

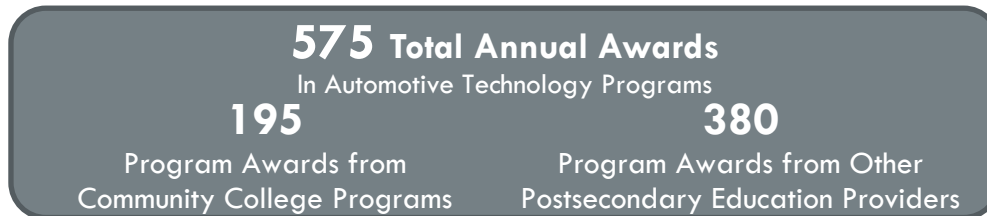
Automotive Fabrication (Automotive Technology)

Inland Empire/Desert Region (Riverside and San Bernardino counties)

Summary



Over the next five years (2022-2027), employment for the automotive occupations is projected to:



The Inland Empire/Desert Centers of Excellence

 **Recommends**

automotive program
to meet the need for more workers in the region

Introduction

California Community College automotive technology (TOP 0948.00) programs prepare students for employment through the instruction of the servicing, maintenance, and diagnosis of malfunctions, and repair and overhaul of components and systems in automotive vehicles (Taxonomy of Programs, 2023). The knowledge, skills, and abilities trained by automotive technology programs lead to employment in the automotive occupational group.

- Automotive Body and Related Repairers (SOC 49-3021)
- Automotive Service Technicians and Mechanics (49-3023)

The supply and demand analysis in this report assesses the need for automotive workers, only. Since welding/fabrication data within the automotive industry was not found, this assessment is unable to determine whether workers with welding skills are in demand. *This report was created for a certificate program (automotive fabrication) that would be best for students already working in the automotive technology field.*

Job Demand

In 2022, there were 12,764 jobs in the automotive occupational group in the Inland Empire/Desert Region. Regional employment for this occupational group is projected to increase by 11% through 2027; 1,584 job openings are projected annually. Exhibit 1 displays the job counts, five-year projected job growth, and job openings in the region.

Exhibit 1. Five-year projections for the automotive occupational group, Inland Empire/Desert Region, 2022-2027

Occupation	2022 Jobs	2027 Jobs	5-Yr % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Automotive Service Technicians and Mechanics	10,878	11,955	10%	6,662	1,332
Automotive Body and Related Repairers	1,886	2,172	15%	1,260	252
Total	12,764	14,127	11%	7,922	1,584

Source: Lightcast 2023.3

An online job ad search for the automotive occupational group was conducted to reveal the employers seeking these workers, including the median posting duration, earnings information, and in-demand skills. Exhibit 2 displays the number of job ads posted for the automotive occupational group over the last 12 months and the median posting duration. Over the previous 12 months, there were 3,771 job ads for the automotive occupational group in the region.

Exhibit 2. Job ads and posting duration, Inland Empire/Desert Region, October 2022 through September 2023

