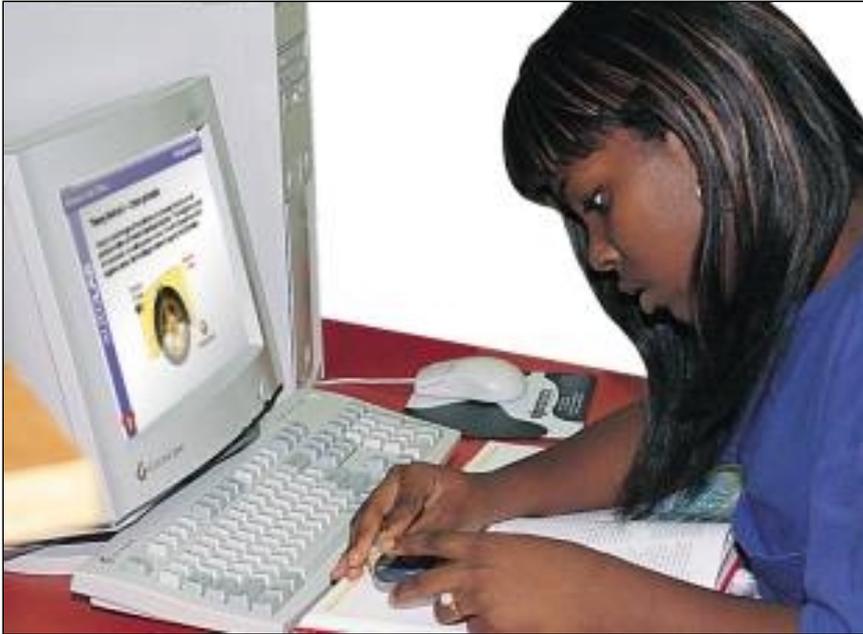


SSS4 Wheels and Tires



This is an integrated instructional module designed specifically to operate within an "Instructional Pod" environment. It provides a 15-assignment study program that has been designed for use within the AutoLAB program for core learning. The module package includes hardware, software, and curriculum materials sufficient to complete the learning activities.

The curriculum incorporates continuous assessment through questions. When used in conjunction with a ClassAct networked management system, this provides instant feedback of student performance.

Each assignment is split into at least two tasks and they start with a series of questions designed to track inventory, and ensure that any missing pieces can be located. The tasks are designed to teach wheel and tire technology, with the research activities based upon on screen material and published textbooks.

Assessment questions are incorporated into each task and a series of job sheets that are printed out by the student are used to guide them through the related shop activities on real vehicle systems.

This module consists of a comprehensive series of computer aided instruction assignments that enable students to learn about wheels and tires. The dynamic computer aided instruction provides interactive animations and high-resolution graphics that help the student understand the topics being delivered.

In addition to providing the underpinning knowledge on wheels and tires, the module also provides a series of practical activities.

These are presented to the student as a series of workshop job sheets, which will require access to a vehicle in a fully equipped automotive workshop.

Typical topic areas include:

- Fundamentals of wheels and tires.
- Tire wear patterns.
- Wheel alignment fundamentals.
- Caster.
- Camber.
- Toe.
- Steering axis inclination.
- Vehicle steering diagnosis.
- Wheel and tire maintenance.
- Wheel, tire, axle, and hub runout.
- Wheel and tire balancing.
- Wheel bearings.

The module guides the student through task-oriented instruction. The tasks include hands-on practical activities. Each task has a theoretical summary that explains the concepts and automotive applications involved.

The computer presented training material is compatible with the ClassAct classroom management system that can track student progress during these tasks and will report back immediately to instructional staff if a student falls below a predetermined standard or takes too long to perform a task.

Each assignment is designed around a list of performance objectives. These lists include academic, technical, and occupational objectives. The assignments are written in such a way as to enable a student to attain the performance objectives, with the assessment questions linked to these in order to provide a measure of true competency.

The performance objectives are used by the ClassAct management system to generate a comprehensive portfolio of student competency reports. The module includes a default competence report addressing the latest NATEF standards.

Typical activities include:

- Diagnose tire wear patterns.
- Inspect tires, check and adjust air pressure.
- Diagnose tire pull (lead) problem.
- Perform realignment inspection.
- Measure vehicle riding height.
- Check and adjust caster, camber, front wheel toe, and front wheel setback.
- Check SAI and included angle.
- Check toe-out on turns.
- Check rear wheel toe and rear wheel thrust angle.
- Check front cradle alignment.
- Diagnose vehicle wander, drift, pull, hard steering, bump steer, memory steer, torque steer and steering return concerns.
- Rotate tires according to manufacturer's recommendations.
- Measure wheel, tire, axle and hub runout.
- Balance wheel and tire assembly.
- Dismount, inspect, repair, and remount tire on wheel and reinstall wheel.
- Remove, inspect and service or replace front and rear wheel bearings.

SSS4 Wheels and Tires

The items supplied with this instructional module include:

- SSS4 Instructor’s Guide
- SSS4 On-Screen Multimedia Manual CD-ROM
- SSS4 Video Materials CD-ROM
- SSS4 Voice-Overs CD-ROM
- NATEF Instructor’s Resources CD-ROM
- Health and Safety Sheet

Additional items required:

- Computer
- Access to printer
- Adhesive (Consumable Item)
- Air Compressor
- Air Line
- Axle Stands
- Bearing Grease (Consumable Item)
- Brake Pedal Depressor
- Camber Gauge
- Caster Gauge
- Dial Test Indicator DTI Lever Type
- Drift / Punch
- Grease Cup Removing Tool
- Inspection Lamp
- Optical Steering Alignment Equipment
- Patch Stitching Tool
- Pointer
- Portable Adhesive Wheel
- Personal protective equipment (PPE)
- Rubber Cleaning Fluid (Consumable Item)
- Rubber Scraper
- Seal Removing Tool
- Steering Wheel Extractor
- Tape Measure
- Tire Mounting Machine (Rim Clamp suggested)
- Tire Plug Inserts (Consumable Item)
- Torque Wrench
- Tracking Gauge
- Tread Depth Gauge
- Tube Patches (Consumable Item)
- Turntables
- Tyre Inflation Gauge
- Tyre Pressure Gauge
- Vehicle Hoist - 2 or 4 Post Ramp
- Vehicle Jacking Equipment
- Vehicle Service Manual
- Wheel Balancer - Electronic Type
- Wheel Chocks
- Wheel Free Hoist
- Wheel Weight Pliers
- Wheel Weights
- Various Hand Tools

NATEF task list areas addressed:

- III-D3 P-2
- IV-A1 P-1
- IV-A2 P-1
- IV-C3-2 P-1
- IV-D2 P-1
- IV-D3 P-1
- IV-D4 P-1
- IV-D5 P-1
- IV-D6 P-1
- IV-D7 P-1
- IV-D8 P-1
- IV-D9 P-2
- IV-D10 P-2
- IV-D11 P-2
- IV-D12 P-2
- IV-D13 P-2
- IV-D14 P-3
- IV-E1 P-1
- IV-E2 P-1
- IV-E3 P-2
- IV-E4 P-1
- IV-E5 P-2
- IV-E6 P-2
- IV-E7 P-1
- IV-E8 P-2
- IV-E9 P-1
- IV-E10 P-2
- V-F2 P-1
- V-F7 P-1

Module Facts

SSS4 Wheels and Tires

| | No. | Average time |
|----------------------|-----|-----------------|
| Assignments | 15 | 90 minutes |
| Extension Activities | 31 | 60 minutes |
| Total | | 54 hours |



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