

SPECIMEN LOADING LIST FOR THE VARYING TEMPERATURE EXPERIMENT —
A. L. Qualls and R. G. Sitterson (Oak Ridge National Laboratory)

OBJECTIVE

The objective of this report is to present a detailed summary of the specimen loading for the DOE/MONBUSHO varying temperature irradiation experiment HFIR-RB-13J.

SUMMARY

The varying temperature experiment HFIR-RB-13J has been assembled and inserted in the reactor. Approximately 5300 specimens were cleaned, inspected, matched, and loaded into four specimen holders. A listing of each specimen loaded into the steady temperature holder, its position in the capsule, and the identification of the corresponding specimen loaded into the varying temperature holder is presented in this report.

PROGRESS AND STATUS

Introduction

The varying temperature experiment [1,2] was assembled during the last reporting period. Approximately 5300 specimens were cleaned, inspected, matched, and loaded into four specimen holders. The purpose of this experiment is to investigate the effects of neutron fluence on the microstructure and mechanical properties of candidate fusion reactor structural materials to the effects of receiving 10% of the fluence at reduced temperature.

The specimens were loaded into holders, which were then pumped under high vacuum, backfilled to a pressure of 1 atmosphere with clean, dry helium (water content < 1 ppm, oxygen content < 2 ppm) and sealed. The sealed holders were assembled into the experimental region of the capsule. This loading report documents specimen location within the capsule along with some details concerning final assembly. Specimen locations are denoted in terms of 1) holder (350°C or 500°C), 2) hole (B1, B2,...,T4, T5), 3) axial position within hole and, 4) location within axial position (where applicable). Locations within axial positions are listed differently for different specimen types. Tensile specimens are listed in order of their position in a stack of 13 to 17. TEMs are listed in order of their insertion into the tube. Bend bar specimens (Bend Bar #7) are listed according to their position within a stack of 10 specimens placed in the square channel of a sleeve (top row, side, or bottom). CVN specimens are also listed according to their location in a stack of 4 specimens placed in an identical sleeve (top, or bottom).

A listing of each specimen loaded into a steady temperature holder, its position (holder, hole, position in hole, position within position) in the capsule, and the number of the corresponding specimen loaded into a varying temperature holder is provided in Appendix A of this report. A "b" or "nm" in the match column indicates that the specimen does not have a match. Some expected specimens were missing and were not loaded, however the match may be loaded and is listed if so. Experimenters were notified individually about missing specimens.

Specimen Loading

Loading of the four holders is rather complicated. Matched specimens are located an equal distance above (steady temperature zones) and below (varying temperature zones) the reactor mid-plane in order to receive similar neutron fluences. Holders located opposite the reactor mid-plane see inverted flux gradients, therefore specimens loaded in the top of an upper holder must have their match located in the bottom of a lower holder to properly match fluences.

Generally, specimens of a single type supplied by the experimenter are located at or about the same elevation within a holder. For example, Dr. Kimura has tensile specimens in three of the four tensile holes of each holder. His specimens are irradiated at the top of the steady temperature holders (upper holders) and at the bottom of the varying temperature holders (lower holders) in order to put them into similar flux regions. Two of the tensile holes load from the top of the holder and two from the bottom. Therefore Dr. Kimura's tensiles are loaded as the last group of the stack into the holes open at the top of the upper holders, as the first group of the stack into the holes at the bottom of the upper holders, as the first group of the stack into the holes at the top of the lower holders, and as the last group of the stack into the holes at the bottom of the lower holders.

The holes are numbered from a Top Dead Center (TDC) mark on the top of the holders counting in the clockwise direction. T2 and T5 are tensile holes. The holes on the bottom of the holders are numbered from this same TDC mark as projected onto the bottom surface, counting in the clockwise direction from the projected mark as you look directly at the bottom surface. The projected mark passes through a tensile hole numbered B1.

The numbering of positions within specimen stacks is counted from the top of the holders. There are 5 tensile positions, 4 CVN positions, 8 bar positions, and 2 TEM positions. Again, as an example, Dr. Kimura's tensile specimens loaded at the top of the upper holders are in position 1, whether the hole was loaded from the bottom or top. The matching specimens are loaded into position 5 of the tensile holes in the lower holders.

When loading the specimens, the following steps were taken:

- (1) Specimens were formed into two matching groups.
- (2) The groups were formed into stacks and loaded into sleeves.
- (3) One end of each sleeve was marked with the desired holder and hole number such that the orientation of the sleeve could be verified as it was inserted.

As a sleeve was inserted, the hole number was checked against the sleeve number, and photographs were taken of the identifying marks.

Loading of the Tensile Specimens (T2,T5,B1,B4)

The tensile specimens were arranged into groups of approximately 15. The groups are held together using pure tungsten wire shaped in the form of a cotter pin with the bent end twisted 90 degree from the legs. The tensile specimens were stacked face to face and the pins were inserted through the end tab holes. The looped end of the wire constrains one end specimen and the two legs are bent to constrain the other end specimen. This was done to assist with loading and to hold specimens in the proper orientation for heat transfer.

Loading of the CVN specimens (B3, B5, T3)

The CVN specimens are arranged into groups of 4 and stacked into 4 axial positions within a sleeve. The sleeve is a cylindrical bar with a machined square channel along its axis and a cap that covers the specimens in the channel and completes the cylinder. The cap has end tabs which prevent specimens from sliding out the end of the channel.

Loading of the TEM specimens (T1, B4, B6)

The TEMs are loaded into tubes. Two of these tubes are inserted into three holes in each holder. The tubes are labeled as either "holder-hole-A" or "holder-hole-B", and are marked at the end

into which the specimens were inserted. In other words, the last specimen loaded is directly under the marked end of the tube. The first specimen loaded into a tube is numbered 1, and the successive specimens are numbered accordingly. In the top holes of the upper holders, tube B is inserted first and tube A is loaded on top of it. The marked end of the tube B is near the middle of the holder and the marked end of tube A is near the top of the holder. For the holes on the bottom of the upper holders, tube A was inserted in the inverted position (the mark could not be seen) and then B was inverted and inserted after A. Again, the marked end of the A tubes are at the top of the upper holders and the marked end of the B tubes are near the middle of the holders. Therefore, specimen 1 in tube A is near the center of the holder in all holes. Specimen 1 of tube B is always near the bottom of the steady temperature holders.

The tubes in the lower holders are loaded inverted with respect to those in the upper holders. For the top holes of the lower holder, tube A was inverted (marks could not be seen) and inserted and then tube B was inverted and inserted on top of A. The marked end of A was near the bottom of the lower holders and the marked end of B was near the middle of the lower holders. Specimen 1 of tube A is near the middle of the holder. Specimen 1 of tube B is near the top of the lower holders. For the bottom holes of the lower holders, B was inserted first (marked end near the middle) and A was placed on top of it (marked end near the bottom). Again, specimen 1 of tube A is near the middle of the holder. Specimen 1 of tube B is near the top of the lower holders. When looking into the holes before sealing them, the marks of the A tubes could be seen in the top holes of the upper holders and in the bottom holes of the lower holders.

The order in which TEMs were loaded in the tube are included in the final loading list. This is indicative of the numbered location of the specimen in the tube. It does not provide the actual location of the specimen, because of variations in the thickness of specimens. Tubes that are not completely filled by the specimens have Dispal spacers to fill the remainder of the tube. The lengths of the spacers are recorded, and an estimated location of each specimen will be provided along with an estimated fluence after irradiation has been completed and the dosimetry analyzed.

Loading of the Bar-7 specimens (B2)

The Bar-7 specimens are loaded into a sleeve and capped, similar to what was done for the CVN specimens. There are 10 specimens to a group and eight groups to a stack. There is only one stack per holder. A Dispal filler piece is inserted into the middle of the groups to complete the square. All of the specimens are located on the outside layer of the grouping, and at least one surface of each specimen is in contact with either the sleeve or the sleeve cap.

Thermometry and Dosimetry

The majority of the thermometry in the holders are included in three Thermocouple Array Tubes (TCATS) that extend the entire length of the four stacked holders. The TCATS are located at different angular locations at the same radial position within the holders. Each contain seven thermocouple junctions which are displaced over the length of the four holders so that each holder has 5 thermocouple junctions, equally spaced in the axial direction, within it.

Each holder contains a hole filled with dosimetry and dummy specimens. The dummy specimens are intended to provide a measured indication of the temperature difference from the centerline of specimens to the thermocouple junctions in the TCATS. Initially, two dummy specimen groups were to be measured in each holder, however, all of the intended measurements are not included in the final assembly.

A reduced sized tensile specimen sleeve was designed to fit into the smaller dummy specimen hole, however it could not be inserted unless the number of specimens in it was reduced to the point that the measurement was no longer valid. Instead of inserting tensile specimens, a solid cylinder of Dispal was fabricated and inserted in the two locations originally designated for the

dummy tensile specimens. The outer diameter of the sleeve is identical to that of the sleeves containing the CVN and BAR7 specimens and the TEM housing tubes. This measurement will provide an indication of the temperature difference from the holder to a specimen sleeve.

Several thermocouples installed into the upper holders were damaged by the insertion and pulling of the electric resistance heaters into position. Therefore, some of the dummy specimens inserted do not have working thermocouples installed and the data is simply lost. The loading of the dummy specimens is as follows:

Holder	Location
LTST	Dispal Blank in top dummy specimen location
HTST	Tungsten Bar 7 specimens in bottom specimen location
HTST	Stainless Steel TEM specimens in top specimen location
HTST	CVN specimens in bottom specimen location
HTVT	CVN specimens in bottom specimen location

The capsule contains neutron dosimetry near the top and bottom of the four holders. The dosimetry capsules were provided by L. R. Greenwood of PNNL and are numbered as follows:

- | | |
|----|-----------------------|
| 53 | Top of LTST holder |
| 56 | Bottom of LTST holder |
| 59 | Top of HTST holder |
| 61 | Bottom of HTST holder |
| 62 | Top of HTVT holder |
| 63 | Bottom of HTVT holder |
| 70 | Top of LTVT holder |
| 71 | Bottom of LTVT holder |

The dosimetry will be retrieved and analyzed after irradiation.

REFERENCES:

1. A. L. Qualls and T. Muroga, "Progress on the Design of a Varying Temperature Irradiation Experiment for Operation in HFIR," Fusion Materials Semiannual Progress Report for period ending December 31, 1996, p. 255.
2. A. L. Qualls, M. T. Hurst, D. L. Raby, D. W. Sparks, and T. Muroga, "Progress Report on the Varying Temperature Experiment," Fusion Materials Semiannual Progress Report for period ending June 30, 1997, p. 243.

Appendix A -

**Listing of the Specimens Loaded into the Varying
Temperature Experiment**

- 1. Low Temperature Steady Temperature and Low
Temperature Variable Temperature Holder**

- 2. High Temperature Steady Temperature and High
Temperature Variable Temperature Holder**

specimen	experimenter	type	irr. temp.	hole	position	position(2)	affiliation	match
k331	Kimura	tensile	350	b1	1	1	Japan	k231
k332	Kimura	tensile	350	b1	1	2	Japan	k232
k333	Kimura	tensile	350	b1	1	3	Japan	k233
k341	Kimura	tensile	350	b1	1	4	Japan	k241
k342	Kimura	tensile	350	b1	1	5	Japan	k242
k343	Kimura	tensile	350	b1	1	6	Japan	k243
k344	Kimura	tensile	350	b1	1	7	Japan	k244
k345	Kimura	tensile	350	b1	1	8	Japan	k245
k351	Kimura	tensile	350	b1	1	9	Japan	k251
k362	Kimura	tensile	350	b1	1	10	Japan	k262
k363	Kimura	tensile	350	b1	1	11	Japan	k263
k364	Kimura	tensile	350	b1	1	12	Japan	k264
k371	Kimura	tensile	350	b1	1	13	Japan	k271
k372	Kimura	tensile	350	b1	1	14	Japan	k272
k373	Kimura	tensile	350	b1	1	15	Japan	k273
vc01	US	tensile	350	b1	1	16	US	b
vc02	US	tensile	350	b1	1	17	US	b
ff1	Kohno	tensile	350	b1	2	1	Japan	ff1
ff2	Kohno	tensile	350	b1	2	2	Japan	ff2
ff3	Kohno	tensile	350	b1	2	3	Japan	ff3
ff4	Kohno	tensile	350	b1	2	4	Japan	ff4
ff5	Kohno	tensile	350	b1	2	5	Japan	ff5
ff6	Kohno	tensile	350	b1	2	6	Japan	ff6
ff7	Kohno	tensile	350	b1	2	7	Japan	ff7
ff8	Kohno	tensile	350	b1	2	8	Japan	ff8
fb1	Kohno	tensile	350	b1	2	9	Japan	fb1
fb2	Kohno	tensile	350	b1	2	10	Japan	fb2
fb3	Kohno	tensile	350	b1	2	11	Japan	fb3
fb4	Kohno	tensile	350	b1	2	12	Japan	fb4
fb5	Kohno	tensile	350	b1	2	13	Japan	fb5
ff11	Kohno	tensile	350	b1	2	14	Japan	ff11
ff12	Kohno	tensile	350	b1	2	15	Japan	ff12
ff13	Kohno	tensile	350	b1	2	16	Japan	ff13
ff17	Satou	tensile	350	b1	3	1	Japan	ff17
ff18	Satou	tensile	350	b1	3	2	Japan	ff18
ff19	Satou	tensile	350	b1	3	3	Japan	ff19
ff20	Satou	tensile	350	b1	3	4	Japan	ff20
ff21	Satou	tensile	350	b1	3	5	Japan	ff21
ff22	Satou	tensile	350	b1	3	6	Japan	ff22
ff23	Satou	tensile	350	b1	3	7	Japan	ff23
ff24	Satou	tensile	350	b1	3	8	Japan	ff24
ff25	Satou	tensile	350	b1	3	9	Japan	ff25
ff26	Satou	tensile	350	b1	3	10	Japan	ff26
ff27	Satou	tensile	350	b1	3	11	Japan	ff27
ff28	Satou	tensile	350	b1	3	12	Japan	ff28
ff29	Satou	tensile	350	b1	3	13	Japan	ff29
ff30	Satou	tensile	350	b1	3	14	Japan	ff30
ff31	Satou	tensile	350	b1	3	15	Japan	ff31
ff32	Satou	tensile	350	b1	3	16	US	b
va01	US	tensile	350	b1	3	17	US	b
ff33	Matsui	tensile	350	b1	4	1	Japan	ff33
ff34	Matsui	tensile	350	b1	4	2	Japan	ff34
ff35	Matsui	tensile	350	b1	4	3	Japan	ff35
ff36	Matsui	tensile	350	b1	4	4	Japan	ff36
ff37	Matsui	tensile	350	b1	4	5	Japan	ff37
ff38	Matsui	tensile	350	b1	4	6	Japan	ff38
ff39	Matsui	tensile	350	b1	4	7	Japan	ff39
ff40	Matsui	tensile	350	b1	4	8	Japan	ff40
ff41	Matsui	tensile	350	b1	4	9	Japan	ff41
ff42	Matsui	tensile	350	b1	4	10	Japan	ff42
ff43	Matsui	tensile	350	b1	4	11	Japan	ff43
ff44	Matsui	tensile	350	b1	4	12	Japan	ff44
ff45	Matsui	tensile	350	b1	4	13	Japan	ff45
ff46	Matsui	tensile	350	b1	4	14	Japan	ff46
ff47	Matsui	tensile	350	b1	4	15	Japan	ff47
ff48	Matsui	tensile	350	b1	4	16	Japan	ff48
fb01	Kueh	tensile	350	b1	5	1	US	fb05
fb02	Kueh	tensile	350	b1	5	2	US	fb06
fb03	Kueh	tensile	350	b1	5	3	US	fb07
fb04	Kueh	tensile	350	b1	5	4	US	fb08
xe01	Kueh	tensile	350	b1	5	5	US	xe05
xe02	Kueh	tensile	350	b1	5	6	US	xe06
xe03	Kueh	tensile	350	b1	5	7	US	xe07
xe04	Kueh	tensile	350	b1	5	8	US	xe08
fp01	Kueh	tensile	350	b1	5	9	US	fp05
fp02	Kueh	tensile	350	b1	5	10	US	fp06
fp03	Kueh	tensile	350	b1	5	11	US	fp07
fp04	Kueh	tensile	350	b1	5	12	US	fp08
fg01	Kueh	tensile	350	b1	5	13	US	fg05
fg02	Kueh	tensile	350	b1	5	14	US	fg06
fg03	Kueh	tensile	350	b1	5	15	US	fg07
fg04	Kueh	tensile	350	b1	5	16	US	fg08
gk01	Kurishita	bar7	350	b2	1	b	Japan	gk05
gk02	Kurishita	bar7	350	b2	1	b	Japan	gk07
gk03	Kurishita	bar7	350	b2	1	s	Japan	gk08
gk04	Kurishita	bar7	350	b2	1	s	Japan	gk09
gk05	Kurishita	bar7	350	b2	1	s	Japan	gk10
gk06	Kurishita	bar7	350	b2	1	s	Japan	gk11
gk07	Kurishita	bar7	350	b2	1	s	Japan	gk12
gk08	Kurishita	bar7	350	b2	1	s	Japan	gk13
gk09	Kurishita	bar7	350	b2	1	s	Japan	gk14
gk10	Kurishita	bar7	350	b2	1	s	Japan	gk15
gk11	Kurishita	bar7	350	b2	1	s	Japan	gk16
gk12	Kurishita	bar7	350	b2	1	s	Japan	gk17
gk13	Kurishita	bar7	350	b2	1	s	Japan	gk18
gk14	Kurishita	bar7	350	b2	1	s	Japan	gk19
gk15	Kurishita	bar7	350	b2	1	s	Japan	gk1a
hd09	Kohno	cvn	350	b3	1	b	Japan	hb7
hf1	Kohno	cvn	350	b3	1	b	Japan	hd8
Sc7	Kohno	cvn	350	b3	1	t	Japan	Sc5
Sc8	Kohno	cvn	350	b3	1	t	Japan	Sc8
hb2	Kohno	cvn	350	b3	2	b	Japan	hb3
hd1	Kohno	cvn	350	b3	2	b	Japan	hd4
hd2	Kohno	cvn	350	b3	2	t	Japan	hb5
hd3	Kohno	cvn	350	b3	2	t	Japan	hd6
hd4	Kohno	cvn	350	b3	2	t	Japan	hd7
hd5	Kohno	cvn	350	b3	2	t	Japan	hd8
hd6	Kohno	cvn	350	b3	2	t	Japan	hd9
hd7	Kohno	cvn	350	b3	2	t	Japan	hd10
hd8	Kohno	cvn	350	b3	2	t	Japan	hd11
hd9	Kohno	cvn	350	b3	2	t	Japan	hd12
hd10	Kohno	cvn	350	b3	2	t	Japan	hd13
hd11	Kohno	cvn	350	b3	2	t	Japan	hd14
hd12	Kohno	cvn	350	b3	2	t	Japan	hd15
hd13	Kohno	cvn	350	b3	2	t	Japan	hd16
hd14	Kohno	cvn	350	b3	2	t	Japan	hd17
hd15	Kohno	cvn	350	b3	2	t	Japan	hd18
hd16	Kohno	cvn	350	b3	2	t	Japan	hd19
hd17	Kohno	cvn	350	b3	2	t	Japan	hd20
hd18	Kohno	cvn	350	b3	2	t	Japan	hd21
hd19	Kohno	cvn	350	b3	2	t	Japan	hd22
hd20	Kohno	cvn	350	b3	2	t	Japan	hd23
hd21	Kohno	cvn	350	b3	2	t	Japan	hd24
hd22	Kohno	cvn	350	b3	2	t	Japan	hd25
hd23	Kohno	cvn	350	b3	2	t	Japan	hd26
hd24	Kohno	cvn	350	b3	2	t	Japan	hd27
hd25	Kohno	cvn	350	b3	2	s	Japan	hd28
hd26	Kurishita	bar7	350	b2	7	s	Japan	gk2a
hd27	Kurishita	bar7	350	b2	7	s	Japan	gk46
hd28	Kurishita	bar7	350	b2	7	s	Japan	gk47
hd29	Kurishita	bar7	350	b2	7	t	Japan	gk48
hd30	Kurishita	bar7	350	b2	7	t	Japan	gk49
hd31	Kurishita	bar7	350	b2	7	t	Japan	gk50
hd32	Kurishita	bar7	350	b2	8	s	Japan	gk16
hd33	Kurishita	bar7	350	b2	8	s	Japan	gk17
hd34	Kurishita	bar7	350	b2	8	t	Japan	gk18
hd35	Kurishita	bar7	350	b2	8	t	Japan	gk19
hd36	Kurishita	bar7	350	b2	8	t	Japan	gk1a
kd1	Kimura	tensile	350	b4	1	1	Japan	kd2
kd3	Kimura	tensile	350	b4	1	2	Japan	kd20
kd3	Kimura	tensile	350	b4	1	3	Japan	kd20
kd3	Kimura	tensile	350	b4	1	4	Japan	kd20
kd4	Kimura	tensile	350	b4	1	5	Japan	kd20
kd5	Kimura	tensile	350	b4	1	6	Japan	kd20
kd6	Kimura	tensile	350	b4	1	7	Japan	kd20
kd7	Kimura	tensile	350	b4	1	8	Japan	kd20
kd8	Kimura	tensile	350	b4	1	9	Japan	kd20
kd9	Kimura	tensile	350	b4	1	10	Japan	kd20
kd10	Kimura	tensile	350	b4	1	11	Japan	kd20
kd11	Kimura	tensile	350	b4	1	12	Japan	kd20
kd12	Kimura	tensile	350	b4	1	13	Japan	kd20

