## Course of Study

### Paint / Refinishing

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Duration</th>
<th>Type</th>
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</thead>
<tbody>
<tr>
<td>PB101/PLB101</td>
<td>Paint Finish Repair</td>
<td>1 DAY</td>
<td>E-Learning</td>
</tr>
<tr>
<td>PB200/PLB201</td>
<td>Color Matching for Painters</td>
<td>1 DAY</td>
<td>E-Learning</td>
</tr>
<tr>
<td>PB250/PLB250</td>
<td>Advanced Painting Techniques</td>
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<tr>
<td>MIC001</td>
<td>Toyota &amp; Lexus Safety Sense</td>
<td>2 DAY</td>
<td>Instructor-Led</td>
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<tr>
<td>T250/L250</td>
<td>Advanced Painting Techniques</td>
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<tr>
<td>B903</td>
<td>Unusual Interior Noise Concerns</td>
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### Body Repair

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<td>Welding Techniques for Collision Repair</td>
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<td>MEC002</td>
<td>Using TIS for Collision Repair</td>
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<td>MEC151</td>
<td>Hybrid General Service for Collision</td>
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<td>PB301/PLB301</td>
<td>Non-Structural Repair Techniques</td>
<td>2 DAY</td>
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<td>PB301A</td>
<td>Aluminum Body Repair Techniques</td>
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<td>BIC020</td>
<td>Non-Structural Body Repair</td>
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### Mechanical Courses

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<td>Body Electrical Diagnosis &amp; Repair</td>
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<tr>
<td>PB504/PLB504</td>
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**Legend:**
- = E-Learning
- = Instructor-Led

**Pre-work:**
- = E-Learning
- = Instructor-Led
**Course Description:** This is a hands on, instructor-led training which provides the technical information needed to evaluate and repair the paint surface of Toyota, Lexus and Scion vehicles.

**Required Pre-Requisite:** PB101/PLB101 - Paint Finish Repair

**Learning Objectives:** Paint Finish Repair provides the information and skill necessary to properly evaluate paint damage and perform paint finish repairs. Upon successful completion, attendees will be able to:

- Identify Toyota, Lexus and Scion paint types and finishes
- Properly use a mil gauge to measure paint finish thickness
- Determine the reparability of a damaged paint surface
- Prepare damaged area for evaluation and repair
- Determine repair tactics for minor scratches, hard water spotting, acid rain and rail dust
- Identify tools, safety equipment and materials necessary for repairing damaged paint surfaces
**Course Description:** This is a hands on, instructor-led training which provides a knowledge base for color matching and allows ample time for students to practice in a hands-on environment. It provides refinish technicians with the principles of color judgment needed to accurately assess color and enhance matching skills.

**Required Pre-Requisite:** PB200/PLB201 - Color Matching for Painters

**Learning Objectives:** Provide a solid foundation for color matching that will provide a systematic approach with repeatable results. Upon successful completion, attendees will be able to:

- Identify paint types (single-stage, two-stage and multi-stage)
- Identify painter-controlled variables that affect color matching
- Apply color principles to the evaluation and tinting process
- Identify adjustments necessary to match flop for metallic colors
- Successfully produce a bendable color match
- Prepare a let-down comparison panel for color matching three-stage paints
T250 /L250 – ADVANCED PAINTING TECHNIQUES

Course Description: This is hands on, instructor-led training that reviews Toyota paint processes and demonstrates how to duplicate them during the refinish process. Topics include: urethane paint systems, low VOC and waterborne materials, transfer efficiency, blending techniques, preparation and painting of plastic bumper covers and restoring chip-resistant coatings.

Required Pre-Requisite: PB250/PL250 – Advanced Painting Techniques

Learning Objectives: Provide information on factory coatings and advanced refinish Technologies to enhance the student's ability to perform high-quality repairs.

Upon successful completion, attendees will be able to:
- Explain the factory paint coating and application processes
- Identify refinish materials necessary for restoring factory like appearance and durability
- Determine materials necessary to replicate factory chip resistant coatings
- Demonstrate proficiency of Toyota-approved paint blending processes
- Prepare and paint Toyota plastic bumper covers per recommended procedures
- Recognize factors that affect HVLP transfer efficiency
- Differentiate the advantages of ultra-violet and infrared materials
**Course Description:** This instructor-led training course provides information and hands-on practice to ensure the student can properly perform repairs requiring welding on Toyota, Lexus and Scion vehicles.

