



Database Administration Quick Reference
15.0



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How to Use This Guide

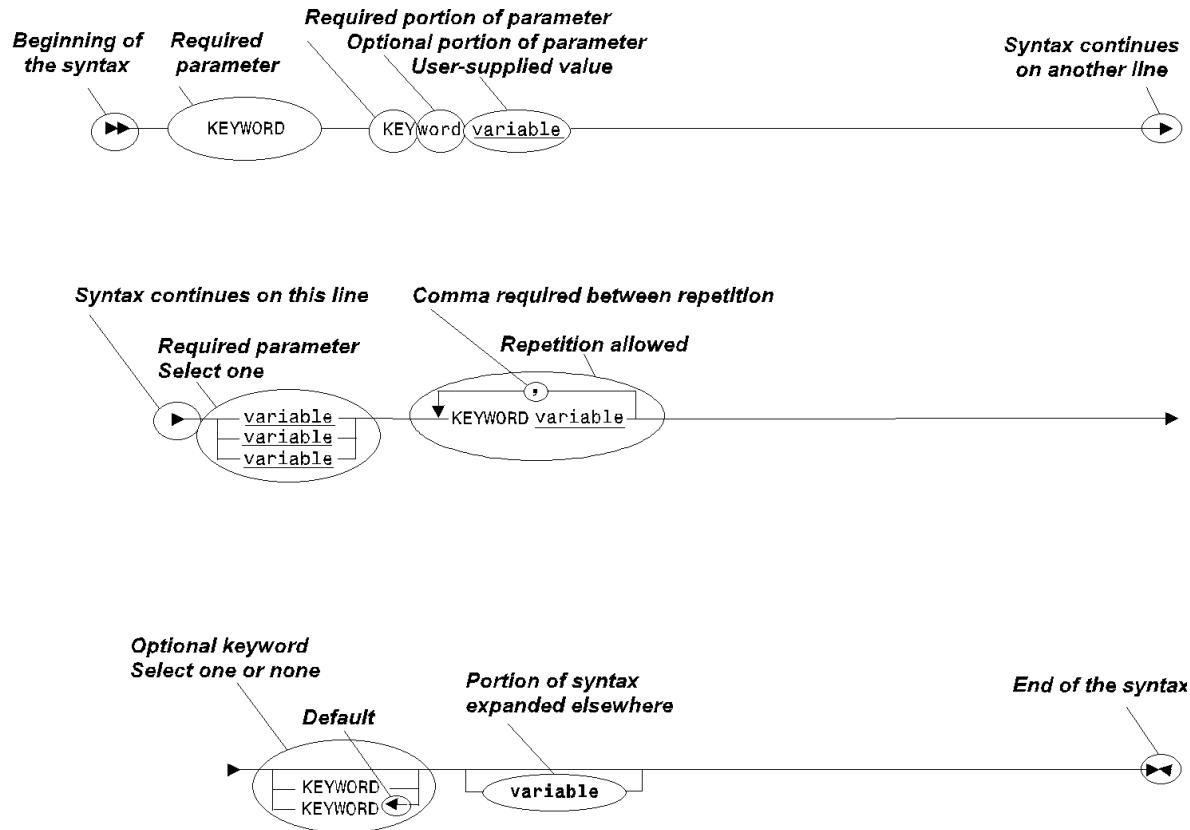
This quick reference is for Release 15.0 of CA-IDMS/DB. It accompanies *CA-IDMS Command Facility*, *CA-IDMS/DB Database Administration*, and *CA-IDMS Utilities*.

Understanding Syntax Diagrams

Look at the list of notation conventions below to see how syntax is presented in this manual. The example following the list shows how the conventions are used.

UPPERCASE OR SPECIAL CHARACTERS	Represents a required keyword, partial keyword, character, or symbol that must be entered completely as shown.
lowercase	Represents an optional keyword or partial keyword that, if used, must be entered completely as shown.
<u>underlined lowercase</u>	Represents a value that you supply.
←	Points to the default in a list of choices.
lowercase bold	Represents a portion of the syntax shown in greater detail at the end of the syntax or elsewhere in the document.
►—————	Shows the beginning of a complete piece of syntax.
—————►	Shows the end of a complete piece of syntax.
—————→	Shows that the syntax continues on the next line.
►—————	Shows that the syntax continues on this line.
—————→	Shows that the parameter continues on the next line.
—————→	Shows that a parameter continues on this line.
►—— parameter ——►	Shows a required parameter.
► [parameter] ——►	Shows a choice of required parameters. You must select one.
► [parameter] ——►	Shows an optional parameter.
► [parameter] ——►	Shows a choice of optional parameters. Select one or none.
►— parameter ——►	Shows that you can repeat the parameter or specify more than one parameter.
►— parameter ——►	Shows that you must enter a comma between repetitions of the parameter.

Sample Syntax Diagram



Chapter 1. Database Administration Tools

Component	Tool	Task Code	Batch Program
Non-SQL defined schema source	Schema compiler	SCHEMA	IDMSCHEM
SQL-defined schema source	Command facility	OCF	IDMSBCF
Physical database definitions	Command facility	OCF	IDMSBCF
	<ul style="list-style-type: none">■ Segments, areas, files■ Database name tables■ DMCL source and load modules		
Subschema source	Subschema compiler	SSC	IDMSUBSC
Subschema load module	DDDL compiler(1); subschema compiler	IDD; SSC	IDMSDDL; IDMSSUBC
Definitions of:	DDDL compiler(1)	IDD	IDMSDDL
	<ul style="list-style-type: none">■ Elements■ Messages■ Modules■ Programs■ Records		
Edit/code table source	DDDL compiler(1)	IDD	IDMSDDL
Map source	Mapping utility Mapping compiler		RHDCPUT RHDCMAP1
Module source	DDDL compiler(1)	IDD	IDMSDDL
	<ul style="list-style-type: none">■ Copybook-style modules■ CA-ADS process code		

Component	Tool	Task Code	Batch Program
Load modules for:	DDDL compiler(1)	IDD	IDMSDDL
■ Applications			
■ Dialogs			
■ Maps			
■ Edit/code tables			
■ RCMs			
Access modules	Command facility	OCF	IDMSBCF

1 All definitions that can be migrated using the DDDL compiler can also be migrated from the command facility.

Chapter 2. CA-IDMS Command Facility

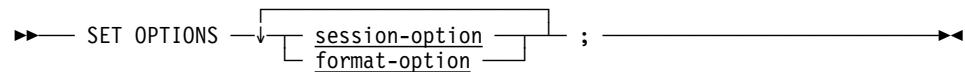
Coding Considerations

Guideline For:	Description
Input	<p>Must be in the columns ranging from 1 to 71 (batch), columns ranging from 1 to 79 (online).</p> <p>Can be either uppercase or lowercase characters (or mixed).</p> <p>A statement can span any number of input lines. You can submit multiple statements on the same input line.</p>
Syntax	<p>Use the syntax rules that apply to the type of statement:</p> <ul style="list-style-type: none">■ Physical DDL■ Logical DDL (SQL-defined databases)■ SQL DML■ Utilities■ Security administration
Statement terminator	<p>End each statement with a semicolon. The semicolon can be on the line with the statement, or it can be on the line following the statement.</p> <p>You can omit the terminator at the end of your last statement.</p>
Comments	<p>Begin comments with a double hyphen (--). Comments continue to the end of an input line.</p>
Connecting to a dictionary	<p>Use a CONNECT statement in a batch or online command facility session (see CONNECT syntax in this section).</p>
Session control	<p>Use the SET OPTIONS statement (see SET OPTIONS syntax in this section).</p>
Output formatting control	<p>Use the SET OPTIONS statement (see SET OPTIONS syntax in this section).</p>

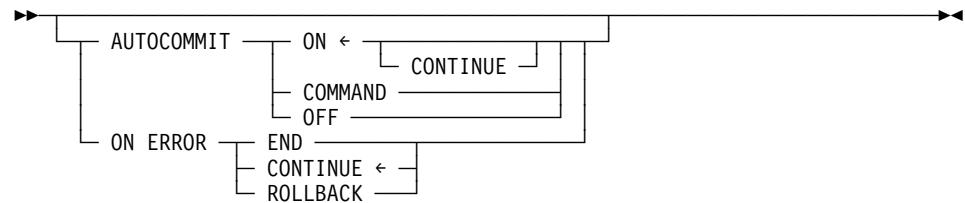
2.1 CONNECT

►— CONNECT TO dictionary-name —►

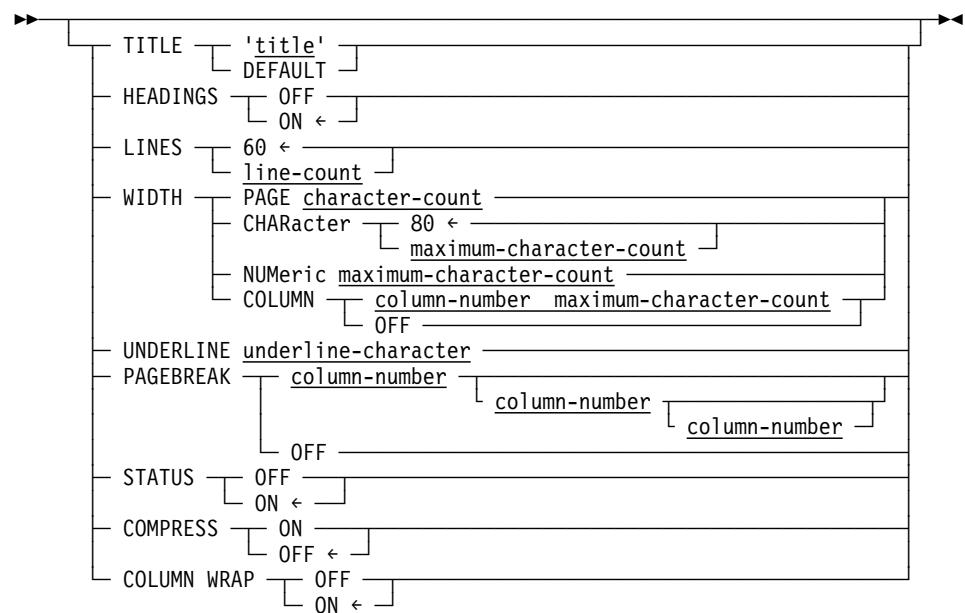
2.2 SET OPTIONS



Expansion for session-option



Expansion for format-option



AUTOCOMMIT Options

Option	IDMSBCF	OCF	OCFX
AUTOCOMMIT ON (default)	Executes a COMMIT WORK RELEASE after the last statement in the input stream.	Executes a COMMIT WORK CONTINUE at the end of the edit buffer. Executes a COMMIT WORK RELEASE at the end of the SQL session; resources are released and temporary tables are dropped.	Executes a COMMIT WORK RELEASE at the end of the module.
AUTOCOMMIT ON CONTINUE	N/A	Holds resources until a COMMIT is issued, enabling you to keep temporary tables; note that this option can slow performance and should be used with caution.	N/A
AUTOCOMMIT COMMAND		Executes a COMMIT WORK CONTINUE after each successfully executed statement.	
AUTOCOMMIT OFF		No automatic COMMIT occurs; you must specify COMMIT WORK RELEASE manually. IDMSBCF and OCFX — A release is issued at the end of processing, and this may cause a rollback if any work has not been committed.	

ON ERROR Options

Option	IDMSBCF	OCF	OCFX
ON ERROR CONTINUE (default)	Continues executing.	Continues executing.	Continues executing.

Option	IDMSBCF	OCF	OCFX
ON ERROR END	Ends job step and session. Proceeds with the AUTOCOMMIT option.	Ends execution of commands in the current edit buffer and ends the SQL session. Does not end the OCF session. Proceeds with the AUTOCOMMIT option.	Ends execution of commands in the module and ends the session. Proceeds with the AUTOCOMMIT option.
ON ERROR ROLLBACK	Issues a ROLLBACK RELEASE and ends job step.	Issues a ROLLBACK RELEASE and ends the SQL session. Does not end the OCF session.	Issues a ROLLBACK RELEASE and ends the execution of the module.

2.3 OCF

OCFX Statement

```
►— OCFX module-name —[ Version version-number ]—[ Echo ↵ ]—[ Noecho ]—►
```

OCFX Status Codes

Status Code	Message And Description
DC394001	INVALID SYNTAX TOKEN FOUND OCFX calls RHDCMISC/SCAN to parse input. When an improper token is encountered, OCFX abends.
DC394002	INVALID MAJOR SCAN CODE <nnn> OCFX calls RHDCMISC/SCAN to parse input. When an unexpected major scan code is returned, OCFX abends.
DC394003	COMMAND EXCEEDS AVAILABLE SPACE OCFX calls RHDCMISC/SCAN to parse input. Token values are extracted and kept in a command buffer that is returned to OCFX. The SCAN routine requires more space.
DC394004	INVALID DICTIONARY/NODE NAME OCFX extracts the dictionary name and node name from the current session PROFILE. It attempts to extract the IDD module with commands to be executed from this dictionary/node combination. The BIND failed.
DC394005	INTERNAL STORAGE EXCEEDED OCFX counts the number of TEXT-088 records in the dictionary module to be executed to determine how much storage to acquire for the command buffer. If this size is incorrect, the error results.
DC394006	MODULE NOT FOUND OCFX attempts to locate a specific IDD module name with either a specified or default (1) version number. The module must have a language attribute of OCF. If any of these conditions fail, the module cannot be loaded.
DC394007	MODULE HAS NO TEXT OCFX located the IDD module name with either a specified or default (1) version number with a language attribute of OCF. However, the module has no TEXT-088 records.

Status Code	Message And Description
DC394008	UNEXPECTED DBMS ERROR OCFX encountered a DBMS error that it does not have code to handle.

SAVE

►— SAVE module-name [Version version-number] ; —►

EDIT

►— EDIT module-name [Version version-number] ; —►

Session Control Commands

Command	Description
APPLY	Updates the screen and work file but does not execute the statements in the work file.
CLEAR	Deletes all data contained in the work file.
DISPLAY LINE	Displays a page of the work file, starting with the specified line.
DISPLAY PAGE	Displays the requested page from the work file.
END	Immediately terminates the current session.
ENTER=APPLY	Sets the ENTER key to execute either the APPLY or the UPDATE command.
ENTER=UPDATE	
ESCAPE	Establishes the escape character that must be used with line editing commands.
FIND	Locates a character string by searching forward or backward in the work file.
HELP	Lists each session-control command and the associated PF key currently assigned to execute that command.
INSERT	Inserts lines into the work file after the line at which the cursor is positioned.
PRINT	Prints the contents of the work file.
REPEAT	Repeats the line at which the cursor is positioned.
RESHOW	Cancels all changes made to the current screen and redisplays the previous screen.

Command	Description
SUSPEND	Suspends the current session and returns control to the host TP monitor.
SWAP	Restores the screen and the work file to their condition prior to the last OCF execution.
SWITCH (only if OCF is executing under the control of the Transfer Control Facility)	Suspends the session and transfers control to the specified online CA-IDMS component or to the Selection screen of the Transfer Control Facility.
UPDATE	Updates the work file and executes the statements in the work file.

Session Control Command Function Keys

PF Key	Corresponding Online Command And Description
[PF1], [PF8], [PF13]	DISPLAY PAGE NEXT Scrolls forward one page.
[PF2], [PF7], [PF14]	DISPLAY PAGE PRIOR Scrolls backward one page.
[PF3], [PF15]	DISPLAY LINE NEXT Scrolls forward one line.
[PF4], [PF16]	INSERT Inserts up to a full screen of lines.
[PF5], [PF17], [Enter]	APPLY Updates screen contents and work file but does not execute the commands in the work file.
[PF6], [PF18], [Enter]	UPDATE Updates work file and executes the contents of the work file.
[PF9], [PF21]	SWAP Redisplays the input statements in the work file.
[PF12], [PF24]	PRINT Prints the contents of the work file (DC/UCF only).
[PA1]	Cancel FIND Cancels the FIND command.

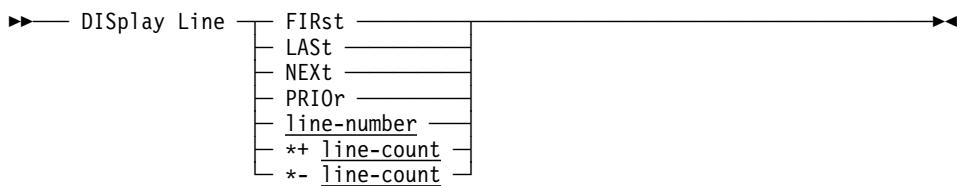
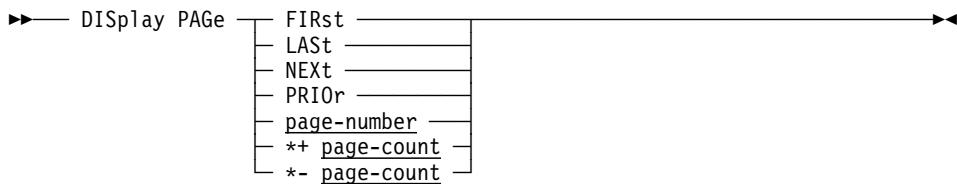
PF Key	Corresponding Online Command And Description
[PA2]	RESHOW Cancels changes to the current screen and redisplays the screen.
[Clear]	CLEAR (CLR) Clears the contents of the work file.
[Enter]	Updates the screen and work file (if you entered the command ENTER=APPLY since the start of your online session).
[Enter]	Updates the work file and executes the statements contained in the work file (if you entered the command ENTER=UPDATE since the start of your online session).

APPLY

►— APPly —————→

CLEAR

►— CLEar —————→
 |
 CLR —————→

DISPLAY LINE**DISPLAY PAGE****END**

►►— END ——————►►

ENTER=

►►— ENTer= — UPDate — APPlY ——————►►

ESCAPE

►►— ESCape escape-character ——————►►

FIND

►►— Find 'character-string' — FWD — BAC ——————►►

HELP

►►— HELp ——————►►

INSERT

►►— INSert ——————►►

PRINT

►►— PRInt ——————►►

REPEAT

►►— REPeat repeat-count ——————►►

RESHOW

►►— REShow ——————►►

SUSPEND

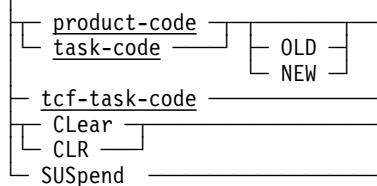
►►— SUSpend —————→

SWAP

►►— SWAp —————→

SWITCH

►►— SWitch —————→

**UPDATE**

►►— UPDate —————→

Editing Commands

Edit Command	Command Format
COPY	<p>Copy a single line: %C</p> <p>Copy this line and the next <i>n-1</i> lines: %C<i>n</i></p> <p>Copy a block of lines: %CB (on the first line of the block) %CE (on the last line of the block)</p> <p>You follow a COPY command with an AFTER or BEFORE command.</p>
DELETE	<p>Delete a single line: %D</p> <p>Delete this line and the next <i>n-1</i> lines: %D<i>n</i></p> <p>Delete a block of lines: %DB (on the first line of the block) %DE (on the last line of the block)</p>

Edit Command	Command Format
MOVE	<p>Move a single line:</p> <p style="text-align: center;">%M</p> <p>Move this line and the next <i>n-1</i> lines:</p> <p style="text-align: center;">%M<i>n</i></p> <p>Move a block of lines:</p> <p style="text-align: center;">%MB (on the first line of the block)</p> <p style="text-align: center;">%ME (on the last line of the block)</p> <p>You follow a MOVE command with an AFTER or BEFORE command.</p>
REPEAT	<p>Repeat a single line:</p> <p style="text-align: center;">%R</p> <p>Repeat this line and the next <i>n-1</i> lines:</p> <p style="text-align: center;">%R<i>n</i></p> <p>Repeat a block of lines:</p> <p style="text-align: center;">%RB (on the first line of the block)</p> <p style="text-align: center;">%RE (on the last line of the block)</p>
AFTER	Place a COPY or MOVE block <i>after</i> the line on which this command is placed: %A
BEFORE	Place a COPY or MOVE block <i>before</i> the line on which this command is placed: %B
TOP	Reposition the work file so that the line on which the command appears becomes the top line on the screen: %T

Chapter 3. Physical Database DDL Statements

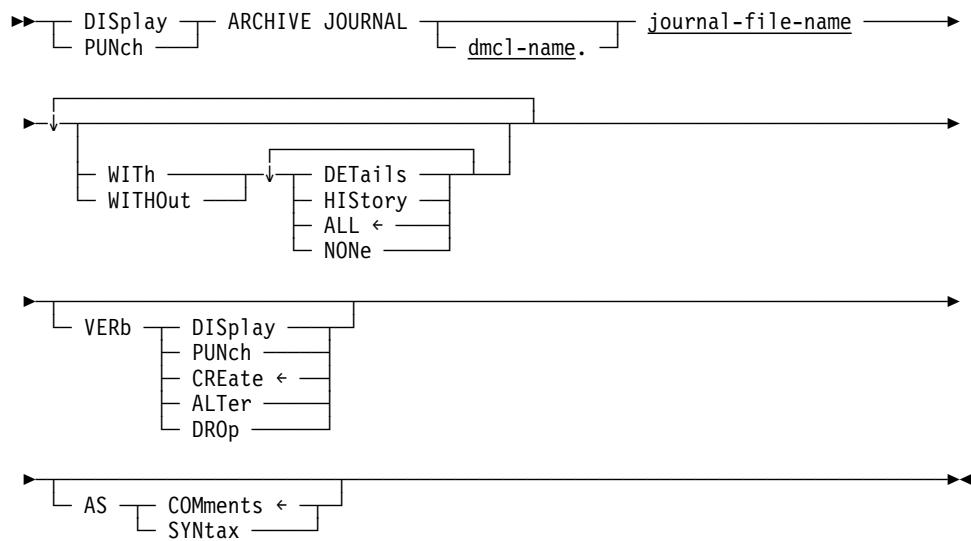
3.1 ARCHIVE JOURNAL

CREATE/ALTER ARCHIVE JOURNAL

```
►─ ┌ CREATE ─┐ ┌ ARCHIVE JOURNAL ─┐ ┌ journal-file-name ─┐ →  
    └ ALTER ─┘   └──────────────────┘ ┌ dmc1-name. ─┘  
  
    ┌ BLOCK SIZE ─┐ ┌ character-count ─┐ →  
    └─────────────┘ ┌ characters ─┘  
  
    ┌ ASSIGN TO ─┐ ┌ ddname ─┐ →  
    └─────────────┘ ┌ filename ─┐  
                  ┌ linkname ─┐
```

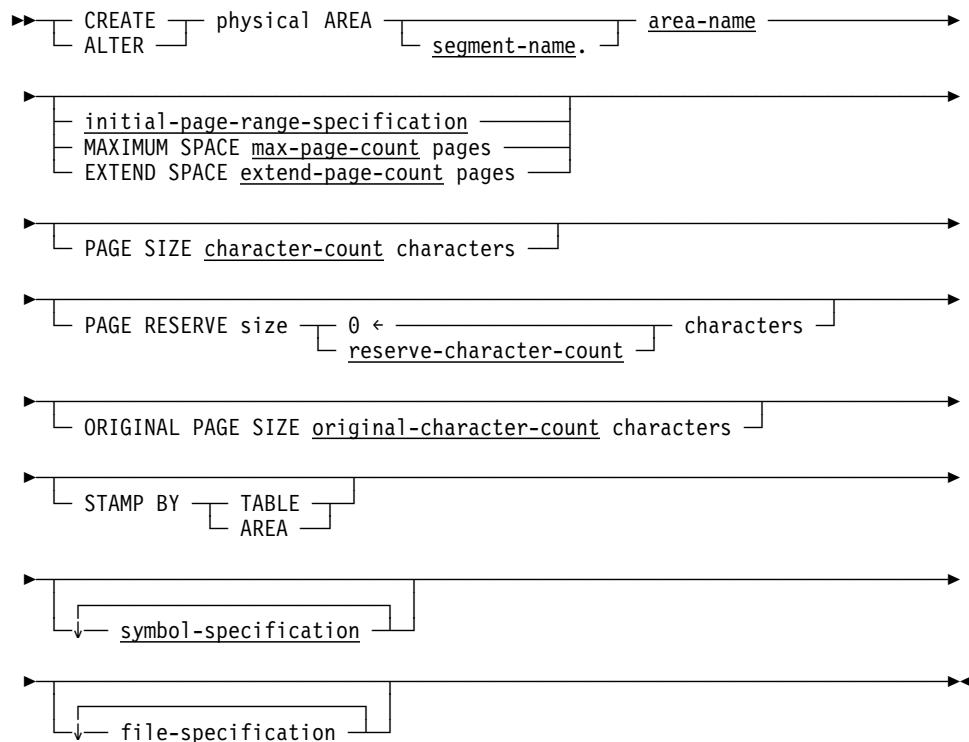
DROP ARCHIVE JOURNAL

```
►─→ DROP ARCHIVE JOURNAL ┌ journal-file-name ─┐ →  
                           ┌ dmc1-name. ─┐
```

DISPLAY/PUNCH ARCHIVE JOURNAL

3.2 AREA

CREATE/ALTER AREA



DROP AREA

```

    ➤— DROP physical AREA [area-name]
    ➤— segment-name
  
```

Expansion for initial-page-range-specification

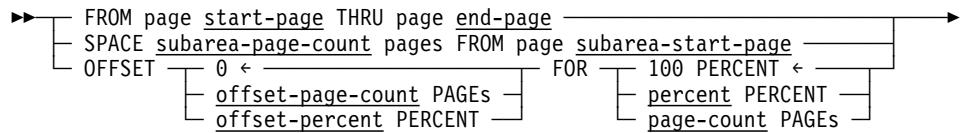
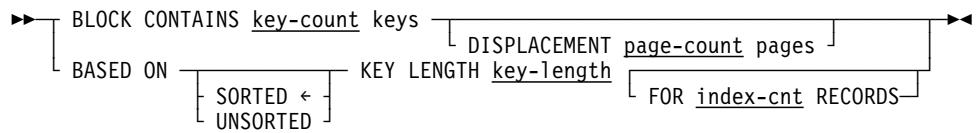
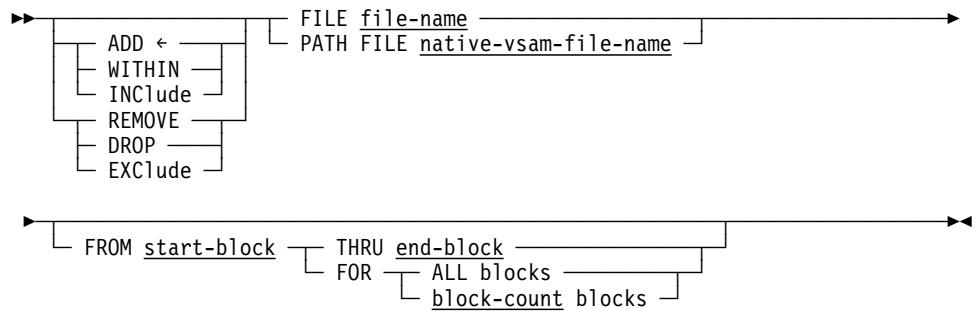
```

    ➤— PRIMARY SPACE primary-page-count pages FROM page start-page
    ➤— MAXIMUM SPACE max-page-count pages
  
```

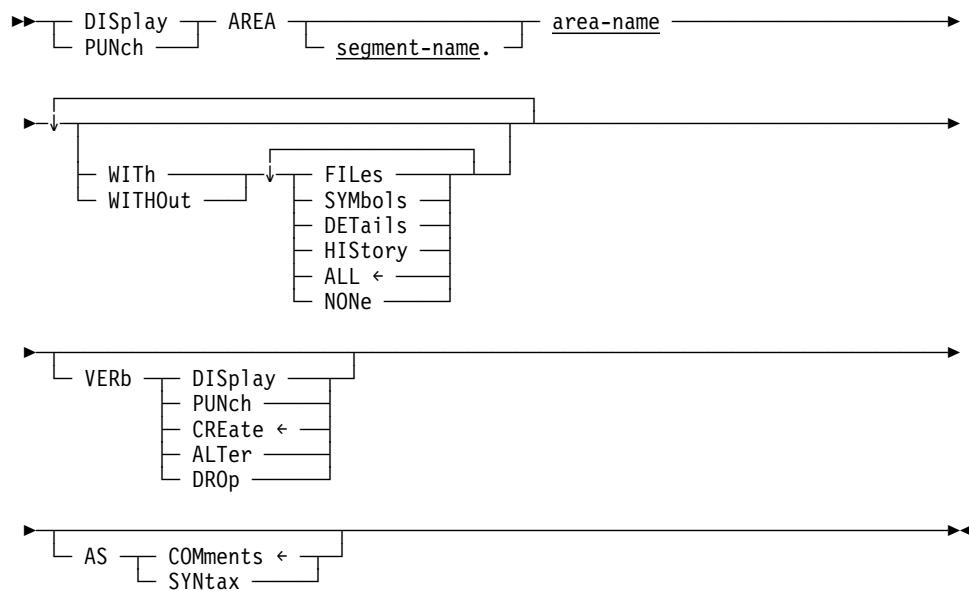
Expansion for symbol-specification

```

    ➤— ADD ←
      ➤— INClude
      ➤— DROP
      ➤— EXClude
    ➤— SUBAREA symbolic-subarea-name [subarea-specification]
    ➤— SYMBOLIC DISPLACEMENT symbolic-displacement-name [page-cnt pages]
    ➤— SYMBOLIC INDEX symbolic-index-name [index-specification]
  
```

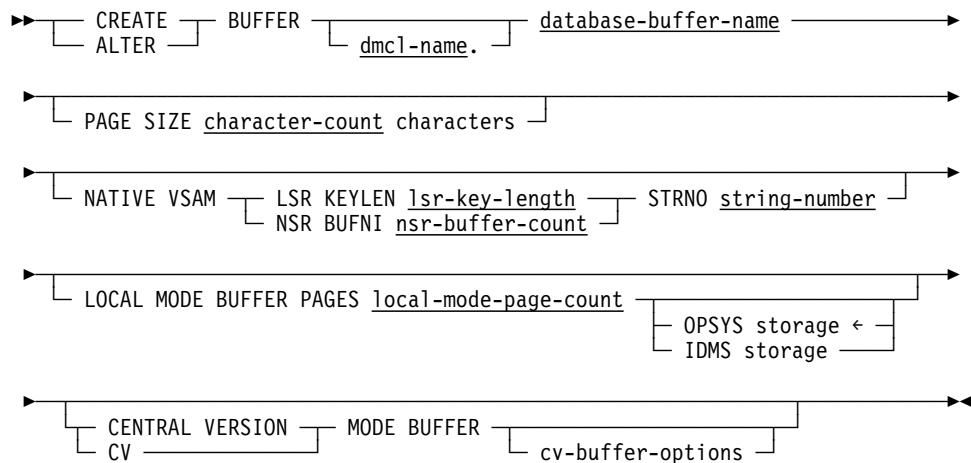
Expansion for subarea-specification**Expansion for index-specification****Expansion for file-specification**

DISPLAY/PUNCH AREA

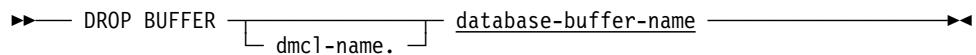


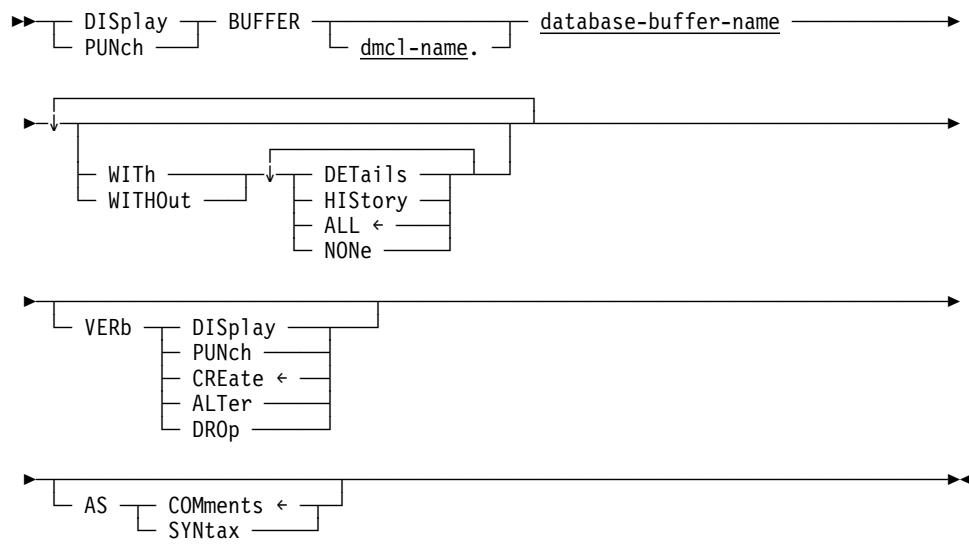
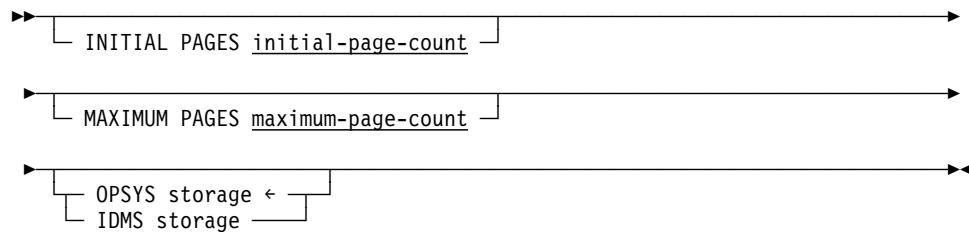
3.3 BUFFER

CREATE/ALTER BUFFER



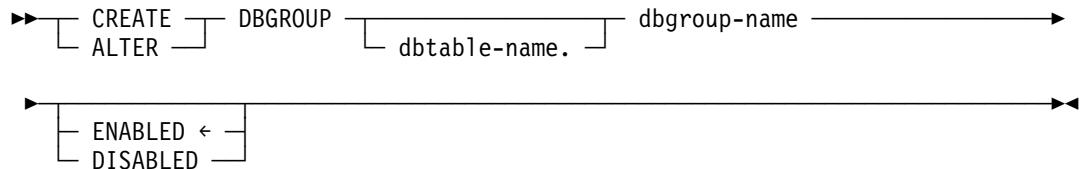
DROP BUFFER



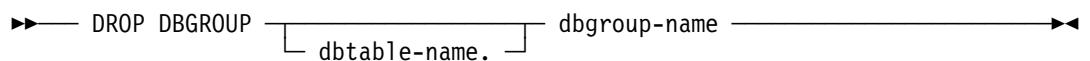
DISPLAY/PUNCH BUFFER**Expansion for cv-buffer-options**

