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MADER 28402

MADER Motocultor 15HP 420CC Model 28402 User Manual

Comprehensive Instructions for Safe Operation and Maintenance

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1. SAFETY INSTRUCTIONS

Read and understand all safety warnings and instructions before operating the MADER Motocultor. Failure to follow these instructions may result in serious injury or death.

1.1 General Safety

- Always wear appropriate personal protective equipment (PPE), including safety glasses, gloves, sturdy footwear, and hearing protection.
- Keep children and bystanders away from the operating area.
- Do not operate the machine under the influence of alcohol, drugs, or medication that may impair judgment.
- Inspect the machine before each use for loose parts, damage, or leaks.
- Ensure all guards and safety devices are in place and functioning correctly.

1.2 Fuel Safety

- Handle fuel in a well-ventilated area, away from sparks, open flames, or other ignition sources.
- Do not refuel while the engine is running or hot.
- Store fuel in approved containers.

1.3 Operation Safety

- Operate the motocultor only on stable ground. Avoid steep slopes or uneven terrain that could cause loss of control.
- Maintain a firm grip on the handles.
- Be aware of rotating parts and keep hands and feet clear.

- Disengage attachments and stop the engine before performing any adjustments or clearing blockages.

2. COMPONENTS OVERVIEW

Familiarize yourself with the main components of your MADER Motocultor.



Figure 2.1: Overview of the MADER Motocultor 28402 with common attachments. This image displays the main power unit, a tiller attachment, a trailer, and other implements like a plow and furrower, illustrating the versatility of the machine.



Figure 2.2: Detailed view of the MADER Motocultor 28402 power unit. This image highlights the 4-stroke air-cooled engine, fuel tank, air filter, and the operator handles with various control levers for speed and engagement.

Key Components:

- **Engine:** 4-stroke, air-cooled, 15HP (9Kw), 420CC displacement.
- **Fuel Tank:** For gasoline.
- **Oil Sump:** For engine oil (1.2L capacity).
- **Handlebars:** With controls for throttle, clutch, and gear selection.
- **Wheels:** Drive wheels for traction.
- **Power Take-Off (PTO):** For attaching various implements.
- **Gearbox:** Provides 3 forward and 2 reverse speeds.

3. SETUP AND INITIAL PREPARATION

Before operating your motocultor, proper assembly and preparation are essential to ensure safe and efficient performance.

3.1 Unpacking and Assembly

1. Carefully remove all components from the packaging.
2. Attach the handlebars to the main unit, ensuring all bolts are securely tightened.

3. Mount the wheels, ensuring they are correctly oriented and fastened.
4. If using an attachment like a tiller, connect it to the PTO shaft according to the attachment's specific instructions. Refer to the attachment's manual for detailed assembly steps.

3.2 Fluid Checks and Filling

- **Engine Oil:** The engine requires approximately 1.2 liters of 10W-40 or equivalent 4-stroke engine oil. The unit is shipped without engine oil. Fill to the appropriate level indicated on the dipstick before first use.
- **Gearbox Oil:** The gearbox is typically pre-filled from the factory. Verify the oil level and top up if necessary with recommended gear oil. Consult the full service manual for specific oil type and capacity.
- **Fuel:** Fill the fuel tank with fresh, unleaded gasoline. Do not overfill and ensure the fuel cap is securely fastened.

3.3 Battery Connection (for Electric Start Models)

If your motocultor is equipped with an electric starter, the battery may be partially disconnected for transport. Locate the battery and ensure both positive (red) and negative (black) terminals are securely connected. The negative terminal may have a protective sleeve that needs to be removed, and it must be connected to the chassis for proper grounding.

4. OPERATING INSTRUCTIONS

Follow these steps for safe and effective operation of your MADER Motocultor.

4.1 Starting the Engine

1. Ensure the fuel valve is open.
2. Set the choke lever to the "CHOKE" position (for cold starts).
3. Move the throttle lever to the "START" or mid-range position.
4. Pull the recoil starter handle firmly until the engine starts, or turn the ignition key for electric start models.
5. Once the engine starts, gradually move the choke lever to the "RUN" position.

