



2024 Mercedes-Benz Certified Collision Program Meeting- Las Vegas

Welcome

November 4, 2024

A photograph of a modern building with a glass and metal facade, featuring the Mercedes-Benz logo on a dark panel. The image is partially obscured by a dark overlay on the right side where the text is located.

Meeting Code of Conduct

Participants must conform to rules of order and follow **Anti-Trust Guidelines**. This includes zero tolerance for verbal abuse or harassment in any form.

Participants are not allowed to discuss any subject relating to prices charged, discounts offered of any nature, hourly rate, employee benefits, or agreements made with third party entities. Participants found to be in violation of the foregoing will be asked to leave.

All participants are herewith notified that the materials presented herein are not to be construed as information or direction to take concerted actions. Information can be utilized by individuals acting within their own judgment, making sound business decisions, without agreements with other participants of this meeting.

Agenda

- Welcome
- Team Introductions
- Society of Collision Repair Specialists
- Program Updates
- Collision Trainer Presentation
- Paint Partner Presentations
 - Sherwin Williams
 - PPG
 - BASF
- Xentry Parts Upgrades
- Mike Anderson
- Final Thoughts/Q&A

Meet The Team

Atlanta-HQ



Benito Cid

Robbinsville



Robert Weingart

Grapevine



Scott Cripps

Jacksonville



Shaira
Santiago



Paul Dent



Sebastian
Wolf



Robert
Laurino



Clint Allen



Kevin King



Society of Collision Repair Specialists



Aaron Schulenburg

Executive Director

aaron@scrs.com

(302) 423-3537

www.scrs.com



MAP YOUR SHOW





GET YOUR FULL SERIES PASS NOW!

GET FULL ACCESS TO ALL SCRS EDUCATIONAL
OFFERINGS DURING THE SEMA SHOW

www.scrs.com



SECURE YOUR SPOT AT THIS YEAR'S





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www.scrs.com

Program Updates



Certified Collision Network

398 Certified Collision Centres

- 182 Base
- 216 Elite
- 48 MB Electric
- 68 Vans
- 299 Participating Dealer



BASE

Authorized to perform all collision repair to all Mercedes-Benz vehicles with the exception of aluminum structural repairs.

ELITE

Authorized to perform all collision repair to all Mercedes-Benz vehicles including aluminum structural repairs. Must have at least 1 Aluminum certified technician

MBE

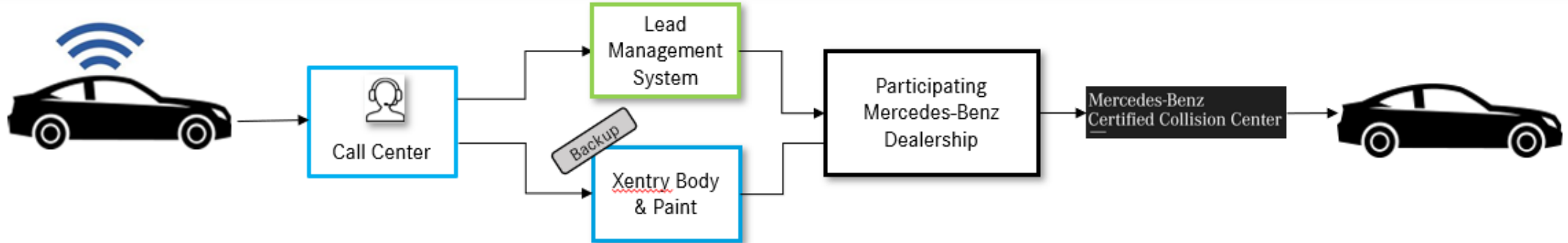
Authorized to perform collision repair work on all Mercedes-EQ vehicles. Facility must be Elite certified and have minimum of 1 Battery Specialist to become an EQ facility.

Vans

Authorized to perform structural and cosmetic repair on the Sprinter and Metris vehicles. Must be in the conjunction with a Base or Elite program.

Connected Car Leads

New Connected Car Accident Leads Process



Over 5K Leads Sent

Current

- Launched July 3rd
- Light to moderate damage- below E Call
- Parking Damages, (PDD), added in August
- Leads to CCP participating dealers

Future

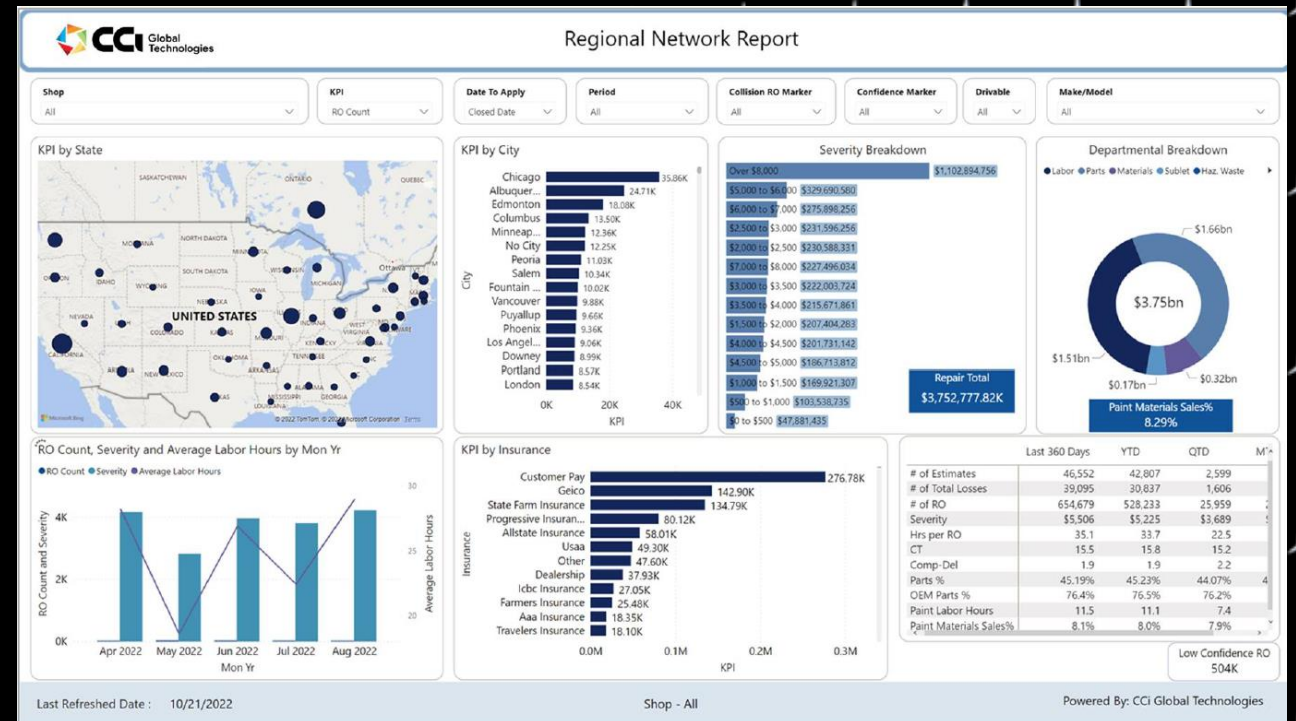
- Improving vehicle trigger to capture more
- Access to additional Xentry tools to simplify the lead handling process

Repair Order Data

Onboarding CCI for RO data to show the value of our program.

Data will provide Insights into our network

- Throughput
- Cycle times
- CSI/NPS
- Parts usage
- Backorder details



Waterborne Paint

The shift to Waterborne will begin in 2025.



Vans Only Program

Launch of the stand-alone Vans Program coming in 2025.

Program requirements will match Base Certification minus the aluminum body repair tools and work area.

Program materials will be available Q1



I-CAR Training Alliance

Mercedes-Benz joined the I-Car Training Alliance. Our training will now get you I-CAR course credits helping to cut costs and time away from production.



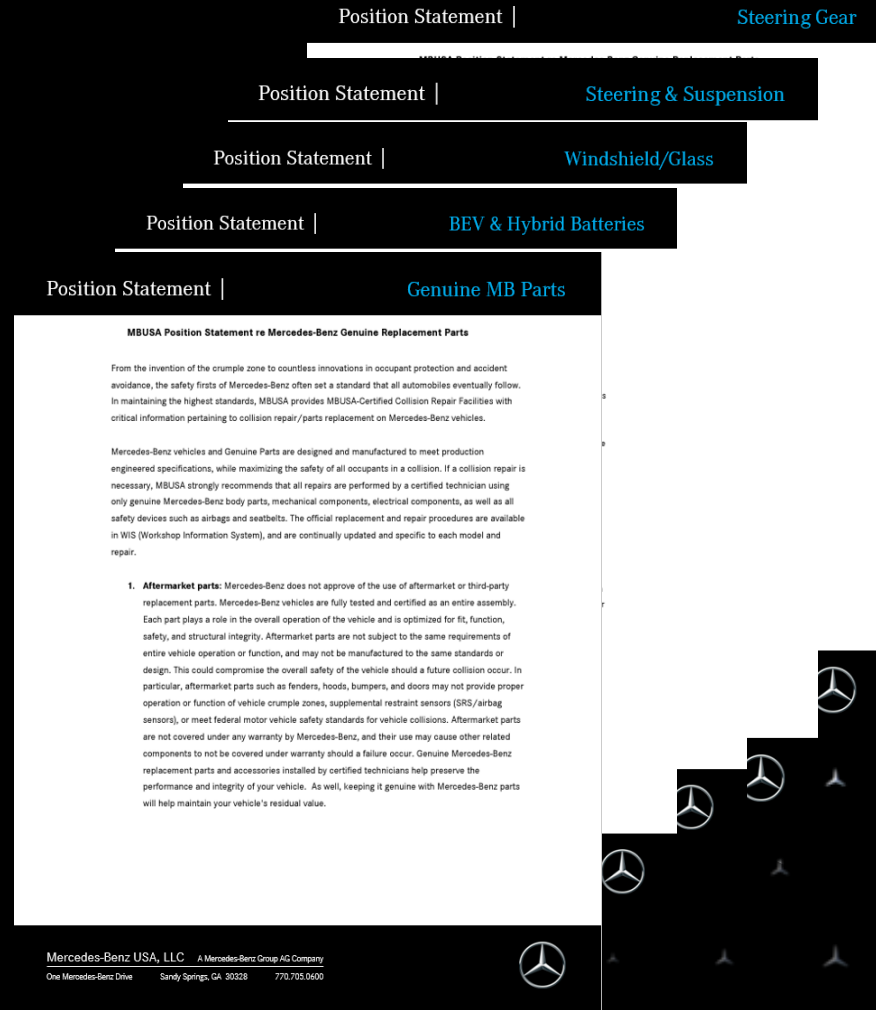
Website: <https://www.i-car.com/industry-training-alliance-partner?partner=Mercedes>

Position Statements

Updates and All New Position Statements being developed.

- Stronger wording
- More comprehensive
- More topics
- Updates to match current vehicle requirements

Any Suggestions please email us at:
mbcollision@mbusa.com -with subject line
“Position Statement Request”



Program Fee Change

		DEALER-OWNED	DEALER SPONSORED	
BASE	Initial Certification:	No Cost	\$7,000	
	Recertification:	No Cost	\$6,000	
ELITE	Initial Certification:	\$14,000	\$18,000	
	Recertification:	\$12,000	\$15,000	
Vans	Initial Certification:	No Cost	Add on \$3,000	Vans Only \$7,000
	Recertification:	No Cost	Add on \$3,000	Vans Only \$6,000
MB Electric	Initial Certification:	Included in Elite Certification		
	Recertification:			

A dark grey Mercedes-Benz S-Class sedan is shown from a front-three-quarter view. The car's body is semi-transparent, revealing the internal chassis, suspension, and engine components. The front end features the Mercedes-Benz grille and hood ornament. The license plate reads 'S MB 5566'. The car is set against a dark, gradient background.

MB Academy- Collision Technical Training

Technical Collision Training

1

Instructor Lead Training

Hands on in person on site training at one of the MB Learning and Performance Centers.

2

Virtual Instructor Lead Training

Live training delivered virtually through an online platform by MB Collision Facilitators

3

eLearnings

Training provided online via the Learning Link

Instructor Lead Training



Collision Training Centers

- DFW Learning and Performance Center
Grapevine, TX
- New Jersey LPC
Robbinsville, NJ

Technical Training Centers

- Long Beach, CA
- Carol Stream, IL
- Jacksonville, FL

*2 In person classes per year
(can be multiple students)*

Joining Techniques

X0028F-US.TT2



Objectives

- Perform destructive spot weld testing
- Demonstrate the proper application of MB adhesive
- Use approved Rivet systems with Positive joining techniques
- Perform Mixed method techniques
- Utilize thread repair solutions
- Test a structural AL component for cracks with a dye test kit

MRA Platform

X0042F-US.TT2

Mercedes Rear Wheel Architecture



Objectives

- Identify MRA vehicles by their sales designations and chassis codes.
- Name and define the four phases of the Integral Safety Concept.
- Name two new features of the PRE-SAFE® system.
- Increase awareness of Driver Assistance Package 5.0 and NTG 7.0
- Perform required collision related calibrations and radar attenuation tests.
- Understand the limitations of plastic bumper repair and aluminum component repairs.

MHA Platform

X0030F-US.TT2

Mercedes High Body Architecture



Objectives

- Identify MHA vehicles by their sales designations and chassis codes.
- Perform disassembly and reassembly of interior and exterior components.
- Name two new features of the GLE and GLS.
- Name two new features of the new G-Class.
- Perform disassembly and reassembly of interior and exterior components of the new G-Class.
- Perform a radar calibration on the new G-Class using a new special tool.

MFA Platform

X0031F-US.TT2

Mercedes Front Wheel Architecture



Objectives

- Identify MFA vehicles by their sales designations and chassis codes.
- Perform disassembly and reassembly of interior and exterior components.
- Name two new features of MBUX.
- Perform wire harness repairs using approved methods.
- Exchange wiper components properly and perform the manufacturer-specific commissioning.

Structural Damage

X0017F-US.TT4



Objectives

- Identify characteristics and repair precautions for steel, composite, and aluminum components.
- Identify and explain crash energy absorbing body and frame features
- Perform a systematic structural damage diagnosis with an electronic measuring system
- Interpret panel replacement specifications and methods using WIS
- Understand the application of corrosion protection and seam sealing materials

Windshield Repair & Replacement

X0003F-US.TT1



Objectives

- Name the approved materials required for fixed glass repair and replacement
- Properly remove and install a glass windshield using approved adhesive technology
- Demonstrate the various repair and removal techniques and state the advantages and disadvantages of each
- Identify and use the appropriate work instructions for windshield repair and replacement
- Describe the necessary calibration operations associated with glass replacement

Aluminum Welding Elite Certification*

TECH 532



Objectives

- Training and Certification pertaining to ISO 9606-2 Aluminum Welding
- 10 day initial session for training and testing
- Certification for welding of Structural Aluminum Components
- Thin Plate Aluminum Certification
- 6 month cycle for re-certification required

*1 welder with up to date
certification must be on staff*

Virtual Instructor Lead Classes



Objectives

- To address specialized topics not typically covered during in person classes
- Deliver cutting edge information in a timely fashion
- Provide a regular schedule of interaction between students and the Learning Academy Collision Repair Instructors
- Allow for student input as to needed training topics

4 shop employees complete 2 classes each

Virtual Class Roster



1234yf Refrigerant

Adhesives and Applicators

Advanced WIS

Brief History of AMG

Chassis Codes

Corrosion Protection

Collision Calibrations

Cosmetic Aluminum Repair

Handling HV in the shop

Intro to NTG7

Research into Wiring Repair

VIN/Part # Decoding

Suggestions for future Virtual topics are always welcomed.

e-Learnings



Requirements

Currently there are over 20 e-Learnings available to satisfy the Base Certification requirement.

4 e-Learnings per year (can be multiple students from the shop)

Courses in Development



Courses submitted for approval:

CV Sprinter 907 Body Repair Training Course

Collision Technician EQ Diagnostic Power Down Certification (shop XENTRY required)


Updating of existing courses:

MHA Platform X0030F-US.TT2 > G Wagon section

Possibly available from Germany:

Soft Top update

Review Menti



Sherwin-Williams



SHERWIN-WILLIAMS®

ABOUT SHERWIN-WILLIAMS

Direct Model:

- 180+ North American auto branch footprint

Innovative Products:

- Versatile, high-performance coatings solutions that drive customer productivity and profitability

Our People:

- Direct Sherwin-Williams trained employees at every customer touchpoint

Customer Productivity Solutions:

- Driving throughput to enable greater customer success and profitability

SHERWIN-WILLIAMS.



Ultra 9K delivers on color accuracy (and speed) for first-time repairs – especially today's complex finishes – with an innovative and compact bank including 60 toners rich in pigments, intensity and effect.

This streamlined bank is combined with our premium portfolio of Ultra System™ undercoats and clears to meet critical production-specific needs.

- Innovative waterborne technology – unlike any other
- Superior color matching of all relevant OEM colors and styles
- Innovative packaging design to maintain quality inside the can
- Comprehensive chromatic/metallic/pearl toner offering
- OEM certified

SHERWIN-WILLIAMS®



Digital, Connected, Ecosystem

SHERWIN-WILLIAMS®




ULTRA
9K™



- BMS
- Spectrometer
- Color Software
- Automated Dispensing
- Inventory Management
- Ordering
- Invoicing
- Reporting
- Sherwin-Williams Branch Store

All Connected

- **Labor Optimization:** Que up to 6 batches, walk away and turn labor while it mixes and stages the paint.
- **Material Optimization:** Mix accuracy beyond human capabilities improves first time quality, reduces waste.
- **Profit Optimization:** Accurately account for material usage and invoice for it.

Certified Collision Center Meeting 2024 | MBUSA

SHERWIN-WILLIAMS®

ONE STOP SUPPLIER WITH ASSOCIATED PRODUCTS

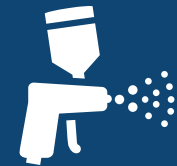
- Single Source Supplier
- Convenience to manage approved product list
- Comprehensive inventory management and invoicing.



