

Data Input and Edits

2

2.1 Input Data - Standard Compilation

Standard compilations are based on two input forms, the Map Area Statement (FS 121) and the Cruise Tally Sheet (FS 205). These two types of input are discussed in this chapter.

Two other input forms are used for non-standard compilations, the Stump Cruise Tally Sheet (FS 205S) and the Cruise Percent Reduction Worksheet (FS 221), which are described in Chapters 5 and 6.

A standard data input file is made up of a Map Area Statement and one or more Cruise Tally Sheets.

The Map Area Statement consists of one card type A, 1 or 2 card type Bs, 1 or more card type Cs, 1 or more card type Ds, 0 or more card type Es, 1 or more card type Fs and 1 card type G.

The Cruise Tally Sheet is 63 characters wide and consists of 1 card type 9, 1 or more card type 2s and 0 or more card type 3s.

The Cruise Tally Sheet and Map Area Statement are described in Chapters 6 and 7 of the *Cruising Manual*.

For each card type, a list or a range of the accepted values for each data input field will be given in tabular format. The following key defines acceptable data types:

1. "A" denotes an upper case letter.
2. "X" denotes an alphanumeric character {i.e., A-Z, 0-9}.
3. "9" denotes a digit.
4. "9(L, D)" denotes a number L digits long with D decimal places. The decimal places are implied and should not appear on the input file.
5. "YY" denotes a year.
6. "MM" denotes a month.
7. "{X, Y, Z}" means that only values 'X', 'Y', & 'Z' are permitted.
8. "{1-7}" means that only digits 1 through 7 are permitted.

Further, this chapter defines the data input requirements by specifying data dependency between different fields. For each card type, the list of data dependencies will be broken down by the severity of the error. Field names are capitalized.

The error message column describes the behavior of the system when the edit fails.

1. "I" - an informational message, the compilation will complete normally.
2. "W" - a warning, the compilation will complete but is suspect.
3. "F" - a fatal error, the compilation cannot be completed.
4. "N/A" - no error messages are generated for the field.

For a detailed explanation of the Cruise Tally Sheet and Map Area Statement fields refer to Chapters 6 and 7 of the *Cruising Manual*. The *Cruising Manual* is located on the Internet at URL

<http://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry/timber-pricing/timber-cruising/timber-cruising-manual>


The input data must be submitted in ASCII format. Here is an example of an input file:

```
V2013.02
AA99999123001205B057000100C 00000020A      Road Fork DEF      2
BA999991231 00003217503015010              A
CA99999123 01      10
CA99999123 02      10
DA9999912300101M 10
DA9999912300102M 10
FA99999123 CC01 10
FA99999123 CC02 10
GA99999123A
9A999991230010101C012545M 25000F175      CC 640314
2A999991230010101C01250001355S 7552 2      3301      MLG 8 -H13 -U99 -
2A999991230010101C01250002550S 13503 4 3 4300      GMDF1398G1398H 898U99 -
2A999991230010101C01250003525S 12401      5300      MLF1398H1398H 898U99 -
9A999991230010102C012554M 25000F175      CC 660314
2A999991230010102C01250001520S 14071      6400      MLF13 -H13 -I 8 -U99 -
2A999991230010102C01250002487S 11502 1      5300      MLF 8 -H1394I 8 -U99 -
2A999991230010102C01250003455S 9508      4302      SLH13 -U99 -
2A999991230010102C01250004565S 15982 1      6400      MLF1398G13 -H11 -U 8 -X99 -
2A999991230010102C01250005611S 16331      5405      MLF13 -F13 -H13 -I 8 -Y99 -
9A999991230010103C012557M 25000F175      CC 240314
2A999991230010103C01250001564S 145521      5300      MLF 8 -Y 650G13 -H11 -U 8 -X99 -
2A999991230010103C01250002584S 15221      6400      MLF13 -F 8 -H13 -I 8 -U99 -
9A999991230010198C012540C 25000F175      CC 590314
2A999991230010198C01250001 S
2A999991230010198C01250002 S
2A999991230010198C01250003 S
2A999991230010198C01250004 S
2A999991230010198C01250005 S
```


Figure 2.1a Input File (page 1).

