of the emergency vent will raise off of the base.
- Make sure the "Tank Vent" warning label is attached to the fill cap.
- If installed, make sure the fuel pump is working properly.
- Make sure the owner is familiar with hooking up the electrical power for the fuel pump.

CERTIFICATE OF ORIGIN

LICENSING INFORMATION

Delivery Date _____

DEALER _____

SOLD TO _____

Address _____

Address _____

City _____

City _____

State _____

State _____

Zip Code _____

Zip Code _____

Phone Number _____

Phone Number _____

Unit's Model Number _____

Unit's Serial Number _____

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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

Our fuel tanks are designed to meet UL 142 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.

- We do build non-UL tanks as well, which do not meet the UL specifications.

These single and double walled, steel lined tanks 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:

- UL 142 Approved
- 100% Secondary Containment
- Heavy Gauge Construction
- Lifting Lugs
- Emergency Vents
- Spare Ports/Fittings
- Sturdy Cradle
- Premium Powder Coat Finish

Options:

- Sturdy cradle option or fully welded heavy duty saddle

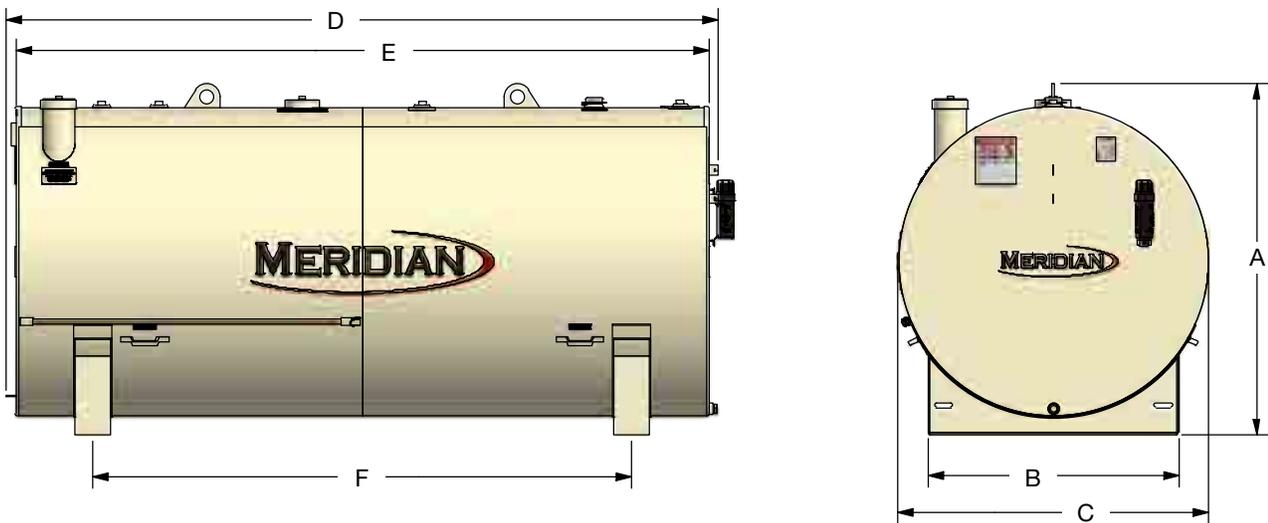


Table 1 - Tank Dimensions

TANK SIZE	ITEM #	A	B	C	D	E	F	WEIGHT (empty)
500 G SW	60629	n/a		4' (48")	6' 2" (74")	n/a		510 lb
500 G DW	64041	4' 6" (55")	3' 6" (42")	4' (48")	6' 5" (77")	6' 1" (73")	4' 2" (50")	885 lb
1000 G SW	60630	5' 9" (69")	4' 4-1/2" (52-1/2")	5' 4" (64")	6' 2" (74")	6' 1" (73")	3' 4" (40")	716 lb
1000 G DW	64042	6' 2" (74")	4' 4-1/2" (52-1/2")	5' 4" (64")	6' 5" (77")	6' 1" (73")	3' 5" (41")	1,750 lb
2000 G SW	60631	5' 10" (70")	4' 4-1/2" (52-1/2")	5' 4" (64")	12' 4" (148")	12' 1" (145")	9' 5" (113")	1,225 lb
2000 G DW	64043	6' 2" (74")	4' 4-1/2" (52-1/2")	5' 4" (64")	12' 6" (150")	12' 1" (145")	9' 5" (113")	3,390 lb

Table 2 - Inside Dimensions

TANK SIZE	ITEM #	INTERNAL DIMENSIONS
500 G SW	60629	n/a
500 G DW	64041	45" I.D. x 72.5"
1000 G SW	60630	n/a
1000 G DW	64042	64" I.D. x 72.5"
2000 G SW	60631	n/a
2000 G DW	64043	64" I.D. x 144.5"

Section 2: SAFETY

3 Big Reasons why safety is important to you:

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

The Safety Alert Symbol means:



ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

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.



