

**Labor Market Analysis for Program Recommendation**

**Automotive Occupations**

**Chabot College**

## Prepared by the San Francisco Bay Center of Excellence for Labor Market Research

## August 2023

## Recommendation

Based on all available data, there appears to be an “undersupply” of Automotive workers compared to the demand for this cluster of occupations in the Bay region and in the East Bay sub-region (Alameda, Contra Costa counties). There is a projected annual gap of about 1,953 students in the Bay region and 655 students in the East Bay Sub-Region.

## Introduction

This report provides student outcomes data on employment and earnings for TOP 0947.00 - Diesel 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 Chabot College and in the region.

This report profiles Automotive Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Chabot 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: 36%
* **Bus and Truck Mechanics and Diesel Engine Specialists (49-3031):** Diagnose, adjust, repair, or overhaul buses and trucks, or maintain and repair any type of diesel engines. Includes mechanics working primarily with automobile or marine diesel engines.
  Entry-Level Educational Requirement: High school diploma or equivalent
  Training Requirement: Long-term on-the-job training
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 37%

## Occupational Demand

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

| **Occupation** | **2021 Jobs** | **2026 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Automotive Service Technicians and Mechanics | 14,399 | 14,853 | 454 | 3% | 7,810 | 1,562 | $21 | $28 |
| Bus and Truck Mechanics and Diesel Engine Specialists | 3,588 | 3,899 | 311 | 9% | 2,030 | 406 | $26 | $33 |
| **Total** | **17,987** | **18,752** | **765** | **4%** | **9,840** | **1,968** |  |  |
| Source: Lightcast 2022.3 |
| **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 Occupations in East Bay Sub-region**

| **Occupation** | **2021 Jobs** | **2026 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Automotive Service Technicians and Mechanics | 5,004 | 5,197 | 193 | 4% | 2,711 | 542 | $22 | $28 |
| Bus and Truck Mechanics and Diesel Engine Specialists | 1,181 | 1,221 | 40 | 3% | 593 | 119 | $27 | $33 |
| **Total** | **6,185** | **6,418** | **233** | **4%** | **3,304** | **661** |  |  |
| Source: Lightcast 2022.3 |
| **East Bay Sub-Region includes:** Alameda, 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 (July 2022 - June 2023)**

| **Occupation** | **Bay Region** | **East Bay** |
| --- | --- | --- |
| Automotive Service Technicians and Mechanics | 7,497 | 2,798 |
| Bus and Truck Mechanics and Diesel Engine Specialists | 1,267 | 607 |
| Source: Lightcast |

**Table 4a. Top Job Titles for Automotive Occupations for latest 12 months (July 2022 - June 2023) Bay Region**

| **Title** | **Bay** | **Title** | **Bay** |
| --- | --- | --- | --- |
| Automotive Technicians | 1,022 | General Service Technicians | 120 |
| Diesel Mechanics | 369 | Diesel Technicians/Mechanics | 117 |
| Service Technicians | 316 | Mechanics | 113 |
| Lube Technicians | 236 | Vehicle Technicians | 112 |
| Automotive Mechanics | 209 | Diesel Mechanic Journeymen | 94 |
| Automotive Technicians/Mechanics | 200 | Shop Technicians | 85 |
| Automotive Service Advisors | 197 | Automotive Service Advisors/Writers | 84 |
| Automotive Tire and Lube Technicians | 175 | Technicians | 84 |
| Diesel Mechanic Technicians | 162 | Vehicle Operators | 84 |
| Source: Lightcast |

**Table 4b. Top Job Titles for Automotive Occupations for latest 12 months (July 2022 - June 2023) East Bay Sub-Region**

| **Title** | **East Bay** | **Title** | **East Bay** |
| --- | --- | --- | --- |
| Automotive Technicians | 396 | Diesel Mechanic Technicians | 60 |
| Diesel Mechanics | 165 | Shop Technicians | 55 |
| Service Technicians | 105 | General Service Technicians | 54 |
| Automotive Technicians/Mechanics | 103 | Diesel Technicians/Mechanics | 49 |
| Automotive Tire and Lube Technicians | 102 | Mechanics | 47 |
| Lube Technicians | 75 | Detailers | 40 |
| Automotive Mechanics | 71 | Fleet Mechanics | 36 |
| Diesel Mechanic Journeymen | 69 | Mobile Technicians | 36 |
| Automotive Service Advisors | 63 | Vehicle Service Technicians | 36 |
| Source: Lightcast |

## Industry Concentration

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

| **Industry - 6 Digit NAICS (No. American Industry Classification) Codes** | **Jobs in Industry (2021)** | **Jobs in Industry (2026)** | **% Change (2021-26)** | **% Occupation Group in Industry (2022)** |
| --- | --- | --- | --- | --- |
| General Automotive Repair | 4,830 | 5,130 | 6% | 27% |
| New Car Dealers | 4,498 | 4,822 | 7% | 25% |
| Local Government, Excluding Education and Hospitals | 923 | 937 | 2% | 5% |
| Automotive Parts and Accessories Stores | 486 | 427 | -12% | 2% |
| Automotive Body, Paint, and Interior Repair and Maintenance | 403 | 407 | 1% | 2% |
| Car Washes | 379 | 399 | 5% | 2% |
| Other Automotive Mechanical and Electrical Repair and Maintenance | 364 | 338 | -7% | 2% |
| Used Car Dealers | 282 | 323 | 14% | 2% |
| Federal Government, Military | 282 | 287 | 2% | 2% |
| Tire Dealers | 296 | 264 | -11% | 1% |
| Source: Lightcast 2022.3 |

**Table 6. Top Employers Posting Automotive Occupations in Bay Region and East Bay Sub-Region (July 2022 - June 2023)**

| **Employer** | **Bay** | **Employer** | **East Bay** |
| --- | --- | --- | --- |
| CarMax | 238 | CarMax | 108 |
| Penske Automotive Group | 181 | Lucid Motors | 102 |
| Bridgestone Corporation | 146 | Ac Transit | 66 |
| AutoNation | 118 | Monro Auto Service and Tire Centers | 63 |
| Monro Auto Service and Tire Centers | 112 | AutoNation | 61 |
| Lucid Motors | 105 | Bridgestone Corporation | 61 |
| Source: Lightcast |

## Educational Supply

There are two (2) community colleges in the Bay Region issuing 15 awards on average annually (last 3 years ending 2019-20) on TOP 0947.00 - Diesel Technology. In the East Bay Sub-Region, there is a one (1) community college that issued six (6) awards on average annually (last 3 years) on this TOP code.

**Table 7. Community College Awards on TOP 0947.00 - Diesel Technology in Bay Region**

| **College** | **Subregion** | **Associate Degree** | **High unit Certificate** | **Low unit Certificate** | **Total** |
| --- | --- | --- | --- | --- | --- |
| Alameda | East Bay | 1 | 5 | 0 | 6 |
| Santa Rosa | North Bay | 0 | 1 | 8 | 9 |
| **Total** |  | **1** | **6** | **8** | **15** |
| Source: Data Mart |
| Note: The annual average for awards is 2019-20 to 2021-22. |

## Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 1,968 annual openings for the Automotive occupational cluster and 15 annual (3-year average) awards for an annual undersupply of 1,953 students. In the East Bay Sub-Region, there is also a gap with 661 annual openings and 6 annual (3-year average) awards for an annual undersupply of 655 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0947.00 - Diesel Technology**

| **Metric Outcomes** | **Bay All CTE Programs** | **Chabot All CTE Programs** | **State 0947.00** | **Bay 0947.00** | **East Bay 0947.00** | **Chabot 0947.00** |
| --- | --- | --- | --- | --- | --- | --- |
| Students with a Job Closely Related to Their Field of Study | 74% | 75% | 81% | 80% | N/A | N/A |
| Median Annual Earnings for SWP Exiting Students | $53,090 | $48,800 | $40,990 | $45,646 | $72,056 | N/A |
| Median Change in Earnings for SWP Exiting Students | 24% | 34% | 49% | 57% | 19% | N/A |
| Exiting Students Who Attained the Living Wage | 54% | 56% | 63% | 59% | 75% | N/A |
| Source: Launchboard Strong Workforce Program Median of 2018 to 2021. |

## Skills, Certifications and Education

**Table 9. Top Skills for Automotive Occupations in Bay Region (July 2022 - June 2023)**

| **Skill** | **Posting** | **Skill** | **Posting** |
| --- | --- | --- | --- |
| Automotive Services | 1,973 | Vehicle Inspection | 777 |
| Brakes | 1,519 | Tires | 684 |
| Suspension (Vehicle) | 1,483 | Electrical Systems | 654 |
| Diesel Engines | 1,058 | Preventive Maintenance | 553 |
| Changing Oil | 1,030 | Batteries | 481 |
| Vehicle Maintenance | 953 | Power Tool Operation | 473 |
| Mechanics | 930 | Tire Repairs | 421 |
| HVAC | 904 | Machinery | 419 |
| Hand Tools | 821 | Engine Repair | 402 |
| Transmission | 788 | Oil And Gas | 387 |
| Source: Lightcast |

**Table 10. Certifications for Automotive Occupations in Bay Region (July 2022 - June2023)**

| **Certification** | **Posting** | **Certification** | **Posting** |
| --- | --- | --- | --- |
| Valid Driver's License | 4,134 | Forklift Certification | 48 |
| Automotive Service Excellence (ASE) Certification | 1,667 | DOT Certification | 27 |
| Commercial Driver's License (CDL) | 415 | Transportation Worker Identification Credential (TWIC) Card | 23 |
| Passenger Endorsement | 135 | ASE Advanced Engine Performance Certification | 18 |
| CDL Class A License | 81 | 10-Hour OSHA General Industry Card | 12 |
| CDL Class B License | 78 | Aerial Lift Certification | 12 |
| CDL Class C License | 54 |  |  |
| Source: Lightcast |

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

| **Education Level** | **Job Postings** | **% of Total** |
| --- | --- | --- |
| High school or GED | 3,340 | 75% |
| Associate degree | 338 | 8% |
| Bachelor's degree & higher | 789 | 17% |
| Source: Lightcast |
| Note: 55% of records have been excluded because they do not include a degree level. As a result, the chart above may not be representative of the full sample. |

## Methodology

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

## Sources

O\*Net Online
Lightcast
CTE LaunchBoard 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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