SCRS Blend Study

CIC Parts & Materials Committee

Presented by:

Aaron Schulenburg, SCRS

COMMITTEE

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- Benito Cid, Mercedes-Benz
- Bradley Khodadadeh, Advantage Parts Solution
- Braxton Ewing, BASF
- Brian Tenley, Rydell Auto
- Dale Sailer, Empire Auto Parts
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- Greg McDowell, Mitchell
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- Paul Folino, LKQ
- Paul Sgro, Lee's Garage
- Rick Palmer, Computer Logic
- Rod Sproule, Manitoba Public Ins.
- Ryan Mandell, Mitchell
- Sandy Blalock, ARA
- Stacy Bartnik, Intertek
- Tim Ronak, AkzoNobel
- Virginia Whalen, ARA

PANELISTS

• **Robb Power**	PPG	Sr. Mgr. Automotive Refinish Solutions,
• **Gary Kilby**	Sherwin-Williams	Curriculum Designer
• **Mark Jahnke**	Axalta	Technical Coordinator
• **Don Shearer**	AkzoNobel	North American Technical Manager
• **Bill Bierie**	BASF	Application Manager, North America
• **Nick Saltamanikas**	DEKRA	Collision Operations Manager
• **Bruce Halcro**	SCRS	Chairman

BLEND

ADJACENT PANEL FOR COLOR MATCH


GFS
ULTRA
MIX ROOM
XD
GLOBALFINISHING.COM
GFS
GLOBAL FINISHING SOLUTIONS
REVO
Faster Repairs. Better Results.

Do you believe it takes…

0

A. More time

B. Less time

C. The same amount of time

...to Blend vs.
Refinish a panel?

AUDATEX - BLEND

Blending

Blending is defined as the application of color to a portion of an undamaged adjacent panel for the sole purpose of facilitating the appearance of color match into the area. When blending is performed in a two- or three-stage refinish system, the same definition applies to the process and includes the application of clear coat to the entire blended panel.

Note: *I-CAR recommends preparing and planning to blend before the work begins. This means that blending should be planned for in all phases of refinish, from tinting to preparation of surfaces. Following this recommendation will ensure that when the decision is made to blend, the preparation work is already complete. (For additional information, see I-CAR Finish Matching, Module 2, and Topic 3.) Blending into an undamaged/unreplaced adjacent panel to facilitate color match is automated in the Audatex system and can be selected on a panel-by-panel basis.*

Audatex's blend formula is:

- 50% of Audatex estimate refinish labor after overlap consideration, including two-stage or three-stage allowances, if applicable for the panel to be blended. This provides time to apply clear coat to the entire panel. Remember that all overlap is still considered when refinish labor is overridden.

CCC / MOTOR - BLEND

Color Blend (Adjacent Panels)

SPECIAL NOTATION:

Calculations for blending are based upo
There should be no overlap deduction b
STAGE, 4-STAGE or TWO-TONE type f
cost should be based upon the full blen

Blending may be necessary for adjacen
adjacent components or areas. The follo

• Each blended adjacent panel or area
50% of blend panel's base refinish time

Included:

- Back tape opening (handle, lock cylir
- Blend coat application
- Bonding / adhesion coat application
- Clean component (solvent / detergen
- Clean in preparation for material app
- Clear coat application (full blend pan
- Initial wet sand or scuff (when require
- Mask adjacent panels (3 foot perimeter)
- Mask / close gap between adjacent panels up to foam tape (over spray)
- Mask glass opening
- Mask / protect grille radiator opening (over spray)
- Remove masking
- Wet Bed application

Three-Stage Color Blend (Adjacent Panels)

SPECIAL NOTATION:

Calculations for blending are based upon the outer surface only and should not include additions for underside, inside or edges of the blend panel. There should be no overlap deductions between blend panel(s) refinish time. Blending may be necessary for adjacent body components to avoid noticeable color variation between newly applied paint and the existing paint of adjacent components or areas. The following formula may be considered in the event this type of procedure is required on an undamaged panel.

• Each blended adjacent panel or area
70% of blend panel's base refinish time

Included:

- Back tape opening (handle, lock cylinder, mirror)
- Blend coat application
- Bonding / adhesion coat application
- Clean component (solvent / detergent wash)
- Clean in preparation for material application
- Clear coat application (full blend panel if required)
- Panel preparation (when required)
- Mask adjacent panels (3 foot perimeter)
- Mask / close gap between adjacent panels (over spray)
- Mask glass opening
- Mask / protect grille radiator opening (over spray)
- Remove masking

Does Not Include:

- Correction of pre-existent surface imperfections
- Cover/mask recessed edges/jambs
- Damage repair
- Masking of attached parts
- Material costs
- R&I of attached parts
- Wet sand and/or buff for polishing
- Test spray-out panel

MITCHELL - BLEND

You are here: CEG - Collision Estimating Guide P-Pages > Procedure Explanations > 28 Refinish Procedure > Single Stage/Two Stage Colors

You are here: CEG - Collision Estimating Guide P-Pages > Procedure Explanations > 28 Refinish Procedure > Three Stage Colors

Three Stage Colors

Blend adjacent panel(s): Allow .7 **per** refinish hou (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 pearl/mica toner
- 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 40% from the total blend time and apply it to the three stage line item. The total sum of the blend line and the amount allocated in the three stage line will total 70% of the exterior refinish time for the panel being blended.

Example: A panel refinish time is 2.0 hrs. When blended, the refinish time for that panel will be displayed as 1.4 (.7 per refinish hour). Once calculated, the refinish blend line will be displayed as .8 and .6 (40%) will be allocated to the three stage line.

MEET THE TALENT…NOT YOUR AVERAGE TECHS

BRIAN MEITZ

- PPG technical sales instruction supervisor.
- Oversees day-to-day operations and leads PPG automotive technician training classes at the Chicago business development center, as well as the operations of 5 other PPG business development centers across the U.S.
- Brian also is involved with product testing, troubleshooting, and creating field specific process documents for repair procedures.
- He has over 35years of experience in the automotive refinish industry.
- Brian started his career with PPG in 2003. Before joining PPG, he worked as a professional automotive technician for 15years.

JASON LUTTON

- **Refinish Solutions Manager for PPG Industries.**
- **Jason began his career in the collision repair industry at TCTC Technical College.**
- **Jason specialized in automotive refinish and has held various positions in Collison Centers, and PPG Industries.**
- **In his 23 years of Industry experience, those roles include Collision Management, Technical Applications, Training and Business Development.**

BOB CHAPMAN

- Technical Instructor at the AkzoNobel Training Center
- Located in the Chicago suburb of Lombard IL. Bob joined AkzoNobel in 2017.
- Bob has been in the collision repair industry for 34 years, as a Painter, Paint shop Manager and has also worked as a Technical Specialist and in sales.
- In his currant role, Bob conducts training classes for all AkzoNobel vehicle refinish premium lines as well as commercial vehicles paint lines.
- Bob produces several Tech Tip videos and is also a cohost of Talking Tech along with Tracy Frye.
- Bob has a passion for learning and sharing the knowledge that he has learned over his career.