**Required Pre-Requisite:** PB300/PLB300 - Welding Techniques for Collision Repair

**Learning Objectives:** Strong reliable welds are paramount to vehicle safety after a repair. This welding course will take students through proper welder set-up, familiarize them with types of welds, tuning a welder and testing weld strength. Upon successful completion, attendees will be able to:

- Use TIS to locate weld location and types on Toyota vehicles
- Perform proper set-up and maintenance of welding equipment
- Identify methods for preparing and welding Toyota vehicles
- Perform MIG plug and butt welds of reliable quality
- Test weld strength on both MIG plug and butt type welds and squeeze-type resistance spot welds
Course Description: This Instructor-Led training is a mix of classroom and lab exercises that introduce and reinforce proper planning and completion of non-structural body repairs. Topics include but are not limited to: Safety for both personnel and vehicles, Using TIS (Toyota’s Technical Information System) for repair planning, proper precautions, procedures and specifications for non-structural body panel repair and replacement, and corrosion prevention to support the longevity of body panel repair and replacement.

Required Pre-Requisites:
- MEC151 Hybrid General Service for Collision
- PB301/PLB301 Non-Structural Repair Techniques
- PB301A Aluminum Body Repair Techniques

Learning Objectives: Non-Structural Body Repair provides the gateway to information and resources necessary to plan and perform proper non-structural body repairs and component replacement. Upon successful completion attendees should be able to:

- Adhere to personal safety guidelines for non-structural body repairs including the use of applicable PPE
- Identify precautions to be observed for safeguarding vehicle SRS and electrical components during repair and welding operations
- Use TIS to locate: non-structural component replacement precautions and specifications, CRIBs and position statements, non-reusable components, dimension and panel fit specifications, dimensions for BSM/RCTA patch/bracket placement, and corrosion prevention measures
- Identify metal substrates and strength ratings and, differentiate handling precautions and procedures for aluminum and steel panels
- Identify and interpret weld symbols for applicable component replacement welding operations
- Recognize sources of information for proper bonded glass installation
- Validate appropriate corrosion prevention procedures and specifications for non-structural body panel repair and replacement
**Course Description:** This course addresses topics that are essential to correctly performing structural body and frame repair from the start. Topics include, collision force analysis and vehicle design, structural damage classification, dimensioning and damage diagnosis, structural repair welding, structural sectioning and frame repair.

**Required Pre-Requisite:** PB460/PLB460 - Structural Body Repair

**Learning Objectives:** To provide the collision repair professional with an advanced understanding of structural body repair tools, equipment and repair techniques. Attendees will be able to:

- Identify and explain crash energy absorbing body and frame features and perform a systematic structural damage diagnosis
- Classify structural damage and predict misalignment to determine corrective measures
- Interpret body and frame dimension specifications and demonstrate competence with a tape measure and tram gauges
- Explain structural repair precautions, recognize repair vs. replace criteria and recognize approved repair procedures
- Interpret specified structural unibody sectioning procedures
- Explain approved frame repair and component replacement procedures
- Measure and section a side-member using electronic measuring equipment, related tools and welding equipment
**Course Description:** This is a hands on, instructor-led training to guide collision technicians when working with high-voltage (HV) systems. Topics include: safety procedures, hybrid component location and operation, disabling the HV system, using a DVOM, TIS and Techstream during a hybrid system repair.

**Required Pre-Requisite:** PB602/LB602 - Advanced Hybrid System for Collision Repair

**Learning Objectives:** Provide information and reference material necessary to safely perform collision repairs to Toyota and Lexus hybrid vehicles. Upon successful completion, attendees will be able to:

- Review safety recommendations for performing repairs on Toyota and Lexus hybrid vehicles
- Review hybrid system components
- Review TIS capability to develop a repair plan when removing hybrid system components
- Use simulations to measure and confirm zero volts within the hybrid high voltage system
- Remove and install HV components
- Explain the use of Techstream to perform an Active Test and purge the hybrid inverter cooling system
Course Description: This is a hands on, instructor-led training that provides an introduction to Steering and Suspension Analysis & Repair by using numerous animated sequences and simulated exercises. Topics include: Steering and suspension types, steering geometry, analyzing steering and suspension damage and misalignment, rear suspension and tracking.

