



Equipment Technician Certificate of Achievement (TOP: 0116.00 - Agricultural Power Equipment Technology)

June 2019

Prepared by the South Central Coast Center of Excellence for Labor
Market Research

Program Recommendation

This report was compiled by the South Central Coast¹ Center of Excellence to provide regional labor market data for the program recommendation – Equipment Technician Certificate of Achievement. This report can help determine whether there is demand in the local labor market that is not being met by the supply from programs of study (CCC and non-CCC) that align with this occupation group.

Key Findings

- In the South Central Coast region, the number jobs related to Agricultural Power Equipment Technology is expected to increase slightly over the next five years.
- Occupations considered in this report are anticipated to experience a high risk of automation.
- In 2017 there were 16 regional completions in programs related to the occupations identified as related to Agricultural Power Equipment Technology and 127 openings indicating an undersupply.
- Typical entry-level education is a high school diploma or equivalent for occupations considered in this report.
- Completers of regional Agricultural Power Equipment Technology programs (TOP 0116.00) from the 2015-2016 academic year had a median annual wage upon completion of \$28,822.
- 66% of students are earning a living.
- 69% of students are employed within a year after completing a program.

¹ The South Central Coast Region consists of San Luis Obispo County, Santa Barbara County, Ventura County, and the following cities from North Los Angeles County: Canyon Country, Castaic, Lake Hughes, Lancaster, Littlerock, Llano, Newhall, Palmdale, Pearblossom, Santa Clarita, Stevenson Ranch, and Valencia.

Occupation Codes and Descriptions

Currently, there are two occupations in the standard occupational classification (SOC) system that are related to Agricultural Power Equipment Technology. The occupation titles and descriptions, as well as reported job titles are included in Exhibit 1.

Exhibit 1 – Occupation, description, and sample job titles

SOC Code	Title	Description	Sample of Reported Job Titles
49-3041	Farm Equipment Mechanics and Service Technicians	Diagnose, adjust, repair, or overhaul farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.	Agricultural Mechanic, Agricultural Technician, Agriculture Mechanic, Farm Equipment Mechanic, Farm Equipment Service Technician, Field Technician, Mechanic, Service Technician, Tractor Mechanic, Tractor Technician
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	Diagnose, adjust, repair, or overhaul mobile mechanical, hydraulic, and pneumatic equipment, such as cranes, bulldozers, graders, and conveyors, used in construction, logging, and surface mining.	Construction Equipment Mechanic, Equipment Mechanic, Equipment Technician, Field Mechanic, Field Service Technician, Field Technician, Heavy Equipment Mechanic, Heavy Equipment Technician, Mechanic, Mobile Heavy Equipment Mechanic

Source: O*NET Online

Current and Future Employment

In the South Central Coast region, the number of jobs related to Agricultural Power Equipment Technology is expected to increase slightly over the next five years. Exhibit 2 contains detailed employment projection data for these occupations.

Exhibit 2 – Five-year projections for Agricultural Power Equipment Technology in the South Central Coast region

SOC	Occupation	2018 Jobs	2023 Jobs	2018-2023 Change	2018-2023 % Change
49-3041	Farm Equipment Mechanics and Service Technicians	136	150	14	10%
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	935	954	19	2%

Source: Economic Modeling Specialists International (EMSI)

Earnings

In the South Central Coast region, the average wage for the listed occupations is \$26.63 per hour.

Exhibit 3 contains hourly wages and annual average earnings for these occupation. Entry-level hourly earnings is represented by the 25th percentile of wages, median hourly earnings is represented by the 50th percentile of wages, and experienced hourly earnings is represented by the 75th percentile of wages, demonstrating various levels of employment.

Exhibit 3 – Earnings for Agricultural Power Equipment Technology in the South Central Coast region

SOC	Occupation	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
49-3041	Farm Equipment Mechanics and Service Technicians	\$14.65	\$16.92	\$19.95
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	\$22.77	\$27.62	\$32.53

Source: Economic Modeling Specialists International (EMSI)

Employer Job Postings

In this research brief, real-time labor market information is used to provide a more nuanced view of the current job market, as it captures job advertisements for occupations relevant to the field of study. Employer job postings are consulted to understand who is employing within the field of Agricultural Power Equipment Technology, and what they are looking for in potential candidates. To identify job postings related to Agricultural Power Equipment Technology, the following standard occupational classifications were used:

49-3041	Farm Equipment Mechanics and Service Technicians
49-3042	Mobile Heavy Equipment Mechanics, Except Engines

Top Occupations

In 2018, there were 83 employer postings for occupations related to Agricultural Power Equipment Technology.

