

Automotive Technology Occupations

Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside and San Bernardino counties combined) and California

Job Opportunities

In 2016, there were more than 86,500 automotive technology occupational jobs in California. About 12% or just nearly 10,200 of these job opportunities were located in the Riverside-San Bernardino-Ontario MSA. Across the local region, automotive technology occupational group is expected to increase 6% through 2021, faster than the state overall at 4% during the 5-year timeframe. Employers in the Riverside-San Bernardino-Ontario MSA will need to hire nearly 5,400 more workers over the next five years to fill new jobs and to backfill jobs that workers are permanent leaving (includes retirements).

Exhibit 1: Five-year projections for the automotive technology occupational group in the Riverside-San Bernardino-Ontario MSA and California

Region	2016 Jobs	2021 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Riverside-San Bernardino-Ontario MSA	10,169	10,779	610	6%	5,369	1,074
California	86,514	89,565	3,051	4%	43,128	8,626

Source: EMSI 17.3

According to real-time job posting data, there were 251 job advertisements (ads) for automotive technology jobs in the Riverside-San Bernardino-Ontario MSA during the last 12 months (September 2016 to August 2017). In the full-year 2016 there were 353 job ads; 291 job ads in 2015, and 289 job ads in 2014. Exhibit 2 shows the occupational breakdown from the job ads posted during the last 12 months in the automotive technology occupational group.



Exhibit 2: Job ads by each of the automotive technology occupations in the Riverside-San Bernardino-Ontario MSA during the past year (Sep 2016 – Aug 2017)

Job Titles	Job Postings
Automotive Service Technicians and Mechanics	230
Electronic Equipment Installers and Repairers, Motor Vehicles	21

Source: Burning Glass

A separate online job posting search was conducted to determine employer demand for subset of occupations connected to the automotive service technician and mechanics occupation: hybrid vehicle specialists as well as steering, suspension, and brakes specialists because no traditional labor market data is tied to these two subset occupations. For hybrid specialists, a keyword search utilizing relevant terms such as “hybrid specialist,” “hybrid mechanic,” “hybrid technician,” and “hybrid vehicle” were used, but yielded no results pertaining to the automotive technology occupational group. The term “hybrid” appeared in a small amount of the aforementioned job postings, but it was used in the description of the company posting the job ad as opposed to a component of the job description (e. g., Sunrise Ford of Fontana is looking for Automotive Diesel Technicians to “diagnose and repair vehicles from the dynamic Ford product line – from Ford tough trucks to fuel-efficient hybrids.”).

A skills-based search for steering, suspension, and brakes specialists yielded 119 job postings, and only 11 of these overlapped with the previous search. The majority of these postings were coded under slightly different occupations, such as automotive and watercraft service attendants (35 postings), bus and truck mechanics and diesel engine specialists (31 postings), and maintenance and repair workers, general (16 postings). Based on these results, employers are looking for workers capable of repairing steering components, vehicle suspension, as well as braking systems.

Earnings

Entry level wages for automotive technology occupations are below the Self-Sufficiency Wage of \$12.00 for Riverside County and \$11.54 for San Bernardino County for a single adult with no children living in these areas. The average annual earnings for automotive technology occupations in the region range from \$34,900 per year for electronic equipment installers and repairers, motor vehicles to \$40,300 per year for automotive service technicians and mechanics, assuming full-time employment. The entry-level wage (10th percentile) is just below the living wage for the region for

both occupations. With years of experience (90th percentile) workers in these occupations will be able to earn an hourly wage that exceeds the regional living wage. Wage details for automotive technology occupational group in the Riverside-San Bernardino-Ontario MSA and California is found below in Exhibits 3 and 4.

Exhibit 3: Earnings for automotive technology occupations in the Riverside-San Bernardino-Ontario MSA

Region	Entry to Experienced Hourly Earnings Range*	Avg. Annual Earnings
Electronic Equipment Installers and Repairers, Motor Vehicles	\$11.51 to \$23.74	\$34,900
Automotive Service Technicians and Mechanics	\$11.03 to \$32.90	\$40,300

*Entry Hourly is 10th percentile wage and experienced is 90th percentile wage.

Source: EMSI 17.3

Exhibit 4: Earnings for automotive technology occupations in California

Region	Entry to Experienced Hourly Earnings Range*	Avg. Annual Earnings
Electronic Equipment Installers and Repairers, Motor Vehicles	\$10.16 to \$21.59	\$30,200
Automotive Service Technicians and Mechanics	\$11.20 to \$33.05	\$41,900

*Entry Hourly is 10th percentile wage and experienced is 90th percentile wage.

