



CLOVER SAFE

AGRICULTURE AND NATURAL RESOURCES
ENVIRONMENTAL HEALTH AND SAFETY



#11

SAFE REPAIR AND MAINTENANCE OF SMALL ENGINES

Clover Safe notes are intended primarily for 4-H volunteers and members nine years and older.



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West Side REC

Several types of injury risks are associated with repairing and maintaining small engines. Types of injury risks include inhalation of toxic fumes, hand and finger fractures, cuts, and bruises from mechanical impacts, back injuries from improper lifting technique or lifting excessive weight, entanglement injuries from rotating parts, burns from contact with hot surfaces, and electrical shocks from energized systems or components. Most injuries experienced during small engine repair or maintenance are avoidable and frequently due to the mechanic's inexperience or improper or inattentive work practices.

Safe Work Practices for the Repair and Maintenance of Small Engines

- Thoroughly review and understand information provided in the small engine operator's manual with particular attention given to descriptions of safety procedures.
- Never wear a tie, loose clothing, jewelry, or earphones when performing repair or maintenance on a small engine. Tie long hair back or secure under a cap.
- Only use the proper tools for the type of small engine repair or maintenance task.
- Drain the fuel before performing mechanical work indoors.
- Use gasoline-resistant gloves, such as nitrile, polyurethane, Viton, or chlorinated polyethylene, and wear safety glasses when handling gasoline to prevent skin and eye exposure to gasoline.
- Regularly inspect small engine fuel lines and fittings and fuel tank and cap for cracks or leaks.
- Disconnect the spark plug wire and remove the spark plug before initiating small engine repair or maintenance work. Use an approved spark plug tester when checking the spark.
- For a small engine with an electric start, disconnect the battery before beginning the repair or maintenance task.
- To hand start a small engine, pull the starter cord back slowly until resistance is encountered. Then pull the cord rapidly to start the small engine.
- Use hearing protection whenever a small engine is running.
- Always operate small engines with all guards in place. Be particularly aware of rotating parts.
- Do not start or run a small engine in an enclosed space. Breathing engine exhaust can be deadly.
- Never refuel a small engine when the engine or other parts such as the muffler are hot.
- Use a rag to wipe off fuel spills or rinse fuel spills off with water before starting a small engine.
- Never dump used oil on the ground or pour down any drain. Properly dispose of used engine oil at a recycling facility.
- Store gasoline in an approved red container that has a spark arrester cap. Do not store gasoline in an enclosed space where vapors could accumulate.
- If you suffer an injury while performing small engine repair or maintenance, tell your group leader, parent, or guardian. Seek medical attention if the injury is serious.
- When finished with the repair or maintenance of a small engine, put all tools away and clean the work area.
- Always wash your hands with soap and water after completing the small engine repair or maintenance task.