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COLLISION PROS

TOYOTA

Your Toyota Collision & Mechanical Repair Resource

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Properly cleaning and disinfecting vehicles is critical to supporting the safety of your employees and your customers.

TOYOTA VEHICLE SANITIZATION

HELP KEEP YOUR CUSTOMERS SAFE

The COVID-19 crisis has changed how shops do business in so many ways. To help support you, Toyota has shared some best practices that help promote the safety of your customers and your shop employees. This information focuses on cleaning and disinfecting Toyota vehicles. It is intended to supplement your shop's existing protocols, processes and procedures specific to the current pandemic.[1]

EVERY VEHICLE, EVERY TIME

In addition to respecting social distancing and other recommendations from the Center for Disease Control and Prevention (CDC) and the Environmental Protection Agency (EPA), Toyota recommends that shops follow these basic actions with every customer vehicle:

- Disinfect the vehicle when it's brought into your shop, test-driven and before it's returned to the customer.
- If a vehicle may have been exposed to someone with COVID-19, don't touch the vehicle for 24 hours; then, disinfect it.
- Always use steering wheel, seat, gear shift and floor mat covers in customer vehicles.

CLEANING AND DISINFECTING GUIDELINES

Properly cleaning and disinfecting vehicles are critical to supporting the safety of your employees and customers. Toyota recommends concentrating on all high-touch areas in the interior and exterior of the vehicle, following these guidelines:

Cleaning:

1. Use products and procedures for cleaning the vehicle as found in the Owner's Manual.
2. Follow the instructions for use on those products, as well as any additional policies and procedures instituted by your shop, including instructions to wear gloves or any other personal protective equipment (PPE).
3. PPE can be found on the Toyota Approved Dealer Equipment site: https://toyotaade.snapon.com/

Disinfection:

1. Use appropriate material(s) for disinfection of high-touch areas. **CLICK HERE** for a list of suitable disinfecting product types, selected for their compatibility with Toyota vehicle exteriors and interiors and adherence to current CDC and EPA guidelines.
2. Follow the instructions for use on those products and any additional policies and procedures instituted by your shop, including instructions to wear PPE.
3. Focus on the high-touch areas illustrated in the photos above.

*All story footnotes can be found on page 13 or **CLICK HERE**.*

KEY INTERIOR TOUCHPOINTS

- Interior Door Levers/Window & Door Lock Controls
- Upper Door Trims/Armrests
- Power Seat Switches
- HVAC Vents/Controls
- Steering Wheel/Buttons
- Lower IP Various Buttons
- Hood Release
- Ignition Switch
- Multifunction Levers
- Radio Various Buttons
- Center Console & Glove Box Buttons/Handle
- Cup Holders
- Shift Lever
- Seat Belt Adjusters/ Buckles/Locks
- Seats If Necessary
- Inner Mirror/Visors/Assist Handles/Moonroof Shade Handle/Map Lamps & Various Buttons (SOS/ HomeLink/Sunroof)

KEY EXTERIOR TOUCHPOINTS

- All Exterior Handles
- Fuel Lid/Gas Cap
- Trunk or Tailgate Button/Pull
- Key Fob
- Front Hood Area/Lever

NOTE: IF REPAIRS ARE PERFORMED ON INTERIOR PARTS OR COMPONENTS NOT LISTED ABOVE, PLEASE ENSURE THAT THOSE SURFACES ARE ALSO WIPED DOWN FOLLOWING THE GUIDELINES PROVIDED.

TO USE OR NOT TO USE

When cleaning and disinfecting vehicles, it's important to use suitable commercial and/or consumer product types. **CLICK HERE** for a matrix of suitable cleaning and disinfecting solutions. Important: Carefully follow the manufacturer's product label instructions for cleaning and disinfecting, as these vary by product.

