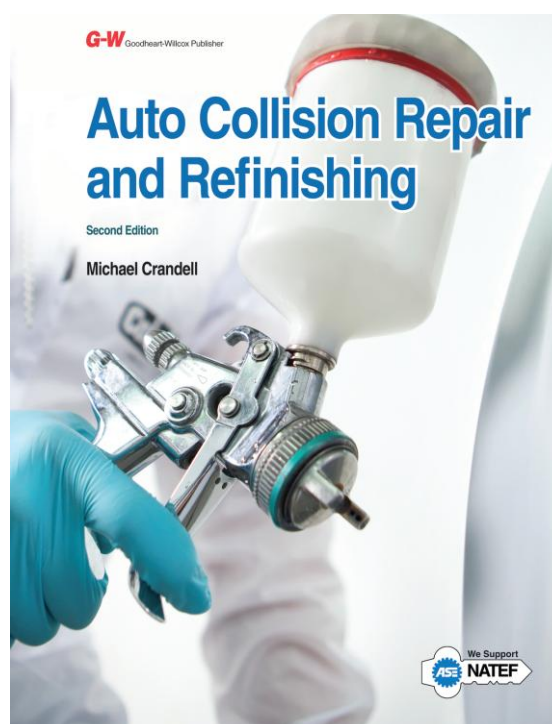


Correlation of
***Auto Collision Repair and Refinishing*, by Crandell**
(Goodheart-Willcox Publisher ©2017)
to
Precision Exams Collision Repair Standards

Goodheart-Willcox is pleased to partner with Precision Exams by correlating *Auto Collision Repair and Refinishing* to their Collision Repair standards. Precision Exams standards and Career Skills Exams were created in concert with industry and subject matter experts to match real-world job skills and marketplace demands. Students who pass the exam and performance portion of the exam can earn a Career Skills Certification.

The correlation chart below lists the Standards, Objectives, and Indicators for the Collision Repair exam in the left column. Corresponding content from *Auto Collision Repair and Refinishing* that can be used by a student to help achieve the standard, objective, or indicator is listed in the right column.

For more information on Precision Exams, including a complete listing of their 150+ Career Skills Exams and Certificates, please visit www.precisionexams.com.



Standards / Objectives / Indicators	Textbook Pages
Standard 1: Students will be able to Understand and Demonstrate Vehicle Preparation.	
Objective 1. Understand safety practices related to personal protection, vehicle lifts, and hand and power equipment.	24–30, 32–35, 91, 94
Objective 2. Interpret damage report information and plan a repair sequence for a damaged vehicle.	62–76, 175–177, 209, 238–239, 342–363, 370–372, 398–399, 428–430, 819–826, 842–845
Objective 3. Remove dirt, grease, wax, and corrosion protection from the repair area.	270–271, 277, 621–623, 648–649, 702–703, 750–753, 779–780
Objective 3. Protect panels and parts adjacent to the repair area.	30–33, 117, 210–211, 706–708, 713–718
Standard 2: Students will be able to Understand and Demonstrate Panel Replacement and Alignment.	
Objective 1. Select and understand how to use panel replacement and alignment tools.	83–92, 94, 119, 138–139, 152, 160–163, 210–211, 213, 215–217, 219, 221–222, 225–226, 229–232, 240–246, 249–264

Standards / Objectives / Indicators	Textbook Pages
Objective 2. Select and understand fastener applications and repair procedures.	102–112
Objective 3. Determine the panel alignment method.	186, 203, 210–233, 244–246, 252, 255, 257–260, 262–264
Objective 4. Remove and install the bumper, fascia, and header panel.	212–218
Objective 5. Remove, install, and align hoods, deck lids, and hatches.	221–225, 228–231
Objective 6. Remove, reinstall, and align fenders, doors, and tailgates.	218–221, 225–228, 231–233
Objective 7. Understand how to select and use the proper tools.	82–96, 117–139, 146–169, 271–274, 302–305, 348–363, 596–606
Standard 3: Students will be able to Understand and Demonstrate Working with Trim and Hardware.	
Objective 1. Select and understand how to use trim removal tools.	91, 177–179, 225–226, 598, 600
Objective 2. Remove and install interior door trim panels.	177–179, 225–226
Objective 3. Remove and install a door lock and handle assembly.	91, 177–179, 225–226
Objective 4. Remove and install decklid lock cylinders.	224, 228–230
Objective 5. Remove and install exterior trim and moldings.	177–179, 600, 702
Objective 6. Remove and install pinstripes, decals, and emblems.	598, 600, 702–703, 803–804, 806–807
Standard 4: Students will be able to Understand and Demonstrate Metal Straightening.	
Objective 1. Identify the necessary tools to straighten damaged sheet metal.	146–169
Objective 2. Straighten a damaged metal panel close to its original contours.	174–203
Standard 5: Students will be able to Understand and Demonstrate the Use of Body Fillers.	
Objective 1. Select and understand the correct filler and tools needed to perform final finishing.	154, 166–167, 195–202
Objective 2. Properly clean and prepare the repair area before applying plastic filler.	196, 648–649
Objective 3. Properly mix and apply plastic body filler to a properly prepared area.	196–202

