

#453(E)

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: **SUSPENSION, STEERING AND BRAKES**

CODE NO.: **MVM011** SEMESTER: **36 Weeks**

PROGRAM: **MOTOR VEHICLE TECHNICIAN**

AUTHORS: **Dan Tregonning/Steve Kent**

DATE: **August 1994** PREVIOUS OUTLINE DATED: **August 1993**

APPROVED: _____
Dean, School of Technical Trades Date

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MAY 03 1995

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PREREQUISITE(S):

I. PHILOSOPHY/GOALS:

This course will stress the basics of the automotive trade and give the student comparable knowledge of a basic level apprentice.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will have the basic knowledge of shop procedures, tools useful to this area and working of suspension brakes & steering components.

III. TOPICS TO BE COVERED:

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1. Suspension Systems

- a) Demonstrate a working knowledge of vehicle front and rear suspension and frame systems.
- b) Demonstrate a working knowledge of most common frame and body misalignments.
- c) Inspect and service a modern suspension and frame system.
- d) Demonstrate a working knowledge of the removal and replacement of suspension system components and assemblies.

2. Manual Steering Gears

- a) Demonstrate a working knowledge of (manual) steering gears.
- b) Demonstrate a working knowledge of the removal and installation of steering gears.

3. Power Steering Systems

- a) Demonstrate a working knowledge of hydraulic fundamentals as applied to power steering systems.
- b) Demonstrate a working knowledge of the operating principles of power steering systems.
- c) Demonstrate a working knowledge of the disassembly, inspection, assembly and installation of power steering.
- d) Dismantle, inspect and assemble integral power steering gear assembly.
- e) Demonstrate a working knowledge of the testing of power assist steering systems.
- f) Demonstrate a working knowledge of replacement of power steering components.

4. Tires and Wheels

- a) Demonstrate a working knowledge of the types, sizes, construction and load ratings of tires and wheels.
- b) Demonstrate a working knowledge of tire and wheel balancing.

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5. Wheel Alignment

- a) Demonstrate a working knowledge of the four wheel alignment factors.
- b) Check four wheel alignment.
- c) Correct vehicle handling problems.

6. Brake Systems

- a) Demonstrate a working knowledge of the fundamental principles of brake systems.
- b) Dismantle, inspect, service and assemble brake system.

7. Electronic Control Devices

- a) Demonstrate a working knowledge of the removal, handling and replacement of electronic suspension, steering and brake monitoring and control devices.

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V. EVALUATION METHODS:

- . random tests & quizzes
- . weekly tests
- . shop practices
- . attendance

VI. REQUIRED STUDENT RESOURCES

- . Text (Supplied by College)
- . Coveralls
- . Safety Glasses (CSA Approved)
- . Regulation Safety Boots (CSA Approved - Min.6")

VII. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY BOOK SECTION:

VIII. SPECIAL NOTES