Tapes



Abrasives/
Equipment



Access to
private
brands and
most major
name
brands



Quotes on
capital
equipment
& tools

Our Overall Approach

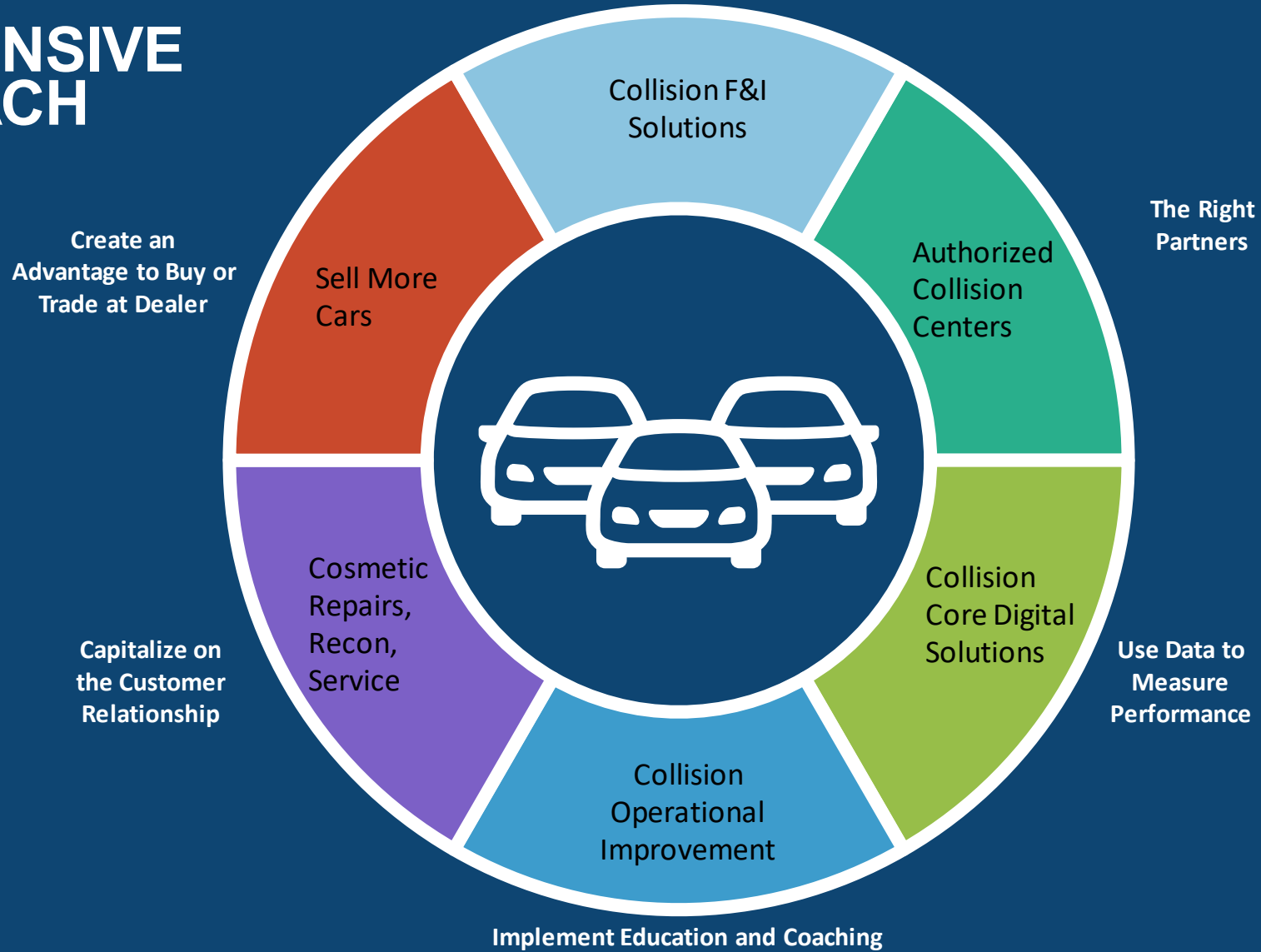
- 1** Execute seamless conversions
- 2** Drive product innovation
- 3** Deliver profit focused process for repair cycles, and CSI
- 4** Utilize account management and network tools to control outcomes
- 5** Create peer connectivity and accountability through performance groups
- 6** Provide solutions to direct control of customer claims
- 7** Improve profits and reduce friction in the claims cycle
- 8** Leverage collision to grow sales in F&I, parts, service new cars and used cars

A Unique, Innovative
Solution Provider

SHERWIN-WILLIAMS®



A COMPREHENSIVE APPROACH



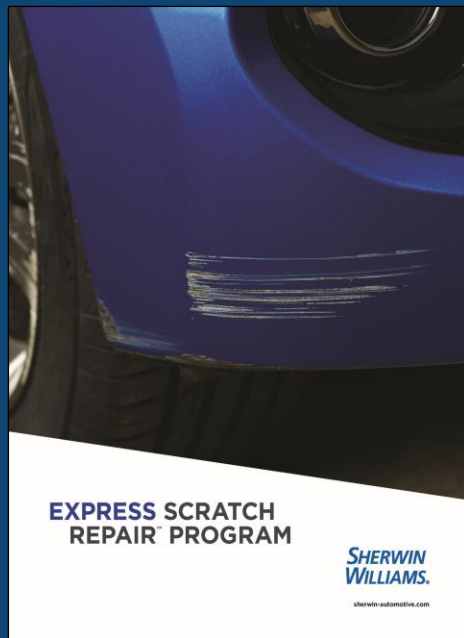
Create a Gravitational Pull To the Dealer and Authorized Collision Center

SHERWIN-WILLIAMS®

Revenue Enhancement Programs

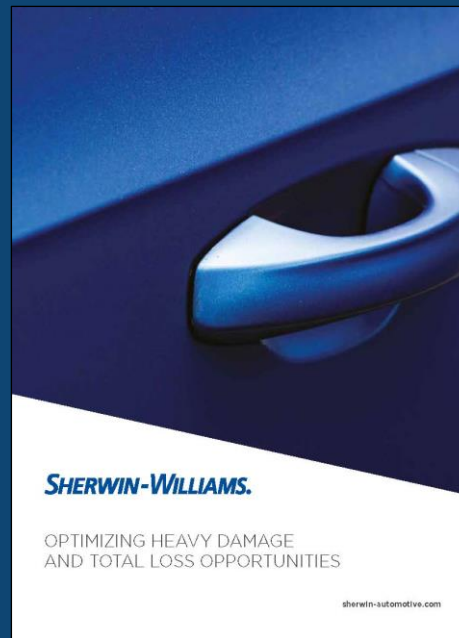
EXPRESS SCRATCH REPAIR

Quick and Affordable Cosmetic Repairs
from Service Lane Vehicles



TOTAL LOSS SALES OPTIMIZATION

Turn Total Loss Units into Sales Each Year



GUARDSMAN AUTO CLUB

Policy that supports Post-Accident
Protection for Consumers



Collision Core

COLLISION CORE INVENTORY

Optimize Inventory for Profitability

- **Accurate Stock Audits:** Ensure precise inventory levels
- **Controlled Ordering:** Streamline product purchases
- **Budget Monitoring:** Keep monthly costs in check
- **Efficient Invoicing:** Capture all billable items accurately



SHERWIN-WILLIAMS.
COLLISION **CORE**
INVENTORY

Collision Core

COLLISION CORE DIAGNOSTICS

Business Control Available Anytime

- **Performance Review:** Analyze key metrics to guide decisions
- **Spot Opportunities:** Identify growth areas quickly
- **Detailed Reports:** Uncover improvement opportunities
- **Aggregated Insights:** Manage effectively with MSO-level data



SHERWIN-WILLIAMS.

COLLISION **CORE**[™]
DIAGNOSTICS

Performance Optimization

OPERATIONAL OPTIMIZATION TRAINING

Boost Efficiency Across Repair Processes

- Damage Analysis
- Parts Correctness
- In-Process Quality Assurance
- Parts and Estimation Accuracy
- Accident Express Repair
- Express Cosmetic Repair



PERFORMANCE PEER GROUPS

Grow Through Collaboration and Expert Guidance

- Peer Groups
- Detailed Financial Composites
- Coaching Sessions
- Continuous Education
- Comprehensive Offering
 - Management by Square One Systems
 - Moderation by QLC Inc.
 - Education by Collision Advice
 - Auditing by DEKRA



SHERWIN-WILLIAMS



Official Team Partner

AMG
PETRONAS
FORMULA ONE TEAM

PRIZE DRAWING



Certified Collision Center Meeting 2024 | MBUSA



Today's Prizes

Certified Collision Center Meeting 2024 | MBUSA

SHERWIN-WILLIAMS

Official Team Partner



AMG
PETRONAS
FORMULA ONE TEAM



Miami Club
May 2-4, 2025

(1) Mercedes-Benz Certified Collision Center will win a VIP Experience for 2 to the 2025 Miami Grand Prix.

Hosted by Mercedes-Petronas F1 Racing and Sherwin-Williams

**Contest rules to be
announced soon**

SHERWIN-WILLIAMS

Official Team Partner



**AMG
PETRONAS**
FORMULA ONE TEAM

ted.c.williams@sherwin.com

jason.l.crager@sherwin.com

SHERWIN-WILLIAMS®





PPG



We protect and
beautify the world®

PPG Industries, Inc. Waterborne? Do We Still Have Slides?



Presenters



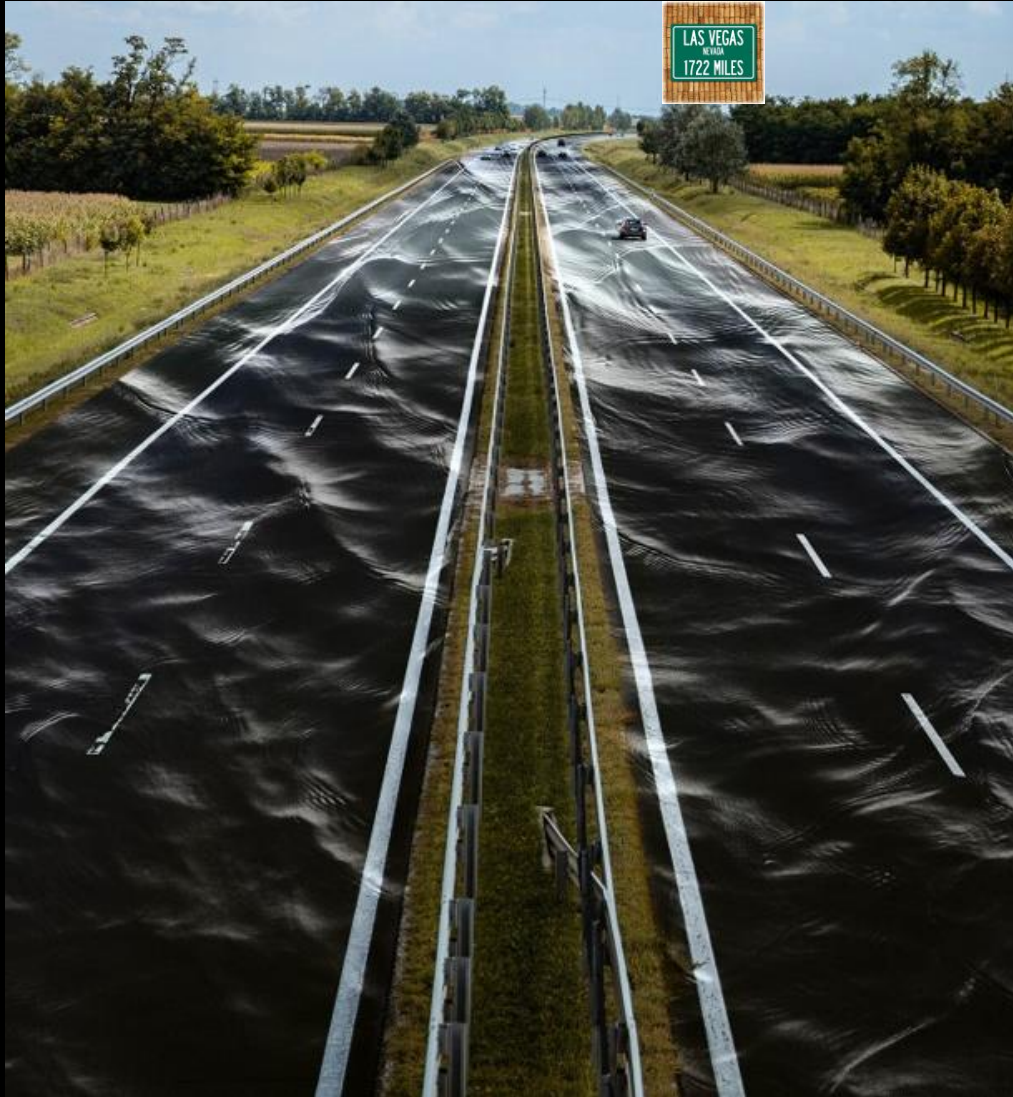
We protect and beautify the world®



- 32 years experience in Automotive Collision Repair
- 17 years experience in administering and supporting OEM-certified facilities
- Dedicated support to OEMs in support of paint-related opportunities
- Dedicated support to OEMs in support of collision repair opportunities
- Liaison for Industry Associations
- **Mission: To assist the top shops across the nation in their pursuit of OEM Certification**

- 15 years experience in Automotive Collision Repair
- 10 years in dealership and auction operations, enhancing operational efficiency and customer satisfaction
- Currently serving as a Business Development Manager, specializing in helping collision centers achieve and maintain profitability
- Advisory Board member for Automotive Educational Programs and engaged participate in Regional I-CAR committees





ENVIROBASE® High Performance

ENVIROBASE® High Performance

The centerpiece of our portfolio

PPG launches the first waterborne basecoat refinish system, **ENVIROBASE®**

XIRALLIC® toners, creating a shimmering and sparkling finish, are launched

Introduction of **SPECTRALFLAIR®** Prism Silver, Liquid Aluminum and High Chroma toners

PPG revamps its offer for deep, pure and vibrant colors, launching a new generation of High Chroma and **ANDARO®** Toners

1999

2005

2006

2008

2012

2014

2018

2024

Upgrade to **ENVIROBASE®** High Performance – the second generation of waterborne technology

COLORSTREAM® and **CHROMAFLAIR®** toners are launched to enable an evolution in the style of car finishes

A new look for the leading brand. PPG continues to improve the system's color capability, adding **COLORSTREAM®** Lapis Sunlight toner to the range

Introduce **ONEVISIT™** modifier to offer additional application flexibility, with further enhancements planned for 2024 and beyond



We protect and beautify the world®

Mercedes-Benz

ENVIROBASE® High Performance

Same system, more flexibility

With the addition of the **OneVisit** modifier,

Repair Facilities have the **flexibility** to choose between standard or wet-on-wet application.



Built on OEM expertise

Low VOC

Save time, less waste

Excellent durability

color matching

Consistent performance

Easy to use, spray and blend

Used by more than 40,000 body shops worldwide

Best appearance overall

Flexibility



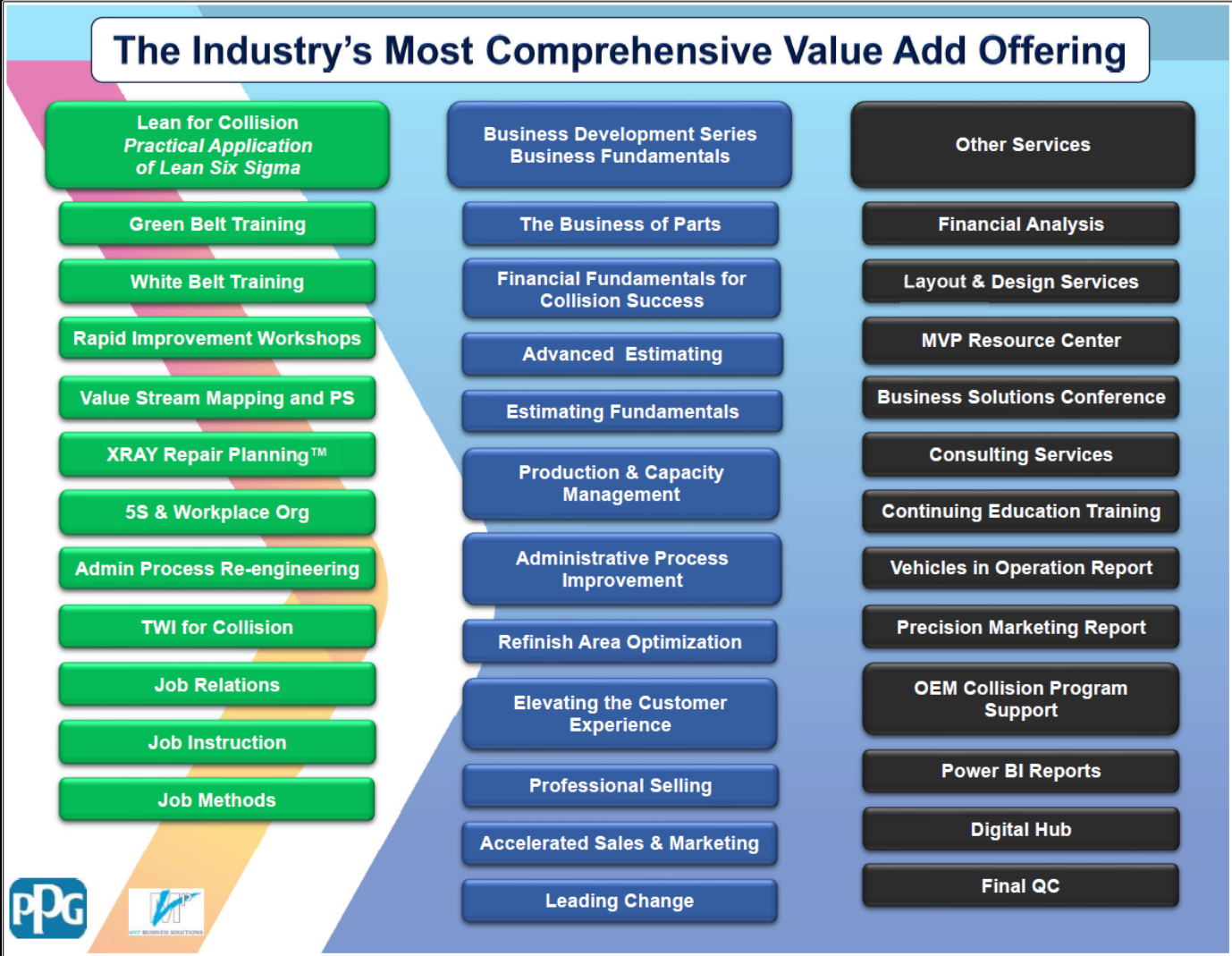
ENVIROBASE® High Performance with OneVisit™ Modifier

Competitive Advantage: Digital Automated Tools

- *OneVisit* is fully compatible with the PPG MOONWALK® automated mixing system
- The paint system is supported by the PPG LINQ™ advanced color matching and automation tools
 - With *PPG LINQ*, painters can modernize their repair processes using the cloud-based platform and its interconnected digital hardware, software and innovative services, gaining clear benefits.



The Other 95%



On the Road Garage FNL.mp4

[OTRG VIDEO - PROUD PPG PARTNER \(youtube.com\)](#)



We protect and beautify the world®

Come talk to us about certifications, color tools or FinalQC!



Jennifer



Amanda





BASF

A silver Mercedes-Benz 300 SL Roadster is parked in front of a wall with the BASF logo. The car's gull-wing doors are open, and it is positioned on a light-colored tiled floor. The background wall is light gray with the BASF logo in large, bold, black letters.

BASF

Mercedes Benz
Certified Collision Center Summit

Daniel Rosenberg
Strategic Account Manager OEM
November 4, 2024

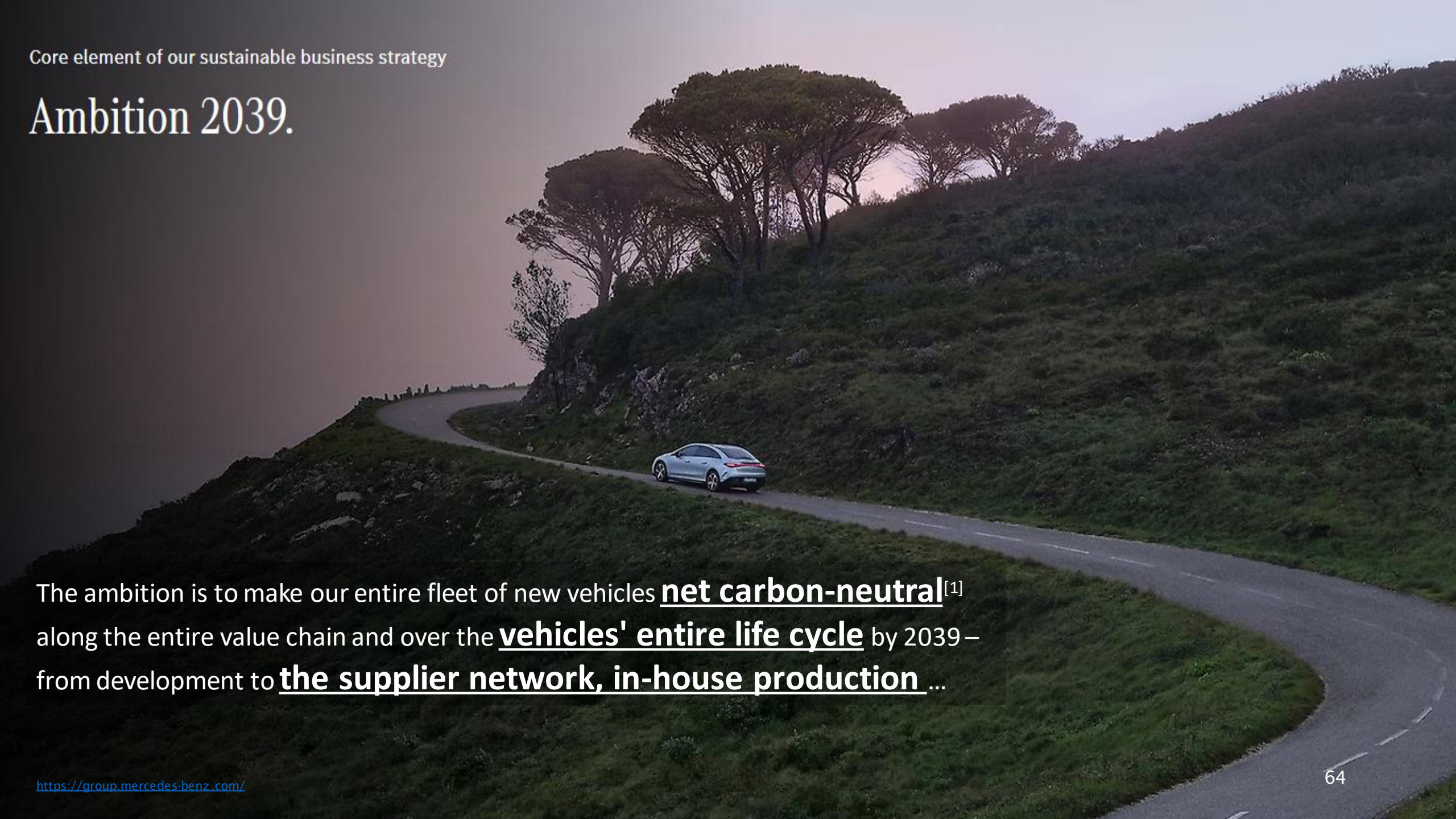
Up Front - Take Aways

Implications to shops from OEM/Insurance sustainability targets

Monetary benefit of easy sustainable actions for shop owners

Core element of our sustainable business strategy

Ambition 2039.

