

Repair S3000 Repair Pro Collision S3500

Repair Information Software

Activity Workbook

Table of Contents

Introduction	3
Follow-Along	4
Review and Documentation	4
What do you know!?	4
Pre-Requisite Viewing	4
First time Login to Repair S3000	5
First time Login to Repair Pro	
First time Login to Collision S3500	
Program Content	
Interesting Facts	7
Features, Advantages and Benefits & Value Points!	7
The :Five Minute" Rule	
Types of Information and Data Coverage	<u>c</u>
Home Page of Repair S3000	10
Contact ALLDATA	11
Self-Help 24/7	11
New TSBs	11
Shop Operations	14
Technicians Reference	14
Community Link	15
Vehicle Selection Page	16
Shortcut buttons	17
Vehicle Selection	17
Previous Vehicle	17
VIN Decoder	17
Year, Make, Model, Engine (YMME)	17
Library Request Form	17
Community	17
Share-a-Repair	17
Vehicle Information Page	19
Filter by Information Type	19
System/Component navigation tree	19
Search	19
Saved Articles	20
Articles and Images	21
Article Types	21

Printing articles and images	22
Zoom and Print	23
Saving Articles	24
Quotes Option	26
Labor Rates	27
Tax Rates	27
Quote Numbering	27
Markup	27
Print Information	27
Writing a Quote	27
Saving, Printing, Opening and Editing Quotes	30
Open a Saved Quote	30
Edit a Quote	30
Repair S3000 Navigation Practice	31
Comparing Repair S3000 to ALLDATA Pro	35
ALLDATA Collision S3500	37
First time Login to Collision S3500	37
Collision Reference	38
Collision Repair Information	40
Body Dimensions	40
Sectioning Procedures	41
Body Materials and Type	41
Weld Locations and Quantity	42
Glossary	43

Introduction

ALLDATA Repair gives automotive technicians access to a single source of accurate, up-to-date OEM (Original Equipment Manufacturer) direct diagnostic, repair, and maintenance information. The program is available online 24/7 and continually updated with thousands of new pages added annually. The database provides information covering more than 36,000 vehicles from 1982 to present. The program includes repair procedures, diagrams, parts and labor, Diagnostic Trouble Code information, and Technical Service Bulletins.

ALLDATA Repair is trusted by more than 80,000 repair shops across North America and Canada. Repair delivers factory-correct repair information that's never edited or redrawn.

Repair also includes these features:

- A VIN decoder that will automatically select the YMME (Year Make Model Engine) of the vehicle, ensuring the correct information is accessed in the database.
- ALLDATA Community ALLDATA Community is an interactive, diagnostic forum built into the ALLDATA Repair product that gives technicians access to 1.3 million probable causes from OEM Repair data.
- A "Library Request" link where customers can receive live library research support
- An optional Quotes Module (Repair S3000 only) that shops can use to create simple quotes on mechanical repairs that will include OEM parts and industry-accepted labor times.

ALLDATA Pro is our legacy product. This is the repair information ALLDATA was founded on. It is also the same platform for Repair S3000 with additional features and functionality. The way information is looked up in each of these programs is the same. This is important to our customers since it doesn't require learning a new way to find what they are looking for. Simple, consistent navigation across each of our repair programs.

ALLDATA Collision S3500 is designed for the collision industry. We realize that you may not be selling this product, but it is important to know about this product in case you ever get a question about it. For this reason, we have included it within this activity book. Once you have completed this activity book you will have a richer understanding of the ALLDATA repair products. Knowing the products we offer will enhance your ability to sell them.

This activity book is designed to take you step-by step through activities to help you apply what you learn to real world situations found in a repair shop. The more you practice using this software, the better prepared you will be to discuss the features, advantages and benefits of Repair with your customers.

Activities cover data content, format, navigation and the types of information available in the ALLDATA Repair database. Other topics include: "Search" and "Filter by Information Type" features, accessing and retrieving "Technical Service Bulletins", using the article Print/View and image Zoom/print features, "Saved Articles", using "Quotes", accessing the "Toolbox", and "Community", and the "Library Request form."

Follow-Along

This training is designed for you to read and follow while the program is open on your computer. The best benefit to you is to actively read and complete the required tasks. You also will be asked to record your answers on a separate answer sheet. There are multiple ways to complete the activities.

- 1. Print this book, have it open along with the program on your computer. Or,
- 2. Open this document on your computer along with the Repair program. To change screen views if you have a single monitor is by toggling between the two.

Depending on your personal computer comfort level will be what works best for you.



Review and Documentation

Look for this symbol to the left throughout this activity book. When you see it, it will call out a specific activity for you to complete. This activity book is designed for you to practice what you are reading about.

NOTE: A separate answer form has been supplied for you to record your answers.

Once you have finished, email the completed answer form to your personal trainer.

What do you know!?

As you begin reading there are some questions for you to find answers to:

- 1. Can you explain the difference between Repair S3000, Repair Pro, and Collision S3500?
- 2. What are the features, advantage and benefits of providing factory correct information that is never edited or redrawn?
- 3. What is the benefit to a repair shop to have OEM data on over 36,000 vehicles?
- 4. Can you explain the value point of manufacturer Technical Service Bulletins (TSBs) and Recalls?
- 5. Can you describe the 'Quote' feature to pull up parts and labor pricing for a customer?
- 6. What are the features and benefits for 'Community' and 'Share a Repair'?



Pre-Requisite Viewing

Before starting the workbook, please watch the Training Garage videos listed below. This will provide you better context for the activities you will be following in this workbook. It will also enhance your understanding of Repair S3000, Pro and S3500.

Your Personal Trainer will discuss with you any questions or observations you may have about these Repair/Collision videos.

Training Garage courses to view for Repair S3000, Pro and Collision S3500.

☐ Repair S3000 [RP010K2E]
☐ 1.5 ALLDATA Repair (aka "ALLDATA Pro") [RP010A3E]
☐ Key Vehicle Information [RP020J2E]
☐ Quotes Feature [RPO30D3E]
☐ Technical Service Bulletins [RP040L1E]
☐ Reset, Relearn, Reprogramming Information [RP050K1E]
☐ Collision S3500 [CL010L2E]
☐ Collision S3500 Quick Tips and Navigation [CL012M2E]
☐ ALLDATA Collision Connect [CL015B3E]
☐ Collision Information Overview [CL020]1E]

First time Login to Repair S3000

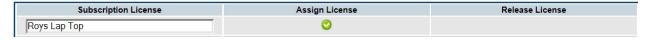
- 1. Open: an internet browser
- 2. Go to: repair.alldata.com (no 'http' or 'www')
- 3. Enter your 'Login Name' and 'Password' (Provided to you)
- 4. Click: Login



5. You may be taken to a page that looks like image below, if so, click on the red button to 'Release License'.



6. The fields will change. Now click the green button (shown below) under 'Assign License'.



First time Login to Repair Pro

- 1. Open: an internet browser
- 2. Go to: alldatapro.com (no 'http' or 'www')
- 3. Enter your 'Login Name' and 'Password' (Provided to you)
- 4. Click: Login

First time Login to Collision S3500

- 1. Open: an internet browser
- 2. Go to: collision.alldata.com (no 'http' or 'www')
- 3. Enter your 'Login Name' and 'Password' (Provided to you)
- 4. Click: Login

Program Content

What ALLDATA Repair is and what it contains

After completing this section, you will be able to:

- 1. Explain what types of data the program covers and the range of vehicles covered.
- 2. Compare the amount and types of information presented to that of the manufacturers' sites.
- 3. Describe why information may be or appear to be missing.
- 4. Identify key value points of accessing a single source of OEM information.

When you tell a customer that ALLDATA Repair is a "Single source of OEM information" ...what exactly does this mean?



Value Point!

Having one source of information for all YMME vehicles saves time and money.

In the old days a repair shop would need a repair manual for each vehicle make, model and year. Over time, the repair shop would look more like a library than a repair shop! Today, each of the major vehicle

manufacturers publish information for repair, service, diagnostics, parts, Technical Service Bulletins, etc. to their websites. Dealerships and independent repair shops subscribe to these sites to access the information.

Each of these websites have different layouts, and ways to navigate along with pricing. One site may offer a "24 hour" rate for a single Year/Model of vehicle, while another charges different rates depending on the information being researched. Information available may only be up to the past 5 to 10 years of vehicles.

ALLDATA has special "republishing" agreements with each manufacturer to present the same information in a single, standardized format; one layout, one price, one access point, covering approximately 36,000 vehicles from 1982 to present. (There is limited Emissions information on vehicles back to 1966.) The vehicles covered are cars and light trucks made for sale in the United States. This excludes "gray market" and "exotic" vehicles. "Gray market" refers to vehicles that were manufactured and sold in another countries, and later imported into the U.S. It also excludes most Medium and Heavy-Duty Trucks. There is some data found for higher capacity trucks such as Ford F550. Heavy-Duty (Semi) trucks such as Mack,

Peterbuilt, Kenworth etc. (18 wheelers) are not covered at all.

Value Point!

Everything in ALLDATA Repair is unedited and uncondensed OEM information. Exactly the same way the dealership gets it.

Interesting Facts:

ALLDATA publishes over 110,000 pages of Technical Service Bulletins each year. If these were actual pages, you would have a stack of paper over 36 feet tall!

ALLDATA Repair contains over 30 million articles, and we continually add over 1 million articles yearly.

If you stacked every page of data in Repair, **you would have a stack of paper almost 2 miles high** with factory correct information. (*Compare this to the 'Willis Tower' in Chicago, formerly the 'Sears Tower', which is only ¼ mile high*).

Features, Advantages and Benefits

Throughout this activity book you will see Features, Advantages and Benefits called out as well as **Value Points!** These will help you better demonstrate to a customer important features and benefits of ALLDATA products and show how they can bring value to a repair shop.

Features	Advantages	Benefits
Factory correct information.	Unedited, uncondensed, factory-correct repair information.	Saves time and money. Faster and more accurate repairs done right the first time.
1982 and later cars and light trucks made for sale in the U.S.	Over 36,000 makes and models covered.	Make money for the repair shop. Take on vehicles they may not be familiar with.
Over 30 million pages of repair data.	Broad range of information.	Make money for the repair shop. Do all types of repairs and services.
Standardized Table of Contents.	Easier to find information.	Save time finding the needed information.
Customer communication tools.	Customer forms, customer checklists, as well as 3 rd party articles.	Make money for the repair shop by helping to validate the repair shops recommendations and sell additional services.
Best-in-class customer support	Help when the repair shop needs it.	Saves time.



Exercise: OEM One Stop TechInfo™ is a "portal site" for manufacturers" websites.

Step 1: Log on to **www.oem1stop.com** to get an idea of how manufactures differ in offering service and repair information. To view a site, simply click on the manufacturer logo.

! IMPORTANT: <u>DO NOT</u> "SUBSCRIBE" TO ANY OF THESE SITES; simply view what you can without creating an account or login.

What this last exercise demonstrates for you as you begin working with the ALLDATA Repair products, is that each manufacturer site has a different way to search for information, and the cost can be prohibitive to a small repair shop.

The Features, Advantages and Benefits of using ALLDATA Repair are:

Features	Advantages	Benefits
Standardized Search	The search features will remain consistent for looking up information for any vehicle, no matter the make and model.	Unlike the various manufacturer websites, a technician would need to be familiar with how to look up repair information different ways. Using ALLDATA Repair will speed up the repair time.
One price for all manufacturer vehicles and models	Over 36,000 makes and models covered.	The cost of ALLDATA Repair is far less than subscribing to a manufacturers repair website.

"Missing" Information: Sometimes a customer may not be able to find what they need. There may be several reasons causing this to happen:

- Age of the Vehicle: As a general rule, the amount and type of information found depends on the age of the vehicle. Models that are 15 years or older will have less information than vehicles five or ten years old. A brand new vehicle may also have very little information, but as the vehicle 'ages', manufacturers will add and update information on that particular vehicle. As information becomes available, we add it to our database.
- **Incorrectly categorized:** The information may exist, but it is in the wrong category. This could be how it was received it from the manufacturer, or it might have happened during our own "data mapping" process.
- **No information available:** The manufacture simply did not include any information. Since we do not edit or re-write any OEM information, if it isn't available, it currently isn't available anywhere.

