

**Table A-7. Fatal occupational injuries by primary and secondary source of injury, 1993**

Source of injury <sup>1</sup>	Fatalities			
	Primary source <sup>2</sup>		Secondary source <sup>3</sup>	
	Number	Percent	Number	Percent
Total .....	6,271	100.0	6,271	100.0
<b>Vehicles</b> .....	2,536	40.4	957	15.3
Air vehicle .....	284	4.5	36	.6
Aircraft--powered fixed wing .....	162	2.6	14	.2
Jet .....	34	.5	7	.1
Propeller-driven aircraft .....	65	1.0	—	—
Aircraft--powered rotary wing .....	71	1.1	11	.2
Aircraft--nonpowered .....	—	—	4	.1
Highway vehicle, motorized .....	1,697	27.1	756	12.1
Automobile .....	457	7.3	200	3.2
Bus .....	16	.3	8	.1
Truck .....	1,012	16.1	420	6.7
Delivery truck .....	39	.6	9	.1
Dump truck .....	79	1.3	29	.5
Pickup truck .....	172	2.7	62	1.0
Semitrailer, tractor trailer, trailer truck .....	443	7.1	204	3.3
Van--passenger or light delivery .....	66	1.1	20	.3
Highway vehicle, nonmotorized .....	4	.1	—	—
Animal or human powered vehicle .....	4	.1	—	—
Offroad vehicle, nonindustrial .....	15	.2	—	—
All terrain vehicle (ATV) .....	7	.1	—	—
Plant and industrial powered vehicles, tractors .....	347	5.5	61	1.0
Forklift .....	64	1.0	28	.4
Platform lift truck--high or low lift .....	4	.1	—	—
Powered industrial carrier, except forklift .....	7	.1	4	.1
Tractor .....	269	4.3	28	.4
Rail vehicle .....	56	.9	78	1.2
Water vehicle .....	122	1.9	23	.4
Barge .....	19	.3	6	.1
Canoe, kayak, rowboat, raft .....	6	.1	—	—
Motorboat .....	11	.2	—	—
Ships--other than sail powered .....	11	.2	9	.1
Tugboat, commercial fishing boat .....	51	.8	5	.1
<b>Structures and surfaces</b> .....	655	10.4	512	8.2
Floors, walkways, ground surfaces .....	556	8.9	140	2.2
Floors .....	163	2.6	20	.3
Ground .....	217	3.5	64	1.0
Sidewalks, paths, outdoor walkways .....	21	.3	—	—
Street, road .....	13	.2	18	.3
Surfaces below ground level, n.e.c. ....	12	.2	14	.2
Ditches, channels, trenches, excavations .....	8	.1	14	.2
Parking lots .....	12	.2	—	—
Other structural elements .....	37	.6	137	2.2
Fences, fence panels .....	—	—	6	.1
Gates .....	5	.1	—	—
Roof .....	13	.2	75	1.2
Walls .....	9	.1	17	.3
Structures .....	54	.9	226	3.6
Bridges, dams, locks .....	8	.1	43	.7
Buildings--office, plant, residential .....	4	.1	20	.3
Mines, caves, tunnels .....	15	.2	13	.2
Scaffolds, staging .....	5	.1	53	.8
Towers, poles .....	19	.3	48	.8
Other structures .....	—	—	46	.7
Guardrails, road dividers .....	—	—	34	.5
<b>Machinery</b> .....	498	7.9	185	3.0
Agricultural and garden machinery .....	118	1.9	9	.1
Harvesting and threshing machinery .....	33	.5	—	—
Balers .....	15	.2	—	—
Combines .....	7	.1	—	—
Mowing machinery .....	32	.5	—	—
Lawn mowers--riding .....	5	.1	—	—
Mowers, tractor .....	20	.3	—	—
Plowing, planting, and fertilizing machinery .....	14	.2	—	—
Plowing and cultivating machinery .....	5	.1	—	—
Construction, logging, and mining machinery .....	187	3.0	39	.6
Excavating machinery .....	52	.8	16	.3
Backhoes .....	19	.3	8	.1
Bulldozers .....	25	.4	8	.1
Loaders .....	60	1.0	7	.1
Bucket loaders .....	8	.1	—	—
Front end loaders .....	34	.5	4	.1
Logging and wood processing machinery--specialized .....	24	.4	8	.1
Forwarder/yarder, skidder .....	8	.1	—	—
Skidder--cable and grapple .....	5	.1	—	—
Mining and drilling machinery .....	17	.3	—	—

See footnotes at end of table.