A light blue car is driving on a winding asphalt road that curves through a hilly landscape. The road is bordered by green grass and shrubs. In the background, there are several tall, dark trees on a hillside. The sky is a pale, hazy blue.

The ambition is to make our entire fleet of new vehicles **net carbon-neutral**^[1] along the entire value chain and over the **vehicles' entire life cycle** by 2039 – from development to **the supplier network, in-house production** ...

Facts and figures

Mercedes-Benz Plant Tuscaloosa.

114 acres of manufacturing

~300,000 Annual Production

**6,300 Employees
+57,000 suppliers**

GLE, GLS, EQS, EQE

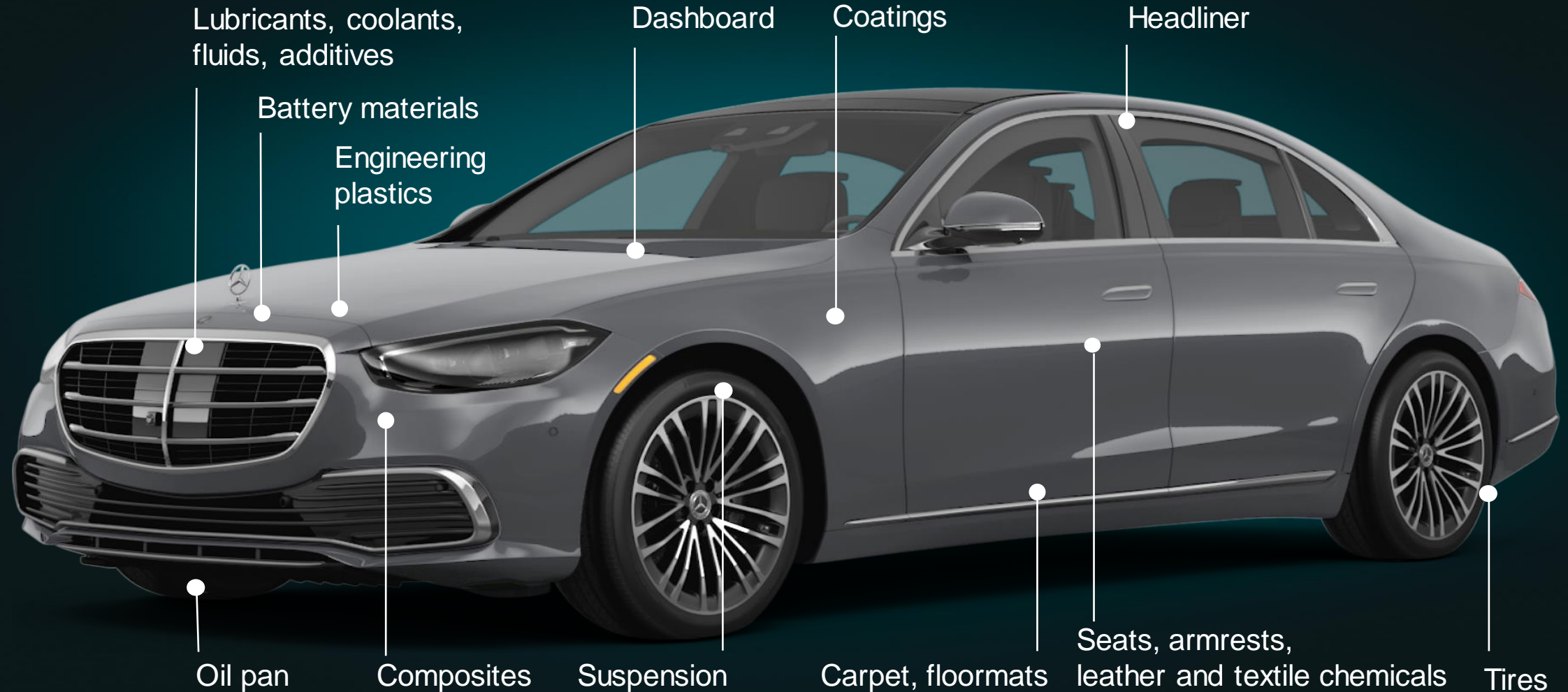
2022-2026 Sustainability Projects

Demand-orientated local lighting control

High efficiency heat recovery


AI regulated conditioning of booth air

BASF – Much more than a paint company



BASF Sustainability targets

2030



25%

*CO*₂ emissions reduction
compared with 2018¹

2050



**Net
Zero**

*CO*₂ emissions¹

¹ The goal includes Scope 1 and Scope 2 emissions. Other greenhouse gases are converted into CO2 equivalents according to the Greenhouse Gas Protocol

Sustainability still in early stages in the Collision Industry

Lack of knowledge around sustainability

Monetary benefit not clear for shop owners

“Mentality: Sustainability does not affect our business”

MYTH

Paint **More**



Efficiency



Profitability



Renewable
Energy



Recycle



with **Less**



A brand of BASF –
We create chemistry



Process
Time



Emissions
CO₂, VOCs



Waste



Paint
Materials



Carbon
Footprint

Sustainability – 100 Line

LOWEST VOC



**Exceeds all global
VOC requirements
for Exceptional
Sustainability**

INTEGRATED PROCESSES



**UV Cure &
direct to metal
Improved
Profitability**

STRATEGICALLY ALIGNED



**Strategic
Partnerships
Collision Industry,
Insurers, OEMs**

PROCESS OPTIMIZATION



**Speed, Improved
workflow reduce
emissions &
energy costs**

BIOMASS BALANCE



**Drives use of
renewable raw
materials**

The only paint line that already meets 2030 SCAQMD VOC requirements

Booth cycle time reductions – 100 Line

Performance Collision – St. Catherines

Booth cycle time reduced from
55 to 35 minutes for 2 stage repair
120 to 45 minutes for a full-sided 3 stage

Freeman Collision – Santa Rosa

50% reduction in booth cycle time
23% increase in monthly revenue

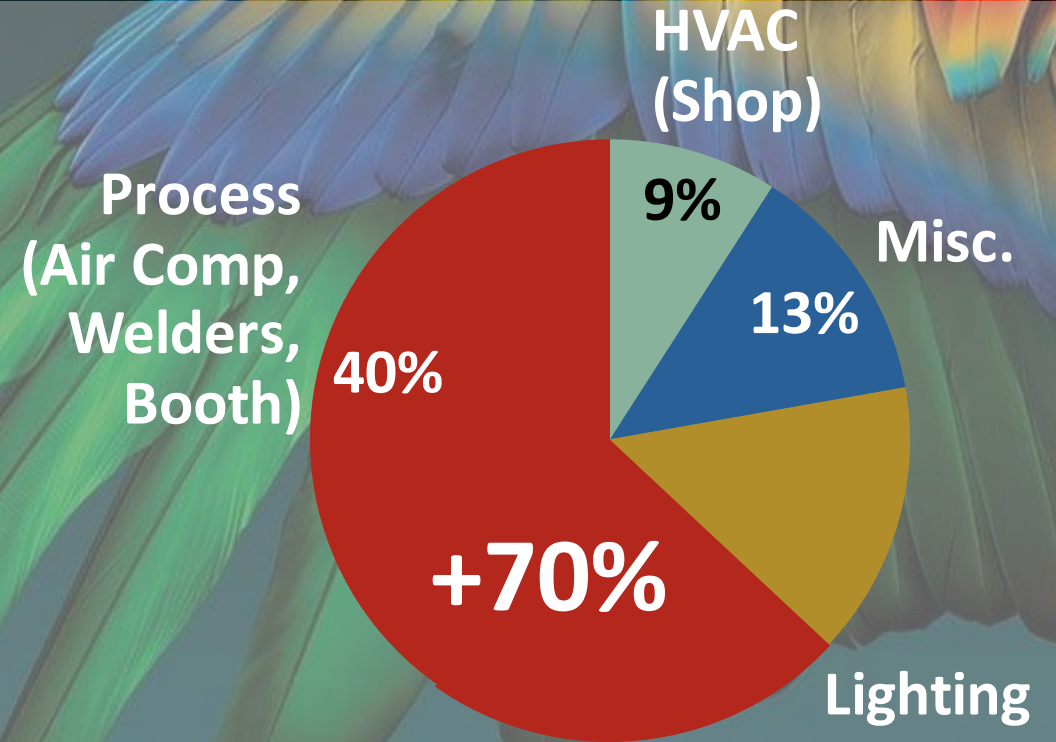
On Line Collision – Langley

40% reduction in booth cycle time
30% increase in total throughput
70% reduction in polishing time needed

Energy Consumption

Avg shop in the US spends
\$2-3,000 / Mo on utilities

Does this sound like
your shop?

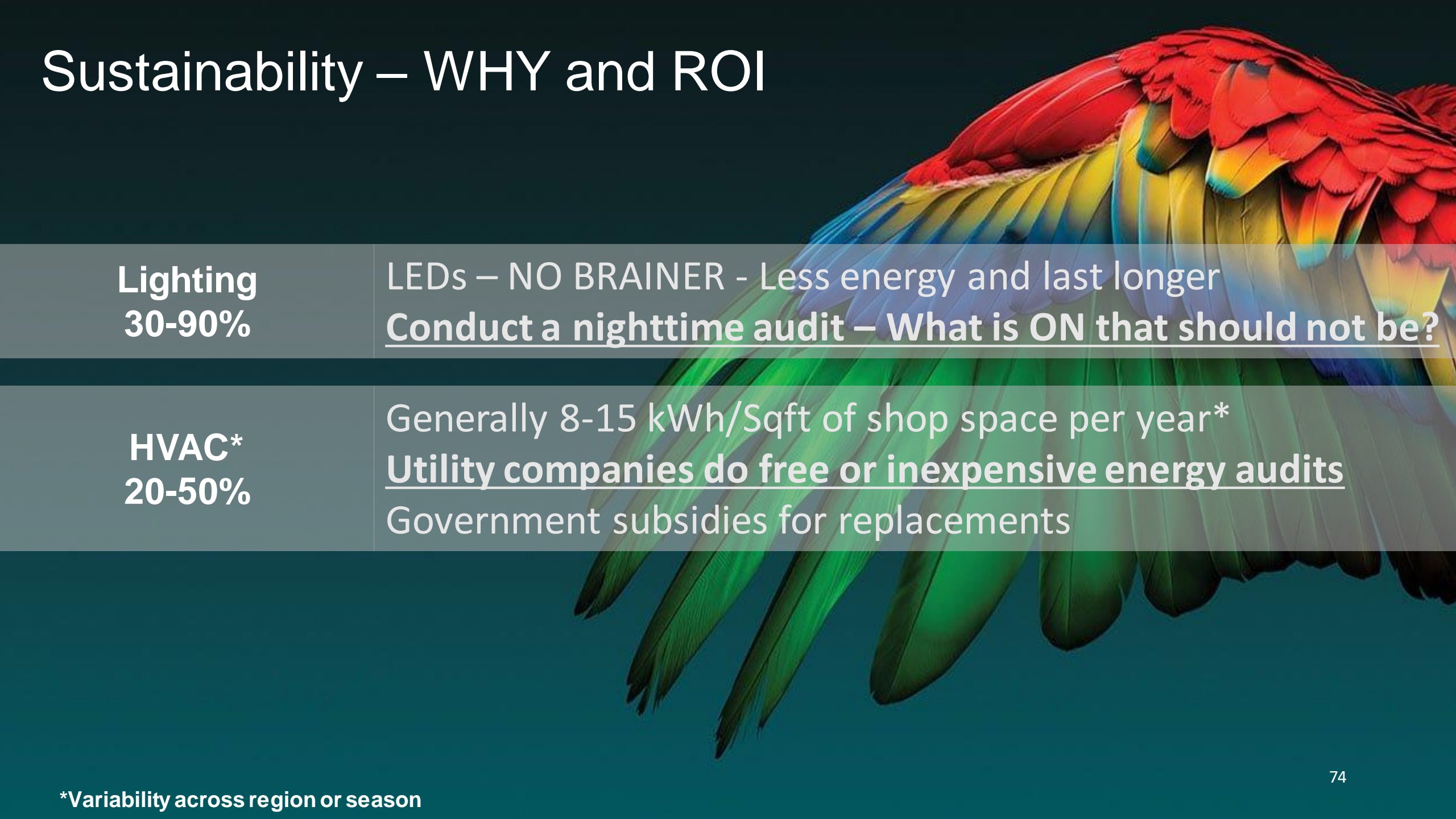


Sustainability – WHY and ROI

Lighting
30-90%

LEDs – NO BRAINER - Less energy and last longer
Conduct a nighttime audit – What is ON that should not be?

Sustainability – WHY and ROI



Lighting
30-90%

LEDs – NO BRAINER - Less energy and last longer
Conduct a nighttime audit – What is ON that should not be?

HVAC*
20-50%

Generally 8-15 kWh/Sqft of shop space per year*
Utility companies do free or inexpensive energy audits
Government subsidies for replacements

Sustainability – WHY and ROI

Lighting
30-90%

LEDs – NO BRAINER - Less energy and last longer
Conduct a nighttime audit – What is ON that should not be?


HVAC*
20-50%

Generally 8-15 kWh/Sqft of shop space per year*
Utility companies do free or inexpensive energy audits
Government subsidies for replacements

Shop Air
20-30%

Generally 3-4 CFM per employee
-2 PSI equals 1% yearly operating cost reduction (~3-500 / yr)
Ask your mechanical contractor for a leak audit
20-30% of compressed air leaks

Sustainability – Best Practices



Utilities and Paint – Major influencers over fixed and variable expenses

Embrace Water Based Paints

Easy sustainability actions for major OpEx reduction

Invest in Energy-Efficient Equipment

Implement Comprehensive Recycling Programs

Prioritize Sustainable Materials and Practices

Educate and Engage Employees and Customers


Thank You



A dark, atmospheric photograph of a Mercedes-Benz technician working on the front of a car in a service center. The technician, wearing safety glasses and a dark uniform, is focused on the engine area. The car's headlight and front wheel are visible. The background shows the interior of a large service facility with various equipment and tools.

Xentry Parts Information

Part Search- Interactive Image

 XENTRY Parts Information

BENITO CID
00030 - Mercedes-Benz USA, LLC.

Vehicle: W1K6G7GBXPA212890 (C223_FV) Color: 799 - MANUFAKTUR diamond white bright - Metallic finish FIN: W1K2231761A212890
S 580 4MATIC Sedan (long wheelbase) Equipment: 805 - Leather/nappa/semi-aniline - Beige

PC > S 580 4MATIC Sedan (long wheelbase) > Vehicle: W1K6G7GBXPA212890 > C223_FV > Visual navigation