k321	Kimura	tensile	350	b4	1	14	Japan	k22
k322	Kimura	tensile	350	b4	1	15	Japan	k22
l114	Kohno	tensile	350	b4	2	1	Japan	l1d
l115	Kohno	tensile	350	b4	2	2	Japan	l1d
l211	Kohno	tensile	350	b4	2	3	Japan	l2d
l212	Kohno	tensile	350	b4	2	4	Japan	l2d
l213	Kohno	tensile	350	b4	2	5	Japan	l2d
l214	Kohno	tensile	350	b4	2	6	Japan	l2d
l215	Kohno	tensile	350	b4	2	7	Japan	l2d
lh11	Kohno	tensile	350	b4	2	8	Japan	lh
lh12	Kohno	tensile	350	b4	2	9	Japan	lh
lh13	Kohno	tensile	350	b4	2	10	Japan	lh
lh14	Kohno	tensile	350	b4	2	11	Japan	lh
lh15	Kohno	tensile	350	b4	2	12	Japan	lh
lh16	Kohno	tensile	350	b4	2	13	Japan	lh
lh17	Kohno	tensile	350	b4	2	14	Japan	lh
l718	Matsui	tensile	350	b4	2	15	Japan	l713
l717	Matsui	tensile	350	b4	2	16	Japan	l714
f8hs	Satou	tensile	350	b4	2	18	Japan	f715
f8ha	Satou	tensile	350	b4	3	1	Japan	f8h3
f8hb	Satou	tensile	350	b4	3	2	Japan	f8h4
f8hc	Satou	tensile	350	b4	3	3	Japan	f7h0
f8hd	Satou	tensile	350	b4	3	4	Japan	f7h1
f8he	Satou	tensile	350	b4	3	5	Japan	f7h2
f8hf	Satou	tensile	350	b4	3	6	Japan	f8h0
f8hg	Satou	tensile	350	b4	3	7	Japan	f8h1
f8hb	Satou	tensile	350	b4	3	8	Japan	f8h3
f8h3	Satou	tensile	350	b4	3	9	Japan	f8h0
f8h4	Satou	tensile	350	b4	3	10	Japan	f8h1
f8h5	Satou	tensile	350	b4	3	11	Japan	f8h2
f8h6	Satou	tensile	350	b4	3	12	Japan	f8h3
f8h7	Satou	tensile	350	b4	3	13	Japan	f2h1
f8h8	Satou	tensile	350	b4	3	14	Japan	f2h2
f8h9	Satou	tensile	350	b4	3	15	Japan	f8h1
f8h10	Satou	tensile	350	b4	4	2	Japan	f202
f8h11	Satou	tensile	350	b4	4	3	Japan	f203
f8h12	Satou	tensile	350	b4	4	4	Japan	f301
f8h13	Satou	tensile	350	b4	4	5	Japan	f302
f8h14	Satou	tensile	350	b4	4	6	Japan	f303
f8h15	Satou	tensile	350	b4	4	7	Japan	f401
f8h16	Satou	tensile	350	b4	4	8	Japan	f402
f8h17	Satou	tensile	350	b4	4	9	Japan	f403
f8h18	Satou	tensile	350	b4	4	10	Japan	f501
f8h19	Satou	tensile	350	b4	4	11	Japan	f502
f8h20	Satou	tensile	350	b4	4	12	Japan	f503
a703	ohnuki	tensile	350	b4	4	13	Japan	a701
a704	ohnuki	tensile	350	b4	4	14	Japan	a702
a713	ohnuki	tensile	350	b4	4	15	Japan	a711
a714	ohnuki	tensile	350	b4	4	16	Japan	a712
a723	ohnuki	tensile	350	b4	4	17	Japan	a721
zh01	Kueh	tensile	350	b4	5	1	US	zh05
zh02	Kueh	tensile	350	b4	5	2	US	zh06
zh03	Kueh	tensile	350	b4	5	3	US	zh07
zh04	Kueh	tensile	350	b4	5	4	US	zh08
x01	Kueh	tensile	350	b4	5	5	US	x05
x02	Kueh	tensile	350	b4	5	6	US	x106
x03	Kueh	tensile	350	b4	5	7	US	x107
x04	Kueh	tensile	350	b4	5	8	US	x108
ta01	Kueh	tensile	350	b4	5	9	US	ta05
ta02	Kueh	tensile	350	b4	5	10	US	ta06
ta03	Kueh	tensile	350	b4	5	11	US	ta07
ta04	Kueh	tensile	350	b4	5	12	US	ta08
ta24	Matsui	tensile	350	b4	5	14	Japan	ta21
ta25	Matsui	tensile	350	b4	5	15	Japan	ta22
ta26	Matsui	tensile	350	b4	5	16	Japan	ta23
lb7	Kohno	cvn	350	b5	1	b	Japan	lb7
l111	Kohno	cvn	350	b5	1	b	Japan	l1d
l112	Kohno	cvn	350	b5	1	t	Japan	l1d2
l113	Kohno	cvn	350	b5	1	t	Japan	l1d3
lb73	Kohno	cvn	350	b5	2	b	Japan	lb73
lb74	Kohno	cvn	350	b5	2	b	Japan	lb74
lb75	Kohno	cvn	350	b5	2	t	Japan	lb75
lb76	Kohno	cvn	350	b5	2	t	Japan	lb76
l133	Kimura	cvn	350	b5	3	b	Japan	l139
ltf1	Kohno	cvn	350	b5	3	b	Japan	ltf1
ltf2	Kohno	cvn	350	b5	3	t	Japan	ltf2
ltf3	Kohno	cvn	350	b5	3	t	Japan	ltf3
ks31	Kimura	cvn	350	b5	4	b	Japan	ks21
ks32	Kimura	cvn	350	b5	4	b	Japan	ks22
ks33	Kimura	cvn	350	b5	4	t	Japan	ks23
ks34	Kimura	cvn	350	b5	4	t	Japan	ks24
k3n1	Kimura	tem	350	b6	1	1	Japan	k2n1
k3n2	Kimura	tem	350	b6	1	2	Japan	k2n2
k3n3	Kimura	tem	350	b6	1	3	Japan	k2n3
k3n4	Kimura	tem	350	b6	1	4	Japan	k2n4
k3n5	Kimura	tem	350	b6	1	5	Japan	k2n5
k3n6	Kimura	tem	350	b6	1	6	Japan	k2n6
k3n7	Kimura	tem	350	b6	1	7	Japan	k2n7
k321	Kimura	tem	350	b6	1	8	Japan	k221
k322	Kimura	tem	350	b6	1	9	Japan	k222
k323	Kimura	tem	350	b6	1	10	Japan	k223
k324	Kimura	tem	350	b6	1	11	Japan	k224
k331	Kimura	tem	350	b6	1	12	Japan	k231
k332	Kimura	tem	350	b6	1	13	Japan	k232
k333	Kimura	tem	350	b6	1	14	Japan	k233

k334	Kimura	tem	350	b6	1	15	Japan	k234
k341	Kimura	tem	350	b6	1	16	Japan	k241
k342	Kimura	tem	350	b6	1	17	Japan	k242
k343	Kimura	tem	350	b6	1	18	Japan	k243
k344	Kimura	tem	350	b6	1	19	Japan	k244
k351	Kimura	tem	350	b6	1	20	Japan	k251
k352	Kimura	tem	350	b6	1	21	Japan	k252
k353	Kimura	tem	350	b6	1	22	Japan	k253
k354	Kimura	tem	350	b6	1	23	Japan	k254
k361	Kimura	tem	350	b6	1	25	Japan	k261
k362	Kimura	tem	350	b6	1	26	Japan	k262
k363	Kimura	tem	350	b6	1	27	Japan	k263
k364	Kimura	tem	350	b6	1	28	Japan	k264
k371	Kimura	tem	350	b6	1	29	Japan	k271
k372	Kimura	tem	350	b6	1	30	Japan	k272
k373	Kimura	tem	350	b6	1	31	Japan	k273
k374	Kimura	tem	350	b6	1	32	Japan	k274
k381	Kimura	tem	350	b6	1	33	Japan	k281
k382	Kimura	tem	350	b6	1	34	Japan	k282
k383	Kimura	tem	350	b6	1	35	Japan	k283
k384	Kimura	tem	350	b6	1	36	Japan	k284
k391	Kimura	tem	350	b6	1	37	Japan	k291
k392	Kimura	tem	350	b6	1	38	Japan	k292
k393	Kimura	tem	350	b6	1	39	Japan	k293
k394	Kimura	tem	350	b6	1	40	Japan	k294
kd31	Kimura	tem	350	b6	1	41	Japan	kd31
kd32	Kimura	tem	350	b6	1	42	Japan	kd32
kd33	Kimura	tem	350	b6	1	43	Japan	kd33
kd34	Kimura	tem	350	b6	1	44	Japan	kd34
kd35	Kimura	tem	350	b6	1	45	Japan	kd35
kd36	Kimura	tem	350	b6	1	46	Japan	kd36
kd37	Kimura	tem	350	b6	1	47	Japan	kd37
kd41	Kimura	tem	350	b6	1	48	Japan	kd41
kd42	Kimura	tem	350	b6	1	49	Japan	kd42
kd43	Kimura	tem	350	b6	1	50	Japan	kd43
kd44	Kimura	tem	350	b6	1	51	Japan	kd44
kd45	Kimura	tem	350	b6	1	52	Japan	kd45
kd51	Kimura	tem	350	b6	1	53	Japan	kd56
kd52	Kimura	tem	350	b6	1	54	Japan	kd27
kd53	Kimura	tem	350	b6	1	55	Japan	kd21
kd54	Kimura	tem	350	b6	1	56	Japan	kd22
kd55	Kimura	tem	350	b6	1	57	Japan	kd23
kd56	Kimura	tem	350	b6	1	58	Japan	kd24
kd57	Kimura	tem	350	b6	1	59	Japan	kd25
kd58	Kimura	tem	350	b6	1	60	Japan	kd26
kd59	Kimura	tem	350	b6	1	61	Japan	kd27
kd61	Kimura	tem	350	b6	1	62	Japan	kd21
kd62	Kimura	tem	350	b6	1	63	Japan	kd22
kd63	Kimura	tem	350	b6	1	64	Japan	kd23
kd64	Kimura	tem	350	b6	1	65	Japan	kd24
kd65	Kimura	tem	350	b6	1	66	Japan	kd25
kd66	Kimura	tem	350	b6	1	67	Japan	kd21
kd67	Kimura	tem	350	b6	1	68	Japan	kd22
kd68	Kimura	tem	350	b6	1	69	Japan	kd23
kd69	Kimura	tem	350	b6	1	70	Japan	kd24
kd70	Kimura	tem	350	b6	1	71	Japan	kd25
kd1m1	Kimura	tem	350	b6	1	72	Japan	kd21
kd1m2	Kimura	tem	350	b6	1	73	Japan	kd22
kd1m3	Kimura	tem	350	b6	1	74	Japan	kd23
kd1m4	Kimura	tem	350	b6	1	75	Japan	kd24
kd1m5	Kimura	tem	350	b6	1	76	Japan	kd25
kd1n1	Kimura	tem	350	b6	1	77	Japan	kd21
kd1n2	Kimura	tem	350	b6	1	78	Japan	kd22
kd1n3	Kimura	tem	350	b6	1	79	Japan	kd23
kd1n4	Kimura	tem	350	b6	1	80	Japan	kd24
kd1n5	Kimura	tem	350	b6	1	81	Japan	kd25
kd1r1	Kimura	tem	350	b6	1	82	Japan	kd21
kd1r2	Kimura	tem</						

