



Dedicated to  
Promoting Quality  
Collision Repair of  
Toyota, Lexus and  
Scion Vehicles

Summer 2015



## Work by Day—Play by Weekend

### The All-New 2016 Toyota Tacoma

RC F Carbon Fiber  
Repairs and Tips

Get results using these carbon  
fiber repair techniques

OPS—Improving Parts Procure-  
ment, Pricing and Delivery

The OPS Technology Suite is now  
available to STAR Elite Dealers

To Repair or  
Not To Repair?

Learn how to properly handle  
wheels during collision repair

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**As the industry continues to advance, Toyota will be there too, helping collision repair shops learn about the latest technologies and deliver the highest caliber service to their customers."**

— Kathy Capozza

## New Technologies Equal New Opportunities

IN THIS ISSUE OF *COLLISION PROS* MAGAZINE, Toyota highlights new technologies in nearly every story. These new technologies represent advancements in our industry that help make cars safer for passengers, collision centers run more efficiently and help us restore Toyota vehicles back to the original factory specifications with greater accuracy.

The all-new Tacoma is a bold, powerful vehicle, sure to get truck enthusiasts excited. Learn all about the new environmentally conscious refrigerant used in this vehicle, plus new applications of ultra-high strength steel for the vehicle body frame. OPSTRAX is a new parts management solution that launched to STAR Elite dealers in July. This software is designed to improve efficiency in the parts ordering process, allowing for better tracking and communication. Finally, Toyota Collision Repair & Refinish (CR&R) Training is embracing some new technology of its own. You can now find CR&R Training on Facebook and Twitter. And, [www.crtraining.com](http://www.crtraining.com) has a new responsive design so you can easily access the site from your mobile phone or tablet.

All of these advancements present exciting opportunities for collision repair shops to learn, grow and evolve. This means being in an even better position to provide high-quality, safe repairs as efficiently as possible. As the industry continues to advance, Toyota will be there too, helping collision repair shops learn about the latest technologies and deliver the highest caliber service to their customers.

Kathy Capozza  
Wholesale Marketing Administrator Sr.  
Toyota Sales and Marketing | Toyota Motor Sales, U.S.A., Inc.  
Collision Pros Magazine | [info@collisionprosmagazine.com](mailto:info@collisionprosmagazine.com)



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# RC F CARBON FIBER REPAIRS & TIPS

THE 2015 LEXUS RC F IS A SLEEK, ATHLETIC COUPE. And, to add even more appeal, owners can purchase an available carbon fiber reinforced roof and rear wing. These braided carbon fiber accents visually reinforce the vehicle's strength and agility. However, if these parts get nicked or scratched, repairing the damage takes time and dedication to detail.

STEP 1: Assess the depth of the scratch.



Lexus outlines the steps needed to repair these pieces in Collision Repair Information Bulletin (CRIB) #189. Toyota's Joe DiDonato, Collision Training Administrator, Technical & Body Training Department, Toyota Motor Sales, U.S.A., Inc., has tested and verified these repair procedures in the Toyota, Lexus and Scion Collision Repair & Refinish lab in Torrance, California. In this article, we explain the repair process and offer tips and advice that DiDonato learned during his testing.

### UNDERSTANDING CARBON FIBER

Carbon fiber reinforced plastic (CFRP) is created by binding resin with carbon fibers. The material is extremely strong and lightweight, has a lower density than metals such as steel and aluminum and has a high strength-to-weight ratio. This material is covered with multiple layers of clear coating designed to protect the carbon fiber and create a shiny, aesthetically pleasing finish.

- Layer 1—helps prevent gapping of the carbon fiber material
- Layer 2—improves coating adhesion
- Layer 3—helps increase weather resistance and UV resistance and create a smooth, glossy appearance

The first step when approaching repairs to Lexus RC F carbon fiber pieces is to assess the depth of the scratch. If the damage is too deep, the piece cannot be repaired and you will need to replace it instead of repairing it.