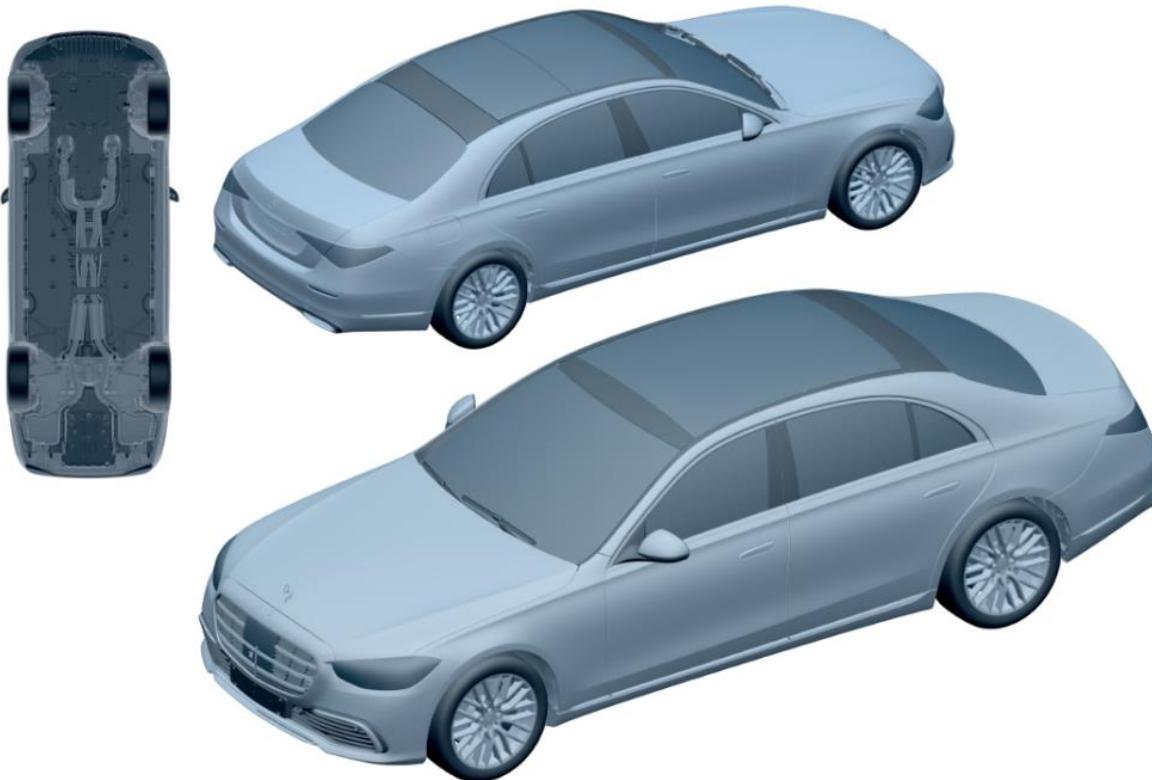
Vehicle Engine Automatic transmission

Top 5

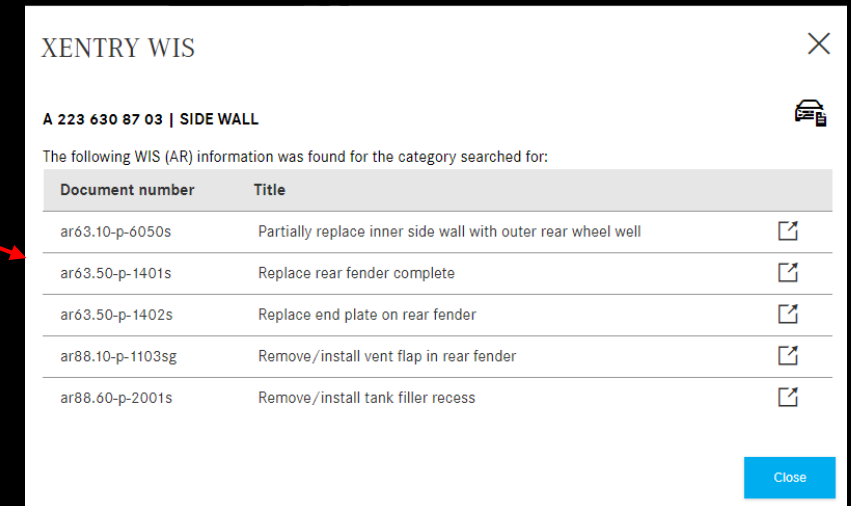
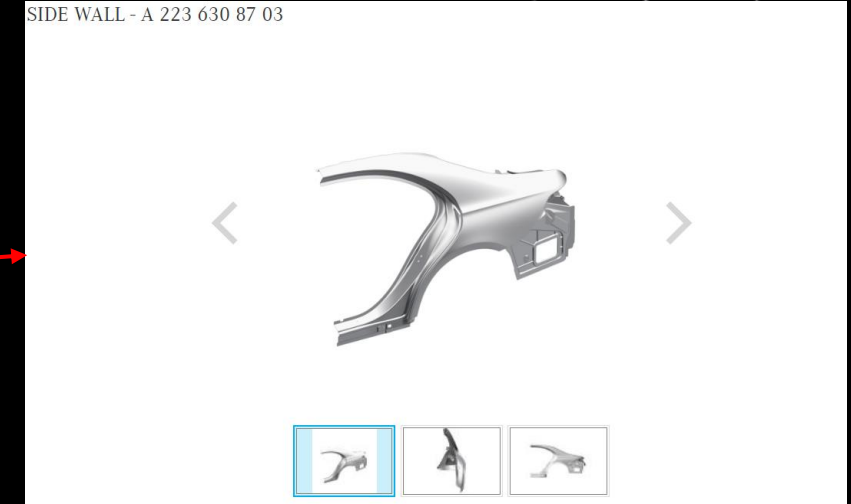
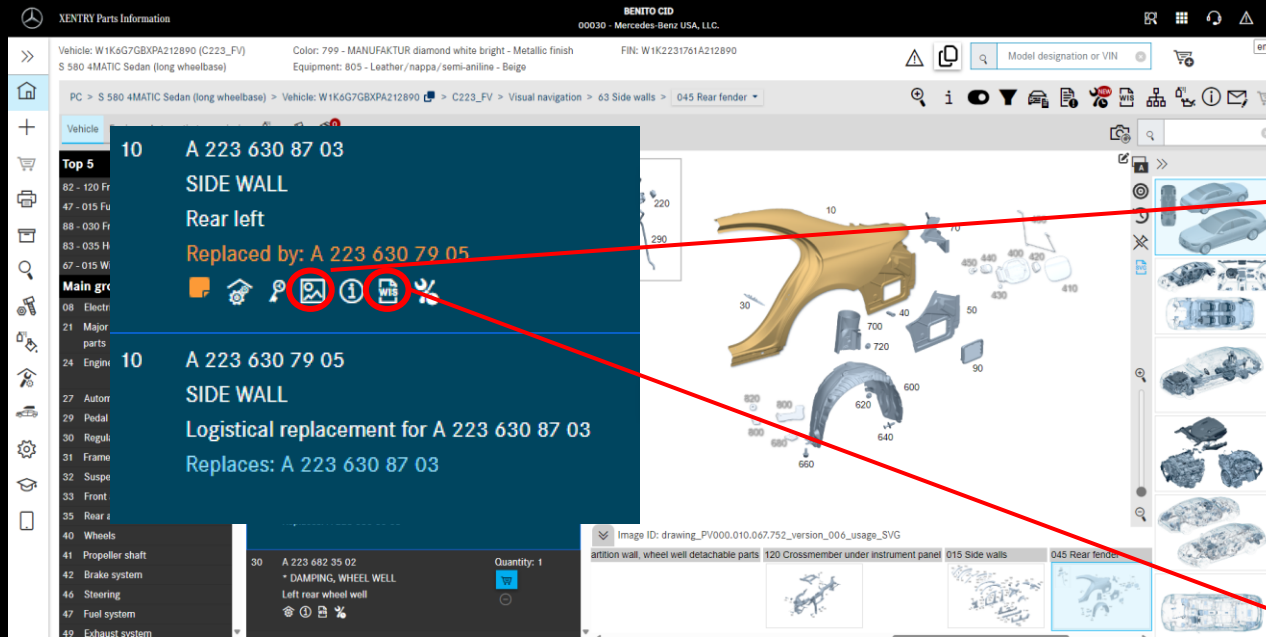
- 82 - 120 Front windshield wiper
- 88 - 030 Front bumper
- 83 - 035 Heating and air conditioner h...
- 47 - 015 Fuel tank with detachable parts
- 83 - 110 Water deflector with intake bo...

Main groups

- 08 Electric drive/hybrid drive
- 21 Major assembly detachable parts
- 24 Engine/transmission suspension
- 27 Automatic transmission
- 29 Pedal assembly
- 30 Regulation
- 31 Frame/trailer coupling
- 32 Suspension
- 33 Front axle
- 35 Rear axle
- 40 Wheels
- 41 Propeller shaft
- 42 Brake system
- 46 Steering
- 47 Fuel system
- 49 Exhaust system
- 49 Exhaust system



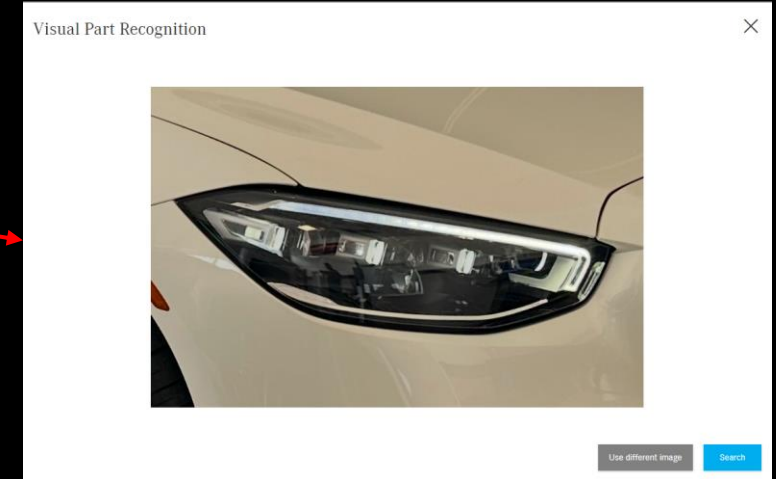
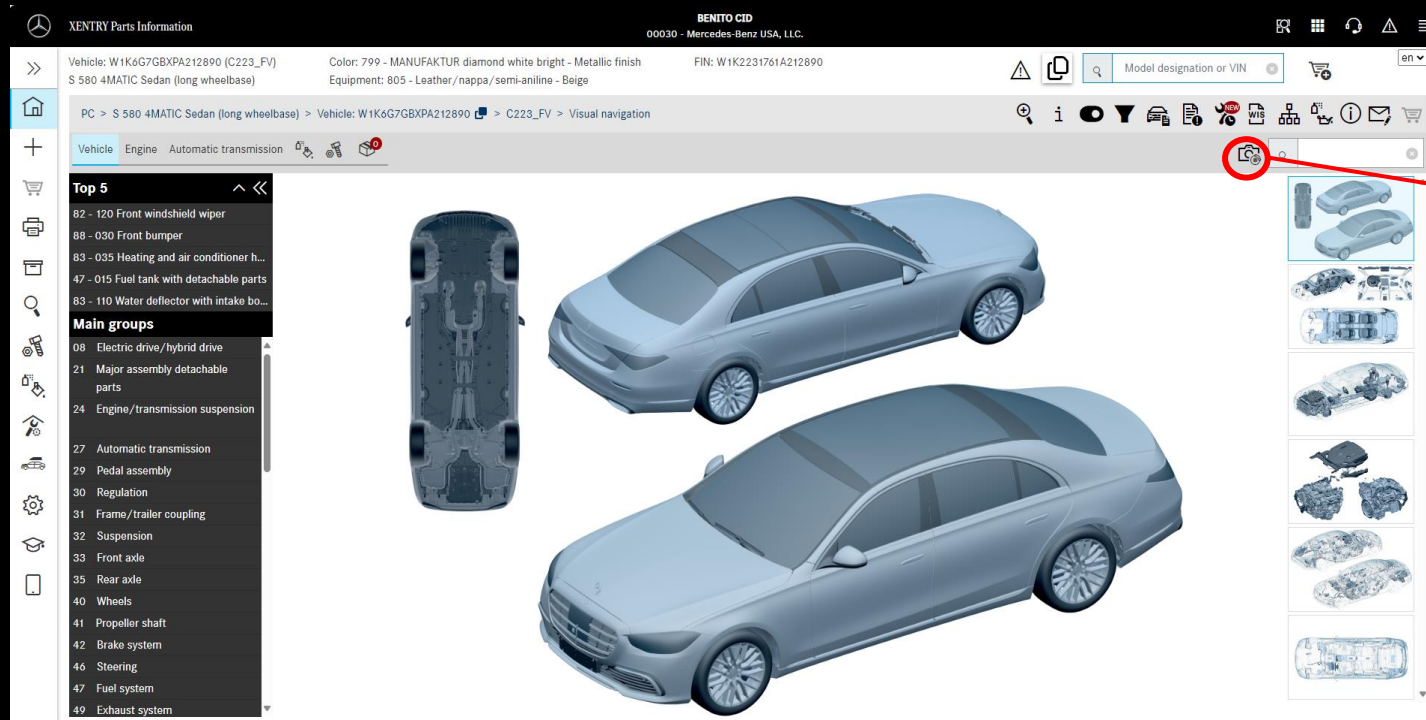
WIS and Xentry Parts Enhancements



Additional features that may be beneficial to you:

1. Images now available for many parts
2. When you search parts by VIN you can click on the “WIS” icon to be taken directly to the procedures available for that part-time saver in the blueprinting process!

Part Search- Photo



6 hits in 1 category/ies

Model designation	Part	Group
Lamp unit, daytime running lamps and turn signal lights		
223176	20 LAMP UNIT	82 - Electr. system
F	Right lamp unit	175 - Front illumination
223176	25 LAMP UNIT	82 - Electr. system
F	Right lamp unit	175 - Front illumination
223176	25 LAMP UNIT	82 - Electr. system
F	Left lamp unit	175 - Front illumination
223176	20 LAMP UNIT	82 - Electr. system
F	Left lamp unit	175 - Front illumination
223176	30 SEAL, LAMP HOUSING	82 - Electr. system
F	Right lamp unit	175 - Front illumination
223176	30 SEAL, LAMP HOUSING	82 - Electr. system
F	Left lamp unit	175 - Front illumination

Use different image Close

Searching a part by picture is possible.

1. Open Xentry Parts
2. Click on the “camera” icon
3. Take picture or chose one from your library
4. Click on “Search”

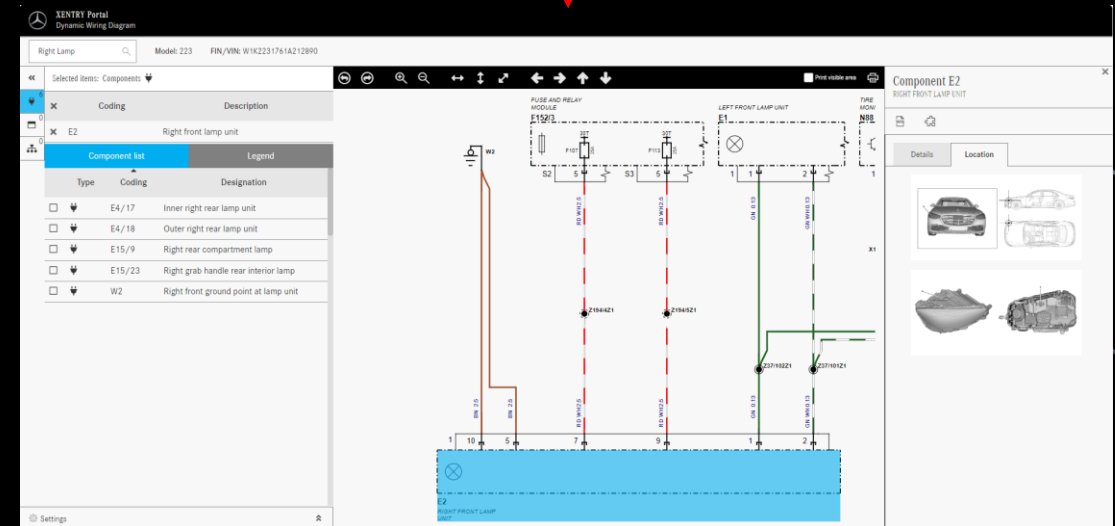
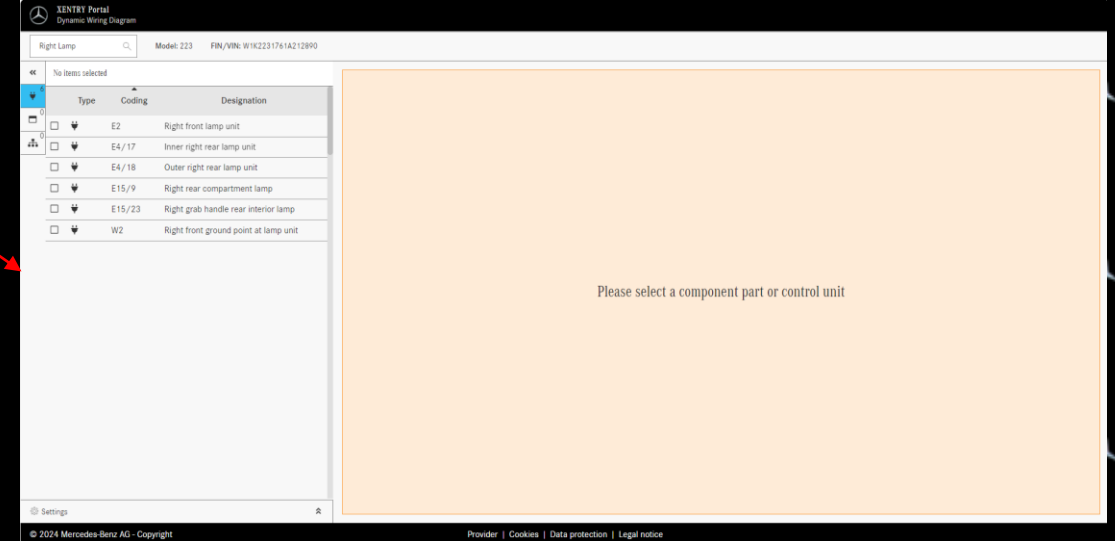
Dynamic Wiring Diagram



Wiring repairs are possible and encouraged. Proper repair can help shorten cycle time.

- From the part you can click on the “Wiring Diagram” icon and choose the part you are looking for information on.
- You will then see the details like; connector part number, wire color, diameter, etc. This along with the procedures provides what you need to carry out a successful repair

Mercedes-Benz



A dark, semi-transparent car is centered in the image. Surrounding the car are several circular icons representing different technologies: a shield with binary code (010 101), a cloud with a plus sign, a microchip, a cloud with a plus sign, a steering wheel with a plus sign, a car with a plus sign, a battery with a lightning bolt, a location pin with a lightning bolt, and a circuit board. The background is dark with a grid of small dots.

Mike Anderson



PROTECT THE HOUSE

MIKE ANDERSON, COLLISION ADVICE

Before We Get Started...

Why do I act this way? Because I can't control it.

I have **Tourette Syndrome or a Tic Disorder** – a medical condition. It causes me to make loud sounds, have twitches or say things I don't mean. Please understand that this is a medical condition and I cannot control my tics. Treatment for Tourette and tics is limited and there is no cure. I am grateful for your understanding and empathy.

My condition is covered by the American Disabilities Act.
Visit Tourette.org to learn more.



Why Quality is Dear to My Heart



Why Quality is Dear to My Heart

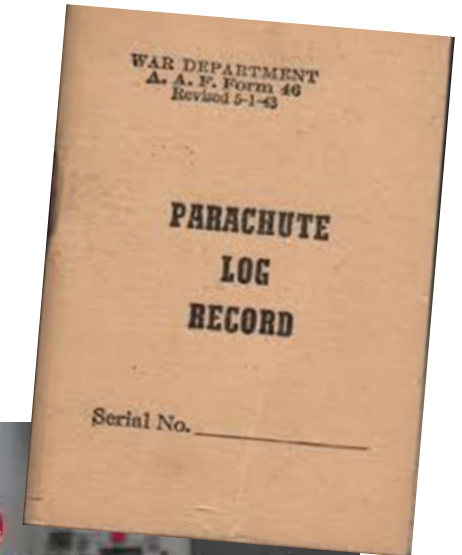


Why Quality is Dear to My Heart

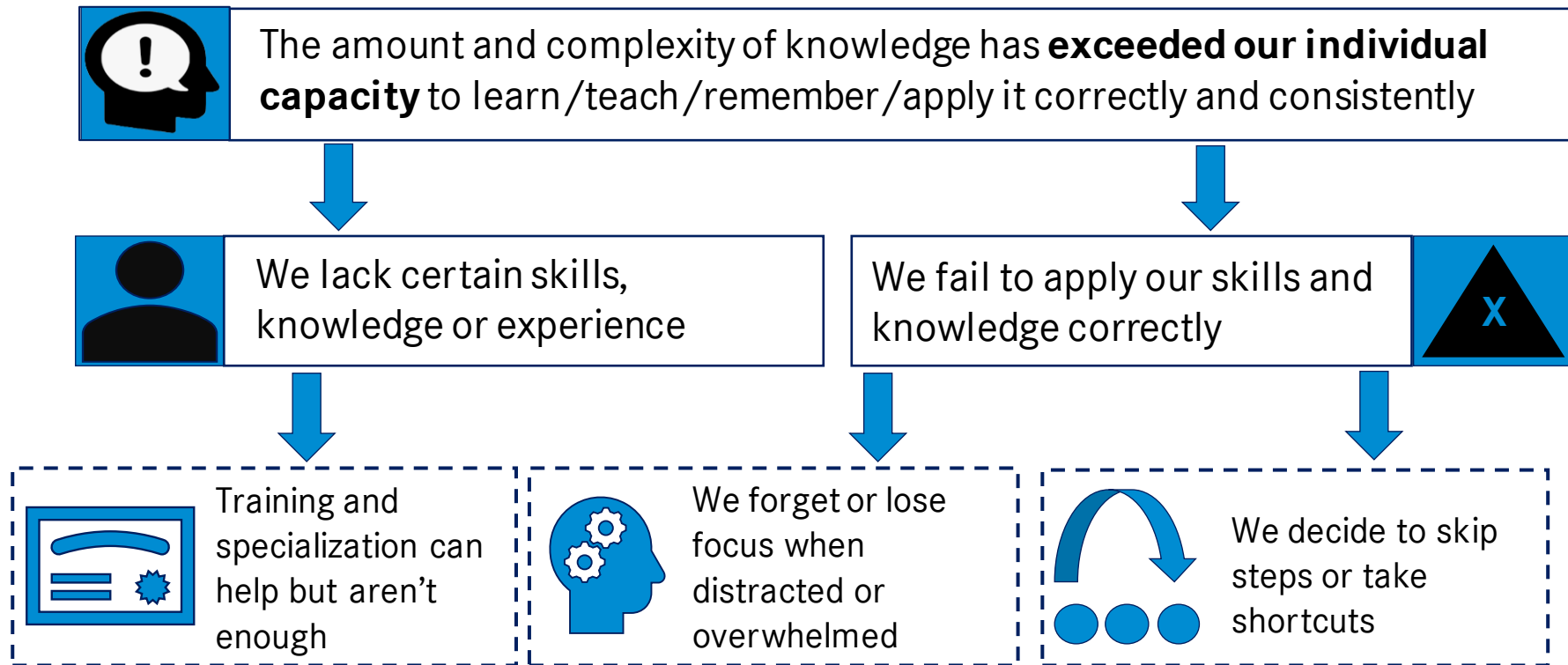


Parachute Riggers

- A **parachute rigger** is a person who is trained or licensed to pack, maintain or repair **parachutes**. A **rigger** is required to understand fabrics, hardware, webbing, regulations, sewing, packing, and other aspects related to the building, packing, repair, and maintenance of **parachutes**.

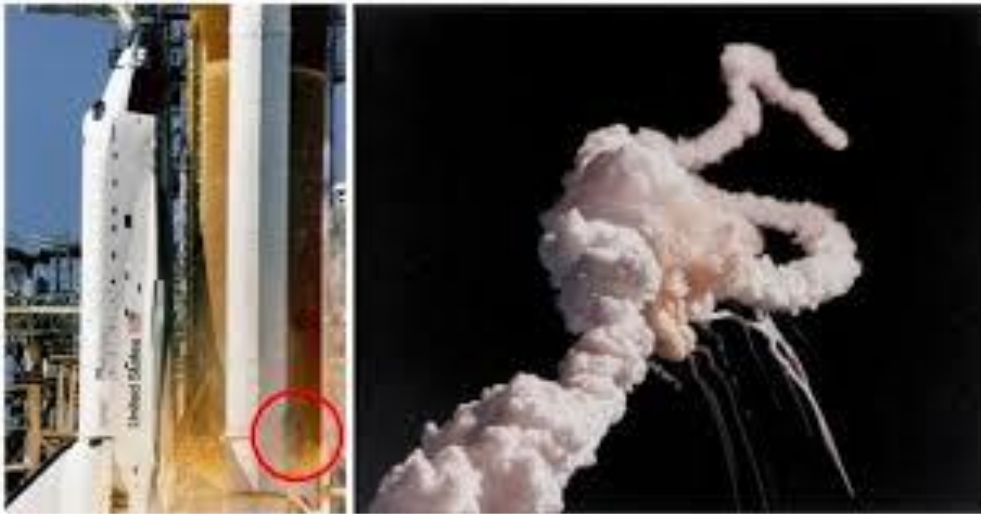


Human Fallibility and Avoidable Mistakes



Human Fallibility and Avoidable Mistakes

The Challenger space shuttle explosion was primarily caused by the failure of an O-ring in one of its solid rocket boosters, which was exacerbated by a lack of communication between engineers who raised concerns about the O-ring's performance in cold temperatures and NASA management who ultimately decided to launch despite these warnings; this poor communication played a significant role in the disaster.