SCOTT HENSON

- **Current role is as Field Training Specialist**
- **During his time as a Sherwin-Williams trainer, Scott has trained over 2100 students, who have received I-CAR credits via the Paint Maker Certification class**
- **37 years in the Collision Repair Industry.**
- **Previous roles within the company include**
  - **Territory Sales**
  - **Trainer at the Chicago Training Center**

SEAN WUELFING

- Application Specialist for BASF, based at the North American headquarters in Whitehouse, Ohio.
- Day-to-day tasks include developing processes for new products, special basecoat process development for new colors, benchmarking products and supporting new product launches through train the trainer activities.
- Sean has been in his current position for 7 years and is considered a basecoat application expert for BASF globally.
- Prior to BASF, Sean worked as the lead painter for 30 years at Solomon Collision Center in Monroe, MI.
- He holds an Associate's degrees in both Science and Business.

MICHAEL NELSON

- **Product Specialist, Great Plains Region**
- **Field Certified Trainer**
- **Graduated in 1998 from Dunwoody College of Technology in Minneapolis with an aas degree in automotive collision repair and refinishing.**
- **Has spent over 26 years in the collision industry, 16 years as a production painter in the Minneapolis metro area.**
- **8 years as a sales technician for Lowell's PCE and Finishmaster covering Minnesota and Western Wisconsin.**


Ford
STORE VERTICAL
PACKAGER STORE VERTICAL
CARRIER LABEL
PDC LABEL
B420


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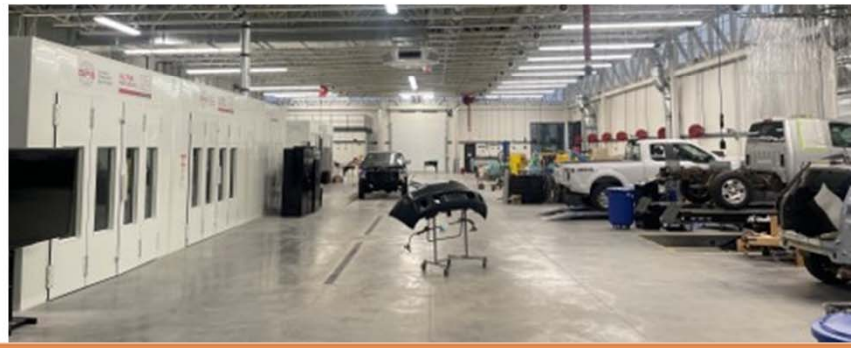
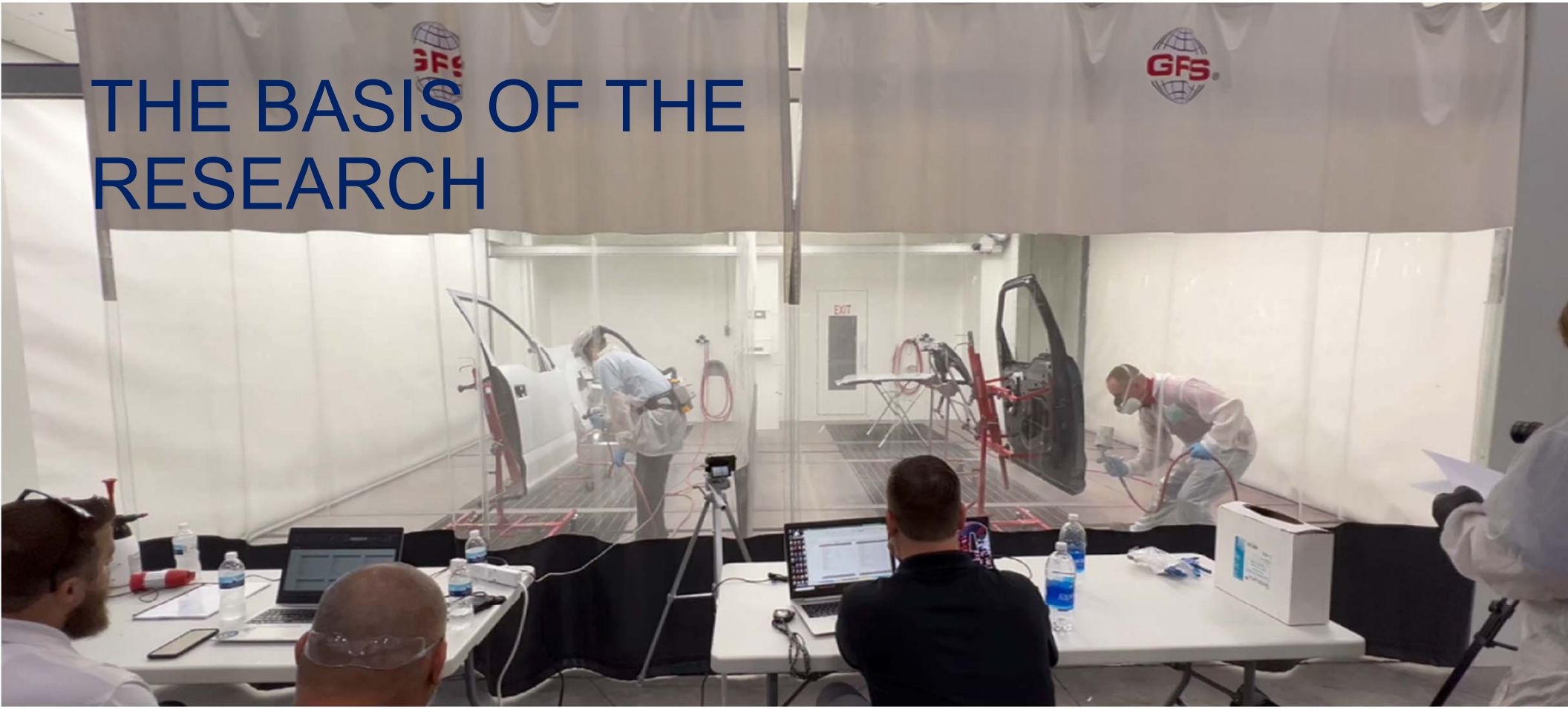
VAN ACCESSIBLE



THE BASIS OF THE RESEARCH



AUDATEX - FULL REFINISH

INCLUDED:

- Add flex additive** (when required, labor only)
- Clear; Clean gun**
- Gather materials, equipment and tools**
- Initial tint, spray test panel, let down, compare to vehicle**
- Mix clear coat**
- Application of guide coat*
- Block sand*
- Dual action sand*
- Apply and flash; color
- Apply and flash clear coat
- Basic corrosion protection provided by primer/sealer and paint application
- Blow dry clean panels
- Booth operations
- Clean booth
- Clean equipment and materials
- Clean gun; color
- De-wax and degrease
- Get paint
- Get paint code
- Hand/wet sand
- Inspect job and paint
- Mix and apply flash; additives
- Mix color, spray test panel, compare to vehicle
- Mix, apply, and flash primer (for adhesion and sealing)
- Move car
- Order paint
- Prepare to sand
- Prepare to spray
- Protect exterior of vehicle from overspray utilizing all acceptable methods of bagging, masking, masking up to 36 inches surrounding the panel and masking of glass within a panel. This includes using backtaping and/or foam tape to close out the gap between panels. If backtaping and/or foam tape does not adequately prevent overspray from entering the jamb areas, any additional masking to protect the interior and jambs is a not included operation (labor only) See Not Included “masking” operation
- Review estimate/work order
- Tack wipe
- Tack wipe (between color and apply clear when required)
- Water wash and clean panel with solvent
- ****Included in setup**
- ***Welded panel operations**

AUDATEX - BLEND

INCLUDED:

- Complete preparation of blended panel
- Scuff or buff
- Application of color to blended panel
- Application of clear coat to entire blended panel in two-stage and three-stage systems

CCC - FULL REFINISH

INCLUDED:

- Back tape opening (handle, lock cylinder, mirror)
- Clean component (solvent wash)
- Clean sprayer
- Color coat application
- Initial dry sand (as recommended by paint manufacturer)
- Light buff, lacquer paint only
- Load sprayer
- Mask adjacent panels (three-foot perimeter)
- Mask/close gap between adjacent panels up to foam tape (overspray)
- Mask glass opening
- Mask/protect grille radiator opening (overspray)
- Mix paint (color with necessary solvents)
- Primer-sealer coat application
- Primer-sealer coat final clean
- Primer-sealer coat final application
- Remove masking
- Retrieve accurate color information, including paint chip

BLEND

INCLUDED:

- Back tape opening (handle, lock cylinder, mirror)
- Blend coat application
- Bonding/adhesion coat application
- Clean component (solvent/detergent wash)
- Clean in preparation for material application
- Clear coat application (full blend panel if required)
- Initial wet sand or scuff (when required)
- Mask adjacent panels (three-foot perimeter)
- Mask/close gap between adjacent panels up to foam tape (overspray)
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- Remove masking
- Wet Bed application

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MITCHELL - FULL REFINISH

INCLUDED:

- 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

BLEND

INCLUDED:

- 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

THIS WAS A COMPARATIVE ANALYSIS OF TWO REFINISH OPERATIONS…

THIS WAS NOT A REFINISH TIME STUDY

WHY THIS WAS NOT A REFINISH TIME STUDY

Inquiry Resolution

Estimated Release Date: Closed
Proposed Resolution: MOTOR stated:
MOTOR's Blend allowance is calculated using 50% of the non-overlapped "Base Refinish Time" for the same component published in the MOTOR database. The "Base Refinish Time" is the estimated refinish time assigned to a component (i.e., Fender, Hood, Door etc.).

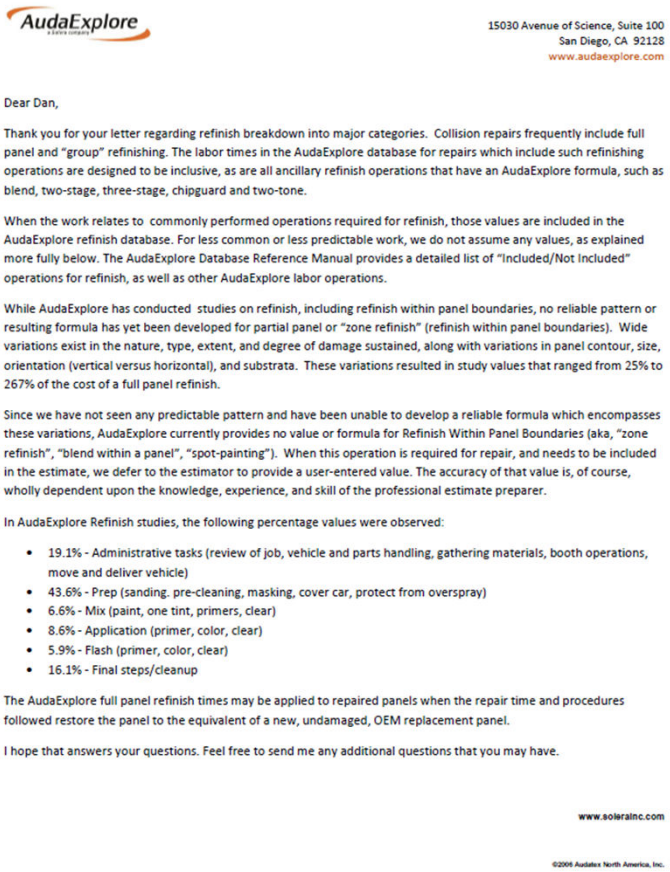
Please note:

- It is important to emphasize this 50% formula is intended for use in only those instances when applying color onto the initial panel and continuing onto an undamaged adjacent panel, in-order to achieve proper color transition or match between the new paint and the existing paint. The blend formula is not intended for estimating time that may be required to refinish any panel with damage.

- MOTOR does not develop refinish times by assigning fixed percentages to individual refinish operations and adding them together. Variables such as panel size, material, shape, contour, position, and color must be taken into consideration when developing or estimating refinish times and such variables are unique to any given panel. These variables are used/accounted for when developing estimated refinish times for new and undamaged panels.

- Labor time breakdowns are considered proprietary information and are not distributed externally.

WHY THIS WAS NOT A REFINISH TIME STUDY



AudaExplore

15030 Avenue of Science, Suite 100
San Diego, CA 92128
www.audaexplore.com

Dear Dan,

Thank you for your letter regarding refinish breakdown into major categories. Collision repairs frequently include full panel and "group" refinishing. The labor times in the AudaExplore database for repairs which include such refinishing operations are designed to be inclusive, as are all ancillary refinish operations that have an AudaExplore formula, such as blend, two-stage, three-stage, chipguard and two-tone.

When the work relates to commonly performed operations required for refinish, those values are included in the AudaExplore refinish database. For less common or less predictable work, we do not assume any values, as explained more fully below. The AudaExplore Database Reference Manual provides a detailed list of "Included/Not Included" operations for refinish, as well as other AudaExplore labor operations.