3.4 DBGROUP

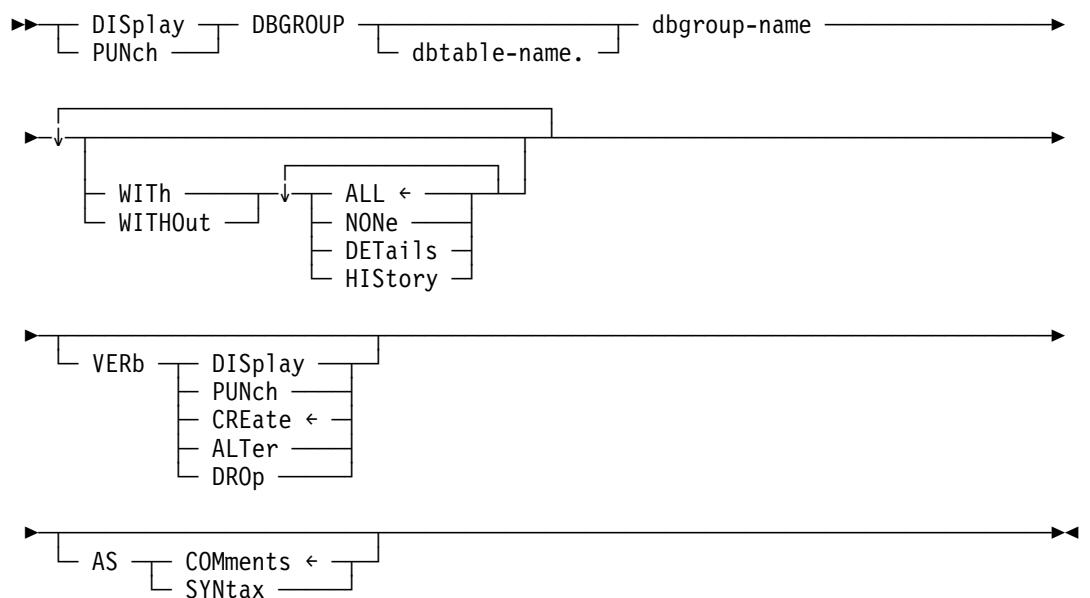
CREATE/ALTER DBGROUP



DROP DBGROUP

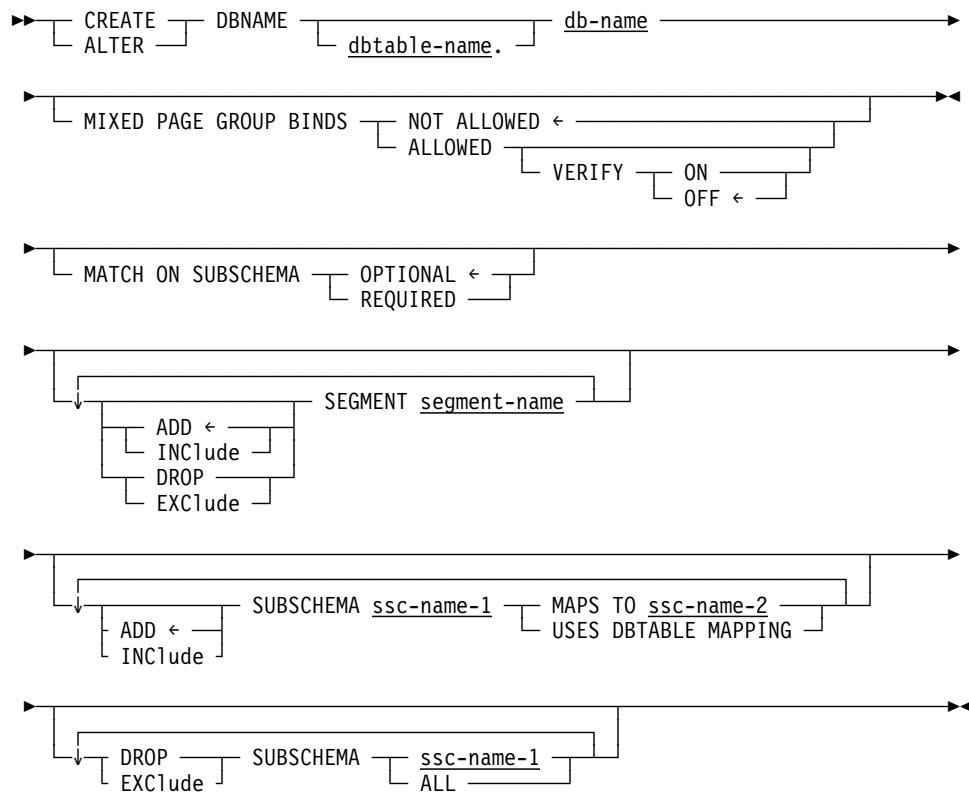


DISPLAY/PUNCH DBGROUP



3.5 DBNAME

CREATE/ALTER DBNAME

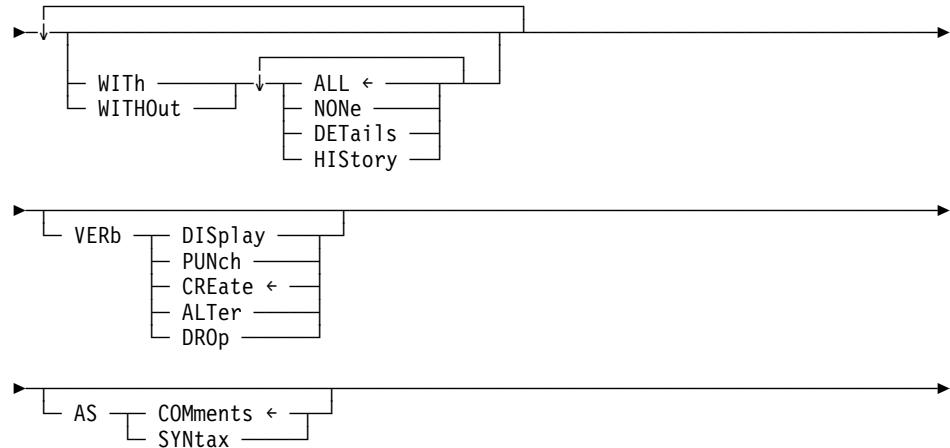


DROP DBNAME

►► DROP DBNAME [dbtable-name.] db-name ►►

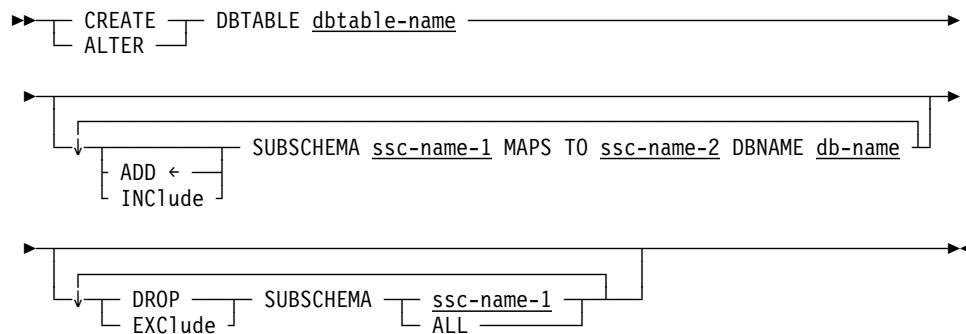
DISPLAY/PUNCH DBNAME

► [DISPlay | PUNch] DBNAME [db-name] ►



3.6 DBTABLE

CREATE/ALTER DBTABLE



DROP DBTABLE

```
➤— DROP DBTABLE dbtable-name —————→
```

GENERATE DBTABLE

```
➤— GENerate DBTABLE dbtable-name —————→
```

DELETE DBTABLE LOAD MODULE

```

    ➤— DElete [ DROP ] DBTABLE LOAD MODULE dbtable-load-module-name —————→
    ↗— PERMANENT —————→
  
```

The diagram shows the syntax for deleting a DBTABLE load module. It starts with 'DElete' or 'DROP' followed by 'DBTABLE LOAD MODULE' and the module name. An optional 'PERMANENT' keyword can be included.

DISPLAY/PUNCH DBTABLE

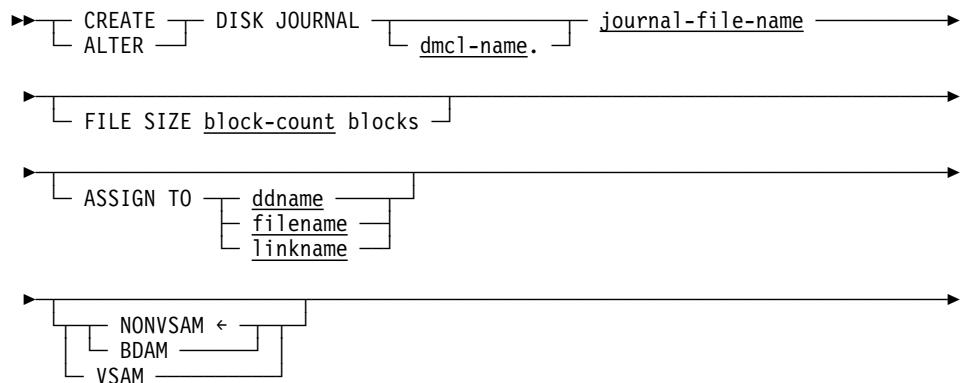
```

    ➤— DISplay [ PUNch ] DBTABLE dbtable-name —————→
    ↗— WITH [ WITHOUT ] ALL ← [ NONE | DETAILS | HISTORY ]
    ↗— VERb [ DISplay | PUNch | CREate | ALTer | DRop ]
    ↗— AS [ COMments ← [ SYNTAX ] ]
  
```

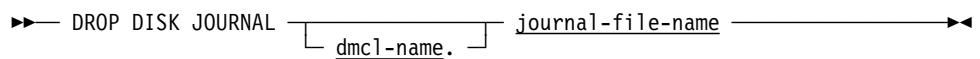
The diagram shows the syntax for displaying or punching a DBTABLE. It starts with 'DISplay' or 'PUNch' followed by 'DBTABLE' and a table name. Options include 'WITH' (with or without details/history), 'VERb' (verb) which lists other display options like 'CREate', and 'AS' (as) which specifies output format like 'COMments' or 'SYNTAX'.

3.7 DISK JOURNAL

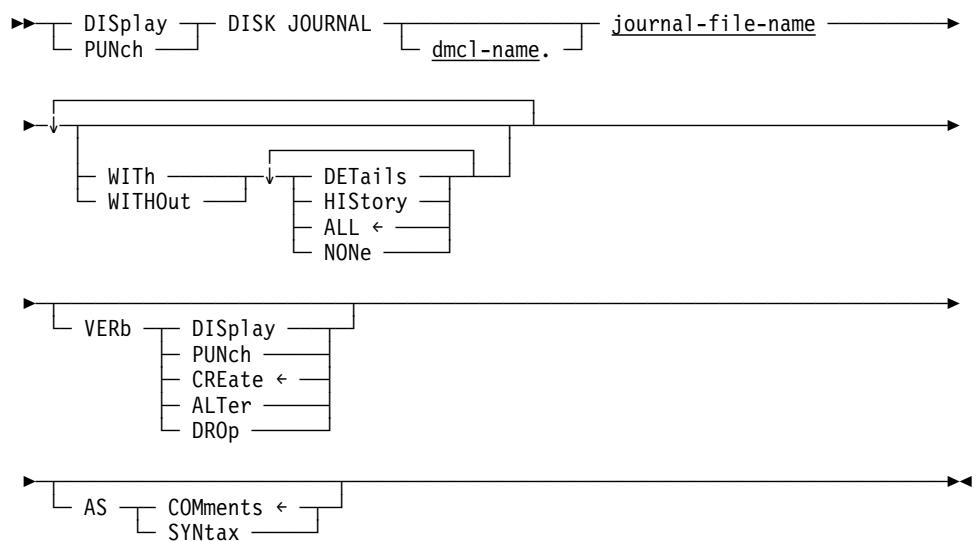
CREATE/ALTER DISK JOURNAL



DROP DISK JOURNAL



DISPLAY/PUNCH DISK JOURNAL



3.8 DMCL

CREATE/DROP DMCL

```
►─ [ CREATE ─ DMCL dmc1-name ] ──────────────────────────────────►
```

```
    └─ [ DROP ] ──────────────────────────────────────────────────────────►
```

ALTER DMCL

```
►─ ALTER DMCL dmc1-name ──────────────────────────────────────────►
```

```
    └─ [ DEFAULT BUFFER [ default-buffer-name ] ] ──────────────────►
```

```
        └─ [ NULL ] ──────────────────────────────────────────────────►
```

```
    └─ [ DBTABLE [ dbtable-name ] ] ──────────────────────────────────►
```

```
        └─ [ NULL ] ──────────────────────────────────────────────────►
```

```
    └─ [ segment-specification ] ──────────────────────────────────►
```

```
        └─ [ file	override-specification ] ──────────────────────────►
```

```
        └─ [ area	override-specification ] ──────────────────────────►
```

```
    └─ [ DATA SHARING [ NO ] ] ──────────────────────────────────►
```

```
        └─ [ data-sharing-attributes ] ──────────────────────────►
```

GENERATE DMCL

```
►─ GENERATE DMCL dmc1-name ──────────────────────────────────►
```

```
    └─ [ FOR [ MVS ] ] ──────────────────────────────────────────►
```

```
        └─ [ VSE ] ──────────────────────────────────────────►
```

```
        └─ [ VM ] ──────────────────────────────────────────►
```

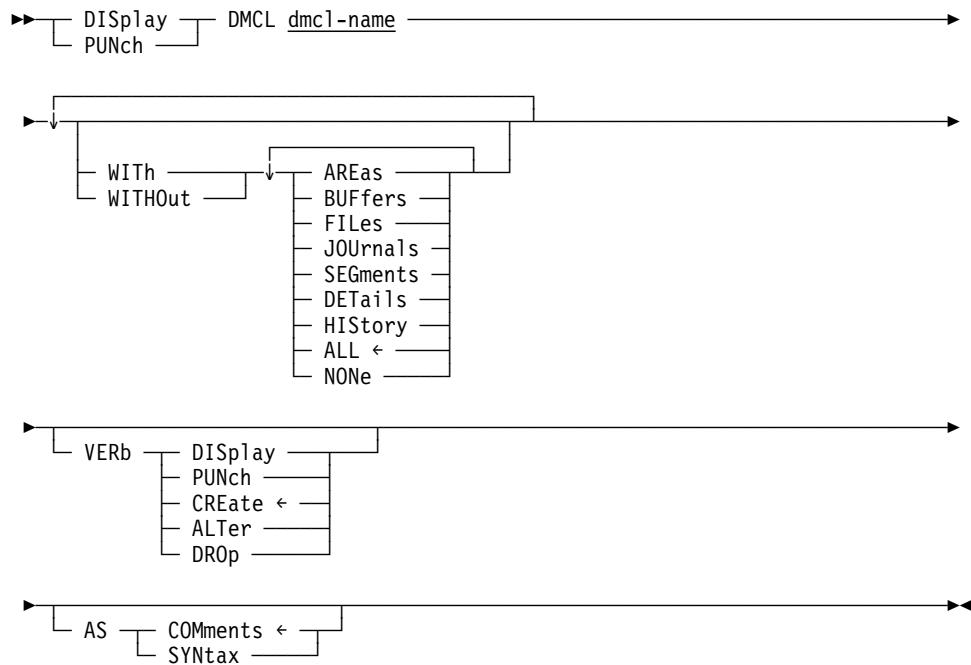
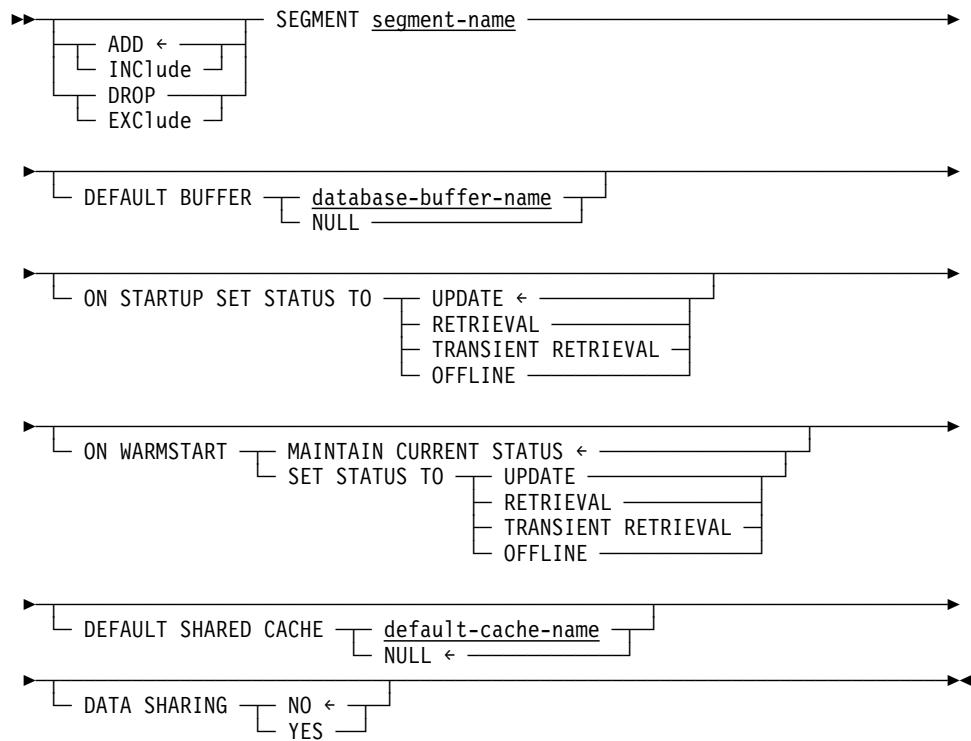
```
        └─ [ BS2000 ] ──────────────────────────────────────────►
```

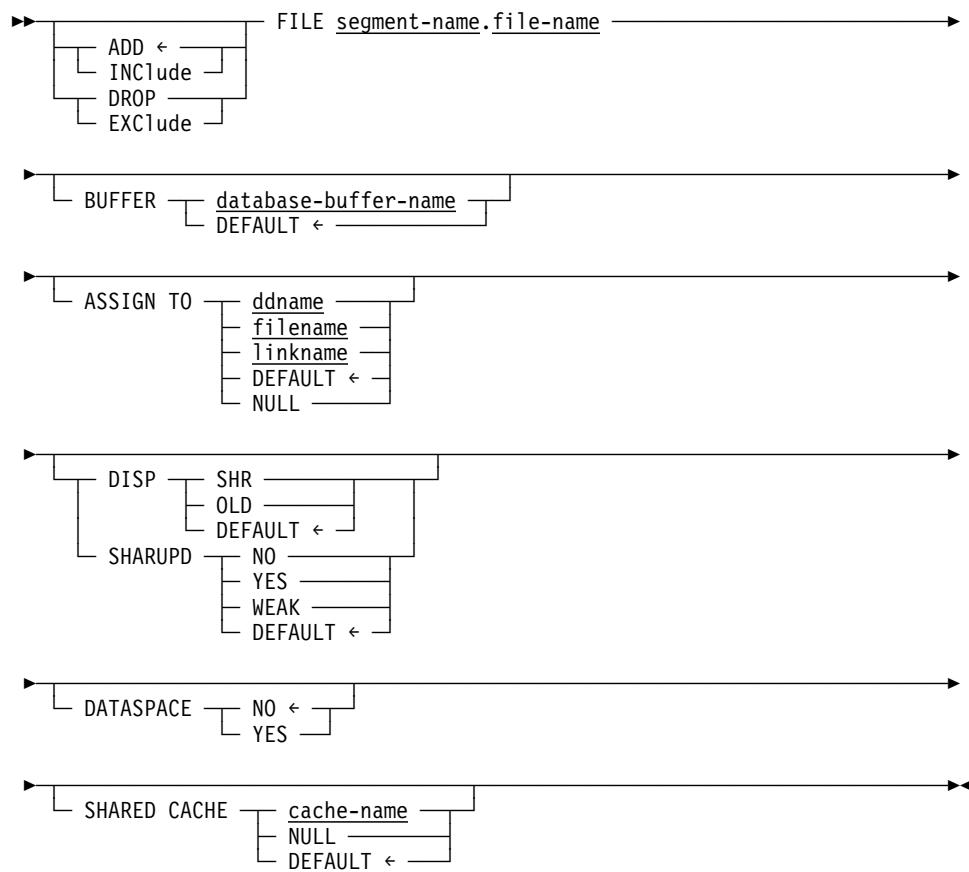
DELETE/DROP DMCL LOAD MODULE

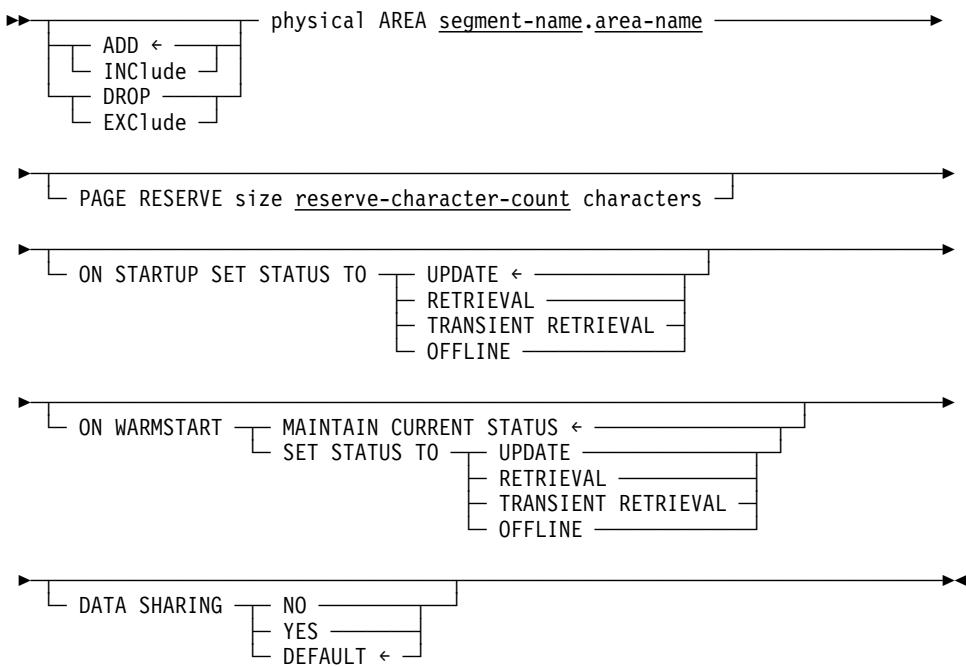
```
►─ [ DElete ─ DMCL LOAD MODULE dmc1-load-module-name ] ──────────►
```

```
    └─ [ DROP ] ──────────────────────────────────────────────────►
```

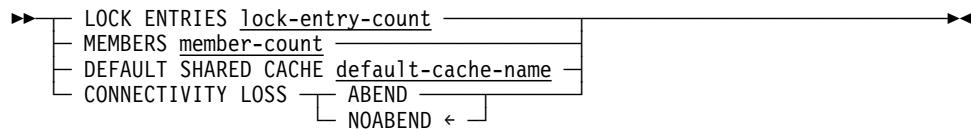
```
    └─ [ PERMANENT ] ──────────────────────────────────────────►
```

DISPLAY/PUNCH DMCL**Expansion for segment-specification**

Expansion for file override**Expansion for area override**

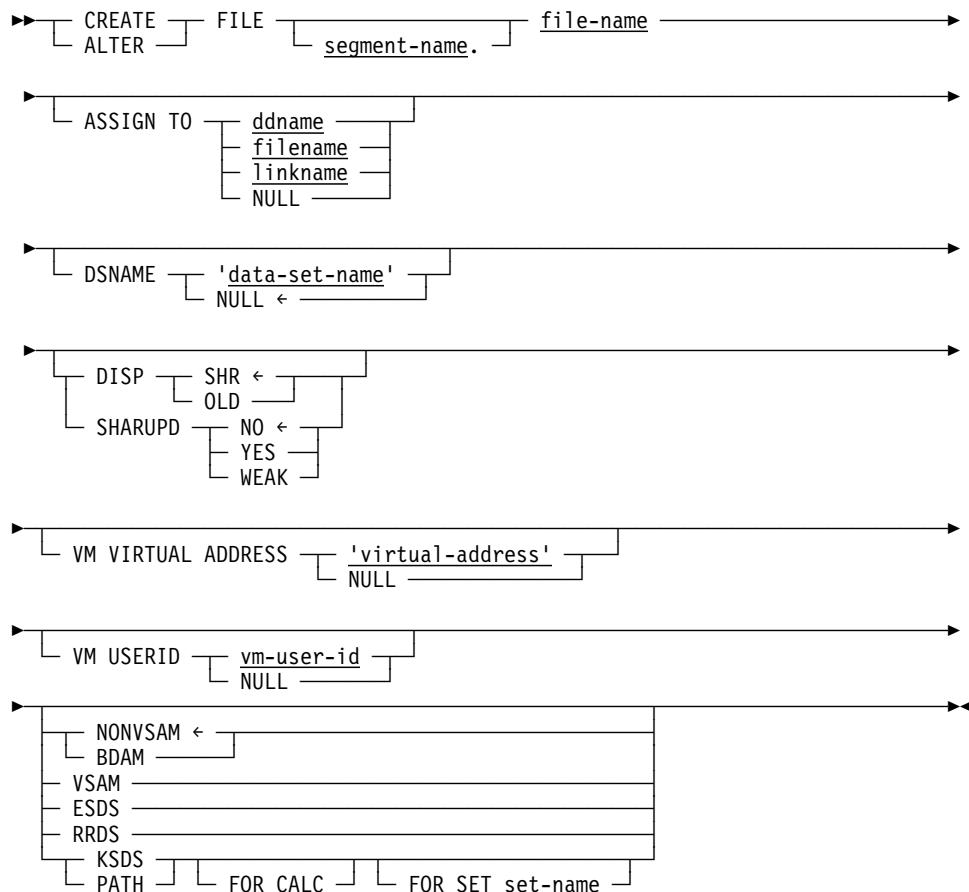


Expansion for data-sharing-attributes



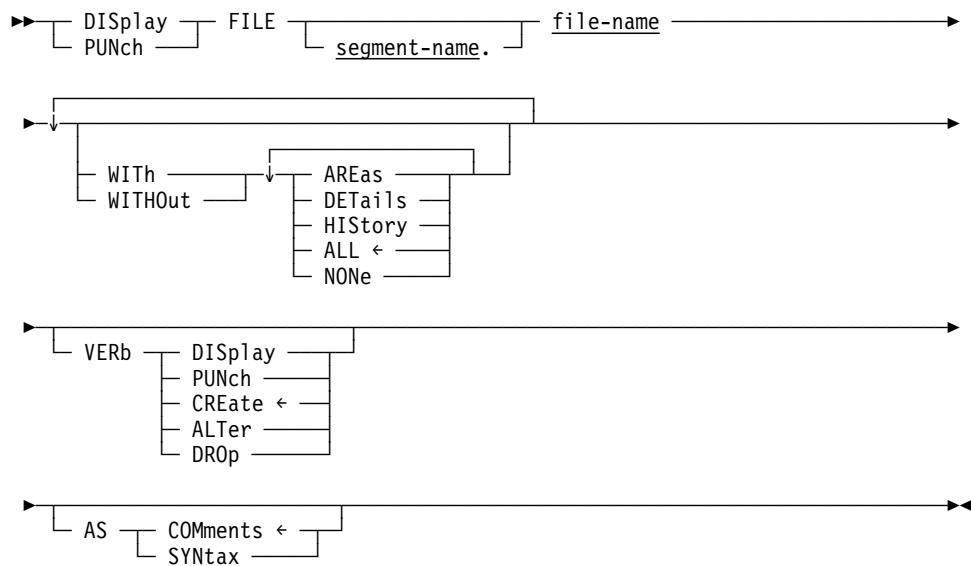
3.9 FILE

CREATE/ALTER FILE



DROP FILE



DISPLAY/PUNCH FILE

3.10 JOURNAL BUFFER

CREATE/ALTER JOURNAL BUFFER

```
►─ [ CREATE ] JOURNAL BUFFER [ journal-buffer-name ] →  
    [ ALTER ] [ dmcl-name. ]  
  
    [ PAGE SIZE character-count characters ] →  
  
    [ BUFFER PAGES page-count ] →
```

DROP JOURNAL BUFFER

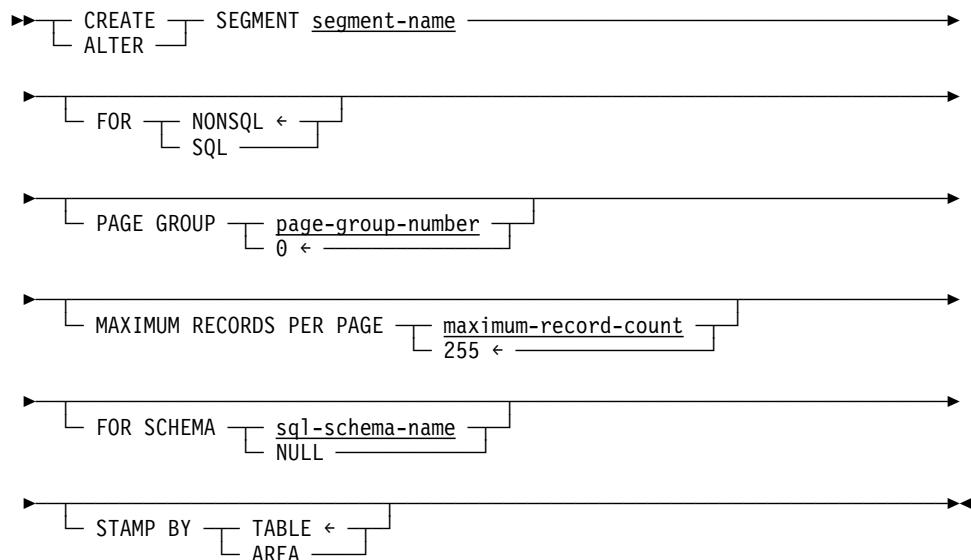
```
►─ DROP JOURNAL BUFFER [ journal-buffer-name ] →  
    [ dmcl-name. ] →
```

DISPLAY/PUNCH JOURNAL BUFFER

```
►─ [ DISPlay ] JOURNAL BUFFER [ journal-buffer-name ] →  
    [ PUNch ] [ dmcl-name. ]  
  
    [ WITH ] [ WITHOUT ] [ DETails ] →  
        [ HIStory ]  
        [ ALL ] ←  
        [ NONe ]  
  
    [ VERb ] [ DISPlay ] →  
        [ PUNch ]  
        [ CREAtE ] ←  
        [ ALTer ]  
        [ DROp ]  
  
    [ AS ] [ COMMENTS ] ←  
        [ SYNTAX ] →
```

3.11 SEGMENT

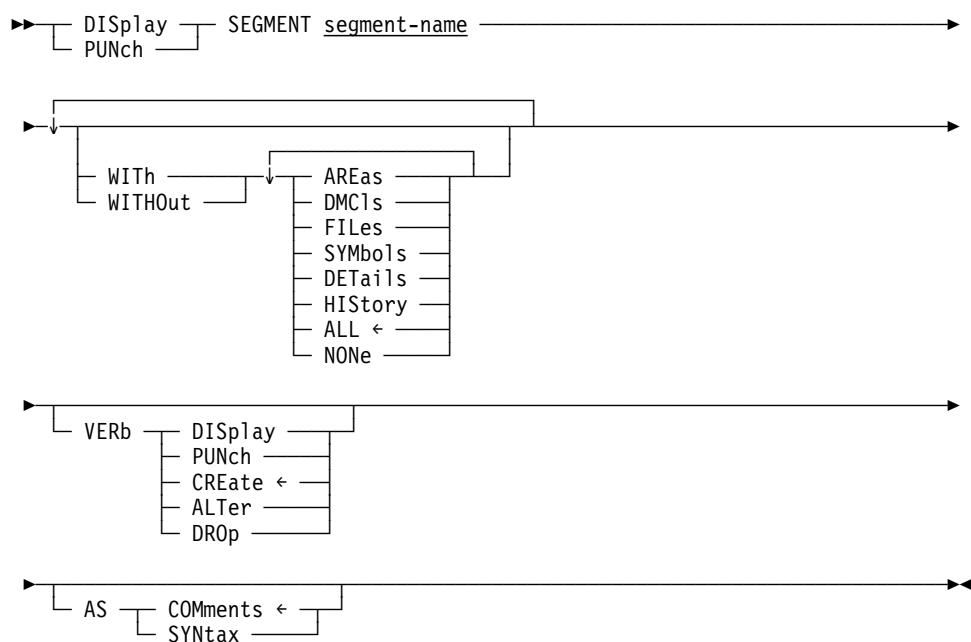
CREATE/ALTER SEGMENT



DROP SEGMENT

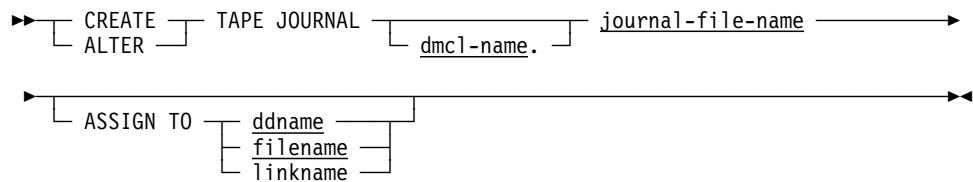
```
➤ [ ] DROP SEGMENT segment-name ➡
```

