

THE OPPORTUNITIES & CHALLENGES OF ALUMINUM AUTO BODY REPAIR

Opportunities of Aluminum Auto Body Repair

2015 Aluminum Body Ford F-150 unveiled at the Detroit Auto Show in January of 2014. The production model of the F-150 will be released to dealers in the fall of 2014. The reason for this move is to enable larger vehicles to comply with governmental CAFE standards (Corporate Average Fuel Economy Law). Aluminum body panels enable the 2015 F-150 to have increased fuel efficiency by being 500 - 700 pounds lighter than its 2014 predecessor.

Is this a passing industry fad?

There are several key indicators that using aluminum in vehicle construction is an industry **TREND**.

Indicator 1: Alcoa Expanding Automotive Aluminum Production

Indicator 2: Aluminum Use in Existing Vehicles

- Jaguar and Land Rover extensive use of Aluminum
- 2014 Corvette Stingray – Aluminum Frame
- Chevy Silverado Aluminum Hood (Aluminum Body by 2018)
- Chevy SS Aluminum Hood & Deck Lid
- Cadillac CTS Aluminum Front Crush Box
- Cadillac Aluminum Bumper Reinforcement
- Acura RLX Aluminum Door Skins
- Accord PHEV Aluminum Engine Cradle

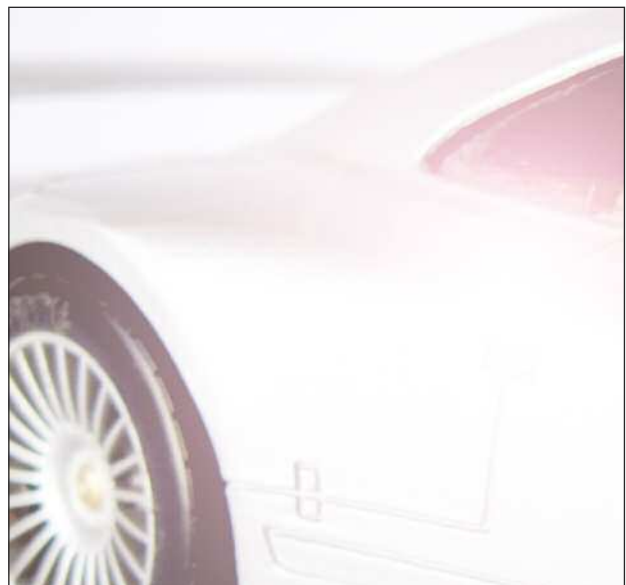
Indicator 3: Insurance companies in many states now requiring repair instead of replacement on Aluminum vehicle parts.

Bottom Line:

There is now an *incredible opportunity* for autobody repair facilities to be ready to offer *exclusive* expertise in Aluminum Repair or, at least, to be prepared to properly handle the repair of aluminum vehicle components.

Are you ready to face the challenges of Aluminum Repair?

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Challenges of Aluminum Auto Body Repair

Aluminum is very different from the various steel products that are used in automotive construction. There are an entirely new set of rules for handling repairs, sanding, grinding, using fasteners, welding and dent pulling. Although working with aluminum has its own set of challenges, there are a number of new solutions to meet these unique needs.

Challenge 1: Galvanic Corrosion

Wikipedia defines Galvanic Corrosion, "... an electrochemical process in which one metal corrodes preferentially to another when both metals are in electrical contact, in the presence of an electrolyte". In other words, whenever aluminum comes in direct contact with dissimilar metals there is the potential for galvanic corrosion to take place. So sensitive is aluminum to this reaction that tools that have been used to repair steel or other metals can cause this corrosive effect to take place. This requires the repair facility to have a separate set of tools for aluminum repair. There can be NO Cross Contamination of Tools or Equipment. Also there must be complete isolation of aluminum repair areas away from the metallic particles generated by sanding or grinding of steel vehicle parts.



Understanding the potential for galvanic corrosion, New Fastener Technologies are required whenever aluminum vehicle components are joined to steel parts. This understanding is necessary since many manufacturers have chosen to build aluminum-bodied vehicles upon a steel frame. So, in collision repair it is important to use the correct type of fasteners.

Challenge 2: Aluminum Burns Easily

Aluminum powder and dust generated by grinding and sanding operations is easily ignited. Special Care is required to be certain that aluminum dust does not come in contact with an ignition source - special anti-static precautions need to be taken around air hoses and vacuum lines.