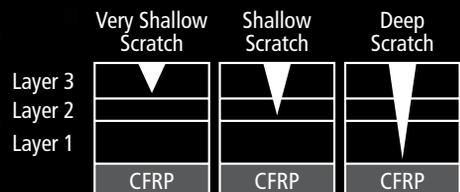
"There is a little bit of judgment involved in how deep of a scratch you are able to repair," explains DiDonato. "If the scratch goes all the way down to the carbon fiber weave, then you need to replace the part. If the scratch is more superficial, use the guidelines in the bulletin and your best judgment to determine if you should repair or replace the part."

You will know that the scratch is too deep to repair if it has reached the carbon fiber below the clear coat or if you can determine that it has penetrated layer 1 of the clear coat. The part is repairable only if the scratch has penetrated no further than layer 2 or layer 3 of the clear coat.

The CRIB gives you a few guidelines for judging the depth of a scratch. You are advised to run your fingernail across the scratch and make the following determination.

- If the deepest part of the scratch is white and your fingernail does not catch then you can refinish the part.
- If the deepest part of the scratch is white and your fingernail catches lightly then you can refinish the part.
- If your fingernail catches strongly then you should replace the part.

"If you are still unsure about the depth of the scratch after you have performed the fingernail test, there are a few other tools you can use," says DiDonato. "Use a magnifying glass to visually inspect the depth of the scratch. Also, you can use a measuring tool such as the Ultrasonic Coating Thickness Gauge for Plastics to measure the depth of the scratch."



### SANDING AND CLEAR COAT

The next step in the repair is to sand down the scratch and surrounding area to remove the damage. Sand a wide dish pattern around the affected area. Depending on the depth of the nick, 800 to 1,000 grit paper is recommended. After you have finished sanding, clean the area thoroughly and then apply clear coat. Apply layers until the area is completely filled in. After applying the clear coat, you may need to sand down the area so that it is completely level with the surrounding material. Apply a final layer of clear coat over the entire piece to ensure a uniform appearance in the finished product.

Premium clear coat should be used for its superior protective properties. 🐾

STEP 2: Sand down the nick and surrounding area.



STEP 3: Clean area thoroughly and apply clear coat.



STEP 4: Buff clear coat.



# WORK BY DAY— PLAY BY WEEKEND

## The All-New 2016 Toyota Tacoma

FOR THE LAST TEN YEARS, THE TACOMA HAS BEEN THE TOP-SELLING MID-SIZE PICKUP IN AMERICA. These highly regarded trucks are something you are used to seeing in your shop. After all, of the roughly three million Tacomas that have been sold, approximately 75 percent of them are still on the road. Now, it's time to meet the all-new 2016 Tacoma—you'll be seeing it for years to come.

### FOR 2016, TOYOTA HAS TAKEN THIS MUCH-LOVED TRUCK AND MADE IT EVEN BETTER.

"This truck is badass!" Bill Fay, Toyota Group Vice President and General Manager said when he revealed the vehicle to the press. "Every time I see it, I just want to

get behind the wheel and set off on a new adventure."

While Tacoma aficionados will find the power and reliability they have come to expect, the 2016 Tacoma boasts new fuel efficiency and safety features. The new Tacoma

was created to work hard by day, and play hard all weekend long. It is an agile beast that eats up city streets as well as country roads. No roads where you're going? No problem for Tacoma. The truck is as content off-road as it is on.

### EXTERIOR

The new Tacoma has a beefy, robust body that exudes strength. A taller hood and distinctive hex-shape upper grille give the vehicle a proud posture that is sure to stand out in any crowd. The exterior includes unique details that accent the hood, wheels and body. The Tacoma is finished off by a stamped logo on the tailgate that harkens back to vintage Toyota trucks.

Additional features include:

- Locking tailgate
- Easy lowering feature that allows the tailgate to slowly lower into place
- Available LED daytime running lights
- Ultra-high strength steel integrated into the body shell
- Integrated spoiler that helps improve vehicle aerodynamics
- Available 16- and 18-inch wheels

The Tacoma features two new paint colors:

- Beige 4V6
- Blue Mica Metallic 8T0

### UNDER THE HOOD

Tacoma comes with several engine options, so you can get the exact combination of power and responsiveness that you desire. One exciting option is the all-new Atkinson cycle 3.5-liter V6 engine. This engine features D4-S technology—the first application on a Toyota vehicle.