Source: EMSI 17.3

Work Locations, Skills, and Education

The top worksite cities in the region for HVAC jobs were Ontario, Temecula, Riverside, and Fontana. Exhibit 5 lists the top specialized, soft, and software and programming skills that employers are seeking when looking for workers to fill automotive technology jobs.

Exhibit 5: Top skills in greatest demand for HVAC jobs in the Riverside-San Bernardino-Ontario MSA, Sep 2016-Aug 2017

Occupation	Specialized skills	Soft skills	Software and Programming skills
Automotive Service Technicians and Mechanics	<ul style="list-style-type: none"> • Repair • Inspection • Vehicle Inspection • Customer Contact 	<ul style="list-style-type: none"> • Communication Skills • Organization Skills • Detail-Oriented • Physical Demand 	<ul style="list-style-type: none"> • Microsoft Office • Microsoft Word • Microsoft Excel
Electronic Equipment Installers and Repairers, Motor Vehicles	<ul style="list-style-type: none"> • Retail Setting • Sales • Administrative Functions 	<ul style="list-style-type: none"> • Writing • Communication Skills • Telephone Skills 	N/A

Source: Burning Glass

The top certifications requested in job postings for automotive service technicians and mechanics are Automotive Service Excellence (ASE) Certification and Certified Lube Technician. For electronic equipment installers and repairers, motor vehicles, the top certification being requested is Mobile Electronics Certified Professional.

Exhibit 6 displays the typical entry-level education requirement according the Bureau of Labor Statistics, educational attainment for incumbent workers age 25 and older, and education level requested by employers in online job ads.

Exhibit 6: Online job ads with minimum advertised education requirements for automotive technology jobs in the Riverside-San Bernardino-Ontario MSA, Sep 2016-Aug 2017

Occupation	Typical Entry-Level Education Requirement	Educational Attainment (Combined percentage of some college, no degree and associate degree)	Minimum Advertised Education Requirement from Job Ads		
			High school diploma or vocational training	Associate degree	Bachelor's degree or higher
Automotive Service Technicians and Mechanics	Postsecondary nondegree award	33%	94%	6%	-
Electronic Equipment Installers and Repairers, Motor Vehicles	Postsecondary nondegree award	44%	100%	-	-

Source: BLS, CPS, Burning Glass

Industry

Exhibit 7 displays the top industries that currently employ HVAC mechanics and installers according to industry staffing patterns as well as job posting data.

Exhibit 7: Top Industries employing automotive technology occupations in the Riverside-San Bernardino-Ontario MSA

Occupation	Top Industries from staffing patterns (NAICS)	Top Industries from job postings (NAICS)
Automotive Service Technicians and Mechanics	<ul style="list-style-type: none"> Automotive Repair and Maintenance (8111) Automotive Dealers (4411) 	<ul style="list-style-type: none"> Automotive Repair and Maintenance (8111) Automotive Parts, Accessories, and Tire Stores (4413)
Electronic Equipment Installers and Repairers, Motor Vehicles	<ul style="list-style-type: none"> Electronics and Appliance Stores (4431) Automotive Parts, Accessories, and Tire Stores (4413) 	<ul style="list-style-type: none"> Electronics and Appliance Stores (4431) Other General Merchandise Stores (4529)

Source: EMSI 17.3, Burning Glass

Student Completions

Exhibit 8 shows the annual average regional community college awards (associate degrees and certificates) conferred during the three academic years between 2013 and 2016, with the relevant TOP code. Annual average awards between 2012 and 2016 from other education institutions is also displayed in the table below. Please note an award is not equivalent to a single person in search of a job opening since a student may earn more than one award, such as an associate degree in addition to a certificate.