DO NOT use disinfecting products that contain any of the following chemicals:

- Hydrogen Peroxide
- Sodium Chlorite
- Sodium Hypochlorite (chlorine bleach)
- Glycol Acid
- Octanoic Acid
- Hypochlorous Acid

REDUCE RISK OF CROSS-CONTAMINATION

To reduce the risk of cross-contamination when disinfecting a vehicle, do not use the same microfiber cloth or wipe on the entire vehicle; instead:

1. Use one microfiber cloth/wipe per vehicle occupant side (e.g., driver's side front = one cloth).
2. If wiping excess disinfecting solution is required, do not rinse and reuse: use a clean microfiber cloth/wipe.
3. Dirty microfiber cloths must be washed with appropriate disinfecting laundry cleaner and dried before reusing.

BE SAFE, BE THOROUGH AND STAY CURRENT

Toyota remains optimistic that our world will soon thrive again. We are committed to supporting you during these challenging times. We will continue to provide updates, which you can access in the "What's New" section of TIS.

VEHICLE SANITIZATION RELEVANT TERMS

Cleaning: Refers to the removal of dirt and impurities, including germs, from surfaces. Cleaning alone does not kill germs, but removing the germs reduces the risk of spreading infection.

Disinfection: Works by using EPA-registered disinfectant chemicals to kill germs on surfaces. This process doesn't necessarily clean dirty surfaces or remove germs. But killing germs remaining on a surface after cleaning further reduces any risk of spreading infection.

CLICK HERE FOR CDC CLEANING AND DISINFECTING GUIDELINES

(Source: CDC as of 4/23/20)

Click to download TOYOTA'S COVID-19 SERVICE RECEPTION & DELIVERY PROCESS

New Technologies and New Best Practices

CONTACT-FREE CUSTOMER EXPERIENCE

CHANGE IS NEVER EASY

The impact of the recent pandemic forced many collision repair facilities to adapt to an unfamiliar touch-free work environment quickly. More importantly, in order to ensure success, these collision repair facilities had to successfully implement new systems and learn new technologies. The outcome is that repair facilities have also developed some best practices that are proving that there is, indeed, a silver lining to challenges created by COVID-19. Here we discuss a few new best practices that successful repair facilities have implemented.

FIVE ESSENTIAL TOOLS

No matter the size of the shop, there are five essential tools that together create a seamless, touchless collision repair experience:

1. Cloud-based Phone System—Cloud-based phone systems allow shop owners and employees to work virtually while still providing responsive customer service. Some systems may include an Artificial Intelligence (AI) feature that answers calls automatically and guides the customer through the estimate and appointment process. These systems can greatly reduce administrative bottlenecks, especially if staff headcount has been reduced.

2. Online Appointment Scheduling—An online appointment scheduling system is essential to the touchless experience. Online appointment scheduling apps not only streamline the scheduling task, but also help to enhance shop workflow by automatically staggering appointments. Customers can select a time that is set aside exclusively for them, rather than arriving at the same time as other customers. This is especially critical during a time when social distancing is important to reducing viral spread.

Many customers prefer communicating by text rather than phone. Some modern texting platforms include estimating tools and calendars to facilitate appointment scheduling for drop-offs and estimates.

3. Emailing System—An emailing system enables you and some of your staff to work onsite or offsite and supports quick and efficient customer communications. Some packages provide templates and scripts you can use to minimize response time.

4. Photo Estimates—Enabling photo estimates is critical to the touch-free transaction. Your process can be as simple as asking the customer to email or text pictures of the vehicle damage, or it can be as slick as using a photo estimating app or web submission portal.

No matter which platform is used, there are pitfalls to photo estimates that you can minimize. Remember: a bad photo can result in a bad estimate! Customers often submit close-up photos that miss hidden damage, which can lead to underestimating the amount of repair work required. It is important to coach the customer on how to properly photograph and document vehicle damage or utilize an application that will guide them through the process. Additionally, tell your customer that in order to provide an accurate estimate, the vehicle must be disassembled in the shop to assess the damage.

Once you've received a photo of the vehicle damage, and you have emailed the customer an estimate, be sure to take the time to explain your findings and the estimate for parts and labor. Also, offer to work with their insurance company to explain your findings.

CLICK HERE to find more information regarding photo-based estimates.

