

**Program Endorsement Brief: 0948.00/Automotive Technology; 0948.40/Alternative Fuels and Advanced Transportation Technology**

- Automotive Technician Certificate**
- Chassis Specialist Certificate**
- Electrical Specialist Certificate**
- Engine Performance Associate of Science**
- Engine Performance & Emissions Specialist Certificate**
- Engine Specialist Certificate**
- HVAC Specialist Certificate**
- Hybrid Electric Vehicle Diagnostic Technician Associate of Science**
- Hybrid Electric Vehicle Maintenance Specialist Certificate**
- Hybrid Electric Vehicle Maintenance Technician Certificate**
- Maintenance Specialist Certificate**
- Powertrain Specialist Associate of Science**
- Powertrain Specialist Certificate**
- Transmission Specialist Certificate**
- Smog Technician Associate of Science**
- Smog Technician Certificate**

Orange County Center of Excellence, September 2021

---

**Summary Analysis**

<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"/>
<b>Program Endorsement Criteria</b>			
<b>Supply Gap:</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/> (See comments below)	
<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"/>	
<b>Emerging Occupation(s)</b>			
Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>	

The Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide Los Angeles/Orange County regional labor market supply and demand data related to one middle-skill occupation: *automotive service technicians and mechanics* (49-3023). Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.<sup>1</sup> This report is intended to help determine whether there is demand in the local labor market that is

---

<sup>1</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.

not being met by the supply from community college programs that align with the relevant occupations.

Based on the available data there does not appear to be a supply gap for *automotive service technicians and mechanics in the region*; however, the oversupply is within the COE's acceptable margin (25% over or under the number of annual job openings) and is therefore considered "supply met" rather than a "supply gap". While entry-level wages for this occupation are lower than the living wage in both Los Angeles and Orange counties, median wages exceed the living wage in both counties. The Bureau of Labor Statistics (BLS) lists a postsecondary nondegree award as the typical entry-level education for *automotive service technicians and mechanics* and roughly one-third of the current workforce have attended some college or earned an associate degree as their highest level of education. **Therefore, due to some of the criteria being met, the COE endorses this proposed program.** Detailed reasons include:

#### **Demand:**

- **Supply Gap Criteria** – Over the next five years, there is projected to be **1,924 jobs available annually** in the region due to retirements and workers leaving the field, **which is less than the 2,135 awards conferred annually** by educational institutions in the region.
  - However, the labor market information suggests that the **supply has been met for this occupation within the LA/OC region** since the average number of annual awards (supply) is within the COE's 25% margin of annual job openings (demand).
- **Living Wage Criteria** – Within Orange County, **typical entry-level hourly wages** for automotive service technicians and mechanics are **\$17.04, which is lower than the California Family Needs Calculator** hourly wage (living wage) for one adult in the region (\$20.63 in Orange County).<sup>2</sup>
  - However, **median hourly wages for automotive service technicians and mechanics** are \$23.94, which is **higher than the living wage estimate**.
- **Educational Criteria** –The Bureau of Labor Statistics (BLS) lists a **postsecondary nondegree award** as the typical entry-level education for *automotive service technicians and mechanics*.
  - Furthermore, the national-level educational attainment data indicates **over one-third of workers in the field have completed some college or an associate degree**.

#### **Supply:**

- Due to inconsistencies in reporting automatically awarded, local low-unit certificates, the number of awards conferred may be overstated. Additionally, it is unclear whether or not these low-unit certificates adequately train for the occupation in this report when compared to higher-unit programs. **Therefore, the three-year average number of awards is overstated.**

---

<sup>2</sup> Living wage data was pulled from California Family Needs Calculator on 09/21/21. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

- There are **16 community colleges** in the LA/OC region that issue awards related to automotive service technicians and mechanics, conferring an average of **1,736 awards annually** between 2017 and 2020.
- Between 2016 and 2019, there was an average of **399 awards conferred annually** in related training programs by non-community college institutions, all of which were generated by **7 individual adult education institutions and trade schools throughout** the region.

### Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for automotive service technicians and mechanics. In Los Angeles/Orange County, the number of jobs related to this occupation is projected to decrease by 6% through 2024. However, there will be 1,924 job openings per year through 2024 due to retirements and workers leaving the field.

*This report includes employment projection data by Emsi which uses EDD information. Emsi's projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy, during the projection period, will be at approximately full employment. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, it may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Therefore, the projections included in this report do not take the impacts of COVID-19 into account.*

**Exhibit 1: Occupational demand in Los Angeles and Orange Counties<sup>3</sup>**

Geography	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	Annual Openings
Los Angeles	16,751	15,621	(1,130)	(7%)	1,410
Orange	6,000	5,831	(168)	(3%)	515
<b>Total</b>	<b>22,751</b>	<b>21,453</b>	<b>(1,298)</b>	<b>(6%)</b>	<b>1,924</b>

### Wages

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

**Orange County**— The typical entry-level hourly wages for automotive service technicians and mechanics are \$17.04, which is below the living wage for one adult (\$20.63 in Orange County). Experienced workers can expect to earn wages of \$29.50, which is higher than the living wage estimate. Orange County's average wages are below the average statewide wage of \$24.48 for this occupation.

<sup>3</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.

**Los Angeles County**— The typical entry-level hourly wages for automotive service technicians and mechanics are \$14.44, which is below the living wage for one adult (\$18.10 in Los Angeles County).<sup>4</sup> Experienced workers can expect to earn wages of \$28.54, which is higher than the living wage estimate. Los Angeles County’s average wages are below the average statewide wage of \$24.48 for this occupation.

**Job Postings**

There were 8,076 online job postings related to automotive service technicians and mechanics listed in the past 12 months. The top skills were: repair, auto repair, and automotive services industry knowledge. The top three employers, by number of job postings, in the region were: Pep Boys, CarMax, and United Parcel Service Incorporated.

*It is important to note that the job postings data included in this section reflects online job postings listed in the past 12 months and does not yet demonstrate the impact of COVID-19. While employers have generally posted fewer online job postings since the beginning of the pandemic, the long-term effects are currently unknown.*

**Educational Attainment**

The Bureau of Labor Statistics (BLS) lists a postsecondary nondegree award as the typical entry-level education for automotive service technicians and mechanics. Furthermore, the national-level educational attainment data indicates 35.7% of workers in the field have completed some college or an associate degree. Of the 44% of automotive service technicians and mechanics job postings listing a minimum education requirement in Los Angeles/Orange County, 97% (3,066) requested high school or vocational training and 3% (89) requested an associate degree.

**Educational Supply**

**Community College Supply**—Exhibit 2 shows the three-year average number of awards conferred by community colleges in the related TOP codes: Diesel Technology (0947.00), Automotive Technology (0948.00), and Alternative Fuels and Advanced Transportation Technology (0948.40). The colleges with the most completions in the region are: Santa Ana, Cypress, LA Trade, and LA Pierce. Over the past 12 months, there were six other related program recommendation requests from regional community colleges.

**Exhibit 2: Regional community college awards (certificates and degrees), 2017-2020**

TOP Code	Program	College	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	3-Year Award Average
0947.00	Diesel Technology	Santa Ana	10	10	4	8
		<b>OC Subtotal</b>	<b>10</b>	<b>10</b>	<b>4</b>	<b>8</b>
		Citrus	12	24	9	15
		LA Trade	66	35	31	44
		<b>LA Subtotal</b>	<b>78</b>	<b>59</b>	<b>40</b>	<b>59</b>
<b>Supply Subtotal/Average</b>			<b>88</b>	<b>69</b>	<b>44</b>	<b>67</b>

<sup>4</sup> Living wage data was pulled from California Family Needs Calculator on 9/21/2021. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