A version number will be placed at the top of the file above card type A. It will start with a V followed by the year, followed by a period followed by 2 digits. For example, the first version in a year would be V2016.00 the next version would be V2016.01. Refer to the 'Valid Compilation Versions' link in the *Cruise Compilation Manual* for the most recent version numbers and cruise compilation companies that are approved to compile cruises for appraisal purposes in British Columbia. The link is located at:

http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/docs/timber-pricing/timber-cruising/valid_compilation_versions_amendment.pdf



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MAP AREA STATEMENT

CRUISE COMPILATION

FOREST REGION: _____

CRUISE SUPERVISOR: _____

COMPANY OR AGENCY: _____

DATE COMPLETED: _____

GRU SE IDENTITY CARD

U.T.M. GRID CO-ORDINATES

NORTH		EAST		ZONE	
71	72	73	74	75	76
77	78	79	80	81	82

LOCALITY DESCRIPTION: _____

CRUISER OR AGENCY: _____

REPORT TYPE: _____

TOTAL MERCHANTABLE AREA (hectares): _____

SALE TYPE: _____

TEMURE: _____

ELEVATION (metres): _____

BLOCK: _____

UNIT IDENTITY: _____

UNIT NO.: _____

TYPE: _____

FL. ZONE: _____

FOREST DISTRICT: _____

NO OF BLOCKS: _____

FOREST REGION: _____

UTM CO-ORDINATES: _____

COMPILATION STANDARD CARD

EXCEPTION #1		EXCEPTION #2		EXCEPTION #3	
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60
61	62	63	64	65	66
67	68	69	70	71	72
73	74	75	76	77	78
79	80	81	82	83	84

DO NOT USE

TYPE DESCRIPTION CARD

SILVICULTURE TREATMENT UNIT

MAP LABEL	SPECIES #1		SPECIES #2		SPECIES #3	
MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	32	33	34	35
36	37	38	39	40	41	42
43	44	45	46	47	48	49
50	51	52	53	54	55	56
57	58	59	60	61	62	63
64	65	66	67	68	69	70
71	72	73	74	75	76	77
78	79	80	81	82	83	84
85	86	87	88	89	90	91
92	93	94	95	96	97	98

PLEASE BE ADVISED THAT THIS INFORMATION MAY BE RELEASED UNDER THE FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT.

FS 121 HVA 2007/05

Figure 2.2a Sample Map Area Statement - Front Side.

2.2 Card type A

2.2.1 Table of Data Types

Column Position	Column Name	Accepted Values	Error Type
1	Card type	"A" - hard coded	F
2-7	License	Refer to Cruising Manual , Chapter 5	F
8-10	Cutting Permit	XXX	F
11-13	No. of Blocks	999	I
14	Forest Region	1-8	F
15-16	Forest District	Refer to Appendix 6 - Regions and Districts	F
17	F.I.Z.	A-L	F
18	Unit Type	0,1,2,3,5,7, B, C, E, G, K, L, M, P, S, T, W, blank	F
19-20	Unit No.	99	W
21	Block	9	F
22-26	Elevation	99999	I
27	Tenure	A, B, C, S, T, U, V, W, X, Y, 1-9	I
28	Quota	D, H, N, Q, R, S, T, blank	I
29	Sale Type	A-K, M, N, R	I
30-37	Total Merchantable Area	9 (8, 1)	F
38	Report Type	Blank, A	I
39-40	Zone	08-11	I
41-46	East	280,000-720,000	I
47-53	North	5,351,000-6,653,000	I
54-66	Locality Description	Any value is accepted	N/A
67-80	Cruiser or Agency	Any value is accepted	F

2.2.2 Fatal Errors

For Unit Type 'T', the Unit Numbers must come from the list of valid Tree Farming Licenses. All TFL's are listed in Table 17 of the [Cruising Manual](#).

1. For Unit Type 'T', columns 6-7 must match columns 19-20.
2. If the Unit Type is blank and the Unit Number is 26 or 75 then the Unit Block must be coded.
3. If the Unit Type is 'A' and the Unit Number is 10, then the Unit Block must be coded 1 or 2.
4. If the Unit Number is one of {25, 39, 43, 45, 47 or 49}, then the Unit Block must be coded.
5. Unit identity does not agree with licence number.
6. Unit identity does not agree with allowable F.I.Z.
7. For Coast compilations, the Forest Inventory Zone must be A, B, C, or D.
8. Invalid District within Area. Refer to Appendix 6.

