



Dedicated to  
Promoting Quality  
Collision Repair of  
Toyota Vehicles

Winter 2018

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Properly align and calibrate this remarkable technology for a full 360° view

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# CP Winter 2018



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## Talent and Patience

Today's successful shops rely upon their team of skilled professionals—individuals who display talent and patience and have the technical skills to reshape and restore a Toyota back to its original specifications.

In this issue you'll read about the art of paint shading or blending. Repainting and refinishing are particularly difficult skills to master—but if you're intent on high-quality repairs, you'll want to become an expert at these tasks. Additionally, we review Toyota's new Bird's Eye View Camera, which provides a driver with a 360° view around the vehicle. Our article helps you better understand how to correctly calibrate and re-align the cameras after the vehicle has been in an accident.

Even more, we want to help your customer satisfaction efforts. If you've ever experienced a customer frustrated with rules, regulations and insurance companies, consider the peace of mind you can bring when armed with the information they need to know about their rights when it comes to collision repair.

Always ahead of the game, Auto PartsBridge continues to bring innovation and speed to the parts ordering process.

Lastly, we're thrilled to partner with Mike Anderson, who brings his industry knowledge to our own Toyota Training facility—this time for a two-day Estimating Essentials class that will focus on identifying collision damage and ensuring vehicles are repaired correctly and on time.

Our goal is to bring you the best technical information in the industry, updates on resources, and industry trends all with an emphasis on customer satisfaction. Your success is our success—we look forward to bringing you the best throughout the year.

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PAINT SHADING OR BLENDING TRICKS THE EYE INTO SEEING ONE CONTINUOUS COLOR—BUT YOU NEED TO WORK AT IT TO MAKE IT LOOK JUST RIGHT.

## ACHIEVING A SHOWROOM FINISH AFTER A COLLISION

# Paint Shading Essentials

(aka Blending)



**Repainting a vehicle after an accident can be tricky—getting the new paint to match the old requires skill and patience. The following tips can ensure that the end result is paint that's as perfect as it was when new.**

### PAINT SHADING/BLENDING—HOW, WHY AND WHEN

Repainting typically falls into three categories: touch-up repainting, partial repainting and total repainting. Here, we'll focus on partial repainting, which is where paint shading/blending comes in.

If you've ever repainted a door and didn't blend in the paint, it was probably easy to see that the door had been repainted when the vehicle was in full sunlight because the repainted area didn't match the original color. To properly restore paint to like-new condition, paint shading or paint blending is required.

Paint shading is important because no two paint jobs are alike. Even at the factory, there can be slight variations based on the conditions the day the vehicle was painted, temperature, humidity, different paint brands used at different assembly plants, different types of equipment, and how long the paint had been flowing in the system—these factors all may affect the final color.

Another element to take into consideration is the way your facility repaints a vehicle. While Toyota primarily uses a waterborne paint process, many collision repair facilities (excluding those in states that mandate the use of waterborne) use solvent-borne paints. Each paint company may use different pigments, and their formulas will also vary in chemistry.

Paint color also varies from batch to batch. Paint companies come up with their own proprietary formula for the standard color and then create alternate formulas to match known variations in the paint as it is produced. For example, Desert Sand Mica (4Q2) has a standard formula and 13 alternate formulas.

Other factors that impact the look of the final color include color or shade of primer sealer, metallic flake orientation, the number of layers of pearl or mid-coat used, the type of paint gun, mixing

*[Continued on page 4]*

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volume and air pressure at the spray nozzle—even the angle and distance at which the painter holds the spray gun has an impact.

And finally, the viewing angle and light source can affect paint appearance—paint looks different under various lighting sources such as inside the shop versus in full daylight.

What's the solution? Paint shading/blending, tricks the eye into seeing one continuous color—but you need to work at it to make it look just right.

Start with the paint: Once you mix the formulation, spray the paint on a card, clear-coat it, let it dry, and then head outside with the card and the vehicle to see how they compare. Keep modifying the formula, gun settings and techniques until the vehicle and the card look to be as close as possible to each other.

Once you have the formula that is the closest match, you must then shade, or blend the paint with the adjacent panels. Panel painting without shading or blending is extremely tedious, requires more time than shading/blending and isn't cost effective because so much time is involved.

**SPOT SHADING/BLENDING** is done to correct relatively small scratches on fenders, door panels, etc. Apply paint carefully so the newly painted areas blend in with the adjacent areas in terms of color and texture and clear-coat to the nearest panel break. This technique is typically used for small damage and is usually done within the central part of a panel, such as a door, fender or bumper. These repairs are away from adjacent panels where a color difference can be easily seen.

