



## **CTE Administrators Meeting**

**February 1, 2024**

**8:00am – 11:30am**

**Sign-in begins at 8:00am**

**Meeting starts promptly at 8:30am**

**Prescott Resort - 1500 E State Rte. 69, Prescott AZ 86301**

### **AGENDA**

**Welcome – Clarkdale/Cottonwood Rooms**

**ADE Updates: Presidential Scholars**

**Perkins Update**

**Feedback**

**Changes Made**

**Survey Results (secondary and post-secondary)**

**Program Service Update, Work-based Learning Guide and Monitoring Document Feedback**

**Break**

**Allocations**

**Partner Updates: Curriculum Connection, ACOVA, ACTEAZ, Premier Series, Project Change, AOAC**

**Break**

**Standards Update, Testing Update, TSA Teacher Institutes**

**CTSOs**

**Leadership/Innovation Grant Updates and Future**

**Reminders and Closing**

**Next CTE Administrators Meeting will be at Summer Conference  
July 14, 2024 – Hilton El Conquistador, Tucson AZ – 10:00am to 11:50am**

**Prescott Resort Conference Room Rates**

**Deluxe King Room: \$103 + tax; Deluxe 2 Queen Room: \$103 + tax**

**King Suite: \$123 + tax; 2 Queen Suite: \$123 + tax**





ARIZONA DEPARTMENT OF  
**EDUCATION**

**Perkins V - Program Monitoring form/guide  
feedback**

**WARM  
FEEDBACK**

**COOL  
FEEDBACK**



**WARM  
FEEDBACK**

**COOL  
FEEDBACK**

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## CTE Grants Administrators Meeting Update February 1, 2024

### Reminders –

- Performance Improvement Plans were due on January 15<sup>th</sup>. If you need help, please reach out. We are here to support you. Due to Federal exemption in 21-22, the most consecutive years of not meeting the performance indicator would be 2 years.
- 2<sup>nd</sup> Allocation – some districts have not completed a revision to amend their additional CTE Perkins and CTE State Priority funds into the grant. Please submit revisions if this has not been completed.
- Reimbursement requests - Work with your business office to submit reimbursement request monthly if possible. Your goal should be to half of your funds spent at this time. All capital items should be ordered in order to use this school year.



The CTE Grant Specialists' team is going to offer monthly office hours via TEAMS. We would like your input to meet your needs. Please scan the QR code or go to this link:

<https://forms.office.com/r/mnYezC5ULZ?origin=lprLink>

to provide input on four quick questions - time of month, day of month, time of day and topics.

- CTE Federal Perkins Post-Secondary, CTE Federal Perkins Secondary, and CTE State Priority grants are scheduled to open in
- In March 2024, your fiscal year 2025 application will be available. Please remember you will be in year 2 of your CLNA so you will be adding onto your 2024 CLNA in the Year 2 Column. We will need signatures of your stakeholders who attended the meeting.





### CTE TECHNICAL SKILLS ASSESSMENTS

**The Technical Skills Assessments System is a secure, reliable online testing application owned by the State of Arizona and housed in the Department of Education.** Districts access the ADE website to register students, conduct assessments, and access summary reports. Assessments are designed for students in their final Carnegie Unit of state-identified programs. All assessments are 100 multiple-choice items that align to program technical standards and range from knowledge and comprehension to application, analysis, and evaluation in cognitive difficulty. Most of the items are operational items that have historically proven to be valid and reliable, and the remaining are field-tested items. Those who successfully pass their TSA receive an industry-endorsed congratulatory letter and certificate.

#### **Teachers serve as content experts in the development of the assessment items.**

Committees comprised of new and veteran secondary teachers convene annually to develop, review, and edit assessment items. The expertise of teachers and their engagement in making connections between curriculum, instruction, and assessment have contributed greatly to the advancement of student achievement. In appreciation of their time and expertise, they are awarded a professional development certificate documenting the hours they contribute to the development and improvement of the assessments.

