August 2018

LABOR MARKET ANALYSIS

Automotive Collision Repair

CALIFORNIA COMMUNITY COLLEGES
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Prepared by the Central Valley/Mother Lode Center of Excellence

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SUMMARY

This study examined labor market demand, wages, skills and community college supply for occupations related to autobody collision repair. Three occupations were identified: automotive body and related repairers (SOC 49-3021); automotive glass installers and repairers (SOC 49-3022); and painters, transportation equipment (SOC 51-9122).

KEY FINDINGS:

- **Occupational demand —** The largest of the three occupations is automotive body and related repairers with 679 workers in 2017 and 78 annual openings.

- **Wages —** The highest paid occupation is painters, transportation equipment, followed closely by automotive body and related repairers. All three occupations have entry-level wages that exceed both the subregional and regional self-sufficiency and living wages.

- **Employers —** Top employers in the region include Enterprise Rent-A-Car, Safelite, and Applied Industrial Technologies.

- **Job titles —** The most common occupational title in job postings was automotive body and related repairers. The most common job title was service agent.

- **Skills and certifications —** The top baseline skill requirement is troubleshooting, and the top specialized skill is repair. The top certification is a driver's license.

- **Education —** The educational required for the three occupations is a high school diploma with on-the-job training.

- **Supply —** Analysis of community college completions in the region shows that, on average, 66 certificates and four degrees are conferred each year related to the three occupations analyzed in this study.

Based on a comparison of occupational demand and community college supply, there is an undersupply of 68 trained workers in the subregion and 211 trained workers in the region. As a result, the Center of Excellence recommends that Modesto Junior College work with its advisory board and local industry in the expansion of its autobody program.

INTRODUCTION

The Central Valley/Mother Lode Center of Excellence was asked by Modesto Junior College to provide labor market information for autobody collision repair. Review of the Taxonomy of Programs (TOP) manual resulted in the identification of the TOP code and title 094900-Automotive Collision Repair-094000 as the appropriate program to evaluate.

This analysis focuses on the North Central Valley/Northern Mother Lode (NCV/NML) subregion.

Occupational demand, supply and wage data for the region are included for broader applicability and use. Analysis of the program and occupational data related to autobody repair resulted in the identification of three applicable occupations. The occupational titles and their Standard Occupational Classification (SOC) System codes are:

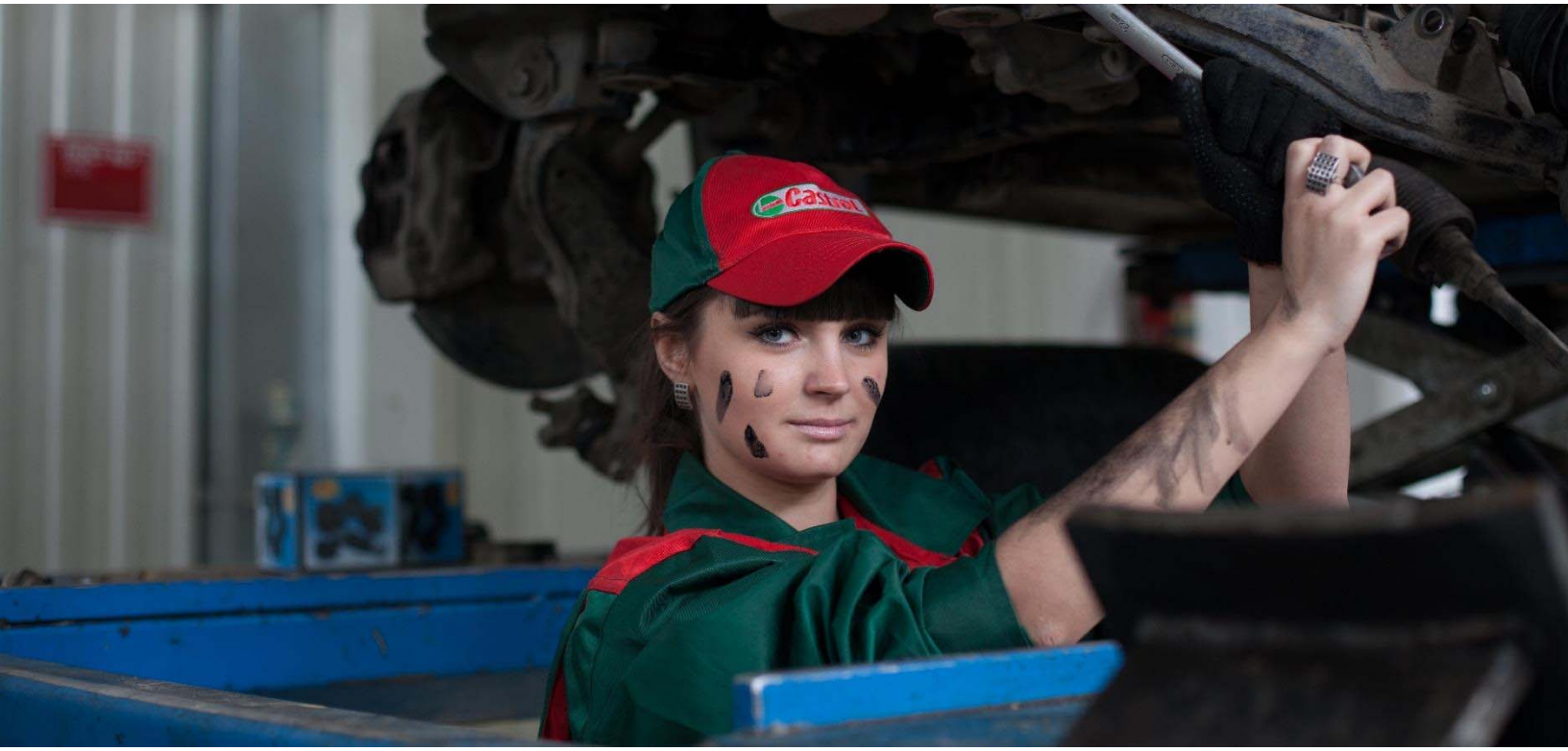
- Automotive body and related repairers (SOC 49-3021),
- Automotive glass installers and repairers (SOC 49-3022), and
- Painters, transportation equipment (SOC 51-9122).

