Abukuma

CL JAPAN 1925 to 1935

1659-0 NAGARA Class

Displacement	5,570 ts	*Length*	520 ft	Uraga, Tokyo	
Complement	450	*Beam*	48 ft	*Launched*	03/16/1923
Sunk 10/25/1944		*Draft*	16 ft	*Completed*	05/26/1925

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	0			Catapult	0	

2 1 4 3

TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48			

RAPID FIRE BATTERIES

RF1	2	8cm/40 Type 3			
Max Rg	11,800	23.6"	7	5	
Eff Rg	5,310	10.6"	11	8	

RF						
18	Port	1	1	1	0	0
	Stbd	1	1	1	0	0
AA	Port	2	2	1	1	0
H	Stbd	2	2	1	1	0

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

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Abukuma

TIER	DP
1/70	136
2/80	271
3/75	407
4/85	542
5/80	678
6/90	800
7/85	922
8/95	1044
9/90	1166
10	1288
10	1370

DP	1356
KTS	36

Engine Rm	2	36	21	0	0	0	0
Prop/Shaft	4	36	31	18	5	0	0
Boiler Rm	4	36	33	22	8	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-10 kt	11-18 kt	19-22 kt	23-25 kt	26-27 kt	28+ kt
	11.0	8.0	5.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		3

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Abukuma

CL JAPAN 1936 to 1942

1659-1 NAGARA Class

Displacement	6,260 ts	*Length*	520 ft	Uraga, Tokyo	
Complement	450	*Beam*	48 ft	*Launched*	03/16/1923
Sunk 10/25/1944		*Draft*	16 ft	*Completed*	05/26/1925

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

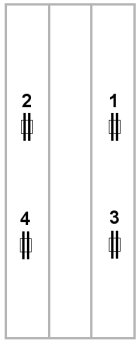
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	1			Catapult	1	
E4N-2				1	1	23
125 kts		80 kts		18830 ft		



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48

RAPID FIRE BATTERIES

RF1	4	25mm/60 Type 96			
Max Rg	7,440	14.9"	9	7	
Eff Rg	3,348	6.7"	13	10	

RF						
5	Port	2	2	1	1	0
	Stbd	2	2	1	1	0
AA	Port	8	7	4	3	1
M	Stbd	8	7	4	3	1

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Abukuma

TIER	DP
1/70	144
2/80	287
3/75	431
4/85	575
5/80	719
6/90	848
7/85	977
8/95	1106
9/90	1236
10	1365
10	1451

DP	1437
KTS	34

Engine Rm	2	34	20	0	0	0	0
Prop/Shaft	4	34	30	17	4	0	0
Boiler Rm	4	34	31	21	8	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed	00-10 kt	11-18 kt	19-22 kt	23-25 kt	26-27 kt	28+ kt
Increase	11.0	8.0	5.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		4

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
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																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
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																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Abukuma

CL JAPAN 1943 to 1943

1659-2 NAGARA Class

Displacement	7,158 ts	*Length*	520 ft	Uraga, Tokyo	
Complement	450	*Beam*	48 ft	*Launched*	03/16/1923
Sunk 10/25/1944		*Draft*	16 ft	*Completed*	05/26/1925

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

6 x 14cm/50 Type 3 15

Max ROF		Range		Shell Size/Weight	
7.0	sh/min	19,395 yds	38.8"	5.5"	83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J3	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1440

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	13	15	10	12	8	11	7
10 - 18	14	10	11	7	9	6	8	6
19 - 27	12	8	10	6	8	5	7	5
28 - 36	11	7	8	6	7	5	6	4
37 - 45	10	7	8	5	7	4	6	4

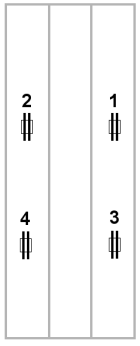
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	1			Catapult	1	
F1M-2 Pete				2	1	30
200 kts	120 kts			30970 ft		



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48

RAPID FIRE BATTERIES

RF1	10	25mm/60 Type 96			
Max Rg	7,440	14.9"	9	7	
Eff Rg	3,348	6.7"	13	10	

RF						
5	Port	5	4	3	2	1
	Stbd	5	4	3	2	1
AA	Port	20	16	11	7	3
M	Stbd	20	16	11	7	3

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW		
0		
None		

DEPTH CHARGES			
Rack	0		
Ammo	0		

Captain	

After 1/1943 refit.