**Over the years the Technical Skills Assessments** have gone from being practical, end-of-program assessments to high stakes tests with the TSA data used for program improvement and accountability reporting. Districts and schools use testing results to evaluate the effectiveness of instructional practices, to better align district and state goals and expectations, to help teachers improve teaching by addressing achievement gaps, and to support collaborative conversation and to share best practices. Additionally, TSA data is used for accountability purposes. Schools earn A-F points for students who complete a CTE program and pass the TSA, the State Legislature looks at TSA scores to determine funding for CTE programs, and the TSA data is a component of the Performance Measures for the federal Perkins Grant.

**Technical Skills Assessments are available for these 54 CTE programs.** Each program's test is 100 multiple-choice items based on the content of program standards. The pass core for all programs is 60% of 80 operational items. The 20 field-tested items are not included in the overall test score. **Programs with new or updated standards to be tested on for the first-time are highlighted below.**

CIP	PROGRAM	CIP	PROGRAM
52.0301.00	Accounting	52.1900.20	Fashion Design and Merchandising
01.0000.00	AgriScience	50.0602.00	Film and TV Production
47.0608.00	Aircraft Mechanics	52.0801.00	Finance (2022 standards)
36.0202.00	Air Transportation	43.0202.00	Fire Service (2023 standards)
15.1303.00	Architectural Drafting	50.0409.00	Graphic Design
14.4201.00	Automation and Robotics	49.0202.00	Heavy Equipment Operations
47.0603.00	Automotive Collision Repair	51.2602.00	Home Health Aide
47.0604.00	Automotive Technologies	52.0900.00	Hospitality Management (2023 standards)
41.0100.00	Bioscience	50.0408.00	Interior Design (2022 standards)
52.0201.00	Business Management	51.0802.00	Laboratory Assisting
52.0408.00	Business Operations (2022 standards)	43.0100.00	Law and Public Safety
48.0703.00	Cabinetmaking	52.1801.00	Marketing
46.0201.00	Carpentry	15.1306.00	Mechanical Drafting
46.0415.00	Construction Technologies	51.0801.00	Medical Assisting Services
12.0400.00	Cosmetology and Related Services	51.1502.00	Mental and Social Health Technician
12.0500.00	Culinary Arts	15.0307.00	Music and Audio Production
51.0600.00	Dental Assisting	11.1999.00	Network Security
47.0613.00	Diesel Engine Repair	51.3902.00	Nursing Services
10.0304.00	Digital Animation	51.0805.00	Pharmacy Support Services
09.0702.00	Digital Communication	48.0510.00	Precision Machining
50.0605.00	Digital Photography	11.0202.00	Software and App Design
10.0200.20	Digital Printing	51.0913.00	Sports Medicine and Rehabilitation
13.1210.00	Early Childhood Education	50.0599.00	Stagecraft
13.1200.00	Education Professions	15.1202.20	Technology Devices Maintenance
14.1001.00	Electronic Technologies	51.3501.00	Therapeutic Massage
51.0904.00	Emergency Medical Services	01.8301.00	Veterinary Assisting
15.0000.00	Engineering	48.0508.00	Welding Technologies

Schedule for Spring 2024 Technical Skills Assessments	
February 26 – May 2	Registration for Spring Assessments
February 26 – May 3 (testing ends at 12:00 p.m.)	Testing Period for Spring Assessments
May 6 – May 10	Congratulatory Letters, Certificates, and Transcripts Delivered to Districts



The **Eligibility Policy for Students to Take and Retake the TSA** describes four conditions when a student can take or retake the assessment. The TSA covers content from all of the program standards. Therefore, teachers should determine the best time for students to test—that time when they are most familiar with the content.

1. **In a traditional or block schedule** a student should take the test when completing two courses worth one credit each in a single CTE program or when completing three courses worth one credit each in a single CTE program. A student can only take the test one time.
2. **If a district has added courses** to a program beyond the state’s designated course sequence for that program, it will be the district’s decision as to when the student will take the test, that is, after the 2<sup>nd</sup>, 3<sup>rd</sup>, or 4<sup>th</sup> course. A student can only take the test one time.
3. **If a student fails the test and retakes the course or takes an additional course** in a single CTE program, the student can retake the test in the next school year prior to graduation through special arrangements with ADE/CTE. The last test score counts.
4. **If an IEP or 504 plan states that the student can take the test more than one time**, the student can retake the test in the current or next school year prior to graduation through special arrangements with ADE/CTE. The last test score counts.

