Fatal and non-fatal accidents in machine products in Japan in 1999-2022

machine products industry Code No.011301

Type of accidents in machine products in 1999-2022

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
fall from height	266	252	244	232	208	242	205	215	233	222	163	172	162	183	168	168	136	168	153	162	150	169	168	157	4,598
falling to same level	216	208	191	156	214	194	205	227	205	222	147	171	163	181	162	180	160	153	163	220	166	200	200	212	4,516
crash	118	122	101	91	95	109	98	88	107	77	59	55	77	60	72	68	57	51	57	68	66	67	62	76	1,901
struck by flying or falling object	392	356	396	314	295	333	360	344	294	290	204	207	230	240	216	248	187	191	180	188	166	157	156	147	6,091
collapse	100	82	87	67	70	71	85	90	85	71	47	49	44	61	58	52	57	45	49	48	52	37	48	35	1,490
crashed by	142	99	144	128	104	121	127	130	121	127	80	73	74	75	72	68	86	74	70	70	86	64	91	67	2,293
caught in/between	938	854	804	741	763	755	693	751	638	621	442	511	545	444	431	435	445	415	438	406	406	297	418	429	13,620
cut	248	256	241	218	200	185	185	189	201	189	114	123	145	137	138	144	114	107	96	123	128	106	106	104	3,797
injury to the sole of the foot	3	2	3	2	1	4	1	3	3		2	1	4	3	1	2	6	3	2	6			4		56
drown													5					1				1			7
contact to high/low-temperature	40	37	28	29	25	34	28	31	30	45	15	31	29	24	23	22	27	23	25	44	31	22	19	35	697
contact to harmful																									

substance	9	14	10	10	12	13	13	17	12	8	12	14	6	5	4	12	6	10	5	9	5	7	12	7	232
electric shock	2	3	6	6	6	5	3		3	5	2	6	2	2	2	2	4		1	4	3	2	6	5	80
explosion	2	5	1	1	8		8		5	2	1	2				5	3	2	7	1	1	2		1	57
burst	4	2	3	2	3	1	4	5	2	2	2	1	2	4	2	2	2	2	3		1	2	2	1	54
fire	1	3	3	7	1	2	2		1		3	5	6	1	2	2	1	2	1	1	2	1	3	1	51
traffic accident (public road)	30	39	39	28	25	44	25	32	21	25	21	29	39	21	24	17	26	26	17	22	18	8	14	5	595
traffic accident (others)		2	1						3			1			1			1	1				1		11
reaction to motion/improper motion	173	141	173	139	148	162	155	192	219	188	118	143	161	130	121	148	143	121	147	138	141	126	164	138	3,629
others	8	6	7	9	9	10	10	4	11	8	5	6	7	11	6	9	6	7	7	8	13	22	109	6	304
unclassifiable	3	3	3		6	2	4	2	1		1	2		3	5	3	7	3	5	2	2			2	59
total	2,695	2,486	2,485	2,180	2,193	2,287	2,211	2,320	2,195	2,102	1,438	1,602	1,701	1,585	1,508	1,587	1,473	1,405	1,427	1,520	1,437	1,290	1,583	1,428	44,138

Causal agents (large) of fatal and non-fatal accidents in machine products in 1999-2022

Causal (L) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
machine	1,012	893	844	758	735	758	709	763	655	660	426	502	561	480	463	455	453	426	420	441	410	342	423	385	13,974
crane, conveying machine	268	270	287	276	248	291	274	283	275	246	168	217	199	188	180	192	178	174	156	205	182	130	154	133	5,174
other equipment	424	412	428	361	374	381	423	391	398	382	271	285	308	288	278	331	266	252	284	264	271	258	309	299	7,938

temporary buildings, establishments	286	273	249	223	247	264	213	262	240	257	166	185	190	213	191	193	196	193	186	224	191	227	207	234	5,310
substance, material	452	411	440	365	389	369	381	404	390	323	260	234	254	251	238	258	227	219	228	201	208	170	202	184	7,058
load	158	135	153	133	109	124	112	128	141	118	83	79	85	66	75	65	58	56	65	78	64	58	84	86	2,313
environment	20	8	15	8	13	15	20	11	9	19	9	19	30	30	21	23	16	21	15	39	22	16	22	37	458
others	75	84	69	56	78	85	79	78	87	97	55	81	74	69	62	70	79	64	73	68	89	89	182	70	1,913
total	2,695	2,486	2,485	2,180	2,193	2,287	2,211	2,320	2,195	2,102	1,438	1,602	1,701	1,585	1,508	1,587	1,473	1,405	1,427	1,520	1,437	1,290	1,583	1,428	44,138

Causal agents (middle) of fatal and non-fatal accidents in machine products in 1999-2022