D4-S technology uses two injectors per cylinder—a direct injector and a port injector. This allows fuel to be injected into both the combustion chamber and intake ports, depending on engine speed. The result is enhanced performance, optimized fuel economy and reduced emissions.

The V6 comes with two new transmission options: a 6-speed manual or a 6-speed automatic.



**The 2016 Tacoma boasts new fuel efficiency and safety features.**

#### INTERIOR

The well-appointed interior of the new Tacoma balances good looks with the ruggedness needed to get the job done. Details like soft-wrapped trim and metallic accents give the cabin space a refined aesthetic. The design of the interior is focused around creating an excellent experience for the driver.

In addition, a new acoustic windshield and strategic placement of more sound-absorbing materials within the cabin make for a quiet ride for passengers.

Interior features include available:

- Qi wireless charging
- Power moonroof
- Blind-spot monitor with rear cross-traffic alert
- Color multi-information display
- GoPro interior windshield mount

#### NEW REFRIGERANT

Collision repair technicians working on the all-new Tacoma should be aware of a few changes to the vehicle that will affect operations in the shop. The 2016 Tacoma uses a new refrigerant called HFO 1234yf. The Tacoma is the first Toyota to use this new refrigerant. One big advantage of HFO 1234yf is that it is more environmentally conscious than other refrigerants.

To work with this new refrigerant, collision centers will need a new A/C machine. Shops should be aware of this change and be prepared to accommodate it.

*Continued pg. 8 >>*



**This truck is badass! Every time I see it, I just want to get behind the wheel and set off on a new adventure."**

**– Bill Fay,  
Toyota Group Vice President  
and General Manager**

#### **BODY TALK**

Changes have been made to the body structure of the all-new Tacoma to help make the vehicle lighter and yet still safe in the event of a collision.

- 1500 MPa high tensile strength steel is used for cabin reinforcement.
- The vehicle's roof has been engineered so that impact will be dispersed in some sections.
- Door openings have an increased number of spot welds to help improve stability (1500 MPa).
- The suspension member and front side member are designed to absorb impact in a frontal collision.

For references on the new Tacoma, view the collision repair manual for the vehicle, body specifications and additional information, which can be found on the Technical Information System (TIS).

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#### **WORKING WITH ULTRA-HIGH STRENGTH STEEL**

The 2016 Tacoma, like many new Toyota vehicles on the road today, uses strategic placement of ultra-high strength steel to help increase structural strength and rigidity without adding weight to a vehicle. However, special caution must be taken when working with this material because it can become fragile if handled improperly or exposed to high temperatures.

Welding specifications and steel strength ratings can be found in model-specific Collision Repair Manuals. The vehicle-specific structural outlines in these manuals will show all ultra-high strength steel body components. Collision Repair Manuals will also give recommendations for welding.

Additionally, ultra-high strength sheet steel is often used for structural body and frame components. Exposing these pieces to heat can result in structural changes to the material that decrease strength. Heat can also damage the zinc coating on these components, making them less corrosion resistant.

The following guidelines apply to cabin reinforcement repair procedures:

- No hot straightening methods should be used.
- Sectioning 980 MPa and 590 MPa strength-rated pillar reinforcements is not recommended.
- Do not section 440 MPa rated components except at specified locations.

For more information on working with ultra-high strength steel, refer to Collision Repair Information Bulletins (CRIBs) #161, 174, 175 and 176. Additional resources can be found on the Technical Information System (TIS) at [www.techinfo.toyota.com](http://www.techinfo.toyota.com). 🐾



# TO REPAIR OR NOT TO REPAIR?

PROPERLY HANDLING WHEELS DURING COLLISION REPAIR



Newly revised Collision Repair Information Bulletin (CRIB) #154 Wheel Reconditioning & Replacement gives recommendations about how to approach wheels during the repair process.

WHEELS ARE OFTEN SOME OF THE MOST ATTRACTIVE AND DEFINING FEATURES OF A VEHICLE. But wheels aren't just about looks, they play an important role in occupant safety.