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Abukuma

TIER	DP
1/70	154
2/80	307
3/75	461
4/85	615
5/80	769
6/90	907
7/85	1045
8/95	1183
9/90	1322
10	1460
10	1552

DP	1537
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		4

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

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																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Abukuma

CL JAPAN 1943 to 1944

1659-3 NAGARA Class

Displacement	7,158 ts	*Length*	520 ft	Uraga, Tokyo	
Complement	450	*Beam*	48 ft	*Launched*	03/16/1923
Sunk 10/25/1944		*Draft*	16 ft	*Completed*	05/26/1925

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

5 x 14cm/50 Type 3 — 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1200

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

CPC — PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

2 x 12.7cm/40 Type 89 — 13

Max ROF	Range	Shell Size/Weight
12.0 sh/min	16,185 yds 32.4"	5.0" 51.7 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	V	Ammunition	360 rpg	720

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

HE — PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.6	6.2	5.0	4.0	3.3	2.7	2.0	1.6						
Rge	S	S	M	M	L	L	E	E						
H	0.1	0.2	0.3	0.4	0.5	0.8	1.4	1.8						
V	3.9	2.8	2.1	1.7	1.3	1.2	1.1	1.3						

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	1			Catapult	1	
F1M-2 Pete				2	1	30
200 kts	120 kts			30970 ft		

2 1 4 3

TORPEDOES

TT	8	Ammo	16

61cm Type 93 M1-2

Damage Class	A
Settings	
22,000/48	
35,000/40	
43,700/36	

MINES

48			

RAPID FIRE BATTERIES

RF1	17	25mm/60 Type 96			
Max Rg	7,440	14.9"		9	7
Eff Rg	3,348	6.7"		13	10

RF						
5	Port	9	7	5	3	1
	Stbd	9	7	5	3	1
AA	Port	35	28	19	11	5
M	Stbd	35	28	19	11	5

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain	

After 11/1943 refit.

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Abukuma

TIER	DP
1/70	154
2/80	307
3/75	461
4/85	615
5/80	769
6/90	907
7/85	1045
8/95	1183
9/90	1322
10	1460
10	1552

DP	1537
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		4

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
SECONDARY BATTERY																					
																				B2D	Directed fire as range permits
																				B2L	Local control as range permits
																				B2P	Split fire
																				B2C	Change target
																				B2B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Abukuma

CL JAPAN 1944 to 1944

1659-4 NAGARA Class

Displacement	7,158 ts	*Length*	520 ft	Uraga, Tokyo	
Complement	450	*Beam*	48 ft	*Launched*	03/16/1923
Sunk 10/25/1944		*Draft*	16 ft	*Completed*	05/26/1925

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

5 x 14cm/50 Type 3 — 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1200

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

CPC — PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

2 x 12.7cm/40 Type 89 — 13

Max ROF	Range	Shell Size/Weight
12.0 sh/min	16,185 yds 32.4"	5.0" 51.7 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	V	Ammunition	360 rpg	720

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

HE — PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.6	6.2	5.0	4.0	3.3	2.7	2.0	1.6						
Rge	S	S	M	M	L	L	E	E						
H	0.1	0.2	0.3	0.4	0.5	0.8	1.4	1.8						
V	3.9	2.8	2.1	1.7	1.3	1.2	1.1	1.3						

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
No.21 Type 2 M2
None

ASW MORTARS/ATW			DEPTH CHARGES			
1			Rack	0		
None			Ammo	12		

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	0			Catapult	0	

TORPEDOES

TT	8	Ammo	16

61cm Type 93 M1-2

Damage Class	A

Settings: 22,000/48; 35,000/40; 43,700/36

MINES: 48

RAPID FIRE BATTERIES

RF1	30	25mm/60 Type 96			
Max Rg	7,440	14.9"	9	7	
Eff Rg	3,348	6.7"	13	10	

RF						
5	Port	15	12	8	5	2
	Stbd	15	12	8	5	2
AA	Port	61	49	34	20	9
M	Stbd	61	49	34	20	9

RF2		None
Max Rg		
Eff Rg		

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None
Max Rg		
Eff Rg		

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain

After 6/1944 refit.

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Abukuma

TIER	DP
1/70	154
2/80	307
3/75	461
4/85	615
5/80	769
6/90	907
7/85	1045
8/95	1183
9/90	1322
10	1460
10	1552

DP	1537
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		4

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
SECONDARY BATTERY																					
																				B2D	Directed fire as range permits
																				B2L	Local control as range permits
																				B2P	Split fire
																				B2C	Change target
																				B2B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Isuzu

CL JAPAN 1923 to 1932

1655-0 NAGARA Class

Displacement	5,570 ts	*Length*	520 ft	Uraga, Tokyo	
Complement	450	*Beam*	48 ft	*Launched*	10/29/1921
Sunk 04/07/1945		*Draft*	16 ft	*Completed*	08/15/1923

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

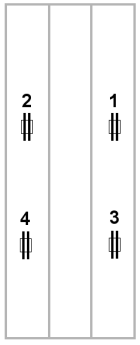
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	0			Catapult	0	



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48			

RAPID FIRE BATTERIES

RF1	2	8cm/40 Type 3			
Max Rg	11,800	23.6"	7	5	
Eff Rg	5,310	10.6"	11	8	

RF						
18	Port	1	1	1	0	0
	Stbd	1	1	1	0	0
AA	Port	2	2	1	1	0
H	Stbd	2	2	1	1	0

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Isuzu

TIER	DP
1/70	136
2/80	271
3/75	407
4/85	542
5/80	678
6/90	800
7/85	922
8/95	1044
9/90	1166
10	1288
10	1370

DP	1356
KTS	36

Engine Rm	2	36	21	0	0	0	0
Prop/Shaft	4	36	31	18	5	0	0
Boiler Rm	4	36	33	22	8	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-10 kt	11-18 kt	19-22 kt	23-25 kt	26-27 kt	28+ kt
	11.0	8.0	5.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		3