2.2.3 Warning

1. Unity identity column cannot be blank.

2.2.4 Messages

1. UTM co-ordinates and Zones must be valid for the specified Area. For a list of UTM co-ordinates refer to the following web site:

<http://a100.gov.bc.ca/pub/mascotw/>

June 1, 2009 Amendment - allow FIZ H and I for the Babine PSYU.

June 15, 2011 Amendment – allow FIZ E and F for the Cranbrook PSYU.

June 1, 2012 Amendment - allow FIZ D and G for the Spallumcheen PSYU.

July 22, 2013 Amendment – allow FIZ L, special cruise number 265 for the Dawson Creek Special Sale Area (SSA).

July 1, 2014 – allow FIZ D for the Shuswap PSYU.

2.3 Card Type B - Compilation Standard

2.3.1 Table of Data Types

Column Position	Column Name	Accepted Values	Error Type
1	Card type	"B" - hard coded	F
2-10	N/A	Same as card type A	F
11	Damage	Yes for appraisal purposes	W
12	Selective Cut Ind.	Blank, C, L	F
13	Double Sampling	0, 1	F
14	Special Comp.	Blank for Coast, 1 or 2 for Interior	I
15	Tree Class Comp.	0, 1	F
16	Species Comp.	0, 1	F
17-18	Type of Comp.	03, 32	F
19-21	DBH lower limit	9 (3, 1)	I
22-24	Stump height	999	I
25-27	Top diameter	9 (3, 1)	I
28-39	Log length	99	I
30-31, 45-46, 60-61	Species Exceptions	Refer to Chapter 5 of the Cruising Manual	F
32-33, 47-48, 62-63	Type of Comp.	03, 32	F
34-36, 49-51, 64-66	DBH lower limit for species exceptions	Blank, 9 (3, 1)	I

Column Position	Column Name	Accepted Values	Error Type
37-39, 52-54, 67-69	Stump height for species exceptions	Blank, 999	I
40-42, 55-57, 70-72	Top diameter for species exceptions	Blank, 9 (3, 1)	I
43-44, 58-59, 73-74	Log length for species exceptions	Blank, 99	I
75	Block vs. Avg. line	A, B	F
76	Type of cruise	Blank for Loss Factors, C for CGNF compilation	N/A
77	100% cruise	Blank, A	N/A
78	Measurement type	C, R	N/A
79	Diameter measure	I	N/A
80	Stump cruise	Blank, S	N/A

2.3.2 Fatal Errors

1. For Interior compilations, the Special Compilation cannot be 0.
2. The DBH Lower Limit is less than or equal to the Top Diameter.
3. Columns 2-10 must be the same as card type A.

2.3.3 Warnings

1. Exception Log Lengths should be between 2 and 11 m.

2.3.4 Messages

1. If Tree Class Combination is coded 1, then mark all reports "Not for Appraisals".
2. For Interior compilations, if the Special Compilation is coded 1, then mark all reports "Sale is in the Wet Belt".
3. For Interior compilations, if the Special Compilation is coded 2, then mark all reports "Sale is in the Dry Belt".
4. If the standard merchantability requirements are not coded as outlined below, then mark all reports "Not for Appraisals":

Coast Log length = 10.0 meters
Mature: Minimum DBH = 17.5, Minimum Top Diameter = 15.0
Immature: Minimum DBH = 12.0, Minimum Top Diameter = 10.0
Exception: the coastal portion of the Coast Mountain Natural
Resource District, must allow for Interior Standard Utilization
Specifications

Interior Log length = 5.0 meters
Minimum DBH = 17.5, Minimum Top Diameter = 10.0
Exception 1: Lodgepole Pine, Minimum DBH = 12.5
Exception 2: Red Cedar Top Diameter = 15.0 if more than 50% of
the Red Cedar net volume is over 140 years old

5. **Coast and interior compilations for the Coast Mountain district using coast and interior Forest Inventory Zones & PSYUs are allowed. Compilations using FIZ D are allowed in Chilliwack district.**

2.4 Card type C - Type Identity

2.4.1 Table of Data Types

Column Position	Column Name	Accepted Values	Error Type
1	Card type	"C" - hard coded	F
2-10	N/A	Same as card type A	F
11-13	N/A	N/A	N/A
14-15	Type number	99 or blanks	F
16-17	Major Species 1	Refer to the Cruising Manual , Appendices (Timber Typing)	W
18-19	Major Species 2	Same as above	W
20-21	Major Species 3	Same as above	W
22-23	Minor Species 1	Same as above	W
24	Age Class	1-9	W
25	Height Class	1-8	W
26	Stocking Class	0-3	W
27	Site Class	G, M, P, L	W
28	Type Identity	1-3	F
29-33, 34-38, Etc.	Treatment unit areas A-CU	9 (5, 1) or blanks	F

2.4.2 Fatal Errors

1. At least one STU area must be greater than 0.
2. There must be at least one timber type.
3. Columns 2-10 must be the same as card type A.

