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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)
   - 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
   - www.Estimatescrubber.com
   - SCRS Guide to Estimating

3. Is there a pre-determined time in the database?
   - Estimating Systems
   - 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

The Information Providers assume that the undersides and jambs are painted the same color as the exterior of the vehicle. However, this is not always the case and often different colors are used for the engine compartments, trunk compartment and jambs. When the color is different, the repair center needs to find a second paint code, mix paint a second time and clean the spray gun a second time. Repairers call this second color setup.

On occasion, there is not a formula available for these inner structure colors and, therefore, the refinish technician will need to mix the color from scratch.

Many insurers claim that second color setup is an included operation. Let’s take a look using the four negotiation questions.
Question 1. Is it required?
Four Negotiation Questions

1. Is second color setup required to return the vehicle back to pre-accident condition?

Answer: Yes, second color setup may be required in order to return the vehicle to pre-accident condition.

Answer Documentation:

The major Information Providers say that an inner structure color may be necessary.

**AudaExplore** – “Second Color Setup – Second Color Setup .4 (not two-tone) may be necessary for underhood colors, moldings and trim where a second color is used. This is a manual entry that may be used when required.”


**CCC/MOTOR** – “Underside Colors – Refinish 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 compartments, trunk compartment and/or jambs. 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.”

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

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

Source: Portions Copyright 2012, Mitchell International, Inc. – Mitchell P-Pages, Rev. 10-09. Page 17

The original source documents from the Information Providers follow.
AudaExplore

Second Color Setup – Second Color Setup .4 (not two-tone) may be necessary for underhood colors, moldings and trim where a second color is used. This is a manual entry that may be used when required.

Section 4-4 Refinish Guidelines

Order-By-Color Parts

Audatex provides refinish labor for parts supplied painted by the manufacturer. This labor allowance is provided for when the part is repaired.

Second Color Setup

Second Color Setup may be necessary for underhood colors, mouldings and trim where a second color is used. This is a manual entry that may be used when required.

Second Clear Setup

Second Clear Setup may be necessary in certain circumstances to match the OEM finish (e.g. underhood, aprons, and rails needing “matte” clears). This is a manual entry that may be used when required.

Edges / Jambs / Undersides

Some parts require refinishing undersides or other interior surface edges. Edging is performed prior to surface refinish as a preparation step to refinishing the entire surface of the job at the same time. Edging is generally done with the parts off the vehicle prior to installation.

Audatex’s study shows significantly less refinish labor per area for edges, jambs, or undersides than for the surface refinishing. To receive the labor for edges, jambs, or undersides, the panel must be replaced and refinish must be selected for that panel. When a repair is being performed, labor for edges, jambs, or undersides needs to be a separate consideration.

Rework

In 15% of our studies, Audatex observed the need to redo either the entire refinish job, or a portion of it. The need for this rework can be attributed to a variety of circumstances ranging from technician error to environmental conditions. Audatex’s refinish does not provide additional allowances for rework.

Not Subject to Color Match

Some parts do not always require color match:
- black bumpers and covers
- black radiator support components
- ladder frame components
- black door handles
- black mirrors

CCC/MOTOR

Underside Colors – Refinish 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 compartments, trunk compartment and/or jambs. 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.

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

REFINISH TIME LISTINGS

All refinish times are listed in hours and tenths of an hour. A time in parentheses adjacent to the part name, such as (0.3) 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 refinish 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 panels, published refinish 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 to 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 refinishsing, 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 item 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 unpainted 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 unpainted bumper preparation time, see “Add if Required” operation(s). 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 609.

DOOR OUTER REPAIR PANELS

Refinish 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 refinishning 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

Refinish times listed on the parts detail line for these new components include exterior surface, edges and interior sides, unless otherwise noted in text.
NOTE: Some OEMs now utilize a matte clear coat on non-exterior colors applied to undersides, edges, and/or jambs.

Source: Portions Copyright 2012, Mitchell International, Inc. – Mitchell P-Pages, Rev. 10-09. Page 17
Procedure Explanation

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

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 jams.

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
- Mix material
- Clean and tack surface
- Apply material
- Clean equipment

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, 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 cover.

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 paint/blend
- Apply toner 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 pearls/mica toner
- Clean and tack surface
- Apply clear

NOTE: With three stage panels, 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 jams.