Standards / Objectives / Indicators	Textbook Pages
Objective 4. Properly prepare and apply specialty fillers.	201–202, 276, 279
Objective 5. Restore the original contour and shape of a straightened panel using plastic body filler.	196–202
Standard 6: Students will be able to Understand and Demonstrate MIG Welding.	
Objective 1. Describe metal joining methods and identify where each method is suitable in automotive sheet metal repair.	117–137, 239, 247–264, 433–436
Objective 2. Explain and demonstrate all applicable personal and shop safety steps, along with vehicle protection measures to be followed when welding and cutting.	18–23, 26, 28–31, 116–117
Objective 3. Properly set up a MIG welder for welding and automotive sheet metal.	119–133
Objective 4. Run a test weld, and tune the welder for the welds being made.	125–130
Objective 5. Clean, assemble, and complete a butt joint with backing in various welding positions; visually inspect and destructively test the weld.	118–119, 129–130, 239, 434–436
Objective 6. Complete a fillet weld lap joint, visually inspect it, and destructively test the weld.	119, 123, 129–130, 239, 434–435
Objective 7. Complete a plug weld, visually inspect it, and destructively test the welds.	118, 125, 129–130, 433–436
Standard 7: Students will be able to Understand and Demonstrate the Cutting and Heating Process.	
Objective 1. Make a weld bead using an oxyacetylene torch.	136–137, 140
Objective 2. Describe the different brazing processes, and identify where each can be used.	138
Objective 3. Set up and use a plasma arc cutter.	138–139
Standard 8: Students will be able to Understand and Demonstrate How to Analyze Damage.	
Objective 1. Analyze various types of vehicle damage.	67–76, 175–176, 209, 238–239, 370–371, 398–399, 819–822
Objective 2. Interpret body dimension specification sheets.	342–363
Objective 3. Select and set up various types of measuring systems used for damage analysis.	342–363
Objective 4. Diagnose vehicle length and width damage with tram gauge.	345–349

Standards / Objectives / Indicators	Textbook Pages
Objective 5. Diagnose centerline misalignment with centering gauges.	349–354
Objective 6. Diagnose vehicle height damage with datum line gauges.	342, 348–349
Objective 7. Diagnose damage with universal measuring system.	356–357
Objective 8. Diagnose damage with dedicated fixture system.	355–356
Objective 9. Diagnose damage with computerized measuring system.	359–363
Standard 9: Students will be able to Understand and Demonstrate Straightening of Structural Parts.	
Objective 1. Mount and anchor vehicle to pulling system.	372–374, 400–408
Objective 2. Select and understand how to use various types of pulling equipment.	318–337
Objective 3. Apply knowledge of working with high-strength steel (HSS).	46–47, 380–381, 444
Objective 4. Apply cold and hot stress method.	379–382, 411–412
Objective 5. Pull and straighten front-end damage.	376–379, 382–386, 408–422
Objective 6. Pull and straighten rear-end damage.	376–379, 382–386, 392, 408–422
Objective 7. Pull and straighten side damage.	376–379, 388–391, 408–422
Objective 8. Pull and straighten roof damage.	376–379, 386–387, 397, 408–422
Standard 10: Students will be able to Understand and Demonstrate Full or Partial Panel Replacement.	
Objective 1. Understand the principle of full or partial panel replacement.	428–438
Objective 2. Select and understand the use of various types of joints used in sectioning.	433–436
Objective 3. Repair and replace a rail assembly.	422–444
Objective 4. Repair and replace rail sections.	422–444
Objective 5. Repair and replace rocker panel.	446–447
Objective 6. Repair and replace A-pillar.	444–446
Objective 7. Repair and replace B-pillar.	447–449
Objective 8. Repair and replace floor pan and trunk floor.	449
Objective 9. Complete full body section repair.	451–453

