

TABLE A-9. Fatal occupational injuries by primary and secondary source of injury by major private industry division, 1997

Primary source and secondary source	Total fatalities (number)	Private industry ¹ (percent)								
		Agriculture, forestry, and fishing	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services
Total	6,218	13.3	2.5	17.8	11.9	16.1	3.9	10.7	1.6	11.6
Primary source²										
Vehicles	2,636	15.1	1.7	9.4	8.6	26.9	5.1	5.4	1.4	12.2
Air vehicle	265	9.4	1.1	5.3	7.9	24.2	1.1	-	2.3	19.2
Aircraft--powered fixed wing	142	12.7	-	9.2	7.7	24.6	2.1	-	3.5	22.5
Jet	21	-	-	-	23.8	14.3	-	-	-	19.0
Propeller-driven aircraft	99	18.2	-	12.1	3.0	25.3	-	-	5.1	21.2
Aircraft--powered rotary wing	66	7.6	4.5	-	-	21.2	-	-	-	4.5
Aircraft--nonpowered	8	-	-	-	-	-	-	-	-	75.0
Highway vehicle, motorized	1,845	5.5	1.7	10.7	8.6	30.6	6.3	7.0	1.7	13.2
Automobile	434	2.8	-	6.7	7.4	10.1	5.5	9.0	4.1	28.1
Bus	11	-	-	-	-	-	-	-	-	-
Truck	1,166	6.5	2.4	12.7	8.7	42.1	6.7	5.3	.5	6.2
Delivery truck	54	-	-	7.4	14.8	16.7	25.9	22.2	-	5.6
Dump truck	98	5.1	4.1	29.6	9.2	28.6	4.1	-	-	-
Pickup truck	224	13.8	6.2	25.9	8.9	12.5	2.2	8.9	1.3	8.9
Semitrailer, tractor trailer, trailer truck	494	2.8	.6	3.8	8.7	68.6	6.5	2.8	-	3.0
Van--passenger or light delivery	96	3.1	-	9.4	14.6	14.6	7.3	14.6	3.1	14.6
Highway vehicle, nonmotorized	8	37.5	-	-	-	-	-	-	-	-
Animal or human powered vehicle	8	37.5	-	-	-	-	-	-	-	-
Bicycle	3	-	-	-	-	-	-	-	-	-
Offroad vehicle, nonindustrial	16	43.8	-	-	-	-	-	-	-	18.8
All terrain vehicle (ATV)	9	66.7	-	-	-	-	-	-	-	-
Plant and industrial powered vehicles, tractors	327	66.1	1.2	7.6	9.8	4.6	4.0	2.1	-	2.8
Forklift	75	5.3	-	16.0	32.0	17.3	10.7	6.7	-	5.3
Order picker high lift truck	3	-	-	-	-	-	-	-	-	-
Powered industrial carrier, except forklift	5	-	-	-	-	-	-	-	-	-
Tractor	240	87.1	-	5.0	2.1	-	1.7	-	-	2.1
Rail vehicle	49	-	6.1	8.2	12.2	53.1	-	-	-	6.1
Water vehicle	114	38.6	2.6	5.3	6.1	32.5	-	-	-	7.9
Barge	19	-	-	-	-	63.2	-	-	-	15.8
Motorboat	14	-	-	-	-	-	-	-	-	21.4
Ships--other than sail powered	19	-	-	-	-	73.7	-	-	-	-
Tugboat, commercial fishing boat	50	76.0	-	-	-	16.0	-	-	-	-
Structures and surfaces	804	8.5	2.5	53.0	7.0	5.3	2.0	4.7	2.2	9.3
Floors, walkways, ground surfaces	700	8.4	1.6	53.7	7.4	5.1	2.0	4.3	2.4	10.0
Floors	208	4.8	1.4	52.4	9.6	4.8	2.9	6.2	2.9	11.1
Ground	307	13.4	1.0	58.3	4.9	6.2	-	2.6	1.0	8.1
Sidewalks, paths, outdoor walkways ..	26	-	-	57.7	-	-	-	-	-	11.5
Street, road	12	-	-	41.7	-	-	-	-	-	-
Surfaces below ground level, n.e.c.	25	-	-	80.0	-	-	-	-	-	-
Ditches, channels, trenches, excavations	23	-	-	82.6	-	-	-	-	-	-
Parking lots	25	-	-	20.0	16.0	12.0	-	-	-	28.0
Other structural elements	51	9.8	-	45.1	5.9	5.9	-	9.8	-	7.8
Doors	4	-	-	-	-	-	-	-	-	-
Fences, fence panels	4	-	-	-	-	-	-	-	-	-
Gates	5	-	-	-	-	-	-	-	-	-
Roof	10	-	-	40.0	-	-	-	-	-	-
Walls	16	-	-	62.5	-	18.8	-	-	-	-
Structures	51	-	17.6	52.9	-	7.8	-	5.9	-	-
Buildings--office, plant, residential	16	-	-	50.0	-	-	-	-	-	-
Mines, caves, tunnels	4	-	-	75.0	-	-	-	-	-	-
Scaffolds, staging	4	-	-	100.0	-	-	-	-	-	-
Towers, poles	16	-	25.0	43.8	-	18.8	-	-	-	-
Other structures	6	-	66.7	-	-	-	-	-	-	-
Wells	4	-	100.0	-	-	-	-	-	-	-