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.



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.



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



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



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.

Remember, you are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a regular part of your safety program. Be certain that everyone who will work with this equipment follows these procedures.

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.
- 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. 
- The Fuel Tank has been designed for the specific purpose of storing diesel fuel. DO NOT modify or use this tank for any application other than which it was designed.
- 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. 
- This tank is not intended for use by children.
- Wear personal protective equipment (PPE). This list may include but is not limited to:
 - Eye protection 
 - Work gloves 
 - Respirator or filter mask
 - Hi-Visibility safety vest
- Stay away from power lines. Electrocutation can occur without direct contact. 
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while using the tank.
 - Consult your doctor about operating machine while taking prescription medications.

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.
- 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.
- DO NOT lift or attempt to transport the tank containing fluid, at any time.
- 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 and 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).
 - a. Remove all dirt, grease, wax from the surface.
 - b. Clean the area with a non-ammonia based cleaner.
 - c. 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 DECAL LOCATION

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



1. UL Approval Plate (part #18438)
Located on rear of tank.



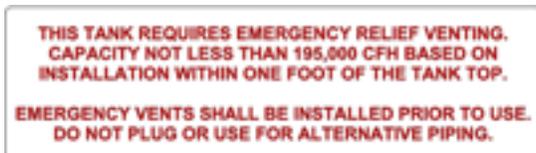
2. Serial Number Decal
Located below UL Plate on rear of tank.



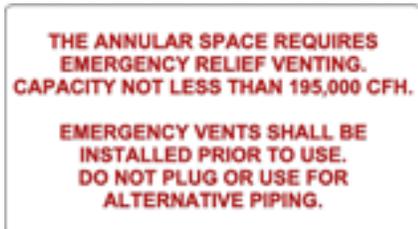
3. Strap Down Hook Decal (part #12844)
Located near the bottom next to saddle weldments.



4. Emergency Vent ID Decal (part #17747)
Located below emergency vents.



5. Emergency Vent-Primary Decal (part #17826, 17828, 18439)
Located below primary vent, along the top of tank.



6. Emergency Vent-Annular Decal (part #17827, 17829, 18440)
Located below the vent on the side, near the rear.



7. Stationary Installation Decal (part #19056)
Located on the rear of tank, above the UL plate.



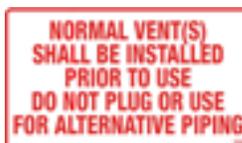
8. Pressurize Decal (part #19058)
Located by the 2" plugs along the top, at both ends.



