

Rental Center Guide Operating Steps and Safety Practices Vermeer LM42 Trencher/Plow

Visit Vermeer at <u>www.vermeer.com</u> to locate your local Vermeer dealer.

Your rental associate or technician will explain each of the following operating steps and safety practices before you use this machine.



WARNING: Do not use or attempt to operate the machine until you understand proper operation and safety of the machine. Read the operator's manual. Read safety signs attached to the machine. If you are unsure of content or meaning of the safety messages or information regarding machine operation, ask your rental associate or technician for details.

INTENDED USE: Vermeer LM42 is a self-propelled rubber-tire machine which can be equipped with front- and rear-mounted attachments to perform various functions such as plowing, trenching, horizontal drilling and backhoeing.

OPERATING STEPS

1. LM 42 Engine Start:

- a. Check all machine fluid levels and condition of air cleaner before starting machine.
- b. Place "Propel" and "Attachment Drive" levers in NEUTRAL.
- c. Engage the "Park Brake" and move "Throttle" to ¼ speed. The "Operator Presence Bar" and the "Propel Lever Operator Presence Button" must be released to start the engine.
- d. Use "Key Switch" to start engine. After engine starts reduce "Throttle" to idle and let engine warm up.

2. LM 42 Transport:

- a. Before transporting machine on a trailer, read trailer manual for safety precautions and loading information. Ensure gross weight of machine with attachments is within the gross weight limits of the trailer and the towing vehicle. Approximate weight of tractor with trencher and plow attachments is 4750 lb. (2155 kg). Refer to operator's/maintenance manual for weights of other configurations.
- b. Clean machine to keep any debris off highway. Fully raise attachments, release "Park Brake," position machine inline with trailer ramps, set "Throttle" to half speed and select "Low" ground speed. With trailer attached to tow vehicle and parked on level ground, drive machine squarely onto trailer and stop machine when tie-down position is reached.
- c. Engage "Park Brake" and lower attachments to trailer bed; or, if equipped, engage attachment transport locks. Shut off engine.
- d. Secure machine to trailer using standard tie-down procedures with two front and two rear tie-down points.
- e. Reverse procedure for unloading machine from trailer. Ensure trailer is on level ground. Avoid unloading if ramps are slick.

3. LM 42 Setup:

- a. Contact the local One-Call system in your area to request location of all underground utilities near work area.
- b. Operating the machine will require you to wear protective equipment. Always wear a hard hat, safety shoes, hearing protectors and eye protection. If working near traffic, wear reflective clothing.
- c. Examine work area for any obstructions, conditions, or situations which may impair machine operation or create a safety hazard for the operator or other persons. Look for evidence or notices of underground placements, manhole covers, drop boxes and recent trenching activity. All utilities in these areas should be marked and avoided.
- d. Either a trench cleaner arch assembly or restraint bar must be in place on the trencher boom while digging. These are intended to help protect against accidental contact with the moving digging chain.
- e. Disengage all attachment drives when driving between work areas. Never ride on machine.

4. Operating the Plow:

- a. Use steering and propel controls to line up machine at beginning of plowing path and lower plow blade to ground level. Shut off machine.
- b. Refer to operator's/maintenance manual for instructions to install cable into chute on back of plow blade.
 c. Restart machine and lower plow blade into starting "Bell" hole or trench until tamping feet contact the ground. With engine at full rpm, engage
- c. Restart machine and lower plow blade into starting "Bell" hole or trench until tamping feet contact the ground. With engine at full rpm, engage "Rear Attachment Drive Lever" to start shaker box. Engage either the red "Operator Presence Bar or Button" and use "Propel and Steering Levers" to move machine FORWARD. Engine will STOP anytime the "Operator Presence Bar and Button" are released.
- d. Use "Plow Lift Lever" to maintain downward pressure and control blade depth. Select "Low" or "High" ground speed depending on ground conditions and depth of plow blade.

5. Operating the Trencher:

- a. Use steering and propel controls to line up machine at beginning of trench path. Select "Low" ground speed.
- b. If equipped with trench cleaner arch, shut off machine and raise and secure trench cleaner arch.
- c. Restart machine and lower trencher boom to position digging chain about 1" (2.5 cm) above the ground. With engine at full rpm, engage either the red "Operator Presence Bar or Button" and engage "Digging Chain Drive" in FORWARD.
- d. Lower trencher boom slowly to the desired digging depth. **NOTE:** Lowering boom too quickly will result in excessive boom and machine bounce. A small amount of rearward ground travel during the plunge cut may help in reducing boom and machine bounce. Engine will **STOP** anytime the "Operator Presence Bar and Button" are released.
- e. If using trench cleaner arch, stop digging chain after plunge cut, raise trencher boom until chain is out of ground, set "Park Brake" and shut off machine. Release trench cleaner arch, restart machine, release "Park Brake" and resume trenching.
- f. Adjust rearward ground travel speed for the best productivity when the required trench depth has been reached.