See footnotes at end of table.

TABLE A-9. **Fatal occupational injuries by primary and secondary source of injury by major private industry division, 1997 -**
Continued

Primary source and secondary source	Total fatalities (number)	Private industry ¹ (percent)								
		Agriculture, forestry, and fishing	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services
Primary source²										
Machinery	556	25.4	5.8	24.6	24.3	5.0	5.2	1.4	-	5.8
Agricultural and garden machinery	109	87.2	-	-	-	-	-	-	-	4.6
Harvesting and threshing machinery ..	31	100.0	-	-	-	-	-	-	-	-
Balers	12	100.0	-	-	-	-	-	-	-	-
Combines	8	100.0	-	-	-	-	-	-	-	-
Harvesters, reapers	6	100.0	-	-	-	-	-	-	-	-
Mowing machinery	46	76.1	-	-	-	-	-	-	-	8.7
Lawn mowers--riding	11	72.7	-	-	-	-	-	-	-	-
Mowers, tractor	32	78.1	-	-	-	-	-	-	-	-
Plowing, planting, and fertilizing machinery	12	75.0	-	-	-	-	-	-	-	-
Plowing and cultivating machinery ..	6	66.7	-	-	-	-	-	-	-	-
Spreading machinery--agricultural ..	3	100.0	-	-	-	-	-	-	-	-
Construction, logging, and mining machinery	204	14.2	10.8	40.7	18.1	5.4	3.4	-	-	2.9
Excavating machinery	65	12.3	-	56.9	4.6	7.7	-	-	-	6.2
Backhoes	21	19.0	-	66.7	-	-	-	-	-	-
Bulldozers	28	10.7	-	42.9	-	14.3	-	-	-	10.7
Trenchers	3	-	-	100.0	-	-	-	-	-	-
Loaders	54	27.8	9.3	31.5	14.8	7.4	7.4	-	-	-
Bucket loaders	7	-	-	-	-	-	-	-	-	-
Front end loaders	30	16.7	10.0	43.3	10.0	-	10.0	-	-	-
Logging and wood processing machinery--specialized	22	13.6	-	-	86.4	-	-	-	-	-
Forwarder/yarder, skidder	6	-	-	-	83.3	-	-	-	-	-
Skidder--cable and grapple	6	-	-	-	100.0	-	-	-	-	-
Mining and drilling machinery	27	11.1	37.0	37.0	11.1	-	-	-	-	-
Drilling machines, drilling augers	12	25.0	-	58.3	-	-	-	-	-	-
Road grading and surfacing machinery	20	-	-	70.0	-	-	-	-	-	-
Graders, levellers, planers, scrapers	11	-	-	72.7	-	-	-	-	-	-
Steam rollers, road pavers	7	-	-	57.1	-	-	-	-	-	-
Heating, cooling, and cleaning machinery and appliances	21	-	-	19.0	14.3	-	-	23.8	-	33.3
Cooling and humidifying machinery and appliances	11	-	-	36.4	27.3	-	-	-	-	-
Heating and cooking machinery and appliances	5	-	-	-	-	-	-	60.0	-	-
Washers, dryers, and cleaning machinery and appliances	5	-	-	-	-	-	-	-	-	80.0
Material handling (cranes, conveyers, jacks)	118	10.2	5.9	33.9	26.3	6.8	5.9	-	-	9.3
Conveyors--powered	33	24.2	-	12.1	42.4	9.1	-	-	-	-
Cranes	47	-	8.5	48.9	19.1	-	6.4	-	-	8.5
Cranes--mobile, truck, rail mounted ..	13	-	-	61.5	-	-	-	-	-	23.1
Cranes--overhead	8	-	-	-	87.5	-	-	-	-	-
Elevators	27	-	-	40.7	18.5	-	-	-	-	22.2
Bucket or basket hoist--truck mounted	7	-	-	100.0	-	-	-	-	-	-
Elevators--electric	5	-	-	-	-	-	-	-	-	-
Manlifts	3	-	-	-	-	-	-	-	-	-
Jacks	3	-	-	-	-	-	-	-	-	-
Metal, woodworking, and special material machinery	44	-	-	6.8	84.1	-	-	-	-	-
Bending, rolling, shaping machinery ...	3	-	-	-	-	-	-	-	-	-
Extruding, injecting, forming, molding machinery	15	-	-	-	80.0	-	-	-	-	-
Casting machinery	5	-	-	-	100.0	-	-	-	-	-
Plastic injection molding machinery ..	4	-	-	-	100.0	-	-	-	-	-
Lathes	5	-	-	-	100.0	-	-	-	-	-

