**Automotive Powertrain Occupations**

**Labor Market Information Report**

**Las Positas** **College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

November 2020

# Recommendation

Based on all available data, there appears to be an undersupply of Automotive Powertrain workers compared to the demand for this cluster of occupations in the Bay region and in the East Bay sub-region (Alameda and Contra Costa Counties). There is a projected annual gap of about 937 students in the Bay region and 453 students in the East Bay Sub-Region.

**Introduction**

This report provides student outcomes data on employment and earnings for TOP 0948.00-Automotive Technology programs in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Las Positas College and in the region.

This report profiles Automotive Powertrain Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Las Positas College.

|  |
| --- |
| * **Automotive Service Technicians and Mechanics (49-3023):** Diagnose, adjust, repair, or overhaul automotive vehicles. Excludes “Automotive Body and Related Repairers" (49-3021), "Bus and Truck Mechanics and Diesel Engine Specialists" (49-3031), and "Electronic Equipment Installers and Repairers, Motor Vehicles" (49-2096). |
| Entry-Level Educational Requirement: Postsecondary nondegree award |
| Training Requirement: Short-term on-the-job training |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 33% |
|  |

**Occupational Demand**

**Table 1. Employment Outlook for Automotive Powertrain Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 25% Hourly Wage | Median Hourly Wage |
| Automotive Service Technicians and Mechanics | 18,334 | 18,399 | 66 | 0% | 9,171 | 1,834 | $18.11 | $24.53 |

*Source: EMSI 2020.3*

**Bay Region includes** Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

**Table 2. Employment Outlook for Automotive Powertrain Occupations in East Bay Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 25% Hourly Wage | Median Hourly Wage |
| Automotive Service Technicians and Mechanics | 6,005 | 6,152 | 147 | 2% | 3,103 | 621 | $18.09 | $24.23 |

*Source: EMSI 2020.3*

**East Bay Sub-Region includes** Alameda and Contra Costa Counties

### Job Postings in Bay Region and East Bay Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (October 2019 - September 2020)**

| **Occupation** | **Bay Region** | **East Bay**  **Sub- Region** |
| --- | --- | --- |
| Automotive Specialty Technicians | 5,562 | 2,018 |
| Automotive Master Mechanics | 426 | 126 |
| **TOTAL** | 5,988 | 2,144 |

*Source: Burning Glass*

**Table 4a. Top Job Titles for Automotive** **Powertrain Occupations for latest 12 months (October 2019 - September 2020) Bay Region**

|  |  |  |  |
| --- | --- | --- | --- |
| **Common Title** | **Bay** | **Common Title** | **Bay** |
| Automotive Technician | 346 | Automotive Maintenance Technician/General Service | 54 |
| Roadside Assistance Technician | 144 | General Service Technician | 49 |
| Seasonal Personal Vehicle Package Driver | 129 | Vehicle Condition Inspector | 47 |
| Service Technician | 121 | Technician | 44 |
| Automotive Service Advisor | 106 | Mechanic | 43 |
| Lube Technician | 90 | Vehicle Service Technician In | 35 |
| Self - Driving Vehicle Operator - Mountain View | 87 | Shop Technician | 35 |
| Mechanic B | 78 | Automotive Service Advisor/Writer | 28 |
| Automotive Lube Technician | 73 | Vehicle Condition Assessor | 26 |
| Automotive Technician/Mechanic | 68 | Ups Seasonal Personal Vehicle Package Driver | 26 |
| Car Detailer | 65 | General Service | 26 |
| Learn Salesforce Skills, Get Entry Level Technician | 64 | General Automotive Technician | 26 |
| Automotive Mechanic | 64 | Smog Check Repair Technician | 25 |
| Self - Driving Vehicle Operator - San Fransisco | 56 | Level 3 Automotive Technician | 24 |

