~~Appendix~~ A

TABLE 2.

B		C	D	E	F	G	H		I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
							INTERVALOMETER SETTINGS			TONS BOMBS DROPPED													
CITY	DATE (1945)	MISSION NUMBER	PLANES REPORTED OVER TARGET	NIGHT OR DAY	ALTITUDE OF ATTACK	NO A.P.	Path-finders	Main Force	TIME OVER TARGET (min)	HE & FRAGS (Tons)	M76 TONS	M76 %	M74 TONS	M74 %	M69 TONS	M69 %	M47 TONS	M47 %	M50 TONS	M50 %	TOTAL TONS THIS ATTACK	DAMAGE-WEIGHT THIS ATTACK	DAMAGE-WEIGHT RATIO 1000 TONS
Akashi	6 July	252	123	N	7,000	1	50	50	72						975	100					975	1.06	1.09
Aomori	28 July	299	61	N	14,000	1	50	50	71				547	100							547	1.06	1.94
Chiba	6 July	251	124	N	10,000	1	75	50	86	31					486	59	371				857+31	.86	.97
Chosi	19 July	279	91	N	10,200	1	50	35	81	31					598	95/100					598+31	.48	.76
Fukui	19 July	277	124	N	12,400	1	50	75/50	81						756	80	195				951	1.61	1.81
Fukuoka	16 June	211	221	N	9,000	1	100	100/50	102						530		1003	66			1533	1.37	.89
Fukuyama	18 August	321	91	N	13,100	1	75	35	70								139		417	75	556	.88	1.58
Gifu	9 July	260	129	N	14,700	1	100	100/50	106						477	53	421				898	1.93	2.15
Hachioji	1 August	306	169	N	14,800	1	50	50	104								69		1525	96	1594	1.15	..72
Hamamatsu	17 June	208	130	N	7,900	1	75	75/50	66						491	52	413		32		936	2.44	2.61
Himeji	3 July	249	106	N	10,100	1	100	100/50	82						547	71	221				768	1.48	1.93
Hiratsuka	16 July	274	133	N	10,900	1	100	50	100								240		923	80	1163	1.04	..89
Hitachi	3 July	279	127	N	12,800	1	50	75/50	93						250		394	41	320		964	1.08	1.12
Ichinomiya	16 July	264	124	N	6,000	1	75	75	111								772	100			772	.01	.014
"	28 July	299	123	N	13,500	1	50	50	112						485	56	378		5		863	.96	1.10
Imabari	5 August	316	64	N	12,200	1	35	35	42	20					490	100/98					490+23	..69	1.35
Isesaki	14 August	330	87	N	15,500	1	25	25	127						343	56	271				614	.166	.27
Kagoshima	17 June	206	117	N	7,000	1	75	75/50	103						447	55	355		8		810	2.15	2.66
Kawasaki	15 April	68	194	N	5-7,900	2	100	50	142	37.6					764	70	308				1072+38	3.7	3.33
Kobe	16 March	43	296	N	6-7000	4	50	50	128	19.4	376				653				1283	56	2312+19	2.9	1.24
"	4 June	188	307	D	13-15000	4			85	71.0					942		1132	37	452		3026+71	4.35	1.45
Kochi	3 July	248	125	N	10,300	1	100	100/50	60		313				748	71					1061	.92	.87
Kofu	6 July	254	131	N	11,200	1	75	50	108						731	75	232		8		971	1.30	1.34
Kumagaya	14 August	329	82	N	14-15000	1	25	25	76	8.0					274	47	218		89		581	.27	.46
Kumamoto	1 July	241	155	N	10-11,000	2	100	50	91				48		702	62	375				1125	1.00	.89
Kure	1 July	240	152	N	10,300	1	100	50	123						612	52	470				1082	1.30	1.20
Kuwana	16 July	273	94	N	10,200	1	50	35	75						492	71	201				693	.63	..91