g732	Shibayama	tem	350	b6	1	116	Japan	g832
g741	Shibayama	tem	350	b6	1	117	Japan	g841
g742	Shibayama	tem	350	b6	1	118	Japan	g842
g7d1	Shibayama	tem	350	b6	1	119	Japan	g8d1
g7d2	Shibayama	tem	350	b6	1	120	Japan	g8d2
gk06	Shibayama	tem	350	b6	1	121	Japan	gk01
gk07	Shibayama	tem	350	b6	1	122	Japan	gk02
gk08	Shibayama	tem	350	b6	1	123	Japan	gk03
ta06	Shibayama	tem	350	b6	1	124	Japan	ta01
ta07	Shibayama	tem	350	b6	1	125	Japan	ta02
tr06	Shibayama	tem	350	b6	1	126	Japan	tr01
tr07	Shibayama	tem	350	b6	1	127	Japan	tr02
tr08	Shibayama	tem	350	b6	1	128	Japan	tr03
av32	Kinoshita	tem	350	b6	1	129	Japan	av30
av33	Kinoshita	tem	350	b6	1	130	Japan	av31
av83	Kinoshita	tem	350	b6	1	131	Japan	av80
av86	Kinoshita	tem	350	b6	1	132	Japan	av81
av92	Kinoshita	tem	350	b6	1	133	Japan	av91
av93	Kinoshita	tem	350	b6	1	134	Japan	av92
al02	Kinoshita	tem	350	b6	1	135	Japan	al00
al03	Kinoshita	tem	350	b6	1	138	Japan	al01
ah82	Kinoshita	tem	350	b6	1	137	Japan	ah80
ah83	Kinoshita	tem	350	b6	1	138	Japan	ah81
aa00	Kinoshita	tem	350	b6	1	139	Japan	aa03
aa01	Kinoshita	tem	350	b6	1	140	Japan	aa05
aa02	Kinoshita	tem	350	b6	1	141	Japan	aa08
aa03	Kinoshita	tem	350	b6	1	142	Japan	aa09
an54	Kinoshita	tem	350	b6	1	144	Japan	an50
an55	Kinoshita	tem	350	b6	1	145	Japan	an51
an56	Kinoshita	tem	350	b6	1	146	Japan	an52
an57	Kinoshita	tem	350	b6	1	147	Japan	an53
ac14	Kinoshita	tem	350	b6	1	148	Japan	ac10
ac15	Kinoshita	tem	350	b6	1	149	Japan	ac11
ac16	Kinoshita	tem	350	b6	1	150	Japan	ac12
ac17	Kinoshita	tem	350	b6	1	151	Japan	ac13
am35	Kinoshita	tem	350	b6	1	152	Japan	am30
am36	Kinoshita	tem	350	b6	1	153	Japan	am31
am37	Kinoshita	tem	350	b6	1	154	Japan	am32
am38	Kinoshita	tem	350	b6	1	155	Japan	am34
fh0	Hasegawa	tem	350	b6	2	1	Japan	fg0
fh1	Hasegawa	tem	350	b6	2	2	Japan	fg02
fh3	Hasegawa	tem	350	b6	2	3	Japan	fg03
fh4	Hasegawa	tem	350	b6	2	4	Japan	fg04
fh5	Hasegawa	tem	350	b6	2	5	Japan	fg05
fh6	Hasegawa	tem	350	b6	2	6	Japan	fg06
fh7	Hasegawa	tem	350	b6	2	7	Japan	fg07
fh8	Hasegawa	tem	350	b6	2	8	Japan	fg08
fh9	Hasegawa	tem	350	b6	2	9	Japan	fg09
fh2	Hasegawa	tem	350	b6	2	10	Japan	fg11
fh3	Hasegawa	tem	350	b6	2	11	Japan	fh2
fh4	Hasegawa	tem	350	b6	2	12	Japan	fh3
fh5	Hasegawa	tem	350	b6	2	13	Japan	fh5
fh6	Hasegawa	tem	350	b6	2	14	Japan	fh6
fh7	Hasegawa	tem	350	b6	2	15	Japan	fh7
fh8	Hasegawa	tem	350	b6	2	16	Japan	fh8
fh9	Hasegawa	tem	350	b6	2	18	Japan	fh9
fh10	Hasegawa	tem	350	b6	2	19	Japan	fh11
fh11	Hasegawa	tem	350	b6	2	20	Japan	fh12
fh12	Hasegawa	tem	350	b6	2	21	Japan	fh3
fh13	Hasegawa	tem	350	b6	2	22	Japan	fh5
fh14	Hasegawa	tem	350	b6	2	23	Japan	fh6
fh15	Hasegawa	tem	350	b6	2	24	Japan	fh7
fh16	Hasegawa	tem	350	b6	2	25	Japan	fh8
fh17	Hasegawa	tem	350	b6	2	26	Japan	fh10
fh18	Hasegawa	tem	350	b6	2	27	Japan	fh12
fh19	Hasegawa	tem	350	b6	2	28	Japan	fh3
fh20	Hasegawa	tem	350	b6	2	29	Japan	fh4
fh21	Hasegawa	tem	350	b6	2	30	Japan	fh5
fh22	Hasegawa	tem	350	b6	2	31	Japan	fh6
fh23	Hasegawa	tem	350	b6	2	32	Japan	fh7
fh24	Hasegawa	tem	350	b6	2	33	Japan	fh10
fh25	Hasegawa	tem	350	b6	2	34	Japan	fh11
fh26	Hasegawa	tem	350	b6	2	35	Japan	fh12
fh27	Hasegawa	tem	350	b6	2	36	Japan	fh14
fh28	Hasegawa	tem	350	b6	2	37	Japan	fh15
fh29	Hasegawa	tem	350	b6	2	38	Japan	fh16
ye01	Watansabe	tem	350	T1	1	1	Japan	yg01
ye02	Watansabe	tem	350	T1	1	2	Japan	yg02
ye03	Watansabe	tem	350	T1	1	3	Japan	yg03
ye04	Watansabe	tem	350	T1	1	4	Japan	yg04
ye05	Watansabe	tem	350	T1	1	5	Japan	yg05
ye06	Watansabe	tem	350	T1	1	6	Japan	yg06
ye07	Watansabe	tem	350	T1	1	7	Japan	yg07
ye08	Watansabe	tem	350	T1	1	8	Japan	yg08
ye09	Watansabe	tem	350	T1	1	9	Japan	yg09
ye10	Watansabe	tem	350	T1	1	10	Japan	yg10
ye11	Watansabe	tem	350	T1	1	11	Japan	yg11
ye12	Watansabe	tem	350	T1	1	12	Japan	yg12
ye13	Watansabe	tem	350	T1	1	13	Japan	yg13
ye14	Watansabe	tem	350	T1	1	14	Japan	yg14
ye15	Watansabe	tem	350	T1	1	15	Japan	yg15
ye16	Watansabe	tem	350	T1	1	16	Japan	yg16
ye17	Watansabe	tem	350	T1	1	17	Japan	yg17
ye18	Watansabe	tem	350	T1	1	18	Japan	yg18
ye19	Watansabe	tem	350	T1	1	19	Japan	yg19
ye20	Watansabe	tem	350	T1	1	20	Japan	yg20
ye21	Watansabe	tem	350	T1	1	21	Japan	yg21
ye22	Watansabe	tem	350	T1	1	22	Japan	yg22
ye23	Watansabe	tem	350	T1	1	23	Japan	yg23

ye24	Watanabe	item	350	T1	1	24	Japan	yg24
ye25	Watanabe	item	350	T1	1	25	Japan	yg25
ye26	Watanabe	item	350	T1	1	26	Japan	yg26
ye27	Watanabe	item	350	T1	1	27	Japan	yg27
ye28	Watanabe	item	350	T1	1	28	Japan	yg28
ye29	Watanabe	item	350	T1	1	29	Japan	yg29
ye30	Watanabe	item	350	T1	1	30	Japan	yg30
ye31	Watanabe	item	350	T1	1	31	Japan	yg31
ye32	Watanabe	item	350	T1	1	32	Japan	yg32
ye33	Watanabe	item	350	T1	1	33	Japan	yg33
ye34	Watanabe	item	350	T1	1	34	Japan	yg34
ye35	Watanabe	item	350	T1	1	35	Japan	yg35
ye36	Watanabe	item	350	T1	1	36	Japan	yg36
ye37	Watanabe	item	350	T1	1	37	Japan	yg37
ye38	Watanabe	item	350	T1	1	38	Japan	yg38
ye39	Watanabe	item	350	T1	1	39	Japan	yg39
ye40	Watanabe	item	350	T1	1	40	Japan	yg40
ye41	Watanabe	item	350	T1	1	41	Japan	yg41
ye42	Watanabe	item	350	T1	1	42	Japan	yg42
ye43	Watanabe	item	350	T1	1	43	Japan	yg43
ye44	Watanabe	item	350	T1	1	44	Japan	yg44
ye45	Watanabe	item	350	T1	1	45	Japan	yg45
ye46	Watanabe	item	350	T1	1	46	Japan	yg46
ye47	Watanabe	item	350	T1	1	47	Japan	yg47
ye48	Watanabe	item	350	T1	1	48	Japan	yg48
ye49	Watanabe	item	350	T1	1	49	Japan	yg49
ye50	Watanabe	item	350	T1	1	50	Japan	yg50
ye51	Watanabe	item	350	T1	1	51	Japan	yg51
ye52	Watanabe	item	350	T1	1	52	Japan	yg52
ye53	Watanabe	item	350	T1	1	53	Japan	yg53
ye54	Watanabe	item	350	T1	1	54	Japan	yg54
ye55	Watanabe	item	350	T1	1	55	Japan	yg55
ye56	Watanabe	item	350	T1	1	56	Japan	yg56
ye57	Watanabe	item	350	T1	1	57	Japan	yg57
ye58	Watanabe	item	350	T1	1	58	Japan	yg58
ye59	Watanabe	item	350	T1	1	59	Japan	yg59
ye60	Watanabe	item	350	T1	1	60	Japan	yg60
ye61	Watanabe	item	350	T1	1	61	Japan	yg61
ye62	Watanabe	item	350	T1	1	62	Japan	yg62
ye63	Watanabe	item	350	T1	1	63	Japan	yg63
ye64	Watanabe	item	350	T1	1	64	Japan	yg64
ye65	Watanabe	item	350	T1	1	65	Japan	yg65
ye66	Watanabe	item	350	T1	1	66	Japan	yg66
ye67	Watanabe	item	350	T1	1	67	Japan	yg67
ye68	Watanabe	item	350	T1	1	68	Japan	yg68
ye69	Watanabe	item	350	T1	1	69	Japan	yg69
ye70	Watanabe	item	350	T1	1	70	Japan	yg70
ye71	Watanabe	item	350	T1	1	71	Japan	yg71
ye72	Watanabe	item	350	T1	1	72	Japan	yg72
ye73	Watanabe	item	350	T1	1	73	Japan	yg73
ye74	Watanabe	item	350	T1	1	74	Japan	yg74
ye75	Watanabe	item	350	T1	1	75	Japan	yg75
ye76	Watanabe	item	350	T1	1	76	Japan	yg76
ye77	Watanabe	item	350	T1	1	77	Japan	yg77
ye78	Watanabe	item	350	T1	1	78	Japan	yg78
ye79	Watanabe	item	350	T1	1	79	Japan	yg79
ye80	Watanabe	item	350	T1	1	80	Japan	yg80
ye81	Watanabe	item	350	T1	1	81	Japan	yg81
ye82	Watanabe	item	350	T1	1	82	Japan	yg82
ye83	Watanabe	item	350	T1	1	83	Japan	yg83
ye84	Watanabe	item	350	T1	1	84	Japan	yg84
ye85	Watanabe	item	350	T1	1	85	Japan	yg85
ye86	Watanabe	item	350	T1	1	86	Japan	yg86
ye87	Watanabe	item	350	T1	1	87	Japan	yg87
ye88	Watanabe	item	350	T1	1	88	Japan	yg88
ye89	Watanabe	item	350	T1	1	89	Japan	yg89
ye90	Watanabe	item	350	T1	1	90	Japan	yg90
ye91	Watanabe	item	350	T1	1	91	Japan	yg91
ye92	Watanabe	item	350	T1	1	92	Japan	yg92
ye93	Watanabe	item	350	T1	1	93	Japan	yg93
ye94	Watanabe	item	350	T1	1	94	Japan	yg94
ye95	Watanabe	item	350	T1	1	95	Japan	yg95
ye96	Watanabe	item	350	T1	1	96	Japan	yg96
ye97	Watanabe	item	350	T1	1	97	Japan	yg97
ye98	Watanabe	item	350	T1	1	98	Japan	yg98
ye99	Watanabe	item	350	T1	1	99	Japan	yg99
yi01	Watanabe	item	350	T1	1	100	Japan	yh01
yi02	Watanabe	item	350	T1	1	101	Japan	yh02
yi03	Watanabe	item	350	T1	1	102	Japan	yh03
yi04	Watanabe	item	350	T1	1	103	Japan	yh04
yi05	Watanabe	item	350	T1	1	104	Japan	yh05
yi06	Watanabe	item	350	T1	1	105	Japan	yh06
yi07	Watanabe	item	350	T1	1	106	Japan	yh07
yi08	Watanabe	item	350	T1	1	107	Japan	yh08
yi09	Watanabe	item	350	T1	1	108	Japan	yh09
yi10	Watanabe	item	350	T1	1	109	Japan	yh10
yi11	Watanabe	item	350	T1	1	110	Japan	yh11
yi12	Watanabe	item	350	T1	1	111	Japan	yh12
yi13	Watanabe	item	350	T1	1	112	Japan	yh13
yi14	Watanabe	item	350	T1	1	113	Japan	yh14
yi15	Watanabe	item	350	T1	1	114	Japan	yh15
yi16	Watanabe	item	350	T1	1	115	Japan	yh16
yi17	Watanabe	item	350	T1	1	116	Japan	yh17
yi18	Watanabe	item	350	T1	1	117	Japan	yh18
yi19	Watanabe	item	350	T1	1	118	Japan	yh19
yi20	Watanabe	item	350	T1	1	119	Japan	yh20
yi21	Watanabe	item	350	T1	1	120	Japan	yh21
yi22	Watanabe	item	350	T1	1	121	Japan	yh22
yi23	Watanabe	item	350	T1	1	122	Japan	yh23

yt24	Watanabe	item	350	T1	1	123	Japan	yh24
yt25	Watanabe	item	350	T1	1	124	Japan	yh25
yt26	Watanabe	item	350	T1	1	125	Japan	yh26
yt27	Watanabe	item	350	T1	1	126	Japan	yh27
yt28	Watanabe	item	350	T1	1	127	Japan	yh28
yt29	Watanabe	item	350	T1	1	128	Japan	yh29
yt30	Watanabe	item	350	T1	1	129	Japan	yh30
yt31	Watanabe	item	350	T1	1	130	Japan	yh31
yt32	Watanabe	item	350	T1	1	131	Japan	yh32
yt33	Watanabe	item	350	T1	1	132	Japan	yh33
yt34	Watanabe	item	350	T1	2	1	Japan	yh34
yt35	Watanabe	item	350	T1	2	2	Japan	yh35
yt36	Watanabe	item	350	T1	2	3	Japan	yh36
yt37	Watanabe	item	350	T1	2	4	Japan	yh37
yt38	Watanabe	item	350	T1	2	5	Japan	yh38
yt39	Watanabe	item	350	T1	2	6	Japan	yh39
yt40	Watanabe	item	350	T1	2	7	Japan	yh40
yt41	Watanabe	item	350	T1	2	8	Japan	yh41
yt42	Watanabe	item	350	T1	2	9	Japan	yh42
ftn1	Iseki	item	350	T1	2	10	Japan	ftn3
ftn2	Iseki	item	350	T1	2	11	Japan	ftn4
fc01	Iseki	item	350	T1	2	12	Japan	fc03
fc02	Iseki	item	350	T1	2	13	Japan	fc04
fc21	Iseki	item	350	T1	2	14	Japan	fc23
fc22	Iseki	item	350	T1	2	15	Japan	fc24
fc01	Iseki	item	350	T1	2	16	Japan	fc03
fc02	Iseki	item	350	T1	2	17	Japan	fc04
fc01	Iseki	item	350	T1	2	18	Japan	fc03
fc02	Iseki	item	350	T1	2	19	Japan	fc04
fn01	Iseki	item	350	T1	2	20	Japan	fn03
fn02	Iseki	item	350	T1	2	21	Japan	fn04
fm21	Iseki	item	350	T1	2	22	Japan	fm23
fm22	Iseki	item	350	T1	2	23	Japan	fm24
fmn1	Iseki	item	350	T1	2	24	Japan	fmn3
fmn2	Iseki	item	350	T1	2	25	Japan	fmn4
fim1	Iseki	item	350	T1	2	26	Japan	fim3
fim2	Iseki	item	350	T1	2	27	Japan	fim4
fi01	Kohno	item	350	T1	2	28	Japan	fi03
fi02	Kohno	item	350	T1	2	29	Japan	fi04
fi03	Kohno	item	350	T1	2	30	Japan	fi13
fi04	Kohno	item	350	T1	2	31	Japan	fi14
fi01	Kohno	item	350	T1	2	32	Japan	fi33
fi02	Kohno	item	350	T1	2	33	Japan	fi34
fmn1	Kohno	item	350	T1	2	34	Japan	fmn3
fmn2	Kohno	item	350	T1	2	35	Japan	fmn4
fmn1	Kohno	item	350	T1	2	36	Japan	fmn3
fmn2	Kohno	item	350	T1	2	37	Japan	fmn4
fd01	Kohno	item	350	T1	2	38	Japan	fd13
fd02	Kohno	item	350	T1	2	39	Japan	fd14
fd03	Kohno	item	350	T1	2	40	Japan	fd23
fd04	Kohno	item	350	T1	2	41	Japan	fd24
fd05	Kohno	item	350	T1	2	42	Japan	fd11
fd06	Kohno	item	350	T1	2	43	Japan	fd12
fd07	Kohno	item	350	T1	2	44	Japan	fd13
fd08	Kohno	item	350	T1	2	45	Japan	fd14
fd09	Kohno	item	350	T1	2	46	Japan	fd25
fd10	Kohno	item	350	T1	2	47	Japan	fd26
fd11	Kohno	item	350	T1	2	48	Japan	fd17
fd12	Kohno	item	350	T1	2	49	Japan	fd18
fd01	Kohno	item	350	T1	2	50	Japan	fd19
fd02	Kohno	item	350	T1	2	51	Japan	fd20
fd03	Kohno	item	350	T1	2	52	Japan	fd21
fd04	Kohno	item						