The "Five Minute" rule:

If the information is for an older vehicle, our Library staff will research to see if we have it in our files and will either send the information or let the customer know it is not available.

If the information is for a brand new

Value Point!

We tell our customers if they cannot find the information they need within "five minutes", they should use the *Library Request* form. Our support team at ALLDATA will do their best to locate it and get back to the customer, usually within 30 minutes.

vehicle, we simply let the customer know that the manufacturer has not yet provided any information.

If the information is truly missing, we contact the manufacturer to find out if it was left out accidently, or if it is something the customer would need to contact them for directly.

If it is incorrectly categorized, we will send them the right information, and correct the error in our database, or notify the manufacturer that *their* information needs to be corrected.



Types of Information and Data Coverage provided by ALLDATA S3000

The Information/Data Coverage Categories found in Repair are:

- Adjustments Procedures to adjust components such as engine timing
- Application and ID Provides information to identify systems and parts on a vehicle such as Vehicle
 ID Number (VIN), Engine casting information, and Regular Production Option codes (RPOs) on GM
 vehicles
- **Description and Operations** Theory of operations for systems and components.
- **Diagnostic Trouble Codes** Procedures to access and clear DTCs from vehicles systems computers: ABS, SRS, ECM/PCM, BCM, etc.
- Diagrams Wiring diagrams, vacuum schematics, belt routing diagrams, connector end-views, etc.
- **Exploded Parts** Exploded views of complex systems such as an engine, transmission, or suspension
- Locations Component locations, connectors, grounds, and splice locations

Value Point!

Having the location of components, splices and labeled connectors makes diagnosing and repairing electrical **issues easier**.

• **Maintenance/ Service Intervals** – Maintenance Schedules, maintenance light reset procedures, tune-up information and related repair information.

Value Point!

Maintenance Schedules help a shop provide excellent customer care by insuring their vehicles are maintained while providing additional sources of income to the shop.

- Parts and Labor OEM part numbers and suggested retail prices; labor times for repair work
- **Service Precautions** Provides warnings and precautions for technician safety and to prevent vehicle damage
- Service and Repair Procedures to remove and replace a component
- **Specifications** Provides various types of specifications such as capacities, voltage and resistance specs, torque and thickness, fluid types and more

• **Technical Service Bulletins** – Factory-issued bulletins that include but are not limited to Recalls. Most bulletins are administrative in nature or provide fixes for common failures

Value Point!

Technical Service Bulletins help technicians quickly diagnose known issues that occur on a specific vehicle.

- **Testing and Inspection** Procedures to test or inspect individual components for proper function or fit or wear.
- **Tools and Equipment** Provides information on special tools needed to work on the component or system or vehicle.

Many of the categories listed above have multiple sub-categories such as 'Diagrams', 'Connector Views', 'Exploded Views' depending on the YMME of the vehicle selected.

THINK ABOUT IT.

How can you explain to a customer how ALLDATA differs from the manufacturers' individual sites?

For the following question, use the Repair Answer Form to record your answers.



- 1. List 5 types of data provided in Repair S3000.
- 2. Write a simple "elevator speech" to explain the "key value points" of accessing a single source of OEM information and what the advantages and benefits are to a repair shop.

Home Page *Follow along on your computer*

In this section we will cover the layout and content of the Home page along with links to the New TSBs, the Contact ALLDATA link, and more.

The Home page allows you to access general information contained in the program. The identified features are listed below. **NOTE: The Select Vehicle button will be covered separately.**



1. **Contact ALLDATA:** When you click this link it will open up a new browser tab with a drop-down menu under the title, 'CHOOSE A GENERAL TOPIC'. Click the dropdown arrow in the '-Select-' box. The dropdown list will expand to the list found on the right. Select a topic you need help with by clicking on it. Choosing a topic will provide instructions on how to resolve the issue, or offers a form to fill out for submitting a question to be answered by the appropriate ALLDATA department.

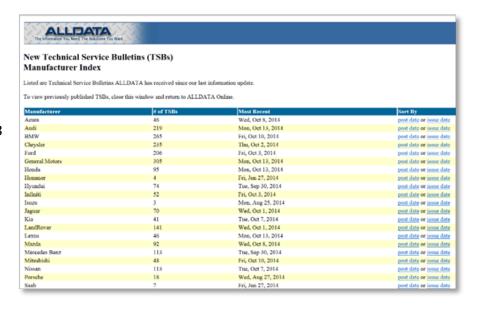


 Self-Help 24/7: Clicking here will open the ALLDATA support site. On this page you can find many of the answers to most of the common issues a user may encounter. There is also 'Product Support', 'Account Support' and 'Training Options' which gives customers choices as well as directions on how to attend training classes, and when they are available.



3. **New TSBs** – TSB stands for "Technical Service Bulletin(s)". These are issued by vehicle manufacturers. They are based on issues the vehicle manufacturer has identified based on known problems, or problems customers are bringing in to have repairs made. Manufacturers will identify if a pattern of the same type of repair or problem has been noted. They will then create a repair checklist, with parts, labor times and detailed repair procedures. This becomes a "Technical Service Bulletin" for that specific manufacturer's dealerships and repair shops. At some point after some time has passed, the manufacturer will post the TSB for all to see. At this time ALLDATA will include it into our database. Initially, since there may be hundreds of different TSBs published, the TSB is posted to the 'New TSBs'

page temporarily for shop owners to access. Later, all these will be indexed and crossed referenced into the appropriate areas of Repair. By clicking on this link you would bring up the New TSB page. Notice this page is arranged by manufacturer lphabetically. TSBs can be sorted by either the posting date or issue date. alphabetically. TSBs can be sorted by either the posting date or issue date.



Value Point!

All new issues, or those not previously identified, can now be posted for independent repair shops to have access to. These TSBs allow independent repair shops the same repair information that the manufacturer based repair shops/dealerships have access to. It provides known and validated repair information to quickly fix the problem a customer may come in with, or the repair shop can bring this to a customer's attention which brings value to the repair shop in the eyes of the customer.

TSB Stories:

Many technicians don't realize the power or understand the value of a Technical Service Bulletin, or "TSB". TSBs are issued by the manufacturer for any number of reasons – from Administrative Information to Recalls. Many bulletins that provide fixes to common failures – solutions to common problems as identified by the manufacturer, using the feedback of 1000's of their technicians and their engineering staff. It's always a good idea take 5 minutes to scan the TSB list before you get started on diagnosing or repairing the vehicle – this can save you time and some headaches in the long run.

Here's how one tech found out the hard way the value of checking TSBs before starting the diagnostic or repair process.

A customer brought their 1988 Chevrolet Corsica, 2.8L engine in with a rough idle and the check engine light on. Dave connected his scan tool and found a code 34 - for the MAF sensor. Dave pulled up the flow chart for the DTC and determined the Air Flow Meter/Sensor (AFM) needed to be replaced. He calls his parts supplier who quickly gets one out to the shop. Dave installs it on 30 minutes and takes the vehicle on a test drive and the check engine light comes back on.

Back in the shop, Dave sees code 34 is still present, he uses the diagnostic flow chart to determine the replacement AFM is bad – defective. His parts shop quickly sends him another. Dave installs it, takes the vehicle on a test drive and the check engine light comes on again!.

Back in the shop Dave finds code 34 is still present and the diagnostic flow chart leads him to believe that the 2^{nd} replacement AFM is also bad. He sources another AFM from another parts supplier and yells at his primary parts supplier for their defective parts.

When the third AFM is delivered, Dave installs it and takes the vehicle on a third test drive, only to have the check engine light come one third time. He returns to the shop and finds code 34 is still present. At this point he has a little over 3 hours of work into a job that should only take .7 hours and he has three AFMs that aren't bad but haven't solved the problem.

Frustrated, he calls his information providers support line. Together they review what was done; the support rep asks Dave if he's looked at TSBs in his information system. Dave hasn't – he's never understood their value. Together they look through the TSB titles for computers and control systems and come across one titled Driveability Conditions and/or Stored Engine Codes.

As they read through the bulletin, Dave sees that the code 34 is a false code and is resolved by replacing the PROM chip and removing the AFM relay. The bulletin indicates this should take about an hour to diagnose and do the repair.

Dave will has to reinstall the original AFM and figure out what he can do with the three "new" AFMs that were installed but not needed. He'll end up with about 4 hours – half his work day – on a job that he can should only bill one hour for.

If only he had known the value of looking at TSBs first.

TSBs not only help a shop diagnose and repair vehicles faster, shops can also use them to help their customers. Here's one example:

Mitch is a shop owner in southern California who prides himself in taking care of his customers. His shop is well known and well respected for their diagnostic and repair skills.

One day, a customer comes in for regular maintenance. Mitch notices the paint on the vehicle appears to be faded in places. The customer tells Mitch that his dealer has refused to acknowledge the problem, saying that it's a new type of paint and from different angles it will look that way. Mitch looks at the TSBs in his information system for his customer's vehicle and finds one that addresses the problem. He prints the TSB for his customer to use as a discussion point with the dealer. Later, he customer calls Mitch up to thank him; the dealer finally agreed to re-paint the vehicle.

Mitch didn't get any additional revenue for doing this but he did build loyalty with the customer. In the customers mind, Mitch is a hero and you can be sure the customer will go back to Mitch's shop in the future.

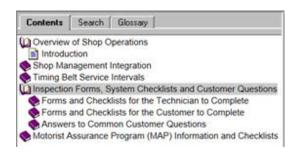
ALLDATA provides a sub-category of TSBs called Customer Interest. These are TSBs that ALLDATA editors feel would be of interest to the vehicle owner – addressing something the owner would experience – such as a shake or shimmy, a noise, a smell, or perhaps see, such as fading paint. ALLDATA users can provide their customers with a list of Customer Interest bulletin titles to review and identify potential issues they've experienced. This list becomes a great tool to bring customers back to the shop to have the work done.

Many shop owners and service writers will provide their customers with a printed list of Recalls. The customer may not have received notice of a recall. They can use this list at their local dealership to make sure all recalls have been completed for their vehicle.

As you can see, TSBs provide a lot of value to a shop:

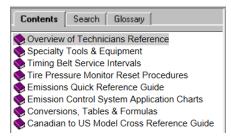
- Fix vehicles faster and correctly the first time
- Save time
- Reduce headaches
- Bring customers back for additional needed repairs.
- Increase loyalty from their customers
- Save their customers money
- Be a hero to their customers

4. **Shop Operations** – This section is very valuable to a repair shop. Items contained in this area make work easier for the Service Writer while categories can help increase revenue for the shop. Click on this button to open this window. You will see a variety of forms and checklists a Service Writer can use when communication with customers.



Some examples are:

- **Timing Belt Service Intervals** Provides a quick reference guide for the service writer to look up if a customer's timing belt needs replacing. By educating the customer on the need for an often overlooked required maintenance item, a shop can increase customer loyalty while at the same time increase revenue from otherwise lost work.
- Inspection Forms, System Checklists and Customer Questions This section provides several categories of forms. Forms for the technician range from a simple visual inspection checklist to a comprehensive vehicle inspection that can actually be sold as a "pre-purchase" inspection for customers bringing in vehicles before they purchase them. Forms for the Customers are checklists and questionnaires that help the service writer identify issues the customer is experiencing with their vehicle. Answers to customer questions contains a very comprehensive library of articles to help educate customers on why certain repairs are needed, thereby instilling additional confidence in repair shop in the eyes of the customer.
- 5. **Technicians Reference** This section includes information that is valuable to the technician as a quick reference. Some of the material included in this section includes:
 - **Timing Belt Service Interval** This section is repeated again as from the Shop Operations section.
 - **Tire Pressure Monitor Reset Procedures** While the procedures for resetting the TPMS on a vehicle can be found in the service and repair articles in Repair, this section makes it faster and more convenient for the technician.



