

## WELDING TESTING AND CERTIFICATION

### ALUMINIUM GMA (MIG) WELDING

WCA03

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. The number of aluminium intensive vehicles is expected to surge in the coming years and technicians and shops must be prepared to perform quality, complete and safe aluminium repairs to properly restore these vehicles. The inherent differences involved in aluminium welding can challenge technicians who are familiar primarily with steel or MIG brazing.

### Course Content

The Aluminium GMA (MIG) Welding Certification is a two-day course that begins with instruction of machine setup of the GMA (MIG) welding equipment, safety issues, preparing aluminium surfaces, weld defect identification and correction, and how welds will be visually and destructively tested.

#### Instruction

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

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

#### Hands-on Practice

Following the instruction participants 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 aluminium alloys. The participant'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 Test

The course concludes with the participant taking the hands-on certification test. All test welds must pass against I-CAR standards in order to receive certification. Participants will be given multiple attempts to perform each weld if necessary and for

those who are unable to properly complete test welds successfully during the event may retake the training and test on another date at their own expense to re-attempt the certification.

### Recommendations

This course covers both the advanced theory and practice involved in aluminium welding and is NOT an introductory welding course. It is a hands-on practice session and verification of a technician's welding skill.

### Important Notice

Participants will be required to have the I-CAR Steel Welding Certification or an OEM Steel or Aluminium Welding certification before registering for this course. If proof is not provided then the participant will be asked to register for the I-CAR Steel Welding Certification program.

The following I-CAR training programs are recommended:

- Welding Training & Certification: Steel GMA (MIG) Welding (WCS03)
- Cosmetic Straightening Aluminium (STA01)
- Hazardous Materials, Personal Safety and Refinish Safety (WKR01)

## Course Highlights

Points: 5

Estimated Duration: 2 Days

Format: Hands on, Instructor led testing

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



ALUMINIUM TECHNICIAN

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

**After completing this course, you will be able to:**

- Understand how to set 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 aluminium welding