See footnotes at end of table.

TABLE A-9. **Fatal occupational injuries by primary and secondary source of injury by major private industry division, 1997 -**
Continued

Primary source and secondary source	Total fatalities (number)	Private industry ¹ (percent)								
		Agriculture, forestry, and fishing	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services
Primary source²										
Presses, except printing	7	-	-	-	100.0	-	-	-	-	-
Assembly presses	3	-	-	-	100.0	-	-	-	-	-
Sawing machinery, stationary	7	-	-	-	57.1	-	-	-	-	-
Special process machinery	35	-	-	-	62.9	-	20.0	-	-	-
Food and beverage processing machinery--specialized	5	-	-	-	100.0	-	-	-	-	-
Packaging, bottling, wrapping machinery	11	-	-	-	36.4	-	63.6	-	-	-
Paper production machinery	4	-	-	-	100.0	-	-	-	-	-
Printing machinery and equipment	3	-	-	-	-	-	-	-	-	-
Textile, apparel, leather production machinery	4	-	-	-	75.0	-	-	-	-	-
Miscellaneous machinery	20	-	-	30.0	-	20.0	25.0	-	-	-
Street sweeping and cleaning machinery	7	-	-	71.4	-	-	-	-	-	-
Parts and materials	392	6.9	5.9	36.2	18.1	9.9	3.3	4.3	-	8.9
Building materials--solid elements	117	4.3	7.7	41.0	26.5	6.0	-	4.3	-	6.8
Bricks, blocks, structural stone	15	-	-	53.3	20.0	-	-	-	-	-
Pipes, ducts, tubing	33	-	21.2	33.3	15.2	-	-	-	-	15.2
Structural metal materials	41	-	-	46.3	24.4	7.3	-	7.3	-	-
Bars, rods, reinforcing bar (rebar) ..	6	-	-	50.0	-	-	-	-	-	-
Plates, metal panels	3	-	-	-	-	-	-	-	-	-
Wood, lumber	22	-	-	27.3	59.1	-	-	-	-	-
Other building materials--solid elements	5	-	-	80.0	-	-	-	-	-	-
Fasteners, connectors, ropes, ties	40	10.0	-	20.0	-	-	10.0	15.0	-	20.0
Fasteners	3	-	-	-	-	-	-	-	-	-
Ropes, ties	35	11.4	-	17.1	-	-	11.4	17.1	-	22.9
Rope, twine, string	13	-	-	-	-	-	-	30.8	-	-
Wire--nonelectrical	4	-	-	-	-	-	-	-	-	-
Hoisting accessories	5	-	-	80.0	-	-	-	-	-	-
Machine, tool, and electrical parts	169	7.1	4.7	40.2	12.4	17.2	3.0	-	-	7.7
Electric parts	145	6.2	2.1	43.4	11.0	18.6	2.8	-	-	7.6
Electrical wiring	44	-	-	59.1	9.1	-	-	-	-	15.9
Power lines, transformers, convertors	70	11.4	-	35.7	10.0	30.0	-	-	-	-
Switchboards, switches, fuses	9	-	-	55.6	-	-	-	-	-	-
Metal materials--nonstructural	16	-	-	25.0	62.5	-	-	-	-	-
Molten or hot metals, slag	7	-	-	-	71.4	-	-	-	-	-
Tars, sealants, caulking, insulating material	3	-	-	100.0	-	-	-	-	-	-
Vehicle and mobile equipment parts	36	16.7	-	16.7	19.4	8.3	-	8.3	-	13.9
Tires, inner tubes, wheels	19	21.1	-	-	15.8	-	-	15.8	-	26.3
Wheels, tire rims	7	-	-	-	-	-	-	-	-	-
Engine parts and accessories	3	-	-	-	-	-	-	-	-	-
Trailers	10	-	-	50.0	-	-	-	-	-	-
Persons, plants, animals, and minerals	307	29.3	5.2	8.5	33.2	4.6	1.0	4.2	-	7.2
Animals and animal products	45	62.2	-	-	-	-	-	-	-	13.3
Insects, arachnids	11	27.3	-	-	-	-	-	-	-	-
Mammals, except humans	30	80.0	-	-	-	-	-	-	-	13.3
Cattle	17	94.1	-	-	-	-	-	-	-	-
Horses	9	66.7	-	-	-	-	-	-	-	33.3
Food products--fresh or processed	30	46.7	-	10.0	13.3	10.0	10.0	-	-	-
Nonmetallic minerals, except fuel	31	-	41.9	25.8	9.7	9.7	-	-	-	-
Dirt, earth	12	-	-	58.3	-	-	-	-	-	-
Rocks, crushed stone	15	-	66.7	-	-	-	-	-	-	-
Person--other than injured or ill worker ..	26	-	-	-	-	-	-	30.8	-	19.2
Plants, trees, vegetation--not processed ..	170	27.6	-	6.5	54.1	2.9	-	-	-	5.3
Trees, logs	162	24.7	-	6.8	56.2	3.1	-	-	-	5.6