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Isuzu

CL JAPAN 1933 to 1942

1655-1 NAGARA Class

Displacement	5,570 ts	*Length*	520 ft	Uraga, Tokyo	
Complement	450	*Beam*	48 ft	*Launched*	10/29/1921
Sunk 04/07/1945		*Draft*	16 ft	*Completed*	08/15/1923

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

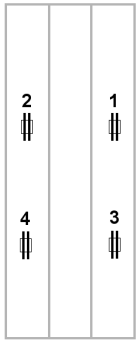
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	1			Catapult	1	
E4N-2				1	1	23
125 kts		80 kts		18830 ft		



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48

RAPID FIRE BATTERIES

RF1	4	25mm/60 Type 96			
Max Rg	7,440	14.9"	7	5	
Eff Rg	3,348	6.7"	11	8	

RF						
5	Port	2	2	1	1	0
	Stbd	2	2	1	1	0
AA	Port	8	7	4	3	1
M	Stbd	8	7	4	3	1

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

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TIER	DP
1/70	136
2/80	271
3/75	407
4/85	542
5/80	678
6/90	800
7/85	922
8/95	1044
9/90	1166
10	1288
10	1370

DP	1356
KTS	34

Engine Rm	2	34	20	0	0	0	0
Prop/Shaft	4	34	30	17	4	0	0
Boiler Rm	4	34	31	21	8	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-10 kt	11-18 kt	19-22 kt	23-25 kt	26-27 kt	28+ kt
	11.0	8.0	5.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		3

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Isuzu

CL JAPAN 1943 to 1944

1655-2 NAGARA Class

Displacement	6,200 ts	*Length*	520 ft	Uraga, Tokyo	
Complement	450	*Beam*	48 ft	*Launched*	10/29/1921
Sunk 04/07/1945		*Draft*	16 ft	*Completed*	08/15/1923

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

5 x 14cm/50 Type 3 — 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1200

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

CPC — PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

2 x 12.7cm/40 Type 89 — 13

Max ROF	Range	Shell Size/Weight
12.0 sh/min	16,185 yds 32.4"	5.0" 51.7 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	V	Ammunition	360 rpg	720

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

HE — PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.6	6.2	5.0	4.0	3.3	2.7	2.0	1.6						
Rge	S	S	M	M	L	L	E	E						
H	0.1	0.2	0.3	0.4	0.5	0.8	1.4	1.8						
V	3.9	2.8	2.1	1.7	1.3	1.2	1.1	1.3						

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
No.21 Type 2 M2
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	1			Catapult	1	
F1M-2 Pete				2	1	30
200 kts	120 kts			30970 ft		

TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48			

RAPID FIRE BATTERIES

RF1	10	25mm/60 Type 96			
Max Rg	7,440	14.9"		9	7
Eff Rg	3,348	6.7"		13	10

RF						
5	Port	5	4	3	2	1
	Stbd	5	4	3	2	1
AA	Port	20	16	11	7	3
M	Stbd	20	16	11	7	3

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain	

After May 1943 refit.

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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TIER	DP
1/70	143
2/80	286
3/75	429
4/85	572
5/80	715
6/90	844
7/85	972
8/95	1101
9/90	1230
10	1359
10	1444

DP	1430
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		4

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

Isuzu

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
SECONDARY BATTERY																					
																				B2D	Directed fire as range permits
																				B2L	Local control as range permits
																				B2P	Split fire
																				B2C	Change target
																				B2B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Isuzu

CL JAPAN 1944 to 1945

1655-3 NAGARA Class

Displacement	7,000 ts	*Length*	520 ft	Uraga, Tokyo	
Complement	450	*Beam*	48 ft	*Launched*	10/29/1921
Sunk 04/07/1945		*Draft*	16 ft	*Completed*	08/15/1923

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

6 x 12.7cm/40 Type 89 | 13

Max ROF	Range	Shell Size/Weight
12.0 sh/min	16,185 yds 32.4"	5.0" 51.7 lbs.

Fire Control	FC Radar	
1 1F3	None	+ 0

AP	SAP
COM	HE

AA	2.7	Level	V	Ammunition	360 rpg	2160

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	23	16	18	13	15	11	14	10
10 - 18	18	12	14	10	12	8	10	7
19 - 27	15	11	12	8	10	7	9	6
28 - 36	13	9	10	7	9	6	8	5
37 - 45	12	9	10	7	8	6	7	5

HE — PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.6	6.2	5.0	4.0	3.3	2.7	2.0	1.6						
Rge	S	S	M	M	L	L	E	E						
H	0.1	0.2	0.3	0.4	0.5	0.8	1.4	1.8						
V	3.9	2.8	2.1	1.7	1.3	1.2	1.1	1.3						

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	0			Catapult	0	

P S

TORPEDOES

TT	8	Ammo	16

61cm Type 93 M1-2

Damage Class	A

Settings

22,000/48

35,000/40

43,700/36

MINES

48

RAPID FIRE BATTERIES

RF1	50	25mm/60 Type 96			
Max Rg	7,440	14.9"	9	7	
Eff Rg	3,348	6.7"	13	10	

RF						
5	Port	25	20	14	8	4
	Stbd	25	20	14	8	4
AA	Port	102	81	56	34	15
M	Stbd	102	81	56	34	15

RF2		None
Max Rg		
Eff Rg		

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None
Max Rg		
Eff Rg		

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
No.13 Type 3 M1
No.22 M4

ASW MORTARS/ATW			DEPTH CHARGES			
2			Rack	2		
None			Ammo	18		

Captain	

After 9/1944 conversion to AA cruiser.