b2m7	Yoshie	item	350	T1	2	90	Japan	b2m9
b2m8	Yoshie	item	350	T1	2	91	Japan	b2m1a
b2s1	Yoshie	item	350	T1	2	92	Japan	b1s3
b2s2	Yoshie	item	350	T1	2	93	Japan	b1s4a
b2s3	Yoshie	item	350	T1	2	94	Japan	b0s4
b2s4	Yoshie	item	350	T1	2	95	Japan	b041
b15y	Yoshie	item	350	T1	2	96	Japan	b1s0
b15z	Yoshie	item	350	T1	2	97	Japan	b1s1
b8y	Yoshie	item	350	T1	2	98	Japan	b6m1
b8z	Yoshie	item	350	T1	2	99	Japan	b6m2
b65y	Yoshie	item	350	T1	2	100	Japan	b6s0
b65z	Yoshie	item	350	T1	2	101	Japan	b6s1
b2s5y	Yoshie	item	350	T1	2	102	Japan	b5s0
b2s5z	Yoshie	item	350	T1	2	103	Japan	b5s2
bze1	Yoshie	item	350	T1	2	104	Japan	bze3
bze2	Yoshie	item	350	T1	2	105	Japan	bze4
bze3	Yoshie	item	350	T1	2	106	Japan	bzf1
bzf2	Yoshie	item	350	T1	2	107	Japan	bzf2
bzf3	Yoshie	item	350	T1	2	108	Japan	bzf3
bzf6	Yoshie	item	350	T1	2	109	Japan	bzf0
b8y	Yoshie	item	350	T1	2	110	Japan	b5m0
b8z	Yoshie	item	350	T1	2	111	Japan	b5m1
b1ly	Yoshie	item	350	T1	2	112	Japan	b1m0
b1lz	Yoshie	item	350	T1	2	113	Japan	b1m1
b75y	Yoshie	item	350	T1	2	114	Japan	b760
b75z	Yoshie	item	350	T1	2	115	Japan	b761
b7ly	Yoshie	item	350	T1	2	116	Japan	b7m0
b7lz	Yoshie	item	350	T1	2	117	Japan	b7m1
b85y	Yoshie	item	350	T1	2	118	Japan	b8s0
b85z	Yoshie	item	350	T1	2	119	Japan	b8s1
b8y	Yoshie	item	350	T1	2	120	Japan	b8m0
b8z	Yoshie	item	350	T1	2	121	Japan	b8m1
b211	Yoshie	item	350	T1	2	122	Japan	b1z13
b212	Yoshie	item	350	T1	2	123	Japan	b1z14
b217	Yoshie	item	350	T1	2	124	Japan	b2z19
b218	Yoshie	item	350	T1	2	125	Japan	b2z21
b224	Yoshie	item	350	T1	2	126	Japan	b2z26
b225	Yoshie	item	350	T1	2	127	Japan	b2z27
b229	Yoshie	item	350	T1	2	128	Japan	b2z32
b231	Yoshie	item	350	T1	2	129	Japan	b2z33
b236	Yoshie	item	350	T1	2	130	Japan	b2z38
b237	Yoshie	item	350	T1	2	131	Japan	b2z39
b243	Yoshie	item	350	T1	2	132	Japan	b2z45
b244	Yoshie	item	350	T1	2	133	Japan	b2z46
b249	Yoshie	item	350	T1	2	134	Japan	b2z52
b251	Yoshie	item	350	T1	2	135	Japan	b2z53
b256	Yoshie	item	350	T1	2	136	Japan	b2z58
b257	Yoshie	item	350	T1	2	137	Japan	b2z59
b263	Yoshie	item	350	T1	2	138	Japan	b2z65
b264	Yoshie	item	350	T1	2	139	Japan	b2z66
b269	Yoshie	item	350	T1	2	140	Japan	b2z72
b271	Yoshie	item	350	T1	2	141	Japan	b2z73
b276	Yoshie	item	350	T1	2	142	Japan	b2z78
b277	Yoshie	item	350	T1	2	143	Japan	b2z79
b283	Yoshie	item	350	T1	2	144	Japan	b2z85
b284	Yoshie	item	350	T1	2	145	Japan	b2z86
b289	Yoshie	item	350	T1	2	146	Japan	b2z92
b291	Yoshie	item	350	T1	2	147	Japan	b2z93
xr48	Mukouda	item	350	T1	2	148	Japan	xr82
xr49	Mukouda	item	350	T1	2	149	Japan	xr63
xr4a	Mukouda	item	350	T1	2	150	Japan	xr64
xr4b	Mukouda	item	350	T1	2	151	Japan	xr65
xr4d	Mukouda	item	350	T1	2	152	Japan	xr66
xr4f	Mukouda	item	350	T1	2	153	Japan	xr67
xr4g	Mukouda	item	350	T1	2	154	Japan	xr68
xr4h	Mukouda	item	350	T1	2	155	Japan	xr69
xr4k	Mukouda	item	350	T1	2	156	Japan	xr6a
xr4l	Mukouda	item	350	T1	2	157	Japan	xr6b
xr4m	Mukouda	item	350	T1	2	158	Japan	xr6d
xr4r	Mukouda	item	350	T1	2	159	Japan	xr6f
xr4s	Mukouda	item	350	T1	2	160	Japan	xr6g
xr4t	Mukouda	item	350	T1	2	161	Japan	xr6h
xr4x	Mukouda	item	350	T1	2	162	Japan	xr6k
xr4y	Mukouda	item	350	T1	2	163	Japan	xr6l
xr51	Mukouda	item	350	T1	2	164	Japan	xr6m
xr52	Mukouda	item	350	T1	2	165	Japan	xr6r
xr53	Mukouda	item	350	T1	2	166	Japan	xr6s
xr54	Mukouda	item	350	T1	2	167	Japan	xr6t
xr5b	Mukouda	item	350	T1	2	168	Japan	xr56
xr3d	Mukouda	item	350	T1	2	169	Japan	xr56
xr3f	Mukouda	item	350	T1	2	170	Japan	xr57
xr3g	Mukouda	item	350	T1	2	171	Japan	xr58
xr3h	Mukouda	item	350	T1	2	172	Japan	xr59
xr3k	Mukouda	item	350	T1	2	173	Japan	xr5a
xr3l	Mukouda	item	350	T1	2	174	Japan	xr5b
xr3m	Mukouda	item	350	T1	2	175	Japan	xr5d
xr3r	Mukouda	item	350	T1	2	176	Japan	xr5e
xr3s	Mukouda	item	350	T1	2	178	Japan	xr5g
xr3t	Mukouda	item	350	T1	2	178	Japan	xr5h
xr3x	Mukouda	item	350	T1	2	179	Japan	xr5k
xr3y	Mukouda	item	350	T1	2	180	Japan	xr5l
xr41	Mukouda	item	350	T1	2	181	Japan	xr5m
xr42	Mukouda	item	350	T1	2	182	Japan	xr5r
xr43	Mukouda	item	350	T1	2	183	Japan	xr5s
xr44	Mukouda	item	350	T1	2	184	Japan	xr5t
xr45	Mukouda	item	350	T1	2	185	Japan	xr5x
xr46	Mukouda	item	350	T1	2	186	Japan	xr5y
xr47	Mukouda	item	350	T1	2	187	Japan	xr61
k321	Kimura	tensile	350	T2	1	1	Japan	k22
k322	Kimura	tensile	350	T2	1	2	Japan	k22
k323	Kimura	tensile	350	T2	1	3	Japan	k22
k324	Kimura	tensile	350	T2	1	4	Japan	k23
k322	Kimura	tensile	350	T2	1	5	Japan	k23
k701	Shibayama	tensile	350	T2	1	6	Japan	y801
k702	Shibayama	tensile	350	T2	1	7	Japan	y802
k703	Shibayama	tensile	350	T2	1	8	Japan	y803
k704	Shibayama	tensile	350	T2	1	9	Japan	y804
k711	Shibayama	tensile	350	T2	1	10	Japan	y811
k712	Shibayama	tensile	350	T2	1	11	Japan	y812
k713	Shibayama	tensile	350	T2	1	12	Japan	y813
k714	Shibayama	tensile	350	T2	1	13	Japan	y814
k721	Shibayama	tensile	350	T2	1	14	Japan	y821
k722	Shibayama	tensile	350	T2	1	15	Japan	y822
vb02	US	tensile	350	T2	1	16	US	nm
vb03	US	tensile	350	T2	1	17	US	nm
y51	Watanabe	tensile	350	T2	2	1	Japan	yh51
y52	Watanabe	tensile	350	T2	2	2	Japan	yh52
y53	Watanabe	tensile	350	T2	2	3	Japan	yh53
y54	Watanabe	tensile	350	T2	2	4	Japan	yh54
y55	Watanabe	tensile	350	T2	2	5	Japan	yh55
y56	Watanabe	tensile	350	T2	2	6	Japan	yh56
y57	Watanabe	tensile	350	T2	2	7	Japan	yh57
y58	Watanabe	tensile	350	T2	2	8	Japan	yh58
y59	Watanabe	tensile	350	T2	2	9	Japan	yh59
y60	Watanabe	tensile	350	T2	2	10	Japan	yh60
y61	Watanabe	tensile	350	T2	2	11	Japan	yh61
y62	Watanabe	tensile	350	T2	2	12	Japan	yh62
y63	Watanabe	tensile	350	T2	2	13	Japan	yh63
y64	Watanabe	tensile	350	T2	2	14	Japan	yh64
y65	Watanabe	tensile	350	T2	2	15	Japan	yh65
d001	Zinke	tensile	350	T2	3	1	US	d004
d002	Zinke	tensile	350	T2	3	15	US	d005
d003	Zinke	tensile	350	T2	3	16	US	d006
a724	ohnuki	tensile	350	T2	4	1	Japan	a722
a733	ohnuki	tensile	350	T2	4	2	Japan	a731
a734	ohnuki	tensile	350	T2	4	3	Japan	a732
a743	ohnuki	tensile	350	T2	4	4	Japan	a741
a744	ohnuki	tensile	350	T2	4	5	Japan	a742
a205	Ohnuki	tensile	350	T2	4	6	Japan	a201
a206	Ohnuki	tensile	350	T2	4	7	Japan	a202
a207	Ohnuki	tensile	350	T2	4	8	Japan	a203
a208	Ohnuki	tensile	350	T2	4	9	Japan	a204
a224	Ohnuki	tensile	350	T2	4	10	Japan	a221
a225	Ohnuki	tensile	350	T2	4	11	Japan	a222
a226	Ohnuki	tensile	350	T2	4	12	Japan	a223
a243	Ohnuki	tensile	350	T2	4	13	Japan	a240
a244	Ohnuki	tensile	350	T2	4	14	Japan	a241
a245	Ohnuki	tensile	350	T2	4	15	Japan	a242
n37	Zinke	tensile	350	T2	5	1	US	nm
n38	Zinke	tensile	350	T2	5	2	US	nm
n01	Zinke	tensile	350	T2	5	3	US	n39
n02	Zinke	tensile	350	T2	5	4	US	n40
d003	Zinke	tensile	350	T2	5	5	US	n07
v04	Zinke	tensile	350	T2	5	6	US	v08
v05	Zinke	tensile	350	T2	5	7	US	v09
v06	Zinke	tensile	350	T2	5	8	US	v10
d001	Zinke	tensile	350	T2	5	9	US	v11
d002	Zinke	tensile	350	T2	5	10	US	v12
d003	Zinke	tensile	350	T2	5	11	US	d009
d004	Zinke	tensile	350	T2	5	12	US	d010
d005	Zinke	tensile	350	T2	5	13	US	d011
d006	Zinke	tensile	350	T2	5	14	US	d012
i516	Matsui	tensile	350	T2	5	15	Japan	i513
i517	Matsui	tensile	350	T2	5	16	Japan	i514
i518	Matsui	tensile	350					

t4c3	Satou	tem	350	T4	1	1	Japan	t4c0
t4c4	Satou	tem	350	T4	1	2	Japan	t4c1
t4c5	Satou	tem	350	T4	1	3	Japan	t4c2
t4c6	Satou	tem	350	T4	1	4	Japan	t4c3
t4c7	Satou	tem	350	T4	1	5	Japan	t4c4
t4c8	Satou	tem	350	T4	1	6	Japan	t4c5
t4c9	Satou	tem	350	T4	1	7	Japan	t4c6
t4c10	Satou	tem	350	T4	1	8	Japan	t4c1
t4c11	Satou	tem	350	T4	1	9	Japan	t4c2
t5c4	Satou	tem	350	T4	1	10	Japan	t5c1
t5c5	Satou	tem	350	T4	1	11	Japan	t5c2
t5c6	Satou	tem	350	T4	1	12	Japan	t5c3
t5c7	Satou	tem	350	T4	1	13	Japan	t5c4
t5c8	Satou	tem	350	T4	1	14	Japan	t5c5
t5c9	Satou	tem	350	T4	1	15	Japan	t5c6
t5h3	Satou	tem	350	T4	1	16	Japan	t5h0
t5h5	Satou	tem	350	T4	1	17	Japan	t5h1
t5h6	Satou	tem	350	T4	1	18	Japan	t5h2
t5h7	Satou	tem	350	T4	1	19	Japan	t5h1
t5g5	Satou	tem	350	T4	1	20	Japan	t5g2
t5g6	Satou	tem	350	T4	1	21	Japan	t5g3
t5g7	Satou	tem	350	T4	1	22	Japan	t5g4
t5g8	Satou	tem	350	T4	1	23	Japan	t5g5
t5g9	Satou	tem	350	T4	1	24	Japan	t5g6
t5h2	Satou	tem	350	T4	1	25	Japan	t5h0
t5h3	Satou	tem	350	T4	1	26	Japan	t5h1
t7c4	Satou	tem	350	T4	1	27	Japan	t7c0
t7c5	Satou	tem	350	T4	1	28	Japan	t7c1
t7c6	Satou	tem	350	T4	1	29	Japan	t7c2
t7c7	Satou	tem	350	T4	1	30	Japan	t7c3
t7c8	Satou	tem	350	T4	1	31	Japan	t7c4
t7c9	Satou	tem	350	T4	1	32	Japan	t7c5
t7h4	Satou	tem	350	T4	1	33	Japan	t7h1
t7h5	Satou	tem	350	T4	1	34	Japan	t7h2
t7h6	Satou	tem	350	T4	1	35	Japan	t7h3
t8g3	Satou	tem	350	T4	1	36	Japan	t8g0
t8g4	Satou	tem	350	T4	1	37	Japan	t8g1
t8g5	Satou	tem	350	T4	1	38	Japan	t8g2
t8g6	Satou	tem	350	T4	1	39	Japan	t8g4
t8g7	Satou	tem	350	T4	1	40	Japan	t8g5
t8g8	Satou	tem	350	T4	1	41	Japan	t8g6
t8h4	Satou	tem	350	T4	1	42	Japan	t8h0
t8h5	Satou	tem	350	T4	1	43	Japan	t8h1
t8h6	Satou	tem	350	T4	1	44	Japan	t8h2
t9g2	Satou	tem	350	T4	1	45	Japan	t9g0
t9g3	Satou	tem	350	T4	1	46	Japan	t9g1
t9g4	Satou	tem	350	T4	1	47	Japan	t9g2
t9g5	Satou	tem	350	T4	1	48	Japan	t9g3
t9g6	Satou	tem	350	T4	1	49	Japan	t9g4
t9g7	Satou	tem	350	T4	1	50	Japan	t9g5
t304	Satou	tem	350	T4	1	51	Japan	t302
t305	Satou	tem	350	T4	1	52	Japan	t303
t404	Satou	tem	350	T4	1	53	Japan	t402
t405	Satou	tem	350	T4	1	54	Japan	t403
t504	Satou	tem	350	T4	1	55	Japan	t502
t505	Satou	tem	350	T4	1	56	Japan	t503
t5gk	Satou	tem	350	T4	1	57	Japan	t5g2
t5gl	Satou	tem	350	T4	1	58	Japan	t5g3
t5g3	Satou	tem	350	T4	1	59	Japan	t5g0
t5g4	Satou	tem	350	T4	1	60	Japan	t5g2
xh01	US	tem	350	T4	1	61	US	xh03
xh02	US	tem	350	T4	1	62	US	xh04
xt71	US	tem	350	T4	1	63	US	xt73
xt72	US	tem	350	T4	1	64	US	xt74
tx32	US	tem	350	T4	1	65	US	tx34
tx33	US	tem	350	T4	1	66	US	tx35
tx32	US	tem	350	T4	1	67	US	tx34
tx33	US	tem	350	T4	1	68	US	tx35
x8e1	US	tem	350	T4	1	69	US	x8e3
x8e2	US	tem	350	T4	1	70	US	x8e4
tp01	US	tem	350	T4	1	71	US	tp03
tp02	US	tem	350	T4	1	72	US	tp04
tp01	US	tem	350	T4	1	73	US	tp03
tp02	US	tem	350	T4	1	74	US	tp04
ay1	US	tem	350	T4	1	75	US	ay1
ay2	US	tem	350	T4	1	76	US	ay2
az1	US	tem	350	T4	1	77	US	cz1
az2	US	tem	350	T4	1	78	US	cz2
dp01	US	tem	350	T4	1	79	US	dp02
bn01	US	tem	350	T4	1	80	US	bn07
bn02	US	tem	350	T4	1	81	US	bn08
bn03	US	tem	350	T4	1	82	US	bn09
ntf1	US	tem	350	T4	1	83	US	ntf4
ntf2	US	tem	350	T4	1	84	US	ntf5
ntf3	US	tem	350	T4	1	85	US	ntf6
MgTiO ₃₋₁	US	tem	350	T4	1	86	US	MgTiO ₃₋₃
MgTiZn _{0.5} US	US	tem	350	T4	1	87	US	nm
tz06	Matsui	tem	350	T4	2	1	Japan	tz01
tz07	Matsui	tem	350	T4	2	2	Japan	tz02
tz08	Matsui	tem	350	T4	2	3	Japan	tz03
tz09	Matsui	tem	350	T4	2	4	Japan	tz04
tz10	Matsui	tem	350	T4	2	5	Japan	tz05
ty05	Matsui	tem	350	T4	2	6	Japan	ty01
ty07	Matsui	tem	350	T4	2	7	Japan	ty02
ty08	Matsui	tem	350	T4	2	8	Japan	ty03
ty09	Matsui	tem	350	T4	2	9	Japan	ty04
ty10	Matsui	tem	350	T4	2	10	Japan	ty05
tx06	Matsui	tem	350	T4	2	11	Japan	tx01
tx07	Matsui	tem	350	T4	2	12	Japan	tx02

