

Program Endorsement Brief: 0948.00/Automotive Technology
Automotive T-TEN Air Conditioning Specialist Certificate
Automotive T-TEN Brake and Alignment Specialist Certificate
Automotive T-TEN Electrical Certificate
Automotive T-TEN Engine and Driveline Specialist Certificate
Automotive T-TEN Performance and Drivability Specialist Certificate
Automotive T-TEN Toyota and Lexus Specialist Certificate
T-TEN Certified Technician Certificate
T-TEN Certified Technician Associate in Science
T-TEN Maintenance Technician Certificate
T-TEN Maintenance Technician Associate in Science Degree
Orange County Center of Excellence, May 2020

Summary Analysis

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.¹ 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.

Based on the available data, it is unclear whether or not there is a supply gap for automotive service technicians and mechanics in the region. It is worth noting that Cypress College is proposing to distinguish its existing automotive program's certificates from these Toyota-sponsored certificates and degrees which would not necessarily increase the existing supply.

Therefore, the COE cautiously endorses this program. Reasons include:

Demand:

- Over the next five years, there is projected to be **2,646 jobs available annually** in the region due to retirements and workers leaving the field.
 - Over the past 12 months, there were **324 online job postings** for automotive service technicians and mechanics that **specifically mention Toyota, T-TEN and/or Lexus.**
- The national-level educational attainment data indicates **34.8% of workers in the field have completed some college or an associate degree.**

¹ 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.

- Typical regional **entry-level hourly wages** for automotive service technicians and mechanics throughout the region are **\$13.59, which are lower than the California Family Needs Calculator** hourly wage (living wage) for one adult in the region (\$15.04 in Los Angeles County and \$17.36 in Orange County).²
 - **Experienced automotive service technicians and mechanics** can expect to earn regional wages of \$27.38, which are **higher than the living wage** estimate for both counties.

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.**
 - There are **16 community colleges** in the region that offer automotive technology and/or alternative fuels and advanced transportation programs, conferring an average of **1,642 awards annually** between 2016 and 2019.
 - However, this supply data includes **1,378 low-unit certificates, many of which were automatically conferred (also known as auto-awarded) by Santa Ana College between 2016 and 2019.** Awards were automatically conferred to both current and past students who had completed the unit requirements within the past few years; however, this low-unit program may not have necessarily prepared students for the occupation within this report, as compared to higher-unit programs at Santa Ana College and throughout the region. Therefore, **the three year-average number of awards is overstated.**
- Between 2013 and 2016, there were an average of **233 awards conferred annually** in related training programs by non-community college institutions 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 these occupations is projected to decrease by less than 1% through 2024. There will be more than 2,600 job openings per year through 2024 due to job growth and replacements.

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.

² Living wage data was pulled from California Family Needs Calculator on 5/4/20. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

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 Counties³

Geography	2019 Jobs	2024 Jobs	2019-2024 Change	2019-2024 % Change	Annual Openings
Los Angeles	19,851	19,560	(291)	(1%)	1,914
Orange	7,092	7,266	174	2%	732
Total	26,943	26,826	(117)	(0%)	2,646

Wages—Typical regional entry-level and median hourly wages for automotive service technicians and mechanics are \$13.59 and \$20.01, respectively.⁴ Entry-level regional wages for this occupation are lower than the California Family Needs Calculator hourly wage (living wage) for one adult in the region (\$15.04 in Los Angeles County and \$17.36 in Orange County). Experienced workers can expect to earn regional wages of \$27.37, which are higher than the living wage estimates for both counties. Regional average wages are below the average statewide wage of \$22.46 for this occupation. Wage information, by county, is included in Appendix A.

Job Postings—There were 5,922 online job postings for automotive service technicians and mechanics listed in the past 12 months, and **324 of these job postings specifically mentioned Toyota, T-TEN and/or Lexus**. Of these Toyota-focused job postings, the highest number of job postings were for automotive service technician, lube technician, automotive service advisor, certified technician and mechanic. The top skills were: auto repair, customer service/contact, automotive services industry knowledge, occupational health and safety, and sales. The top three employers, by number of job postings, in the region were: Toyota Motors, LAcAR GUY, and AutomotoHR. Of the 324 online job postings, 79% list a minimum education requirement.

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 non-degree award as the typical entry-level education for automotive service technicians and mechanics. The national-level educational attainment data indicates 34.8% of workers in the field have completed some college or an associate degree. Of the 79% of Toyota/Lexus-focused automotive service technician and mechanic job postings in Los Angeles/Orange County, 99% (253) requested a high school diploma and 1% (2) requested an associate degree.

³ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

⁴ Entry-level wage is defined as the twenty-fifth percentile hourly wage. Wages for experienced workers are defined as the seventy-fifth percentile hourly wage.

Supply

Community College Supply—Exhibit 2 shows the 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: Santa Ana, LA Trade-Tech and Cypress. During the past 12 months, there were 10 other related program recommendation requests from regional community colleges.

It is worth noting that this supply data includes 1,378 low-unit certificates automatically conferred by Santa Ana College from 2016-2019 (including 1,291 low-unit certificates that were auto-awarded during the 2017-2018 academic year alone). Local awards were automatically conferred to both current and past students who had completed the unit requirements within the past 3-5 years. It is unclear if this number double-counts students who previously exited the program and are already working in the field, or if these students are necessarily prepared to work as automotive service technicians and mechanics, as compared to students who completed higher-unit awards. Since this data point is included within the regional average supply data, the three year-average number of awards (1,642) is overstated.

The T-TEN Toyota Certified programs at Cypress College are not new programs; instead, these Toyota-sponsored certificates and degrees are break-out programs and will be considered separate from Cypress's existing automotive technology programs. Therefore, adding these T-TEN programs are not expected to greatly increase the supply data for this college, or for the automotive technology TOP Code (0948.00).

Exhibit 2: Regional community college awards (certificates and degrees), 2016-2019

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
0948.00	Automotive Technology	Cerritos	52	57	58	56
		Citrus	81	85	114	93
		Compton	25	21	15	20
		East LA	53	84	70	69
		El Camino	60	97	70	76
		LA Pierce	103	137	86	109
		LA Trade-Tech	245	147	157	183
		Pasadena	46	40	107	64
		Rio Hondo	38	85	90	71
		Santa Monica	-	-	2	1
		LA Subtotal	703	753	769	742
		Cypress	225	173	362	253
		Fullerton	16	49	26	30
		Golden West	46	37	51	45
		Saddleback	44	23	48	38
		Santa Ana ⁵	78	1,291	119	496
		OC Subtotal	409	1,573	606	863
Supply Subtotal/Average			1,112	2,326	1,375	1,604
0948.40	Alternative Fuels and Advanced Transportation Technology	Cerritos	1		1	1
		LA Trade-Tech	11	18	10	13
		Long Beach	-	3	7	3
		Rio Hondo	14	19	8	14
		LA Subtotal	26	40	26	31
		Saddleback	4	8	8	7
		OC Subtotal	4	8	8	7
Supply Subtotal/Average			30	48	34	37
Supply Total/Average			1,142	2,374	1,409	1,642

Non-Community College Supply—It is important to consider the supply from other non-community college 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

⁵ Santa Ana College automatically conferred 1,378 low-unit certificates between 2016 and 2019.

Inspection and Maintenance Technology/Technician (47.0612). Due to different data collection periods, the most recent three-year period of available data is from 2014 to 2017. Between 2014 and 2017, four-year colleges in the region conferred an average of 233 awards annually in related training programs.

Exhibit 3: Regional non-community college awards, 2014-2017

CIP Code	Program	College	2014-2015 Awards	2015-2016 Awards	2016-2017 Awards	3-Year Award Average
47.0604	Automobile/ Automotive Mechanics Technology/ Technician	Baldwin Park Adult & Community Education	11	18	10	13
		GDS Institute	10	10	5	8
		Hacienda La Puente Adult Education	40	38	46	41
		UEI College-Gardena	84	98	69	84
		Universal Technical Institute of California	-	1	245	82
47.0612	Vehicle Emissions Inspection and Maintenance Technology/Technician	California Career School	7	7	-	5
Supply Total/Average			152	172	375	233

Appendix A: Occupational demand and wage data by county

Exhibit 4. Los Angeles County

Occupation (SOC)	2019 Jobs	2024 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)	19,851	19,560	(291)	(1%)	1,914	\$13.07	\$19.45	\$26.57

Exhibit 5. Orange County

Occupation (SOC)	2018 Jobs	2023 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)	7,092	7,266	174	2%	732	\$15.11	\$21.67	\$29.29

Exhibit 6. Los Angeles and Orange Counties

Occupation (SOC)	2018 Jobs	2023 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)	26,943	26,826	(117)	(0%)	2,646	\$13.59	\$20.01	\$27.37

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
- Employment Development Department, Unemployment Insurance Dataset
- Living Insight Center for Community Economic Development
- 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)

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