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

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

- Clean equipment

Additional panel(s) and/or other refinish area(s): Deduct overlap (if applicable); add .3 per refinish hour (30%)

Included Operations
- Mask panel
- Scuff panel
- 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 refresh labor time.

The blend times are for existing undamaged adjacent surfaces. The blend labor time includes 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. No overlap deduction applies to blended panel(s)/refinish area(s).

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 line will total 50% of the exterior refresh time for the panel being blended.

Example: A panel refresh time is 2.0 hrs. When blended, the refresh time for that panel will be displayed as 1.0 (1.5 per refinish hour). Once calculated, the refresh blend time will be displayed as .5 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 pearls/mica toner
- Clean and tack surface
- Apply clear material

Not Included Operations
- Repair existing surface imperfections
DEG Inquiry #3913

Inquiry #3913

Inquiry Description
Hood Underside
AreaVehicle//Hood

Issue Summary// Hoods underside is a 2nd color (greyish) with c/c . Is the under side times the same as 1 color? If so how is the second mix of paint calculated in the labor since not all applications require a second mix?

Resolution Description
We have reviewed your inquiry, if you are replacing the hood and select two-stage interior the estimate writer needs to add a manual entry for the second color setup. This is covered in the reference manual (see attachment), if the hood underside is being only repaired the writer only needs to select the hood underside from the parts choice box and two-stage interior.

DEG Inquiry #3913

Inquiry #3913

<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>
</tr>
</thead>
</table>

**Inquiry Description**

- Hood Underside
  - Issue: Summary: Hood underside is a 2nd color (grayish) with c/p. Is the under side times the same as 1 color?
  - What if the second mix of paint is calculated in the labor since not all applications require a second mix?

**Resolution Description**

- IP Explanation:
  - We have reviewed your inquiry. If you are replacing the hood and select two-stage interior the estimate writer needs to add a manual entry for the second color setup. This is covered in the reference manual (see attachment). If the hood underside is being only repaired the writer only needs to select the hood underside from the parts choice box and two-stage interior.

Question 2.
Is it included?
2. Is second color setup included in any other labor operation?

Answer: No, second color setup is not included in any other repair operation.

The Information Providers say that refinish times are for one side only.

**AudaExplore** – “Second Color Setup – Second Color Setup .4 (not two-tone) may be necessary for underhood colors, moldings and trim where a second color is used. This is a manual entry that may be used when required.”


**CCC/MOTOR** – “Underside of Hoods, Lids or Gates – Special Notation: The following items or operations were not considered during the development of any published basic refinish operation times. If any of these items or operations are required, they should be considered by the estimator. An additional paint mix is required if the underside color is a different color than the exterior body color. Clear coat (gloss or matte) will be required for base color coat applications.

INCLUDED:
- Refer to specific vehicle text for estimated time allowance
- Use full refinishing time without deduction for overlap

DOES NOT INCLUDE:
- Clear coat
- Color tint
- Mixing a different underside color

Source: CCC/Motor Guide to Estimating, Rev. 9-14, Page G38

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

Source: Portions Copyright 2012, Mitchell International, Inc. – Mitchell P-Pages, Rev. 10-09. Page 16

The original source documents from the leading Information Providers follow.
AudaExplore

Second Color Setup – Second Color Setup .4 (not two-tone) may be necessary for underhood colors, moldings and trim where a second color is used. This is a manual entry that may be used when required.

Section 4-4 Refinish Guidelines

Order-By-Color Parts

Audatex provides refinsh labor for parts supplied painted by the manufacturer. This labor allowance is provided for when the part is repaired.

Second Color Setup

Second Color Setup .4 (not two-tone) may be necessary for underhood colors, mouldings and trim where a second color is used. This is a manual entry that may be used when required.

Second Clear Setup

Second Clear Setup .4 may be necessary in certain circumstances to match the OEM finish (e.g. underhood, aprons, and rails needing "matte" clears). This is a manual entry that may be used when required.

Edges / Jambs / Undersides

Some parts require refinishing undersides or other interior surface edges. Edging is performed prior to surface refinsh as a preparation step to refinishing the entire surface of the job at the same time. Edging is generally done with the parts off the vehicle prior to installation.