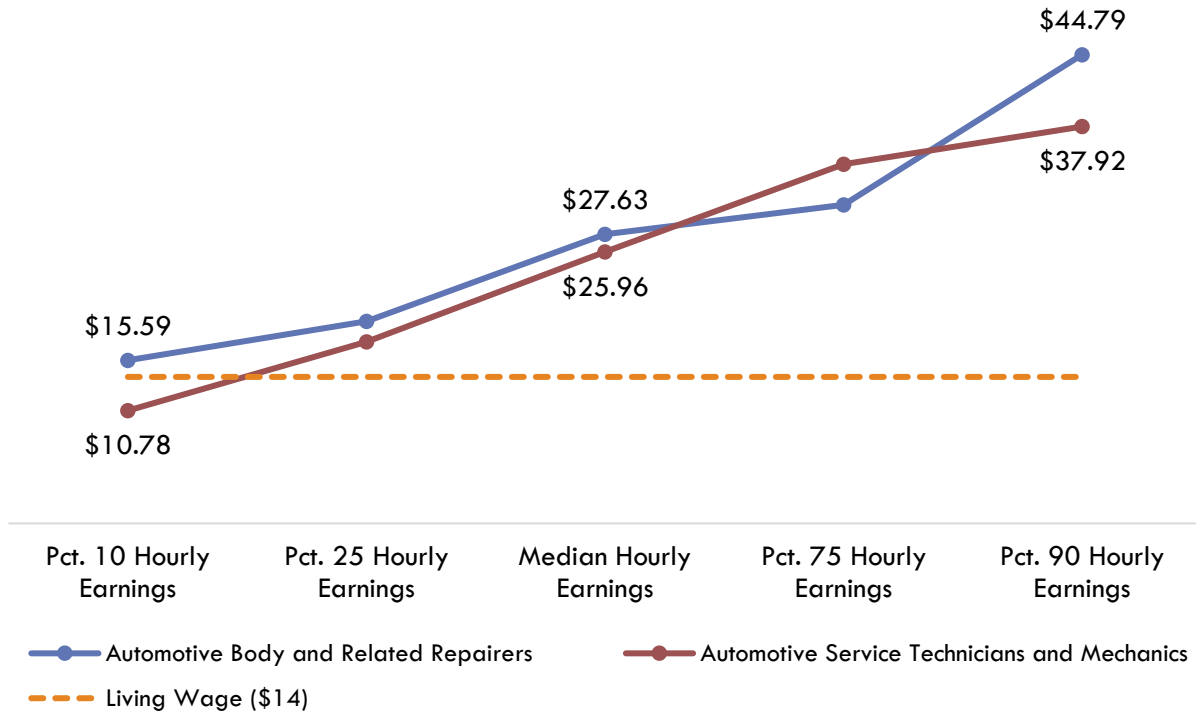
Occupation	Job Ads	Median Posting Duration (Days)
Automotive Service Technicians and Mechanics	3,132	28
Automotive Body and Related Repairers	639	28

Source: Lightcast 2023.3

Earnings

The living wage for one adult in the Inland Empire (Riverside and San Bernardino) is \$14 per hour or \$29,120 annually. Exhibit 3 displays the hourly earnings for the automotive occupational group. Most notable is that both occupations have median hourly wages above the living wage estimate.

Exhibit 3. Hourly earnings by percentile for the automotive occupational group, Inland Empire/Desert Region, 2022