5. Paperless Transaction—A paperless transaction for customer electronic signature and payment eliminates the need to physically handle documents, checks, cash and credit cards. This enables a truly touchless transaction and can also help to streamline accounting processes.

FROM SURVIVING TO THRIVING

According to Mike Anderson of Collision Advice, "The change to the industry was quick and necessary for survival. Repair facilities have learned a lot from this transition. And, those shops that take these lessons to heart are going to be better poised for the future."

Today's customers have what Anderson refers to as "liquid expectations." Rather than compare their collision repair experiences to other automotive facilities, they compare the experience to their most recent touchless transactions, such as ordering an Uber, shopping on Amazon or making a restaurant reservation on Open Table. Shops that modernize the customer experience earn the benefits of enhanced customer satisfaction, plus improved, sustainable shop best practices including:

- Proactive follow-up on customer estimates
- Increased use of electronic parts catalogs
- And more thorough damage analysis to help ensure accurate parts ordering and to minimize delays through more efficient online scheduling processes

PREPARING FOR A BETTER TOMORROW

Your Toyota dealer is committed to supporting you as you adapt to a new repair world. An important part of that commitment is providing systems and support that enhance your business success and your customers' satisfaction. When you do business with a participating Toyota dealer, you can benefit from premier services such as the OPS Technology Suite™ and Toyota Mechanical Parts Program (TMPP) powered by RepairLink®. Both of these proven systems provide powerful tools that can help you excel today and prepare for the future.

2021 Toyota Venza

UNDERSTANDING ITS NEW TECHNOLOGY

One thing is constant in the automotive industry and it's change. Every year, new models are introduced with new technology, and with those changes come new repair procedures.

Case in point: Toyota has introduced the all-new 2021 Venza, a two-row crossover with the Toyota Hybrid System II powertrain and advanced Electronic On-Demand All-Wheel Drive. It comes in three trim levels: LE, XLE and Limited.

If one comes into your facility, you need to be aware of the following features in order to make a great repair.

TOP COLLISION PROTECTION

Venza is built on Toyota's New Global Architecture Platform K (TNGA-K), which is shared with the Camry, Avalon and RAV4. As such, Venza delivers the best of both worlds: sedan-like driving comfort and CUV versatility. The TNGA-K platform owes its inherent strength to the extensive use of ultra high-tensile strength steel, high-tensile strength steel, hot-stamped steel and aluminum.

All 2021 Venza trim levels offer a full suite of Toyota Safety Sense 2.0 features

SOUND REDUCTION MEASURES

Drivers are attracted to the Venza because it is quiet on the road. So, if one is in an accident, you have to be aware of where sound-blocking and body sealing materials have been used. For example, sound-blocking and absorbing insulation and body sealing material are placed throughout the structure, under the carpeting and above the headliner. The materials and their placement were optimized to minimize noise in the frequencies that typically interfere with conversation.

Venza also has a floor silencer pad that is one large piece rather than separate segments. As a result, surface coverage reaches about 92 percent. Holes and gaps between parts are filled in with sound-damping material for greater road noise reduction.

Under the hood, sound-absorbing insulation around the engine compartment helps reduce intake noise by the placement of two special resonance chambers that help minimize air intake noise in the 530Hz and 650Hz ranges.

So, when a Venza is in for repairs, be sure to use the proper materials and repair techniques to ensure you maintain its quiet ride.

HYBRID PLATFORM

The Venza only comes with a hybrid drivetrain. The hybrid battery is located under the rear seats. It also comes standard with Toyota's Electronic On-Demand All-Wheel Drive. Instead of using a transfer case and driveshaft to deliver power to the rear wheels, Venza employs a separate rear-mounted electric motor to power the rear wheels when needed. This feature preemptively distributes up to 80 percent of driving force to the rear wheels, which helps suppress front wheel slip during off-the-line starts. This system also makes repairs easier, as you don't have to deal with a transfer case or rear driveshaft.