Mabashi	5 August	313	92	N	15,200	1	35	35	100	15.2					691	100/98					691+15	1.00	1.42
Matsuyama	26 July	293	128	N	11,000	1	50	50	130						487	54	394		15		896	1.22	1.36
Mito	1 August	309	161	N	12,000	1			94						642	56	510				1152	1.70	1.47
Miyakonjo	6 August	-	27	D	1,000	-			—						165 gallon belly tanks		20				229	0	Omit
Moji	28 June	236	91	N	9,000	1	100	100/50	92						253		373	60			626	0.30	.48
Nagaoka	1 August	308	125	N	12,100	1			75						849	92	76				925	1.33	1.44
Nagoya	11 March	41	280	N	6,000	3	100	100	178						1689	94	104				1793	2.05	1.15
"	18 March	44	290	N	4,5-7,000	3	100	50	164	19	495				274		959	52	116		1844+19	2.95	1.60
"	13 April	174	472	D	16,000	4	25	25	80						2515	100					2515	3.15	1.25
"	16 April	176	457	N	6-10,000	4	100	50	173						75		127		3407	96	3609	3.82	1.06
Nishinomiya	5 August	314	255	N	12,6-13,000	2	35	35	29	33.5					1795	92	94		33		1922+33	3.50	1.79
Nobeoka	28 June	237	117	N	7,000	1	100	100/50	91						483	58	346				829	..52	.63
Numazu	16 July	271	119	N	10,600	1	75	50	99						8		197		831	80	1036	1.25	1.21
Ogaki	28 July	301	92	N	14,000	1	50	50	118						360	55	289		10		659	.48	.73
Oita	16 July	272	127	N	10,000	1	75	75	80						—	%	790	100	—	%	790	.42	.53
Okayama	28 June	234	138	N	11,000	1		100/50	24				547	56			435				982	2.13	2.17
Okasaki	19 July	280	126	N	14,700	1		75/50	78						495	58	327		29		851	.65	.76
Omuta	17 June	207	116	N	6,600	1		75/50	129						369		401	52			770	.217	.28
"	26 July	295	124	N	13,100	1		50	79								380		585	61	965	2.05	2.12
"	31 May	187	458	D	20,000	5		50	208						1678	97	55						
Osaka & Amagasaki	6 June	189	409	D	18,000	5	75	75/35	92	81					698		1328	48	680		2706+81	3.15	1.13
Saga	15 June	203	390	D	18,000	5	75	75/35	79	47			196		556		1046	58			1798+47	2.21	1.20
Sakai	5 August	312	63	N	12,400	4	75	75/35	131						69		507		2581	85	3157	2.49	.79
Sasebo	9 July	258	116	N	10,000	1	35	35	95	72					439	100/86					439+72	/02	Omit
Sendai	28 June	235	140	N	10,100	1	100	100/50	93						412	53	367				779	1.02	1.31
Shimizu	9 July	257	125	N	10,000	1	100	100/50	76		262		221		34				543	51	1060	.97	.91
Shimonosaki	6 July	253	133	N	7,100	1	100	100/50	122						13		376		539	58	928	1.22	1.32
Shizuoka	1 July	243	126	N	7,000	1	50	50/35	97								435		595	58	1030	..74	.71
Takamatsu	19 June	212	123	N	8,000	1	100	50	35						491	59	342				833	.51	.61
Tokushima	3 July	247	116	N	9,900	1	75	75/50	123						499	57	370				869	2.28	2.62
Tokuyama	3 July	250	129	N	10,200	1	100	50	106	24.3					463	56	346				809+24	1.40	1.68
Tokyo	26 July	294	98	N	11,000	1	100	100/50	110								404		647	61	1051	1.70	1.62
"	25 February	38	172	D	23-25,000	1	50	50	73						642	82	76				718	.68	.95