See footnotes at end of table.

TABLE A-9. **Fatal occupational injuries by primary and secondary source of injury by major private industry division, 1997 -**
Continued

Primary source and secondary source	Total fatalities (number)	Private industry ¹ (percent)								
		Agriculture, forestry, and fishing	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services
Primary source²										
Chemicals and chemical products	155	9.7	3.2	19.4	16.1	9.0	3.2	11.0	1.9	21.9
Acids	3	-	-	-	100.0	-	-	-	-	-
Alkalies	5	-	-	-	-	-	-	-	-	-
Aromatics and hydrocarbon derivatives, except halogenated	3	-	-	-	-	-	-	-	-	-
Halogens and halogen compounds	4	-	-	-	-	-	-	-	-	-
Metallic particulates, trace elements, dusts, powders, fumes	3	-	-	-	-	-	-	-	-	-
Agricultural chemicals and other pesticides	4	100.0	-	-	-	-	-	-	-	-
Chemical products--general	64	-	-	20.3	10.9	9.4	-	15.6	-	32.8
Drugs, alcohol, medicines	46	-	-	13.0	6.5	13.0	-	19.6	-	34.8
Explosives, blasting agents, n.e.c.	10	-	-	40.0	-	-	-	-	-	30.0
Paint, lacquer, shellac, varnish, n.e.c.	3	-	-	-	-	-	-	-	-	-
Coal, natural gas, petroleum fuels and products	6	-	-	-	-	-	-	-	-	-
Petroleum fuels, distillates, products, unspecified	4	-	-	-	-	-	-	-	-	-
Other chemicals	60	10.0	-	26.7	16.7	-	5.0	10.0	-	18.3
Ammonia and ammonium compounds	3	-	-	-	-	-	-	-	-	-
Cyanide and cyanide compounds, n.e.c.	4	-	-	-	-	-	-	-	-	-
Oxygen and oxygen compounds, n.e.c.	41	-	-	31.7	14.6	-	-	12.2	-	24.4
Carbon monoxide	38	-	-	34.2	10.5	-	-	13.2	-	23.7
Sewer gas, mine gas, methane	3	-	-	-	-	-	-	-	-	-
Tools, instruments, and equipment	143	6.3	-	19.6	7.0	7.7	2.1	26.6	2.1	19.6
Handtools--nonpowered	87	-	-	5.7	6.9	10.3	3.4	35.6	-	25.3
Cutting handtools	74	-	-	-	6.8	10.8	-	37.8	-	27.0
Knives	65	-	-	-	7.7	9.2	-	38.5	-	26.2
Striking and nailing handtools	3	-	-	-	-	-	-	-	-	-
Turning handtools, screwdrivers, wrenches	3	-	-	-	-	-	-	-	-	-
Handtools--powered	18	16.7	-	44.4	22.2	-	-	-	-	-
Boring handtools	3	-	-	100.0	-	-	-	-	-	-
Cutting handtools	6	-	-	-	-	-	-	-	-	-
Welding and heating handtools	4	-	-	-	-	-	-	-	-	-
Other handtools--powered	4	-	-	-	-	-	-	-	-	-
Handtools--power not determined	5	-	-	-	-	-	-	-	-	-
Ladders	17	-	-	70.6	-	-	-	-	-	-
Ladders--movable	14	-	-	71.4	-	-	-	-	-	-
Extension ladders	4	-	-	100.0	-	-	-	-	-	-
Containers	94	10.6	6.4	10.6	23.4	13.8	8.5	6.4	-	9.6
Containers-nonpressurized	43	7.0	7.0	16.3	23.3	11.6	7.0	9.3	-	9.3
Bags, sacks, totes	5	-	-	-	-	-	-	-	-	-
Barrels, kegs, drums	3	-	-	-	-	-	-	-	-	-
Boxes, crates, cartons	5	-	-	-	-	-	-	-	-	-
Buckets, baskets, pails	4	-	-	-	-	-	-	-	-	-
Tanks, bins, vats	23	-	13.0	21.7	17.4	-	13.0	-	-	-
Containers-pressurized	24	-	12.5	-	25.0	-	-	-	-	-
Boilers	3	-	-	-	-	-	-	-	-	-
Pressure lines, except hoses	4	-	-	-	-	-	-	-	-	-
Containers-variable restraint	21	23.8	-	-	23.8	19.0	19.0	-	-	-
Bundles, bales	12	41.7	-	-	-	-	25.0	-	-	-
Reels, rolls	9	-	-	-	44.4	-	-	-	-	-
Other	1,131	6.4	.8	5.3	8.4	11.2	2.7	34.1	2.7	14.6
Furniture and fixtures	16	-	-	25.0	25.0	-	-	-	-	25.0
Cases, cabinets, racks, and shelves ..	4	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