6. Restarting Stalled Machine:

- a. If digging chain snags material and stalls engine, place "*Propel*" and "*Digging Chain Drive*" levers in NEUTRAL and restart engine. Slightly raise trencher boom and reverse digging chain to free obstruction.
- b. Engage "Digging Chain Drive" in FORWARD, lower trencher boom to desired digging depth and resume trenching.

7. Shutdown Procedure:

a. Place "Prope!" and "Attachment Drive" levers in NEUTRAL and fully raise attachments. Reduce engine speed to idle, turn off engine and remove key. Engage the "Park Brake."

Copies of the operator's manual and this operation and safety guide are available in Spanish from your Vermeer dealer. Su distribuidor Vermeer dispone de ejemplares en español del manual del operador y de esta guía de operación y seguridad.

See other side for Safety Practices



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Your **rental associate** or technician **will explain** to you each of the following **safety practices and operating steps** before you use this machine.

TRENCHER/PLOW SAFETY PRACTICES

Below are selected safety messages. Additional safety information is contained in safety signs on the machine and in the operator's manual attached to the machine.



WARNING: Keep all spectators and unprotected workers away from the machine and work area while in operation.





WARNING: Fuel and fumes can explode and burn.

Shut off engine before refueling. No flame. No smoking.



WARNING: Before you start any digging project, do not forget to call the local One-Call system in your area and any utility that does not subscribe to the One-Call system.





DANGER: Contact with moving digging chain will result in death or serious injury. Trench cave-in may cause you to fall onto moving chain.

- Stay away from moving digging chain.
- Never adjust trench cleaner assembly with the digging chain or engine running.





WARNING: Runover/Rollover can crush.

- Avoid situations where rollover can occur.
- Keep feet away from wheels.
- Do not allow anyone to ride on machine.



WARNING: Use Shutdown Procedure explained in the operator's manual before servicing, cleaning, repairing or transporting the machine.

WARNING: Failure to follow any of the preceding safety instructions or those shown on the machine or in the operator's manual could result in serious injury or death. This machine is to be used for only those purposes for which it was intended as explained in the operator's manual.

See other side for Operating Steps



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HORIZONTAL BORING (Porta Bore) OPERATING STEPS

(When used with LM42 Trencher/Plow)

NOTE: Refer to LM42 Trencher/Plow Operating Steps and Safety Practices before operating horizontal boring attachment.

1. Horizontal Boring Setup: (Porta Bore)

- a. Boring requires a trained operator and a trained helper. Operator must be present at the machine and operating the controls. The helper aligns the bore, changes drilling rods, attaches cutters and watches drilling operation.
- b. Refer to the LM42 Trencher/Plow operator's/maintenance manual for instructions on how to prepare worksite for making a bore.
- c. Do not engage boring motor rotation with pipe wrench attached onto drill rod. Never have more than 20 ft. (6.1 m) of drill rod exposed between bore entrance and machine.
- d. Control forward travel speed to avoid bending rod, causing drill string to whip.
- e. Always use forward rotation when boring. Reversing motor direction when using threaded-pipe type drill rod may uncouple rod in the bored hole.

2. Horizontal Boring Operation: (Porta Bore)

- a. Use steering and propel controls to line up machine at beginning of bore path, raise front and rear attachments to transport position and select "LOW" ground speed. Shut off machine.
- b. Follow instructions in the operator's manual to install universal joint onto boring motor shaft. Assemble one or two drill rods and the desired cutting head and attach to universal joint.
- c. Follow Starting Procedure, keep "*Throttle*" at low rpm and engage "Boring Attachment" control in FORWARD. Engage either the red "*Operator Presence Bar or Button*" and use "*Propel Control*" to slightly creep tractor FORWARD.
- d. While standing beside and outside of the entrance pit, the helper must use the supplied "**Rod Guide Tool**" behind the cutter head to start the head into the ground. Stop the machine and remove the "**Rod Guide Tool**" after head has entered the ground. Use a level to check bore alignment and resume boring. Follow instructions in the operator's/maintenance manual for adding additional sections of drill rod as needed.
- e. When bore is complete, back machine away from bore entrance until one or two rods are withdrawn. Stop machine, uncouple and remove exposed rod connected to boring motor. Move machine toward entrance trench and recouple to drill string. With helper, clear area, start machine, and continue removing one or two rods at a time until all tooling is withdrawn from bore.
- f. When finished boring, remove universal joint from the boring motor.

3. Shutdown Procedure:

a. Place "Propel" and "Attachment Drive" levers in NEUTRAL and fully raise attachments. Reduce engine speed to idle, turn off engine and remove key. Engage the "Park Brake."

HORIZONTAL BORING (Porta Bore) SAFETY PRACTICES





DANGER: Serious injury is possible if struck by pipe wrench on rotating drill rod. Remove wrench before starting engine and boring attachment.



WARNING: Rotating rod can kill. Clothes can snag.



Stay away. Do not wear loose clothing that could catch on rotating equipment. Boring rotation lever must self-center to NEUTRAL and stop rod motion when released.