Who is Responsible for Ensuring Quality

EVERYONE!

What areas should we focus on to ensure quality standards are being met?

1. Quality of taking care of our customers
 - Includes cleanliness of the office, production area, and the overall facility
2. Quality of the estimate
3. Quality Documentation
4. Quality Repair



QUALITY CUSTOMER EXPERIENCE

QUALITY CUSTOMER EXPERIENCE

How do we provide quality care for our customers?

- The customer is ALWAYS first and top of mind
- Ensure they are comfortable with the repair plan that we have outlined as well as timelines (expected delivery date)
- Provide a quality estimate & review with them
- Remind them of our commitment to complete a quality repair on their vehicle
- LISTEN & COMMUNICATE
- All paperwork and forms are completed & the customer receives a copy
- Keep the customer updated throughout the repair process
- At vehicle delivery: Confirm they understand the repairs completed and feel safe



Radically Easy To Do Business With Us

Most common time for crashes:

- Weekdays between 4 pm and 8 pm
- At least 43% of accidents happen outside of M-F 8-5 business hours

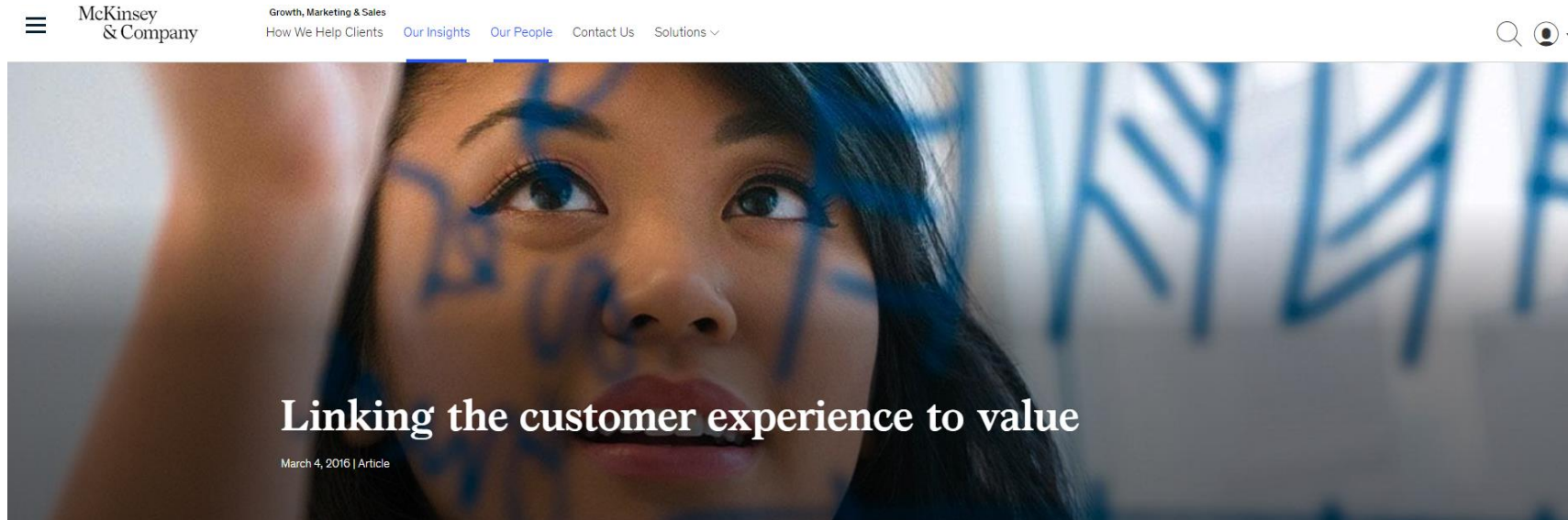
Shops MUST have the ability for a vehicle owner to submit photos for an estimate and schedule their own appointment after hours! DIGITALLY!

Pre-pandemic!

Percent of All Crashes by Day and Time of Day		
Weekdays	4:00-7:59 pm	22.2%
Weekdays	Noon-3:59 pm	19.9%
Weekdays	8:00-11:59 am	14.8%
Weekdays	4:00-7:59 am	9.7%
Weekdays	8:00-11:59 pm	8.1%
Sat-Sun	12:00-3:59 pm	6.0%
Sat-Sun	4:00-7:59 pm	5.3%
Sat-Sun	8:00-11:59 am	3.7%
Sat-Sun	8:00-11:59 pm	3.5%
Weekdays	Midnight-3:59 am	2.6%
Sat-Sun	Midnight-3:59 am	2.4%
Sat-Sun	4:00-7:59 am	1.7%

**We want to make it RADICALLY EASY
for the consumers to do business with us!**

After Hours Contact




Control. Customers want to feel like they are in control of their journey as well as other immediate aspects of their life affected by the customer journey. The more empowered, engaged, and updated they are in the course of the journey, the less likely they are to assign blame to the company when things go wrong. A home-repair company knew from its consumer-satisfaction surveys that customers cared the most about the time it took for a repair worker to visit the home and fix the problems.

However, when the company ran a pilot test, **it was surprised to find that customer-satisfaction scores went up when customers were offered options for scheduling, even if each option offered meant the customer would wait longer than the company's average wait time.**

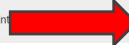
Radically Easy To Do Business With Us


Best Auto Body Shops near 22306 (Alexandria, VA)


>35 mi (7) x Mercedes-Benz Elite x Ratings Top Rated v



Severn Auto Body - Chinqapin Cr#74
★★★★★ 4.8
220 Chinqapin Round Road, Annapolis
1,325 reviews 34.1 mi
"It looks amazing honestly brand new!! The detail was amazing and you all were so helpful and kind throughout the process!! Thank you so much!!"


Schedule an in-person appointment  [Book Appointment](#)

Take photos for a repair cost  [Online Estimate](#)



Rosslyn Auto Body Co.
★★★★★ 4.7
6015 Farrington Ave., Alexandria
2,772 reviews 3.9 mi
"Excellent service! I was very happy with the status updates and follow up emails. Staff are very nice and welcoming."

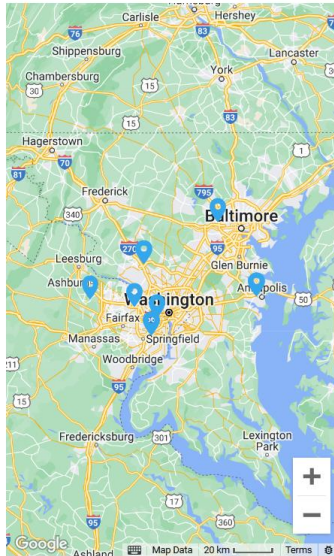
Get an AI powered repair cost prediction [Instant Estimate](#)




Mercedes-Benz of Arlington Collision
★★★★★ 4.3
4013 5th Rd North, Arlington
873 reviews 8.4 mi
"Brian, The service representative at the body shop fully addressed the issue. He researched previous visits on the subject and proved the appropriate resolution. I was recommended to..."

Schedule an in-person appointment [Book Appointment](#)

Get an AI powered repair cost prediction [Instant Estimate](#)



From Our Carwise™ Blog



- Book Appointment

- Online Estimate

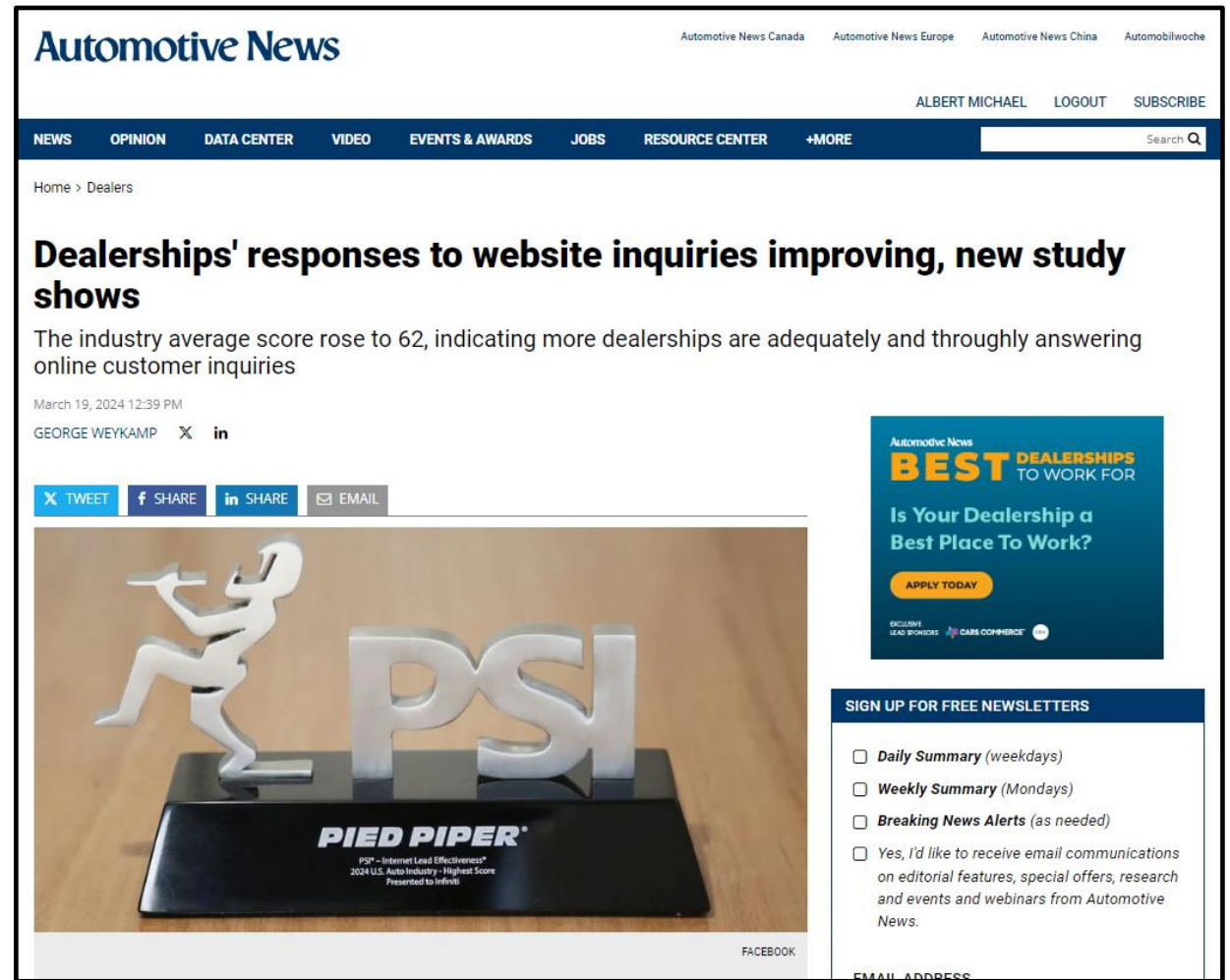
“Virtual Consultation or
In Person Consultation”

After Hours Contact

Response Time Matters

- Chat
- Estimate Requests
- Email
- Assignments Received

Consumers will often select the company that responds the quickest!



QUALITY ESTIMATING



**LOTS OF SALES
COVER LOTS OF SINS**

Average Repair Order (by State)

2023 National average: \$5164 (up \$413 or 9%)

	2023	2022	2021	2020
ALABAMA	\$4,833	\$4,312	\$3,783	\$3,129
ALASKA	\$4,327	\$4,225	\$3,776	\$3,397
ARIZONA	\$5,701	\$5,039	\$4,459	\$3,833
ARK.	\$5,746	\$5,360	\$4,584	\$3,936
CALIF.	\$5,424	\$4,953	\$4,520	\$3,859
COLO.	\$6,047	\$5,152	\$4,408	\$4,257
CONN.	\$5,311	\$4,579	\$4,353	\$3,589
D.C.	\$3,319	\$3,565	\$3,486	\$2,114
DEL.	\$4,021	\$3,688	\$3,363	\$2,848
FLORIDA	\$5,136	\$4,815	\$3,883	\$3,264
GEORGIA	\$5,959	\$5,235	\$4,451	\$3,609
HAWAII	\$4,506	\$4,300	\$3,848	\$3,512
IDAHO	\$6,074	\$5,252	\$4,224	\$3,542
ILLINOIS	\$5,266	\$4,940	\$4,288	\$3,378
INDIANA	\$5,363	\$4,708	\$3,999	\$3,577
IOWA	\$5,270	\$5,270	\$4,514	\$3,604
KANSAS	\$5,338	\$5,264	\$4,670	\$3,835

	2023	2022	2021	2020
KENTUCKY	\$5,171	\$4,718	\$4,200	\$3,503
LOUISIANA	\$5,691	\$5,255	\$4,912	\$3,565
MAINE	\$3,910	\$3,497	\$3,134	\$2,737
MARYLAND	\$4,904	\$4,398	\$3,763	\$2,963
MASS.	\$4,817	\$4,435	\$3,892	\$3,303
MICHIGAN	\$5,325	\$4,995	\$4,364	\$3,415
MINNESOTA	\$5,461	\$5,315	\$4,515	\$3,699
MISSISSIPPI	\$5,238	\$4,974	\$4,265	\$3,589
MISSOURI	\$5,399	\$4,895	\$4,350	\$3,793
MONTANA	\$6,511	\$6,041	\$4,966	\$4,374
NEBRASKA	\$5,773	\$5,371	\$4,490	\$3,946
NEVADA	\$4,829	\$4,442	\$4,028	\$2,803
N.H.	\$4,684	\$4,062	\$3,658	\$3,124
NEW JERSEY	\$5,553	\$5,123	\$4,417	\$3,616
NEW MEXICO	\$4,618	\$4,717	\$4,318	\$3,786
NEW YORK	\$5,765	\$5,233	\$4,541	\$3,587
N.C.	\$5,141	\$4,692	\$3,922	\$3,327

	2023	2022	2021	2020
N.D.	\$4,456	\$4,287	\$4,271	\$3,702
OHIO	\$5,012	\$4,647	\$4,119	\$3,281
OKLAHOMA	\$5,504	\$4,956	\$4,349	\$3,498
OREGON	\$4,915	\$4,687	\$4,071	\$3,308
PENN.	\$4,830	\$4,479	\$3,907	\$3,259
R.I.	\$6,116	\$5,134	\$4,303	\$3,392
S.C.	\$4,708	\$4,445	\$3,784	\$3,228
S.D.	\$5,480	\$5,164	\$4,505	\$4,195
TENNESSEE	\$5,494	\$4,932	\$4,225	\$3,358
TEXAS	\$5,545	\$4,857	\$4,302	\$3,590
UTAH	\$5,548	\$4,938	\$4,140	\$3,516
VERMONT	\$3,607	\$3,659	\$3,056	\$2,761
VIRGINIA	\$4,555	\$3,819	\$3,446	\$2,956
WASH.	\$5,279	\$5,009	\$4,190	\$3,715
W.V.	\$5,050	\$4,768	\$4,288	\$3,376
WISCONSIN	\$5,426	\$5,103	\$4,299	\$3,386
WYOMING	\$5,719	\$4,829	\$4,910	\$4,923

Green =
Highest by year
Red =
Lowest per year

Source: Collision Advice

Average Body Labor Hours (Per Estimate)

	2023	2022	2021	2020
ALABAMA	18.2	17.3	17.1	14.55
ALASKA	17.1	17.9	16.3	15.95
ARIZONA	20.3	20.1	19.3	17.58
ARKANSAS	19.6	18.5	17.6	16.02
CALIFORNIA	19.2	18.8	18.5	17.41
COLORADO	21.4	20.3	18.4	19.18
CONNECTICUT	20.2	19.3	19.8	16.83
DIST. OF COL.	20.1	18.7	18.3	13.88
DELAWARE	18.2	17.5	17.1	14.99
FLORIDA	20.0	19.9	17.8	16.04
GEORGIA	23.1	22.3	20.3	17.50
HAWAII	14.5	14.5	13.7	13.57
IDAHO	20.3	19.5	19.1	16.73
ILLINOIS	20.0	20.0	18.6	15.77
INDIANA	19.2	18.0	16.7	15.67
IOWA	16.8	17.5	16.2	13.89
KANSAS	19.1	19.6	18.8	15.95

	2023	2022	2021	2020
KENTUCKY	19.0	18.3	17.5	15.62
LOUISIANA	18.1	17.6	18.0	14.05
MAINE	17.3	16.4	16.1	14.82
MARYLAND	20.2	19.4	18.2	15.84
MASS.	22.7	22.1	21.3	19.31
MICHIGAN	19.9	19.5	18.8	15.81
MINNESOTA	18.3	18.3	17.9	15.03
MISSISSIPPI	16.8	17.1	16.1	14.24
MISSOURI	19.6	18.9	18.2	16.23
MONTANA	20.8	19.8	18.6	17.30
NEBRASKA	19.4	19.1	18.0	16.40
NEVADA	18.6	18.1	18.6	14.53
NEW HAMPSHIRE	20.7	19.7	18.7	16.65
NEW JERSEY	20.0	19.6	18.3	16.44
NEW MEXICO	18.4	19.0	17.9	16.49
NEW YORK	22.9	22.3	20.8	17.65
N.C.	19.9	19.2	17.8	15.74

	2023	2022	2021	2020
NORTH DAKOTA	13.5	13.6	13.9	12.12
OHIO	18.7	18.1	17.5	16.04
OKLAHOMA	20.8	19.1	18.7	15.78
OREGON	20.1	20.4	19.3	17.12
PENNSYLVANIA	18.0	17.9	17.1	15.28
RHODE ISLAND	23.1	20.1	18.6	16.79
S.C.	18.6	18.4	17.2	15.80
SOUTH DAKOTA	16.5	17.0	15.4	15.34
TENNESSEE	19.3	18.5	17.7	14.94
TEXAS	20.8	19.6	18.6	16.71
UTAH	21.5	20.3	18.6	16.68
VERMONT	15.1	15.8	14.6	13.14
VIRGINIA	18.2	17.5	17.0	15.60
WASHINGTON	19.7	19.9	18.9	17.45
WEST VIRGINIA	18.0	18.1	17.2	14.33
WISCONSIN	18.0	17.8	16.2	14.10
WYOMING	16.4	15.5	17.0	17.99

Green =
Highest by year
Red =
Lowest per year

Source: Collision Advice

Average Paint Labor Hours (Per Estimate)

	2023	2022	2021	2020
ALABAMA	9.7	9.4	9.1	8.69
ALASKA	8.5	8.6	8.4	8.26
ARIZONA	9.8	9.7	9.4	9.04
ARKANSAS	10.2	10.0	9.8	9.38
CALIFORNIA	9.6	9.5	9.4	9.01
COLORADO	9.8	9.7	9.1	9.09
CONNECTICUT	10.4	10.1	10.2	9.36
DIST. OF COL.	9.3	8.7	8.7	7.58
DELAWARE	9.0	9.0	8.8	8.13
FLORIDA	10.4	10.4	9.6	9.18
GEORGIA	11.0	10.7	10.1	9.47
HAWAII	9.3	9.2	8.9	8.85
IDAHO	10.3	9.8	9.4	8.75
ILLINOIS	9.8	9.9	9.5	8.53
INDIANA	10.1	9.8	9.1	8.94
IOWA	9.2	9.3	8.9	8.52
KANSAS	9.9	10.1	9.5	8.90