The SOC codes, occupational titles, job descriptions, sample job titles, and knowledge and skills from the Bureau of Labor Statistics and O*NET OnLine are shown in Exhibit 1.

EXHIBIT 1. Autobody repair SOC titles, job descriptions, sample job titles, and knowledge and skills

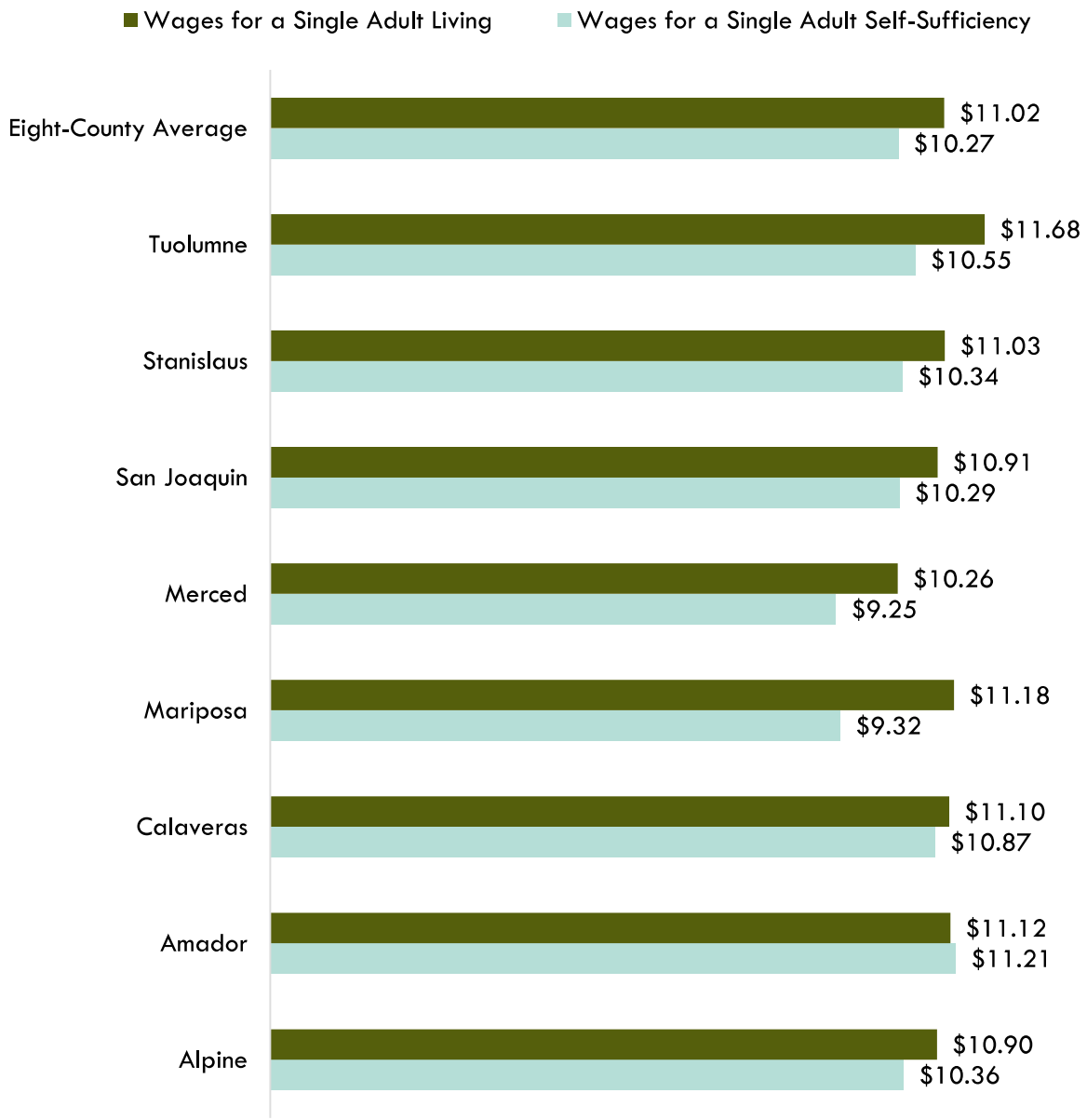
SOC CODE & TITLE	DESCRIPTION	SAMPLE JOB TITLES	KNOWLEDGE AND SKILLS
49-3021 Automotive body and related repairers	Repair and refinish automotive vehicle bodies and straighten vehicle frames.	Auto Body Man, Auto Body Repair Technician, Auto Body Repairer, Auto Body Repairman, Auto Body Technician, Autobody Technician, Automotive Painter, Body and Frame Man, Body Man, Body Technician	**Knowledge**
			Mechanical
			English language
			Customer and personal service
			Production and processing
			Public safety and security
			Skills
			Repairing
			Active listening
			Complex problem solving
			Monitoring
			Operation and control
49-3022 Automotive glass installers and repairers	Replace or repair broken windshields and window glass in motor vehicles.	Automotive Glass Installer, Automotive Glass Technician, Automotive Glazier, Glass Installer, Glass Installer Technician, Glass Technician, Glass Technician/Installer, Master Automotive Glass	**Knowledge**
			Customer and personal service
			Mechanical
			English language
			Administration and management
			Skills
			Installation

