



**ECONOMIC &
WORKFORCE
DEVELOPMENT**
through the
CALIFORNIA
COMMUNITY
COLLEGES

**BUSINESS AND WORKFORCE
PERFORMANCE IMPROVEMENT INITIATIVE**



**Occupational Profile Report for
Riverside and San Bernardino Counties**

Motorcycle Mechanics

At-a-Glance



Center of Excellence

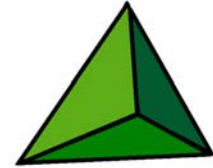
San Bernardino Community College District

June 2007



**ECONOMIC &
WORKFORCE
DEVELOPMENT**
through the
CALIFORNIA
COMMUNITY
COLLEGES

**BUSINESS AND WORKFORCE
PERFORMANCE IMPROVEMENT INITIATIVE**



Strategic Possibility for Inland Empire Community Colleges

Motorcycle Mechanics

June 2007

Prepared By:

Kevin Fleming

Center of Excellence, EWD Region 9

Riverside and San Bernardino Counties

San Bernardino Community College District

114 S. Del Rosa Avenue, San Bernardino, CA 92408

Phone: (909) 382-4037 Fax: (909) 382-6005

kflaming@sbccd.cc.ca.us

www.ccewd.net

THE BUSINESS AND WORKFORCE PERFORMANCE IMPROVEMENT INITIATIVE IS FUNDED IN PART BY THE CHANCELLOR'S OFFICE, CALIFORNIA COMMUNITY COLLEGES, ECONOMIC AND WORKFORCE DEVELOPMENT PROGRAM. THE TOTAL GRANT AMOUNT (GRANT NUMBER 06-305-013 FOR \$205,000) REPRESENTS COMPENSATION FOR MULTIPLE DOCUMENTS OR WRITTEN REPORTS THROUGH THE CENTERS OF EXCELLENCE.

OUR MISSION IS TO STRENGTHEN CALIFORNIA'S WORKFORCE AND ADVANCE ECONOMIC GROWTH THROUGH EDUCATION, TRAINING AND JOB DEVELOPMENT.

Table of Contents

Executive Summary	4
Introduction.....	5
Occupation Description	5
Knowledge, Skills, & Abilities.....	6
Tasks & Activities	8
Occupation Specific Tasks.....	8
Generalized Work Activities	8
Detailed Work Activities	9
Work Style Requirements.....	10
Earnings	11
California Employment	11
Regional Employment Projections.....	13
Related Occupations	14
Motorcycle Sales & Registrations.....	14
Employer Profile	15
Education/Certifications.....	16
Conclusion.....	17
References	18
Appendices	
A: How to Use this Report	19
B: GIS Map: Inland Empire Potential Employers	20
C. Titles & Data Descriptors	21
D: Training Providers in California	22
E: Training Providers Nationwide.....	24
F: California Motorcycle Registrations 1915 - 2005	26
G: Regional Employer Analysis	27

California is currently home to an estimated 3,117 Motorcycle Mechanics. Only a 7.43% increase is projected between 2006-2010 resulting in 232 additional jobs statewide and only 40 additional jobs in the Inland Empire.

– Source: CC Benefits, 2007

Executive Summary

When analyzing both public and private data sources, the Inland Empire is home to an estimated 282 Motorcycle Mechanics evenly split between San Bernardino and Riverside Counties. However, only a projected 321 mechanics will be needed in 2010 yielding a net increase of only 40 Motorcycle Mechanics within the region.

As expected, 84% of the 529 regional employers of Motorcycle Mechanics are small “mom and pop” garages with 3, or less, employees. Industry representatives stated that this occupation is primarily learned on-the-job within family-owned and operated businesses. Moreover, there are six existing certificate and degree programs for Motorcycle Mechanics throughout the state with a seventh emerging in Fall 2007 in San Diego (see Appendix D). At the printing of this report, these programs collectively enroll more than 400 students statewide. At this pace, the existing programs will supply more than the projected need of 321 mechanics by 2010 even when accounting for replacement jobs.

Thus, at this time, there is not a significant economic impact, industry need, nor concentration of employers to warrant a community college response in the Inland Empire. However, if the sales of motorcycles increase along with the Inland Empire population in the years to come and/or if the new program at SD Miramar College becomes impacted, this program opportunity should be revisited. Any college seriously considering starting a Motorcycle Technician program should reference *A Blueprint For The Establishment of a Community College Motorcycle Maintenance Program* as discussed on page 17.



Introduction

The purpose of a Strategic Possibility Report is to determine if the workforce needs of a particular industry or occupation warrant an organized response from local community colleges. Five main criteria are used to establish the value of a Strategic Possibility including: size, relevance, economic impact, high growth, and leveraging. A Strategic Possibility report identifies industries and occupations that meet some, but not all, of the aforementioned criteria. While a response may be appropriate for a specific college, a strategic response from multiple districts within a region is not warranted.

The focus of this study is solely the Motorcycle Mechanic occupation. This report does not take into account off-road vehicles, motorcycle safety classes, or agricultural vehicles (each of which may require specific, future investigation).

Occupation Description¹

Motorcycle Mechanics diagnose, adjust, repair, and overhaul motorcycles - but they also work on motor scooters, mopeds, dirt bikes, all-terrain vehicles and similar motor vehicles. Mechanics often service just a few makes and models of motorcycles, because most work for dealers that service only the products they sell.

Mechanics listen to engines, examines a vehicle's frame, and confers with customer to determine the nature and extent of a malfunction or damage. They connect test panels to engines and measure generator output, ignition timing, and other engine performance indicators. Mechanics dismantle engines and repairs/replaces defective parts, such as magnetos, carburetors, and generators. They remove cylinder heads, grinds valves, scrapes off carbon, and replaces defective valves, pistons, cylinders, and rings using both hand tools and power tools.