TABLE A-9. **Fatal occupational injuries by primary and secondary source of injury by major private industry division, 1997 -**
Continued

Primary source and secondary source	Total fatalities (number)	Private industry ¹ (percent)								
		Agriculture, forestry, and fishing	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services
Primary source²										
Furniture	5	-	-	-	-	-	-	-	-	60.0
Other fixtures	6	-	-	50.0	-	-	-	-	-	-
Ammunition	842	3.2	-	2.1	5.8	12.5	2.5	41.8	3.4	15.8
Bullets	817	3.2	-	2.2	5.8	12.5	2.3	42.5	3.5	15.5
Explosive devices	4	-	-	-	-	-	-	-	-	-
Atmospheric and environmental conditions	143	17.5	2.8	16.8	14.7	9.1	4.9	9.8	-	8.4
Avalanche, mud slide	3	-	-	-	-	-	-	-	-	-
Fire, flame, smoke	87	12.6	-	12.6	17.2	12.6	3.4	12.6	-	11.5
Fire, flame	61	11.5	-	16.4	18.0	16.4	4.9	16.4	-	9.8
Smoke, fire gases	21	14.3	-	-	19.0	-	-	-	-	-
Temperature extreme	23	30.4	-	26.1	-	-	-	-	-	-
Steam, vapors, liquids	77	22.1	3.9	14.3	9.1	6.5	-	5.2	-	10.4
Scrap, waste, debris	5	-	-	-	80.0	-	-	-	-	-
Sewage	4	-	-	-	75.0	-	-	-	-	-
Secondary source³										
Vehicles	948	8.8	1.1	11.6	10.3	26.3	5.9	7.4	2.3	13.5
Air vehicle	22	-	-	-	27.3	13.6	-	-	-	40.9
Aircraft--powered fixed wing	14	-	-	-	28.6	-	-	-	-	28.6
Propeller-driven aircraft	9	-	-	-	-	-	-	-	-	33.3
Aircraft--nonpowered	4	-	-	-	-	-	-	-	-	100.0
Highway vehicle, motorized	756	7.3	.8	12.2	9.3	24.6	5.8	8.5	2.8	14.4
Automobile	199	6.0	1.5	8.5	7.5	15.1	4.0	9.0	2.5	22.6
Bus	6	-	-	-	-	50.0	-	-	-	-
Truck	447	8.9	.7	13.4	9.6	30.9	5.1	8.5	2.5	8.9
Delivery truck	13	-	-	23.1	-	-	-	-	-	30.8
Dump truck	33	-	-	33.3	-	27.3	-	-	-	-
Pickup truck	69	20.3	-	11.6	4.3	18.8	-	10.1	4.3	15.9
Semitrailer, tractor trailer, trailer truck	233	6.4	-	11.6	11.6	36.1	7.3	9.4	2.1	5.2
Van--passenger or light delivery	31	-	-	9.7	-	12.9	16.1	9.7	-	25.8
Offroad vehicle, nonindustrial	4	-	-	-	-	-	-	-	-	-
All terrain vehicle (ATV)	3	-	-	-	-	-	-	-	-	-
Plant and industrial powered vehicles, tractors	57	31.6	-	10.5	17.5	17.5	10.5	-	-	5.3
Forklift	37	8.1	-	16.2	27.0	21.6	13.5	-	-	-
Pallet lift truck--motorized	3	-	-	-	-	-	-	-	-	-
Powered industrial carrier, except forklift	3	-	-	-	-	-	-	-	-	-
Tractor	17	88.2	-	-	-	-	-	-	-	-
Rail vehicle	86	3.5	-	10.5	9.3	45.3	7.0	4.7	-	4.7
Water vehicle	16	31.2	-	-	-	50.0	-	-	-	-
Barge	5	-	-	-	-	80.0	-	-	-	-
Ships--other than sail powered	5	-	-	-	-	-	-	-	-	-
Tugboat, commercial fishing boat	4	75.0	-	-	-	-	-	-	-	-
Structures and surfaces	799	8.1	3.0	35.9	6.3	19.8	3.1	3.1	.9	8.9
Floors, walkways, ground surfaces	227	12.8	2.2	18.1	6.2	22.0	4.4	5.7	1.3	10.1
Floors	35	-	-	57.1	8.6	-	-	-	-	11.4
Ground	111	18.0	-	7.2	5.4	25.2	-	-	-	11.7
Street, road	7	-	-	-	-	42.9	-	-	-	-
Surfaces below ground level, n.e.c.	38	18.4	-	23.7	7.9	15.8	-	7.9	-	-
Ditches, channels, trenches, excavations	35	17.1	-	22.9	8.6	17.1	-	8.6	-	-
Other structural elements	202	5.4	1.5	69.3	5.0	2.5	-	2.5	1.5	6.4
Fences, fence panels	10	30.0	-	-	-	-	-	-	-	-
Gates	3	-	-	-	-	-	-	-	-	-
Roof	131	3.1	-	80.9	3.1	-	-	2.3	-	3.8
Walls	15	-	-	20.0	-	-	-	-	-	33.3
Structures	357	6.2	4.5	28.6	7.3	28.0	3.6	1.7	-	9.5