SOC CODE & TITLE	DESCRIPTION	SAMPLE JOB TITLES	KNOWLEDGE AND SKILLS
		Technician, Windshield Installer, Windshield Repair Technician	Equipment selection Speaking
51-9122 Painters, transportation equipment	Operate or tend painting machines to paint surfaces of transportation equipment, such as automobiles, buses, trucks, trains, boats, and airplanes. Includes painters in auto body repair facilities.	Auto Painter, Auto Refinisher, Automotive Paint Technician, Automotive Painter, Automotive Refinish Technician, Body Technician/Painter, Finish Painter, Paint Prepper, Paint Technician, Top Coater	**Knowledge** English language **Skills** Monitoring Operation and control Operation monitoring Coordination Critical thinking



The 2014 average self-sufficiency wage for a single adult in the North Central Valley/Northern Mother Lode (NCV/NML) subregion is $10.27/hour, and the current average living wage for a single adult is $11.02/hour. Self-sufficiency and living wage data by county and the overall eight-county average are shown in Exhibit 2. In the wages sections of this report, Pct.10 hourly denotes entry-level wages, and median represents experienced wages.

EXHIBIT 2. Self-sufficiency and living wages in the NCV/NML subregion



OCCUPATIONAL DEMAND

The subregion employed 1,026 autobody workers in 2017 in the North Central Valley/Northern Mother Lode subregion (Exhibit 3). The largest occupation is automotive body and related repairers with 679 workers in 2017. This occupation is expected to increase by 8% over the next five years and has the greatest number of projected annual openings, 78. The next largest occupation is painters, transportation equipment which is substantially smaller with only 287 jobs in 2017. It is projected to grow 6% offering 35 annual openings. The smallest occupation is automotive glass installers and repairers, with only 60 workers in 2017. However, it is expected to grow the fastest, 15%, but will only have eight annual openings.