"	9 March	40	279	N	5-7,000	1	25	25	114	42.2					412	100/87					412+42	1.00	2.10
"	13 April	67	328	N	6-9,000	4	100	50	173						1539	92	128				1667	15.8	9.50
"	15 April	[illegible]				3	100			31.9					1820	85							

CITY	TOTAL TONS ON CITY All Attacks	TOTAL DEATHS TO CITY All Attacks	POPULATION	SQ MI BUILT-UP	DESTROYED This Attack
Akashi	975	1421	90,000	1.2	60
Aomori	547	1018	100,000	1.65	64
Chiba	888	856	92,000	1.98	43
Chosi	693	394	61,200	1.12	43
Fukui	961	1584	98,000	1.90	85
Fukuoka	1533	953	323,200	6.56	21.5
Fukuyama	556	275	56,653	1.20	73
Gifu	898	818	172,340	2.60	74
Hachioji	1594	290	62,280	1.40	82
Hamamatsu	1056	2947	166,350	4.24	75
Himeji	768	514	104,250	1.92	71
Hiratsuka	1103	228	43,150	2.35	44
Hitachi	971	1019	82,700	1.38	78
Ichinomiya			70,800	1.28	81
"	1640	648	"	"	75
Imabari	629	242	60,000	.97	76
Isesaki	614	9	40,000	1.00	16
Kagoshima	969	—	190,250	4.87	44
Kawasaki	1515	1520	300,770	11.3	33
Kobe		6887	"	"	18
"	5667		967,234	15.7	37
Kochi	1061	447	106,650	1.9	48
Kofu	977.9	832	102,400	2.0	55
Kumagaya	593	242	49,000	.6	45
Kumamoto	1491	583	211,000	4.8	21
Kure	1082	1967	277,000	3.26	40
Kuwana	693	421	41,850	.82	77
Mabashi	723	471	87,000	2.34	42
Matsuyama	896	380	117,530	1.67	73
Mito	1152	205	66,300	2.60	65
Miyakonjo			—		0
Moji	626	161	139,000	1.12	27
Nagaoka	925	831	67,000	2.03	65
Nagoya		8152	1,328,000	40.0	5
"			"	"	7
"			"	"	8
"	10603		"	"	10
Nishinomiya	2,004	749	111,800	12.03	37
Nobeoka	853	284	79,426	1.43	36
Numazu	1051	267	53,165	1.40	90
Ogaki	659	61	56,100	1.20	40
Oita	824	177	61,000	1.6	25
Okayama	982	1745	163,560	3.38	63
Okasaki	851	151	84,070	.95	68
Omuta	770	780	177,000	5.37	4
"	965		177,000	5.37	38
"	1733	9,915		60.0	13
Osaka & Amagasaki			3,252,340	"	5
Saga			3433,340	"	4
Sakai	511	254		67.0	4
Sasebo	779	1411	50,400	1.2	70
Sendai	1070	1000	182,150	2.32	44
Shimizu	1018	992	206,000	2.34	42
Shimonosaki	1042	351	233,630	4.53	27
Shizuoka	837	241	68,600	1.41	52.5
Takamatsu	1022	1952	196,000	1.42	36
Tokushima	833	1773	212,200	3.46	56
Tokuyama	1127	1070	111,200	1.80	72
Tokyo	718	942	119,600	2.30	76
"			38,400	1.27	32
"			6,778,800	163.0	1.
"		86,000	"	"	10.

Nagaoka	1 August	308	125	N	12,100	1			12																				
Nagoya	11 March	41	280	N	6,900	3	100	100	178				1689	94	104														7
"	18 March	44	290	N	4,5-7,000	3	100	50	164	19	495		274		959	52	116		1863 1844	2.95	1.58 1.60								8
"	13 April	174	472	D	16,000	4	25	25	80				2515	100					2515	3.15	1.13								18
"	16 April	176	457	N	6-10,000	4	100	50	173				75		127		3407	96	3609	3.82	1.06	10603			1,328,000	1070			31.8
