# Drive Train Technology Course No. 40208 Credit: 0.5

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

Pathways and CIP Codes: **Mobile Equipment Maintenance (47.9999) - Technology Strand II**

Course Description: A comprehensive, **technical level** course designed to provide students with the basic theories and skills needed to inspect and service drive train components.

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.

## Benchmark 1: Basic Knolwedge of Drive Train

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Identify basic automatic transmission/transaxle components and theory of operation. |  |
| 1.2 | Identify basic manual transmission components and calculate gear ratios. |  |
| 1.3 | Research applicable vehicle and service information, such as transmission/transaxle operation, fluid type and service needs, bulletins and service precautions. |  |
| 1.4 | Use a scan tool to read transmission related data and diagnostic trouble codes. |  |
| 1.5 | Identify and interpret transmission/transaxle concerns and determine necessary operation. |  |

## Benchmark 2: Diagnose and Inspect Drive Train Problems

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 2.1 | Diagnose abnormal clutch operation and noise. |  |
| 2.2 | Inspect, test, and locate electrical/electronic transmission components including, solenoids, sensors, relays, connectors, switches, and harnesses. |  |
| 2.3 | Inspect and adjust shift linkage and transmission range sensor/switch. |  |
| 2.4 | Inspect and diagnose constant-velocity and standard universal joints for noise and vibration concerns. |  |
| 2.5 | Inspect rear axle differential fluid; diagnose rear axle noise and vibration concerns. |  |
| 2.6 | Inspect and determine cause of fluid leaks, condition, level, and replace fluid and filter where applicable. |  |
| 2.7 | Inspect clutch pedal linkage and cables; adjust as necessary. |  |
| 2.8 | Inspect hydraulic slave and master cylinders, lines, and hoses for leaks and condition; bleed system. |  |

## Benchmark 3: Replacement of Drvie Train Components

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 3.1 | Perform install, test and determine necessary action. |  |
| 3.2 | Perform transmission pressure test using Pascal’s law to diagnose pressure concerns. |  |

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

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