Fatal and non-fatal accidents in railroad/water transportation/airline service in Japan in 1999-2021

railroad/water transportation/airline service industry Code No.0401

Type of accidents in railroad/water transportation/airline service in 1999-2021

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	total	Type of accidents
fall from height	78	68	69	83	81	94	76	94	83	67	72	80	76	76	61	69	67	73	75	95	78	77	85	1,777	fall from height
falling to same level	103	101	87	77	104	113	108	94	96	94	97	107	105	134	116	119	117	119	119	133	109	99	138	2,489	falling to same level
crash	36	42	57	36	31	41	41	55	51	36	36	42	20	27	49	46	26	60	53	44	48	37	51	965	crash
struck by flying or falling object	15	16	22	23	16	23	23	15	18	13	13	12	18	23	6	16	16	17	14	22	17	17	12	387	struck by flying or falling object
collapse	4	1	4	3	2	2	5	5	5	4	2	1	2	5	2	3	7	3	2	2	4			68	collapse
crashed by	36	36	30	24	22	30	28	21	24	23	17	31	19	27	23	62	58	23	21	19	34	16	21	645	crashed by
caught in/between	56	50	51	36	44	61	51	64	64	46	41	49	39	47	78	44	42	40	62	40	64	41	42	1,152	caught in/between
cut	9	8	8	4	12	14	10	7	9	11	10	7	5	7	10	11	9	3	11	9	7	7	7	195	cut
injury to the sole of the foot			1			3	1	2		1		1	3				1		2			2		17	injury to the sole
drown	1	1					1						4	1	1	1	2		2	2			1	17	drown
contact to high/low- temperature	7	7	6	6	5	11	4	6	8	8	4	4	4	8	8	9	10	10	23	15	11	7	4	185	contact to high/low- temperature

contact to harmful		1		1	3	4	3	1	1		2	2	8	3	16	10	14	10	16	13	2	5	2		contact to harmful
Substance																									substance
electric shock	3	5	2	4	2	1	4	2	5	3	1	2	1	1	3	2	2	3		3		2	1	52	electric shock
explosion										1					1				1					3	explosion
burst				1			2				1		1											5	burst
fire													1											1	fire
traffic accident (public	17	11	22	15	20	24	25	20	28	17	28	11	18	13	17	14	24	27	9	38	10	9	9	426	traffic accident
road)	17				20	24	25	20	20		20				17									720	(public road)
traffic accident	4	10	12	55	42	64	66	50	82	42	18	20	3	2	3	10	5	1	10	3	6	7	3	518	traffic accident
(others)	T		12		72				02	72								•						310	(others)
reaction to																									reaction to
motion/improper	90	107	86	113	116	101	96	123	122	101	92	95	116	170	135	117	97	153	187	156	153	132	110	2,768	motion/improper
motion																									motion
others	14	26	17	19	17	12	43	34	61	66	53	45	29	35	11	13	23	20	12	19	33	24	166	792	others
unclassifiable	6	2	12	28	27	39	16	8	9	8	7	5		10	2	2	5	4	3	2	2	1	4	202	unclassifiable
total	479	492	486	528	544	637	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	12,781	total

Causal agents (large) of fatal and non-fatal accidents in railroad/water transportation/airline service in 1999-2021

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		Causal (L)
																									agents
machine	13	11	11	6	7	13	10	9	6	7	12	8	12	8	9	9	10	4	12	12	10	4	6	209	machine
crane, conveying																									crane,

	115	147	157	173	171	232	212	212	259	177	178	169	139	176	165	149	165	177	166	192	189	120	125	3,965	conveying
machine																									machine
other aguinment	64	77	63	73	54	69	79	56	68	79	57	52	51	73	57	81	57	66	74	87	55	62	60	1,514	other
other equipment	04		03	/3	34	09		30	08	7 9	57	32	31	/3	37	01	J 7	00		67	55	02	00	1,314	equipment
tomporary buildings																									temporary
temporary buildings, establishments	141	125	111	106	149	159	143	173	170	139	130	162	123	158	153	154	147	155	175	161	180	146	193	3,453	buildings,
establistifferits																									establishments
substance, material	10	13	7	13	9	12	14	16	14	11	10	14	16	14	7	10	18	8	11	10	12	12	10	271	substance,
substance, material		13		13		12	14	10	14		10	14		14		10	10	0		10	12	12		2/1	material
load	19	26	22	33	20	18	22	27	37	18	10	18	22	26	26	26	20	28	54	28	33	22	17	572	load
environment	30	34	33	33	35	30	26	40	48	24	18	17	40	45	47	37	34	57	59	56	34	26	29	832	environment
others	87	59	82	91	99	104	97	68	64	86	79	74	69	89	78	82	74	71	71	69	65	91	216	1,965	others
total	479	492	486	528	544	637	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	12,781	total

Causal agents (middle) of fatal and non-fatal accidents in railroad/water transportation/airline service in 1999-2021