Audatex's study shows significantly less refinsh labor per area for edges, jambs, or undersides than for the surface refinshing. To receive the labor for edges, jambs, or undersides, the panel must be replaced and refinsh must be selected for that panel. When a repair is being performed, labor for edges, jambs, or undersides needs to be a separate consideration.

Rework

In 15% of our studies, Audatex observed the need to redo either the entire refinsh job, or a portion of it. The need for this rework can be attributed to a variety of circumstances ranging from technician error to environmental conditions. Audatex's refinsh does not provide additional allowances for rework.

Not Subject to Color Match

Some parts do not always require color match:

- black bumpers and covers
- black radiator support components
- ladder frame components
- black door handles
- black mirrors

*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.boxlink.audatex.us.*

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Underside of Hoods, Lids or Gates – Special Notation: The following items or operations were not considered during the development of any published basic refinish operation times. If any of these items or operations are required, they should be considered by the estimator. An additional paint mix is required if the underside color is a different color than the exterior body color. Clear coat (gloss or matte) will be required for base color coat applications.

INCLUDED:
- Refer to specific vehicle text for estimated time allowance
- Use full refinishing time without deduction for overlap

DOES NOT INCLUDE:
- Clear coat
- Color tint
- Mixing a different underside color

Source: CCC/Motor Guide to Estimating, Rev. 9-14, Page G38
THREE-STAGE COLOR BLEND (Adjacent Panels) - Continued

INCLUDED (continued):
- Bonding/adhesion coat application
- Clean component (solvent/detergent wash)
- Clean in preparation for material application
- Clear coat application (full blend panel if required)
- Cover/mask recessed edges/rimbs
- Panel preparation (when required)
- Mask adjacent panels (three foot perimeter)
- Mask/close gap between adjacent panels up to front tape (overspray)
- Mask glass opening
- Mask/protect grille radiator opening (overspray)
- Remove masking

DOES NOT INCLUDE:
- Correction of pre-existing surface imperfections
- Damage repair
- Masking of attached parts
- Material costs
- R/L of attached parts
- Wet sand and/or buff for polishing
- Test spray-out panel

STONE CHIP GUARD (Protective Material)

SPECIAL NOTATION:
The following items or operations were not considered during the development of any published basic refinish operation times. If any of these items or operations are required, they should be considered by the estimator.

- First panel:
  - Add 0.5 per panel
- Each additional panel:
  - Add 0.3 per panel

INCLUDED:
- Up to a 12” height

DOES NOT INCLUDE:
- Texture matching

UNDORE OF HOODS, LIDS OR GATES

SPECIAL NOTATION:
The following items or operations were not considered during the development of any published basic refinish operation times. If any of these items or operations are required, they should be considered by the estimator. An additional paint mix is required if the underside color is a different color than the exterior body color. Clear coat (gloss or matte) will be required for base coat color applications.

INCLUDED:
- Refer to specific vehicle test for estimated time allowance
- Use full refinishing time without deduction for overlap

DOES NOT INCLUDE:
- Clear coat
- Color tinting
- Making a different underside color

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

Source: Portions Copyright 2012, Mitchell International, Inc. – Mitchell P-Pages, Rev. 10-09. 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
- Bumper
- Remove and replace impact absorbers or mounting arms
- Remover and install or replace optional accessories (example: trailer hitch, trailer connector)
- Remove and install adhesive exterior trim; add to clean and retape
- Splay and install exterior trim; deduct one-half of R&R time

Procedure 28—Refinish Procedure

Refinish General Information
Complete Refinish
Refinish times in this Guide pertain to NEW, UNDAMAGED PARTS and are not included for calculating 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 paint refinish manufacturers recommend that when performing lifetime refinish warranty repairs on an OEM multi-stage or basecoat/clearcoat finish, you must apply the application of clear to the nearest panel edge or breakpoint to qualify for lifetime warranty.”

AZCO — 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 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 un damaged 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 un damaged 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, COIL, 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 0.4 hour from refinish time for each ADJACENT MAJOR PANEL, and deduct 0.3 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 0.4 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 0.3 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, filter panel, or windshield glass.

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

Included Operations
- Solvent wash
- Scrub panel and clean
- Mask adjacent panels up to 38 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 near breaking paint
- 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 0.2 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 burn damage (see Feather, Prime & Block definition under Refinish General Information)
- Gravel guard refinish; add 0.5 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 rear face 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 costs to ensure visual 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 list or otherwise modify non-exterior colors applied to underside, edges and/or jamb 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-primered state.

