

WHEEL ALIGNMENT AND DIAGNOSTIC ANGLES

STE04

Alignment and ride play a key role in driver experience and satisfaction, placing heavy weight on the repairer's ability to refine and diagnose as necessary. As automotive technology advances and rear vehicle complexities increase, staying at the forefront becomes even more important for repairers.

STE04 covers concepts such as toe, camber, caster and more, using hands-on simulations, HD-quality videos, detailed charts and imagery, and group activities to provide technicians a comprehensive information base toward achieving total vehicle alignment.

Course Content

Module 1— Wheel Alignment s

The opening module offers an overview of considerations surrounding a vehicle's alignment, including repair checklists for pre-repair and alignment repair. Considerations regarding ride height are explained. An in-class activity helps students to assemble a prop that focuses on the rear axle installation, and assembling the front wheel camber, front wheel caster, front wheel toe and SAI and scrub radius.

Module 2— Toe

The course continues with a definition and description of tow. A group activity helps students to understand how to diagnose incorrect use.

Module 3—Camber

The third module focuses on camber and its affect on the vehicle's alignment. Detailed videos and discussions led by the instructor explain related topics such as measuring and pre-adjustment considerations in detail.

Module 4—Caster

The next module of the course defines caster, its variables, and adjustment locations. Other topics covered are strut and SLA suspension pivot locations and solid axle pivot point locations. Student participation in an activity reinforces factors in diagnosing camber, caster and toe.

Module 5—Rear Vehicle Measurements

The fifth module continues with a description of wheelbase, setback, tracking information, and thrust. Students learn about thrust angle, rear axle offset, and rear angles through discussions imagery, and detailed diagrams.

Module 6—Diagnostic Angles

Using instructor-led discussions, HD-quality videos, and hands-on activities, information in this module details a variety of topics relating to diagnostic angles, including toe-out on turns, steering axis inclination (SAI), included angle and scrub radius.

Module 7—Types of Alignments

The final module of the course describes two-wheel, thrust angle, four-wheel, and sublet alignments, as well as what to look for in the post-alignment test drive. Before the class concludes, students work through an activity to achieve total vehicle alignment.

Recommendations

This course covers a variety of topics related to technology in current and future vehicles. It is recommended that students have a basic understanding of several of the subject areas contained in the course and understand where they can find repair information on new trends. Courses that are helpful include:

- Suspension Systems (STE02)
- Rack and Pinion and Parallelogram Steering Systems (STE03)

Registration

To register for Wheel Alignment and Diagnostic Angles (STE04) click [here](#) or visit www.i-car.com.au

Course Highlights

Points: 2

Estimated Duration: 8 Hours

Format: Classroom

Meets the I-CAR training requirements for the following roles:



ESTIMATOR



NON-STRUCTURAL TECHNICIAN



ASSESSOR



STRUCTURAL TECHNICIAN



ALUMINIUM TECHNICIAN



ELECTRICAL/ MECHANICAL TECHNICIAN

After completing this course, you will be able to:

- Understanding procedures for inspecting and completing wheel alignment repairs
- Explain diagnostic measurements for rear vehicle parts
- Describe procedures for measuring and adjusting caster and camber
- Identify considerations around diagnosing toe activity