Causal (M) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
engine	1	3	3	3	5	1	2	3		3	1	1	3	3	2		3	2	1	2	2	1	1	1	47
power transmission mechanism	22	22	20	15	20	21	18	19	15	18	12	6	13	11	13	8	10	11	18	13	10	7	7	10	339
woodworking machine	28	14	16	17	15	13	18	13	17	12	7	15	11	5	7	13	9	8	8	12	6	8	13	13	298
construction machine	12	9	12	5	13	9	10	12	8	9	3	9	6	10	11	8	7	10	6	8	6	4	5	7	199
metal manufacturing machine	752	684	624	585	532	564	518	555	460	504	323	374	420	354	336	335	334	310	295	310	300	249	299	260	10,277

general machine	197	161	169	133	150	150	143	161	155	114	80	97	108	97	94	91	90	85	92	96	86	73	98	94	2,814
mobile silviculture machine																									
crane	128	116	130	132	118	134	127	137	125	116	75	101	75	90	82	101	78	88	74	93	97	67	69	61	2,414
conveying machine	98	124	104	114	104	116	116	114	116	109	74	88	86	82	76	67	72	64	61	79	68	52	67	66	2,117
vehicle	42	30	53	30	26	41	31	32	34	21	19	28	38	16	22	24	28	22	21	33	17	11	18	6	643
pressure vessel	7	5	7	7	2	4	4	4	2	3	3	1	1	3	1		1	2	2	1	4	2	3	3	72
chemical facilities	1		2	1	1				2			1				1	2			1				1	13
welding equipment	23	22	23	15	19	20	23	21	22	23	20	9	12	13	11	17	13	17	15	8	13	10	14	11	394
kiln, caldron	4	9	7	6	13	7	8	3	6	4	3	5	3	3	3	8	6	2	4	4	1	3	5	1	118
electric equipment	7	6	9	6	7	5	3	3	9	9	4	12	1	5	2	1	9	1	3	6	5	2	8	9	132
human power machine, tools	104	95	116	94	87	107	99	100	103	98	63	67	87	78	66	93	68	62	74	86	82	59	89	82	2,059
tools	222	216	205	175	197	192	212	202	191	190	149	154	160	153	158	163	126	131	137	133	136	153	150	149	4,054
other equipments, facilities	56	59	59	57	48	46	74	58	63	55	29	36	44	33	37	48	41	37	49	25	30	29	40	43	1,096
temporary buildings, establishments	286	273	249	223	247	264	213	262	240	257	166	185	190	213	191	193	196	193	186	224	191	227	207	234	5,310
hazards, harmful substances	16	27	20	17	21	18	16	23	21	17	14	17	13	10	12	12	12	13	12	18	11	10	15	10	375
materials	436	384	420	348	368	351	365	381	369	306	246	217	241	241	226	246	215	206	216	183	197	160	187	174	6,683

load	158	135	153	133	109	124	112	128	141	118	83	79	85	66	75	65	58	56	65	78	64	58	84	86	2,313
natural environment	20	8	15	8	13	15	20	11	9	19	9	19	30	30	21	23	16	21	15	39	22	16	22	37	458
other causal agent	22	28	19	11	13	16	16	12	13	24	7	14	11	13	15	11	13	7	10	9	16	24	110	8	442
no causal agent	48	52	47	43	57	67	57	64	73	73	44	62	62	54	44	55	60	55	59	56	71	65	72	60	1,400
unclassifiable	5	4	3	2	8	2	6	2	1		4	5	1	2	3	4	6	2	4	3	2			2	71
total	2,695	2,486	2,485	2,180	2,193	2,287	2,211	2,320	2,195	2,102	1,438	1,602	1,701	1,585	1,508	1,587	1,473	1,405	1,427	1,520	1,437	1,290	1,583	1,428	44,138

Causal agents (small) of fatal and non-fatal accidents in machine products in 1999-2022

Causal (S) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
engine			3		5		2	3		3	1	1	3	3	2		3	2	1	2	2	1	1	1	39
power transmission mechanism			20		20		18	19	15	18	12	6	13	11	13	8	10	11	18	13	10	7	7	10	259
circular sawing machine			11		8		9	6	6	6	4	7	5	3	2	7	6	4	6	5	4	4	2	7	112
band sawing machine			1		1		1	1	2		2	3	2		2			1		2		1	1	1	21
wood planer machine							3	2	1	2		2		1							1		1		13
hollow chisel mortiser, wood borer					3			4	1			1	1			2		1		2		2	1	3	21
chamfering																									

machine, router, woodworking milling machine							1					1											2		4
chain saw										1													3		4
other woodworking machines			4		3		4		7	3	1	1	3	1	3	4	3	2	2	3	1	1	3	2	51
leveling, transporting or loading machine			2		3		1	1				1	2	2	3	1			2	1	3		1	2	25
excavating machine			4		2		4	6	4	2	3	5	3	3	4	3	2	3	4	3	2	2	1	1	61
foundation work machine			1							1		1		2	2			1							8
hardening machine					1					1		1										1	1		5
demolition machine			2					1	1									2						1	7
vehicle for high lift work			1		3		2	1	2	1		1	1	2	2	1	1				1			2	21
other construction machines			2		4		3	3	1	4				1		3	4	4		4		1	2	1	37
lathe			176		133		142	133	106	133	96	116	122	110	83	75	95	78	75	86	76	50	79	73	2,037
drill press, milling machine			143		130		127	122	113	117	74	77	79	60	66	70	71	67	48	49	60	40	53	48	1,614
grinding machine, buffing machine			95		78		79	87	83	83	57	62	72	56	64	62	47	58	46	73	57	57	64	40	1,320
power press			75		63		52	74	50	47	29	31	42	47	40	45	40	41	49	33	38	34	32	42	904