Shading makes color differences less noticeable; the shade area can be light sanded and polished in a short period of time because it only involves a small area.

**BLOCK SHADING/BLENDING** refers to the application of clear coat over an entire panel in which the base color is shaded partially by solid color, metallic, pearl or mid-coat application. This technique is typically used for front and rear doors and complete fenders. The shading area also includes the adjacent panels.

This method requires relatively simple shading techniques so the color difference from the adjacent panels is not noticeable.

**BLOCK REPAINTING** is similar to refinishing a quarter panel section, and the cutoff point may be a distinct location under a body molding. This is done by removing molding, applying paint and clear coat, and then reattaching the molding, which will mask the repair. An example is the roof drip molding.

The shade/blend area fades in a small area. Texture and gloss matching is easy because the entire area is clear coated.

The bottom line: You need to be aware of what you're painting and what you're not painting, and make sure that all repaired areas blend so the vehicle looks like new when finished.



If you've ever repainted a door and didn't blend in the paint, it was probably easy to see that the door had been repainted when the vehicle was in full sunlight because the repainted area didn't match the original color. To properly restore paint to like-new condition, paint shading or paint blending is required."



### TWO-TONE ROOF PAINT REPAIR

Back in the '50s, two-tone paint was all the rage. Well, that trend is coming back, and to stand out in today's competitive automotive marketplace, Toyota is using dramatic two-tone paint schemes on select Camry, Yaris and C-HR models.

If you have to repaint a vehicle with a two-tone roof, here are some tips:

- Start by referring to the paint codes to be sure you have the correct formulas for each color (keep in mind, there may be variations, so be sure you have the correct one to guarantee a perfect match).
- If only one side of the vehicle is damaged, refer to the undamaged side of the vehicle to see where the two colors are used or go to Toyota's Technical Information System (TIS) site, <https://techinfo.toyota.com> (which requires a subscription). Some models have detailed two-tone repair information. As noted previously, paint color may vary from factory to factory, so paint blending is critical. In addition, on two-tone paint, the cut line between the two colors can vary from factory to factory, so be sure both sides match.
- If you have to completely repaint both sides, again refer to TIS or refer to a new vehicle on the showroom floor to determine the cut line where one color starts and the other stops, and then be consistent on both sides.

### TEXTURED ANTI-CHIP PAINT COATING ON TOYOTA TRUCKS

Why do people love Toyota Trucks? They're tough! After exposure to abrasive road debris however, or if in an accident, the textured surface on the rocker panels can be damaged. These coatings need to be properly restored to ensure factory-like chip-resistance and finish durability. The good news—this surface is easy to repair by following these guidelines:

- Wash and clean the surface.
- Dry and inspect the areas that are affected—check for any rust.
- Scuff or sand the surface.
- Re-clean the surface using wax and tar remover.
- Mask off the damaged area.
- Prime the area.
- Apply the anti-chip coating. You can apply the coating with a brush or roller for small areas; you may need to spray the finish for larger areas.
- Apply two coats.
- Allow the surface to cure for 24 hours before light use.

That's it—this tough, textured anti-chip coating is ready for another adventure. 🚛



# Bird's Eye View Camera

## HOW TO CALIBRATE



The Toyota Bird's Eye View Camera with Perimeter Scan helps drivers get into and out of the smallest spaces more easily.

TEN YEARS AGO, IF YOU TOLD SOMEONE THEY COULD SIT IN THE DRIVER'S SEAT, PUSH A BUTTON AND SEE A 360° VIEW AROUND THAT VEHICLE, they might not have believed you. But today, that feature—the Bird's Eye View Camera with Perimeter Scan—is a reality and available on select Camry, C-HR, RAV4, Highlander and Land Cruiser models.

The Bird's Eye View Monitor System takes the backup camera to a whole new level. It gives drivers the ability to view their surroundings and make safe decisions when parking and leaving tight spaces.

To get the Bird's Eye View Monitor System working:

1. Turn the vehicle on.
2. Leave the transmission in Park.
3. Turn on Park Assist.
4. Press the Bird's Eye View button located above the display.
5. The display will show a moving 360° view of the vehicle and its surroundings.
6. To stop the display from rotating, select Pause.
7. Then, you can select Play to resume the rotation.