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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TIER	DP
1/70	152
2/80	304
3/75	456
4/85	608
5/80	760
6/90	897
7/85	1034
8/95	1170
9/90	1307
10	1444
10	1535

DP	1520
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		4

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Kinu

CL JAPAN 1922 to 1934

1658-0 NAGARA Class

Displacement	5,570 ts	*Length*	520 ft	Kawasaki, Kobe	
Complement	450	*Beam*	48 ft	*Launched*	05/29/1922
Sunk 10/24/1944		*Draft*	16 ft	*Completed*	11/10/1922

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

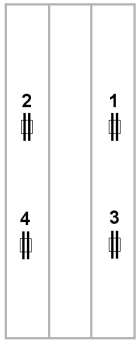
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	0			Catapult	0	



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48			

RAPID FIRE BATTERIES

RF1	2	8cm/40 Type 3			
Max Rg	11,800	23.6"	7	5	
Eff Rg	5,310	10.6"	11	8	

RF						
18	Port	1	1	1	0	0
	Stbd	1	1	1	0	0
AA	Port	2	2	1	1	0
H	Stbd	2	2	1	1	0

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

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Kinu

TIER	DP
1/70	136
2/80	271
3/75	407
4/85	542
5/80	678
6/90	800
7/85	922
8/95	1044
9/90	1166
10	1288
10	1370

DP	1356
KTS	36

Engine Rm	2	36	21	0	0	0	0
Prop/Shaft	4	36	31	18	5	0	0
Boiler Rm	4	36	33	22	8	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-10 kt	11-18 kt	19-22 kt	23-25 kt	26-27 kt	28+ kt
	11.0	8.0	5.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		3

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Kinu

CL JAPAN 1935 to 1943

1658-1 NAGARA Class

Displacement	5,570 ts	*Length*	520 ft	Kawasaki, Kobe	
Complement	450	*Beam*	48 ft	*Launched*	05/29/1922
Sunk 10/24/1944		*Draft*	16 ft	*Completed*	11/10/1922

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

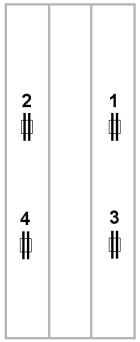
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	1			Catapult	1	
E4N-2				1	1	23
125 kts		80 kts		18830 ft		



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48

RAPID FIRE BATTERIES

RF1	4	25mm/60 Type 96			
Max Rg	7,440	14.9"	7	5	
Eff Rg	3,348	6.7"	11	8	

RF						
5	Port	2	2	1	1	0
	Stbd	2	2	1	1	0
AA	Port	8	7	4	3	1
M	Stbd	8	7	4	3	1

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

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Kinu

TIER	DP
1/70	136
2/80	271
3/75	407
4/85	542
5/80	678
6/90	800
7/85	922
8/95	1044
9/90	1166
10	1288
10	1370

DP	1356
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		3

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Kinu

CL JAPAN 1943 to 1944

1658-2 NAGARA Class

Displacement	6,200 ts	*Length*	520 ft	Kawasaki, Kobe	
Complement	450	*Beam*	48 ft	*Launched*	05/29/1922
Sunk 10/24/1944		*Draft*	16 ft	*Completed*	11/10/1922

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

5 x 14cm/50 Type 3 — 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1200

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

CPC — PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

2 x 12.7cm/40 Type 89 — 13

Max ROF	Range	Shell Size/Weight
12.0 sh/min	16,185 yds 32.4"	5.0" 51.7 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	V	Ammunition	360 rpg	720

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

HE — PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.6	6.2	5.0	4.0	3.3	2.7	2.0	1.6						
Rge	S	S	M	M	L	L	E	E						
H	0.1	0.2	0.3	0.4	0.5	0.8	1.4	1.8						
V	3.9	2.8	2.1	1.7	1.3	1.2	1.1	1.3						

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	0			Catapult	0	

TORPEDOES

TT	8	Ammo	16

61cm Type 93 M1-2

Damage Class	A

Settings: 22,000/48; 35,000/40; 43,700/36

MINES: 48

RAPID FIRE BATTERIES

RF1	10	25mm/60 Type 96			
Max Rg	7,440	14.9"	9	7	
Eff Rg	3,348	6.7"	13	10	

RF						
5	Port	5	4	3	2	1
	Stbd	5	4	3	2	1
AA	Port	20	16	11	7	3
M	Stbd	20	16	11	7	3

RF2		None
Max Rg		
Eff Rg		

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None
Max Rg		
Eff Rg		

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain

After October 1943 refit.