Standards / Objectives / Indicators	Textbook Pages
Standard 11: Students will be able to Understand and Demonstrate Stationary Glass Replacement.	
Objective 1. Identify and select different types of automotive glass.	296–302
Objective 2. Select and understand how to use stationary glass removal tools.	302–306
Objective 3. Remove stationary glass using full or partial cutout methods.	306–312
Objective 4. Select and understand how to use stationary glass adhesives.	304–306
Objective 5. Install stationary glass.	306–312
Objective 6. Repair stationary glass.	306–312
Standard 12: Students will be able to Understand and Demonstrate How to Restore Corrosion Protection.	
Objective 1. Understand corrosion principles and factory corrosion protection.	47, 55, 102, 168–169, 244, 437, 637–640, 648–649, 700–701, 708–709, 721–724
Objective 2. Repair methods and material for corrosion.	102, 168–169, 244, 437, 637–640, 648–649, 700–701, 708–709, 721–724
Objective 3. Protecting enclosed interior surfaces.	102, 168–169, 244, 637–640, 649, 722
Objective 4. Protecting weld areas and exposed seams.	244, 252, 437, 637–640, 649, 709, 722
Objective 5. Protecting exposed interior surfaces.	102, 168–169, 244, 437, 637–640, 649, 722
Objective 6. Protecting exposed exterior surfaces, trims, and accessories.	102, 168–169, 244, 437, 637–640, 649, 722
Standard 13: Students will Understand the Need for Professional Development.	
Objective 1. Complete a personal inventory.	862
Objective 2. Set and meet goals.	862
Objective 3. Be self-motivated.	862, 866–867
Objective 4. Know how to make decisions.	865, 867
Objective 5. Know how to manage time.	866–867
Objective 6. Organize personal belongings and lab equipment.	82–83, 862
Objective 7. Learn to communicate verbally.	818–819, 866–867
Objective 8. Write effective communications.	842–844, 867
Objective 9. Establish a personal reading program.	835
Objective 10. Develop effective work skills and attitudes.	865–867

Standards / Objectives / Indicators	Textbook Pages
Objective 11. Master a working knowledge of SkillsUSA.	–
Indicator 1 Learn the acronym SkillsUSA.	–
Indicator 2 State the SkillsUSA motto.	–
Indicator 3 State the SkillsUSA creed.	–
Indicator 4 Learn the SkillsUSA colors.	–
Indicator 5 Describe the official SkillsUSA dress.	–
Indicator 6 Describe the procedure for becoming a SkillsUSA officer	–
Standard 14: Students will Understand the Need for Leadership Skills.	
Objective 1. Serve on a committee.	–
Objective 2. Prepare an agenda.	–
Objective 3. Assist in planning a meeting.	867
Objective 4. Review basic parliamentary procedure.	–
Indicator 1 Make a main motion.	–
Objective 5. Participate in a school project.	867
Objective 6. Attend a community meeting.	866–867
Objective 7. Practice effective speaking.	866–867
Objective 8. Present a three- to five-minute talk.	–
Objective 9. Implement a leadership project.	867
Objective 10. Implement a leadership project.	867
Indicator 1 Describe the meaning of the SkillsUSA emblem.	–
Indicator 2 State the SkillsUSA pledge.	–
Indicator 3 Describe the duties of a SkillsUSA officer.	–
Standard 15: Students will Understand the Need for Career Planning.	
Objective 1. Define your future occupation.	862, 864–865, 867–868
Objective 2. Survey employment opportunities.	865
Objective 3. Report on a trade journal article.	96–98, 864–865
Objective 4. Explore opportunities for advanced training.	867–868
Objective 5. Conduct a worker interview.	865
Objective 6. Contact a professional association.	14, 36–38, 97–98, 818–819, 852–855, 864–865, 867–868

Standards / Objectives / Indicators	Textbook Pages
Objective 7. Explore entrepreneurship opportunities.	10–13, 862–863, 867–868
Objective 8. Give a talk about your career.	4–10, 862–863, 865–867
Objective 9. Review career goals.	862
Standard 16: Students will Understand the Importance of Employability and Work Habits.	
Objective 1. Develop a list of work standards to follow at school and on the job.	18–38, 862, 865–867
Objective 2. Evaluate your personal ethics.	867
Indicator 1 Evaluate your personal ethics against acceptable workplace ethics.	867
Objective 3. Build a job search network.	864–865
Objective 4. Find job leads.	864–865
Objective 5. Write a résumé.	864–865
Objective 6. Create a job portfolio.	864–865
Objective 7. Complete a job application.	864–865
Objective 8. Write a business letter and memo.	864–867
Objective 9. Participate in an actual or simulated job interview.	865