9. On Support Decal (part #19059)
Located on rear, below the UL plate.



10. Do Not Fill Decal (part #20022)
Located along the top, at the front, below the 2-1/2" vented fill cap.



11. Normal Vents Decal (part #20026)
Located along the top, center of tank.



12. Tank Caution Decal (part #20047)
Located on both ends of tank.



13. Tank Danger Decal (part #20048)
Located on both ends of tank.

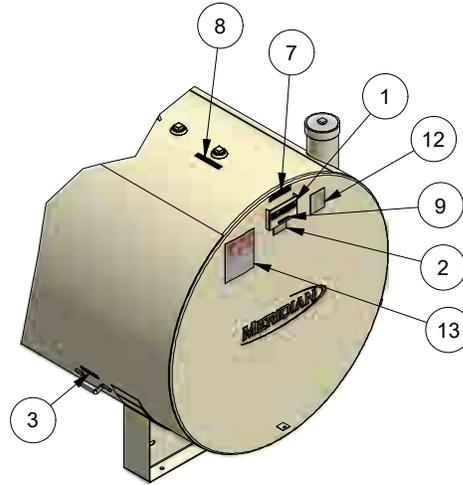


Fig 2 - Rear of 2000 G fuel tank

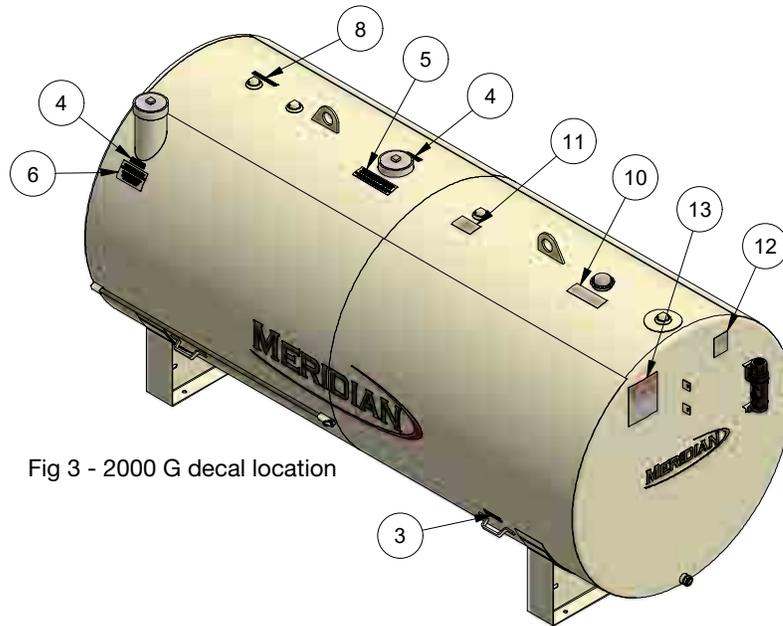


Fig 3 - 2000 G decal location

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 UL 142 and all Federal, State 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, State 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, State 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.

2.9 DIESEL FUEL SAFETY

DANGER

INHALATION HAZARD

- Always avoid breathing fuel vapors or mists which may cause dizziness, drowsiness, moderate eye irritation, and/or skin irritation (rash).
- Excessive exposure may cause irritations to the nose, throat, lungs, and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.
- In case of inhalation, move the person to fresh air. If the person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so.
- Seek medical attention immediately.

WARNING

FIRE AND EXPLOSION HAZARDS

- Diesel fuel presents a moderate fire hazard.
- Vapors may be ignited rapidly when exposed to heat, spark, open flame, or other source of ignition.
- When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces.
- Being heavier than air, vapors may travel long distances to an ignition source and flash back.
- Runoff to sewer may cause fire or explosion hazard.

WARNING

INGESTION HAZARD

- The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting.
- Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure, and even death.
- Ingestion will cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.
- In case of ingestion:
 - DO NOT INDUCE VOMITING.
 - Do not give liquids.
 - Obtain immediate medical attention.
- If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties.
- Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

EYE PROTECTION

- Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.
- Contact with liquid or vapor may cause mild irritation.
- In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 minutes. Hold eyelids open to ensure adequate flushing. Seek medical attention.

CAUTION

SKIN PROTECTION

- Contact with diesel fuel may cause skin irritation with prolonged or repeated contact.
- Wearing gloves constructed of nitrile, neoprene, or PVC are recommended when in close contact with diesel fuel.
- Chemical protective clothing should also be worn.
- Long-term, repeated exposure to diesel fuel may cause skin cancer.
- In case of contact with skin, remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

STORAGE PRECAUTIONS

- Keep away from flame, sparks, excessive temperatures, and open flame.
- Keep tank fill port closed because an empty tank may contain explosive vapors.
- Do not pressurize, cut, heat, weld, or expose tanks to sources of ignition.
- Store the tank in a well-ventilated area. Avoid storage near incompatible materials.

SAFETY INSTRUCTIONS

U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

- Diesel fuel is on the EPA TSCA Inventory.
- Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements.
- This product may also be subject to other regulations at the state and/or local level.
- Always consult the regulations applicable to your area prior to operation.

Section 3: SITE AND INSTALLATION

WARNING

- Read and understand all related OEM manuals, 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, State 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 UL 142 and all Federal, State 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.