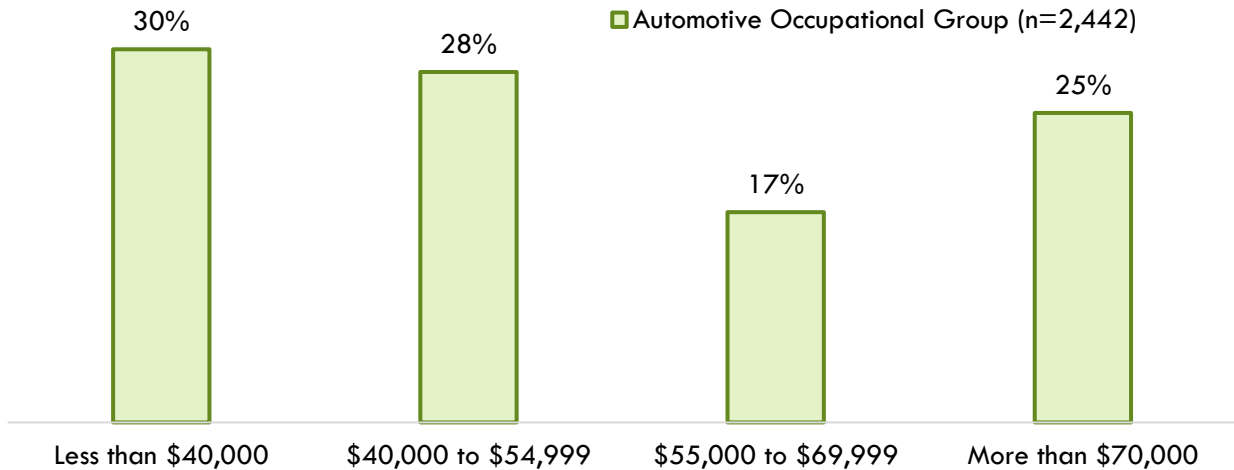


Source: Lightcast 2023.3

Advertised Salary from Online Job Ads

Exhibit 4 displays the regional online advertised salaries for the automotive occupational group over the last 12 months. Online job ads salary information reveals 42% of employers are willing to pay this occupational group an annual salary of at least \$55,000 or \$26.44 per hour, well above the region's \$29,120 annual or \$14 hourly living wage standard.

Exhibit 4. Online advertised salaries for the automotive occupational group, Inland Empire/Desert Region, October 2022 through September 2023



Source: Lightcast 2023.3

Online Job Advertisements: Job Titles, Employers, Skills, Education, & Work Experience

Exhibit 5 displays the job titles most frequently used in automotive job ads over the last 12 months. Displaying advertised job titles may provide insight into the types of positions sought by employers.

Exhibit 5. Job titles most frequently used in automotive job ads, Inland Empire/Desert Region, October 2022 through September 2023

Job Titles	Unique Job Ads
Automotive Technicians	453
Auto Body Technicians	238
Tire and Lube Technicians	146
Automotive Mechanics	143
General Service Technicians	108
Service Technicians	104
Lube Technicians	92
Master Mechanic	70

Source: Lightcast 2023.3

Exhibit 6 displays the employers posting the most job ads for the automotive occupational group during the last 12 months. Showing employer names provides insight into where students may find employment after completing a program. Pep Boys posted the most job ads for the automotive occupational group over the last 12 months.

Exhibit 6. Employers posting the most job ads for the automotive occupational group, Inland Empire/Desert Region, October 2022 through September 2023

Top Employer	Unique Job Ads
Pep Boys	145
Goodyear	117
Valvoline	101
Jiffy Lube	91
Gerber Collision & Glass	80

Source: Lightcast 2023.3

Exhibit 7 lists a sample of specialized and employability skills employers seek when seeking workers to fill automotive positions. Specialized skills are occupation-specific skills that employers request for industry or job competency. Common skills are foundational skills that transcend industries and occupations; this category is often referred to as "soft skills." The skills requested in job ads may be utilized to guide curriculum development.

Exhibit 7. Sample of in-demand skills from employer job ads, Inland Empire/Desert Region, October 2022 through September 2023

Specialized skills	Common skills
<ul style="list-style-type: none"> Automotive Services Changing Oil Suspension (vehicle) Brakes Tires Mechanics Vehicle Inspection Tire Balancing and Rotation 	<ul style="list-style-type: none"> Customer Service Communications Management Lifting Ability Good Driving Record Troubleshooting Sales Operations

Source: Lightcast 2023.3

Exhibit 8 displays the minimum advertised education requirements for the automotive occupational group. According to the Bureau of Labor Statistics, between 25% and 35% of incumbent workers in this field hold a community college-level of educational attainment; "some college, no degree," and an "associate degree." Only 44% of employer job ads included minimum education requirements. The majority of employer job ads (90%) sought a candidate holding a high school diploma or equivalent as a minimum education level requirement.

