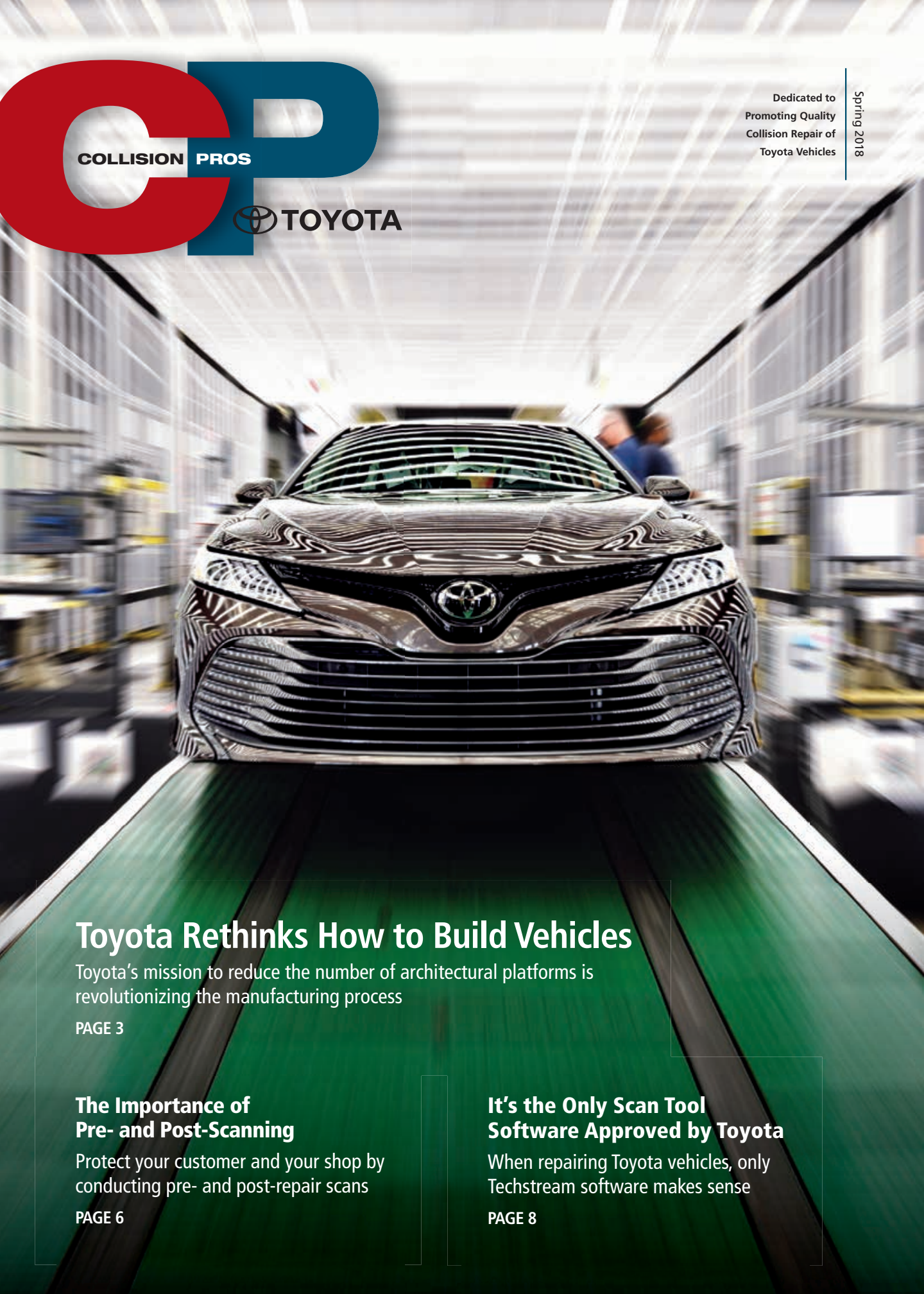
COLLISION PROS
TOYOTA

Dedicated to
Promoting Quality
Collision Repair of
Toyota Vehicles

Spring 2018



Toyota Rethinks How to Build Vehicles

Toyota's mission to reduce the number of architectural platforms is revolutionizing the manufacturing process

PAGE 3

The Importance of Pre- and Post-Scanning

Protect your customer and your shop by conducting pre- and post-repair scans

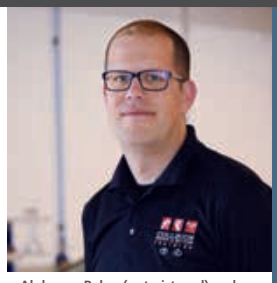
PAGE 6

It's the Only Scan Tool Software Approved by Toyota

When repairing Toyota vehicles, only Techstream software makes sense

PAGE 8





Contributors to this edition of *Collision Pros*: Ryan Bacsafra, Agustin Diaz, Michael Kramarz, Alphonso Baker (not pictured) and Rusty Brown (not pictured).