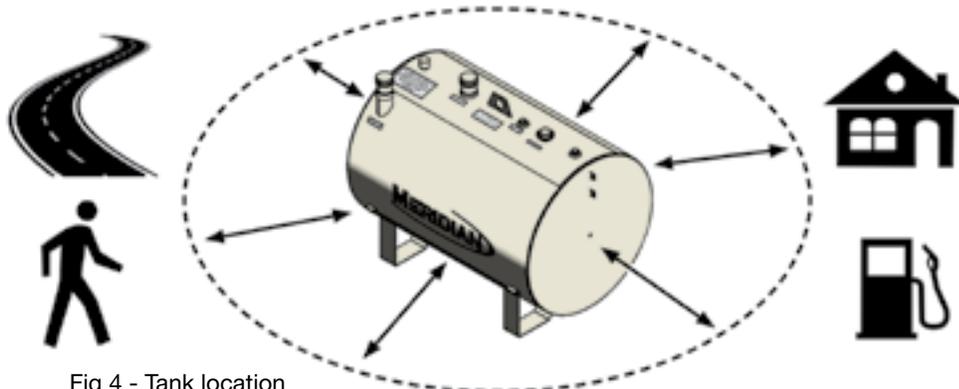


Fig 4 - Tank location

Lifting and Transporting Fuel Tanks:

Only the lifting lug weldments on the tank shall be used for unloading or transporting the empty fuel tank.

- NEVER lift or transport tanks that contain fluid.

Mounting Fuel Tank to Concrete Pad:

The tank must be installed on a level concrete pad designed to support the tank weight plus 100% liquid loading.

The tank should be securely anchored to the concrete pad using eight 1/2" anchor bolts to prevent shifting or tipping when full or empty.

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

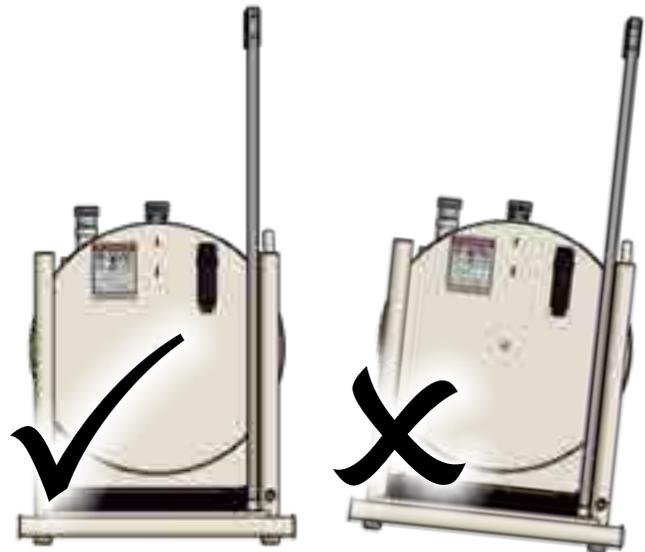


Fig 5 - Level base

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 6 - Lift lug and dip stick

Installation of Tank Venting:

The emergency vents are installed by Meridian. The normal vent is to be field-installed by a qualified tank installer before the tank is placed into service. It will prevent pressure or vacuum inside the tank during filling, emptying, or atmospheric temperature changes that may occur. The design of the normal vent will not allow flame impingement onto the surface of the tank in the event of vapor ignition.

Containment Tank Inspection:

The containment tank should be checked on a regular basis, to confirm that neither precipitation or product has accumulated therein. The disposal of any liquid found in the containment tank shall be disposed of in accordance with the requirements of the authority having jurisdiction.

Overfill Protection:

The tank installer must ensure that an approved OVERFILL PROTECTION DEVICE is installed in the tank prior to the tank being filled with any fuel.

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, State and Local Codes.

Regular Inspection and Maintenance:

The fuel tank must 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.

Disposal Of Equipment At End Of Useful Life:

The fuel tank has been designed for the specific purpose of storing diesel fuel. When this tank is no longer capable of performing its designed purpose, it should be dismantled and scrapped. Do not use any materials or components from this tank for any other purpose.

3.1 ELECTRICAL WIRING FOR FUEL PUMP

WARNING

- Improper installation or use of this pump can result in serious bodily injury or death!
- Electrical wiring should be performed ONLY by a licensed electrician in compliance with local, state, and national electrical code NEC/ANSI/NFPA 70, NFPA30, and NFPA 30A, as appropriate to the intended use of the pump.

1. Verify the operating voltage located on the pump's nameplate.
2. Verify the power for the pump is supplied from a dedicated 20 amp circuit breaker.
 - No other equipment should be powered by this circuit.
3. Make sure the wiring is of sufficient size to carry the correct current for the pump.
 - Voltage drop will vary with distance from the source to the pump and the size of the wire.
 - Refer to the National Electrical Code (NEC), or local codes, for Voltage Drop Compensation to be sure you are using the correct size wire for your application.
4. Remove the junction box cover to access the wire ends.
5. Route the power source wiring through conduit with sealed fittings.
6. Connect the pump wires to the power source according to the OEM wiring diagram.
 - Install the appropriate wire nuts or other connectors.
7. Connect the ground wire.
 - The pump must be properly grounded.
8. Place the wires back into the junction box.

