

## Labor Market Analysis: 0948.40/Alternative Fuels and Advanced Transportation Technology

**Rivian MSAT Technician** (Certificate requiring 8 to fewer than 16 semester units)

Los Angeles Center of Excellence, March 2023

### Summary

<b>Program Endorsement:</b>	<b>Endorsed:</b> All Criteria Met <input type="checkbox"/>	<b>Endorsed:</b> Some Criteria Met <input checked="" type="checkbox"/>	<b>Not</b> Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
<b>Supply Gap:</b>	Yes <input checked="" type="checkbox"/> (See below)	No <input type="checkbox"/>	
<b>Living Wage:</b> (Entry-Level, 25 <sup>th</sup> )	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Education:</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Emerging Occupation(s)			
	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

The Los Angeles Center of Excellence for Labor Market Research (LA COE) prepared this report to provide regional labor market supply and demand data related to one middle-skill occupation:

- **Automotive Service Technicians (49-3023)** Diagnose, adjust, repair, or overhaul automotive vehicles. <sup>1</sup>

Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.<sup>2</sup> This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupations.

This labor market assessment is focused on Rivian electric vehicle job postings in the LA/OC area, and the supply of automotive technology and alternative fuels and advanced transportation technology program completions in the region. Based on the available data, there may be a supply gap for electric vehicle technicians in the region. However, since *automotive service technicians and mechanics (49-3023)* includes all automotive technician jobs and not solely technicians who work with electric vehicles, annual job openings is likely overstated for electric vehicle technicians. While entry-level wages are lower than the self-sufficiency standard wage in Los Angeles County, this occupation typically requires a postsecondary non-degree award.

<sup>1</sup> [Automotive Service Technicians and Mechanics: U.S. Bureau of Labor Statistics \(bls.gov\)](#)

<sup>2</sup> The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

**Therefore, due to some of the criteria being met, the LA COE endorses this proposed program.**  
Detailed reasons include:

#### **Demand:**

- **Supply Gap Criteria** – Over the next five years, **3,504 jobs are projected to be available annually** in the region due to new job growth and replacements, **which is more than the three-year average of 1,546 awards conferred** by educational institutions in the region.
  - *Automotive service technicians and mechanics* (49-3023) includes all automotive technician occupations, and not solely technicians who work with electric vehicles. Therefore, the number of annual job openings is likely overstated for electric vehicle technicians.
  - **There were 196 online middle-skill automotive-related job postings for Rivian listed in the past 12 months in the LA/OC region.** The highest number of job postings were for field service technicians (30 job postings), field service advisors (14), manufacturing engineering technicians (8), facilities operations managers (5), launch technicians (5), and vehicle operators (5).
- **Living Wage Criteria** –Within Los Angeles County, **typical entry-level hourly wages for automotive service technicians are \$12.05, which is lower than the self-sufficiency standard** hourly wage (living wage) for one adult in the region (\$18.10 in Los Angeles County).<sup>3</sup>
- **Educational Criteria** –The Bureau of Labor Statistics (BLS) lists **a postsecondary non-degree award** as the typical entry-level education for *automotive service technicians and mechanics*.
  - Furthermore, the national-level educational attainment data indicates **36% of workers in the field have completed some college or an associate degree.**

#### **Supply:**

- There are **16 community colleges** in the greater LA/OC region that issue awards related to automotive technology, conferring an average of **1,096 awards annually** between 2018 and 2021.
- Between 2017 and 2020, there was an average of **450 awards conferred annually** in related training programs by non-community college institutions throughout the greater LA/OC region.

#### **Occupational Demand**

Exhibit 1 shows the five-year occupational demand projections for *automotive service technicians and mechanics*. In the greater Los Angeles/Orange County region, the number of jobs related to these occupations is projected to increase by 1% through 2026. There will be more than 3,500 job openings per year through 2026 due to job growth and replacements.

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<sup>3</sup> Self-Sufficiency Standard wage data was pulled from The Self-Sufficiency Standard Tool for California. For more information, visit: <http://selfsufficiencystandard.org/california>.

**Exhibit 1: Occupational demand in Los Angeles and Orange Counties<sup>4</sup>**

Geography	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	Annual Openings
Los Angeles	28,338	28,274	(64)	(0%)	2,908
Orange	5,343	5,621	278	5%	597
<b>Total</b>	<b>33,681</b>	<b>33,896</b>	<b>215</b>	<b>1%</b>	<b>3,504</b>

**Wages**

The labor market endorsement in this report considers the entry-level hourly wages for *automotive service technicians and mechanics* in Los Angeles County as they relate to the county’s self-sufficiency standard wage. Orange County wages are included below in order to provide a complete analysis of the greater LA/OC region. Detailed wage information, by county, is included in Appendix A.

**Los Angeles County**—The typical entry-level hourly wages for *automotive service technicians and mechanics* are \$12.05, which is below the self-sufficiency standard wage for one adult (\$18.10 in Los Angeles County). Experienced workers can expect to earn wages of \$26.73., which is higher than the self-sufficiency standard.

