



Transportation Industry Sector

Transportation plays a crucial role in our society because moving people and goods is central to everything America does. As the Transportation industry sector continues to expand significantly, it will provide employment opportunities for years to come in a vast range of transportation-related occupations. It will also continue to adapt to changing technology and repair techniques as vehicle components and systems become increasingly sophisticated. Examples include developments in rocket technology, super-capacity jet airplanes, hybrid and hydrogen fuel-cell technology affecting automobiles, and diesel trucks that run on bio-diesel or other alternative fuels. This industry also plays an important part in education through financial and in-kind support for training and educating the current and future workforce.

The Transportation industry sector features three career pathways that provide opportunities from entry-level jobs requiring high school diplomas to progressive careers requiring advanced degrees. These pathways emphasize real-world, occupationally relevant experiences of significant scope and depth in Aviation and Aerospace Transportation Services, which includes maintaining aircraft, operating airports, and designing and flying various types of aircraft; Collision Repair and Refinishing, which includes painting, repairing, and refinishing vehicles; and Vehicle Maintenance, Service, and Repair, which includes maintaining, servicing, and repairing light-, medium-, and heavy-duty vehicles.

Transportation Industry Sector Pathways:

- *Aviation and Aerospace Transportation Services*
- *Collision Repair and Refinishing*
- *Vehicle Maintenance, Service, and Repair*

Entry Level Careers

(with high school diploma)

Mechanic's Assistant
 Lube Technician
 Parts and Sales Counter Clerk
 Automotive Body and Paint Repairer
 Tire Repairers and Changers
 Service Station Attendants
 Bus Driver, School
 Industrial Truck and Tractor Operators
 Truck Driver, Light or Delivery Service
 Taxi Drivers and Chauffeurs
 Flight Attendant
 Porter
 Aircraft Detailer
 Ground Support Crew

Technical Level Careers

(with AA or AS degree or certificate)

Bus and Truck Mechanics
 Automotive Master Mechanic
 Diesel Engine Specialist
 Motorcycle Mechanics
 Auto Glass Installer
 Dispatcher
 Service Writer
 Licensed Smog Technician
 Avionics Technicians
 Airframe and Power Plant Technician
 Aircraft Mechanics/Service Technicians
 Air Traffic Controllers
 Commercial Pilots
 Ship Engineers
 Ship and Boat Captains

Professional Level Careers

(with BS or BA degree)

Ship Engineers
 Airline Pilots, Copilots
 Flight Engineers
 Astronaut
 Insurance Claims Adjuster
 Shop Manager
 Fleet Manager
 Parts and Service Manager
 Automotive Corp. Service Representative



Transportation Industry Sector Pathway Options

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Aviation and Aerospace Transportation Services Pathway

Sample CTE Courses*

Education Level and Related Occupations**

Introductory	Concentration	Capstone	High School Diploma	Certification and/or AA Degree	Bachelor's Degree or Higher
<ul style="list-style-type: none"> ▪ Small Engines ▪ Exploring Technology ▪ Technology Core ▪ Basic Automotive 	<ul style="list-style-type: none"> ▪ Electronics ▪ Auto 1 	<ul style="list-style-type: none"> ▪ Avionics ▪ Radio Communications ▪ Aviation Aircraft Engines 	<ul style="list-style-type: none"> ▪ Ground Support Crew ▪ Mechanic's Assistant ▪ Flight Attendant ▪ Porter ▪ Apprentice/Intern ▪ Aircraft Detailer 	<ul style="list-style-type: none"> ▪ Military Ground Crew ▪ Airframe and Power Plant Technician ▪ Maintenance Worker ▪ Ramp Service Worker ▪ Dispatcher 	<ul style="list-style-type: none"> ▪ Engineer ▪ Astronaut ▪ Instructor+ ▪ Pilot+

Collision Repair and Refinishing Pathway

Sample CTE Courses*

Education Level and Related Occupations**

Introductory	Concentration	Capstone	High School Diploma	Certification and/or AA Degree	Bachelor's Degree or Higher
<ul style="list-style-type: none"> ▪ Introduction to Automotive Technology ▪ Small Engines 	<ul style="list-style-type: none"> ▪ Basic Collision Repair ▪ Basic Auto Refinishing ▪ Automotive Construction ▪ Steering and Suspension ▪ Auto 1 	<ul style="list-style-type: none"> ▪ Advanced Collision Repair Technology ▪ Advanced Auto Refinishing 	<ul style="list-style-type: none"> ▪ Collision Repair Intern or Apprentice ▪ Refinisher Helper ▪ Auto Detailer 	<ul style="list-style-type: none"> ▪ Collision Repair Technician ▪ Collision Repair Shop Owner ▪ Auto Refinish Technician ▪ Auto Glass Installer ▪ Assistant Manager 	<ul style="list-style-type: none"> ▪ Insurance Claims Adjuster ▪ Collision Shop Manager ▪ Instructor+ ▪ Paint Manufacturer Representative

