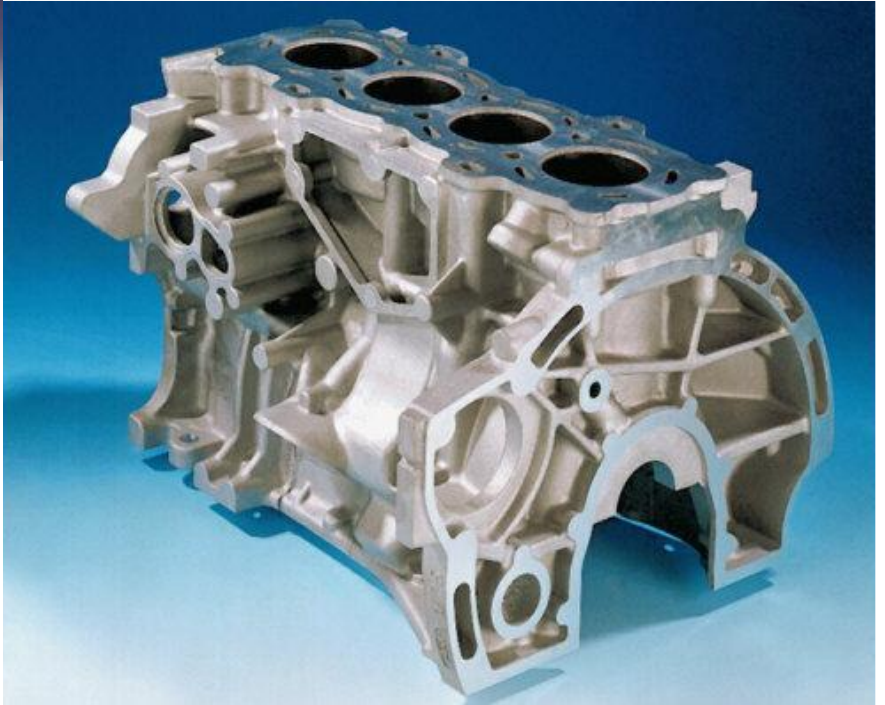


Aluminum

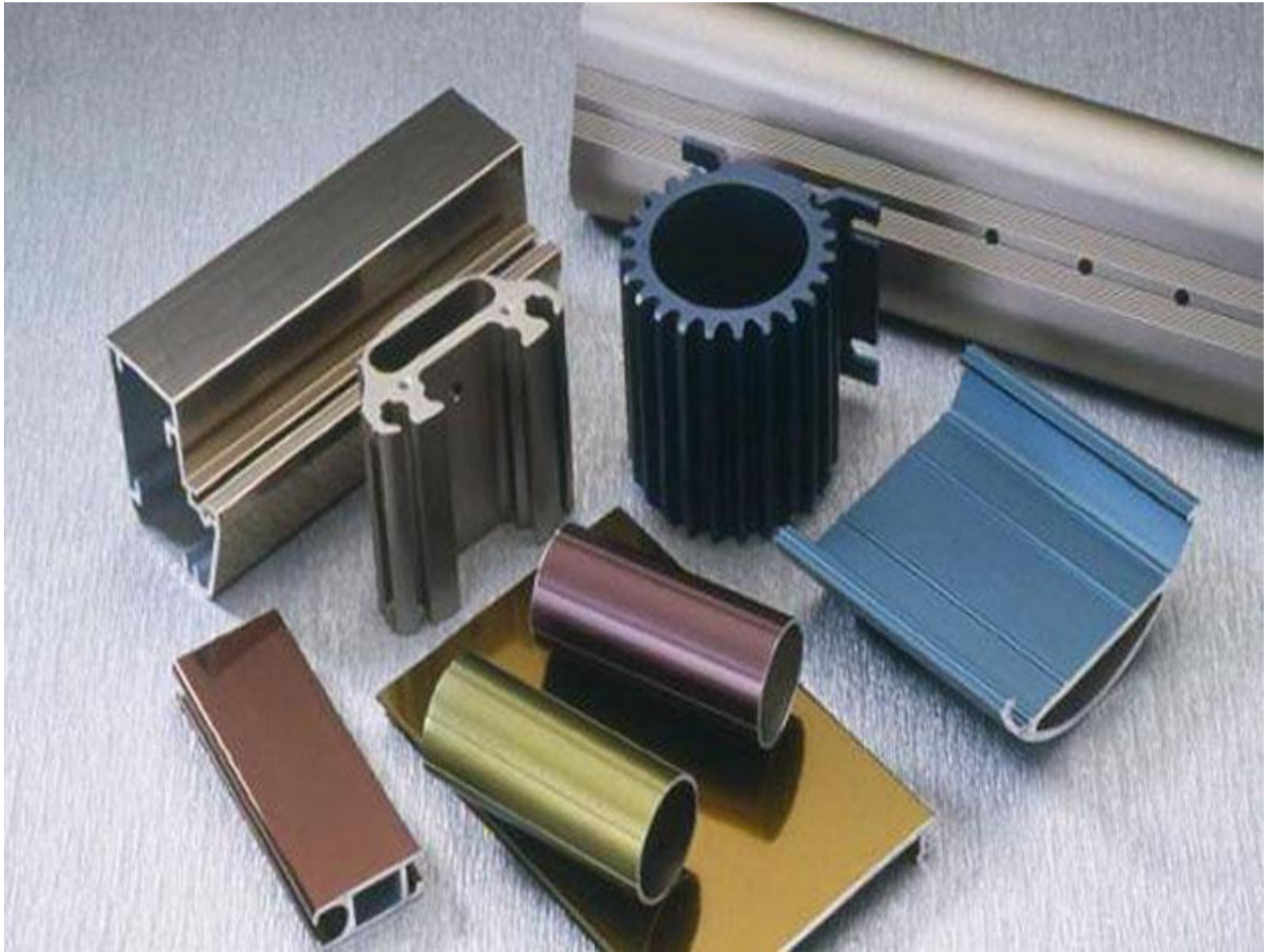
- I have 45 minutes so this conversation is just a beginning place for Steel repair body shops and technicians who are thinking of repairing Aluminum as a profit center.
- This presentation was prepared and delivered by DOXA Enterprises, Inc for Verifacts.
- For more information contact:

Larry Hults at 425 387 3692

or, lhults@msn.com







**We have been repairing
aluminum for generations**

So what's the big deal now?

The big deal is:

- We've been repairing aluminum for years but have we done it right?
- Aluminum was always a small part of our business but not, looking forward
- 40% or more of your business could be Aluminum
- Improperly repaired parts fail in about a year. How many comebacks can you afford?

Repairing Aluminum includes:

- PDR paintless dent repair
- Conventional repairs
 - Replace parts
 - Refinish

Each of these processes has differences from repairing steel.

Owners

- Techs have been pushed to cut corners and work faster and faster (either we are pushing them or they are pushing themselves)
- Proper Aluminum repair requires attention to details not “hurry up speed.”
- How do you run your business, your relationship with your techs?
- How is your relationship with your DRP business generators? You need a strong conversations with them aboutrepairing Aluminum.
- Should you raise your hourly rate? How will flat rate effect you.....and your techs?
- How much is this going to cost me? Can I make any money repairing Aluminum?
- Should I join all of the manufacturer’s repair groups?

All good questions that you need to answer for your business.

Production Management

- How hard can I push?
easy at first and build to the same tension as steel
- What should I be looking for?
cleanliness, documentation, maintenance, accuracy (glue, rivets, disassembly, re-assembly, welding, supplies.
- How will your production processes change?
processes should stay mostly the same. Repair plan, disassembly, parts processing, repair. Reassembly, paint, detail and deliver. However, each step will be a little different.
- Who the heck decided I needed to change how we do things?
You will. Anything new takes awhile to learn and get good at. Your staff is going to be slow for awhile. If you approach it right, they will be excited. They will all want to be the guy with the first job. Or – you can continue with business as usual.

Let's look at some processes

Repair Plan

- Cannot be written until you have the OE repair details. You have to have them and they need to be part of the customer file
- Just like steel, you need to know what is included and what is not included in estimating guide processes.
- Supplies for repair may be purchased with service parts so there is an invoice to justify the proper charges. Rivets, Adhesives, one time fasteners, etc. Bulk fasteners are partially available

Have you ever used this type of product before?



This is an example of one product that can be used to detect microscopic cracks in aluminum. Cleaner, dye and penetrant. the cleaner may be necessary before the dye and to remove the dye and developer from the work area.

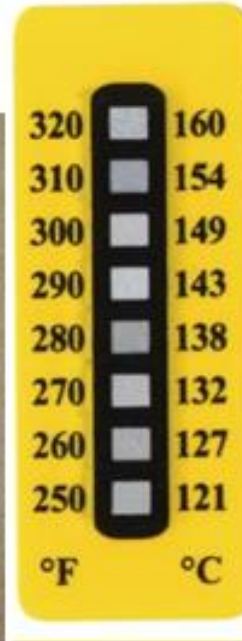
You may need to use it in at least three of the steps for aluminum repair.