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	total	Causal (M) agents
engine	1	1								1							2			1				6	engine
power transmission mechanism	1		1	2			1	1		1		1	4	1	1	1			2	2	2			21	power transmission mechanism
woodworking machine	1		1		3	2				1		1	2	1	1	2	1		1		1			18	woodworking machine
																									construction

construction machine	1	4			1	2	2	3	2		2		3		2	1	1	1	2	2	1	2	4	36	machine
metal manufacturing machine	4	2	5	1	2	2	1	1	1	2	2	1	3	2			1	1	3	1	2	1	1	39	metal manufacturing machine
general machine	5	4	4	3	1	7	6	4	3	2	8	5		4	5	5	5	2	4	6	4	1	1	89	general machine
mobile silviculture machine																									mobile silviculture machine
crane	5	3	4	3	2	3	1	2	1	4	4	1	4	3	5	3	1	5	4	4	6	10	1	79	crane
conveying machine	24	19	22	28	20	21	16	18	18	8	15	15	9	16	12	9	11	13	23	11	18	13	15	374	conveying machine
vehicle	86	125	131	142	149	208	195	192	240	165	159	153	126	157	148	137	153	159	139	177	165	97	109	3,512	vehicle
pressure vessel						1										2								3	pressure vessel
chemical facilities																									chemical facilities
welding equipment		1		1			1						1			1			1					6	welding equipment
kiln, caldron			1												1	1	2		1					6	kiln, caldron
electric equipment	3	3	2	6	2	1	7	2	5	4	1	3		2	3	4	2	3	2	5	1	2	2	65	electric equipment
human power machine,	15	14	11	16	17	25	28	16	16	24	10	7	12	17	16	18	11	13	12	20	13	15	13	359	human power
tools	30	29	33	34	20	30	35	23	31	30	21	25	24	27	27	41	22	29	31	38	23	32	26	661	tools

other equipments,																									other
facilities	16	30	16	16	15	12	8	15	16	21	25	17	14	27	10	14	20	21	27	24	18	13	19	414	equipments,
lucincies																									facilities
tompount buildings																									temporary
temporary buildings, establishments	141	125	111	106	149	159	143	173	170	139	130	162	123	158	153	154	147	155	175	161	180	146	193	3,453	buildings,
establishments																									establishments
haranda hamaƙal																									hazards,
hazards, harmful	1	1		1	1	1	4	3	5	2	3		4	1	2	1	4	1	5	1	2		1	44	harmful
substances																									substances
materials	9	12	7	12	8	11	10	13	9	9	7	14	12	13	5	9	14	7	6	9	10	12	9	227	materials
load	19	26	22	33	20	18	22	27	37	18	10	18	22	26	26	26	20	28	54	28	33	22	17	572	load
						20	2.5	40	40		10	4-7	40	4.5	4-7							2.			natural
natural environment	30	34	33	33	35	30	26	40	48	24	18	17	40	45	47	37	34	57	59	56	34	26	29	832	environment
	20	27					26				42	22	22	22		2.1	22	25	20	26	1	20	150	700	other causal
other causal agent	39	27	33	23	27	44	36	33	22	33	42	33	33	22	22	31	22	25	20	26	16	20	159	788	agent
	40	2.5	20	F-2		F.0	F.1	20	24	20	22	2.5	24		F-4		40		47	42	1	70		1.022	no causal
no causal agent	40	25	38	53	55	50	51	29	34	39	32	35	34	52	51	51	48	44	47	43	46	70	56	1,023	agent
unclassifiable	8	7	11	15	17	10	10	6	8	14	5	6	2	15	5		4	2	4		3	1	1	154	unclassifiable
total	479	492	486	528	544	637	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	12,781	total

Causal agents (small) of fatal and non-fatal accidents in railroad/water transportation/airline service in 1999-2021

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	total	Causal (S) agents
engine										1							2			1				4	engine

power transmission		1		1	1	1		1	4	1	1	1		2	2	2			18	power transmission
mechanism																				mechanism
circular sawing		1	2					1				1	1	1		1			8	circular sawing
machine																				machine
band sawing																				band sawing
machine																				machine
wood planer																				wood planer
machine																			l .	machine
hollow chisel																				hollow chisel
mortiser, wood																				mortiser, wood
borer																				borer
chamfering																				chamfering
machine, router,																				machine, router,
woodworking																				woodworking
milling machine																				milling machine
chain saw			1			1			2		1	1							6	chain saw
other woodworking																				other woodworking
machines																				machines
leveling,																				leveling,
transporting or							1		1						1		1	1	5	transporting or
loading machine																				loading machine
excavating machine					1							1							2	excavating machine
foundation work				1															1	foundation work
machine																				machine
hardening machine																				hardening machine

											1			1				1				
demolition machine																						demolition machine
vehicle for high lift work			1		1	1				2					1					1	7	vehicle for high lift work
other construction machines				1	1	1		1				2		1		2	1	1	1	2	14	other construction machines
lathe		1	2	1			1	1	1	1											8	lathe
drill press, milling machine		1					1									1				1	4	drill press, milling machine
grinding machine, buffing machine		2				1		1		1	2			1		2	1	2	1		14	grinding machine, buffing machine
power press																						power press
forging pressure hammer																						forging pressure
shearing machine																						shearing machine
other metal manufacturing machines		1			1					1					1						4	other metal manufacturing machines
centrifugal machine																						centrifugal machine
mixer, grinder									1				1								2	mixer, grinder
roll machine (except printingroll machine)																						roll machine (except printingroll machine)
injection molding machine																						injection molding machine