2.4.3 Warnings

1. The sum of the STU areas must equal the Total Area coded on card type A.

2.4.4 Messages

1. Type Identities greater than 3 are invalid or incorrect.
2. If the Type Number is blank, all the subsequent card type C fields should be blank.
3. Timber type numbers should appear only once on the card type Cs.

2.5 Card Type D - Block Description

2.5.1 Table of Data Types

Column Position	Column Name	Accepted Values	Error Type
1	Card type	"D" - hard coded	F
2-10	N/A	Same as card type A	F
11-13	Block number	XXX	N/A
14-15	Type number	99 or blanks	F
16	Block Maturity	Blank, I, M	I
17-21, 22-26, Etc.	Treatment unit areas A-CU	9 (5, 1) or blanks	F

2.5.2 Fatal Errors

1. A block must contain at least one timber type.
2. Columns 2-10 must be the same as card type A.
3. There must be the same number of blocks coded on card type Ds as is specified on card type A.
4. The sum of the type areas within blocks must be equal to the total type area on card type C.

2.5.3 Messages

1. Type Numbers must be coded on a preceding card type C.
2. If a Type Number is blank, then all of its Treatment Unit Areas should be blank.
3. For Coast compilations, if the Block Maturity is not coded, mark all reports "Not for Appraisals"
4. There should be at least one block.

2.6 Card Type E - Height/Diameter Description

2.6.1 Table of Data Types

Column Position	Column Name	Accepted Values	Error Type
1	Card type	"E" - hard coded	F
2-10	N/A	Same as card type A	F
11-13	N/A	Blanks	I
14	Calc. height only	Blank, 0, 1	F
15-16	Species used	Refer to Cruising Manual , Chapter 5	F
17-18, 19-20, 21-22	Species to be replaced 1, 2 & 3	Same as above	F
23-24	Type used	99 or blanks	I
24-25, 26-27... 79-80	Types to be replaced 1, 2, ... 28	99 or blanks	I

2.6.2 Messages

1. There should be no blanks between the types coded in columns 25-80.
2. Type Numbers must be coded on a preceding card type C.

2.7 Card Type F - Harvesting Method Description

2.7.1 Table of Data Types

Column Position	Column Name	Accepted Values	Error Type
1	Card type	"F" - hard coded	F
2-10	N/A	Same as card type A	F
11	N/A	Blank	N/A
12-13	Harvesting method	Refer to Chapter 13 for valid harvesting method codes	F
14-15	Type number	99 or blanks	F
16		Blank	N/A
17-21, 22-26, Etc.	Treatment unit areas A-CU	9 (5, 1) or blanks	F

2.7.2 Fatal Errors

1. There must be at least 1 Harvesting Method.
2. The sum of the type areas within Harvesting Methods must be equal to the total type area on card type C.

2.7.3 Warnings

1. A Harvesting Method should appear only once on the card type Fs.
2. Type Numbers should be coded on a preceding card type C.

2.8 Card Type G - Treatment Unit Description

2.8.1 Table of Data Types

Column Position	Column Name	Accepted Values	Error Type
1	Card type	"G" - hard coded	F
2-10	N/A	Same as card type A	F
11-20, 21-30, Etc.	Silviculture Treatment Units A-CU	XXXXXXXXXX	N/A

2.8.2 Fatal Errors


1. There must be 1 card type G.
2. There must be an equal number of Treatment Unit Names specified in card type G as there are Treatment Unit Areas on card type C.

