

## Auto Body Repair lab

Automobiles are meant to be maintained on a periodic basis. This Repair lab trains students under various repairing methodologies. Some of the methods following are used for repairing automobiles,

### 1. Buffing

This is one of the easiest, simplest and cheapest auto body repair techniques to fix a damaged car. However, "damaged" may not be the best word for it. This technique is generally used when it comes to minor damage to your car. We are talking here about minor to moderate scratches that can occur in various ways. It may be an errant shopping cart, a poor first cycling attempt your kid had, or even an unsuccessful parking attempt (we don't blame and we definitely don't want to judge anyone).

The bottom line is that when it comes to auto body repair, a skillful technician could fix these minor problems by buffing out any scuffs that might appear on the paint surface.

### 2. Dent repairs

Believe it or not, as far as auto body repair goes, dents are the most frequent problems we need to fix. If you are lucky enough to only have a minor dent and no damaged paint, this issue is definitely not a problem to a professional.

Of course, this auto body repair technique is a bit more complicated and it takes longer than a simple buffing, but in the end your car will look as good as new. The metal can be easily put back into place (this requires some pulling, pushing and even a gentle massage from time to time) and made to look as if nothing had happened.

### 3. Fender bender

The second most frequent problem we need to fix here at Sam's Auto Body & Paint is fender benders. The best course of action in this case would be replacing the dented or damaged fenders, so that the owner can avoid any long-term issues such as chipping or corrosion.

However, considering the fact that replacing the fender is more expensive, most car owners ask us to repair the damaged ones.

This auto body repair technique is a bit more complicated and it includes more steps. The fender is first straightened then it is sanded all the way to the metal. The area is coated with a body – filler which needs to cure. After it has cured, the body – filler is also sanded until the surface is smooth. The last step of this auto body repair technique is the paint job and after that, the fender will surely look great.

New technology, particularly the way cars' construction is evolving, means that auto repair shops need to update their techniques and equipment. A specific area of concern is the increased use of aluminum in car design. Aluminum body panels were once a privilege reserved mainly for high-end performance cars; but that's expected to change, and more manufacturers, such as Ford, are rumored to be designing all-new aluminum-bodied vehicles [source: Wernle]. That's mostly because the material is lightweight and strong, which helps cars meet federal fuel economy and safety regulations. But experienced technicians are accustomed to working on steel cars, and aluminum requires a totally new strategy. Banged-up aluminum body panels usually can't be reshaped like their steel counterparts can; the panel typically needs to be replaced, which requires aluminum-specific riveting tools and welding equipment.

This Lab involves in teaching also about,

### **Measuring Instruments**

#### **Tools**

- Hammer Bumping
- Universal Dolly
- Single sided Gun
- T- Spanner

#### **Equipments**

- Sanding Hand Block
- Single Action Sander

- Dual Action Sander
- Buffing and Polishing Machine
- Spray Gun (Painting) 500ml

### Personal Protective Equipment

### Vehicle Safety Accessories

### Automotive Body Components

- Classification of Vehicle Body

### Repairing Body Components

- Introduction
- Removing the Fender (SOP)
- Beating out A Dent
- Paint Stripping
- Carbon Shrinking

### Feather Edging

- Degreasing

### Courses in this Lab:

S.No	Domain	Course Name	Hours	Mandatory Prerequisite
1	<b>Auto Repair &amp; Paint</b>	Auto Body Repair, Denting And Painting	20	Mechanical, Automobile, Production Engineering (2 <sup>nd</sup> Year)
2	<b>Auto Repair &amp; Paint</b>	Repair And Overhauling Of Chassis System (Passenger Cars)	30	Mechanical, Automobile, Production Engineering (2 <sup>nd</sup> Year)