**Note:** Special arrangements with ADE/CTE mentioned in policy statements 3 and 4 refers to the completion, submission, and final approval of the Change Request form found on the TSA dashboard.

## TECHNICAL SKILLS ASSESSMENT RESOURCES FOR DIRECTORS AND TEACHERS

**Technical Skills Assessment Webpage** at <https://www.azed.gov/cte/assessments>

**Technical Skills Assessment Dashboard** available with ADEConnect Account for TSAs

**Helpline:** 602-542-5452

**Email:** [CTEAssessmentHelp@azed.gov](mailto:CTEAssessmentHelp@azed.gov)

### **New Documents**

- Technical Skills Assessment Overview (formerly TSA User Guide)
- Technical Skills Assessment Troubleshooting Guide with Video Links

### **ADE/CTE Standards, Assessment, Career Development Team**

- Judy Balogh, Team Lead, [judy.balogh@azed.gov](mailto:judy.balogh@azed.gov)
- Cathy Reed, Technical Standards & Assessment Program Specialist, [cathy.reed@azed.gov](mailto:cathy.reed@azed.gov)
- Hannah Perkins, Assessment Program Specialist, [hannah.perkins@azed.gov](mailto:hannah.perkins@azed.gov)
- Susan Farretta, Career Development Program Specialist, [susan.farretta@azed.gov](mailto:susan.farretta@azed.gov)
- Jet Wilson Dight, Professional Development Projects Specialist, [jet.wilsondight@azed.gov](mailto:jet.wilsondight@azed.gov)

## Announcement and Application Process for CTE Directors --2024 CTE Technical Skills Assessment Teacher Institutes--

**Dear Director**, the Annual CTE Technical Skills Assessment Teacher Institutes bring teacher committees together to review, update, and develop assessment items for their program's TSA. Each committee includes teachers new to the assessment process, those who have experienced the assessment work previously, and as well, geographic diversity is an important consideration. Each Institute begins at 8:30 a.m. and concludes by 4:30 p.m. Teachers receive a stipend of \$250 and 8 hours of Professional Development Credit, with lunch on their own. Meeting dates, programs, locations, and application deadlines are listed below. The application links for the TSA Institutes will be emailed to directors and teachers before. Applicants and their directors will be notified by email regarding their status to participate in the Institutes.

### CTE Technical Skills Assessment Teacher Institutes



**Saturday, March 9 at West-MEC Glendale-START Bldg.**

Diesel Engine Repair

Dental Assisting

Welding Technologies

Film and TV Production

Heavy Equipment Operations

**Saturday, April 6 at West-MEC Glendale-START Bldg.**

Construction Technologies

Fashion Design & Merchandising

Stagecraft

Cosmetology and Related Services

Air Transportation

Architectural Drafting

**Application/Notification**

**Application available:** January 5, 2024  
**Application deadline:** February 2, 2024  
**Notification of acceptance:** February 16, 2024



**Saturday – May 18 at West-MEC Glendale-START Bldg.**

Automation and Robotics

Digital Printing

Engineering

Digital Photography

**Tuesday, June 4 at Chandler-ASU Innovation Center**

Automotive Collision Repair

Music and Audio Production

Business Operations

Business Management

Network Security

Early Childhood Education

**Application/Notification**

**Application available:** February 23, 2024  
**Application deadline:** March 22, 2024  
**Notification of acceptance:** April 19, 2024



**Tuesday, June 11 at Chandler-ASU Innovation Center**

Software and App Design

Culinary Arts

Finance

Technology Devices Maintenance

Aircraft Mechanics

**Thursday, June 13 at Chandler-ASU Innovation Center**

Hospitality Management

Veterinary Assisting

Home Health Aide

Sports Medicine and Rehabilitation

Laboratory Assisting

**Application/Notification**

**Application available:** April 12, 2024  
**Application deadline:** May 10, 2024  
**Notification of acceptance:** May 17, 2024

### What we need from you!

**PLEASE SPREAD THE WORD** when you receive the announcement about the TSA Institutes,

- Recruit teachers who have shared an interest in participating in the development of TSA items.
- Encourage teachers new to the assessment process to apply so they will be better informed.
- Remind teachers who are interested in the Institutes to submit the application by the deadline.
- Support your teachers' mileage and per diem if selected to participate.

