Prep Raw Plastic Components Negotiation Tool
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**Introduction**

In response to numerous requests from valued Collision Advice customers across the US, we have created this tool to help explain, justify and negotiate time for repair operations. The collected information and documentation are intended to help clarify whether or not specific repair processes are considered to be required repair operations and if they are included or not-included within any other repair procedures. Our objective is to help our customers build a complete repair plan and to get paid for the work they do.

To do so, we utilize four negotiation questions and supporting documentation as described below:

1. **Is it required to put the vehicle back to pre-accident condition?**
   - OEM Position Statements
   - ALLDATA®, TechAdvisor and Other Similar Systems
   - Paint Manufacture Bulletins
   - Material Manufacturer Bulletins (ex. 3M, Wurth, Kent)
   - Equipment Manufacturers
   - Internet ([www.YouTube.com](http://www.YouTube.com))
   - Estimating Systems
   - Scan Tools (Ex. ASTech)
   - The Vehicle

2. **Is it included in any other labor operations?**
   - Estimating Systems
   - ASA Not-Included Charts
   - [www.Degweb.org](http://www.Degweb.org)
   - [www.Estimatescrubber.com](http://www.Estimatescrubber.com)
   - SCRS Guide to Estimating

3. **Is there a pre-determined time in the database?**
   - Estimating Systems
   - [www.Degweb.org](http://www.Degweb.org)

4. **What is it worth?**
   - Do a Time Study
   - Print an Invoice
   - OEM Warranty Times
   - Equipment Manufacture Times
   - ALLDATA®, TechAdvisor and Other Similar Systems
   - Internet
Definition
Definition

Many estimators and owners are unaware that there’s significant additional labor involved to refinish a new, raw, unprimed bumper cover than there is to refinish a new, primed bumper cover. Others include grills, mirror covers, moldings, etc.

Why? Because many years ago, OEMS began using thermoplastics in the production of plastic bumper. Thermoplastics are flexible, hold their shape well and can be produced quickly in high-production runs and are very recyclable.

However, the polyolefin injection process required heat to liquefy the thermoplastic pellets so that the molten plastic could be injected into a mold. When the plastic cooled, it was hard to remove the part from the mold.

Different mold release strategies were employed. Some were applied to the mold, and some were added to the thermoplastic itself until an easy release allowed production to proceed.

When it came to painting the bumper covers on the line, the OEMs that used thermoplastics immediately figured out how to overcome the challenge that the release agent (think Crisco or Pam) provided. The OEMs had negligible delamination problems when it came to bumper covers.

The OEMs began to supply replacement parts to the collision repair industry in the raw, unprimed condition. However, for collision repair facilities to achieve the same level of adhesion requires significant additional labor operations to refinish the new, raw, unprimed bumper or other plastic component.
Photo Documentation
# Justifying Each Line on the Repair Plan

<table>
<thead>
<tr>
<th>1. Is it required?</th>
<th>2. Is it included?</th>
<th>3. Is there a pre-determined time?</th>
<th>4. If not, what is it worth?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALLDATA®, TechAdvisor, etc.</td>
<td>ASA Not-Included Charts</td>
<td><a href="http://www.DEGweb.org">www.DEGweb.org</a></td>
<td>Print an Invoice</td>
</tr>
<tr>
<td>Paint Manufacturer’s Bulletins</td>
<td><a href="http://www.DEGweb.org">www.DEGweb.org</a></td>
<td></td>
<td>OEM Warranty Times</td>
</tr>
<tr>
<td>Material Manufacturer’s Bulletins (3M, Wurth, Kent, etc.)</td>
<td><a href="http://www.estimatescrubber.com">www.estimatescrubber.com</a></td>
<td></td>
<td>Equipment Manufacturer’s Bulletins</td>
</tr>
<tr>
<td>Equipment Manufacturer’s Bulletins</td>
<td>SCRS Guide to Complete Repair Planning</td>
<td></td>
<td>ALLDATA®, TechAdvisor, etc. Times</td>
</tr>
<tr>
<td>Internet</td>
<td></td>
<td></td>
<td>Internet</td>
</tr>
<tr>
<td>Scan Tools</td>
<td></td>
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<tr>
<td>The Vehicle</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Question 1.
Is it required?
Four Negotiation Questions

1. Is it required to prep a raw plastic bumper cover prior to paint to restore the vehicle back to pre-accident condition?

Answer: Yes, it may be required to perform these tasks in order to return the vehicle to pre-accident condition.

The following items are included as justification:

- Plastic Bumper Refinishing Bulletin #170 from Toyota (2 pages)
- Bumper Fascia Preparation for Painting Bulletin from Mitsubishi Motors (4 page)
- Flexible Plastics Repair Procedures Flow Chart from Axalta Coating Systems’ ChromaSystem™ Technical Manual (1 page)
- OEM Bumper Covers – Condition as Shipped from the Database Task Force and DEG (2 pages)
Collision Repair Information

For the Collision Repair Professional

Title: Plastic Bumper Refinishing
Section: Refinish Bulletin #170
Models: All Toyota, Lexus, and Scion
Date: October 2008

When it is necessary to replace a damaged plastic bumper, proper consideration should be given to preparation and refinishing to ensure high quality, long-term durability, and customer satisfaction. While it is important to follow paint manufacturer recommendations for application of refinish materials, this bulletin provides Toyota recommended procedures for cleaning and preparation of original equipment (OE) raw plastic bumpers.

Background:
Toyota bumper covers are manufactured using several types of plastic however, cleaning and preparation procedures outlined here are applicable to all Toyota, Lexus, and Scion raw plastic OE bumpers.

Soap-base mold release agent replaced the wax-base type beginning in 1995 to reduce volatile organic compound (VOC) emissions produced by the use of cleaning solvents. This topic is covered in Collision Repair Information Bulletin (CRIB) #69. Thorough cleaning with recommended soap and water removes soap-base mold release agent.

Cleaning and Preparation:
- Wash new part thoroughly inside and out with a hot water and pH neutral wax-free carwash soap solution. Rinse well and dry with clean towels.

Cleaning and Preparation, Continued-

- Clean exterior surface and all edges thoroughly with paint manufacturer recommended plastic parts cleaner or water-base wax and grease remover, or a 1-1 mixture of isopropyl alcohol and deionized water.

- Scuff exterior surface and all edges with a medium to fine scuff pad (as recommended by paint manufacturer), with sanding paste and clean water. Repeat wash sequence, rinse well and dry with clean towels.

- Examine the bumper closely, especially hard to reach areas. Re-scuff any areas that do not appear to have been scuffed sufficiently. Repeat wash-rinse-dry sequence.

- Make final surface inspection and clean with paint manufacturer recommended cleaner or a 1-1 mixture of isopropyl alcohol and deionized water.

- Apply anti-static measures.

- Apply adhesion promoter per paint manufacturer’s recommendations.

- Apply primer and topcoats per paint manufacturer’s recommendations.

Note:
Toyota recommends the use of adhesion promoter and elastifier for all OE raw plastic bumpers to ensure adhesion, flexibility, and long-term durability of topcoats; and the use of refinish materials that meet or exceed the Toyota new vehicle limited paint finish warranty.

Toyota, Lexus and Scion bumpers are primarily made from TSOP (Toyota Super Olefin Polymer). This type of plastic requires the use of adhesion promoters. However, the application of adhesion promoters on earlier model bumpers made from PP/TPU (Polypropylene/Thermoplastic Urethane) and PUR (Polyurethane) is also recommended.

Mitsubishi

IMPORTANT INSTRUCTIONS FOR
BUMPER FASCIA PREPARATION FOR PAINTING

Replacement bumper fascia parts must be prepared for painting as described below, to ensure good paint adhesion.

