DuPont Performance Services
Prepping Raw Plastic Components

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Prepping Raw Plastic Components

Question 1: Is it required to prep a raw plastic bumper cover prior to paint to restore the vehicle back 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 DuPont Refinish’s ChromaSystem™ Technical Manual (1 page)
- OEM Bumper Covers – Condition as Shipped from the Database Task Force and DEG (2 pages)
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.
This bulletin supercedes TSB-05-42A-006, to add Diamante Revisions are indicated by ▶.

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 attached to this bulletin.

▶ Note: Replacement Diamante rear bumper fascias, pin MR926548A, may show signs of rework as shown below.

AFFECTED VEHICLES
2004–on Endeavor
1999–on Galant
2000–on Eclipse
2001–on Eclipse Spyder
1997–2003 Diamante

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

Mitsubishi Motors North America, Inc.
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).

Mitsubishi Motors North America, Inc.
The information contained in this bulletin is subject to change. For the latest version of this document, go to the Mitsubishi Dealer Link, MEDIC, or the Mitsubishi Service Information website (www.mitsubishitechinfo.com).

FILE UNDER:
Group 42A Body in the Dealer Service Information Binder (2828)
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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.
<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>Polyoilefin or Nonpoly carbonate</td>
<td>ABS or Lexan® (Poly carbonate)</td>
<td>Fiberglass with gelcoat</td>
</tr>
<tr>
<td>Pre-wash with warm water and DuPont 2310S™ Plastic Cleaning Paste using a gray or gold Scotchbrite™</td>
<td>Wash with soap and hot water</td>
<td>Wash with soap and hot water</td>
<td>Wash with soap and hot water</td>
<td>Wash with soap and hot water</td>
</tr>
<tr>
<td>Wash again with warm water and DuPont 2310S™ Plastic Cleaning Paste using a gray or gold Scotchbrite™</td>
<td>Clean with Plas-Stick® 2320S™ or A-2320S™</td>
<td>Clean with Plas-Stick® 2320S™ or A-2320S™</td>
<td>Clean with Plas-Stick® 2320S™ or A-2320S™</td>
<td>Clean with 3900S™ or 3900S™ and wipe dry</td>
</tr>
<tr>
<td>Rinse thoroughly, making sure the DuPont 2310S™ Cleaning Paste does not dry on the surface. Dry following the rinse.</td>
<td>Make it Stick Plas-Stick® 2330S™, A-2330S™ or 2322S™ Adhesion Promoter</td>
<td>Make it Stick Plas-Stick® 2330S™, A-2330S™ or 2322S™ Adhesion Promoter</td>
<td>Make it Stick Plas-Stick® 2330S™, A-2330S™ or 2322S™ Adhesion Promoter</td>
<td>Make it Stick Plas-Stick® 2330S™, A-2330S™ or 2322S™ Adhesion Promoter</td>
</tr>
</tbody>
</table>

Apply Flexible Primer or Sealer

Fill required: Use ChromaSystem™ Primer-Filler with the appropriate flexible additive.

No fill required: Use ChromaSystem™ Primer-Sealer with the appropriate flexible additive.

Apply Flexible 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

Make it Shine

Gloss Finish over basecoat: Any ChromaSystem™ Clearcoat with Plas-Stick® 2350S™ Flexible Additive

Matted Finish over basecoat: For semi-gloss, eggshell or flat finish, use ChromaClear® 2370S™ Matted Clearcoat or ChromaSystem™ Clearcoat with Plas-Stick® 2360S™ Flexible Matting Additive

Refer to DuPont ChromaSystem™ and Low VOC ChromaSystem™ Manuals for additional details. Those directions refer to the use of products that may be restricted in VOC regulated areas. Follow usage instructions.
OEM Bumper Covers – Condition as Shipped

**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>
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<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>

**Legend:**
- RAW = Always Raw, unprimed
- PRIMED = always primed
- R/P = Sometimes raw, sometimes primed
Prepping Raw Plastic Components

Question 2: Is prepping a raw plastic bumper cover included in the paint time or any other labor operation involving the bumper cover?

The following items are included as justification:

- Information Provider P-page Documentation (4 pages)
- ASA’s Raw Plastic Bumper Covers (1 page)
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.

*Any printed copy of this document may not contain the most current information. For the latest version, please refer to the Database Reference Manual accessed through the Help Menu in the current release of Audatex Estimating, PenPro or Shoplink. The current version of the Database Reference Manual may also be found at www.training.audatex.us

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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 (p3.5) 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.

Refinish 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, rustproofing or undercoating replacement components to avoid damaging the label.

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.