They may also hammer out dents and bends in frames, weld tears and breaks, and reassemble and reinstall engines. Mechanics repair and adjust clutches, brakes, and drive chains. They also repair or replace other motorcycle and motor scooter parts, such as spring forks, headlights, horns, handlebar controls, valve releases, gear levers, gasoline and oil tanks, starters, brake levers, and mufflers. Some mechanics may specialize in the repair of motor scooters and be designated as a Motor-Scooter Repairer. There is a distinction between a Motorcycle Mechanics and a small engine (e.g. lawn mower) mechanic or hobbyist.

¹ Bureau of Labor Statistics

Knowledge, Skills, & Abilities²

The most important knowledge, skills, and abilities for Motorcycle Mechanics are:

Knowledge:

- **Mechanical** — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- **Customer and Personal Service** — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
- **Design** — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
- **Computers and Electronics** — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
- **Mathematics** — Basic knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
- **Production and Processing** — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

Skills:

- **Repairing** — Repairing machines or systems using the needed tools.
- **Troubleshooting** — Determining the causes of operating errors and deciding what to do about it.
- **Equipment Maintenance** — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- **Active Learning** — Understanding the implications of new information for both current and future problem-solving and decision-making.
- **Equipment Selection** — Determining the kind of tools and equipment needed to do a job.
- **Reading Comprehension** — Understanding written sentences and paragraphs in work related documents.
- **Complex Problem Solving** — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- **Active Listening** — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- **Installation** — Installing equipment, machines, wiring, or programs to meet specifications.
- **Critical Thinking** — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

² Source: O*Net online



Abilities:

- **Manual Dexterity** — The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
- **Arm-Hand Steadiness** — The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
- **Hearing Sensitivity** — The ability to detect or tell the differences between sounds that vary in pitch and loudness.
- **Problem Sensitivity** — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- **Deductive Reasoning** — The ability to apply general rules to specific problems to produce answers that make sense.
- **Inductive Reasoning** — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
- **Near Vision** — The ability to see details at close range (within a few feet of the observer).
- **Oral Comprehension** — The ability to listen to and understand information and ideas presented through spoken words and sentences.
- **Control Precision** — The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
- **Finger Dexterity** — The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.

Tasks and Activities³

Specific tasks and the most important generalized work activities for Motorcycle Mechanics include:

Occupation Specific Tasks:

- Repair and adjust motorcycle subassemblies such as forks, transmissions, brakes, and drive chains, according to specifications.
- Replace defective parts, using hand tools, arbor presses, flexible power presses, or power tools.
- Connect test panels to engines and measure generator output, ignition timing, and other engine performance indicators.
- Listen to engines, examine vehicle frames, and confer with customers in order to determine nature and extent of malfunction or damage.
- Reassemble and test subassembly units.
- Dismantle engines and repair or replace defective parts, such as magnetos, carburetors, and generators.
- Remove cylinder heads, grind valves, and scrape off carbon, and replace defective valves, pistons, cylinders and rings, using hand tools and power tools.
- Repair or replace other parts, such as headlights, horns, handlebar controls, gasoline and oil tanks, starters, and mufflers.
- Disassemble subassembly units and examine condition, movement or alignment of parts visually or using gauges.
- Hammer out dents and bends in frames, weld tears and breaks; then reassemble frames and reinstall engines.

Generalized Work Activities:

- Operating Vehicles, Mechanized Devices, or Equipment — Running, maneuvering, navigating, or driving vehicles and mechanized equipment.
- Getting Information — Observing, receiving, and otherwise obtaining information from all relevant sources.
- Repairing and Maintaining Mechanical Equipment — Servicing, repairing, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily on the basis of mechanical (not electronic) principles.
- Handling and Moving Objects — Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Identifying Objects, Actions, and Events — Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.

³ Source: O*Net online

- Inspecting Equipment, Structures, or Material — Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Controlling Machines and Processes — Using either control mechanisms or direct physical activity to operate machines or processes (in addition to computers).
- Making Decisions and Solving Problems — Analyzing information and evaluating results to choose the best solution and solve problems.
- Performing for, or Working Directly with, the Public — Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
- Analyzing Data or Information — Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

Detailed Work Activities:

- adhere to safety procedures
- adjust or set mechanical controls or components
- align or adjust clearances of mechanical components or parts
- align or adjust clearances of vehicle body parts or components
- assemble, dismantle, or reassemble equipment or machinery
- conduct tests to locate mechanical system malfunction
- determine installation, service, or repair needed
- diagnose malfunctioning vehicle systems
- diagnose mechanical problems in machinery or equipment
- estimate time or cost for installation, repair, or construction projects
- fabricate, assemble, or disassemble manufactured products by hand
- follow safe waste disposal procedures
- follow vehicle repair procedures
- identify properties of metals for repair or fabrication activities
- inspect machinery or equipment to determine adjustments or repairs needed
- maintain repair records
- maintain welding machines or equipment
- move or fit heavy objects
- observe or listen to machinery or equipment operation to detect malfunctions
- obtain information from clients, customers, or patients
- operate vehicle engine electrical system test equipment
- overhaul vehicle major operating units, such as engines or transmissions
- perform safety inspections in industrial, manufacturing or repair setting
- read schematics
- read specifications
- read technical drawings
- read vehicle manufacturer's specifications
- read work order, instructions, formulas, or processing charts
- repair or replace electrical wiring, circuits, fixtures, or equipment
- repair or replace malfunctioning or worn mechanical components
- repair vehicle body parts
- service vehicle with water, fuel, or oil
- set up and operate variety of machine tools
- solder vehicle components

- test mechanical products or equipment
- test operate vehicles before or after repair
- understand service or repair manuals
- understand technical operating, service or repair manuals
- use 2-cycle engine technology
- use acetylene welding/cutting torch
- use arc welding equipment
- use auto or vehicular body repair equipment
- use combination welding procedures
- use electrical or electronic test devices or equipment
- use electronic calibration devices
- use engine diagnostic equipment
- use hand or power tools
- use knowledge of metric system
- use knowledge of welding filler rod types
- use machine tools in installation, maintenance, or repair
- use oral or written communication techniques
- use pneumatic tools
- use precision measuring devices in mechanical repair work
- use voltmeter, ammeter, or ohmmeter
- weld together metal parts, components, or structures
- write vehicle damage repair estimates