MMNA recommends using the following PPG products, or their equivalent, for this procedure:

- PPG SU4901 – Clean and Scuff Sponge
- PPG SU4902 – Plastic Adhesion Wipe
- PPG SU4903 – Advanced Plastic Bond (or SUA4903 aerosol version)

1. Using PPG SU 4901 Clean and Scuff Sponge or equivalent, clean the fascia thoroughly with the pre-saturated sponge and rinse well with water. Blow dry or wipe dry with a clean cloth. Be sure that the surface is dry, without water spots, before continuing this procedure. Refer to the manufacturer’s instructions provided with the product.

2. If the fascia has any noticeable scratches or other minor surface defects, sand the affected area using P600 grit or finer sandpaper.
   a. After sanding, clean the affected area with PPG SXA 103 Multi-Prep or equivalent. Refer to the manufacturer’s instructions provided with the product.

3. Using PPG SU4902 Plastic Adhesion or equivalent, apply a light, even coat over the entire surface, *wiping in one direction* to minimize overlap. Allow 3 to 5 minutes before continuing.

4. Apply a light coat of PPG SU4903 or equivalent over the entire surface, covering all edges thoroughly. Allow 3 to 5 minutes before applying paint.

If you have any questions or concerns regarding this procedure, contact your local PPG representative or the Mitsubishi Tech Line (800-446-6064).

Mitsubishi Motors North America, Inc.

PURPOSE
Replacement bumper fascias for affected vehicles are now supplied unprimed. These parts require special preparation prior to priming and painting. MMNA recommends using the PPG products or equivalent that are shown in the paint preparation instructions that are included with each part. A sample copy of the instructions is included in this bulletin.

AFFECTED VEHICLES
2004--on Endeavor
1999--on Galant
2000--on Eclipse
2001--on Eclipse Spyder

PROCEDURE
Follow the preparation, priming, and painting instructions included with unprimed replacement bumper fascias. If you have any questions or concerns about these procedures, please call the Mitsubishi Tech Line (1–800–446–6064).

IMPORTANT INSTRUCTIONS FOR 
BUMPER FASCIA PREPARATION FOR PAINTING

Replacement bumper fascia parts must be prepared for painting as described below, to ensure good paint adhesion.

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1. Using PPG SU 4901 Clean and Scuff Sponge or equivalent, clean the fascia thoroughly with the pre–saturated sponge and rinse well with water. Blow dry or wipe dry with a clean cloth. Be sure that the surface is dry, without water spots, before continuing this procedure. Refer to the manufacturer’s instructions provided with the product.

2. If the fascia has any noticeable scratches or other minor surface defects, sand the affected area using 600 grit or finer sandpaper.
   a. After sanding, clean the affected area with PPG SXA 103 Multi–Prep or equivalent. Refer to the manufacturer’s instructions provided with the product.

3. Using PPG SU4902 Plastic Adhesion or equivalent, apply a light, even coat over the entire surface, wiping in one direction to minimize overlap. Allow 3 to 5 minutes before continuing.

4. Apply a light coat of PPG SU4903 or equivalent over the entire surface, covering all edges thoroughly. Allow 3 to 5 minutes before applying paint.

If you have any questions or concerns regarding this procedure, contact your local PPG representative or the Mitsubishi Tech Line (800–446–6064).

Mitsubishi Motors North America, Inc.

## Prep Dispersion Raw Plastic Components

### Negotiation Tool

<table>
<thead>
<tr>
<th>Option A</th>
<th>Option B</th>
<th>Fiberglass</th>
<th>Primed</th>
<th>OEM Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unprimed</td>
<td>Unprimed</td>
<td>Fiberglass with gelcoat</td>
<td>Plastic or Fiberglass</td>
<td>Flexible Parts</td>
</tr>
</tbody>
</table>

**Pre-wash with warm water and DuPont 2310S™ Plastic Cleaning Paste using a gray or gold Scotchbrite™**

- Wash with soap and hot water
- Wash with soap and hot water
- Wash with soap and hot water
- Wash with soap and hot water
- Wash with soap and hot water

**Rinse thoroughly, making sure the DuPont 2310S™ Plastic Cleaning Paste does not dry on the surface.**

- Wash again with warm water and DuPont 2310S™ Plastic Cleaning Paste using a gray or gold Scotchbrite™
- Clean with Plas-Stick® 2320S™ or A-2320S™
- Clean with Plas-Stick® 2319S™ and wipe dry
- Clean with Plas-Stick® 2319S™ and wipe dry
- Clean with Plas-Stick® 2319S™ and wipe dry

**Apply Flexible Primer or Sealer**

- Flex ChromaSystem™ Single Stage with Plas-Stick® 2350S™ Flexible Additive or Plas-Stick® 2360S™ Flexible Matting Additive or apply DuPont Vinyl color
- Clean with Plas-Stick® 2319S™ and wipe dry
- Clean with Plas-Stick® 2319S™ and wipe dry

**Add Flexibil TopCoat or Activated ChromaSystem™ Basecoat**

- Flex ChromaSystem™ Single Stage with Plas-Stick® 2350S™ Flexible Additive or Plas-Stick® 2360S™ Flexible Matting Additive or apply DuPont Vinyl color
- Apply Plas-Stick® 2360S™ Flexible Matting Additive

**Make it Shine**

- Gloss Finish over basecoat: Any ChromaSystem™ Clearcoat with Plas-Stick® 2350S™ Flexible Additive
- Matt Finish over basecoat: For semi-gloss, eggshell or flat finish, use ChromaClean® 2370S™ Matt Clearcoat or ChromaSystem™ Clearcoat with Plas-Stick® 2360S™ Flexible Matting Additive

Refer to DuPont ChromaSystem™ and Low VOC ChromaSystem™ Manuals for additional details. These directions refer to the use of products that may be restricted in VOC regulated areas. Follow usage instructions.
Project Scope: The scope of this project was to contact each of the OE’s to determine in which condition their bumper covers are shipped. (Raw, Primed, or R/P Sometimes Raw – Sometimes Primed)

In an effort to obtain this information we made phone and/or e-mail contact with the OE’s noted below to inquire about the bumper cover condition as shipped.

Below are our findings:

The following OE’s ship their bumper covers PRIMED

- Ford – The only parts currently shipped raw are mirror skull caps.
- Volkswagen
- Chrysler
- Audi
- Honda – Or surface finished ready to install
- Acura – Or surface finished ready to install

The following OE’s ship their bumper covers RAW

- Toyota – With the exception of a few Corolla parts coming out of one specific plant.
- Lexus
- Subaru
- Hyundai

The Following OE’s ship their bumper covers a combination of Raw/Primed/Painted

- General Motors – Most are shipped primed but some are shipped Raw.
- Saturn - Most are shipped primed but some are shipped Raw.
- Volvo – 95% are shipped painted and the other 5% are raw. No consistent make/model shipped raw but typically older models or rush orders.
- Mazda – Currently shipped primed or raw but in the near future all covers will be shipped raw.
- Nissan
- Infiniti
- Mercedes – Most covers are shipped in color or primed but some do go out raw.
- Mitsubishi – 04 and newer Endeavor, 99 and newer Galant, 00 and newer Eclipse, 01 and newer Eclipse Spyder, and 97-03 Diamante are all shipped Raw.
As we all know bumper covers shipped in the RAW condition require additional steps to prepare them for the painting process. Our research confirms the need for information providers to automate this required additional labor in their database.