**Table 4b. Top Job Titles for Automotive Powertrain Occupations for latest 12 months (October 2019 - September 2020) East** **Bay Sub-Region**

|  |  |  |  |
| --- | --- | --- | --- |
| **Common Title** | **East Bay** | **Common Title** | **East Bay** |
| Automotive Technician | 131 | Mechanic | 21 |
| Roadside Assistance Technician | 62 | Automotive Mechanic | 20 |
| Seasonal Personal Vehicle Package Driver | 60 | Learn Salesforce Skills, Get Entry Level Technician | 19 |
| Service Technician | 46 | Automotive Maintenance Technician/General Service | 17 |
| Lube Technician | 43 | Technician | 15 |
| Automotive Service Advisor | 41 | General Service Technician | 15 |
| Self - Driving Vehicle Operator - Mountain View | 36 | Mobile Detailer | 14 |
| Automotive Lube Technician | 33 | Brake And Alignment Technician | 14 |
| Mechanic B | 30 | Roadside Auto Technician | 13 |
| Car Detailer | 28 | Reinforcing Steel Detailer | 13 |
| Automotive Technician/Mechanic | 27 | Automotive Assembler | 13 |
| Vehicle Condition Inspector | 22 | Vehicle Service Technician | 12 |
| Shop Technician | 22 | Detailer | 12 |
| Self - Driving Vehicle Operator - San Fransisco | 22 | Ups Seasonal Personal Vehicle Package Driver | 11 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Automotive Powertrain Workers in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Industry – 6 Digit NAICS (No. American Industry Classification) Codes** | **Jobs in Industry (2019)** | **Jobs in Industry (2024)** | **% Change (2019-24)** | **% Occupation Group in Industry (2019)** |
| General Automotive Repair | 6,341 | 6,327 | 0% | 34.8% |
| New Car Dealers | 4,989 | 4,949 | -3% | 27.2% |
| Automotive Body, Paint, and Interior Repair and Maintenance | 873 | 852 | -8% | 4.7% |
| Automotive Parts and Accessories Stores | 627 | 619 | -10% | 3.4% |
| Other Automotive Mechanical and Electrical Repair and Maintenance | 518 | 491 | -14% | 2.7% |
| Local Government, Excluding Education and Hospitals | 457 | 451 | -5% | 2.5% |
| Car Washes | 438 | 438 | 2% | 2.4% |
| Tire Dealers | 394 | 390 | -1% | 2.1% |
| Used Car Dealers | 347 | 345 | 13% | 1.9% |
| All Other Automotive Repair and Maintenance | 306 | 304 | 2% | 1.7% |
| Taxi Service | 213 | 215 | 29% | 1.2% |
| Gasoline Stations with Convenience Stores | 191 | 187 | -4% | 1.0% |
| Automotive Transmission Repair | 183 | 180 | -18% | 1.0% |

*Source: EMSI 2020.3*

**Table 6. Top Employers Posting Automotive Powertrain Occupations in Bay Region and East Bay Sub-Region (October 2019 - September 2020)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Employer** | **Bay** | **Employer** | **Bay** | **Employer** | **East** Bay |
| United Parcel Service Incorporated | 278 | Amerit Fleet Solutions | 50 | United Parcel Service Incorporated | 119 |
| Allstate | 163 | Transdevna | 41 | Allstate | 72 |
| Bridgestone / Firestone | 157 | Honda | 41 | Transdev Inc | 50 |
| Transdev Inc | 140 | FedEx | 41 | Bridgestone / Firestone | 49 |
| Big O Tires | 88 | Carmax | 41 | Tesla Motors | 39 |
| Goodyear | 86 | Sonic Automotive | 38 | Big O Tires | 31 |
| Chrysler | 85 | Lithia Motors Incorporated | 37 | Pacific Gas and Electric Company | 27 |
| Mopar Cap Student Program | 84 | Enterprise Rent-A-Car | 37 | Chrysler | 27 |
| Climb Hire | 63 | Transdev | 36 | Lucid Motors Inc | 26 |
| Pep Boys | 61 | Best Buy | 36 | Goodyear | 26 |
| Pacific Gas and Electric Company | 56 | Subaru | 35 | Tesla | 25 |
| Toyota Motors | 55 | The Home Depot Incorporated | 32 | Jiffy Lube | 24 |
| Autonation | 55 | Speedee Oil Change & Auto Service | 31 | Pep Boys | 22 |
| Tesla | 53 | United Site Services | 30 | Autonation | 22 |
| Tesla Motors | 51 | Qvale Auto Group | 29 | Enterprise Rent-A-Car | 21 |
| Jiffy Lube | 51 | Penske Automotive Group | 28 | Qvale Auto Group | 20 |
| Chevrolet | 50 | Midas | 28 | Les Schwab Tire Centers | 20 |