See footnotes at end of table.

TABLE A-9. **Fatal occupational injuries by primary and secondary source of injury by major private industry division, 1997 -**
Continued

Primary source and secondary source	Total fatalities (number)	Private industry ¹ (percent)								
		Agriculture, forestry, and fishing	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services
Secondary source³										
Bridges, dams, locks	33	12.1	—	15.2	12.1	48.5	—	—	—	—
Buildings--office, plant, residential	29	17.2	—	31.0	—	20.7	—	—	—	—
Mines, caves, tunnels	10	—	30.0	30.0	—	—	—	—	—	—
Scaffolds, staging	79	3.8	—	67.1	7.6	—	—	—	—	13.9
Towers, poles	84	7.1	13.1	27.4	3.6	23.8	3.6	—	—	7.1
Other structures	115	—	—	7.0	8.7	49.6	8.7	—	—	10.4
Guardrails, road dividers	88	—	—	5.7	4.5	54.5	9.1	—	—	10.2
Machinery	241	16.2	5.8	31.5	18.3	5.0	3.7	3.7	—	10.8
Agricultural and garden machinery	21	90.5	—	—	—	—	—	—	—	—
Harvesting and threshing machinery ..	8	100.0	—	—	—	—	—	—	—	—
Balers	3	100.0	—	—	—	—	—	—	—	—
Mowing machinery	6	100.0	—	—	—	—	—	—	—	—
Mowers, tractor	5	100.0	—	—	—	—	—	—	—	—
Construction, logging, and mining machinery	43	—	14.0	51.2	23.3	—	—	—	—	—
Excavating machinery	13	—	—	76.9	—	—	—	—	—	—
Backhoes	5	—	—	80.0	—	—	—	—	—	—
Bulldozers	3	—	—	—	—	—	—	—	—	—
Loaders	10	—	—	30.0	—	—	—	—	—	—
Front end loaders	3	—	—	—	—	—	—	—	—	—
Logging and wood processing machinery--specialized	8	—	—	—	87.5	—	—	—	—	—
Log loaders, including heel boom ...	3	—	—	—	100.0	—	—	—	—	—
Mining and drilling machinery	3	—	—	—	—	—	—	—	—	—
Road grading and surfacing machinery	4	—	—	75.0	—	—	—	—	—	—
Heating, cooling, and cleaning machinery and appliances	13	—	—	23.1	—	—	—	—	—	23.1
Cooling and humidifying machinery and appliances	5	—	—	—	—	—	—	—	—	—
Heating and cooking machinery and appliances	5	—	—	60.0	—	—	—	—	—	—
Washers, dryers, and cleaning machinery and appliances	3	—	—	—	—	—	—	—	—	—
Material handling (cranes, conveyers, jacks)	134	11.2	4.5	32.8	14.2	6.7	6.0	5.2	—	15.7
Conveyors--gravity	4	—	—	—	—	—	—	—	—	—
Conveyors--powered	7	42.9	—	—	—	—	—	—	—	—
Cranes	47	—	—	48.9	14.9	10.6	8.5	—	—	8.5
Cranes--mobile, truck, rail mounted	12	—	—	58.3	—	—	—	—	—	—
Cranes--overhead	6	—	—	—	—	—	—	—	—	—
Cranes--portal, tower, pillar	3	—	—	—	—	—	—	—	—	—
Overhead hoists	10	—	—	—	—	—	—	—	—	40.0
Elevators	33	12.1	—	45.5	15.2	—	—	—	—	9.1
Bucket or basket hoist--truck mounted	17	17.6	—	29.4	23.5	—	—	—	—	—
Elevators--hydraulic	3	—	—	—	—	—	—	—	—	—
Manlifts	8	—	—	87.5	—	—	—	—	—	—
Jacks	28	25.0	—	10.7	—	—	—	17.9	—	35.7
Metal, woodworking, and special material machinery	19	—	—	21.1	63.2	—	—	—	—	—
Sawing machinery, stationary	7	—	—	—	57.1	—	—	—	—	—
Other metal, woodworking, and special material machinery	3	—	—	—	—	—	—	—	—	—
Miscellaneous machinery	8	—	—	—	—	—	—	—	—	—
Parts and materials	239	13.0	2.5	47.3	11.7	12.1	2.5	1.3	—	6.3
Building materials--solid elements	48	—	—	52.1	25.0	10.4	—	—	—	—
Bricks, blocks, structural stone	5	—	—	—	—	—	—	—	—	—
Pipes, ducts, tubing	15	—	—	40.0	26.7	—	—	—	—	—
Structural metal materials	23	—	—	69.6	21.7	—	—	—	—	—

