

AUTOMOTIVE SPECIALIZATION (Transmissions)

STUDENT GRADE RECORD

Career & Technical Education

WINDHAM SCHOOL DISTRICT

Student Name _____

TDCJ # _____

Instructor Name _____

Unit _____

WSD Certificate	Y / N
If I were hiring for this position, I would: (check one) <input type="checkbox"/> 0-No recommendation at this time. (Cannot be used for Completers.) <input type="checkbox"/> 1-Hire this person and look no further. <input type="checkbox"/> 2-Interview this person along with other applicants <input type="checkbox"/> 3-Not hire this person.	
Complete only if student attempted industry certification.	
Name of Industry Certificate	Code P/F
ASE, Automatic Transmission and Transaxle (A2)	0212
ASE, Manual Drive Train and Axles (A3)	0213
OSHA	0100

I attest that all of the information reported on this form is true.

Instructor Signature

Date

Course Outline Modules	Windham Module Test	Module Competency Rating
0. CTE Orientation		
1. Introduction to Automatic Transmissions and Transaxles		
2. Shop Safety and Environmental Protection		
3. Special Service Tools and Service Information		
4. Gears, Chains, and Bearings		
5. Sealing Materials, Fasteners, and Lubricants		
6. Hydraulics and Pneumatics		
7. Basic Electricity and Electronics		
8. Automatic Transmission Mechanical Components		
9. Automatic Transmission Control Components		
10. Automatic Transaxle Construction and Operation		
11. Transmission and Transaxle Circuits		
12. Electronic Control Systems		
13. Troubleshooting Mechanical, Hydraulic, and Electrical Problems		
14. Troubleshooting Electronic Control System Problems		
15. Transmission and Transaxle In-Vehicle Service		
16. Transmission and Transaxle Removal and Installation		
17. Rebuilding Automatic Transmissions and Transaxles		
18. Automatic Transaxles Final Drive Service		
19. Electronic Control System Service		
20. ASE Certification		
21. Career Preparation		

Windham Module Test Average	x . 75		a	Completer
Windham End of Course Exam	x . 25		b	
Windham Module Score (a + b=)				70+
% Competencies Completed				70+
Module Competency Rating				2.7+

AUTOMOTIVE SPECIALIZATION (Transmissions)

STUDENT PROGRESS RECORD

RECORDING DIRECTIONS

SKILL RATING: Post the student's competency rating for each skill performed.

MODULE TEST SCORE: Enter the student's test score for the module.

MODULE RATING: Use the following scale to determine module rating:

[4] **Skilled**- Can perform competencies independently with no supervision.

[3] **Moderately Skilled**- Can perform competencies with limited supervision.

[2] **Limited Skill**- Requires instruction and close supervision to perform competencies.

[1] **Unskilled**- Exposed to concept, but no hands-on experience.

Note: When evaluating a student's module rating, skill performance should be given priority.

0. CTE Orientation

Teacher Student

Initial Initial

- ____ | ____ 1. Identify employment opportunities related to the course.
- ____ | ____ 2. Identify the number of classroom hours a student must attend to be considered as a completer.
- ____ | ____ 3. Identify the industry-recognized certification.
- ____ | ____ 4. Identify course expectations including:
- Working conditions
 - Attendance expectations
 - Instructor's expectations

1. Introduction to Automatic Transmissions and Transaxles

Module Test Score _____

Module Rating (4, 3, 2, 1)

- ____ 1. Identify the differences between manual and automatic transmissions.
- ____ 2. Identify major automatic transmission and transaxle components.

2. Shop Safety and Environmental Protection

Module Test Score _____

Minimum 100% Required

Module Rating (4, 3, 2, 1)

- ____ 1. Identify the major causes of accidents in the workplace.
- ____ 2. Identify types of environmental damage caused by improper auto shop practices.

3. Special Service Tools and Service Information

Module Test Score _____

Module Rating (4, 3, 2, 1)

- ____ 1. Identify special tools used in automatic transmission and transaxle service.
- ____ 2. Demonstrate the use of common measuring tools.

4. Gears, Chains, and Bearings

Module Test Score _____

Module Rating (4, 3, 2, 1)

- ____ 1. Identify certain basic parts of a gear.
- ____ 2. Name and describe type of gears found in automatic transmissions and transaxles.
- ____ 3. Calculate gear ratio.
- ____ 4. Describe the construction and explain the operation of a planetary gearset.

5. Sealing Materials, Fasteners, and Lubricants

Module Test Score _____

Module Rating (4, 3, 2, 1)

- ____ 1. Identify the types of seals found in automatic transmissions and transaxles.
- ____ 2. Demonstrate proper methods of removing and installing seals.

6. Hydraulics and Pneumatics

Module Test Score _____

Module Rating (4, 3, 2, 1)

- ____ 1. Explain why a hydraulic system can transfer motion and power.
- ____ 2. Identify different hydraulic components used in modern automatic transmissions and transaxles.
- ____ 3. Discuss basic pneumatic systems and compare them to hydraulic systems.

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7. Basic Electricity and Electronics

Module Test Score _____

Module Rating (4, 3, 2, 1)

1. Explain electron theory of electricity.
2. Describe basic electrical circuits.
3. Identify basic electrical measurements.