TOYOTA SAFETY SENSE™ 2.0[1] FEATURES

All 2021 Venza trim levels offer a full suite of *Toyota Safety Sense* 2.0 features (see Toyota Safety Sense story in this issue to learn more about how these features function)—they include:

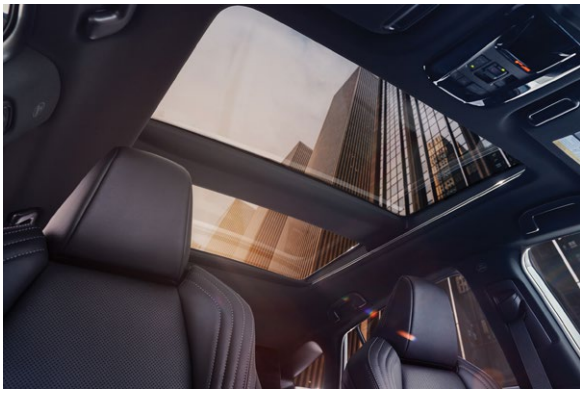
- Pre-Collision System with Daytime/Low-Light Vehicle and Pedestrian Detection, plus Daytime Bicycle Detection (PCS)[2]
- Full-Speed Range Dynamic Radar Cruise Control (DRCC)[3]
- Lane Departure Alert with Steering Assist (LDA w/SA)[4]
- Automatic High Beams (AHB)[5]
- Lane Tracing Assist (LTA)[6]
- Road Sign Assist (RSA)[7]

Other key features include:

- Blind Spot Monitor (BSM)[8] with Rear Cross-Traffic Alert (RCTA)[9]
- XLE and Limited trim levels add Front and Rear Parking Assist with Automated Braking (PA w/AB)[10]

Compared to previous years, the sensors and cameras on this model are more refined for better pedestrian and bicyclist detection. As such, they require precise alignment and calibration after a collision.

In addition, the available digital rearview mirror with HomeLink universal transceiver on the new Toyota Venza helps the driver see what's behind the vehicle. If rear passengers or luggage in the cargo area are blocking the view behind, a flip of a switch on the digital rearview mirror instantly provides the driver with a wide, unobstructed view from a rear camera.



To further aid outward visibility, the Limited grade comes standard with Bird's Eye View Camera[11] with Perimeter Scan, providing a panoramic overhead view of the vehicle's surrounding.

The standard backup camera[12] features projected path and dynamic gridlines, while, if equipped, an available rear Camera Cleaning System sprays washer fluid to clear away water droplets, mud, snow and snow-melting road treatments from the lens.

You need to be aware of all these cameras as they require precise alignment and calibration after a collision.

S-FLOW COOLING TECHNOLOGY

If a Venza is in for a repair, you need to be aware of its variable cooling control technology, which consists of an electric water pump, electric thermostat and a fully variable oil pump. This system not only helps improve engine efficiency, it also directs air conditioning only to occupied seats, providing comfort and helping to reduce energy consumption.

KNOW THE VENZA BEFORE STARTING A REPAIR

Be sure to follow the recommended procedures based on the parts you're working with to ensure you return a vehicle that looks perfect, functions as new and maintains Toyota safety standards.

*All story footnotes can be found on page 13 or **CLICK HERE**.*

Toyota Safety Sense™

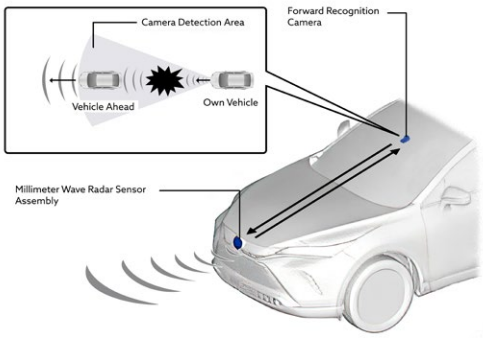
TODAY'S NEW TOYOTA TECHNOLOGY—HOW IT AFFECTS REPAIRS

Toyota Safety Sense™ (TSS)[1] is a suite of active safety technologies and driver assistance systems that help address three areas of accident protection:

- Preventing or mitigating frontal collisions
- Keeping drivers within their lanes
- Enhancing road safety during nighttime driving

You need to be aware of these systems, how they operate and where the sensors are located in case a Toyota vehicle with TSS comes into your collision repair facility. To understand what these safety systems are intended for, and to confirm that they are functioning as intended, refer to the New Car Features (NCF) manual on Toyota's Technical Information System website: https://techinfo.toyota.com/.