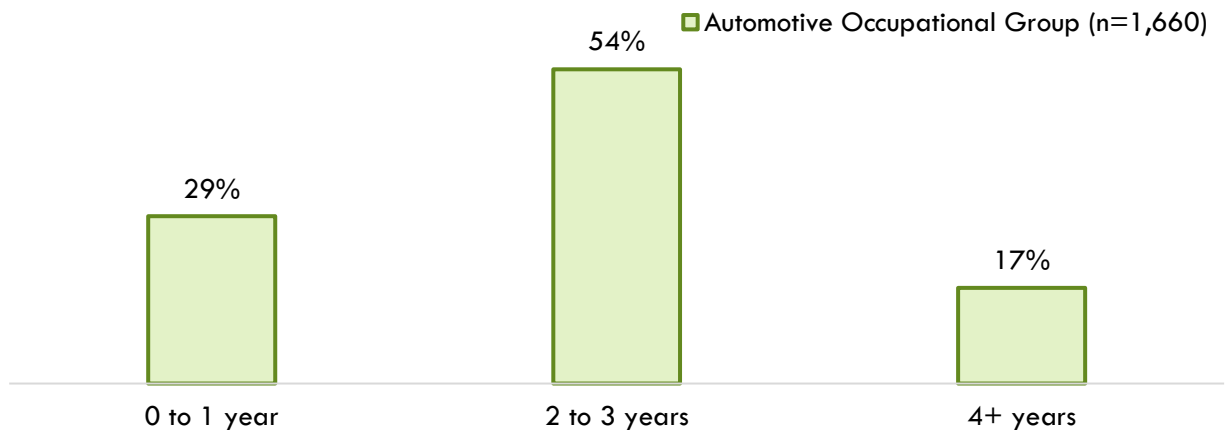
Exhibit 8. Minimum advertised education requirements, Inland Empire/Desert Region, October 2022 through September 2023



Source: Lightcast 2023.3

Exhibit 9 displays the work experience typically required from employer job ads for the automotive occupational group. The majority of employers, approximately 54%, listing minimum experience requirements sought candidates with two to three years of previous work experience.

Exhibit 9. Real-time work experience requirements, Inland Empire/Desert Region, October 2022 through September 2023



Source: Lightcast 2023.3

Certifications

Exhibit 10 displays the most frequently requested certifications by employers in job advertisements.

Job advertisements reveal that employers value the Automotive Service Excellence (ASE) certification.

Exhibit 10: Certifications most frequently required by employers, Inland Empire/Desert Region, October 2022 through September 2023

Certification	Jobs Ads
Automotive Service Excellence (ASE)	722
Commercial Driver's License (CDL)	64
Airframe and Powerplant (A&P)	53
Forklift Certification	18

Source: Lightcast 2023.3

Student Completions and Programs Outcomes

Exhibit 11 displays student completions for automotive technology (TOP 0948.00) programs over the last three academic years (2019-22). In the previous three academic years, nine regional community colleges issued 195 annual average awards in relevant programs.

Exhibit 11. Annual average community college awards for automotive technology programs, Inland Empire/Desert Region, Academic Years 2019-2022

TOP Code	Program	College	2019-20 Awards	2020-21 Awards	2021-22 Awards	3-Year Award Average
0948.00	Automotive Technology	Barstow	9	8	13	10
		Chaffey	46	24	41	37
		Copper Mountain	-	1	10	4
		Desert	31	8	12	17
		Mt. San Jacinto	21	15	11	16
		Palo Verde	17	20	4	14
		Riverside	52	40	50	47
		San Bernardino	17	4	12	11
		Victor Valley	28	35	57	40
Supply Subtotal/Average			221	155	210	195
Supply Total/Average			221	155	210	195

Source: MIS Data Mart

California program outcome data may provide useful insight into the likelihood of success for the proposed program. Community college student outcome information based on the selected TOP code and region is provided in Exhibit 12.

Exhibit 12. 0948.00 – Automotive technology strong workforce program outcomes, Inland Empire/Desert Region, most recent academic year

Strong Workforce Program Metrics: 0948.00 – Automotive Technology	Inland Empire/Desert Region	California
Unduplicated count of enrolled students (2021-22)	1,471	13,032
Completed 9+ career education units in one year (2021-22)	30%	36%
Students who attained a noncredit workforce milestone in a year (2021-22)	70%	82%
Students who earned a degree, certificate, or attained apprenticeship (2021-22)	119	1,314
Job closely related to the field of study (2019-20)	52%	63%
Median annual earnings (all exiters) (2020-21)	\$33,692	\$36,140
Median change in earnings (all exiters) (2020-21)	54%	53%
Attained a living wage (completers and skills-builders) (2020-21)	62%	49%

Sources: LaunchBoard Community College Pipeline and Strong Workforce Program Metrics

Exhibit 13 displays awards for other postsecondary education providers reported in automotive programs. Completion data is compiled from the Integrated Postsecondary Education Data System (IPEDS) for the most recent two years. Two non-community college institutions issued 380 annual average awards over the last two academic years.