Work Style Requirements

- **Attention to Detail** — Job requires being careful about detail and thorough in completing work tasks.
- **Dependability** — Job requires being reliable, responsible, and dependable, and fulfilling obligations.
- **Integrity** — Job requires being honest and ethical.
- **Initiative** — Job requires a willingness to take on responsibilities and challenges.
- **Persistence** — Job requires persistence in the face of obstacles.
- **Stress Tolerance** — Job requires accepting criticism and dealing calmly and effectively with high stress situations.
- **Achievement/Effort** — Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
- **Adaptability/Flexibility** — Job requires being open to change (positive or negative) and to considerable variety in the workplace.
- **Independence** — Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
- **Analytical Thinking** — Job requires analyzing information and using logic to address work-related issues and problems.

Earnings⁴

Salaries for Motorcycle Mechanics and Technicians vary greatly depending on experience, location within the state, and level of responsibility.

Median annual earnings within the Inland Empire were \$34,600 in May 2005. Hourly wages, however, vary between \$11.35 and \$27.91. The San Bernardino WIB has identified a living wage within the Inland Empire of \$13.00/hour.

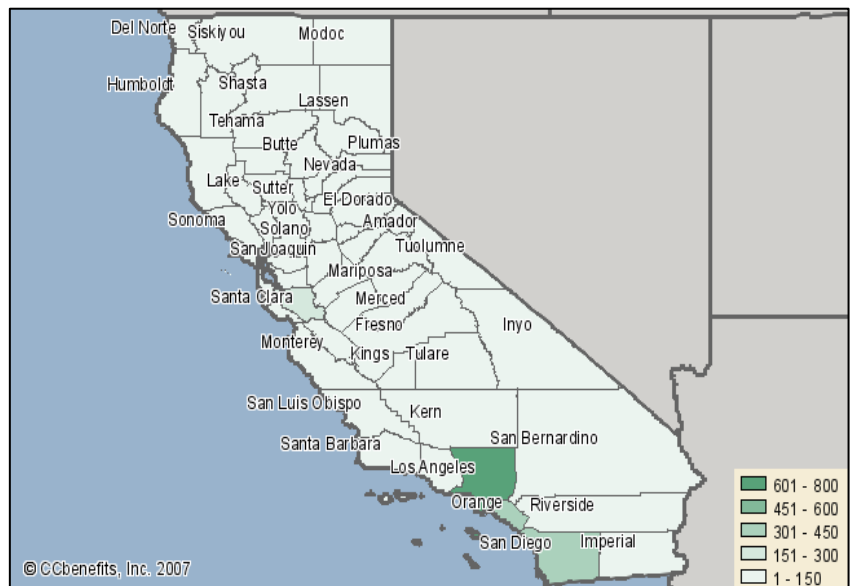
Location	Pay Period	2005				
		10%	25%	Median	75%	90%
United States	Hourly	\$9.00	\$11.21	\$14.16	\$18.05	\$22.71
	Yearly	\$18,700	\$23,300	\$29,500	\$37,500	\$47,200
California	Hourly	\$10.88	\$13.59	\$17.62	\$22.69	\$26.68
	Yearly	\$22,600	\$28,300	\$36,600	\$47,200	\$55,500
Riverside-San Bernardino-Ontario, CA MSA	Hourly	\$11.35	\$14.93	\$16.65	\$19.81	\$27.91
	Yearly	\$23,600	\$31,100	\$34,600	\$41,200	\$58,100

California Employment⁵

When analyzing both public and private data sources (not just the state's Labor Market Information), California is currently home to an estimated 3,117 Motorcycle Mechanics. Only a 7.43% increase is projected between 2006-2010 resulting in 232 additional jobs.

From the 3,117 jobs in 2006, the largest concentration of jobs are located within Los Angeles County (766), followed by San Diego (305), and Orange Counties (326). The Inland Empire does not employ a large concentration of Motorcycle Mechanics comparatively within the state.

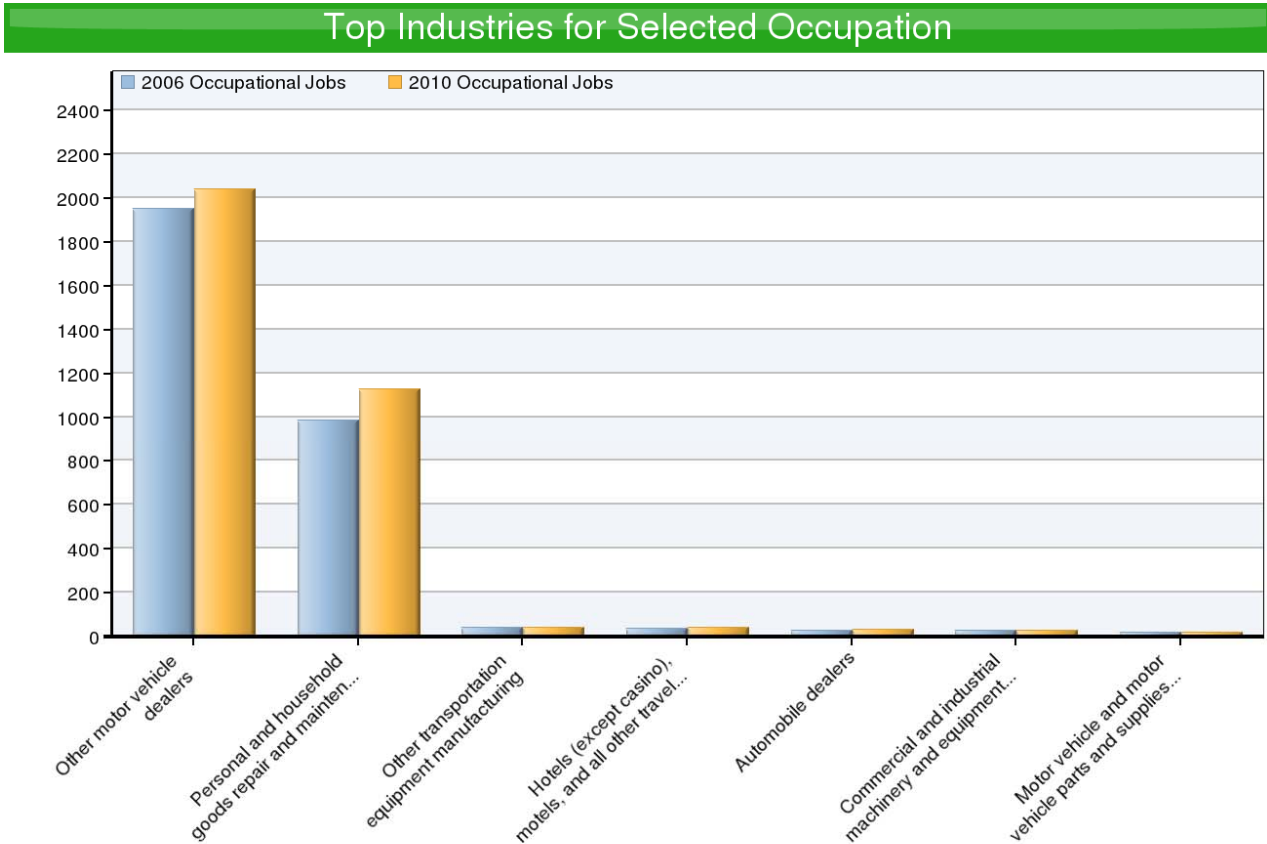
Motorcycle Mechanics 2006 - 2010	
2006 CA Jobs	3,117
2010 CA Jobs	3,348
Total Change	232
Total % Change	7.43%



⁴ Source: Bureau of Labor Statistics, LMID

⁵ Source: Occupational Employment Statistics Survey, LMID, and 65 other sources via EMSI's CC Benefits.

When evaluating which industries currently hire Motorcycle Mechanics, the top two industries are “Other Motor Vehicle Dealers” (North American Industry Classification System #44120) and the “Personal and Household Goods Repair and Maintenance” sector (North American Industry Classification System #81140). The projections for both of these industries within California is very moderate within the next 4 years.



Source: CCbenefits, 2007

California Projections

NAICS Code	Industry Title	2006 Jobs	2010 Jobs	Change	% Change
44120	Other motor vehicle dealers	1,952	2,038	86	4%
81140	Personal and household goods repair and maintenance	989	1,127	138	14%
33690	Other transportation equipment manufacturing	41	42	1	2%
7211A	Hotels (except casino), motels, and all other traveler accommodation	34	39	5	15%
44110	Automobile dealers	28	31	3	11%
81130	Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance	26	27	1	4%
42310	Motor vehicle and motor vehicle parts and supplies merchant wholesalers	16	16	0	0%

Regional Employment Projections⁶

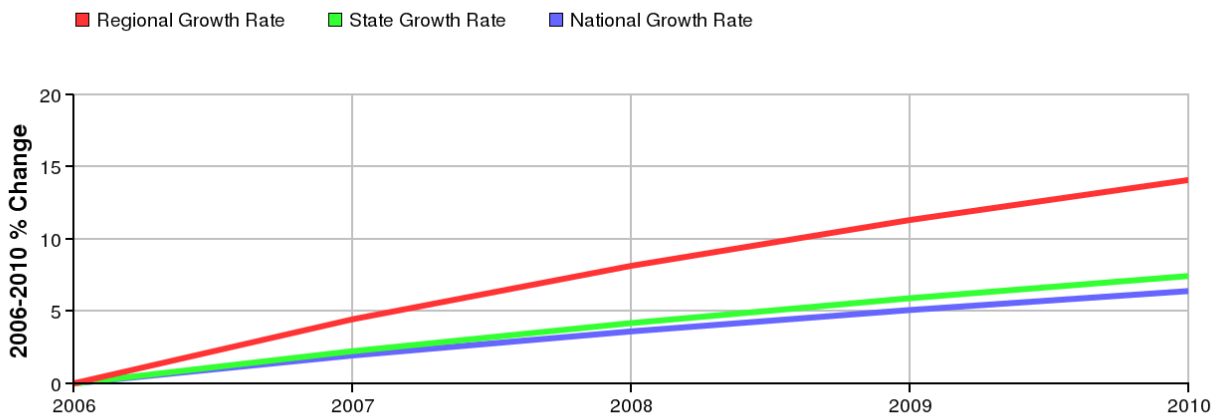
When analyzing both public and private data sources (in addition to the state's Labor Market Information), the Inland Empire is home to an estimated 282 Motorcycle Mechanics. (San Bernardino County = 142 jobs. Riverside County = 140 jobs).

Given population and aging trends, demographics, and even factoring for the increasing popularity of motorcycles within the baby boomer generation, only a projected 321 mechanics will be needed in 2010.

Motorcycle Mechanics 2006 - 2010	
2006 IE Jobs	282
2010 IE Jobs	321
Total Change	40
Total % Change	14.08%

Even with the staggering population growth the Inland Empire will experience in the future, the Inland Empire's anticipated need for Motorcycle Mechanics is just 40 additional jobs. Perhaps if employment projections were to significantly change in the future, the Inland Empire would be a justified location as opposed to other regions within California. However, with existing programs in Los Angeles and Glendora, with one program forthcoming in San Diego, a program in the Inland Empire is not warranted nor recommended at this time.

Occupational Change Summary



Source: CCbenefits, 2007

Region	2006 Jobs	2010 Jobs	Change	% Change	Hourly EPW
Regional Total	282	321	40	14%	\$16.65
State Total	3,117	3,348	232	7%	\$16.68
National Total	25,432	27,057	1,625	6%	\$13.80

⁶ Source: Bureau of Labor Statistics, Occupational Employment Statistics Survey, LMID, and 65 other sources via EMSI.

Related Occupations

Often times in developing a new program, the question of relatable and transferable skills arises. From what occupations could we find candidates that would make good Motorcycle Mechanics after some initial training? Into what occupations could a person advance after becoming a Motorcycle Mechanic? The research suggests that related occupational profiles and career paths with similar skill requirements include:

- Bicycle Repairers
- Bus and Truck Mechanics and Diesel Engine Specialists
- Electric Motor, Power Tool, and Related Repairers
- Heating, Air Conditioning, and Refrigeration Mechanics and Installers
- Home Appliance Repairers
- Locksmiths and Safe Repairers
- Motorboat Mechanics
- Outdoor Power Equipment and Other Small Engine Mechanics



Motorcycle Sales & Registrations

One factor that will obviously influence the projected need of motorcycle mechanics is the retail sales figures of motorcycles within California. Naturally, more bikes on the road equates to more mechanics needed. Statistics reported by the Motorcycle Industry Council indicate that an estimated 166,280 new motorcycles were sold in California in 2005.⁷ This represented 14.47% of all new motorcycle retail sales in the United States for that year. (Data from previous years was not available from the MIC for comparison).

According to the US Department of Transportation's Federal Highway Administration, 675,336 motorcycles (private, commercial, and publicly owned) were registered in California in 2005 compared to 532,053 in 1995.⁸ Following a sharp decline in motorcycle registrations throughout the 1990s (See Appendix F) California has experienced a sharp increase in motorcycle registrations since 1998. This has resulted with increased motorcycles on the roads and highways. Assumedly, this is a combined result of population growth and increasing gas prices. The rate of motorcycle sales and registrations should continue to be monitored as an indicator of projected motorcycle technician needs.

⁷ 2005 MIC Retail Sales Report, Motorcycle Industry Council, Inc. Irvine California, January 2006.

⁸ Office of Highway Policy Information reports (<http://www.fhwa.dot.gov/policy/ohpi/qfvehicles.htm>)

Employer Profile

When analyzing Inland Empire companies that would potentially hire Motorcycle Mechanics, they primarily fall into two different industries:

All Other Motor Vehicle Dealers (441229)

This U.S. industry comprises establishments primarily engaged in retailing new and/or used utility trailers and vehicles (except automobiles, light trucks, recreational vehicles, motorcycles, boats, motor scooters, motorbikes, off-road all-terrain vehicles, and personal watercraft) or retailing these new vehicles in combination with activities, such as repair services and selling replacement parts and accessories.

Other Personal and Household Goods Repair and Maintenance (811490)

This industry comprises establishments primarily engaged in repairing and servicing personal or household-type goods without retailing new personal and household-type goods (except home and garden equipment, appliances, furniture, and footwear and leather goods). Establishments in this industry repair items, such as garments; watches; jewelry; musical instruments; bicycles and motorcycles; motorboats, canoes, sailboats, and other recreational boats.

According to InfoUSA (a private employer database) there were 529 employers within these two industries within the Inland Empire in 2006. These companies employed 2,419 employees (within all occupations) and declared a combined \$449,026,000 in sales for 2005. However, as expected, most of these 529 employers are small "mom and pop" garages with less than 3 employees.

Size Distribution of Employers within the Inland Empire

<i>Employee Size of Firm</i>	<i>No. of Firms</i>	<i>% of total</i>	<i>Total Number of Employees</i>	<i>Employment % of total</i>
1	187	35.4%	187	7.7%
2 - 3	256	48.4%	689	28.5%
4 - 6	34	6.4%	166	6.8%
7 - 10	17	3.2%	148	6.1%
11 - 50	27	5.1%	515	21.3%
50+	8	1.5%	714	29.6%
<i>Total</i>	<i>529</i>	<i>100%</i>	<i>2,419</i>	<i>100%</i>

Source: Info USA 2005 data (Issued 2006)

Within these industries, the 8 largest employers in the Inland Empire are:

LIPPERT COMPONENTS INC	RIALTO	60	employees
AZ-TEX TRAILERS	FONTANA	75	employees
ACTRON MANUFACTURING INC	CORONA	80	employees
UPLAND FAMILY FUN CTR	UPLAND	80	employees
AIRCRAFT SPRUCE & SPECIALTY	CORONA	90	employees
VALEW WELDING	ADELANTO	99	employees
GENERAL ATOMICS	ADELANTO	100	employees
MISSION AVIATION	REDLANDS	130	employees

Education/Certifications

Motorcycle Mechanics usually need one or two years of training involving both on-the-job experience and informal training with experienced workers to be successful. The most common instructional program related to this occupation is entitled: *Motorcycle Maintenance and Repair Technology/Technician*.

Distribution of Educational Attainment

Occupation	Percent of employees aged 25 to 44 in the occupation whose highest level of educational attainment is-		
	High School or Less	Some College	Bachelor Degree or More
Motorcycle Mechanics	59.6%	33.5%	6.9%
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	66.6%	27.5%	5.9%
Installation, Maintenance, and Repair	54.2%	37.3%	8.5%
Total, All Related Occupations	40.5%	27.4%	32%

There are no state certificates or licensing requirements to gain employment as a Motorcycle Mechanic. However, in addition to general training courses, there are Manufacturer-branded technician training program offerings that could aid in gaining employment. Dealers can send mechanics to gain certifications directly from the manufacturer; from which annual 1-2 classes are offered teaching model changes and providing upgrade skill training. These programs are sponsored by:

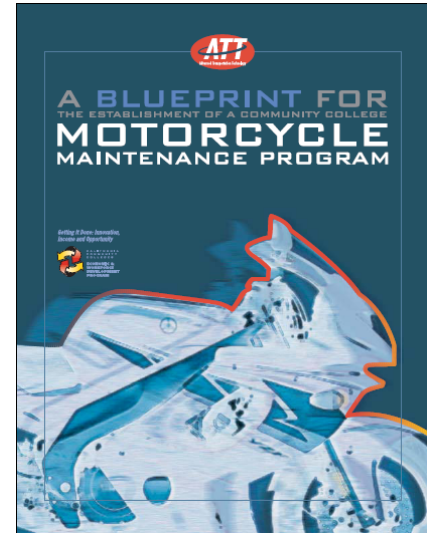
- American Honda Motor Co. Inc.
- American Suzuki Motor Corporation
- BMW Motorrad, USA
- Harley-Davidson Motor Co.⁹
- Kawasaki Motors Corp., USA
- Yamaha Motor Corp., USA

There are six existing training and degree programs for Motorcycle Mechanics throughout the state, and a seventh will begin in Fall 2007 (see Appendix D). Four are located throughout Southern California and three are located within Northern California. This provides a great geographical spread of programs for California residents. Personal interviews indicate that the number of existing programs is sufficient in light of the projected need. **There are over 400 students currently enrolled in Motorcycle Technician programs statewide.** At this pace, the seven existing programs will supply more than the projected statewide need of 321 motorcycle mechanics by 2010 (also accounting for those that enroll for personal use not for

⁹ Harley-Davidson owns the Motorcycle Mechanics Institute, so while they may be supportive of new programs in California, they are in direct competition for students via MMI's Arizona campus.

career advancement). However, if motorcycle retail sales and the corresponding registration numbers increase in the years to come (and/or if the new program at San Diego Miramar College becomes impacted) this program opportunity should be revisited.

The Advanced Transportation Technologies and Energy (ATTE) Initiative through the California Community College's Economic and Workforce Development Program have experienced some success at Sacramento City College with their Motorcycle Maintenance Technology Program. In 2004, Peter Davis, Phil Cypret and Ed Gallup wrote a proposal called *A Blueprint For The Establishment of a Community College Motorcycle Maintenance Program*, or The Blue Book, which was sent to all the California Community Colleges. It is a step-by-step guide to setting up a Motorcycle Program parallel to SCC's. In 2005, they wrote another book, *The Motorcycle Curriculum Guide* or Red Book, which includes a completely upgraded and updated version of SCC's Motorcycle curriculum, our DACUM study and DACUM guide, and Approval Data was designed for use by any CCC interested in working with SCC to develop their own Motorcycle Program to provide their students with the best training and their local industry with qualified motorcycle technicians.¹⁰ For more information or for a copy of the Blue Book or a Red Book, contact the ATTE Statewide Director, Peter Davis, at outrchpd@mac.com.



Note that there was an attempt to offer a Motorcycle Mechanic program through Community Education (at West Valley College) between 2004 - 2006. The program was discontinued due to difficulty filling classes. However, their administration suggests that Motorcycle safety classes could be a viable option for Contract Education units. For more information about motorcycle safety classes, reference the California Motorcyclist Safety Program at <http://www.ca-msp.org>.

Conclusion

There are seven training and degree programs for Motorcycle Mechanics throughout the state to adequately support the projected need of 321 additional jobs. While the scope of training is relevant for the Community Colleges and this opportunity should be monitored moving forward, the occupation is not projected to grow at a pace that outstrips the current supply chain of trained workers. Thus, a significant community college response within the Inland Empire region is not warranted at this time.

Further investigation of Motorcycle Safety classes may be a viable option for Contract Education units to consider.

¹⁰ EWD Newsletter. The Motorcycle Maintenance Technology Program at Sacramento City College Enjoying Success.

References

- 2005 MIC Retail Sales Report. (January 2006). Motorcycle Industry Council, Inc. Irvine California
- Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2006-07 Edition*
- California Employment Development Department (EDD)
- California Regional Economies Project: Southern California Economic Base Report
- CC Benefits, a division of EMSI
- Environmental Systems Research Institute (ESRI) Business Analyst 9.1
- EWD Newsletter (October, 2005). The Motorcycle Maintenance Technology Program at Sacramento City College Enjoying Success. Volume 2. Number 6.
- Info USA 2005 data (Issued 2006)
- Internet System for Education and Employment Knowledge
- Labor Market Information: Employment by Industry Data. (September 2006).
- Occupational Information Network (o*net Resource Center)
- Roadmap to Industry Clusters (2004) Los Angeles County Economic Development Corporation
- San Bernardino County Comprehensive Economic Development Strategy (CEDS)
- U.S. Census Bureau (2005) California's County Business Partners
- U.S. Department of Labor ETA – Occupational Outlook
- U.S. Department of Labor - Career InfoNet
- U.S. Department of Transportation. Federal Highway Administration's Office of Highway Policy Information.
- USWorks, a division of ERISS

APPENDIX A: How to Utilize this Report

About Us - Description of BWPI

The Business and Workforce Performance Improvement (BWPI) initiative is focused on building the capacity of the colleges in the area of economic and workforce development to enhance their ability to deliver education and training services to businesses and workers in high growth industries, new technologies, and other clusters of opportunities.

The Centers of Excellence (COE) within BWPI provide information regarding workforce trends, increasing awareness and visibility about the colleges economic and workforce development programs and services, and building partnerships with business and industry.

The difference this will make to the colleges is that it will position them as THE workforce partners of choice to business and industry and ensure that college programs are current and responsive. This will contribute to the overall economic vitality of the communities in which they serve.

How to Use This Strategic Possibility Report

The Centers of Excellence within the Business and Workforce Performance Improvement Initiative of the California Community College Economic and Workforce Development Program have undertaken Industry Scanning to provide targeted and valuable information to community colleges on high growth industries and occupations.

This report, while not a full industry scan, is intended to assist the decision-making process of California community college administrators and planners in addressing local and regional workforce needs and emerging job opportunities in the workplace as they relate to college programs. The information contained in this report can be used to guide program offerings, strengthen grant applications, and support other economic and workforce development efforts.

This report is designed to provide current industry data that will:

- Define potential strategic opportunities relative to an industry's emerging trends and workforce needs;
- Influence and inform local college program planning and resource development; and
- Promote a future-oriented and market responsive way of thinking among stakeholders.

This Industry Scan included a review of the California Regional Economies Project reports and Employment Development Department (EDD) Labor Market Information (LMID) projections that cover the communities in this region, as well as many other sources as listed.

Important Disclaimer:

All representations included in this Environmental Scan product/study have been produced from a secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings. The purpose of the Environmental Scan is to assist the California Community Colleges to respond to emerging market needs for workforce performance improvement. However, neither the Business and Workforce Performance Improvement Centers of Excellence, COE host college or California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon this study including components or recommendations.

APPENDIX C: Titles & Data Descriptors

Motorcycle Mechanics are also reported to have job titles such as Motorcycle Technicians, Mechanics, Service Technicians, All Terrain Vehicle Technicians (ATV Technician), Motorcycle Service Technicians, Custom Bike Builders, Motorsports Technicians, or Scooter Mechanics.

Data Descriptors for Motorcycle Mechanics:

DOT (Dictionary of Occupational Titles)	620281054 Motorcycle Repairer 620684026 Motorcycle Subassembly Repairer
AIM (Apprenticeship Information Management)	0356 MOTORCYCLE REPAIRER
CEN (1990 Census Occupations)	509 Small Engine Repairers
CIP (Classification of Instructional Programs)	470611 Motorcycle Mechanic and Repairer
GOE (Guide for Occupational Exploration)	051002 Crafts: Mechanical 050509 Craft Technology: Mechanical Work
OES (Occupational Employment Statistics)	85308 Motorcycle Repairers
SOC (Standard Occupational Classification)	49-3052 Motorcycle Mechanics

APPENDIX D: Training Providers in California

According to the US Department of Labor and the California Chancellor's Office, there are only a few motorcycle mechanic training facilities in the state of California. The listing below includes all training institutions in the nation as additional references.

Below are training providers currently producing Motorcycle Mechanics nationwide:

Note: All certifications programs listed are awarded between 1-2 academic years unless otherwise noted.)

Programs in California

Citrus College

Motorcycle and Personal Watercraft Technology Program
(18 unit Associates Degree)
1000 W. Foothill Blvd.
Glendora, CA 91741-1899
Phone: 626-963-0323
[http://www.citruscollege.edu/apps/comm.asp?\\$1=281](http://www.citruscollege.edu/apps/comm.asp?$1=281)

City College of San Francisco

Custom Motorcycle Technician (29 unit certificate)
Motorcycle Technician (34 unit degree)
50 Phelan Ave.
San Francisco, CA 94112
Phone: 415-239-3000
<http://www.ccsf.edu>
Currently has a combined 100 students enrolled in both programs

Los Angeles Trade Technical College

Motorcycle Repair Mechanics
(23 unit Certificate)
400 W. Washington Blvd.
Los Angeles, CA 90015
Phone: 213-763-7000
<http://www.lattc.edu>
<http://www.lattc.edu/lattc/catalog/auto.pdf>
In Spring 2007, there were 80 students enrolled within 4 courses (8 sections) offered both on weeknights and Saturdays.

San Diego Miramar College

Motorcycle Repair Mechanics
(23 unit Certificate)
10440 Black Mountain Rd.
San Diego, CA 92126-2999

Phone: 619-388-7800

<http://www.sdmiramar.edu>

SD Miramar will be starting a Motorcycle Technician program in the Fall of 2007 based upon the Blue and Red Books (modeling Sacramento City College's program)

Sacramento City College (*this is considered to be the exemplary program within the State*)

Motorcycle Maintenance Technician

(32 unit degree or certificate)

3835 Freeport Blvd.

Sacramento, CA 95822-1386

Phone: 916-558-2111

<http://www.scc.losrios.edu>

<http://www.scc.losrios.edu/programs/mtrcl.html>

Their 9 month certificate program runs 4 nights per week in the evenings. It is impacted every semester graduating 25-30 per semester. Many students desire to start their own business although dealers hire most of the graduates resulting in a high job placement rate.

Sequoia Education, INC. (DBA WyoTech)

Motorcycle Technician

Diploma in Motorcycle Technology

420 Whitney Place

Fremont, CA 94539

(510) 490-6900

www.wyotech.com

Program started in June 2006. Currently has 125-150 students enrolled in various stages of the program. First graduates complete the program in Oct/Nov 2007.

Southwestern College

Small Engine Service & Repair

(32 unit degree or certificate)

900 Otay Lakes Rd.

Chula Vista, CA 91910-7299

Phone: 619-421-6700

<http://www.swccd.edu>

This night program (taught in conjunction with their local ROP) enrolls an average of 50 students per/semester in the Small Motorcycle Engine Repair classes. Estimated yearly completion from discussing the program with SWCCD = 30.

West Valley College - Discontinued

Introduction to Motorcycle Maintenance

(12-hour course with emphasis on owners repairing their own vehicle)

Offered three times per year. Began in 2004, discontinued in Fall 2006 due to lack of consistent enrollment.

APPENDIX E: Training Providers Nationwide

The listing below includes all Motorcycle Mechanic training institutions in the nation as an additional reference.

Note: All certifications programs listed are awarded between 1-2 academic years unless otherwise noted.)