Nishinomiya	5 August	314	255	N	12,6-13,000	2	35	35	19	33.5			1795	92	94		33		1922+55	3.50	1.79	2,004	749		111,800	12.03 9.46			37
Nobeoka	28 June	337	117	N	7,000	1	100	100/50	91				483	58	346				829	..52	.63	853	284		79,426		1.43		36
Numazu	16 July	271	119	N	10,600	1	75	50	99				8		197		831	80	1036	1.25	1.21	1051	267		53,165		1.40		90
Ogaki	28 July	241	92	N	14,000	1	50	50	118				360	55	289		10		659	.48	.73	659	61		56,100		1.20		40
Oita	16 July	272	127	N	10,000	1	75	75	80			Total		1/0	790	0/0 100		0/0	790	.42	.53	824	177		61,000		1.6		25
Okayama	28 June	224	138	N	11,000	1	100	100/50	24			547	56		435		29		982	2.13	2.17	982	1745		163,560		3.38		63
Okasaki	19 July	280	126	N	12,700	1	75	75/50	78				495	58	327				851	.65	.76	851	151		84,070		.95		68
Omuta	17 June	207	116	N	6,600	1	75	75/50	129				369		401	52			770	.217	.28	770	780		177,000		5.37		4
"	26 July	295	124	N	13,100	1	50	50	79						380		585	61	965	2.05	2.12	965			177,000		5.37		38
Osaka	13 March	42	264	N	5-6,000	5	100	50	208	81			1678	97	55				1733	8.1	4.67	1733	9,915		3,252,340		60.0		13
"	31 May	187	458	D	15-20,000	5	75	75/35	92	47		196	698		1328	48	680		2706+81 2787	3.15	1.13								5
"	6 June	189	409	D	18,000	5	75	75/35	79				556		1046	58			1798+47 1855	2.21	1.20				3433,340				4
Osaka & Amagasaki	15 June	203	390	D	18,000	4	75	75/35	131	72			69		507		2581	85	3157	2.49	.79	9514			50,400		67.0		4
Saga	5 August	312	63	N	12,400	1	35	35	95				439	100/86					439+72 511	/02	Omit	511	25				1.2		570
Sakai	9 July	258	116	N	10,000	1	100	100/50	93				412	53	367				779	1.02	1.31	779	1411		182,150		2.32		44
Sasebo	28 June	235	140	N	10,100	1	100	100/50	76		262	221	34				543	51	1060	.97	.91	1070	1000		206,000		2.34		42
Sendai	9 July	257	125	N	10,000	1	100	100/50	122				13		376		539	58	928	1.22	1.32	1018	992		233,630		4.53		27
Shimizu	6 July	253	133	N	7,100	1	50	50/35	97						435		595	58	1030	..74	.71	1042	351		68,600		1.41		52.5
Shimonosaki	1 July	243	126	N	7,000	1	100	50	35				491	59	342				833	.51	.61	837	241		196,000		1.42		36
Shizuoka	19 June	212	123	N	8,000	1	75	75/50	123				499	57	370				869	2.28	2.62	1022	1952		212,200		3.46		56
Takamatsu	3 July	247	116	N	9,900	1	100	50	106	24.3			463	56	346				833 809+24	1.40	1.68	833	1773		111,200		1.80		6673
Tokushima	3 July	250	129	N	10,200	1	100	100/50	110						404		647	61	1051	1.70	1.62	1127	1070		119,600		2.30		74
Tokuyama	26 July	294	98	N	11,000	1	50	50	73				642	82	76				718	.68	.95	718	942		38,400		1.27		14
Tokyo	25 February	38	172	D	23-25,000	1	25	25	114	42.2			412	100/87					412+42 454	1.00	2.20				6,778,800		163.0		1.
"	9 March	40	279	N	5-7,000	4	100	50	173				1539	92	128				1667 1624+43	15.8	9.50 5.27		86,000		"		"		10.
