



Results by Standard

2021-2022 Technical Skills Assessment Automotive Collision Repair

Legend (%)		
0-50%	51-75%	76-100%

Assessment: Automotive Collision Repair Number tested: 84	% Correct 17-18	% Correct 18-19	% Correct 20-21	% Correct 21-22
CONTENT STANDARD 1.0: IDENTIFY AND UTILIZE SAFETY PROCEDURES AND PROPER TOOLS	76.92%	71.53%	75.73%	78.38%
Performance Standard 1.1: Demonstrate general lab safety rules and procedures	76.92%	71.53%	75.73%	78.38%
1.1.1 Describe general shop safety rules and procedures (i.e., safety test)	66.67%	64.41%	71.56%	72.76%
1.1.2 Utilize safe procedures for handling of tools and equipment	92.31%	84.75%	86.00%	92.31%
1.1.3 Identify and use proper placement of floor jacks and jack stands	95.19%	87.29%	90.67%	92.31%
1.1.4 Identify and use proper procedures for safe vehicle lift operation	85.26%	77.40%	84.44%	86.54%
1.1.5 Utilize proper ventilation procedures for working within the lab/shop area	93.27%	82.20%	92.67%	94.71%
1.1.6 Identify marked safety areas	76.92%	63.56%	72.00%	73.56%
1.1.7 Identify the location and the types of fire extinguishers and other fire safety equipment.	95.19%	84.75%	88.00%	81.25%
1.1.8 Demonstrate knowledge of the procedures for using fire extinguishers and other fire safety equipment	61.54%	52.54%	54.00%	60.58%
1.1.10 Identify the location of the posted evacuation routes	82.69%	72.88%	88.00%	88.46%
1.1.11 Comply with the required use of PPE during lab/shop activities	56.73%	66.95%	60.00%	63.46%
1.1.12 Identify and wear appropriate clothing for lab/shop activities	75.00%	81.36%	86.67%	88.46%
1.1.14 Research safety aspects of supplemental restraint systems (SRS), electronic brake control systems, and hybrid vehicle high voltage circuits	36.54%	35.59%	26.67%	37.50%
1.1.16 Locate and interpret safety data sheets (MSDS, SDS)	48.08%	55.93%	49.33%	62.50%
CONTENT STANDARD 3.0 DEMONSTRATE DAMAGE ANALYSIS, ESTIMATING AND CUSTOMER SERVICE SKILLS	57.14%	51.09%	56.38%	59.07%
Performance Standard 3.1: Identify vehicle construction and parts	57.21%	51.27%	54.33%	56.97%
3.1.1 Identify type of vehicle construction (space frame, unibody, body-over-frame)	71.15%	62.71%	54.67%	51.92%

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3.1.4 Identify steel types; determine repairability	53.85%	47.46%	56.00%	63.46%
3.1.5 Identify aluminum/magnesium components; determine repairability	75.00%	55.93%	66.67%	74.04%
3.1.6 Identify plastic/composite components; determine repairability	28.85%	38.98%	40.00%	38.46%
Performance Standard 3.3: Demonstrate estimating procedures	54.81%	50.00%	61.33%	65.87%
3.3.16 Determine price and source of necessary sublet operations	57.69%	42.37%	53.33%	64.42%
3.3.28 Demonstrate ability to access OEM repair information	51.92%	57.63%	69.33%	67.31%
Performance Standard 3.4: Demonstrate customer relations and sales skills	61.54%	52.54%	54.67%	53.85%
3.4.2 Listen to customer/client; collect information and identify customers/client's concerns, needs and expectations	61.54%	52.54%	54.67%	53.85%
CONTENT STANDARD 4.0 PERFORM NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS)	55.59%	54.34%	60.29%	60.46%
Performance Standard 4.1: Demonstrate inspection and preparation techniques	90.38%	89.27%	96.00%	93.91%
4.1.3 Inspect, remove, label, store, and reinstall interior trim and components	98.08%	94.92%	97.33%	97.12%
4.1.13 Verify proper operation of seatbelt	86.54%	86.44%	95.33%	92.31%
Performance Standard 4.2: Perform outer body panel repairs, replacements, and adjustments	55.13%	51.41%	58.37%	58.01%
4.2.1 Determine the extent of direct and indirect/hidden damage and direction of impact; develop and document a repair plan	44.23%	23.73%	46.67%	50.96%
4.2.2 Inspect, remove, replace, and align hood, hood hinges, and hood latch	78.85%	81.36%	80.00%	85.58%
4.2.3 Inspect, remove, replace, and align deck lid, lid hinges, and lid latch	48.08%	42.37%	50.67%	33.65%
4.2.7 Inspect, remove, replace and align fenders, and related panels	63.46%	74.58%	70.67%	69.23%
4.2.8 Straighten contours of damaged panels to a suitable condition for body filling or metal finishing using power tools, hand tools, and weld-on pulling attachments	55.77%	50.85%	68.00%	65.38%
4.2.9 Weld damaged or torn steel body panels; repair broken welds	73.08%	50.85%	54.67%	55.77%
4.2.10 Restore corrosion protection	26.92%	33.90%	52.00%	49.04%
4.2.11 Restore sound deadeners and foam materials	80.77%	86.44%	86.67%	90.38%
4.2.12 Perform panel bonding and weld bonding	25.00%	18.64%	16.00%	22.12%
Performance Standard 4.3: Apply metal finishing and body filling techniques	51.92%	50.28%	56.89%	56.62%
4.3.1 Remove paint from the damaged area of a body panel	65.38%	67.80%	78.67%	74.04%
4.3.2 Locate and repair surface irregularities on a damaged body panel	44.23%	23.73%	44.00%	38.46%
4.3.3 Demonstrate hammer and dolly techniques	57.69%	77.97%	60.00%	58.65%
4.3.4 Heat shrinkstretched panel areas to proper contour	15.38%	28.81%	30.00%	33.65%