1. To access the NCF, enter the model and year, then click on NCF.
2. Once on TIS, you can also click on the Repair Manual (RM) tab or the Collision Damage Repair Manual tab (CR) to locate procedures for measuring mounting locations, performing initializations, calibrations and operational checks.
3. It's important to perform pre- and post-repair health checks, and to complete calibration functions necessary for Safety Sense systems.
4. Follow the RM and CR procedures to complete initializations, calibrations and operational checks of systems and components related to TSS.



MOST COMMON TSS FEATURES

Pre-Collision System (PCS) with Vehicle and Pedestrian Detection[2]—uses a forward recognition camera and a grille-mounted millimeter wave radar sensor or laser to reduce the likelihood of colliding with a preceding car, pedestrian or bicyclist (for TSS 2.0 and newer systems).

Dynamic Radar Cruise Control (DRCC)[3]—uses the same camera and radar as PCS to detect vehicles in front of you, and to automatically adjust vehicle speed to maintain a pre-set distance behind the vehicle ahead. It also provides the ability to automatically adjust speed to maintain the flow of traffic.

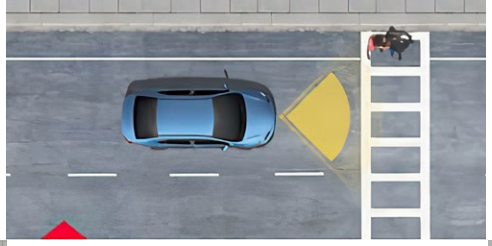
Find Out More

For a complete overview on how to navigate Toyota's NCF, RM and CR tabs as they relate to the TSS safety systems.

ROAD SIGN ASSIST (RSA)[6]

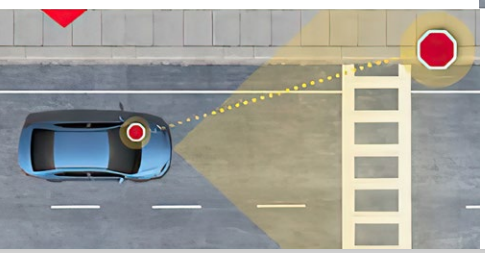
Using a forward-facing intelligent camera, Road Sign Assist (RSA)is designed to detect speed limit signs, stop signs, do not enter signs and yield signs, and display them on the MID.

***All vehicle actions must be driver-initiated and are not automated.*



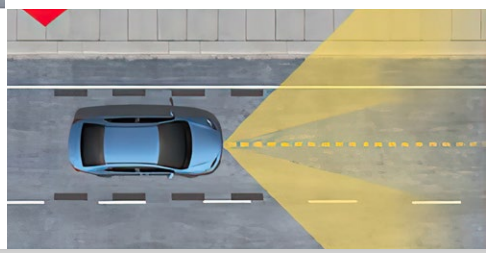
LANE TRACING ASSIST (LTA)[7]

When Full-Speed Range Dynamic Radar Cruise Control (DRCC) is enabled and lane markers are visible, Lane Tracing Assist (LTA)uses the lines on the road and preceding vehicles to help keep the vehicle centered and in its lane.



PRE-COLLISION SYSTEM WITH PEDESTRIAN DETECTION[2]

This integrated camera and radar system is designed to help reduce the likelihood of colliding with a preceding car or pedestrian.



Not all TSS features are shown above. To see more **CLICK HERE**.