In addition, when you shift the transmis-

sion into Reverse with the system on, the display will show the backup camera on the left-hand side of the display and the overview camera on the right.

If you shift the transmission into Drive, press the Bird's Eye View button once and it will show the wide front view on the left and the overhead view on the right. If you press the button again, it will display the vehicle's side views. When you press the button a third time, the system will turn off.

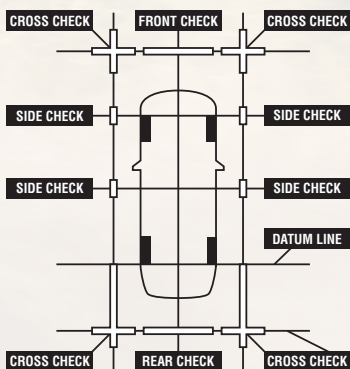
So, what happens if a vehicle equipped with the Bird's Eye View Monitor System is in a collision? The system has four cameras—one in front, one in each side

mirror, and a rear camera. After a collision or when a camera is replaced, the system has to be properly aligned and calibrated to create an accurate 360° image on the display.

Tools needed to recalibrate the cameras include:

- Laser tool kit
- Plumb bob
- String
- 4 inch wide tape (or 2 inch wide tape laid side by side)
- Metric tape measure
- Scissors
- Laser targets (boxes or wood blocks)

Follow the instructions on Toyota's Technical Information System (TIS) site at <https://techinfo.toyota.com> to create a grid like this:



Once you have your grid, you are ready to put the vehicle in diagnostic mode.

In addition to using Techstream (Toyota's diagnostic software), there are three ways to enter the diagnostic mode.

#### METHOD 1: SCREEN FLICK METHOD

1. Turn the ignition on.
2. Make sure the audio system is off.
3. Push the Menu button on the multi-display.
4. Press the Display button in the lower right section of the multi-display.
5. Press Screen Off on the display.
6. Perform a flick operation on the multi-display screen from left to right five times, then perform a flick operation from right to left five times, completing these actions within 15 seconds of the first flick. Verify that diagnostic mode is entered.
7. Turn the ignition off and then repeat steps 1 – 5.

#### METHOD 2: SEEK/TRACK METHOD

Perform steps 1 – 5, and then push the Seek > button five times, push the < Track button five times, and verify that the diagnostic mode is entered.

#### METHOD 3: HEADLIGHT SWITCH

While pressing and holding the Audio switch, operate the headlight switch: Off – Tail – Off – Tail – Off – Tail – Off – and then verify that diagnostic mode is entered.

Once in diagnostic mode, isolate each individual camera and adjust the direction of the lens to adjust the camera view forward or backward, or twist or raise and lower the views to get the markers on the floor into the red boxes and align the cross-check markers in the corners.

You can also press All View Reset to return all of the camera settings to default.

Issues with the steering angle sensor, body damage and dirt on the camera lens can affect performance and calibration. For complete instructions, go to <https://techinfo.toyota.com>.

The Bird's Eye View Camera with Perimeter Scan is a feature that Toyota drivers rely on when parking and driving in tight quarters, and by properly aligning the cameras you help ensure this system is in top operating condition. 🐦

# Be Your CUSTOMER'S ADVOCATE

FROM FILING A CLAIM TO FINDING THE RIGHT BODY SHOP, being in a collision can be extremely stressful for your customers. You can be a huge asset to them during this time by understanding your state's laws and explaining to customers what their rights are when it comes to collision repair.





## THE ABCs OF COLLISION REPAIR—CONSUMER RIGHTS

- A] A customer's right to choose original equipment manufacturer (OEM) parts begins with his or her insurance policy. Many insurance carriers offer policies that allow for OEM parts, and when it comes to vehicle safety and reliability, selecting that option is well worth the premium. Policies vary—some allow for OEM parts in every repair. Some allow for OEM parts depending upon the age of the vehicle, while others only use aftermarket, LKQ (like kind and quality) or Opt OE—i.e., gray market parts. Advise your customer to have a conversation with their insurance agent and ask the question, "Is my policy based upon OEM or like parts?"
- B] Many states require disclosures if anything other than an OEM part is used in a repair, while other states may require the customer's consent to use non-OEM parts. Some states do not have any of these protections. Research the rules in your state so that you can help your customers understand their rights.
- C] The use of OEM parts also depends upon whether the customer is the insured (the one that caused the accident) or the claimant (the victim in the accident). If the customer is the insured, the use of OEM parts is dictated by the insurance policy. But if the customer is the claimant, the insured's policy does not apply and it is the customer's right to insist upon OEM parts. In this instance, your shop can assist the customer by inspecting aftermarket or alternative parts on an estimate in order to rebut a claim.

