

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

Adopted 2004

Applying safety practices on the job

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

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

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

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

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

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

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

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

Performing shop operations

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

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

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

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

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

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

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

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

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

B010. Adhere to inventory controls **B010**

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

Identifying fasteners and their uses

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

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

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

Diagnosing and repairing fuel system

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

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

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

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

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

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

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

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

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

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

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

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

D013. Clean crankcase breather **D013**

Diagnosing and servicing general electrical system

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

E002. Apply electrical theory. **E002**

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

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

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

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

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

E008. Replace alternator components. E008

E009. Test and charge the battery. E009

E010. Repair and/or replace starter. E010

E011. Troubleshoot and repair starting circuit. E011

Diagnosing and servicing manual starting system

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

F002. Replace starter spring. F002

F003. Replace a starter clutch if needed. F003

F004. Replace starter pawls. F004

F005. Replace a worn or defective cup. F005

F006. Replace starter rope. F006

Diagnosing and servicing ignition system

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

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

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

G004. Adjust armature air gap. G004

G005. Test and replace coil/magneto. G005

G006. Test and replace ignition wires. G006

G007. Test and replace safety switch. G007

Diagnosing and repair 2 and 4-Cycle engine

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

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

H003. Disassemble 2 and 4-cycle engine. H003

H004. Install piston. H004

H005. Install piston rings. H005

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

H007. Ridge ream top of cylinder. H007

H008. Bore and deglaze cylinder. H008

H009. Reassemble long block. H009

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

Diagnosing and servicing lawn mower

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

I002. Inspect and service mower decks. I002

I003. Set height of cut. I003

I004. Lubricate mower. I004

I005. Grind and balance rotary blade. I005

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

I007. Inspect and service steering assembly. I007

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

I009. Replace and adjust throttle cable. I009

I010. Inspect and/or replace brake pad. I010

I011. Test the kill switch. I011

Diagnosing and servicing chain saw

K001. Diagnose needed repair on chain saw. K001

Troubleshoot cutter problem

K001. Sharpen and adjust or replace chain. K001

K002. Set chain depth gauge. K002

K003. Check and adjust chain oiler. K003

K004. Lubricate bar nose sprocket. K004

K005. Inspect and replace worn sprocket and clutch. K005

Diagnosing and servicing string trimmer

L001. Diagnose needed repair on string trimmer. L001

L002. Conduct maintenance on shaft. L002

L003. Wind and trim cutter head. L003

Diagnosing and servicing cooling systems

M001. Apply cooling system theory. M001

M002. Identify liquid cooling system components. M002

M003. Identify air-cooling system components. M003

Diagnosing and servicing cooling systems

N001. Apply governor system theory. N001

N002. Inspect, adjust, and replace pneumatic system N002

N003. Inspect, adjust, and replace mechanical system N003

Diagnosing and servicing exhaust systems

O001. Apply exhaust system theory 0001

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

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