

Summary of SAS Dictionary Tables and Views

Notation:

- In headers, **dict** indicates SQL usage (dictionary.*tableName*); **sh** indicates SASHELP usage (*sashelp.viewName*); **PW** identifies tables with no data displayed if member is password-protected.
- indicates a field used for uniquely identifying an observation
- NN** identifies a field whose value may be missing for non-native SAS file types (including SAS Transport files).
- V** identifies a field whose value may be missing or 0 for SAS views
- Highlighted names are unique to Version 9.2 (TS2M0)

Usage Notes:

- MEMNAME:**
 - Native SAS engines store member names in upper case. Other engines (access, excel, *et al.*) preserve case and spacing. Using the EXCEL engine, for example, program references to sheet name "Sheet One" must be "Sheet One\$"n
 - Generation datasets are stored as memname#nnn (e.g., MAST, MAST#001)
- Non-native/"foreign" files: if the data source's name exceeds 32 characters, has security limitations, or uses syntax not understood by SAS, the data source will *not* be represented in *any* Table or View.
- Not all tables are shown

<i>dict.catalogs / sh.vCatalog</i>		Catalog Member Attributes
► libname	\$8	Library name [upper case]
► memname	\$32	Member name [upper case]
memtype	\$8	Member type [CATALOG]
► objname	\$32	Object name [upper case]
► objtype	\$8	Object type [SCL FRAME FORMAT FORMATC MACRO...]
objdesc	\$256	Object description
created	num	Date created [DATETIME informat/format]
modified	num	Date modified [DATETIME informat/format]
alias	\$8	Object alias [upper case]
level	num	Library concatenation level [0, 1, 2, ...]

<i>dict.columns / sh.vColumn</i>		PW Variable Attributes
► libname	\$8	Library name [upper case]
► memname	\$32	Member name.
► memtype	\$8	Member type [DATA VIEW]
► name	\$32	Column name [case as-is from data set creation except for transport files (always upper-cased)] Can contain blanks.
type	\$4	Column type [char num]
length	num	Column length
npos	num	Column position [offset within obs., e.g., 0, 1, 20]
varnum	num	Column number in table [1, 2, 3, ...]
label	\$256	Column label
format	\$16	Column format [DATE9. \$HEX22.]
informat	\$16	Column informat [MMDDYY10. 8.2]
idxusage NN	\$9	Column index type [SIMPLE COMPOSITE BOTH]
sortedby	num	Key sequence order [0, 1, ...] Negative if descending
xtype	\$12	Extended type
notnull	\$3	Not NULL? [no yes]
precision NN V	num	Precision
scale NN V	num	Scale
transcode	\$3	Did source/target encoding differences require character remapping (transcoding)? [no yes]

<i>dict.destinations / sh.vDest</i>		Open ODS Destinations
► destination	\$100	Destination [upper case] [PDF RTF IPS...]
style	\$32	Style [Journal Printer...] One-level name only.

<i>dict.dictionaries / sh.vDctnry</i>		Dictionary Table Attributes
► memname	\$32	Dictionary table name [upper case]
memlabel	\$256	Dictionary Table label
► name	\$32	Column name [upper case]
type	\$4	Column type [char num]
length	num	Column length

<i>dict.dictionaries / sh.vDctnry</i>		Dictionary Table Attributes
npos	num	Column position [offset within observation. >= 0]
varnum	num	Column number in table [1, 2, 3, ...]
format	\$49	Column format [<i>may</i> include width, period]
informat	\$49	Column informat [<i>may</i> include width, period]

<i>dict.engines / sh.vEngine</i>		Attributes of <i>all</i> available engines
► engine	\$8	Engine name [upper case]
alias	\$8	Alias [upper case]
description	\$40	Description
preferred	\$3	Preferred? [yes no]
properties	\$1024	Engine dialog properties

<i>dict.extfiles / sh.vExtfl</i>		User, system external files
► fileref	\$8	Fileref [upper case] [duplicated for concatenated files]
► xpath	\$1024	Path name or piped command [case preserved]
xengine	\$8	Engine name [upper case]
directory	\$3	Does fileref point to a directory [yes no]
exists	\$3	Does the location exist? [yes no]
fileSize	num	Size of file, in bytes
level	num	File concatenation level
modDate	num	File modification date-time [DATETIME informat/format]
temporary	char	Allocated as a temporary location? [yes no]