REVOLUTIONIZING THE
Manufacturing Process

Streamline, simplify, optimize—our story about the Toyota New Global Architecture (TNGA) is a classic case where less is more. We explore how reducing the number of architectural platforms will simplify the manufacturing process while making it possible to offer customers a wide array of options and more efficient collision repairs for shops. If meeting OE standards on all repairs seems complicated, we're here to tell you it's not. In our article about OEM scan tools, you'll see that by using the right tools and relying upon the best resources, it's easy to ensure that each Toyota you repair is restored to factory standards. Further, it's really your responsibility to your customers to follow OE standards—after all, what's more important than their safety and your shop's reputation? Our articles on following OE guidelines, along with our recommendations about pre- and post-scanning all repairs, emphasize the importance of quality assurance and technical compliance. We also offer some helpful tips when it comes to repairing a vehicle equipped with Entune 3.0 and Service Connect—helping to keep your customers satisfied with both the repair and the repair experience.

Our new website, www.toyotapartsandservice.com, is your newly updated Toyota Wholesale Parts resource where you'll find Genuine Toyota collision and mechanical parts, application charts, parts support programs and OE training opportunities. There's a lot to explore! Visit for yourself to see how convenient it is to find and order Genuine Toyota Parts.

FOR A FREE ELECTRONIC SUBSCRIPTION OF COLLISION PROS MAGAZINE
www.toyotapartsandservice.com.

EDITOR:
Ryan Bacsafra

MANAGING EDITORS:
Elisa Liehr
Roberta Clark

COPYWRITING AND DESIGN:
Liehr, Inc.

CONTRIBUTING DEPARTMENTS:
Toyota Collision Repair & Refinish Training
Toyota Certified Collision Centers
Toyota Genuine Parts
Toyota Technical Education Network
Toyota Wholesale Parts & Certified Collision Department