tx08	Matsui	tem	350	T4	2	13	Japan	tx03
tx09	Matsui	tem	350	T4	2	14	Japan	tx04
tx10	Matsui	tem	350	T4	2	15	Japan	tx05
tx06	Matsui	tem	350	T4	2	16	Japan	tx01
tx07	Matsui	tem	350	T4	2	17	Japan	tx02
tx08	Matsui	tem	350	T4	2	18	Japan	tx03
tx09	Matsui	tem	350	T4	2	19	Japan	tx04
tx10	Matsui	tem	350	T4	2	20	Japan	tx03
tx08	Matsui	tem	350	T4	2	21	Japan	tx04
tx11	Matsui	tem	350	T4	2	22	Japan	tx03
tx10	Matsui	tem	350	T4	2	23	Japan	tx05
tx06	Matsui	tem	350	T4	2	24	Japan	tx01
tx07	Matsui	tem	350	T4	2	25	Japan	tx02
tx08	Matsui	tem	350	T4	2	26	Japan	tx04
tx07	Matsui	tem	350	T4	2	26	Japan	tx02
tx08	Matsui	tem	350	T4	2	27	Japan	tx03
tx10	Matsui	tem	350	T4	2	28	Japan	tx05
tx08	Matsui	tem	350	T4	2	29	Japan	tx04
tx10	Matsui	tem	350	T4	2	30	Japan	tx06
tx06	Matsui	tem	350	T4	2	31	Japan	tx01
tx06	Matsui	tem	350	T4	2	32	Japan	tx01
tx07	Matsui	tem	350	T4	2	33	Japan	tx02
tx07	Matsui	tem	350	T4	2	34	Japan	tx02
tx08	Matsui	tem	350	T4	2	35	Japan	tx03
tx09	Matsui	tem	350	T4	2	36	Japan	tx04
tx08	Matsui	tem	350	T4	2	37	Japan	tx03
tx10	Matsui	tem	350	T4	2	38	Japan	tx05
tm06	Matsui	tem	350	T4	2	39	Japan	tm01
tm09	Matsui	tem	350	T4	2	40	Japan	tm04
tm07	Matsui	tem	350	T4	2	41	Japan	tm02
tm08	Matsui	tem	350	T4	2	42	Japan	tm03
tm09	Matsui	tem	350	T4	2	43	Japan	tm05
tm09	Matsui	tem	350	T4	2	50	Japan	tm03
tm08	Matsui	tem	350	T4	2	51	Japan	tm04
tm10	Matsui	tem	350	T4	2	52	Japan	tm05
tm10	Matsui	tem	350	T4	2	53	Japan	tm05
tm08	Matsui	tem	350	T4	2	54	Japan	tm01
tm09	Matsui	tem	350	T4	2	55	Japan	tm04
tm07	Matsui	tem	350	T4	2	56	Japan	tm02
tm08	Matsui	tem	350	T4	2	57	Japan	tm03
tm10	Matsui	tem	350	T4	2	58	Japan	tm05
tm09	Matsui	tem	350	T4	2	59	Japan	tm04
tm10	Matsui	tem	350	T4	2	60	Japan	tm05
tm07	Matsui	tem	350	T4	2	61	Japan	tm01
tm08	Matsui	tem	350	T4	2	62	Japan	tm02
tm06	Matsui	tem	350	T4	2	63	Japan	tm03
tm06	Matsui	tem	350	T4	2	64	Japan	tm04
tm07	Matsui	tem	350	T4	2	65	Japan	tm05
tm08	Matsui	tem	350	T4	2	66	Japan	tm01
tm07	Matsui	tem	350	T4	2	67	Japan	tm02
tm09	Matsui	tem	350	T4	2	68	Japan	tm03
tm09	Matsui	tem	350	T4	2	69	Japan	tm04
tm10	Matsui	tem	350	T4	2	70	Japan	tm05
tm07	Matsui	tem	350	T4	2	71	Japan	tm01
tm08	Matsui	tem	350	T4	2	72	Japan	tm02
tm09	Matsui	tem	350	T4	2	73	Japan	tm03
tm10	Matsui	tem	350	T4	2	74	Japan	tm04
tm08	Matsui	tem	350	T4	2	75	Japan	tm05
tm09	Matsui	tem	350	T4	2	76	Japan	tm01
tm10	Matsui	tem	350	T4	2	77	Japan	tm02
tm08	Matsui	tem	350	T4	2	78	Japan	tm03
tg04	Matsui	tem	350	T4	2	79	Japan	tg04
tg10	Matsui	tem	350	T4	2	80	Japan	tg05
tg06	Matsui	tem	350	T4	2	81	Japan	tg01
tg07	Matsui	tem	350	T4	2	82	Japan	tg02

t607	Matsui	tensile	350	T4	2	112	Japan	t602
t608	Matsui	tensile	350	T4	2	113	Japan	t603
t609	Matsui	tensile	350	T4	2	114	Japan	t604
t610	Matsui	tensile	350	T4	2	115	Japan	t605
t705	Matsui	tensile	350	T4	2	116	Japan	t701
t707	Matsui	tensile	350	T4	2	117	Japan	t702
t708	Matsui	tensile	350	T4	2	118	Japan	t703
t709	Matsui	tensile	350	T4	2	119	Japan	t704
t710	Matsui	tensile	350	T4	2	120	Japan	t705
t806	Matsui	tensile	350	T4	2	121	Japan	t801
t807	Matsui	tensile	350	T4	2	122	Japan	t802
t808	Matsui	tensile	350	T4	2	123	Japan	t803
t809	Matsui	tensile	350	T4	2	124	Japan	t804
t810	Matsui	tensile	350	T4	2	125	Japan	t805
sj01	Robertson	tensile	350	T5	1	1	US	sj04
sj02	Robertson	tensile	350	T5	1	2	US	sj05
sj03	Robertson	tensile	350	T5	1	3	US	sj06
sj01	Robertson	tensile	350	T5	1	4	US	sj04
sj02	Robertson	tensile	350	T5	1	5	US	sj05
sj03	Robertson	tensile	350	T5	1	6	US	sj06
g723	Shibayama	tensile	350	T5	1	7	Japan	g823
g724	Shibayama	tensile	350	T5	1	8	Japan	g824
g731	Shibayama	tensile	350	T5	1	9	Japan	g831
g732	Shibayama	tensile	350	T5	1	10	Japan	g832
g733	Shibayama	tensile	350	T5	1	11	Japan	g833
g734	Shibayama	tensile	350	T5	1	12	Japan	g834
g741	Shibayama	tensile	350	T5	1	13	Japan	g841
g742	Shibayama	tensile	350	T5	1	14	Japan	g842
g743	Shibayama	tensile	350	T5	1	15	Japan	g843
g744	Shibayama	tensile	350	T5	1	16	Japan	g844
yf66	Watanebe	tensile	350	T5	2	1	Japan	yf66
yf67	Watanebe	tensile	350	T5	2	2	Japan	yf67
yf68	Watanebe	tensile	350	T5	2	3	Japan	yf68
yf69	Watanebe	tensile	350	T5	2	4	Japan	yf69
yf70	Watanebe	tensile	350	T5	2	5	Japan	yf70
yf71	Watanebe	tensile	350	T5	2	6	Japan	yf71
yf72	Watanebe	tensile	350	T5	2	7	Japan	yf72
yf73	Watanebe	tensile	350	T5	2	8	Japan	yf73
yf74	Watanebe	tensile	350	T5	2	9	Japan	yf74
yf75	Watanebe	tensile	350	T5	2	10	Japan	yf75
yf76	Watanebe	tensile	350	T5	2	11	Japan	yf76
yf77	Watanebe	tensile	350	T5	2	12	Japan	yf77
yf78	Watanebe	tensile	350	T5	2	13	Japan	yf78
yf79	Watanebe	tensile	350	T5	2	14	Japan	yf79
dm01	US	tensile	350	T5	2	15	US	dm04
dm02	US	tensile	350	T5	2	16	US	dm05
dm03	US	tensile	350	T5	2	17	US	dm06
g710	Shibayama	tensile	350	T5	3	1	Japan	g810
g711	Shibayama	tensile	350	T5	3	2	Japan	g811
g712	Shibayama	tensile	350	T5	3	3	Japan	g812
g713	Shibayama	tensile	350	T5	3	4	Japan	g813
g714	Shibayama	tensile	350	T5	3	5	Japan	g814
g715	Shibayama	tensile	350	T5	3	6	Japan	g815
g716	Shibayama	tensile	350	T5	3	7	Japan	g816
g717	Shibayama	tensile	350	T5	3	8	Japan	g817
g718	Shibayama	tensile	350	T5	3	9	Japan	g818
g719	Shibayama	tensile	350	T5	3	10	Japan	g819
gc01	US	tensile	350	T5	3	11	US	gc07
gc02	US	tensile	350	T5	3	12	US	gc08
gc03	US	tensile	350	T5	3	13	US	gc09
gc04	US	tensile	350	T5	3	14	US	gc10
gc05	US	tensile	350	T5	3	15	US	gc11
gc06	US	tensile	350	T5	3	16	US	gc12
gd01	Singh	tensile	350	T5	4	1	US	gd04
gd02	Singh	tensile	350	T5	4	2	US	gd05
gd03	Singh	tensile	350	T5	4	3	US	gd08
yc01	Singh	tensile	350	T5	4	4	US	yc04
yc02	Singh	tensile	350	T5	4	5	US	yc05
yc03	Singh	tensile	350	T5	4	6	US	yc08
aj01	Singh	tensile	350	T5	4	7	US	aj04
aj02	Singh	tensile	350	T5	4	8	US	aj05
aj03	Singh	tensile	350	T5	4	9	US	aj06
dt01	Singh	tensile	350	T5	4	10	US	dt04
dt02	Singh	tensile	350	T5	4	11	US	dt05
dt03	Singh	tensile	350	T5	4	12	US	dt06
dp01	Singh	tensile	350	T5	4	13	US	dp05
dp02	Singh	tensile	350	T5	4	14	US	dp06
dp03	Znkle	tensile	350	T5	4	15	US	dp07
dp04	Znkle	tensile	350	T5	4	16	US	dp07
rc01	Znkle	tensile	350	T5	5	1	US	rc07
rc02	Znkle	tensile	350	T5	5	2	US	rc08
rc03	Znkle	tensile	350	T5	5	3	US	rc09
rc04	Znkle	tensile	350	T5	5	4	US	rc10
rc05	Znkle	tensile	350	T5	5	5	US	rc11
rc06	Znkle	tensile	350	T5	5	6	US	rc12
fc01	Znkle	tensile	350	T5	5	7	US	fc08
fc02	Znkle	tensile	350	T5	5	8	US	fc09
fc03	Znkle	tensile	350	T5	5	9	US	fc09
fc04	Znkle	tensile	350	T5	5	10	US	fc10
fc05	Znkle	tensile	350	T5	5	11	US	fc11
fc06	Znkle	tensile	350	T5	5	12	US	fc12
t316	Matsui	tensile	350	T5	5	13	Japan	t313
t317	Matsui	tensile	350	T5	5	14	Japan	t314
t318	Matsui	tensile	350	T5	5	15	Japan	t315