<table>
<thead>
<tr>
<th>Make</th>
<th>Condition</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toyota</td>
<td>RAW</td>
<td>All Bumper Covers are shipped RAW with the exception of a few Corolla parts coming out of one plant.</td>
</tr>
<tr>
<td>Lexus</td>
<td>RAW</td>
<td>All Bumper Covers are shipped RAW.</td>
</tr>
<tr>
<td>Ford</td>
<td>PRIMED</td>
<td>All Bumper Covers are Primed. The only parts sent RAW are mirror skull caps.</td>
</tr>
<tr>
<td>Volkswagen</td>
<td>PRIMED</td>
<td>All Bumper Covers are Primed.</td>
</tr>
<tr>
<td>Chrysler</td>
<td>PRIMED</td>
<td>All Bumper Covers are primed.</td>
</tr>
<tr>
<td>Audi</td>
<td>PRIMED</td>
<td>All Bumper Covers are Primed.</td>
</tr>
<tr>
<td>GM</td>
<td>R/P</td>
<td>Most covers are shipped Primed - Some are Shipped RAW.</td>
</tr>
<tr>
<td>Saturn</td>
<td>R/P</td>
<td>Most covers are shipped Primed - Some are Shipped RAW.</td>
</tr>
<tr>
<td>Subaru</td>
<td>RAW</td>
<td>All Bumper Covers are shipped Raw.</td>
</tr>
<tr>
<td>Volvo</td>
<td>R/P</td>
<td>95% of the bumper covers are shipped painted and ready to install. The other 5% are shipped raw. There is no consistent model that is raw but many are older models or in some cases new models when the shop doesn't want to wait for the OE to paint and ship the cover.</td>
</tr>
<tr>
<td>Hyundai</td>
<td>RAW</td>
<td>All Covers are shipped Raw.</td>
</tr>
<tr>
<td>Mazda</td>
<td>R/P</td>
<td>Currently bumper covers are shipped primed and/or Raw but in the near future all covers will be shipped Raw.</td>
</tr>
<tr>
<td>Honda</td>
<td>PRIMED</td>
<td>All Primed or surface finished ready to install.</td>
</tr>
<tr>
<td>Acura</td>
<td>PRIMED</td>
<td>All Primed or surface finished ready to install.</td>
</tr>
<tr>
<td>Nissan</td>
<td>R/P</td>
<td>Covers are shipped in both conditions.</td>
</tr>
<tr>
<td>Infiniti</td>
<td>R/P</td>
<td>Covers are shipped in both conditions.</td>
</tr>
<tr>
<td>Mercedes</td>
<td>R/P</td>
<td>Most covers go out in color or primed but some do go out Raw.</td>
</tr>
<tr>
<td>Mitsubishi</td>
<td>R/P</td>
<td>Currently bumper covers are shipped primed or raw.</td>
</tr>
<tr>
<td>BMW</td>
<td>PRIMED</td>
<td>All covers shipped primed</td>
</tr>
</tbody>
</table>

RAW = Always Raw, unprimed
PRIMED = always primed
R/P = Sometimes raw, sometimes primed
Negotiation Question # 1 – Summary

It has been established and proved thru the source documentation it is required to prep a raw plastic components in order to return the vehicle to pre-accident condition.
Question 2. Is it included?
2. Is prepping a raw plastic component included in the paint time or any other labor operations?

Answer:
No, it is not included in any other labor operation.

Answer Documentation:
- Major Information Providers
- ASA

The source documentation follows.
AudaExplore

Raw, Unprimed Bumper Covers and Plastics Parts

AudaExplore refinish allowances start with priming a part. Due to the differences in the paint manufacturers’ procedures, OEM recommendations, and the unpredictable nature of the parts, any preparation required for raw, unprimed bumper covers or other plastic parts is Not Included in AudaExplore labor allowances. This operation may be added manually, if required.

Section 4-4 Refinish Guidelines

Two-Sided Refinish Panels

Some body panels (e.g., hoods, deck lids, single-walled bedsides, and tailgates) are painted both inside and outside. Currently, when these panels are:

- replaced, Audatex automatically calculates two-sided refinish
- repaired, Audatex does not automatically calculate two-sided refinish

Welded-on Panels

Audatex base refinish labor does not include additional time to refinish adjacent panels that may be damaged by welding.

Highly Contoured Parts

Pickup beds and large roofs (station wagons and vans) often have corrugated panels for extra strength. Their highly contoured construction makes them more difficult to sand.

Most large, flexible front and rear panels (front bumper covers, and rear bumper covers), and cowl vent panels present some additional contours (beyond the usual metal and fiberglass panels). However, these did not appear to be noticeably more difficult.

Audatex refinish labor is determined on a per-panel basis considering contours.

Part Composition

Metal is the standard for all refinish labor.

Plastic, fiberglass, and SMC refinish processes are similar to metal. Audatex recognizes that flexible panels are usually the same part types (e.g., bumper covers, and fillers). For flexible panels, Audatex refinish labor is part type specific.

Raw, Unprimed Bumper Covers and Plastic Parts

Audatex refinish allowances start with priming a part. Due to the differences in the paint manufacturers’ procedures, OEM recommendations, and the unpredictable nature of the parts, any preparation required for raw, unprimed bumper covers or other plastic parts is Not Included in Audatex labor allowances. This operation may be added manually, if required.

Bumper Covers and Other Flexible Components

Refinish times listed on the parts detail lines for these components are based on the items being refinished prior to installation. Refinish time listed on the parts detail line for an OEM bumper cover that has both body color and unpainted grained portion allows for the refinish of the body color only. Masking the grained, textured, or non-body color portions in preparation for body color application is an included operation. It includes exterior surface and edges refinished during one continuous process. If a separate edging procedure is utilized then the appropriate time should be estimated after an on-the-spot evaluation. Refinish times do not include removal of mold release agent from new unprimed molded components. Parts received from the OEM manufacturer without primer and some non-OEM parts with or without primer should be tested for the presence of release agents that would cause paint adhesion problems and treated accordingly. For unprimed bumper preparation time, see "Add If Required" operation(s). Preparation time for all other unprimed components should be estimated after an on-the-spot evaluation. For unprimed component preparation time, see Unprimed Flexible Component Preparation on page G39.

Source: CCC/Motor Guide to Estimating, Rev. 9-14, Page G34

Unprimed Bumper Preparation

**DOES NOT INCLUDE:**

- Correction of pre-existent surface imperfections
- Material Costs

Source: CCC/Motor Guide to Estimating, Rev. 9-14, Page G39
REFINISH TIME LISTINGS

All refinishing times are listed in hours and tenths of an hour. A time in parentheses adjacent to the part name, such as (3.5), indicates three and one-half hours. Replacement operation time does not include time necessary to refinish the component.

Operation times for the application of painted-on stripes are not covered in this publication. The time necessary to perform this type of operation should be estimated after an on-the-spot evaluation of required procedure.

REFINISH TIME PREMISE

Published refinishing times are for one color applied to new undamaged replacement components, without exterior trim, interior trim, or other attached components and applied in one continuous process. For damaged panel(s), published refinishing times may be applied after the damaged panel has been returned to a NEW UNDAMAGED condition.

Refinishing times do not include time which may be required to match color tints or defective finish textures on interior or exterior surfaces. Nor do they include time which may be required to correct finish imperfections caused by improper weather conditions, application, or environmental contamination such as dust, dirt, grease, etc. MOTOR advises all parties consider these factors beforehand to determine mutually acceptable provisions in the event such conditions exist or occur.

ANTI-THEFT LABELS (R DOT)

Replacement part labels are coded with the letter “R” to show that it is a replacement part. R Dot labels should not be removed from the part. Use caution when refinishing, reupholstering or undercoating replacement components to avoid damaging the label.