"	13 April	67	328	N	6-9,000	3	100	50	219	31.9			1820	85	223	85			1979-83 764	11.4	5.35				"		"		7
"	15 April	69	109	N	8,000	1	100	50	142	14.5			434	56	320				754+14	6.0	7.80		220 others		"		"		8
"	23 May	181	520	N	8-10,000	6	100	50	119				2820	77	777		49		3646	5.3	1.45				"		"		3
"	25 May	183	464	N	7,9-8,700	6	25	100/50	155	4.0	348	3	1320	41	634		945		3251 3254	16.8	5.17	14054	71,000		"		"		11
Toyama	1 August	307	175	N	12,100	1			111				67		274		1131	77	1472	1.87	1.27	1472	2149		127,860		1.88		99
Toyohasi	19 June	210	136	N	8,800	1	100	100/50	139				513	55	420		8		946	1.7	1.80	1026	576		142,700		3.3		52
Tsu	28 July	297	76	N	11,000	1	50	50	69			730	100						730	/84	1.15	1507	1498		68,625		1.47		81
Tsuruga	12 July	265	93	N	12,200	1	50	35	187										683	.77	1.13	633	161		31,350		1.13		68
Ube	1 July	242	101	N	10,000	2	100	50	85				477	70	206				712	.49	.68	722	-336		100,600		1.80		27
Ujiyamada	28 July	300	93	N	12,000	1	35	35	69				532	74	185				735	.36	.49	735	102		52,555		.93		39
Utsonomiya	12 July	263	115	N	13,300	1	75	75/35	131				735	100					803	.94	1.17	803	570		87,868		2.73		34
Uwajima	12 July	266	124	N	10,400	1	75	75/50	133				441	55	362				872	.14	.16	872	248		52,100		1.0		14
"	28 July	302	29	N	10,400	1	50	50	69				479	55	393				205	.35	1.71	1989			"		"		35
Wakayama	9 July	259	108	N	10,200	1	100	100/50	120				115	56	90				801	2.10	2.62	854	1635		195,200		4.0		52.5
Yawata	7 August	319	221	N	19-22,000	3	75	75/35	35						442	55	359		1302	1.22	.94	1502	1996		261,300		5.76		21
Yokkaichi	17 June	209	89	N	7,000	1	75	75/50	79				133				1169	89	567	1.23	2.17	591	834		102,770		3.51		35
Yokohama	28 May	186	454	D	16,5-18,000	5			75				195		352	62	20		2570	8.9	3.46	2590	4 832		968,090		20.2		44
													1782	69	767		21												

* Populated area including parks and small rivers within the city
* All deaths from all attacks are given in cities of multiple attack
† Damage-Weight Index = Sq mi of damage per 1000 tons of bombs

By HR-M NARA, Date 3/5/91

City	Date	Mission No.	Planes over target	No Aiming Points	Total Tons Dropped	Altitude of Attack	Tons of HE or Frags.	Fuze	Tons of M76	Tons of M-69 (clusters)	Tons of M-47	Tons of M 74	Tons of M-50 (clusters)	Total tons all attacks	Area destroyed this attack in sq miles	Population	Built-up area sq miles	% of BU destroyed all attack	Sq miles of damage per 1000 tons			Min. of Attack Duration	
AKASI	6/7	252	123	1	975	7,000	0	–	–	975 (100)	975		–	975	1.06	98,000	1.70	60	1.09	50	50	72	1
AOMORI	28/7	298	61	1	547	14,000	0				547	547 (100)	–	547	1.06	100,000	1.65	65	1.94	50	50	71	2
CHIBA	6/7	251	124	1	857+31	10,000	31	–		486 (57)	371	–	–	888	.86	92,000	1.98	43	.97	75	50	86	3
