

# Welding Training & Certification™: Aluminum GMA (MIG) Welding (WCA03)



## Course Overview

The technology previously seen only in high-end vehicles is quickly becoming standard on the more popular vehicles on the road as they shed weight and become more fuel-efficient. Technicians and shops must be prepared to perform quality, complete and safe aluminum repairs to properly restore these vehicles. The inherent differences involved in aluminum welding can present challenges to those who are familiar primarily with steel.

I-CAR's in-shop Welding Training & Certification: Aluminum GMA (MIG) Welding (WCA03) course supports the most current aluminum repairs, providing technicians and facilities with insights and knowledge to prepare for the growing number of aluminum-body vehicles on the road. Featuring a shop welding capability and readiness assessment and one-on-one personalized coaching to enhance technician skill and technique, I-CAR's hands-on, comprehensive welding training contributes to overall shop productivity and weld quality on aluminum vehicles.

### After completing this course, you will have proven your ability to:

- Understand how to set up and tune a welding machine
- Perform proper welding techniques
- Know how to properly prepare metal surfaces
- Identify and correct weld defects
- Explain safety issues involved with welding

**One single training event can accommodate multiple technicians.**

## Course Content

### Welding Capability & Readiness Assessment

An in-shop Welding, Capability & Readiness Assessment is conducted by the instructor prior to the in-shop training. Pre-assessment of the shop infrastructure and equipment ensures conditions are adequate to perform proper welds both during hands-on practice and certification testing, as well as post-training. The recommended time frame for the assessment is one to two weeks prior to training day to avoid any delays.

### Instruction

Students will begin with an overview of course objectives followed by instruction on how to:

- Properly set up, tune, and maintain aluminum GMA (MIG) welding machine
- Prepare aluminum surfaces
- Perform proper welding techniques
- Identify and correct weld defects
- Visually inspect and destructively test welds
- Address safety issues

### Hands-on Practice and Coaching

Students will then have the opportunity to apply their knowledge by making GMA (MIG) plug, fillet, and butt joint with backing welds. Plug welds are made in the vertical position, all others are made in both the vertical and overhead positions, and on two types and thicknesses of aluminum alloys. The student's welds will need to pass the required visual inspections and destructive tests for each type of welded joint. Instructors monitor and provide one-on-one coaching in order for students to achieve repeatable, successful results.

### Skills Certification

The course concludes with the student taking the hands-on certification test. All test welds must pass against I-CAR standards in order to receive the certification. Students will be given multiple attempts to perform each weld if necessary. Students who are unable to properly complete test welds successfully during the event may retake the training and test on another date and pass to receive the certification.

## To Register or Learn More

Visit [www.I-CAR.com](http://www.I-CAR.com) and select Welding Training & Certification™ located under the I-CAR Training tab, or call **888.589.3148**, Monday – Friday from 7:00 A.M. to 6:00 P.M. CST.

## Course Highlights

**Credit Hours:** 6

**Estimated Duration:** 8 Hours

**Format:** In-shop assessment, instruction, hands-on practice and skills certification

**Meets I-CAR® ProLevel® or annual training requirements for the following role(s):**

- Aluminum Structural Technician
- Steel Structural Technician
- Non-Structural Technician

**Prerequisite:** None

*All earned I-CAR Welding Training & Certification designations are valid for five years from the passing date.*

## In-Shop Event

This event is administered at your repair facility using the welding equipment that you work with regularly. **The event also includes a shop Welding Capability & Readiness Assessment**, where the Instructor will assess the shop infrastructure, equipment and coach technicians, owners or managers before the training begins.

## Recommendations

This course covers both the advanced theory and practice involved in aluminum welding and can also serve as an introductory welding course. It is a hands-on practice session and certification of a technician's welding skill. The student should have an understanding of the collision repair process, know how to work safely when welding, and be familiar with aluminum in a repair facility environment.

The following I-CAR training programs are recommended:

- Welding Training & Certification: Steel GMA (MIG) Welding (WCS03)
- Aluminum Exterior Panel Repair and Replacement (APR01)
- Aluminum Intensive Vehicle Repairs (ALI01)
- Hazardous Materials, Personal Safety, and Refinish Safety (WKR01)