While AudaExplore has conducted studies on refinish, including refinish within panel boundaries, no reliable pattern or resulting formula has yet been developed for partial panel or "zone refinish" (refinish within panel boundaries). Wide variations exist in the nature, type, extent, and degree of damage sustained, along with variations in panel contour, size, orientation (vertical versus horizontal), and substrata. These variations resulted in study values that ranged from 25% to 267% of the cost of a full panel refinish.

Since we have not seen any predictable pattern and have been unable to develop a reliable formula which encompasses these variations, AudaExplore currently provides no value or formula for Refinish Within Panel Boundaries (aka, "zone refinish", "blend within a panel", "spot-painting"). When this operation is required for repair, and needs to be included in the estimate, we defer to the estimator to provide a user-entered value. The accuracy of that value is, of course, wholly dependent upon the knowledge, experience, and skill of the professional estimate preparer.

In AudaExplore Refinish studies, the following percentage values were observed:

- 19.1% - Administrative tasks (review of job, vehicle and parts handling, gathering materials, booth operations, move and deliver vehicle)
- 43.6% - Prep (sanding. pre-cleaning, masking, cover car, protect from overspray)
- 6.6% - Mix (paint, one tint, primers, clear)
- 8.6% - Application (primer, color, clear)
- 5.9% - Flash (primer, color, clear)
- 16.1% - Final steps/cleanup

The AudaExplore full panel refinish times may be applied to repaired panels when the repair time and procedures followed restore the panel to the equivalent of a new, undamaged, OEM replacement panel.

I hope that answers your questions. Feel free to send me any additional questions that you may have.

www.soleraInc.com

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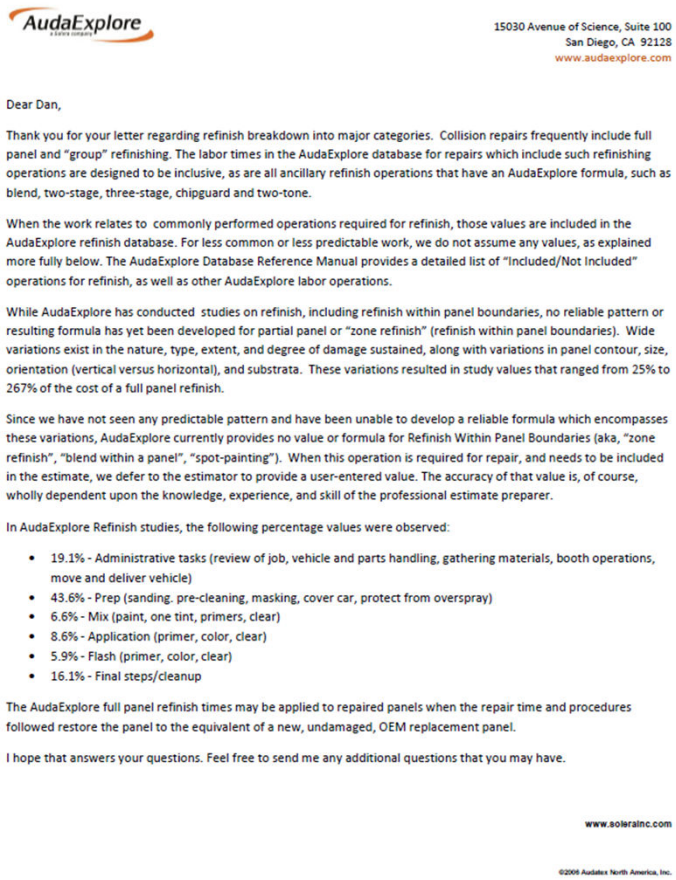
WHY THIS WAS NOT A REFINISH TIME STUDY



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Since we have not seen any predictable pattern and have been unable to develop a reliable formula which encompasses these variations, AudaExplore currently provides no value or formula for Refinish Within Panel Boundaries (aka, "zone refinish", "blend within a panel", "spot-painting"). When this operation is required for repair, and needs to be included in the estimate, we defer to the estimator to provide a user-entered value. The accuracy of that value is, of course, wholly dependent upon the knowledge, experience, and skill of the professional estimate preparer.

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- 8.6% - application (primer, color, clear)
- 5.9% - flash (primer, color, clear)
- 16.1% - final steps / cleanup