CHOSI	19/7	279	91	1	598+31	10,200	31	–		598 (95)	–	–	–	693	.48	61,200	1.12	43	.76	50	35	81	4
FUKUI	19/7	277	124	1	951	12,400	0	–	–	756 (80)	195	–	–	961	1.61	98,000	1.61	84	1.81	50	75/50	81	5
FUKUOKA	16/6	211	221	1	1533	9000	0	–	–	530	1003 (66)	–	–	1533	1.37	323,210	6.56	21.5	.89	100	100/50	102	6
FUKUYAMA	8/8	321	91	1	556	13,100	0	–	–	0	139	0	417 (75)	556	.88	56,653	1.2	73	1.58	75	35	70	7
GIFU	9/7	260	129	1	898	14,700	0	–	–	477 (53)	421	0	0	898	1.93	172,340	2.6	74	2.15	100	100/50	106	8
HACHIOJI	1/8	306	169	1	1594	14,800	0				69		1525 (96)	1594	1.15	62,280	1.4	82	.72	50	50	104	9
HAMAMATSU	17/6	208	130	1	936	7,900	0	–	–	491 (52)	413	–	32	1056+	2.44 (2.87)	166,350	4.24	70.	2.61	75	75/50	66	10
HIMEJI	3/7	244	106	1	768	10,100	0	–	–	547 (71)	221	–	–	768	1.48	104,250	1.92	71	1.93	100	100/50	82	11
HIRATSUKA	16/7	274	133	1	1163	10,900	0	–	–	0	240	0	923 (80)	1103	1.04	43,150	2.35	44	.89	100	50	100	12
HITACHI	19/7	279	127	1	964	12,800	0	–	–	250	394 (41)	0	320	971	1.08	82,900	1.38	75	1.12	50	75/50	93	13
ICHINOMIYA	12/7	264	124	1	772	6,000	0	–	–		772 (100)			772	.01				.014 Omit			111	
"	28/7	299	123	1	863	13,500	0			485 (56)	378	0	5	868 / 1640	.96 / .97	70,800	1.28	76	1.10	50	50	110	14
IMABARI	5/9	316	64	1	490+20	12,200	8 + 12			490 (100)	–	–	–	629	.69	60,000	.97	76.	1.35	35	35	42	15
ISESAKI	14/8	330	87	1	614	15,500	–	–	–	343 (56)	271	–	–	614	.166	40,000	1.00	76.	.27	25	25	127	16
KAGOSHIMA	17/6	206	117	1	810	7,000	–	–	–	447 (55)	355	–	8	969	2.15	190,250	4.87	44.1	2.66	75	75/50	103	17
KAWASAKI	15/4	68	194	2	1072+25	5-7,900	37.6	–	–	764 (70)	308	–	–	1515	3.7	300,770	11.3	32.8	3.33	100	50	142	18
KOBE	16/3	43	296	4	2312+19	5,9-7,000	19.4	–	376	653	–	–	1283 (56)	5667	2.9	967,234	15.7		1.24	50	50	128	19
"	4/6	188	307	4D	3026+1	13-15,000	71	–	0	942	1132 (37)		952		4.35 (6.5)	"	31.	28 Total 156	1.45			85	20
KOCHI	3/7	248	125	1	1061	10,300	0	–	313	748 (71)	0	0	0	1061	.92	106,650	1.9	48.	.87	100	100/50	60	21
KOFU	6/7	254	131	1	971	11,200	0	–	–	731 (75)	232	0	8	971	1.3	102,400	2.0	15	1.34	75	50	108	22
KUMAGAYA	14/8	329	82	1	581	14-15000	8	–	–	274 (47)	218	0	89	593	.27	49000	.6	45	.46	25	25	76	23
KUMAMOTO	1/7	241	155	2	1125	10-11,000	0	–	–	702 (62)	375	48	0	1491	1.0	211,000	4.8	21	.89	100	50	91	24
KURE	1/7	240	152	1	1082	10,300	0			612 (52)	470	0	0	1082	1.3	277,000	3.26	65	1.20	100	50	123	25
KUWANA	14/7	273	94	1	693	10,300	0	–	–	492 (71)	201	0	0	693	.63	41850	.82	77	.91	50	35	75	26
MADASHI	5/8	313	92	1	691+5	15,200	15.7	P		691 (98)	0	0	0	723	1.0	87,000	2.34	42 %	1.43	35	35	100	27
MATSUYAMA	26/7	293	128	1	896	11,000	0	–	–	487 (54)	394	0	15	896	1.22	117,534	1.67	73%	1.36	50	50	130	28