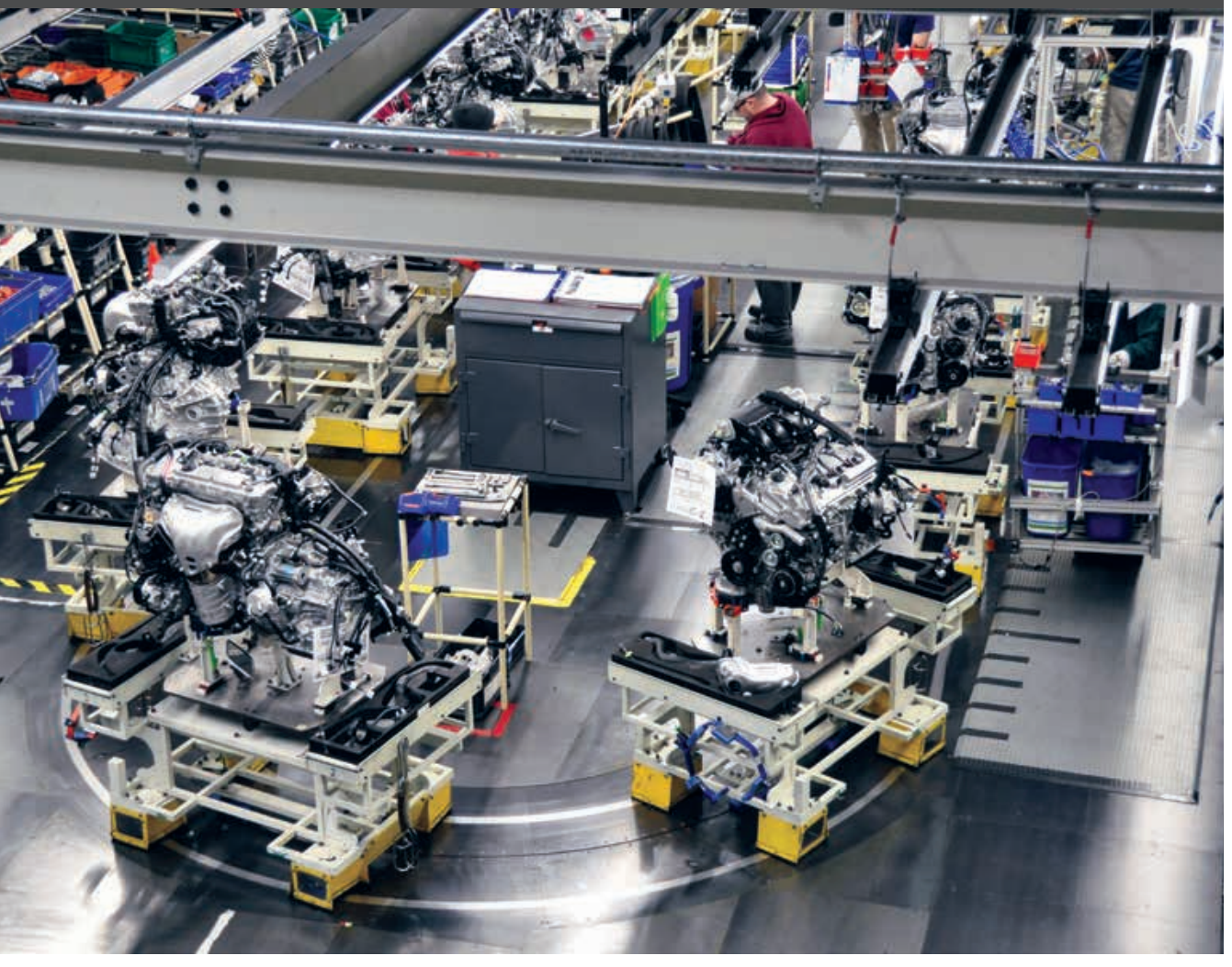
REFER ALL CORRESPONDENCE TO:
Collision Pros
Toyota Motor North America, Inc.
6565 Headquarters Drive
Mail Stop E1-4D
Plano, TX 75024
info@collisionprosmagazine.com

TECHNICAL WEBSITES
www.toyotapartsandservice.com
www.crrtraining.com
www.techinfo.toyota.com
www.autopartsbridge.com
www.opstrax.com

Collision Pros is published four times a year by the Toyota Wholesale Parts & Certified Collision Department. Contents may be reprinted with permission.

MDC# 00117-00601-JUN18

TOYOTA HAD 105 DIFFERENT ARCHITECTURAL PLATFORMS. NOW, THANKS TO TOYOTA NEW GLOBAL ARCHITECTURE (TNGA), THE NUMBER OF PLATFORMS WILL BE REDUCED TO FIVE.



Toyota Rethinks **How to Build Vehicles**

A CASE WHERE LESS IS MORE

As a collision repair facility, you must work on a variety of vehicle body styles as well as different chassis configurations (unibody as well as body-on-frame). To streamline the development of new models, as well as to make them easier to repair, Toyota has been on a mission to reduce the number of architectural platforms used to build new vehicles.

INTRODUCING TOYOTA NEW GLOBAL ARCHITECTURE

Up until recently, Toyota had 105 different architectural platforms. Now, thanks to Toyota New Global Architecture (TNGA), the number of platforms will be reduced to five. Just as athletes build their core strength to maximize their performance, Toyota is working on improving the vehicles' core components. To accomplish that goal and to enhance each model's unique features, these new platforms will share their highly functional core components.

The end result will be vehicles that deliver improved agility and dynamic performance thanks to possessing a stronger core. They will be compact, but efficient, and feature progressive design. This is a total rethinking of how to build vehicles: It's about building

[Continued on page 4]

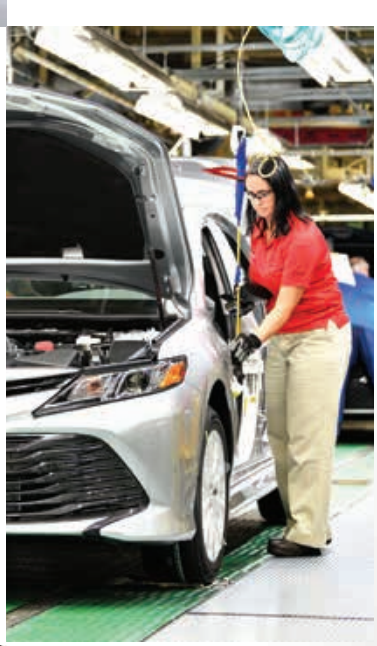
[Continued from page 3]

better vehicles on common platforms with common parts. The aim is to make Toyota's manufacturing plants more flexible and responsive to changes in the marketplace. This flexibility will lead to cost savings that can then be reinvested in future technologies, giving rise to the next generation of Toyota vehicles. Accomplishing these goals will also make these new models easier for your shop to repair as it will only have to be proficient with these five platforms.