*Source: Burning Glass*

# Educational Supply

There are 14 community colleges in the Bay Region issuing 897 awards on average annually (last 3 years ending 2018-19) on TOP 0948.00-Automotive Technology. There are five (5) colleges in the East Bay Sub-Region issuing

168 awards on average annually (last 3 years) on this TOP code.

There is one (1) Other Educational Institution in the Bay Region issuing 27 awards on average annually (last 3 years ending 2016-17) on TOP 0948.00-Automotive Technology. There are no Other Educational Institutions in the East Bay Sub-Region issuing awards on average annually (last 3 years) on this TOP code.

**Table 7a. Community College Awards on TOP 0948.00-Automotive Technology in Bay Region**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **College** | **Sub-Region** | **Associates** | **Certificate 18+ Units** | **Certificate Low Unit** | **Noncredit** | **Total** |
| Alameda | East Bay | 9 |  | 21 |  | 30 |
| Chabot | East Bay | 15 |  | 36 |  | 51 |
| Contra Costa | East Bay | 4 |  | 19 |  | 23 |
| De Anza | Silicon Valley | 38 |  | 113 |  | 151 |
| Evergreen Valley | Silicon Valley | 8 |  | 29 |  | 37 |
| Hartnell | SC - Monterey | 10 |  | 5 |  | 15 |
| Las Positas | East Bay | 4 |  | 3 |  | 7 |
| Los Medanos | East Bay | 11 |  | 46 |  | 57 |
| Marin | North Bay | 2 | 6 | 17 |  | 25 |
| Monterey | SC - Monterey | 3 |  | 19 |  | 22 |
| San Francisco | Mid-Peninsula | 6 |  | 87 |  | 93 |
| Santa Rosa | North Bay | 7 |  | 132 | 76 | 215 |
| Skyline | Mid-Peninsula | 6 |  | 149 |  | 155 |
| Solano | North Bay | 2 |  | 14 |  | 16 |
| **Total Bay Region** | | **125** | **6** | **690** | **76** | **897** |
| **Total East** **Bay Sub-Region** | | **43** | **0** | **125** | **0** | **168** |

# Source: Data Mart

Note: The annual average for awards is 2016-17 to 2018-19.

**Table 7b. Other Educational Institution Awards on TOP 0948.00-Automotive** **Technology in Bay Region**

|  |  |  |  |
| --- | --- | --- | --- |
| College | Sub-Region | Associates | Total |
| CET-Sobrato | Silicon Valley | 27 | 27 |
| **Total Bay Region** |  | **27** | **27** |
| **Total East** **Bay Sub-Region** |  | **0** | **0** |

# Source: Data Mart

Note: The annual average for awards is 2014-15 to 2016-17.

# Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay region with 1,834 annual openings for the Automotive Powertrain occupational cluster and 897 annual (3-year average) awards for an annual undersupply of 937 students. In the East Bay Sub-Region, there is also a gap with 621 annual openings and 168 annual (3-year average) awards for an annual undersupply of 453 students.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0948.00-Automotive** **Technology**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **2017-18** | **Bay**  All CTE Programs | **Las Positas College** All CTE Programs | **State** 0948.00 | **Bay** 0948.00 | **East Bay** 0948.00 | **Las Positas College** 0948.00 |
| % Employed Four Quarters After Exit | 66% | 70% | 67% | 69% | 68% | 69% |
| Median Quarterly Earnings Two Quarters After Exit | $11,466 | $11,069 | $7,122 | $9,621 | $9.020 | $8,705 |
| Median % Change in Earnings | 31% | 30% | 45% | 52% | 73% | 60% |
| % of Students Earning a Living Wage | 53% | 52% | 44% | 41% | 37% | 38% |