Source: Portions Copyright 2012, Mitchell International, Inc. – Mitchell P-Pages, Rev. 10-09. Page 16
DEG Inquiry #619

Inquiry Description

Edging and Undersides Issue Summary // Section 4-4 refinish guidelines edges jambs undersides. States that edging is performed prior to surface refinish in preparation for refinishing the entire surface of the job at the same time. Does surface mean exterior surfaces & at the same time meaning with other exterior surfaces? Also is an additional setup included or not when edges, jambs, undersides are refinished in a separate or stand alone operation?. Please clarify what does not include additional time for setup mean?

Suggested Action // If edges are refinished in a separate operation with the same color as the exterior, additional setup time is needed, unless edges are refinished at the same time as the exterior surfaces. Also if edges are a different color, e.g. underhood color etc. than additional time should be allowed over & above to actually mix an additional color paint itself.

Resolution Description

To answer your questions on Section 4-4 Refinish Guidelines edges jambs undersides.

The question that states that "edging is performed prior to surface refinish in preparation for refinishing the entire surface of the job at the same time" has been clarified in the 2008-09 Database Reference Manual and will now read as follows.

"Edging is performed prior to surface refinish as a preparation step to refinishing the entire surface of the job at the same time"

Also is an additional setup included or not when edges, jambs, undersides are refinished in a separate or stand alone operation?

Audatex includes one setup allowance in their two stage refinish calculations. If a second setup becomes necessary it would be a not included operation and need to be manually added to the estimate as required.

DEG Inquiry #619

DEG DATABASE INQUIRY

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<th>Inquiry Category</th>
<th>Year Make Model</th>
<th>Resolution Status</th>
<th>Origination Date</th>
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<th>Total Time to Resolve</th>
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**Inquiry Description**

**Edging and Undersides**

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**IP Explanation**

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Audatex includes one setup allowance in their two stage refinish calculations. If a second setup becomes necessary it would be a not included operation and need to be manually added to the estimate as required.
DEG Inquiry #2975

Inquiry Description
Bumper / Fender Flair / Under Hood Refinish

Issue Summary // There are actually two separate refinish issues on this vehicle.
#1: bumpers and fender flairs are a different color than the main body.(in this case the body color is gold and the flairs and bumpers are gray metallic). Bumpers and flairs require painting separately from the body color. There is currently no provision for estimating paint times without writing a separate refinish estimate for the bumpers and flairs to eliminate overlap deductions. This problem also applies to other vehicles. Two tone does not entirely address this situation.

#2: This vehicle as well as many other vehicles have a different underhood/underbody color which must be mixed and matched separately from the topcoat color there is no estimating option at present for this situation.

Suggested Action// Please review and consider changing estimating options to address different undercolor options as well as separate two color parts.

Resolution Description
These questions are covered under Section 4-4 Refinish Guidelines.

There is no overlap deduction on bumpers but there is a standard Audatex overlap deduction on the flairs. This is explained in Overlap/Setup/Minimum

Second Color Setup
Second Color Setup .4 (not two-tone) may be necessary for underhood colors, mouldings and trim where a second color is used. This is a manual entry that may be used when required.

DEG Inquiry #2975

DEG Inquiry #6259

Inquiry Description
Fender Section 6_Area Vehicle Fender
Section 6_Issue Summary
The oem fender on the vehicle is gray on the backside. OEM fender to replace is not and only black primer on the backside.
What does it pay to paint the back side gray and is it incl in the refinish time for the replacement fender?
Section 6_Suggested Action
.5 for second color set up

Resolution Description
Estimated Release Date: Closed
Proposed Resolution: MOTOR stated: Per the Guide To Estimate: Basic Color Coat Application, “Backside refinishing” is not included. MOTOR suggests using an on-the-spot evaluation to determine an estimated refinish time.
No change required.
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**Inquiry Description**

Fender

Section6_AreaVehicleFender

Section6_IssueSummary

The oem fender on the vehicle is gray on the backside. CBM fender to replace is not and only black primer on the backside.

What does it pay to paint the back side grey and is it incl in the refinish time for the replacement fender?