THE FOUNDATION OF TOYOTA NEW GLOBAL ARCHITECTURE

The platform is the basic core around which the rest of the vehicle is built. In addition to more than a hundred different platforms, globally Toyota currently uses more than 800 different powertrains, including engines modified to fit those different platforms. By adopting TNGA, Toyota can cover the entire range of vehicles—from compact sedans and sports cars to SUVs—with just five platforms.

The aim is to make Toyota's manufacturing plants more flexible and responsive to changes in the marketplace. This flexibility will lead to cost savings that can then be reinvested in future technologies, giving rise to the next generation of Toyota vehicles.



In addition, all key interior components such as steering wheels, gear shifters, pedals and airbags will be dictated by five standardized seat heights. Designers will select a seat height and the vehicle's purpose (whether it's a sedan, sports car or SUV), which will lead to a concise decision tree of accompanying components. Then, thanks to unique interior finishes combined with bold exterior styling, this simplification of the platforms becomes invisible. That's because TNGA is built on two pillars: core strength and emphasized personality. Core strength relates to increased chassis stiffness and a lower center of gravity to improve the basic performance of the core (or essential) parts and raises the level of all Toyota vehicles. And by sharing high-performance components, chief engineers are able to focus on accentuating the appeal of each model, giving them more personality.

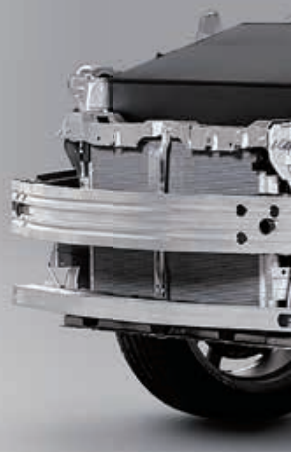
Using standardized platforms, powertrains and major components will help Toyota make cars that require fewer resources to build and provide a safer and more enjoyable drive with even greater fuel efficiency.

EXAMPLES OF TNGA IN ACTION

The 2017 Prius represents the first vehicle built with TNGA. The result is a vehicle that is more powerful and fuel efficient, produces lower emissions, and weighs less thanks to the use of lighter materials. In addition, this Prius delivers enhanced visibility and legroom and features a lower and wider stance, more responsive steering, and improved ride and handling, all with more athletic and aggressive styling.

The 2018 Toyota Camry is the first North American TNGA assembled vehicle.

Moving forward, TNGA will help shorten the development cycle for vehicle improvements and getting new vehicles to market.



TNGA SEGMENTS

Currently, there are two primary TNGA segments:

- **GA-C Platform**—applied to the fourth-generation Prius, second-generation Prius Prime (PHEV), 2018 C-HR and the upcoming 2019 Corolla
- **GA-K Platform**—applied with the 2018 Camry and 2019 Avalon

TNGA LEADS TO NEW ASSEMBLY TECHNOLOGIES

In refining the design and manufacturing process, TNGA has led to the adoption of various new technologies:

- Paint shops are designed to use less water and reduce plant waste by shifting to lower-sludge-producing metal oxide phosphate paint chemicals.
- Shared parts and components mean multiple vehicles can be assembled on the same line.
- Hot stamping and new adhesives create a stronger, more rigid chassis.
- Laser screw welding instead of traditional spot welding also contributes to a stronger chassis.

Another example is bumper production: A new plastic mold machine makes one-piece bumpers using new adhesives that improve body stiffness, which contributes to better handling. And, this machine can produce a Camry bumper, then an Avalon bumper, then a Camry bumper based on production demand vs. batch production, improving assembly line flexibility.