<i>dict.formats / sh.vFormat</i>		Attributes of system/user-written formats
► libname	\$8	Library name [upper case] [when source='C']
► memname	\$32	Member name [upper case] [when source='C']
► path	\$1024	Path name [case preserved] [when source='U']
► objname	\$32	Object name [upper case] [e.g. GROUP, TYPE] [when source='U', 'C']
► fmtname	\$32	Format name [upper case] [e.g., GROUP, \$TYPE] [no decimal point]
► fmtype	\$1	Format type [F (format) (informat)]
source	\$1	Format source [U (system, using DLL) B (built-in) C (catalog, i.e., created by PROC FORMAT)]
minw	num	Minimum width [>= 0]
mind	num	Minimum decimal width [>= 0]
maxw	num	Maximum width [>= 0]
maxd	num	Maximum decimal width [>= 0]
defw	num	Default width [>= 0]

<i>dict.functions / sh.vFunc</i>		Available Functions
► fncname	\$32	Function name [upper case]
fncargs	num	Argument attributes
fncprod	\$1	Implementation type
fncdtype	\$1	Function type
maxarg	num	Maximum arguments to function
minarg	num	Minimum arguments to function
source	\$1	Format source

<i>dict.indexes / sh.vIndex</i>		PW Native Engine Index Attributes
► libname	\$8	Library name [upper case]
► memname	\$32	Member name [upper case]
memtype	\$8	Member type [DATA]
► name	\$32	Column name [mixed case]
idxusage	\$9	Column index type [COMPOSITE SIMPLE]
► indname	\$32	Index name [mixed case]
► indxpos	num	Position of column in concatenated key. Missing if not concatenated key.
nomiss	\$3	NOMISS option [yes blank]
unique	\$3	UNIQUE option [yes blank]

Summary of SAS Dictionary Tables and Views

<i>dict.libnames</i> / <i>sh.vLibnam</i>		Attributes of Allocated Libraries	
▶ libname	\$8	Library name [upper case]	
engine	\$8	Engine name [V9 V8 ...]	
▶ path	\$1024	Path name [blank for some engines: URL, ...] For non-native engines, may include file name, extension.	
▶ level	num	Library concatenation level [0, 1, 2, ...]	
fileformat	\$8	Default file format	
readonly	\$3	Read only? [no yes]	
sequential	\$3	Sequential? [no yes]	
sysdesc	\$1024	System information description	
sysname	\$1024	System information name	
sysvalue	\$1024	System information value	
temp	\$3	Allocated with temporary access? [yes no]	

<i>dict.macros</i> / <i>sh.vMacro</i>		Macro Variable Values	
▶ scope	\$9	Macro variable scope [GLOBAL AUTOMATIC macro name (if local)]	
▶ name	\$32	Macro variable name [upper case]	
▶ offset	num	Offset into macro variable [0, 200, ...]. Note that the beginning of the value spanning observations may not always be stored with OFFSET=0.	
value	\$200	Macro variable value [case, spacing are preserved]	

<i>dict.members</i> (See following table for views)		Member Attributes	
▶ libname	\$8	Library name [upper case]	
▶ memname	\$32	Member name.	
memtype	\$8	Member type [DATA VIEW ITEMSTOR CATALOG ...]	
dbms_memtype	\$32	DBMS member type [VIEW DATA LINK ...]	
engine	\$8	Engine name [upper case]	
index	\$32	Indexes? [yes no] [not index names!]	
path	\$1024	Path name [mixed case] [if concatenated, enclosed in parentheses, each path name quoted; otherwise, no parentheses or quotes] [For most non-native engines, directory + file name + extension; otherwise, just directory]	

Views defined for members

<i>sh.vMember</i>	All fields from <i>dict.members</i>
<i>sh.vsAccess</i>	LIBNAME, MEMNAME where memtype='ACCESS'
<i>sh.vsCatlg</i>	LIBNAME, MEMNAME, where memtype='CATALOG'
<i>sh.vSLib</i>	LIBNAME, PATH for unique values of LIBNAME
<i>sh.vstble</i>	LIBNAME, MEMNAME where memtype='DATA'
<i>sh.vsview</i>	LIBNAME, MEMNAME where memtype='VIEW'
<i>sh.vstbvw</i>	LIBNAME, MEMNAME, MEMTYPE where memtype='DATA', 'VIEW'

