

# Power Equipment Technology: Grades 9, 10, 11, 12

Adopted 2004

## Applying safety practices on the job

**A001.** Identify the safe use of chemicals. [A001](#)

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**A002.** Identify the safe use and maintenance of hand tools. [A002](#)

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**A003.** Identify the safe use and maintenance of power tools. [A003](#)

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**A004.** Identify the safe use and maintenance of specialized measuring tools. [A004](#)

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**A005.** Identify the safe use of protective clothing and equipment. [A005](#)

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**A006.** Identify the safe use of fire protection equipment. [A006](#)

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**A007.** Identify the safe use of shop equipment. [A007](#)

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**A006.** Follow Environmental Protection Agency (EPA), Occupational Safety and Health Act (OSHA), Material Safety Data Sheets (MSDS), safety standards and regulations. [A006](#)

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## Performing shop operations

**B001.** Read a shop manual. [B001](#)

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**B002.** Maintain a time record for each shop job. [B002](#)

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**B003.** Maintain a daily and weekly work schedule and assign individuals to job positions. [B003](#)

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**B004.** Determine economic feasibility of repair. [B004](#)

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**B005.** Write a service order. [B005](#)

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**B006.** Calculate labor cost using a flat rate manual. [B006](#)

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**B007.** Identify work performed on work orders. [B007](#)

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**B008.** Interpret parts lists and schematics using associated manuals, microfiche, and computer. [B008](#)

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**B009.** Prepare warranty reports. [B009](#)

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**B010. Adhere to inventory controls** B010

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**B011. Maintain a clean and orderly work area.** B011

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**Identifying fasteners and their uses**

**C001. Identify type and grade of fasteners.** C001

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**C002. Choose appropriate fastener for corresponding job.** C002

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**C003. Repair damaged thread using a tap and die set.** C003

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**Diagnosing and repairing fuel system**

**D001. Diagnose and determine needed repair on fuel system.** D001

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**D002. Remove and replace the fuel tank and fuel lines.** D002

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**D003. Remove and replace the fuel filter systems.** D003

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**D004. Diagnose and determine needed repair on air cleaner system.** D004

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**D005. Service foam-type air cleaner.** D005

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**D006. Service dry element-type air cleaner.** D006

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**D007. Disassemble, clean, and inspect diaphragm-type carburetor.** D007

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**D008. Reassemble and adjust a diaphragm-type carburetor.** D008

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**D019. Disassemble, clean, and inspect a float-type carburetor.** D019

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**D010. Reassemble and adjust float-type carburetor.** D010

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**D011. Disassemble, clean, and inspect fuel pump.** D011

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**D012. Reassemble and install fuel pump.** D012

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**D013. Clean crankcase breather** D013

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**Diagnosing and servicing general electrical system**

**E001. Read a multimeter. (VAO)** E001

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**E002. Apply electrical theory.** E002

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**E003. Service and repair DC electric starter/generator.** E003

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**E004. Troubleshoot the charging circuit using a manufacturer's guide.** E004

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**E005. Remove pulley and belt.** E005

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**E006. Replace starter/generator pulley assembly and belt.** E006

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**E007. Remove and inspect alternator.** E007

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**E008. Replace alternator components. E008**

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**E009. Test and charge the battery. E009**

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**E010. Repair and/or replace starter. E010**

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**E011. Troubleshoot and repair starting circuit. E011**

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**Diagnosing and servicing manual starting system**

**F001. Diagnose and determine needed repair on manual starting system. F001**

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**F002. Replace starter spring. F002**

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**F003. Replace a starter clutch if needed. F003**

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**F004. Replace starter pawls. F004**

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**F005. Replace a worn or defective cup. F005**

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**F006. Replace starter rope. F006**

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**Diagnosing and servicing ignition system**

**G001. Remove, inspect, adjust, and install sparkplugs. G001**

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**G002. Remove, inspect, and replace the flywheel. G002**

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**G003. Remove, inspect, and replace points and condenser system. G003**

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**G004. Adjust armature air gap. G004**

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**G005. Test and replace coil/magneto. G005**

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**G006. Test and replace ignition wires. G006**

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**G007. Test and replace safety switch. G007**

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**Diagnosing and repair 2 and 4-Cycle engine**

**H001. Apply 2 and 4-cycle engine theory. H001**

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**H002. Diagnose and determine needed repair on 2 and 4-cycle engine components. H002**

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**H003. Disassemble 2 and 4-cycle engine. H003**

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**H004. Install piston. H004**

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**H005. Install piston rings. H005**

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**H006. Determine wear on internal engine parts using specialized tools. H006**

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**H007. Ridge ream top of cylinder. H007**

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**H008. Bore and deglaze cylinder.** H008

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**H009. Reassemble long block.** H009

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**H010. Replace cylinder and cylinder head on 2 and 4 cycle engines** H010

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**Diagnosing and servicing lawn mower**

**I001. Adjust clutch controls (i.e., cables, rods, and springs).** I001

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**I002. Inspect and service mower decks.** I002

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**I003. Set height of cut.** I003

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**I004. Lubricate mower.** I004

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**I005. Grind and balance rotary blade.** I005

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**I006. Diagnose needed repair for self-propelled drive system on walk behind mower.** I006

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**I007. Inspect and service steering assembly.** I007

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**I008. Replace and adjust drive trans and PTO (power take-off) belts.** I008

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**I009. Replace and adjust throttle cable.** I009

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**I010. Inspect and/or replace brake pad.** I010

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**I011. Test the kill switch.** I011

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**Diagnosing and servicing chain saw**

**K001. Diagnose needed repair on chain saw.** K001

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**Troubleshoot cutter problem**

**K001. Sharpen and adjust or replace chain.** K001

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**K002. Set chain depth gauge.** K002

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**K003. Check and adjust chain oiler.** K003

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**K004. Lubricate bar nose sprocket.** K004

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**K005. Inspect and replace worn sprocket and clutch.** K005

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**Diagnosing and servicing string trimmer**

**L001. Diagnose needed repair on string trimmer.** L001

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**L002. Conduct maintenance on shaft.** L002

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**L003. Wind and trim cutter head.** L003

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**Diagnosing and servicing cooling systems**

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**M001.** Apply cooling system theory. M001

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**M002.** Identify liquid cooling system components. M002

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**M003.** Identify air-cooling system components. M003

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**Diagnosing and servicing cooling systems**

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**N001.** Apply governor system theory. N001

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**N002.** Inspect, adjust, and replace pneumatic system N002

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**N003.** Inspect, adjust, and replace mechanical system N003

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**Diagnosing and servicing exhaust systems**

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**O001.** Apply exhaust system theory 0001

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**O002.** Diagnose common equipment problems in a damaged exhaust system, 2 & 4 cycle 0002

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**O003.** Identify cleaning procedures for exhaust ports and spark arrestor screens, 2 cycle 0003