# Small Engines & Powertrains II Course No. 40214 Credit: 0.5

|  |  |  |  |
| --- | --- | --- | --- |
| **Student name:** |  | **Graduation Date:** |  |

Pathways and CIP Codes: **Vehicle Maintenance & Repair (47.0600)**

Course Description: A comprehensive, **application level** course designed to provide students with advanced knowledge and skills common to all small engine operations and repair.

Directions:The following competencies are required for full approval of this course. Check the appropriate number to indicate the level of competency reached for learner evaluation.

**RATING SCALE:**

4. Exemplary Achievement: Student possesses outstanding knowledge, skills or professional attitude.

3. Proficient Achievement:Student demonstrates good knowledge, skills or professional attitude. Requires limited supervision.

2. Limited Achievement:Student demonstrates fragmented knowledge, skills or professional attitude. Requires close supervision.

1. Inadequate Achievement:Student lacks knowledge, skills or professional attitude.

0. No Instruction/Training:Student has not received instruction or training in this area.

**Prerequisite**: Small Engines and Powertrains I (40212)

## Benchmark 1: Saefty

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Identify and safely use and maintain the tools needed to perform mechanical repairs, including precision measuring tools. |  |
| 1.2 | Demonstrate and follow safety procedures as outlined in OSHA and EPA guidelines. |  |

Benchmark 2: engine diagnostics

Competencies

| # | DESCRIPTION | RATING |
| --- | --- | --- |
| 2.1 | Perform electrical system service, diagnostics, and testing. |  |
| 2.2 | Perform fuel system service and diagnosis. |  |
| 2.3 | Perform ignition system service and diagnosis. |  |
| 2.4 | Perform starting and charging system service and diagnosis. |  |

Benchmark 3: engine repair

Competencies

| # | DESCRIPTION | RATING |
| --- | --- | --- |
| 3.1 | Remove and install an engine following manufacturers procedures |  |
| 3.2 | Disassemble and reassemble an internal combustion engine correctly, including assembly specifications |  |
| 3.3 | Clean and inspect engine parts to determine their quality and usability. |  |
| 3.4 | Perform troubleshooting techniques for engine performance |  |
| 3.5 | Prepare a repair order and estimate required time and materials to accomplish service procedure. |  |
| 3.6 | Indentify and Perform Preventive maintenance on various engine systems utilizing manufactures recommendations |  |

I certify that the student has received training in the areas indicated.

Instructor Signature:

For more information, contact:

CTE Pathways Help Desk

(785) 296-4908

[pathwayshelpdesk@ksde.org](mailto:pathwayshelpdesk@ksde.org)



900 S.W. Jackson Street, Suite 102

Topeka, Kansas 66612-1212

[https://www.ksde.org](https://www.ksde.org/)

The Kansas State Department of Education does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities and provides equal access to any group officially affiliated with the Boy Scouts of America and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: KSDE General Counsel, Office of General Counsel, KSDE, Landon State Office Building, 900 S.W. Jackson, Suite 102, Topeka, KS 66612, (785) 296-3201.