DISPLAY/PUNCH SEGMENT

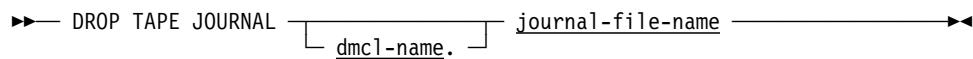


3.12 TAPE JOURNAL

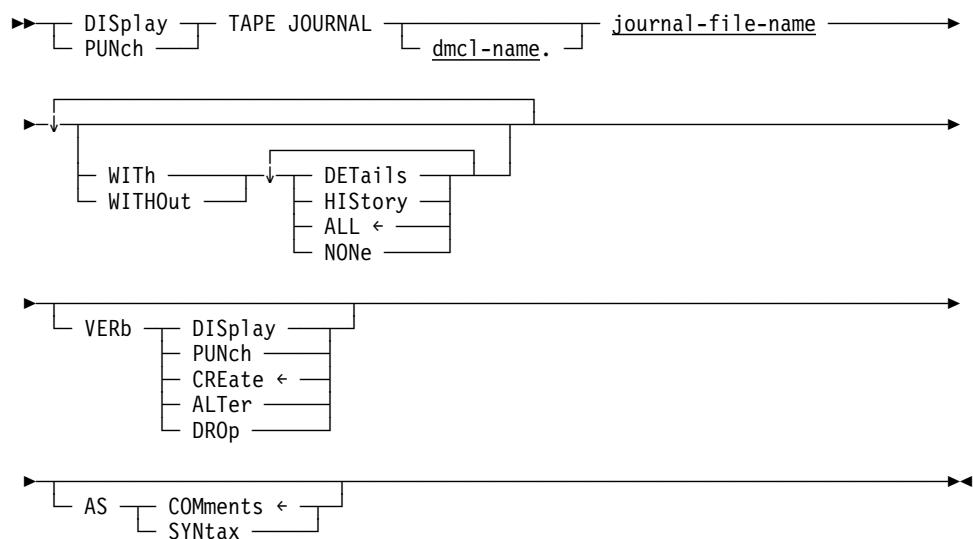
CREATE/ALTER TAPE JOURNAL



DROP TAPE JOURNAL

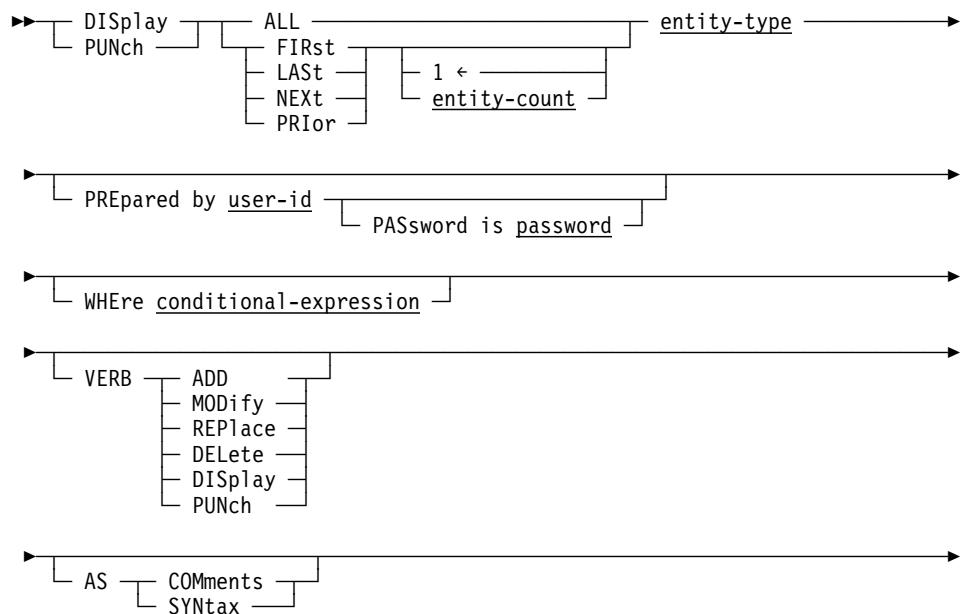


DISPLAY/PUNCH TAPE JOURNAL

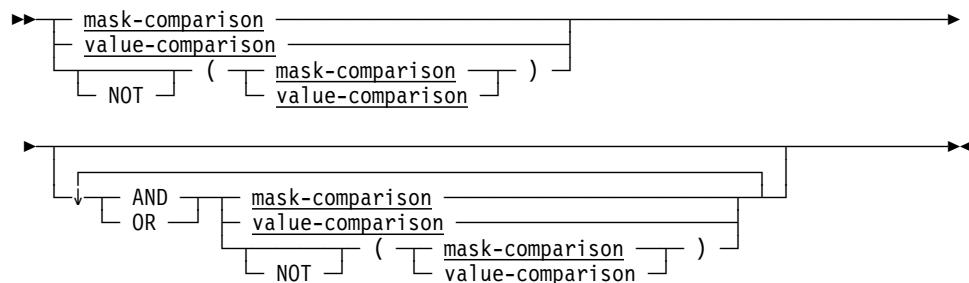


Chapter 4. Schema And Subschema Compiler Directives

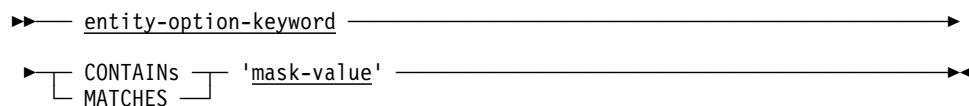
4.1 DISPLAY/PUNCH ALL

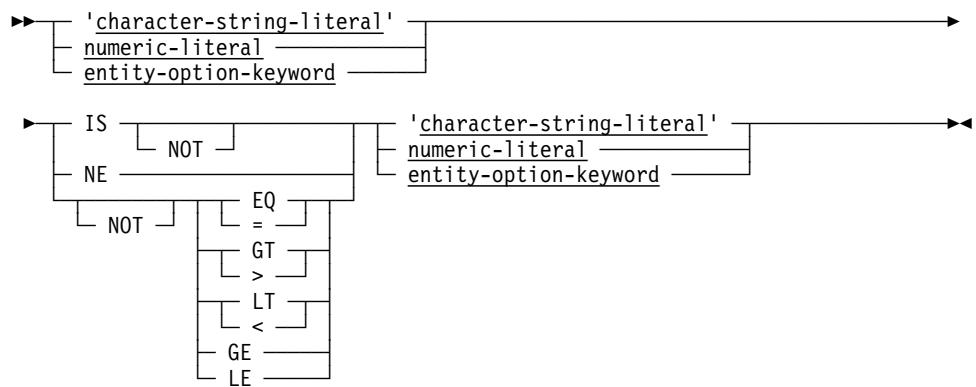


Expansion for conditional-expression

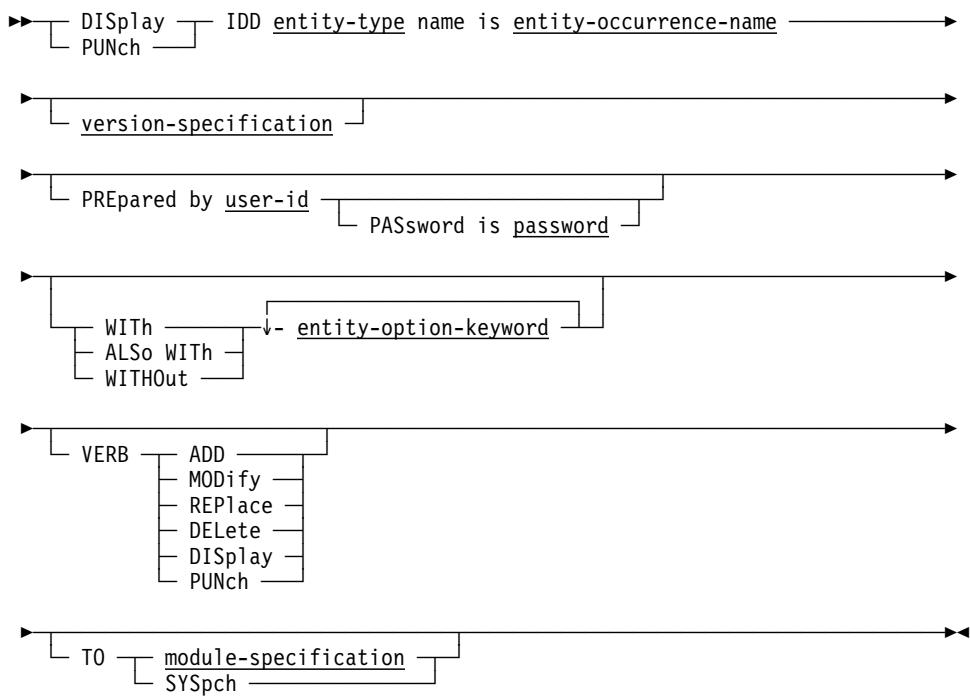


Expansion for mask-comparison



Expansion for value-comparison

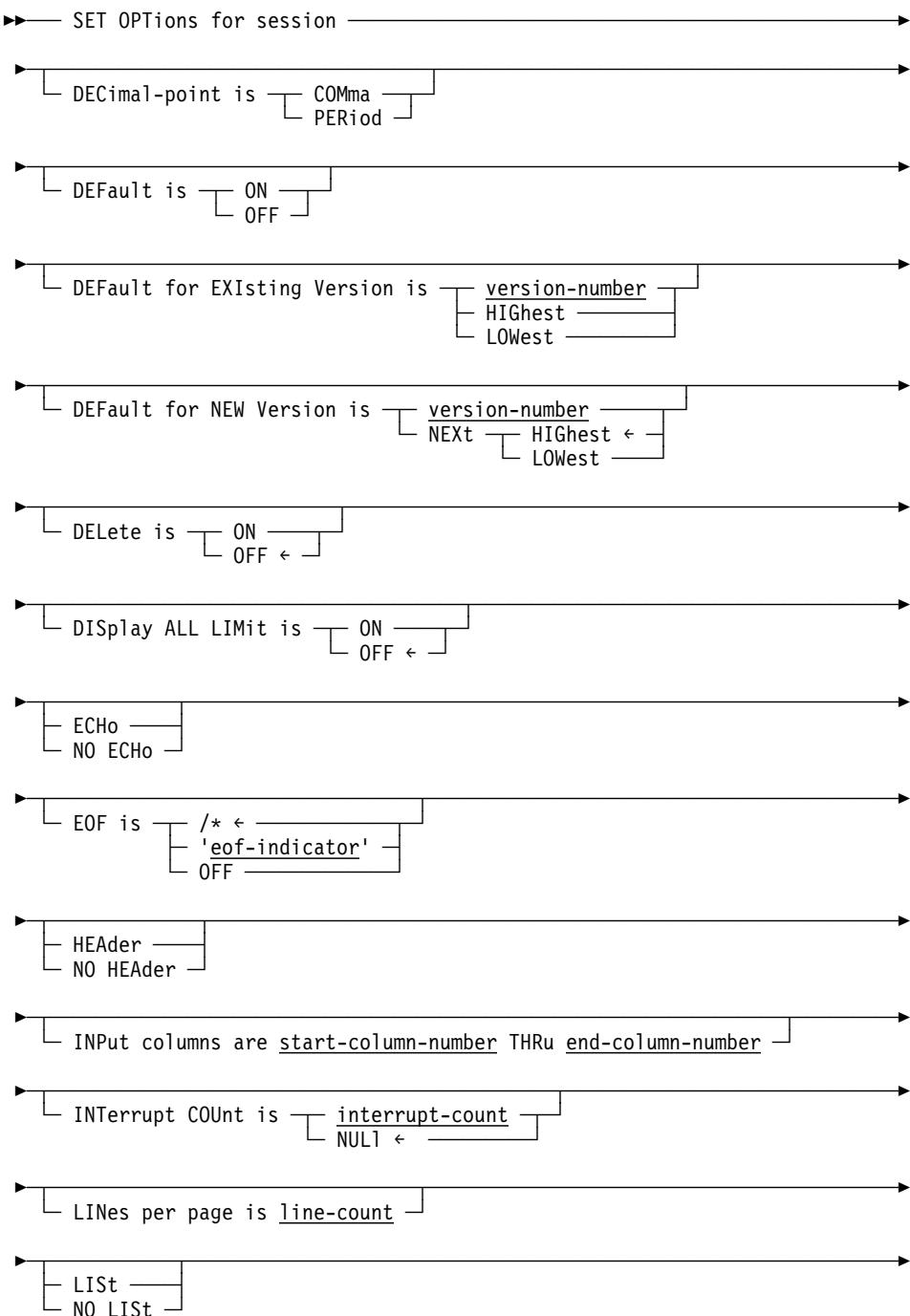
4.2 DISPLAY/PUNCH IDD

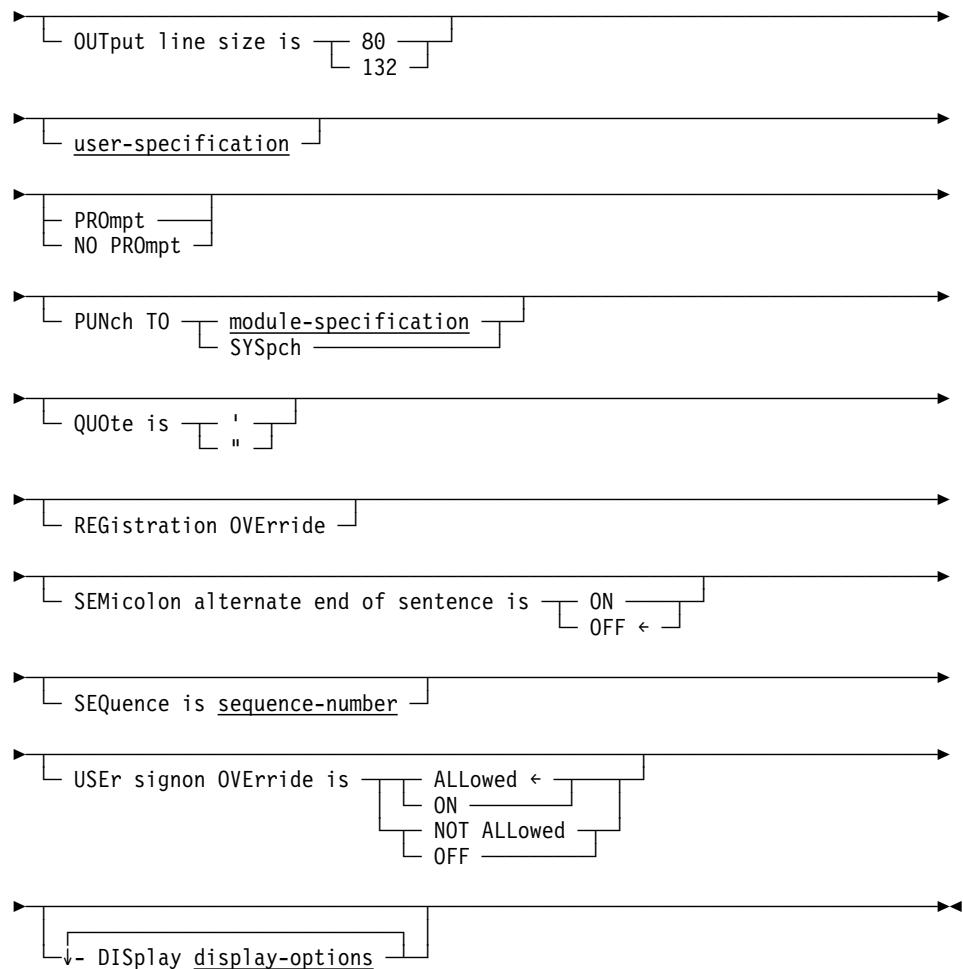


4.3 INCLUDE

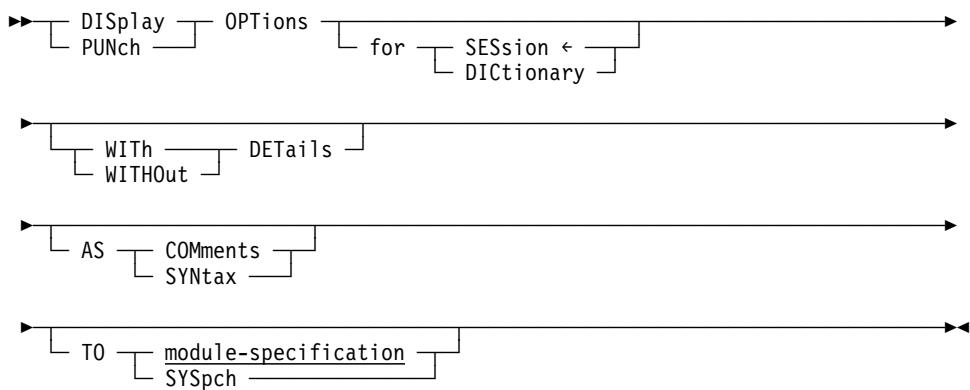
►— INCLUDE module-specification —►

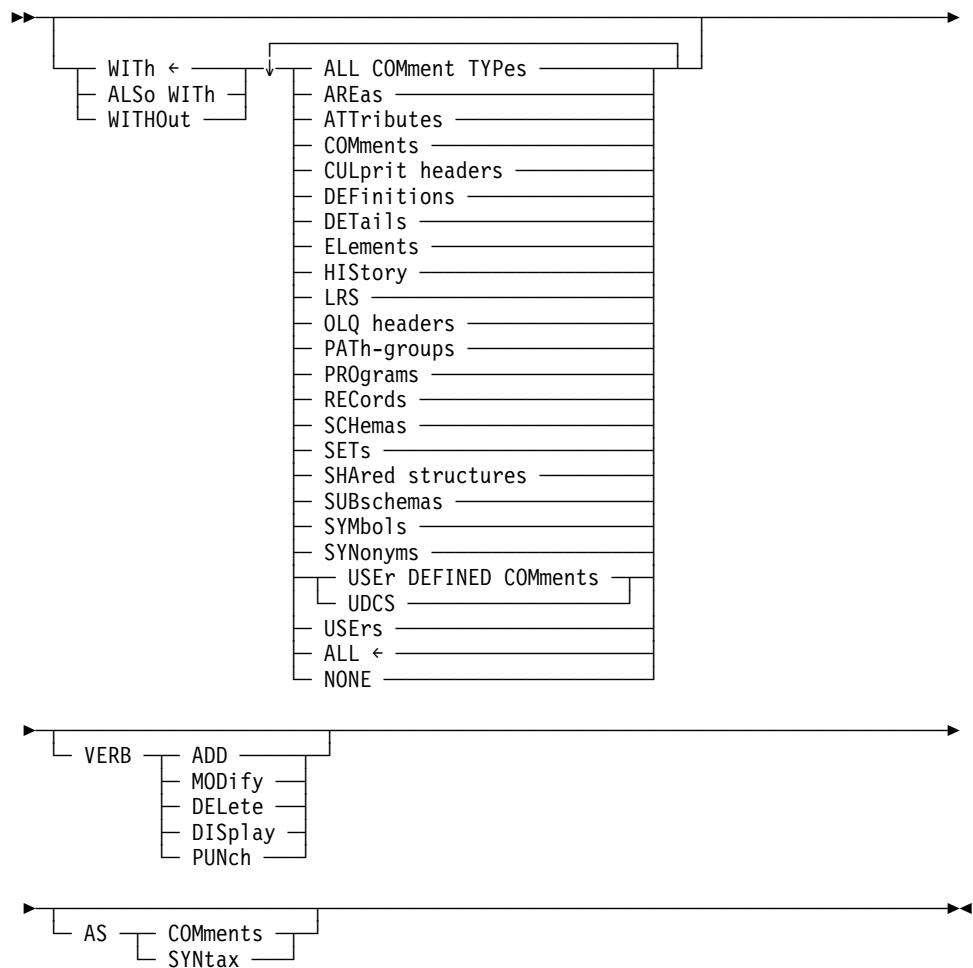
4.4 SET OPTIONS



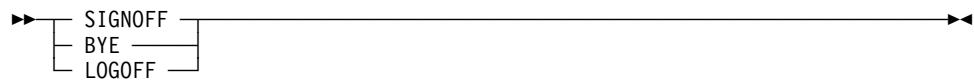


4.5 DISPLAY/PUNCH OPTIONS

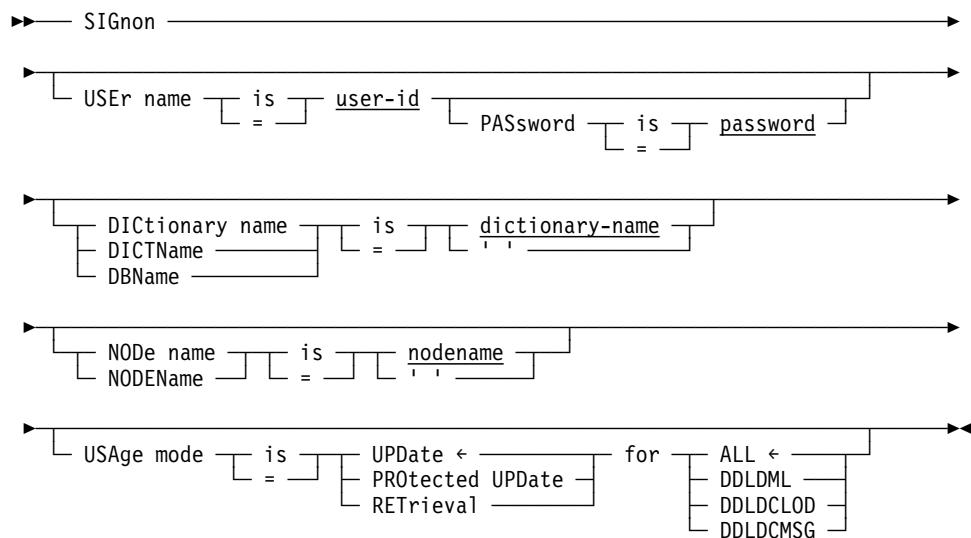


Expansion for display-options

4.6 SIGNOFF



4.7 SIGNON



Options Reset By SIGNON

SET OPTIONS Option	Installation Default	Option Changed by IDD	Option Reset by SIGNON
DECIMAL POINT	PERIOD	X	X
DEFAULT	OFF	X	X
DEFAULT FOR EXISTING VERSION	1	X	X
DEFAULT FOR NEW VERSION	1	X	X
DELETE IS ON/OFF	OFF		X
DISPLAY AS	COMMENTS		
DISPLAY ALL LIMIT IS ON/OFF	OFF	X	X
DISPLAY VERB	ADD		X
DISPLAY WITH	ALL		
ECHO/ NO ECHO	ECHO		
EOF	/*	X	X
HEADER/ NO HEADER	HEADER (batch) NO HEADER (online)		

SET OPTIONS Option	Installation Default	Option Changed by IDD	Option Reset by SIGNON
INPUT COLUMNS	1 THRU 72 (batch) 3270: 1 THRU 79 Line device: 1 THRU 80		
INTERRUPT COUNT IS	NULL	X	X
LINES PER PAGE	60		X
LIST/ NO LIST	LIST		
OUTPUT LINE SIZE	132 (batch) 80 (online)		
PREPARED BY	no default		X
PROMPT/ NO PROMPT	NO PROMPT (batch) 3270: NO PROMPT Line device: PROMPT		
PUNCH TO	SYSPCH		
QUOTE	' (single quote)	X	X
REGISTRATION OVERRIDE	OFF		X
REVISED BY	no default		X
SEMICOLON ALTERNATE	OFF	X	X
SEQUENCE	100	X	X
USER SIGNON OVERRIDE	ALLOWED	X	X

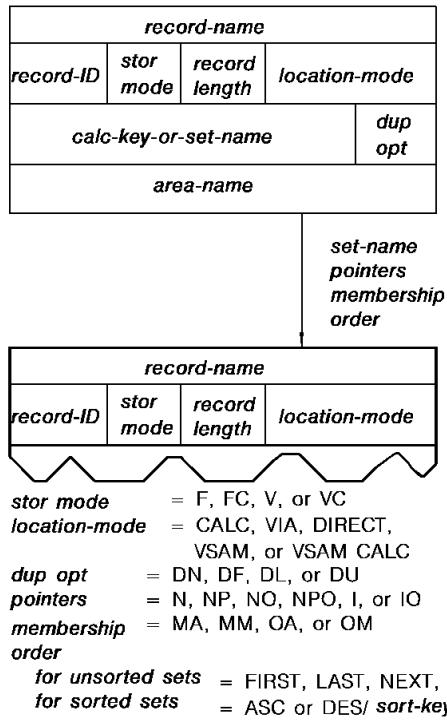
Chapter 5. Entity Operations

5.1 DISPLAY/PUNCH operations



Chapter 6. Record-Set Representation

Format



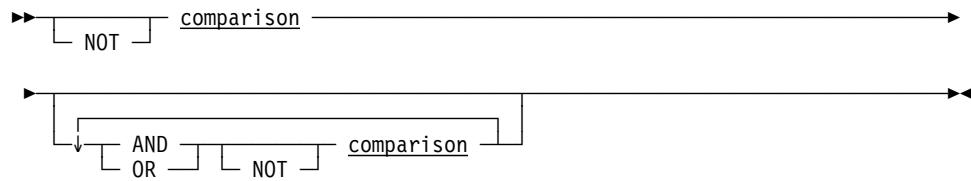
Example

STUDENT			
108	FC	452	CALC
STUD-ID			DN
STUDENT-REGION			
STUDENT-SCHEDULE NP MA ASC SCHED-PERIOD DN			
SCHEDULE			
107	F	24	VIA
STUDENT-SCHEDULE			
STUDENT-REGION			

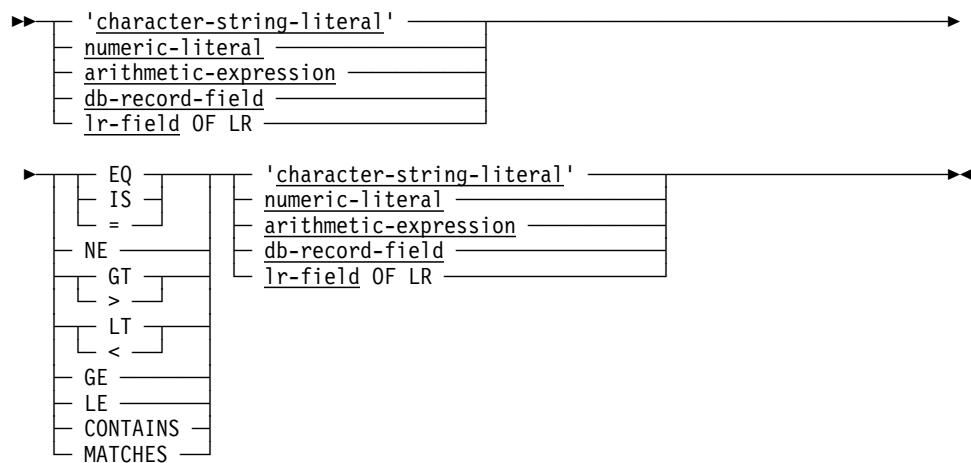
Chapter 7. Parameter Expansions Common To Schema And Subschema Statements (non-SQL)