Exhibit 4 – Top occupations in job postings and risk of automation tables

SOC Code	Occupation	Job Postings, Full Year 2018
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	80
49-3041	Farm Equipment Mechanics and Service Technicians	3

Source: Labor Insight/Jobs (Burning Glass)

SOC Code	Occupation	Risk of Automation
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	High
49-3041	Farm Equipment Mechanics and Service Technicians	High

Source: Labor Insight/Jobs (Burning Glass)

Top Titles

The top job titles for employers posting ads for jobs related to Agricultural Power Equipment Technology are listed in Exhibit 5. Heavy Equipment Mechanic is mentioned as the job title in 48% of all relevant job postings (40 postings).

Exhibit 5 –Job titles

Title	Job Postings, Full Year 2018
Heavy Equipment Mechanic	40
Equipment Mechanic	26
Mechanic	8
Equipment Technician	5
Field Service Technician	3
Diesel Mechanic	1

Source: Labor Insight/Jobs (Burning Glass)

Top Employers

Exhibit 6 lists the major employers hiring professionals in the Agricultural Power Equipment Technology field. The top employer posting job ads was Waste Management. The top worksite cities in the region for these occupations were Santa Maria, Oxnard, Ventura, San Luis Obispo, and Lompoc.

Exhibit 6 – Top employers (n=63)

Employer	Job Postings, Full Year 2018
Waste Management	11
Mechanics Hub	10
US Air Force	7
Altec Industries	6
Ahern Rentals	4

Source: Labor Insight/Jobs (Burning Glass)

Skills

Repair is the most sought after skill for employers hiring for jobs related to Agricultural Power Equipment Technology.

Exhibit 7 –Job skills (n=71)

Skills	Job Postings, Full Year 2018
Repair	81
Heavy Equipment	47
Electrical Systems	22
Welding	16
Backhoes	15

Source: Labor Insight/Jobs (Burning Glass)

Industry Concentration

Exhibit 9 shows the industries where most equipment technicians are employed in the South Central Coast region. Note: 40% of records have been excluded because they do not include an industry. As a result, the chart below may not be representative of the full sample.

Exhibit 9 – Industries employing for Agricultural Power Equipment Technology, 2018

Industry	Occupation Group Jobs in Industry	% of Occupation Group in Industry
Administrative and Support and Waste Management and Remediation Services	11	22%
Manufacturing	11	22%
Public Administration	11	22%
Real Estate and Rental and Leasing	7	14%
Health Care and Social Assistance	3	6%

Source: Labor Insight/Jobs (Burning Glass)

Education and Training

Exhibit 10 shows the typical entry-level education requirement for the occupations of interest, along with the typical on-the-job training needed to attain competency in the occupation.

Exhibit 10 – Education and training requirements

SOC	Occupation	Typical entry-level education	Typical on-the-job training
49-3041	Farm Equipment Mechanics and Service Technicians	High school diploma or equivalent	Long-term on-the-job training
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	High school diploma or equivalent	Long-term on-the-job training

Source: Bureau of Labor Statistics Employment Projections (Educational Attainment)

Regional Completions and Openings

There were 16 regional completions (2017) and 127 regional openings (2017) in the South Central Coast region in programs related to the occupations identified as related to Agricultural Power Equipment Technology.

Exhibit 11 – Completions and Openings

2 Regional Institutions had Related Programs (2017)	16 Regional Completions (2017)	127 Annual Openings (2017)
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Source: Economic Modeling Specialists International (EMSI)

Related Programs

CIP Code	Program	Completions (2017)
01.0201	Agricultural Mechanization, General	16
47.0302	Heavy Equipment Maintenance Technology/Technician	0

Source: Economic Modeling Specialists International (EMSI)

Student Outcomes

The CTE LaunchBoard provides student outcome data on the effectiveness of CTE programs. The following student outcome information was collected from exiters of the Agricultural Power Equipment Technology program (TOP Code: 0116.00) statewide for the 2015-16 academic year.

- The median annual wage for students after exiting is \$28,822
- Starting salary in the region for Mobile Heavy Equipment Mechanics, Except Engines is \$55,765
- 66% of students are earning a living wage
- 69% of students are employed within a year after completing a program

Source: CTE LaunchBoard

Sources

O*Net Online, Labor Insight/Jobs (Burning Glass), Economic Modeling Specialists International (EMSI), MIT Living Wage Calculator, Bureau of Labor Statistics (BLS) Education Attainment, California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart, CTE LaunchBoard, Statewide CTE Outcomes Survey, Employment Development Department Unemployment Insurance Dataset

Notes

Data included in this analysis represents the labor market demand for positions most closely related to Agricultural Power Equipment Technology. Traditional labor market information was used to show current and projected employment based on data trends, as well as annual average awards granted by regional community colleges. Real-time labor market information captures job post advertisements for occupations relevant to the field of study and should not be used to establish current job openings, because the numbers may include duplicate job postings or postings intended to gather a pool of applicants. Real-time labor market information can signal demand and show what employers are looking for in potential employees, but is not a perfect measure of the quantity of open positions.