**IF YOU HAVE QUESTIONS**, please contact Cathy Reed ([cathy.reed@azed.gov](mailto:cathy.reed@azed.gov)) or Judy Balogh ([judy.balogh@azed.gov](mailto:judy.balogh@azed.gov)).





## TECHNICAL SKILLS ASSESSMENT (TSA) INSTITUTES 2024 Application-Notification Process

We are very excited to share with you this information about the 2024 CTE / TSA Teacher Institutes. This year, we plan to meet with 32 CTE programs. This means we will be working with many of you who anticipate working with your colleagues to review, edit, and write assessment items for your programs.

PLEASE READ THE INFORMATION BELOW CAREFULLY AND LET US KNOW IF YOU HAVE ANY QUESTIONS.

At each one-day meeting, teachers will:

- ❖ Learn what's new with the Technical Skills Assessments
- ❖ Realign assessment items to new standards, if applicable
- ❖ Develop a Blueprint based on updated standards, if applicable
- ❖ Improve and develop assessment items according to Blueprint domains

LOCATION AND TIME	All Saturday meetings will be at the West-MEC Campus START Building at 5405 N 99 <sup>th</sup> Avenue in Glendale, Arizona 85305. Meetings will start at 8:30 and adjourn no later than 4:30. Lunch will be "on your own."
TEACHER COMMITTEES	Each committee will be 6-8 teachers and a facilitator. Committees will include teachers who have experience with the item development/analysis process, teachers who are new to the process, and teachers who represent various geographic areas.
PROFESSIONAL DEVELOPMENT CREDIT	Teachers will receive a \$250 stipend and 8 hours of professional development credit. Teachers should check with their CTE director to request mileage reimbursement and per diem.
APPLICATION PROCESS	<u>We are requesting that CTE directors recommend teachers to apply and attend the TSA Teacher Institutes.</u> So as not to omit any teacher from applying, an application will be sent to all teachers with the request to contact their director for consent and to request financial support.
NOTIFICATION OF ACCEPTANCE	Teachers and their directors will be notified by the TSA staff regarding their acceptance and/or nonacceptance to participate in the TSA Teacher Institute.

Each TSA Teacher Institute will feature several programs. If you are interested in being considered for a teacher committee for your program, obtain your director's approval and complete and submit the application below by the deadline provided.

CTE Teachers

- ✓ Obtain CTE director's consent to participate in TSA meeting
- ✓ Complete application by requested deadline
- ✓ Receive notification of acceptance

TSA Institute Saturday,  
March 9, 2024- West-MEC  
Glendale-START Bldg.

Diesel Engine Repair  
Dental Assisting  
Welding Technologies  
Film and TV Production  
Heavy Equipment Operations

Application/Notification

Application Available:  
January 5, 2024  
Application deadline:  
February 2, 2024  
Notification of acceptance:  
February 16, 2024

[Apply here](#)

Please complete the online application to be considered for the TSA Institute on Saturday, March 9, 2024.

Direct application questions to Cathy Reed, 602.364.0103 or [cathy.reed@azed.gov](mailto:cathy.reed@azed.gov).





# AUTOMOTIVE COLLISION REPAIR 47.0600.30

## TECHNICAL STANDARDS

An Industry Technical Standards Validation Committee updated the program technical standards by aligning them to the recently updated Automotive Service Excellence (ASE) Task and Standards List and the Tool and Equipment Lists. Students completing the program are then eligible to earn the ASE Certification. The Arizona Career and Technical Education Quality Commission, the validating authority for the Arizona Skills Standards Assessment System, endorsed these standards on January 24, 2024.

