

## Material Moving Occupations

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### Significant Points

- Job openings should be numerous because the occupation is very large.
- Most jobs require little work experience or specific training, but earnings are low.
- Pay is highest in jobs that require the most experience or that have the greatest responsibilities, but seasonal work may reduce earnings.

### Nature of the Work

Material moving workers are categorized into two groups: operators and laborers. Operators use machinery to move construction materials, earth, petroleum products, and other heavy materials. Generally, they move materials over short distances—around a construction site, factory, or warehouse. Some move materials on or off trucks and ships. Operators control equipment by moving levers or foot pedals, operating switches, or turning dials. They may also set up and inspect equipment, make adjustments, and perform minor repairs when needed. Laborers and hand material movers manually handle freight, stock, or other materials; clean vehicles, machinery, and other equipment; feed materials into or remove materials from machines or equipment; and pack or package products and materials.

Material moving occupations are classified by the type of equipment they operate or goods they handle. Each piece of equipment requires different skills to move different types of loads. (For information on *operating engineers; paving, surfacing, and tamping equipment operators; and pile-driver operators*, see the statement on construction equipment operators, elsewhere in the *Handbook*.)

*Industrial truck and tractor operators* drive and control industrial trucks or tractors equipped to move materials around a warehouse, storage yard, factory, or construction site. A typical industrial truck, often called a forklift or lift truck, has a hydraulic lifting mechanism and forks. They also may operate tractors that pull trailers loaded with materials, goods, or equipment within factories and warehouses, or around outdoor storage areas.

*Excavating and loading machine and dragline operators* operate or tend machinery equipped with scoops, shovels, or buckets, to dig and load sand, gravel, earth, or similar materials into trucks or onto conveyors. Construction and mining industries employ the majority of excavation and loading machine and dragline operators.

*Crane and tower operators* operate mechanical boom and cable or tower and cable equipment to lift and move materials, machinery, or other heavy objects. They extend or retract a horizontally mounted boom to lower or raise a hook attached to the loadline. Most operators coordinate their maneuvers in response to hand signals and radioed instructions. Operators position the loads from the on-board console or from a remote console at the site. While crane and tower operators are noticeable at office building and other construction sites, the biggest group works in primary metal, metal fabrication, and transportation equipment manufacturing industries that use heavy, bulky materials.

*Hoist and winch operators* control movement of cables, cages, and platforms to move workers and materials for manufacturing, logging, and other industrial operations. They work in such positions as derrick operators and hydraulic boom operators. One half of all jobs for hoist and winch operators were found in manufacturing or construction industries.

*Pump operators* and their helpers tend, control, or operate power-driven pumps and manifold systems that transfer gases, oil, or other materials to vessels or equipment. They maintain the equipment to regulate the flow of materials according to a schedule set up by petroleum engineers and production supervisors.

*Gas compressor and gas pumping station operators* operate steam, gas, electric motor, or internal combustion engine driven compressors. They transmit, compress, or recover gases, such as butane, nitrogen, hydrogen, and natural gas. *Wellhead pumpers* operate power pumps and auxiliary equipment to produce flow of oil or gas from wells in oil fields.

*Tank, car, truck and ship loaders* operate ship loading and unloading equipment, conveyors, hoists, and other specialized material handling equipment such as railroad tank car unloading equipment. They may gauge or sample shipping tanks and test them for leaks. *Conveyor operators and tenders* control or tend conveyor systems that move materials to or from stockpiles, processing stations, departments, or vehicles.

*Laborers and hand freight, stock, and material movers* manually move materials or perform other unskilled general labor. These workers move freight, stock, and other materials to and from storage and production areas, loading docks, delivery vehicles, ships, and containers. Their specific duties vary by industry and work setting. Specialized workers within this group include baggage and cargo handlers, who work in transportation industries; and truck loaders and unloaders. In factories, they may move raw materials, components, and finished goods between loading docks, storage areas, and work areas. They receive and sort materials and supplies and prepare them according to work orders for delivery to work or storage areas.

*Hand packers and packagers* manually pack, package, or wrap a variety of materials. They may inspect items for defects, label cartons, stamp information on products, keep records of items packed, and stack packages on loading docks. This group also includes



Some operators move materials between trucks and ships.

order fillers, who pack materials for shipment, as well as grocery store courtesy clerks. In grocery stores, they may bag groceries, carry packages to customers' cars, and return shopping carts to designated areas.

*Machine feeders* and *offbearers* feed materials into or remove materials from automatic equipment or machines tended by other workers. *Cleaners of vehicle and equipment* clean machinery, vehicles, storage tanks, pipelines, and similar equipment using water and other cleaning agents, vacuums, hoses, brushes, cloths, and other cleaning equipment. *Refuse and recyclable material collectors* gather trash, garbage, and recyclables from homes and businesses along a regularly scheduled route, and deposit the refuse in their truck for transport to a dump, landfill, or recycling center. They lift and empty garbage cans or recycling bins by hand, or operate a hydraulic lift truck that picks up and empties dumpsters.