food manufacturing												1	1	1		1					4	food manufacturing
printing machine																						printing machine
industrial robot																						industrial robot
other general power machines		4	1	6	4	3	2	8	4		4	4	3	4	2	3	6	4	1	1	64	other general power machines
felling machine																						felling machine
mobile logging machine																						mobile logging machine
skyline yarding machine																						skyline yarding machine
other mobile silviculture machine																						other mobile silviculture machine
crane						1	2			1		1	1		1	1	2		4	1	15	crane
mobile crane		2	1		1		2	1				1	1		2		1				12	mobile crane
derrick crane																						derrick crane
elevator, lift		1						1		1	1				1	1		1	4		11	elevator, lift
cargo lifting appliance												1		1				1			3	cargo lifting appliance
gondola																		1			1	gondola
lumberyard equipment, logging cableway		1																1			2	lumberyard equipment, logging cableway
simple skyline																						simple skyline

yarding equipment																						yarding equipment
other powered crane			1	1	1			2	1	2	2	2	1		1	2	1	2	2		21	other powered crane
truck		6	8	5	8	8	3	2	4	5	8	1	2	1	5	9	4	5	4	5	93	truck
forklift		4	2	1	1	1		5	4		2		2	3	1	5	1		7	2	41	forklift
railway equipment		3	5	4	4	3	4	2	1	1		4	2	1	2	3	1	1			41	railway equipment
conveyor		2		2	2	1		1			3	2		1		2		1		2	19	conveyor
loader															1		1	1			3	loader
straddle carrier																						straddle carrier
rough terrain hauler																			1		1	rough terrain hauler
other powered conveying machines		7	5	4	3	5	1	5	6	3	3	5	3	5	4	4	4	10	1	6	84	other powered conveying machines
cars, bus, motorcycle		25	30	28	18	34	21	31	21	21	21	21	22	26	31	14	42	14	7	11	438	cars, bus, motorcycle
railway vehicle		36	38	47	58	45	38	43	43	42	42	62	33	24	38	36	40	45	41	49	800	railway vehicle
other vehicles		70	81	120	116	161	106	85	89	63	94	65	82	103	90	89	95	106	49	49	1,713	other vehicles
boiler																						boiler
pressure vessel																						pressure vessel
other pressure vessels													2								2	other pressure vessels
chemical facilities																						chemical facilities
gas welding equipment				1						1						1					3	gas welding equipment
arc welding																						arc welding

equipment													1								1	equipment
other welding equipment																						other welding equipment
kiln, caldron		1										1	1	2							5	kiln, caldron
industrial dryer																						industrial dryer
other kiln, caldron																1					1	other kiln, caldron
transmission		1	1	2	2	5	2		2		1	1	1		1	1	1				21	transmission
electric power facilities		1	1	4			1	1			1	1	2	2	2	1	2		1	1	21	electric power facilities
other electrical equipment				1			1		1			1	1				2	1	1	1	10	other electrical equipment
human power cranes					1		3			2							1		1		8	human power cranes
human power hauling equipment		3	10	18	12	12	9	7	5	7	9	9	14	9	9	8	14	6	10	7	178	human power hauling equipment
human power machine		1	1	1														1	1		5	human power machine
hand tool		7	6	9	3	4	12	3	2	3	8	7	4	2	4	4	5	6	3	6	98	hand tool
ladder		18	10	15	8	11	16	7	9	9	15	11	18	8	12	10	19	9	16	14	235	ladder
slinging tool		2		1		2	2				1						1	1		1	11	slinging tool
other tools		13	10	19	15	18	12	14	16	15	11	16	23	14	17	21	18	13	16	11	292	other tools
other equipment,		16	15	8	15	16	21	25	17	14	27	10	14	20	21	27	24	18	13	19	340	other equipment,
scaffolding		2	3		1	2	2		1	2		1	2	1	1	1			1	2	22	scaffolding

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timbering																						timbering
stairs, landing stage		23	43	34	49	44	41	34	45	29	47	35	27	38	36	54	43	43	37	44	746	stairs, landing stage
opening		3	3	4	4	1	3	5	2	3	2	4	4	2	2	3	2	3	5	2	57	opening
roof, beam, haze,																						roof, beam, haze,
crossbeam,			2	3	4			1	1	1	1	2	1	2		1	1	1		1	22	crossbeam,
principal rafter																						principal rafter
working platform,		14	12	11	11	10	13	11	15	11	18	14	13	9	12	19	13	14	9	12	241	working platform,
boot board			12				13				10	-			12	13				12	241	boot board
passage		26	42	48	53	54	45	39	54	35	55	55	63	52	57	55	66	51	39	86	975	passage
building,		26	25	20	2.1	40	10	26	27		1.6	25	27		22		10	2.1		27	472	building,
establishment		26	25	28	31	40	19	26	27	24	16	25	27	24	22	23	19	21	23	27	473	establishment
other temporary																						other temporary
buildings,		17	19	15	20	19	16	14	17	18	19	17	17	19	25	19	17	47	32	19	386	buildings,
establishments																						establishments
explosive substance								1													1	explosive substance
inflammable										1											,	inflammable
substance																		2			3	substance
inflammable gas					1							1									2	inflammable gas
harmful substance			1	2		1								2							6	harmful substance
radiation																						radiation
other hazards,				2	2	4		2		2	1	1	1		1	F	1			1	20	other hazards,
harmful substances				2	2	4	2	2		3	I			2		5					28	harmful substances
metal material		4	5	6	4	4	3	1	5	7	4	1	2	6	5	3	3	2	7	4	76	metal material
lumber, bamboo			1	1	4		1	1	4	2	3	2	1	3		1		2	2	3	31	lumber, bamboo