forging pressure hammer												2		1			1				1				5
shearing machine			16		17		10	5	9	16	7	13	11	7	5	8	8	8	8	6	2	5	3	4	168
other metal manufacturing machines			119		111		108	134	99	108	60	73	94	73	78	75	72	58	69	63	66	63	68	53	1,644
centrifugal machine			2				2	1	1	2		1			2		1		3		1		2	1	19
mixer, grinder			5		4		1	1	3	4	4	4	3	2	6	5	1	2	1	1	3	6	4	2	62
roll machine (except printingroll machine)			11		13		10	12	9	5	4	5	7	13	5	6	9	7	6	9	4	6	5	6	152
injection molding machine			1		4		4	3	2	4	2	1	1		3	2	1	1	2	5	2	3		1	42
food manufacturing machine			3		5		4	2	4	2	3	2	2	2		6	4		10	4	2	3	7	3	68
printing machine			2		3			5	2	3		1	2	2	1	2	2	3		1	3	1		2	35
industrial robot					1		5	3	7	3		3	3	1	4	3		2	3	2	3	4	1	2	50
other general power machines			145		120		117	134	127	91	67	80	90	77	73	67	72	70	67	74	68	50	79	77	1,745
felling machine																									
mobile logging machine																									
skyline yarding machine																									

other mobile silviculture machine																									
crane			107		98		109	114	105	104	63	84	63	82	69	88	68	75	65	76	84	60	57	52	1,623
mobile crane			8		11		6	8	7	2	5	3	8	2	4	8	6	6	4	6	3	1	8	4	110
derrick crane																									
elevator, lift			8		6		4	6	9	4	2	9	1	2	3	1	3		3	3	7	3	1	4	79
cargo lifting appliance			1																			1	1		3
gondola					1					1					2										4
lumberyard equipment, logging cableway																									
simple skyline yarding equipment																									
other powered crane			6		2		8	9	4	5	5	5	3	4	4	4	1	7	2	8	3	2	2	1	85
truck			39		25		37	32	42	39	23	37	34	26	36	24	25	22	19	32	29	17	24	22	584
forklift			31		43		47	56	41	43	28	21	29	30	26	20	30	25	26	24	24	23	27	16	610
railway equipment					1		1	2	1	2	1		3	1	1					1					14
conveyor			27		24		22	17	25	21	22	22	13	18	10	17	10	11	11	14	9	11	11	19	334
loader			2													1								1	4
straddle carrier																									
rough terrain hauler								1																	1
other powered																									

conveying machines			5		11		9	6	7	4		8	7	7	3	5	7	6	5	8	6	1	5	8	118
cars, bus, motorcycle			49		23		25	32	30	21	18	28	38	14	20	20	27	20	20	32	16	10	16	4	463
railway vehicle			1												1				1						3
other vehicles			3		3		6		4		1			2	1	4	1	2		1	1	1	2	2	34
boiler					1		2				1			2						1					7
pressure vessel			2		1			1	1	2	1	1						1	2		2	1	2	1	18
other pressure vessels			5				2	3	1	1	1		1	1	1		1	1			2	1	1	2	24
chemical facilities			2		1				2			1				1	2			1				1	11
gas welding equipment			5		4		4	4	3	3	7	3		2	4	3	3	3	7	1	2	1		1	60
arc welding equipment			5		9		11	10	12	11	10	3	7	3	4	9	7	6	3	5	7	6	7	7	142
other welding equipment			13		6		8	7	7	9	3	3	5	8	3	5	3	8	5	2	4	3	7	3	112
kiln, caldron			5		10		4	1	5	2	1	5	2	2	1	7	5	1	2	3		3	4	1	64
industrial dryer			2				4	1		1	1		1		1	1	1	1	2		1		1		18
other kiln, caldron					3			1	1	1	1			1	1					1					10
transmission			2		1			1	6	2	1	3		4			5	1	3	1	2		2	6	40
electric power facilities			1		5		1	2	2	6	3	6			1		1			2	2	2	2	1	37
other electrical			6		1		2		1	1		3	1	1	1	1	3			3	1		4	2	31

equipment																									
human power cranes			4		3		3	3	5	3	6	1	5	3	6	4		1	2	1	3	3	8	13	77
human power hauling equipment			31		34		40	35	36	35	18	26	36	27	24	43	34	31	25	32	29	26	35	23	620
human power machine			1		5		4	5	1	3	2	3	1	2	3	5	4	2	3	7	5	2	4	2	64
hand tool			80		45		52	57	61	57	37	37	45	46	33	41	30	28	44	46	45	28	42	44	898
ladder			87		94		91	76	85	75	75	67	63	71	59	71	47	60	59	56	53	72	64	72	1,397
slinging tool			65		60		59	67	48	51	33	42	42	39	53	39	37	40	40	28	36	30	30	18	857
other tools			53		43		62	59	58	64	41	45	55	43	46	53	42	31	38	49	47	51	56	59	995
other equipment, facilities			59		48		74	58	63	55	29	36	44	33	37	48	41	37	49	25	30	29	40	43	878
scaffolding			13		6		11	6	9	14	10	5	4	5	3	6	6	9	9	3	2	8	3	6	138
timbering																									
stairs, landing stage			42		45		33	52	30	51	25	39	35	38	38	34	41	38	35	40	32	46	52	44	790
opening			9		2		6	4	8	1	7		5	5	6	5	5	3	4	7	4	2	5	5	93
roof, beam, haze, crossbeam, principal rafter			5		3		5	4	3	5	1	2	5	5	1	3	1	5	1	7	4	2	2	2	66
working platform, boot board			44		46		37	51	45	47	28	34	25	40	34	29	32	30	29	35	26	24	30	30	696
passage			82		84		71	86	81	76	59	69	67	65	66	77	67	70	75	87	73	103	79	97	1,534
building,																									