Challenge 3: New Vehicle Design

Most modern vehicles are designed with an eye towards collision safety. As a result modern vehicles have "crumple zones" areas of the car that are designed to collapse upon impact to channel stress away from the passengers in the "safety cage" area. Different metals are used in different parts of the vehicle to create various safety zones. It is important to consult OEM (Original Equipment Manufacturer) information to know which metal you are approaching in each vehicle area.

Challenge 4: New Welding Tech

It is also important to consult OEM materials before welding aluminum parts. TIG welding is usually associated with aluminum welding applications. This may not be true in the case of some newer automotive aluminum components.

Challenge 5: Different Rules for Dent Pulling

The material characteristics of aluminum are very different from steel. Aluminum can tear if dents are pulled cold. Surface heating of body panels is required before for dent pulling. A heat source and a UV temperature device are indispensable tools for aluminum dent repairs.



An Important Resource

I-CAR (Inter-Industry Conference on Auto Collision Repair) is a valuable source of information to aid you in your navigation of the brave new world of aluminum repair. I-CAR develops and delivers technical training programs to professionals in all areas of the collision repair industry. They offer certificate level training courses for aluminum repair as well as informational courses that will alert collision repair professionals to upcoming trends in the industry. Their web site offers Internet-based resources that give you access to vital OEM information. Visit I-CAR and set up a free user account on their web site:

www.i-car.com

Challenge Solutions for Aluminum Auto Body Repair

All of the products on this page and the following page offer solutions to the unique challenges associated with aluminum autobody repair.

THE MOST COMPLETE SYSTEM AVAILABLE ! Aluspot® Deluxe Aluminum Repair Station DF-900DX



Deluxe Version Includes:

- Everything Found in the DF-900A
- Plus Bridge Puller, 3rd Drawer and Dust Cover (Shown Below)



Aluspot® Aluminum Repair Station DF-900A

- Everything You Need for Aluminum Repair
- Repair Rates are up to 3x that of Steel
- Lockable System Keeps Tools Organized, Clean and Safe

BOTH SYSTEMS Include:

- Hammers
- Nylon & Polished Steel Dollies
- Infrared Temp Gauge
- Digital Heat Gun
- Instructional CD
- Storage Cart
- 110 Volt Alu-Spot Welder



Tutorials & Resources for Aluminum Repair at:
www.dentfix888.com

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FREE "For Aluminum Only" trigger with purchase of any NEW Profinisher™



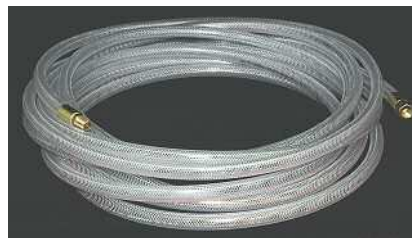
HU700

Scan the QR code on the package or email info@hutchinsmtg.com with "Aluminum trigger" on the subject line. Receive, at no charge, a color-coded trigger for your new sander identifying it as an "Aluminum Only" sander

Hutchins Anti-Static air hoses control the static discharge that can cause Aluminum dust to ignite

HU1361-3A-35 35 Feet Long

HU1361-3A-50 50 Feet Long



Made in the USA

4-Pc Soft Strike Aluminum Conversion Kit

SS35000



Kit Includes: Body Hammer Cover, Dinging Spoon Cover, Heel Dolly Face Cover and Heel Dolly End Cover

- Eliminates the Problem of a Rubber Dolly not Being Heavy Enough to Work Effectively by Allowing a Technician to Add a Cover to the Existing Steel Dolly
- Safe & Uncomplicated Conversion to Work on Aluminum
- Removable Covers Prevent Cross Contamination and Galvanic Corrosion

MORE Challenge Solutions for Aluminum Auto Body Repair

AMH[®]
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ALUMATECH



Contamination Free Coated Hammer & Dolly Kit

CS161780510

Precision Aluminum Reformation Station

The workbench centralizes all the operator's tools and utilities:

- 11 0V & 220V electrical outlets.
- Compressed air outlets
- Front and side perforated panels for tool storage
- Heat gun & Cable with supports.
- Sliding drawer & storage shelves.
- **The CompuSpot 180AL** dent pulling system: Straightening bar, 3 pulling claws, Aluminum hammer & dolly kit, Heat gun, and Infrared Laser Thermometer Sensor.

CS28CPS185



Adjust-A-Wall™

Protect Your Aluminum Repair Workspace from Contamination with Track & Roller Curtain Partitions

Call for Details!

STEINER INDUSTRIES

Helpful Information You Can Use From Your Friends