Section6_SuggestedAction

.5 for second color set up

**Resolution Description**

IP Explanation

Estimated Release Date: Closed
Proposed Resolution: MOTOR stated:
Per the Guide To Estimate Basic Color Coat Application, "Backside refinishing" is not included. MOTOR suggests using an on-the-spot evaluation to determine an estimated refinish time.

No change required.
Question 3.
Is there a pre-determined time?
3. Are there pre-determined times for second color setup?

**Answer:** AudaExplore and CCC/MOTOR provide a formula for second color setup. Mitchell does not.

**Answer Documentation:**

**AudaExplore** – “Second Color Setup – Second Color Setup .4 (not two-tone) may be necessary for underhood colors, moldings and trim where a second color is used. This is a manual entry that may be used when required.”


**CCC/MOTOR** – “Two-Tone Refinishing (Second Color Tone Application) – The following items or operations were not considered during the development of any published basic refinishing operation times. If any of these items or operations are required on exterior, interior or undersides, they should be considered by the estimator. The following formula may be superseded by information published in specific parts text. Calculations should be made after deductions for overlap and additions for edges, if required.

- First panel: Add 40% to refinishing time
- Each additional panel: Add 30% to refinishing time

Source: CCC/Motor Guide to Estimating, Rev. 9-14, Page G38
"Second Color Setup – Second Color Setup .4 (not two-tone) may be necessary for underhood colors, moldings and trim where a second color is used. This is a manual entry that may be used when required."

Section 4-4 Refinish Guidelines

Order-By-Color Parts

Audatex provides refinish labor for parts supplied painted by the manufacturer. This labor allowance is provided for when the part is repaired.

**Second Color Setup**

Second Color Setup .4 (not two-tone) may be necessary for underhood colors, mouldings and trim where a second color is used. This is a manual entry that may be used when required.

**Second Clear Setup**

Second Clear Setup .4 may be necessary in certain circumstances to match the OEM finish (e.g. underhood, aprons, and rails needing “matte” clears). This is a manual entry that may be used when required.

Edges / Jambs / Undersides

Some parts require refinishing undersides or other interior surface edges. Edging is performed prior to surface refinish as a preparation step to refinishing the entire surface of the job at the same time. Edging is generally done with the parts off the vehicle prior to installation.

Audatex’s study shows significantly less refinish labor per area for edges, jambs, or undersides than for the surface refinishing. To receive the labor for edges, jambs, or undersides, the panel must be replaced and refinish must be selected for that panel. When a repair is being performed, labor for edges, jambs, or undersides needs to be a separate consideration.

Rework

In 15% of our studies, Audatex observed the need to redo either the entire refinish job, or a portion of it. The need for this rework can be attributed to a variety of circumstances ranging from technician error to environmental conditions. Audatex’s refinish does not provide additional allowances for rework.

Not Subject to Color Match

Some parts do not always require color match:

- black bumpers and covers
- black radiator support components
- ladder frame components
- black door handles
- black mirrors

*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.estimating.audatex.com*

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CCC/MOTOR

Two-Tone Refinishing
Second Color Tone Application

SPECIAL NOTATION:
The following items or operations were not considered during the development of any published basic refinish operation times. If any of these items or operations are required on exterior, interior or undersides, they should be considered by the estimator. The following formula may be superseded by information published in specific parts text. Calculations should be made after deductions for overlap and additions for edges, if required.

- First panel: Add 40% to refinish time
- Each additional panel: Add 30% to refinish time

Source: CCC/Motor Guide to Estimating, Rev. 9-14, Page G38
THREE-STAGE COLOR BLEND (Adjacent Panels) - Continued

INCLUDED (continued):
- Bonding/adhesive coating application
- Clean component (solvent/detergent wash)
- Clean in preparation for material application
- Clear coat application (full blend panel if required)
- Cover/mask recessed edges/jamb
- Panel preparation (when required)
- Mask adjacent panels (three-foot perimeter)
- Mask/overlap gap between adjacent panels up to front tape (overspray)
- Mask glass opening
- Mask/protect grille radiator opening (overspray)
- Remove masking

DOES NOT INCLUDE:
- Correction of pre-existent surface imperfections
- Damage repair
- Masking of attached parts
- Material costs
- RM of attached parts
- Wet sand and/or buff for polishing
- Test spray-out panel

STICK CHIP GUARD (Protective Material)

SPECIAL NOTATION:
The following items or operations were not considered during the development of any published basic refinishing operation times. If any of these items or operations are required, they should be considered by the estimator.