BUMPER COVERS AND OTHER FLEXIBLE COMPONENTS

Refinishing times listed on the parts detail lines for these components are based on the items being refinished prior to installation. Refinishing time listed on the parts detail line for an OEM bumper cover that has both body color and unpainted grained portion allows for the refinish of the body color only. Masking the grained, textured, or non-body color portions in preparation for body color application is an included operation. It includes exterior surface and edges refinished during the continuous process. If a separate edging procedure is utilized then the appropriate time should be estimated after an on-the-spot evaluation. Refinishing times do not include removal of mold release agent from new unpainted molded components. Parts received from the OEM manufacturer without primer and some non-OEM parts with or without primer should be treated for the presence of release agents that would cause paint adhesion problems and treated accordingly. For unpainted bumper preparation time, see “Add If Required” operations. Preparation time for all other unpainted components should be estimated after an on-the-spot evaluation. For unpainted component preparation time, see Unpainted Flexible Component Preparation on page G39.

DOOR OUTER REPAIR PANELS

Refinishing times listed on the parts detail line for new repair panels (i.e., door outer repair panel, tailgate and liftgate repair panels) include panel lip and immediate area. It does not include time for refinishing the entire door frame edge or interior side. Where possible, MOTOR will publish time for those areas under a “Refinishing Notes” heading within that group.

DOOR SHELLS, LIFTGATES AND TAILGATES

Refinishing times listed on the parts detail line for these new components include exterior surface, edges and interior sides, unless otherwise noted in text.

REFINISH TIME PREMISE - Continued

DOOR SHELLS, LIFTGATES AND TAILGATES - Continued

Refinishing times listed under the “Refinishing Notes” heading for “door outer panel only” operations do not include time for refinishing the door frame edge or interior side. Where possible, MOTOR will publish time for those areas under a “Refinishing Notes” heading within that group.

FENDERS, HOODS, TRUNK LIDS AND OTHER MAJOR BOLTED PANELS

Refinishing times listed on the parts detail line for these new panels do not include time for refinishing the edge or underside. Where possible, MOTOR will publish time for those areas under a “Refinishing Notes” heading within that group.

QUARTER PANELS AND OTHER MAJOR WELDED PANELS

Refinishing times listed on the parts detail line for these new panels include exterior side, recessed edges, gutters and pockets, unless otherwise noted in text. Refinishing times listed under the “Refinishing Notes” heading for quarter panels or other major welded panels “exterior surface only” operations do not include time for refinishing recessed edges, gutters and pockets. Where possible, MOTOR will publish time for those areas under a “Refinishing Notes” heading within that group.

NEW UNDAMAGED PANEL

A component manufactured to the same exacting standards as the parts installed on new vehicles when the car was built. Exterior body panels are supplied with a smooth painted surface (e-coat).

UNDERSIDE COLORS

Refinishing times presented in this guide are developed under the premise that the underside and jamb color is the same as the exterior body color. Some vehicle manufacturers use a different color for the engine compartment, trunk compartment and/or jams. An additional paint mix is required if the underside and/or jamb color is a different color than the exterior body color. Clear coat (gloss or matte) will be required for base color coat applications. This should be considered when developing the estimate.

PRIME & BLOCK

Prime & block (high build/primer-filler) is a required procedure that restores a repaired panel surface, including the joints of areas of replaced welded panels, from 150-grit finish to NEW UNDAMAGED condition. It is MOTOR’s position that prime and block is a process best reserved for the judgment of an estimator/appraiser following a thorough on-the-spot evaluation of the specific vehicle and/or condition of damage in question.

REPAIRED PANEL REFINISHING

MOTOR suggests using components based refine time for this type of procedure after the damaged panel is repaired to new undamaged condition. Repaired surface preparation requires an on-the-spot evaluation for additional procedural steps such as weathering and/or prime and block not required for new undamaged panels.

PARTIAL PANEL REFINISHING

This is NOT a BLEND-THROUGH procedure, partial panel refinishing is NOT a BLEND operation. MOTOR defines partial panel refinishing as refinishing a body panel with damage that is contained within a defined border or undersand body cladding after the panel has been repaired to that of a “NEW UNDAMAGED PANEL.” It is MOTOR’s position that partial panel refinishing is a process best reserved for the judgment of an estimator/appraiser following a thorough on-the-spot evaluation of the specific vehicle and refinishing requirements in question. Refer to G.T.E. “BASIC COLOR COAT APPLICATION.”

Footnotes found in a chapter contain vehicle-specific information. The content of footnotes is in addition to, and takes precedence over, information in the Guide to Estimating pages for the operation indicated.

Source: CCC/Motor Guide to Estimating, Rev. 9-14, Page G34
**GUIDE TO ESTIMATING**

**WELD ZONE/ADJACENT PANEL**

**SPECIAL NOTATION:**
Suggested refinish operation times do not include additional time for repair of damage to adjacent panels resulting from normal cutting, welding and grinding procedures. The amount of damage can vary considerably depending upon process and technique used by the servicing technician and, therefore, is impractical to anticipate in this publication. MOTOR recommends these factors be considered before finalizing any repair cost estimate. Typical areas to be considered are illustrated below.

![Weld Zone/Adjacent Panel Diagram]

**DE-NIB & POLISH**

**SPECIAL NOTATION:**
Refinished panels may or may not require a varying amount of de-nibbing, a process used to remove small particles in final finish surface. The clear coat contains ultraviolet screeners and reducing the clearcoat thickness (mil) may result in early paint failure. Follow vehicle manufacturer’s recommendations when performing this type of repair. Calculations should be based upon the base refinish time outer surface only and should not include additions for clear coat, underside, inside or edges. In the event that this type of operation will be performed, MOTOR suggests the following formula be considered:

Each panel requiring de-nibbing (refinish or blend)
- HOOD, ROOF, TRUNK LID, SPOILER
- First panel add up to 20% of full base refinish time, each additional panel add up to 10%
- FENDER, DOOR, QUARTER PANEL, BUMPER COVER
- First panel add up to 10% of full base refinish time, each additional panel add up to 5%

**INCLUDED:**
- Panel outer surface only
- Paint nib removal as required (spot only)
- Spot polish only

**DOES NOT INCLUDE:**
- Acid rain damage
- Overspray removal
- Removal of residual material from recessed edges and jamb if required
- Scratch damage
- Wash, clean, wax or detail entire vehicle prior to delivery if required
- Wet sand full panel

**WET/DRY SAND, RUB-OUT & BUFF**

**SPECIAL NOTATION:**
Refinished panels may or may not require a varying amount of wet sanding, compound rub-out or buffing operations in order to match original finish texture. The clear coat contains ultraviolet screeners and reducing the clear coat thickness (mil) may result in early paint failure. Follow manufacturer’s recommendations when performing this type of repair. Calculations should be based upon the outer surface only and should not include additions for clear coat, underside, inside or edges. Base refinish time does not include deduction for finish overlap. In the event that this type of operation will be performed, MOTOR suggests the following formula be considered:

Each panel requiring wet sand, rub-out and/or buff (refinish or blend)
- Add 30% of full base refinish time

**INCLUDED:**
- Panel outer surface only
- Wet sand full panel as required
- Compound, buff and/or polish as required

**DOES NOT INCLUDE:**
- Acid rain damage
- Overspray removal
- Removal of residual material from recessed edges and jamb if required
- Wash, clean, wax or detail entire vehicle prior to delivery if required

**UNPRIMED FLEXIBLE COMPONENT PREPARATION**

- 25% of the component’s base refinish time
- Maximum time allocation: 1.0 hours

**INCLUDED:**
- Removal of mold-release agents as outlined by manufacturer
- Masking if required
- Application of adhesion promoter