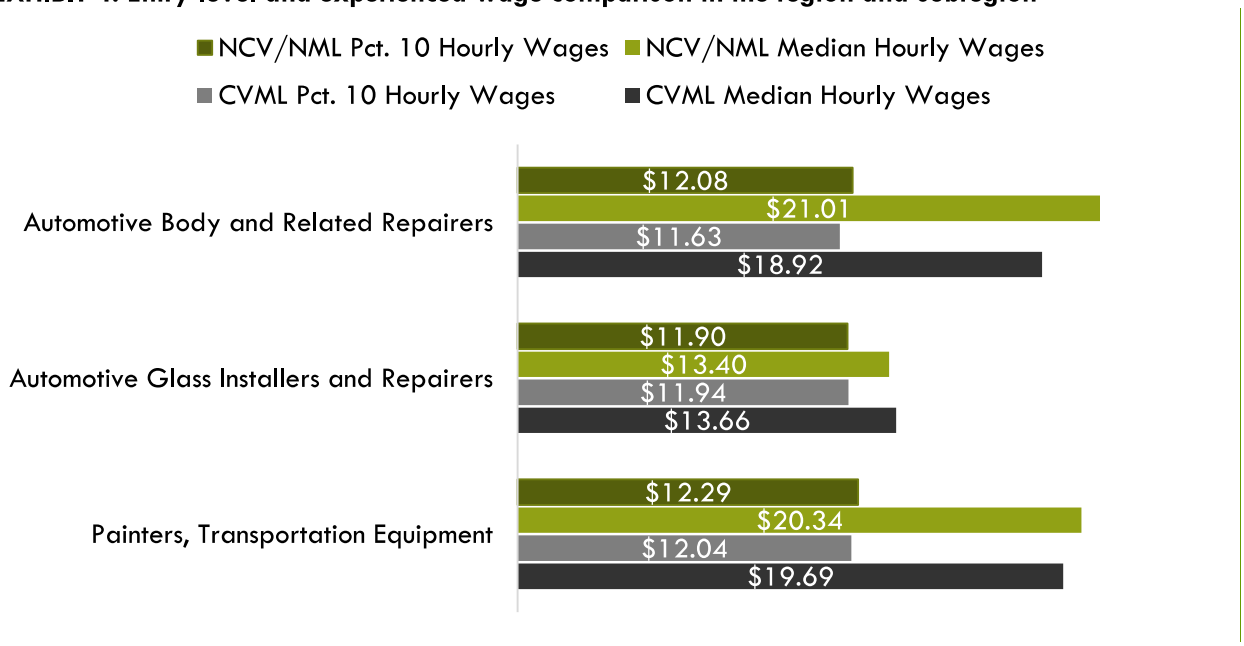
EXHIBIT 3. Autobody repair employment and occupational projections in the NCV/NML subregion

OCCUPATION	2017 JOBS	5-YEAR CHANGE	5-YEAR % CHANGE	ANNUAL OPENINGS
Automotive body and related repairers	679	57	8%	78
Painters, transportation equipment	287	18	6%	35
Automotive glass installers and repairers	60	9	15%	8
TOTAL	**1,026**	**84**	**8%**	**120**

WAGES

Exhibit 4 compares the entry-level and experienced wages of the three autobody technician occupations. The entry-level wages for the targeted occupations exceed the average self-sufficiency wage for a single adult in the eight-county subregion, $10.29/hour and the average living wage for a single adult, $11.02/hour, in the subregion.

EXHIBIT 4. Entry-level and experienced wage comparison in the region and subregion



JOB POSTINGS

There were only 48 job postings for the three autobody repair occupations in the eight counties of the North Central Valley/Northern Mother Lode subregion from August 2017 through July 2018. The top employers advertising for the 48 jobs are listed in Exhibit 5.

EXHIBIT 5. Top autobody repair employers by number of job postings

EMPLOYER	JOB POSTINGS
Enterprise Rent-A-Car	10
Safelite	8
Applied Industrial Technologies	3
Kar Auction Services	3
ADT Security Services	2
Lodi Unified School District	2

Exhibit 6 shows the job postings for the three targeted autobody repair occupations in the subregion. These titles are predominantly distributed across one primary occupation with the majority of the postings using the occupational title of automotive body and related repairs.

EXHIBIT 6. Occupational titles related to autobody repair in job postings

OCCUPATIONAL TITLE	JOB POSTINGS
Automotive body and related repairers	38
Automotive glass installers and repairers	8
Painters, transportation equipment	2

JOB TITLES

Analysis of the 48 advertised job titles for the targeted occupations reveals that the top five job titles are service agent and autobody technician. Exhibit 7 shows the top job titles among the job postings.