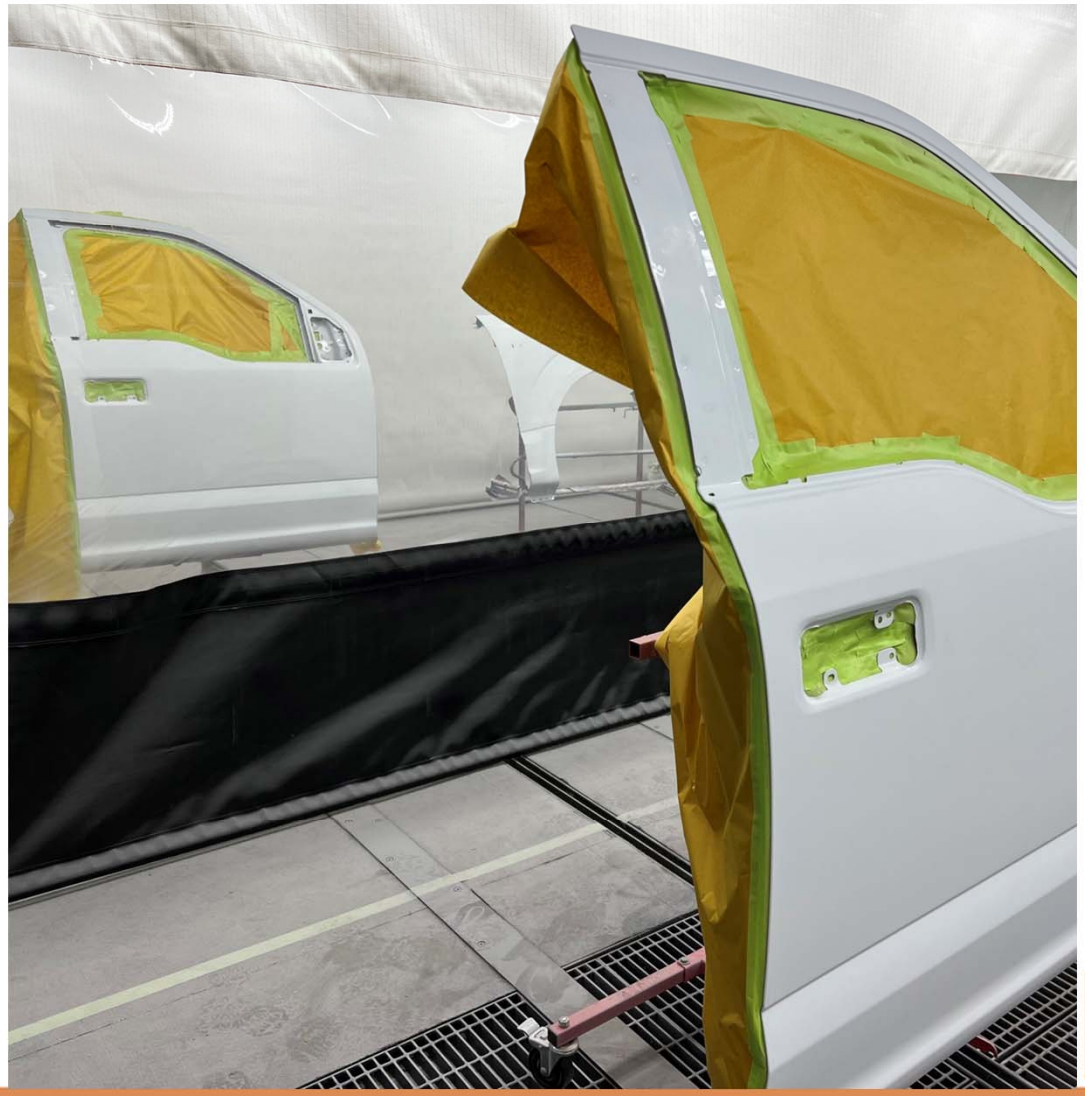
WHY THIS WAS NOT A REFINISH TIME STUDY

- We did not study the entire process, or the full list of included items
- We did not track administrative steps (ex: review of job, vehicle and parts handling, gathering materials, booth operations, move and deliver vehicle)
- We did not have a vehicle, so we started with an assumption that color validation had already been completed (collecting color code, color tint, let down cards, validation steps, etc.)

WHAT WE DID DO IN THE COMPARISON

- We compared full refinish to the exterior of a “new and undamaged” OEM part, to blend for color match on an adjacent panel
- The new parts were not all free of damage. Repairing that damage is not included in the refinish time, and we did not repair or track any time to address imperfections in the e-coat, or dents in the panel.
- Most companies arrived to the study with premixed color
- We had each paint company follow their own process for refinish and blend, as they would instruct and expect their customers to follow in accordance with their procedures. Each Company had unique elements to their process.
- We did standardize some elements, examples
  - Flash times
  - Wash with soap and water wash
  - How we masked parts


MATHEWS
92
ARCHERY



WHAT WE DID DO IN THE COMPARISON

FULL REFINISH

INCLUDED:

- 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

BLEND

INCLUDED:

- 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

WHAT WE DID DO IN THE COMPARISON

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- Clean and tack surface
- Apply clear material

EXAMPLE PROCEDURES – COMPANY 2 – SOLID

EXAMPLE PROCEDURES – COMPANY 2 – SOLID

Hood, Full Refinish, New Part	*% of overall*
Verify Color	
Create Spray-out/ Let Down Panel	
Mix Basecoat	
Clean w/ wax & grease	**6.90%**
Sand w/ 600 grade Defect removal	
Clean w/ Waterborne pre-cleaner	**3.62%**
Blow and tack panels	**1.94%**
Mix and reduce Sealer	**5.82%**
Apply Sealer	**3.35%**
Clean spray gun	**7.59%**
Reduce Basecoat	**4.67%**
Apply 1st coat of base	**2.96%**
Apply 2nd coat of base (Control coat)	**2.89%**
Flash Panel	**29.59%**
Check for perceived hiding/ Blend	**0.56%**
Clean spray gun	**7.43%**
Mix Clear Coat	**6.25%**
Tack Panel	**1.25%**
Apply 1.5 coats of Clear	**7.99%**
Clean spray gun	**7.20%**
Total Time	**100.00%**

Hood, Blend	*% of overall*
Verify Color	
Create Spray-out/ Let Down Panel	
Mix Basecoat	
Clean w/ soap & water	**5.73%**
Clean w/ wax & grease	**2.23%**
Sand blend panel w/ 1000 grade scuff pad	**3.53%**
Sand blend panel w/ 1000 grade DA	**13.22%**
Mask for Paint	**7.70%**
Clean w/ Waterborne pre-cleaner	**3.67%**
Blow and tack panels	**1.44%**
Mix / Reduce Wet Bed	**4.73%**
Reduce Basecoat	**3.61%**
Apply Wet Bed	**1.76%**
Apply 1st coat of base	**0.68%**
Apply 2nd coat of base (Control coat)	**0.50%**
Flash Panel	**26.45%**
Check for perceived hiding/ Blend	**0.38%**
Clean Blender spray gun	**3.94%**
Clean spray gun	**4.64%**
Mix Clear Coat	**6.11%**
Tack Panel	**0.73%**
Apply 1.5 coats of Clear	**6.41%**
Clean spray gun	**1.76%**
Remove Masking	**0.76%**
Total Time	**100.00%**

Blend was 111.87 % of Full Refinish

EXAMPLE PROCEDURES – COMPANY 3 – METALLIC

RT FRT Door, Full Refinish, New Part	*% of overall*
Verify Color	
Create Spray-out/ Let DownPanel	
Mix Basecoat	**6.53%**
Clean w/ soap & water	**1.17%**
Clean w/ wax & grease	**1.53%**
Mask for Paint	
Clean w/ Waterborne pre-cleaner	**2.30%**
Blow and tack panels	**0.77%**
Mix and reduce Sealer	**12.29%**
Apply Sealer	**2.52%**
Clean spray gun	**2.12%**
Apply base	**7.47%**
Flash Panel	**40.50%**
Check for perceived hiding/ Blend	**0.81%**
Tack Panel	**0.63%**
Clean spray gun	**7.74%**
Mix Clear Coat	**4.64%**
Apply 2 coats of Clear	**3.47%**
Clean spray gun	**5.54%**
Remove Masking	
Total Time	**100.00%**

RT FRT Door, Blend	*% of overall*
Verify Color	
Create Spray-out/ Let DownPanel	
Mix Basecoat	**5.43%**
Clean w/ soap & water	**5.34%**
Clean w/ wax & grease	**1.45%**
Sand blend panel w/ 1000 grade DA	**8.57%**
Sand blend panelw/ 1000 grade scuff pad	**7.78%**
Mask for Paint	**23.02%**
Clean w/ Waterborne pre-cleaner	**3.56%**
Blow and tack panels	**0.97%**
Mix and reduce Sealer	
Mix Blender	**0.84%**
Clean spray gun	**0.00%**
Apply Blender	**0.94%**
Apply base	**1.03%**
Flash Panel	**27.15%**
Check for perceived hiding/ Blend	**0.27%**
Clean spray gun	**3.62%**
Mix Clear Coat	**2.71%**
Tack Panel	**0.39%**
Apply 2 coats of Clear	**3.53%**
Clean spray gun	**1.96%**
Remove Masking	**1.45%**
Total Time	**100.00%**