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stone, sand, substance	1				2	2	4	3	4	4	2	1	1	1	1	1	2	3	4	1	1	38	stone, sand, substance
other materials	2		2		1	3	1	2	1	1	1	5	1	5	4	1		3	2	2	1	38	other materials
load	1	7	18		22	24	37	17	10	18	21	25	25	26	19	27	51	26	33	20	15	451	load
machine/equipment as load	5		2			3		1			1	1	1		1	1	3	2		2	2	25	machine/equipment as load
natural ground,	4		3		4	6	6	4	2	2	9	4	11	3	2	5	5	1	5	1	6	83	natural ground, rock
standing tree	4		4		3	1	2	1	1	2	2	1	1	2	1	1		1		2	1	30	standing tree
water	1					1					4	1	2				2	1	1			13	water
abnormal environment	1		1		1	9	11	1	1	1	6	14	16	6	10	21	22	21	2		1	145	abnormal environment
high/cold temperature environment	2					2	2			1	1	1	2	1	3	3	6	7	4	6	1	42	high/cold temperature environment
other environments	2	1	27		18	21	27	18	14	11	18	24	15	25	18	27	24	25	22	17	20	392	other environments
other causal agent	33	3	27		36	33	22	33	42	33	33	22	22	31	22	25	20	26	16	20	159	655	other causal agent
no causal agent	38	8	55		51	29	34	39	32	35	34	52	51	51	48	44	47	43	46	70	56	855	no causal agent
unclassifiable	1	1	17		10	6	8	14	5	6	2	15	5		4	2	4		3	1	1	114	unclassifiable
total	4	86	544		603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	10,645	total

Workers age of fatal and non-fatal accidents in railroad/water transportation/airline service in 1999-2021

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Age	1999 2	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Age

19 years old or less	7	6	6	8	2	3	3	7	4	6	8	4	7	7	2	5	3	5	9	5	7	4	12	130	19 years old or less
20-29	133	147	138	147	167	172	169	148	149	115	108	113	90	128	140	131	126	163	167	186	170	124	173	3,304	20-29
30-39	101	100	94	137	121	169	169	173	214	157	136	137	141	172	150	124	120	118	132	108	119	93	138	3,123	30-39
40-49	124	104	114	121	129	144	119	123	156	126	106	113	78	125	91	118	101	112	113	127	120	90	115	2,669	40-49
50-59	93	111	115	88	109	120	110	112	115	106	101	104	114	122	114	127	121	126	134	118	97	100	144	2,601	50-59
60 years old or more	21	24	19	27	16	29	33	38	28	31	35	43	42	35	45	43	54	42	67	71	65	72	74	954	60 years old or more
total	479	492	486	528	544	637	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	12,781	total

Workers' number of workplace of fatal and non-fatal accidents in railroad/water transportation/airline service in 1999-2021

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	total	Workers scale
9 workers or less	38	20	30	22	37	37	30	43	25	29	14	34	23	38	24	22	22	20	31	25	19	34	24	641	9 workers or less
10-29	51	52	55	58	40	52	43	39	57	35	44	47	55	48	32	35	38	40	44	49	55	65	46	1,080	10-29
30-49	54	47	50	46	53	44	47	55	37	40	31	48	37	44	55	47	45	50	48	39	45	44	55	1,061	30-49
50-99	63	61	44	57	68	58	76	67	66	68	72	59	76	69	65	69	58	69	76	76	68	67	95	1,547	50-99
100-299	140	148	134	135	169	198	163	183	192	166	170	172	158	174	180	164	158	159	192	167	172	159	288	3,941	100-299
300 workers or	133	164	173	210	177	248	244	214	289	203	163	154	123	216	186	211	204	228	231	259	219	114	148	4,511	300 workers or
more																									more
total	479	492	486	528	544	637	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	12,781	total

Month of fatal and non-fatal accidents in railroad/water transportation/airline service in 1999-2021

January	36	37	55	51	57	40	59	58	54	56	51	59	63	54	60	56	58	41	56	61	67	59	52	1,240	January
February	49	45	41	37	49	55	61	63	62	50	43	48	48	59	54	61	48	50	52	63	47	52	63	1,200	February
March	51	52	48	53	52	68	47	60	65	38	48	46	48	52	46	50	59	57	57	45	57	45	34	1,178	March
April	41	29	38	28	51	43	44	51	77	37	52	42	27	41	42	49	36	42	49	52	51	35	44	1,001	April
May	36	38	42	41	49	48	61	34	52	43	35	51	30	49	33	47	41	53	36	46	50	29	66	1,010	May
June	37	38	49	29	46	42	59	54	51	37	38	40	33	54	37	29	47	48	46	51	40	32	40	977	June
July	36	39	38	49	39	58	36	45	59	48	37	35	35	51	48	40	50	49	58	51	51	30	71	1,053	July
August	33	51	47	40	44	47	53	39	53	47	39	44	26	43	49	36	34	50	66	59	43	32	105	1,080	August
September	36	48	21	38	40	65	45	50	57	31	45	38	41	63	41	61	51	51	55	54	43	34	43	1,051	September
October	42	35	39	51	49	58	32	54	47	46	37	35	37	42	48	33	36	42	50	36	40	44	50	983	October
November	41	42	37	51	25	55	55	54	47	55	32	37	36	39	40	34	41	41	39	39	42	35	35	952	November
December	41	38	31	60	43	58	51	39	42	53	37	39	48	42	44	52	24	42	58	58	47	56	53	1,056	December
total	479	492	486	528	544	637	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	12,781	total