Vehicle Maintenance, Service, and Repair Pathway

Sample CTE Courses*

Education Level and Related Occupations**

Introductory	Concentration	Capstone	High School Diploma	Certification and/or AA Degree	Bachelor's Degree or Higher
<ul style="list-style-type: none"> ▪ Introduction to Automotive Repair ▪ Small Engines ▪ Technology Core ▪ Exploring Technology 	<ul style="list-style-type: none"> ▪ Brakes ▪ Electrical Systems and Electronics ▪ Steering and Suspension ▪ Outdoor Power Equipment ▪ Auto Fundamentals 	<ul style="list-style-type: none"> ▪ Advanced Automotive ▪ Engine Performance/Smog ▪ Motorcycle ▪ Diesel 	<ul style="list-style-type: none"> ▪ Porter/Lot Person ▪ Lube Technician ▪ Aftermarket Sales Representative ▪ Vehicle Maintenance Intern or Apprentice ▪ Parts and Service Counter Person ▪ Salesperson ▪ Vehicle Maintenance Technician 	<ul style="list-style-type: none"> ▪ Line Technician ▪ Service Writer ▪ Motor Carrier ▪ Technical Writer ▪ Smog Technician+ ▪ Driver ▪ Inspector 	<ul style="list-style-type: none"> ▪ Fleet Manager or Director ▪ Shop Foreman or Forewoman ▪ Parts and Service Manager ▪ Instructor+ ▪ Manufacturer's Representative

*Sample CTE Courses are from the Career Technical Education Framework for California Public Schools (California Department of Education: 2007, <http://www.cde.ca.gov/re/pn/fd/>)

**Visit ASSIST (www2.assist.org/browseAreas.do) for community college and UC/CSU information and California Career Zone (www.cacareerzone.org) for occupation information.

+This occupation requires certification or licensure.

Related Career Technical Student Organization: SkillsUSA (<http://www.skillsusaca.com>)

Additional Industry Sector information available through the California Industrial and Technology Education Consortium (<http://www.citeonline.org>).

CAREER OPPORTUNITIES IN TRANSPORTATION INDUSTRY SECTOR

10 TIPS FOR CHOOSING THE RIGHT CAREER FOR YOU

*How does a person know what career to work toward?
There is no perfect answer, but the following 10 tips will
get you off to a good start.*

- 1 Get to know yourself** – Complete more than one self-assessment test.
- 2 Identify your strengths and weaknesses** – What do you do well and what do you not do well?
- 3 Develop an inventory of careers** – Write down some careers that might interest you.
- 4 Research different careers** – Talk to others and use the Internet.
- 5 Write the pros and cons** – List positives and negatives about the careers that interest you.
- 6 Network**– Discuss your ideas with others.
- 7 Talk with people who work in your area of interest** – Family and friends are great resources.
- 8 Find a mentor** – Find someone with whom you can discuss your career selection.
- 9 Experiment** – Take a related class or part-time job.
- 10 Don't give up** – “If there is a will, there is a way.”



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Plan For Success
Visit statecenter.com/industrysectors





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Web sites
for further information:

www.californiacareers.info

www.whodouwant2be.com

www.californiacolleges.edu

www.edd.ca.gov/Jobs_and_Training/

Career Pathways



Aviation and Aerospace Transportation Services Pathway

More and more people and products are being transported by air than ever before. This practice is expected to continue increasing at a fast pace, which will in turn open more opportunities in this pathway. Aviation and aerospace services include maintaining aircrafts, operating airports, and designing and flying various types of aircrafts.

CAREERS/CAREER AREAS:

- Ground Support Crew
- Freight and Baggage Handler
- Ticket Agent
- Flight Attendant
- Airframe and Power Plant Technician
- Dispatcher
- Air Traffic Controller
- Pilot
- Aviation Engineer
- Aircraft Detailer
- Mechanics Assistant



Vehicle Maintenance, Service, and Repair Pathway

In your grandparents' day, "shade tree" mechanics were common. You could claim to be a mechanic with a few simple tools – but that day has long passed! Vehicle service and repair is now a highly-skilled profession that requires more brain power than muscle power. Solving problems with your head is critical. In addition to cars and trucks, the motor vehicles category includes boats, motorcycles, trains, and outdoor power equipment. All require specific knowledge in order to be serviced, repaired, and maintained properly.

CAREERS/CAREER AREAS:

- Lube, Line, and Smog Technician
- Service Writer
- Diesel Engine
- Small Engine
- Parts and Service Counter Technician
- Parts Runner
- After-Market Sales
- Shop Foreman
- Manufacturer Representative
- Motorcycle, Heavy Equipment, and Farm Equipment Mechanic



Collision Repair and Refinishing Pathway

Like to work on puzzles or piece together broken items? If so, collision repair may be for you. Using specialized equipment, a body technician can repair any frame or sheet metal damage and safely return a vehicle to the road. A paint technician can restore the original look of the vehicle to the manufacturer's specifications.