MITO	1/8	309	161	1	1152	12000	0	–	–	642 (56)	510	0	0	1152	1.7	66,300	2.60	65%	1.47			94	29
MIYAKONOJO	6/8	–	217	–	209	1000	165 gal. belly tanks				20		–	–	0		1.17	0	Omit			—	
MOJI	28/6	236	91	1	626	9,000	0	–	–	253	373 (60)	0	0	626	1.302	139,000	1.12	27.0	.48	100	100/50	92	30
NAGAOKA	1/8	308	125	1	925	12,000	0	–	–	849 (92)	76	0	0	925	1.33	67,000	2.03	65.	1.44			75	31
NAGOYA	11/3	41	280	3	1793	6000	0	–	–	1689 (94)	104	0	0	–	2.95	1,328,000	40.0	3.5	1.15	100	100	178	32
"	18/3	44	290	3	1844	4,5-7000	0		495	274	959 (52)		116		2.75	"	"		1.60 M 16 / 1.25	100	50	164	33
"	13/4	174	472	4D	2515	16,000	0	–	–	2515 (100)	0	0	0		3.15	"	"			25	25	140	34
"	16/4	176	457	4	3609	6-10,000	0	–	–	75	127	0	3407 (46)	10,603	3.82 / 11.12 (12.97)	"	"	3.48	1.06	100	50	173	35
NISHINOMIYA	5/8	314	255	2	1922+33	12,6-13,000	33.5	ND	–	1795 (92)	94	0	33	12,004	3.5	111,800	9.46	37	1.79	35	35	36	36
NOBEOKA	28/6	237	117	1	829	7,000	0	–	–	483 (58)	346	0	0	829	.52	79,426	1.43	36%	.63	100	100/50	91	37
NUMAZU	16/7	271	119	1	1036	10,600	0	0	0	48 (55)	197	0	831 (80)	1051	1.25	53,165	1.4	90.	1.21	75	50	99	38
																56,100	1.2	40	.73	50	50	118	39

NOBEOKA	28/6	237	117	1	829	7,800	0	–	–	483/58	346	0	0	853	.52	79,026	1.43	36 90	.63	55	35	36	36	
NUMAZU	16/7	271	119	1	1036	10,600	0	0	0	48	197	0	831/80	1051	1.25	53,165	1.4	90.	1.21	100	100/50	91	37	
OGAKI	28/7	301	92	1	659	14,000	0	0	0	360/55	289	0	10	659	.48	56,100	1.2	40	.73	75	50	99	38	
OITA	16/7	272	177	1	790	10,000	0	0	0	0	790/100	0	0	824	.42	61,000	1.6	77	.53	50	50	118	39	
OKAYAMA	28/6	234	138	1	982	11,000	0	0	0	0	435	547/56	0	982	2.13	163,550	3.38	63	2.17	75	75	80	40	
OKAZAKI	19/7	280	126	1	851	12,700	0	0	0	495/58	327	0	29	851	.65	84,070	.95	68	.76	100	100/50	24	41	
OMUTA	17/6	207	116	1	770	6,600	0	0	0	369	401/52	0	0	770	.217	177,000	5.37		.28	75	75/50	78	42	
	26/7	295	124	1	965	13,100	0	0	0	0	380	0	585/61	965	2.05	"	"	total 42	2.12	75	75/50	129	43	
OSAKA	13/3	42	264	3	1733	5-6,000		0	0	1678/97	55	0	0	1733	8.1				4.67	50	50	79	44	
AMAGASAKI	31/5	187	458	5 D	2706 81	18-20,000	81	–		698	1328/48	0	680	2706	3.151				Omit			208		
"	6/6	189	409	5 D	1798 +49	18,000	47	.01		556	1046/58	196	0		2.21				1.13	75	75/35	92	45	
AMAGASAKI OSAKA	15/6	203	390	4 D	3157	18 000	0	–	0	69	507	0	258/85	9,514	2.49 15.95	325,800 181,000	60. 7	16.49 m 377.	1.20	75	75/35	79	46	
SAGA	5/8	312	163	1	439 +22	12 400	72	P	0	439/86	0	0	0	511	mixed .02 outside	50,400	1.2	0	.79	75	75/35	131	47	
SAKAI	9/7	258	116	1	779	10,000	0	0	–	412/53	367	0	0	779	1.62	182,150	2.32	44	Omit	35	35			
SASEBO	28/6	235	140	1	1060	10,100	0	–	262	34	0	221	543/51	1070	.99	206,000	2.34	42	1.31	100	100/50	93	48	
SENDAI	9/7	257	125	1	928	10,000	0	–	–	13	376	0	539/58	1018	1.22	233,630	4.53	27	.91	100	100/50	76	49	