2.9 Card Type H – Non Productive Areas

2.9.1 Table of Data Types

Column Position	Column Name	Accepted Values	Error Type
1	Card type	"H" - hard coded	F
2-10	N/A	Same as card type A	F
11–13	Block No.	XXX	N/A
14–18	R/W Removed Under Other Licence	9 (5, 1) or blanks	F
19-28 34-43 49-58 Etc.	Other Non Productive Description	AAAAAAAAAA or blanks	N/A
29-33 44-48 59-63 Etc.	Other Non Productive Area	9 (5,1) or blanks	N/A

2.10 Cruise Tally Sheet Image



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CRUISE TALLY SHEET

LICENCE NO.		CP NO.	BLOCK	STRIP	PLOT	B/C	TYPE NO.	AGE 10S	IT. TYPE	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
YEAR		MONTH		DAY		HOUR		MINUTE		SECOND		TENTH		HUNDREDTH		THOUSANDTH		TEN THOUSANDTH		HUNDRED THOUSANDTH		MILLIONTH		TENTH OF MILLIONTH		HUNDREDTH OF MILLIONTH		THOUSANDTH OF MILLIONTH		TEN THOUSANDTH OF MILLIONTH		HUNDREDTH OF BILLIONTH		THOUSANDTH OF BILLIONTH		TEN THOUSANDTH OF BILLIONTH		HUNDREDTH OF TRILLIONTH		THOUSANDTH OF TRILLIONTH			
9																																											
CT		LOG		D.B.H.		SPECIES		TOTAL HEIGHT		DBH		SPP.		TOTAL HT.		NO.		CORR. AGE		BORED		HT.		REMARKS																			
1		26		29		31		37		33		34		35		36		37		38		39		40		41		42		43		44		45		46		47					
2																																											
3																																											

Figure 2.3a Interior Cruise Tally Sheet - Front Side.

CHECKED BY (PRINT)		DATE		Y		M		D	
SIGNATURE		CRUISED BY (PRINT)		SIGNATURE		(I CERTIFY THAT THIS IS A TRUE STATEMENT OF SAMPLING DONE BY ME AT THE PLACE SHOWN.)		DATE	
SIGNATURE		ECOSYSTEM		SNOW DEPTH					
QUALITY CODES		KNOT CODE QUARTERS (Q) WITH KNOTS		CROWN CLASS (CC)		PATH CODE BY TREE THIRD			
ITEM	CODE	LIMITS	ITEM	CODE	LIMITS	0	1	2	3
SPIRAL GRAIN	0	0-5%	SWEEP OR LEAN	0	0-4.9°	1	DOMINANT	TOP	1
	1	6-15%		1	ONE Q	5	2	CO-DOMINANT	MID
	2	16-25%	2	TWO Q	6	3	INTERMEDIATE	BOT	3
	3-8	26-85%	3	THREE Q	6	4	SURPRESSED		4
9	86+%	4	FOUR Q	6	10°+				5
TREE CLASS		INSECT CODES		FIRE CODE		UPROOTED CODES		CONDITION	
(unless Coast age in 10s = 13 or 14)		CODE		CONDITION		ALLOWED SPECIES		E	
1	Older Immature	1	GREEN ATTACK	A		Scorched bark and foliage, no charring in merch portion of trunk.		LESS THAN OR EQUAL TO ONE CLEAN BREAK	
2	Older Immature - Suspect	2	RED ATTACK	B		Charring of wood fibre > 100 cm but < 1/3 of tree radius in merch portion of trunk.		MORE THAN ONE CLEAN BREAK OR ONE OR MORE SHATTERED BREAKS	
3	Older Imm Dead Potential	3	GREY ATTACK	C		Charring of wood fibre in 3 or more areas > 100 cm² > 1/3 of tree radius or > 1 check > 1/3 of tree radius if dbh < 30 cm		For Age in 10s/Tree classes refer to Tree Class Modification of Loss Factor Tables at the end of Table 17 in Cruising Manual.	
4	Dead Useless	5	GREEN (ALIVE) STRIP	S, F					
5	Mature	6	GREEN (DEAD) FULL	F only					
6	Live Useless	7	GREY ATTACK	All					
7	Mature-Dead Potential	8	RED ATTACK	All					
8	Younger Immature	X	DEFOLIATORS (LIVE)	All					
9	Younger Imm Dead Potential	Y	DEFOLIATORS (DEAD)	All					
		COMMENTS		REMARKS (OTHER DEFECTS AND QUALITY FACTORS AFFECTING LOGGING)		DISEASE CODES			
						4		BLISTER RUST ON PW	
								ROOT ROT	
								J LIGHT	
								K MODERATE	
								L HEAVY	

Figure 2.3b Cruise Tally Sheet - Reverse Side.