7.1 boolean-expression

Expansion for boolean-expression

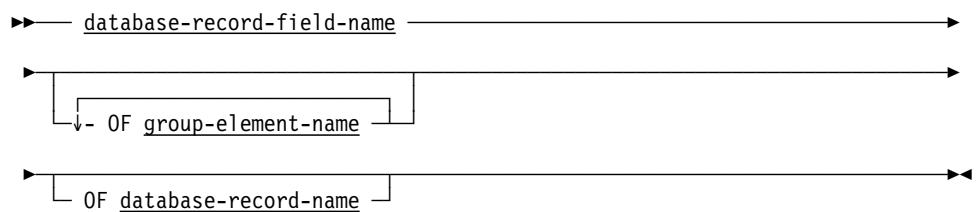


Expansion for comparison



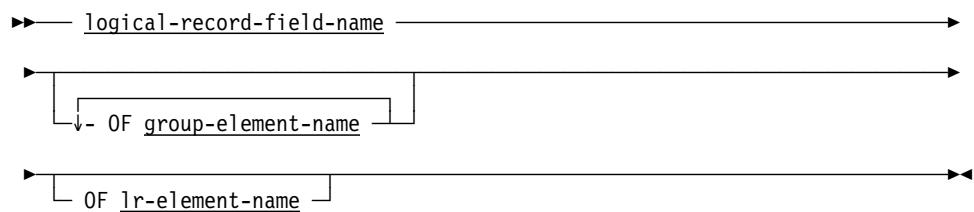
7.2 db-record-field

Expansion for boolean-expression



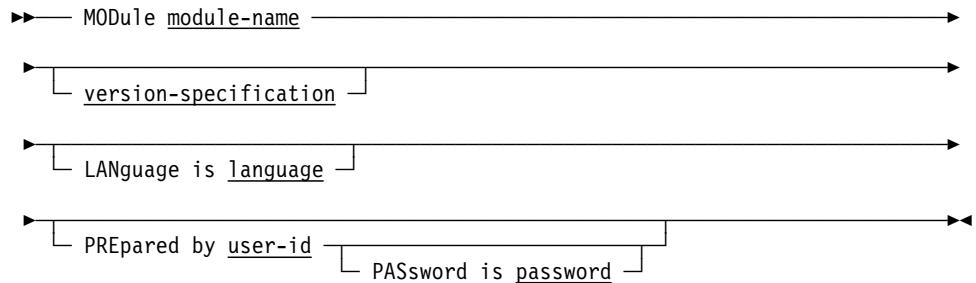
7.3 Ir-field

Expansion for Ir-field



7.4 module-specification

Expansion for module-specification



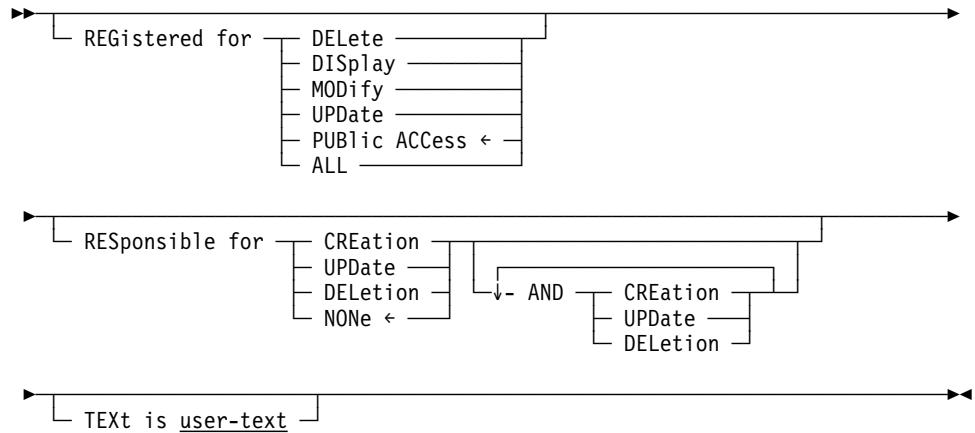
7.5 user-specification

Expansion for user-specification

► [PREpared] by user-id [PASsword is password] ►

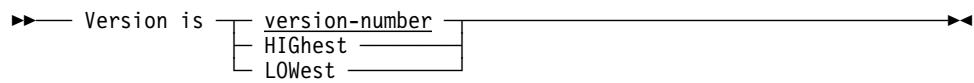
7.6 user-options-specification

Expansion for user-options-specification



7.7 version-specification

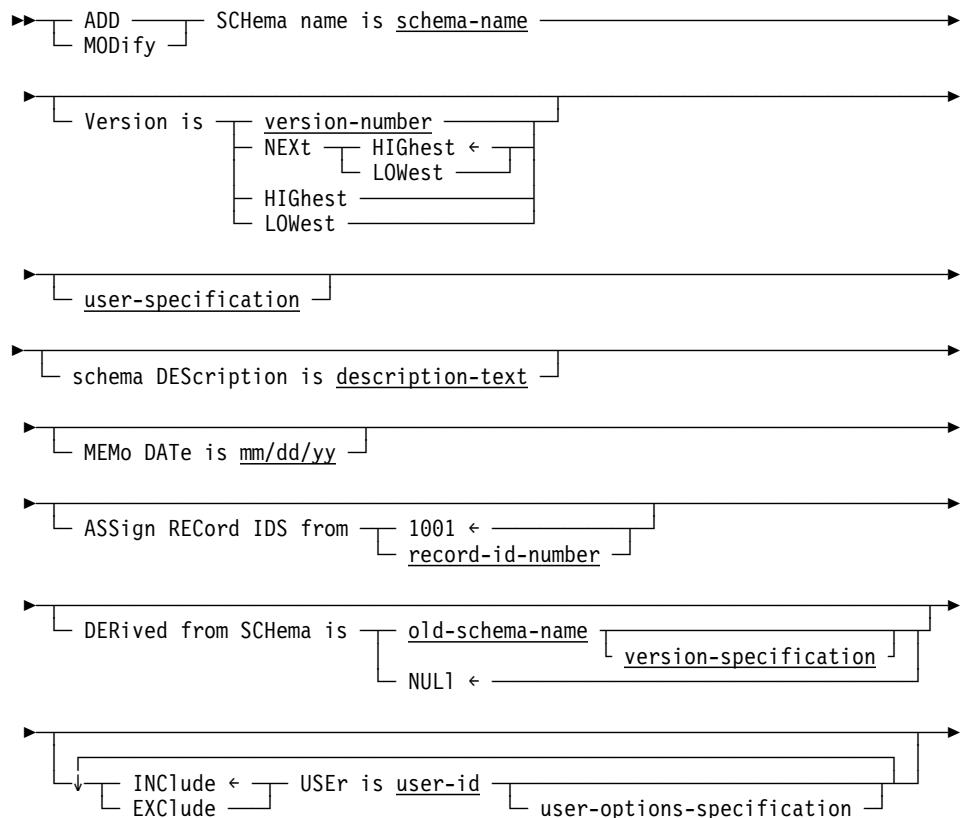
Expansion for version-specification

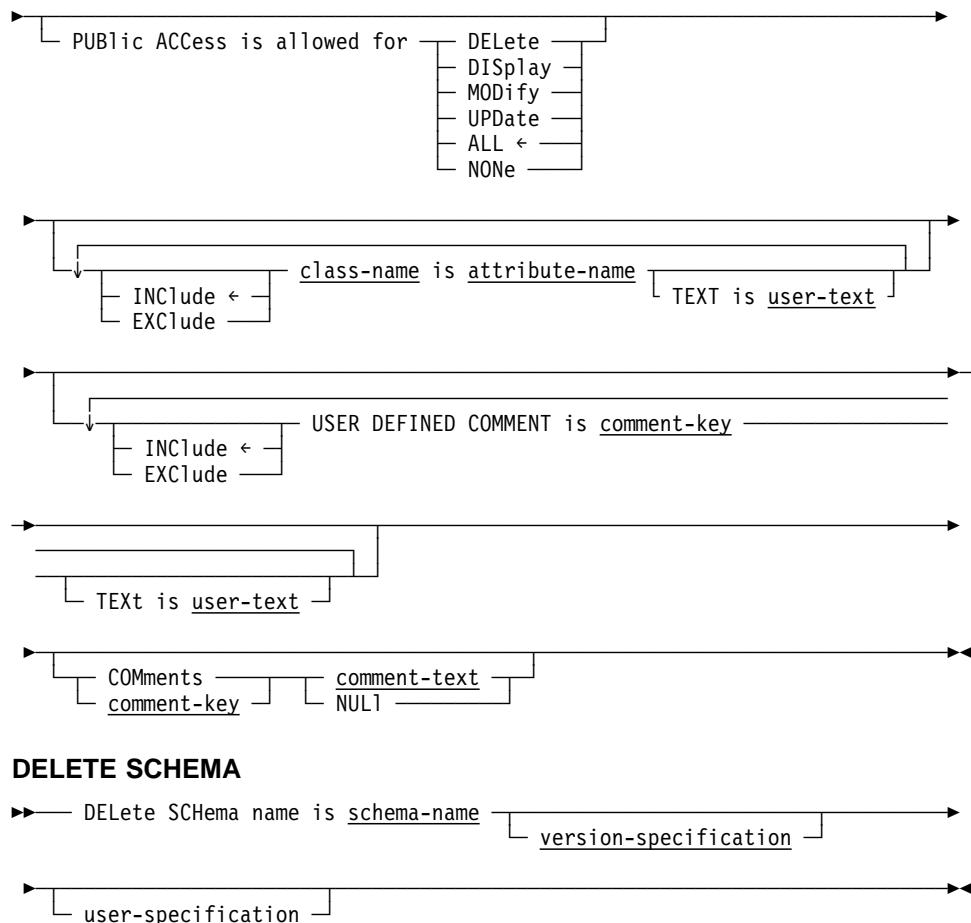


Chapter 8. Non-SQL Schema Statements

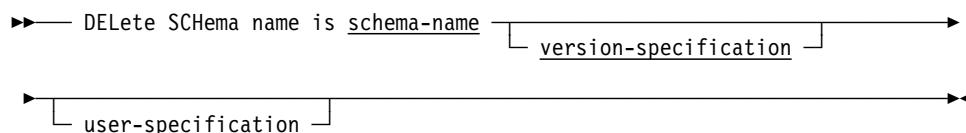
8.1 SCHEMA

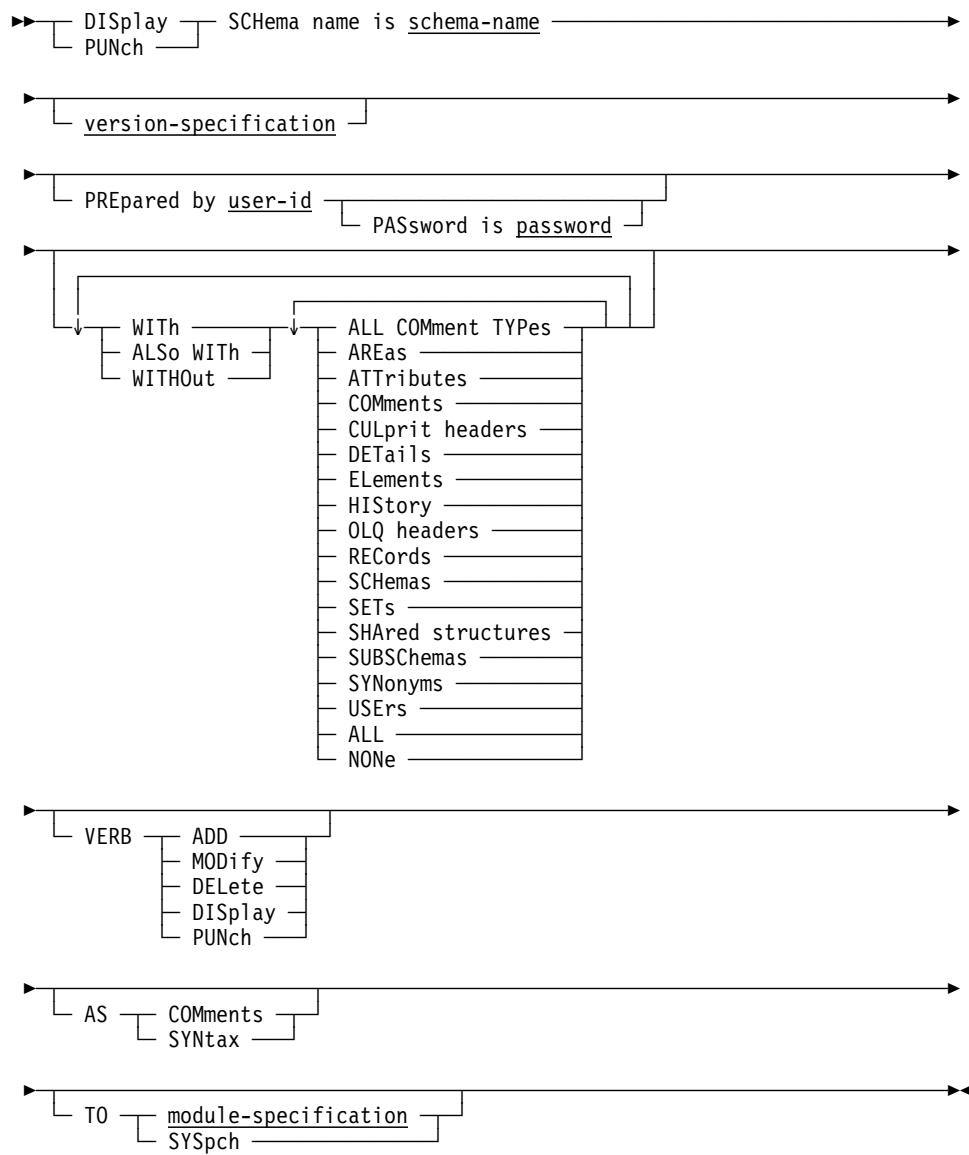
ADD/MODIFY SCHEMA





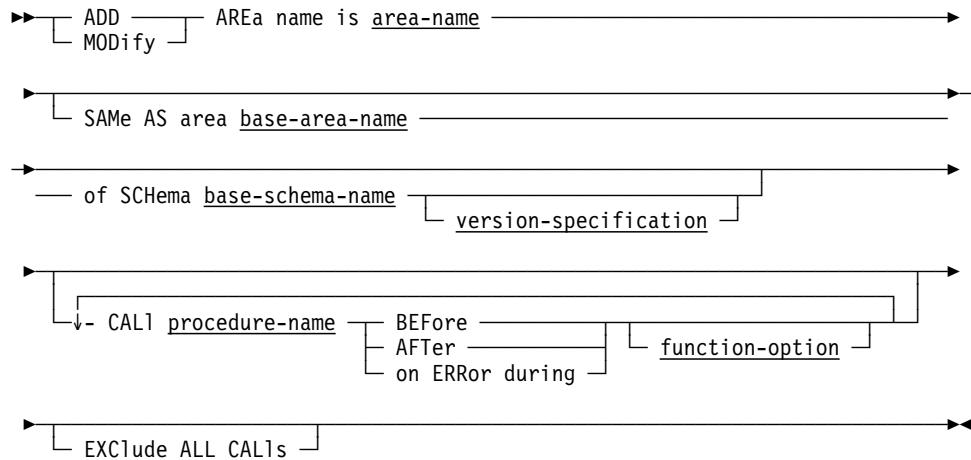
DELETE SCHEMA



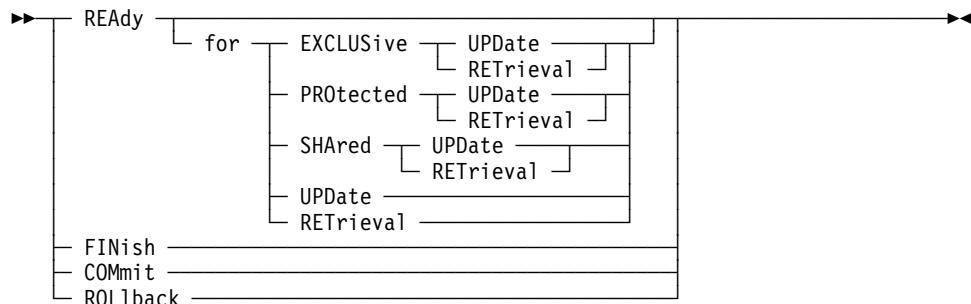
DISPLAY/PUNCH SCHEMA

8.2 AREA

ADD/MODIFY AREA



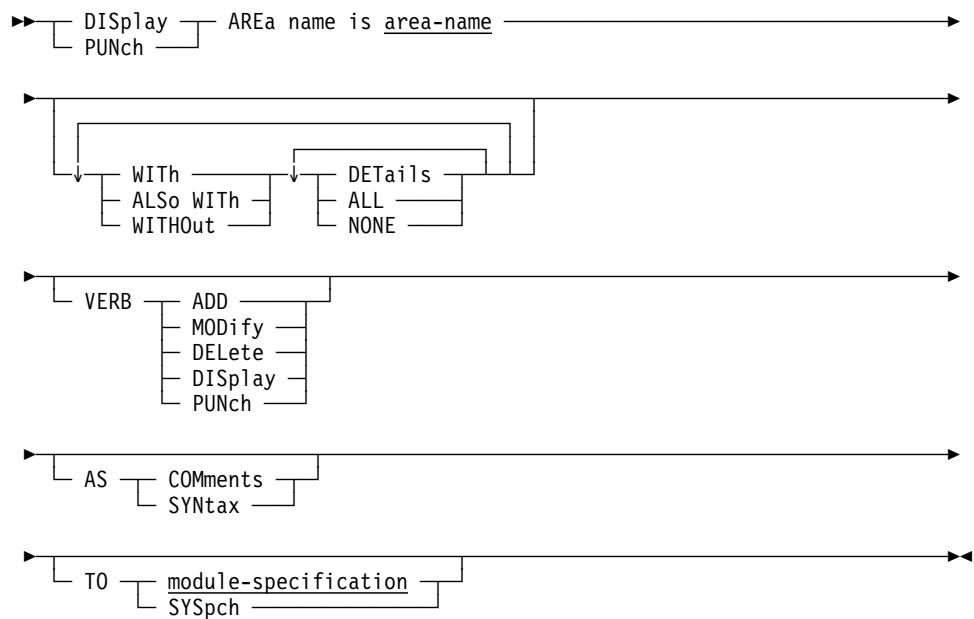
Expansion for function-option



DELETE AREA

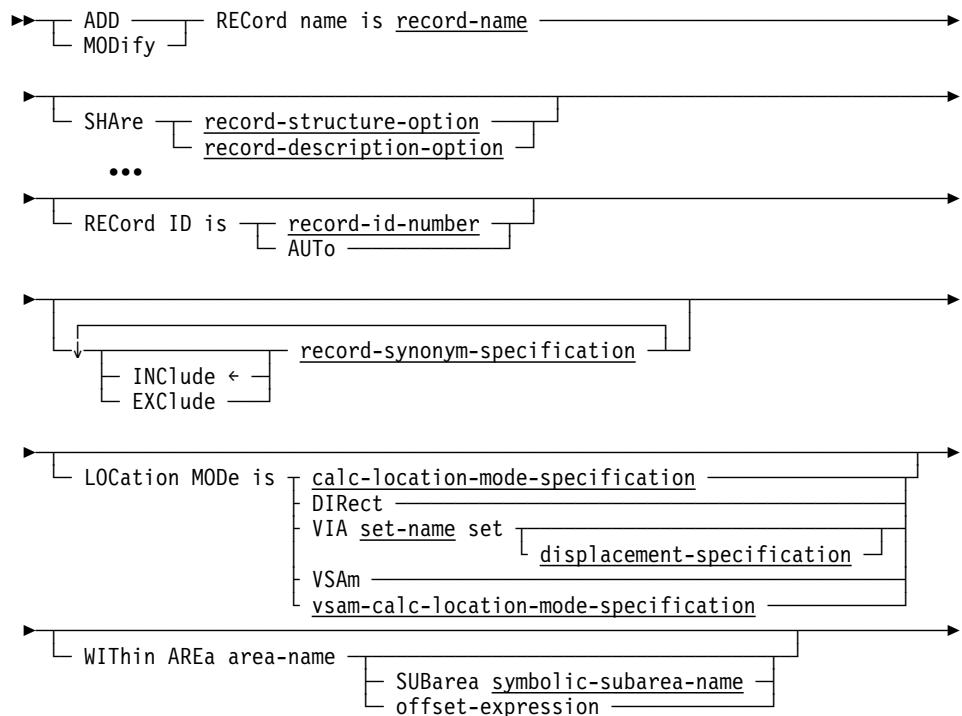
➤ DElete AREa name is area-name ➤

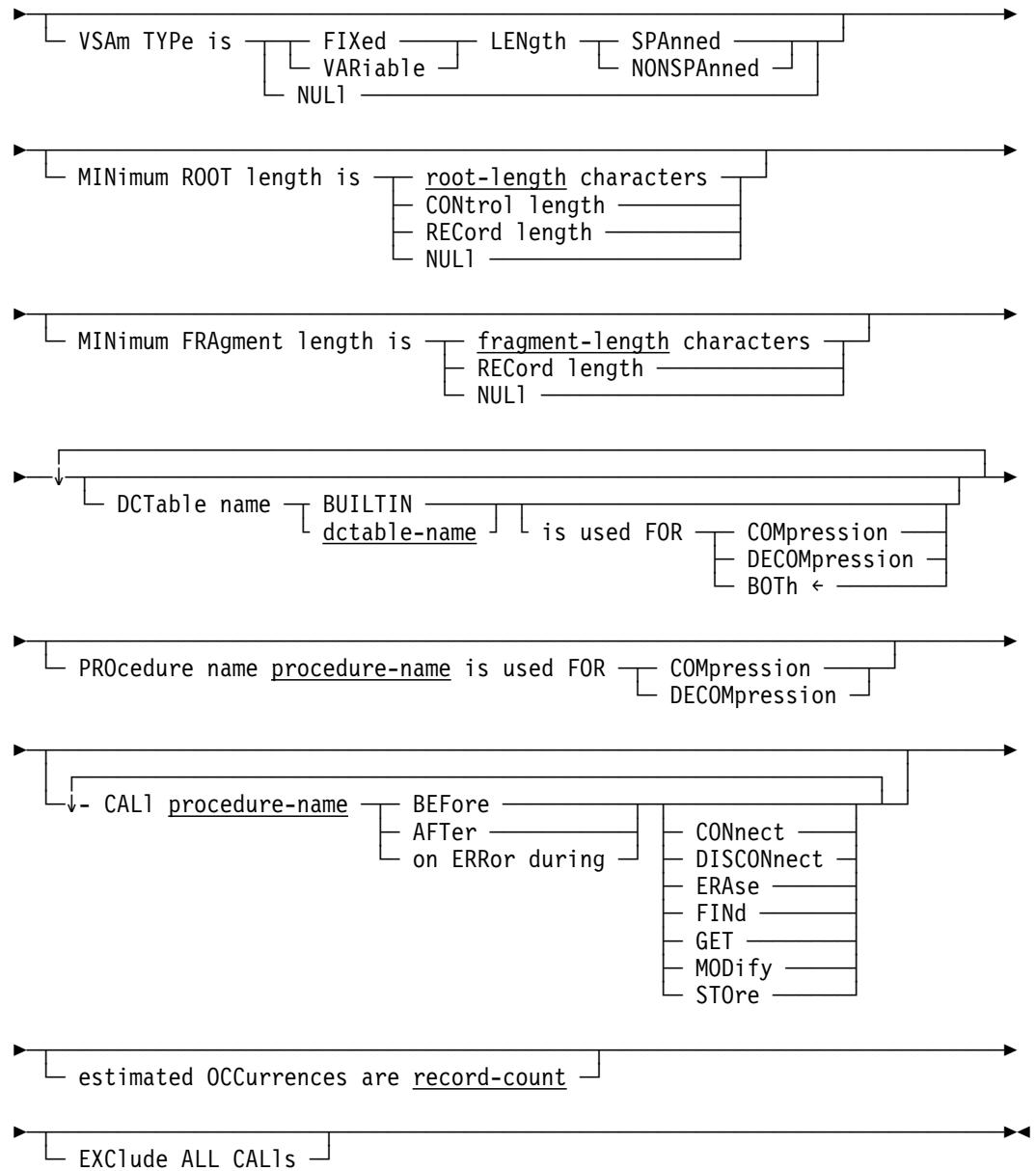
DISPLAY/PUNCH AREA

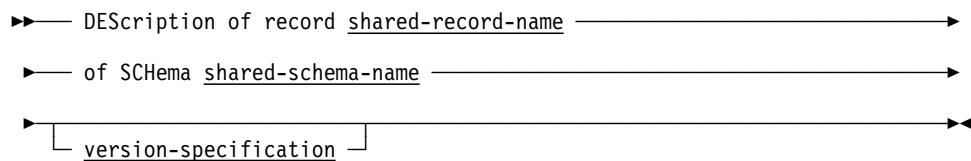
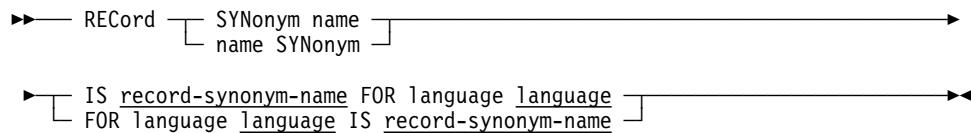
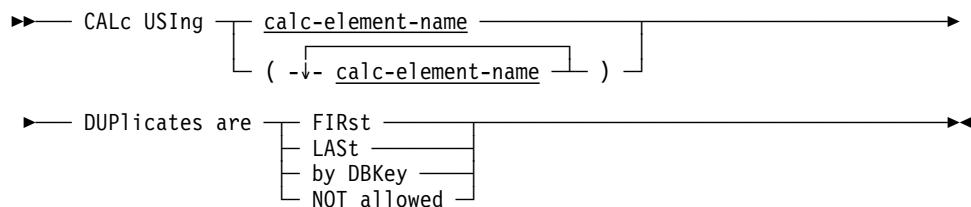
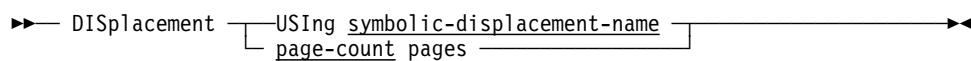
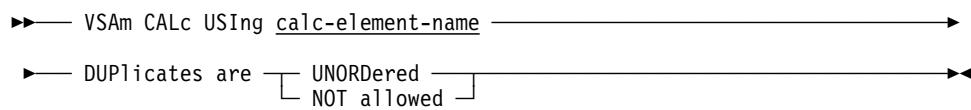
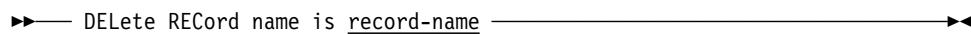


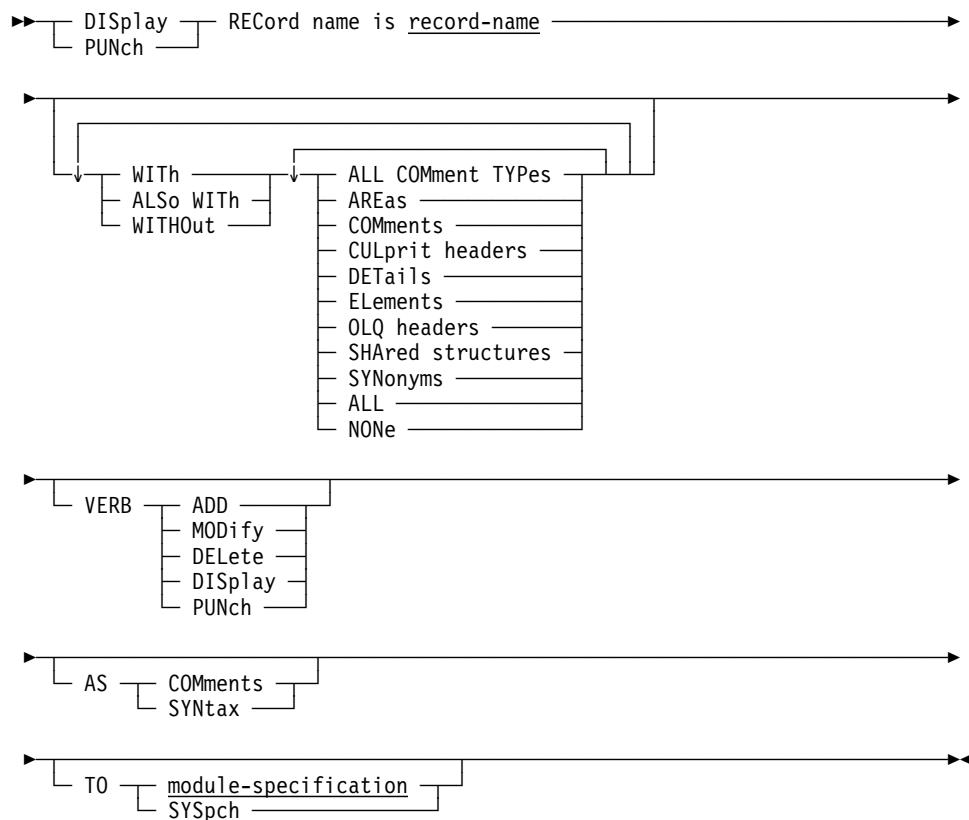
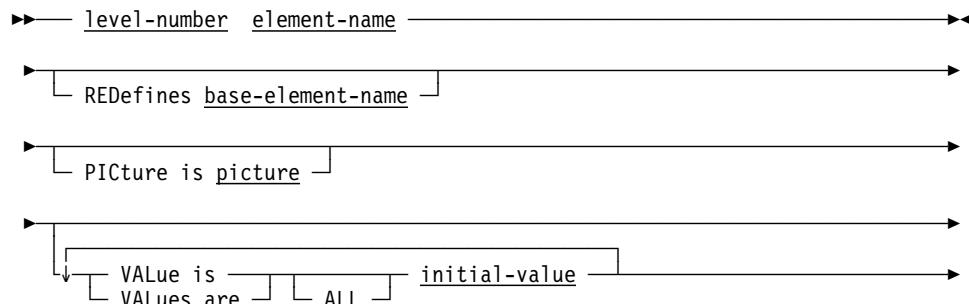
8.3 RECORD

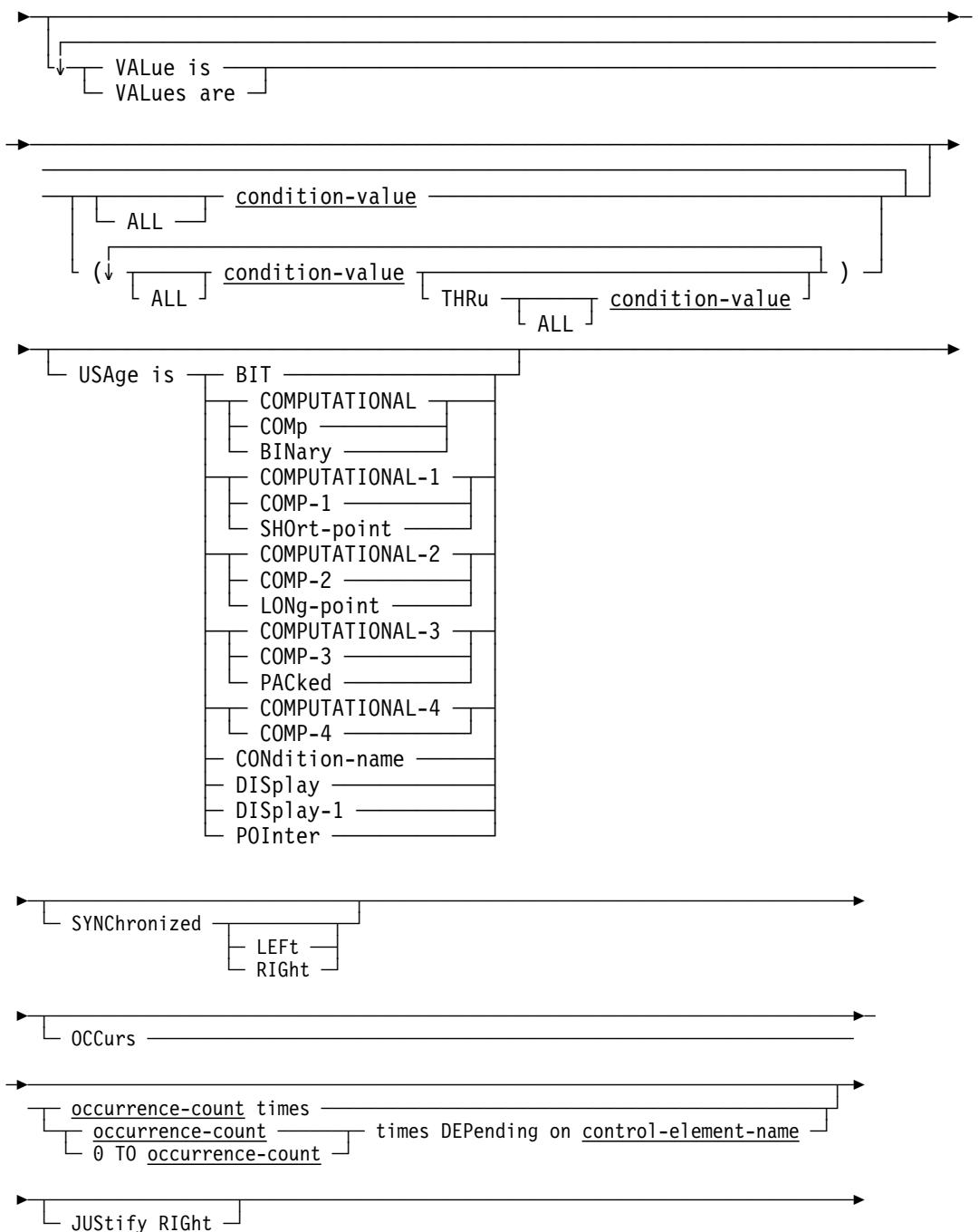
ADD/MODIFY RECORD

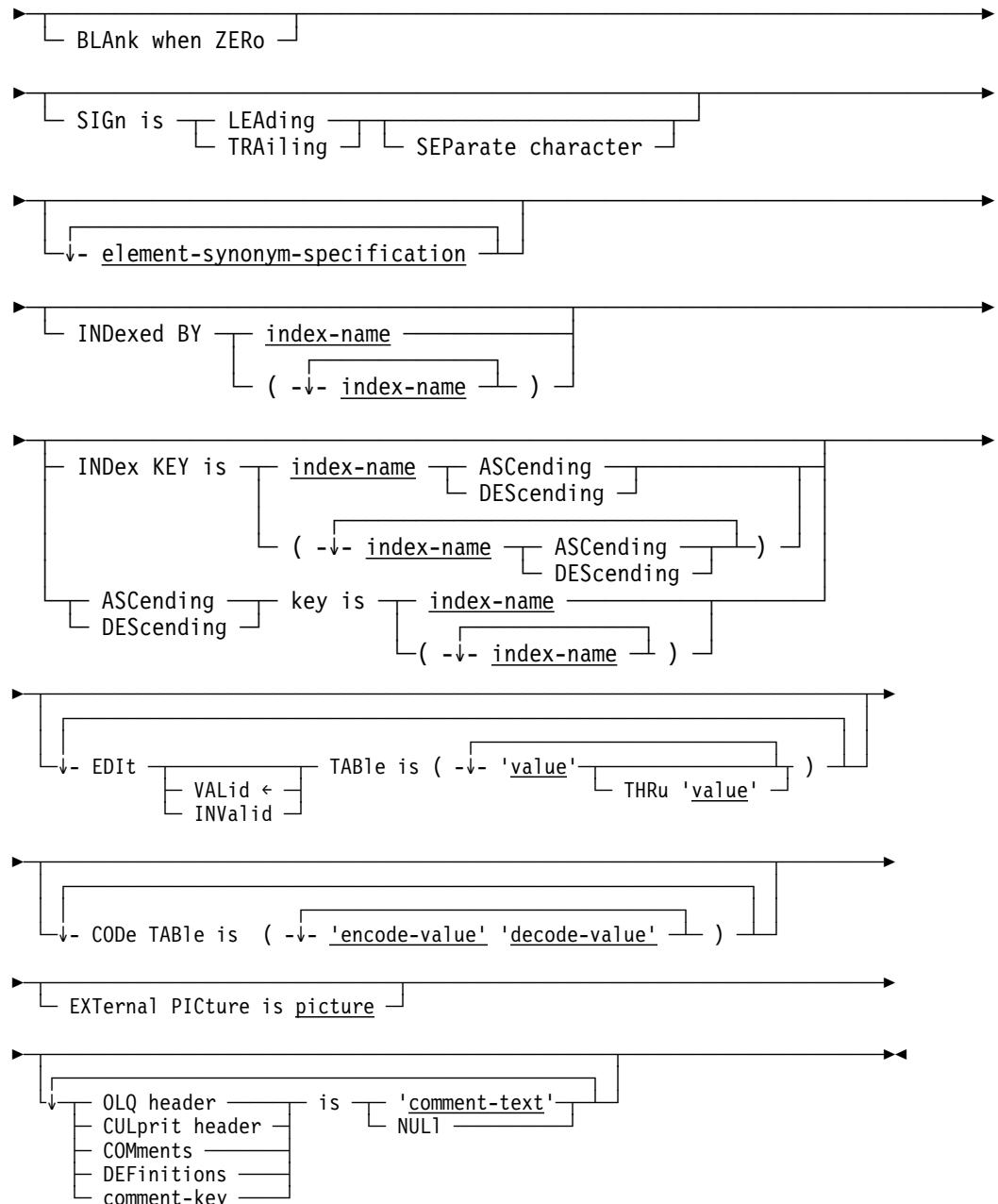




Expansion for record-description-option**Expansion for record-synonym-specification****Expansion for calc-location-mode-specification****Expansion for displacement-specification****Expansion for ysam-calc-location-mode-specification****Expansion for offset-expression****DELETE RECORD**

DISPLAY/PUNCH RECORD**Element Substatement**

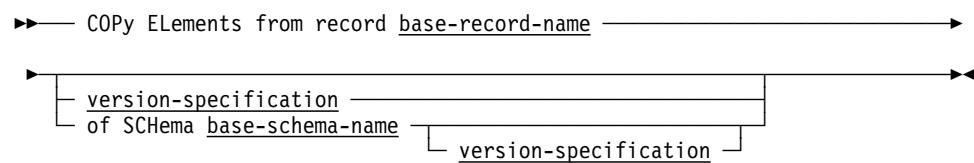




Expansion for element=synonym-specification

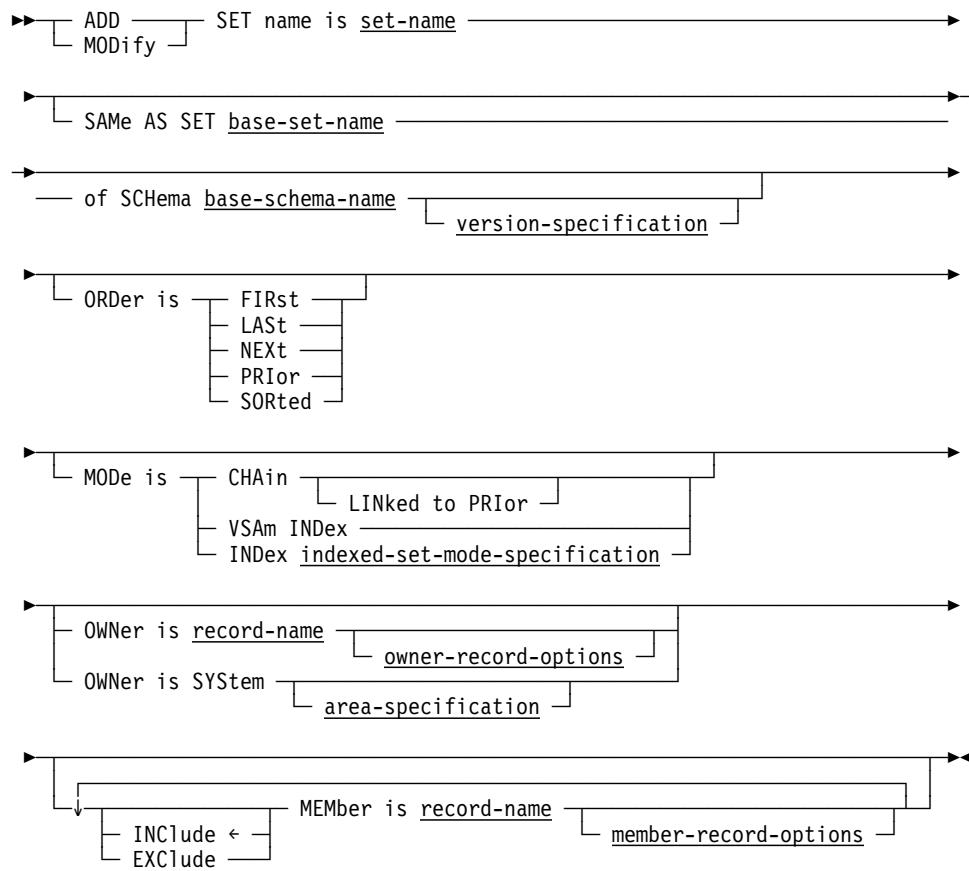
- element SYNonym name
name SYNonym
- FOR language language is synonym-name
- + mantissa E + exponent