Lane Departure Alert (LDA)[4]—uses the forward recognition camera to detect the vehicle's position in the lane and notifies the driver with an audible and visual alert when it detects unintended lane departure from its visibly marked lane. Select Toyota vehicles with Electronic Power Steering (EPS) also have Steering Assist, which may detect unintentional drifting and may automatically make small corrective steering inputs to help keep the vehicle in its lane.

Automatic High Beams (AHB)[5]—When activated, the forward recognition camera detects the headlights of oncoming vehicles and taillights of preceding vehicles, then automatically toggles between high and low beams to help drivers see more clearly at night while reducing glare for other drivers.

Road Sign Assist (RSA)[6]—On TSS 2.0 and newer systems, the vehicle's forward recognition camera and navigation system have the ability to read certain traffic signs and display them on the vehicle's multi-information display or via the Head-Up Display to enhance driver awareness of posted road signs.

TOYOTA Lane Tracing Assist (LTA) Lane Tracing Assist (LTA)[7]—works automatically when the Full-Speed Dynamic Radar Cruise Control (DRCC) is active and lane markers are visible. LTA uses the forward-facing camera to monitor the lane markers as well as the path of the vehicle, then automatically make steering inputs to help keep the vehicle centered in its lane and preemptively avoid unintended lane departures.

REPAIRING VEHICLES WITH TSS

When repairing a vehicle with TSS, it's critical to know which TSS components are installed on that vehicle, as they can vary year to year and by trim level. The easiest way is to log on to the Toyota Information System (TIS) https://techinfo.toyota.com/, enter the model and year and select ADAS (Advanced Driver Assistance System) under Service Category. You'll note that the ADAS category is a recent addition to TIS and is only available on newer models. If you are repairing an older model, you may have to conduct a more thorough search to find TSS component repair procedures. Please refer to the Applicability Chart, found on TIS, for the proper names of the TSS systems.

Vehicles equipped with TSS mean that they come with an array of cameras and sensors that you need to be aware of, as many will require precise calibration. This includes:

- **Front Camera with Camera Heater**—The forward recognition camera is located inside the vehicle at the top center of the windshield in front of the rearview mirror. It's a key element in most of the TSS systems and the camera lens should never be touched. If it's touched, it should be replaced. Or, if the camera is struck, dropped or has any foreign matter on it, it must also be replaced. Finally, if the camera bracket is damaged, it, too must be replaced along with the windshield.
- **Millimeter Wave Radar System**—is a vital part of TSS and is attached to the backside of the front Toyota emblem in the grille.

Calibration for these sensors is required when certain procedures take place, and those procedures can vary by model year and trim level, which is why you need to research each model before you begin repairs. Sensors need to be calibrated if they have been affected by a collision, or by removal or replacement. For example, that means any time a vehicle has had a bumper cover or grille removed and reinstalled or replaced, or needs a wheel alignment, the sensors need to be calibrated.

Proper repair and painting procedures around each sensor are vital, because if one or more of the sensors becomes inoperable, TSS may not function as intended. That's why you must make sure the sensors and cameras are properly calibrated after repairs are complete. In addition, you should also conduct a post repair/calibration test drive to confirm all systems are operating as intended.

We encourage you to follow the repair procedures based on the TSS System that is on the vehicle you're working with. This ensures you return a vehicle that functions as new and maintains Toyota safety standards.

*All story footnotes can be found on page 13 or **CLICK HERE**.*

To Repair or Not Repair

THE ART OF TACKLING UNCOMMON REPAIRS AND EXTENSIVE DAMAGE

Underestimating the amount of work an uncommon repair or extensively damaged vehicle will require is a mistake your shop does not want to make. To avoid this potentially costly error, it's important that you take the time to do the research and ensure that you're writing a complete and accurate estimate.

IDENTIFYING COMPLEX REPAIRS

Collision repair manuals typically contain instructions for performing light to moderate repair work on a vehicle. When instructions are missing for a part, it may be because it is an uncommon repair, or it could be an indication that the collision has breached the structure of the vehicle and extensive repairs are needed.