**Working Conditions**

Many material moving workers work outdoors in every type of climate and weather condition. The work tends to be repetitive and physically demanding. They may lift and carry heavy objects, and stoop, kneel, crouch, or crawl in awkward positions. Some work at great heights, or outdoors in all weather conditions. Some jobs expose workers to harmful materials or chemicals, fumes, odors, loud noise, or dangerous machinery. To avoid injury, these workers wear safety clothing, such as gloves and hard hats, and devices to protect their eyes, mouth, or hearing. These jobs have become much safer as safety equipment such as overhead guards on forklift trucks has become common. As with most machinery, most accidents can be avoided by observing proper operating procedures and safety practices.

Material movers generally work 8-hour shifts, though longer shifts are also common. In many industries that work around the clock, material movers work evening or "graveyard" shifts. Some may work at night because the establishment may not want to disturb customers during normal business hours. Refuse and recyclable material collectors often work shifts starting at 5:00 or 6:00 a.m. Some material movers only work during certain seasons, such as when the weather permits construction activity.

**Employment**

Material movers held about 5 million jobs in 2000. They were distributed among the detailed occupations as follows:

Laborers and freight, stock, and material movers, hand .....	2,084,000
Hand packers and packagers .....	1,091,000
Industrial truck and tractor operators .....	635,000
Cleaners of vehicles and equipment .....	322,000
Machine feeders and offbearers .....	182,000
First-line supervisors/managers of helpers, laborers, and material movers, hand .....	153,000
Refuse and recyclable materials collectors .....	124,000
Excavating and loading machine and dragline operators .....	76,000
Conveyer operators and tenders .....	63,000
Crane and tower operators .....	55,000
Tank, car, truck, and ship loaders .....	19,000
Pump operators, except wellhead pumpers .....	14,000
Wellhead pumpers .....	12,000
Hoist and winch operators .....	9,000
Gas compressor and gas pumping station operators .....	7,000
All other material moving workers .....	142,000

More than 44 percent of all material movers worked in transportation, public utilities, wholesale trade, or retail trade industries. Another 26 percent worked in manufacturing. Significant numbers of material movers also worked in construction, mining, and service industries. A small proportion of material movers were

self-employed. A growing number are employed on a temporary or contract basis, many through firms providing personnel supply services. For example, companies that only need workers for a few days to move materials or clean up a site may contract with temporary help agencies specializing in providing this type of worker on a short-term basis.

Material movers work in every part of the country. Some work in remote locations on large construction projects, such as highways and dams, or in factory or mining operations.

**Training, Other Qualifications, and Advancement**

Most material moving jobs require no work experience or specific training. Some employers prefer applicants with a high school diploma, but most simply require workers to be at least 18 years old and physically able to perform the work. For those jobs requiring physical exertion, employers may require that applicants pass a physical exam. Some employers also require drug testing or background checks before employment. These workers often are younger than workers in other occupations—reflecting the limited training but significant physical requirements of many of these jobs.

Material movers generally learn skills informally, on the job from more experienced workers or supervisors. However, workers who use dangerous equipment or handle toxic chemicals usually receive specialized training in safety awareness and procedures. Many of the training requirements are standardized through the U.S. Occupational Safety and Health Administration (OSHA).

Material moving equipment operators need a good sense of balance, distance judgment, and eye-hand-foot coordination. For those jobs that involve dealing with the public, such as grocery store courtesy clerks, workers should be pleasant and courteous. Most jobs require reading and basic mathematics skills to read procedures manuals, billing, and other documents. Mechanical aptitude and high school training in automobile or diesel mechanics are helpful because workers may perform some maintenance on their equipment. Experience operating mobile equipment, such as farm tractors or heavy equipment in the Armed Forces, is an asset.

Experience in many of these jobs may allow workers to qualify or become trainees for other skilled positions such as construction trades workers; assemblers or other production workers; motor vehicle operators; or vehicle and mobile equipment mechanics, installers, and repairers. In fact, many employers prefer to promote qualified material movers as openings arise. Some may eventually advance to become supervisors.

**Job Outlook**

Employment in material moving occupations will increase about as fast as average for all occupations through 2010. Employment growth will stem from an expanding economy and increased spending on the Nation's infrastructure of highways, bridges, and dams. However, equipment improvements, including the growing automation of material handling in factories and warehouses, will continue to raise productivity and moderate the demand for material movers.

Job growth for material movers largely depends on growth in the industries employing them and the type of equipment the workers operate or the materials they handle. For example, employment of operators in manufacturing will decline slightly due to increased automation and efficiency in the production process. On the other hand, employment will grow rapidly in temporary help organizations as firms contract out material moving services.