CAREERS/CAREER AREAS:

- Collision Repair Technician
- Auto Detailer
- Refinish Technician
- Auto Damage Appraiser
- Glass Installer
- Claims Adjuster
- Parts Specialist
- Vehicle Restoration
- Vehicle Painter





TRANSPORTATION

Transportation plays a crucial role in our society because moving people and goods is central to everything America does. Vehicle components and systems will continue to become increasingly sophisticated which, in turn, will require well-trained operators and maintenance and repair technicians. Examples of future transportation technology include rocket technology, super-capacity jet airplanes, hybrid, bio-diesel, and hydrogen fuel-cell technology involving automobiles and trucks.

The information below is just a small sample of the many great employment related resources available on the State of California website www.edd.ca.gov. We encourage you to visit the website and explore the available information.

Occupation Title	Employment Levels in 2006	Projected Employment level 2016	Projected Job Growth	Percent of Job Growth	2008 Hourly ¹ Mean Wage	2008 ² Weekly Mean Wage	2008 ³ Monthly Mean Wage	2008 Annual Mean Wage
Aerospace Engineers	25,600	27,600	2,000	7.8%	\$49.91	\$1,996.40	\$8,384.88	\$100,618.56
Aircraft Mechanics & Service Technicians	11,700	13,200	1,500	12.8%	\$27.12	\$1,084.80	\$4,556.16	\$54,673.92
Airfield Operations Specialists	N/A				\$27.98	\$1,119.20	\$4,700.64	\$56,407.68
Avionics Technicians	1,600	1,700	100	6.3%	\$25.04	\$1,001.60	\$4,206.72	\$50,480.64
Air Traffic Controllers	2,400	2,800	400	16.7%	\$55.14	\$2,205.60	\$9,263.52	\$111,162.24
Airline Pilots, Copilots, & Flight Engineers	5,900	6,500	600	10.2%	N/A	N/A	N/A	N/A
Flight Attendants	11,100	11,900	800	7.2%	N/A	N/A	N/A	N/A
Transportation Attendants	1,600	2,000	400	25%	\$12.89	\$515.60	\$2,165.52	\$25,986.24
Automotive Body & Related Repairers	15,300	16,300	1,000	6.5%	\$20.49	\$819.60	\$3,442.32	\$41,307.84
Automotive Service Technicians & Mechanics	79,000	90,200	11,200	14.2%	\$20.12	\$804.80	\$3,380.16	\$40,561.92
Bus & Truck Mechanics	28,500	32,200	3,700	13%	\$21.94	\$877.60	\$3,685.92	\$44,231.04
Mechanics, Installers, & Repair Supervisors	44,500	49,400	4,900	11%	\$31.14	\$1,245.60	\$5,231.52	\$62,778.24
Reservation & Transportation Ticket Agents	16,100	16,500	400	2.5%	\$15.32	\$612.80	\$2,573.76	\$30,885.12
Service Station Attendants	8,800	10,700	1,900	21.6%	\$11.54	\$461.60	\$1,938.72	\$23,264.64
Transportation Inspectors	2,000	2,300	300	15%	\$31.38	\$1,255.20	\$5,271.84	\$63,262.08
Motorcycle Mechanics	2,200	2,400	200	9.1%	\$19.84	\$793.60	\$3,333.12	\$39,997.44
Parts Salespersons	22,500	22,300	-200	-0.9%	\$16.96	\$678.40	\$2,849.28	\$34,191.36
Painters, Transportation Equipment	7,100	7,600	500	7%	\$20.92	\$836.80	\$3,514.56	\$42,174.72
Automotive Glass Installers	2,700	3,000	300	11.1%	\$16.73	\$669.20	\$2,810.64	\$33,727.68
Claims Adjusters, Examiners, & Investigators	31,200	35,000	3,800	12.2%	\$28.79	\$1,151.60	\$4,836.72	\$58,040.64
Insurance Appraisers, Auto Damage	1,400	1,600	200	14.3%	\$26.88	\$1,075.20	\$4,515.84	\$54,190.08
Commercial Pilots	2,800	3,300	500	17.9%	\$37.95	\$1,517.94	\$6,375.34	\$76,504.03

These selected occupations with information on job growth, percent growth and earning potentials are based on information found at www.labormarketinfo.edd.ca.gov

¹ **Mean:** Midpoint between highest & lowest

² **Weekly:** Based on 40 hours

³ **Monthly:** Based on 168 hours



TIPS FOR JOB SEEKERS

How can you improve your chances of getting a job? Applying for a job is the easy part, but getting it can be more of a challenge. Following these five tips can help you reach your goal:

1 The Job

- Determine your interests: talk to others and consider your hobbies and talents
- Search “career assessments” on the Internet

2 The Resume

- Should be easy to read: not too long, too wordy or too cluttered
- Make it powerful
- Show you can cooperate, you can learn, and you can do

3 The Application

- Make it neat, complete and accurate
- Include recommendations from teachers, employers, coaches, friends, etc.

4 The Interview

- Show enthusiasm: it separates the winners from the losers
- Dress appropriately/similar to those on the job

5 The Follow-up

- Send a thank you note
- Call to see if a decision has been made
- If not, ask, “Am I still a candidate?”
- If you are, ask, “Is it okay if I call back in a couple of days?”



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