- Emissions Quick Reference Guide This is another section that provides quick access to general emissions control information. Topics covered are: Proper Guide Usage, EGR Functional Tests, Ignition Timing Adjustment Connectors, Visual Inspections, Diesel Emission Component Locator, Emission Control Service Reminder Indicator Reset Procedure, Federal and State Air Quality Standards, Accessing, Interpreting & Clearing DTCs, Powertrain On-Board Diagnosis, 4WD AWD and Traction Control System, DYNO Safety Checklist.
- **Emission Control System Application Charts** This section contains specific emissions relate information. Charts are provided that list the emissions equipment installed on a vehicle. The charts are broken down by manufacturer and engine. Information is included for an extensive list of vehicles from 1966 to present.

• **Conversions, Tables & Formulas** – Contain a quick reference guide to many common conversion a technician may encounter.



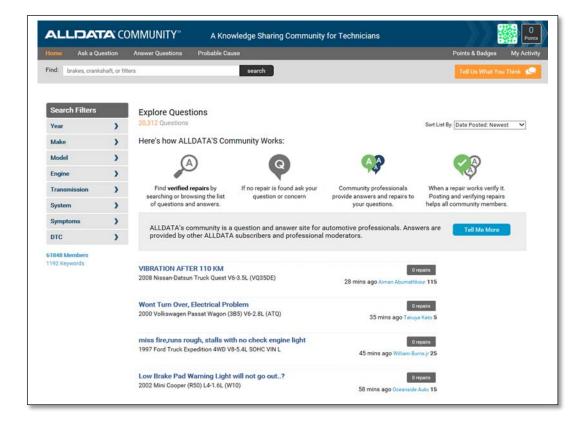
Value Point!

These categories save the technician time because the YMME of the vehicle is not required, simply click to look up the information necessary.

6. **Community Link** – This link takes you to the ALLDATA Community page. This feature is a question and answer forum for techs by techs. It is designed to provide access to other mechanics and technicians, as well as ALLDATA's team of research experts – to exchange information or swap ideas on any vehicle repair. You can use the search feature to find fixes and use the search filters to narrow down your search to a specific vehicle or group of vehicles. You can also search for specific symptoms or DTC's. If there is no answer already provided for a specific issue, you can ask a question. Other technicians will see your question and provide suggested repairs. When a posted response accurately identifies the fix to a question, the person who posted the question can "Verify" the fix. This lets everyone in the community know what worked and makes it quicker to find the most likely repair when searching the ALLDATA Community.

Value Point!

ALLDATA Community provides technicians with the benefit of repairs from 50,000 technicians (and growing!) located around the country. This is backed by the ALLDATA staff of ASE certified Master Technicians.



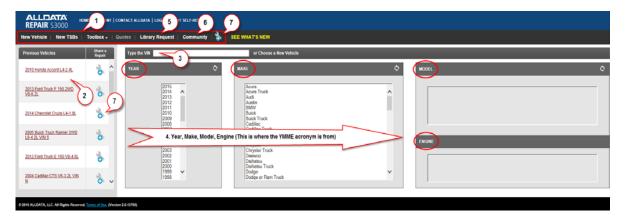
Vehicle Selection Page

Click on the "Select Vehicle tab. This link opens a brand new page which you will notice is quite different from the previous page you were on.



This is the Vehicle Selection page. The areas covered here are:

- 1. Shortcut buttons,
- 2. Previous Vehicles.
- 3. VIN Selection,
- 4. Year, Make, Model, Engine (YMME) selection,
- 5. Library Request,
- 6. Community,
- 7. Share a Repair (notice this is found in two locations on the page).

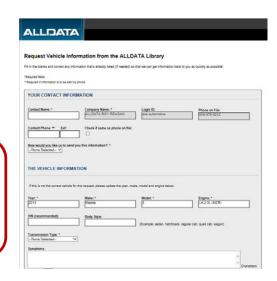


- 1. **Shortcut buttons** This area of the screen contains shortcuts to some of the same areas as the Home page. Having them listed here means less switching back and forth to the home page.
 - **New TSB's** This button takes you to the same page as before.
 - **Toolbox dropdown** This dropdown contains the Shop Operations and Technicians Reference links.
- 2, 3 & 4. Vehicle Selection There are three ways to select a vehicle in Repair S3000
- 2. **Previous Vehicle** This area stores the last 20 vehicles that have been looked up. This is a great feature for techs when they may be working on more than one vehicle at a time. Using this feature, they can look at multiple vehicles without having to completely select that vehicle again, simply click here and the information re-opens. It is also good when there is a shop with multiple techs using the same computer, they can switch between the repair information for multiple vehicles quickly.
- 3. **VIN Decoder** In this space you can type the **Vehicle Identification Number** (VIN) of the vehicle and Repair will decode it and take you to the repair information for that vehicle. (Try this out: locate the VIN for your own vehicle. This is a series of 17 numbers and letters found inside the driver side door, or on the dash up just below the windshield. Type this into the space provided. If more than one vehicle appears it typically means there are various trim packages available for your vehicle, select one of the options.)
- 4. **Year, Make, Model, Engine (YMME)** This is the area where you will manually select the vehicle you want to access information for. Try this out, select your own vehicle. Start with the Year, then select the make. Next choose the model and lastly select the engine size for your vehicle. (And that is YMME, or often pronounce as 'Yimee').

Library Request Form – The library request form is used to help technicians find information. The library has access to an extensive amount of information on vehicles not included in Repair S3000 including pre-1982 and some exotics. The Library team will research the answers and respond in 30 minutes or less.

Value Point!

For customers or potential customers who may on occasion work on older vehicles, this is a great selling feature in that the technician can request specific repair information and have it in 30 minutes or less!



- 5. **Community** This link will take you to the same page as previously described in the Home page section
- 6. **Share-a-Repair** This link is tied into the ALLDATA Community. It allows technicians to post repairs they have discovered which they believe could be valuable to the Community. These repairs show up in the Community as answered questions.



Click on the Share-a-Repair icon (shown at left).

A new page will open which contains fields for information. If you have a vehicle selected, or use the icon next to the Previous Vehicle pane, the vehicle YMME will be pre-populated for you.

Choose the vehicle system involved and list the symptoms.

Next, describe the issue and what steps were taken to resolve it. At the bottom of this page you would click the "Share Repair" button. Once the repair is "shared" it is posted to the ALLDATA Community for other techs to benefit from your experience and solution.

For the following question, use the Repair Answer Form to record your answers.



- 3. What are two ways you can select a vehicle using Repair \$3000?
- 4. Write a simple "elevator speech" explaining the benefits to a customer of the 'Previously viewed vehicle" list.
- 5. Explain the benefits of "Share-a-Repair".

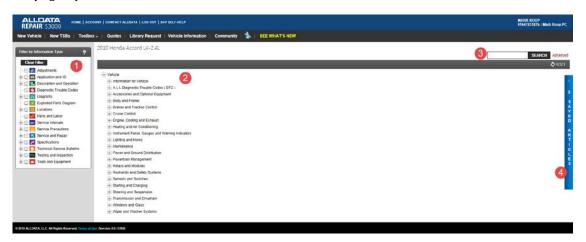
Vehicle Information Page

This is the page where the power of ALLDATA Repair S3000 shows.

To get to this page we will use YMME to select a new vehicle.

- Step 1. Under 'Year' click on '2010'.
- Step 2. Under 'Make' click on 'Honda'.
- Step 3. Under 'Model' click on 'Accord'
- Step 4. Under 'Engine' click on 'L4-2.4L' to select the engine size.

A new page opens that will look like this:



This is the vehicle information page. Notice that the shortcut buttons listed across the top remain the same, but the rest of the page has changed. We are now going to focus on four areas:

- 1. "Filter by Information Type"
- 2. System/Component navigation tree
- 3. Search
- 4. Saved Articles
- 1. **Filter by Information Type -** This box along the left side of the screen is used to narrow a search criteria. To narrow your search, you can apply a filter to limit the amount of information returned. When choosing a filter the System/Component tree (to the right) is also filtered. You will notice that to the left of each category there is a check box and in some cases a plus sign as well. Clicking on the plus sign will expand that particular category. Clicking the check box will filter the 'tree' view to the right to limit the information provided to make it easier to find what you are searching for.
- 2. **System/Component navigation tree** In this area you can navigate to information by expanding the categories down to the level you desire. This is typically the slowest method to find information. Especially with no filters applied.
- 3. **Search** Searching from this field without any filters applied will return results for all information types related to the search term. You can search for a component, by symptom, Diagnostic Trouble Code (DTC) to name a few.

4. **Saved Articles** – This area allows you to return to previously saved articles. This can be especially beneficial if more than one technician uses the same computer to look up information, or when working on more than one vehicle.

On this page you will be able to look up known TSBs, Service Intervals, Parts and Labor information, Service and Repair information, Service Intervals, etc. To demonstrate this, you will be walked through a series of exercises.

NOW YOU TRY IT! Look above the 'System Component / Navigation Tree'. The '2010 Honda Accord L4-2.4L' should still be listed. This indicates that the information you select on this page is linked specifically to that vehicle.

- 1. In the "Filter by Information Type" box, click the "Clear Filter" button. You will notice the 'Vehicle' tree to the right has over 20 categories listed.
- 2. In the "Filter by Information

Click back on the "New Vehicle" tab. You will be taken back to the Vehicle Selection page. Notice the 2010 Honda Accord is now listed under 'Previous Vehicles'. If you select another vehicle such as your own vehicle you will be taken to the Vehicle Information page.

Click back on the "New Vehicle" tab and select the 2010 Honda Accord from the Previous Vehicles area.

To get to this, find: "Technical Service Bulletins" under "Filter by Information Type". Next, click the plus sign (to open sub-categories), then when the sub-categories open, click the plus sign before "By Symptom". Click on "Noise". Now in the Systems Components field (to the right), click the plus sign before "Brakes and Traction Control". Click the plus sign in for the sub-category of "Information for Brakes and Traction Control". Click the plus sign for "Technical Service Bulletins", then the plus sign for "By Symptom", and "Noise". The screen will change with a link to the TSB. **Click on this link to open the TSB**.

With this TSB open, click on the vertical blue bar along the right side of the screen. This will open the "Saved Articles" window. Save this TSB by clicking above this area (upper right on the screen) where you see "Save Article". If you have access to a printer, you can also print this by clicking the drop down arrow next to "Select Print Option". You are given a choice to print the 'Complete Article', 'Text Only' or 'Images Only'. Now open the "Saved Articles" blue tab to see the article you just saved.

Did it seem like many steps to look up the TSB for front brake squeal? Let's try it again, but this time you will use the "Search" feature. In the Search field (upper right) enter, 'front brake squeal' and click 'Search'. Now, you have the Technical Service Bulletins group listed. Click one of the TSBs listed in blue. That's it! See how easy the Search function is? 'Search' should become your friend.

For the following question use the Repair answer form to record your answers.



6. What is the TSB number and date that is related to 'Front Brakes Judder and/or Squeal'?

Something that will help you is that when you open the TSB, you should notice what is referred to as the 'bread crumb trail' across the upper part of the screen. It will look like what is shown below.

Vehicle » Brakes and Traction Control » Disc Brake System » Brake Pad » Technical Service Bulletins » All Technical Service Bulletins » Brakes - Front Brakes Squeal/Judder

This will show you where you are within the program, as well as how you got where you currently are. Each of the underlined categories can be clicked on to be taken back to that level of the search.

If you click on 'Vehicle' it will take you back to the beginning.

Articles and Images

Let's look closer in order to understand the difference between 'Articles' and 'Images'. In Repair S3000 there are several options for how information can be displayed. We will focus on the difference between 'text' and 'image' within articles, how to use the 'print options' for articles, and using 'Zoom and Print'.