**DOES NOT INCLUDE:**
- Correction of pre-existent surface imperfections
- Material Costs

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Source: CCC/Motor Guide to Estimating, Rev. 9-14, Page G39
First major panel or soft bumper/fascia cover:

- Removal of release agent from OEM raw plastic components (Example: non-primed bumper covers)

Source: Portions Copyright 2012, Mitchell International, Inc. – Mitchell P-Pages, Page 16
Procedure Explanation

Bumper Assembly O/H

Included Operations

- Remove and install assembly
- Disassemble and replace damaged parts
- Replace or transfer parts attached except those listed in Not Included Section
- Remove and install or replace: License plate bracket
- Assemble and install
- Adjust alignment to vehicle

Not Included Operations

- Refinish bumper
- Remove and replace impact absorbers or mounting arms
- Remove and install or replace optional accessories (example: trailer hitch, trailer connector)
- Remove and install exterior trim; add to clean and retape
- Replace new exterior trim; deduct one-half of R&R time
- Install stripes, decals, transfers or overlays

Procedure 28—Refinish Procedure

Refinish General Information

Complete Refinish

Refinish times in this Guide pertain to NEW, UNDAMAGED PARTS and are not intended for calculating complete vehicle refinish—single or multi-stage. An estimate of this nature would suggest new panels have been fitted to the vehicle.

Lifetime Refinish Warranty/Clear Coat

The major paint manufacturers listed below have provided the following information: "Major refinish paint manufacturers recommend that when performing refinish warranty repairs on an OEM multi-stage or basecoat/clearcoat finish, you must extend the application of clear to the nearest panel edge or break point to qualify for lifetime warranty." AKZO — DuPont — Sherwin Williams — BASF — PPG

Repair/Used Panels

Labor times related to repaired and/or used panels—example: Remove and install or masking of glass, outside handles or exterior trim, feather prime & block, masking for primer surfacer application—are not included in refinish time. The steps required for refinishing a repaired and/or used panel may vary from those required for a new panel depending on the condition of the repaired and/or used panel.

Feather, Prime & Block

Is the Not Included refinish operation that completes bodywork repair from 150 grit smoothness to the condition of a new undamaged panel, and the point at which refinish labor time begins. The labor and materials associated with feather, prime and block may vary depending upon the size of the repair area, and should be evaluated when determining the work to be performed. See Welded Panels under Estimating Information.

SPOT REPAIR/BLEND ADJACENT PANEL

Spot Repair

Spot repair is defined as applying color to the repaired area of a damaged panel to obtain full coverage of undercoats, and blending that color into the original panel finish so that no transition can be detected. The goal is to keep the actual repair as small as possible to avoid having newly applied color directly next to an undamaged adjacent panel(s). Clear coat is then applied to the entire panel. This refinish process minimizes color mismatch.

Blend for Color Match

Blending is defined as applying color without necessity to cover undercoats, to less than the full surface area of an adjacent undamaged panel. Paint manufacturers recommend blending adjacent panels when a panel is replaced, or repaired and color applied to the full surface areas, or to the area that borders the adjacent undamaged panel(s). Clear coat is then applied to the entire blended panel.

Major Panels

Major panels are those listed: FRONT HEADER, FENDER, HOOD, COWL TOP, DOOR, ROCKER, ROOF, PICKUP CAB CORNER, PICKUP CAB BACK, QUARTER, PICKUP BED FRONT, PICKUP BED SIDE, VAN SIDE, VAN REAR CORNER, ENGINE LID, LUGGAGE LID, LIFT GATE, REAR RATE, TAIL GATE, REAR BODY

Overlap

Deduct .4 hour from refinish time for each ADJACENT MAJOR PANEL and deduct .2 hour from time for each NON-ADJACENT MAJOR PANEL. There is no overlap deduction taken for the first major panel.

Adjacent major panel example: Right front fender 2.5 hours (full time) and right front door 2.5 hours minus .4 hour overlap for a total of 4.6 hours.

Non-adjacent major panel example: Right front fender 2.5 hours (full time) and left front fender 2.5 hours minus .2 hour overlap for a total of 4.8 hours.

No overlap deductions for valance panel, pillars, door jams, underside of hood, underside of luggage lid or underside of gate, inner panels, filler panels, soft bumper covers or bolt-on finish panels.

NOTE: Refinish times are for outside surfaces only unless stated otherwise in text (example: add for underside, add to edge).

Included Operations

- Solvent wash
- Scuff panel and clean
- Mask adjacent panels up to 36 inches or substitute with cover vehicle (bag) complete
- Prime or seal as required
- Final sanding and clean
- Mix materials
- Adjust spray equipment
- Apply color
- Clean equipment

Not Included Operations

- Blending into adjacent panel and/or panels, or nearest breaking point
- Color match or tinting
- Applying anti-corrosion rust resistant materials
- Additional application of soft chip primers or anti-chip undercoats
- Finish sand and buff
- Subsequent vehicle bagging when required: add .2 hour for each application & removal
- Mask interior to prevent overspray damage
- Removal of protective coatings

- Removal of release agent from OEM raw plastic components (example: non-primed bumper covers) See formula under Raw Substrate Prep
- Feather, Prime & Block paint damage to adjacent panel and/or panels joined by welding due to curb damage (See Feather, Prime & Block definition under Refinish General Information)
- Gravel guard refresh; add .2 hour for the first major panel and .3 hour for each additional panel.

NOTE: The included operation of mask adjacent panels is inclusive of any necessary back tape masking to prevent overspray.

IMPORTANT REMINDER: Refinish times are for new, undamaged parts without exterior or interior trim or attached components. Refinish times may vary depending on individual procedures, product and weather conditions.

A small percentage of colors are identified by the paint manufacturers as highly transparent. These colors may require additional application coats to achieve visible hiding. In instances where four or more color coats are necessary to achieve adequate hiding, some adjustment in refinish times may be appropriate.

IMPORTANT REMINDER: The cost of paint and materials is not included in refinish time.

NOTE: Gravel Guard application and appropriate refinish may be necessary beyond the actual replacement area to achieve a "texture" match. It may be necessary to tint or otherwise modify non-exterior colors applied to undersides, edges and/or jams for which there is no paint color formula to achieve a color match. When necessary, reference "color match or tinting" listed above in Not Included Operations.

Raw Substrate Prep

Allow .2 per refinish hour (20%) for plastic components that come from the manufacturer/supplier in a raw/un-primed state.

Source: Portions Copyright 2012, Mitchell International, Inc. – Mitchell P-Pages, Page 16
Raw Plastic Bumper Covers
Compare Basic Refinish Procedures for
Raw Bumper Covers vs. Primed Bumper Covers

42% MORE: 27 raw bumper procedures vs. 19 primed bumper procedures.**
- "Raw bumper covers" -- More procedures than "primed bumper covers!"
- Call the information providers to inquire about additional time for raw bumper covers.
- Ask your insurance company for additional compensation on raw bumper covers.
- Be professional, be courteous and educate yourself to help educate our industry.

Raw Plastic Bumper Covers*

1. Check/test plastic type.
2. Clean raw plastic (remove release agents).
3. Bake raw plastic (sweat out release agents).**
4. Clean raw plastic again (remove release agents). May need to clean additional times.
5. Sand and prep panel/edges.
7. Wax and grease for contamination.
8. Blow off and tack panel for dust.
9. Mix primer (for raw plastic).
10. Apply primer for adhesion.
11. Clean up primer spray gun.
12. Mix sealer.
13. Mix color (minimum amounts required).
14. Tint (if necessary).
15. Wax and grease for contamination.
16. Blow off and tack panel for dust.
17. Apply sealer.
18. Clean up sealer spray gun.
19. Apply base-coat color.
20. Clean up base coat spray gun.
21. Mix clear coat.
22. Add in flex additive.
23. Apply two coats of clear.
24. Clean up clear spray gun.
25. Bake at 140° for 30-45 minutes.
27. Unmask openings and/or backside.