Note: Arizona's Professional Skills are taught as an integral part of the Automotive Collision Repair program.

**The Technical Skills Assessment for Automotive Collision Repair is available SY2024-2025.**

Note: In this document i.e. explains or clarifies the content and e.g. provides examples of the content that must be taught.

### STANDARD 1.0 PERFORM NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR

- 1.1 Use proper personal safety equipment and take necessary precautions with hazardous operations and materials in accordance with federal, state, and local regulations
- 1.2 Use OEM (Original Equipment Manufacturer/Manufacturing) procedures to identify material and composition of the vehicle being repaired (i.e., mid steel, high strength steel, ultra-high strength steel, aluminum, composites, carbon fiber, etc.)
- 1.3 Use procedures and precautions that apply to the vehicle being repaired
- 1.4 Identify vehicle system precautions and/or inspections and recommended procedure before inspecting or replacing components [i.e., supplemental restraint system (SRS), advanced driver assistance systems (ADAS), hybrid/electric/alternative fuel vehicles, locations, etc.]
- 1.5 Perform vehicle clean-up; complete quality control using a checklist on operations performed (e.g., review estimate and develop a repair plan; secure and store any items in the repair area; remove necessary trim and panels for repair, and bag and tag hardware; vacuum glass from doors, quarters, and floors; and wipe clean any materials on panels and interior parts)
- 1.6 Review damage report and analyze damage to determine appropriate methods for overall repair and develop and document a repair plan
- 1.7 Inspect, remove, protect, label, store, inventory, and reinstall exterior trim and moldings
- 1.8 Inspect, remove, protect, label, store, inventory, and reinstall interior trim and components
- 1.9 Inspect, remove, protect, label, store, inventory, and reinstall body panels and components that may interfere with or be damaged during repair
- 1.10 Inspect, remove, protect label, store, inventory, and reinstall vehicle mechanical and electrical components that may interfere with or be damaged during repair
- 1.11 Protect panels, glass, interior parts, and other vehicles adjacent to the repair area
- 1.12 Wash entire vehicle with soap and water and complete pre-repair inspection checklist (e.g., secure and store any items in the way of vehicle repair; remove and store any item removed for repair; bag and tag any hardware for easy reassembly; wash vehicle with soap and water; and cover any adjacent panels, glass, and trim to protect from damage during repair)
- 1.13 Prepare damaged area using water-based and solvent-based cleaners
- 1.14 Remove corrosion protection, undercoating, sealers, and other protective coatings as necessary to perform repairs
- 1.15 Inspect, remove, and reinstall repairable plastics and other components for off-vehicle repair

### STANDARD 2.0 PERFORM OUTER BODY PANEL REPAIRS, REPLACEMENTS, AND ADJUSTMENTS

- 2.1 Inspect, remove, replace, and align hood, hood hinges, and hood latch
- 2.2 Inspect, remove, replace, and align deck lid, lid hinges, and lid latch
- 2.3 Inspect, remove, replace, and align doors, latches, hinges, and related hardware
- 2.4 Inspect, remove, replace, and align tailgates, hatches, liftgates, and sliding doors
- 2.5 Inspect, remove, replace, overhaul, and align bumpers, covers, reinforcement, guards, impact absorbers, and mounting hardware
- 2.6 Inspect, remove, replace, and align fenders, and related panels
- 2.7 Restore corrosion protection during and after the repair
- 2.8 Replace seam sealer to match OEM appearance

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- 2.9 Restore sound deadeners and foam materials
- 2.10 Identify one-time use fasteners
- 2.11 Inspect, identify labels/decals, and replace as necessary
- 2.12 Follow manufacture guidelines when applying heat to non-structural components during repair