Job openings should be numerous because the occupation is very large and turnover is relatively high—characteristic of occupations requiring little formal training. Many openings will arise from the need to replace workers who retire, transfer to other occupations, or leave the labor force for other reasons.

Both construction and manufacturing are very sensitive to changes in economic conditions, so the number of job openings in these industries may fluctuate from year to year.

### Earnings

Median hourly earnings of material moving workers in 2000 were as follows:

Gas compressor and gas pumping station operators .....	\$20.32
Pump operators, except wellhead pumpers .....	17.16
First-line supervisors/managers of helpers, laborers, and material movers, hand .....	16.73
Wellhead pumpers .....	16.35
Crane and tower operators .....	15.89
Excavating and loading machine and dragline operators .....	14.94
Hoist and winch operators .....	14.40
Tank, car, truck, and ship loaders .....	13.78
Refuse and recyclable materials collectors .....	11.83
Industrial truck and tractor operators .....	11.74
Conveyer operators and tenders .....	10.70
Machine feeders and offbearers .....	9.69
Laborers and freight, stock, and material movers, hand .....	9.04
Cleaners of vehicles and equipment .....	7.55
Hand packers and packagers .....	7.53

Pay rates vary according to experience and job responsibilities. Pay usually is higher in metropolitan areas. Seasonal work may reduce earnings.

### Related Occupations

Other workers who operate mechanical equipment include busdrivers; construction equipment operators; machine setters, operators, and tenders—metal and plastic; rail transportation workers; and truckdrivers and driver/sales workers. Other entry-level workers who perform mostly physical work are agricultural workers; building cleaning workers; construction laborers; forest, conservation, and logging workers; and grounds maintenance workers.

### Sources of Additional Information

For information about job opportunities and training programs, contact local State employment service offices, building or construction contractors, manufacturers, and wholesale and retail establishments.

Information on safety and training requirements is available from:

- ▶ U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), 200 Constitution Ave. NW., Washington, D.C. 20210. Internet: <http://www.osha.gov>

Information on industrial truck and tractor operators is available from:

- ▶ Industrial Truck Association, 1750 K St. NW., Suite 460, Washington, DC 20006.
- ▶ Specialized Carriers and Rigging Association, 2750 Prosperity Ave., Suite 620, Fairfax, VA 22301.

## Motor Vehicle Operators

### Busdrivers

(O\*NET 53-3021.00, 53-3022.00)

#### Significant Points

- Opportunities should be good, particularly for school busdriver jobs.
- A commercial driver's license is required to operate on interstate bus routes.
- Busdrivers must possess strong customer service skills, including communication skills and the ability to manage large groups of people with varying needs.

#### Nature of the Work

Millions of Americans every day leave the driving to busdrivers. Busdrivers are essential in providing passengers with an alternative to their automobiles or other forms of transportation. Intercity busdrivers transport people between regions of a State or of the country; local transit busdrivers, within a metropolitan area or county; motorcoach drivers, on charter excursions and tours; and school busdrivers, to and from schools and related events.

Drivers pick up and drop off passengers at bus stops, stations, or, in the case of students, at regularly scheduled neighborhood locations based on strict time schedules. Drivers must operate vehicles safely, especially when traffic is heavier than normal. However, they cannot let light traffic put them ahead of schedule so that they miss passengers.

*Local transit and intercity busdrivers* report to their assigned terminal or garage, where they stock up on tickets or transfers and prepare trip report forms. In some firms, maintenance departments

are responsible for keeping vehicles in good condition. In others, drivers may check their vehicle's tires, brakes, windshield wipers, lights, oil, fuel, and water supply, before beginning their routes. Drivers usually verify that the bus has safety equipment, such as fire extinguishers, first aid kits, and emergency reflectors in case of an emergency.

During the course of their shift, local transit and intercity busdrivers collect fares; answer questions about schedules, routes, and transfer points; and sometimes announce stops. Intercity busdrivers may make only a single one-way trip to a distant city or a round trip each day. They may stop at towns just a few miles apart or only at large cities hundreds of miles apart. Local transit busdrivers may make several trips each day over the same city and suburban streets, stopping as frequently as every few blocks.

Local transit busdrivers submit daily trip reports with a record of trips, significant schedule delays, and mechanical problems. Intercity drivers who drive across State or national boundaries must comply with U.S. Department of Transportation regulations. These include completing vehicle inspection reports and recording distances traveled and the periods they spend driving, performing other duties, and off duty.

*Motorcoach drivers* transport passengers on charter trips and sightseeing tours. Drivers routinely interact with customers and tour guides to make the trip as comfortable and informative as possible. They are directly responsible for keeping to strict schedules, adhering to the guidelines of the tours' itinerary, and the overall success of the trip. These drivers act as customer service representative, tour guide, program director, and safety guide. Trips frequently last more than one day. The driver may be away for more than a week if assigned to an extended tour. As with all drivers who drive across State or national boundaries, motorcoach drivers must comply with Department of Transportation regulations.