*Source: Launchboard Pipeline (version available on (10/19/20)*

# Skills, Certifications and Education

**Table 9. Top Skills for Automotive Powertrain Occupations in Bay Region (October 2019 - September 2020)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Skill** | **Postings** | **Skill** | **Postings** | **Skill** | **Postings** |
| Repair | 3,299 | Predictive / Preventative Maintenance | 290 | Battery Testing and Installation | 155 |
| Auto Repair | 1,544 | Cleaning | 286 | Diagnosis of Drivability | 153 |
| Automotive Services Industry Knowledge | 1,149 | Vehicle Inspection | 273 | Personal Protective Equipment (PPE) | 149 |
| Customer Service | 1,129 | Tire Repairs | 268 | Tire Mounting | 146 |
| Oil Changes | 546 | Occupational Health and Safety | 248 | Engine Repair | 141 |
| Scheduling | 528 | Brake Work | 245 | Transmission Repair | 141 |
| Hand Tools | 479 | Commercial Driving | 239 | Data Entry | 140 |
| Vehicle Maintenance | 401 | Welding | 239 | Machinery | 139 |
| Customer Contact | 364 | Power Tools | 224 | Test Equipment | 137 |
| Electrical Systems | 334 | Roadside Assistance | 202 | Technical Training | 135 |
| Motor Vehicle Operation | 324 | Quality Assurance and Control | 201 | Store Management | 131 |
| Automotive Industry Knowledge | 311 | Schematic Diagrams | 181 | Inspection Records | 129 |
| Lifting Ability | 302 | Manual Dexterity | 165 | Forklift Operation | 124 |
| Sales | 297 | Highway Maintenance | 159 | Suspension Repair | 120 |
| Mechanical Repair | 293 | Retail Industry Knowledge | 156 | Hydraulics | 119 |

*Source: Burning Glass*

**Table 10. Certifications for Automotive Powertrain Occupations in Bay Region (October 2019 - September 2020)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Certification** | **Postings** | **Certification** | **Postings** |
| Driver's License | 3,325 | First Aid CPR AED | 28 |
| Automotive Service Excellence (ASE) Certification | 872 | CDL Class B | 25 |
| Air Brake Certified | 190 | MECP Advanced Certification | 23 |
| CDL Class A | 124 | Environmental Protection Agency Certification | 21 |
| Epa 609 | 45 | OSHA Forklift Certification | 17 |
| Mobile Electronics Certified Professional (MECP) | 39 | Advanced Engine Performance Certified | 14 |
| Mobile Electronics Certified Professional | 39 | Security Clearance | 11 |
| Chrysler Certified | 39 | Project Management Certification | 11 |
| Good Conduct | 36 | Phlebotomy Certification | 11 |
| MECP Basic Installation | 35 | Adjuster License | 10 |
| CDL Class C | 35 | Electric Vehicle Technician (EVT) | 9 |
| Occupational Safety and Health Administration Certification | 31 | American Registry For Diagnostic Medical Sonography (ARDMS) | 9 |

*Source: Burning Glass*

**Table 11. Education Requirements for Automotive Powertrain Occupations in Bay Region**

|  |  |  |
| --- | --- | --- |
| **Education (minimum advertised)** | **Latest 12 Mos. Postings** | **Percent 12 Mos. Postings** |
| High school or vocational training | 2,222 | 97% |
| Associate Degree | 59 | 3% |
| Bachelor’s Degree or Higher | 0 | 0% |

*Source: Burning Glass*

# Methodology

Occupations for this report were identified by use of skills listed in O\*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCO Data Mart.

# Sources

O\*Net Online

Labor Insight/Jobs (Burning Glass)

Economic Modeling Specialists International (EMSI)

CTE LaunchBoard [www.calpassplus.org/Launchboard/](http://www.calpassplus.org/Launchboard/)

Statewide CTE Outcomes Survey

Employment Development Department Unemployment Insurance Dataset

Living Insight Center for Community Economic Development

Chancellor’s Office MIS system

# Contacts

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