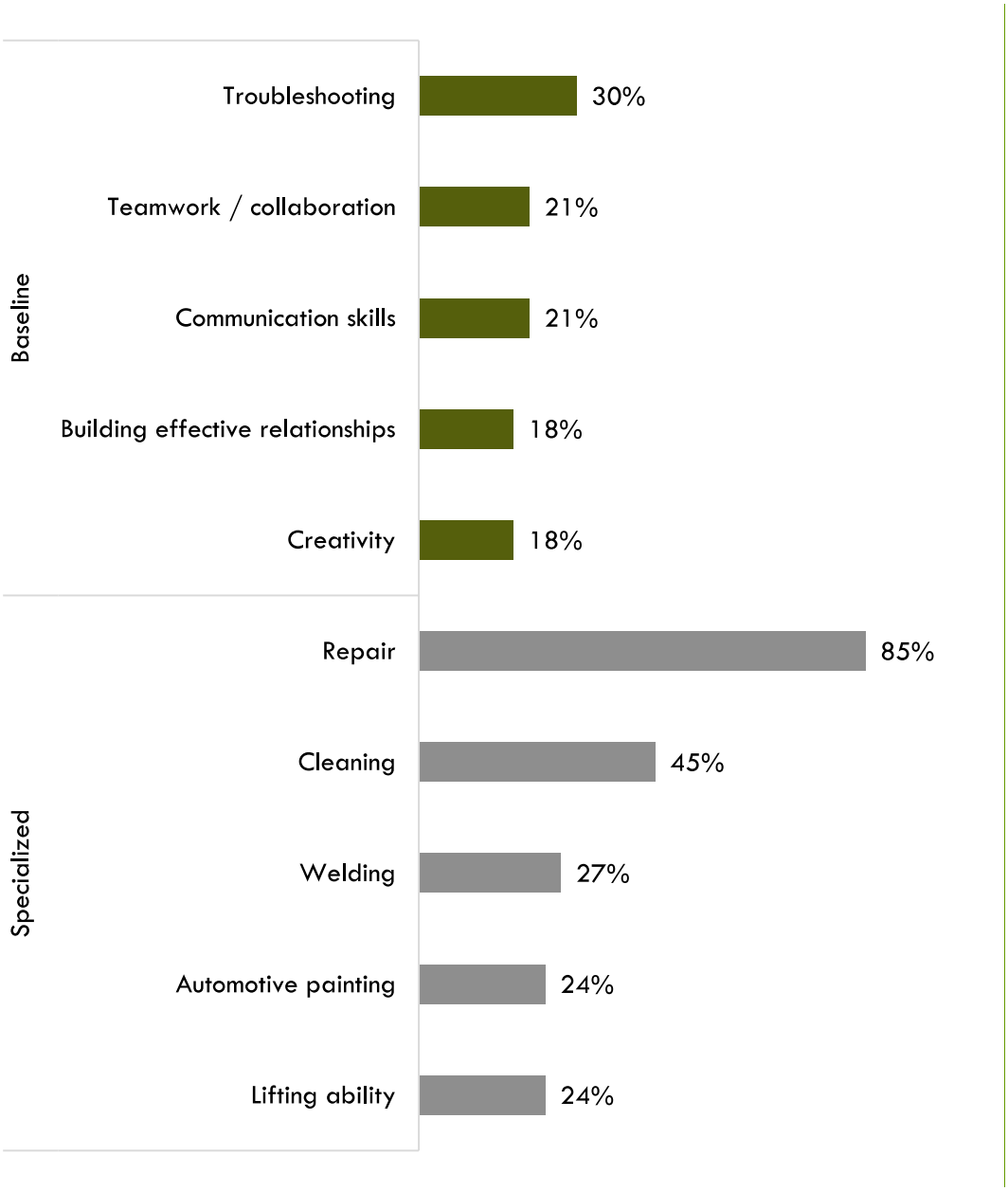
EXHIBIT 7. Top autobody repair job titles by number of job postings

TITLE	JOB POSTINGS
Service agent	10
Auto body technician	6
Auto technician	4
Hydraulic technician	4
Auto repair specialist	3

SKILLS

Exhibit 8 depicts the top baseline and specialized skills for the two targeted autobody technician occupations. Approximately 70% of the 48 job postings contained skills data. Within these, the three most important baseline skills are troubleshooting, 30% of job postings, teamwork/collaboration, 21%, and communication skills, 21%. The top three specialized skills are repair, 85% of job postings, cleaning, 45%, and welding, 27%.

EXHIBIT 8. Autobody repair baseline and specialized skills

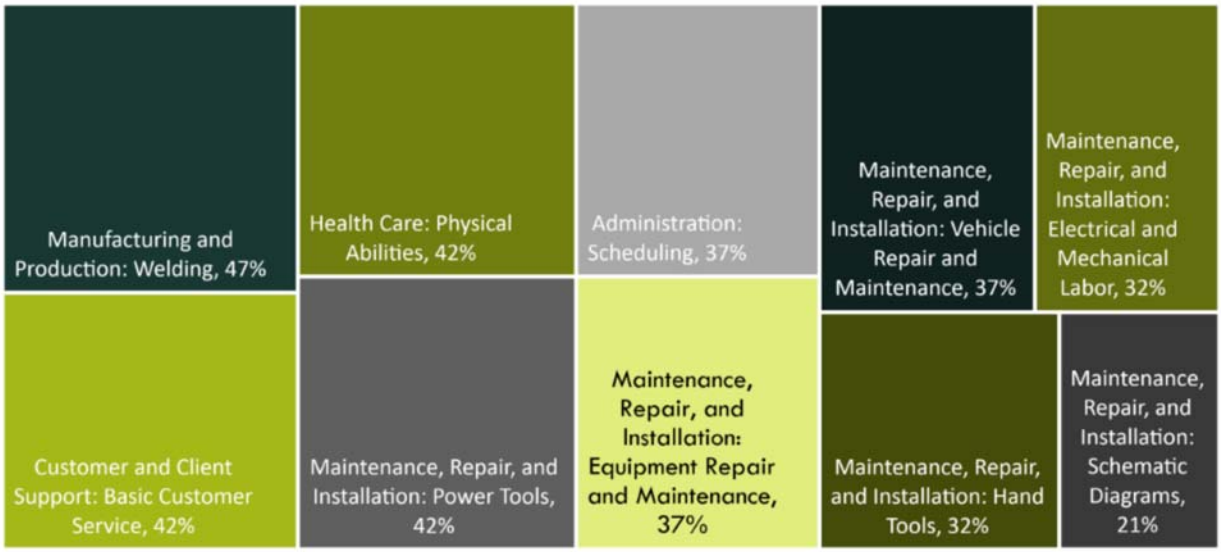


SKILL CLUSTER PROJECTIONS

Just under half of the 48 job postings contain skill cluster projections data. Of the 19 employers who provided skill cluster data, 47% indicated that the greatest gains in level of importance is manufactuing and production: welding, 47%.