Some clues that could indicate you're dealing with a vehicle that requires uncommon repairs or has been heavily damaged are:

- Damage that requires uncommon replacement parts
- Damage that has breached the vehicle's structure
- Replacement times for the repair not included in the information provider's guides
- Parts that do not have replacement, sectioning or repair instructions

If you see one or more of these things, you may be dealing with a complex repair that could cost more to complete than the vehicle is worth.

When approaching a complex repair, it may be tempting to cut up a large part and only replace the damaged sections. This is not recommended unless sectioning instructions are provided for the part you are replacing. If no sectioning instructions exist, the component must be installed in its entirety to the factory seam or mounting location.

BE CAUTIOUS AND HAVE A PLAN

To determine the best course of action for uncommon repairs or extensive damage to a vehicle, consider these two factors:

1. Can the repair be made without compromising the safety of the vehicle?
2. Can the repair be completed in a way that is cost effective for all parties involved?

A mistake that repair shops sometimes make is that they underestimate the amount of work an uncommon replacement component or major repair will require. For example, a part might only cost $300, but the labor to replace it might be $3,000! To avoid underestimating costs, take the time to perform a thorough estimate—even if it means a teardown for a complete analysis of the repair. Conduct a complete damage assessment and develop a repair plan to ensure that you are not repairing a vehicle that should be considered a total loss.

TOYOTA'S TECHNICAL INFORMATION SYSTEM (TIS): YOUR BEST RESOURCE

Your best source for the most current, extensive repair information is Toyota's Technical Information System (TIS). The information is model-specific from 1990 through the current model year. There you'll find collision repair manuals and Toyota Collision Repair Information Bulletins (CRIBs), which provide the most current critical updates to Toyota collision repair manuals.

NOT A TIS SUBSCRIBER? **Contact your Toyota dealer for subscription details.**

Four New CRIBs Available at: Toyota's Technical Information System (TIS)

- CRIB 2020-193: Frame Repair & Component Replacement
- CRIB 2020-194: Welded Outer Panel Replacement
- CRIB 2020-196: GMAW/MIG Welding Specifications
- CRIB 2020-197: Prevention of Metal Contamination in Speakers

GO TO TIS

IT'S GOOD TO BE GENUINE

GENUINE • QUALITY • RELIABILITY • FIT • VALUE

Toyota Genuine Radiators and Condensers provide uncompromising quality. They're meticulously designed for the perfect fit, engineered and tested by Toyota, and backed by our Toyota Genuine Warranty. And now, they're available for almost all Toyotas on the road, giving you the perfect blend of benefits to help increase your shop efficiency and profitability.

EXCLUSIVELY FROM YOUR TOYOTA DEALER

Wholesale Parts

» **toyotapartsandservice.com**

For complete details about Toyota's warranties, please refer to the applicable Warranty & Maintenance Guide or see your Toyota Dealer.

DISCLAIMER: THIS TRAINING IS JUST ONE RESOURCE AVAILABLE TO DEALERS AND THEIR ASSOCIATES. COLLISION REPAIR CENTERS ARE FREE TO USE OR NOT USE THIS RESOURCE. OF COURSE, OUR DEALERS ARE RESPONSIBLE FOR ALL EMPLOYMENT DECISIONS RELATING TO THEIR EMPLOYEES INCLUDING ALL RECRUITING, HIRING, RETENTION, DEVELOPMENT, DISCIPLINE AND TERMINATION DECISIONS.

FOOTNOTE for TOYOTA VEHICLE SANITIZATION

1. This article and the accompanying materials do not provide, and are not intended to constitute, legal or compliance advice. They also do not address all the legal or compliance issues, such as occupational health and safety or other requirements that may apply to the issues discussed. Consult an attorney familiar with the federal, state and/or local laws at issue to obtain specific advice with respect to specific legal matters. Also, many state and local governments have instituted emergency COVID-19 related measures that impose requirements or restrictions on automotive collision repair facility operations

FOOTNOTES for 2021 TOYOTA VENZA:

