
Maintenance and Repair Workers, General

(O*NET 49-9042.00)

Significant Points

- General maintenance and repair workers are employed in almost every industry.
- Many workers learn their skills informally on the job.
- Job growth and turnover in this large occupation should result in excellent job opportunities, especially for people with experience in maintenance and related fields.

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 dry-wall 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 that allow maintenance workers to make adjustments in building settings and monitor for problems from a central location. For example, they can remotely control light sensors that turn off lights automatically after a set amount of time or identify a broken ventilation fan that needs to be replaced.

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, duties may be

limited to the maintenance of everything in a workshop or a particular area.

Work environment. General maintenance and repair workers often carry out several different tasks in a single day, at any number of locations. They may work inside 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. Those employed in small establishments often work with only limited supervision. Those in larger establishments frequently work under the direct supervision of an experienced worker. Some tasks put workers at risk of 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.

Training, Other Qualifications, and Advancement

Many general maintenance and repair workers learn their skills informally on the job as helpers to other repairers or to carpenters, electricians, and other construction workers.

Education and training. General maintenance and repair workers often 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 light bulbs, and progress to more difficult tasks, such as overhauling machinery or building walls. Some learn their skills by working as helpers to other types of repair or construction workers, including machinery repairers, carpenters, or electricians.

Several months of on-the-job training are required to become fully qualified, depending on the skill level required. Some jobs require a year or more to become fully qualified. Because a growing number of new buildings rely on computers to control 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. Companies that install computer-controlled equipment usually provide on-site training for general maintenance and repair workers.

Many employers prefer to hire high school graduates. High school courses in mechanical drawing, electricity, woodworking, blueprint reading, science, mathematics, and computers are useful. Because of the wide variety of tasks performed by maintenance and repair workers, technical education is an im-



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Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-16	
				Number	Percent
Maintenance and repair workers, general	49-9042	1,391,000	1,531,000	140,000	10

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

portant part of their training. Maintenance and repair workers often need to do work that involves electrical, plumbing, and heating and air-conditioning systems, or painting and roofing tasks. Although these basic tasks may not require a license to do the work, a good working knowledge of many repair and maintenance tasks is required. Many maintenance and repair workers learn some of these skills in high school shop classes and postsecondary trade or vocational schools or community colleges.

Licensure. Licensure requirements vary by State and locality. In some cases, workers may need to be licensed in a particular specialty such as electrical or plumbing work.

Other qualifications. 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.

Advancement. Many general maintenance and repair workers in large organizations advance to maintenance supervisor or become craftworkers such as electricians, heating and air-conditioning mechanics, or plumbers. Within small organizations, promotion opportunities may be limited.

Employment

General maintenance and repair workers held 1.4 million jobs in 2006. They were employed in almost every industry. Around 19 percent worked in manufacturing industries, almost evenly distributed through all sectors, while about 10 percent worked for Federal, State, and local governments. Others worked for wholesale and retail firms and for real estate firms that operate office and apartment buildings.

Job Outlook

Average employment growth is expected. Job growth and the need to replace those who leave this large occupation should result in excellent job opportunities, especially for those with experience in maintenance and related fields.

Employment change. Employment of general maintenance and repair workers is expected to grow 10 percent during the 2006-16 decade, about as fast as the average for all occupations. 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. One factor limiting job growth is that computers allow buildings to be monitored more efficiently, partially reducing the need for workers.

Job prospects. Job opportunities should be excellent, especially for those with experience in maintenance or related fields. General maintenance and repair is a large occupation, generating many job openings due to growth and the need to replace those who leave the occupation. Many job openings are expected to result from the retirement of experienced maintenance workers over the next decade.

Earnings

Median hourly earnings of general maintenance and repair workers were \$15.34 in May 2006. The middle 50 percent earned between \$11.66 and \$19.90. The lowest 10 percent earned less than \$9.20, and the highest 10 percent earned more than \$24.44. Median hourly earnings in the industries employing the largest numbers of general maintenance and repair workers in May 2006 are shown in the following tabulation:

Local government	\$15.85
Elementary and secondary schools	15.76
Activities related to real estate	13.44
Lessors of real estate	13.06
Traveler accommodation.....	11.76

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

For information related to maintenance managers contact:

► International Maintenance Institute, P.O. Box 751896, Houston, TX 77275-1896.

Internet: <http://www.imionline.org>