### **STANDARD 3.0 PERFORM METAL FINISHING AND BODY FILLING**

- 3.1 Prepare a panel for body filler by abrading or removing the coatings; featheredge, refine scratches, and clean the surface before the application of body filler
- 3.2 Locate and repair surface irregularities and straighten contours on a damaged body panel using power tools, hand tools, and weld-on pulling attachments
- 3.3 Demonstrate hammer and dolly techniques
- 3.4 Heat shrink stretched panel areas to proper contour
- 3.5 Cold shrink stretched panel areas to proper contour
- 3.6 Identify body filler defects and correct the cause and conditions (i.e., pinholing, ghosting, staining, over catalyzing, etc.)
- 3.7 Identify different types of body fillers
- 3.8 Shape body filler to contour and finish sanding
- 3.9 Perform proper metal finishing techniques for aluminum
- 3.10 Perform proper application of body filler to aluminum
- 3.11 Locate and repair surface irregularities and straighten contours on a damaged panel using Glue-Pulling Dent Repair (GPDR)
- 3.12 Mix and apply body filler

### **STANDARD 4.0 DETERMINE MOVEABLE GLASS AND HARDWARE REQUIREMENTS**

- 4.1 Inspect, adjust, overhaul, repair, or replace window regulators, run channels, glass, power mechanisms, and related controls
- 4.2 Inspect, adjust, repair, remove, reinstall, or replace weather-stripping
- 4.3 Inspect, remove, repair or replace, and adjust removable power-operated roof panel and hinges, latches, guides, handles, retainer, and controls of sunroofs

### **STANDARD 5.0 PERFORM PLASTICS, ADHESIVES, AND WELDING REPARABILITY**

- 5.1 Identify the types of plastics and determine reparability
- 5.2 Identify location of damage relative to safety systems (ADAS); determine reparability according to manufacturer repair procedures
- 5.3 Clean and prepare the surface of plastic parts and identify the types of plastic repair procedures
- 5.4 Repair rigid, semi-rigid, and flexible plastic panels
- 5.5 Remove, replace, or repair damaged areas of rigid exterior composite panels
- 5.6 Repair plastic parts by welding (e.g., nitrogen and airless)
- 5.7 Perform a single-sided adhesively bonded cosmetic repair
- 5.8 Perform a double-sided adhesively bonded repair
- 5.9 Perform an adhesively bonded or welded tab repair
- 5.10 Shape and reform damaged plastic

### **STANDARD 6.0 APPLY SAFETY PRECAUTIONS WHEN PAINTING AND REFINISHING**

- 6.1 Select and use the proper personal safety equipment for surface preparation, spray gun and related equipment operation, paint mixing, matching and application, paint defects, and detailing (i.e., gloves, suits, hoods, eye and ear protection, etc.) and take necessary precautions with hazardous operations and materials according to federal, state, and local regulations
- 6.2 Identify safety and personal health hazards according to OSHA guidelines, the "Right to Know Law", and Safety Data Sheet (SDS) information
- 6.3 Inspect spray environment and equipment to ensure compliance with federal, state, and local regulations, and for safety and cleanliness hazards
- 6.4 Select and use a NIOSH approved respiratory protection system (supplied air/fresh air make up recommended) and perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulations
- 6.5 Perform vehicle clean-up and complete quality control using a checklist on operations performed (e.g., use soap, water, and sponge to wash vehicle, wheel wells, wheels, door jams, hood, and trunk jams; dry vehicle using an absorbent towel; clean all glass and chrome; in booth, pick up any loose paper and tape; sweep, clean floor and walls, and remove water from floors and walls with broom and squeegee)

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- 6.6 Demonstrate knowledge of the process for tracking of expelled volatile organic compounds (VOCs)
- 6.7 Follow federal, state, and local regulations regarding the handling and disposal of refinishing waste products