Primed Plastic Bumper Covers*

1. Clean panel and edges.
2. Sand and prep panel/edges.
3. Mask openings/backside.
4. Mix sealer.
5. Mix color (minimum amounts required).
6. Tint (if necessary).
7. Wax and grease for contamination.
8. Blow off and tack panel for dust.
9. Apply sealer.
10. Clean up sealer spray gun.
11. Apply base-coat color.
12. Clean up base coat spray gun.
13. Mix clear coat.
15. Apply two coats of clear.
16. Clean up clear spray gun.
17. Bake at 140° for 30-45 minutes.
18. Cool down process.
19. Unmask openings and/or backside.

*Based on paint manufacturer requirements, industry refinishing standards, technical data sheets, warranty requirements and p-pages as of March 2008.
**Additional materials not taken into consideration on this chart (additional paint materials, primer materials, safety equipment, masking materials, bake cycle, etc.).
***Please contact your local paint representative for your exact refinishing procedures.

ASA
Automotive Service Association*
(800) ASA-SHOP
www.ASAshop.org
Negotiation Question # 2 – Summary

It has been established and proved thru the source documentation that additional labor operations is not included to prep raw plastic components.
Question 3.
Is there a pre-determined time?
3. If not, are there pre-determined times for prepping raw plastic components?

Answer: Yes, there are pre-determined times for prepping raw plastic components as identified by the following Information Providers.

Answer Documentation:

**AudaExplore**

- 20% of the base refinish labor
  

**CCC/MOTOR**

- 25% of the bumper’s base refinish time
  
  Source: CCC/Motor Guide to Estimating, Rev. 9-14, Page G39

**Mitchell**

- Allow .2 per refinish hour (20%) for plastic components that come from the manufacturer/supplier in a raw/un-primed state.
  
  Source: Portions Copyright 2012, Mitchell International, Inc. – Mitchell P-Pages, Page 16

The original source documents from the leading Information Providers follow.
Section 4-4 Refinish Guidelines

Raw, Unprimed Bumper Covers and Plastic Parts – continued

The Audatex formula for preparation of a raw, unprimed Bumper Cover or Plastic Part is:
- 20% of the base refinsh labor.

Note: Audatex will begin to add a “Prep Raw Bumper Cover” operation to the Bumper Cover part choice box for new and update vehicles, beginning with Q1 2011. This will apply only to manufacturers known to supply raw, unprimed bumper covers. This operation only applies to the front and rear bumper covers. The Audatex formula for Prep Raw, Unprimed Bumper Cover is 20% of the base refinsh allowance, with a .3 minimum time.

The Audatex formula includes the following:
1. Wash cover with soap and water, rinse & dry
2. Degrease the surface with a wax, grease, and silicone remover.
3. Sand cover with a sanding paste and grey scuff pad.
4. Wash cover with soap and water, rinse & dry
5. Degrease the surface with a wax, grease, and silicone remover.

If the paint manufacturer or OEM requires any other or additional steps to prepare a raw, unprimed bumper cover, these steps are Not Included in Audatex labor times. They may be accounted for manually, if required.

Corrosion Protection

Corrosion protection is the process and materials used to prevent corrosion. The primer included in any specific paint system is one type of corrosion protection. Only one paint system and accompanying products should be used throughout the repair.

Audatex does not include allowances for the restoration of bare metal or application of an "e-coat" equivalent or a "high build primer" either in refinsh or in replacement labor.

Any considerations in this area will need to be determined during the estimate preparation.

Audatex’s refinsh labor:
- includes mixing, application, and flashing of the paint system primers

Anti-corrosion compounds are the second type of corrosion protection.

These compounds are:
- categorized as either wax-based coatings or petroleum-based coatings
- applied inside closed sections of structural members

Audatex labor does not include allowances for anti-corrosion compounds in either refinsh or replacement labor. Any considerations in this area will need to be determined during estimate preparation.

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WELD ZONE/ADJACENT PANEL

SPECIAL NOTATION:
Suggested repair operations times do not include additional time for repair of damage to adjacent panels resulting from normal cutting, welding and grinding procedures. The amount of damage can vary considerably depending upon process and technique used by the servicing technician and, therefore, is impractical to anticipate in this publication. MOTOR recommends these factors be considered before finalizing any repair cost estimate. Typical areas to be considered are illustrated below.

WET/DRY SAND, RUB-OUT & BUFF

SPECIAL NOTATION:
Refinished panels may or may not require a varying amount of wet sanding, compound rub-out or buffing operations in order to match original finish texture. The clear coat contains ultraviolet screeners and reducing the clear coat thickness (mil) may result in early paint failure. Follow manufacturer's recommendations when performing this type of repair. Calculations should be based upon the outer surface only and should not include additions for clear coat, underside, inside or edges. Base refinish time does not include deduction for refinish overlap. In the event that this type of operation will be performed, MOTOR suggests the following formula be considered:

- Each panel requiring wet sand, rub-out and/or buff (refinish or blend)
  - Add 30% of full base refinish time

INCLUDED:
- Panel outer surface only
- Wet sand full panel as required
- Compound, buff and/or polish as required

DOES NOT INCLUDE:
- Acid rain damage
- Over spray removal
- Removal of residual material from recessed edges and jamb if required
- Wash, clean, wax or detail entire vehicle prior to delivery if required
- Wet sand full panel

DE-NIB & POLISH

SPECIAL NOTATION:
Refinished panels may or may not require de-nibbing, a process used to remove small particles in the finish surface. The clear coat contains ultraviolet screeners and reducing the clear coat thickness (mil) may result in early paint failure. Follow vehicle manufacturer's recommendations when performing this type of repair. Calculations should be based upon the base refinish time outer surface only and should not include additions for clear coat, underside, inside or edges. In the event that this type of operation will be performed, MOTOR suggests the following formula be considered:

Each panel requiring de-nibbing (refinish or blend)
- HOOD, ROOF, TRUNK LID, SPOILER
  - First panel add up to 30% of full base refinish time, each additional panel add up to 10%
- FENDER, DOOR, QUARTER PANEL, BUMPER COVER
  - First panel add up to 10% of full base refinish time, each additional panel add up to 5%

INCLUDED:
- Panel outer surface only
- Paint nib removal as required (spot only)
- Spot polish only

DOES NOT INCLUDE:
- Acid rain damage
- Full panel polish
- Over spray removal
- Removal of residual material from recessed edges and jamb if required
- Scratch damage
- Wash, clean, wax or detail entire vehicle prior to delivery if required
- Wet sand full panel

UNPRIMED FLEXIBLE COMPONENT PREPARATION

- 25% of the component's base refinish time
- Maximum time allocation: 1.0 hour

INCLUDED:
- Removal of mold release agents as outlined by manufacturer
- Masking (if required)
- Application of adhesion promoter

DOES NOT INCLUDE:
- Correction of pre-existent surface imperfections
- Material Code

Source: CCC/Motor Guide to Estimating, Rev. 9-14, Page G39
**Procedure Explanation**

**Bumper Assembly O/H**

**Included Operations**
- Remove and install assembly
- Disassemble and replace damaged parts
- Replace or transfer parts attached except those listed in *Not Included Section*
- Remove and install or replace: License plate bracket
- Assemble and install
- Adjust alignment to vehicle

**Not Included Operations**
- Refinish bumper
- Remove and replace impact absorbers or mounting arms
- Remove and install or replace optional accessories (example: trailer hitch, trailer connection)
- Remove and install adhesive exterior trim; add to clean and retape
- Replace new adhesive exterior trim; deduct one-half of R&R time
- Install stripes, decals, transfers or overlays

**Procedure 28—Refinish Procedure**

**Refinish General Information**

**Complete Refinish**

Refinish times in this Guide pertain to *NEW, UNDAMAGED PARTS* and are not intended for calculating complete vehicle refinish—single- or multi-stage. An estimate of this nature would suggest all new panels have been fitted to the vehicle.