**Table A-7. Fatal occupational injuries by primary and secondary source of injury, 1993 — Continued**

Source of injury <sup>1</sup>	Fatalities			
	Primary source <sup>2</sup>		Secondary source <sup>3</sup>	
	Number	Percent	Number	Percent
Drilling machines, drilling augers .....	6	.1	—	—
Road grading and surfacing machinery .....	24	.4	—	—
Graders, levellers, planers, scrapers .....	9	.1	—	—
Steam rollers, road pavers .....	8	.1	—	—
Heating, cooling, and cleaning machinery and appliances .....	10	.2	15	.2
Cooling and humidifying machinery and appliances .....	5	.1	4	.1
Heating and cooking machinery and appliances .....	—	—	9	.1
Material handling (cranes, conveyers, jacks) .....	103	1.6	95	1.5
Conveyors--gravity .....	—	—	7	.1
Conveyors--powered .....	30	.5	—	—
Cranes .....	31	.5	31	.5
Cranes--mobile, truck, rail mounted .....	8	.1	6	.1
Cranes--overhead .....	—	—	5	.1
Overhead hoists .....	—	—	4	.1
Derricks .....	—	—	6	.1
Elevators .....	33	.5	24	.4
Bucket or basket hoist--truck mounted .....	6	.1	13	.2
Manlifts .....	8	.1	5	.1
Jacks .....	—	—	18	.3
Metal, woodworking, and special material machinery .....	30	.5	13	.2
Special process machinery .....	26	.4	6	.1
Food and beverage processing machinery--specialized .....	6	.1	—	—
Textile, apparel, leather production machinery .....	4	.1	—	—
Miscellaneous machinery .....	19	.3	7	.1
<b>Parts and materials</b> .....	462	7.4	158	2.5
Building materials--solid elements .....	121	1.9	32	.5
Bricks, blocks, structural stone .....	18	.3	4	.1
Pipes, ducts, tubing .....	29	.5	5	.1
Structural metal materials .....	43	.7	10	.2
Bars, rods, reinforcing bar (rebar) .....	6	.1	—	—
Plates, metal panels .....	8	.1	—	—
Wood, lumber .....	23	.4	7	.1
Other building materials--solid elements .....	4	.1	—	—
Fasteners, connectors, ropes, ties .....	44	.7	18	.3
Ropes, ties .....	37	.6	14	.2
Chains, n.e.c. ....	4	.1	—	—
Rope, twine, string .....	13	.2	—	—
Wire--nonelectrical .....	—	—	5	.1
Hoisting accessories .....	—	—	6	.1
Machine, tool, and electrical parts .....	233	3.7	75	1.2
Electric parts .....	212	3.4	68	1.1
Electrical wiring .....	71	1.1	4	.1
Motors .....	6	.1	—	—
Power lines, transformers, convertors .....	93	1.5	58	.9
Switchboards, switches, fuses .....	17	.3	—	—
Metal materials--nonstructural .....	11	.2	—	—
Vehicle and mobile equipment parts .....	41	.7	23	.4
Tires, inner tubes, wheels .....	22	.4	7	.1
Wheels, tire rims .....	11	.2	—	—
Engine parts and accessories .....	4	.1	—	—
Trailers .....	7	.1	11	.2
<b>Persons, plants, animals, and minerals</b> .....	354	5.6	1,281	20.4
Animals and animal products .....	40	.6	11	.2
Insects, arachnids .....	6	.1	—	—
Mammals, except humans .....	33	.5	10	.2
Cattle .....	19	.3	—	—
Horses .....	8	.1	4	.1
Food products--fresh or processed .....	26	.4	—	—
Metallic minerals .....	6	.1	—	—
Metal ores--nonradiating .....	5	.1	—	—
Nonmetallic minerals, except fuel .....	51	.8	13	.2
Boulders .....	—	—	5	.1
Dirt, earth .....	31	.5	—	—
Rocks, crushed stone .....	9	.1	5	.1
Sand, gravel .....	5	.1	—	—
Person--other than injured or ill worker .....	26	.4	1,037	16.5
Co-worker, former co-worker or injured worker .....	—	—	69	1.1
Relative of injured worker .....	—	—	20	.3
Plants, trees, vegetation--not processed .....	177	2.8	109	1.7
Cash grain crops .....	10	.2	—	—
Field crops .....	4	.1	—	—
Trees, logs .....	162	2.6	103	1.6
<b>Chemicals and chemical products</b> .....	156	2.5	77	1.2
Aromatics and hydrocarbon derivatives, except halogenated .....	6	.1	—	—
Halogens and halogen compounds .....	4	.1	—	—
Chemical products--general .....	35	.6	25	.4

See footnotes at end of table.

