



2024 Edition

SCOUTMASTER BUCKY

Farm Mechanics Merit Badge

SCOUTS PARTICIPATING IN A SCOUTMASTER BUCKY MERIT BADGE OPPORTUNITY (ONLINE OR IN PERSON), PLEASE CONSIDER ALSO USING THE FARM MECHANICS MERIT BADGE CLASS PREPARATION PAGE FOR CLARIFICATIONS, INSIGHTS, AND EXPECTATIONS.

<https://scoutmasterbucky.com/merit-badges/farm-mechanics/farm-mechanics-cpp.pdf>

FARM MECHANICS MERIT BADGE WORKBOOK

REQUIREMENT 1a: Discuss with your counselor the safety equipment, tools, and clothing used while checking or repairing farm equipment. Use this equipment, tools, and/or clothing (when needed or called for) in meeting the requirements for this merit badge.

Notes:



2024 Edition

SCOUTMASTER BUCKY

Farm Mechanics Merit Badge

REQUIREMENT 1b: Draw a plan showing a well-equipped farm shop. Point out the shop's mandatory safety devices and features.

Notes:



2024 Edition

SCOUTMASTER BUCKY

Farm Mechanics Merit Badge

REQUIREMENT 1c: Find all the universal warning and safety symbols on a piece of equipment and explain what they mean.

Notes:

REQUIREMENT 1d: Describe what a safety data sheet (SDS) is and tell why it is used. Obtain the SDS for any engine coolant, oil, grease, fuel, hydraulic or transmission fluid, or other flammable or hazardous materials you use in meeting the requirements for this merit badge.

Notes:



2024 Edition

SCOUTMASTER BUCKY

Farm Mechanics Merit Badge

REQUIREMENT 2a: Explain how power is produced or transferred in a diesel engine.

Notes:

REQUIREMENT 2b: Explain how power is produced or transferred in a hydraulic system.

Notes:

REQUIREMENT 2c: Explain how power is produced or transferred in a transmission or any other power system.

Notes:



2024 Edition

SCOUTMASTER BUCKY

Farm Mechanics Merit Badge

DO TWO OF THE FOLLOWING (3A, 3B, 3C, or 3D) FOR REQUIREMENT 3

REQUIREMENT 3a: Replace the handle of any tool found on the farm.

Notes:

REQUIREMENT 3b: Organize a tool rack or a storage system for nails, bolts, nuts, and washers.

Notes:

REQUIREMENT 3c: Using a hand file, properly dress the mushroomed head of a chisel or punch.

Notes:

REQUIREMENT 3d: Using a hand file, correctly dress a screwdriver tip.

Notes:



2024 Edition

SCOUTMASTER BUCKY

Farm Mechanics Merit Badge

DO ONE OF THE FOLLOWING (4A, 4B, or 4C) FOR REQUIREMENT 4

REQUIREMENT 4a: On an engine-powered machine: Grease all fittings, change the oil, and oil filter, clean the air filter, clean the radiator fins, and replace the fuel filters.

Notes:

REQUIREMENT 4b: For any engine-powered machine, create a preoperational checklist; include checking the engine coolant, engine oil, hydraulic and/or transmission fluid, and battery voltage (using a voltmeter). Using your checklist, conduct a preoperational check of that machinery or equipment.

Notes:

REQUIREMENT 4c: Prepare any farm machine for winter storage.

Notes:



2024 Edition

SCOUTMASTER BUCKY

Farm Mechanics Merit Badge

REQUIREMENT 5: Visit an implement dealer. Interview the dealer technician or service manager for hints on good preventive maintenance. Ask why it is important, the costs, and what causes wear or damage. Report what you learn.

Implement Dealer:

Implement Dealer Location (address):

Date of Visit to Implement Dealer:

Implement Dealer Representative's Name

Phone

Implement Dealer Representative's Signature

Date

visited

Notes:



2024 Edition

SCOUTMASTER BUCKY

Farm Mechanics Merit Badge

DO ONE OF THE FOLLOWING (6A, 6B or 6C) FOR REQUIREMENT 6

REQUIREMENT 6a: Explain each step in maintenance procedures for tightening hydraulic fittings .

REQUIREMENT 6b: Explain each step in maintenance procedures for checking the air filter.

REQUIREMENT 6c: Explain each step in maintenance procedures for cleaning a work piece with a wire-brush wheel.

Selected Requirement Option:

6A Tightening Hydraulic Fittings

6B Checking the Air Filter

6C Cleaning a work piece with a wire-brush wheel

Maintenance Procedure Steps:



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SCOUTMASTER BUCKY

Farm Mechanics Merit Badge

REQUIREMENT 7: Find out about three career opportunities in farm mechanics.

Career Opportunity #1:

Career Opportunity #2:

Career Opportunity #3:

REQUIREMENT 7: Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor.

Selected Career Opportunity:

Educational Requirements:

Training Requirements:

Experience Requirements:

REQUIREMENT 7: Explain why this career might interest you.

Notes: