

Small Engine Service and Repair

Curriculum Guide: *Small Engine Service and Repair*

Module: 4. Small Engine Compression

Unit Objective:

Students will demonstrate an understanding of small engine compression by identifying valve tools and their uses and inspecting and servicing the valve train of a small engine.

Show-Me Standards: 1.10, CA3

References:

Briggs & Stratton Corporation. Accessed January 13, 2004, from <http://www.briggsandstratton.com>.

Kohler Engines. Accessed January 13, 2004, from <http://www.kohlerengines.com/>.

Small Engine Service and Repair. University of Missouri-Columbia, Instructional Materials Laboratory, 1994.

Instructional Strategies/Activities:

- Students will engage in study questions in lesson 1.
- Students will complete the Module 4 evaluation, Compression-Valve Service and Repair.
- Students will complete the following competency profile: Compression-Valve Service and Repair.
- Additional activities that relate to the unit objective can be found under the heading "Other Activities" in the following location: p. 4.9 (1, 2).

Performance-Based Assessment:

As part of the instructional strategies and activities for this module, students will identify valve tools and their uses and inspect and service the valve train of a small engine.

Assessment will be based on performance on the module evaluation and the ability to safely and correctly perform the assigned repair and service procedures.

Module 4—Small Engine Compression Instructor Guide

The instructor should assign the performance-based assessment activity procedures in conjunction with the relevant lesson material outlined in the instructor guide. Students will complete the activity procedures as they progress through the module lessons.

1. Use the Compression–Valve Service and Repair Competency Profile to assess student performance. This profile includes the procedures listed below. The page number indicates the location of a checklist for the procedure. The procedures and checklists are found in the student manual.
 - Checking Compression, p. 33
 - Removing Cylinder Head, p. 33
 - Removing the Valves, p. 33
 - Inspecting the Valves and Accessories, p. 33
 - Replacing the Valve Guide, p. 34
 - Refacing the Valves, p. 34
 - Refacing Valve Seats, p. 34
 - Replacing Valve Seats, p. 34
 - Lapping the Valves, p. 35
 - Installing the Cylinder Head, p. 35
2. Have students complete the Module 4 evaluation, Compression–Valve Service and Repair. Answers for the evaluation are found on pp. 4.10–4.11 of the instructor manual.
3. Because the student manual includes step-by-step instructions and an itemized checklist for each competency procedure, there is no student handout for this performance-based assessment activity. However, there is a scoring guide that can be used, if desired. The scoring guide lists the assessment activity procedures and includes spaces for points possible, points earned, and instructor comments.
4. The final assessment score will be based on the performance on the module evaluation and the ability to safely and correctly perform the assigned repair and service procedures.

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Module 4—Small Engine Compression Scoring Guide

Name _____

Activity	Criteria	Points Possible	Points Earned	Instructor Comments
Compression-Valve Service and Repair Competency Profile	<input type="checkbox"/> Checking compression			
	<input type="checkbox"/> Removing cylinder head			
	<input type="checkbox"/> Removing the valves			
	<input type="checkbox"/> Inspecting the valves and accessories			
	<input type="checkbox"/> Replacing the valve guide			
	<input type="checkbox"/> Refacing the valves			
	<input type="checkbox"/> Refacing valve seats			
	<input type="checkbox"/> Replacing valve seats			
	<input type="checkbox"/> Lapping the valves			
	<input type="checkbox"/> Installing the cylinder head			
Module 4 Evaluation	Complete Module 4 evaluation			

Total Points Earned _____