TNGA'S FIVE DOMAINS

TNGA affects owners in these five areas:

1. **Driving Quality:** Making vehicles that are satisfying to drive
2. **Comfort:** Comfort that makes drivers want to keep on driving by creating an enjoyable total sensory experience
3. **User-Friendliness:** Smart technology that enriches the daily driving experience–including everything from luggage space to fuel consumption
4. **Pride of Ownership:** State-of-the-art environmental performance teamed with sophisticated styling
5. **Security:** Creating a strong body that protects the driver and passenger, then adding world-class security features

What TNGA Means for the Collision Repairer

Through TNGA, Toyota is revolutionizing the manufacturing process. It also represents a pioneering of the design and development of future automobiles for the coming decades. Put simply, a greater focus on standardized parts and components means Toyota's future vehicles will be more attractive and more engaging to drive. They'll be easier to design and develop and will deliver more quickly. What it means to you, the collision repair facility, is that it's also more efficient for you to repair vehicles, as you'll be working with only five basic platforms. Fewer repair procedures and simplified repairs—proof that less is even better than before.

THE IMPORTANCE OF

Pre- *and* Post-Scanning

IT'S ALL ABOUT UNDERSTANDING WHAT'S GOING ON INSIDE A VEHICLE

Imagine this: You go to the doctor. The doctor comes in, asks a couple of questions, writes a prescription and leaves. The doctor didn't even take your temperature or use the stethoscope to listen to your heart, but he gives you a diagnosis anyway. How would you feel?

You'd probably feel like the doctor wasn't doing his job.

Your customers may feel the same way if you're not scanning vehicles when they come into your shop and if you're not scanning the vehicle once the work is complete. How have you verified that the vehicle is really repaired correctly?

SCANNING PROVIDES A SNAPSHOT OF WHAT YOU CAN'T SEE

Today's modern vehicles are complex, with multiple computers, sensors and state-of-the-art technology. To monitor the integrity and functionality of these systems, manufacturers have created scan tools that plug into the vehicle and electronically monitor each system, noting any issues via Diagnostic Trouble Codes (DTC). The challenge is that a lot of shops don't scan vehicles before repairs are started or after repairs are completed. One reason why scanning is so important is quality assurance, to help ensure

Running a collision repair center is difficult enough. By pre- and post-scanning every vehicle that comes into your shop, you're better equipped to fix them right the first time and maintain a higher level of customer satisfaction.

the vehicle is in optimum operating condition when it's returned to the customer.

IT STARTS WITH THE PRE-SCAN

Let's go back to the doctor example: If you don't tell your doctor about a pre-existing condition, then the diagnosis and remedy could be wrong. The same may apply to a vehicle that's been in an accident—something may have been damaged that isn't obvious to the naked eye.

Here's an example: A Camry comes in with a damaged passenger rear quarter panel. It's decided that the damage doesn't warrant a pre-scan, so only the quarter panel is repaired. The customer picks up the Camry, sits in the car, and discovers that something is not functioning. The customer claims the damage occurred as a result of the accident or while the vehicle was in your shop, and they want you to pay for the repairs. That leaves your shop in a precarious position, because you do not know if it was a pre-existing condition or if it did, in fact, occur during the repair process at your shop.

Now, had the shop performed a pre-scan when the car was dropped off, the technician would have noted any DTCs, and those issues would have been listed on the repair order and could have been addressed during the estimating phase, thus limiting shop liability.

PREVENT CHANGE ORDERS

Another advantage of pre-scanning is that you know what DTCs have been set, what issues need to be addressed and what parts need to be ordered to complete the repairs. If you only scan vehicles after repairs are complete, then you run the risk of discovering additional damage that can create delays and upset customers, as you may need to have parts shipped overnight, which adds to the cost and the repair time. It also means that you have to contact your customers to tell them the repairs won't be completed on time.

Case in point, a vehicle comes in with a deployed driver's airbag. A new airbag is ordered, but the vehicle was not scanned, so the shop didn't detect damage to the seatbelt pretensioner, which also needs to be replaced. Now there's a change order to the insurance company to account for the difference between the final cost and the original estimate, and the repairs are delayed while waiting for the part.

Another benefit of conducting a post-scan it can reveal if something failed during the repair, and it can be addressed before the vehicle is returned to the customer.

LONG-TERM CUSTOMER SATISFACTION

Toyota has always been about fix it right the first time—whether it's a mechanical issue or collision repair—and for good reason. After an accident, it's easy for customers to lose faith in their vehicle, the dealership, and your repair facility if things are not fixed right the first time. By conducting pre- and post-scans, your shop can identify the problems before you start work and confirm that they have been addressed before returning the vehicle to the customer.

