

Program Endorsement Brief: 0947.00/Diesel Technology

Diesel Technology

Orange County Center of Excellence, March 2022

Summary Analysis

Program Endorsement:	Endorsed: All Criteria Met <input checked="" type="checkbox"/>	Endorsed: Some Criteria Met <input type="checkbox"/>	Not Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
Supply Gap:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Living Wage: (Entry-Level, 25th)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Education:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Emerging Occupation(s)			
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: *diesel and truck mechanics and diesel engine specialists (49-3031)*. 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 there appears to be a supply gap for *diesel and truck mechanics and diesel engine specialists* in the region. Furthermore, while this occupation typically requires a high school diploma or equivalent, over one-third of workers in the field have completed some college or an associate degree as their highest level of education. Additionally, entry-level wages exceed the living wage in both Los Angeles and Orange counties. **Therefore, due to all 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 **663 jobs available annually** in the region due to new job growth and replacements, **which is more than the 144 awards conferred annually** by educational institutions in the region.
- **Living Wage Criteria** – Within Orange County, **typical entry-level hourly wages for diesel and truck mechanics and diesel engine specialists are \$25.15, which is higher than the living wage for one adult in the region (\$20.63 in Orange County).**²

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.

² Living wage data was pulled from California Family Needs Calculator on 1/10/2022. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/family-needs-calculator/>.

- **Educational Criteria** – The Bureau of Labor Statistics (BLS) lists a **high school diploma or equivalent** as the typical entry-level education for *diesel and truck mechanics and diesel engine specialists*.
 - However, the national-level educational attainment data indicates **36.6% of workers in the field have completed some college or an associate degree** as their highest level of education.

Supply:

- There are **three community colleges** in the LA/OC region that issue awards related to *diesel and truck mechanics and diesel engine specialists*, conferring an average of **67 awards annually** between 2017 and 2020.
- Between 2016 and 2019, there was an average of **77 awards conferred annually** in related training programs by non-community college institutions, all of which were generated by **one individual private technical institution throughout** the region.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for *diesel and truck mechanics and diesel engine specialists*. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 1% through 2025. There will be nearly 700 job openings per year through 2025 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. 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	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	Annual Openings
Los Angeles	5,437	5,520	83	2%	515
Orange	1,588	1,602	13	1%	148
Total	7,025	7,122	97	1%	663

Wages

The labor market endorsement in this report considers the entry-level hourly wages for *diesel and truck mechanics and diesel engine specialists* in Orange County as they relate to the county’s living

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.

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 *diesel and truck mechanics and diesel engine specialists* are \$25.15, which is above the living wage for one adult (\$20.63 in Orange County). Experienced workers can expect to earn wages of \$38.18, which is higher than the living wage estimate. Orange County's average wages are above the average statewide wage of \$28.80 for this occupation.

Los Angeles County: The typical entry-level hourly wages for *diesel and truck mechanics and diesel engine specialists* are \$23.58, which is above the living wage for one adult (\$18.10 in Los Angeles County). Experienced workers can expect to earn wages of \$35.99, which is higher than the living wage estimate. Los Angeles County's average wages are above the average statewide wage of \$28.80 for this occupation.

Job Postings

There were 1,253 online job postings related to *diesel and truck mechanics and diesel engine specialists* listed in the past 12 months. The highest number of job postings were for diesel mechanics, diesel technicians, diesel mechanics (all levels), and diesel technician/mechanics. The top skills were repair, predictive/preventative maintenance, vehicle maintenance, fleet preventative maintenance, and auto repair. The top three employers, by number of job postings, in the region were Penske, Carvana LLC, and Waste Management.

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 high school diploma or equivalent as the typical entry-level education for *diesel and truck mechanics and diesel engine specialists*. However, the national-level educational attainment data indicates 36.6% of workers in the field have completed some college or an associate degree as their highest level of education. Of the 38% of *diesel and truck mechanic and diesel engine specialist* job postings listing a minimum education requirement in Los Angeles/Orange County, 99% (476) requested high school or vocational training and 1% (5) 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 code: Diesel Technology (0947.00). The college with the most completions in the region is LA Trade. Over the past 12 months, there were no 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	Citrus	12	24	9	15
		LA Trade	66	35	31	44
		LA Subtotal	78	59	40	59
		Santa Ana	10	10	4	8
		OC Subtotal	10	10	4	8
Supply Total/Average			88	69	44	67

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 *diesel and truck mechanics and diesel engine specialists*. Exhibit 3 shows the annual and three-year average number of awards conferred by this institution in the related Classification of Instructional Programs (CIP) Code: Diesel Mechanics Technology/Technician (47.0605). Due to different data collection periods, the most recent three-year period of available data is from 2016 to 2019. Between 2016 and 2019, four-year colleges in the region conferred an average of 77 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
47.0605	Diesel Mechanics Technology/Technician	Universal Technical Institute-Southern California	58	95	77	77
Supply Total/Average			58	95	77	77

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 (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Diesel and Truck Mechanics and Diesel Engine Specialists (49-3031)	1,588	1,602	13	1%	148	\$25.15	\$30.68	\$38.13

Exhibit 5. Los Angeles County

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Diesel and Truck Mechanics and Diesel Engine Specialists (49-3031)	5,437	5,520	83	2%	515	\$23.58	\$28.94	\$35.99

Exhibit 6. Los Angeles and Orange Counties

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings
Diesel and Truck Mechanics and Diesel Engine Specialists (49-3031)	7,025	7,122	97	1%	663

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)

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