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› MTD 31A-2M1E678 Snow Thrower User Manual

## MTD 31A-2M1E678

# MTD 31A-2M1E678 Snow Thrower User Manual

Model: 31A-2M1E678

## 1. INTRODUCTION

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This manual provides essential instructions for the safe assembly, operation, maintenance, and troubleshooting of your MTD 31A-2M1E678 Snow Thrower. Please read this manual thoroughly before operating the machine to ensure proper use and to prevent injury or damage. Keep this manual for future reference.

The MTD 31A-2M1E678 is a robust snow thrower designed for efficient snow removal from driveways, paths, and other surfaces. It features an MTD SnowThorX 35 OHV 4-stroke engine, providing reliable performance in various snow conditions.

## 2. SAFETY INFORMATION

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**WARNING: Failure to follow these safety instructions can result in serious injury or death.**

- **Read the Manual:** Always read and understand the entire operator's manual before attempting to assemble, operate, or maintain the snow thrower.
- **Personal Protective Equipment (PPE):** Wear appropriate safety glasses or goggles, hearing protection, and sturdy footwear. Avoid loose clothing that could get caught in moving parts.
- **Clear the Area:** Before starting, thoroughly clear the area to be plowed of all objects such as rocks, toys, wires, and other debris that could be thrown by the auger.
- **Fuel Safety:** Handle fuel with extreme care. It is highly flammable. Store fuel in approved containers, outdoors, and away from ignition sources. Never refuel a hot or running engine.
- **Engine Exhaust:** Operate the snow thrower only in well-ventilated areas. Engine exhaust contains carbon monoxide, a colorless, odorless, poisonous gas.
- **Keep Bystanders Away:** Keep children, pets, and other people away from the operating area.
- **Never Direct Discharge:** Never direct the discharge chute towards people, animals, or property. Thrown objects can cause serious injury.
- **Avoid Slopes:** Exercise extreme caution when operating on slopes. Never operate on excessively steep slopes.

- **Disengage Power:** Always disengage power to the auger/impeller and stop the engine before unclogging the discharge chute, making adjustments, or performing maintenance.
- **Use Clearing Tool:** Never use your hands to clear the discharge chute. Always use the provided clearing tool or a stick.

## 3. SETUP

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### 3.1 Unpacking and Assembly

Carefully remove the snow thrower and all components from the packaging. Inspect for any shipping damage. If damage is found, contact your dealer immediately.

Assembly typically involves attaching the handle and discharge chute. Refer to the detailed diagrams in your included assembly guide for specific steps. Ensure all bolts and fasteners are securely tightened.



Image: The MTD 31A-2M1E678 Snow Thrower with its handle fully assembled, ready for operation. This view highlights the main body, engine, and discharge chute.

### 3.2 Adding Fuel and Oil

Your snow thrower is equipped with an MTD SnowThorX 35 OHV 4-stroke engine. It requires unleaded gasoline and engine oil.

- **Engine Oil:** Before first use, fill the engine with the recommended 4-stroke engine oil (typically SAE 5W-30 or 10W-30 for cold weather operation). Consult the engine manual for exact specifications and capacity. Do not overfill.
- **Fuel:** Fill the fuel tank with fresh, clean, unleaded gasoline with an octane rating of 87 or higher. Do not use E85 fuel. Always use a fuel stabilizer if storing fuel for extended periods.
- **Safety Precaution:** Always refuel outdoors in a well-ventilated area. Do not smoke or allow open flames near the machine while refueling.

## 4. OPERATING INSTRUCTIONS

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### 4.1 Pre-Operation Checklist

- Check engine oil level.
- Ensure fuel tank is adequately filled.
- Inspect the auger for any obstructions.
- Verify all controls (chute, auger engagement) operate freely.
- Clear the work area of any debris.

### 4.2 Starting the Engine

1. **Prime (if equipped):** Press the primer bulb 3-5 times, or as recommended by the engine manufacturer, if the engine is cold.
2. **Choke:** Move the choke lever to the "FULL CHOKE" position.
3. **Throttle:** Set the throttle lever to the "FAST" position.
4. **Ignition:** Ensure the ignition switch is in the "ON" position.
5. **Start:** Pull the starter rope with a rapid, continuous motion until the engine starts. If equipped with electric start, connect to power and press the start button.
6. **Warm-up:** Once the engine starts, gradually move the choke lever to the "RUN" position as the engine warms up (usually within 30 seconds to 1 minute).