Required Pre-Requisite: PB503/PLB503 - Steering & Suspension Analysis Repair

Learning Objectives: Steering and Suspension Analysis and Repair is designed to provide students with the knowledge and skills needed to analyze and repair suspension related issues after a collision repair. Upon successful completion, attendees will be able to:

- Identify steering and suspension geometric angles significant to proper handling and alignment such as: caster, camber, toe, steering axis inclination (SAI) and turning radius, predict which are tire wear and non-wearing angles.
- Recognize characteristics of steering types such as rack and pinion and recirculating ball, front suspension types like Long-arm/short-arm and strut and predict the effect damage and misalignment has on performance
- Demonstrate measuring techniques for analyzing steering and suspension damage and misalignment
- Demonstrate measuring techniques for analyzing rear axle: tracking, toe, camber, setback and offset alignment.
- Determine rear wheel adjustability and perform a pre-alignment inspection
Course Description: Air Conditioning for Collision repair is a hands-on, instructor-led course that explains the principles of refrigeration, the operation of air conditioning components and systems. This course also gives students hands-on experience with special service tools, proper recovery and recharging of refrigerant and diagnosis and repair of Toyota air conditioning systems.

Required Pre-Requisite: PB504/PLB504 - Air Conditioning for Collision Repair

Learning Objectives: Air Conditioning for Collision Repair is designed to provide students with the knowledge and skills needed to analyze and repair air condition and climate controls systems during a collision repair. Upon successful completion, attendees will be able to:

- Explain the fundamental principles of refrigeration
- Describe the function of air conditioning components, system operation, and identify refrigerants and oils
- Identify, diagnose and troubleshoot Toyota Air conditioning systems
- Use Special Service Tools and equipment specific to air conditioning repairs
- Demonstrate proper recovery, recharging and safe handling of refrigerant
Course Description: This course is an instructor-led, hands-on course that strengthens a collision technician’s ability to perform body electrical diagnosis and repair in areas related to collision repair.

Required Pre-Requisite: PB502/PLB502 Body Electrical Diagnosis & Repair

Learning Objectives: This course will provide the collision repair professional with a foundation in electrical diagnosis and repair. Upon successful completion, attendees will be able to:

- Understand electrical concepts and circuit theory
- Use a DVOM to measure voltage, current and resistance
- Read electrical wiring diagrams to diagnose and repair electrical circuits
- Properly repair vehicle wiring, terminals and connectors
- Perform battery inspection, testing and maintenance
**Course Description:** Equip Toyota Collision Center Managers, Estimators and Technicians with the ability use TIS and Tech Stream to complete and document repairs and calibrations made to Toyota and Lexus vehicles.

**Required Pre-Requisite:** MEC002- Using TIS for Collision Repair

**Learning Objectives:** Use TIS and Techstream to perform Initializations, Calibrations and Operational Checks of the systems related to TSS/LSS.

- Navigate the New Car Features (NCF) tab in TIS to locate and determine intended use and functionality of model specific systems.
- Navigate the Repair Manual (RM) tab in TIS to locate the procedures for performing Initializations, Calibrations and Operational Checks.
- Use Tech Stream to perform "Pre-and Post-Repair Health Checks" to confirm and document repair needs and completion.
- Use Repair Manual procedures to complete Initializations, Calibrations and Operation Checks of system components related to TSS/LSS.
**Course Description:** Toyota Supra Collision Repair is a 3-day, interactive, instructor led course that introduces Collision Repair Technicians to the new Toyota Supra features and collision repair procedures and techniques. During this course, students will be able, to use TIS to locate service and repair information related to collision repairs, use the Integrated Service Technical Application (ISTA) to conduct a Health Check, perform a structural repair procedure using bonding and riveting techniques, and conduct additional activities that are related to collision repair on the new Toyota Supra.

**Required Pre-Requisite:** TEB019A - 2020 Toyota Supra Collision Repair Preview

**Learning Objectives:**

Describe and locate service information available through TIS:

- VIN information
- Service and Collision Repair information
- Integrated Service Technical Application (ISTA) fundamentals of steel and aluminum Repair

Demonstrate ISTA pre and post scanning

Demonstrate:

- Material processing and standard procedures for collision repair
- Structural component replacement with cold repair techniques
- Window adjustment procedures
- EPS initialization procedures
- Cooling system bleeding procedures