Other clusters with large gain projections include customer and client support: basic customer service (42%), maintenance, repair, and installation: power tools (42%), and health care: physical abilities (42%).

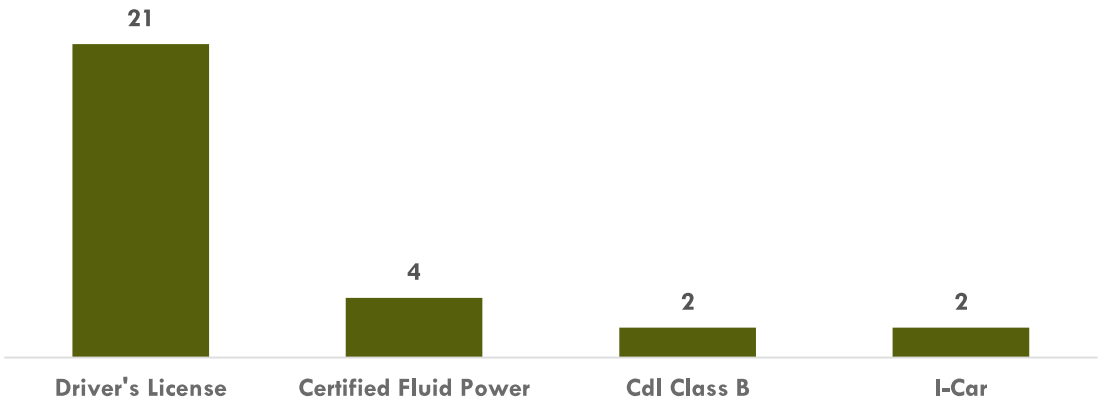
EXHIBIT 9. Skill cluster projections for autobody repair occupations



CERTIFICATIONS

Of the 48 postings that contain certification data, 21 indicate a need for a driver's license. The next two top certifications were for Certified Fluid Power and CDL Class B (Exhibit 10).

EXHIBIT 10. Autobody repair certifications requested in job postings



EDUCATION, WORK EXPERIENCE AND TRAINING

The typical entry-level education for all three of the autobody occupations is a high school diploma (Exhibit 11). Beyond the need for on-the-job training, the three occupations also qualify as relevant to community colleges due to one or more of the following requirements:

- State of California certification requirements,
- Specialized industry knowledge, and
- Performance of duties that are taught through programs offered by local community colleges.

EXHIBIT 11. Education, work experience, training and Current Population Survey results[1]

OCCUPATION	TYPICAL ENTRY-LEVEL EDUCATION	WORK EXPERIENCE REQUIRED	TYPICAL ON-THE-JOB TRAINING	CPS
Automotive body and related repairers	HS Diploma	None	Long-term	25.1%
Automotive glass installers and repairers	HS Diploma	None	Moderate-term	27.8%
Painters, transportation equipment	HS Diploma	None	Moderate-term	23.1%

SUPPLY

Analysis of the last three years of TOP code data, from 2014 through 2017, showed that, on average, 66 certificates and four degrees were conferred in the Central Valley/Mother Lode region each year (Exhibit 12).

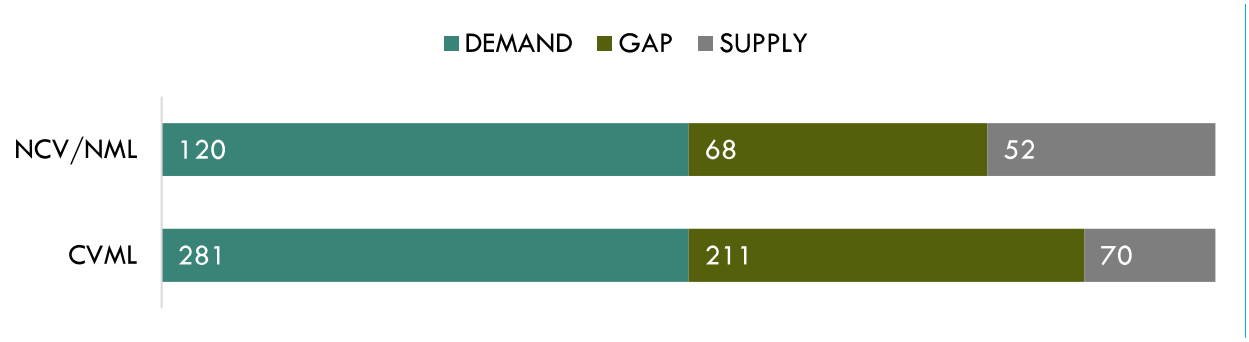
EXHIBIT 12. Community college supply for autobody technicians in the subregion and region