Prefecture of fatal and non-fatal accidents in railroad/water transportation/airline service in 1999-2021

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Prefecture
Hokkaido	15	19	14		21		21	13	19	12	17	19	21	29	28	20	19	31	38	30	38	38	49	511	Hokkaido
Aomori	2	6	4		4		8	3	3	1	3	3	5	7	2	3	1			1	4	3	3	66	Aomori
lwate	2		4		2		4	1	1	1	1	1		1	3	4	3	1	1	3	2	3	4	42	lwate
Miyagi	6	7	8		10		8	3	11	6	6	14	11	6	7	3	6	4	13	5	4	4	8	150	Miyagi
Akita	2	2	3		2		3	2	4	6	2	3	3	5	5	2	1	6	4	4	4	2	4	69	Akita
Yamagata	2	6	3		2		1	4	4	2	2	6	6	1	8	3		2	7	4	1	4	4	72	Yamagata

Fukushima	8	5	3	4	9	9	5	6	5	9	3	5	6	4	1	2	4	4	2	2	4	100	Fukushima
Ibaraki	7	7	12	11	2	7	5	1	3	4	2	8	8	4	1	1	3			4	5	95	lbaraki
Tochigi	2	2	2	2		4	3		1	2	2	2	1	3	1	2	3	4	1			37	Tochigi
Gunma	11	16	8	12	14	5	6	10	15	4	11	15	12	12	18	6	11	9	8	5	6	214	Gunma
Saitama	15	16	15	15	15	23	9	17	8	16	12	17	17	10	9	10	7	7	6	14	18	276	Saitama
Chiba	72	99	98	106	136	105	131	77	67	59	38	59	50	69	56	82	63	62	49	26	26	1,530	Chiba
Tokyo	88	59	89	106	128	122	142	132	105	136	105	174	129	167	158	174	174	195	172	94	112	2,761	Tokyo
Kanagawa	23	27	24	24	19	41	33	31	22	21	24	33	31	24	21	20	30	29	27	33	32	569	Kanagawa
Niigata	25	10	11	6	10	13	14	14	12	9	9	13	8	11	7	11	9	8	7	13	16	236	Niigata
Toyama	1	5	2	6	2	3	2		1	3	4	1	1	1	7	2	3	4	5	4	5	62	Toyama
Ishikawa	1		1	2	2	3	4	2		1	1	1	2	1	3	4	2	8	5	2	21	66	Ishikawa
Fukui	1	8	2	1	1	1	1	4	3	2	1	2		2		1	1			3	3	37	Fukui
Yamanashi	1		3	4	2	3	1	1	2		2	1	2		2	2	2	1		2	2	33	Yamanashi
Nagano	30	18	15	27	29	22	25	25	26	17	24	24	30	33	25	21	25	29	32	37	31	545	Nagano
Gifu		4	3	4	7	4	4	3	2	5	4	2	3	2	2	2	6	7	5	1	2	72	Gifu
Shizuoka	5	4	6	12	4	4	8	8	5	3	11	9	5	6	10	7	7	7	5	6	4	136	Shizuoka
Aichi	15	12	17	11	26	27	18	13	24	16	16	18	21	13	21	11	24	19	19	9	16	366	Aichi
Mie	5		8	4	5	5	5	6	6	3	4	3	4	1	4	5	2	4	4	4	3	85	Mie
Shiga	2	7	5	3	1	5	2	1	1	4	7	7	6	3	2	7	4	1	2	6	10	86	Shiga
Kyoto	8	1	4	2	11	14	14	5	10	7	15	9	20	19	8	18	19	18	15	13	14	244	Kyoto
Osaka	43	61	49	51	43	60	90	62	56	46	40	44	41	34	38	45	51	54	58	37	134	1,137	Osaka
Hyogo	15	17	14	6	12	14	15	11	5	19	12	17	12	13	19	13	17	12	14	25	16	298	Hyogo
Nara	2	1	2	2	4	3	4	3	1	2	2	2	3	3	4	4	4	1	2	4	4	57	Nara