COPY ELEMENTS Substatement

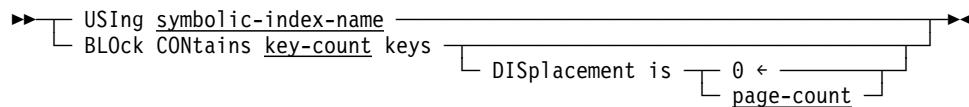


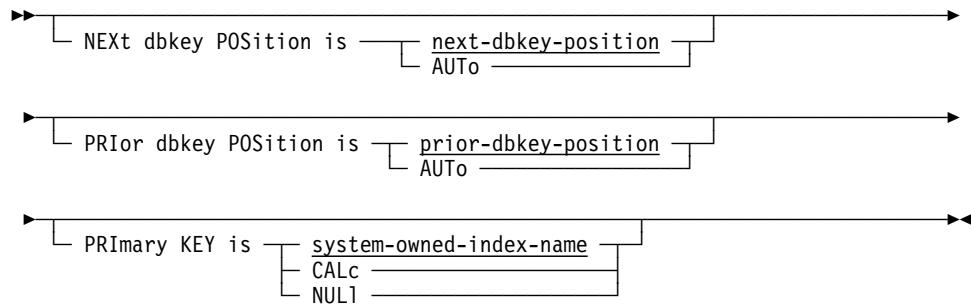
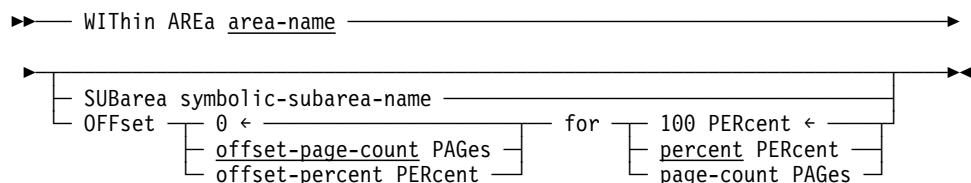
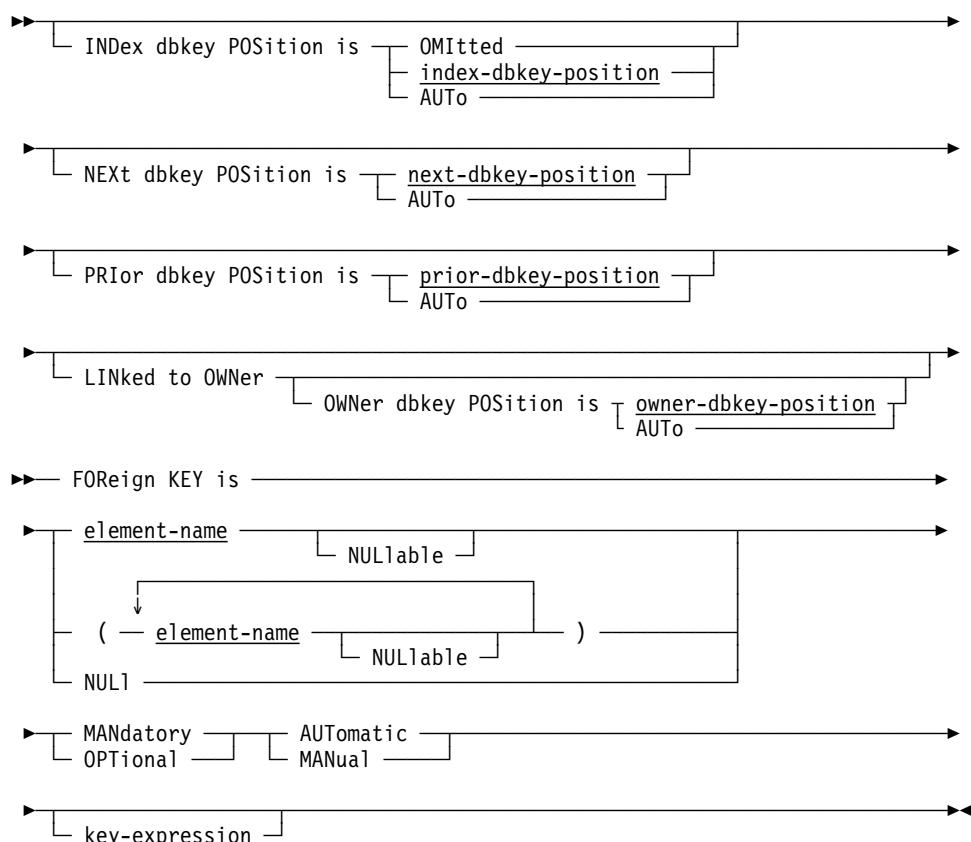
8.4 SET

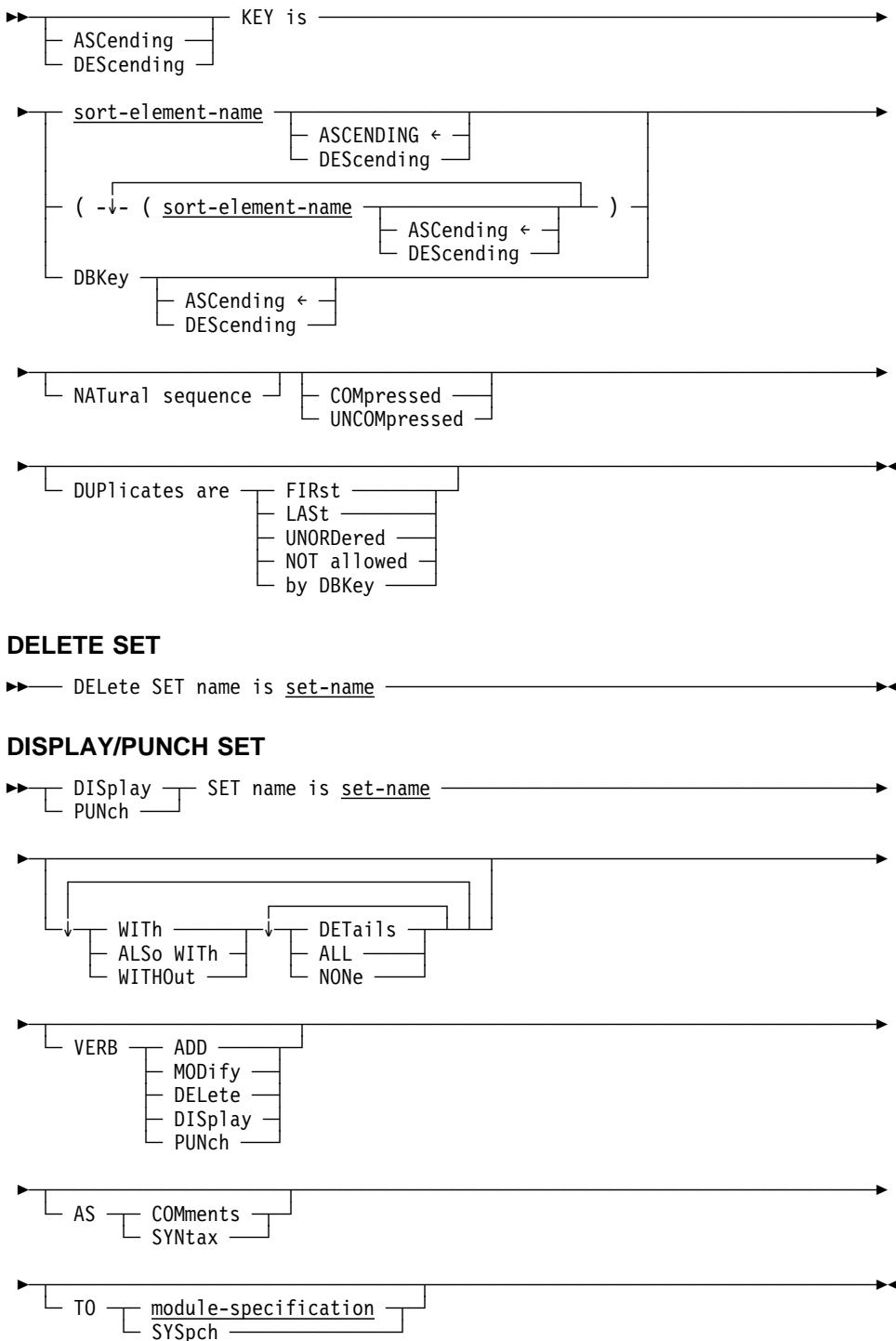
ADD/MODIFY SET



Expansion for indexed-set-mode-specification



Expansion for owner-record-options**Expansion for area-specification****Expansion for member-record-options****Expansion for key-expression**



8.5 VALIDATE

►— VALIDATE —►

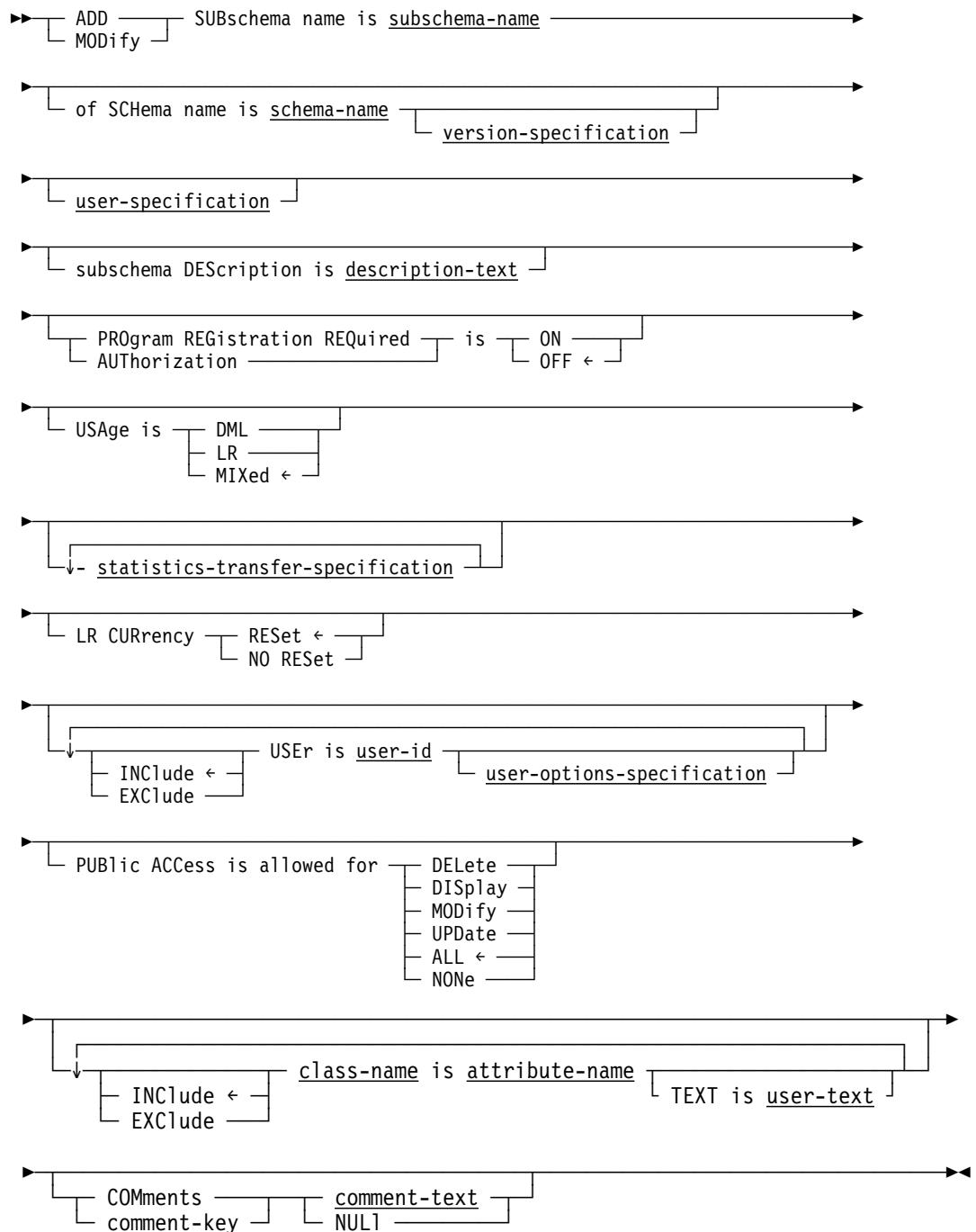
8.6 REGENERATE

```
►-- REGenerate ┌─ AFFected ─┐ SUBSchemas ──────────────────→  
          ┌─ ALL ─┐  
          ┌─ as LOAd MODule Version version-number ─┐ →
```

Chapter 9. Subschema Statements

9.1 SUBSCHEMA

ADD/MODIFY SUBSCHEMA

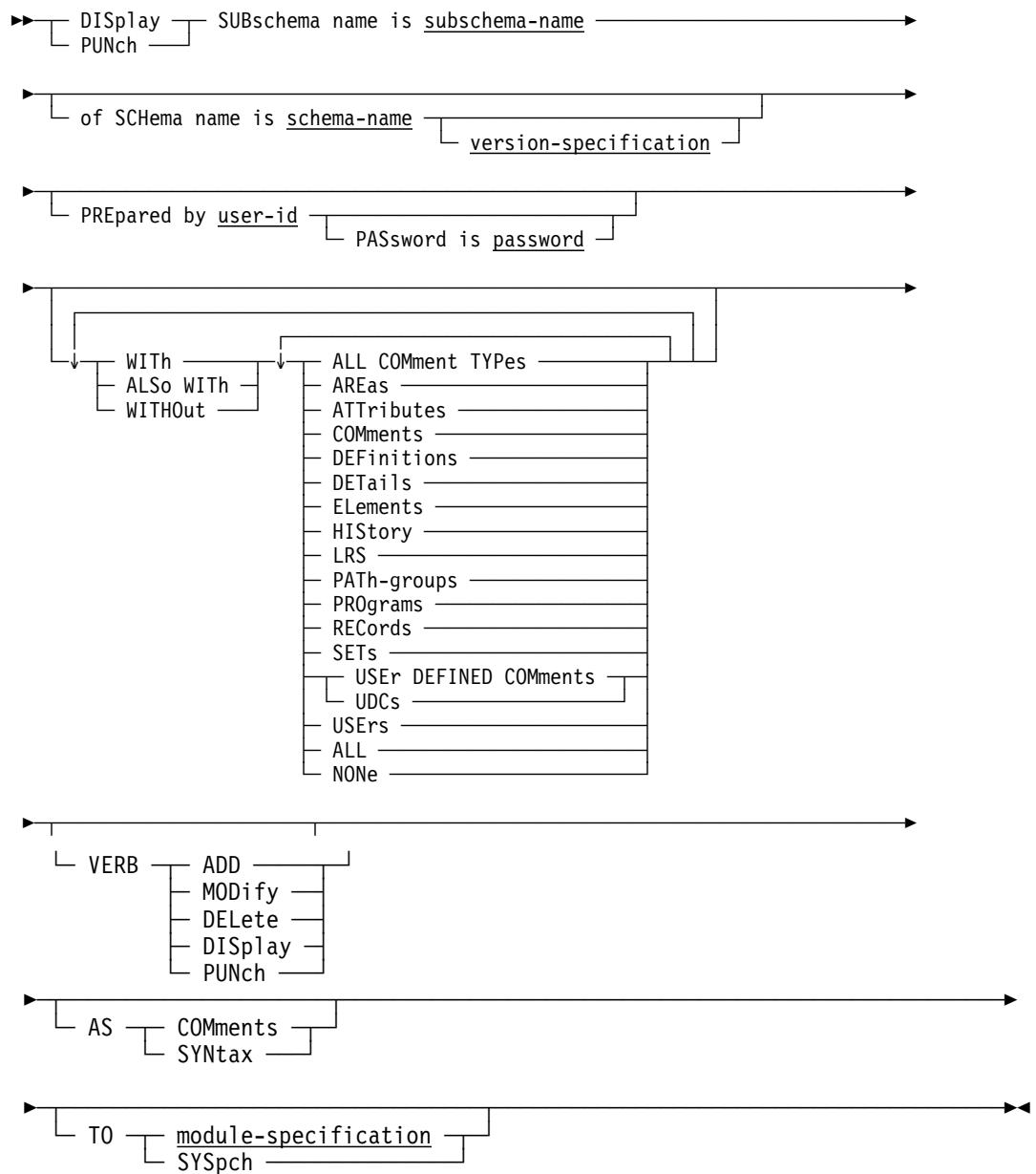


Expansion for statistics-transfer-specification

►— TRAnsfer statistics to SUBschema name subschema-name —————→
 └ of SCHEMA name is schema-name └ version-specification ─→
 └ FOR PROgram name is program-name └ version-specification ─→

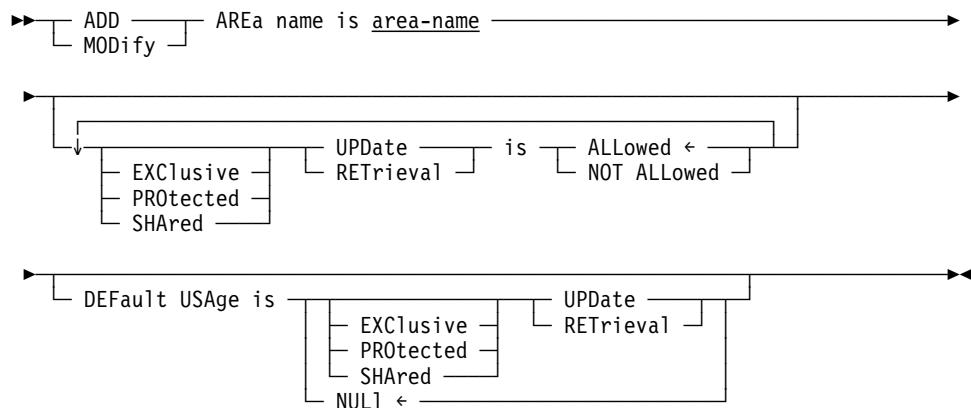
DELETE SUBSCHEMA

►— DElete SUBschema name is subschema-name —————→
 └ of SCHEMA name is schema-name └ version-specification ─→
 └ user-specification ─→

DISPLAY/PUNCH SUBSCHEMA

9.2 AREA

ADD/MODIFY AREA



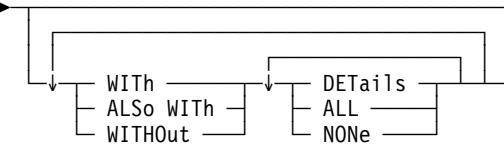
DELETE AREA

►— DELetE AREa name is area-name —►

DISPLAY/PUNCH AREA

►— DISPlay AREa name is area-name —►

►— PUNch —►



►— VERB —►

ADD
MODify
DElete
DISPlay
PUNch

►— AS —►

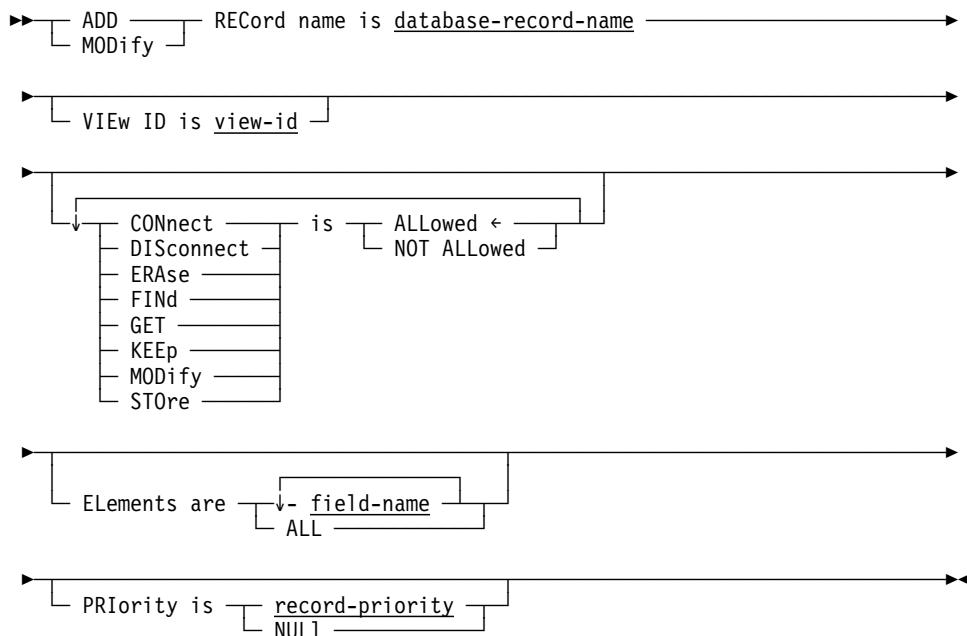
COMments
SYNtax

►— T0 —►

module-specification

9.3 RECORD

ADD/MODIFY RECORD

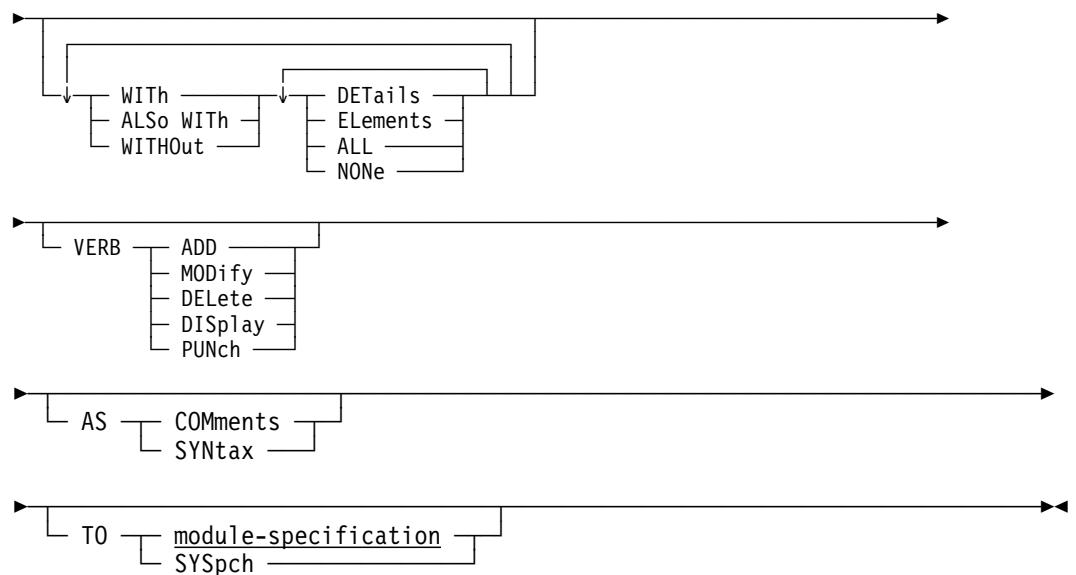


DELETE RECORD

➤— DElete REcord name is database-record-name —————→

DISPLAY/PUNCH RECORD

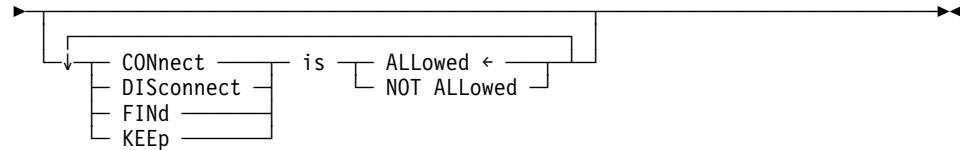
➤— DISplay — REcord name is database-record-name —————→



9.4 SET

ADD/MODIFY SET

► [ADD] SET name is set-name →
 ► [MODify]

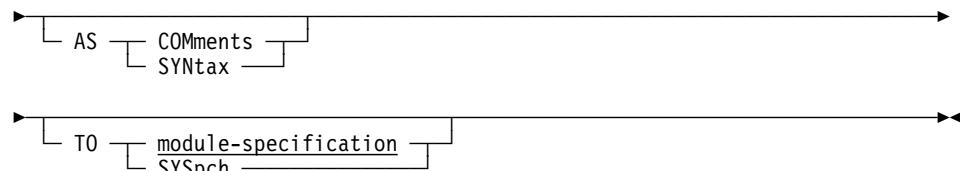
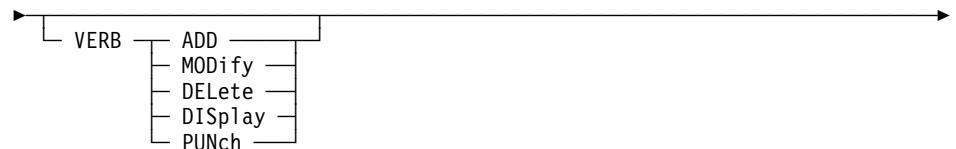
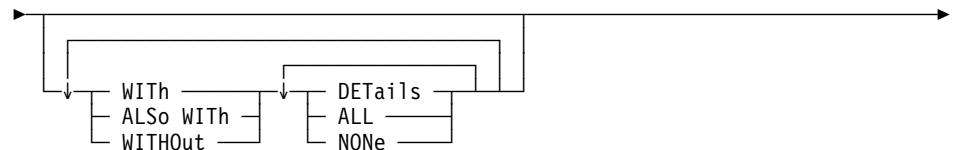


DELETE SET

► DElete SET name is set-name →

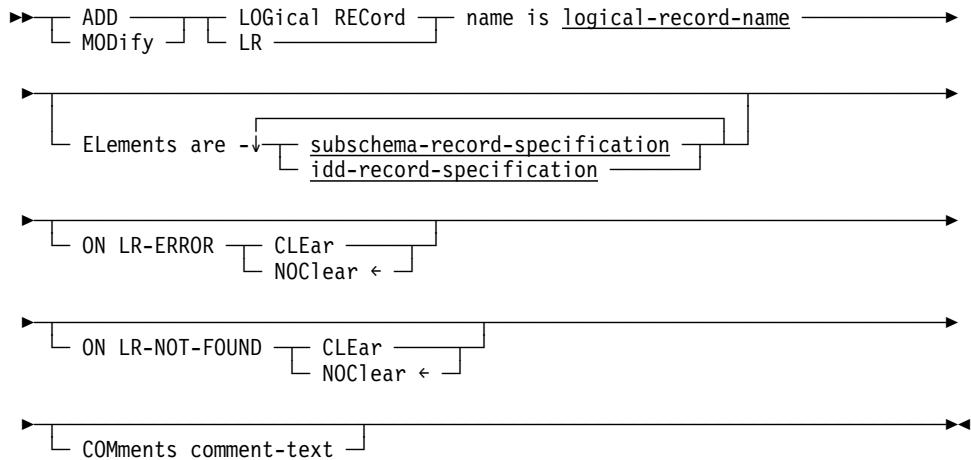
DISPLAY/PUNCH SET

► [DISPlay] SET name is set-name →
 ► [PUNch]

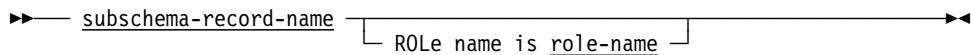


9.5 LOGICAL RECORD

ADD/MODIFY LOGICAL RECORD



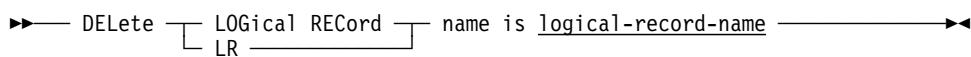
Expansion for subschema-record-specification



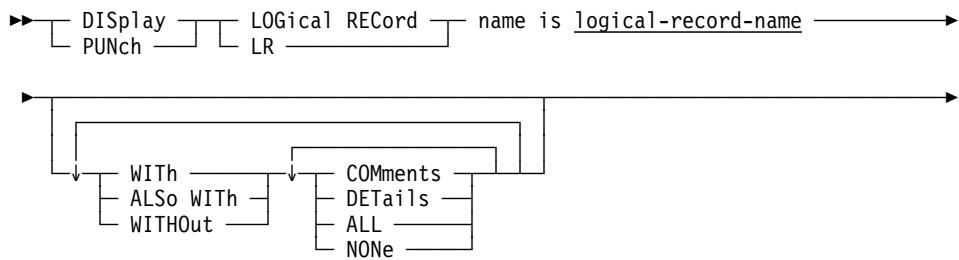
Expansion for idd-record-specification

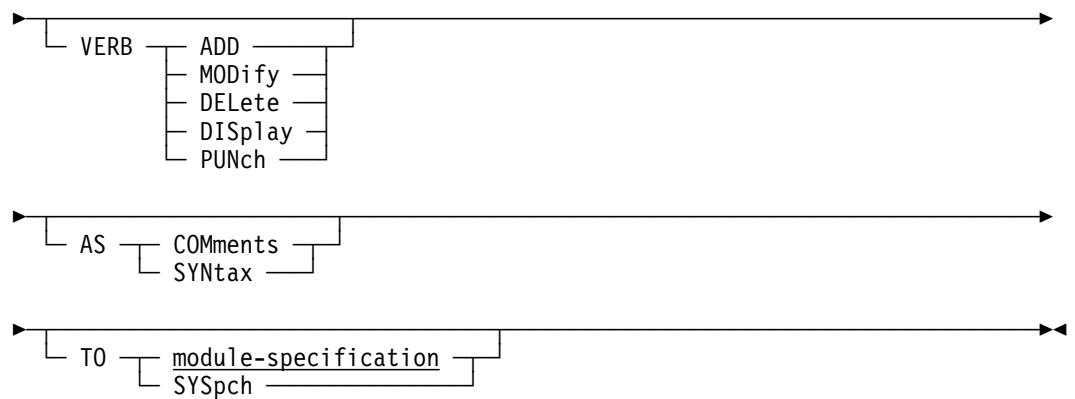


DELETE LOGICAL RECORD



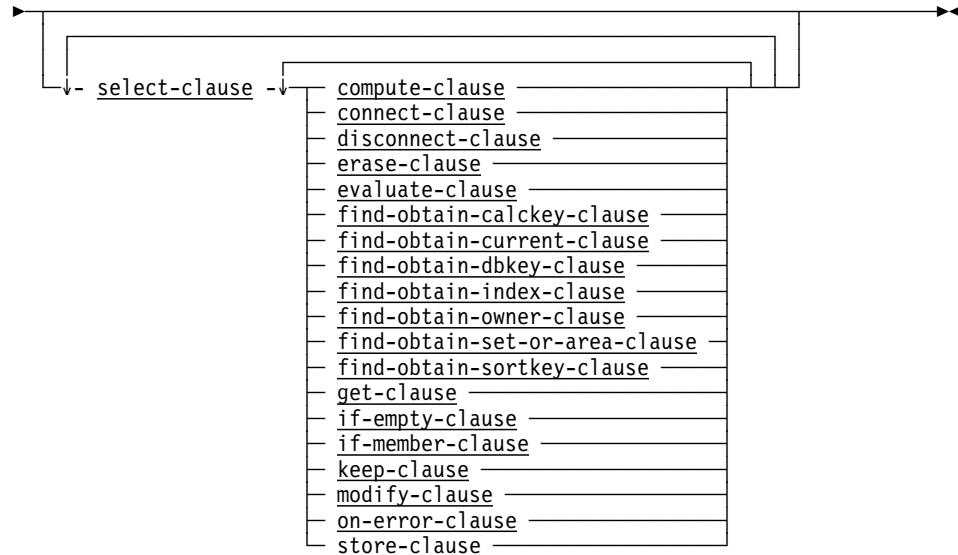
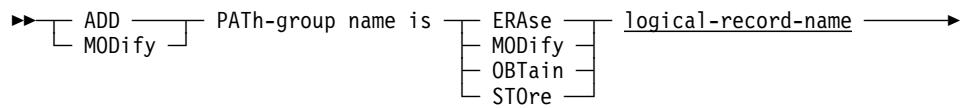
DISPLAY/PUNCH LOGICAL RECORD