It is worth noting that *automotive service technicians and mechanics* that are traditional employees (not self-employed) typically earn entry-level hourly wages of \$17.70 and median hourly earnings of \$23.38. These wages are much higher than the wages of self-employed *automotive service technicians and mechanics*, who earn much lower wages for entry-level hourly earnings (\$7.68) and median hourly earnings (\$12.99). The data in exhibit 2 is an average of both classes of workers (employees and self-employed).

**Exhibit 2: Earnings for Occupations in LA County**

Occupation	Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 <sup>th</sup> Percentile)	Median Annual Earnings*
Automotive Service Technicians and Mechanics (49-3023)	\$12.05	\$18.75	\$26.73	\$39,000

\*rounded to the nearest \$100

<sup>4</sup> Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

**Orange County**—The typical entry-level hourly wages for *automotive service technicians and mechanics* are \$19.19, which is below the self-sufficiency standard wage for one adult (\$20.63 in Orange County). Experienced workers can expect to earn wages of \$31.32, which is higher than the self-sufficiency standard.

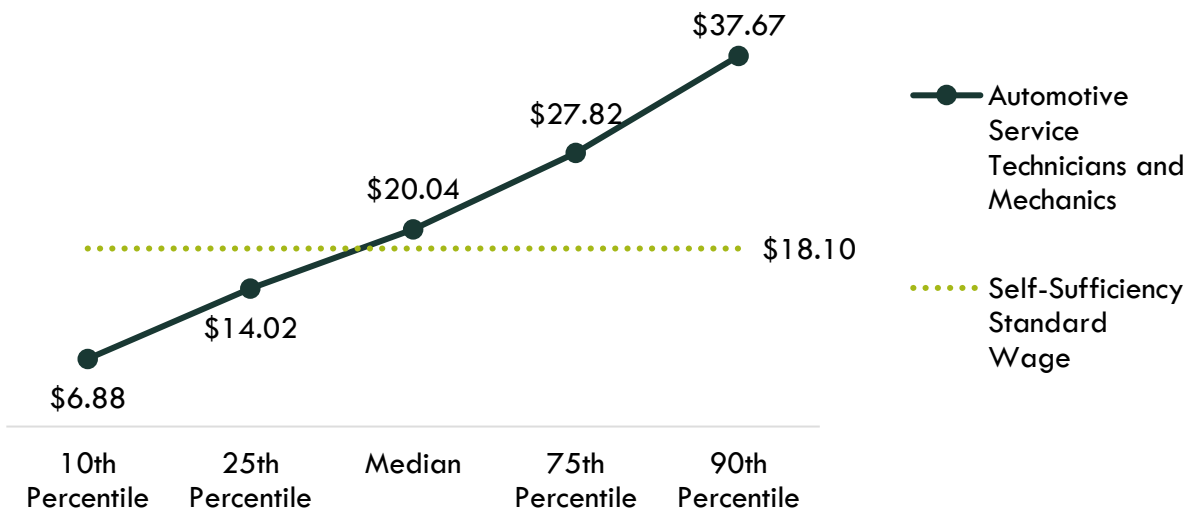
**Exhibit 3: Earnings for Occupations in Orange County**

Occupation	Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 <sup>th</sup> Percentile)	Median Annual Earnings*
Automotive Service Technicians and Mechanics (49-3023)	\$19.19	\$25.46	\$31.32	\$53,000

\*rounded to the nearest \$100

On average, the entry-level earnings for the occupations in this report are \$14.02; this is below the living wage for one single adult in Los Angeles County (\$18.10). Exhibit 4 shows the average wage for the occupations in this report, from entry-level to experienced workers.

**Exhibit 4: Average Hourly Earnings for Automotive Service Technicians and Mechanics in LA/OC**



### Job Postings

**There were 196 online middle-skill automotive-related job postings for Rivian listed in the past 12 months in the LA/OC region.** The highest number of job postings were for field service technicians (30 job postings), field service advisors (14), manufacturing engineering technicians (8), facilities operations managers (5), launch technicians (5), and vehicle operators (5). The top skills were finance, cloud services, corporate governance, networking hardware, and field service management. Of the 32% of Rivian job postings listing a minimum education requirement in the greater Los Angeles/Orange County region, 76% (47) requested high school or vocational training, and 24% (15) requested an associate degree.

### Educational Attainment

The Bureau of Labor Statistics (BLS) lists a postsecondary non-degree award as the typical entry-level education for *automotive service technicians and mechanics*. Furthermore, the national-level educational attainment data indicates 36% of workers in the field have completed some college or an associate degree.

### Educational Supply

**Community College Supply**—Exhibit 5 shows the annual and three-year average number of awards conferred by community colleges in the related TOP codes: Automotive Technology (0948.00) and Alternative Fuels and Advanced Transportation Technology (0948.40). The colleges with the most completions in the region are: Cypress, Santa Ana, Rio Hondo, and LA Trade-Tech.