establishment			30		35		26	29	42	39	18	26	29	31	25	26	21	21	20	29	30	20	21	25	543
other temporary buildings, establishments			24		26		24	30	22	24	18	10	20	24	18	13	23	17	13	16	20	22	15	25	404
explosive substance							1								1		1						1		4
inflammable substance			6		8		1	4	4	7	3	5	7	2	1	1	2	3	6	3	4	2	1		70
inflammable gas					2		2	3	3	1				1	1		1	1	1	3		1		1	21
harmful substance			8		7		10	6	7	3	10	8	3	2	4	3	4	6	3	6	4	3	5	4	106
radiation																									
other hazards, harmful substances			6		4		2	10	7	6	1	4	3	5	5	8	4	3	2	6	3	4	8	5	96
metal material			393		339		344	351	343	282	229	201	221	222	207	231	198	200	200	171	190	145	175	165	4,807
lumber, bamboo			9		13		9	12	11	9	4	5	3	11	10	2	9	3	7	3	4	8	2	4	138
stone, sand, substance			3		1		2	4	2	2	2		2	1		1	1	1	2	1		1		1	27
other materials			15		15		10	14	13	13	11	11	15	7	9	12	7	2	7	8	3	6	10	4	192
load			106		63		74	84	98	75	56	52	60	47	49	50	40	39	51	56	41	42	64	60	1,207
machine/equipment as load			47		46		38	44	43	43	27	27	25	19	26	15	18	17	14	22	23	16	20	26	556
natural ground, rock			1				2		2	2				4	2	2	2		1	1	2	1		1	23
standing tree			1							2			2	4		1	1		1	2	1	1	2		18

water					1		2		2	1	1	1	6					1	1		1	1			18
abnormal environment								1										1		1					3
high/cold temperature environment			6				3	2	3	5	1	10	10	4	10	5	6	7	6	20	13	6	7	18	142
other environments			7		12		13	8	2	9	7	8	12	18	9	15	7	12	6	15	5	7	13	18	203
other causal agent			19		13		16	12	13	24	7	14	11	13	15	11	13	7	10	9	16	24	110	8	365
no causal agent			47		57		57	64	73	73	44	62	62	54	44	55	60	55	59	56	71	65	72	60	1,190
unclassifiable			3		8		6	2	1		4	5	1	2	3	4	6	2	4	3	2			2	58
total	2,695	2,486	2,485	2,180	2,193	2,287	2,211	2,320	2,195	2,102	1,438	1,602	1,701	1,585	1,508	1,587	1,473	1,405	1,427	1,520	1,437	1,290	1,583	1,428	44,138

Workers age of fatal and non-fatal accidents in machine products in 1999-2022

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
19 years old or less	91	78	69	75	70	67	57	80	74	46	36	41	29	28	39	41	34	34	40	31	28	20	26	21	1,155
20-29	519	490	488	373	426	441	409	447	404	408	258	292	324	282	278	308	260	254	260	253	243	214	243	222	8,096
30-39	401	383	443	394	434	446	458	497	502	422	337	337	359	348	318	314	301	278	291	325	270	213	310	267	8,648
40-49	520	463	433	376	376	385	355	389	378	359	264	290	373	335	328	331	345	310	320	335	312	287	360	310	8,534
50-59	860	778	763	672	595	621	583	555	504	482	286	330	315	296	263	325	266	264	251	281	315	310	356	345	10,616
60 years old or more	304	294	289	290	292	327	349	352	333	385	257	312	301	296	282	268	267	265	265	295	269	246	288	263	7,089
total	2,695	2,486	2,485	2,180	2,193	2,287	2,211	2,320	2,195	2,102	1,438	1,602	1,701	1,585	1,508	1,587	1,473	1,405	1,427	1,520	1,437	1,290	1,583	1,428	44,138

Workers' number of workplace of fatal and non-fatal accidents in machine products in 1999-2022

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
9 workers or less	772	730	787	694	681	697	594	616	502	466	378	372	382	399	324	364	294	315	249	276	253	212	268	218	10,843
10-29	824	769	729	657	651	658	661	677	578	592	391	432	446	420	428	408	423	377	374	371	371	339	425	370	12,371
30-49	334	283	303	269	291	303	304	313	315	280	178	213	235	196	230	209	205	190	238	241	220	188	199	196	5,933
50-99	296	293	263	204	234	249	246	253	250	232	174	208	212	188	182	208	200	194	207	210	197	190	221	216	5,327
100-299	304	252	263	220	212	232	250	283	299	293	186	223	233	223	188	221	206	189	194	229	220	202	233	215	5,570
300 workers or more	165	159	140	136	124	148	156	178	251	239	131	154	193	159	156	177	145	140	165	193	176	159	237	213	4,094
total	2,695	2,486	2,485	2,180	2,193	2,287	2,211	2,320	2,195	2,102	1,438	1,602	1,701	1,585	1,508	1,587	1,473	1,405	1,427	1,520	1,437	1,290	1,583	1,428	44,138

Month of fatal and non-fatal accidents in machine products in 1999-2022

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
January	196	166	202	178	172	167	170	202	176	169	123	126	139	149	116	111	127	108	107	139	109	113	127	130	3,522
February	258	206	206	182	174	186	170	198	178	211	121	135	128	157	138	152	118	128	107	115	133	111	135	116	3,763
March	237	258	227	189	197	212	198	215	223	164	128	146	151	164	121	125	149	125	131	116	120	105	119	133	3,953
April	202	186	218	199	169	188	188	181	179	189	123	136	134	110	115	119	124	123	120	105	110	120	124	118	3,580
May	225	205	228	207	172	186	176	193	174	167	110	130	137	113	115	154	100	107	102	136	124	89	128	104	3,582
June	211	215	219	178	219	222	173	195	186	179	137	154	166	125	139	129	128	135	144	144	140	132	136	134	3,940
July	217	207	249	204	204	224	210	202	214	194	137	151	156	140	142	173	139	122	126	146	137	119	139	135	4,087
August	226	208	191	166	180	183	191	192	195	154	105	109	143	141	122	130	107	119	123	138	96	109	151	111	3,590