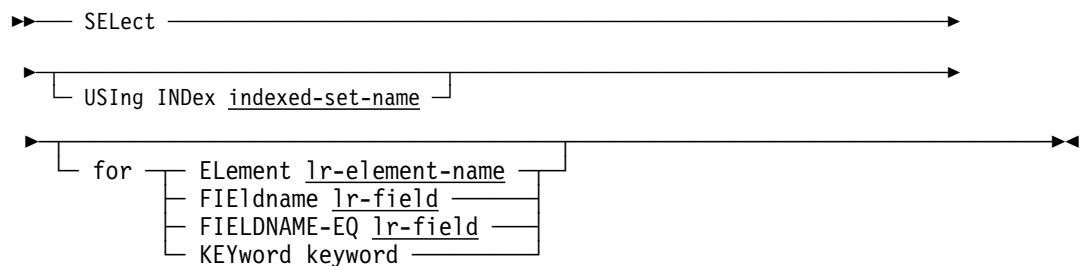


9.6 PATH-GROUP

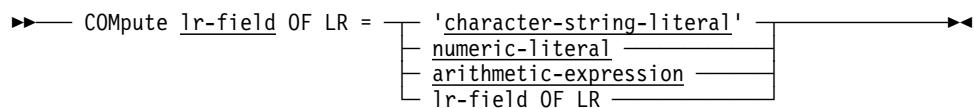
ADD/MODIFY PATH-GROUP



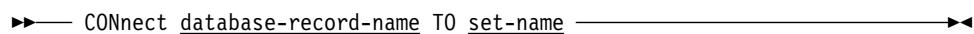
Expansion for select-clause



Expansion for compute-clause



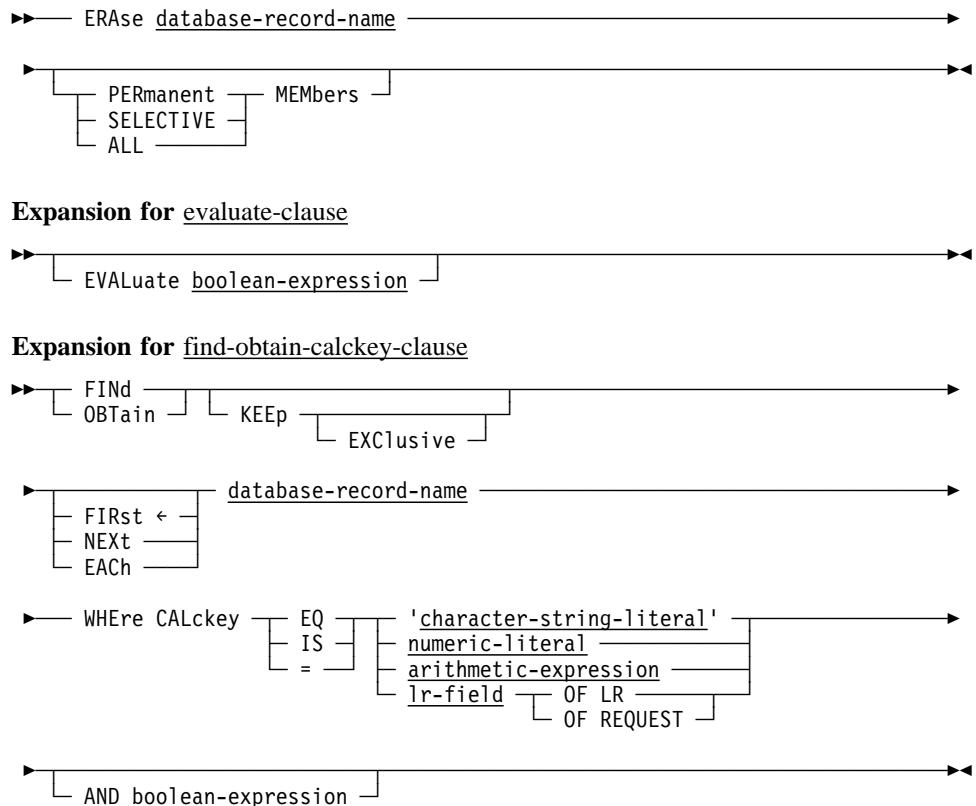
Expansion for connect-clause

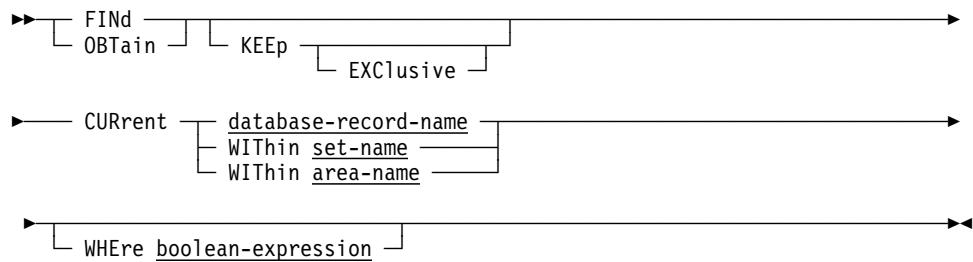
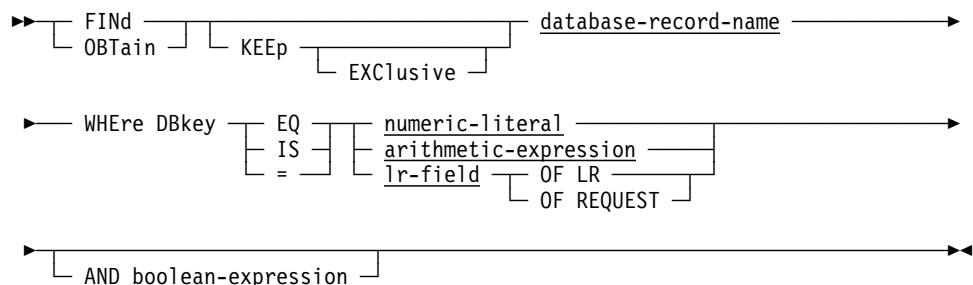
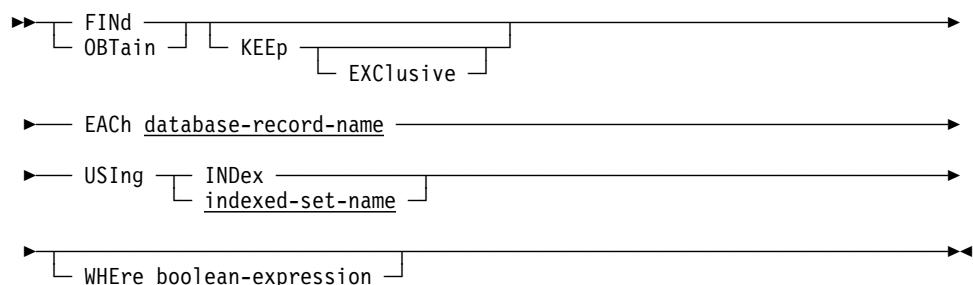
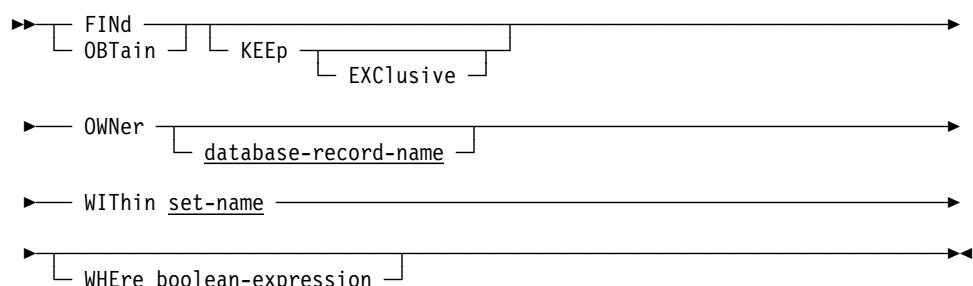


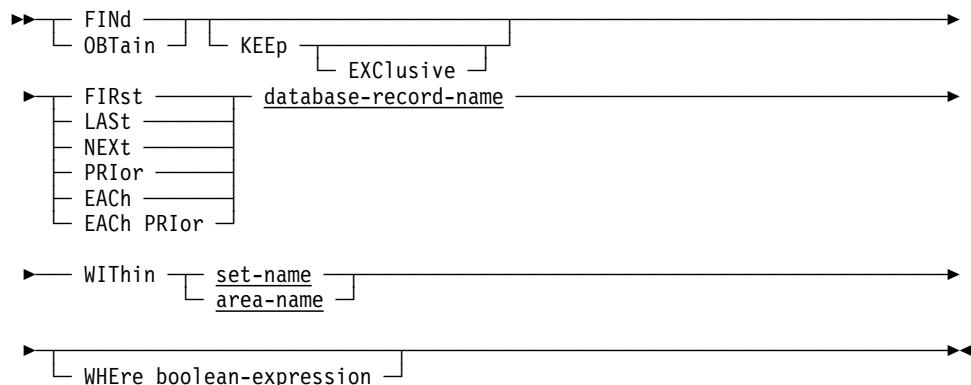
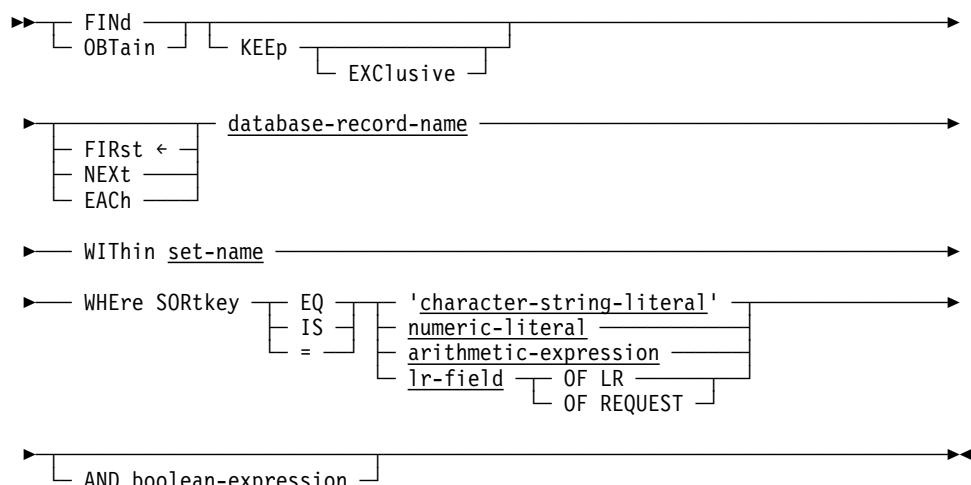
Expansion for disconnect-clause



Expansion for erase-clause



Expansion for find-obtain-current-clause**Expansion for find-obtain-dbkey-clause****Expansion for find-obtain-index-clause****Expansion for find-obtain-owner-clause**

Expansion for find-obtain-set-or-area-clause**Expansion for find-obtain-sortkey-clause****Expansion for get-clause**

►--> GET database-record-name

Expansion for if-empty-clause

►--> IF set-name is

- └--> NOT

Expansion for if-member-clause

►--> IF

- └--> NOT

set-name MEMBER

Expansion for keep-clause

►--> KEEp

- └--> EXclusive

CURrent

- └--> database-record-name
- └--> WITIn set-name
- └--> WITIn area-name

Expansion for modify-clause

►— MODify database-record-name —————→

Expansion for on-error-clause

►— ON idms-error-status —————→

- DO nested-block END —————→
- ITERate —————→
- NEXT —————→
- CLEar —————→
- RETurn path-status —————→

Expansion for store-clause

►— ST0re database-record-name —————→

DELETE PATH-GROUP

►— DElete PATH-group name is —————→

- ERAse —————→
- MODify —————→
- OBTain —————→
- ST0re —————→

DISPLAY/PUNCH PATH-GROUP

►— [DISplay PUNch] PATH-group-name is —————→

- ERAse —————→
- MODify —————→
- OBTain —————→
- ST0re —————→

►— [WITH [ALSO WITH | WITHOut] [DETails [ALL | NONE]]] —————→

►— [VERB [ADD | MODify | DElete | DISplay | PUNch]] —————→

►— [AS [COMMENTS | SYNTAX]] —————→

►— [TO [module-specification]] —————→

9.7 VALIDATE

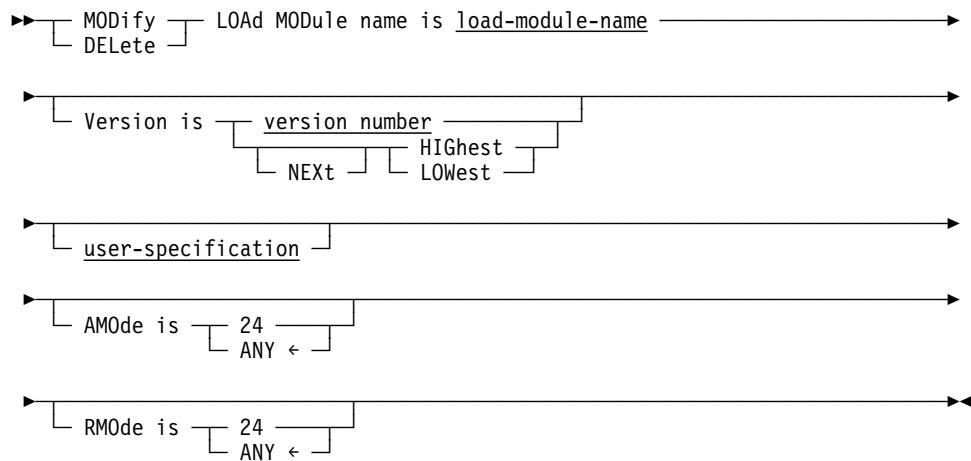
►— VALIDATE —►

9.8 GENERATE

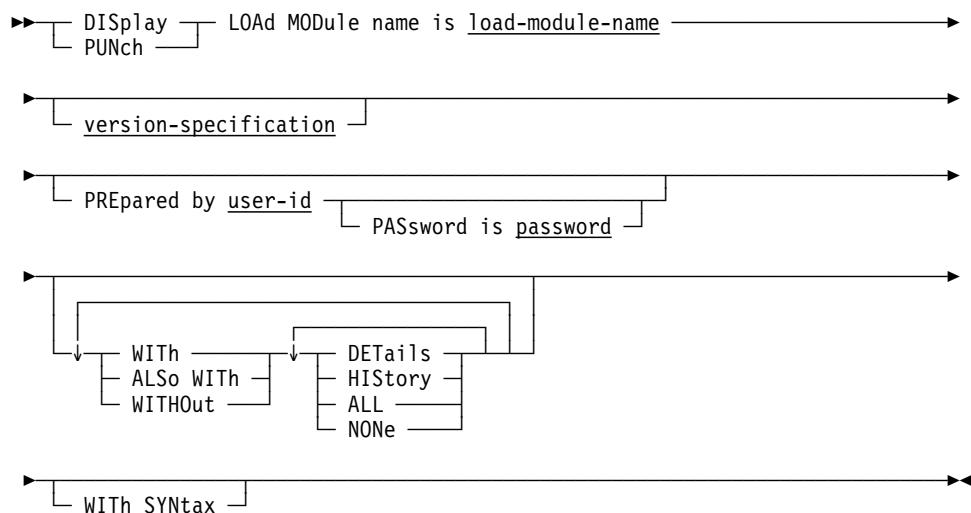
```
►►— GENerate —————→  
►————— as LOAd MODule Version —————→  
|————— version-number ——————|  
| 1 ← ——————|
```

9.9 LOAD MODULE

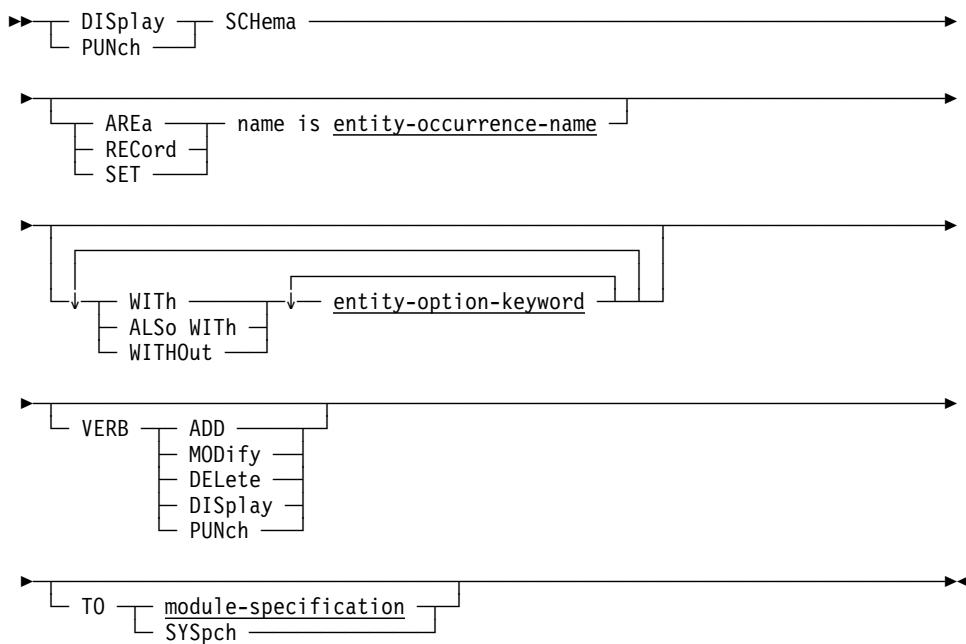
MODIFY/DELETE LOAD MODULE



DISPLAY/PUNCH LOAD MODULE



9.10 DISPLAY/PUNCH SCHEMA



Chapter 10. Database Procedures

10.1 Procedure Control Block

Item	Usage	Length	Description
Entry Level	Alphanumeric	4 bytes	Level at which the procedure is invoked: REC or AREA.
Entry Time	Alphanumeric	4 bytes	The time the procedure is invoked: BFOR, AFTR or ERR.
Major Code	Alphanumeric	2 bytes	Major DML code of the DML command for which the procedure is being invoked (that is, 12 for STORE, or 03 for FIND, etc.).
IDBMSCOM Code	Binary	2 bytes	IDBMSCOM code of the DML command for which the procedure is being invoked (that is, 14 for FIND NEXT WITHIN SET, or 15 for FIND NEXT WITHIN AREA, etc.).
Cancel Indicator	Binary	2 bytes	Zero indicates that the DML command should be performed; nonzero requests cancellation of the DML command. The initial value of zero can be reset by a BEFORE procedure.
Filler	Alphanumeric	2 bytes	Reserved.
User Item	Binary	4 bytes	For user storage, as needed (normally, an address); initialized to zero. This value is preserved across calls to the procedure.

10.2 Application Control Block

Item	Usage	Length	Description
Subschema Name	Alphanumeric	8 bytes	Name of subschema being used.
Program Name	Alphanumeric	8 bytes	Name of application program.
Error-Status Indicator	Alphanumeric	4 bytes	Major DML code (first two bytes) of the command for which the procedure is being invoked, and the minor error-status code (second two bytes).
Database Key	Binary	4 bytes	The database key that is current of run unit.
Record Name	Alphanumeric	18 bytes	Name of record type that is current of run unit.
Area Name	Alphanumeric	18 bytes	Name of area to which current of run unit is assigned.
Filler	Alphanumeric	18 bytes	Reserved for future use.
Error-Set Name	Alphanumeric	18 bytes	Name of error-set type, if applicable.
Error-Record Name	Alphanumeric	18 bytes	Name of error-record type, if applicable.
Error-Area Name	Alphanumeric	18 bytes	Name of error area, if applicable.
IDBMSCOM Array	Alphanumeric	100 bytes	System IDBMSCOM array for passing function information.
Direct Db-key	Binary	4 bytes	Item used by application program to specify a database key for storing a record in DIRECT storage mode.

10.3 Application Program Information Block

Item	Usage	Length	Description
Application Program Information	DBA-defined	DBA-defined	Information passed from application program using a BIND PROCEDURE statement; if not used, this field must be defined as a 4-byte alphanumeric item.

10.4 Area Control Block

Item	Usage	Length	Description
Area Name	Alphanumeric	18 bytes	Name of area for which DML command is being invoked.
Low Page	Binary	4 bytes	Number of lowest page in area.
High Page	Binary	4 bytes	Number of highest page in area.

10.5 IDMS Statistics Block

Item	Usage	Length	Description
Date	Alphanumeric	8 bytes	Today's date in the format <i>mm/dd/yy</i> .
Time	Alphanumeric	8 bytes	The time of the last occurrence of BIND, RUN-UNIT, FINISH or run-unit abort; in the format <i>hhmmsshh</i> .
Pages Read	Binary	4 bytes	Total pages read by application program.
Pages Written	Binary	4 bytes	Total pages written by application program.
Pages Requested	Binary	4 bytes	Total pages requested by application program.
CALC Records	Binary	4 bytes	Total CALC records stored with no overflow.
CALC Overflow	Binary	4 bytes	Total CALC records that overflowed.
VIA Records	Binary	4 bytes	Total VIA records stored with no overflow.
VIA Overflow	Binary	4 bytes	Total VIA records that overflowed from target page.
Records Requested	Binary	4 bytes	Total number of records accessed by the DBMS.

Item	Usage	Length	Description
Records Current	Binary	4 bytes	Total number of records established as current of run unit.
Calls to CA-IDMS/DB	Binary	4 bytes	Total calls made for DBMS services.
Fragments Stored	Binary	4 bytes	Total variable-length record fragments.
Records Relocated	Binary	4 bytes	Total records relocated.
Locks Requested(1)	Binary	4 bytes	Total number of record locks requested.
Select Locks Held(2)	Binary	4 bytes	Number of shared locks now held.
Update Locks Held(2)	Binary	4 bytes	Number of exclusive locks now held.
Run Unit Id(2)	Binary	4 bytes	Identification number of transaction for journaling purposes; incremented by one and carried across central versions until the journal is reinitialized.
Task Id(2)	Binary	4 bytes	Identification number of central version task; reinitialized for each central version run and incremented by 1, beginning at 2 (0 and 1 are reserved for system).

Item	Usage	Length	Description
Local Identification ⁽²⁾	Alphanumeric	8 bytes	Identification code of batch or TP program to facilitate location of dumps and elements in the central version log.
Filler	Alphanumeric	8 bytes	Reserved.

¹ As a lock is released, this value is not decremented
² Applies to central version only

10.6 Record Control Block

Item	Usage	Length	Description
Record Name	Alphanumeric	18 bytes	Name of record type for which DML command is being invoked.
Area Name	Alphanumeric	18 bytes	Name of area to which record is assigned.
Record ID	Binary	2 bytes	Identification number of record type for which DML command is being invoked.
Record Length	Binary	2 bytes	Length (data only), in bytes, of record.
Control Length	Binary	2 bytes	Length (data only), in bytes, of record up to and including the last CALC or sort-control field.
Maximum Length	Binary	2 bytes	Actual length of fixed-length record or maximum length of variable-length record, in bytes.
Database Key	Binary	4 bytes	Database key of record.
Low Page	Binary	4 bytes	Number of lowest page on which records of this type can exist.
High Page	Binary	4 bytes	Number of highest page on which records of this type can exist.

10.7 Record Occurrence Block

Item	Usage	Length	Description
Record Occurrence	As defined in schema	As defined in schema	Actual record that is the target of the DML command.

Chapter 11. Database Performance Monitoring And Tuning

11.1 Suggested Monitoring Schedule

Monitoring Tool	Monitoring Frequency	Information Provided
JREPORT 004	Daily	Summary information on the database processing activities for each program recorded in the journal file.
IDMSDBAN report 2	Weekly	Area detail statistics, such as number of logically full pages and number of relocated records.
IDMSDBAN report 5	Monthly	Set detail statistics, such as the number of pages needed to store a chained set.
PRINT SPACE	Daily	Area space utilization statistics.
IDMSDBAN (all reports)	Monthly or as needed	Set statistics, including broken chains, record data and area data.

11.2 Monitoring Facilities

Facility	Uses
CA-IDMS Performance Monitor	To monitor: <ul style="list-style-type: none"> ■ Real-time database and system statistics ■ System-wide, wait-time statistics for a unit of time ■ Statistics about resource usage by individual programs
DCMT commands	To display definitions and run-time statistics for entities associated with a DC/UCF system.
IDMSDBAN utility program	To check for broken chains and to display statistics and data for sets, records and areas.
OPER WATCH commands	To display dynamic system run-time statistics associated with DC/UCF systems.
PRINT INDEX utility statement	To monitor the structure of user-owned and system-owned indexes.
PRINT SPACE utility statement	To monitor space utilization in segments or areas.
PRINT JOURNAL utility statement	To display checkpoint information about transactions recorded on an archive or tape journal file.
PRINT utility statement	To display the contents of requested database pages.
JREPORTS	To monitor journal and database usage statistics.
SREPORTS	To monitor system and database usage statistics.
Online print log (PLOG)	To display system messages, system trace information, and snap dumps from the DDLCLOG area.
UPDATE STATISTICS utility statement	For SQL-defined databases, to refresh statistical information about SQL-defined databases in the SQL catalog.

Chapter 12. CA-Supplied Schema

Schema	Areas
IDMSNTWK	DDLDML DDLDCLOD DDLCAT DDLCATX DDLDMSG

Chapter 13. CA-Supplied Subschemas

Subschema	Areas	Used By
IDMSCATL	DDLCATLOD	<ul style="list-style-type: none">■ Loader processing■ CLOD DC/UCF system task■ PUNCH utility statement■ Database administrators when executing utilities such as UNLOAD/RELOAD against the DDLCATLOD area
IDMSCATZ	DDLCAT DDLCATX DDLCATLOD	<ul style="list-style-type: none">■ The command facility for SQL processing and physical database definition■ User applications issuing dynamic SQL requiring automatic recompilation of an access module or issuing SQL DDL statements■ Database administrators when executing utilities such as UNLOAD/RELOAD against SQL-defined DDLCAT and DDLCATX areas
IDMSNWKA	DDLDML DDLCDLOD DDLCDMSG	<ul style="list-style-type: none">■ IDD DDDL compiler (IDMSDDDL)■ DC/UCF system generation compiler (RHDCSGEN)■ DC/UCF startup■ Schema and subschema compilers (IDMSCHEM and IDMSUBSC)■ CA-IDMS-DC mapping compilers (MAPC and batch)■ CA-ADS compilers■ CA-OLQ■ CA-CULPRIT■ The Automatic System Facility (ASF)
IDMSNWKL	DDLCDLOD	Loader processing and the CLOD DC/UCF system task.
IDMSNWKT	DDLDML	SQL processing to access non-SQL defined database descriptions.

Subschema	Areas	Used By
IDMSNWKU	DDLDML DDLDCLOD DDLDCMSG DDLCAT DDLCATX	Database administrators when executing utilities such as UNLOAD/RELOAD against dictionary areas DDLDML, DDLDCLOD, DDLDCMSG and DDLCAT and DDLCATX for non-SQL defined segments only.
IDMSNWKG	DDLDML DDLDCLOD DDLDCMSG DDLCAT DDLCATX	■ IDMSRPTS
IDMSWK6	DDLDCMSG	System message processing.
IDMSWK7	DDLDCRUN	QUED and QUEM DC/UCF system tasks and queue processing.
IDMSWK8	DDLDML	CLIST and send-message processing.
IDMSWK9	DDLDCLOG	Online print log (OLP) and PRINT and ARCHIVE LOG utility statements.

Note: Additional non-SQL schemas and subschemas are supplied at installation time.

Chapter 14. SYSIDMS Parameter File

14.1 Parameter Summary

Debugging and abend control parameters

Parameter	CV	Batch	OS/ 390	VSE/ ESA	VM/ ESA	BS2000 /OSD	MSP/ EX
ABEND_ON_ DEADLOCK	X		X	X	X	X	X
ABENDTRACE		(1)					
ABENDTRACE_ ENTRIES		(1)					
ABENDTRACE _SUBSCHEMA _DISPLAY		(1)					
ABENDTRACE _VIBSNAP		(1)					
AREA_VALIDATION_MSGSX			X	X	X	X	X
DB_DEADLOCK _DUMP	X		X	X	X	X	X
DC_DEADLOCK _DUMP	X		X	X	X	X	X
DC_DEADLOCK_0029	X		X	X	X	X	X
DEADLOCK_ABEND _ERUS	X		X	X	X	X	X
DEADLOCK_ABEND _0029	X		X	X	X	X	X
DEADLOCK_DETAILS	X		X	X	X	X	X
DMLTRACE		X	X	X	X	X	X
ECHO	X	X	X	X	X	X	X
PROCTRACE		X	X	X	X	X	X
QSAMTRACE		X	X	X	X	X	X
SQLTRACE		X	X	X	X	X	X

(1) The CA-OPTIMIZER/II product must be installed to use this parameter.

Performance-related parameters

Parameter	CV	Batch	OS/ 390	VSE/ ESA	VM/ ESA	BS2000 /OSD	MSP/ EX
BUFFER_PURGE		X	X	X	X	X	X
BUFFERSTAT		X	X	X	X	X	X
DLBLMOD		X		X			
FILE_BUF		X	X	X	X	X	X
IDMSQSAM		X	X	X	X	X	X
PREFETCH	X	X	X	X	X	X	X
PREFETCH_BUF		X	X	X	X	X	X
QSAMAREA		X	X	X	X	X	X
QSAMBUF#		X	X		X		X
QSAM#BUF		X				X	
QSAMTRACE		X	X	X	X	X	X
SQL_INTLSORT		X	X	X	X	X	X

File-related parameters

Parameter	CV	Batch	OS/ 390	VSE/ ESA	VM/ ESA	BS2000 /OSD	MSP/ EX
DLBLMOD		X		X			
FILE_BUF		X	X	X	X	X	X
LENGTH_PAGE		X	X	X	X	X	X
LIST		X				X	
LOCAL_DYNAMIC _ALLOCATION		X	X	X	X	X	X
MULTIDSN		X		X			
OVERPRINT		X				X	
ROLLBACK3490		X	X	X	X		X
SYS_MSG		X	X	X	X	X	X
UPPER		X	X	X	X	X	X
<i>VSE/ESA file parameters</i>		X		X			
WIDTH_PAGE		X	X	X	X	X	X

Connection and environment parameters

14.1 Parameter Summary

Parameter	CV	Batch	OS/ 390	VSE/ ESA	VM/ ESA	BS2000 /OSD	MSP/ EX
CVMACH		X			X		
CVNUM		X			X		
CVRETRY		X	X	X	X		X
DBNAME		X	X	X	X	X	X
DICTNAME		X	X	X	X	X	X
DICTNODE		X	X	X	X	X	X
DMCL	X	X	X	X	X	X	X
LANG		X	X	X	X	X	X
LOCAL		X	X	X	X	X	X
NODENAME		X	X	X	X	X	X
REREAD_SYSCTL		X	X	X	X	X	X
SYSCTL		X	X	X	X	X	X

Miscellaneous runtime directives

Parameter	CV	Batch	OS/ 390	VSE/ ESA	VM/ ESA	BS2000 /OSD	MSP/ EX
DC_SCRATCH		X	X	X	X	X	X
DCNAME	X		X				
DMCL	X	X	X	X	X	X	X
DSGROUP	X		X				
JOURNAL		X	X	X	X	X	X
JRNLDTS	X		X	X	X	X	X
LOADAREA		X	X	X	X	X	X
LOCAL_NOJOURNAL _RETRIEVAL	X	X	X	X	X	X	X
LOCALPUR		X	X	X	X	X	X
MSGDICT		X	X	X	X	X	X
PARM		X	X	X	X	X	X
SORTSIZE		X	X	X	X	X	X

14.2 Parameter Descriptions

Parameter	Description
ABEND_ON_DEADLOCK	<p>Forces the abnormal termination of a task that encounters a database resource deadlock. In normal CV operations, a database resource deadlock results in control being returned to the application program with an indication that a deadlock occurred. This parameter causes the task to be abended instead.</p> <p>Note: It is meaningful only in the SYSIDMS file associated with a central version.</p>
ABENDTRACE=ON/OFF	<p>Activates the tracing of various pieces of IDMS data when using CA-OPTIMIZER/II. This parameter is meaningful only in the SYSIDMS file associated with a batch job.</p> <p>Note: The CA-OPTIMIZER/II product must be installed to use this parameter.</p>
ABENDTRACE_ENTRIES= <i>nnn</i>	<p>Overrides the default number of entries being traced by ABENDTRACE. This parameter is meaningful only in the SYSIDMS file associated with a batch job.</p> <p>Note: The CA-OPTIMIZER/II product must be installed to use this parameter.</p>
ABENDTRACE_SUBSCHEMA_DISPLAY=ON	<p>Activates the display of information from the subschema in use at the time of abend when using ABENDTRACE. This parameter is meaningful only in the SYSIDMS file associated with a batch job.</p> <p>Note: The CA-OPTIMIZER/II product must be installed to use this parameter.</p>

Parameter	Description
ABENDTRACE_VIBSNAP=ON	<p>Causes the dump of the VIB at the time of abend when using ABENDTRACE. This parameter is meaningful only in the SYSIDMS file associated with a batch job.</p>
	<p>Note: The CA-OPTIMIZER/II product must be installed to use this parameter.</p>
AREA_VALIDATION_MSGS=ON/OFF	<p>ON causes the informational messages DB347042 and DB347043 to be displayed on the JES log during startup and shutdown for each area being shared in a SYSPLEX data sharing environment. If you are sharing many areas this can cause the JES log to be congested.</p>
	<p>OFF is the default.</p>
	<p>Note: This parameter is only applicable in a SYSPLEX data sharing environment.</p>
BUFFER_PURGE	<p>Causes updated pages to be written to the database whenever the number of buffers containing such pages exceeds 1/4 of the number of pages in the buffer pool. This parameter may improve the performance of local mode update jobs that do not issue frequent COMMITS, since it will make buffers available for the use of prefetch. It has meaning only for local mode batch jobs.</p>
BUFFERSTAT	<p>Produces a report containing buffer pool I/O statistics that can be used for tuning purposes. The report will be written to SYSLST at the end of the job. This parameter has meaning only for local mode batch jobs.</p>
CVMACH= <i>cms-machine-name</i> (VM/ESA only)	<p>Specifies the virtual machine in which the DC/UCF system is executing.</p>

Parameter	Description
CVNUM= <i>nnn</i> (VM/ESA only)	Specifies the number of the central version that is accessible by CMS and is used to route database requests through the IDMSVMCF facility; <i>nnn</i> must be an integer in the range from 0 through 255.
CVRETRY=ON/OFF	<p>ON indicates that the following message is displayed on the operator console when the CA-IDMS central version is not active:</p> <p>CV <i>nnn</i> NOT ACTIVE. REPLY RETRY OR CANCEL.</p> <p>ON is the default.</p>
DB_DEADLOCK_DUMP	Specifies that a dump will be produced for a task that is abended due to a database resource deadlock. This parameter is used in conjunction with the ABEND_ON_DEADLOCK parameter. If not specified, no dump will be produced when a task is abended due to a database deadlock.
DBNAME= <i>database-name</i>	For non-SQL applications, specifies the name of the database to access at runtime. <i>database-name</i> is either a segment name or a DBNAME defined in a database name table. For SQL applications, it has no impact.
DC_DEADLOCK_NODUMP	Specifies that a dump not be produced for a task that is abended due to a DC resource deadlock. This parameter overrides the DUMP/NODUMP sysgen parameter.
DC_DEADLOCK_0029	Specifies that tasks that encounter a DC resource deadlock be abended with a code of 0029 rather than a code of DEAD.
DC_SCRATCH=ON/OFF	ON allows local jobs to use the Central Version's scratch area (DDLDCSCR) when a local scratch area (DDLOCSCR) is not defined in the DMCL. OFF is the default.

Parameter	Description
DCNAME= <i>member-name</i> (OS/390 only)	<p>Specifies the member name of the system within a data sharing group. This name also becomes the system (node) name, overriding the value specified in the system definition. <i>member-name</i> must be a 1-8 character name consisting of characters A-Z, 0-9, \$, #, or @.</p>
	<p>Note: This parameter is only applicable in a data sharing environment.</p>
DEADLOCK_ABEND_ERUS	<p>Specifies that ERUS tasks that encounter a database resource deadlock be abnormally terminated. This parameter is meaningful only if the ABEND_ON_DEADLOCK parameter is also specified.</p>
DEADLOCK_ABEND_0029	<p>Specifies that tasks that are abended due to database resource deadlocks use a code of 0029 rather xx29, where "xx" represents the major code of the DML request that was being issued at the time of the abend. This parameter has meaning only if the ABEND_ON_DEADLOCK parameter is also specified.</p>
DEADLOCK_DETAILS=ON/OFF	<p>ON specifies that more detail be provided in a deadlock situation. The default is OFF.</p>
DICTNAME= <i>dictionary-name</i>	<p>Specifies a dictionary to use when loading a subschema from a load area. For dictionary-related tools like CA-IDMS compilers and precompilers, IDMSBCF, etc., <i>dictionary-name</i> specifies the dictionary to access at run time. For SQL applications, <i>dictionary-name</i> specifies the name of the dictionary to connect to at run time.</p>

Parameter	Description
DICTNODE= <i>dictionary-node-name</i>	For SQL applications and dictionary-related tools under the central version, specifies the name of the DC/UCF system that controls the dictionary to access at run time. For applications running in local mode, this parameter is not applicable.
DLBLMOD=ON/OFF (VSE/ESA only)	ON specifies that the DLBL type in the disk label will be changed from 'DA' to 'SD' when sequential processing (IDMSQSAM) is activated. After the disk labels are processed as 'SD' during the QSAM file OPEN, the DLBLs are changed back to 'DA' to allow random BDAM processing. OFF is the default.
DMCL= <i>dmcl-name</i>	Specifies the name of the DMCL load module to use in local mode. IDMSDMCL is the default.
DMLTRACE=ON/OFF	ON activates a trace facility that traces all navigational DML requests made by an application. OFF is the default.
DSGROUP= <i>data-sharing-group-name</i> (OS/390 only)	Specifies the name of the data sharing group of which this system is a member. All CA-IDMS systems that are members of the same group must specify the same group name. The data-sharing-group-name must be a 1-8 character name consisting of characters A-Z, 0-9, \$, #, or @. Names that begin with SYS or UNDESIG are reserved and cannot be used. Names that begin with A-I may be in use by the operating system and should be avoided.
	Note: This parameter is only applicable in a data sharing environment.
ECHO=ON/OFF	Indicates whether SYSIDMS parameters are displayed on the JES log. OFF is the default.