Exhibit 13. Other educational providers for automotive programs, two-year annual average credentials, Inland Empire/Desert Region, Academic Years 2019-2021

CIP Code	Program	Institution	2019-20 Awards	2020-21 Awards	2-Year Award Average
47.0604	Automobile/Automotive Mechanics Technology/Technician	CET-Colton	21	20	21
		Universal Technical Institute of California Inc	413	305	359
Supply Subtotal/Average			434	325	380
Supply Total/Average			434	325	380

Source: IPEDS

Summary of Findings & Recommendation

Over the next five years, the automotive occupational group is projected to have 1,584 annual job openings and increase employment by 11% in the Inland Empire/Desert Region. Both occupations have median wages above the living wage estimate.

Over the last three academic years, nine regional community colleges issued 195 annual average awards in automotive technology programs. Two non-community college postsecondary education institutions issued 380 annual average awards in automotive technology programs. Combined, all regional postsecondary education institutions issued 575 automotive technology awards annually, on average.

The Centers of Excellence finds that there is a regional need for automotive technology training programs to meet the regional demand for more workers. Colleges considering an automotive fabrication program should partner with applicable employers to document their demand for automotive + welding technology workers and the certifications required for students to earn a living wage after exiting the program.

The supply and demand analysis in this report assesses the need for automotive workers, only. Since welding/fabrication data within the automotive industry was not found, this assessment is unable to determine whether workers with welding skills are in demand. *This report was created for a certificate program (automotive fabrication) that would be best for students already working in the automotive technology field.*

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Appendix: Methodology

Exhibit 11 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2019 and 2022 from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variations that might be present in a single year.

Community college student outcome information is from LaunchBoard and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (MIS) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from California's Employment Development Department's Unemployment Insurance database. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included for each metric, please see the web link for LaunchBoard's Strong Workforce Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2023a). Finally, employment in a job closely related to the field of study comes from self-reported student responses on the CTE Employment Outcomes Survey (CTEOS) administered by Santa Rosa Junior College (LaunchBoard, 2023a).

Table 1. 2022 to 2027 job growth, wages, entry-level education, training, and work experience required for the automotive + welding occupational group in the Inland Empire/Desert Region (Riverside and San Bernardino Counties combined)

Occupation (SOC)	2022 Jobs	5-Year Change	5-Year % Change	Annual Openings (New + Replacement Jobs)	Entry-Experienced Hourly Wage (10 th to 90 th percentile)	Median Hourly Wage (50 th percentile)	Average Annual Earnings	Entry-Level Education & On-The-Job-Training	Work Experience Required
Automotive Service Technicians and Mechanics (49-3023)	10,878	1,078	10%	1,332	\$10.78 to \$37.92	\$25.96	\$54,600	Postsecondary nondegree award & Short-term	None
Automotive Body and Related Repairers (49-3021)	1,886	287	15%	252	\$15.59 to \$44.79	\$27.63	\$57,800	High school diploma or equivalent & Long-term	None
Welders, Cutters, Solderers, and Brazers (51-4121)	4,619	215	5%	561	\$17.16 to \$31.51	\$22.80	\$51,500	High school diploma or equivalent & Moderate-term	None
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic (51-4021)	789	4	1%	89	\$15.12 to \$24.66	\$17.97	\$40,300	High school diploma or equivalent & Moderate-term	None
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122)	211	0	0%	23	\$15.50 to \$29.57	\$21.84	\$47,200	High school diploma or equivalent & Moderate-term	None
Total	18,382	1,583	9%	2,258	-	-	-	-	-

Source: Lightcast 2023.3