September	248	221	192	184	188	201	204	179	180	199	103	135	146	136	138	142	142	106	138	130	122	107	120	120	3,781
October	233	228	220	180	168	173	191	208	159	186	127	134	152	130	147	131	122	107	127	134	109	107	150	102	3,725
November	249	186	170	151	167	166	170	175	147	160	98	115	133	110	113	125	112	121	105	136	117	86	118	115	3,345
December	193	200	163	162	183	179	170	180	184	130	126	131	116	110	102	96	105	104	97	81	120	92	136	110	3,270
total	2,695	2,486	2,485	2,180	2,193	2,287	2,211	2,320	2,195	2,102	1,438	1,602	1,701	1,585	1,508	1,587	1,473	1,405	1,427	1,520	1,437	1,290	1,583	1,428	44,138

Prefecture of fatal and non-fatal accidents in machine products in 1999-2022

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
Hokkaido	53	58	49		50		45	35	40	34	31	40	24	36	35	26	23	35	26	23	29	29	24	36	781
Aomori	7	4	10		10		5	12	8	7	6	9	5	5	3	8	5	6	2	2	6	7	5	6	138
Iwate	27	8	16		9		17	7	9	7	11	11	11	14	8	10	8	4	6	6	6	9	16	13	233
Miyagi	35	33	14		20		19	17	15	14	12	10	20	11	10	6	13	17	15	14	13	14	16	9	347
Akita	18	16	15		19		13	10	9	12	7	16	5	10	7	7	11	9	10	13	10	6	9	14	246
Yamagata	23	36	21		23		28	28	25	33	18	12	15	21	20	25	17	24	23	25	16	20	26	18	497
Fukushima	34	20	28		14		28	22	31	34	22	11	31	17	22	21	10	21	11	20	13	16	20	24	470
Ibaraki	32	51	48		51		40	49	57	49	29	52	47	46	28	46	43	41	43	44	55	46	51	36	984
Tochigi	41	47	26		27		33	37	41	36	21	20	27	26	19	19	18	14	29	27	28	22	16	20	594
Gunma	68	66	70		45		44	66	73	49	34	38	28	37	28	43	47	29	47	45	42	36	35	37	1,007
Saitama	118	119	124		110		100	101	91	83	77	70	67	63	51	50	54	61	60	57	68	51	88	51	1,714
Chiba	92	72	59		64		43	57	40	47	43	54	38	49	35	39	31	34	32	33	39	43	39	29	1,012
Tokyo	113	94	111		71		84	77	66	60	50	35	40	38	37	31	38	25	28	28	28	24	20	20	1,118
Kanagawa	150	130	115		87		86	100	105	96	71	73	78	89	81	63	59	61	47	59	57	38	55	49	1,749

Niigata	70	70	95		74		80	71	65	60	23	39	61	38	44	49	49	50	58	36	49	43	41	48	1,213
Toyama	36	32	39		31		42	34	43	40	33	32	29	20	19	21	21	29	26	26	24	23	25	28	653
Ishikawa	55	43	49		50		66	69	62	73	32	46	50	47	42	44	43	35	41	47	28	28	52	43	1,045
Fukui	18	15	15		9		11	19	19	12	8	5	10	20	7	16	14	5	7	9	7	9	14	13	262
Yamanashi	12	6	11		6		18	17	18	17	10	13	13	10	10	13	3	9	10	12	12	10	15	13	258
Nagano	39	36	47		34		37	50	35	45	23	27	34	34	42	42	44	33	27	36	32	23	27	41	788
Gifu	87	78	70		64		60	72	61	60	34	40	51	50	55	47	58	46	48	42	41	35	49	54	1,202
Shizuoka	135	127	142		125		103	136	118	126	91	78	69	82	65	73	80	70	72	93	70	74	79	71	2,079
Aichi	251	247	237		221		227	205	190	156	104	150	160	127	133	139	118	119	110	110	102	124	135	120	3,485
Mie	73	56	53		45		51	60	62	50	32	41	58	37	28	43	41	42	38	54	46	25	42	46	1,023
Shiga	42	47	32		33		53	50	47	39	24	26	43	23	34	27	34	28	27	35	23	30	76	38	811
Kyoto	43	38	31		25		31	32	37	31	20	26	35	26	22	27	30	17	23	24	29	24	46	27	644
Osaka	286	247	241		256		225	249	206	209	139	179	173	170	169	181	143	141	135	144	132	100	144	114	3,983
Hyogo	173	140	152		138		125	136	131	126	86	95	102	90	87	85	61	76	79	77	85	82	85	80	2,291
Nara	17	13	18		14		18	19	18	20	10	12	18	11	7	11	16	15	5	10	15	12	21	15	315
Wakayama	19	29	22		21		20	20	24	22	14	13	21	14	22	16	14	15	13	5	20	9	14	11	378
Tottori	10	12	4		5		5	7	5	2	3		3	3	5	5	1	1	2	2	8	5	4	4	96
Shimane	13	13	5		15		13	10	10	13	4	12	3	8	11	7	8	10	8	11	6	5	8	10	203
Okayama	37	48	57		35		36	51	46	43	22	25	38	36	35	40	25	29	35	43	26	35	36	34	812
Hiroshima	92	104	100		91		94	82	97	95	61	62	58	66	59	69	66	56	74	69	62	41	58	58	1,614
Yamaguchi	57	34	37		33		25	32	41	34	26	21	22	9	16	18	20	17	18	25	18	23	13	8	547
Tokushima	18	13	18		20		16	23	12	11	8	16	15	11	11	12	13	4	9	9	9	7	7	8	270
Kagawa	22	28	24		18		39	30	25	29	17	16	23	23	23	24	12	17	20	31	25	17	21	25	509