Parameter	Description
FILE_BUF= <i>ddname=nnnnn</i>	Allows users to increase the number of pages in a buffer used by a specific file for a local mode job without having to change the DMCL. In CV, a DCMT command can be used to alter the number of pages in a buffer. The FILE_BUF parameter provides a similar capability for local mode jobs. If specified, the number of pages in the buffer pool associated with the specified file is increased by <i>nnnnn</i> .
	This parameter can be used to tune PREFETCH processing by allowing the local mode user to increase the number of pages in a specific buffer for a job and thereby maximize the benefit of prefetch processing.
IDMSQSAM=ON/OFF	ON activates the IDMSQSAM facility (sequential access for look-ahead database reads). OFF is the default.
JOURNAL=ON/OFF	Specifies whether journaling will be performed in local mode. OFF specifies that local mode journaling will not be performed, even if there are tape journals defined in the DMCL. ON is the default.
JRNLDTS= <i>yyyy-mm-dd-hh.mm.ss.nnnnnn</i>	This parameter provides a way to bypass a date time stamp mismatch problem between the DMCL and the journal files. The <i>yyy-mm-dd-hh.mm.ss.nnnnnn</i> is the date time stamp on the journal file. This should only be used if you know that the reason for the mismatch will not cause a problem. Inappropriate use of this parameter may cause database corruption.

Parameter	Description
LANG=xxxxxxxxxxxxxxxxxxxx Sets an alternate environment for DBCS support. This parameter is useful for local mode batch jobs and is equivalent to issuing the DCUF SET LANG command for online users. The language environment name specified can be a maximum of 19 characters long.	
LENGTH_PAGE= <i>nnn</i> Specifies the maximum number of lines to be printed on a page. <i>nnn</i> must be in the range from 10 through 32,767. The default is 60.	
LIST=SYSLST/SYSOUT/BOTH (BS2000/OSD only) Specifies whether output is written to SYSLST, SYSOUT, or both. The default is SYSLST.	
LOADAREA=ON/OFF Specifies whether the dictionary load (DDLDCLOD) area is to be accessed when loading a module. If OFF is specified, the dictionary load area will not be accessed. You should specify OFF only when all load modules are linked into an OPSYS load library. ON is the default.	
LOCAL=ON/OFF Specifies whether a batch job is to execute in local mode. If ON is specified, all requests are processed locally even if an IDMSOPTI is link-edited with the program, or a SYSCTL file is specified in the JCL. OFF is the default.	
LOCAL_DYNAMIC_ALLOCATION=ON/OFF OFF directs a local IDMS batch job to ignore any DSN information defined in the DMCL for database files, and requires that the DSN information be included in the JCL in order to access a database file. ON is the default.	
LOCAL_NOJOURNAL_RETRIEVAL Specifies that local batch jobs not journal RETRIEVAL ONLY transactions.	

Parameter	Description
LOCALPUR=ON/OFF	<p>ON forces the purging of the local mode buffer pool whenever a transaction terminates.</p>
	<p>This parameter addresses a change in the way local mode buffers are handled (between 10.21 and later releases). In release 10.21 a local mode job that had multiple transactions (run units) would have separate buffer pools for each transaction (and each transaction would have no knowledge of the others). When a transaction terminated its buffer pool would be purged. Starting in release 12.0, a local job with multiple transactions will have just one buffer pool shared by all transactions. When a transaction terminates the buffer remains unchanged until the last transaction terminates at which time the shared buffer pool is purged. To make the system purge the common buffer pool when each transaction terminates (and therefore mimic what happened in release 10.21), use the parm LOCALPUR=ON (OFF is the default).</p>
MSGDICT=ON/OFF	<p>Note: This parameter should only be specified if a compatibility problem is encountered, since there can be performance implications in specifying LOCALPUR=ON.</p> <p>Specifies whether the dictionary message (SYSMSG) area is to be accessed in order to retrieve the text of messages. If OFF is specified, the dictionary message area is not accessed. OFF should be specified only when using a DMCL that does not contain the SYSMSG segment, such as during installation. ON is the default.</p>

Parameter	Description
MULTIDSN=ON/OFF (VSE/ESA only)	ON specifies that tape files may span multiple volumes. At the end of a tape reel, EOF (end of file) or EOV (end of volume) prompts the user to specify an END OF JOB or an END OF VOLUME condition. The default, OFF, specifies that END OF JOB is automatically the condition at the end of a tape reel.
NODENAME= <i>nodename</i>	For non-SQL applications running under the central version, identifies the DC/UCF system to bind to at run time.
OVERPRINT=YES/NO (BS2000/OSD only)	Specifies whether the overprint facility is used when writing to SYSLST. The default is YES.
PARM='parameter-string'	Allows you to specify parameters typically specified in a JCL EXEC PARM statement. The format is the same as the IBM PARM parameter on the EXEC JCL statement. parameter-string can contain any 1 through 256 character parameter and can be specified on multiple lines.
PREFETCH=ON/OFF	OFF overrides the default ON and prevents IDMS from prefetching database pages, the normal processing when an area or index sweep is detected. Specify OFF for a local batch job to prevent prefetching database pages for the job step. Specify OFF in the SYSIDMS file associated with a central version to prevent prefetching pages for all transactions running with the central version.
PREFETCH_BUF= <i>nnnnn</i>	Specifies the minimum number of pages in a buffer pool that must be present before IDMS will use prefetch processing for non-area sweep requests. This parameter applies to both local and Central Version environments.

Parameter	Description
PROCTRACE=ON/OFF	ON activates a trace of key user blocks that participate in an SQL PROCEDURE call. OFF is the default.
QSAMAREA= <i>qsam-area-name</i>	Specifies the physical area in the DMCL for which the IDMSQSAM facility will do look-ahead reads. If this parameter is omitted and the IDMSQSAM=ON parameter is specified, the look-ahead reads will be performed on the first area that is accessed by the transaction.
QSAMBUF#=nnn (OS/390 and MSP/XE only)	Specifies the number of buffers to use when the IDMSQSAM facility is active. nnn can be from 1 to 255. QSAMBUF# enables you to set the number of QSAM buffers to be used without having to code JCL for the file being processed by IDMSQSAM. If QSAMBUF# is not specified, the number of buffers is determined by the DCB parameter BUFNO=nnn, or defaults to 5 buffers.
QSAM#BUF=nnn (BS2000/OSD only)	Specifies the number of buffers to use for IDMSQSAM simulation.
QSAMTRACE=ON/OFF	ON activates a trace of all the IDMSQSAM look-ahead I/O reads. This trace shows the name of the file(s) being accessed by IDMSQSAM, each RBN that is read using QSAM or BDAM (DAM/EXCP), and a summary of the number of RBN's read through QSAM and BDAM. It also shows the area being accessed and the number of OPSYS QSAM buffers being used as determined by the JCL. OFF is the default.

Parameter	Description
REREAD_SYSCTL=ON/OFF	ON directs local mode operations to reread the SYSCTL file for each new transaction. This allows you to
	<ul style="list-style-type: none"> 1. Include a SYSCTL in a batch job step's JCL. 2. Start a transaction that will execute under central version, based on the contents of the SYSCTL file. 3. Deallocate the SYSCTL file defined in the JCL. 4. Start another transaction to execute in local mode.
	OFF is the default.
ROLLBACK3490	Enables the ROLLBACK utility to process archive files residing on devices that do not support backward read, such as disk and 3490E devices.
SORTSIZE=ON/OFF	Directs whether or not IDMS utilities generate the SIZE= sort parameter card. Some sort packages cannot handle the SIZE= parameter. The default is ON which means that the SIZE= sort parameter will be generated.
SQL_INTLSORT=ON/OFF	Allows you to force the internal IDMS sort to be used in local mode. If ON is specified, an internal SORT rather than an operating system SORT will be performed on SQL commands issued in a local batch job that contain an ORDER BY clause. In many cases, an internal SORT is faster than an operating system SORT when you are not dealing with a large amount of data. OFF is the default, indicating an operating system SORT will be used.
SQLTRACE=ON/OFF	ON activates a trace facility of all the SQL database requests made by an application. OFF is the default.

Parameter	Description
SYS_MSG=UPLOW/UPPER	<p>UPPER directs IDMS to translate the text of internal #WTL messages to uppercase before being displayed at the output destination. The default is UPLOW. This allows the text of an internal #WTL message issued by CA software to be displayed in mixed case letters.</p>
	<p>Specify UPPER under these conditions:</p> <ul style="list-style-type: none"> ■ In local batch jobs to translate any internal #WTL messages issued by CA software to uppercase for that job step. ■ In the SYSIDMS file associated with a Central Version to translate any internal #WTL messages issued by CA software to uppercase for that CV region.
SYSCTL= <i>ddname</i>	<p>Specifies an alternate ddname for the SYSCTL file (other than the default ddname of SYSCTL).</p>
UPPER=INPUT/OUPUT/BOTH/OFF	<p>Specifies whether input and/or output files will be converted to uppercase:</p> <ul style="list-style-type: none"> ■ INPUT — Converts SYSIPT input files to uppercase. ■ OUTPUT — Converts SYSLST output files to uppercase. ■ BOTH — Converts both SYSIPT input files and SYSLST output files to uppercase. ■ OFF (the default) — Does not convert SYSIPT input files or SYSLST output files to uppercase.
USERCAT=ON/OFF	<p>Specifies whether the user catalog is to be accessed. Specify OFF only when formatting the user catalog or when the DMCL does not have access to a user catalog. ON is the default.</p>

Parameter	Description
WIDTH_PAGE=nnn	Specifies a maximum number of characters to be printed on a SYSLST output line. nnn must be an integer in the range from 71 to 132. The default is 132.
XA_SCRATCH=ON/OFF	Specifies whether scratch space will be allocated out of XA storage or not. OFF, the default, indicates that a scratch file will be used.

VSE/ESA file parameters

Parameter	Description
FILENAME= <i>file-name</i>	Specifies the name of the file whose attributes are to be overridden by the following SYSIDMS parameters.
BLKSIZE= <i>block-size</i>	Specifies the block size for a file. BLKSIZE and BLOCKS are mutually exclusive parameters.
BLOCKS= <i>block-count</i>	Specifies a blocking factor for a file. BLKSIZE and BLOCKS are mutually exclusive parameters.
DEVADDR=SYSxxx	Specifies a device address for a tape file (SYSIPT, SYSLST, SYSRDR, SYSPCH, or SYSlogical-unit-number).
FILABL=NO	Specifies a no-label option for a tape file. FILABL=STD is the default.
FILETYPE= <i>file-type</i>	Specifies a file type of tape, disk or file independent.
REWIND=YES/NO/UNLOAD	Specifies the position of a tape file when it is opened or closed. REWIND=UNLOAD is the default.

Chapter 15. Lock Management

15.1 Ready Mode Compatibility

		Transaction B						
		SHARED UPDATE	SHARED RETRIEVAL	PROTECTED UPDATE	PROTECTED RETRIEVAL	EXCLUSIVE UPDATE	EXCLUSIVE RETRIEVAL	TRANSIENT RETRIEVAL
Transaction A	SHARED UPDATE	Y	Y	N	N	N	N	Y
	SHARED RETRIEVAL	Y	Y	Y	Y	N	N	Y
	PROTECTED UPDATE	N	Y	N	N	N	N	Y
	PROTECTED RETRIEVAL	N	Y	N	Y	N	N	Y
	EXCLUSIVE UPDATE	N	N	N	N	N	N	Y
	EXCLUSIVE RETRIEVAL	N	N	N	N	N	N	Y
	TRANSIENT RETRIEVAL	Y	Y	Y	Y	Y	Y	Y

15.2 Lock Resource ID Format

Resource Type	Bytes 1-4	Bytes 5-8
Dbkey	X'nnnn00xx'	Dbkey
Page	X'nnnn10xx'	Page number
Space on a page	X'nnnn20xx'	Page number
Area	X'nnnn80xx'	Area low page number
Area (transient retrieval)	X'nnnnC0xx'	Area low page number

where nnnn = page group
xx = dbkey radix

Chapter 16. System Record Types

Type	Record ID	Description
SR1	1	Participates as owner in the system-owned CALC set; members are all user record types with a storage mode of CALC; occurs once for each page in a standard database area as bytes 5 through 16 in the header.
SR2	2	Replaces records relocated by the RESTRUCTURE SEGMENT, and the migration utility (RHDCMIG1 and RHDCMIG2), and SQL processing following the addition of a column to a table; eight bytes in length.
SR3	3	Identifies a user record as having been relocated; the actual user-designated record identification can be found in the relocated record's corresponding SR2 record.
SR4	4	Identifies fragments of variable-length records; the actual user-designated record identification can be found in the line index of the root portion of the record.
K0	5	Holds the area-level synchronization stamp for SQL-defined segments and acts as an owner for the table-level synchronization stamp records (K2s).
SR6	6	Appears in the subschema tables for excluded owner or member record definitions in set relationships; never occurs in the database.
SR7	7	Participates as owner in an index; stores CALC under the indexed set's name; occurs once for each indexed set in the database that does not have a user-defined owner record.
SR8	8	Contains index entries that point to lower level SR8 records or to an indexed set's member database record occurrences; chained by next, prior and owner pointers to the owner record occurrence of an indexed set.
K2	9	Holds the table identifier and synchronization stamp for each table in the area.

Chapter 17. Utilities

17.1 Utilities Summary

Backup And Recovery Utilities

Utility	Purpose
ARCHIVE JOURNAL	Offload disk journal files to archive files
BACKUP	Back up database areas
FIX ARCHIVE	Rewrite a tape journal file
FIX PAGE	Verify and/or modify the contents of a database page
MERGE ARCHIVE	Merge journal archive files and/or local mode journal files into a single file
PRINT JOURNAL	Report on transaction activity
RESTORE	Restore backed up database areas
ROLLBACK	Restore files or areas to earlier states using journal information
ROLLFORWARD	Update a backup copy of a file or area using journal information
UNLOCK	Remove locks from an area

Log Maintenance Utilities

Utility	Purpose
ARCHIVE LOG	Offload system log to archive file
PRINT LOG	Print all or part of a system log or archive log

Area Maintenance Utilities

Utility	Purpose
CLEANUP	Erase logically deleted records
EXPAND PAGE	Increase page size for a database file
FIX PAGE	Verify and/or modify the contents of a database page
FORMAT	Prepare a file, area or segment for use by CA-IDMS/DB
INSTALL STAMPS	Store synchronization stamps for an SQL-defined database
PRINT PAGE	Print the contents of database pages

Utility	Purpose
PRINT SPACE	Report on space utilization in areas
UNLOCK	Remove locks from an area
UPDATE STATISTICS	Update statistics used by CA-IDMS/DB to optimize access to an SQL-defined database

Database Loading And Restructuring Utilities

Utility	Purpose
BUILD	Build or rebuild indexes and build referential constraints for an SQL-defined database
FASTLOAD	Load data into a non-SQL defined database for the first time
IDMSDIRL	Load the IDMSNTWK version 1 schema and the IDMSNWKA subschema into a data dictionary
IDMSRSTC	Generate IDMSRSTT macro statements for restructuring a non-SQL defined database
LOAD	Load data into an SQL-defined database
MAINTAIN INDEX	Build, rebuild or delete indexes in a non-SQL defined database
RELOAD	Reload a non-SQL defined database unloaded by UNLOAD
RESTRUCTURE CONNECT	Connect new prior and owner pointers in existing sets in a non-SQL defined database
RESTRUCTURE SEGMENT	Modify record occurrences to match new schema specifications
UNLOAD	Unload all or part of a non-SQL defined database
VALIDATE	Check referential constraints for an SQL-defined database

Integrity Checking Utilities

Utility	Purpose
IDMSDBAN	Analyze the structure of an existing non-SQL defined database
PRINT INDEX	Report on system owned indexes and indexed sets

Utility	Purpose
VALIDATE	Check referential constraints for an SQL-defined database

Database Reporting Utilities

IDMSDBAN	Analyze the structure of an existing non-SQL defined database
IDMSLOOK	Report on the contents of load modules
IDMSRPTS	Report on information stored in a data dictionary
PRINT INDEX	Report on system owned indexes and indexed sets
PRINT JOURNAL	Report on transaction activity
PRINT PAGE	Print the contents of database pages
PRINT SPACE	Report on space utilization in areas

For SQL Databases Only:

BUILD
INSTALL STAMPS
LOAD
UPDATE STATISTICS
VALIDATE

For Non-SQL Databases Only:

CLEANUP
FASTLOAD
MAINTAIN INDEX
RESTRUCTURE CONNECT
RESTRUCTURE SEGMENT
IDMSRSTC

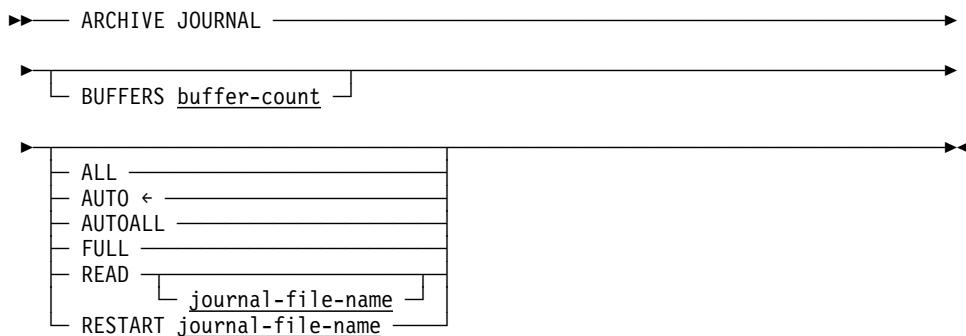
For Both SQL And Non-SQL Databases:

ARCHIVE JOURNAL
ARCHIVE LOG
BACKUP
EXPAND PAGE
FIX ARCHIVE
FIX PAGE
FORMAT
MERGE ARCHIVE
PRINT INDEX
PRINT JOURNAL
PRINT LOG

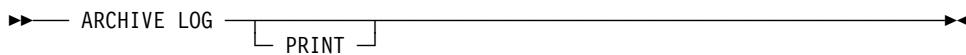
PRINT PAGE
PRINT SPACE
PUNCH
RELOAD
RESTORE
ROLLBACK
ROLLFORWARD
UNLOAD
UNLOCK
IDMSDBAN
IDMSCALC
IDMSDIRL
IDMSLOOK
IDMSRPTS

17.2 Utility Statements

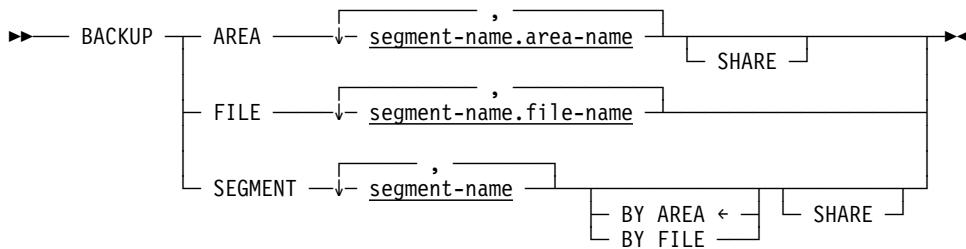
ARCHIVE JOURNAL

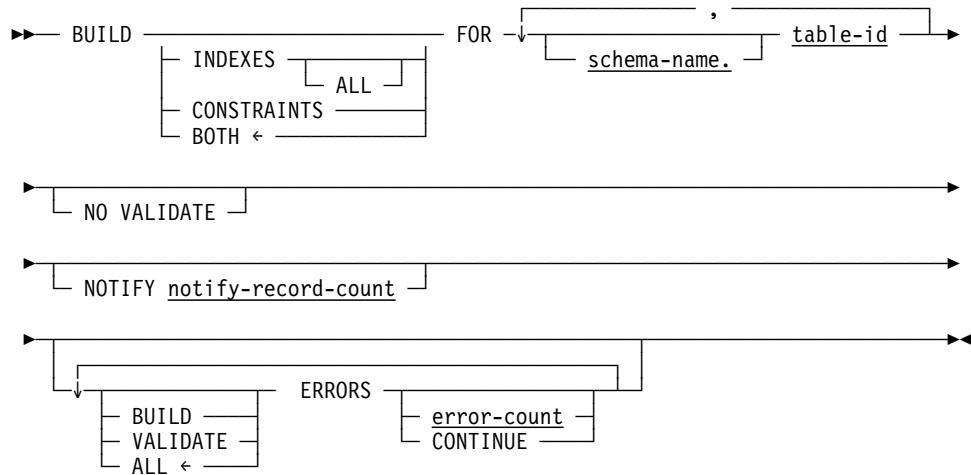
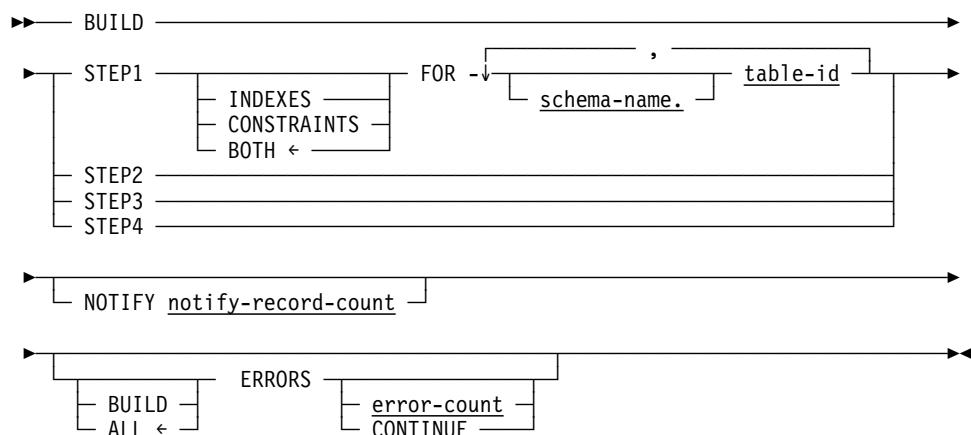
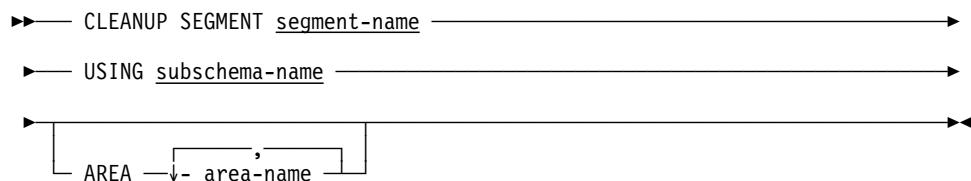
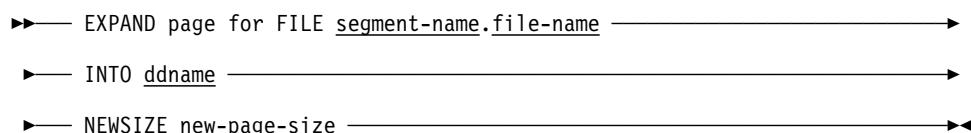


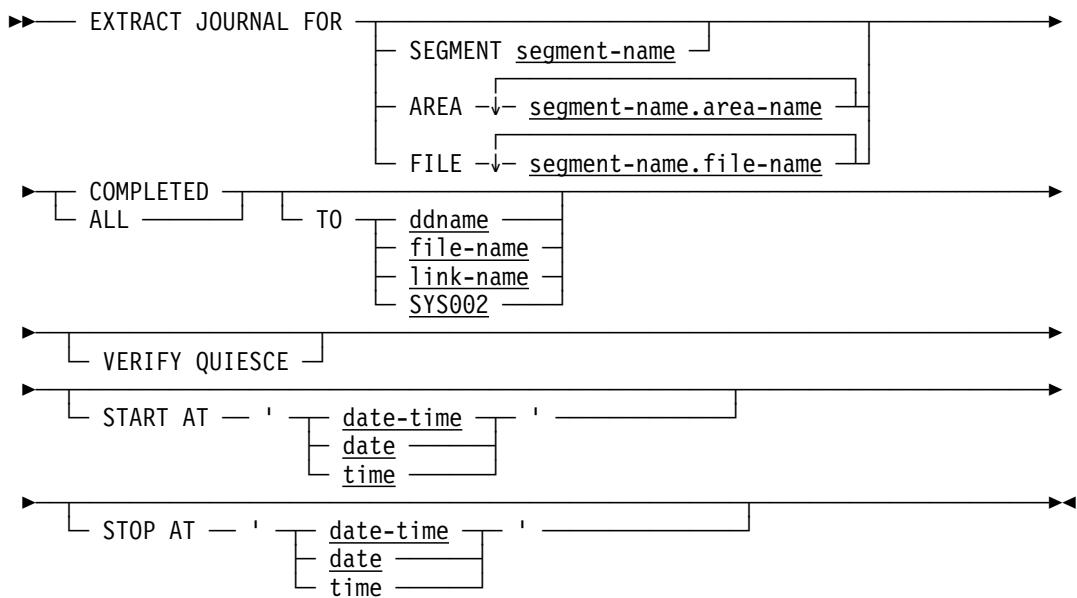
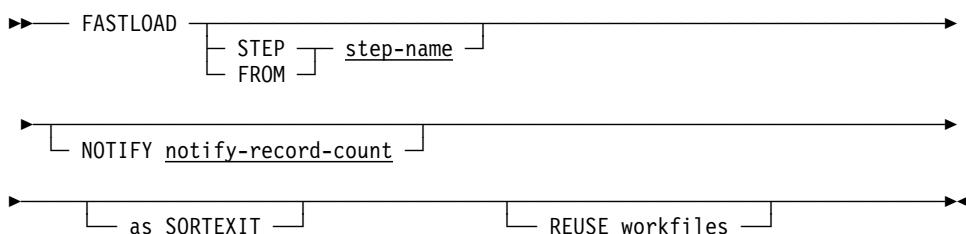
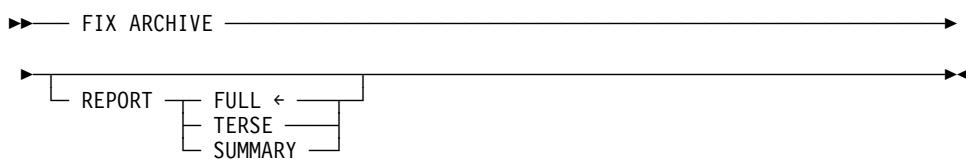
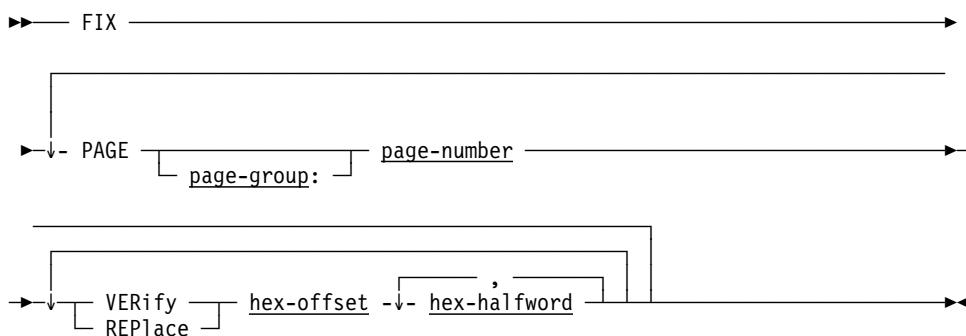
ARCHIVE LOG

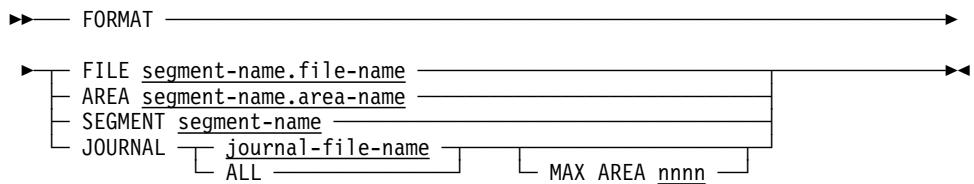


BACKUP

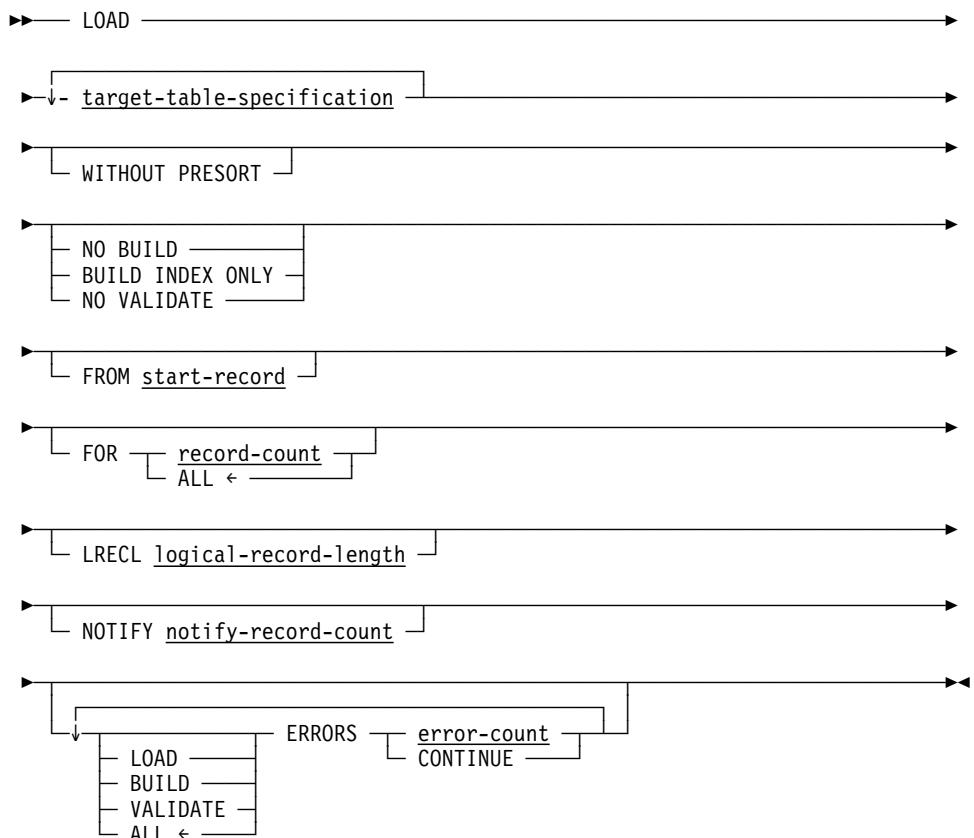
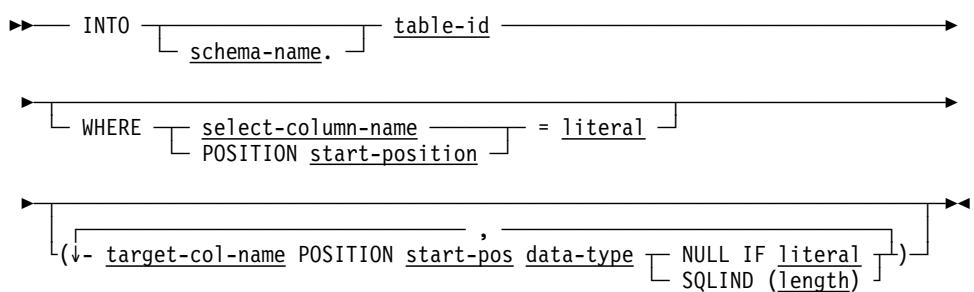


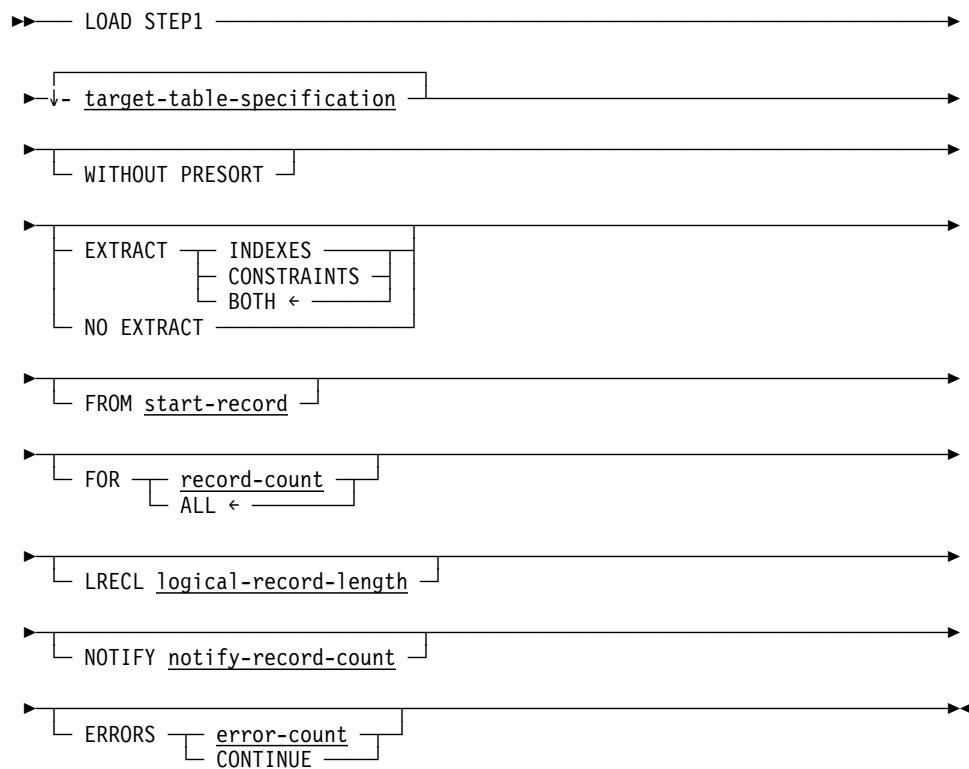
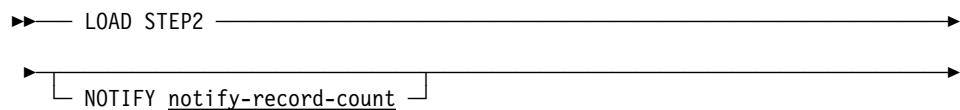
BUILD: Complete BUILD**BUILD: Stepped BUILD****CLEANUP****EXPAND PAGE**