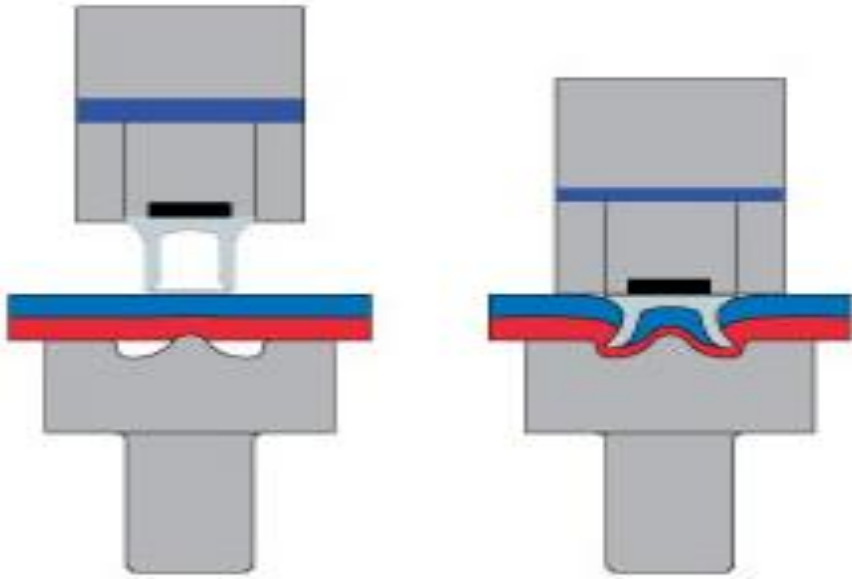
Is its use included in estimating guides?

Disassembly

- Tools, tools, tools.
- Proper drill bits, saw blades, grinders, hand tools
- SPR guns
- Clean, organized and proper.
- No short cuts.

Some tool details











Fasteners

Spot welds

Plug welds

Seam welds

Laser welds

Clinches

Rivets

Bolts

Flowdrill Screws

Adhesives

Steel Welding

- Can you tell me that your technicians do proper welding on every vehicle? Do you have the test weld samples to prove it?
- Can you walk up to your lead tech and ask, “what type of welding wire is in
- your welder?” And get an accurate answer?
- Do you know what each of these numbers and letters mean? ER70S6?
- For welding steel, are you using a MIG welder? Or is it a MAG welder?
- Now they are going to weld aluminum?

Buy a new welder

Learn how to use it

Certify your techs

Do it again and again

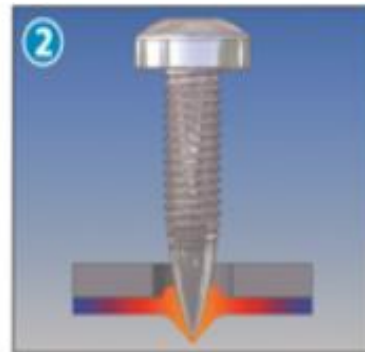
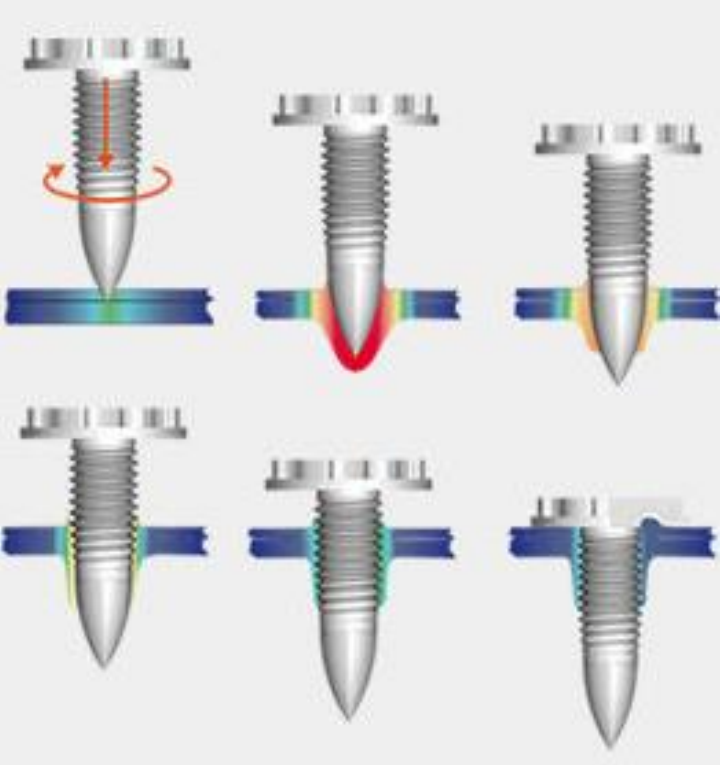
**Then do it every time
you take OE training**