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4.3.5 Cold shrinkstretched panel areas to proper contour	47.12%	38.14%	44.67%	43.27%
4.3.6 Prepare and apply body filler	80.77%	59.32%	84.00%	87.50%
4.3.8 Rough sand body filler to contour; finish sand	94.23%	89.83%	96.00%	97.12%
Performance Standard 4.5: Perform metal welding and cutting techniques	52.99%	53.67%	58.22%	58.23%
4.5.1 Identify weldable and non-weldable substrates used in vehicle construction	44.23%	50.85%	58.67%	54.81%
4.5.3 Determine the correct GMAW (MIG) welder type, electrode/wire type, diameter, and gas to be used in a specific welding situation	67.31%	57.63%	65.33%	72.12%
4.5.4 Set up and adjust the GMAW (MIG) welder to tune for proper electrode stickout, voltage, polarity, flow rate, and wire-feed speed required for the substrate being welded	53.85%	59.32%	68.00%	64.42%
4.5.5 Store, handle, and install high-pressure gas cylinders	96.15%	89.83%	93.33%	97.12%
4.5.7 Use the proper angle of the gun to the joint and direction of gun travel for the type of weld being made in the flat, horizontal, vertical, and overhead positions	9.62%	15.25%	14.67%	6.73%
4.5.8 Protect adjacent panels, glass, vehicle interior, etc. from welding and cutting operations	46.15%	47.46%	57.33%	49.04%
4.5.9 Protect computers and other electronic control modules during welding procedures	46.15%	57.63%	40.00%	38.46%
4.5.13 Perform the following welds: continuous, plug, butt weld with and without backing, fillet, etc	75.00%	69.49%	66.67%	81.73%
4.5.15 Identify the causes of various welding defects; make necessary adjustments	38.46%	35.59%	60.00%	59.62%
Performance Standard 4.6: Utilize plastics and adhesives	33.65%	36.44%	40.00%	48.56%
4.6.1 Identify the types of plastics; determine repairability	1.92%	13.56%	10.67%	16.35%
4.6.3 Demonstrate one-sided, two-sided, and tab repair	65.38%	59.32%	69.33%	80.77%
CONTENT STANDARD 5.0 PERFORM STRUCTURAL ANALYSIS AND DAMAGE REPAIR	68.75%	63.56%	76.67%	78.85%
Performance Standard 5.1: Demonstrate inspection and repair techniques	68.75%	63.56%	76.67%	78.85%
5.1.1 Measure and diagnose structural damage using a tram gauge	57.69%	57.63%	76.00%	73.08%
5.1.2 Attach vehicle to anchoring devices	84.62%	62.71%	73.33%	86.54%
5.1.8 Reinstall wheels and torque lug nuts	66.35%	66.95%	78.67%	77.88%
CONTENT STANDARD 6.0 DEMONSTRATE PAINTING AND REFINISHING TECHNIQUES	52.55%	52.84%	55.73%	57.13%
Performance Standard 6.1: Apply safety precautions	55.77%	59.89%	58.67%	62.18%
6.1.1 Identify and take necessary precautions with hazardous operations and materials according to federal, state, and local regulations	78.85%	79.66%	81.33%	85.58%