Blend was 144.46 % of Full Refinish

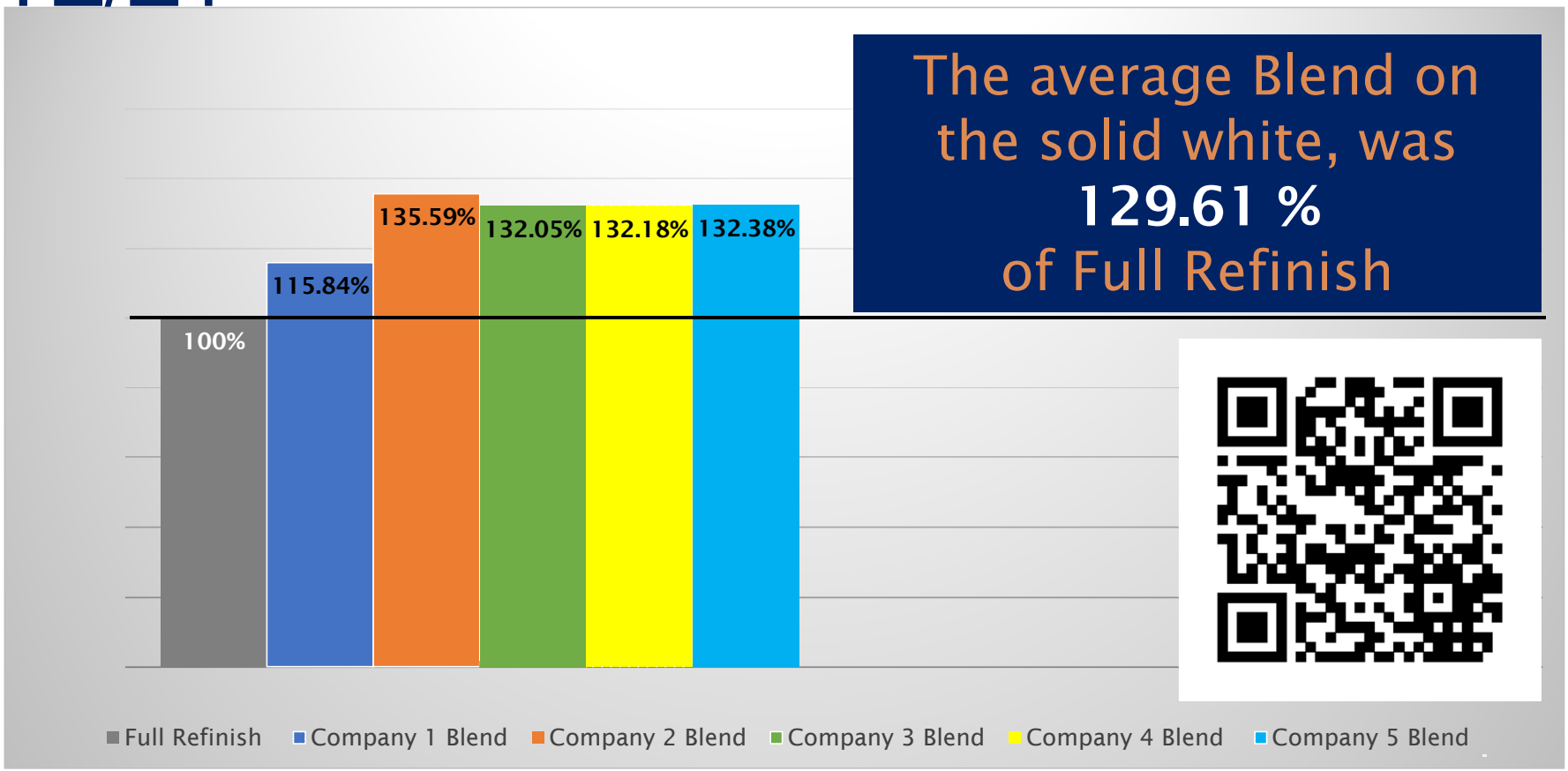
EXAMPLE PROCEDURES – COMPANY 4 – TRI COAT

Hood, Full Refinish, New Part	*% of overall*
Verify Color	
Create Spray-out/ Let DownPanel	
Mix Basecoat	
Clean w/ soap & water	
Clean w/ wax & grease	**1.87%**
Sand w/ 320 grade DA	
Sand w/ 320 grade scuff pad	
Sand blend panel w/ 800 grade DA	
Sand blend panelw/ 800 grade scuff pad	
Mask for Paint	
Clean w/ Waterborne pre-cleaner	**1.76%**
Blow and tack panels	**1.03%**
Mix and reduce Sealer	**3.09%**
Apply Sealer	**2.04%**
Flash Sealer	**0.28%**
Clean spray gun	**1.40%**
Reduce Basecoat	**10.33%**
Apply Wet Bed	
Apply 1st coat of base	**1.68%**
Flash Panel	**5.61%**
Apply 2nd coat of base	**2.38%**
Flash Panel	**16.84%**
Apply 3rd coat of base	
Flash Panel	
Apply 1st coat of mid-coat	**3.59%**
Flash Panel	**5.61%**
Apply 2nd coat of mid-coat	**3.18%**
Flash Panel	**16.84%**
Apply 3rd coat of mid-coat	
Flash Panel	
Check for perceived hiding/ Blend	**0.90%**
Tack Panel	**0.58%**
Apply control coat	
Clean spray gun	**2.71%**
Mix Clear Coat	**6.12%**
Tack Panel	
Apply 1st coat of Clear	**2.04%**
Flash Panel	**5.61%**
Apply 2nd coat of Clear	**2.39%**
Clean spray gun	**2.11%**
Remove Masking	
Total Time	**100%**