Running a collision repair center is difficult enough. By pre- and post-scanning every vehicle that comes into your shop, you're better equipped to fix them right the first time and maintain a higher level of customer satisfaction.

WHY GENUINE TOYOTA

OEM Scan Tool Software Makes Sense

It's the Only Scan Tool Software Approved by Toyota

TECHSTREAM SOFTWARE IS THE OFFICIAL OEM DIAGNOSTIC SOFTWARE USED DAILY BY TOYOTA/LEXUS DEALER TECHNICIANS to diagnose and service Toyota/Lexus vehicles, so why not use what the dealers use?

FEATURES AND BENEFITS:

- Techstream software offers diagnostic support for most 1996 and newer Toyota/Lexus/Scion vehicles with DLC3/OBDII diagnostics
- Supports ECU reprogramming for most Toyota/Lexus/Scion ECUs on 2002 and newer vehicles
- Offers a vehicle Health Check function that provides DTC, FFD, Calibration, Service Bulletin and Campaign data for each vehicle with one click
- Provides access to factory level (C-Best) vehicle customization settings
- Allows most computers, ranging from netbook to a fully featured PC, to use factory diagnostic software

Techstream software provides some advantage over the aftermarket by integrating functionality between the diagnostic software and TIS, Toyota's Technical Information System. For example, being able to pass vehicle information directly from the diagnostic software to the TIS site for quicker service information searching.

Techstream software can be downloaded and installed on any laptop/PC that meets minimum PC requirements and when combined with a Techstream Lite kit (MongoosePro MFC 2 cable) provides a low-cost OEM level scantool alternative. For more information about Techstream software please visit https://toyotaade.snapon.com and/or call by phone at 1-800-368-6787.

When it comes to working with the complex electronics on Toyota vehicles, using Techstream software makes sense.

https://toyotaade.snapon.com

Live up to your image. Your customer's safety and your shop's reputation are on the line every time you repair a vehicle. To ensure you're restoring a vehicle to pre-accident condition use Toyota's resources like Technical Information System (TIS) and Techstream software, and be sure to follow all of Toyota's repair procedures.

REPAIRING TO OEM STANDARDS

TOO GREAT TO IGNORE

RECENT EVENTS IN THE COLLISION REPAIR INDUSTRY have caused us all to stand up and take notice. Whether you're an owner, operator or technician in a collision repair facility, the need to follow OEM repair procedures has become too great to ignore.

YOUR SHOP BEARS RESPONSIBILITY FOR REPAIRS

Gone are the days of body shops caving to insurers' requests to reduce expenses by not following OEM repair procedures. Safety is the number one priority in returning a vehicle to its original factory standard.

Insurance and accident investigators try to determine liability after any collision. The key questions are: Was the vehicle involved in a prior collision? If so, who repaired the vehicle? Did they repair it to OEM standards following OEM procedures? The bottom line: If a shop improperly repairs a vehicle and the structural integrity is compromised, the shop could bear responsibility for improper repairs.