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Number tested: 84	17-18	18-19	20-21	21-22
6.1.2 Identify safety and personal health hazards according to OSHA guidelines and the Right to Know Law	92.31%	93.22%	94.67%	90.38%
6.1.3 Inspect spray environment and equipment to ensure compliance with federal, state and local regulations, and for safety and cleanliness hazards	36.54%	42.37%	46.67%	40.38%
6.1.4 Select and use a NIOSH approved air purifying respirator. Inspect condition and ensure fit and operation. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulation	32.69%	52.54%	33.33%	48.08%
6.1.5 Select and use a NIOSH approved supplied air (Fresh Air Make-up) respirator system. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulation	11.54%	22.03%	12.00%	20.19%
6.1.6 Select and use appropriate PPE	82.69%	69.49%	84.00%	88.46%
Performance Standard 6.2: Utilize surface preparation techniques	45.81%	48.65%	46.98%	48.59%
6.2.4 Strip paint to bare substrate (paint removal)	7.69%	3.39%	6.67%	4.81%
6.2.5 Dry or wet sand areas to be refinished	38.46%	38.98%	32.00%	29.81%
6.2.6 Featheredge areas to be refinished	61.54%	57.63%	60.00%	65.38%
6.2.7 Apply suitable metal treatment or primer in accordance with total product systems	88.46%	88.14%	84.00%	86.54%
6.2.8 Mask and protect other areas that will not be refinished	51.92%	72.88%	65.33%	61.54%
6.2.9 Mix primer, primer-surfacer or primer-sealer	75.00%	71.19%	76.00%	78.85%
6.2.11 Apply primer onto surface of repaired area	98.08%	79.66%	97.33%	100.00%
6.2.12 Apply two-component finishing filler to minor surface imperfections	19.23%	25.42%	30.67%	24.04%
6.2.13 Block sand area to which primer-surfacer has been applied	51.92%	49.15%	56.00%	43.27%
6.2.14 Dry sand area to which finishing filler has been applied	38.46%	31.36%	38.00%	42.31%
6.2.15 Remove dust from area to be refinished, including cracks or moldings of adjacent areas	36.54%	44.07%	34.67%	36.54%
6.2.16 Clean area to be refinished using a final cleaning solution	50.00%	67.80%	53.33%	68.27%
6.2.17 Remove, with a tack rag, any dust or lint particles from the area to be refinished	48.08%	72.88%	38.67%	38.46%
6.2.23 Identify the types of rigid, semi-rigid or flexible plastic parts to be refinished; determine the materials needed, preparation, and refinishing procedures	19.23%	22.88%	24.67%	27.40%
6.2.24 Identify metal parts to be refinished; determine the materials needed, preparation, and refinishing procedures	36.54%	47.46%	38.67%	49.04%
Performance Standard 6.3: Perform spray gun and related equipment operations	67.31%	52.54%	73.33%	76.92%
6.3.4 Demonstrate an understanding of the operation of spray equipment	67.31%	52.54%	73.33%	76.92%

Assessment: Automotive Collision Repair	% Correct 17-18	% Correct 18-19	% Correct 20-21	% Correct 21-22
Number tested: 84				
Performance Standard 6.4: Utilize paint mixing, matching, and application techniques	56.87%	56.17%	62.86%	63.74%
6.4.1 Identify color code by manufacturers vehicle information label	69.23%	71.19%	78.67%	74.04%
6.4.2 Shake, stir, reduce, catalyze/activate, and strain refinsh materials	71.15%	59.32%	66.67%	66.35%
6.4.3 Apply finish using appropriate spray techniques (gun arc, angle, distance, travel speed, and spray pattern overlap) for the finish being applied	50.00%	45.76%	54.67%	64.42%
6.4.7 Apply basecoat/clearcoat for overall refinishing	32.69%	40.68%	38.67%	46.15%
6.4.12 Identify and mix paint using a formula	51.92%	54.24%	64.00%	64.42%
6.4.14 Tint color using formula to achieve a blendable match	46.15%	40.68%	42.67%	38.46%
6.4.15 Identify alternative color formula to achieve a blendable match	76.92%	81.36%	94.67%	92.31%
Performance Standard 6.5: Identify paint defects—causes and cures	62.50%	52.54%	76.67%	76.44%
6.5.3 Identify the presence of fish-eyes (crater-like openings) in the finish; determine the cause(s) and correct the condition	67.31%	54.24%	80.00%	73.08%
6.5.8 Identify solvent popping in freshly painted surface; determine the cause(s) and correct the condition	57.69%	50.85%	73.33%	79.81%
Performance Standard 6.6: Perform final detail procedures	82.69%	59.32%	77.33%	67.31%
6.6.6 Perform vehicle clean-up; complete quality control using a checklist	82.69%	59.32%	77.33%	67.31%