CAUTION

If the pump is equipped with an "AUX" circuit, this wire is normally "A LIVE WIRE" when the pump switch is in the ON position.

- Normally an "AUX" lead wire is insulated and enclosed in the junction box.
 - DO NOT connect this wire without first verifying the "ON" line voltage of the wire for compatibility with the equipment to be installed.
 - Verify the maximum amperage on this wire before attaching it to any auxiliary device.
 - The "AUX" wire must be insulated and enclosed in the junction box if it is not used.
9. Install the junction box cover
 - Be sure the gasket is in place.
 - The screws draw the cover tight against the junction box.
 - There must be no gap between the junction box and its cover.

Section 4: OPERATION

DANGER

- This Fuel Tank is only intended for use with diesel fuel. DO NOT fill with any flammable liquid, such as gasoline or kerosene.
- Storing any other flammable or combustible liquid could result in a fire and explosion, causing serious injury or death.

WARNING

- Read and understand all related OEM manuals, and all safety decals, before using.
- DO NOT smoke when using fuel tank.
- A fire extinguisher should be within reach.
- 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 5 feet (1.5 m) 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.
- DO NOT modify or use the tank for any application other than what it was intended.

It is the responsibility of the owner and operators to read this manual and to train all personnel before they start to use the tank. By following recommended procedure, a safe working environment is provided for the operator, co-workers and bystanders in the area around the work site.

By following these instructions, in conjunction with a good maintenance program, your tank will provide many years of trouble free storage.