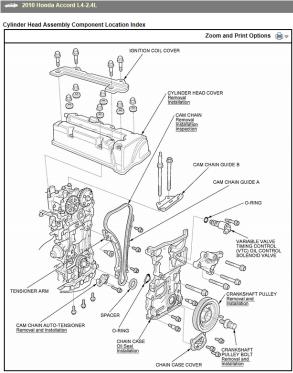
The purpose of this section: After completing this section, you will be able to:

- Describe how a text article differs from an image.
- Describe the difference between the article print options and image zoom and print options as well as use Image Zoom and Print to select a specific image from a series.
- Differentiate between "Exploded Views" in diagrams and an 'Exploded Parts Diagram'.

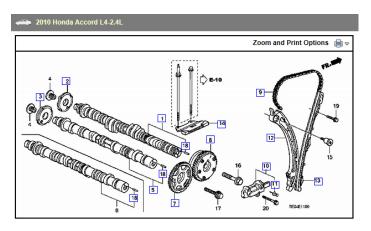
• Demonstrate how to use the Saved Articles tab, and clear specific saved articles or specific vehicles from the Saved Articles tab.

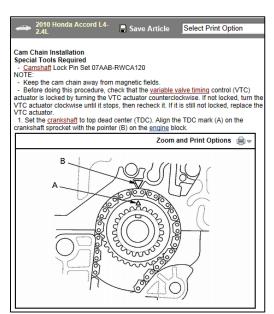
Article Types – Articles are presented in Repair in several ways. Some contain text only and some contain images only while others are a combination of both.

 Exploded View – In the example (right) you are shown the timing chain assembly and its associated parts and location. It is important to note that text contained in an image cannot be searched.



• Exploded Parts Diagram – This type of image (right) differs from the previous example in that it is used to access parts and labor information. Notice that there are blue boxes with numbers in the image. These boxes are hyperlinks that when you click on them will take you to the parts and labor catalog for that part.





• **Text and Image Article** – This is an example (left) of an article which contains both text and images. These images are directly related to the associated repair procedure article in which they are contained.

Value Point!

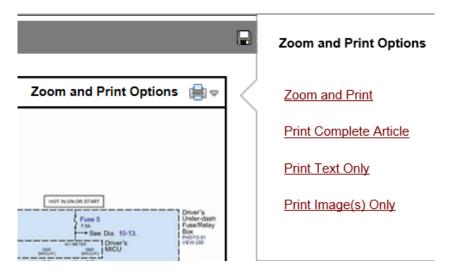
Providing a variety of options for article types as well as image views allows technicians flexibility in how they can access and view their repair information.

Printing articles and images – As noted previously, there are several options for printing articles and images.



As seen in the illustration to the left, located at the top right of an article will be a 'Print Option' dropdown menu which allows you to specifically select what you want to print.

Zoom and Print – Also available to you are print options located on each individual image. This can be accessed by clicking on the printer icon at the top right of the image and selecting the option you desire. These are the same options mentioned above with the addition of the 'Zoom and Print' option.



Clicking on "Zoom and Print" from this dropdown will open a new tab.

This feature is especially valuable when looking at wiring diagrams.

(Find the diagram shown below by following this string.)

```
Vehicle » Body and Frame » Locks » Power Locks » Diagrams » Electrical » Wiring Diagrams » Diagrams Set 130 (Power Door Locks/Keyless Entry/Security System)
```

For example, when only a small portion of the diagram is needed. The technician can zoom to that particular area and print just what is needed.

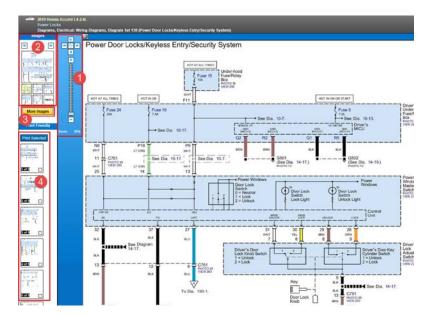
You can zoom the diagram using the scroll bar (1) to show more detail, or hovering the cursor over the diagram, you can use the scroll wheel on your mouse. (If your mouse has one).

Often times there will be a series of diagrams in an article. (2) You can also scroll through the diagrams one

at a time by clicking the Next Image and Previous Image arrows.

Clicking the More Images (3) button will display thumbnails of the other diagrams in the series.

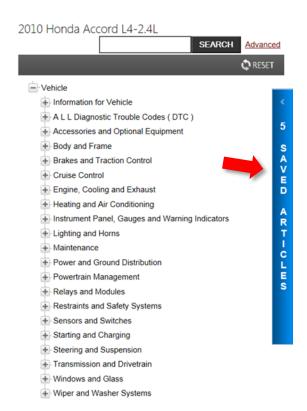
It will also display the thumbnails in a column under the Print Selected button (4). This allows you to select a group of diagrams and print them. This will print each diagram individually.



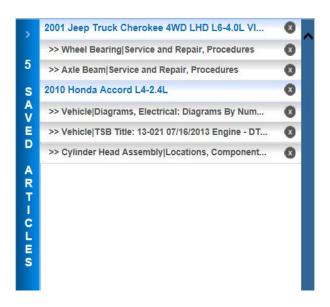
Saving Articles – Saving articles is a useful feature of Repair, especially when working on more than one vehicle, or when two technicians use the same computer to view repair information. Saving an article saves time because the technicians don't need to search for that same vehicle again, they can simply pull up the saved article.



To save an article simply click on the 'Save Article' link at the top right of the page.



Saved articles are stored under the blue banner on the right side of the page. It will indicate how many articles are saved. All saved articles remain in the saved articles area regardless of what vehicle you have selected.



Clicking on the Saved Articles bar will open it.

All saved articles are displayed. They are sorted by the vehicle to which they pertain beginning with the most recently saved. To view the article click on the article title. Clicking the X next to an article title will delete that article. Clicking the X next to a vehicle description will delete all articles associated with that vehicle.

For the following questions use the Repair answer form to record your answers.

With the 2010 Honda Accord still selected, and the wiring diagram open from the illustrations above; 'Diagram Set 130(Power Door Locks/Keyless Entry/Security System)':



7. What is the amperage of Fuse 15 in the first diagram of the series?

Quotes Option

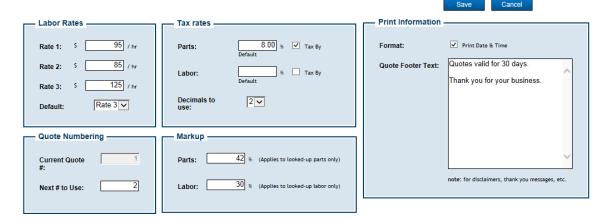
This section covers how to set-up and use the 'Quotes' option in Repair S3000. Topics include initial setup of labor and tax rates, parts and labor markups and entering "Footer" information, entering customer and vehicle information, using Parts/Labor lookup, adding line items manually, and saving and retrieving Quotes.

Goals - After completing this section, you will be able to correctly access the Quotes feature and enter appropriate information in the Setup section. Describe the difference between "Markup" for parts and "Markup" for labor hours.



Before beginning using the Quotes feature you must first complete the **setup**. Each of these categories are important for capturing and setting such information as the labor and tax rates, what markup you are applying and any additional information you want to appear on the quote page.

Begin by clicking on 'New Vehicle' and select a vehicle. Next, click on the 'Quotes' link at the top of the page. A 'New Quote' page opens. Look up in the upper right of the screen for a gear icon with 'Setup' and click on that. (see above) The screen will change and you will notice that there are five areas which need to be set up. We will go over each category.



• **Labor Rates** – You can enter up to 3 labor rates. The reason for this is because a shop may have a labor rate for diagnosing problems, and a labor rate for work by one technician and a labor rate for another technician. You also need to designate which will be your default rate.

Value Point!

Having more than one labor rate is beneficial to a shop in that it allows them to create quotes for different circumstances. For example, shops may charge a higher labor rate for diagnostic jobs, while they may have a lower rate for fleet or preferred customers.

- **Tax Rates** Enter appropriate tax rates for parts and labor. **NOTE:** If there is no tax on labor in your area leave this field blank. (A repair shop would most likely know this. Typically it is based on the repair shop zip code.) Select the "Tax By Default" check box to always calculate this tax when generating Quotes. You can also specify how many decimals to use for this field. An example could be a tax rate of 6.123 would need a decimal set to 3.
- **Quote Numbering** Here you can determine where to start numbering Quotes.
- Markup There are two sections in this area, and both work slightly different.
 - Parts Entering a percentage number for parts will markup the list price of the part by the amount entered. Note: This only applies to parts that are pulled from the OEM electronic parts and labor catalog. Any parts that are entered manually will need to be marked up when they are entered. Let's stop and think about this for a moment. Say you have a part that costs \$1 dollar. A higher percentage markup will benefit the shop and not overly impact the customer. But, a high percentage markup on a \$400 item probably would not be appreciated by the customer. Something to keep in mind is that our Manage programs are more sophisticated in setting markups. You will see that when you begin working through those activity books.
 - **Labor** Entering a percentage number for labor will markup the *hours* pulled from the OEM parts and labor catalog. It does not markup the per hour labor rate.
- **Print Information** There is a check box available if you wish to print the date and time on your Quotes. The larger text box is where you can enter a footer to appear on your quotes. This footer can be used for such things as a disclaimer (Example, 'Quotes valid for 30 days'), and/or a thank you message such as, "Thank you for your business".

Once you have the information necessary, click the "Save" button in the upper right of the page.

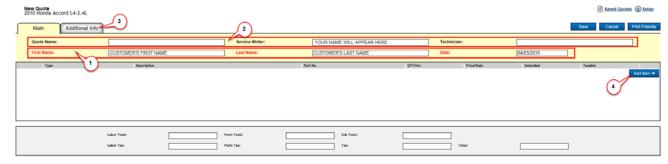
Writing a Quote

To start writing a Quote: (See: next page for illustration of this Quote page)

Step 1: Select a vehicle. (If no vehicle is selected the Quote tab will not activate). Select the 2010 Honda Accord.

Step 2: Click on the 'Quote' tab.

Step 3: Enter the required information on the New Quote main page:



1. First and Last Name. The date will pre-populate with the current date, and this can be changed if desired. You will note that these are listed in red indicating they are required fields.

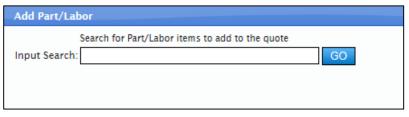
- 2. Additional information which can be entered are a quote name (i.e. Starter Replacement, water pump replacement, etc.) Service Writer and Technician names. The Service Writer field will by default be pre-populated with the name of the person currently logged in. (This can be changed manually if necessary).
- 3. Under the "Additional Info" tab you can enter additional customer contact information and vehicle specific information. Once you have done this, **Click back on the "Main" tab.**
- 4. Click on the "Add Item" button. (It is a drop down list).

Once you click the "Add Item" dropdown list it will open to reveal the list shown to the right.

The items you can add to a Quote are:

 Parts/Labor - Lookup - Clicking this will take you to the OEM electronic parts and labor catalog. A new window will open such as the one shown below.





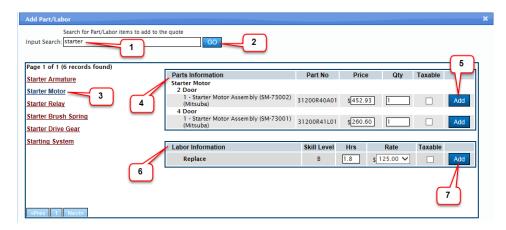
Within the "Input Search" field you will enter the name of the part you

are looking for. The catalog will display the OEM part number, suggested price as well as the industry standard labor time for replacing that part.

NOTE: 'Less is more' is a good rule for this search field, keep your search query simple and don't use too many words. Keep your search fairly simple.