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Kinu

TIER	DP
1/70	143
2/80	286
3/75	429
4/85	572
5/80	715
6/90	844
7/85	972
8/95	1101
9/90	1230
10	1359
10	1444

DP	1430
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		4

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
SECONDARY BATTERY																					
																				B2D	Directed fire as range permits
																				B2L	Local control as range permits
																				B2P	Split fire
																				B2C	Change target
																				B2B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Nagara

CL JAPAN 1922 to 1933

1654-0 NAGARA Class

Displacement	5,570 ts	*Length*	520 ft	Sasebo Naval Yard	
Complement	450	*Beam*	48 ft	*Launched*	04/25/1921
Sunk 08/07/1944		*Draft*	16 ft	*Completed*	04/21/1922

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	0			Catapult	0	

2 1

4 3

TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48

RAPID FIRE BATTERIES

RF1	2	8cm/40 Type 3			
Max Rg	11,800	23.6"	7	5	
Eff Rg	5,310	10.6"	11	8	

RF						
18	Port	1	1	1	0	0
	Stbd	1	1	1	0	0
AA	Port	2	2	1	1	0
H	Stbd	2	2	1	1	0

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

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Nagara

TIER	DP
1/70	136
2/80	271
3/75	407
4/85	542
5/80	678
6/90	800
7/85	922
8/95	1044
9/90	1166
10	1288
10	1370

DP	1356
KTS	36

Engine Rm	2	36	21	0	0	0	0
Prop/Shaft	4	36	31	18	5	0	0
Boiler Rm	4	36	33	22	8	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-10 kt	11-18 kt	19-22 kt	23-25 kt	26-27 kt	28+ kt
	11.0	8.0	5.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		3

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Nagara

CL JAPAN 1934 to 1943

1654-1 NAGARA Class

Displacement	5,570 ts	*Length*	520 ft	Sasebo Naval Yard	
Complement	450	*Beam*	48 ft	*Launched*	04/25/1921
Sunk 08/07/1944		*Draft*	16 ft	*Completed*	04/21/1922

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

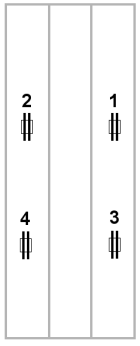
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	1			Catapult	1	
E4N-2				1	1	23
125 kts		80 kts		18830 ft		



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48

RAPID FIRE BATTERIES

RF1	4	25mm/60 Type 96			
Max Rg	7,440	14.9"	7	5	
Eff Rg	3,348	6.7"	11	8	

RF						
5	Port	2	2	1	1	0
	Stbd	2	2	1	1	0
AA	Port	8	7	4	3	1
M	Stbd	8	7	4	3	1

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW		
0		
None		

DEPTH CHARGES			
Rack	0		
Ammo	0		

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Nagara

TIER	DP
1/70	136
2/80	271
3/75	407
4/85	542
5/80	678
6/90	800
7/85	922
8/95	1044
9/90	1166
10	1288
10	1370

DP	1356
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		3

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Nagara

CL JAPAN 1943 to 1943

1654-2 NAGARA Class

Displacement	6,200 ts	*Length*	520 ft	Sasebo Naval Yard	
Complement	450	*Beam*	48 ft	*Launched*	04/25/1921
Sunk 08/07/1944		*Draft*	16 ft	*Completed*	04/21/1922

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

6 x 14cm/50 Type 3 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1440

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

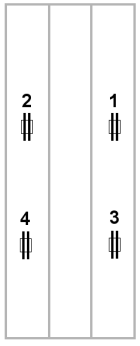
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	1			Catapult	1	
F1M-2 Pete				2	1	30
200 kts	120 kts			30970 ft		



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48

RAPID FIRE BATTERIES

RF1	10	25mm/60 Type 96			
Max Rg	7,440	14.9"	9	7	
Eff Rg	3,348	6.7"	13	10	

RF						
5	Port	5	4	3	2	1
	Stbd	5	4	3	2	1
AA	Port	20	16	11	7	3
M	Stbd	20	16	11	7	3

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW		
0		
None		

DEPTH CHARGES			
Rack	0		
Ammo	0		

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Nagara

TIER	DP
1/70	143
2/80	286
3/75	429
4/85	572
5/80	715
6/90	844
7/85	972
8/95	1101
9/90	1230
10	1359
10	1444

DP	1430
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		4

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Nagara

CL JAPAN 1944 to 1944

1654-3 NAGARA Class

Displacement	6,200 ts	*Length*	520 ft	Sasebo Naval Yard	
Complement	450	*Beam*	48 ft	*Launched*	04/25/1921
Sunk 08/07/1944		*Draft*	16 ft	*Completed*	04/21/1922

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

5 x 14cm/50 Type 3

15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1200

FIRE CONTROL TABLE								
T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

CPC	PENETRATION TABLE													
Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