See footnotes at end of table.

TABLE A-9. **Fatal occupational injuries by primary and secondary source of injury by major private industry division, 1997 -**
Continued

Primary source and secondary source	Total fatalities (number)	Private industry ¹ (percent)								
		Agriculture, forestry, and fishing	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services
Secondary source³										
Fasteners, connectors, ropes, ties	19	26.3	—	31.6	—	—	—	—	—	—
Ropes, ties	16	31.2	—	31.2	—	—	—	—	—	—
Chains, n.e.c.	7	—	—	57.1	—	—	—	—	—	—
Hoisting accessories	4	—	—	—	—	—	—	—	—	—
Machine, tool, and electrical parts	143	14.0	2.1	51.0	6.3	10.5	2.8	2.1	—	7.7
Electric parts	139	14.4	—	51.8	6.5	10.1	2.9	2.2	—	7.9
Electrical wiring	17	—	—	52.9	—	—	—	—	—	—
Generators	3	—	—	—	—	—	—	—	—	—
Power lines, transformers, converters	106	16.0	—	57.5	2.8	7.5	3.8	2.8	—	7.5
Switchboards, switches, fuses	7	—	—	—	42.9	—	—	—	—	—
Vehicle and mobile equipment parts	20	20.0	—	25.0	15.0	25.0	—	—	—	—
Tires, inner tubes, wheels	4	—	—	—	—	—	—	—	—	—
Trailers	15	26.7	—	33.3	—	20.0	—	—	—	—
Persons, plants, animals, and minerals	1,054	5.9	.6	3.3	6.6	13.1	3.7	37.0	3.0	14.5
Animals and animal products	15	66.7	—	—	—	—	—	—	—	—
Mammals, except humans	13	61.5	—	—	—	—	—	—	—	—
Cattle	5	60.0	—	—	—	—	—	—	—	—
Horses	4	75.0	—	—	—	—	—	—	—	—
Nonmetallic minerals, except fuel	21	—	—	33.3	—	—	19.0	—	—	—
Dirt, earth	10	—	—	60.0	—	—	—	—	—	—
Rocks, crushed stone	7	—	—	—	—	—	—	—	—	—
Sand, gravel	4	—	—	—	—	—	—	—	—	—
Person--other than injured or ill worker ..	812	.9	—	1.7	5.0	13.2	2.6	45.9	3.3	16.3
Co-worker, former co-worker or injured worker	61	—	—	4.9	27.9	6.6	—	16.4	—	26.2
Relative of injured worker	24	—	—	—	—	—	—	37.5	—	41.7
Plants, trees, vegetation--not processed	163	24.5	2.5	6.1	14.7	16.0	6.1	6.1	—	7.4
Trees, logs	158	24.1	2.5	5.7	15.2	15.8	6.3	6.3	—	7.6
Chemicals and chemical products	77	9.1	13.0	10.4	18.2	6.5	5.2	14.3	—	14.3
Aromatics and hydrocarbon derivatives, except halogenated	5	—	—	—	60.0	—	—	—	—	—
Agricultural chemicals and other pesticides	3	—	—	—	—	—	—	—	—	—
Chemical products--general	17	—	—	—	23.5	—	—	—	—	29.4
Explosives, blasting agents, n.e.c.	9	—	—	—	—	—	—	—	—	55.6
Paint, lacquer, shellac, varnish, n.e.c.	3	—	—	—	—	—	—	—	—	—
Coal, natural gas, petroleum fuels and products	35	11.4	20.0	11.4	—	8.6	—	28.6	—	8.6
Natural gas	13	—	38.5	—	—	—	—	23.1	—	—
Petroleum fuels, distillates, products, unspecified	21	—	—	14.3	—	—	—	33.3	—	14.3
Gasoline, diesel fuel, jet fuel	12	—	—	25.0	—	—	—	33.3	—	—
Propane	5	—	—	—	—	—	—	—	—	—
Other chemicals	8	—	—	—	37.5	—	—	—	—	—
Oxygen and oxygen compounds, n.e.c.	5	—	—	—	60.0	—	—	—	—	—
Carbon monoxide	3	—	—	—	—	—	—	—	—	—
Tools, instruments, and equipment	219	8.2	—	37.0	14.2	7.3	1.8	7.3	4.1	13.2
Handtools--nonpowered	5	—	—	—	—	—	—	—	—	—
Handtools--powered	45	15.6	—	28.9	33.3	—	6.7	—	—	—
Cutting handtools	24	20.8	—	20.8	54.2	—	—	—	—	—
Welding and heating handtools	16	—	—	37.5	—	—	18.8	—	—	—
Handtools--power not determined	3	—	—	—	—	—	—	—	—	—
Ladders	112	3.6	—	52.7	8.9	7.1	—	4.5	7.1	9.8
Ladders--fixed	6	—	—	—	50.0	—	—	—	—	—
Ladders--movable	56	—	—	58.9	—	5.4	—	—	7.1	12.5
Extension ladders	18	—	—	66.7	—	—	—	—	—	—
Step ladders	11	—	—	72.7	—	—	—	—	—	—