If damaged in a collision, wheels need to be restored properly during the repair process to help ensure that the vehicle is restored to pre-accident condition.

"Wheels should be treated as crucial to the integrity of a vehicle," says James Meyer, Senior Collision Training Administrator, Toyota Motor Sales, U.S.A., Inc. "Safety should be the most significant consideration for wheel replacement, not cost."

## REFINISH OR REPLACE?

If a vehicle has been in a collision, wheels should be carefully inspected to ascertain any damage. During the evaluation process, check for visible damage such as nicks, dents, scrapes, cracks, and lateral and radial run out. If a wheel exhibits any of this type of damage, it should be replaced with a new Genuine OEM wheel and not refinished. In addition, salvage wheels are not recommended for use during Toyota, Lexus and Scion collision repairs. Salvage wheels are from unknown origin and the history and previous damage to these parts cannot be known with exact certainty.

Refinishing is acceptable only in the case that the damage to a wheel is superficial. Repairs to wheels should be limited to cosmetic sanding and replacing paint coatings.

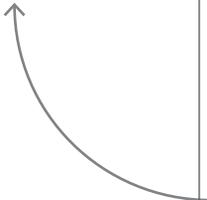
To read Toyota's complete recommendations on this subject, refer to CRIB #154 at: <http://www.crrtraining.com>.





Offering the OPS Technology Suite to our dealerships is an important step in fulfilling our commitment to provide tools to our dealerships that give them a competitive edge. Not only will our dealers' parts department be able to take advantage of cutting-edge technology in parts ordering and delivery distribution, they will be able to pass along better efficiency and generate savings for their collision shop customers."

– Jeff Hilton,  
Wholesale Parts &  
Collision Manager,  
Toyota Motor Sales,  
U.S.A., Inc.



# OPS

## Improving Parts Procurement,

Recently, Toyota announced that it is supporting a new shop management software suite from Overall Parts Solutions (OPS) that is designed to help improve ordering, management and delivery of Genuine Toyota Parts. The OPS Technology Suite is now available to Toyota STAR Elite dealers. Quick, easy access to Genuine Toyota Parts is an important part

chased parts from the time they are ordered to the moment they are delivered. OPS can also help identify disruptions to the shop's supply chain. Finally, OPS can help create greater efficiencies within a collision center's ordering processes by reducing phone calls, which can save time and free up staff to concentrate on other important tasks.



of helping produce satisfied customers, high-quality work and greater profits.

"Offering the OPS Technology Suite to our dealerships is an important step in fulfilling our commitment to provide tools to our dealerships that give them a competitive edge. Not only will our dealers' parts department be able to take advantage of cutting-edge technology in parts ordering and delivery distribution, they will be able to pass along better efficiency and generate savings for their collision shop customers," says Jeff Hilton, Wholesale Parts & Collision Manager, Toyota Motor Sales, U.S.A., Inc.

In today's collision repair environment, having control over the procurement and delivery of parts can help give you an important competitive advantage. OPS helps track pur-

### BUY GENUINE

Cost and availability can sometimes be barriers to collision centers using Genuine Toyota Parts. The OPS Technology Suite reduces these issues by offering competitive pricing on Genuine Parts as well as exclusive deals and discounts. OPS also provides the framework for a uniform purchasing process for both dealers and collision centers. This helps ensure consistency and continuity, enabling dealers to deliver the parts as quickly as possible to collision centers. A quality parts purchasing process can help to improve the cycle time and efficiency of collision centers and can help dealerships sell more parts.

Using Genuine Toyota Parts during a collision repair helps ensure that customers' cars

# Pricing and Delivery

are returned to the original factory standard and meet all original criteria for safety and appearance. The result is a high-quality repair and a satisfied customer.

The OPS Technology Suite is compatible with most major estimating and management systems. The program is already available to Lexus dealerships.

For more information about the OPS Technology Suite, visit [www.OPSTRAX.com](http://www.OPSTRAX.com). 📄



 The OPS Technology Suite is now available to Toyota STAR Elite dealers

## The OPS Technology Suite

The OPS Technology Suite combines several tools to help dealerships streamline their wholesale parts business. The tools are designed to assist with procurement, competitive pricing and delivery of Genuine Toyota Parts. The suite consists of the following components.

