

# 2015 FORD F-150 STRUCTURAL REPAIR TRAINING COURSE

FOR06

Collision repair training experts at I-CAR worked alongside Ford Motor Company engineers during the 2015 Ford F-150 design and development process, leveraging I-CAR's expertise to create a training solution for collision repair professionals who will work on the next generation of Ford's extremely popular truck.

Two years of development culminates in the 2015 Ford F-150 Structural Repair course that covers all topics on aluminum, and dives deep into vehicle-specific repair information. This instructor-led course uses discussion, high-definition videos, animations, and detailed graphics to equip technicians to properly repair the 2015 F-150.

## Course Content

### Module 1 – Introduction to Ford

The course opens with a historical overview of the evolution of the F-150, leading up to the 2015 model. This module also details what Ford is doing to achieve CAFE standards, how to access 2015 F-150 online service information, and understanding the vehicle certification label.

### Module 2 – Aluminum

The second module provides students with an overview of aluminum and its application on the 2015 F-150. Considerations concerning stampings, extrusions, castings, galvanic corrosion and damage analysis will be discussed. Ford recommendations on working with aluminum are discussed, including heating and straightening considerations for the material. Detailed images and videos are found within the module to enhance student learning.

### Module 3 – Aluminum Joining Methods

The third module in the course provides in-depth information on clinches, fasteners, rivets, aluminum flanges, and aluminum welding as they relate to the 2015 F-150. With the aid of HD-quality videos and thorough imagery, the instructor will guide the students through understanding topics such as: clinch applications; threaded fasteners, including their corrosion-resistant coatings and flow drill screws; a demonstration on different types of rivets and their usage, including self-piercing rivets removal and installation, and rivet bonding; riveted part replacement; and hem flanges and door panel considerations. Also discussed in detail will be aluminum GMA (MIG) welding and its application on the 2015 F-150, including equipment, consumables, electrode alloys, shielding gas, and surface preparation. Information on 2015 F-150 welded panel replacements concludes this module.

### Module 4 – Body Design and Construction

The fourth module in the course begins with an overview of the body assembly materials. Students then learn details about the exterior body, cab repair options, box assembly, and key information such as proper electrode wires for welding repairs. As the module concludes, students will learn about the proper processes for refinishing aluminum parts on the 2015 F-150 and proper stationary glass installation.

### Module 5 – Frame Repairs

The final module in the course is devoted to the steel frame on the 2015 F-150. Key information such as proper electrode wires for welding repairs, control arm bracket options, and front and rear extension replacements is detailed through instructor lecture and discussion.

## Recommendations

This course covers information specifically related to the 2015 Ford F-150. Understanding basic collision repair concepts is recommended. Courses that may be helpful to take in addition to this one are:

- Corrosion Protection (CPS01)
- Measuring (MEA01)
- Welding Training & Certification™: Aluminum GMA (MIG) Welding (WCA03)

## Registration

To register for the 2015 Ford F-150 Structural Repair Training Course (FOR06), visit the I-CAR website at [www.i-car.com](http://www.i-car.com) or contact I-CAR Customer Care at 800-422-7872.

## Course Highlights

**Credit Hours:** 6

**Estimated Duration:** 8 hours

**Format:** Classroom instruction with written test

**Meets I-CAR ProLevel® or annual training requirements for the following roles:**

-  ESTIMATOR
-  STEEL STRUCTURAL TECHNICIAN
-  ALUMINUM STRUCTURAL TECHNICIAN
-  NON-STRUCTURAL TECHNICIAN
-  REFINISH TECHNICIAN
-  AUTO PHYSICAL DAMAGE APPRAISER

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

- Understand what Ford is doing to meet CAFE standards
- Understand safe practices when working with aluminum
- Identify the Ford heating limits for straightening
- Understand Ford's position on repairing cracks in aluminum parts and in the frame assembly
- Determine the approved adhesive Ford requires on the 2015 F-150
- Describe what types of rivets are approved for use on Ford vehicles
- Describe why aluminum flanges may be different than what is used on steel
- Understand what is different about welding on aluminum than steel
- Understand what steel strengths are used in the F-150 frame and what frame repairs are supported by Ford
- Explain vehicle-specific repairs, such as: what can be done to the magnesium radiator core support; how close to a hinge or striker a cut line can be for repairs; and repairing the extruded rocker panel



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