Ehime	67	57	66		57		50	53	41	47	44	40	46	40	32	35	28	42	43	33	32	28	26	33	940
Kochi	27	18	32		18		15	22	19	16	21	18	14	22	18	12	24	16	15	15	13	21	10	14	400
Fukuoka	87	80	75		73		71	57	61	62	44	55	59	48	63	48	55	45	48	57	52	49	57	49	1,295
Saga	11	23	21		15		21	28	29	20	15	14	12	14	15	18	15	11	14	13	15	12	12	21	369
Nagasaki	25	34	36		22		28	30	20	31	21	22	22	27	20	37	30	18	17	25	20	13	15	12	525
Kumamoto	21	11	14		10		19	14	25	17	9	11	5	4	7	14	12	10	14	10	9	5	5	9	255
Oita	10	4	11		11		7	10	8	16	13	10	4	5	10	8	4	2	2	1	3	6	10	5	160
Miyazaki	12	13	13		12		10	5	6	9	5	3	7	4	9	6	6	10	4	9	8	2	13	4	170
Kagoshima	18	14	12		11		9	9	4	10	9	4	7	4	4	6	8	6	5	10	6	9	3	9	177
Okinawa	1	2			1		1				1								1	1				1	9
total	2,695	2,486	2,485	2,180	2,193	2,287	2,211	2,320	2,195	2,102	1,438	1,602	1,701	1,585	1,508	1,587	1,473	1,405	1,427	1,520	1,437	1,290	1,583	1,428	44,138

Fatal and non-fatal accidents mean fatal and non-fatal injuries and occupational diseases with work absence of 4 days and more.

Data of 2022 year do not include Covid-19 cases. Data of 2020 & 2021 year include Covid-19 cases. Fatal and non-fatal data are same situation.

Data of 2011 year include fatal and non-fatal accidents caused by Great East Japan Earthquake in 2011.

Data sources: https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.html (MHLW, Japan)

Return to https://www.jisha.or.jp/english/statistics/2022e_industry.html

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Fatal accidents in machine products in Japan in 1999-2022

machine products industry Code No.011301

Type of fatal accidents in machine products in 1999-2022

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
fall from height	1	3	4	2	1	3	1	1	5	1		2	2	4	3	2	1	1	3	1		1	2		44
falling to same level							1	1	1														1		4
crash								1																	1
struck by flying or falling object	3	4	2			1	3	3	4	2	1	3	2	2	4	3	1	1	1	2		5			47
collapse	4		2	1	1	2	1	5		1					1		1			2			1	1	23
crashed by		2	2	2	4	1	2	1	2				1	1	2	5	1	2		4	1		1		34
caught in/between	6	5	4	5	4	4	3	4	6	2	3	5	2	2	6		1	7	5	1	5	5	3	6	94
cut				1																				1	2
injury to the sole of the foot																									
drown													5									1			6
contact to high/low-temperature							1		1	1		1			1										5
contact to harmful substance	1		1			1		1			2	1			1										8
electric shock		1		1	2	1					1	1			1	1									9
explosion			1		1		1					1				1			2				1	1	9
burst		1		1										1											3
fire							1						1												2
traffic accident (public road)	6	4	2		3	4	2	2			3		1	1					1	1					30
traffic accident (others)									1																1
reaction to motion/improper motion																									

others				2		1			1	1		1	4	1	1		2	3					1		18
unclassifiable																									
total	21	20	18	15	16	18	16	19	21	8	10	15	18	12	20	12	7	14	12	11	6	12	10	9	340

Causal agents (large) of fatal accidents in machine products in 1999-2022

Causal (L) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
machine	4	4	2	4	4	3	5	5	5	2	2	2	2	2	8	5	1	6	4	1	5	4	3	6	89
crane, conveying machine	11	8	5	4	7	8	5	3	9	1	4	4	2	3			1	4	2	3	1	2	1		88
other equipment	1	5	7	5	2	1		4	3	3	2	2	2	3	6	6	1		3	4		5		2	67
temporary buildings, establishments	4	1	1		1	2	1	2	2			2	2	3	1	1	1		1				2		27
substance, material	1	2	1		1	2	4	2	1	1	2	3	1		2		1	1	2	2			3	1	33
load			1		1	1	1	2							1					1					8
environment			1					1				1	6		1							1			11
others				2		1			1	1		1	3	1	1		2	3					1		17
total	21	20	18	15	16	18	16	19	21	8	10	15	18	12	20	12	7	14	12	11	6	12	10	9	340