Hood, Blend	*% of overall*
Verify Color	
Create Spray-out/ Let DownPanel	
Mix Basecoat	
Clean w/ soap & water	**3.04%**
Clean w/ wax & grease	**2.06%**
Sand w/ 320 grade DA	
Sand w/ 320 grade scuff pad	
Sand blend panel w/ 800 grade DA	**7.80%**
Sand blend panelw/ 800 grade scuff pad	**3.58%**
Mask for Paint	**7.58%**
Clean w/ Waterborne pre-cleaner	**1.35%**
Blow and tack panels	**0.86%**
Mix and reduce Sealer	**3.61%**
Apply Sealer	**0.14%**
Clean spray gun	**1.68%**
Reduce Basecoat	**5.67%**
Apply Wet Bed	**0.97%**
Apply 1st coat of base	**0.22%**
Flash Panel	**4.67%**
Apply 2nd coat of base	**0.16%**
Flash Panel	**14.01%**
Apply 3rd coat of base	
Flash Panel	
Apply 1st coat of mid-coat	**0.14%**
Flash Panel	**4.67%**
Apply 2nd coat of mid-coat	**0.40%**
Flash Panel	**4.67%**
Apply 3rd coat of mid-coat	**0.45%**
Flash Panel	**14.01%**
Check for perceived hiding/ Blend	**0.36%**
Tack Panel	
Apply control coat	
Clean spray gun	**2.85%**
Mix Clear Coat	**3.57%**
Tack Panel	
Apply 1st coat of Clear	**1.64%**
Flash Panel	**4.67%**
Apply 2nd coat of Clear	**1.99%**
Clean spray gun	**2.87%**
Remove Masking	**0.31%**
Total Time	**100%**