**Table A-7. Fatal occupational injuries by primary and secondary source of injury, 1993 — Continued**

Source of injury <sup>1</sup>	Fatalities			
	Primary source <sup>2</sup>		Secondary source <sup>3</sup>	
	Number	Percent	Number	Percent
Drugs, alcohol, medicines .....	25	.4	—	—
Explosives, blasting agents, n.e.c. ....	—	—	7	.1
Solvents, degreasers, n.e.c. ....	—	—	10	.2
Coal, natural gas, petroleum fuels and products .....	15	.2	32	.5
Coal and coal products .....	4	.1	—	—
Petroleum, crude oil .....	—	—	5	.1
Petroleum fuels, distillates, products, unspecified .....	7	.1	22	.4
Gasoline, diesel fuel, jet fuel .....	4	.1	14	.2
Propane .....	—	—	4	.1
Other chemicals .....	86	1.4	13	.2
Ammonia and ammonium compounds .....	10	.2	—	—
Oxygen and oxygen compounds, n.e.c. ....	48	.8	6	.1
Carbon monoxide .....	40	.6	5	.1
Sewer gas, mine gas, methane .....	6	.1	—	—
Sulfur and sulfur compounds .....	9	.1	—	—
Multiple chemicals or chemical mixtures, n.e.c. ....	8	.1	—	—
<b>Tools, instruments, and equipment</b> .....	137	2.2	120	1.9
Handtools--nonpowered .....	97	1.5	7	.1
Cutting handtools .....	77	1.2	—	—
Knives .....	69	1.1	—	—
Striking and nailing handtools .....	4	.1	—	—
Handtools--powered .....	19	.3	17	.3
Boring handtools .....	5	.1	—	—
Cutting handtools .....	7	.1	7	.1
Welding and heating handtools .....	—	—	8	.1
Handtools--power not determined .....	4	.1	—	—
Ladders .....	9	.1	72	1.1
Ladders--fixed .....	—	—	4	.1
Ladders--movable .....	6	.1	27	.4
Extension ladders .....	4	.1	7	.1
Step ladders .....	—	—	6	.1
<b>Containers</b> .....	78	1.2	52	.8
Containers--nonpressurized .....	40	.6	32	.5
Barrels, kegs, drums .....	5	.1	—	—
Tanks, bins, vats .....	21	.3	27	.4
Containers--pressurized .....	16	.3	10	.2
Boilers .....	5	.1	5	.1
Containers--variable restraint .....	19	.3	10	.2
Bundles, bales .....	13	.2	10	.2
Reels, rolls .....	6	.1	—	—
<b>Other</b> .....	1,394	22.2	257	4.1
Ammunition .....	1,024	16.3	—	—
Bullets .....	983	15.7	—	—
Explosive devices .....	7	.1	—	—
Atmospheric and environmental conditions .....	172	2.7	78	1.2
Fire, flame, smoke .....	116	1.8	23	.4
Flood .....	—	—	5	.1
Temperature extreme .....	27	.4	5	.1
Steam, vapors, liquids .....	104	1.7	132	2.1
Scrap, waste, debris .....	7	.1	—	—
<b>Not reported</b> .....	—	—	2,672	42.6

<sup>1</sup> Based on the 1992 BLS Occupational and Illness Classification Structures.

<sup>2</sup> The primary source of injury identifies the object, substance, or exposure that directly produced or inflicted the injury. For transportation incidents, the source identifies the vehicle in which the deceased was an occupant.

<sup>3</sup> The secondary source of injury, if any, identifies the object, substance, or person that generated the source of injury or that contributed to the event or exposure. For vehicle collisions, the deceased's vehicle is the primary source and the other object (truck, road, divider, etc.) is the secondary source. For most homicides, the "bullet" is the

primary source and the "perpetrator" is the secondary source. Secondary source was coded for 3,599 cases.

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding.

Dashes indicate no data reported or data that do not meet publication criteria.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries, 1993.