2 x 12.7cm/40 Type 89

13

Max ROF	Range	Shell Size/Weight
12.0 sh/min	16,185 yds 32.4"	5.0" 51.7 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	V	Ammunition	360 rpg	720

FIRE CONTROL TABLE								
T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

HE	PENETRATION TABLE													
Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.6	6.2	5.0	4.0	3.3	2.7	2.0	1.6						
Rge	S	S	M	M	L	L	E	E						
H	0.1	0.2	0.3	0.4	0.5	0.8	1.4	1.8						
V	3.9	2.8	2.1	1.7	1.3	1.2	1.1	1.3						

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
No.21 Type 2 M2
None

ASW MORTARS/ATW			DEPTH CHARGES			
2			Rack	2		
None			Ammo	18		

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	0			Catapult	0	

P S

TORPEDOES

TT	8	Ammo	16

61cm Type 93 M1-2

Damage Class	A

Settings

22,000/48

35,000/40

43,700/36

MINES

48			

RAPID FIRE BATTERIES

RF1	22	25mm/60 Type 96			
Max Rg	7,440	14.9"	9	7	
Eff Rg	3,348	6.7"	13	10	

RF						
5	Port	11	9	6	4	2
	Stbd	11	9	6	4	2
AA	Port	45	36	25	15	7
M	Stbd	45	36	25	15	7

RF2		None	
Max Rg			
Eff Rg			

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None	
Max Rg			
Eff Rg			

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain	

After April 1944 refit.

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Nagara

TIER	DP
1/70	143
2/80	286
3/75	429
4/85	572
5/80	715
6/90	844
7/85	972
8/95	1101
9/90	1230
10	1359
10	1444

DP	1430
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		4

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
SECONDARY BATTERY																					
																				B2D	Directed fire as range permits
																				B2L	Local control as range permits
																				B2P	Split fire
																				B2C	Change target
																				B2B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Natori

CL JAPAN 1922 to 1932

1657-0 NAGARA Class

Displacement	5,570 ts	*Length*	520 ft	Mitsubishi, Nagasaki	
Complement	450	*Beam*	48 ft	*Launched*	02/16/1922
Sunk 08/18/1944		*Draft*	16 ft	*Completed*	09/15/1922

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 — 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

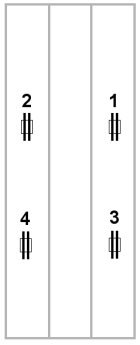
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	0			Catapult	0	



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings: 11,000/38; 16,400/32; 21,900/27

MINES: 48

RAPID FIRE BATTERIES

RF1	2	8cm/40 Type 3			
Max Rg	11,800	23.6"	7	5	
Eff Rg	5,310	10.6"	11	8	

RF						
18	Port	1	1	1	0	0
	Stbd	1	1	1	0	0
AA	Port	2	2	1	1	0
H	Stbd	2	2	1	1	0

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Natori

TIER	DP
1/70	136
2/80	271
3/75	407
4/85	542
5/80	678
6/90	800
7/85	922
8/95	1044
9/90	1166
10	1288
10	1370

DP	1356
KTS	36

Engine Rm	2	36	21	0	0	0	0
Prop/Shaft	4	36	31	18	5	0	0
Boiler Rm	4	36	33	22	8	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-10 kt	11-18 kt	19-22 kt	23-25 kt	26-27 kt	28+ kt
	11.0	8.0	5.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		3

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Natori

CL JAPAN 1933 to 1943

1657-1 NAGARA Class

Displacement	5,570 ts	*Length*	520 ft	Mitsubishi, Nagasaki	
Complement	450	*Beam*	48 ft	*Launched*	02/16/1922
Sunk 08/18/1944		*Draft*	16 ft	*Completed*	09/15/1922

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 — 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

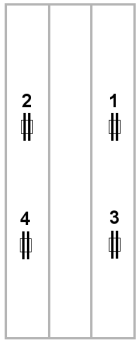
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	1			Catapult	1	
E4N-2				1	1	23
125 kts		80 kts		18830 ft		



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48

RAPID FIRE BATTERIES

RF1	4	25mm/60 Type 96			
Max Rg	7,440	14.9"	7	5	
Eff Rg	3,348	6.7"	11	8	

RF						
5	Port	2	2	1	1	0
	Stbd	2	2	1	1	0
AA	Port	8	7	4	3	1
M	Stbd	8	7	4	3	1

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW		
1		
None		

DEPTH CHARGES			
Rack	0		
Ammo	12		

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Natori

TIER	DP
1/70	136
2/80	271
3/75	407
4/85	542
5/80	678
6/90	800
7/85	922
8/95	1044
9/90	1166
10	1288
10	1370

DP	1356
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		3

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Natori

CL JAPAN 1944 to 1944

1657-2 NAGARA Class

Displacement	6,200 ts	*Length*	520 ft	Mitsubishi, Nagasaki	
Complement	450	*Beam*	48 ft	*Launched*	02/16/1922
Sunk 08/18/1944		*Draft*	16 ft	*Completed*	09/15/1922