Causal agents (middle) of fatal accidents in machine products in 1999-2022

Causal (M) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
engine																									
power transmission mechanism																									

woodworking machine				1													1							1	3
construction machine							1		1							1									3
metal manufacturing machine	2	3	2	2	3	3	3	4	2	1	2	2	2		7	4		4	1		3	3	2	5	60
general machine	2	1		1	1		1	1	2	1				2	1			2	3	1	2	1	1		23
mobile silviculture machine																									
crane	1	1	2	1	1	3	1	1	7	1		4		1			1	1	1	1	1		1		30
conveying machine	4	5	2	2	3	2	3	2	2		2		1	2				3		1		2			36
vehicle	6	2	1	1	3	3	1				2		1						1	1					22
pressure vessel			1						1																2
chemical facilities																								1	1
welding equipment		1				1				1						1				1					5
kiln, caldron			2													1								1	4
electric equipment				1					1		1	1			1										5
human power machine, tools	1			1				1		1				1											5
tools		2	2	1				2	1	1		1	2	1	2	2			1	2		5			25
other equipments, facilities		2	2	2	2			1			1			1	3	2	1		2	1					20
temporary buildings, establishments	4	1	1		1	2	1	2	2			2	2	3	1	1	1		1				2		27
hazards, harmful substances	1					1	2				1	2	1		1								1		10
materials		2	1		1	1	2	2	1	1	1	1			1		1	1	2	2			2	1	23
load			1		1	1	1	2							1					1					8
natural environment			1					1				1	6		1							1			11
other causal agent						1				1															2

no causal agent				2					1			1	3	1	1		2	3					1		15
unclassifiable																									
total	21	20	18	15	16	18	16	19	21	8	10	15	18	12	20	12	7	14	12	11	6	12	10	9	340

Causal agents (small) of fatal accidents in machine products in 1999-2022

Causal (S) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
engine																									
power transmission mechanism																									
circular sawing machine				1																				1	2
band sawing machine																									
wood planer machine																									
hollow chisel mortiser, wood borer																									
chamfering machine, router, woodworking milling machine																									
chain saw																									
other woodworking machines																	1								1
leveling, transporting or loading machine																									
excavating machine																									
foundation work machine							1																		1
hardening machine																									

demolition machine																									
vehicle for high lift work									1							1									2
other construction machines																									
lathe		2	2	1	1	2	1	1	1	1	1	1	1		4	2		3			1		1		26
drill press, milling machine	2			1	2		2	1	1		1				2	1		1			2	1	1	2	20
grinding machine, buffing machine																						1			1
power press													1											1	2
forging pressure hammer																									
shearing machine																									
other metal manufacturing machines		1				1		2				1			1	1			1			1		2	11
centrifugal machine																									
mixer, grinder	1																								1
roll machine (except printingroll machine)																									
injection molding machine				1																1					2
food manufacturing machine																									
printing machine																									
industrial robot									1						1			1			1		1		5
other general power machines	1	1			1		1	1	1	1				2				1	3		1	1			15
felling machine																									
mobile logging machine																									

skyline yarding machine																									
other mobile silviculture machine																									
crane	1	1	1			3			3	1		2		1			1	1	1				1		17
mobile crane				1	1		1		1											1					5
derrick crane																									
elevator, lift			1					1	1																3
cargo lifting appliance																									
gondola																									
lumberyard equipment, logging cableway																									
simple skyline yarding equipment																									
other powered crane									2			2									1				5
truck	1	2	1		1	1	1	2	1		1			1											12
forklift	2	3			1		1		1		1							1		1		1			12
railway equipment													1												1
conveyor			1	2														2				1			6
loader																									
straddle carrier																									
rough terrain hauler																									
other powered conveying machines	1				1	1	1							1											5
cars, bus, motorcycle	6	2	1	1	3	3	1				2		1						1	1					22
railway vehicle																									

other vehicles																									
boiler																									
pressure vessel			1																						1
other pressure vessels									1																1
chemical facilities																								1	1
gas welding equipment																									
arc welding equipment		1				1				1						1				1					5
other welding equipment																									
kiln, caldron																1								1	2
industrial dryer			1																						1
other kiln, caldron			1																						1
transmission												1													1
electric power facilities									1		1				1										3
other electrical equipment				1																					1
human power cranes	1									1															2
human power hauling equipment				1				1																	2
human power machine														1											1
hand tool																									
ladder		1	1						1	1									1			1			6
slinging tool		1	1					1				1	2		2	2				2		4			16
other tools				1				1						1											3
other equipment, facilities		2	2	2	2			1			1			1	3	2	1		2	1					20
scaffolding												1	1												2

timbering																									
stairs, landing stage																			1				1		2
opening			1																						1
roof, beam, haze, crossbeam, principal rafter						1	1							2											4
working platform, boot board		1			1	1			1					1	1								1		7
passage																									
building, establishment	1							2	1			1	1			1	1								8
other temporary buildings, establishments	3																								3
explosive substance							1																		1
inflammable substance							1					1	1												3
inflammable gas																							1		1
harmful substance	1					1					1	1			1										5
radiation																									
other hazards, harmful substances																									
metal material		2	1		1		1	2	1	1	1	1			1		1		2	2			2	1	20
lumber, bamboo																									
stone, sand, substance							1																		1
other materials						1												1							2
load						1	1	2												1					5
machine/equipment as load			1		1										1										3
natural ground, rock																									

standing tree																									
water													6									1			7
abnormal environment			1					1																	2
high/cold temperature environment												1			1										2
other environments																									
other causal agent						1				1															2
no causal agent				2					1			1	3	1	1		2	3					1		15
unclassifiable																									
total	21	20	18	15	16	18	16	19	21	8	10	15	18	12	20	12	7	14	12	11	6	12	10	9	340

