

# Maintenance and Repair Workers, General

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## Significant Points

- General maintenance and repair workers are employed in almost every industry.
- Most workers are trained on the job; others learn by working as helpers to other repairers or to construction workers such as carpenters, electricians, or machinery repairers.
- Job openings should be plentiful due to significant turnover in this large occupation.

## Nature of the Work

Most craft workers specialize in one kind of work, such as plumbing or carpentry. General maintenance and repair workers, however, have skills in many different crafts. They repair and maintain machines, mechanical equipment, and buildings and work on plumbing, electrical, and air-conditioning and heating systems. They build partitions, make plaster or drywall repairs, and fix or paint roofs, windows, doors, floors, woodwork, and other parts of building structures. They also maintain and repair specialized equipment and machinery found in cafeterias, laundries, hospitals, stores, offices, and factories. Typical duties include troubleshooting and fixing faulty electrical switches, repairing air-conditioning motors, and unclogging drains. New buildings sometimes have computer-controlled systems, requiring workers to acquire basic computer skills. For example, new air-conditioning systems often can be controlled from a central computer terminal. In addition, light sensors can be electronically controlled to turn off lights automatically after a set amount of time.

General maintenance and repair workers inspect and diagnose problems and determine the best way to correct them, frequently checking blueprints, repair manuals, and parts catalogs. They obtain supplies and repair parts from distributors or storerooms. Using common hand and power tools such as screwdrivers, saws, drills, wrenches, and hammers, as well as specialized equipment and electronic testing devices, these workers replace or fix worn or broken parts, where necessary, or make adjustments to correct malfunctioning equipment and machines.

General maintenance and repair workers also perform routine preventive maintenance and ensure that machines continue to run smoothly, building systems operate efficiently, and the physical condition of buildings does not deteriorate. Following a checklist, they may inspect drives, motors, and belts, check fluid levels, replace filters, and perform other maintenance actions. Maintenance and repair workers keep records of their work.

Employees in small establishments, where they are often the only maintenance worker, make all repairs, except for very large or difficult jobs. In larger establishments, their duties may be limited to the general maintenance of everything in a workshop or a particular area.

## Working Conditions

General maintenance and repair workers often carry out several different tasks in a single day, at any number of locations. They may work inside of a single building or in several different buildings.

They may have to stand for long periods, lift heavy objects, and work in uncomfortably hot or cold environments, in awkward and cramped positions, or on ladders. They are subject to electrical shock, burns, falls, cuts, and bruises. Most general maintenance workers work a 40-hour week. Some work evening, night, or weekend shifts or are on call for emergency repairs.

Those employed in small establishments often operate with only limited supervision. Those working in larger establishments frequently are under the direct supervision of an experienced worker.

## Employment

General maintenance and repair workers held 1.3 million jobs in 2002. They were employed in almost every industry. Around 1 in 5 worked in manufacturing industries, almost evenly distributed through all sectors. About 17 percent worked for different government bodies. Others worked for wholesale and retail firms and for real-estate firms that operate office and apartment buildings.

## Training, Other Qualifications, and Advancement

Many general maintenance and repair workers learn their skills informally on the job. They start as helpers, watching and learning from skilled maintenance workers. Helpers begin by doing simple jobs, such as fixing leaky faucets and replacing lightbulbs, and progress to more difficult tasks, such as overhauling machinery or building walls. Some learn their skills by working as helpers to other repair or construction workers, including carpenters, electricians, or machinery repairers.

Necessary skills also can be learned in high school shop classes and postsecondary trade or vocational schools. It generally takes from 1 to 4 years of on-the-job training or school, or a combination of both, to become fully qualified, depending on the skill level required. Because a growing number of new buildings rely on computers to control various of their systems, general maintenance and repair workers may need basic computer skills, such as how to log onto a central computer system and navigate through a series of menus. Usually, companies that install computer-controlled equipment provide on-site training for general maintenance and repair workers.

Graduation from high school is preferred for entry into this occupation. High school courses in mechanical drawing, electricity,



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woodworking, blueprint reading, science, mathematics, and computers are useful. Mechanical aptitude, the ability to use shop mathematics, and manual dexterity are important. Good health is necessary because the job involves much walking, standing, reaching, and heavy lifting. Difficult jobs require problem-solving ability, and many positions require the ability to work without direct supervision.

Many general maintenance and repair workers in large organizations advance to maintenance supervisor or become a craftworker such as an electrician, a heating and air-conditioning mechanic, or a plumber. Within small organizations, promotion opportunities are limited.

### **Job Outlook**

Job openings should be plentiful. General maintenance and repair is a large occupation with significant turnover, and many job openings should result from the need to replace workers who transfer to other occupations or stop working for other reasons.

Employment of general maintenance and repair workers is expected to grow about as fast as average for all occupations through 2012. Employment is related to the number of buildings—for example, office and apartment buildings, stores, schools, hospitals, hotels, and factories—and the amount of equipment needing maintenance and repair. However, as machinery becomes more advanced and requires less maintenance, the need for general maintenance and repair workers diminishes.

### **Earnings**

Median hourly earnings of general maintenance and repair workers were \$14.12 in 2002. The middle 50 percent earned between \$10.61 and \$18.48. The lowest 10 percent earned less than \$8.25, and the highest 10 percent earned more than \$22.78. Median hourly earnings in the industries employing the largest numbers of general maintenance and repair workers in 2002 are shown in the following tabulation:

Local government .....	\$14.83
Elementary and secondary schools .....	14.01
Activities related to real estate .....	11.79
Lessors of real estate .....	11.64
Traveler accommodation .....	10.58

Some general maintenance and repair workers are members of unions, including the American Federation of State, County, and Municipal Employees and the United Automobile Workers.

### **Related Occupations**

Some duties of general maintenance and repair workers are similar to those of carpenters; pipelayers, plumbers, pipefitters, and steamfitters; electricians; and heating, air-conditioning, and refrigeration mechanics. Other duties are similar to those of coin, vending, and amusement machine servicers and repairers; electrical and electronics installers and repairers; electronic home entertainment equipment installers and repairers; and radio and telecommunications equipment installers and repairers.

### **Sources of Additional Information**

Information about job opportunities may be obtained from local employers and local offices of the State Employment Service.