- First panel:
  - Add 0.5 per panel
- Each additional panel:
  - Add 0.3 per panel

INCLUDED:
- Up to a 12" width

DOES NOT INCLUDE:
- Texture matching

TWO-TONE REFINISHING (Second Color Tone Application)

SPECIAL NOTATION:
The following items or operations were not considered during the development of any published basic refinishing operation times. If any of these items or operations are required on exterior, interior or undersides, they should be considered by the estimator. The following formula may be superseded by information published in specific parts text. Calculations should be made after deductions for overlap and additions for edges, if required.

- First panel:
  - Add 40% to refinishing time
- Each additional panel:
  - Add 30% to refinishing time

UNDERSIDE OF HOODS, LIDS OR GATES

SPECIAL NOTATION:
The following items or operations were not considered during the development of any published basic refinishing operation times. If any of these items or operations are required, they should be considered by the estimator. An additional paint mix is required if the underside color is a different color than the exterior body color. Clear coat (gloss or matte) will be required for base color coat applications.

INCLUDED:
- Refer to specific vehicle text for estimated time allowance
- Use full refinishing time without deduction for overlap

DOES NOT INCLUDE:
- Clear coat
- Color tinting
- Mixing a different underside color

Footnotes found in a chapter contain vehicle-specific information. The context of footnotes is in addition to, and take precedence over, information in the Guide to Estimating pages for the operation indicated.
Question 4. What is it worth?
4. If not, what is it worth?

Answer: The Repair Planner will have to use judgment times on these items since no database times are given by Mitchell. The following items can be used as justification:

– Submit an inquiry to DEG (www.DEGweb.org) to prove it is not included only
– Conduct your own time study:
  o Create a time study form
  o Create a video of the time study
– The Axalta Paint Mixing Work Standard shows you the steps needed to mixing paint
Axalta Work Standard

Transition – In
- The paint code identified and sheet metal analyzed to prevent damage during repair planning
- The paint mixing process is considered the "last part" needed to complete the repair plan

Work Standard – The Paint Mixing Process

Step 1. Paint as the Last Part – Allow sufficient time to match paint

Step 2. Gather Paint Information – Enter paint code & other to improve color match, identify paint system – In-situ, peel, effect colors – for repair plan

Step 3. Develop the Blend Plan – Developing blend plan; determine where base & clear start & stop: apply 97% rule for dine-sized damage in first 20% of blend panel

Step 4. Proof the Color – Start with regular color position, be sure scale is updated correctly

Step 5. Take Images with Spectrophotometer

Step 6. Compare Color in Natural Daylight – From website, use lab data from other lab and print color swatches to adjacent panel

Step 7. Agitate the Paint – Solution = 2½ to 3 times per day for 15 minutes. Water = 2½ times per day, 15 minutes. Containers = 1½ seconds before use

Step 8. Create a Spray-out – Color, Trial – Mix a solution; store in small 30 ml cup or Prowell sprayer; apply color & left over clear; check color in natural sunlight

Step 9. Create a Spray-out – Back Trial & Material Conversion Report – Print: Create new or reprint panel, blend

Step 10. Identify Items to Paint – Print: Identify new or reprint panels, blend, panels, etc.

Step 11. Use the Paint Volume Calculator – Choose vehicle style & select specific panels to be painted

Step 12. Use the Paint Volume Calculator – Choose vehicle style & select specific panels to be painted

Step 13. Use the "Ready To Spray Out" Test – Compare results to paint volume calculator & use your best judgment, calibrate your paint gun as needed

Step 14. Mix Valve Reinstall – Mix an adequate volume or volume of paint to minimize drips: water = 125 micron, solvent = 190 micron

Step 15. Print & Apply Label – Labels are required by OSHA & some local fire codes

Step 16. Refill Paint Can & Material Cost – Mix solvent in aluminum or stainless steel; mix water in plastic liner

Step 17. Follow System Recommendations

Step 18. Evaluate Paint Usage Via Scale Mix Report – If excessive due to replacement, you will see duplicate moves per WO. If excessive due to over mixing, weigh excess paint & evaluate quantity moved

Step 19. 3S Work Area

Scale Mix Usage Report

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Second Color Setup Negotiation Tool
Version 3.0, January 4, 2016
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