## YOUR CUSTOMER'S HAVE RIGHTS—KNOW THEM

"Often times, insurance companies dictate that structural parts be replaced with used components," states Mike Anderson of Collision Advice. "It's nearly impossible to duplicate the same type, size and diameter of a weld that has been designated by Toyota engineers. The repaired part may not be as strong or might be too strong—and this may impact collision performance or airbag performance."

Your customers have the right to choose your body shop, and they have the right to request OEM parts. But in some instances, an insurance company will dictate the use of aftermarket LKQ or Opt OE—i.e., gray market parts.

In those instances, you can inspect the used components to ensure that they perform to OEM standards of fit, finish and safety. Some attributes to look out for include:

- Weight versus the OEM part
- Amount, size and type of welds
- Metal strength—Toyota welds will be galvanized
- Crash test results—will the parts hold up the same in a collision?
- Headlamp brightness—measure lumens with a light meter and compare to the OEM part

The advanced technologies and sophisticated composite materials used in today's vehicles are critical considerations in collision repair. Consider the example of a bumper repair. Some insurance companies may require the use of remanufactured bumper covers. But, if the vehicle is equipped with blind spot monitors, a non-OEM bumper could block the monitor and impact safety.

Be your customer's advocate, help them understand their rights, and inspect non-OEM parts to confirm proper performance and help ensure a safe, quality repair. It's important that your customers understand that only Genuine Toyota Parts are engineered to the exact specifications and tolerances of the particular vehicle for which they were created. They meet the highest standards of fit, finish and safety, giving you and your customers security and confidence in knowing their Toyota is still a Toyota. 📄



## Parts Terminology

### ■ OEM Part

A part designed by the vehicle manufacturer.

### ■ Aftermarket Part

A part produced by companies other than the OEM. These parts are sometimes referred to as "like kind and quality."

### ■ Recycled Part

A used part or assembly that has been removed from another vehicle.

### ■ Reconditioned Part

A used part that has been repaired or rebuilt to appear like a new OEM part.

### ■ Genuine Toyota Remanufactured Part

A part designed to be an exact replacement for the original equipment Toyota part covered by a 12-month unlimited mileage warranty.



Find additional resources about customer rights and collision repair at [www.crashrepairinfo.com](http://www.crashrepairinfo.com).

AUTO PARTSBRIDGE®

# Get OEM Parts Information—FAST!

AUTO PARTSBRIDGE CONTINUES TO RAISE THE BENCHMARK IN PARTS ORDERING by recently adding new features, such as providing access to more Toyota content including parts photos and parts repair bulletins as well as bringing Toyota data directly to the shop through the program. And as part of Toyota's dedication to continuous improvement, two enhancements have been made for a more user-friendly experience.

## UNIVERSAL SUPPLEMENT HANDLING—EASIER, FASTER, LESS RISK

Supplement handling can be completed in a snap! Auto PartsBridge can now match your internal process. Simply submit your supplements in the same way you typically process orders. Whether it's submitted electronically, by fax, via email, a committed estimate or running parts list, it's built to fit your business model.

## DEALER-INITIATED ORDERING—LET THE DEALER PLACE THE ORDER FOR YOU

Dealer-initiated ordering eliminates the "hiccups" that shops sometimes experience with electronic ordering. Fact is, electronic ordering offers a lot of benefits, yet some shops may find it just doesn't fit in with their internal processes. Auto PartsBridge has changed all that! Now the dealer can initiate an order on your behalf, so you

don't have to worry about software challenges.

## HOW DEALER-INITIATED ORDERING WORKS

The shop sends the estimate or the estimate number to the dealer, and the dealer takes it from there, introducing the data to Auto PartsBridge on behalf of the shop. The shop gets to take full advantage of Auto PartsBridge, including automatic part number verification to eliminate incorrect parts and better communication between shops and dealers, improved visibility of parts data from the dealership, and access to the Genuine Toyota Parts Catalog for difficult-to-find parts.