8. Automatic Transmission Mechanical Components

Module Test Score _____

Module Rating (4, 3, 2, 1)

1. Identify the major mechanical parts of an automatic transmission.
2. State various outcomes resulting from driving certain planetary gears and holding others.
3. Diagram power flow through a typical automatic transmission.
4. Summarize operations of planetary holding members.
5. Identify and explain the purpose of stationary mechanical parts.

9. Automatic Transmission Control Components

Module Test Score _____

Module Rating (4, 3, 2, 1)

1. State the two locations of transmission oil coolers.

10. Automatic Transaxle Construction and Operation

Module Test Score _____

Module Rating (4, 3, 2, 1)

1. Identify and explain the purpose of the major parts of an automatic transaxle.
2. Identify similar transaxle and rear-wheel drive transmission parts.
3. Identify transaxle-specific parts.
4. Identify the differences between transaxle and rear-wheel drive transmission parts.
5. Trace power flow through an automatic transaxle.
6. Compare automatic transaxle design variations.

11. Transmission and Transaxle Circuits

Module Test Score _____

Module Rating (4, 3, 2, 1)

1. Trace the path of oil flow through typical automatic transmission circuits.
2. Read hydraulic circuit diagrams for automatic transmissions and transaxles.

12. Electronic Control Systems

Module Test Score _____

Module Rating (4, 3, 2, 1)

1. Identify input sensors and explain their operation.
2. Identify output devices and explain their operation.
3. Define control loops and explain their purpose.

13. Troubleshooting Mechanical, Hydraulic, and Electrical Problems

Module Test Score _____

Module Rating (4, 3, 2, 1)

1. State possible causes of transmission and transaxle problem
2. Identify logical troubleshooting procedures..
3. Name diagnostic tests used for troubleshooting.

14. Troubleshooting Electronic Control System Problems

Module Test Score _____

Module Rating (4, 3, 2, 1)

1. Determine the exact nature of an electronic transmission/transaxle complaint.
2. Determine whether the problem is in the electronic control system.
3. Make visual checks for problems.
4. Retrieve trouble codes and match codes to problem areas.
5. Use scan tools and other test equipment to locate problem areas.
6. Use test equipment to test individual components.
7. Determine repair steps necessary to correct electronic transmission/transaxle defects.

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15. Transmission and Transaxle In-Vehicle Service

Module Test Score _____

Module Rating (4, 3, 2, 1)

- ____ 1. Change transmission/transaxle oil and filter.
- ____ 2. Adjust automatic transmission linkage and bands.
- ____ 3. Perform service operations on valve bodies.
- ____ 4. Perform governor service.
- ____ 5. Perform service operations on modulators.
- ____ 6. Repair bad servos.

16. Transmission and Transaxle Removal and Installation

Module Test Score _____

Module Rating (4, 3, 2, 1)

- ____ 1. Remove an automatic transmission from a vehicle.
- ____ 2. Install an automatic transmission in a vehicle.
- ____ 3. Remove an automatic transaxle from a vehicle.
- ____ 4. Install an automatic transaxle in a vehicle.

17. Rebuilding Automatic Transmissions and Transaxles

Module Test Score _____

Module Rating (4, 3, 2, 1)

- ____ 1. Disassemble an automatic transmission.
- ____ 2. Inspect the internal parts of an automatic transmission.
- ____ 3. Reassemble an automatic transmission.
- ____ 4. Disassemble an automatic transaxle.
- ____ 5. Inspect the internal parts of an automatic transaxle.
- ____ 6. Reassemble an automatic transaxle.
- ____ 7. Check endplay of an automatic transmission or transaxle.
- ____ 8. Perform air pressure checks on an automatic transmission or transaxle.

18. Automatic Transaxle Final Drive Service

Module Test Score _____

Module Rating (4, 3, 2, 1)

- ____ 1. Disassemble a planetary gear final drive.
- ____ 2. Inspect the parts of a planetary gear final drive.
- ____ 3. Assemble a planetary gear final drive.
- ____ 4. Disassemble a helical gear final drive.
- ____ 5. Inspect the parts of a helical gear final drive.
- ____ 6. Assemble a helical gear final drive.
- ____ 7. Disassemble a hypoid gear final drive.
- ____ 8. Inspect the parts of a hypoid gear final drive.

19. Electronic Control System Service

Module Test Score _____

Module Rating (4, 3, 2, 1)

- ____ 1. Replace defective components in the transmission or transaxle.
- ____ 2. Replace engine or vehicle components that affect electronic transmission or transaxle operation.
- ____ 3. Replace the PROM in a transmission/transaxle computer.
- ____ 4. Reprogram a transmission/transaxle computer.
- ____ 5. Check transmission/transaxle operation after service.

20. ASE Certification

Module Test Score _____

Module Rating (4, 3, 2, 1)

- ____ 1. Explain why ASE certification is beneficial to both the technicians and the vehicle owner.

_____ Number of Skills Completed ÷
75 Number of Skills on SPR =
_____ % of Skills Completed

Conference

Date: _____ Hours in class: _____

Comments:

Teacher initial: _____ Student initial: _____

Student Name: _____

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