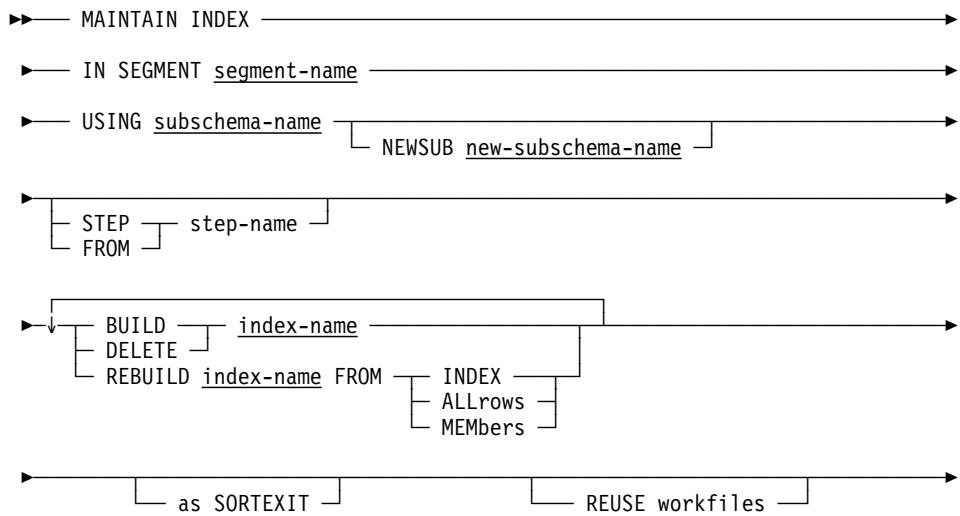
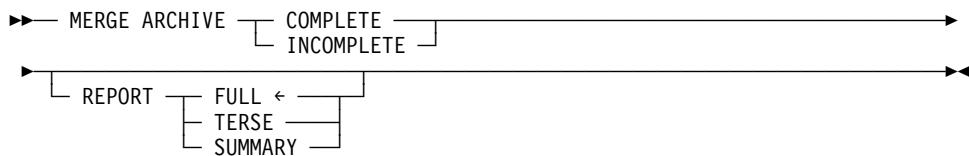
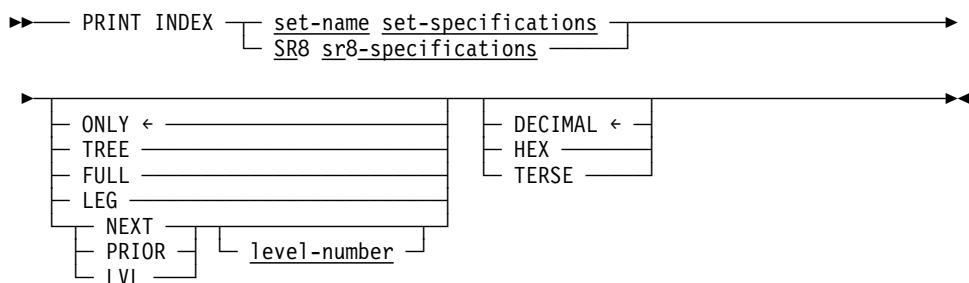
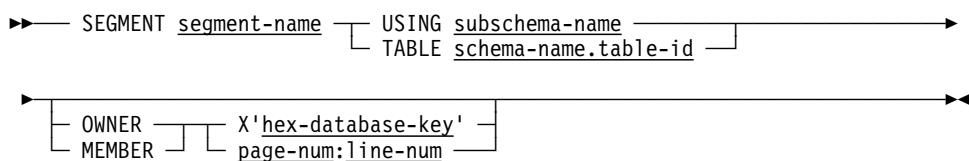
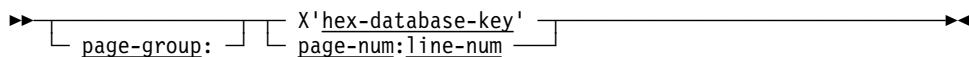
EXTRACT JOURNAL**FASTLOAD****FIX ARCHIVE****FIX PAGE**

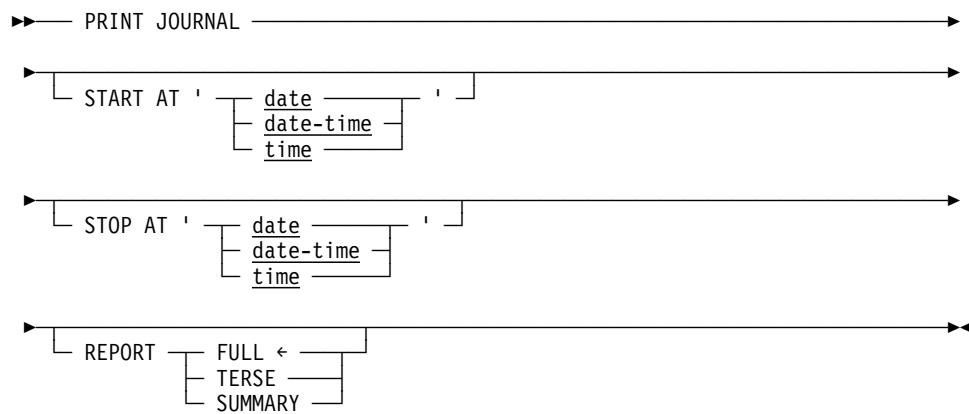
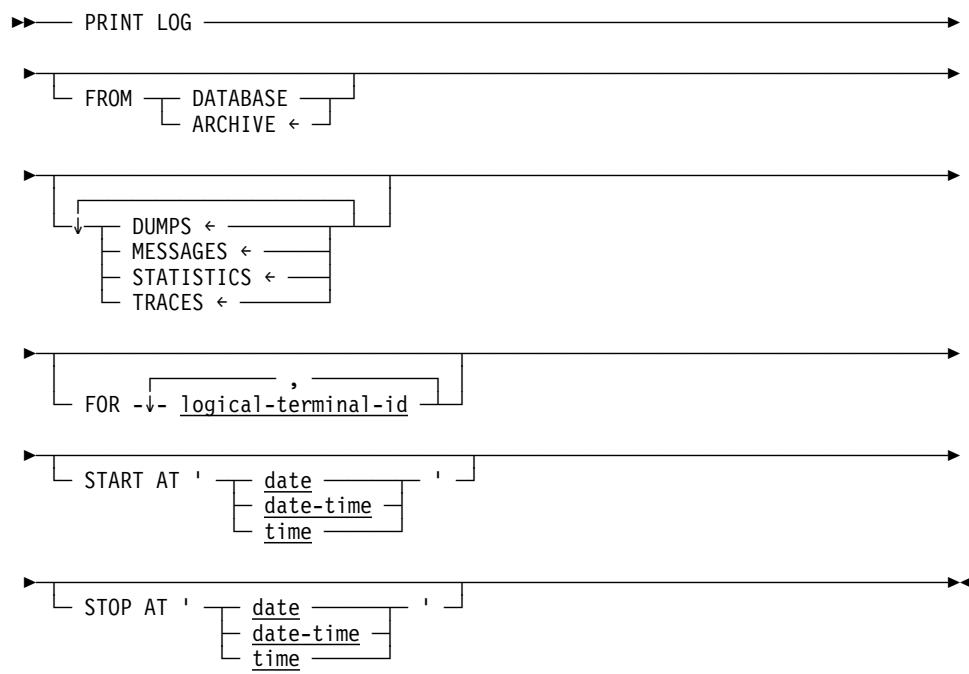
FORMAT**INSTALL STAMPS**

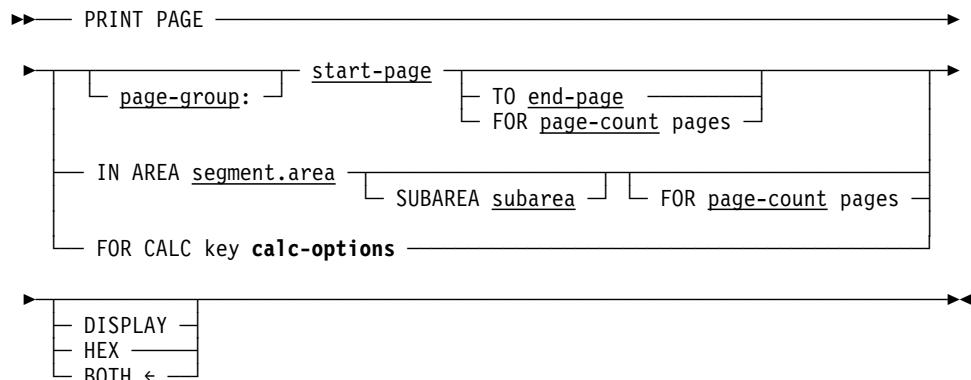
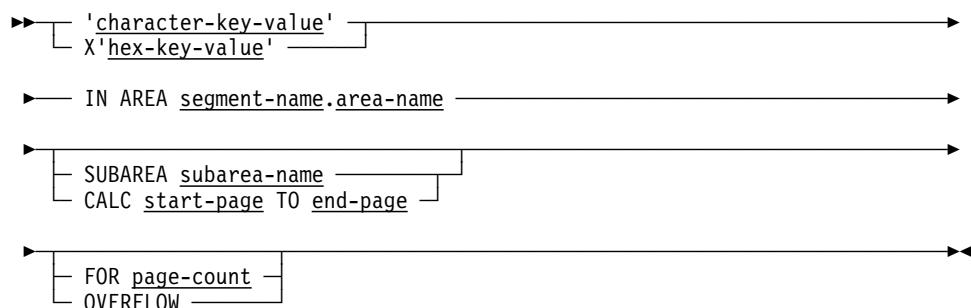
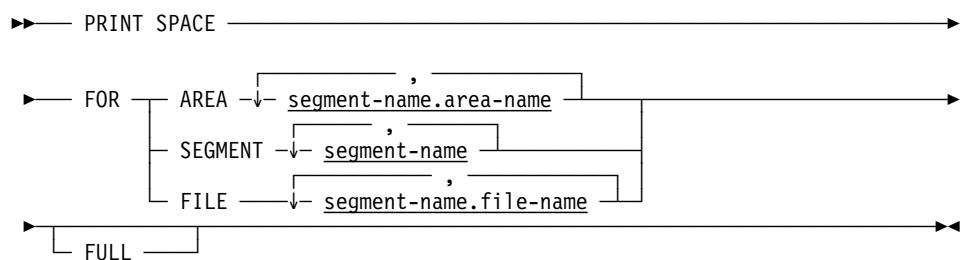
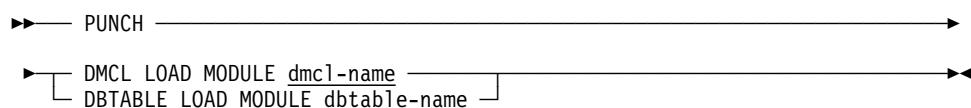
```
➤— INSTALL STAMPS INTO AREA segment-name.area-name —————→
```

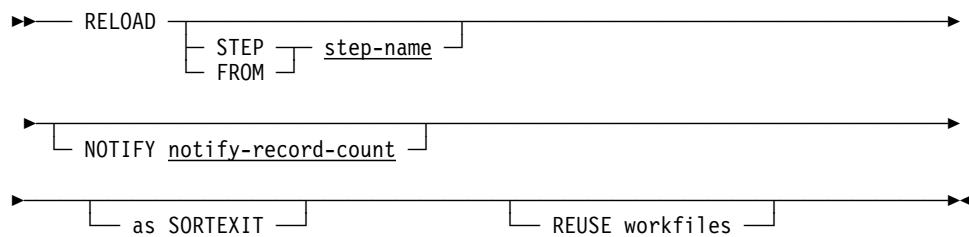
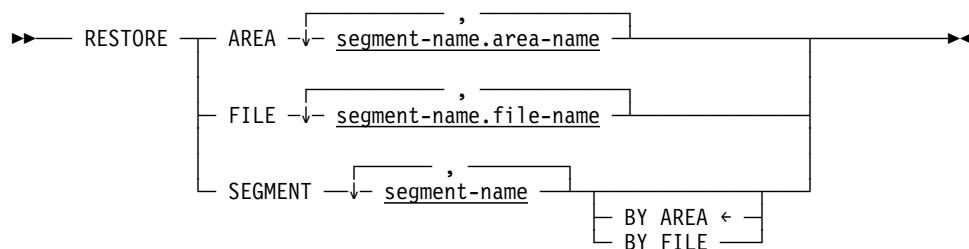
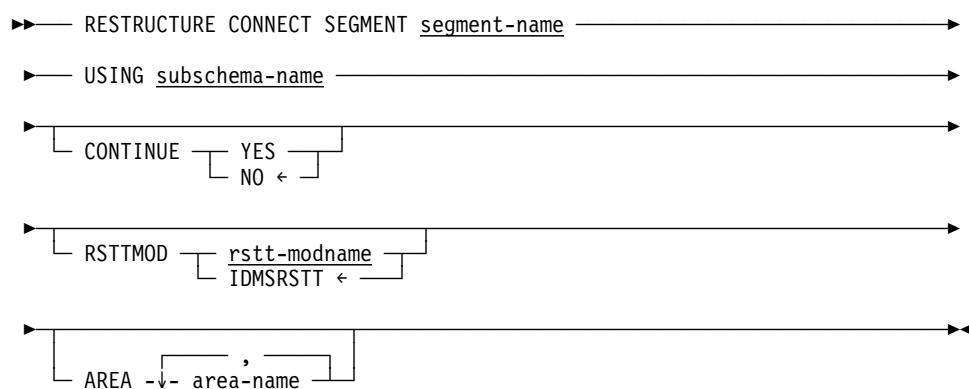
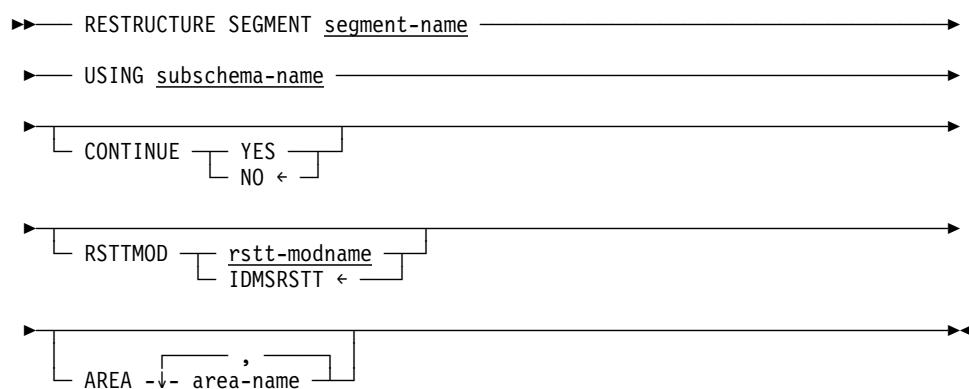
LOAD: Complete or phased load**Expanded syntax for target table specification**

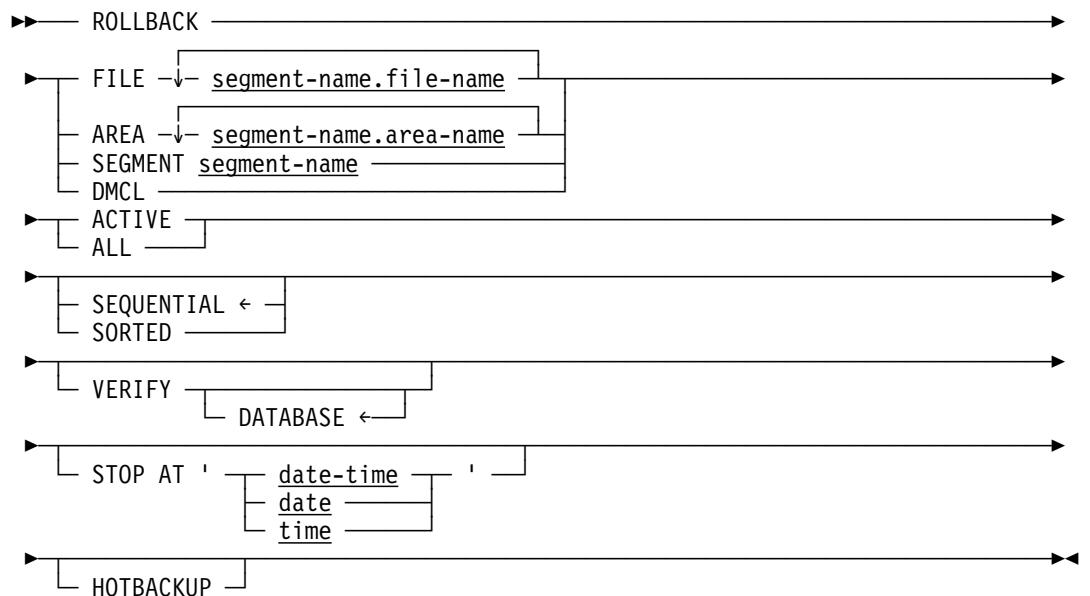
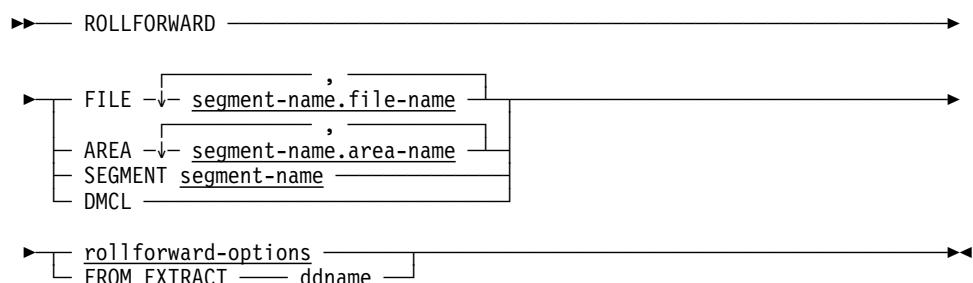
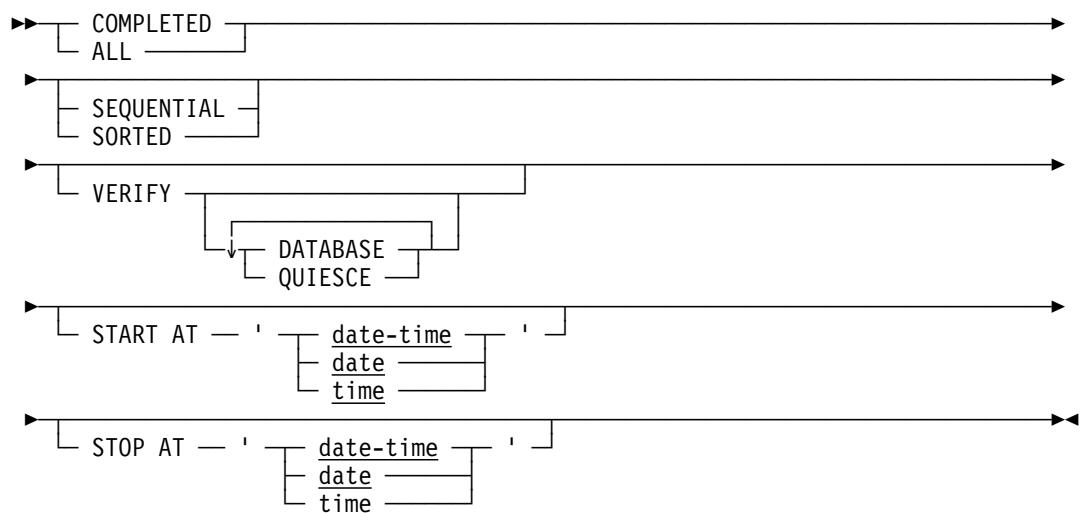
Stepped LOAD — Step 1**Stepped LOAD — Step 2**

MAINTAIN INDEX**MERGE ARCHIVE****PRINT INDEX****Expansion for set-specifications****Expansion for SR8-specifications**

PRINT JOURNAL**PRINT LOG**

PRINT PAGE**Expansion for calc-options****PRINT SPACE****PUNCH**

RELOAD**RESTORE****RESTRUCTURE CONNECT****RESTRUCTURE SEGMENT**

ROLLBACK**ROLLFORWARD****Expansion of rollforward-options**

UNLOAD

```
► UNLOAD SEGMENT segment-name ──────────────────────────  
|  
|   ┌── USING subschema-name ──────────────────────────  
|  
|   ┌── AREA ────┐ , ────┐  
|   └──────────┘  
|  
► RELOAD INTO segment-name ──────────────────────────  
|  
|   ┌── USING subschema-name ──────────────────────────  
|  
|   ┌── DMCL dmc1-name ──────────────────────────  
|  
|   └──────────┘
```

UNLOCK

►► UNLOCK [AREA segment-name.area-name] [SEGMENT segment-name] ►►

UPDATE STATISTICS

```

    ➔ UPDATE STATISTICS [ [ FOR ] { TABLE | AREA | SCHEMA } ]
        [ [ , ] { schema-name. } table-identifier ]
        [ [ , ] segment-name.area-name ]
        [ [ , ] schema-name ]
        [ [ , ] area-name ]
    ➔ SAMPLE percent
  
```

The diagram illustrates the syntax of the `UPDATE STATISTICS` statement. It starts with `UPDATE STATISTICS`, followed by optional parameters: `FOR`, `TABLE`, `AREA`, or `SCHEMA`. The `FOR TABLE` path leads to `table-identifier` (with an optional schema prefix). The `FOR AREA` path leads to `segment-name.area-name`. The `FOR SCHEMA` path leads to `schema-name` (with an optional area name suffix). Finally, the `SAMPLE` keyword is shown at the bottom left.

VALIDATE: Complete VALIDATE

►►► VALIDATE

►►► TABLE → [schema-name.] table-identifier

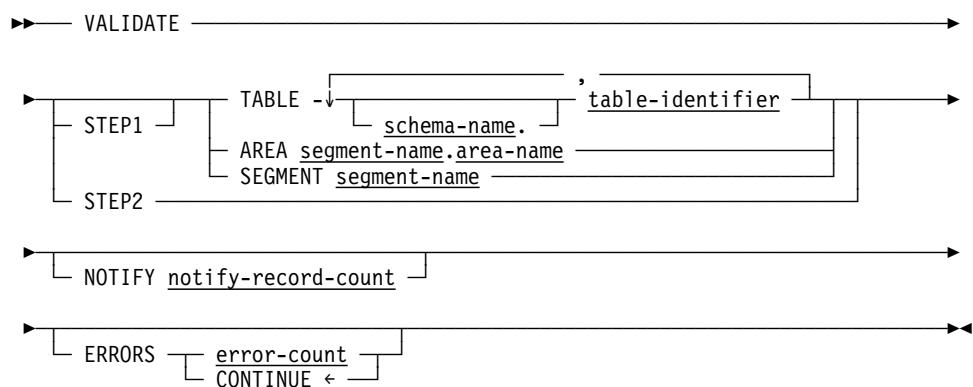
►►► AREA segment-name.area-name

►►► SEGMENT segment-name

►►► NOTIFY notify-record-count

►►► ERRORS [error-count] CONTINUE ← []

Stepped VALIDATE

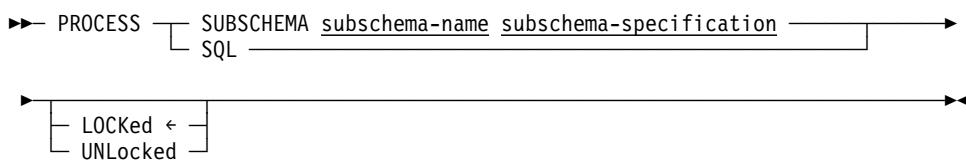


Chapter 18. Utility Programs

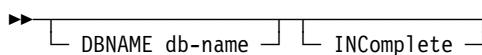
18.1 IDMSDBAN

PROCESS

Code on one line only.

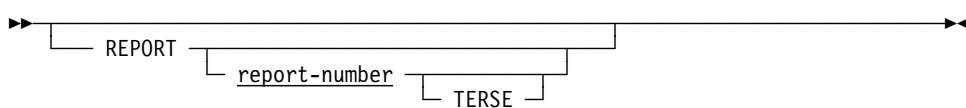


Expansion for subschema-specification



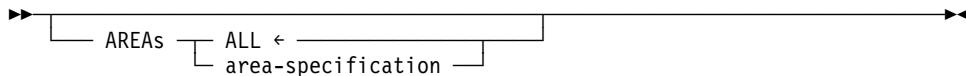
REPORT

Code on one line only.



AREA

Code on one line only.

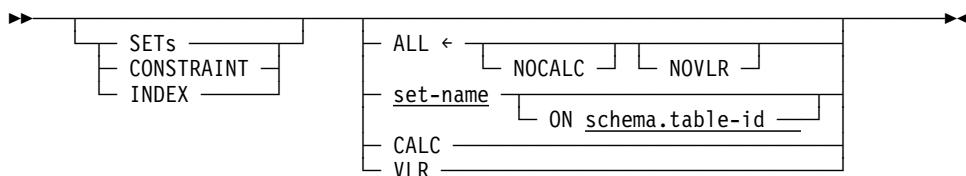


Expansion for area-specification



SET

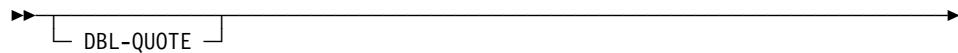
Code on one line only.



18.2 IDMSDIRL

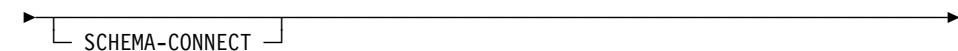
DBL-QUOTE

Code on one line only.

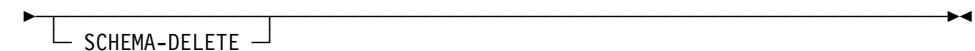


SCHEMA-CONNECT

Code on one line only.



SCHEMA-DELETE



18.3 IDMSLOOK

HELP

►— HELP —————→

LOAD=OPSYS

►— LOAD=OPSYS —————→

SUBSCHEMA

►— SUBSCHEMA = subschema-name —————→

BIND SUBSCHEMA

►— BIND SUBSCHEMA = subschema-name ,DBNAME = database-name —————→

DBTABLE

►— DBTABLE = [dbtable-name] —————→

DMCL

►— DMCL [ALL] [SORTED] [SORTED PAGES] —————→

AM

►— AM=access-module-name —————→

AM PROGRAM

►— AM PROGRAM = access-module-name —————→

PROGRAM

►— PROGRAM = load-module-name —————→

RCM PROGRAM

►— RCM PROGRAM = RCM-module-name —————→

DATES

►— DATES = load-module-name —————→

DATETIME

►— DATETIME —————→

DATETIME STAMP

►↓- DATETIME STAMP = internal-stamp-value ──────────────────────────►

OPTIONAL APARS

►─ OPTIONAL APARS ──►

STORAGE POOL

►─ STORAGE POOL ──►

PROGRAM POOL

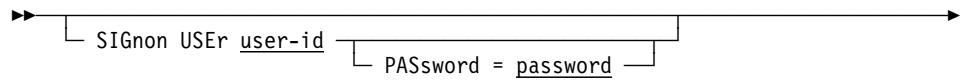
►─ PROGRAM POOL ──►

FIND

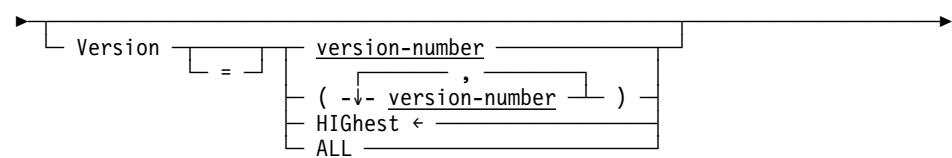
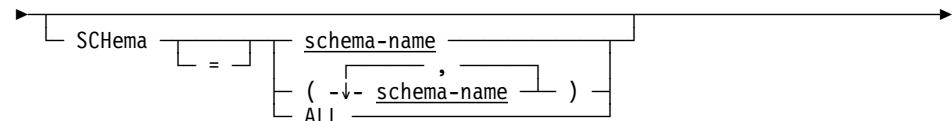
►─ FIND=hex-string ──►

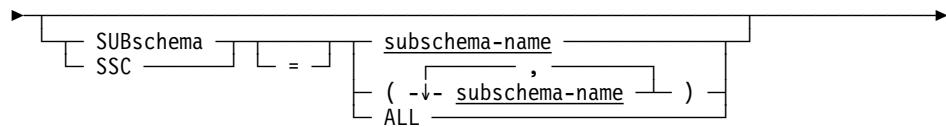
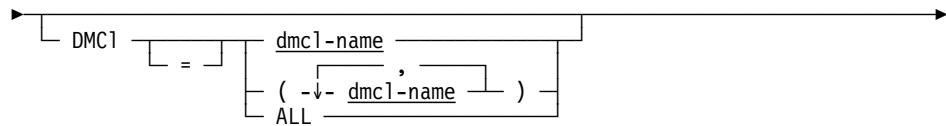
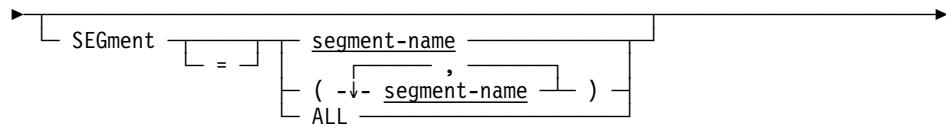
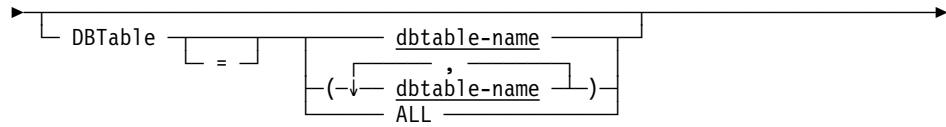
18.4 IDMSRPTS

SIGNON USER

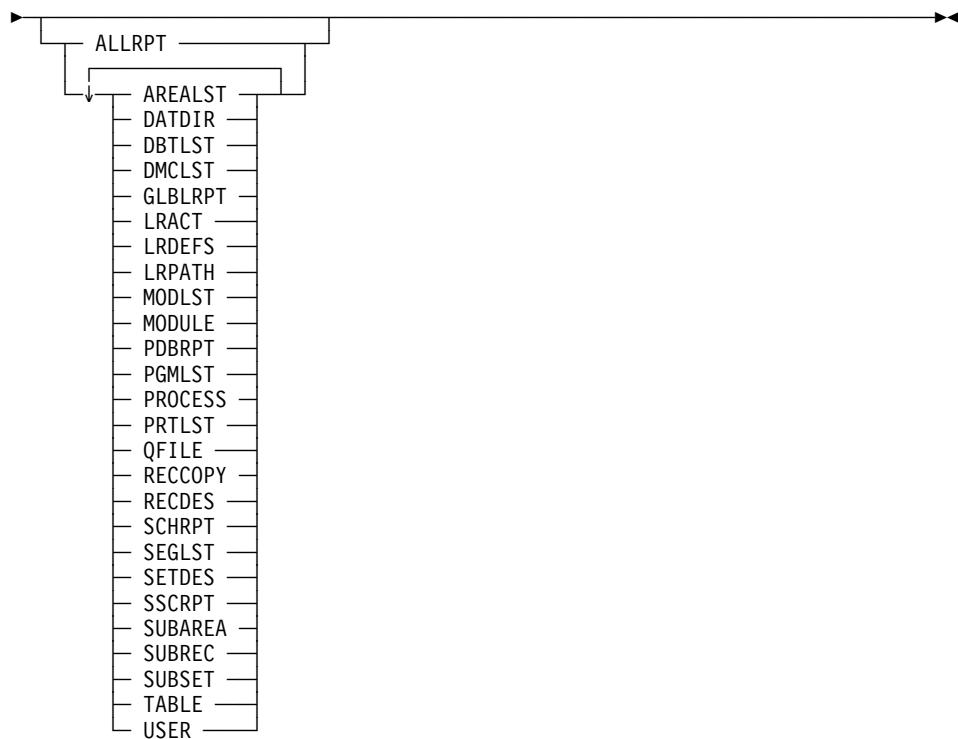


SCHEMA



SUBSCHEMA**DMCL****SEGMENT****DBTABLE**

REPORTS SELECTION



18.5 IDMSRSTC

SIGNON

```
►-- SIGnon -->
  ►-- [USER name] [is] [user-id] -- [PASSword] [is] [password] -->
  ►-- . -->
```

SCHEMA

► OLD SCHEMA name is old-schema-name →
 └ Version is ┌ version-number ┌
 └ HIGhest ──────────┐
 └ LOWest ──────────┘
► NEW SCHEMA name is new-schema-name →
 └ Version is ┌ version-number ┌
 └ HIGhest ──────────┐
 └ LOWest ──────────┘
► . →

SIGNOFF

► ┌ SIGNOFF ┌ . →
 └ BYE ──────────┐
 └ LOGOFF ──────────┘

18.6 IDMSRSTT Macro Statements

IDMSRSTT BUFSIZE

►— IDMSRSTT BUFSIZE = (new-buffer-size) —————►

IDMSRSTT RECNAME

►— IDMSRSTT RECNAME = record-name —————►

►— [,MINLEN = (min-root-length,min-fragment-length,max-data-length)]
 | FIXED ————————►

►— [DCT = dctname] —————►

►— [,NUPROCS = (-↓- procedure-name)] —————►

IDMSRSTT SETPTR

►— IDMSRSTT SETPTR = —————►

►— [(— old-position —), (— new-position —) | set-name)]
 | ALL ————————►

IDMSRSTT FIELD

```
►-- IDMSRSTT FIELD = ──────────────────────────────────────────  
►-- ( -> field-specification ) ──────────, OCC = ── occurrence-count ──  
ALL ──────────────────────────────────────────────────────────  
                  DEP ──────────────────────────────────────────
```

Expansion for field-specification

```
─ ┌─ old-displacement ─┐ ──────────────────────────────────────────  
─ ┌─ new-field-value ─┐ ──────────────────────────────────────────  
─ ──, new-displacement ──────────────────────────────────────────  
─ ──, field-length ──────────────────────────────────────────  
─ ┌─ , NEW ─┐ ──────────────────────────────────────────────────  
─ ┌─ , CTRL ─┐ ──────────────────────────────────────────────────
```

IDMSRSTT END

```
►-- IDMSRSTT END ──────────────────────────────────────────────────
```

END

```
►-- END ──────────────────────────────────────────────────────────
```