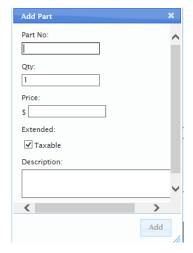
As an example, follow these next steps:

- 1. Enter the word: 'Starter' (without quotes) in the Input Search field.
- 2. Click 'GO'



3. You should see a listing of 6 category items related to starters, (Depending on the vehicle YMME this listing can vary greatly). For this specific example, click on 'Starter Motor'.

- 4. (Notice that there are two category boxes shown. The upper box (4) contains 'Parts Information' while the lower box (6) contains 'Labor Information'.) Select your part first. In this example there are two choices, one for a 2 door or 4 door vehicle. For this example it doesn't really matter which you select. Notice the OEM part number is listed along with the suggested price.
- 5. To add the part to your quote click on the "Add" button next to the part. NOTE: if the part is taxable, then you would also check the box under 'Taxable'.
- 6. Now you would select your Labor. This area will display the skill level of the technician. How many labor hours will be required to perform the service, the labor rate (set up by you) and a check box is labor is taxable in your area.
- 7. Click the "Add" button to add this to your quote.
- 8. Once you have your parts and labor added to your quote, click on "Close" located at the lower right of this box. You will see your Quote.
- **Flat Fee** The next category listed under the "Add Item" dropdown list is "Flat Fee". This category is to include something that you are charging a set dollar amount for. Note that this is *not* for complete jobs, such as a \$29.99 oil change. It should be used for a labor only operation that costs the same no matter what vehicle is selected. An examples would be a tire rotation for \$20.00 or a tire disposal fee. You would enter the flat fee price in the field and the description of the service below that.
- Note Clicking on this will open a popup box where you can add a
 note to your Quote. Any type of information you want to add can be
 added here.



• Part - (Left) This is where you would enter part information manually. For instance items that are

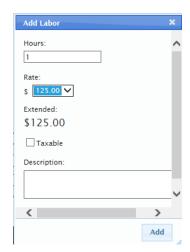
Add Flat Fe

Description:

Price:

not listed in the OEM catalog such as spark plugs, oil or antifreeze. NOTE: The parts markup entered in the setup is not applied to parts that are entered manually.

• Labor – (Right) This how you would enter a miscellaneous labor line item that likewise is not found in the OEM pars and labor catalog. You can also select a different labor rate using the dropdown list to select a different labor rate you set previously in 'Setup'



Add

Save

Saving, Printing Opening and Editing Quotes

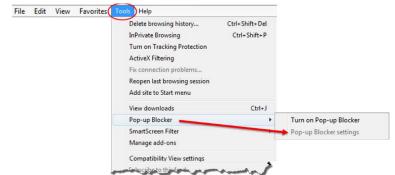
Once a Quote has been completed it can be printed and/or saved. Saved Quotes can later be retrieved and edited.

- **Saving** To save a Quote simply click the Save button located in the upper right corner of the screen.
- **Printing** To print the Quote click the "Print Friendly" button. This will open a new page with the Quote. Look at the layout of the Quote. You will notice that the footer you created in Setup is shown at the bottom of the page.

To print this page you have two choices:

- 1. With the cursor over the Quote to be printed, right click on your mouse and select "print" from the popup menu.
- 2. With the Quote to be printed, select "File" at the top left of the page, and select "print" from the popup menu.

NOTE: If you do not see the print pop-up window shown above, it means you will need to allow pop-ups. To do this click on 'Tools" from the menu bar at the top of your screen, click on 'Pop-up Blocker' and then click on 'Pop-up Blocker settings'. Click to 'allow pop-ups'/



Saved Quotes Setup

Print Friendly

Cancel

- Open a Saved Quote You can retrieve and open saved Quotes.
 - 1. To do this first, click on the "Saved Quotes" icon at the upper right on the screen. The screen will change to show a table.
 - 2. The first heading will be 'Quote#', the next is 'Quote Name', then 'Customer', 'Vehicle', etc. For this illustration we will focus attention to this first heading of 'Quote#'. Below this header there should be a "1" and possibly a "2" IF YOU HAVE SAVED ANOTHER Quote. (You will also notice the far right on this table there is a red 'X'. DO NOT CLICK ON THE RED X AT THIS TIME. You can delete a saved quote by clicking on the red 'X'.)



3. After clicking on the "1" (or '2' under 'Quote#' in the example above) your saved Quote will open.

• **To edit a Quote** it must be retrieved from the Save Quotes list. With your Saved Quote open, you can edit the Quote of necessary. You can add a part, change labor hours, and add a note to the Quote, etc. by clicking on the "Add Item" button. You can also delete things from the Quote by clicking on the red "X" located to the Right.



For this exercise, follow the steps listed below and save your completed quote. Later when in class you will open these save quotes for your Personal Trainer.

- 1. Select the vehicle 2010 Honda Accord.
- 2. Check that in Setup you have the following:
 - a. Labor Rates Rate 1 = \$95.00, Rate 2 = \$85.00, Rate 3 = \$125.00
 - b. Tax Rate Enter the appropriate rates for your area.
 - c. Markup Parts 42%, Labor 30%
 - d. Quotes Footer Enter "Quotes are valid for 30 days". And "Thank you for your business".
- 3. Add a customer Enter a name of your choice. Keep yourself as the Service Writer. Add, "Joe Wrench" as the Technician.
- 4. Fill in the information under the "Additional Information" tab.
- 5. Write a Quote using each of the line items listed:
 - a. Add a water pump and the associated labor
 - b. Add a Flat Fee for "Clean Engine" and charge \$20.00 for the service
 - c. Add a note "Always keep a 50-50 mix of Anti-Freeze and Water in the cooling system".
 - d. Manually add a part.
 - i. Part: # 3HC
 - ii. Quantity: 4
 - iii. Price: \$2.00 (taxable)
 - iv. Description: 3 inch hose clamp
- 6. Save the Ouote.

Navigation Practice

For this exercise I want you to think of the flow within a repair shop and how a repair shop would use Repair S3000 in this process.

Let's say you are the Service Writer for "**Best Auto Repair**," and a customer comes in for a problem with their vehicle.

The customer's name is **Bud Garret**. Bud is driving a **2006 Ford F 150 truck, 2WD with v6-4.2L**

You ask Bud what brings him in today. He tells you that he has experienced two times in the past week that the truck will not crank when he starts it up. He wants the problem fixed before he gets stranded.

You open Repair S3000 and enter his vehicle information and first check to see if there might be a TSB related to this issue.

You do find a TSB and inform Bud that it appears the manufacturer has identified a problem related to 'no crank', and has created a repair solution. Neither the vehicle nor this repair is under warranty, but by using this TSB it can help speed the repair time for his vehicle since a solution, repair procedure and parts have been identified. You also explain you will run a diagnostic to check the battery and starter.

For the following questions use the Repair answer form to record your answers.



8. What is the number, date of issue and title of this TSB?

You collect the key from Bud and tell him you will have your technician take a look at the vehicle to evaluate the issue and hopefully confirm this TSB will cover the issue. Once your technician has had an opportunity to evaluate the issue you will call Bud with an estimate for the repair.

Create a quote to replace the wiring pigtail kit. Don't forget about adding the labor to your quote.

Once the quote is completed, call Bud to give him the estimate for the cost to repair his vehicle. When Bud gives his consent to make the repairs, you will order the parts from your distributer.

Save this quote, for viewing in class.

Later, when the parts arrive from your distributer, the technician will complete the repair. After you have verified the repair work has indeed eliminated the issue and the truck starts, you, as the Service Writer will call Bud and let him know his truck ready for pick-up. Once Bud comes into the shop, he will pay for the services and you can give him his key.

Again for this exercise, think of the flow within a repair shop and how they would use Repair S3000 in this process.

You are again the Service Writer for "**Best Auto Repair**" and a new customer comes in for a problem with their vehicle. The customer's name is **Brenda Lee**.

Brenda is driving a **2010 Dodge Charger with the V6-3.5L engine.**

Brenda tells you that the check engine light has come on in her car. She hasn't experienced any significant issues with the car's engine or performance.

You open Repair S3000 and enter this new vehicle information and check for any TSBs. You see that there are several TSBs related to emissions and engine controls, but since nothing stands out, you tell her that you will connect a computer up to her car to read the OBD II code.

Using a tablet installed with ALLDATA Mobile, you connect your 'OBDLink MX' adaptor into the OBD port in her car and check for the code. You pull a P0457 code.

For the following questions use the Repair answer form to record your answers.



9. What is the name of the P0457 DTC?

Reading this DTC, you see that it is an active DTC. According to step #2, you inspect this part and notice damage, a large crack. You confirm this damage with Brenda.

You clear this DTC - P code and explain to Brenda that you can order this part for her, or she can simply pick one up at her local AutoZone store or at her Dodge dealership.

Think of the repair shop flow to answer the next questions.

Again, you are the Service Writer for "**Best Auto Repair**" and receive a call from a customer asking if they can have their car towed into your shop today. They tell you their car will not start. You agree to have your technician look at the vehicle when it.

The customer's name is **Honus Wagner**. He drives a **2008 Honda Civic with the L4-1.8L** engine.

Honus arrives with his towed car and explains that the car will not start. You ask additional questions such as did it crank over, is it slow to crank or will it not crank at all. He says it did not crank at all. You open Repair S3000:

To help assist you in diagnosing this problem you pull up the "Symptom Troubleshooting Index". (Starting System>Testing and Inspections>Symptom Related Diagnostic Procedures)



10. What is Step 1, under the symptom 'Engine does not start (does not crank)'?

The battery tests out as good, but the cables are loose and the negative cable is corroded and completely broken at its connection to the body.

Create a Quote to replace the Negative battery cable and add 1 hour of diagnostic time at the rate of \$95 per hour.



Save this quote, for viewing in class.

A customer brings their **2003 Toyota Camry Sedan 4 cyl engine** in for brakes.

The pedal is going lower to the floor, vehicle isn't stopping like it "used to" stop, and there is a grinding noise from the front end of the car when they step on the brakes.

Write a quote for inspecting the brakes, a \$50 charge.

The technician reports that rear brakes are good but the front brake pads need to be replaced and rotor thicknesses are 25.4mm and 24.9mm.

For the following questions use the Repair answer form to record your answers.



11. What is the minimum thickness for front brake rotors on this vehicle?

Modify the quote to include front brake pads and 2 front brake rotors and labor for all.

Change the inspection cost to reflect no inspection charge.



12. What is the new amount for the estimate?

You call the customer with the new estimate and they authorize the repairs.

Look up the replacement procedures for the front brake pads.



13. What does step #22 tell you to do?



Save this quote, for viewing in class.

A customer brings in their **2011 Chevrolet Impala (3.5L)** to your shop with a Check Engine Light on.

The technician confirms the check engine light is on, connects the scan tool to the vehicle and determines there is a DTC P0117.



14. What component is DTC P0117 related to?



15. Where is this component located on the vehicle?



16. When installing this component what should it be tightened to?

Comparing Repair S3000 to ALLDATA Pro

ALLDATA Pro (AKA Repair 1.5) is the original online version of ALLDATA Repair. The information contained in Repair Pro is exactly the same as found in S3000. The differences lie in the user interface and the way users navigate through it.

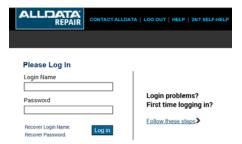
In this section we will compare and contrast similarities and differences between Repair S3000 and ALLDATA Pro such as screen layout, navigation, search, and document view/print options.

The purpose of this section – Is that after completing this section, you will be able to:

- Describe the basic differences between S3000 and ALLDATA Pro.
- Use the Vehicle Selection in AD Pro correctly
- Locate the "Community" link
- Describe what the Popular Information links are used for.
- Demonstrate retrieving information for the same vehicle from both products

START HERE: Login to ALLDATA Pro.