2.11 Card Type 9 - Plot Identity Information

2.11.1 Table of Data Types

Column Position	Column Name	Accepted Values	Error Type
1	Card type	"9" - hard coded	N/A
2-10	Same as card type A	Same as card type A	W
11-13	Block	XXX	F
14-15	Strip	XX	F
16-17	Plot	XX	F
18	Original or Check	O, C	F
19-20	Type number	99	F
21-22	Age in 10s	99	F
23-24	Height in 3m	Blanks or 99	F
25	Plot type	Blank, C, M, S	F
26	Plot card sequence	Blank - not used ¹	N/A
27-30	Hectares	Blanks or 9 (4, 3)	F
31-35	Basal area factor	Blanks or 9 (5, 3)	F
36	Plot sweep	F, B	F
37-39	DBH limit	9 (3, 1)	F
40-43	Sub-plot hectares	Blanks or 9 (4, 3)	F
44-48	Sub-plot BAF	Blanks or 9 (5, 3)	F
49	Sub-plot prism sweep	Blank or F, H, B	I
50-52	Sub-plot DBH limit	Blanks or 9 (3, 1)	F

Column Position	Column Name	Accepted Values	Error Type
53-54	Harvesting method	Refer to card type F, positions 12-13. Blanks are not permitted	F
55-57	Slope percent	999	F
58-61	Cruise date	YYMM	F

- 1 This field is used on stump cruise tally cards to indicate ordering of tally sheets when more than one tally sheet is required for a plot. It is not used in a compilation.

2.11.2 Fatal Errors

1. Timber Type must match a valid type from card type C.
2. Block must match a valid block from card type D.
3. Average height field is required for PSYUs Bowron, Longworth, Monkman, Purden and Robson, and for TFL 30.
4. Block/Strip/Plot combinations must be unique.
5. Both Hectares and BAF cannot be coded in a main/sub plot.
6. Count plots are not allowed for a fixed area compilation.
7. For count plots, the Prism Sweep must be full ('F').
8. For interior compilations the card type 9 Main/Sub Plot DBH must be the same as the lowest DBH limit for the cruise plot. Each tree in a count plot must have the DBH or DBH class recorded if the tree has a DBH smaller than the interior timber merchantability requirements.
9. For coast compilations, the card type 9 Main/Sub Plot DBH must be the same as the lowest DBH limit for the cruise plot. Each tree in a count plot must have the DBH or DBH class recorded if the tree has a DBH smaller than the Coast timber merchantability requirements.
10. Harvesting Method must occur on a card type F.
11. Harvesting Method/Timber Type combination must occur on a card type F.

12. Fixed plot areas must be the same for all plots in a type.

13. The date must be included on the tally card.

2.11.3 Warnings

1. Variable plot BAFs should be the same for all plots in a type.
2. There must be at least 2 plots per type for average line method compilations.
3. There must be at least 2 plots per type for each block for block method compilations.

2.11.4 Messages

1. The Sub Plot BAF/plot size are greater than the Main Plot BAF/plot size.
2. If the Sub Plot BAF/plot size are both blank, then the Sub Plot Sweep and DBH should also be blank.
3. Sweep in sub plot must be equal to Sweep in the main plot.
4. Main plot or sub plot DBH lower limit should not be less than the compilation standard or exception DBH lower limit, whichever is lower.

2.12 Card Type 2 - Tree Details

2.12.1 Table of Data Types

Column Position	Column Name	Accepted Values	Error Type
1	Card type	"2" - hard coded	F
2-24	N/A	Identical to card type 9	F
25-26	Tree number	01-99	F
27-29	Total height	9 (3, 1)	F
30-31	Species	Refer to Cruising Manual , Section 4.3.2.4	F
32-35	DBH	9 (4, 1)	F
36	Tree class	1-9	F
37	Conk	1-7, Blank	F
38	Blind conk	1-7, Blank	F
39	Scar	1-7, Blank	F
40	Fork or crook	1-7, Blank	F
41	Frost crack	1-7, Blank	F
42	Mistletoe	1-7, Blank	F
43	Rotten branch	1-7, Blank	F
44	Dead top	1-7, Blank	F
45	Spiral grain	0-9	F
46	Sweep	0, 1, 2, Blank (Coast)	F
47	Lean	0, 1, 2, Blank (Coast)	F
48	Log no. of 1 st live limb	1-9	F

Column Position	Column Name	Accepted Values	Error Type
49	Log no. of 1 st stub	1-9	F
50	Knots in 1 st 5 m	0-6	F
51	Knots in 2 nd 5 m	0-6	F
52-58	N/A	Not used at this time	N/A
59	Selective	Blank, C, L	F
60	Root rot	Blank 1 – 7, J, K, L	F
61	Insect and disease damage	1, 2, 3, 4, 5, 6, 7, 8, X, Y	W
62	Fire damage	A, B, C	W
63	Blowdown damage	E, G	W

2.12.2 Fatal Errors

1. Cut and leave trees coded in the selective cut column must have a full measure tree recorded, by species for each timber type.
2. For tree class 2, pathological codes are required.