### 4.3 Operating the Snow Thrower

Once the engine is running smoothly, you can begin snow removal.

- **Engage Auger:** Engage the auger control lever. The auger will begin to rotate, collecting and discharging snow.
- **Adjust Chute:** Use the chute control handle to direct the snow discharge away from areas where it is not wanted.
- **Plowing Technique:** Push the snow thrower forward into the snow. For deep snow, it may be necessary to overlap passes or take smaller bites.
- **Avoid Overloading:** Do not force the machine into heavy snow too quickly, as this can stall the engine or damage components.



Image: The MTD 31A-2M1E678 Snow Thrower positioned in a snowy environment, illustrating its intended use for clearing snow from outdoor areas near a residence.

## 4.4 Stopping the Engine

To stop the engine:

1. Disengage the auger control lever.
2. Move the throttle lever to the "SLOW" or "IDLE" position and allow the engine to cool for a few moments.
3. Turn the ignition switch to the "OFF" position.

## 5. MAINTENANCE

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Regular maintenance ensures optimal performance and extends the life of your snow thrower. Always stop the engine, disconnect the spark plug wire, and allow the machine to cool before performing any maintenance.

### 5.1 After Each Use

- **Clean:** Remove any snow, ice, or debris from the machine, especially around the auger, chute, and engine cooling fins.
- **Inspect:** Check for loose fasteners, damaged parts, or worn belts.

### 5.2 Seasonal Maintenance

- **Engine Oil Change:** Change the engine oil after the first 5 hours of operation, then every 25-50 hours or annually, whichever comes first.
- **Spark Plug:** Inspect and clean or replace the spark plug annually.
- **Belts:** Inspect auger drive belts for wear or damage. Replace if necessary.
- **Skid Shoes and Scraper Bar:** Check the skid shoes and scraper bar for wear. Replace if they are excessively worn to prevent damage to the auger housing.



Image: The MTD 31A-2M1E678 Snow Thrower stored in a garage, emphasizing the importance of proper storage and post-operation care.

### 5.3 Storage

For long-term storage (over 30 days):

- Drain the fuel tank or add a fuel stabilizer and run the engine for a few minutes to circulate it.
- Change the engine oil.
- Clean the entire machine thoroughly.
- Store in a clean, dry, well-ventilated area, away from direct sunlight and extreme temperatures.

## 6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Engine will not start	<ul style="list-style-type: none"><li>• No fuel or stale fuel</li><li>• Ignition switch OFF</li><li>• Choke not set correctly</li><li>• Spark plug fouled or loose</li></ul>	<ul style="list-style-type: none"><li>• Add fresh fuel; drain old fuel</li><li>• Turn ignition switch to ON</li><li>• Adjust choke lever</li><li>• Clean or replace spark plug</li></ul>
Engine runs poorly or stalls	<ul style="list-style-type: none"><li>• Stale fuel</li><li>• Clogged air filter</li><li>• Spark plug issue</li></ul>	<ul style="list-style-type: none"><li>• Drain and refill with fresh fuel</li><li>• Clean or replace air filter</li><li>• Inspect/replace spark plug</li></ul>
Snow discharge is weak or clogged	<ul style="list-style-type: none"><li>• Auger clogged with snow/ice</li><li>• Damaged auger or impeller</li><li>• Worn drive belt</li></ul>	<ul style="list-style-type: none"><li>• <b>STOP ENGINE!</b> Clear chute with tool.</li><li>• Inspect and replace damaged parts.</li><li>• Inspect and replace drive belt.</li></ul>

If problems persist after attempting these solutions, please contact MTD customer support or an authorized service center.

## 7. SPECIFICATIONS

Feature	Detail
Model Number	31A-2M1E678
Engine Type	MTD SnowThorX 35, OHV, 4-stroke
Engine Displacement	123 cm <sup>3</sup>
Power Output	2.2 kW / 3600 rpm
Dimensions (L x W x H)	111 x 57 x 91.5 cm
Weight	31 kg
Material	Metal
Color	Red

## 8. WARRANTY AND SUPPORT

Your MTD 31A-2M1E678 Snow Thrower is covered by a manufacturer's warranty. Please refer to the separate warranty document included with your purchase for specific terms and conditions, including warranty period and coverage details.

For technical assistance, spare parts, or warranty claims, please contact MTD customer support or visit the official MTD website. Ensure you have your model number (31A-2M1E678) and serial number ready when contacting support.

**MTD Official Website:** [www.mtdproducts.com](http://www.mtdproducts.com)