ALUMINIUM-INTENSIVE VEHICLE REPAIRS

ALI01

How can you ensure that you have the knowledge and skills needed when faced with a repair decision on an aluminium structure?

Throughout this course, you will make repair procedure decisions on a simulated aluminium intensive vehicle, exposing you to some of the considerations that you could be faced with on a regular day in your collision repair facility. This interactive I-CAR course offers discussion, education and decision making exercises designed to equip collision repair professionals with the knowledge needed to repair aluminium structures.

As aluminium continues to gain popularity among vehicle makers due to its high-strength, lightweight nature, it is more critical than ever for repairers to understand the unique considerations around working with aluminium structures. The distinctive characteristics of aluminium require proper electrode wire and rivet type and length selection. Additionally, straightening considerations, removal and installation procedures and attachment methods differ from vehicle to vehicle and must be identified in order to achieve complete and safe repairs.

Course Content

Module 1—Aluminium Overview

The course opens by providing students with an overview of aluminium and uses on today's vehicle models. Considerations concerning stampings, extrusions, castings, galvanic corrosion and damage analysis will be discussed. A small group activity will be conducted during this first module. Students will make repair procedure decisions on a simulated aluminium intensive vehicle.

Module 2—Working with Aluminium

The second module of the course offers general best practices for working with aluminium and details heating and straightening considerations for the material. Student groups will continue to build on their repair decisions for the simulated aluminium intensive vehicles.

Module 3—Attachment Methods and Processes

The final module in this course describes vehicle maker attachment methods, threaded fasteners and rivets. The class continues with a discussion on hem flanges, clinches and welding procedures for aluminium. The student groups will complete the simulated repair decisions and discuss their decisions made throughout the activity.

Recommendations

This course covers a range of information related to aluminium repairs, as well as basic collision repair and welding procedures. The following I-CAR training programs are recommended:

- Aluminium Panels and Structural Analysis (DAM05)
- Aluminium GMA (MIG) Welding Qualification Series (WCA03)

Registration

To register for Aluminium-Intensive Vehicle Repairs (ALI01) click here or visit www.i-car.com.au

Course Highlights

Points: 1

Estimated Duration: 3 Hours

Format: Classroom

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

- ESTIMATOR
- ALUMINIUM TECHNICIAN
- ASSESSOR

After completing this course, you will be able to:

- Understand the characteristics and best practices for working with aluminium in structural applications
- Understand uses of castings and repair or replace considerations
- Identify causes of galvanic corrosion and understand methods to prevent galvanic corrosion
- Identify anchoring and straightening considerations, including work hardening and workability of aluminium
- Work with rivets in the collision repair process
- Simulate aluminium repair decisions through small group activities

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