2.12.3 Warnings

1. Insect damage code must be valid for species (refer to the [Cruising Manual](#), Section A.6.1). Beetle codes 1, 2 and 3 are allowed in all species of the *Pinus* genus.
2. Damage codes must be valid for tree class.

Damage Code	1	2	3	4	Tree Class 5	6	7	8	9	Species
1	X	X			X			X		PI,Py,Pw,B
2	X	X			X			X		PI,Py,Pw,B
3			X				X		X	PI,Py,Pw,B
4	X	X			X			X	X	Pw
5	X	X			X			X		S,F
6	X	X			X			X		S,F
7			X				X		X	S,F
8	X	X			X			X		F
X	X	X			X			X		All
Y	X	X	X		X		X	X	X	All
A	X	X	X		X		X	X	X	All
B	X	X	X		X		X	X	X	All
C	X	X	X		X		X	X	X	All
E	X	X	X		X		X	X	X	All
G	X	X	X		X		X	X	X	All

2.12.4 Messages

1. For interior compilations, if the tree DBH is less than the compilation standard DBH lower limit, then the tree will not be used.
2. For coast compilations, if the tree DBH is less than the compilation standard DBH lower limit OR the block maturity DBH lower limit, then the tree will not be used.
3. If the tree class is 4 or 6 and the Tree Class combination is not coded 1, then the tree will only contribute to the snag percent.
4. If the selective cut indicator does not match the card type B selective cut indicator then the tree will not be compiled.
5. A tree with a height less than 3 m will not be used.
6. A tree with no height and the species does not exist on a card type E will not be used.
7. No pathological codes are allowed for tree classes 1, 4, and 6.
8. For tree classes 4 and 6, do not code quality remarks.

2.13 Card Type 3 - Sample Tree Details

2.13.1 Table of Data Types

Column Position	Column Name	Accepted Values	Error Type
2-24	N/A	Identical to card type 9	F
36	Crown class	1-4	I
37-39	Total age	999	F

2.13.2 Messages

1. The tree height is not in range for species in Forest Inventory Zone - refer to Appendix 4.
2. The total age is not in range for species in Forest Inventory Zone - refer to Appendix 5.

2.14 Report 001A - Sample Listing (Partial)

Edit Error Report - Required.

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FOREST REVENUE BRANCH - 2001.0      COMPUTED 2001-03-19  15:44:21
(001) PAGE      1

11111111112222222222333333333344444444445555555555666666666677777777778
1234567890123456789012345678901234567890123456789012345678901234567890
1   ATL7070001002106CE86000100BD 00000125A  0000000000000 TEST 2000  CRUISER B
      REPORT DESIGNATOR - CC 38 - INFO MAYBE USED FOR APPRAISALS
      UTM ZONE - CC 39-40 - IS INVALID
      DISTRICT NAME = SOUTH ISLAND
      PSYU VANCOUVER      -
      UTM ZONE - CC 39-40 - IS INVALID CODE

2   BTL7070001  00 13217503015010                                     A
N
      THIS CRUISE WILL BE COMPILED USING AVERAGE LINE METHOD

3   CTL7070001  01F H C Y 941M200050

4   CTL7070001  02F B      440M20005000025

5   DTL70700010010100025                                     0200025      M

6   DTL70700010020100025                                     020002500025  M

7   FTL7070001 SC0100050                                     0200050

8   FTL7070001 SS020000000025

9   GTL7070001CLEARCUT SELECTION

10  9TL707000100101010011342M      12000B175      SC0602010
      PLOT AGE FOR CONIFEROUS - MATURE      - SEE TABLE 17

PAGE 11
11  2TL70700010010101001134201410Y 11005  7      3      4300      F
    
```

Figure 2.4 Report 001A.

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