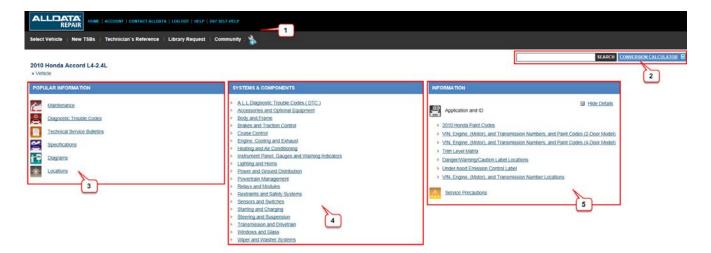
- 1. Open an internet browser and go to "alldatapro.com". Note: do not put "www" before the address. If you have never logged in to Repair or logged out you will be taken to this page.
- 2. Enter your Repair Login Name and Password and click Log in.
- 3. You will be taken to the home page. All of the links on this page take you to the same information as in Repair S3000.



4. Click on the Select Vehicle link (shown above) to take you to the Vehicle Selection page. It is essentially the same as S3000. The layout of the page is just slightly different.



5. Select a 2010 Honda Accord L4-2.4L (1HGCP2F32AA031821) to be taken to the vehicle information page.



- **1. Vehicle Information Page** The links across the top of the page serve the same function and access the same information as in S3000, but there are several differences. There is no link to the Shop Operations from this page.
- 2. The **Conversion Calculator** is in the upper right of the page next to the **Search Field**. The search feature in ALLDATA Pro is significantly different from S3000. In ALLDATA Pro the search feature only searches for components (water pump, starter, alternator etc.). Unlike S3000 searches for noncomponent items (symptoms, Diagnostic Trouble Codes etc.) will not return any results. There is also no way to filter by information types.

The three main areas of the Vehicle Information Page are:

- **3. Shortcuts to Popular Information** This area contains shortcuts to the most commonly used information types. Selecting one of these shortcuts from the main vehicle page such as Technical Service Bulletins will show all TSB's for the vehicle. This area contains several of the information types contained in the "Filter by Information Type" feature in S3000.
- **4. Systems and Components** This area is the primary navigation area. Unlike S3000 this is not a navigation tree, but links to the various systems and components. Clicking a link will take you to a new page.
- **5. Information** This area contains additional categories. The amount of information displayed will vary from page to page. For instance, at the vehicle level there may only be a few categories and pertain to the entire vehicle. However, when you select a system from the middle column (i.e. Engine Cooling and Exhaust) then select a component (i.e. Engine) there may be more items in the information column and they will apply to only the engine. As you continue to navigate to specific components of the engine the selections will change based on that component and the information available for it. This area also contains information types contained in the "Filter by Information Type" feature.

ALLDATA Collision S3500

Collision Repair Information

S3500 Foreword and Instructions

What ALLDATA Collision S3500 is...

ALLDATA Collision is factory direct information on how to perform collision repairs. This information is not readily available to the collision industry. There is limited information from multiple sources but not complete information from a single source. It gives Auto Body Technicians and Estimators access to the same accurate, up-to-date OE-direct diagnostic, repair, and maintenance information available in ALLDATA Repair S3000. Collision S3500 has added features and information specifically for the collision repair industry. These additional items will be covered in this addendum. You should have completed the ALLDATA Repair S3000 workbook prior to completing this addendum.

What ALLDATA Collision S3500 is not...

ALLDATA Collision is *not* a collision estimating system. There are a multitude of collision estimating systems on the market. These systems (highly regulated by the insurance companies) are designed to do just what they sound like. Estimate the time and cost of a collision repair. ALLDATA Collision does not contain this estimating information.

This section of the activity book will focus attention on content found in ALLDATA Collision S3500; data and vehicle coverage, the features and information contained in the program in addition to that in ALLDATA Repair.

The purpose of this section: After completing this section, you will be able to:

- 1. Describe the types of data Collision S3500 covers as well as the range of vehicles covered.
- 2. Describe the benefits for a collision repair shop for having the information found in Collision S3500.

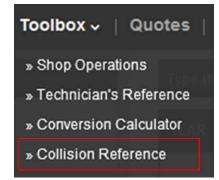
First time Login to Collision S3500

- 1. Open: an internet browser
- 2. Go to: collision.alldata.com (no 'http' or 'www')
- 3. Enter your 'Login Name' and 'Password' (Provided to you)
- 4. Click: Login

Collision Reference

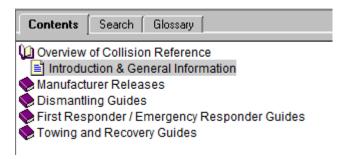
On the home page and also in the "Toolbox" area of S3500 has been added the 'Collision Reference' feature.





open a new page

Clicking on this tab will with a 'tree' of information fields.



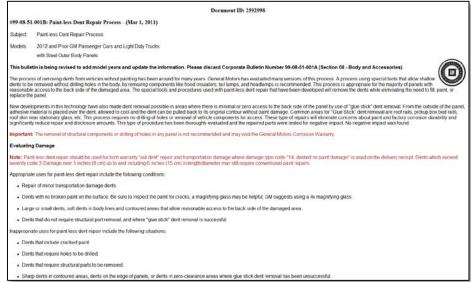
This section contains very important information for Estimators and Technicians, but you will notice it goes beyond this; it also provides information to First Responders and Tow truck operators. This may seem strange to have information in a collision repair program for first responders such as Police and Fire Rescue crews. This information provides them with key structural areas of a vehicle that has been involved in an accident. For example, electric vehicles could pose electrical shock danger if certain areas are exposed to air or water.

Features	Advantages	Benefits
Provides more than basic collision repair information	The program has value for First Responders as they approach a vehicle involved in an accident to show dangers, and provide extraction points.	With more cars on the road, First Responders need accurate information on many vehicles.
Provides information for how to safely connect and tow a vehicle without causing damage.	Provides a comprehensive listing of vehicles towing and recovery information.	A tow operator can quickly find the information to a specific vehicle.



What has been highlighted in the example to the left are manufacturers (1) "Position Statement". These articles describe the manufacturer's requirements on various types of collision repair. This can cover anything from what types of adhesives are authorized for use in sheet metal repairs or the use of salvage parts to what must be inspected or replaced when air bags are deployed. These articles are sorted by manufacturer.

(2) "Paintless Dent Repair, PDR" has been highlighted as an example. When this is clicked it opens the document shown below. It will provide information from the manufacturer on repairing a dent without the need for painting.



Value Point!

Having vehicle specific collision and repair information in one location allows small collision shops to repair all types of vehicles to specific manufacturer guidelines maintaining the vehicles warrantee in some cases. Also, many Automobile Insurance companies require specific work done for collision repair and this ALLDATA Collision S3500 provides this information to the repair shop.

Collision Repair Information

The collision repair information contained in S3500 can be found in the Body and Frame category. While the majority of the sub-categories are the same in both products, there is more extensive information found in S3500. The types of additional information include: Sectioning Information, Body Dimensions, Body Materials and Type, Weld Locations and Quantity.

Let's take a look:

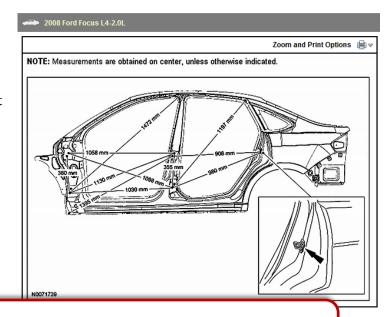
- 1. Click on "New Vehicle"
- 2. For this example, select a: 2008 Ford Focus with the L4-2.0L engine.
- 3. It looks pretty similar to both Repair S3000 and Pro, but there are additions to this program. Under 'Vehicle' click on "Body and Frame". There are some additional categories listed here that are not in Repair.
- 4. Click on "Welding", and "Information for Welding". Here you could look at welding safety, weld 'nugget' size charts, specs, etc.

Body Dimensions

Now go back to 'Body and Frame' up in your bread crumb trail.

- 1. Click on 'Body Dimensions'
- 2. Click on 'Specifications' and 'Dimensions'
- 3. Click on 'Body Opening Dimensions' and 'Bodyside Closure Dimensions'

Correct body dimensions are critical to repairing a crashed vehicle. If correct dimensions are not obtained it will lead to misaligned parts (doors, windows etc.) and improper gap tolerances. When this occurs it leads to customer complaints about an unaesthetically pleasing repair, wind noise and rattles to name a few. Many collision shops believe they can get these dimensions from their frame machines. Some information is available but they are usually related to under car dimensions such as frame rails.

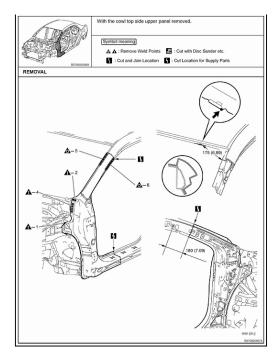


Value Point!

Having the level of information provided in ALLDATA S3500 will insure a shop get the repair done correctly the first time with fewer customer complaints and come-backs.

Sectioning Procedures

Sectioning procedures tell the collision repair technician the specific locations where the vehicle must be cut, to replace a panel or structural portion of the vehicle. These instructions must be followed in order to



effect a safe repair. Today's vehicles have crumple zones and use many different types of metals and materials to protect the occupants in case of an accident. If a repair is done incorrectly, it could result in serious consequences for the occupants in a subsequent crash.

This information is not commonly available to the collision industry.

There is a multitude of metals used in the manufacture of today's vehicles. Some examples are Mild Steel, Laminated Steel, High Strength Steel, Boron and Magnesium. The repair procedures of these metals varies greatly. Some metals cannot be welded while some cannot be "cold repaired" and must be replaced if damaged. Matrixes like the one at right help the repair technician repair vehicles safely and correctly.

Body Materials and Type

					Zoor	m and Pr	int Options	=
			Welding Method					
Grade	Trade Descrip- tions	Metal Inert Gas (MIG)	Squeeze- Type Resist- ance Spot Welding (STRW)	MIG Braze	Cold Repairs	Use of Heat for Repair	Temp- erature Range	Max- imum Heat
Mild Steel	Mild	Yes	Yes	NA	Yesa	Yes	Up to 650°C (1,200°F)	90 sec. x 2
Laminate Steel	Quiet Steel	No	Yes	No	Yesa	NA	NA	NA
Bake Hardened	BH 180, BH210, BH 250, BH 280	Yes	Yes	Yes	Yesa	Yes	Up to 650°C (1,200°F)	90 sec. x 2
Solid Solution Strength- ened		Yes	Yes	Yes	Yesa	Yes	Up to 650°C (1200°F)	90 sec. x 2
High- Strength Low Alloy (HSLA)	HSLA 250, HSLA 350, HSLA 550	Yes	Yes	Yes	Yesa	Yes	Up to 650°C (1200°F)	90 sec. x 2
Dual Phase = 600 MPa Ultimate Tensile Strength (UTS)	DP 500, DP 600	Yes	Yes	Yes	Yes ^a	No	NA	NA
Dual Phase = 600 MPa Ultimate Tensile Strength (UTS) particular to 780 and 980 grades) ^b	DP 700, DP 780, DP 900	Yes ^c	Yes	Yes	No	No	NA	NA
Ultra High Strength Steel (UHSS) (Martensitic, Boron) ^d	Boron	Yesa	Yes	Yes	No	No	NA	NA
Trans- formation Induced Plasticity Steel (TRIP)	TRIP 590, TRIP 780, TRIP 980	NA	NA	NA	NA	NA	NA	NA

a Cold repairs can be performed if damage excludes kinks. May section only if approved procedure in

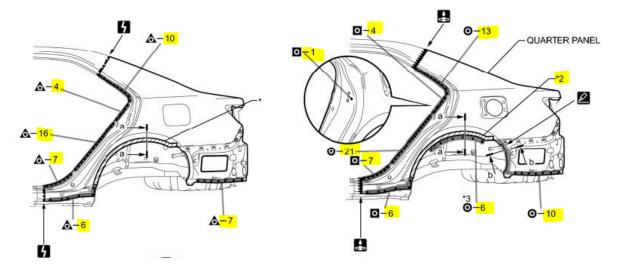
diagnostic/repair information.

b Dual phase steels DP 700, DP 780 and DP 980 must be replaced at factory joints, no sectioning unless approved procedure diagnostic/repair information.

approved procedure diagnosticinepair information.

c. For DP 980, use MilG plug <u>welding</u> only, no stitch welding.
d. Boron components must be replaced at factory joints, no sectioning allowed.