TOP Code	Program	College	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	3-Year Award Average
0948.00	Automotive Technology	Cypress	173	362	262	266
		Fullerton	49	26	24	33
		Golden West	37	51	55	48
		Saddleback	23	48	26	32
		Santa Ana	1,291	119	182	531
		<b>OC Subtotal</b>	<b>1,573</b>	<b>606</b>	<b>549</b>	<b>909</b>
		Cerritos	57	58	72	62
		Citrus	85	114	13	71
		Compton	21	15	1	12
		East LA	84	70	35	63
		El Camino	97	70	77	81
		LA Pierce	137	86	110	111
		LA Trade	147	157	67	124
		Long Beach	-	-	24	8
		Pasadena	40	107	125	91
		Rio Hondo	85	90	86	87
		Santa Monica	-	2	-	1
		<b>LA Subtotal</b>	<b>753</b>	<b>769</b>	<b>609</b>	<b>710</b>
		<b>Supply Subtotal/Average</b>			<b>2,362</b>	<b>1,375</b>
0948.40	Alternative Fuels and Advanced Transportation Technology	Saddleback	8	8	2	6
		<b>OC Subtotal</b>	<b>8</b>	<b>8</b>	<b>2</b>	<b>6</b>
		Cerritos	-	1	-	0
		LA Trade	18	10	4	11
		Long Beach	3	7	8	6
		Rio Hondo	19	8	53	27
		<b>LA Subtotal</b>	<b>40</b>	<b>26</b>	<b>65</b>	<b>44</b>
<b>Supply Subtotal/Average</b>			<b>48</b>	<b>34</b>	<b>67</b>	<b>50</b>
<b>Supply Total/Average</b>			<b>2,462</b>	<b>1,478</b>	<b>1,269</b>	<b>1,736</b>

**Non-Community College Supply**—For a comprehensive regional supply analysis, it is also important to consider the supply from other institutions in the region that provide training programs for automotive service technicians and mechanics. Exhibit 3 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Codes: Automobile/Automotive Mechanics Technology/Technician (47.0604), and Vehicle Emissions Inspection and Maintenance Technology/Technician (47.0612). Due to different data collection periods, the most recent three-year period of available data is

from 2016 to 2019. Between 2016 and 2019, non-community college institutions in the region conferred an average of 399 awards annually in related training programs.

**Exhibit 3: Regional non-community college awards, 2016-2019**

CIP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
47.0604	Automobile/Automotive Mechanics Technology/Technician	Baldwin Park Adult & Community Education	10	9	13	11
		GDS Institute	5	9	-	5
		Hacienda La Puente Adult Education	46	21	9	25
		UEI College-Gardena	69	46	72	62
		United Education Institute- West Covina	-	-	32	11
		United Technical Institute- Southern California	245	329	277	284
<b>Supply Subtotal/Average</b>			<b>375</b>	<b>414</b>	<b>403</b>	<b>397</b>
47.0612	Vehicle Emissions Inspection and Maintenance Technology/Technician	California Career School	-	-	7	2
<b>Supply Subtotal/Average</b>			<b>0</b>	<b>0</b>	<b>7</b>	<b>2</b>
<b>Supply Total/Average</b>			<b>375</b>	<b>414</b>	<b>410</b>	<b>399</b>

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

**Exhibit 4. Orange County**

Occupation (SOC)	2020 Jobs	2025 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)	6,000	5,831	(168)	(3%)	515	\$17.04	\$23.94	\$31.94

### Exhibit 5. Los Angeles County

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Automotive Service Technicians and Mechanics (49-3023)	16,751	15,621	(1,130)	(7%)	1410	\$14.44	\$21.16	\$28.54

### Exhibit 6. Los Angeles and Orange Counties

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Typical Entry-Level Education
Automotive Service Technicians and Mechanics (49-3023)	22,751	21,453	(1,298)	(6%)	1,924	Postsecondary Nondegree Award

#### Appendix B: Sources

- O\*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- California Family Needs Calculator, Insight Center for Community Economic Development
- Chancellor's Office Curriculum Inventory (COCI 2.0)

For more information, please contact:

Jacob Poore, Interim Director  
 Center of Excellence, Orange County  
[poore.jacob@rscdd.edu](mailto:poore.jacob@rscdd.edu)

September 2021