	2023	2022	2021	2020
KENTUCKY	10.1	10.0	9.6	8.99
LOUISIANA	10.1	10.0	10.3	8.74
MAINE	8.9	8.6	8.5	8.29
MARYLAND	10.0	9.7	9.2	8.57
MASS.	10.9	10.7	10.5	9.91
MICHIGAN	10.4	10.4	9.9	9.10
MINNESOTA	9.5	9.0	9.4	8.60
MISSISSIPPI	9.5	9.7	9.5	8.78
MISSOURI	9.6	9.5	9.3	8.81
MONTANA	10.8	10.1	9.7	9.48
NEBRASKA	9.7	9.7	9.3	8.82
NEVADA	9.3	9.3	9.2	8.03
NEW HAMPSHIRE	10.2	9.9	9.6	8.99
NEW JERSEY	10.6	10.5	10.0	9.34
NEW MEXICO	8.9	9.4	9.0	8.69
NEW YORK	11.2	11.0	10.5	9.63
N.C.	10.1	9.9	9.2	8.68

	2023	2022	2021	2020
NORTH DAKOTA	7.6	7.5	8.1	7.32
OHIO	9.7	9.6	9.4	8.62
OKLAHOMA	10.0	10.0	9.4	8.81
OREGON	9.6	9.7	9.2	8.66
PENNSYLVANIA	9.7	9.5	9.2	8.61
RHODE ISLAND	11.8	11.1	10.4	9.38
S.C.	9.8	9.7	9.2	8.70
SOUTH DAKOTA	9.0	9.0	8.5	8.63
TENNESSEE	10.7	10.2	9.7	8.94
TEXAS	10.0	9.7	9.2	8.78
UTAH	10.2	9.9	9.4	8.92
VERMONT	8.7	9.1	8.5	8.40
VIRGINIA	9.4	9.1	8.9	8.46
WASHINGTON	9.7	9.7	9.2	8.84
WEST VIRGINIA	9.7	9.9	9.7	8.83
WISCONSIN	9.4	9.4	9.1	8.45
WYOMING	9.2	8.9	9.0	9.10

Green =
Highest by year
Red =
Lowest per year

Average Frame Labor Hours (Per Estimate)

	2023	2022	2021	2020
ALABAMA	0.2	0.2	0.2	0.21
ALASKA	0.1	0.1	0.1	0.10
ARIZONA	0.3	0.3	0.2	0.31
ARKANSAS	0.3	0.3	0.3	0.32
CALIFORNIA	0.3	0.3	0.4	0.46
COLORADO	0.2	0.2	0.2	0.19
CONN.	0.4	0.4	0.4	0.33
D.C.	0.2	0.1	0.1	0.04
DELAWARE	0.2	0.2	0.1	0.21
FLORIDA	0.3	0.3	0.2	0.28
GEORGIA	0.4	0.4	0.3	0.34
HAWAII	0.2	0.2	0.1	0.19
IDAHO	0.3	0.3	0.2	0.27
ILLINOIS	0.2	0.2	0.2	0.18
INDIANA	0.4	0.3	0.3	0.33
IOWA	0.2	0.2	0.2	0.20
KANSAS	0.3	0.3	0.3	0.26

	2023	2022	2021	2020
KENTUCKY	0.5	0.5	0.5	0.51
LOUISIANA	0.5	0.5	0.6	0.37
MAINE	0.2	0.2	0.2	0.22
MARYLAND	0.4	0.3	0.3	0.26
MASS.	0.4	0.4	0.4	0.37
MICHIGAN	0.5	0.5	0.6	0.48
MINNESOTA	0.2	0.2	0.2	0.18
MISSISSIPPI	0.2	0.3	0.3	0.27
MISSOURI	0.2	0.2	0.2	0.25
MONTANA	0.3	0.3	0.2	0.21
NEBRASKA	0.4	0.3	0.4	0.32
NEVADA	0.2	0.2	0.3	0.26
NEW HAMPSHIRE	0.4	0.4	0.3	0.27
NEW JERSEY	0.4	0.5	0.4	0.40
NEW MEXICO	0.3	0.3	0.4	0.45
NEW YORK	0.4	0.3	0.3	0.24
N.C.	0.3	0.3	0.2	0.25

	2023	2022	2021	2020
N. DAKOTA	0.2	0.2	0.3	0.13
OHIO	0.3	0.4	0.4	0.30
OKLAHOMA	0.3	0.5	0.3	0.30
OREGON	0.3	0.3	0.3	0.33
PENNSYLVANIA	0.4	0.3	0.3	0.30
RHODE ISLAND	0.5	0.5	0.5	0.41
S.C.	0.3	0.3	0.3	0.24
S. DAKOTA	0.1	0.1	0.2	0.18
TENNESSEE	0.6	0.5	0.4	0.50
TEXAS	0.3	0.2	0.2	0.22
UTAH	0.3	0.2	0.2	0.15
VERMONT	0.2	0.3	0.2	0.24
VIRGINIA	0.2	0.3	0.2	0.24
WASHINGTON	0.3	0.4	0.2	0.23
WEST VIRGINIA	0.3	0.4	0.4	0.31
WISCONSIN	0.2	0.2	0.2	0.22
WYOMING	0.1	0.1	0.1	0.13

Green =
Highest by year
Red =
Lowest per year

Average Mechanical Labor Hours (Per Estimate)

	2023	2022	2021	2020
ALABAMA	0.2	0.2	0.2	0.21
ALASKA	0.1	0.1	0.1	0.10
ARIZONA	0.3	0.3	0.2	0.31
ARKANSAS	0.3	0.3	0.3	0.32
CALIFORNIA	0.3	0.3	0.4	0.46
COLORADO	0.2	0.2	0.2	0.19
CONN.	0.4	0.4	0.4	0.33
D.C.	0.2	0.1	0.1	0.04
DELAWARE	0.2	0.2	0.1	0.21
FLORIDA	0.3	0.3	0.2	0.28
GEORGIA	0.4	0.4	0.3	0.34
HAWAII	0.2	0.2	0.1	0.19
IDAHO	0.3	0.3	0.2	0.27
ILLINOIS	0.2	0.2	0.2	0.18
INDIANA	0.4	0.3	0.3	0.33
IOWA	0.2	0.2	0.2	0.20
KANSAS	0.3	0.3	0.3	0.26

	2023	2022	2021	2020
KENTUCKY	0.5	0.5	0.5	0.51
LOUISIANA	0.5	0.5	0.6	0.37
MAINE	0.2	0.2	0.2	0.22
MARYLAND	0.4	0.3	0.3	0.26
MASS.	0.4	0.4	0.4	0.37
MICHIGAN	0.5	0.5	0.6	0.48
MINNESOTA	0.2	0.2	0.2	0.18
MISSISSIPPI	0.2	0.3	0.3	0.27
MISSOURI	0.2	0.2	0.2	0.25
MONTANA	0.3	0.3	0.2	0.21
NEBRASKA	0.4	0.3	0.4	0.32
NEVADA	0.2	0.2	0.3	0.26
NEW HAMPSHIRE	0.4	0.4	0.3	0.27
NEW JERSEY	0.4	0.5	0.4	0.40
NEW MEXICO	0.3	0.3	0.4	0.45
NEW YORK	0.4	0.3	0.3	0.24
N.C.	0.3	0.3	0.2	0.25

	2023	2022	2021	2020
N. DAKOTA	0.2	0.2	0.3	0.13
OHIO	0.3	0.4	0.4	0.30
OKLAHOMA	0.3	0.5	0.3	0.30
OREGON	0.3	0.3	0.3	0.33
PENNSYLVANIA	0.4	0.3	0.3	0.30
RHODE ISLAND	0.5	0.5	0.5	0.41
S.C.	0.3	0.3	0.3	0.24
S. DAKOTA	0.1	0.1	0.2	0.18
TENNESSEE	0.6	0.5	0.4	0.50
TEXAS	0.3	0.2	0.2	0.22
UTAH	0.3	0.2	0.2	0.15
VERMONT	0.2	0.3	0.2	0.24
VIRGINIA	0.2	0.3	0.2	0.24
WASHINGTON	0.3	0.4	0.2	0.23
WEST VIRGINIA	0.3	0.4	0.4	0.31
WISCONSIN	0.2	0.2	0.2	0.22
WYOMING	0.1	0.1	0.1	0.13

Green =
Highest by year
Red =
Lowest per year

Average Labor Hours

Texas

\$688.00 increase in Severity

Body Labor Hour Increase 1.2

Refinish Labor Hour Increase .3

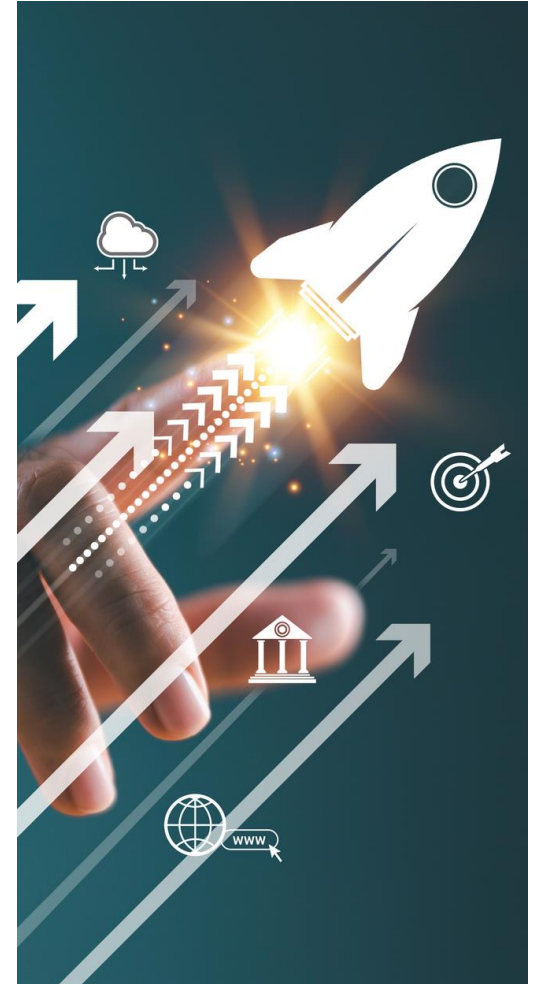
Frame Labor Hour Increase 0.1

Mechanical Labor Hour Increase 0.2

$1.8 \times \$60.00 = \108.00

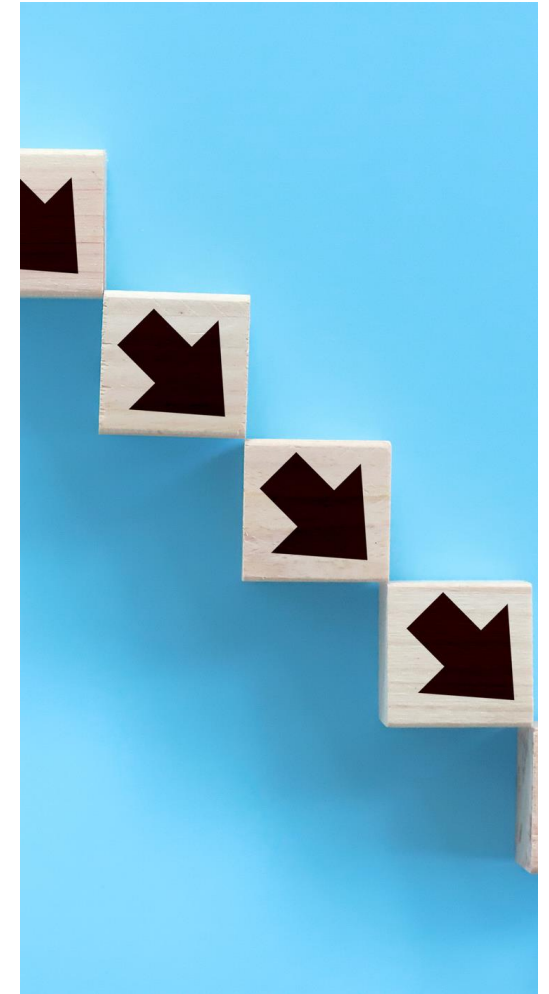
What's the additional \$580 attributed to?

What will shops do to grow sales in the future without ADAS, Scanning, Labor Rate Increases, etc.?



Claims Count Has Declined

- Claims were down nationwide 9% in March
- Claims count were down double digits in April
- Claims count down double digits in May as well.
- Resulting in the average shops backlog has slowed down to less than a few days in most markets
- We must get back to the basics:
 - **Monitoring RO count** month-to-month and each month compared to prior year
 - **Focus on Sales** – Focus on capture rate and following up on unscheduled estimates



Claims Count Has Declined – Why?

1. Mild Winter
2. Total losses are increasing. Insurers receiving such high salvage bids from overseas that vehicles are totaling out at 45-50%
3. Some premiums have increased as much as 30%
4. Premium increases have created a reluctance for consumers to file claims
5. ADAS is having an effect
6. The COVID back log has gone away
7. The economy is GOOD, but the Narrative that people are hearing in the in media is negative!
8. This is impacting spending habits.

[Cars For Sale](#)[CARFAX Reports](#)[My Car Maintenance](#)[Used Car Values](#)[Research](#)[Help](#)

Are Car Accidents Increasing or Decreasing?

The number of car accidents decreased in 2022 relative to 2021. Comparing those two years, the estimated number of police-reported crashes showed a 2.8% decrease in 2022. The number of people injured in traffic crashes also decreased in 2022, falling 4.6%.

Traffic fatalities declined in 2022 relative to 2021. There were 716 fewer people killed in motor vehicle crashes in 2022, a 1.7% decrease from the prior year. The fatality rate per 100 million vehicle miles traveled fell in 2022 by 3.6% compared to 2021.

How Many Cars Are Totalled Each Year?

Exact numbers concerning how many cars are totaled each year are hard to come by. However, according to a [2024 consumer study](#) by global data and analytics company LexisNexis Risk Solutions, 27% of all collision claims in 2023 were deemed total losses. The company estimates that total loss claims have increased 29% since 2020.

What Is the Annual Cost of Accident Damage in the U.S.?

Car accidents significantly impact the U.S. economy. According to the U.S. Department of Transportation's [most recent estimate](#), the annual economic cost of accident damage in the U.S. is \$340 billion.

Consumers Paying Out of Pocket For Repairs

Almost 40% of Insured Drivers in Incidents Have Chosen to Pay Out of Pocket for Repairs



Written by [Maggie Davis](#)



Edited by [Dan Shepard](#)

Published on: [August 19, 2024](#)

Editorial Note: The content of this article is based on the author's opinions and recommendations alone. It may not have been reviewed, commissioned or otherwise endorsed by any of our network partners.

Dealing with insurance after an accident can be a nightmare — and some drivers try to avoid it altogether.

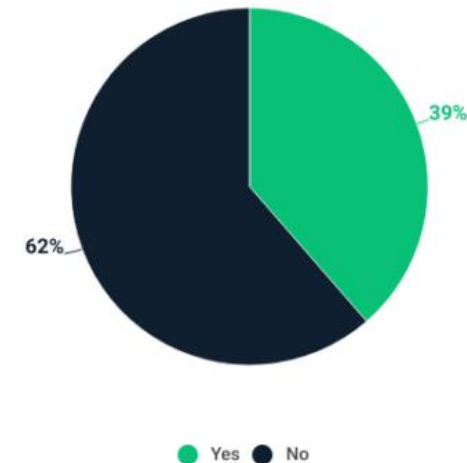
According to the latest LendingTree survey of 2,000 U.S. consumers, 39% of insured drivers who've been in an auto accident or incident have bypassed their insurance for repairs. What's more, 24% have filed a claim and later regretted it.

Here's what else we found.

Key findings

- **Many prefer to pay out of pocket for auto damage.** Among insured drivers in an accident or incident, 39% have bypassed their [auto insurance](#) for repairs. When asked why, 59% said the damage was minimal, 44% said their deductible was higher than the cost and 42% didn't want their insurance to increase.
- **Some keep these incidents to themselves.** 57% of those who've paid out of pocket didn't disclose the incident to their insurer. A high deductible doesn't appear to be a barrier for many drivers since 76% had a deductible of less than \$1,000 when they paid out of pocket, and 65% spent less than \$1,000 on repairs.
- **Filing claims has led to regret for some drivers.** Almost a quarter (24%) of insured drivers in an accident or incident have filed a claim and later regretted doing so. The top reasons for post-claim regret are significantly higher insurance rates (59%), a decreased vehicle value (36%) and an expensive deductible (33%). Among drivers who've filed a claim in the past five years, 26% said their annual insurance rate increased by at least 25%.
- **Overall, most drivers want to avoid insurance.** Almost three-quarters (73%) of insured drivers in an incident would generally prefer to pay out of pocket for a small issue rather than go through insurance, and 49% have repaired damage their insurance would have covered.

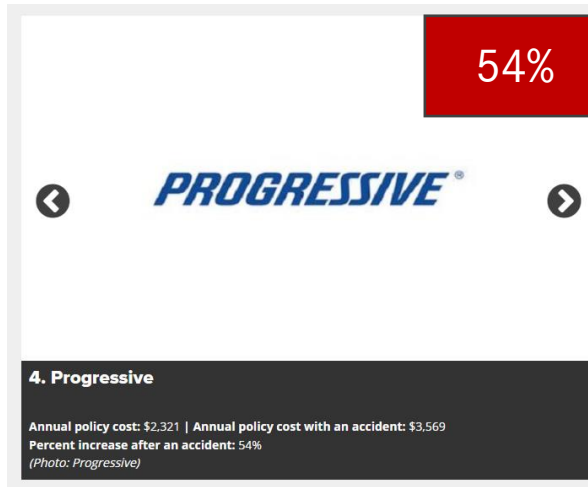
Have you ever had an auto incident where you decided not to go through your insurance company to get repairs done (i.e., you paid out of pocket)?



Source: LendingTree survey of 806 insured drivers who've been in an auto accident or incident, conducted in June 2024. Note: Totals don't equal 100% due to rounding.



Customer Pay is Growing



QUALITY DOCUMENTATION

IMPORTANCE OF FILE DOCUMENTATION

- It is critical to have a clear and accurate vision of the repair plan when writing an estimate
- Each line on the estimate needs to speak for itself
- The biggest areas to work on to help get more of these assignments approved are:

1. Line Notes

2. Photo Quality

3. Document in order of repair



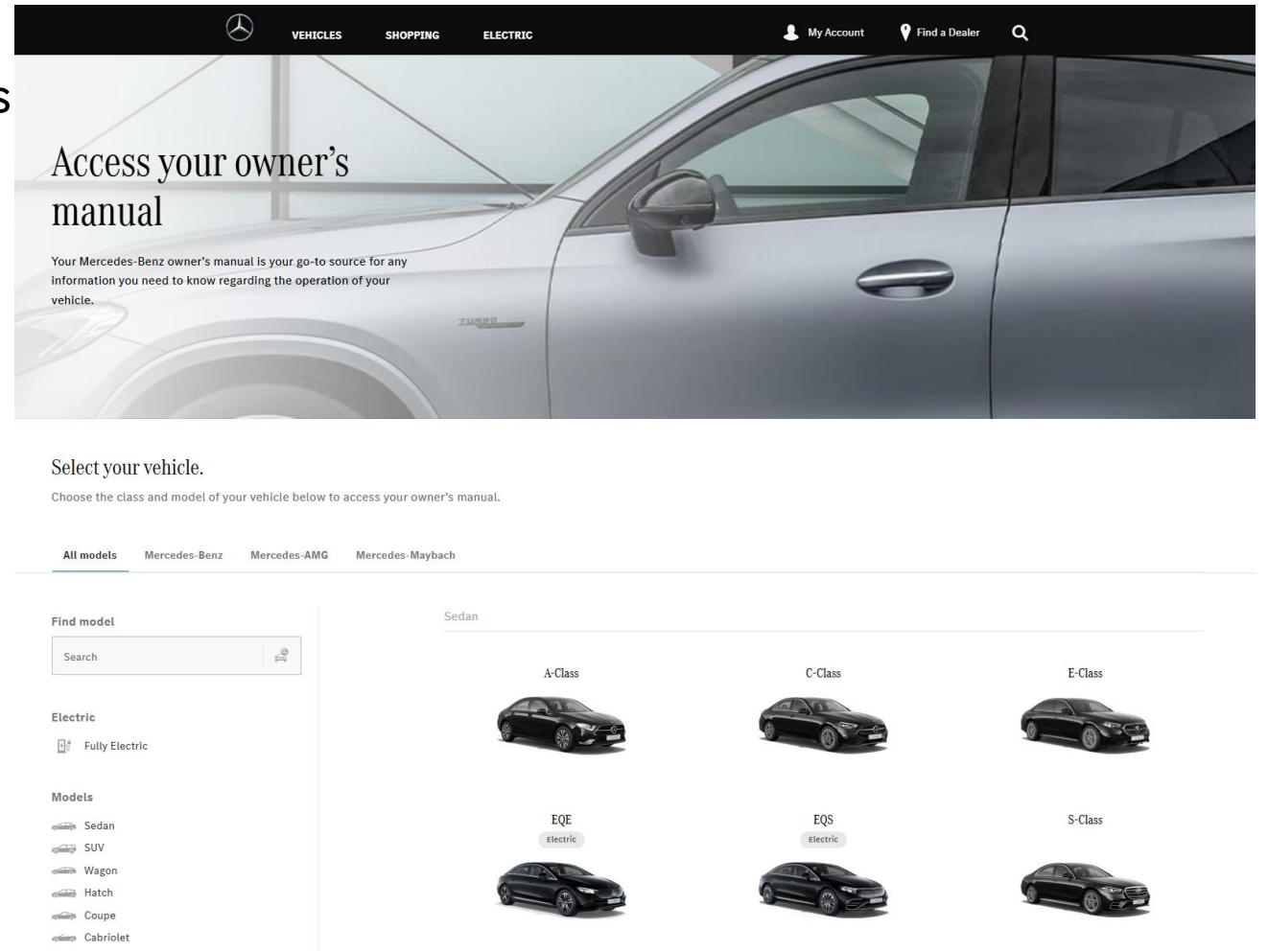
YOUR ESTIMATE NEEDS TO TELL A STORY!