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

5 x 14cm/50 Type 3 — 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1200

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

CPC — PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

2 x 12.7cm/40 Type 89 — 13

Max ROF	Range	Shell Size/Weight
12.0 sh/min	16,185 yds 32.4"	5.0" 51.7 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1G2	None		COM	HE

AA	2.7	Level	V	Ammunition	360 rpg	720

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	21	13	15	10	12	8	10	7
10 - 18	15	9	11	7	9	5	7	5
19 - 27	12	8	9	6	7	4	6	4
28 - 36	10	7	7	5	6	4	5	3
37 - 45	9	6	7	4	5	3	5	3

HE — PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.6	6.2	5.0	4.0	3.3	2.7	2.0	1.6						
Rge	S	S	M	M	L	L	E	E						
H	0.1	0.2	0.3	0.4	0.5	0.8	1.4	1.8						
V	3.9	2.8	2.1	1.7	1.3	1.2	1.1	1.3						

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	0			Catapult	0	

TORPEDOES

TT	8	Ammo	16

61cm Type 93 M1-2

Damage Class	A

Settings: 22,000/48 — 35,000/40 — 43,700/36

MINES: 48

RAPID FIRE BATTERIES

RF1	10	25mm/60 Type 96			
Max Rg	7,440	14.9"	9	7	
Eff Rg	3,348	6.7"	13	10	

RF						
5	Port	5	4	3	2	1
	Stbd	5	4	3	2	1
AA	Port	20	16	11	7	3
M	Stbd	20	16	11	7	3

RF2		None
Max Rg		
Eff Rg		

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None
Max Rg		
Eff Rg		

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain	

After March 1944 refit.

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Natori

TIER	DP
1/70	143
2/80	286
3/75	429
4/85	572
5/80	715
6/90	844
7/85	972
8/95	1101
9/90	1230
10	1359
10	1444

DP	1430
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
Increase	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		4

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
SECONDARY BATTERY																					
																				B2D	Directed fire as range permits
																				B2L	Local control as range permits
																				B2P	Split fire
																				B2C	Change target
																				B2B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Yura

CL JAPAN 1923 to 1933

1656-0 NAGARA Class

Displacement	5,570 ts	*Length*	520 ft	Sasebo Naval Yard	
Complement	450	*Beam*	48 ft	*Launched*	02/15/1922
Sunk 10/25/1944		*Draft*	16 ft	*Completed*	03/20/1923

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

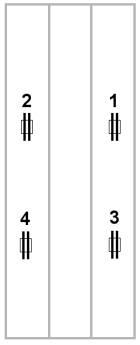
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	0			Catapult	0	



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48			

RAPID FIRE BATTERIES

RF1	2	8cm/40 Type 3			
Max Rg	11,800	23.6"	7	5	
Eff Rg	5,310	10.6"	11	8	

RF						
18	Port	1	1	1	0	0
	Stbd	1	1	1	0	0
AA	Port	2	2	1	1	0
H	Stbd	2	2	1	1	0

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

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Yura

TIER	DP
1/70	136
2/80	271
3/75	407
4/85	542
5/80	678
6/90	800
7/85	922
8/95	1044
9/90	1166
10	1288
10	1370

DP	1356
KTS	36

Engine Rm	2	36	21	0	0	0	0
Prop/Shaft	4	36	31	18	5	0	0
Boiler Rm	4	36	33	22	8	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-10 kt	11-18 kt	19-22 kt	23-25 kt	26-27 kt	28+ kt
	11.0	8.0	5.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		3

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity

Yura

CL JAPAN 1934 to 1944

1656-1 NAGARA Class

Displacement	5,570 ts	*Length*	520 ft	Sasebo Naval Yard	
Complement	450	*Beam*	48 ft	*Launched*	02/15/1922
Sunk 10/25/1944		*Draft*	16 ft	*Completed*	03/20/1923

SEEKRIEG 5

SHIP LOG SHEET

Version 2/18/2009

7 x 14cm/50 Type 3 15

Max ROF	Range	Shell Size/Weight
7.0 sh/min	19,395 yds 38.8"	5.5" 83.8 lbs.

Fire Control			FC Radar	+ 0	AP	SAP
1		1J2	None		COM	HE

AA	2.7	Level	S	Ammunition	240 rpg	1680

FIRE CONTROL TABLE

T Kts	Short		Medium		Long		Extreme	
0 - 9	19	12	14	9	11	7	9	6
10 - 18	13	8	10	6	8	5	7	4
19 - 27	11	7	8	5	6	4	5	3
28 - 36	9	6	7	4	5	3	5	3
37 - 45	8	5	6	4	5	3	4	3

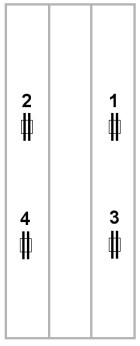
CPC / PENETRATION TABLE

Yds	2,000	4,000	6,000	8,000	10,000	12,000	15,000	18,000	21,000	24,000	27,000	30,000	33,000	36,000
ROF	7.8	6.7	5.7	4.8	4.1	3.4	2.7	2.2	1.9					
Rge	S	S	S	M	M	M	L	L	E					
H	0.1	0.2	0.3	0.4	0.5	0.6	1.0	1.6	1.9					
V	6.1	5.0	4.0	3.1	2.4	2.0	1.6	1.5	1.5					