Wakayama	2		2	1	3	3		2		1	3	2	1	3	1	4	3		6	3	4	44	Wakayama
Tottori	2		1	2	2	6			2			2			2				2	5		26	Tottori
Shimane	1	2	1	1		2	1	3	1		2	1		1			4			2	3	25	Shimane
Okayama	1	12	4	3	7	12	6	8	2	3	1	4	4	6	5	4	7	2	3	8	4	106	Okayama
Hiroshima	10	9	8	21	6	9	11	7	11	9	12	10	9	7	8	8	11	9	17	13	11	216	Hiroshima
Yamaguchi		2		3	1	2		4	4	2	4	4	5	2	3	5	4	3	5	2	2	57	Yamaguchi
Tokushima	1		1	2	6		2	3	5	1			2	1	5	5	3	3	1	1	1	43	Tokushima
Kagawa	8	4	6	8	8	8	10	2	7	9	5	6	5	2	2	4	4	6	6	5	17	132	Kagawa
Ehime	6	6	4	5	3	3	5	6	5	3	5	4	6	7	4	2	2	3	3	7	2	91	Ehime
Kochi	1	4	1	1	6	2	1	2	1	2	1	1	2	2		3	2	3	1	1	1	38	Kochi
Fukuoka	14	15	8	20	15	13	17	15	12	19	18	17	17	18	19	16	20	24	26	11	28	362	Fukuoka
Saga	1	1	1		1	1	1	2		2		4	1		4		2	2	1			24	Saga
Nagasaki	5		6	5	2	6	6	8	10	4	7	4	6	6	6	2	5	5	4	11	5	113	Nagasaki
Kumamoto	3	8	4	1	3	1	1	3	4	10	2	5	4	3	1	2	3	2	2	4	6	72	Kumamoto
Oita	4		3	2	3	1	3	1			2	2	1	4	2	1	1	4			1	35	Oita
Miyazaki	1	1		3	3	1		1		2	3	2	1	1			1	3	2	1	1	27	Miyazaki
Kagoshima	8	6	5	4	5	5	4	1	3	3	2	2	7	5	8	8	11	10	7	7	10	121	Kagoshima
Okinawa	2	3	2		2	3	15	13	16	10	10	4	6	10	8	8	5	6	1	4	4	132	Okinawa
total	479	492	486	544	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	11,616	total

Fatal and non-fatal accidents mean fatal and non-fatal injuries and occupational diseases with work absence of 4 days and more. 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.htm (MHLW, Japan)

Return to https://www.jisha.or.jp/english/statistics/2021e_industry.html

Fatal accidents in railroad/water transportation/airline service in Japan in 1999-2021

railroad/water transportation/airline service industry Code No.0401

Type of fatal accidents in railroad/water transportation/airline service in 1999-2021

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	total	Type of accidents
fall from height	1	1		1		1	1		1	1							2	1		2	1	3		16	fall from height
falling to same level									1	1		1	1		1	1						1		7	falling to same
crash																									crash
struck by flying or																									struck by flying
falling object																									or falling object
collapse																			1					1	collapse
crashed by			1		1		1												1					4	crashed by
caught in/between			1	1	1			2		1		1	1	1				1	1	1				12	caught in/between
cut																									cut
injury to the sole of the																									injury to the sole
foot																									of the foot
drown		1					1	1					4	1	1	1	2		2	2			1	17	drown

contact to high/low-																								contact to
temperature																								high/low-
temperature																								temperature
contact to harmful																								contact to
substance																1							1	harmful
substance																								substance
electric shock			1	1			1																3	electric shock
explosion																								explosion
burst																								burst
fire																								fire
traffic accident (public	1																				2		3	traffic accident
road)	I																							(public road)
traffic accident (others)	1	3	6	1	4	9	2	6	7	2	6	1				2		6	2				58	traffic accident
tranic accident (others)	ľ	3	6		4	9		0	/		0	•						0	2					(others)
reaction to																								reaction to
motion/improper																								motion/improper
motion																								motion
others	1		1											1								1	4	others
unclassifiable																								unclassifiable
total	4	5	10	4	6	10	6	9	9	5	8	7	2	3	2	7	2	11	7	1	6	2	126	total

Causal agents (large) of fatal accidents in railroad/water transportation/airline service in 1999-2021

																									Causal (L)	
Cau	sal (L) agents	1999	2000	2001	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total		

																								agents
machine											1	1							1		1		4	machine
crane, conveying machine	3	4	8	3	6	9	3	8	8	4	7	1	2	2	2	5	1	8	4		4	1	93	crane, conveying machine
other equipment		1	1	1			1											1					5	other equipment
temporary buildings, establishments							2		1	1		2				1		1	1				9	temporary buildings, establishments
substance, material																1							1	substance, material
load																								load
environment						1		1				3					1	1	1	1			9	environment
others	1		1											1							1	1	5	others
total	4	5	10	4	6	10	6	9	9	5	8	7	2	3	2	7	2	11	7	1	6	2	126	total

Causal agents (middle) of fatal accidents in railroad/water transportation/airline service in 1999-2021

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	total	Causal (M) agents
engine																									engine
power transmission mechanism													1							1				2	power transmission mechanism