4.2 Engaging Gears and Driving

- With the engine running, disengage the clutch.
- Select the desired gear (3 forward, 2 reverse). Start with a low gear for initial movement.
- Gradually engage the clutch to begin moving.
- Adjust the throttle to control engine speed.

4.3 Using Attachments (e.g., Tiller)



Figure 4.1: The MADER Motocultor 28402 equipped with a rotary tiller attachment. This configuration is ideal for preparing soil for planting, breaking up compacted earth, and weeding. Ensure the tiller is securely mounted before operation.

- Ensure the attachment is securely mounted to the PTO.
- Engage the PTO lever (if separate from the main clutch) to power the attachment.
- Adjust the working depth or height of the attachment as needed.
- Operate at a steady pace, allowing the attachment to perform its function effectively.

4.4 Stopping the Engine

1. Disengage any attachments.
2. Move the throttle lever to the "STOP" or "IDLE" position.
3. Turn the ignition key to "OFF" or press the engine stop switch.
4. Close the fuel valve for storage.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your motocultor.

5.1 Daily Checks

- Check engine oil level.

- Inspect air filter for cleanliness.
- Check tire pressure.
- Look for any loose fasteners or signs of damage.

5.2 Periodic Maintenance

- **Engine Oil Change:** Change engine oil after the first 5 hours of operation, then every 25-50 hours or annually.
- **Air Filter Cleaning/Replacement:** Clean or replace the air filter every 25 hours or more frequently in dusty conditions.
- **Spark Plug:** Inspect and clean the spark plug every 50 hours. Replace if worn.
- **Gearbox Oil:** Check and change gearbox oil as recommended in the full service manual (typically every 100-200 hours).
- **Lubrication:** Lubricate all pivot points and control cables as needed.

5.3 Storage

- Clean the motocultor thoroughly.
- Drain the fuel tank or add a fuel stabilizer.
- Remove the spark plug and add a small amount of engine oil into the cylinder, then slowly pull the recoil starter a few times to distribute. Reinstall the spark plug.
- Store in a dry, protected area.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your MADER Motocultor.

Problem	Possible Cause	Solution
Engine does not start	No fuel; Choke incorrect; Spark plug faulty; Engine oil low (safety cutoff)	Check fuel level; Adjust choke; Clean/replace spark plug; Fill engine oil to correct level.
Engine runs poorly or stalls	Dirty air filter; Stale fuel; Clogged fuel line; Spark plug issues	Clean/replace air filter; Use fresh fuel; Clean fuel line; Inspect/replace spark plug.
Loss of power	Overload; Dirty air filter; Incorrect engine speed; Low engine oil	Reduce load; Clean/replace air filter; Adjust throttle; Check engine oil.
Excessive vibration	Loose fasteners; Damaged attachment; Unbalanced wheels	Tighten all bolts; Inspect attachment for damage; Check wheel balance.

If you cannot resolve the issue using this guide, please contact MADER customer support or a qualified service technician.

7. SPECIFICATIONS

Technical details for the MADER Motocultor Model 28402.

- **Model:** 28402
- **Engine Type:** 4-stroke, Air-cooled
- **Displacement:** 420 CC

- **Power:** 15 HP (9 Kw) at 3600 RPM
- **Speeds:** 3 Forward + 2 Reverse
- **Engine Oil Capacity:** 1.2 Liters
- **Transmission:** Gear
- **Material:** Alloy Steel
- **Power Source:** Gasoline Engine
- **Dimensions (Package):** 110 x 79 x 62 cm
- **Product Weight:** 140 kg
- **Included Components:** Motocultor and Tiller (Motoazada y Fresas)

8. WARRANTY AND SUPPORT

MADER products are manufactured to high-quality standards. For warranty information, please refer to the documentation provided with your purchase or contact MADER customer service. Keep your proof of purchase for any warranty claims.

For technical support, spare parts, or service inquiries, please contact your authorized MADER dealer or visit the official MADER website for contact details.