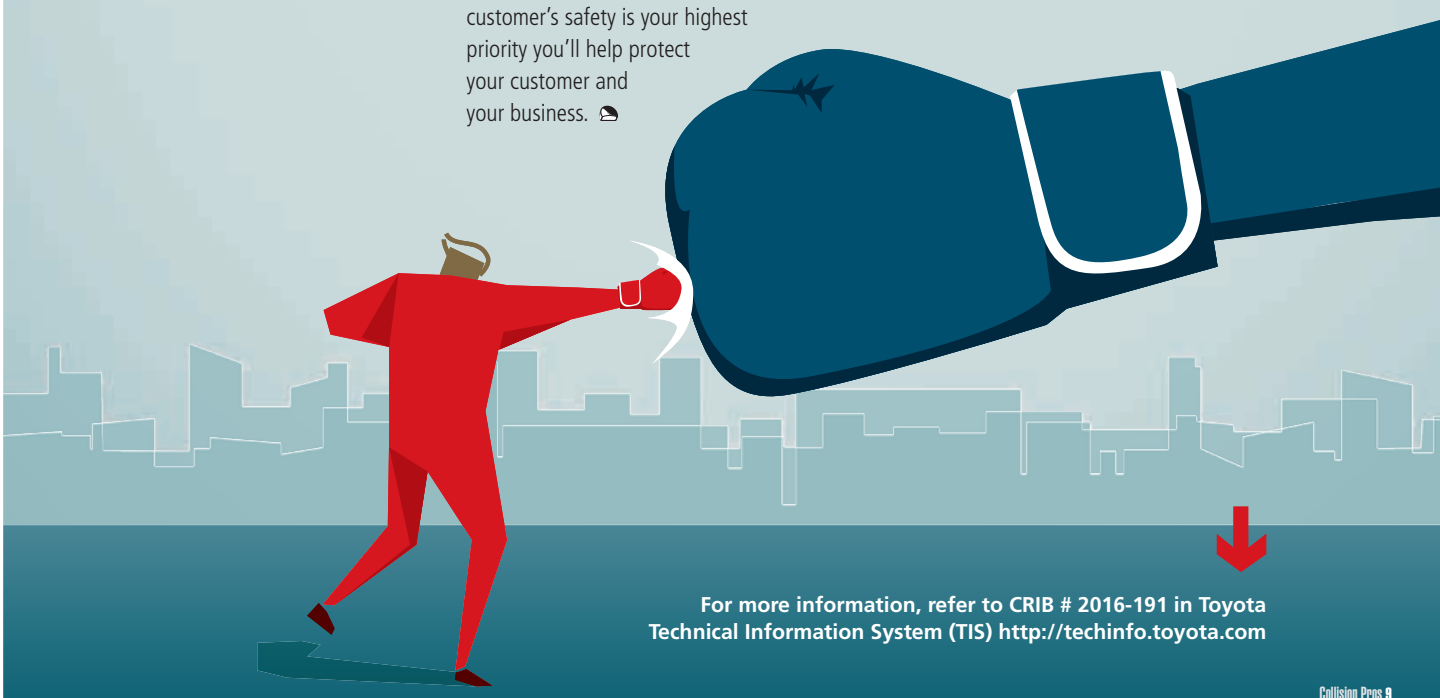
ALWAYS FOLLOW OEM REPAIR PROCEDURES

To ensure that a repair is properly performed, the vehicle must be scanned with an OEM scan tool and OEM repair procedures must be followed. If you're a shop manager, you need to make sure that your technicians aren't cutting any corners. Everyone who touches a vehicle has responsibility to ensure that OEM repair procedures are always followed.

YOUR RESPONSIBILITY CONTINUES FOR THE LIFE OF THE VEHICLE

Your lawful responsibility continues no matter how many times ownership is transferred. Many shops state that they warranty the repair only to the person who owns the vehicle at the time. However, if you repaired it, you may be legally responsible for it no matter how many times the vehicle changes ownership.

Ensure that your shop follows OEM standards with every repair and every vehicle. If your customer's safety is your highest priority you'll help protect your customer and your business.



For more information, refer to CRIB # 2016-191 in Toyota Technical Information System (TIS) http://techinfo.toyota.com

Connectivity and Infotainment

ENTUNE 3.0 WITH SERVICE CONNECT

The vehicle can be put into Service Mode with Techstream. For more details, refer to the repair manual.

TOYOTA CONTINUES TO RAISE THE BAR IN CUSTOMER SATISFACTION AND PRODUCT INNOVATION. Entune Audio Plus and Entune Premium Audio are equipped with the latest version of Entune 3.0, which includes Service Connect. Available on all three trim levels of the 2018 Toyota Camry Hybrid, Service Connect will eventually roll out to the entire Toyota vehicle lineup. With Service Connect, owners no longer need to worry about keeping track of required vehicle services. Convenient Vehicle Maintenance Alerts notify owners when maintenance is required and even lets them schedule service appointments via a mobile app or an email.

HEADS UP

When a Maintenance Indicator Lamp (MIL) is illuminated showing, for example, "Check Engine" or "Check ABS," Service Connect will display a vehicle maintenance alert on the multimedia screen. Customers who have registered their vehicle in Service Connect can contact their dealer to set a service appointment by touching the soft key on the display.

The most important resource your shop has regarding properly repairing any Toyota vehicle is Toyota's Technical Information System (TIS). This is where you'll find everything you need to know about a vehicle—from trim codes to specific build data—and it will confirm whether the vehicle has Service Connect. Thanks to TIS, users have all product support and repair information right at their fingertips.