Community College student outcome information was obtained from the CTE LaunchBoard based on the selected TOP code(s) and region:

Exhibit 8: Annual average community college student completions for the automotive technology program in the Riverside-San Bernardino-Ontario MSA

0948.00 – Automotive Technology	Annual Avg. CC Headcount (2015-2016)	CC Annual Avg. Awards (2013-16)	Other Educational Institutions Annual Avg. Certificates or Other Credit Awards (2012-15)
Universal Technical Institute of California Inc			
Award 2 < 4 academic yrs			1,014
Award 1 < 2 academic yrs			3
Barstow	167		
Associate Degree		3	
Certificate 18 to < 30 semester units		3	
Chaffey	430		
Associate Degree		9	
Certificate 30 to < 60 semester units		5	
Certificate 18 to < 30 semester units		50	
Copper Mountain	52		
Associate Degree		4	
Desert	362		
Associate Degree		4	
Certificate 18 to < 30 semester units		33	
Mt. San Jacinto	201		
Associate Degree		6	
Certificate 30 to < 60 semester units		8	
San Bernardino	242		
Associate Degree		2	
Certificate 30 to < 60 semester units		5	

0948.00 – Automotive Technology	Annual Avg. CC Headcount (2015-2016)	CC Annual Avg. Awards (2013-16)	Other Educational Institutions Annual Avg. Certificates or Other Credit Awards (2012-15)
Certificate 18 to < 30 semester units		6	
Certificate 6 to < 18 semester units		7	
Palo Verde	202		
Associate Degree		1	
Certificate 18 to < 30 semester units		8	
Certificate 6 to < 18 semester units		3	
Riverside	552		
Associate Degree		14	
Certificate 18 to < 30 semester units		24	
Victor Valley	813		
Associate Degree		8	
Certificate 30 to < 60 semester units		3	
Certificate 18 to < 30 semester units		16	
Total headcount (2015-16)	3,021		
Total annual average awards		221	
Total annual average other credit awards			1,017

Source: California Community Colleges Chancellor’s Office Management Information Systems (MIS), Datamart

0948.00 – Automotive Technology program outcomes in the Riverside-San Bernardino-Ontario MSA in academic year 2014-15:

- The median annual wage after program completion is \$18,506.
- 30% of students are earning a living wage.
- Median change in earnings was 76%
- 63% of students are employed within six months after completing a program

Summary

- Employment for the automotive technology occupational group is expected to increase by 6% through 2021, yielding 5,369 openings.
- The entry-level wages (10th percentile) for automotive technology occupations are both below the Self-Sufficiency Wage for both San Bernardino (\$11.54) and Riverside (\$12.00) counties. Experienced wage (90th percentile) is well above the living wage in both counties.
- Despite being a rapidly declining occupation (decreasing employment by 17% through 2021), approximately 25 electronic equipment installers and repairers, motor vehicles will



need to be hired per year in the region in order to keep up with demand, see Appendix A for more details.

- The majority of awards in the automotive technology program in the region come from Universal Technical Institute of California Inc. (1,017), compared to only 221 awards annually by the regional California Community Colleges.
- The total program completions in the region (1,238) are currently outpacing demand in the two selected occupations.

Sources

O*Net Online

Labor Insight/Jobs (Burning Glass)

Economic Modeling Specialists International (EMSI)

Employment Development Department, Labor Market Information Division, OES

Employment Development Department, Unemployment Insurance Dataset

CTE LaunchBoard

Statewide CTE Outcomes Survey

Living Insight Center for Community Economic Development

California Community Colleges Chancellor's Office Management Information Systems (MIS)

Datamart



Appendix A: Occupation definitions, five-year projections, and earnings for HVAC mechanics and installers

Occupation Definitions (SOC code), Education and Training Requirement, Community College Education Attainment

Electronic Equipment Installers and Repairers, Motor Vehicles (49-2096)

Install, diagnose, or repair communications, sound, security, or navigation equipment in motor vehicles.

Entry-Level Educational Requirement: Postsecondary nondegree award

Training Requirement: One to 12 months on-the-job training

Percentage of incumbent workers with Community College Award or Some Postsecondary Coursework: 44%

Automotive Service Technicians and Mechanics (49-3023)

Diagnose, adjust, repair, or overhaul automotive vehicles.

Entry-Level Educational Requirement: Postsecondary nondegree award

Training Requirement: One to 12 months on-the-job training

Percentage of incumbent workers with Community College Award or Some Postsecondary Coursework: 33%

Table 1. Job Growth for Automotive Technology Occupations, Riverside-San Bernardino-Ontario MSA

Occupation	2016 Jobs	2021 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Electronic Equipment Installers and Repairers, Motor Vehicles (49-2096)	299	247	(52)	(17%)	126	25
Automotive Service Technicians and Mechanics (49-3023)	9,870	10,532	662	7%	5,243	1,049
Total	10,169	10,779	610	6%	5,369	1,074