**Lifetime Refinish Warranty/Clear Coat**

The major paint manufacturers listed below have provided the following information: “Major refinish paint manufacturers recommend that when performing refinish warranty repairs on an OEM multi-stage or basecoat/clearcoat finish, you must extend the application of clear to the nearest panel edge or breakpoint to qualify for lifetime warranty.” AKZO — DuPont — Sherwin Williams — BASF — PPG

**Repaired/Used Panels**

Labor times related to repaired and/or used panels—example: Remove and install or masking of glass, outside handles or exterior trim, feather prime & block, masking for primer surfacer application—are not included in refinish time. The steps required for refinishing a repaired and/or used panel may vary from those required for a new panel depending on the condition of the repaired and/or used panel.

**Feather, Prime & Block**

Is the *Not Included refinish* operation that completes bodywork repair from 150 grit smoothness to the condition of a new undamaged panel, and the point at which refinish labor time begins. The labor and materials associated with feather, prime and block may vary depending upon the size of the repair area, and should be evaluated when determining the work to be performed. See Welded Panels under Estimating Information.

**SPOT REPAIR/BLEND ADJACENT PANEL**

**Spot Repair**

Spot repair is defined as applying color to the repaired area of a damaged panel to obtain full coverage of undercoats, and blending that color into the original panel finish so that no transition can be detected. The goal is to keep the actual repair as small as possible to avoid having newly applied color directly next to an undamaged adjacent panel(s). Clear coat is then applied to the entire panel. This refinish process minimizes color mismatch.

**Blend for Color Match**

Blending is defined as applying color, without necessity to cover undercoats, to less than the full surface area of an adjacent undamaged panel. Paint manufacturers recommend blending adjacent panels when a panel is replaced, or repaired and color applied to the full surface areas, or to the area that borders the adjacent undamaged panel(s). Clear coat is then applied to the entire blended panel.

**Major Panels**

Major panels are those listed: FRONT HEADER, FENDER, HOOD, COWL, TOP, DOOR, ROCKER, ROOF, PICKUP CAB CORNER, PICKUP CAB BACK, QUARTER, PICKUP BED FRONT, PICKUP BED SIDE, VAN SIDE, VAN REAR CORNER, ENGINE LID, LUGGAGE LID, LIFT GATE, REAR RATE, TAIL GATE, REAR BODY

**Overlap**

Deduct .4 hour from refinish time for each ADJACENT MAJOR PANEL and deduct .2 hour from time for each NON-ADJACENT MAJOR PANEL. There is no overlap deduction taken for the first major panel.

**Adjacent major panel example:** Right front fender 2.5 hours (full time) and right front door 2.5 hours minus .4 hour overlap for a total of 4.6 hours.

**Non-adjacent major panel example:** Right front fender 2.5 hours (full time) and left front fender 2.5 hours minus .2 hour overlap for a total of 4.8 hours.

No overlap deductions for valence panel, pillars, door jambs, underside of hood, underside of luggage lid or underside of gate, inner panels, filler panels, soft bumper covers or bolt-on finish panels.

**NOTE:** Refinish times are for outside surfaces only unless stated otherwise in text (example: add for underside, add to edge).

**Included Operations**
- Solvent wash
- Scuff panel and clean
- Mask adjacent panels up to 36 inches or substitute with cover vehicle (beg) complete
- Prime or seal as required
- Final sanding and clean
- Mix materials
- Adjust spray equipment
- Apply color
- Clean equipment

**Not Included Operations**
- Blending into adjacent panel and/or panels, or nearest breaking point
- Color match or tinting
- Applying anti-corrosion Rust resistant materials
- Additional application of soft chip primers or anti-chip undercoats
- Finish sand and buff
- Subsequent vehicle bagging when required: add .2 hour for each application & removal
- Mask interior to prevent overspray damage
- Removal of protective coatings
- Removal of release agent from OEM raw plastic components (example: non-printed bumper covers) See formula under Raw Substrate Prep
- Feather, Prime & Block paint damage to adjacent panel and/or panels joined by welding due to burn damage (see Feather, Prime & Block definition under Refinish General Information)
- Gravel guard refinish: add .5 hour for the first major panel and .3 hour for each additional panel.

**NOTE:** The included operation of mask adjacent panels is inclusive of any necessary back tape masking to prevent overspray.

**IMPORTANT REMINDER:** Refinish times are for *NEW, UNDAMAGED PARTS* without exterior or interior trim or attached components. Refinish times may vary depending on individual procedures, product and/or weather conditions.

A small percentage of colors are identified by the paint manufacturers as highly transparent. These colors may require additional application coats to achieve visual holding. In instances where four or more color coats are necessary to achieve adequate holding, some adjustment in refinish times may be appropriate.

**IMPORTANT REMINDER:** The cost of paint and materials is not included in refinish time.

**NOTE:** Gravel Guard application and appropriate refinishing may be necessary beyond the actual replacement area to achieve a “texture” match. It may be necessary to tint or otherwise modify non-exterior colors applied to undersides, edges and/or jambs for which there is no paint color formula to achieve a color match. When necessary, reference “color match or tinted” listed above in *Not Included Operations*.

**Raw Substrate Prep**

Allow .2 per refinish hour (20%) for plastic components that come from the manufacturer/supplier in a raw/un-painted state.
**Procedure Explanation**

### Clear Coat/Two Stage Refinish
First major panel or soft bumper/fascia cover: Add .4 per refinish hour (40%), then add .4 per refinish hour for jamb, jamb and interior, edge panel, and/or underside (when necessary).

- **Included Operations**
  - Mix material
  - Clean and tack surface
  - Apply material
  - Clean equipment
  
  **NOTE:** Some OEMs now utilize a matte clear coat on non-exterior colors applied to undersides, edges, and/or jambs.

- **Additional panel(s) and/or other refinish area(s): Deduct overlap (if applicable); add .2 per refinish hour for jamb, jamb and interior, edge panel, and/or underside (when necessary).**

- **Included Operations**
  - Clean and tack surface
  - Apply material

- **NOTE:** For NEW, UNDAMAGED PARTS, a total of no more than 2.5 hours should be necessary to perform the four Clear Coat Refinish Included Operations listed above. This calculation DOES NOT APPLY to bumper covers, ground effects, special package equipment, interior edges, jambs, entry ways, undersides and additional time that may be required for repaired and/or used panels. IT DOES NOT APPLY to complete vehicle refinish. It is not intended to determine the quantity or cost of materials required for the application of clear.

### Three Stage Refinish
First major panel or soft bumper/fascia cover: Add .7 per refinish hour (70%), after time has been added for jamb, jamb and interior, edge panel, and/or underside (when necessary).

- **Included Operations**
  - Mix polyester/primer
  - Apply primer to test panel
  - Mix clear
  - Clean and tack surface
  - Apply clear to test panel
  - Repeat application to surface being refinished
  - Clean equipment

- **Additional panel(s) and/or other refinish area(s): Deduct overlap (if applicable); add .4 per refinish hour (40%), after time has been added for jamb, jamb and interior, edge panel, and/or underside (when necessary).**

- **Included Operations**
  - Apply primer/prima
  - Clean and tack surface
  - Apply clear

- **NOTE:** With three stage paints, it may be necessary to blend into larger areas of adjacent panels or complete sides of vehicles, otherwise known as zone painting.