**Exhibit 5: Regional community college awards (certificates and degrees), 2018-2021**

TOP	Program	College	2018-19 Awards	2019-20 Awards	2020-21 Awards	3-Year Average		
0948.00	Automotive Technology	Cerritos	58	71	22	50		
		Citrus	114	13	10	46		
		Compton	15	1	1	6		
		East LA	70	35	18	41		
		El Camino	70	77	35	61		
		LA Pierce	86	110	44	80		
		LA Trade-Tech	157	67	81	102		
		Long Beach	-	24	42	22		
		Pasadena	107	125	36	89		
		Rio Hondo	92	86	55	78		
		Santa Monica	2	-	-	1		
		<b>LA Subtotal</b>	<b>771</b>	<b>609</b>	<b>344</b>	<b>575</b>		
		Cypress	362	262	140	255		
		Fullerton	26	24	25	25		
		Golden West	51	55	21	42		
		Saddleback	48	26	15	30		
		Santa Ana	119	182	57	119		
		<b>OC Subtotal</b>	<b>606</b>	<b>549</b>	<b>258</b>	<b>471</b>		
		<b>Supply Subtotal/Average</b>			<b>1,377</b>	<b>1,158</b>	<b>602</b>	<b>1,046</b>

TOP	Program	College	2018-19 Awards	2019-20 Awards	2020-21 Awards	3-Year Average
0948.40	Alternative Fuels and Advanced Transportation Technology	Cerritos	1	-	-	0
		LA Trade	10	4	3	6
		Long Beach	7	8	15	10
		Rio Hondo	8	53	30	30
		<b>LA Subtotal</b>	<b>26</b>	<b>65</b>	<b>48</b>	<b>46</b>
		Saddleback	8	2	2	4
		<b>OC Subtotal</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>4</b>
<b>Supply Subtotal/Average</b>			<b>34</b>	<b>67</b>	<b>50</b>	<b>50</b>
<b>Supply Total/Average</b>			<b>1,411</b>	<b>1,225</b>	<b>652</b>	<b>1,096</b>

**Non-Community College Supply**—For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that provide training programs for automotive technology occupations. Exhibit 6 shows the annual and three-year average number of awards conferred by these institutions in relevant programs. Due to different data collection periods, the most recent three-year period of available data is from 2017 to 2020. Between 2017 and 2020, non-community college institutions in the region conferred an average of 450 sub-baccalaureate awards.<sup>5</sup>

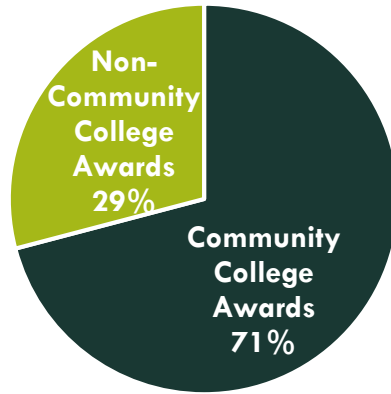
**Exhibit 6: Regional non-community college awards, 2017-2020**

CIP	Program	Institution	2017-18 Awards	2018-19 Awards	2019-20 Awards	3-Year Average
47.0604	Automobile/ Automotive Mechanics Technology/ Technician	Baldwin Park Adult & Community Education	9	13	10	11
		Hacienda La Puente Adult Education	21	9	-	10
		UEI College-Gardena	46	72	127	82
		United Education Institute-West Covina	-	32	98	43
		Universal Technical Institute-So. CA	329	277	306	304
<b>Supply Total/Average</b>			<b>405</b>	<b>403</b>	<b>541</b>	<b>450</b>

Exhibit 7 shows the proportion of community college awards conferred in LA/OC compared to the number of non-community college awards for the programs in this report. More than two-thirds of awards conferred in these programs are awarded by community colleges in the LA/OC region.

<sup>5</sup> Sub-baccalaureate awards are comparable to community college awards and include associate degrees, postsecondary awards, and other awards from 1<4 academic years.

**Exhibit 7: Community College Awards Compared to Non-Community College Awards in LA/OC Region, 3-Year Average**



**Appendix A: Occupational demand and wage data by county**

**Exhibit 8. Los Angeles County**

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 <sup>th</sup> Percentile)
Automotive Service Technicians and Mechanics (49-3023)	28,338	28,274	(64)	(0%)	2,908	\$12.05	\$18.75	\$26.73

**Exhibit 9. Orange County**

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 <sup>th</sup> Percentile)
Automotive Service Technicians and Mechanics (49-3023)	5,343	5,621	278	5%	597	\$19.19	\$25.46	\$31.32

**Exhibit 10. Los Angeles and Orange Counties**

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	% Age 55 and older	Typical Entry-Level Education
Automotive Service Technicians and Mechanics (49-3023)	33,681	33,896	215	1%	3,504	19%	Postsecondary non-degree award

## Appendix B: Sources

- O\*NET Online
- Lightcast (formerly Emsi)
- Bureau of Labor Statistics (BLS)
- California Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington
- Chancellor's Office Curriculum Inventory (COCI 2.0)

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