Motorcycle Mechanics Institute (Universal Technical Institute)

Motorcycle Maintenance & Repair Technology/Technician

Motorcycle Technician Specialist program

(Award of at least 2 but less than 4 academic years)

2844 W Deer Valley Rd

Phoenix, AZ 85027

(623) 869-9644

<http://www.uticorp.com/default.aspx?tabid=256>

Motorcycle Mechanics Institute (Universal Technical Institute)

Motorcycle Maintenance and Repair Technology/Technician

(Award of at least 2 but less than 4 academic years)

9751 Delegates Dr

Orlando, FL 32837

(407) 240-2422

<http://www.uticorp.com/default.aspx?tabid=256>

Wyotech

Motorcycle Maintenance and Repair Technology/Technician

3042 W International Speedway Blvd

Daytona Beach, FL 32124

(386) 255-0295 EXT:313

www.amiwrench.com

Dekalb Technical College

Motorcycle Maintenance and Repair Technology/Technician

495 N Indian Creek Dr

Clarkston, GA 30021-2397

(404) 297-9522

www.dekalbtech.edu

North Georgia Technical College

Motorcycle Maintenance and Repair Technology/Technician

1500 Georgia Hwy 197

Clarkesville, GA 30523

(706) 754-7700

www.northgatech.edu

Iowa Lakes Community College

Motorcycle Maintenance and Repair Technology/Technician

(Associate's degree)

19 S 7th St
Estherville, IA 51334
(712) 362-0438
www.iowalakes.edu

Fort Scott Community College

Motorcycle Maintenance and Repair Technology/Technician
(Associate's degree)
2108 S Horton
Fort Scott, KS 66701-3141
(620) 223-2700
www.fortscott.edu

Hennepin Technical College

Motorcycle Maintenance and Repair Technology/Technician
9000 Brooklyn Blvd
Brooklyn Park, MN 55445
(952) 995-1300
www.hennepintech.edu

Central Carolina Community College

Motorcycle Maintenance and Repair Technology/Technician
1105 Kelly Dr
Sanford, NC 27330
(919) 775-5401
www.cccc.edu

Edgecombe Community College

Motorcycle Maintenance and Repair Technology/Technician
2009 W Wilson St
Tarboro, NC 27886
(252) 823-5166 EXT:255
www.edgecombe.edu

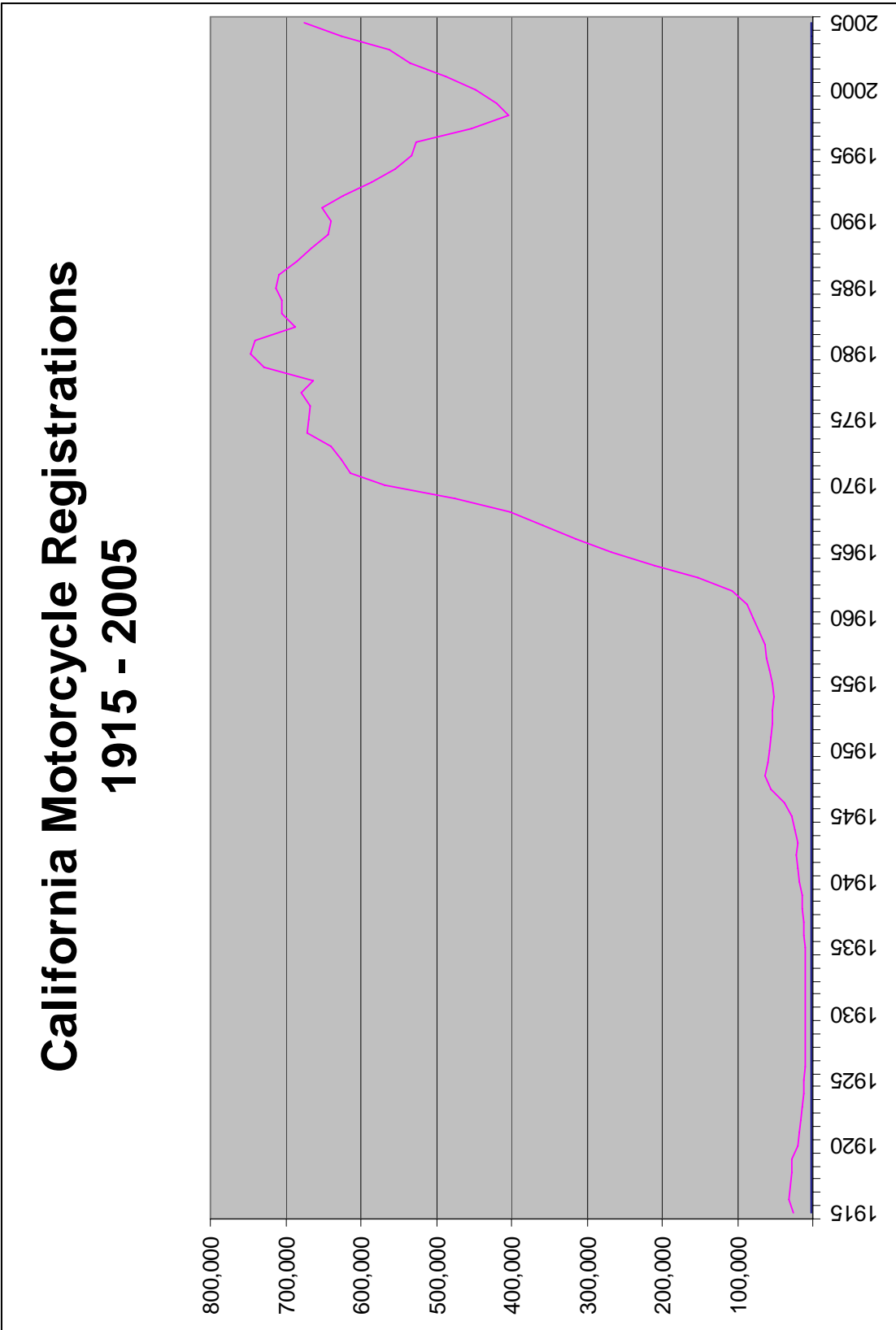
Ohio Technical College

Motorcycle Maintenance and Repair Technology/Technician
1374 E 51st St
Cleveland, OH 44103
(216) 881-1700
www.ohiotechnicalcollege.com

Bates Technical College

Motorcycle Maintenance and Repair Technology/Technician
1101 S Yakima Ave
Tacoma, WA 98405
(253) 680-7000
www.bates.ctc.edu/

APPENDIX F



Source: US Department of Transportation. Federal Highway Administration. Office of Highway Policy Information. Highway Statistical Series.

APPENDIX G: Regional Employer Analysis

(Excel Spreadsheet with all employer data sent electronically under separate cover)