## **STANDARD 7.0 PERFORM SURFACE PREPARATION FOR PAINTING AND REFINISHING**

- 7.1 Inspect, remove, store, protect, and replace exterior trim and components necessary for proper surface preparation
- 7.2 Wash entire vehicle with soap and water and use appropriate cleaner to remove contaminants
- 7.3 Remove paint finish as needed
- 7.4 Properly sand areas to be refinished
- 7.5 Identify and select appropriate sandpaper to featheredge areas to be refinished
- 7.6 Apply suitable metal treatment or primer in accordance with total product systems
- 7.7 Mask and protect other areas that will not be refinished
- 7.8 Demonstrate different masking techniques (i.e., recess/back masking, foam door type, etc.)
- 7.9 Mix primer, primer surfacer, and primer sealer following the paint technical data sheet instructions according to the manufacturer
- 7.10 Apply primer onto surface of repaired area, demonstrating control of primer application by keeping the areas as small as possible
- 7.11 Force curing and drying of primer coating following paint manufacturers technical data sheet
- 7.12 Apply two-component finishing filler to minor surface imperfections
- 7.13 Guide coat and block sand area with correct grade/grit sandpaper to which primer surfacer has been applied
- 7.14 Dry sand area to which two-component finishing filler has been applied
- 7.15 Remove dust from area to be refinished, including cracks or moldings of adjacent areas
- 7.16 Clean area to be refinished using a recommended final cleaning solution
- 7.17 Prepare adjacent panels for blending using paint manufacturers procedures
- 7.18 Identify the types of rigid, semi-rigid or flexible plastic parts to be refinished; determine the materials needed, preparation, and refinishing procedures
- 7.19 Identify metal parts to be refinished and determine the materials needed, preparation, and refinishing procedures
- 7.20 Identify refinishing guidelines for stationary glass flange areas to be refinished

## **STANDARD 8.0 PERFORM SPRAY GUN AND RELATED EQUIPMENT OPERATION**

- 8.1 Inspect, clean, and determine condition of spray guns and related equipment (e.g., air hoses, regulators, air lines, air source, spray environment, and filters)
- 8.2 Select spray gun setup (e.g., fluid needle, nozzle, and cap) for product being applied
- 8.3 Test and adjust spray gun using fluid, air and pattern control valves

## **STANDARD 9.0 PERFORM DAMAGE ANALYSIS**

- 9.1 Identify components to be removed to gain access to damaged areas
- 9.2 Analyze damage to determine appropriate methods in accordance with manufacturers recommendations and guidelines
- 9.3 Determine the direction, point(s) of impact, and extent of direct, indirect, and inertia damage
- 9.4 Perform visual inspection of non-structural components and members
- 9.5 Determine parts, components, material type(s), and procedures necessary for a proper repair
- 9.6 Identify suspension, electrical, and mechanical component physical damage
- 9.7 Identify single (one time) use components

## **STANDARD 10.0 PERFORM ESTIMATION**

- 10.1 Record customer/vehicle owner information
- 10.2 Record vehicle identification number (VIN) information, including nation of origin, make, model, restraint system, body type, production date, engine type, build data, and assembly plant
- 10.3 Record vehicle mileage and options, including trim level, paint code, transmission, accessories, and modifications
- 10.4 Identify safety systems and determine precautions, inspections, and replacement items as required
- 10.5 Apply appropriate estimating and parts nomenclature (terminology)

## **STANDARD 11.0 DETERMINE VEHICLE CONSTRUCTION AND PARTS IDENTIFICATION**

- 11.1 Identify type of vehicle construction (e.g., unibody, body-over-frame, and alternates)

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- 11.2 Recognize the different collision damage between unibody and body-over-frame vehicles
- 11.3 Identify impact energy absorbing components
- 11.4 Identify different types of substrates (i.e., steel types, aluminum, magnesium, plastic, composites, etc.) and determine reparability
- 11.5 Identify vehicle glass components and repair/replacement procedures
- 11.6 Identify add-on accessories
- 11.7 Recognize different vehicle joining/attaching methods (e.g., welding, adhesives, and rivets)

**STANDARD 12.0 PERFORM MECHANICAL AND ELECTRICAL COMPONENT OPERATIONS FOR SUSPENSION AND STEERING, FUEL INTAKE, AND EXHAUST SYSTEMS  
(ELECTRICAL – Note: All tasks in this section refer to low voltage system and components only.)**

- 12.1 Reinstall wheels and tighten lug nuts to manufacturer specification using a torque wrench
- 12.2 Remove, replace, and recharge battery
- 12.3 Check operation and aim headlamp assemblies and fog/driving lamps
- 12.4 Remove and replace horn(s); check operation
- 12.5 Check operation of wiper/washer systems
- 12.6 Remove and replace air intake components

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