

ADVANCED MATERIAL DAMAGE ANALYSIS

DAM08

Today's vehicles are using a growing number of different advanced materials that contribute to improve vehicle safety, reduce vehicle structure weight and improve fuel efficiency. In some vehicles, over one half of the steel used is HSS or AHSS. Understanding how advanced materials effect collision energy management, as well as understanding considerations in repairing these materials, can help guide a repair vs. replace decision and ensure that a repair is completed safely.

Course Content

Module 1—How are Advanced Materials Different?

This module provides an overview of the course objectives and identifies many of the types of advanced materials including steels, aluminium, magnesium and composites-that are used for vehicle construction and how they are affected during a collision. The student will also learn about damage analysis considerations.

Module 2—Materials, Application and Repair Considerations

Students continue by learning characteristics of advanced materials along with specific applications, repair vs. replace decisions and the effect of heat and straightening on different materials.

Module 3 General Considerations

The course concludes with an explanation of damage analysis considerations as well as considerations for recycled parts. Joining methods, corrosion protection and refinishing for advanced materials are also discussed.

Recommendations

This class covers a range of advanced materials that are found on many of today's vehicles. It is recommended that students have an understanding of HSS and aluminium, as well as damage analysis processes. Courses that are helpful include:

- Advanced High Strength Steel Overview (AHS01)
- Aluminium Panels and Structures Damage Analysis (DAM05)

Registration

To register for Advanced Material Damage Analysis (DAM08) click [here](#) or visit www.i-car.com.au

Course Highlights

Points: 1

Estimated Duration: 4 Hours

Format: Classroom & Virtual Classroom

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



ESTIMATOR



STRUCTURAL TECHNICIAN



ASSESSOR

After completing this course, you will be able to:

- Identify advanced materials used for vehicle construction and describe their characteristics and applications.
- Explain how advanced material construction materials affect collision energy management.
- Make repair vs. replace decisions for specific advanced materials.
- Describe the effects of heat and straightening on different advanced materials.
- Explain advanced materials recycled parts considerations, joining methods, corrosion protection and refinishing considerations.