Workers age of fatal accidents in machine products in 1999-2022

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
19 years old or less			1	2			1					1		1	1										7
20-29	4	1	2	1	4	2	1	3	1		1	1	3	1	4	2	1	2	1	1	1	2	1	3	43
30-39	4	6	3	2	1	3	5	3	6	1		4	3	4	7	2	1	3	2	4	2	1		1	68
40-49	4	1	5	4	1	6	4	3	4		2	3	1	1	3	3	1	5	4			3	3	1	62
50-59	4	5	4	4	7	5	1	3	6	6	2	1	5	5	3	3	1		1	4	1	2	1	1	75
60 years old or more	5	7	3	2	3	2	4	7	4	1	5	5	6		2	2	3	4	4	2	2	4	5	3	85
total	21	20	18	15	16	18	16	19	21	8	10	15	18	12	20	12	7	14	12	11	6	12	10	9	340

Workers' number of workplace of fatal accidents in machine products in 1999-2022

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
9 workers or less	2	5	7	5	6	2	4	4	5	1	5	3	7	6	4	2	2	4	1	2	1	7	7	3	95
10-29	5	5	3	1	2	7	5	3		1	2	4	1	2	6	4	2	3	1	4	2	3		1	67
30-49	2	2	2	3	1	4	4	2	4	1	1	2	3	1	3	2	2	1	5	2	1	1			49
50-99	1	4	3	1	2		1	5	4	2	1	5	5		2	1	1	5	3	2	1		1	3	53
100-299	3	1	2		2	4		3	4	2	1		2	1	1	2					1	1	1	1	32
300 workers or more	8	3	1	5	3	1	2	2	4	1		1		2	4	1		1	2	1			1	1	44
total	21	20	18	15	16	18	16	19	21	8	10	15	18	12	20	12	7	14	12	11	6	12	10	9	340

Month of fatal accidents in machine products in 1999-2022

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
January	1		3	3	2	2	1	2	4	1	1			2	1			1	1		1	1			27
February	2	2	1	1	2	2	2	3	3		1		2		3	1			3	1			2	1	32
March	1	3	2	1		2	3		4		1	1	9	2		1		4	2	2	1		2	2	43
April	1		2	2	1	1	1		1		2	2			1	1	1	1			1	3		1	22
May		2	1	3			1	3		1	2	1	3	1	1	1		1		1		1	1		24
June		2		1	3	3	1	1		2			1	1			1	2	2	1	1	2	2		26
July	2	2	1	1	3	1	1	4	1		1	1	1	1	2	1	1			1		2	1	2	30
August	1	4	4		1	2	3	1	1	1		2		1	2	3			1			1	2	1	31
September	7	2	1	1	1	1	2		2	1					1	3	2	2	1	1					28
October	1			1	1				1	1	1	2		1	4		2	1		2		1			19

November	1	1	2		1		1	3	2	1	1	3	2	2	2	1		1		1				1	26
December	4	2	1	1	1	4		2	2			3		1	3			1	2	1	2	1		1	32
total	21	20	18	15	16	18	16	19	21	8	10	15	18	12	20	12	7	14	12	11	6	12	10	9	340

Prefecture of fatal accidents in machine products in 1999-2022

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
Hokkaido		1	2		1				1			1		1				1	1						9
Aomori												1													1
Iwate	1					2							1			1									5
Miyagi		1	1					1					5												8
Akita			1																						1
Yamagata	1		1	1								1			1			1					1		7
Fukushima										1			1	1							1				4
Ibaraki	1		1	1	1	1		1	1					1				1						1	10
Tochigi		1			1						1							1			1				5
Gunma		1		1				1	1			1					1	1	1				1		9
Saitama			1	1							1	1		1	2	1				2		1			11
Chiba	1	1	1		1		2						1						2			1	1		11
Tokyo	1	1	1	1			1											1			1		2		9
Kanagawa	1	2			3				2			1	1	3	1	1	1					2			18
Niigata		1						1										1							3
Toyama					1			2		1						2					1				7

Ishikawa				1						2	1	1	1		1			1						1	9
Fukui									2																2
Yamanashi								1																	1
Nagano				1		2						1		1	1			1		1					8
Gifu				1	1	2		1		1					2			3						1	12
Shizuoka	2	1	1		1								1		1		1	1							9
Aichi	3	3	2		1	1	1	2	4				2	1		1	1			1		2	2		27
Mie						1								1											2
Shiga	1	1									1	1								1	1	1	1		8
Kyoto				1		1		2				1			1										6
Osaka	2			1	1	2	2	3	2		1	1	1	2	3	1	1		1			1			25
Hyogo	1	2	3	3	1		3	1	3						2				2	1	1			2	25
Nara																									
Wakayama		1					1												1	1					4
Tottori							1																		1
Shimane															2										2
Okayama			1		1			1		1			1		1									1	7
Hiroshima	3	1	2		1	2			1	1		1			1				1	4		1			19
Yamaguchi				1		1				1	1								1						5
Tokushima						1							1												2
Kagawa									1															1	2
Ehime		1		1			3		1		1		1				1		2						11
Kochi	1																						1		2

Fukuoka	1					1	1				2	1				1						3	1	1	12
Saga																2									2
Nagasaki	1	1				1		2				1			1	2	1								10
Kumamoto											1	1						1							3
Oita									1															1	2
Miyazaki							1		1																2
Kagoshima													1												1
Okinawa					1																				1
total	21	20	18	15	16	18	16	19	21	8	10	15	18	12	20	12	7	14	12	11	6	12	10	9	340

Data sources: https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.html (MHLW, Japan)

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