

Power Equipment

Apply safety principles, practices, and guidelines to the work environment. [STS.HS.28.1](#)

- a** Complete applicable safety assessment with 100% accuracy. [STS.HS.28.1.A](#)
- b** Identify and explain the use of personal protective equipment. [STS.HS.28.1.B](#)
- c** Describe proper use of a fire extinguisher. [STS.HS.28.1.C](#)
- d** Demonstrate power equipment battery safety best-practices. [STS.HS.28.1.D](#)
- e** Apply the safe use of tools, machines, and equipment in alignment with industry standards to maintain a safe workplace. [STS.HS.28.1.E](#)
- f** Describe the role of government agencies in providing a safe workplace. [STS.HS.28.1.F](#)
- g** Describe the safe and environmental disposal of fluids. [STS.HS.28.1.G](#)

Identify career opportunities in the Power Equipment industry. [STS.HS.28.2](#)

- a** List the most common power equipment careers and related fields of employment. [STS.HS.28.2.A](#)
- b** List the traits & skills employers look for in their employees. [STS.HS.28.2.B](#)
- c** Explain how to find job openings in the power equipment field & identify employment trends. [STS.HS.28.2.C](#)
- d** Explain the specialized tasks completed by each type of technician. [STS.HS.28.2.D](#)
- e** Explain the types of repair facilities. [STS.HS.28.2.E](#)
- f** Summarize the different systems used to pay technicians. [STS.HS.28.2.F](#)
- g** Identify the training, education, certification, and licensing requirements for various careers in the power equipment industry. [STS.HS.28.2.G](#)

Identify fundamentals of power equipment measurement and math. [STS.HS.28.3](#)

- a** Measure power equipment parts and measurements using both English and metric measuring systems. [STS.HS.28.3.A](#)
- b** Identify and use basic measuring tools. [STS.HS.28.3.B](#)
- c** Solve power equipment problems using basic math skills. [STS.HS.28.3.C](#)

Explain fundamentals of Power Equipment Service Information. STS.HS.28.4

- a Describe the different types of service information.** STS.HS.28.4.A
- b Explain the different kinds of information and Illustrations used in service information.** STS.HS.28.4.B
- c Utilize print and/or online service information.** STS.HS.28.4.C
- d Explain how to read and use shop work orders.** STS.HS.28.4.D
- e Describe how to order parts for repair.** STS.HS.28.4.E

Explain fundamentals of fasteners, gaskets, seals, and sealants used in Power Equipment. STS.HS.28.5

- a Identify commonly used power equipment fasteners.** STS.HS.28.5.A
- b Select and use fasteners properly.** STS.HS.28.5.B
- c Remove, select, and install gaskets, seals, and sealants correctly.** STS.HS.28.5.C

Explain fundamentals of power equipment principles of engine operation. STS.HS.28.6

- a Explain simple engine operation.** STS.HS.28.6.A
- b Describe four-stroke engine operation and explain the purpose of each stroke.** STS.HS.28.6.B
- c Describe two-stroke engine operation and explain the principles of two-cycle operation.** STS.HS.28.6.C
- d List the advantages and disadvantages of two-stroke and four-stroke engines.** STS.HS.28.6.D

Explain fundamentals of Power Equipment engine components and systems. STS.HS.28.7

- a Describe the function of major moving components (e.g., piston, crankshaft, camshaft, valves).** STS.HS.28.7.A
- b Describe the fundamentals of power equipment fuel supply and air induction.** STS.HS.28.7.B
- c Describe the fundamentals of Power Equipment Ignition Systems.** STS.HS.28.7.C
- d Describe the fundamentals of power equipment lubrication Systems.** STS.HS.28.7.D
- e Describe the fundamentals of Power Equipment Cooling Systems.** STS.HS.28.7.E

Demonstrate the fundamentals of power equipment engine disassembly, inspection and reassembly. STS.HS.28.8

- a List the steps involved in disassembling an engine.** STS.HS.28.8.A
- b Explain how to inspect various engine parts for damage and wear.** STS.HS.28.8.B
- c Describe the procedure for removing an engine from an implement.** STS.HS.28.8.C
- d Explain how to inspect engines for problems.** STS.HS.28.8.D

e Demonstrate power equipment engine assembly. STS.HS.28.8.E

Explain fundamentals of Power Equipment Preventative Maintenance & Troubleshooting. STS.HS.28.9

a Explain the steps to perform preventive maintenance on various engine systems. STS.HS.28.9.A

b Summarize the steps to change the oil in a four-cycle engine. STS.HS.28.9.B

c Describe the steps to prepare an engine for storage. STS.HS.28.9.C

d Describe systematic troubleshooting. STS.HS.28.9.D

e Explain the importance of manufacturers' service manuals to determine engine specifications and explain why this information is necessary when servicing a small engine. STS.HS.28.9.E

f Discuss the importance of a maintenance schedule and records. STS.HS.28.9.F