Crew	Sea	BR	Targ Sz	Ops
			1	

AIRCRAFT

Aircraft	1			Catapult	1	
E4N-2				1	1	23
125 kts		80 kts		18830 ft		



TORPEDOES

TT	8	Ammo	16

61cm Type 8 M2

Damage Class	C

Settings

11,000/38

16,400/32

21,900/27

MINES

48

RAPID FIRE BATTERIES

RF1	4	25mm/60 Type 96			
Max Rg	7,440	14.9"	7	5	
Eff Rg	3,348	6.7"	11	8	

RF						
5	Port	2	2	1	1	0
	Stbd	2	2	1	1	0
AA	Port	8	7	4	3	1
M	Stbd	8	7	4	3	1

RF2		None			
Max Rg					
Eff Rg					

RF						
0	Port					
	Stbd					
AA	Port					
	Stbd					

RF3		None			
Max Rg					
Eff Rg					

RF						
	Port					
	Stbd					
AA	Port					
	Stbd					

Coal (ts)	350	Oil (ts)	1260
Engines	4 Gihon GT		
Boilers	12 Kampon		

Radius (nm/kts)	
9000	10
5000	14

Search Radar
None
None

ASW MORTARS/ATW			DEPTH CHARGES			
0			Rack	0		
None			Ammo	0		

Captain	

T#	BTTY	TARGET SHIP	SHELL	FCS	BR	H	RANGE	R	#RNDS	HITS

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Yura

TIER	DP
1/70	136
2/80	271
3/75	407
4/85	542
5/80	678
6/90	800
7/85	922
8/95	1044
9/90	1166
10	1288
10	1370

DP	1356
KTS	32

Engine Rm	2	32	18	0	0	0	0
Prop/Shaft	4	32	28	16	4	0	0
Boiler Rm	4	32	29	20	7	0	0
			0	0	0	0	0

Standard Turn	
60	
Emergency Turn	
90	

Target Sz	
1	
Searchlights	
Port	Stbd

Speed Increase	00-09 kt	10-16 kt	17-20 kt	21-23 kt	24-25 kt	26+ kt
	10.0	7.0	4.0	3.0	2.0	1.0

Crew

Bridge Command Rating	Flag Command Rating	Damage Control (DCR)
		3

Fuel Code	CS3C

ARMOR	0.82	Actual
1H DECK	1.0	1.3
2H TURRET	0.0	0.0
3H SUPERSTR	0.3	0.4
4V CON	0.0	0.0
5V BELT MID	2.1	2.5
6V BELT END	0.0	0.0
7V BARBETTE	0.0	0.0
8V TURRET	0.0	0.0
9V SUPERSTR	0.4	0.4

T#	DE #	SEVERITY	DESCRIPTION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	CODE	ORDER
																				AF	Obey signals from Flagship
																				AI	Independent Action
																				AX	Battle Stations!
																				AA	Abandon ship!
																				AZ	Strike colors
COURSE AND SPEED																					
																				CA	Midships steady
																				CP #	Alter course to PORT
																				CS #	Alter course to STARBOARD
																				SF	Ahead full
																				SR#	Revolutions for # knots
																				SA	Full astern
																				SS	All stop
ILLUMINATION AND EVASION																					
																				EX	Evasive action
																				KX	Lay smoke
																				IS ##	Illuminate using starshell
																				IL #	Illuminate using searchlight
TORPEDO AND AIRCRAFT																					
																				TR (X)	Prepare to launch torpedoes to (X)
																				TL (X)	Launch torpedoes to (X)
																				VL	Prepare to launch aircraft
																				VX	Launch aircraft
PRIMARY BATTERY																					
																				B1D	Directed fire as range permits
																				B1V	Coordinated fire
																				B1L	Local control as range permits
																				B1P	Split fire
																				B1C	Change target
																				B1B	Barrage fire as range permits
RF BATTERY																					
																				R5B	Barrage fire as range permits
																				R6B	Barrage fire as range permits
																				R7B	Barrage fire as range permits

LOSS OF SPEED DURING TURNS

KTS	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
STD	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	30.0
E/EA	NA	NA	NA	NA	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0

TURNING SEGMENTS

DEG OF TURN	SEGMENTS
TO 15	2 Segments*
16 TO 45	2 Segments
46 TO 90	3 Segments
91 TO 135	4 Segments
136 TO 180	5 Segments

SHIPBOARD FIRE TRACKING

T#	Fire	Current Severity					T#	Fire	Current Severity				

FIGHTING SHIPBOARD FIRES

NO DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-03	-20 from severity
04-12	-10 from severity
13-50	No change
51-85	+10 to severity
86-95	+30 to severity
96-00	+40 to severity

DAMAGE CONTROL	
ROLL	EFECT ON FIRE
01-05	Fire extinguished
06-15	-30 from severity
16-45	-20 from severity
46-75	-10 from severity
76-90	No change
91-00	+10 to severity