	1	<u> </u>						-	-						\vdash						-		1
woodworking machine																							woodworking machine
construction machine																							construction
																							machine
metal manufacturing																							metal
machine																							manufacturing
- Indentific																							machine
																							general
general machine											1									1		2	machine
																							mobile
mobile silviculture																							silviculture
machine																							machine
crane			1							1												2	crane
Crane			'																				
conveying machine	1	2		1	1			1					1			1				2		10	conveying
																							machine
vehicle	2	2	7	2	5	9	3	7	8	3	7	1	1	2	2	4	1	8	4	2	1	81	vehicle
pressure vessel																							pressure vessel
																							chemical
chemical facilities																							facilities
																							welding
welding equipment																							equipment
kiln, caldron																							kiln, caldron
																							electric
electric equipment			1	1			1															3	equipment
]				1] <u> </u> 											<u> </u> 	1]	

human power machine,																								human power
tools																								machine, tools
tools		1																1					2	tools
other equipments,																								other
facilities																								equipments,
																								facilities
temporary buildings,																								temporary
establishments							2		1	1		2				1		1	1				9	buildings,
																								establishments
hazards, harmful																								hazards,
substances																1							1	harmful
Substances																								substances
materials																								materials
load																								load
natural environment						1		1				3					1	1	1	1			9	natural environment
																								other causal
other causal agent			1																			1	2	agent
																								no causal
no causal agent	1																				II.		3	agent
unclassifiable																								unclassifiable
total	4	5	10	4	6	10	6	9	9	5	8	7	2	3	2	7	2	11	7	1	6	2	126	total

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	total	Causal (S) agents
engine																									engine
power transmission mechanism													1							1				2	power transmission mechanism
circular sawing machine																									circular sawing
band sawing machine																									band sawing machine
wood planer machine																									wood planer machine
hollow chisel mortiser, wood borer																									hollow chisel mortiser, wood borer
chamfering machine, router, woodworking milling machine																									chamfering machine, router, woodworking milling machine
chain saw																									chain saw
other woodworking machines																									other woodworking
leveling, transporting or loading machine																									leveling, transporting or loading machine
excavating machine																									excavating machine

foundation work											foundation work
machine											machine
hardening machine											hardening machine
demolition machine											demolition machine
vehicle for high lift											vehicle for high lift
work											work
other construction											other construction
machines											machines
lathe											lathe
drill press, milling											drill press, milling
machine											machine
grinding machine,											grinding machine,
buffing machine											buffing machine
power press											power press
forging pressure											forging pressure
hammer											hammer
shearing machine											shearing machine
other metal											other metal
manufacturing											manufacturing
machines											machines
centrifugal machine											centrifugal machine
mixer, grinder											mixer, grinder
wall manahina (assas											roll machine (except
roll machine (except printingroll machine)											printingroll
pa. g. o.i macimic)											

														machine)
injection molding machine														injection molding machine
food manufacturing machine														food manufacturing machine
printing machine														printing machine
industrial robot														industrial robot
other general power machines							1					1	2	other general power machines
felling machine														felling machine
mobile logging machine														mobile logging machine
skyline yarding machine														skyline yarding machine
other mobile silviculture machine														other mobile silviculture machine
crane														crane
mobile crane		1				1							2	mobile crane
derrick crane														derrick crane
elevator, lift														elevator, lift
cargo lifting appliance														cargo lifting appliance
gondola														gondola
lumberyard														lumberyard

equipment, logging cableway																							equipment, logging cableway
simple skyline yarding equipment																							simple skyline yarding equipment
other powered crane																							other powered crane
truck																				2		2	truck
forklift																							forklift
railway equipment																							railway equipment
conveyor								1					1									2	conveyor
loader				1																		1	loader
straddle carrier																							straddle carrier
rough terrain hauler																							rough terrain hauler
other powered conveying machines	1	2			1											1						5	other powered conveying machines
cars, bus, motorcycle	1								1													2	cars, bus, motorcycle
railway vehicle		1	2	1	2	1	3	6	2		1							1				20	railway vehicle
other vehicles	1	1	5	1	3	8		1	5	3	6	1	1	2	2	4	1	7	4	2	1	59	other vehicles
boiler																							boiler
pressure vessel																							pressure vessel
other pressure vessels																							other pressure vessels
chemical facilities																							chemical facilities

gas welding																			gas welding
equipment																			equipment
arc welding																			arc welding
equipment																			equipment
other welding																			other welding
equipment																			equipment
kiln, caldron																			kiln, caldron
industrial dryer																			industrial dryer
other kiln, caldron																			other kiln, caldron
transmission		1																1	transmission
electric power			1		1													2	electric power
facilities					•														facilities
other electrical																			other electrical
equipment																			equipment
human power cranes																			human power
numan power cranes																			cranes
human power																			human power
hauling equipment																			hauling equipment
human power																			human power
machine																			machine
hand tool																			hand tool
ladder																			ladder
slinging tool																			slinging tool
other tools	1														1			2	other tools
I—	 	=	=	 	=	 ==	=	=	=	=	 	=	=	_		=	 	 	

other equipment,															other equipment,
facilities															facilities
scaffolding															scaffolding
timbering															timbering
stairs, landing stage															stairs, landing stage
opening						1								1	opening
roof, beam, haze, crossbeam, principal rafter															roof, beam, haze, crossbeam, principal rafter
working platform, boot board								1		1				2	working platform, boot board
passage					1									1	passage
building, establishment				1				1				1		3	building, establishment
other temporary buildings, establishments				1							1			2	other temporary buildings, establishments
explosive substance															explosive substance
inflammable substance															inflammable substance
inflammable gas															inflammable gas
harmful substance															harmful substance
radiation															radiation
other hazards,										1				1	other hazards,

harmful substances																								harmful substances
metal material																								metal material
lumber, bamboo																								lumber, bamboo
stone, sand,																								stone, sand,
substance																								substance
other materials																								other materials
load																								load
machine/equipment																								machine/equipment
as load																								as load
natural ground, rock						1											1						2	natural ground,
January 10 and																								rock
standing tree																								standing tree
water								1				3							1				5	water
abnormal																								abnormal
environment																								environment
high/cold																								high/cold
temperature																								temperature
environment																								environment
other environments																		1		1			2	other environments
other causal agent			1																			1	2	other causal agent
no causal agent	1													1							1		3	no causal agent
unclassifiable																								unclassifiable
total	4	5	10	4	6	10	6	9	9	5	8	7	2	3	2	7	2	11	7	1	6	2	126	total