- **NOTE:** Some OEMs now utilize a matte clear coat on non-exterior colors applied to undersides, edges, and/or jambs.

### Two Tone Refinish
First major panel: Add .5 per refinish hour (50%)

- **Included Operations**
  - Mask panel
  - Scuff panel
  - Mix material
  - Apply material

### Blend Adjacent Panel(s)
With some colors, it may be necessary to blend color into adjacent panels to obtain an acceptable color match.

A blend labor time formula is provided should it be necessary to perform this operation. The performance of this operation is NOT INCLUDED in the Mitchell refinish labor time.

The blend times are for existing undamaged adjacent surfaces. The blend labor time is the application of clear coat to the entire panel on which color is blended. On some panels, the clear may be stopped at natural body lines or be blended into acceptable design configuration areas.

### Single Stage/Two Stage Colors
Blend adjacent panel(s): Allow .5 per refinish hour (50%) for each panel(s)/refinish area(s) blended.

- **Included Operations**
  - Detergent/solvent wash
  - Wet sand, scuff (ScotchBrite) or rubout (compound) panel and clean for preparation
  - Mask existing adjacent panels to 36°
  - Apply bonding material - if required
  - Apply color
  - Clean and tack surface
  - Apply clear material

- **Not Included Operations**
  - Repair existing surface imperfections
  - Remove and install or mask attached components, trim, stripes or decals on blended panel/area
  - Finish, sand, and buff

- **NOTE:** Blend labor time does not apply to two-tone refinish or custom non-OEM refinish.

- **Not Included Operations**
  - Repair existing surface imperfections
  - Remove and install or mask attached components, trim, stripes or decals on blended panel/area
  - Finish, sand, and buff

- **NOTE:** When calculated, the estimate will allocate 20% from the total blend time and apply it to the clear coat line item. The total sum of the blend line and the amount allocated to the clear coat will total 50% of the exterior refinish time for the panel being blended.

**Example:** A panel refinish time is 2.0 hrs. When blended, the blend time for the panel will be displayed as 1.0 (.5 per refinish hour). Once calculated, the repair blend time will be displayed as .8 and .2 (20%) will be allocated to the clear coat line.

### Three Stage Colors
Blend adjacent panel(s): Allow .7 per refinish hour (70%) for each panel(s)/refinish area(s) blended.

- **Included Operations**
  - Detergent/solvent wash
  - Wet sand, scuff (ScotchBrite) or rubout (compound) panel and clean for preparation
  - Mask existing adjacent panels to 36°
  - Apply bonding material - if required
  - Apply color
  - Clean and tack surface
  - Apply primer/prima
  - Clean and tack surface
  - Apply clear material

- **Not Included Operations**
  - Repair existing surface imperfections
Negotiation Question # 3- Summary

Pre-determined times for prepping raw plastic components have been clearly identified by the Information Providers.
Question 4.
What is it worth?
4. What is it worth?

You can also look for an inquiry on the DEG website. If there is nothing on the DEG website, you can designate a time based on how long it takes the average technician to gather up their tools, equipment, and supplies and perform the task in a safe manner and return the tools, equipment and supplies back to their storage location.
**DEG Inquiry #8342**

Final resolution
The prep unprimed bumper information will be added to the DI chapter that was submitted by the DEG. The updated chapter will be sent to CCC next week (09/03/2015). In addition MOTOR will review the other vehicles listed in the Mazda document and will update the prep unprimed bumper chapter information for the vehicles listed by Mazda.

Initial Resolution
Estimated Release Date: Closed  Proposed Resolution: MOTOR stated: When the OEM makes available information that their replacement bumper covers are delivered in an unprimed condition, MOTOR includes an “Add If Required” operation in the bumper group that provides a labor allowance for unprimed bumper preparation time. MOTOR does not provide such labor allowances for aftermarket bumpers, or when they have not received information from the OEM stating that their bumper covers are delivered in an unprimed condition. If an unprimed bumper which has no labor allowance is encountered in the field, estimators should consult the formula published in the Guide To Estimating to determine the appropriate preparation time.

The following OEMs have confirmed that some or all of their bumpers are delivered in an unprimed state:
General Motors/Saturn
Hyundai
Mitsubishi
Subaru
Toyota/Lexus
Volvo
DEG Inquiry #8342

<table>
<thead>
<tr>
<th>Track_#</th>
<th>Estimating Platform</th>
<th>Inquiry Category</th>
<th>Year Make Model</th>
<th>Resolution Status</th>
<th>Origination Date</th>
<th>Submission Date</th>
<th>Resolution Date</th>
<th>Total Time to Resolve</th>
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<tbody>
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<td>8342</td>
<td>CCC</td>
<td>- Missing Information - Refinish Operations</td>
<td>2006 Mazda 3</td>
<td>Resolved</td>
<td>8/14/2015 10:09:32 AM</td>
<td>8/21/2015 4:18:00 PM</td>
<td>8/24/2015 2:32:00 PM</td>
<td>01 Days</td>
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</tbody>
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### Inquiry Description

**Prep Raw Bumper**

- **AreaVehicle**
  - Front and Rear

- **Section1**: Missing Part Name
  - Bumper covers

- **Section1**: Missing Part Description
  - Front cover and Rear cover oem

- **Section1**: OEM Part Number
  - BN850211HBB Rear BN85001XEBB Front

- **Section1**: Quantity
  - 2

- **Section1**: Missing Information
  - No provision to prep raw bumper covers. Farmers insurance refused to pay for procedure only because ccc did not have this listed as an option.

- **Section6**: Area Vehicle
  - Front and Rear

- **Section6**: Issue Summary
  - No provision to prep raw bumper covers in ccc for this model. They do come raw plastic and because it is not listed in ccc insurance company will not pay for procedure.

- **Section6**: Suggested Action
  - Include prep of raw plastic bumper on front and rear of car. Check all Mazda bumper covers for same issue.

### Resolution Description

The first response from CCC was they did not have information from Mazda that showed bumpers shipped in an unpainted state. Working with 1-Cars RTS (https://1-cars.com/) the DEG received documents that show Mazda shipping bumpers in a “Raw” state, CCC agreed to change this vehicle and other Mazda’s covered under the document.

Final resolution:

The prep unpainted bumper information will be added to the 01 chapter that was submitted by the DEG. The updated chapter will be sent to CCC next week (09/03/2015). In addition MOTOR will review the other vehicles listed in the Mazda document and will update the prep unpainted bumper chapter information for the vehicles listed by Mazda.

### Initial Resolution

**Estimated Release Date**: Closed

**Proposed Resolution**: MOTOR stated:

When the OEM makes available information that their replacement bumper covers are delivered in an unpainted condition, MOTOR includes an “Add If Required” operation in the bumper group that provides a labor allowance for unpainted bumper preparation time.

MOTOR does not provide such labor allowances for aftermarket bumpers, or when they have not received information from the OEM stating that their bumper covers are delivered in an unpainted condition. If an unpainted bumper which has no labor allowance is encountered in the field, estimators should consult the formula published in the Guide To Estimating to determine the appropriate preparation time.

The following OEMs have confirmed that some or all of their bumpers are delivered in an unpainted state:

- General Motors/Saturn
- Hyundai
- Mitsubishi
- Subaru
- Toyota/Lexus
- Volvo
Additional Thoughts
Additional Thoughts

- It is not uncommon for parts to be raw plastic. It is not limited to just bumpers but could be wheel flares, mirror covers, and grilles.
- TIP: If you save the P-pages as a PDF and search for terms in the document by going to Edit, then Find or by hitting Ctrl+F