High Temperature..... follows

f3ha	Satou	Iensis	500	b4	3	8	Japan	k3h6
f3hb	Satou	Iensis	500	b4	3	9	Japan	k3h7
f3hd	Satou	Iensis	500	b4	3	10	Japan	k3h9
f3hb	Satou	Iensis	500	b4	2	11	Japan	k3h1
f2h0	Satou	Iensis	500	b4	2	12	Japan	k2h5
f2h8	Satou	Iensis	500	b4	3	13	Japan	k2h6
f222	Matsu	Iensis	500	b4	3	16	Japan	k2h18
f223	Matsu	Iensis	500	b4	3	17	Japan	k2h20
f224	Matsu	Iensis	500	b4	3	18	Japan	k2h21
f224	Matsu	Iensis	500	b4	4	1	Japan	k2h21
f225	Matsu	Iensis	500	b4	4	2	Japan	k2h22
f226	Matsu	Iensis	500	b4	4	3	Japan	k2h23
f224	Matsu	Iensis	500	b4	4	4	Japan	k2h21
f225	Matsu	Iensis	500	b4	4	5	Japan	k2h22
f226	Matsu	Iensis	500	b4	4	6	Japan	k2h23
f310	Matsu	Iensis	500	b4	4	7	Japan	k3o7
f311	Matsu	Iensis	500	b4	4	8	Japan	k3o8
f312	Matsu	Iensis	500	b4	4	9	Japan	k3o9
f410	Matsu	Iensis	500	b4	4	10	Japan	k4o7
f411	Matsu	Iensis	500	b4	4	11	Japan	k4o8
f412	Matsu	Iensis	500	b4	4	12	Japan	k4o9
f610	Matsu	Iensis	500	b4	4	13	Japan	k6o7
f611	Matsu	Iensis	500	b4	4	14	Japan	k6o8
f612	Matsu	Iensis	500	b4	4	15	Japan	k6o9
kh09	Kueh	Iensis	500	b4	5	1	US	kh13
kh10	Kueh	Iensis	500	b4	5	2	US	kh14
kh11	Kueh	Iensis	500	b4	5	3	US	kh15
kh12	Kueh	Iensis	500	b4	5	4	US	kh16
kh10	Matsu	Iensis(s)	500	b4	5	5	Japan	k2c7
kh11	Matsu	Iensis(s)	500	b4	5	6	Japan	k2c8
kh12	Matsu	Iensis(s)	500	b4	5	7	Japan	k2c9
kh24	Matsu	Iensis(s)	500	b4	5	8	Japan	k2c1
kh25	Matsu	Iensis(s)	500	b4	5	9	Japan	k2c2
kh26	Matsu	Iensis(s)	500	b4	5	10	Japan	k2c3
kh24	Matsu	Iensis(s)	500	b4	5	11	Japan	k2c1
kh25	Matsu	Iensis(s)	500	b4	5	12	Japan	k2c2
kh26	Matsu	Iensis(s)	500	b4	5	13	Japan	k2c3
kh09	Kuen	Iensis	500	b4	5	14	US	kh13
kh10	Kuen	Iensis	500	b4	5	15	US	kh14
kh11	Kuen	Iensis	500	b4	5	16	US	kh15
kh12	Kuen	Iensis	500	b4	5	17	US	kh16
k57	Kohno	cvm	500	bs	1	B	Japan	k57
hk1	Kohno	cvm	500	bs	1	B	Japan	hk1
hk2	Kohno	cvm	500	bs	1	T	Japan	hk2
hk3	Kohno	cvm	500	bs	1	T	Japan	hk3
hk3	Kohno	cvm	500	bs	2	B	Japan	hk4d
hk4	Kohno	cvm	500	bs	2	B	Japan	hk4
hk5	Kohno	cvm	500	bs	2	T	Japan	hk5
hk6	Kohno	cvm	500	bs	2	T	Japan	hk6
hk5	Kohno	cvm	500	bs	3	B	Japan	hk3
hk6	Kohno	cvm	500	bs	3	B	Japan	hk4
hk7	Kohno	cvm	500	bs	3	T	Japan	hk2
hk3	Kohno	cvm	500	bs	3	T	Japan	hk3
ks51	Kimura	cvm	500	b5	4	B	Japan	ks41
ks52	Kimura	cvm	500	b5	4	B	Japan	ks42
ks53	Kimura	cvm	500	b5	4	T	Japan	ks43
ks54	Kimura	cvm	500	b5	4	T	Japan	ks44
ks55	Kimura	cvm	500	b6	1	B	Japan	ks45
ks56	Kimura	cvm	500	b6	1	T	Japan	ks46
ks57	Kimura	cvm	500	b6	1	T	Japan	ks47
ks58	Kimura	cvm	500	b6	1	T	Japan	ks48
ks51	Kimura	cvm	500	b6	1	99	Japan	ks41
ks52	Kimura	cvm	500	b6	1	100	Japan	ks42
ks53	Kimura	cvm	500	b6	1	101	Japan	ks43
ks54	Kimura	cvm	500	b6	1	102	Japan	ks44
ks55	Kimura	cvm	500	b6	1	95	Japan	ks45
ks56	Kimura	cvm	500	b6	1	96	Japan	ks46
ks57	Kimura	cvm	500	b6	1	97	Japan	ks47
ks58	Kimura	cvm	500	b6	1	98	Japan	ks48
as47	Onuki	cvm	500	b6	1	99	Japan	as41
as48	Onuki	cvm	500	b6	1	100	Japan	as42
as02	Onuki	cvm	500	b6	1	101	Japan	as43
as03	Onuki	cvm	500	b6	1	102	Japan	as44
as51	Onuki	cvm	500	b6	1	110	Japan	as46
as27	Onuki	cvm	500	b6	1	111	Japan	as25
as28	Onuki	cvm	500	b6	1	112	Japan	as26
as07	Onuki	cvm	500	b6	1	113	Japan	as35
as33	Onuki	cvm	500	b6	1	114	Japan	as36
as47	Onuki	cvm	500	b6	1	115	Japan	as45
as48	Onuki	cvm	500	b6	1	116	Japan	as46
as02	Onuki	cvm	500	b6	1	117	Japan	as405
as03	Onuki	cvm	500	b6	1	118	Japan	as06
as17	Onuki	cvm	500	b6	1	119	Japan	as15
as18	Onuki	cvm	500	b6	1	120	Japan	as16
as27	Onuki	cvm	500	b6	1	121	Japan	as25
as28	Onuki	cvm	500	b6	1	122	Japan	as26
as37	Onuki	cvm	500	b6	1	123	Japan	as35
as38	Onuki	cvm	500	b6	1	124	Japan	as36
as07	Onuki	cvm	500	b6	1	125	Japan	as05
as08	Onuki	cvm	500	b6	1	126	Japan	as06
as17	Onuki	cvm	500	b6	1	127	Japan	as15
as18	Onuki	cvm	500	b6	1	128	Japan	as16
as27	Onuki	cvm	500	b6	1	129	Japan	as25
as28	Onuki	cvm	500	b6	1	130	Japan	as26
as37	Onuki	cvm	500	b6	1	131	Japan	as35
as38	Onuki	cvm	500	b6	1	132	Japan	as36
as07	Onuki	cvm	500	b6	1	133	Japan	as45
as48	Onuki	cvm	500	b6	1	134	Japan	as46
as57	Onuki	cvm	500	b6	1	135	Japan	as55
as58	Onuki	cvm	500	b6	1	136	Japan	as56
as67	Onuki	cvm	500	b6	1	137	Japan	as65
as68	Onuki	cvm	500	b6	1	138	Japan	as66
as77	Onuki	cvm	500	b6	1	139	Japan	as75
as78	Onuki	cvm	500	b6	1	140	Japan	as76
as87	Onuki	cvm	500	b6	1	141	Japan	as85
as58	Onuki	cvm	500	b6	1	142	Japan	as66
as97	Onuki	cvm	500	b6	1	143	Japan	as95
as98	Onuki	cvm	500	b6	1	144	Japan	as96
as107	Onuki	cvm	500	b6	1	145	Japan	as105
as108	Onuki	cvm	500	b6	2	1	Japan	as106
ma	Hasegawa	cvm	500	b6	2	1	Japan	rka
mb	Hasegawa	cvm	500	b6	2	2	Japan	rkb
mc	Hasegawa	cvm	500	b6	2	3	Japan	rkd
md	Hasegawa	cvm	500	b6	2	4	Japan	rkg
mr	Hasegawa	cvm	500	b6	2	5	Japan	rkr
ms	Hasegawa	cvm	500	b6	2	6	Japan	rkj
mv	Hasegawa	cvm	500	b6	2	7	Japan	rly
mx	Hasegawa	cvm	500	b6	2	8	Japan	rjz
ma	Hasegawa	cvm	500	b6	2	9	Japan	rka
mb	Hasegawa	cvm	500	b6	2	10	Japan	rkb
rd	Hasegawa	cvm	500	b6	2	11	Japan	rkd
rfi	Hasegawa	cvm	500	b6	2	12	Japan	rld
rm	Hasegawa	cvm	500	b6	2	13	Japan	rkm
rn	Hasegawa	cvm	500	b6	2	14	Japan	rkr
rs	Hasegawa	cvm	500	b6	2	15	Japan	rks
rx	Hasegawa	cvm	500	b6	2	16	Japan	rkc
rb	Hasegawa	cvm	500	b6	2	17	Japan	rbb

b8d	Hasegawa	Item	500	b6	2	18	Japan	flat
b8d	Hasegawa	Item	500	b6	2	19	Japan	flat
b8b	Hasegawa	Item	500	b6	2	20	Japan	flat
b8m	Hasegawa	Item	500	b6	2	21	Japan	flat
b8r	Hasegawa	Item	500	b6	2	22	Japan	flat
b8s	Hasegawa	Item	500	b6	2	23	Japan	flat
b8t	Hasegawa	Item	500	b6	2	24	Japan	flat
b8a	Hasegawa	Item	500	b6	2	25	Japan	flat
b8b	Hasegawa	Item	500	b6	2	26	Japan	flat
b8d	Hasegawa	Item	500	b6	2	27	Japan	flat
b8f	Hasegawa	Item	500	b6	2	28	Japan	flat
b8h	Hasegawa	Item	500	b6	2	29	Japan	flat
b8k	Hasegawa	Item	500	b6	2	30	Japan	flat
b8l	Hasegawa	Item	500	b6	2	31	Japan	flat
b8m	Hasegawa	Item	500	b6	2	32	Japan	flat
b8z	Hasegawa	Item	500	b6	2	33	Japan	flat
b8b	Hasegawa	Item	500	b6	2	34	Japan	flat
b8f	Hasegawa	Item	500	b6	2	35	Japan	flat
b8g	Hasegawa	Item	500	b6	2	36	Japan	flat
b8h	Hasegawa	Item	500	b6	2	37	Japan	flat
b8k	Hasegawa	Item	500	b6	2	38	Japan	flat
b8l	Hasegawa	Item	500	b6	2	39	Japan	flat
b8m	Hasegawa	Item	500	b6	2	40	Japan	flat
b8v	Kinoshita	Item	500	b6	2	41	Japan	av34
b8w	Kinoshita	Item	500	b6	2	42	Japan	av35
b8x	Kinoshita	Item	500	b6	2	43	Japan	av36
b8y	Kinoshita	Item	500	b6	2	44	Japan	av36
b8z	Kinoshita	Item	500	b6	2	45	Japan	av36
b8v	Kinoshita	Item	500	b6	2	46	Japan	av36
b8y	Kinoshita	Item	500	b6	2	47	Japan	av36
b8w	Kinoshita	Item	500	b6	2	48	Japan	av36
b8x	Kinoshita	Item	500	b6	2	49	Japan	av36
b8z	Kinoshita	Item	500	b6	2	50	Japan	av36
b8o	Kinoshita	Item	500	b6	2	51	Japan	av36
b8n	Kinoshita	Item	500	b6	2	52	Japan	av36
b83	Kinoshita	Item	500	b6	2	53	Japan	av36
b84	Kinoshita	Item	500	b6	2	54	Japan	av36
b85	Kinoshita	Item	500	b6	2	55	Japan	av36
b86	Kinoshita	Item	500	b6	2	56	Japan	av36
b87	Kinoshita	Item	500	b6	2	57	Japan	av36
b88	Kinoshita	Item	500	b6	2	58	Japan	av36
b89	Kinoshita	Item	500	b6	2	59	Japan	av36
b8x	Kinoshita	Item	500	b6	2	60	Japan	av36
b8y	Kinoshita	Item	500	b6	2	61	Japan	av36
b8z	Kurishita	Item	500	b6	2	62	Japan	av36
b8a	Kurishita	Item	500	b6	2	63	Japan	av36
b8b	Kurishita	Item	500	b6	2	64	Japan	av36
b8c	Kurishita	Item	500	b6	2	65	Japan	av36
b8d	Kurishita	Item	500	b6	2	66	Japan	av36
b8e	Kurishita	Item	500	b6	2	67	Japan	av36
b8f	Kurishita	Item	500	b6	2	68	Japan	av36
b8g	Kurishita	Item	500	b6	2	69	Japan	av36
b8h	Kurishita	Item	500	b6	2	70	Japan	av36
b8i	Kurishita	Item	500	b6	2	71	Japan	av36
b8j	Kurishita	Item	500	b6	2	72	Japan	av36
b8k	Kurishita	Item	500	b6	2	73	Japan	av36
b8l	Kurishita	Item	500	b6	2	74	Japan	av36
b8m	Kurishita	Item	500	b6	2	75	Japan	av36
b8n	Kurishita	Item	500	b6	2	76	Japan	av36
b8o	Kurishita	Item	500	b6	2	77	Japan	av36
b8p	Kurishita	Item	500	b6	2	78	Japan	av36
b8q	Kurishita	Item	500	b6	2	79	Japan	av36
b8r	Kurishita	Item	500	b6	2	80	Japan	av36
b8s	Kurishita	Item	500	b6	2	81	Japan	av36
b8t	Kurishita	Item	500	b6	2	82	Japan	av36
b8u	Kurishita	Item	500	b6	2	83	Japan	av36
b8v	Kurishita	Item	500	b6	2	84	Japan	av36
b8w	Kurishita	Item	500	b6	2	85	Japan	av36
b8x	Kurishita	Item	500	b6	2	86	Japan	av36
b8y	Kurishita	Item	500	b6	2	87	Japan	av36
b8z	Kurishita	Item	500	b6	2	88	Japan	av36
b8a	Kurishita	Item	500	b6	2	89	Japan	av36
b8b	Kurishita	Item	500	b6	2	90	Japan	av36
b8c	Kurishita	Item	500	b6	2	91	Japan	av36
b8d	Kurishita	Item	500	b6	2	92	Japan	av36
b8e	Kurishita	Item	500	b6	2	93	Japan	av36
b8f	Kurishita	Item	500	b6	2	94	Japan	av36
b8g	Kurishita	Item	500	b6	2	95	Japan	av36
b8h	Kurishita	Item	500	b6	2	96	Japan	av36
b8i	Kurishita	Item	500	b6	2	97	Japan	av36
b8j	Kurishita	Item	500	b6	2	98	Japan	av36
b8k	Kurishita	Item	500	b6	2	99	Japan	av36
b8l	Kurishita	Item	500	b6	2	100	Japan	av36
b8m	Kurishita	Item	500	b6	2	101	Japan	av36
b8n	Kurishita	Item	500	b6	2	102	Japan	av36
b8o	Kurishita	Item	500	b6	2	103	Japan	av36
b8p	Kurishita	Item	500	b6	2	104	Japan	av36
b8q	Kurishita	Item	500	b6	2	105	Japan	av36
b8r	Kurishita	Item	500	b6	2	106	Japan	av36
b8s	Kurishita	Item	500	b6	2	107	Japan	av36
b8t	Kurishita	Item	500	b6	2	108	Japan	av36
b8u	Kurishita	Item	500	b6	2	109	Japan	av36
b8v	Kurishita	Item	500	b6	2	110	Japan	av36
b8w	Kurishita	Item	500	b6	2	111	Japan	av36
b8x	Kurishita	Item	500	b6	2	112	Japan	av36
b8y	Kurishita	Item	500	b6	2	113	Japan	av36
b8z	Kurishita	Item	500	b6	2	114	Japan	av36
b8a	Kurishita	Item	500	b6	2	115	Japan	av36
b8b	Kurishita	Item	500	b6	2	116	Japan	av36
b8c	Kurishita	Item	500	b6	2	117	Japan	av36
b8d	Kurishita	Item	500	b6	2	118	Japan	av36
b8e	Yoshie	Item	500	B6	2	119	Japan	b2mf
b8f	Yoshie	Item	500	B6	2	120	Japan	b2mq
b8g	Yoshie	Item	500	B6	2	121	Japan	b2mr
b8h	Yoshie	Item	500	B6	2	122	Japan	b2mv
b8i	Yoshie	Item	500	B6	2	123	Japan	b244
b8j	Yoshie	Item	500	B6	2	124	Japan	b445
b8k	Yoshie	Item	500	B6	2	125	Japan	b164
b8l	Yoshie	Item	500	B6	2	126	Japan	b165
b8m	Yoshie	Item	500	B6	2	127	Japan	bem6
b8n	Yoshie	Item	500	B6	2	128	Japan	bem7
b8o	Yoshie	Item	500	B6	2	129	Japan	b664

b663	Yoshie	Item	500	b6	2	130	Japan	b665
b563	Yoshie	Item	500	b6	2	131	Japan	b566
b565	Yoshie	Item	500	b6	2	132	Japan	b567
b567	Yoshie	Item	500	b6	2	133	Japan	b567
b568	Yoshie	Item	500	b6	2	134	Japan	b568
b569	Yoshie	Item	500	b6	2	135	Japan	b569
b570	Yoshie	Item	500	b6	2	136	Japan	b570
b571	Yoshie	Item	500	b6	2	137	Japan	b571
b572	Yoshie	Item	500	b6	2	138	Japan	b572
b5m2	Yoshie	Item	500	b6	2	139	Japan	b5m4
b5m3	Yoshie	Item	500	b6	2	140	Japan	b5m5
b5m2	Yoshie	Item	500	b6	2	141	Japan	b1m4
b1m3	Yoshie	Item	500	b6	2	142	Japan	b1m5
b762	Yoshie	Item	500	b6	2	143	Japan	b764
b763	Yoshie	Item	500	b6	2	144	Japan	b765
b7m2	Yoshie	Item	500	b6	2	145	Japan	b7m4
b7m3	Yoshie	Item	500	b6	2	146	Japan	b7m5
b862	Yoshie	Item	500	b6	2	147	Japan	b864
b863	Yoshie	Item	500	b6	2	148	Japan	b865
b8m2	Yoshie	Item	500	b6	2	149	Japan	b8m4
b8m3	Yoshie	Item	500	b6	2	150	Japan	b8m5
b215	Yoshie	Item	500	b6	2	151	Japan	b216
b216	Yoshie	Item	500	b6	2	152	Japan	b217
b222	Yoshie	Item	500	b6	2	153	Japan	b223
b223	Yoshie	Item	500	b6	2	154	Japan	b224
b228	Yoshie	Item	500	b6	2	155	Japan	b225
b244	Yoshie	Item	500	b6	2	157	Japan	b245
b241	Yoshie	Item	500	b6	2	158	Japan	b246
b242	Yoshie	Item	500	b6	2	160	Japan	b247
b247	Yoshie	Item	500	b6	2	161	Japan	b248
b248	Yoshie	Item	500	b6	2	162	Japan	b249
b254	Yoshie	Item	500	b6	2	163	Japan	b254
b255	Yoshie	Item	500	b6	2	164	Japan	b255
b261	Yoshie	Item	500	b6	2	165	Japan	b265
b262	Yoshie	Item	500	b6	2	166	Japan	b267
b267	Yoshie	Item	500	b6	2	167	Japan	b268
b268	Yoshie	Item	500	b6	2	168	Japan	b269
b274	Yoshie	Item	500	b6	2	169	Japan	b271
b275	Yoshie	Item	500	b6	2	170	Japan	b272
b281	Yoshie	Item	500	b6	2	171	Japan	b282
b282	Yoshie	Item	500	b6	2	172	Japan	b284
b287	Yoshie	Item	500	b6	2	173	Japan	b285
b288	Yoshie	Item	500	b6	2	174	Japan	b286
b289	Yoshie	Item	500	b6	2	175	Japan	b287
b285	Yoshie	Item	500	b6	2	176	Japan	b288
v01	Watanaabe	Item	500	T1	1	1	Japan	v01
v152	Watanaabe	Item	500	T1	1	2	Japan	v152
v102	Watanaabe	Item	500	T1	1	3	Japan	v102
v153	Watanaabe	Item	500	T1	1	4	Japan	v153
v103	Watanaabe	Item	500	T1	1	5	Japan	v103
v154	Watanaabe	Item	500					