Point, click, access the OEM information you need—that's what Auto PartsBridge is all about. For more information on Auto PartsBridge or any of these new features, please call Customer Support at 888-929-5599 or visit [www.autopartsbridge.com](http://www.autopartsbridge.com). 📧



With Auto PartsBridge, you have a one-stop, easy-to-use online parts ordering system at your fingertips:

- ✔ Access to price matching for OEM parts
- ✔ Availability to the same parts information that the dealer has, including illustrations, VIN-based parts validation and look up, not to mention exact part identification

*Auto PartsBridge is a registered trademark of Infomedia Ltd., used with permission.*



We've introduced major features that make Auto PartsBridge faster, better and more convenient for collision centers."

— Karl Krug  
Global Head of Wholesale  
Solutions at Infomedia

# B0030

## ESTIMATING FOR COLLISION REPAIR PROFESSIONALS



TEAM UP WITH TOYOTA FOR EXPERT ADVICE ON COLLISION REPAIR ESTIMATING, best practices and accountability. For the first time, industry expert Mike Anderson from Collision Advice will be teaching a course specific to Toyota and Lexus vehicles. The new B0030 Collision Estimator Essentials course will launch in April 2018. The class is offered at only \$495 per person to non-certified Toyota and Lexus collision centers and at no charge to Toyota and Lexus Certified Collision Centers.

The two-day class will cover topics like identifying collision damage by using Toyota Information System (TIS), which covers Toyota's OEM repair procedures, and performing a health check with Toyota's Techstream. You will also gain a true customer service perspective, including keeping customers informed of the vehicle status, providing on-time delivery, and ensuring the vehicle is fixed right the first time.

Visit the University of Toyota site, [www.uotdealer.com](http://www.uotdealer.com), where you'll be able to log in with your Toyota/Lexus SPIN and dealer code to register for B0030. 📍

## The Toyota Collision Repair & Refinish Training Calendar

FEBRUARY — APRIL 2018

### WEST CALDWELL, NJ

02/06	301	Non-Structural Body Repair Techniques
02/08	460	Structural Body Repair Techniques
02/20	200/201	Color Matching For Painters
02/22	250	Advanced Painting Techniques
03/13	601	Hybrid Collision Repair
03/14	300	Welding Techniques For Collision Repair
03/15	301	Non-Structural Body Repair Techniques
03/20	460	Structural Body Repair Techniques
03/22	503	Steering & Suspension Analysis & Repair
03/27	602	Advanced Hybrid Collision Repair
04/10	200/201	Color Matching For Painters
04/12	300	Welding Techniques For Collision Repair
04/17	301	Non-Structural Body Repair Techniques
04/24	250	Advanced Painting Techniques

### JACKSONVILLE, FL

02/05	601	Hybrid Collision Repair
02/06	300	Welding Techniques For Collision Repair
02/07	301	Non-Structural Body Repair Techniques
02/12	200/201	Color Matching For Painters
02/14	250	Advanced Painting Techniques
03/05	601	Hybrid Collision Repair
03/06	300	Welding Techniques For Collision Repair
03/07	301	Non-Structural Body Repair Techniques
03/12	602	Advanced Hybrid Collision Repair
03/13	503	Steering & Suspension Analysis & Repair
03/14	460	Structural Body Repair Techniques
04/09	601	Hybrid Collision Repair
04/10	300	Welding Techniques For Collision Repair
04/11	301	Non-Structural Body Repair Techniques

04/23	200/201	Color Matching For Painters
04/25	250	Advanced Painting Techniques

### TORRANCE, CA

02/06	300	Welding Techniques For Collision Repair
02/07	301	Non-Structural Body Repair Techniques
02/13	602	Advanced Hybrid Collision Repair
02/14	460	Structural Body Repair Techniques
02/21	601	Hybrid Collision Repair
02/22	503	Steering & Suspension Analysis & Repair
03/13	101	Paint Finish Repair
03/14	200/201	Color Matching For Painters
03/21	602	Advanced Hybrid Collision Repair
03/22	908	ISC Retractable Hard Top
04/04	502	Body Electrical Diagnosis and Repair
04/10	300	Welding Techniques For Collision Repair
04/11	301	Non-Structural Body Repair Techniques
04/17	250	Advanced Painting Techniques
04/19	101	Paint Finish Repair
04/24	300	Welding Techniques For Collision Repair
04/25	460	Structural Body Repair Techniques

For a complete training schedule and the latest information on Toyota's Collision Repair & Refinish Training, visit [www.crtraining.com](http://www.crtraining.com).

### CHECK US OUT ON FACEBOOK AND TWITTER!

You'll also find the latest information on tools, classes and repair procedures on our social media sites.

 Toyota Collision Repair Training

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