4.1 TANK COMPONENTS

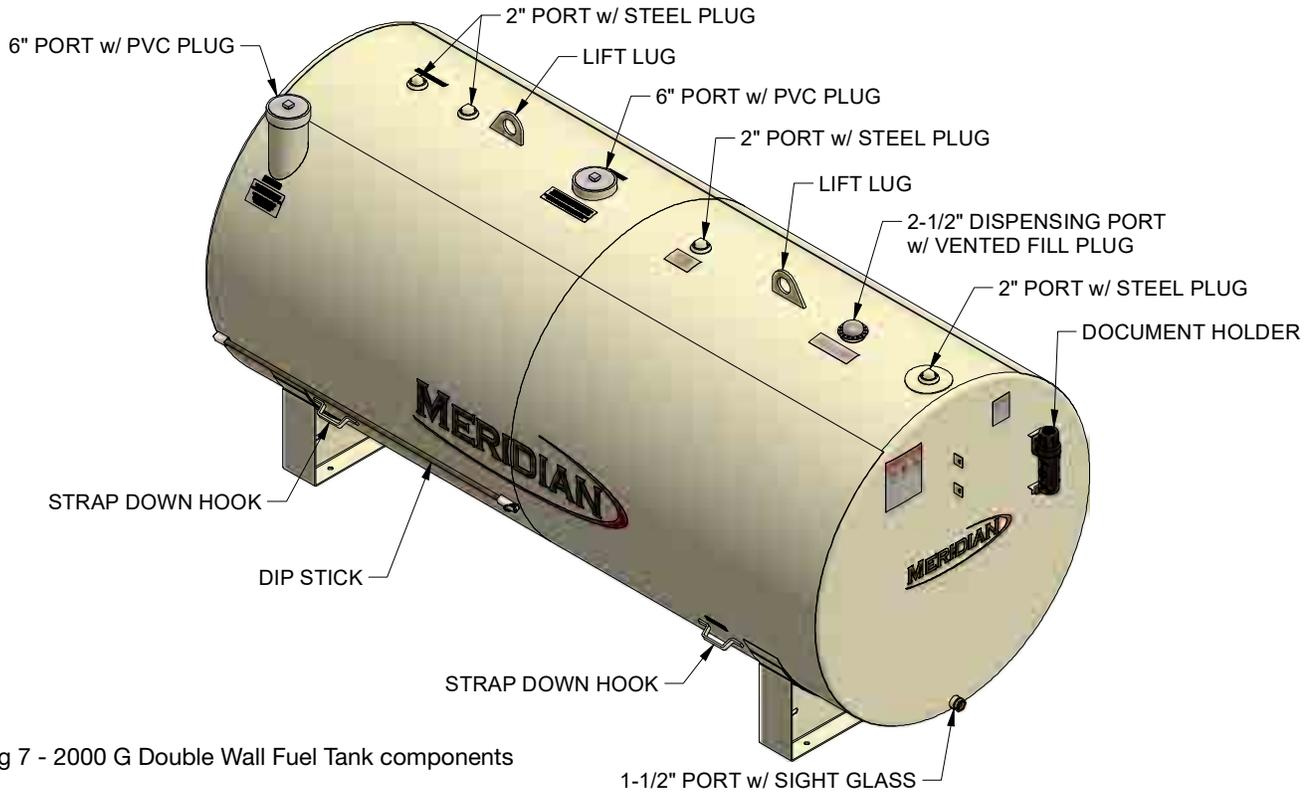


Fig 7 - 2000 G Double Wall Fuel Tank components

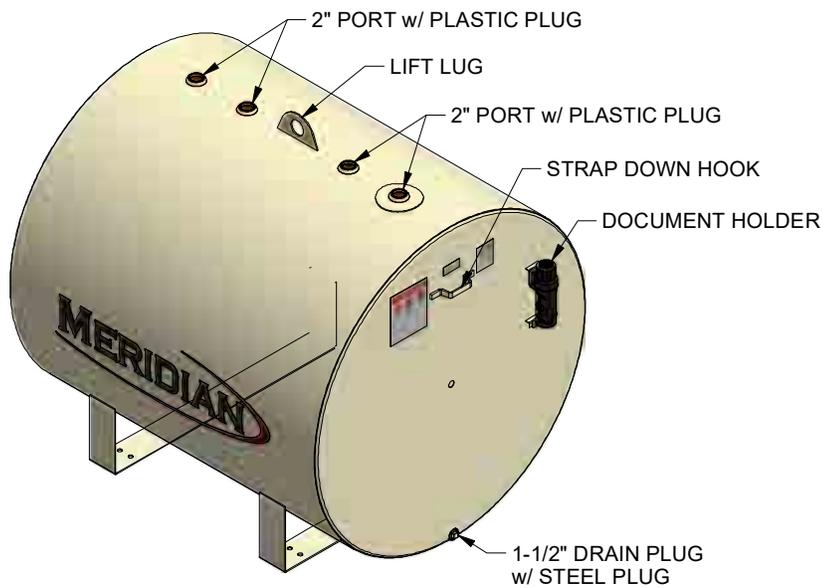


Fig 8 - 1000 G Single Wall Utility Tank components

4.2 INSTRUCTIONS FOR FUEL DELIVERY PERSONNEL

1. The fuel delivery personnel shall ensure that all applicable Federal, State 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 FILLING THE FUEL TANK

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 emergency vents are clean and unrestricted.
 - Check the transfer hose for leaks, cracks or damage. If leaks are present or later appear, stop transfer, repair as necessary.

Note:

Never obstruct the emergency vent by placing an object on top of the cap.

3. Wipe area around the vented fill cap with a clean cloth or rag to remove risk of fuel contamination.
4. Open vented fill cap and place cap in a clean secure location. Insert the delivery nozzle into the fill port.
5. Start delivery vehicle pump, depress delivery nozzle handle and slowly begin fuel transfer.
 - Only increase the flow of fuel 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 9 - Inspect vents for correct operation



Fig 10 - Use sight gauge

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, that is showing on the stick.
4. Replace the vented fill cap.
5. Compare the number of inches 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 11 - Dip stick location

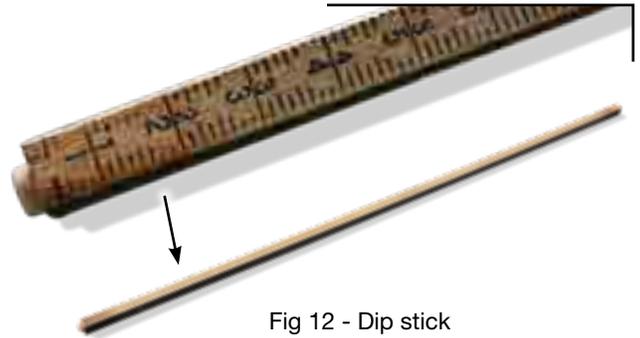


Fig 12 - Dip stick



Fig 13 - 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.

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 boot or drip pot.
3. Move the switch lever to the "ON" position to power the pump.
4. Insert the dispensing nozzle into the equipment/container to be filled.

Note:

To minimize static electricity build up, keep the nozzle in contact with the equipment being filled.