V183	Watanebe	Item	500	T1	1	64	Japan	v183
V184	Watanebe	Item	500	T1	1	65	Japan	v184
V184	Watanebe	Item	500	T1	1	67	Japan	v184
V184	Watanebe	Item	500	T1	1	68	Japan	v184
V185	Watanebe	Item	500	T1	1	69	Japan	v185
V185	Watanebe	Item	500	T1	1	70	Japan	v185
V186	Watanebe	Item	500	T1	1	71	Japan	v186
V186	Watanebe	Item	500	T1	1	72	Japan	v186
V187	Watanebe	Item	500	T1	1	73	Japan	v187
V187	Watanebe	Item	500	T1	1	74	Japan	v187
V188	Watanebe	Item	500	T1	1	75	Japan	v188
V188	Watanebe	Item	500	T1	1	76	Japan	v188
V189	Watanebe	Item	500	T1	1	77	Japan	v189
V189	Watanebe	Item	500	T1	1	78	Japan	v189
V190	Watanebe	Item	500	T1	1	79	Japan	v190
V191	Watanebe	Item	500	T1	1	80	Japan	v191
V192	Watanebe	Item	500	T1	1	81	Japan	v192
V193	Watanebe	Item	500	T1	1	82	Japan	v193
V194	Watanebe	Item	500	T1	1	83	Japan	v194
V194	Watanebe	Item	500	T1	1	84	Japan	v194
V195	Watanebe	Item	500	T1	1	85	Japan	v195
V195	Watanebe	Item	500	T1	1	86	Japan	v195
V196	Watanebe	Item	500	T1	1	87	Japan	v196
V197	Watanebe	Item	500	T1	1	88	Japan	v197
V198	Watanebe	Item	500	T1	1	89	Japan	v198
V199	Watanebe	Item	500	T1	1	90	Japan	v199
V200	Watanebe	Item	500	T1	1	91	Japan	v200
V201	Watanebe	Item	500	T1	1	92	Japan	v201
V202	Watanebe	Item	500	T1	1	93	Japan	v202
V203	Watanebe	Item	500	T1	1	94	Japan	v203
V204	Watanebe	Item	500	T1	1	95	Japan	v204
V205	Watanebe	Item	500	T1	1	96	Japan	v205
V206	Watanebe	Item	500	T1	1	97	Japan	v206
V207	Watanebe	Item	500	T1	1	98	Japan	v207
V208	Watanebe	Item	500	T1	1	99	Japan	v208
V209	Watanebe	Item	500	T1	1	100	Japan	v209
vk01	Watanebe	Item	500	T1	1	101	Japan	vn01
vk02	Watanebe	Item	500	T1	1	102	Japan	vn02
vk03	Watanebe	Item	500	T1	1	103	Japan	vn03
vk04	Watanebe	Item	500	T1	1	104	Japan	vn04
vk05	Watanebe	Item	500	T1	1	105	Japan	vn05
vk06	Watanebe	Item	500	T1	1	106	Japan	vn06
vk07	Watanebe	Item	500	T1	1	107	Japan	vn07
vk08	Watanebe	Item	500	T1	1	108	Japan	vn08
vk09	Watanebe	Item	500	T1	1	109	Japan	vn09
vk10	Watanebe	Item	500	T1	1	110	Japan	vn10
vk11	Watanebe	Item	500	T1	1	111	Japan	vn11
vk12	Watanebe	Item	500	T1	1	112	Japan	vn12
vk13	Watanebe	Item	500	T1	1	113	Japan	vn13
vk14	Watanebe	Item	500	T1	1	114	Japan	vn14
vk15	Watanebe	Item	500	T1	1	115	Japan	vn15
vk16	Watanebe	Item	500	T1	1	116	Japan	vn16
vk17	Watanebe	Item	500	T1	1	117	Japan	vn17
vk18	Watanebe	Item	500	T1	1	118	Japan	vn18
vk19	Watanebe	Item	500	T1	1	119	Japan	vn19
vk20	Watanebe	Item	500	T1	1	120	Japan	vn20
vk21	Watanebe	Item	500	T1	1	121	Japan	vn21
vk22	Watanebe	Item	500	T1	1	122	Japan	vn22
vk23	Watanebe	Item	500	T1	1	123	Japan	vn23
vk24	Watanebe	Item	500	T1	1	124	Japan	vn24
vk25	Watanebe	Item	500	T1	1	125	Japan	vn25
vk34	Watanebe	Item	500	T1	1	127	Japan	vn34
vk26	Watanebe	Item	500	T1	1	129	Japan	vn26
vk35	Watanebe	Item	500	T1	1	131	Japan	vn35
vk27	Watanebe	Item	500	T1	1	133	Japan	vn27
vk36	Watanebe	Item	500	T1	1	134	Japan	vn36
vk30	Watanebe	Item	500	T1	2	1	Japan	vn30
vk39	Watanebe	Item	500	T1	2	2	Japan	vn39
vk31	Watanebe	Item	500	T1	2	3	Japan	vn31
vk40	Watanebe	Item	500	T1	2	4	Japan	vn40
vk32	Watanebe	Item	500	T1	2	5	Japan	vn32
vk41	Watanebe	Item	500	T1	2	6	Japan	vn41
vk33	Watanebe	Item	500	T1	2	7	Japan	vn33
vk42	Watanebe	Item	500	T1	2	8	Japan	vn42
fm5	Iseki	Item	500	T1	2	9	Japan	fm5
fm6	Iseki	Item	500	T1	2	10	Japan	fm6
fm5	Iseki	Item	500	T1	2	11	Japan	fm5
fm6	Iseki	Item	500	T1	2	12	Japan	fm6
fz25	Iseki	Item	500	T1	2	13	Japan	fz25
fz26	Iseki	Item	500	T1	2	14	Japan	fz26
fz26	Iseki	Item	500	T1	2	15	Japan	fz27
fz6	Iseki	Item	500	T1	2	16	Japan	fz6
fz6	Iseki	Item	500	T1	2	17	Japan	fz7
fz6	Iseki	Item	500	T1	2	18	Japan	fz8
fz6	Iseki	Item	500	T1	2	19	Japan	fz9
fz6	Iseki	Item	500	T1	2	20	Japan	fz8
fz6	Iseki	Item	500	T1	2	21	Japan	fz7
fz6	Iseki	Item	500	T1	2	22	Japan	fz8
fz5	Iseki	Item	500	T1	2	23	Japan	fz7
fz5	Iseki	Item	500	T1	2	24	Japan	fz8
fz5	Iseki	Item	500	T1	2	25	Japan	fz7
fz6	Iseki	Item	500	T1	2	26	Japan	fz8
fz6	Iseki	Item	500	T1	2	27	Japan	fz7
fz6	Iseki	Item	500	T1	2	28	Japan	fz8
fz6	Iseki	Item	500	T1	2	29	Japan	fz7
fz6	Iseki	Item	500	T1	2	30	Japan	fz8
fz6	Iseki	Item	500	T1	2	31	Japan	fz7
fz6	Iseki	Item	500	T1	2	32	Japan	fz8
fz6	Iseki	Item	500	T1	2	33	Japan	fz7
vn6	Iseki	Item	500	T1	2	34	Japan	vn8
vn5	Iseki	Item	500	T1	2	35	Japan	vn7
vn6	Iseki	Item	500	T1	2	36	Japan	vn8
vn5	Iseki	Item	500	T1	2	37	Japan	vn7
vn6	Iseki	Item	500	T1	2	38	Japan	vn8
vn5	Iseki	Item	500	T1	2	39	Japan	vn7
vn6	Iseki	Item	500	T1	2	40	Japan	vn8
ibf1	Kohno	Item	500	T1	2	41	Japan	ka1
ibf2	Kohno	Item	500	T1	2	42	Japan	ka2
ibf3	Kohno	Item	500	T1	2	43	Japan	ka3
ibf4	Kohno	Item	500	T1	2	44	Japan	ka4
ibf5	Kohno	Item	500	T1	2	45	Japan	ka5
ibf6	Kohno	Item	500	T1	2	46	Japan	ka6

ibf7	Kohno	Item	500	T1	2	47	Japan	ka7
ibf8	Kohno	Item	500	T1	2	48	Japan	ka8
ibf9	Kohno	Item	500	T1	2	49	Japan	ka9
ibf10	Kohno	Item	500	T1	2	50	Japan	ka10
ibf11	Kohno	Item	500	T1	2	51	Japan	ka11
ibf12	Kohno	Item	500	T1	2	52	Japan	ka12
ibf13	Kohno	Item	500	T1	2	53	Japan	ka13
ibf14	Kohno	Item	500	T1	2	54	Japan	ka14
ibf15	Kohno	Item	500	T1	2	55	Japan	ka15
ibf16	Kohno	Item	500	T1	2	56	Japan	ka16
ibf17	Kohno	Item	500	T1	2	57	Japan	ka17
ibf18	Kohno	Item	500	T1	2	58	Japan	ka18
ibf19	Kohno	Item	500	T1	2	59	Japan	ka19
ibf20	Kohno	Item	500	T1	2	60	Japan	ka20
ibf21	Kohno	Item	500	T1	2	61	Japan	ka21
ibf22	Kohno	Item	500	T1	2	62	Japan	ka22
ibf23	Kohno	Item	500	T1	2	63	Japan	ka23
ibf24	Kohno	Item	500	T1	2	64	Japan	ka24
ibf25	Kohno	Item	500	T1	2	65	Japan	ka25
ibf26	Kohno	Item	500	T1	2	66	Japan	ka26
ibf27	Kohno	Item	500	T1	2	67	Japan	ka27
ibf28	Kohno	Item	500	T1	2	68	Japan	ka28
ibf29	Kohno	Item	500	T1	2	69	Japan	ka29
ibf30	Kohno	Item	500	T1	2	70	Japan	ka30
ibf31	Kohno	Item	500	T1	2	71	Japan	ka31
ibf32	Kohno	Item	500	T1	2	72	Japan	ka32
ibf33	Kohno	Item	500	T1	2	73	Japan	ka33
ibf34	Kohno	Item	500	T1	2	74	Japan	ka34
ibf35	Kohno	Item	500	T1	2	75	Japan	ka35
ibf36	Kohno	Item	500	T1	2	76	Japan	ka36
ibf37	Kohno	Item	500	T1	2	77	Japan	ka37
ibf38	Kohno	Item	500	T1	2	78	Japan	ka38
ibf39	Kohno	Item	500	T1	2	79	Japan	ka39
ibf40	Kohno	Item	500	T1	2	80	Japan	ka40
ibf41	Kohno	Item	500	T1	2	81	Japan	ka41
ibf42	Kohno	Item	500	T1	2	82	Japan	ka42
ibf43	Kohno	Item	500	T1	2	83	Japan	ka43
ibf44	Kohno	Item	500	T1	2	84	Japan	ka44
ibf45	Kohno	Item	500	T1	2	85	Japan	ka45
ibf46	Kohno	Item	500	T1	2	86	Japan	ka46
ibf47	Kohno	Item	500	T1	2	87	Japan	ka47
ibf48	Kohno	Item	500	T1	2	88	Japan	ka48
ibf49	Mukuda	Item	500	T1	2	89	Japan	ka49
ibf50	Mukuda	Item	500	T1	2	90	Japan	ka50
ibf51	Mukuda	Item	500	T1	2	91	Japan	ka51
ibf52	Mukuda	Item	500	T1	2	92	Japan	ka52
ibf53	Mukuda	Item	500	T1	2	93	Japan	ka53
ibf54	Mukuda	Item	500	T1	2	94	Japan	ka54
ibf55	Mukuda	Item	500	T1	2	95	Japan	ka55
ibf56	Mukuda	Item	500	T1	2	96	Japan	ka56
ibf57	Mukuda	Item</td						

M9TO>2	US	Item	500	11	2	158	US	b
		Item	500	11	2	158	US	b
ka51	Kimura	tensoe	500	T2	1	1	Japan	ka451
ka52	Kimura	tensoe	500	T2	1	2	Japan	ka452
ka53	Kimura	tensoe	500	T2	1	4	Japan	ka453
ka54	Kimura	tensoe	500	T2	1	3	Japan	ka454
ka55	Shibayama	tensoe	500	T2	1	5	Japan	0001
ka56	Shibayama	tensoe	500	T2	1	6	Japan	0002
ka57	Shibayama	tensoe	500	T2	1	7	Japan	0003
ka58	Shibayama	tensoe	500	T2	1	8	Japan	0004
ka59	Shibayama	tensoe	500	T2	1	9	US	f019
ka60	US	tensoe	500	T2	1	10	US	f014
ka61	US	tensoe	500	T2	1	11	US	f015
ka62	US	tensoe	500	T2	1	12	US	f016
ka63	US	tensoe	500	T2	1	13	US	f013
ka64	US	tensoe	500	T2	1	14	US	f014
ka65	US	tensoe	500	T2	1	15	US	f015
ka66	US	tensoe	500	T2	1	16	US	f016
ka67	Watanebe	tensoe	500	T2	2	1	Japan	f002
ka68	Watanebe	tensoe	500	T2	2	2	Japan	f003
ka69	Watanebe	tensoe	500	T2	2	3	Japan	f010
ka70	Watanebe	tensoe	500	T2	2	4	Japan	f011
ka71	Watanebe	tensoe	500	T2	2	5	Japan	f012
ka72	Watanebe	tensoe	500	T2	2	6	Japan	f007
ka73	Watanebe	tensoe	500	T2	2	7	Japan	f058
ka74	Watanebe	tensoe	500	T2	2	7	Japan	f008
ka75	Watanebe	tensoe	500	T2	2	8	Japan	f059
ka76	Watanebe	tensoe	500	T2	2	8	Japan	f009
ka77	Watanebe	tensoe	500	T2	2	9	Japan	f059
ka78	Watanebe	tensoe	500	T2	2	10	Japan	f050
ka79	Watanebe	tensoe	500	T2	2	11	Japan	f061
ka80	Watanebe	tensoe	500	T2	2	12	Japan	f052
ka81	Watanebe	tensoe	500	T2	2	13	Japan	f053
ka82	Watanebe	tensoe	500	T2	2	14	Japan	f054
ka83	Watanebe	tensoe	500	T2	2	15	Japan	f055
ka84	Watanebe	tensoe	500	T2	2	16	Japan	f057
ka85	Satou	tensoe	500	T2	3	1	Japan	f7hd
ka86	Satou	tensoe	500	T2	3	2	Japan	f7hi
ka87	Satou	tensoe	500	T2	3	3	Japan	f7hq
ka88	Satou	tensoe	500	T2	3	4	Japan	f7hk
ka89	Satou	tensoe	500	T2	3	5	Japan	f7hk
ka90	Satou	tensoe	500	T2	3	6	Japan	f7hi
ka91	Satou	tensoe	500	T2	3	7	Japan	f7hd
ka92	Satou	tensoe	500	T2	3	8	Japan	f4hf
ka93	Satou	tensoe	500	T2	3	9	Japan	f4hg
ka94	Satou	tensoe	500	T2	3	10	Japan	f4hh
ka95	Satou	tensoe	500	T2	3	11	Japan	f4hk
ka96	Satou	tensoe	500	T2	3	12	Japan	f4hm
ka97	Satou	tensoe	500	T2	3	13	Japan	f4hr
ka98	Satou	tensoe	500	T2	3	14	Japan	f4hs
ka99	Satou	tensoe	500	T2	3	15	Japan	f4ht
ka100	Satou	tensoe	500	T2	3	16	Japan	f4hs
ka101	Satou	tensoe	500	T2	3	17	Japan	f4ht
ka102	Matou	tensoe	500	T2	4	1	Japan	f127
ka103	Matou	tensoe	500	T2	4	2	Japan	H28
ka104	Matou	tensoe	500	T2	4	3	Japan	H29
ka105	Matou	tensoe	500	T2	4	4	Japan	H21
ka106	Matou	tensoe	500	T2	4	5	Japan	H22
ka107	Matou	tensoe	500	T2	4	6	Japan	H23
ka108	Chinu	tensoe	500	T2	4	7	Japan	a738
ka109	Chinu	tensoe	500	T2	4	8	Japan	a735
ka110	Chinu	tensoe	500	T2	4	9	Japan	a745
ka111	Chinu	tensoe	500	T2	4	10	Japan	a746
ka112	Robertson	tensoe	500	T2	4	11	US	c110
ka113	Robertson	tensoe	500	T2	4	12	US	C11
ka114	Robertson	tensoe	500	T2	4	13	US	C112
ka115	Robertson	tensoe	500	T2	4	14	US	a110
ka116	Robertson	tensoe	500	T2	4	15	US	a111
ka117	Robertson	tensoe	500	T2	4	16	US	a112
ka118	Zinke	tensoe	500	T2	5	1	US	rc119
ka119	Zinke	tensoe	500	T2	5	2	US	rc20
ka120	Zinke	tensoe	500	T2	5	3	US	rc21
ka121	Zinke	tensoe	500	T2	5	4	US	rc22
ka122	Zinke	tensoe	500	T2	5	5	US	rc23
ka123	Zinke	tensoe	500	T2	5	6	US	rc24
ka124	Zinke	tensoe	500	T2	5	7	US	rc118
ka125	Zinke	tensoe	500	T2	5	8	US	rc20
ka126	Zinke	tensoe	500	T2	5	9	US	rc21
ka127	Zinke	tensoe	500	T2	5	10	US	rc21
ka128	Zinke	tensoe	500	T2	5	11	US	rc22
ka129	Zinke	tensoe	500	T2	5	12	US	rc23
ka130	Zinke	tensoe	500	T2	5	13	US	rc24
ka131	US	tensoe	500	T2	5	14	US	dp11
ka132	US	tensoe	500	T2	5	15	US	dp12
ka133	US	tensoe	500	T2	5	16	US	dp13
ka134	Zinke	tensoe	500	T2	5	17	US	rv43
ka135	Zinke	tensoe	500	T2	5	18	US	rv44
ka136	Kohno	cvn	500	T3	1	b	Japan	Iia4
ka137	Kohno	cvn	500	T3	1	b	Japan	Iia5
ka138	Kohno	cvn	500	T3	1	1	Japan	Iia6
ka139	Kohno	cvn	500	T3	1	2	Japan	Iia7
ka140	Kohno	cvn	500	T3	2	b	Japan	ya5
ka141	Kohno	cvn	500	T3	2	b	Japan	ya9
ka142	Kohno	cvn	500	T3	2	b	Japan	ya2
ka143	Kohno	cvn	500	T3	3	b	Japan	ya4
ka144	Kohno	cvn	500	T3	3	b	Japan	ya5
ka145	Kohno	cvn	500	T3	3	b	Japan	ya6
ka146	Kohno	cvn	500	T3	3	1	Japan	Iia4
ka147	Kohno	cvn	500	T3	3	1	Japan	Iia5
ka148	Kohno	cvn	500	T3	3	1	Japan	Iia6
ka149	Kohno	cvn	500	T3	1	1	Japan	Iia7
ka150	Kohno	cvn	500	T3	1	2	Japan	Iia8
ka151	Kohno	cvn	500	T3	1	3	Japan	Iia9
ka152	Kohno	cvn	500	T3	1	4	Japan	Ia35
ka153	Kohno	cvn	500	T3	1	5	Japan	Ia36
ka154	Kohno	cvn	500	T3	1	6	Japan	Ia37
ka155	Kohno	cvn	500	T3	1	7	Japan	Ia38
ka156	Kohno	cvn	500	T3	1	8	Japan	Ia39
ka157	Kohno	cvn	500	T3	1	9	Japan	Ia39
ka158	Kohno	cvn	500	T3	1	10	Japan	Ia40
ka159	Kohno	cvn	500	T3	1	11	Japan	Ia41
ka160	Kohno	cvn	500	T3	1	12	Japan	Ia42
ka161	Kohno	cvn	500	T3	1	13	Japan	Ia43
ka162	Kohno	cvn	500	T3	1	14	Japan	Ia44
ka163	Kohno	cvn	500	T3	1	15	Japan	Ia45
ka164	Kohno	cvn	500	T3	1	16	Japan	Ia46
ka165	Kohno	cvn	500	T3	1	17	Japan	Ia47
ka166	Kohno	cvn	500	T3	1	18	Japan	Ia48
ka167	Kohno	cvn	500	T3	1	19	Japan	Ia49
ka168	Kohno	cvn	500	T3	1	20	Japan	Ia49
ka169	Kohno	cvn	500	T3	1	21	Japan	Ia50
ka170	Kohno	cvn	500	T3	1	22	Japan	Ia51
ka171	Kohno	cvn	500	T3	1	23	Japan	Ia52
ka172	Kohno	cvn	500	T3	1	24	Japan	Ia53
ka173	Kohno	cvn	500	T3	1	25	Japan	Ia54
ka174	Kohno	cvn	500	T3	1	26	Japan	Ia55
ka175	Kohno	cvn	500	T3	1	27	Japan	Ia54
ka176	Kohno	cvn	500	T3	1	28	Japan	Ia56
ka177	Kohno	cvn	500	T3	1	29	Japan	Ia57
ka178	Kohno	cvn	500	T3	1	30	Japan	Ia58
ka179	Kohno	cvn	500	T3	1	31	Japan	Ia59
ka180	Kohno	cvn	500	T3	1	32	Japan	Ia59
ka181	Kohno	cvn	500	T3	1	33	Japan	Ia60
ka182	Kohno	cvn	500	T3	1	34	Japan	Ia60
ka183	Kohno	cvn	500	T3	1	35	Japan	Ia60
ka184	Kohno	cvn	500	T3	1	36	Japan	Ia58
ka185	Kohno	cvn	500	T3	1	37	Japan	Ia58
ka186	Kohno	cvn	500	T3	1	38	Japan	Ia58
ka187	Kohno	cvn	500	T3	1	39	Japan	Ia58
ka188	Kohno	cvn	500	T3	1	40	Japan	Ia59
ka189	Kohno	cvn	500	T3	1	41	Japan	Ia60
ka190	Kohno	cvn	500	T3	1	42	Japan	Ia60
ka191	Kohno	cvn	500	T3	1	43	Japan	Ia60
ka192	Kohno	cvn	500	T3	1	44	Japan	Ia60
ka193	Kohno	cvn	500	T3	1	45	Japan	Ia60
ka194	Kohno	cvn	500	T3	1	46	Japan	Ia60
ka195	Kohno	cvn	500	T3	1	47	Japan	Ia60
ka196	Kohno	cvn	500	T3	1	48	Japan	Ia64
ka197	Kohno	cvn	500	T3	1	49	Japan	Ia65
ka198	Kohno	cvn	500	T3	1	50	Japan	Ia66
ka199	Kohno	cvn	500	T3	1	51	Japan	Ia68
ka200	Kohno	cvn	500	T3	1	52	Japan	Ia69
ka201	Kohno	cvn	500	T3	1	53	Japan	Ia70
ka202	Kohno	cvn	500	T3	1	54	Japan	Ia71
ka203	Kohno	cvn	500	T3	1	55	Japan	Ia70
ka204	Kohno	cvn	500	T3	1	56	Japan	Ia71
ka205	Kohno	cvn	500	T3	1	57	Japan	Ia72
ka206	Kohno	cvn	500	T3	1	58	Japan	Ia73
ka207	Kohno	cvn	500	T3	1	59	Japan	Ia74
ka208	Kohno	cvn	500	T3	1	60	Japan	Ia74
ka209	Kohno	cvn	500	T3	1	61	Japan	Ia74
ka210	Kohno	cvn	500	T3	1	62	Japan	Ia75
ka211	Kohno	cvn	500	T3	1	63	Japan	Ia76
ka212	Kohno	cvn	500	T3	1	64		