TOP COPE & TITLE	COLLEGE	3-YEAR AVERAGE	
		CERTIFICATES	DEGREES
094900 – Automotive Collision Repair	Fresno City	14	3
	Merced	2	0
	Modesto Junior	18	1
	San Joaquin Delta	31	0
TOTAL		**66**	**4**

[1] "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, https://www.bls.gov/cps/.

An undersupply of autobody repair workers supply appears to exist in the region and subregion. In the subregion, there is a shortage of 68 trained workers. In the region, the shortage is 211 trained workers (Exhibit 13).

EXHIBIT 13. Autobody repair workforce annual demand and supply in the subregion and region



STUDENT OUTCOMES

Exhibit 14 summarizes employment and wage outcomes for the related program TOP code based on the Career Technical Education Outcomes Survey (CTEOS) conducted by Santa Rosa Junior College. Respondents report that 40 percent of students attained a living wage after completing coursework, and median earnings in the second quarter were $5,645.

Exhibit 14. Career Technical Education Outcomes Survey for the TOP codes related to collision repair, Central Valley/Mother Lode[2]

METRIC	094900- AUTOMOTIVE COLLISION REPAIR
Course Enrollments	468
Students Who Got a Degree or Certificate	68
Number of Students Who Transferred	<10
Median Earnings in the Second Fiscal Quarter after Exit	$5,645 (n=42)
Attained a Living Wage	40% (n=43)

[2] The Career and Technical Education Outcomes Survey (CTEOS) is a survey of former students in career education programs, conducted one year after they exited the California Community Colleges. Students either earned an award or completed at least nine units in the same 2-digit TOP code. https://cteos.santarosa.edu/

CONCLUSION

The entry-level wages for autobody repair occupations exceed the average self-sufficiency wage and the average living wage for a single adult at the regional and subregional levels.

There were 48 job postings in the past 12 months for occupations related to autobody technicians in the North Central Valley/Northern Mother Lode subregion.

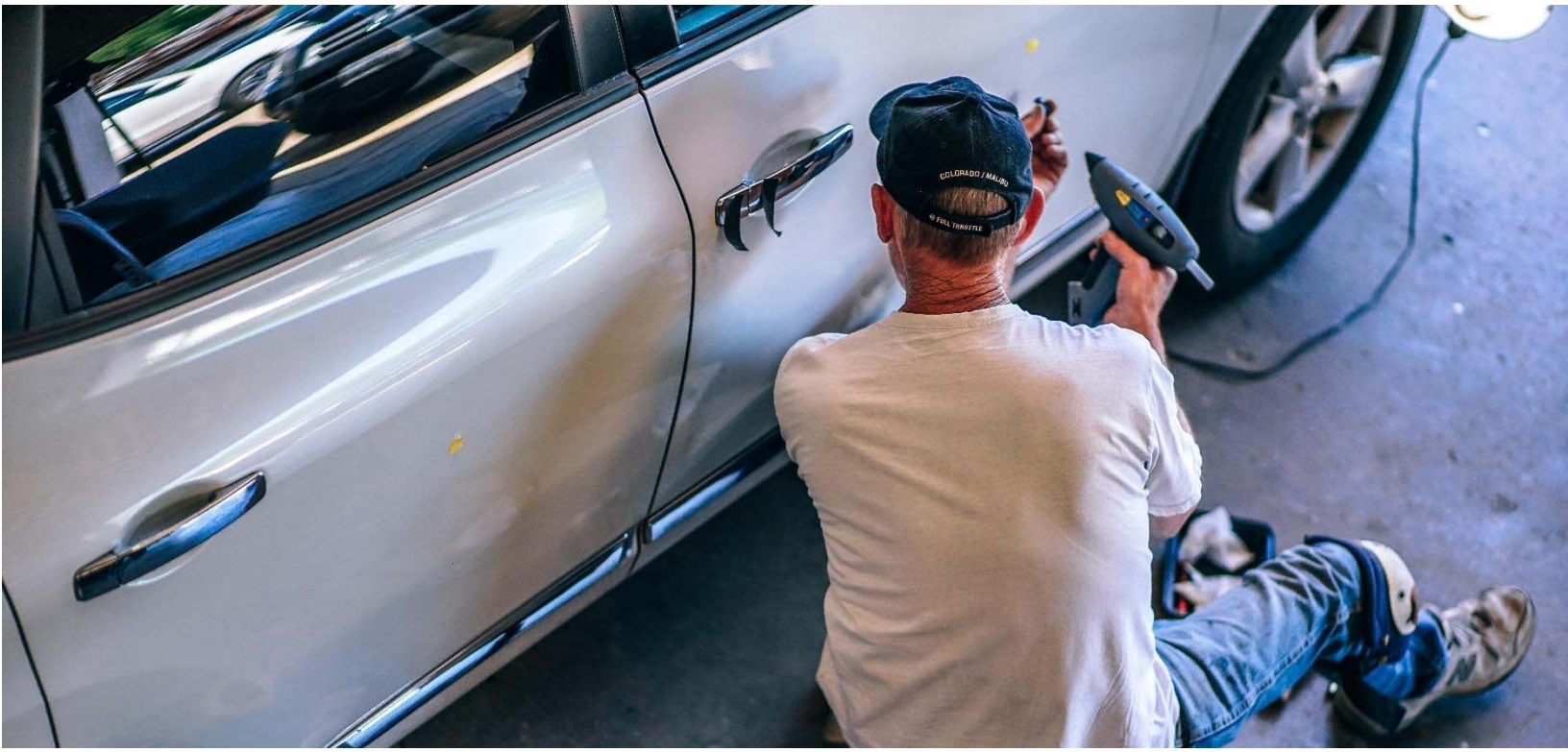
Analysis of skills and certificate requirements in job postings indicates:

- The top baseline skill requirement is troubleshooting, and the top specialized skill is repair.
- The top certification is a driver's license.

There are four community colleges in the region contributing to the workforce supply for the identified autobody repair occupations, but there remains an undersupply of trained workers, a shortage of 211 in the region and 68 in the subregion.

RECOMMENDATION

It is recommended that Modesto Junior College work with the college's advisory board and local industry in the expansion of its autobody program.



APPENDIX A: METHODOLOGY & DATA SOURCES

DATA SOURCES

Labor market and educational supply data compiled in this report derive from a variety of sources. Data were drawn from external sources, including the Economic Modeling Specialists, Inc., the California Community Colleges Chancellor's Office Management Information Systems Data Mart and the National Center for Educational Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). Below is the summary of the data sources found in this study.

DATA TYPE	SOURCE
Labor Market Information/Population Estimates and Projections/Educational Attainment	Economic Modeling Specialists, Intl. (EMSI). EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry: economicmodeling.com.
Living Wage	A living wage calculator that estimates the cost of living in a specific community or region: livingwage.mit.edu.
Typical Education Level and On-the-job Training	Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education and typical on-the-job training to each occupation for which BLS publishes projections data: www.bls.gov/emp/ep_education_tech.htm.
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division, labormarketinfo.edd.ca.gov
Job Posting and Skills Data	Burning Glass, http://www.burning-glass.com/
Additional Education Requirements/ Employer Preferences	The O*NET Job Zone database includes over 900 occupations as well as information on skills, abilities, knowledge, work activities and interests associated with specific occupations: www.onetonline.org

KEY TERMS AND CONCEPTS

Annual Job Openings: Annual openings are calculated by dividing the number of years in the projection period by total job openings.

Education Attainment Level: The highest education attainment level of workers age 25 years or older.

Employment Estimate: The total number of workers currently employed.

Employment Projections: Projections of employment are calculated by a proprietary Economic Modeling Specialists, Intl. (EMSI) formula that includes historical employment and economic indicators along with national, state and local trends.

Living Wage: The cost of living in a specific community or region for one adult and no children. The cost increases with the addition of children.

Occupation: An occupation is a grouping of job titles that have a similar set of activities or tasks that employees perform.

Percent Change: Rate of growth or decline in the occupation for the projected period; this does not factor in replacement openings.

Replacements: Estimate of job openings resulting from workers retiring or otherwise permanently leaving an occupation. Workers entering an occupation often need training. These replacement needs, added to job openings due to growth, may be used to assess the minimum number of workers who will need to be trained for an occupation.

Total Job Openings (New + Replacements): Sum of projected growth (new jobs) and replacement needs. When an occupation is expected to lose jobs, or retain the current employment level, number of openings will equal replacements.

Typical Education Requirement: represents the typical education level most workers need to enter an occupation.

Typical On-The-Job Training: indicates the typical on-the-job training needed to attain competency in the skills needed in the occupation.

Wages Family Compositions: The living wage calculator estimates the living wage needed to support families. For single adult families, the adult is assumed to be employed full time. For two adult families where both adults are in the labor force, both adults are assumed to be employed full time. For two adult families where one adult is not in the labor force, one of the adults is assumed to be employed full time while the other non-wage-earning adult provides full-time child care for the family's children. Full-time work is assumed to be year-round, 40 hours per week for 52 weeks, per adult. Families with one child are assumed to have a 'young child' (4 years old). Families with two children are assumed to have a 'young child' and a 'child' (9 years old). Families with three children are assumed to have a 'young child,' a 'child,' and a 'teenager' (15 years old).