Justifying Each Line on the Repair Plan


1. Is it required?	2. Is it included?	3. Is there a pre-determined time?	4. If not, what is it worth?
OEM Repair Procedures	Estimating Systems	Estimating Systems	Time Study
Mercedes Xentry WIS	www.DEGweb.org	www.DEGweb.org	Print an Invoice
Paint Manufacturer's Bulletins	SCRS Guide to Complete Repair Planning / SCRS BOT Tool. www.scrs.com/bot		OEM Warranty Times
Material Manufacturer's Bulletins (3M, Wurth, Kent, etc.)	Collision Advice "Who Pays for What" survey		Equipment Manufacturer's Documents
Equipment Manufacturer's Bulletins			Xentry WIS & STAR
Internet			Internet
Scan Tools (Star Diagnostic Tester)			Collision Advice "Who Pays for What" survey
The Vehicle			

Mercedes-Benz Owner's Manuals


- <https://www.mbusa.com/en/owners/manuals>




Mercedes-Benz Owner's Manuals



VEHICLES SHOPPING ELECTRIC

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Search through this manual 

< General notes

Protecting the environment

Mercedes-Benz GenuineParts

Touch-sensitive controls

Operating safety

Installing the license plate on the front license plate bracket

National information for components relevant to radio regulation

Diagnostics connection



Qualified specialist workshop



Correct use of the vehicle

Notes for persons with electronic medical aids

Problems with your vehicle

Mercedes-Benz GenuineParts

 **Environmental Note: Environmental damage due to not using recycled reconditioned components** 

 **Note: Impairment of the operating efficiency of the restraint systems from installing accessory parts or from repairs or welding** 

You could jeopardize the operating safety of your vehicle if you use parts, tires and wheels, as well as accessories relevant to safety that have not been approved by Mercedes-Benz. Safety-critical systems (e.g. the brake system) may malfunction. Use only Mercedes-Benz GenuineParts or parts of equal quality. Use only tires, wheels and accessory parts that have been specifically approved for your vehicle model.

Mercedes-Benz GenuineParts are subject to strict quality inspections. Each part has been specially developed, manufactured or selected for Mercedes-Benz vehicles and adapted to them. Therefore, only Mercedes-Benz GenuineParts should be used.

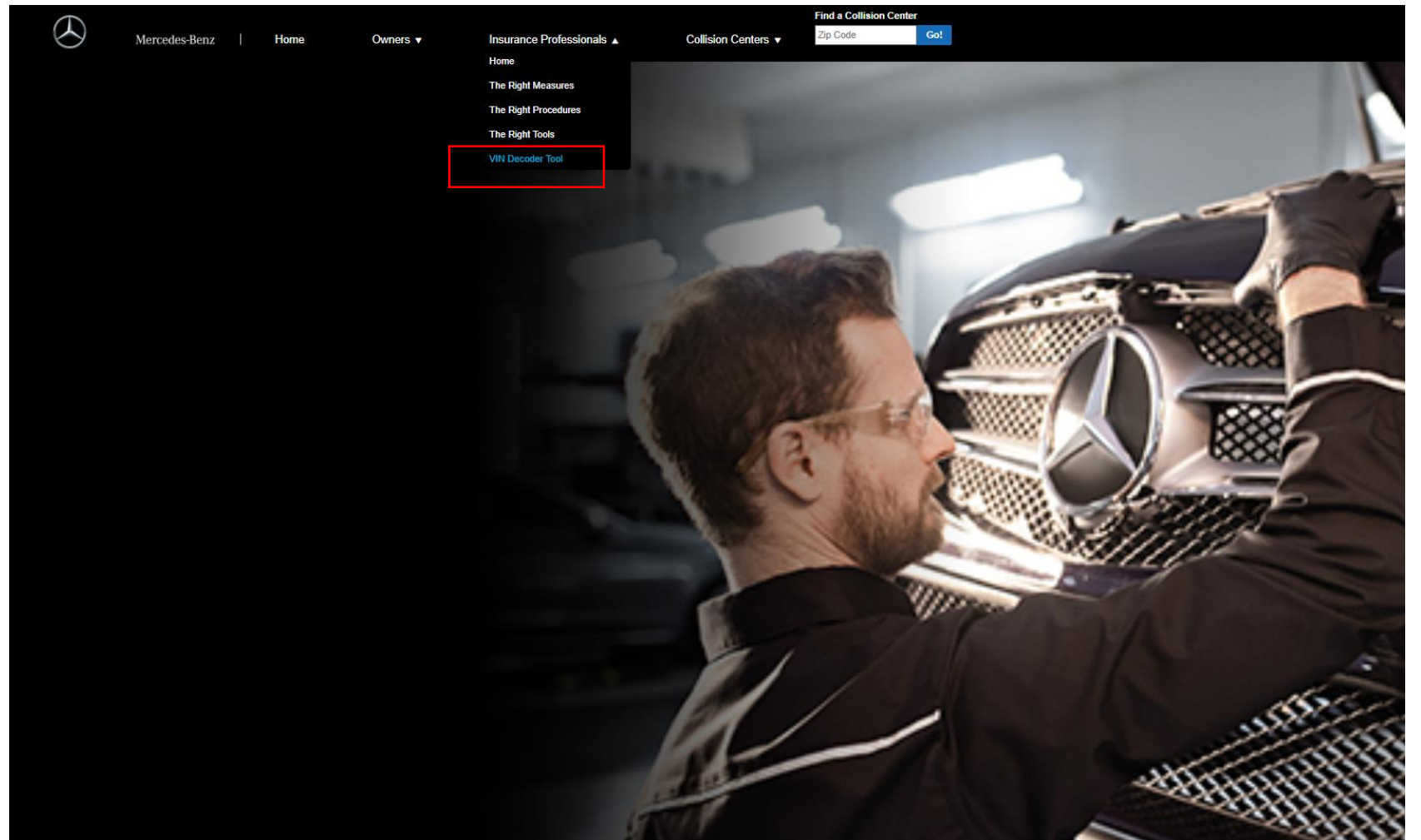
More than 300,000 different Mercedes-Benz GenuineParts are available for Mercedes-Benz models.

All Mercedes-Benz Service Centers maintain a supply of Mercedes-Benz GenuineParts for necessary service and repair work. In addition, strategically located parts delivery centers ensure quick and reliable parts service.

- Always specify the vehicle identification number (VIN) [More](#) when ordering Mercedes-Benz GenuineParts.

MBCollisionCenters.com

- Build Sheet / production sheet



VIN Decoder Tool

Mbcollisioncenters.com



2024 GLS450W4	VIN: 4JGFF5KE7RB242375	PO#:
Dealer Code: 08522	Region: 03	Dealer Address: PHIL LONG AUTOHAUS, LLC 730 AUTOMOTIVE DRIVE COLORADO SPRINGS, CO 80905.
VPC: BALTIMORE		

Standard Accessories

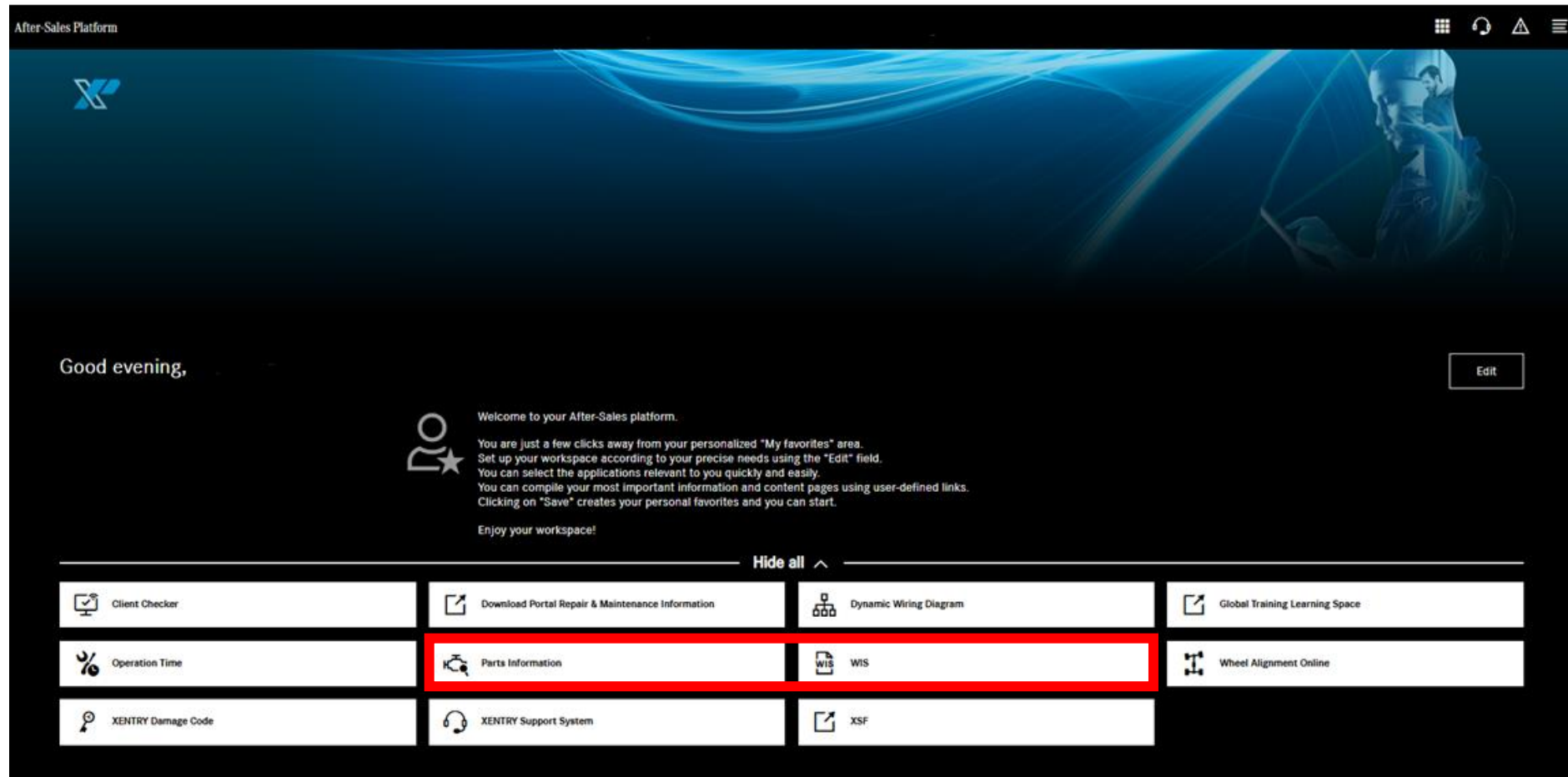
Code	Description	Code	Description
01U	Pre-installation for Navigation Services	845	Elect Folding 3rd Row Seat
04U	Transparent bonnet	852	Advanced Alarm with Parking Collision Detection
12B	Owners Manual	868	12.3" Center Display
14U	Smartphone Integration	871	HANDS FREE ACCESS
16U	Apple CarPlay™	876	Premium Interior Lighting
17U	Android Auto	889	KEYLESS-GO®
215	Adaptive Damping System Plus	890	Power Liftgate
22U	Pre-installation for MBUX Entertainment	897	Inductive wireless charging and NFC pairing
232	Garage Door Opener	901	Interior Chrome Package
233	Active Distance Assist DISTRONIC®	915	Large Capacity Fuel Tank
235	PARKTRONIC with Active Parking Assist	986	Identification label with VIN number
23U	Active Stop-and-Go Assist	989	VIN Code
242	Passenger Seat Memory w/ adj. Thigh Support	801	48 Volt System
249	Auto-dimming Driver and Rearview Mirrors	K32	Active Lane Change Assist
264	License Plate Holder	K33	Extended Restart in Stop-and-Go Traffic
266	Active Distance Assist DISTRONIC® with Active Steering	K34	Route-Based Speed Action
	Assist	P17	KEYLESS-GO Package
270	GPS Antenna	P20	Driver Assistance Package
273	Vehicle Exit Warning	P47	Surround View System
275	Power Driver Seats with Memory	P49	Mirror Package
292	Pre-Safe Impulse Side	P64	Memory Package
294	Driver Knee Airbag	P82	Guard 360
32U	Sound personalisation	U01	Rear belt status indication in the instrument display
34U	Remote Services Premium	U08	MB-TeX Upper Dash
351	eCall-Emergency System	U10	Passenger Seat Weight Sensing System
355	Extended MBUX functions™	U19	Augmented Video for Navigation
362	HERMES Communications module LTE	U82	USB Ports in Rear
365	MB Navigation	054	Modification year 23/2
37U	Remote Services Advanced	226	7 Seat Configuration
401	Heated & Ventilated Front Seats	297	Power Rear-Side Window Sunshades
413	Panorama Sunroof	367	Live Traffic
421	9G-TRONIC 9-Speed Automatic Transmission	436	Comfort Front Headrests
461	English Inscriptions	443	Heated Steering Wheel
475	Tire Pressure Monitoring System	U1U	Black Fabric Headliner
489	AIRMATIC	582	5-Zone Climate Control
494	USA specification	636	Omission of Warning Triangle
500	Power Folding Mirrors	666	Transportation Protection Foll
501	Surround View Camera	763	Remote Key with Panic Button
513	Traffic Sign Assist	804	Technical modifications
517	HD Radio	811	Burmester® High-End 3D-Surround Sound System
534	MBUX multimedia system	824	Engine air intake screen
536	SiriusXM Radio with Free Trial Period	883	Soft-Close Doors
543	Double Sun Visors	888	Passive person presence reminder
546	Active Speed Limit Assist	902	Rapid Heating Front Seats
551	Anti-Theft Alarm System	948	Integrated Starter Generator Generation 2
581	4-Zone Climate Control	851	TIREFIT Kit
587	Side Mirror Logo Projector	H22	Natural Grain Brown Walnut Trim
608	Adaptive High Beam Assist	L5C	Multifunction sports steering wheel in nappa leather
634	Omission of first-aid kit	PBG	Preinstallation for Navigation and Comfort Connectivity package
640	Active Curve Illuminating Full LED		High Performance Tires
723	Cargo Cover	R01	23" AMG Twin 5-Spoke - Black
728	Additional USB Ports	RPK	AMG Floor Mats
840	Privacy Glass	U26	

Options

DC1	Night Package
DG1	AMG Line Exterior Package
DX2	Pinnacle Trim

No Pricing information available for this Vehicle

Using Xentry



Using Parts Information “EPC”

Vehicle: 4JGFF5KE7RB242375 (C167_FX) GLS 450 4MATIC Color: 197 - Obsidian black - Metallic finish Equipment: 224 - Leather - Brown FIN: 4JG1679591B242375

PC > GLS 450 4MATIC > Vehicle: 4JGFF5KE7RB242375 > C167_FX > Visual navigation > 88 ATTACHMENT PARTS > 030 FRONT BUMPER

Vehicle Engine Automatic transmission

Main groups

21	ATTACHMENT PARTS FOR UNITS	10	A 167 885 02 11 9999 TRIM, BUMPER Front bumper trim Code: 772+235+-(809/800/801/802/...)	Quantity: 1
24	ENGINE SUSPENSION	15	A 167 885 07 11 9999 TOWING EYE COVER Towing eye cover Code: 772+235+-(M177+M40+M014)/...	Quantity: 1
27	MB AUTOMATIC TRANSMISSION	17	A 167 885 08 11 TOWING EYE COVER Upper Code: 772+235+-(809/800/801/802/...)	Quantity: 1
28	TRANSFER CASE	25	A 218 885 00 59 CHECK STRAP Towing eye Code: 804/805/806;	Quantity: 1
29	PEDAL ASSEMBLY	30	A 167 885 03 11 BASIC CARRIER, BUMPER Left Code: 772+-(809/800/801/802/803);	Quantity: 1
30	CONTROL	30	A 167 885 04 11	Quantity: 1
31	TRAILER COUPLING			
32	SPRINGS,SUSPENSION AND HYDRAULICS			
33	FRONT AXLE			
35	REAR AXLE			
40	WHEELS			
41	PROPELLER SHAFT			
42	BRAKES			
46	STEERING			
47	FUEL SYSTEM			
49	EXHAUST SYSTEM			
50	RADIATOR			
52	CHASSIS SHEET METAL / AIR INTAKE			
54	ELECTRICAL EQUIPMENT AND INSTRUMENTS			
58	TOOLS AND ACCESSORIES			
60	BODY SHELL			
61	SUBSTRUCTURE			

Image ID: drawing_PV000.010.152.175_version_010

054 CONTROL UNITS,FUSE BOXES AND RELAYS IN ENGINE COMPARTMENT 077 CONTROL MODULES AND RELAYS IN LOAD COMPARTMENT 060 OUT

Using WIS For Repair Information

Vehicle: 4JG1679591B242375 4JGFF5KE7RB242375 CAR 167959 GLS 450 4MATIC 256830 30 083863 *****

Search options > Standard > Hit list > 1

>>	✓	General notes: Passenger cars: Detachable body components, exterior flaps ah88.00-z-9999az 'MODEL all'				
	>	General information on repair to detachable plastic components ah88.00-p-1000-01a 'MODEL 124, 129, 140, 168, 202, 208, 210, 414'				
	>	General notes on filling detachable body components ah88.00-p-1000-02cr 'MODEL 450.418'				
		General information on the impact absorber ah88.20-p-1000-01a 'Model all (CAR)'				
	>	Notes on electric trunk lid emergency release ah88.50-p-0001-01a 'MODEL 129, 202, 203, 208, 210, 215, 220 with CODE 491(US version) with electric trunk inside door handle'				
+	>	General notes on repairing tubular frame ah88.50-p-0002-01v 'Model 171.4, 172.4, 231'				
	>	Remove/install front fender liner ar88.10-p-1301me 'Model 167'				
	>	Remove/install rear fender liner ar88.10-p-1302me 'Model 167'				
	>	Remove/install front bumper ar88.20-p-2000me 'Model 167'				
	>	Adjust front bumper ar88.20-p-2001me 'Model 167'				
	>	Disassemble/assemble front bumper ar88.20-p-2050me 'Model 167'				
	>	Disassemble/assemble rear bumper ar88.20-p-2100mez 'Model 167.9'				
	>	Remove/install rear bumper ar88.20-p-2200me 'Model 167'				
	>	Remove/install carrier for rear bumper ar88.20-p-2250me 'Model 167'				
⋮	>	Remove/install automatic running boards control unit				