See footnotes at end of table.

TABLE A-9. **Fatal occupational injuries by primary and secondary source of injury by major private industry division, 1997 -**
Continued

Primary source and secondary source	Total fatalities (number)	Private industry ¹ (percent)								
		Agriculture, forestry, and fishing	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services
Secondary source³										
Containers	75	21.3	—	12.0	28.0	9.3	8.0	5.3	—	5.3
Containers-nonpressurized	36	25.0	—	19.4	25.0	8.3	—	—	—	8.3
Tanks, bins, vats	31	22.6	—	19.4	25.8	9.7	—	—	—	9.7
Containers-pressurized	15	—	—	—	33.3	—	—	—	—	—
Oxygen tanks	5	—	—	—	—	—	—	—	—	—
Containers-variable restraint	14	42.9	—	—	28.6	—	—	—	—	—
Bundles, bales	10	60.0	—	—	—	—	—	—	—	—
Reels, rolls	3	—	—	—	100.0	—	—	—	—	—
Skids, pallets	8	—	—	—	—	—	37.5	—	—	—
Other	280	25.0	3.6	13.9	8.6	19.6	2.1	3.6	—	7.9
Furniture and fixtures	10	—	—	—	—	—	—	50.0	—	—
Cases, cabinets, racks, and shelves ..	4	—	—	—	—	—	—	75.0	—	—
Other fixtures	3	—	—	—	—	—	—	—	—	—
Atmospheric and environmental conditions	88	9.1	3.4	20.5	6.8	26.1	—	—	—	5.7
Fire, flame, smoke	22	13.6	—	—	—	40.9	—	—	—	—
Fire, flame	16	—	—	—	—	50.0	—	—	—	—
Smoke, fire gases	4	—	—	—	—	—	—	—	—	—
Temperature extreme	4	—	—	—	—	—	—	—	—	—
Steam, vapors, liquids	131	33.6	4.6	6.9	6.1	22.9	2.3	—	—	9.2
Scrap, waste, debris	4	—	—	—	—	—	—	—	—	—
Not reported	2,286	19.2	3.3	15.3	15.9	14.4	3.8	5.6	0.9	11.5

¹ Classified according to the *Standard Industrial Classification Manual, 1987*.

² 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.

³ 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.

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.

n.e.c. means "not elsewhere classified."

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