Workers age of fatal accidents in railroad/water transportation/airline service in 1999-2021

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Age
19 years old or less																									19 years old or less
20-29	1		2	1	1	1	3	1				1						1	2			2		16	20-29
30-39			3	1		4	1		1	1		2	1	1					1	1				17	30-39
40-49	1	2		1	3	2	1	6	3	1		2	2		1		2			1		2		30	40-49
50-59	2	2	3		2	3	1	1	2	3		1			1	1	3	1	4	2		1	1	34	50-59
60 years old or more		1	2	1				1	3			2	4	1	1	1	2		4	3	1	1	1	29	60 years old or more
total	4	5	10	4	6	10	6	9	9	5		8	7	2	3	2	7	2	11	7	1	6	2	126	total

Workers' number of workplace of fatal accidents in railroad/water transportation/airline service in 1999-2021

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	total	Workers scale
9 workers or less		1	2		2	2	1	2	3	2		1	1		1	1	1		1	3				24	9 workers or less
10-29	1		1		1	5		2	3				4	1	2				3	2	1	1	1	28	10-29
30-49			1	2	2	3	1	5	3	3		1				1	2		2	1		2		29	30-49
50-99		1	1									3	1	1			1		4			3		15	50-99
100-299		3	1	2	1		3					1	1				2	1		1			1	17	100-299
300 workers or more	3		4				1					2					1	1	1					13	300 workers or more
total	4	5	10	4	6	10	6	9	9	5		8	7	2	3	2	7	2	11	7	1	6	2	126	total

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Month
January			1			2	1	3						1	1	1	1		1					12	January
February			2							1			2				2		1		1			9	February
March	1	2	1		3	3	1					2	3				2			1				19	March
April					1		2		1						1					1				6	April
May	1		3						1	1		1				1							1	9	May
June				1	1	1			1								1		1			1		7	June
July	1			2					1	2		3						1		1				11	July
August			2					1									1		1	2		3		10	August
September		2						1				2										1	1	7	September
October	1		1	1	1			1	2				1	1										9	October
November						1			3	1									5	1				11	November
December		1				3	2	3					1		1			1	2	1		1		16	December
total	4	5	10	4	6	10	6	9	9	5		8	7	2	3	2	7	2	11	7	1	6	2	126	total

Prefecture of fatal accidents in railroad/water transportation/airline service in 1999-2021

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Prefecture
Hokkaido			1		1		1	1							1	1	1	1	1			2		11	Hokkaido
Aomori									1															1	Aomori
lwate																									lwate
Miyagi												1	3											4	Miyagi
Akita										2												1		3	Akita

Yamagata																								Yamagata
Fukushima																								Fukushima
Ibaraki																								Ibaraki
Tochigi								1															1	Tochigi
Gunma																			2				2	Gunma
Saitama		3				1					3												7	Saitama
Chiba				1	1						1					1		1					5	Chiba
Tokyo	2	1		1	2	2		1	1		1	1				1	1	3			1		18	Tokyo
Kanagawa						1		2						1					1				5	Kanagawa
Niigata									1														1	Niigata
Toyama																								Toyama
Ishikawa														1									1	Ishikawa
Fukui		1		1																			2	Fukui
Yamanashi																								Yamanashi
Nagano						2				2					1	1		2	2	1	1	1	13	Nagano
Gifu			1																				1	Gifu
Shizuoka						1																	1	Shizuoka
Aichi			3		1		1				1	1				1			1				9	Aichi
Mie			1																				1	Mie
Shiga																								Shiga
Kyoto									1							1							2	Kyoto
Osaka	1		1	1	1		2		3		1							1				1	12	Osaka
Hyogo			1					1					1										3	Hyogo

Nara									1														1	Nara
Wakayama																								Wakayama
Tottori								3															3	Tottori
Shimane																								Shimane
Okayama			1																				1	Okayama
Hiroshima												2											2	Hiroshima
Yamaguchi																								Yamaguchi
Tokushima																			1				1	Tokushima
Kagawa							1						1										2	Kagawa
Ehime																								Ehime
Kochi							1																1	Kochi
Fukuoka										1								1					2	Fukuoka
Saga						3																	3	Saga
Nagasaki																					1		1	Nagasaki
Kumamoto			1																				1	Kumamoto
Oita	1																						1	Oita
Miyazaki																								Miyazaki
Kagoshima																		2					2	Kagoshima
Okinawa									1							1							2	Okinawa
total	4	5	10	4	6	10	6	9	9	5	8	7	2	3	2	7	2	11	7	1	6	2	126	total

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