**OPSTRAX**—a parts procurement and communication tool between dealers and collision centers. OPSTRAX gives collision centers the ability to submit and track parts orders electronically and it allows dealerships to view all orders electronically through a centralized location.

**VALUTRAX**—allows parts departments to offer original equipment manufacturer parts at competitive prices.

**DELIVERYTRAX**—makes parts delivery logistics a breeze. DELIVERYTRAX provides electronic driver dispatching, live-tracking and accountability for wholesale logistics operations.

**TRAXPOD**—stay connected with your customer using this handy feature. TRAXPOD provides delivery notifications, deals and discounts, all sent directly to your customer’s computer desktop.

Additional features include:

- Real-time reporting and statistics
- Instantly view purchasing trends and benchmarks
- Helps improve communication between collision centers and dealerships



## THE TRAINING CALENDAR



[WWW.CRRTRAINING.COM](http://WWW.CRRTRAINING.COM)

### WEST CALDWELL, NJ

09/15 300 Welding Techniques for Collision Repair  
09/16 601 Hybrid Collision Repair  
09/17 504 Air Conditioning for Collision Repair  
09/22 200 Color Matching for Painters  
09/24 250 Advanced Painting Techniques

### JACKSONVILLE, FL

09/09 300 Welding Techniques for Collision Repair  
09/10 601 Hybrid Collision Repair  
09/11 602 Advanced Hybrid Collision Repair  
09/15 301 Non-structural Body Repair Techniques  
09/17 460 Structural Body Repair Techniques  
09/22 300 Welding Techniques for Collision Repair  
09/23 601 Hybrid Collision Repair  
09/24 101 Paint Finish Repair

NEW JERSEY



FLORIDA



CALIFORNIA



### TORRANCE, CA

09/09 300 Welding Techniques for Collision Repair  
09/10 601 Hybrid Collision Repair  
09/15 200 Color Matching for Painters  
09/17 250 Advanced Painting Techniques  
09/21 601 Hybrid Collision Repair  
09/22 300 Welding Techniques for Collision Repair  
09/23 460 Structural Body Repair Techniques

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More courses can be found at [www.crrtraining.com](http://www.crrtraining.com)

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Get the latest information on tools, training and repair procedures on our social media sites.



Toyota Collision Repair Training



@ToyotaCRR

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

## TECHNICAL WEBSITES



## YOU NEED TO KNOW

### [www.crrtraining.com](http://www.crrtraining.com)

Get Toyota, Lexus and Scion Collision Repair & Refinish Training information

### [autopartsbridge.com](http://autopartsbridge.com)

Order all Toyota and Scion parts and components—clips, fasteners and decals—needed for a repair

### [techinfo.toyota.com](http://techinfo.toyota.com)

Get vital information you'll need to effectively service most Toyota, Lexus and Scion vehicles

### [toyotapartsandservice.com](http://toyotapartsandservice.com)

Search and order Genuine Toyota Parts right from your computer

## EDITORS, WRITERS, DESIGNERS



## WE WANT TO HEAR FROM YOU

**EDITOR:** Kathy Capozza

**MANAGING EDITORS:**

Elisa Liehr, Allison Barker

**COPYWRITING AND DESIGN:**

Liehr Marketing & Communications

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**CONTRIBUTING DEPARTMENTS:**

TIS  
STAR  
Lexus Collision Repair & Refinish  
Toyota Collision Repair & Refinish  
Toyota Certified Collision Centers  
Toyota Genuine Parts  
University of Toyota, Lexus College  
Toyota Technical Education Network  
Toyota Wholesale Parts Department

**REFER ALL CORRESPONDENCE TO:**

Collision Pros  
Toyota Motor Sales, U.S.A., Inc.  
19001 S. Western Ave., HQ16  
Torrance, California 90501  
[info@collisionprosmagazine.com](mailto:info@collisionprosmagazine.com)

TOYOTA

**WHOLESALE PARTS**

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