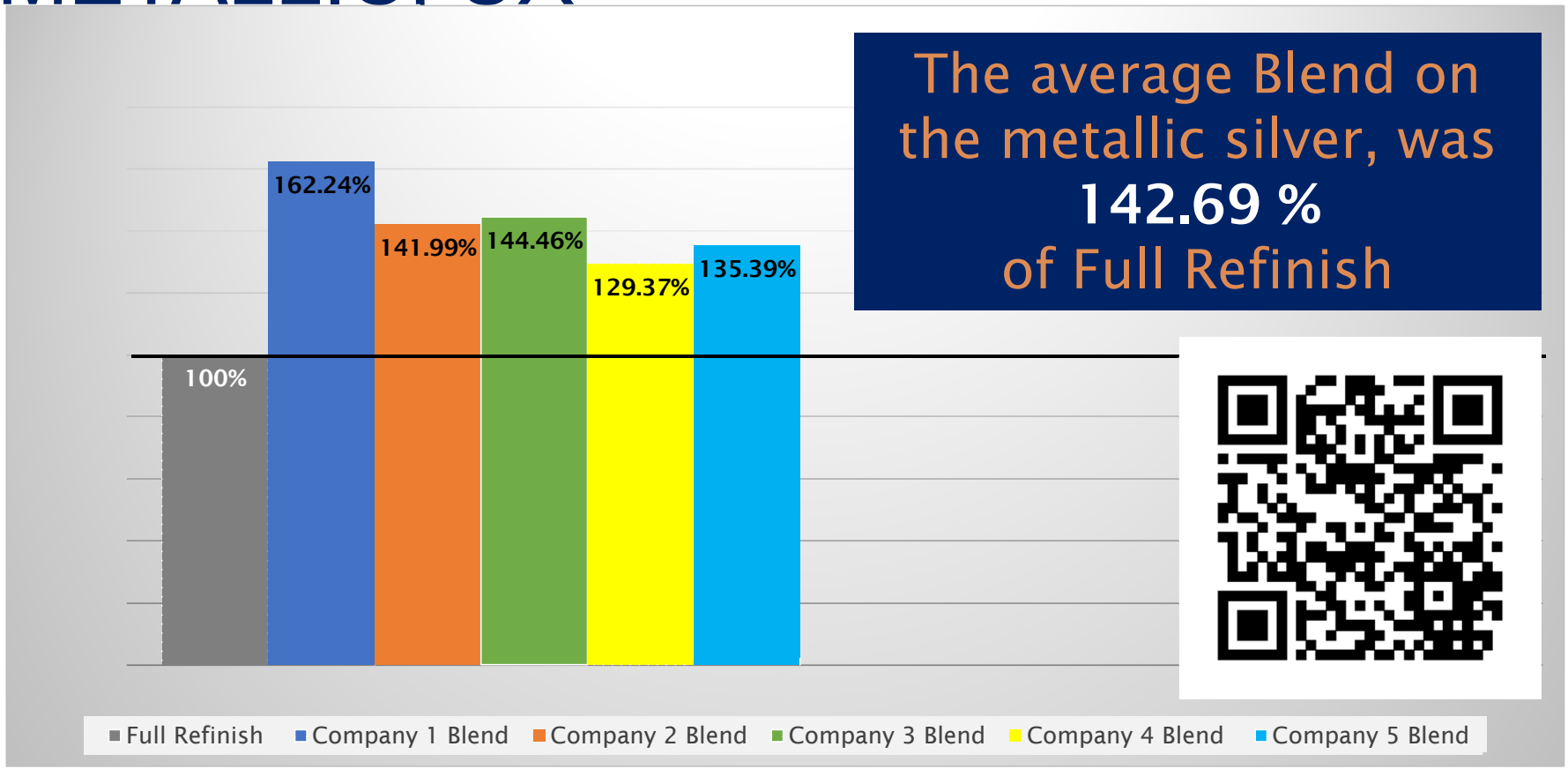
Blend was 120.15 % of Full Refinish

RESULTS – SOLID – OXFORD WHITE YZ/Z1



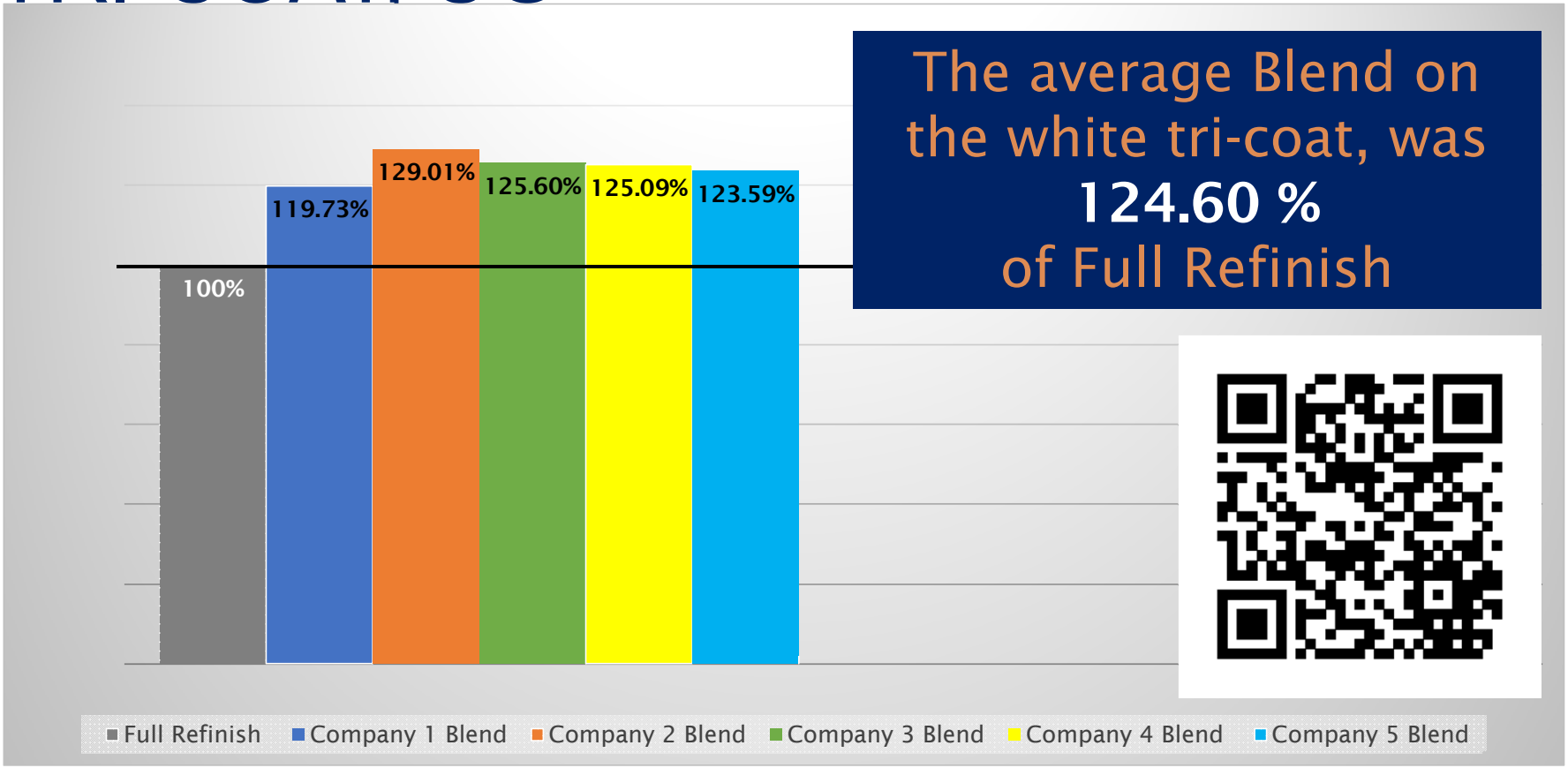
The average Blend on the solid white, was **129.61 %** of Full Refinish

RESULTS – METALLIC – INGOT SILVER METALLIC. UX



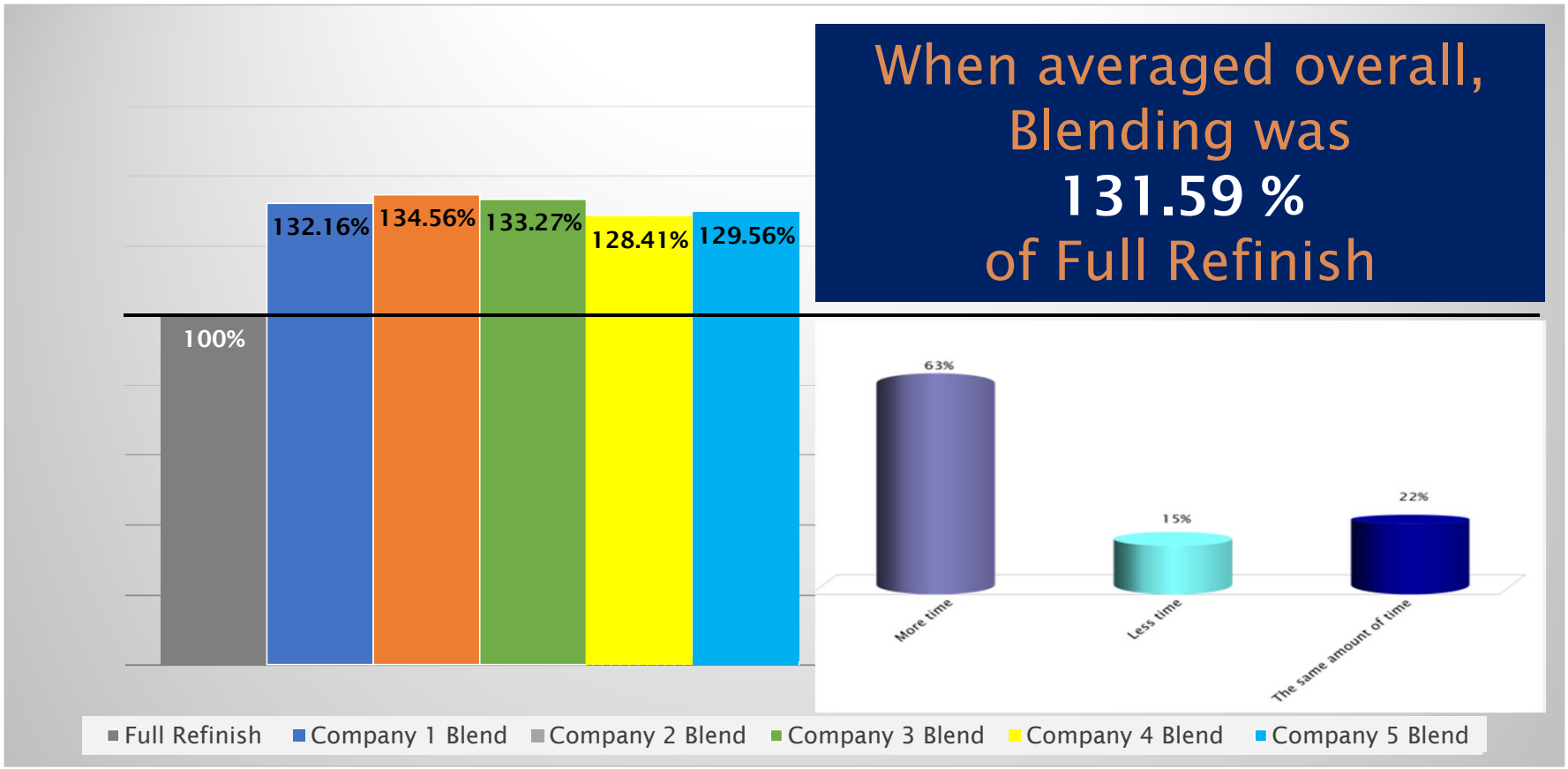
The average Blend on the metallic silver, was **142.69 %** of Full Refinish

RESULTS – 3-STAGE – WHITE PLATINUM TRI-COAT. UG



The average Blend on the white tri-coat, was **124.60 %** of Full Refinish

RESULTS – OVERALL AVERAGE



SPECIAL THANKS TO