ta37	Stoller	Item	500	T4	1	118	US	ta39
tb36	Stoller	Item	500	T4	1	119	US	tb39
tb37	Stoller	Item	500	T4	1	120	US	tb38
ze88	Zincke	Item	500	T4	1	121	US	ze87
ze89	Zincke	Item	500	T4	1	122	US	ze88
ip05	Zincke	Item	500	T4	1	123	US	ip07
ip06	Zincke	Item	500	T4	1	124	US	ip08
ip05	Zincke	Item	500	T4	1	125	US	ip07
ip06	Zincke	Item	500	T4	1	126	US	ip08
by1	Zincke	Item	500	T4	1	127	US	by2
by2	Zincke	Item	500	T4	1	128	US	by1
bz1	Zincke	Item	500	T4	1	129	US	dz3
bz2	Zincke	Item	500	T4	1	130	US	dz2
b	Zincke	Item	500	T4	1	131	US	dp03
a321s	Robertson	Item	500	T4	1	132	US	b
a323s	Robertson	Item	500	T4	1	133	US	b
a323t	Robertson	Item	500	T4	1	134	US	b
tz16	Matsu	Item	500	T4	2	1	Japan	tz11
tz17	Matsu	Item	500	T4	2	2	Japan	tz12
tz18	Matsu	Item	500	T4	2	3	Japan	tz13
tz18	Matsu	Item	500	T4	2	4	Japan	tz14
tz20	Matsu	Item	500	T4	2	5	Japan	tz15
hy16	Matsu	Item	500	T4	2	6	Japan	hy11
hy17	Matsu	Item	500	T4	2	7	Japan	hy12
hy18	Matsu	Item	500	T4	2	8	Japan	hy13
hy19	Matsu	Item	500	T4	2	9	Japan	hy14
hy20	Matsu	Item	500	T4	2	10	Japan	hy15
tz16	Matsu	Item	500	T4	2	11	Japan	tz11
tz17	Matsu	Item	500	T4	2	12	Japan	tz12
tz18	Matsu	Item	500	T4	2	13	Japan	tz13
tz20	Matsu	Item	500	T4	2	14	Japan	tz14
tz20	Matsu	Item	500	T4	2	15	Japan	tz15
hy16	Matsu	Item	500	T4	2	16	Japan	hy11
hy16	Matsu	Item	500	T4	2	17	Japan	hy11
hy17	Matsu	Item	500	T4	2	18	Japan	hy12
hy17	Matsu	Item	500	T4	2	19	Japan	hy12
hy18	Matsu	Item	500	T4	2	20	Japan	hy13
hy19	Matsu	Item	500	T4	2	21	Japan	hy14
hy19	Matsu	Item	500	T4	2	22	Japan	hy13
tz20	Matsu	Item	500	T4	2	23	Japan	tz15
tp16	Matsu	Item	500	T4	2	24	Japan	tp11
hy19	Matsu	Item	500	T4	2	25	Japan	hy14
tp17	Matsu	Item	500	T4	2	26	Japan	tp12
tp18	Matsu	Item	500	T4	2	27	Japan	tp13
tz20	Matsu	Item	500	T4	2	28	Japan	hy15
tp18	Matsu	Item	500	T4	2	29	Japan	tp14
tp20	Matsu	Item	500	T4	2	30	Japan	tp15
tz16	Matsu	Item	500	T4	2	31	Japan	tz11
tz16	Matsu	Item	500	T4	2	32	Japan	tz11
tz17	Matsu	Item	500	T4	2	33	Japan	tz12
tz17	Matsu	Item	500	T4	2	34	Japan	tz12
tz18	Matsu	Item	500	T4	2	35	Japan	tz13
tz19	Matsu	Item	500	T4	2	36	Japan	tz14
tz18	Matsu	Item	500	T4	2	37	Japan	tz13
tz20	Matsu	Item	500	T4	2	38	Japan	tz15
hy16	Matsu	Item	500	T4	2	39	Japan	hy11
hy16	Matsu	Item	500	T4	2	40	Japan	hy14
hy17	Matsu	Item	500	T4	2	41	Japan	hy12
hy18	Matsu	Item	500	T4	2	42	Japan	hy13
tz20	Matsu	Item	500	T4	2	43	Japan	tz15
hy19	Matsu	Item	500	T4	2	44	Japan	hy14
hy20	Matsu	Item	500	T4	2	45	Japan	hy15
ts16	Matsu	Item	500	T4	2	46	Japan	ts11
tm16	Matsu	Item	500	T4	2	47	Japan	tm11
tm17	Matsu	Item	500	T4	2	48	Japan	tm12
tm17	Matsu	Item	500	T4	2	49	Japan	tm12
tm18	Matsu	Item	500	T4	2	50	Japan	tm13
tm19	Matsu	Item	500	T4	2	51	Japan	tm14
tm18	Matsu	Item	500	T4	2	52	Japan	tm13
tm20	Matsu	Item	500	T4	2	53	Japan	tm15
tz16	Matsu	Item	500	T4	2	54	Japan	tz11
tz19	Matsu	Item	500	T4	2	55	Japan	tz14
tz18	Matsu	Item	500	T4	2	56	Japan	tz13
tz20	Matsu	Item	500	T4	2	57	Japan	tz15
hy16	Matsu	Item	500	T4	2	58	Japan	hy15
hy17	Matsu	Item	500	T4	2	59	Japan	hy14
tz20	Matsu	Item	500	T4	2	60	Japan	hy15
tk16	Matsu	Item	500	T4	2	61	Japan	tk11
tk17	Matsu	Item	500	T4	2	62	Japan	tk12
tk18	Matsu	Item	500	T4	2	63	Japan	tk13
tk19	Matsu	Item	500	T4	2	64	Japan	tk14
tk20	Matsu	Item	500	T4	2	65	Japan	tk15
tz16	Matsu	Item	500	T4	2	66	Japan	tz11
tz17	Matsu	Item	500	T4	2	67	Japan	tz12
tz18	Matsu	Item	500	T4	2	68	Japan	tz13
tz19	Matsu	Item	500	T4	2	69	Japan	tz14
tz20	Matsu	Item	500	T4	2	70	Japan	tz15
tz16	Matsu	Item	500	T4	2	71	Japan	tz11
tz17	Matsu	Item	500	T4	2	72	Japan	tz12
tz18	Matsu	Item	500	T4	2	73	Japan	tz13
tz19	Matsu	Item	500	T4	2	74	Japan	tz14
tz20	Matsu	Item	500	T4	2	75	Japan	tz15
tg16	Matsu	Item	500	T4	2	76	Japan	tg11
tg17	Matsu	Item	500	T4	2	77	Japan	tg12
tg18	Matsu	Item	500	T4	2	78	Japan	tg13
tg19	Matsu	Item	500	T4	2	79	Japan	tg14
tg20	Matsu	Item	500	T4	2	80	Japan	tg15
tz16	Matsu	Item	500	T4	2	81	Japan	tz11
tz17	Matsu	Item	500	T4	2	82	Japan	tz12
tz18	Matsu	Item	500	T4	2	83	Japan	tz13
tz19	Matsu	Item	500	T4	2	84	Japan	tz14
tz20	Matsu	Item	500	T4	2	85	Japan	tz15
tc16	Matsu	Item	500	T4	2	86	Japan	tc11
tc17	Matsu	Item	500	T4	2	87	Japan	tc12
tc18	Matsu	Item	500	T4	2	88	Japan	tc13
tc19	Matsu	Item	500	T4	2	89	Japan	tc14
tc20	Matsu	Item	500	T4	2	90	Japan	tc15
tz16	Matsu	Item	500	T4	2	91	Japan	tz11
tz17	Matsu	Item	500	T4	2	92	Japan	tz12
tz18	Matsu	Item	500	T4	2	93	Japan	tz13
tz19	Matsu	Item	500	T4	2	94	Japan	tz14
tz20	Matsu	Item	500	T4	2	95	Japan	tz15

ta16	Matsu	Item	500	T4	2	96	Japan	ta11
ta17	Matsu	Item	500	T4	2	97	Japan	ta12
ta18	Matsu	Item	500	T4	2	98	Japan	ta13
ta19	Matsu	Item	500	T4	2	99	Japan	ta14
ta20	Matsu	Item	500	T4	2	100	Japan	ta15
ta16	Matsu	Item	500	T4	2	101	Japan	ta11
ta17	Matsu	Item	500	T4	2	102	Japan	ta12
ta18	Matsu	Item	500	T4	2	103	Japan	ta13
ta20	Matsu	Item	500	T4	2	105	Japan	ta15
ta16	Matsu	Item	500	T4	2	106	Japan	ta11
ta17	Matsu	Item	500	T4	2	107	Japan	ta12
ta18	Matsu	Item	500	T4	2	108	Japan	ta13
ta20	Matsu	Item	500	T4	2	109	Japan	ta15
ta20	Matsu	Item	500	T4	2	110	Japan	ta16
t16	Matsu	Item	500	T4	2	111	Japan	t11
t18	Matsu	Item	500	T4	2	112	Japan	t12
t19	Matsu	Item	500	T4	2	113	Japan	t13
t20	Matsu	Item	500	T4	2	115	Japan	t15
t16	Matsu	Item	500	T4	2	116	Japan	t11
t17	Matsu	Item	500	T4	2	117	Japan	t12
t18	Matsu	Item	500	T4	2	118	Japan	t13
t19	Matsu	Item	500	T4	2	119	Japan	t14
t20	Matsu	Item	500	T4	2	120	Japan	t15
t16	Matsu	Item	500	T4	2	121	Japan	t11
t17	Matsu	Item	500	T4	2	122	Japan	t12
t18	Matsu	Item	500	T4	2	123	Japan	t13
t19	Matsu	Item	500	T4	2	124	Japan	t14
t20	Matsu	Item	500	T4	2	125	Japan	t15
g911	Shibayama	Tenaille	500	T5	1	1	Japan	g011
g912	Shibayama	Tenaille	500	T5	1	2	Japan	g012
g913	Shibayama	Tenaille	500	T5	1	3	Japan	g013
g914	Shibayama	Tenaille	500	T5	1	4	Japan	g014
g921	Shibayama	Tenaille	500	T5	1	5	Japan	g021
g922	Shibayama	Tenaille	500	T5	1	6	Japan	g022
g923	Shibayama	Tenaille	500	T5	1	7	Japan	g023
g924	Shibayama	Tenaille	500	T5	1	8	Japan	g024
g931	Shibayama	Tenaille	500	T5	1	9	Japan	g031
g932	Shibayama	Tenaille	500	T5	1	10	Japan	g032
g933	Shibayama	Tenaille	500	T5	1	11	Japan	g033
g934	Shibayama	Tenaille	500	T5	1	12	Japan	g034
g942	Shibayama	Tenaille	500	T5	1	13	Japan	g041
g943	Shibayama	Tenaille	500	T5	1	14	Japan	g042
g944	Shibayama	Tenaille	500	T5	1	15	Japan	g043
y170	Watanabe	Tenaille	500	T5	2	1	Japan	y170
y168	Watanabe	Tenaille	500	T5	2	2	Japan	y168
y166	Watanabe	Tenaille	500	T5	2	3	Japan	y166
y165	Watanabe	Tenaille	500	T5	2	4	Japan	y165
f4ko	Satou	Tenaille	500	T5	3	1	Japan	f4ko
f4km	Satou	Tenaille	500	T5	3	2	Japan	f4km
f5ki	Satou	Tenaille	500	T5	3	3	Japan	f4ki
f6sz	Satou	Tenaille	500	T5	3	4	Japan	f4sd
a707	Ohrudi	Tenaille	500	T5	4	1	Japan	a701
a708	Ohrudi	Tenaille	500	T5	4			