Weld Locations and Quantity



The illustrations above show weld locations and number to remove (R) and replace (L) the rear quarter panel on a 2013 Toyota Camry. Note that the highlighted numbers represent the number of welds to remove (50) and the number to replace (70) the panel.

Glossary

Industry Vocabulary - Terms, Acronyms and Definitions

Term	Definition
ADP	An Automotive Software company that supplies estimating and collision based software to the Collision industry
Aftermarket Part	A part of similar kind and quality not made by the original manufacturer of the vehicle.
Alternative Parts Usage	Alternative Parts Usage" A percentage calculated by the amount of alternative parts used in a repair as compared to OEM parts used in the repair.
A-Pillar	Either of the Front Pillars that support the windshield, the Front of the roof, and door hinges. Also called windshield pillar or A-post
Apron Panel	The panel behind and below the front bumper, joining the bottom ends of the front fenders
APU	"Alternative Parts Usage" A percentage calculated by the amount of alternative parts used in a repair as compared to OEM parts used in the repair.
Basecoat	During the painting stage of auto body repair, the vehicle undergoes several layers of paint. This basecoat is the first colored coat of paint applied to the repaired area. This basecoat is dull and needs to be covered with a clear coat for ultra violet protection and gloss.
Blending	Process in which the painter feathers/layers the paint across the body panels. This procedure fades the paint from the damaged area into the original paint to ensure the new paint matches the old paint.
B-Pillar	Either of the Side Pillars that support the roof and or Door Latch. Also called B-post
Bumper Cover	A covering usually made of a form of plastic that covers the structural front or rear support of a vehicle
Bumper Reinforcement	A part of the bumper which acts as the primary defense in the bumper system. It is usually a long heavy bar made of steel, aluminum, or hard plastic, and is located under the bumper face bar.
CCC	An Automotive Software company that supplies estimating and collision based software to the Collision industry
Channel	A Piece of U-Shaped Metal that is attached along the bottom edge of movable glass and connects the glass to the regulator.(window)
Claimant	A person who files a claim against another person's insurance carrier
Claims Adjuster	One who investigates insurance claims or claims for damages and recommends an effective settlement
Closure Panel	A Moveable exterior body panel, such as a hood , door, deck lid (Trunk),etc.
Control Point	Any of Several identifiable points that are very accurately located during a vehicle's original assembly. (For Measuring?)
Convoluted Area	A Series of Ridges stamped into a structural part, such as a rail, allowing crushing or bending as a means of absorbing the energy of a collision.
Corrosion	The Chemical Reaction of air moisture, or corrosive materials on a metal surface. Also called Rust or Oxidation.
Cowl Panel	A part of the vehicle's body, located between the engine compartment and the dash panel. Often the windshield wipers are attached here.
C-Pillar	Either of the Two Pillars that support the rear door Latch and the roof. Also called C-post

Cross member	Any of the transverse structural or stiffening members of a vehicle frame or underbody structure
Crush Zone	An engineered relief or weakened zone in a structural or non-structural assembly designed to collapse upon an impact
Cycle Time	A measurement of the time a vehicle is in the repair center. Usually measured from the initial point of drop off to the final time of customer pickup
Deductible	Your deductible is the amount of money you have to pay before your insurance kicks in to pay for the rest of the repairs. Collision deductibles can vary from \$300 to \$2,500 on regular vehicles.
Dimensions	A means of measuring the amount of space an object occupies. Usually these are measured in height, width and depth
Door Shell	The complete metal door assembly minus internal or external hardware or workings.
Door Skin	This is the part of the door visible from the outside. It can be separated from the door shell and replaced.
D-Pillar	Either of the Two Pillars that support the roof and are located behind the C-Pillars as in station wagons and vans. Also called D-post
DRP	Acronym for Direct Repair Program. These programs often involve a contractual agreement between an Autobody Repair Center and an Insurance Company. For the most part, the agreements set the rules of repair and standardized procedures such as warranties, billing practices and record keeping
Face Bar	A metal, chrome, or plastic part attached to the front or rear end of the vehicle. It acts as the cover to the bumper reinforcement bar. It provides little protection and is usually placed on the car for appearance. Often trucks will have a chromed face bar with no reinforcement bar.
Factory Seam	The Edges and seams where panels were joined during vehicle assembly. Also called factory Joint
Fender	A guard over each wheel of a motor vehicle, for example, that is shaped and positioned so as to block the splashing of water or mud. Usually located on the front of the vehicle located on each side of the hood
Flange	A bend or offset formed along the edge of a panel, or around a hole in a panel
Floor Pan	The panel of metal that is attached between the vehicles rocker panels on the sides and the front firewall and rear trunk floor of the vehicle
Frame Horn	Front end extensions to the frame's side rails. They support the bumper and other parts of the front and rear of the vehicle. In a hard impact they will also absorb some of the damage.
Frame Rail	A fore and aft member of a frame or under-body structure
Front Lower Rail	The lower front structural beam that runs perpendicular to the side of a vehicle
Front Upper Rail	The upper front structural beam that runs perpendicular to the side of a vehicle
Full Frame	Terminology that describes a "Box style" frame. Example would be the frame on a pick - up truck
Grille	A part located just above the bumper. It is usually made out of plastic, or aluminum, and adds to the appearance of the vehicle. Its open form allows air to blow through to the radiator to assist in cooling
Heat Treatable Alloy	Any substance whose strength will not be affected by the application of a controlled amount of heat. Usually refers to metals, such as alloys of aluminum, or Iron (Steel)
Hood	The Hinged metal lid over an automobile engine compartment
Horizontal Datum Line	A horizontal plane located at or below a vehicles underbody, that serves as a reference for height measurements/
Datuill Lille	0