**Does that sound like
it might be
important?**



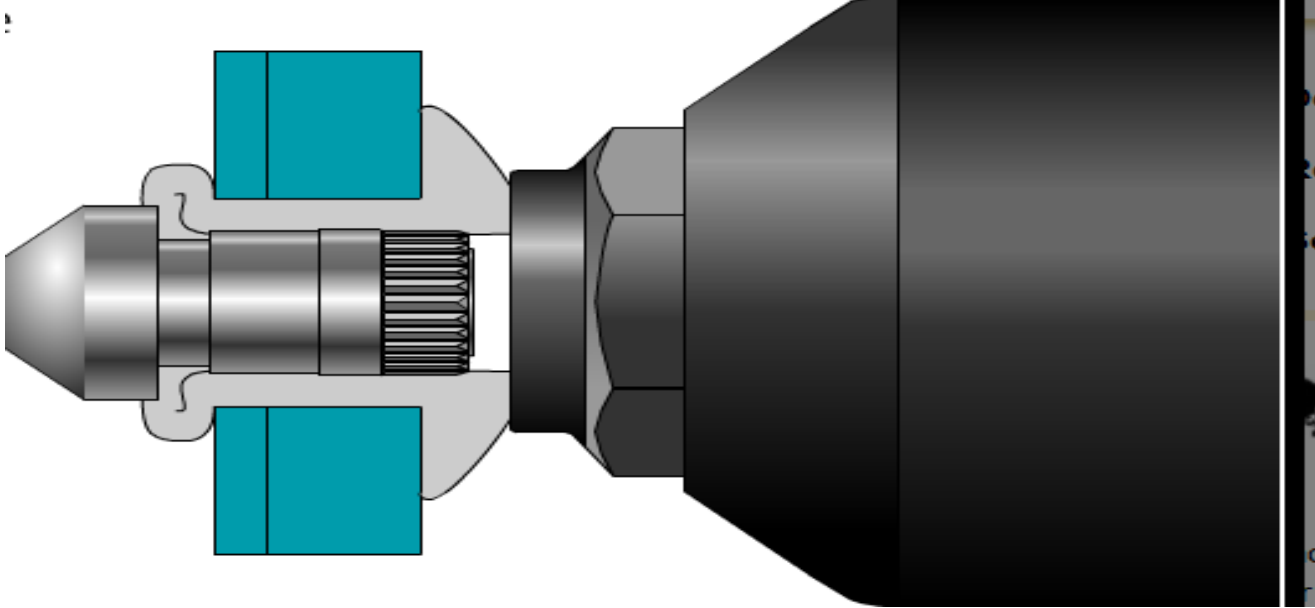
Clinches

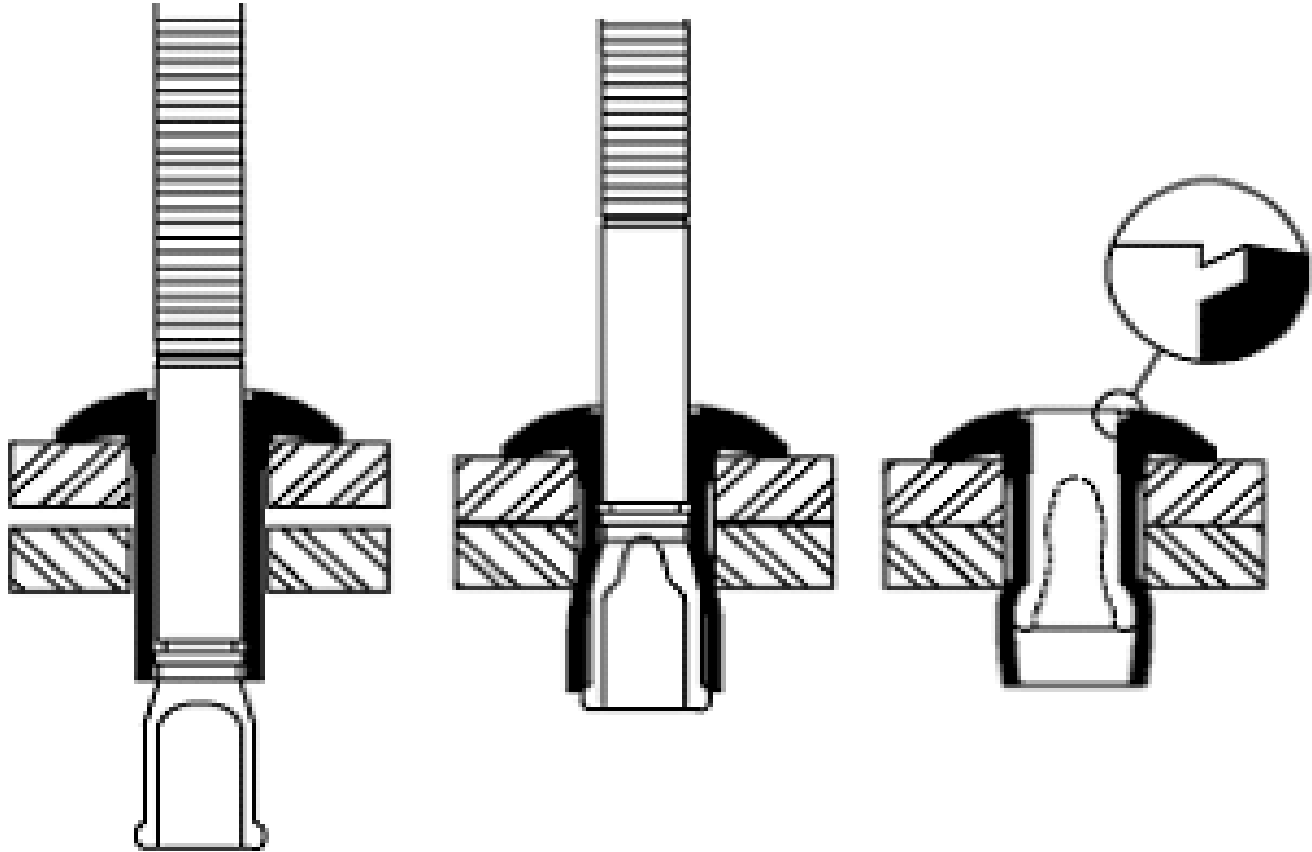


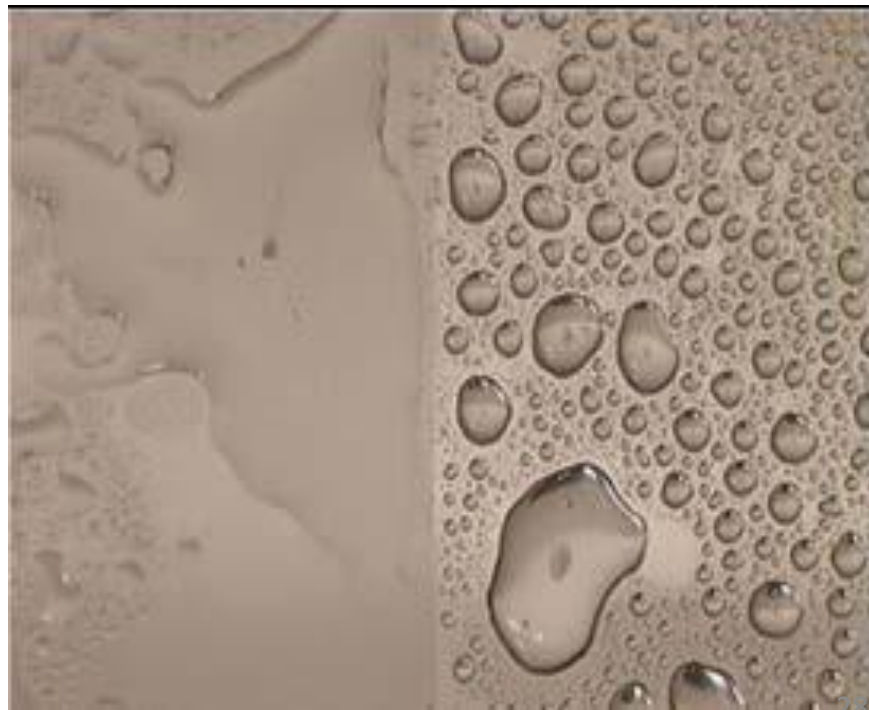


Parts Processing

- Like a well organized shop manages steel parts
- But, you may want to order service parts with all the rivets, glue, etc. AND keep them separate and clean
- You can use bulk supplies and manage inventories of rivets, adhesives, drill bits, saw blades, grinding discs, sandpaper, etc
- But, you need to keep them separate from the same stuff you inventory for steel. Store it all, clean and separate.