<i>dict.options</i> / <i>sh.vOpt</i>		Option Settings	
<i>dict.goptions</i> / <i>sh.vGopt</i>			
<i>sh.vAllopt</i>			
▶ optname	\$32	Option name [upper case] Full name, not alias	
setting	\$1024	Option setting [mixed case]	
optdesc	\$160	Option description	
▶ level	\$8	Option location <ul style="list-style-type: none"> GOPTIONS: [GRAPH] OPTIONS: [Portable Host] 	
group	\$32	Option group [upper case] <ul style="list-style-type: none"> GOPTIONS: [blank] OPTIONS: [MACRO SORT ENVFILES ...] 	
opttype	\$8	Option type [boolean char num]	

<i>dict.tables</i> / <i>sh.vTable</i>		Attributes of Tables and Views	
Typical setting for non-native (MDB, XLS, REMOTE, XPT) member ▼			
▶ libname #	\$8	Library name [upper case]	
▶ memname #	\$32	Member name.	
▶ memtype #	\$8	Member type [DATA VIEW]	
dbms_memtype	\$8	If DBMS (non-native engine), member type [VIEW TABLE LINK ...]. Otherwise, blank	
memlabel V	\$256	Dataset label	<i>missing</i>

<i>dict.tables</i> / <i>sh.vTable</i>		Attributes of Tables and Views	
Typical setting for non-native (MDB, XLS, REMOTE, XPT) member ▼			
typemem	\$8	Dataset type [upper case] [<i>blank</i> DATA MSGFILE ATTLIST VIEW ...]	DATA
crdate	num	Date created [DATETIME informat/format]	<i>missing</i>
modate	num	Date modified [DATETIME informat/format]	<i>missing</i>
nobs V	num	Number of observations	<i>missing</i>
delobs V	num	Number of deleted observations [>= 0]	0
nlobs V	num	Number of logical observations [. if view, else positive integer]	<i>missing</i>
obslen	num	Observation length	0
nvar	num	Number of variables	
maxvar	num	Length of longest variable name	
maxlabel V	num	Length of longest label [>=0]	0
num_character	num	Number of character variables	
num_numeric	num	Number of numeric variables	
protect # V	\$3	Password protection [position 1: - R position 2: - W position 3: - A]	---
compress V	\$8	Compression routine [NO CHAR BINARY]	NO
encrypt V	\$8	Encryption [NO YES]	NO
filesize V	num	File size [>= 0]	0
npage V	num	Number of pages [0, 1, ...]	0
pcompress V	num	Percent compression [0, 1, ...] [value stored is truncated integer -can be negative]	<i>missing</i>
reuse V	\$3	Reuse space [no yes]	no
bufsize V	num	Buffer size {0}	0
indxtype V	\$9	Type of indexes [<i>blank</i> SIMPLE COMPOSITE BOTH]	<i>missing</i>
reqvector # V	\$24	Requirements vector [\$HEX informat, format]	0
maxgen V	num	Maximum number of generations	0
gen	num	Generation number [, 0, 1, 2, ...] Can be greater than MAXGEN, above	<i>missing</i>
attr	\$3	Data set attributes [S ON ...]	<i>missing</i>
sortname	\$8	Name of collating sequence	<i>missing</i>
sorttype	\$4	Sorting type [S=sort verified SR=sort w. NODUPREC SK=sort w. NODUPKEY]	<i>missing</i>
sortchar	\$8	Character sorted by [ANSI ASCII ...]	<i>missing</i>
datarep	\$32	Data representation	NATIVE
datarepname V	\$170	Data representation name	<i>missing</i>
encoding	\$256	Data encoding [blank if view]	Default

* If password protected (TABLES.PROT position 1 = "R") this field will be populated

<i>dict.styles</i> / <i>sh.vStyle</i>		Attributes of Currently Allocated Styles	
▶ libname	\$8	Library name	
▶ memname	\$32	Member name	
▶ style	\$32	Style name [case preserved] V9: two-level style path V8: one-level style identifier	
crdate	num	Date created [DATETIME informat/format]	

<i>dict.titles</i> / <i>sh.vTitle</i>		Values of Titles and Footnotes	
▶ type	\$1	Title location [T F]	
▶ number	num	Title number [1 ... 10]	
text	\$256	Text [case preserved] Rendering information (h=1 j=l etc.) is removed. Macro variables are resolved.	

<i>dict.views</i> / <i>sh.vView</i>		PW View Attributes (SAS file formats only)	
▶ libname	\$8	Library name [upper case]	
▶ memname	\$32	Member name [upper case]	
memtype	\$8	Member type [VIEW]	
engine	\$8	Engine name [SASESQL SASDSV ...]	