Hours Per Day A calculation defined by total collision repair hours divided by the actual total days to repair the vehicle. A vehicle with more than one power source such as a small internal combustion engine and an electric motor. A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A passive and the person policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by their own insurance policy A person who is covered by the builder of your vehicle. The term of that connects the lock of person policy and policy and power lock motor to the late. A person who is covered by the builder of your vehicle into the opening for glass parts, usually extending from the side pillars and roof. A person who is covered by a person person person on t		
Insured A person who is covered by their own insurance policy Intrusion Beam A Beam inside the door frame, which protects the occupants during a side impact. Isolator A friction type of energy absorber KPI "Key Performance Indicator" The most frequent used in the Collision Industry are: Cycle Time, APU, Repair vs. Replace and Hours per Day LKQ (Like Kind and Quality) parts, simply put, are used parts. They are auto parts originally manufactured by the builder of your vehicle. The quality and fit will be the same as new parts; they have simply been on another car previously. The use of LKQ parts, when appropriate, can reduce the cost of repairs. Lock Rod The rod that connects the lock cylinder, night latch, and power lock motor to the latch mechanism. An Automotive Software company that supplies estimating and collision based software to the Collision industry MSDS Material Safety Data Sheet. A Document which provides safety, handling, storage, and clean up information for hazardous materials. Ma OEM (Original Equipment Manufacturer) When referring to automotive parts, OEM designates a replacement part made by the manufacturer of the original part. As most cars are originally assembled with parts made by companies other than the one whose badge appears on the vehicle, it may happen that a car company sells OEM spare parts without claiming to have manufactured the part itself. An automobile part may carry the designation OEM if it is made by the same manufacturer that made the original part used when building and selling the vehicle. The term 'aftermarket' is often used for non-OEM spare parts. Over-Spray Passive Restraint System Pinch weld Arbert passes that adhere to a finished surface. Over-spray particles can include unwanted paint, industrial fallout, chemical contaminants, or other airborne particles. Any setternial fallout, chemical contaminants, or other airborne particles. Apresser has an automatic seat belt or supplemental airbag system Pinch weld Arbert pages located in an Automotive E	Hours Per Day	
Intrusion Beam Isolator A friction type of energy absorber KPI "Key Performance Indicator" The most frequent used in the Collision Industry are: Cycle Time, APU, Repair vs. Replace and Hours per Day LKQ (Like Kind and Quality) parts, simply put, are used parts. They are auto parts originally manufactured by the builder of your vehicle. The quality and fit will be the same as new parts; they have simply been on another car previously. The use of LKQ parts, when appropriate, can reduce the cost of repairs. Lock Rod The rod that connects the lock cylinder, right latch, and power lock motor to the latch mechanism. An Automotive Software company that supplies estimating and collision based software to the Collision industry MSDS Material Safety Data Sheet. A Document which provides safety, handling, storage, and clean up information for hazardous materials. Ma OBM (Original Equipment Manufacturer) When referring to automotive parts, OEM designates a replacement part made by the manufacturer of the original part. As most cars are originally assembled with parts made by companies other than the one whose badge appears on the vehicle, it may happen that a car company sells OEM spare parts without claiming to have manufactured the part itself. An automobile part may carry the designation OEM if it is made by the same manufacturer that made the original part used when building and selling the vehicle. The term 'aftermarket' is often used for non-OEM spare parts. Over-Spray Passive Restraint System Pinch weld A Flange extending from the body of a vehicle into the opening for glass parts, usually extending from the side pillars and roof. P-Pages Procedure Pages' located in an Automotive Estimating format that describes procedures for the given operation. Primary Damage Quarter Panel A Flange extending from the body of a vehicle into the opening for glass parts, usually extending from the side pillars and roof. Procedure Pages' located in an Automotive Estimating format that describes procedures for the give	Hybrid	
Isolator A friction type of energy absorber	Insured	A person who is covered by their own insurance policy
KPI	Intrusion Beam	A Beam inside the door frame, which protects the occupants during a side impact.
Time, APU, Repair vs. Replace and Hours per Day LKQ (Like Kind and Quality) parts, simply put, are used parts. They are auto parts originally manufactured by the builder of your vehicle. The quality and fit will be the same as new parts; they have simply been on another car previously. The use of LKQ parts, when appropriate, can reduce the cost of repairs. Lock Rod The rod that connects the lock cylinder, night latch, and power lock motor to the latch mechanism. An Automotive Software company that supplies estimating and collision based software to the Collision industry MSDS Material Safety Data Sheet. A Document which provides safety, handling, storage, and clean up information for hazardous materials. Ma OEM (Original Equipment Manufacturer) When referring to automotive parts, OEM designates a replacement part made by the manufacturer of the original part. As most cars are originally assembled with parts made by companies other than the one whose badge appears on the vehicle, it may happen that a car company sells OEM spare parts without claiming to have manufactured the part listelf. An automobile part may carry the designation OEM if it is made by the same manufacturer that made the original part used when building and selling the vehicle. The term 'aftermarket' is often used for non-OEM spare parts. Over-Spray Passive Restraint System Restraint System that does not require activation by the occupant to be effective, such as an automatic seat belt or supplemental airbag system Pinch weld A Flange extending from the body of a vehicle into the opening for glass parts, usually extending from the side pillars and roof. Primary Damage Quarter Panel Quarter Panel Quarter Panel A Flange extending from the body of a vehicle into the opening for glass parts, usually extending from the side pillars and roof. Procedure Reges' located in an Automotive Estimating format that describes procedures for the given operation. Damage at or near the point of impact caused by the collision. Also called direct da	Isolator	A friction type of energy absorber
LKQ Parts LKQ Like Kind and Quality) parts, simply put, are used parts. They are auto parts originally manufactured by the builder of your vehicle. The quality and fit will be the same as new parts; they have simply been on another car previously. The use of LKQ parts, when appropriate, can reduce the cost of repairs. The rod that connects the lock cylinder, night latch, and power lock motor to the latch mechanism. An Automotive Software company that supplies estimating and collision based software to the Collision industry MSDS Material Safety Data Sheet. A Document which provides safety, handling, storage, and clean up information for hazardous materials. Ma OEM (Original Equipment Manufacturer) When referring to automotive parts, OEM designates a replacement part made by the manufacturer of the original part. As most cars are originally assembled with parts made by companies other than the one whose badge appears on the vehicle, it may happen that a car company sells OEM spare parts without claiming to have manufactured the part itself. An automobile part may carry the designation OEM if it is made by the same manufacturer that made the original part used when building and selling the vehicle. The term 'aftermarket' is often used for non-OEM spare parts. Over-Spray Airborne particles that adhere to a finished surface. Over-spray particles can include unwanted paint, industrial fallout, chemical contaminants, or other airborne particles. Any Restraint System that does not require activation by the occupant to be effective, such as an automatic seat belt or supplemental airbag system Pinch weld P-Pages Princedure Pages' located in an Automotive Estimating format that describes procedures for the given operation. Panage at or near the point of impact caused by the collision. Also called direct damage. A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid.	KPI	
Mitchell An Automotive Software company that supplies estimating and collision based software to the Collision industry Material Safety Data Sheet. A Document which provides safety, handling, storage, and clean up information for hazardous materials. Ma OEM (Original Equipment Manufacturer) When referring to automotive parts, OEM designates a replacement part made by the manufacturer of the original part. As most cars are originally assembled with parts made by companies other than the one whose badge appears on the vehicle, it may happen that a car company sells OEM spare parts without claiming to have manufactured the part itself. An automobile part may carry the designation OEM if it is made by the same manufacturer that made the original part used when building and selling the vehicle. The term 'aftermarket' is often used for non-OEM spare parts. Over-Spray Airborne particles that adhere to a finished surface. Over-spray particles can include unwanted paint, industrial fallout, chemical contaminants, or other airborne particles. Any Restraint System that does not require activation by the occupant to be effective, such as an automatic seat belt or supplemental airbag system Pinch weld A Flange extending from the body of a vehicle into the opening for glass parts, usually extending from the side pillars and roof. P-Pages Procedure Pages" located in an Automotive Estimating format that describes procedures for the given operation. Damage at or near the point of impact caused by the collision. Also called direct damage. A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired.	LKQ Parts	LKQ (Like Kind and Quality) parts, simply put, are used parts. They are auto parts originally manufactured by the builder of your vehicle. The quality and fit will be the same as new parts; they have simply been on another car previously. The use of LKQ
MSDS Material Safety Data Sheet. A Document which provides safety, handling, storage, and clean up information for hazardous materials. Ma OEM (Original Equipment Manufacturer) When referring to automotive parts, OEM designates a replacement part made by the manufacturer of the original part. As most cars are originally assembled with parts made by companies other than the one whose badge appears on the vehicle, it may happen that a car company sells OEM spare parts without claiming to have manufactured the part itself. An automobile part may carry the designation OEM if it is made by the same manufacturer that made the original part used when building and selling the vehicle. The term 'aftermarket' is often used for non-OEM spare parts. Over-Spray Airborne particles that adhere to a finished surface. Over-spray particles can include unwanted paint, industrial fallout, chemical contaminants, or other airborne particles. Any Restraint System that does not require activation by the occupant to be effective, such as an automatic seat belt or supplemental airbag system Pinch weld P-Pages Pinch weld A Flange extending from the body of a vehicle into the opening for glass parts, usually extending from the side pillars and roof. "Procedure Pages" located in an Automotive Estimating format that describes procedures for the given operation. Damage at or near the point of impact caused by the collision. Also called direct damage. A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. R&I Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part.	Lock Rod	
Clean up information for hazardous materials. Ma OEM (Original Equipment Manufacturer) When referring to automotive parts, OEM designates a replacement part made by the manufacturer of the original part. As most cars are originally assembled with parts made by companies other than the one whose badge appears on the vehicle, it may happen that a car company sells OEM spare parts without claiming to have manufactured the part itself. An automobile part may carry the designation OEM if it is made by the same manufacturer that made the original part used when building and selling the vehicle. The term 'aftermarket' is often used for non-OEM spare parts. Over-Spray Airborne particles that adhere to a finished surface. Over-spray particles can include unwanted paint, industrial fallout, chemical contaminants, or other airborne particles. Any Restraint System that does not require activation by the occupant to be effective, such as an automatic seat belt or supplemental airbag system Pinch weld P-Pages Pinch weld A Flange extending from the body of a vehicle into the opening for glass parts, usually extending from the side pillars and roof. "Procedure Pages" located in an Automotive Estimating format that describes procedures for the given operation. Damage at or near the point of impact caused by the collision. Also called direct damage. A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. R&I Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part.	Mitchell	
When referring to automotive parts, OEM designates a replacement part made by the manufacturer of the original part. As most cars are originally assembled with parts made by companies other than the one whose badge appears on the vehicle, it may happen that a car company sells OEM spare parts without claiming to have manufactured the part itself. An automobile part may carry the designation OEM if it is made by the same manufacturer that made the original part used when building and selling the vehicle. The term 'aftermarket' is often used for non-OEM spare parts. Over-Spray Airborne particles that adhere to a finished surface. Over-spray particles can include unwanted paint, industrial fallout, chemical contaminants, or other airborne particles. Any Restraint System that does not require activation by the occupant to be effective, such as an automatic seat belt or supplemental airbag system Pinch weld P-Pages A Flange extending from the body of a vehicle into the opening for glass parts, usually extending from the side pillars and roof. "Procedure Pages" located in an Automotive Estimating format that describes procedures for the given operation. Primary Damage Quarter Panel A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part. The front horizontal metal assembly which house the radiator. Located between the	MSDS	clean up information for hazardous materials.
Passive Restraint System that does not require activation by the occupant to be effective, such as an automatic seat belt or supplemental airbag system Pinch weld Pages Procedure Pages" located in an Automotive Estimating format that describes procedures for the given operation. Primary Damage Damage at or near the point of impact caused by the collision. Also called direct damage. A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. R&I Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. R&R Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part. The front horizontal metal assembly which house the radiator. Located between the	OEM	When referring to automotive parts, OEM designates a replacement part made by the manufacturer of the original part. As most cars are originally assembled with parts made by companies other than the one whose badge appears on the vehicle, it may happen that a car company sells OEM spare parts without claiming to have manufactured the part itself. An automobile part may carry the designation OEM if it is made by the same manufacturer that made the original part used when building and selling the vehicle. The
Restraint System Pinch weld A Flange extending from the body of a vehicle into the opening for glass parts, usually extending from the side pillars and roof. P-Pages Procedure Pages" located in an Automotive Estimating format that describes procedures for the given operation. Primary Damage Damage at or near the point of impact caused by the collision. Also called direct damage. A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. R&I Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. R&R Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part. The front horizontal metal assembly which house the radiator. Located between the	Over-Spray	
Pinch weld Pinch weld Pinch weld P-Pages P-Pages P-Pages Procedure Pages" located in an Automotive Estimating format that describes procedures for the given operation. Primary Damage Quarter Panel Quarter Panel R&I R&R Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. Radiator A Flange extending from the body of a vehicle into the opening for glass parts, usually extending from the side pillars and roof. Procedure Pages" located in an Automotive Estimating format that describes procedures for the given operation. Primary Damage Damage at or near the point of impact caused by the collision. Also called direct damage. A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part. The front horizontal metal assembly which house the radiator. Located between the	Passive	
Pinch weld A Flange extending from the body of a vehicle into the opening for glass parts, usually extending from the side pillars and roof. P-Pages "Procedure Pages" located in an Automotive Estimating format that describes procedures for the given operation. Primary Damage Damage at or near the point of impact caused by the collision. Also called direct damage. A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. R&I Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. R&R Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part. The front horizontal metal assembly which house the radiator. Located between the	Restraint	such as an automatic seat belt or supplemental airbag system
P-Pages "Procedure Pages" located in an Automotive Estimating format that describes procedures for the given operation. Primary Damage Damage at or near the point of impact caused by the collision. Also called direct damage. A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. R&I Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. R&R Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part. The front horizontal metal assembly which house the radiator. Located between the	System	
Primary Damage Damage at or near the point of impact caused by the collision. Also called direct damage. A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. R&I Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. R&R Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part. The front horizontal metal assembly which house the radiator. Located between the	Pinch weld	extending from the side pillars and roof.
A body part which makes up one of the two rear sides of the car. It contains the lock pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. R&I Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. R&R Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part. Radiator The front horizontal metal assembly which house the radiator. Located between the	P-Pages	
Quarter Panel pillar, to which the doors lock onto. The two quarter panels are located on either side of the trunk or deck lid. R&I Acronym for Remove and Install. Refers to a part removed from the customer's damaged vehicle to be saved and reinstalled after the repair has been completed. Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part. Radiator The front horizontal metal assembly which house the radiator. Located between the	Primary Damage	Damage at or near the point of impact caused by the collision. Also called direct damage.
vehicle to be saved and reinstalled after the repair has been completed. R&R Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part. Radiator The front horizontal metal assembly which house the radiator. Located between the	Quarter Panel	pillar, to which the doors lock onto. The two quarter panels are located on either side of
R&R Acronym for Remove and Replace. Refers to a part removed from the customer's damaged vehicle that cannot be acceptably repaired. It is replaced with a new part. Radiator The front horizontal metal assembly which house the radiator. Located between the	R&I	
Radiator The front horizontal metal assembly which house the radiator. Located between the	R&R	Acronym for Remove and Replace. Refers to a part removed from the customer's
Support front fenders on a vehicle	Radiator	The front horizontal metal assembly which house the radiator. Located between the
	Support	front fenders on a vehicle

Rear Body Panel	The panel of metal that spans between the rear tail lamp pockets or quarter panels on
Rear Rail	the rear of the vehicle The lower rear structural beam that runs perpendicular to the side of a vehicle
Repair vs. Replace	A percentage derived from total repair operations divided by total replace operations, usually calculated in dollars.
Rocker Panel	Either of the two structural members, located below the doors, which support the door pillars and the floor pan.
Roof Bow	Any of several side-to-side structural arches that support the roof. The Bows are attached to the roof rails between the front and rear header panels
Roof Panel	The panel that covers the exterior upper portion of the passenger compartment of the vehicle
Salvage Part	A Part Removed from a vehicle being scrapped, that is intended to be used as a replacement part.
Secondary Damage	Damage beyond the point of impact that resulted from the force of the collision. Also called indirect damage.
Severity	The final total amount of a collision repair. Average severity refers to an accumulative total amount of collision repairs based on an average.
Space Frame	A steel or composite/steel combination of structure to which exterior body panels are attached e.g.: Saturn vehicles
Structural Dimensions	A means of measuring the amount of space an object occupies. Usually these are measured in height, width and depth
Structural Part	Any of several parts that support vehicle weight and absorb collision energy and road shock
Strut Tower	A structural component that houses the McPherson Struts on a vehicle
Sublet	To subcontract repairs
TCS	Traction Control System. A system which improves traction during vehicle acceleration and cornering
Tinting	The process prior to painting of mixing the paint to make sure it matches the color of the vehicle.
Total Loss	A vehicle that is not repaired because it will cost more to repair than the vehicle is worth, or cannot be repaired well enough for safe operation. In general, if the cost of repairs plus the salvage value (value of vehicle for parts purposes) of the vehicle is higher than the actual cash value (retail market value) of the vehicle including taxes, then the vehicle is deemed a "write-off" or "total loss
Trim Panel	The inside part of the door which holds the armrest, door locks, speakers etc. It is usually designed to match the interior of the vehicle.
Trunk Floor	The lower metal pan that spans the trunk compartment between the left and right quarter panels
Trunk Lid	Hinged lid for a trunk area
Unibody	A term used to describe cars that have the frame and body structure connected as one. Most new cars are of the uni-body type. The uni-body is basically a somewhat flexible shell to which the body parts are attached. Crush zones are built into the shell for accident safety.
Valance	A decorative exterior panel used to fill a gap or hide other parts
VIN Plate	A permanently installed plate displaying the vehicle identification number which is viewable through the windshield from outside the vehicle