5. Operate the nozzle to dispense fluid; release nozzle when the desired amount of fluid has been dispensed.
6. Stop the pump by switching the lever "OFF".
7. Remove the nozzle and return it to the boot or drip pot.

4.5.2 Locking The Pump:

Depending 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. 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.

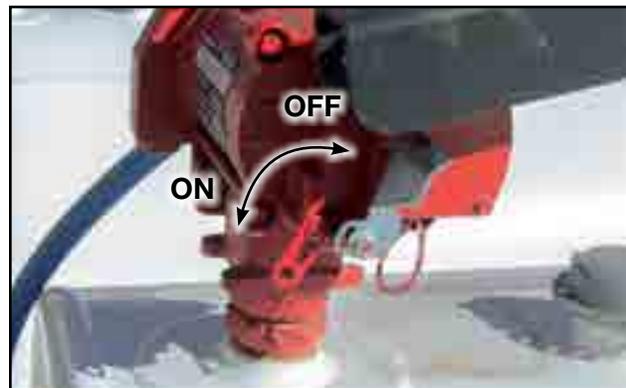


Fig 14 - Pump operation



Fig 15 - Nozzle boot

Section 5: SERVICE AND MAINTENANCE

WARNING

- Read and understand all related OEM manuals, and all safety decals, before using.
- 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.
- Lift the vent cover all the way up and lower it back down onto the body several times.
 - The cover must move freely for the vent to work properly.
 - Replace the vent if sticking or binding occurs.
- Inspect the 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 secondary containment and internal tank for leakage.
- Check the pump and meter for proper operation.
- Check the calibration of the meter, if equipped.
- Make sure the tank's anchor bolts are securely attached to the concrete pad.
- Thoroughly clean the tank and pump.

5.2 REPLACE EMERGENCY VENT

1. Inspect the replacement unit for shipping damage. Do not install the unit if damage is found.
2. Check the vent openings for foreign matter such as packaging material. Remove any debris or obstructions.
3. Inspect the sealing surfaces between cover and body. Remove any dust or debris.
4. Verify the vent cover is moving freely before and after installation into the tank.
5. Do not paint the vent unless necessary. If painting, extreme caution must be used to make sure the paint does not inhibit proper operation of the vent.

IMPORTANT:

Do not use Teflon® tape to seal threads.

6. Apply a fuel resistant, non-hardening, antiseize sealant to the threads on the riser pipe.
7. Thread the vent onto the pipe avoiding excessive torque, which may damage the vent.

Note:

There should be no reduction of pipe size between the storage tank and the emergency vent.

8. Attach the included warning tag where it will be visible to the operator filling the tank or fueling equipment.

5.3 ELECTRIC FUEL PUMP

WARNING

- DO NOT open or attempt to repair the motor on the fuel pump. If the pump is damaged or not working.
 - Refer to the Warranty procedures for repair or replacement.
- Disassembling the motor case can compromise the integrity of the explosion-proof construction and will void any existing warranty and certification (UL listing).

IMPORTANT:

Be sure all power to the pump is turned OFF prior to performing any service or maintenance.

5.4 HOSE REPLACEMENT

- Replace the fuel hose with only OEM parts.
- Using other vendors of fuel hose may allow static electricity build up.
- Use only static wire conductive hose when pumping flammable fluids.

5.5 FUEL METER MAINTENANCE

5.5.1 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 U.S. Gallons or Liters. 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 U.S. Gallons or Liters.
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.

5.5.2 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.

5.5.3 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.

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Section 6: TROUBLESHOOTING

This section contains a list of common problems, causes and offers quick solutions to those issues. For more difficult problems contact your authorized dealer, distributor or Meridian Manufacturing Inc. Before you call, have this Operator's Manual and the unit's serial number ready.

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
	Hose or nozzle damage	Replace hose or nozzle
	Plugged filter	Replace filter
Low fluid level	Fill tank	

Problem	Possible Cause	Possible Solution
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
Pump stalls, fuse blows or circuit breaker trips repeatedly	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
Pump does not operate	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
Pump leaks	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
Meter counter is reading high or low	Calibration incorrectly set	Check calibration and recalibrate if necessary
	Air in product	Check for and repair air leaks
	Measuring chamber or gears could be sticking	Clean or replace the internal metering components
Meter shaft seal leakage	Dirty or damaged seals	Clean O-ring and seat area or replace seal
Fuel meter gasket leakage	Loose gasket	Tightening joints
	Damaged gaskets	Replace damaged gaskets. If caused by high-pressure, install pressure relief valve to allow high-pressure to bleed back to tank
Fuel meter low flow capacity	Meter chamber obstructed	Clean clogged meter chamber, clean or replace screens and filters in piping

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.