WIS Instructions

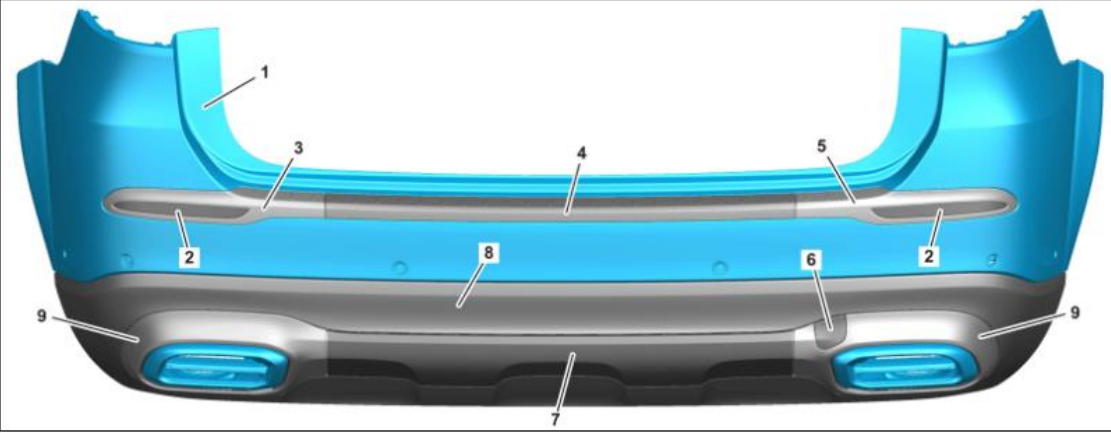
Vehicle: 4JG1679591B242375 4JGFF5KE7RB242375 CAR 167959 GLS 450 4MATIC 256830 30 083863 *****

[Search options](#) > [Standard](#) > [Hit list](#) > [Display](#)

>>

AR88.20-P-2100MEZ	Disassemble/assemble rear bumper	15.04.2024
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Model 167.9



P88.20-A368-78


1 Rear bumper upper trim	6 Towing eye cap
2 Reflector	7 Center trim
3 Left ornamental molding	8 Rear bumper lower trim
4 Center ornamental molding	9 Side trim
5 Right ornamental molding	

WSM – WIS Service Media

Vehicle: 4JG1679591B242375 4JGFF5KE7RB242375 CAR 167959 GLS 450 4MATIC 256830 30 083863 *****

Search options


>> Reception report

 **XENTRY Portal**
WIS Service Media

← Home Menu

AR – Calibrate augmented reality camera

Validity
Model all (CAR) with code U19 (Augmented reality video)



This film contains no subtitles.
WSM-ID: 01_201800_45, Status: 06/2018

> Important note

WSM/WIS Classic All main

Locating Calibration Requirements

Vehicle: 4JG1679591B242375 4JGFF5KE7RB242375 CAR 167959 GLS 450 4MATIC 256830 30 083863 *****

[Search options](#) > [Full text](#) > [Hit list](#) > [Display](#)

>>			
	Notice	Information on preventing damage to electronic components due to electrostatic discharge	AH54.00-P-0001-01A
	Notice	Notes on preventing damage to electronic components due to a magnetic tool	AH54.00-P-0002-01A
		Remove/install	
	1	Remove Mercedes star.	AR88.40-P-4053ME
	2	Remove nuts (1).	
	3	Remove short and long range radar sensor (B92/12).	
	4	Release and disconnect electrical connector of short-range and long-range radar sensor (B92/12).	
	5	Install in the reverse order.	
	6.1	Perform commissioning of short and long range radar sensor (B92/12).	Model 167 as of model year 2022 with code 233 (Adaptive cruise control Plus (DISTRONIC PLUS))
	AD		AD00.00-P-2000-06ME
	6.2	Perform commissioning of short and long range radar sensor (B92/12).	Model 167 up to model year 2022 with code 233 (Adaptive cruise control Plus (DISTRONIC PLUS)) If the short-range and long-range radar sensor (B92/12) has been replaced.
	AD		AD00.00-P-2000-06ME
	6.3	Calibrate short and long-range radar sensor (B92/12).	Model 167 up to model year 2022 with code 233 (Adaptive cruise control Plus (DISTRONIC PLUS)) If short-range and long-range radar sensor (B92/12) has been removed.
	AD		AD00.00-P-2000-06ME

Perform Redocumentation of Windshield

AR67.10-P-1700-115	Perform redocumentation of windshield		
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Model 223
with code 445 (Head-up display with augmented reality.)

Model 296
with code 445 (Head-up display with augmented reality.)

Model 297
with code 445 (Head-up display with augmented reality.)

Modification notes

29.08.2023	Designations adapted.	Operation step 1, 2, 3, 4.	
29.08.2023	Depending on the vehicle status, a second windshield label (1) (with the same information content) is located in the area This can also be scanned in the the windshield.	Operation step 3.	

i To prepare the redocumentation, the "Mercedes-Benz PartScan" app must be installed on a mobile terminal that has an Internet connection. The "Mercedes-Benz PartScan" app is available in the respective app stores for Apple and Android devices.

i A mobile Internet connection is required for the data transfer.

1 Scan the QR code shown above using the "Mercedes-Benz PartScan" app to carry out the login authentication.
i Ensure that only authorized workshop personnel have access to the QR code.

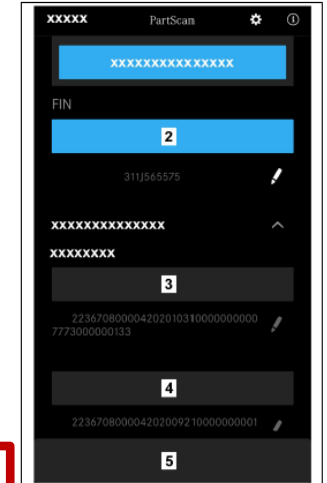
2 Scan the vehicle identification number on the FIN label (6) on the B-pillar by tapping the "Scan FIN" (2) button in the "Mercedes-Benz PartScan" app or alternatively enter it manually.

i After scanning or entering the information, compare the vehicle identification number shown in the "Mercedes-Benz PartScan" app with the windshield label with data matrix code (1) on the vehicle and correct any scanning errors/input errors.

i All required data can also be read off and entered manually.

3 Scan the data matrix code on the windshield label with data matrix code (1) of the old, removed windshield using the "Scan old part" (3) button in the "Mercedes-Benz PartScan" app or alternatively enter it manually.

i The windshield label with data matrix code (1) is only visible when the windshield is removed. The windshield label with data matrix code (1) is located on the inside of the windshield at the bottom edge of the black print.



P67.10-A034-73

3 Scan the data matrix code on the windshield label with data matrix code (1) of the old, removed windshield using the "Scan old part" (3) button in the "Mercedes-Benz PartScan" app or alternatively enter it manually.

i The windshield label with data matrix code (1) is only visible when the windshield is removed. The windshield label with data matrix code (1) is located on the inside of the windshield at the bottom edge of the black print.

i All required data can also be read off and entered manually.

Perform Redocumentation of Windshield

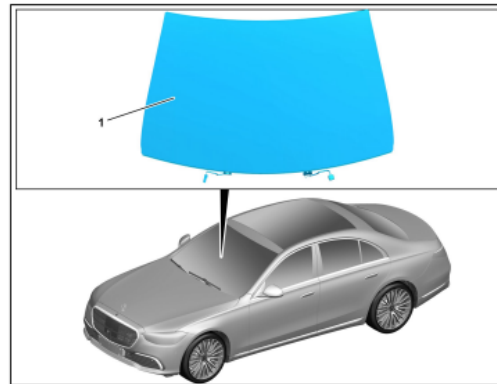
AR67.10-P-17005 Remove, install windshield 07.07.2021

Model 223
except code Z07 (B7 armoring on special protection version)

Modification notes

12.10.2020 Work procedure extended.

1 Windshield



P67.10-A018-76

Warning	Injury hazard from pinching and crushing, in extreme cases extremities can even be cut off when caught in windshield wiper mechanism.	When working on the windshield wiper mechanism, always switch off the ignition and store transmitter key outside of transmission range (at least 2 m).	AS82.30-Z-0001-01A
	Notes on removal/installation of windshield		AH67.10-P-1000-03MFA
	Notes on safety-relevant components		AH00.00-Z-0019-01A
24	Remove		
1	Remove front drip rails from A-pillars.	Model 223 except code Z07 (B7 armoring on special protection version) Model 223.0/1 except code Z07 (B7 armoring on special protection version)	AR88.80-P-4000S
2	Remove wiper arms.		AR82.30-P-6100S
3	Remove covers of air/water duct.		
4	Disconnect electrical connectors on windshield (1) and fix in place to top of windshield (1).	1 The number of electrical connectors can vary depending on the equipment variant.	
5	Remove A-pillar trims.		AR68.30-P-4050S
6	Remove inside rearview mirror.		AR68.40-P-0001S
7	Remove rain and light sensor.		AR82.30-P-7801S
8	Remove multifunction camera.		AR54.21-P-3000S
9	Remove augmented reality camera.	Model 223 with code U19 (Augmented reality video)	

Warning	Risk of injury from cutting wire tearing or becoming hot and from splinters of glass when cutting out bonded windows. Cut out and remove windshield (1).	Wear protective gloves and safety glasses.	AS67.00-Z-0004-01A AR67.10-P-1000-115X
12		1 Helper required for removal of windshield (1).	
13	Carry out redocumentation of windshield (1).	Model 223 with code 445 (Head-up display with augmented reality.) except code Z07 (B7 armoring on special protection version) When replacing windshield (1).	AR67.10-P-1700-11S
25	Install		
Notice	Notes on handling adhesive		AH67.00-P-1000-01A
14	Prepare window frame of the windshield (1) for installation.		AR67.10-P-1700-03S
Notice	General notes about painting the body flange in the glazing area	1 Use only primer fillers and primer sticks approved by Daimler AG: https://xentry.daimler.com	AH98.00-P-940B-06A
15	Prepare windshield (1) for installation.	1 Model 223 with code 445 (Head-up display with augmented reality.) except code Z07 (B7 armoring on special protection version) Windshield (1) must be replaced.	AR67.10-P-1700-04S
16	Glue new spacers onto windshield (1).	Model 223 except code 445 (Head-up display with augmented reality.) except code Z07 (B7 armoring on special protection version) If the windshield (1) is reused. 1 Use old positions to determine spacer positions. 1 Remove protective film from spacers only on one side.	
17	Align windshield (1) in body opening.	1 Aid of helper required. Distance between top edge of window and front edge of roof 2 Feeler gauge	AR67.10-P-1000-09S BE67.10-P-1001-01E 129 589 03 21 00
18	Remove protective film from spacers.		
19	Apply adhesive material.	9 Install windshield (1) within 10 min after applying adhesive material. Otherwise the adhesive force of the adhesive material starts to decrease. 2 Adapter	AR67.10-P-1000-08S 000 589 86 63 00
20	Close hood.		
21	Install windshield (1).	1 Aid of helper required. 1 Observe the manufacturer's specifications for the curing time of the adhesive material. Perform following work only after curing time.	AR67.10-P-1700-05S
22	Close side window of the driver's door.		
23	Remove tape and cover material from vehicle.		
24	Clean repair area.		
25	Install augmented reality camera.	Model 223 with code U19 (Augmented reality video) except code Z07 (B7 armoring on special protection version)	AR54.30-P-0004S AR54.21-P-3000S
26	Install multifunction camera		

Battery Disconnect & Reconnect

Vehicle: WDD223063 CAR 223063 S 500 4MATIC Limousine

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>>



1 For paint drying in a drying oven

Electronic components such as, e.g. the switching unit for the ignition system, control unit for the electronic gasoline, diesel injection system, ABS system, airbag, emergency tensioning retractor etc., may only be heated up to a max. object temperature of 90 °C.

In cases of doubt, a series of tests is to be performed to check the temperature at these points (remove the electronic components beforehand) using a mercury maximum thermometer during the baking phase.

If the maximum permissible temperature is not exceeded, the electronic components need not be removed.

At an object temperature of up to a max. 60 °C (secondary air injection temperature max. 90 °C) no special safety precautions are required.

2 With welding work

Always detach the negative terminal of the battery and cover it up. Detach the test connector for the airbag connector, 10-pin (colored red) in the right footwell and after a waiting time of 2 s after disconnecting the battery, or as of 07/93, detach the coupling on the airbag control unit using the plug-in aid.

3 After accidents

Electronic control units only need to be changed after an accident when at least one of the following conditions has been fulfilled:

- The housing is recognizably deformed or damaged.
- The contact surface or mounting console is deformed; the device does not exhibit any signs of external damage.
- The connector is damaged or corroded through moisture.
- Device faults are determined by a function test or the self-diagnosis.



If, when performing repair work, electronic components such as, e.g. the ABS control unit, had to be removed and then used again, then they are to be checked for function after being assembled again.

Read out and erase fault memory.

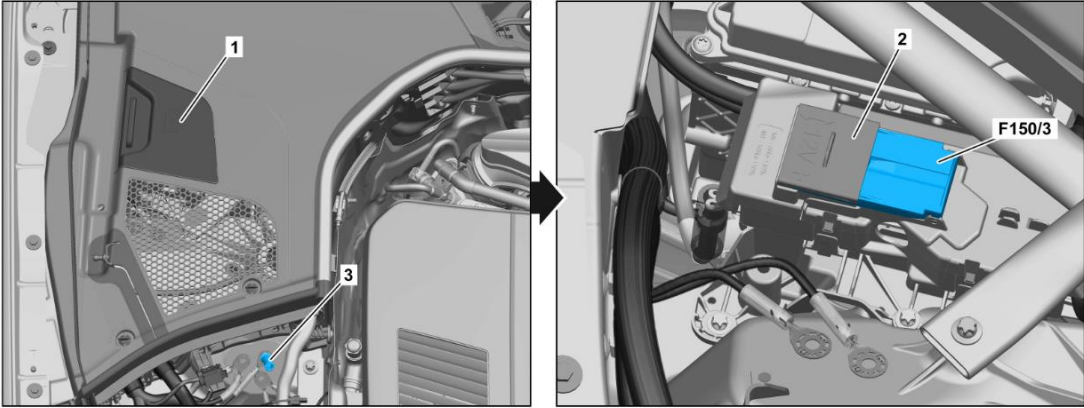
Battery Support When Scanning




Vehicle: WDD223063 CAR 223063 S 500 4MATIC Limousine

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>> AR54.10-P-1127WT Maintaining on-board electrical system voltage when performing test and diagnosis work on vehicle 03.05.2024

Model 192, 206, 214, 223, 232, 236, 254



Notice	Notes on battery		AH54.10-P-0001-01A
	Connect battery charger		
1	Open trim (1) in engine compartment on front passenger side.		
2	Expose charging terminal point of prefuse box (F150/3) by moving cover (2).	 When working on restraint systems, when welding and when working on lines without contact protection, do not maintain the on-board electrical system voltage. The electrical system or electronic components can otherwise be damaged.	
3	Clip charger positive clamp onto charging terminal point of prefuse box (F150/3), then clip charger ground clamp onto ground terminal point (3).		
	 000 588 07 81 00 Charger	 Do not reverse polarity. Otherwise a short circuit will cause damage.	WS54.00-P-0127B
4	Switch on charger.		
	Disconnect battery charger		
5	Switch off charger.		
6	Disconnect charger ground clamp from ground terminal point (3), then disconnect charger positive terminal from charging terminal point of prefuse box (F150/3).		
7	Close charging terminal point of prefuse box (F150/3) by moving cover (2).		
8	Close trim (1) in engine compartment on front passenger side.		

ETHICS

What Do You Think? Ethical or Not?

1	#	Pre Wash Car	1		0.5
2	#	Protect vehicle interior	1	10.00	0.2
3	#	Research OEM procedures	1	99.95 X	7.0
4	#	Admin Labor: Prepare repair plan & File Documentation	1	1,499.00 X	
5	#	Intake Photos and send to insurance	1		0.5
6	VEHICLE DIAGNOSTICS				
7	#	Tow to service dept +25%	1	187.50 X	
8	*	Subl Pre-repair scan +25%	1	<u>275.00</u> X m	
9	#	Tow Back from Service Dept +25%	1	187.50 X	
10	#	Tow to service dept +25%	1	187.50 X	
11	*	Subl In-proc repair scan +25%	1	<u>275.00</u> X m	
12	#	Tow Back from service dept +25%	1	187.50 X	
13	#	Tow to service dept +25%	1	187.50 X	
14	*	Subl Post-repair scan +25%	1	<u>275.00</u> X m	
15	#	Tow back from service dept +25%	1	187.50 X	
16	*	Subl Calibrate backup camera +25%	1	300.00 X m	
17	*	Subl Calibrate blind spot radar +25%	1	<u>300.00</u> X m	
18	*	Subl Calibrate occupant classification system +25%	1	<u>300.00</u> X m	
19	*	Subl Calibrate park distance sensor +25%	1	<u>300.00</u> X m	

Administrative fees to write estimate / repair plan

Not needed. 167 requires no "Calibration"

What Do You Think? Ethical or Not?

73		Repl	Susp crossmember mount bolt	0009901819	4	70.00		
74			FUEL SYSTEM					
75		R&I	R&I fuel tank			m	2.8	M
			Note: PREVENT SPARKS ENTERING GAS TANK CAUSING EXPLOSION					
76	#		DRAIN AND STORE FUEL		1		2.0	M
77	#	Repl	FUEL 93 OCT		1	125.00		
			Note: WHEN STORING FUEL, IT WAS CONTAMINATED WITH 87 OCTANE FUEL.					
78			QUARTER PANEL					
79		Repl	RT Quarter panel	1676303403	1	3,250.00	25.5	3.9
80			Overlap Major Adj. Panel					-0.4
81			Deduct for Rear Bumper R&I				-1.2	
82	#		Drill Rivet Holes		1		4.5	
83	#	Subl	JIG RENTAL		1	600.00		
84	#		ORDER AND RECIEVE JIGS		1		2.0	
85	#	Rpr	SET UP ON CELLETTE				8.0	F
86	#		SET UP RT RR SHOCK TOWER FIXTURES		1		2.0	F
87	*	Rpr	RT Tail lamp panel				0.5	
88		R&I	RT Pressure vent				0.1	
89		Repl	RT Wheel opng mldg textured black	1678850400	1	236.00	0.5	
90		Repl	LT Wheel opng mldg textured black	1678850300	1	236.00	0.5	
91		R&I	RT Rear trim				0.1	
92		Repl	RT Quarter glass Mercedes	1676708400	1	410.00	Incl.	

WIS procedures does not call out R/I Fuel Tank Required. Can be protected from the fuel neck

Jig rental when shop is using camelon universal jigs with additional time to order and receive

Qtr panel replacement does not require a fixture set up. Can be done without fixtures per WIS

What Do You Think? Ethical or Not?

181	#	Corrosion Protection	1	10.00	0.2
182	#	Cavity Wax	1	47.00	0.2
183	#	Seam Sealer	1	180.00	0.8
184	#	Welder Set Up & Destructive Weld	1		4.0
185	#	Rivet Gun Set up	1		2.0
186	#	1k Zinc Dust 0009862800	1	149.00	0.3
187	#	Basic Body Filler 0129892971	1	70.00	
188	#	Parts Kit Adhesive 0129891771	1	434.00	
189	#	Rivet y1 0009917632	10	30.00	
190	#	Rivet y2 0040001607	15	45.00	
191	#	Store/ Wrap/ Organize parts cart and rental	1	5.00	3.0
192	#	Organize & Catalogue Fasters removed	1		1.5
193	#	Water / Air Leak Check	1		1.0

Is 4 + 2 Hrs reasonable for these two operations?

Organize and Catalogue Fasteners

Ethics in Collision Repair

1. **Prioritizing customer safety:** The safety of customers should always be the first consideration.
2. **Providing quality repairs:** Collision repair should restore the vehicle's structural integrity and repair any damage to the exterior and interior.
3. **Using quality parts:** Collision repair should use proven, high-quality parts from reputable firms.
4. **Being honest and transparent:** Collision repair should be honest and transparent with customers.
5. **Avoiding unnecessary repairs:** Collision repair should not recommend unnecessary repairs to increase the bill.
6. **Providing warranties:** Collision repair should provide warranties for repairs.
7. **Adhering to regulations:** Collision repair should adhere to safety and environmental regulations.
8. **Educating customers:** Collision repair should educate customers about testing, analysis, repair options, and the features and benefits of services.
9. **Advocating for the customer:** Collision repair should advocate for the customer's best interest and ensure they receive the full entitlement of their claim.
10. **Maintaining a clean and safe facility:** Collision repair should maintain facilities that are safe, clean, and employee- and customer-friendly

THANK YOU!

Final Thoughts/Q&A





Thank You