1. Toyota Safety Sense™ effectiveness is dependent on many factors including road, weather, and vehicle conditions. Drivers are responsible for their own safe driving. Always pay attention to your surroundings and drive safely. See Owner's Manual for additional limitations and details.
2. The TSS Pre-Collision System is designed to help avoid or reduce the crash speed and damage in certain frontal collisions only. It is not a substitute for safe and attentive driving. System effectiveness is dependent on many factors, including road, weather, and vehicle conditions. Feature availability may vary by vehicle and trim.
3. Dynamic Radar Cruise Control (DRCC) is designed to assist the driver and is not a substitute for safe and attentive driving. System effectiveness is dependent on many factors, including road, weather, and vehicle conditions. Feature availability may vary by vehicle and trim.
4. Lane Departure Alert (LDA) is designed to read visible lane markers under certain conditions and provide visual and audible alerts when lane departure is detected. It is not a collision-avoidance system or a substitute for safe and attentive driving. System effectiveness is dependent on many factors, including road, weather, and vehicle conditions.
5. Automatic High Beams operate at speeds above 25 mph. Factors such as a dirty windshield, weather, lightning, and terrain limit effectiveness, requiring the driver to manually operate the high beams. Feature availability may vary by vehicle and trim.
6. Lane Tracing Assist (LTA) is designed to read visible lane markers and detect other vehicles under certain conditions. It is only operational when DRCC is engaged.
7. Do not rely exclusively on Road Sign Assist (RSA). It is not a substitute for safe and attentive driving. System effectiveness is dependent on many factors, including road, weather, and vehicle conditions. Feature availability may vary by vehicle and trim.
8. Do not rely exclusively on the Blind Spot Monitor. Always look over your shoulder and use your turn signal. There are limitations to the function, detection and range of the monitor.
9. Do not rely exclusively on the Rear Cross-Traffic Alert system. Always look over your shoulder and use your mirrors to confirm rear clearance. There are limitations to the function, detection and range of the system.
10. At speeds of 9 mph or less, Front and Rear Parking Assist with Automatic Braking (PA w/AB) is designed to assist drivers in avoiding potential collisions with nearby static objects when the vehicle is in Drive or Reverse and approaching crossing vehicles when the vehicle is in Reverse. Do not overly rely on PA w/AB. Always look around outside the vehicle and use mirrors to confirm clearance. Certain vehicle and environmental factors, including an object or vehicle's shape, size and composition, may affect the system's effectiveness.
11. The Bird's-Eye-View Camera does not provide a comprehensive view of the area surrounding the vehicle. You should also look around outside your vehicle and use your mirrors to confirm surrounding clearance. Environmental conditions may limit effectiveness and view may become obscured.
12. The backup camera does not provide a comprehensive view of the rear area of the vehicle and you should also look around the vehicle, using mirrors to confirm rearward clearance. Environmental conditions may limit effectiveness and view may become obscured.

FOOTNOTES for TOYOTA SAFETY SENSE:

1. Toyota Safety Sense™ effectiveness is dependent on many factors including road, weather and vehicle conditions. Drivers are responsible for their own safe driving. Always pay attention to your surroundings and drive safely. See Owner's Manual for additional limitations and details.
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4. Lane Departure Alert (LDA) is designed to read visible lane markers under certain conditions, and provide visual and audible alerts when lane departure is detected. It is not a collision-avoidance system or a substitute for safe and attentive driving. System effectiveness is dependent on many factors, including road, weather, and vehicle conditions.
5. Automatic High Beams operate at speeds above 25 mph. Factors such as a dirty windshield, weather, lightning, and terrain limit effectiveness, requiring the driver to manually operate the high beams. Feature availability may vary by vehicle and trim
6. Do not rely exclusively on Road Sign Assist (RSA). It is not a substitute for safe and attentive driving. System effectiveness is dependent on many factors, including road, weather, and vehicle conditions. Feature availability may vary by vehicle and trim.
7. Lane Tracing Assist (LTA) is designed to read visible lane makers and detect other vehicles under certain conditions. It is only operational when DRCC is engaged.

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THE COMMUNICATOR AWARDS

APEX AWARDS FOR PUBLICATION EXCELLENCE