ITEM #64041
500 GALLON HORIZONTAL DW FUEL TANK - DIP CHART
 Primary Tank = 45-1/2" I.D. x 72-1/2" Long

DEPTH (Inch)	VOLUME (Gallon)
1	2.8
2	7.9
3	14.3
4	22.0
5	30.5
6	39.8
7	49.8
8	60.4
9	71.6
10	83.2
11	95.2
12	107.6
13	120.4
14	133.4
15	146.8

DEPTH (Inch)	VOLUME (Gallon)
16	160.3
17	174.1
18	187.9
19	201.9
20	216.1
21	230.4
22	244.6
23	258.9
24	273.2
25	287.4
26	301.6
27	315.7
28	329.7
29	343.5
30	357.2

DEPTH (Inch)	VOLUME (Gallon)
31	370.6
32	383.8
33	396.7
34	409.3
35	421.5
36	433.3
37	444.7
38	455.6
39	465.9
40	475.6
41	484.5
42	492.6
43	499.7
44	505.5
45	509.7

ITEM #64042
1000 GALLON HORIZONTAL DW FUEL TANK - DIP CHART
 Primary Tank = 64" I.D. x 72-1/2" Long

DEPTH (Inch)	VOLUME (Gallon)
1	3.3
2	9.4
3	17.2
4	26.3
5	36.6
6	47.8
7	59.9
8	72.9
9	86.5
10	100.8
11	115.7
12	131.1
13	147.1
14	163.5
15	180.3
16	197.5
17	215.1
18	233.0
19	251.2
20	269.8
21	288.5
22	307.5
23	326.7

DEPTH (Inch)	VOLUME (Gallon)
24	246.1
25	365.6
26	385.3
27	405.1
28	424.9
29	444.9
30	465.0
31	485.1
32	505.2
33	525.3
34	545.4
35	565.4
36	585.4
37	605.3
38	625.1
39	644.7
40	664.3
41	683.7
42	702.9
43	721.8
44	740.6
45	759.1
46	777.3

DEPTH (Inch)	VOLUME (Gallon)
47	795.2
48	812.9
49	830.1
50	846.9
51	863.3
52	879.2
53	894.6
54	909.5
55	923.8
56	937.5
57	950.4
58	962.5
59	973.8
60	984.1
61	993.2
62	1000.9
63	1007.0
64	1010.4

ITEM #64043
2000 GALLON HORIZONTAL DW FUEL TANK - DIP CHART
 Primary Tank = 63-7/8" I.D. x 144-1/2" Long

DEPTH (Inch)	VOLUME (Gallon)
1	6.6
2	18.7
3	34.1
4	52.3
5	72.7
6	95.1
7	119.3
8	144.9
9	172.1
10	200.5
11	230.1
12	260.8
13	292.5
14	325.1
15	358.6
16	392.8
17	427.8
18	463.4
19	499.7
20	536.4
21	573.7
22	611.5
23	649.6

DEPTH (Inch)	VOLUME (Gallon)
24	688.2
25	727.0
26	766.1
27	805.5
28	845.0
29	884.7
30	924.6
31	964.5
32	1004.4
33	1044.3
34	1084.2
35	1124.1
36	1163.7
37	1203.3
38	1242.6
39	1281.7
40	1320.5
41	1358.9
42	1397.1
43	1434.8
44	1472.0
45	1508.7
46	1544.9

DEPTH (Inch)	VOLUME (Gallon)
47	1580.4
48	1615.3
49	1649.5
50	1682.8
51	1715.3
52	1746.9
53	1777.5
54	1806.9
55	1835.2
56	1862.2
57	1887.7
58	1911.6
59	1933.8
60	1953.9
61	1971.8
62	1986.9
63	1998.4
64	2011.6

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:
 - d. 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.
 - e. Failures or defects arising out of damage during shipment or during storage on site.
 - f. Materials replaced or repaired under this warranty except to the extent of the remainder of the applicable warranty.
 - g. Damage resulting from misuse, negligence, accident or improper site preparation by others.
 - h. Products that have been altered or modified by others.
 - i. (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.
 - j. 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.meridianmfg.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.



(800) 437-2334 | www.meridianmfg.com | fuel tanks@meridianmfg.com