Repair

- Repair is what got me invited to do this Guild event:
- The details for Aluminum repair could go on for nine hours. Maybe more.
 - It is not hard, it is different, and will take time for your techs, your staff, and you to get used to.
 - No short cuts. There are too many people watching and it is too important to get it wrong

Reassembly

- Using the adhesives correctly
- Using the rivets and FDS' correctly
- Using the correct fasteners
- Seam sealers and cavity coatings must meet OE requirements
- Getting all the coatings right including paint

Cleco Fasteners



Fasteners come in four sizes. Choose the size that matches the size of the rivet hole

Color	Size
Silver (Zinc)	3/32" (2.4 mm)
Copper	1/8" (3.2 mm)
Black	5/32" (4.0 mm)
Gold (Brass)	3/16" (4.8 mm)

Cleco Clamps



Cleco pliers are used to install and remove fasteners and clamps

Refinish

- Your paint system products must all match for Aluminum; cleaners, primer surfacers, basecoats, etc. Must all be compatible with Aluminum.
- Refinish techs must use the same care, cleaning and tools that the repair techs use to prep for paint.

Safety in the facility for everyone

- Aluminum dust
- Steel dust
- Work areas
- Compressed air
- HVAC systems
- SDS safety data system information must be updated to the Aluminum products being added to your environment

Where is the pressure coming from?

- I guess, for this 45 minutes I get blamed for some of that
- OSHA can get some of it
- Car manufacturers and their engineers and repair departments get some blame
- Public safety holds a big part of the blame
- And keeping your staff healthy and professional gets the rest

What do I need to do to properly repair Aluminum Vehicles

Getting Started

1. Change how you think about the repair process
2. Gear up so you have a chance of getting it right
3. Begin changing your business model, pricing model, marketing model
 - Join Certification programs
 - Create a Training Culture. Get involved with a training process with your staff
 - Assure that you have access to and use repair information from the OEs
4. Make the infrastructure changes necessary to make your staff and business safe

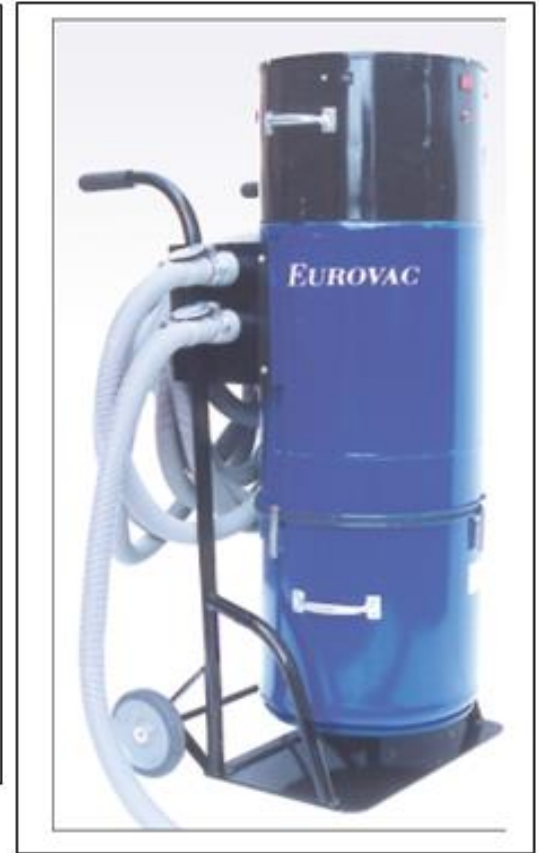
Thoughts about Change, Aluminum

- Competition for business will continue to get harder
- Shops do not market well. Learn to market your business
- Differentiate yourself from the guy down the street
- Are you ready to change your business and add Aluminum?



The portable vacuum system on the left is for use with your sanders and grinders that are able to be attached to a vacuum. It can also be equipped with a capture funnel to collect the dust from the surface as it is created.

The portable system on the right is a fume extractor for welding aluminum. The hoses go to a funnel that is located above or beside the weld site to capture the fumes before they can diffuse in the air.



There are portable and permanent units available that are both particulate and fume extractors