SHIMIZU	6/7	253	133	1	1030	7,100	0	–	–	0	435	0	595/58	1042	.74	68,600	1.41	52	1.32	100	100/50	122	50	
SHIMONOSEKI	1/7	243	126	1	833	7000	0	–	–	491/59	342	0	0	837	.51	196,000	1.42	36	.71	50	50/35	97	51	
SHIZUOKA	19/6	212	123	1	869	8000	0	–	–	499/57	370	0	0	1027	2.28	212,200	3.46	66	.61	100	50	35	52	
TAKAMATSU	3/7	247	116	1	809 +24	9,900	24.3	IN	–	463/56	346	0	0	833	1.40	111,200	1.8	78 90	2.62	75	75/50	123	53	
TOKUSHIMA	3/7	250	129	1	1051	10,200	0	–	–	0	404	0	647/61	1127	1.7	119,600	2.3	74	1.68	100	50	106	54	
TOKUYAMA	26/7	294	98	1	718	16,000	0	–	–	642/82	76	0	0	718 +70	.68	38,400	1.27	53	1.62	100	100/50	110	55	
TOKYO	24/2	38	172	1 D	412 21 +42	23,25000	42.30	–	–	412/97	0		0		1.0	67,778,000	153.		.95	50	50	73	56	
"	9/3	40	279	4	1667	5-7,000	0	–	0	1534/92	128	0	0		15.8				2.11	25	25	114	57	
"	13/4	67	328	3	1979 +83	6-9000	81.9	IN	–	1890/85	1272/85	0	0		11.4				9.50 Omit	100	50	173		
"	15/4	69	109	1	754 +14	8,000	14.5	IN	0	434/56	320	0	0		6.0				5.37 Omit	100	50	319		
"	23/5	181	520	6	3646	8-10,000	0	–	0	2820/77	777	0	49		5.3				7.80 Omit	100	50	142		
"	25/5	183	464	6	3250	7,9-8,700	0	–	348	1320/41	634	3	945	14,054	16.8			508°	1.45 5.17 Omit	100	50	119	58	
TOYAMA	1/8	307	175	1	1472	12,100	0	–	0	67	274	0	1131/77	1472	1.87	127,860	1.88	99.5	1.27	25	50/100	155		
TOYOHASI	19/6	210	136	1	946	8,800	0	–	0	518/55	420	0	8	1026	1.7	142,700	3.3	52	1.80			111	59	
TSU	28/7	297	76	1	730	11,000	0	–	0	0	0	730/100	0	1507	.84 1.18	68,625	1.47	81	1.15	100	100/50	139	60	
TSURUGA	12/7	265	93	1	683	12,200	0	–	0	477/70	206	0	0	683	.77	31350	1.13	68	1.13	50	50	69	61	
UBE	1/7	242	101	2	717	13,000	0	0	0	532/74	185	0	0	722	.49	100,600	1.8	22	.68	50	35	187	62	
UJIYAMADA	28/7	300	93	1	735	12,800	0	0	0	735/100	0	0	0	735	.36	52,555	.93	39	.49	100	50	85	63	
UTSONOMMA	12/7	263	115	1	803	13,300	0	–	0	441/55	362	0	0	803	.94	87,868	2.73	34	1.19	35	35	69	64	
UWAJIMA	12/7	266	124	1	872	10,400	0	–	0	479/55	393	0	0	872	.14	52,100	1.0	44	.16	75	75/50	181	65	
"	28/7	302	29	1	205	10,400	0	–	0	115/56	90	0	0	1089	.35	"	"	.35 52	1.71	75	75/50	133	66	
WAKAYAMA	9/7	259	108	1	801	10,200	0	–	0	0	442/55	0	359	854	2.10	195,203	4.0	52.5	2.62	50	50	69	67	
YAWATA	7/8	319	221	3	1302	19-22,000	0	–	0	133	0	0	1169/89	1302	1.22	261,300	5.76	21	.94	100	100/50	120	68	
YOKKAICHI	17/6	209	89	1	567	7000	0	–	0	195	352/62	0	20	591	1.23	102,770	3.51	35	2.17	75	75/35	35	69	
YOKOHAMA	28/5	186	454	5 D	2570	17,5-18,000	0	–	0	1782/69	767	0	21	2590	8.9	968,090	20.2	44	3.46	75	75/50	79	70	
Totals			13,365		92,922		642 .79°		1974 2.1°	43,593 46°	25151 27.7°	2,292 2.5°	19,879 21.9°				175.73		9309			75	71	
			-3 +4 -14 -7																					