DOOR OUTER REPAIR PANELS

Refinish times listed on the parts detail line for new repair panels (i.e. door outer repair panel, tail gate and lift gate 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, LIFT GATES AND TAIL GATES

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

DOOR SHELLS, LIFT GATES AND TAIL GATES - Continued

MOTOR suggests using component(s) base refinishing time for this form 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 featheredge and/or prime block and not required for new undamaged panels.

PARTIAL PANEL REFINISHING

This is NOT a BLEND-WITHIN 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 underneath 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 damage in question.
**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.

**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 clear coat thickness (mils) 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
- Full panel polish
- Overspray removal
- Removal of residual material from recessed edges and jambs 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 (mils) 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
- Overspray removal
- Removal of residual material from recessed edges and jambs if required
- Wash, clean, wax or detail entire vehicle prior to delivery if required

**UNPRIMED BUMPER PREPARATION**

- 25% of the bumper’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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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.
Refinish Procedure

(continued)

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

**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 hiding. In instances where four or more color coats are necessary to achieve adequate hiding, some adjustment in refinish times may be appropriate.

Not Included Operations

- Blending into adjacent panel and/or panels, or nearest breaking point
- Color match or lining
- 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

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

**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 jamb for which there is no paint color formula to achieve a color match. When necessary, reference “color match or lining” listed above in Not Included Operations.

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 jamb.

Additional panel(s) and/or other refinish area(s):
Deduct overlap (if applicable): add .2 per refinish hour (20%), then 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, jamb, etc. and undervis 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.
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* vs. Primed Plastic Bumper Covers*

<table>
<thead>
<tr>
<th>Raw Plastic Bumper Covers*</th>
<th>Primed Plastic Bumper Covers*</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Sand and prep panel/edges.</td>
<td>5. Mix color (minimum amounts required).</td>
</tr>
<tr>
<td>7. Wax and grease for contamination.</td>
<td>7. Wax and grease for contamination.</td>
</tr>
<tr>
<td>10. Apply primer for adhesion.</td>
<td>10. Apply primer for adhesion.</td>
</tr>
<tr>
<td>11. Clean up primer spray gun.</td>
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</tr>
<tr>
<td>15. Wax and grease for contamination.</td>
<td>15. Add two coats of clear.</td>
</tr>
<tr>
<td>17. Bake at 140° for 30-45 minutes.</td>
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</tr>
<tr>
<td>19. Unmask openings and/or backside.</td>
<td>19. Unmask openings and/or backside.</td>
</tr>
</tbody>
</table>

**Based on paint manufacturer requirements, industry refinish 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, prime materials, safety equipment, masking materials, bake cycles, etc.).

***Please contact your local paint representative for your exact refinish procedures.

Use this tool to help explain proper refinish procedures to insurance partners.***

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* vs. Primed Plastic Bumper Covers*

<table>
<thead>
<tr>
<th>Raw Plastic Bumper Covers*</th>
<th>Primed Plastic Bumper Covers*</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Sand and prep panel/edges.</td>
<td>5. Mix color (minimum amounts required).</td>
</tr>
<tr>
<td>7. Wax and grease for contamination.</td>
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</tr>
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Automotive Service Association® (800) ASA-SHOP www.ASAshop.org

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Prepping Raw Plastic Components

**Question 3: Is there a pre-determined time in the database for prepping raw plastic bumper covers?**

*The following items are included as justification:*

- *Information Provider P-page Documentation (3 pages)*
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 refinish 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 the first quarter 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 refinish allowance, with a .3 minimum time.

The Audatex formulas 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 “e-coat” equivalent either in refinish or in replacement labor.

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

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

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

*Any printed copy of this document may not contain the most current information. For the latest version, please refer to the Database Reference Manual accessed through the Help Menu in the current release of Audatex Estimating, PenPro or Shoplink. The current version of the Database Reference Manual may also be found at www.training.audatex.us.
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.

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 clear coat thickness (mils) may result in early paint failure. Follow vehicle 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. 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
• Full panel polish
• Overspray removal
• Removal of residual material from recessed edges and jambs if required
• Scratch damage
• Wash, clean, wax or detail entire vehicle prior to delivery if required
• Wet sand full panel

WET/DYR 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 (mils) 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:

Refinished panels may or may not require a varying amount of wet sanding, compound rub-out or buffing operations. In the event 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 jambs if required
• Wash, clean, wax or detail entire vehicle prior to delivery if required

UNPRIMED BUMPER PREPARATION

• 25% of the bumper’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
**Raw Substrate Prep**

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

**Included Operations**
- Detergent wash
- Alcohol plastic cleaner wash
- Additional solvent wash
- Application of specialized adhesion promoter
- Clean Equipment

**Was this information helpful?**

Yes  No