SERVICE MODE TEMPORARILY SUSPENDS VEHICLE ALERTS

Service Connect is handy—especially if there's ever an issue that might otherwise go undetected. One thing to note, however, is that if the vehicle is in an accident and requires repairs, it must be put into "Service Mode" so the owner doesn't continue to receive vehicle alerts while it's being fixed. When the vehicle is repaired and ready to go, be sure to reactivate Service Connect.

SUPERIOR PERFORMANCE

Toyota's infotainment system, Entune 3.0, is the easiest way for owners to effortlessly find new destinations with an integrated navigation system or enjoy their favorite stations like Pandora or iHeartRadio. Vehicles equipped with Entune 3.0 Audio Plus and Entune 3.0 Premium Audio keep customers connected with Safety Connect, Remote Connect and Service Connect. To learn more go to www.toyota.com/entune.

Service Connect keeps owners and their vehicles well connected and well informed."
—Alphonso Baker, Jr., Senior Entune Analyst, Toyota

The Toyota Collision Repair & Refinish Training Calendar

JUNE — AUGUST 2018

WEST CALDWELL, NJ

06/12	503	Steering & Suspension Analysis & Repair
06/13	602	Advanced Hybrid Collision Repair
07/10	300	Welding Techniques For Collision Repair
07/11	301	Non-Structural Body Repair Techniques
07/24	460	Structural Body Repair Techniques
07/26	602	Advanced Hybrid Collision Repair
08/07	200/201	Color Matching For Painters
08/15	300	Welding Techniques For Collision Repair
08/16	601	Hybrid Collision Repair
08/21	250	Advanced Painting Techniques

JACKSONVILLE, FL

06/18	200/201	Color Matching For Painters
06/20	250	Advanced Painting Techniques
07/09	601	Hybrid Collision Repair
07/10	300	Welding Techniques For Collision Repair
07/11	301	Non-Structural Body Repair Techniques
07/23	602	Advanced Hybrid Collision Repair
07/24	503	Steering & Suspension Analysis & Repair
07/25	460	Structural Body Repair Techniques
08/13	601	Hybrid Collision Repair
08/14	300	Welding Techniques For Collision Repair
08/15	301	Non-Structural Body Repair Techniques
08/21	200/201	Color Matching For Painters
08/22	250	Advanced Painting Techniques

TORRANCE, CA

06/12	601	Hybrid Collision Repair
06/13	300	Welding Techniques For Collision Repair
06/14	301	Non-Structural Body Repair Techniques
06/20	601	Hybrid Collision Repair
06/21	503	Steering & Suspension Analysis & Repair
06/26	250	Advanced Painting Techniques
06/28	101	Paint Finish Repair
07/10	300	Welding Techniques For Collision Repair
07/11	301	Non-Structural Body Repair Techniques
07/16	200/201	Color Matching For Painters
07/18	250	Advanced Painting Techniques
07/20	101	Paint Finish Repair
07/24	601	Hybrid Collision Repair
07/25	908	ISC Retractable Hard Top

PLANO, TX

06/14	503	Steering & Suspension Analysis & Repair
06/18	300	Welding Techniques For Collision Repair
06/19	301	Non-Structural Body Repair Techniques
06/21	601	Hybrid Collision Repair
06/26	200/201	Color Matching For Painters
06/28	250	Advanced Painting Techniques
07/10	460	Structural Body Repair Techniques
07/12	503	Steering & Suspension Analysis & Repair
07/16	300	Welding Techniques For Collision Repair
07/17	301	Non-Structural Body Repair Techniques
07/19	601	Hybrid Collision Repair
07/23	200/201	Color Matching For Painters
07/25	250	Advanced Painting Techniques
07/27	101	Paint Finish Repair

For a complete training schedule and the latest information on Toyota's Collision Repair & Refinish Training, visit www.crrtraining.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

@ToyotaCRR

TOYOTA **WholesaleParts**
Where the Pros Go for Genuine Toyota Parts

Collision Mechanical MICROCAT LOGIN

Your Go-To Place For:

Seamless Wholesale Parts Ordering. It's All Here. In One Place.

- Application Charts
- Access to OEM Training
- Toyota Dealer Locator
- Industry News & Blog
- Microcat® Market Access
- Wholesale Parts Support Programs

Explore Now

toyotapartsandservice.com

Where the Pros Go

TOYOTA