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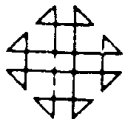
PROGRAM NUMBER

**030010**

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## University of Miami

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(305) - 284-6257



CONTRIBUTED PROGRAM LIBRARY SUBM  
(for IBM S/360, 1130 and 1800)

SHARE Program Library Agency  
Triangle Universities Computation Center  
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This form should be completed and submitted with the program package to PID at the address shown above. Standards and instructions for submitting programs are in your *User Group Reference Manual* or the *Contributed Program Submittal Standards Manual* available from PID.

- ① Program Order Number (to be filled in by PID) . . . . . 360D-03.0.010
- ② System Type (machine) . . . . . S / 3 6 0
- ③ Search Key . . . . . T R A N S L A T E S . S T E N O G R A P H I C  
/ I N P U T / I N T O E N G L I S H / O U T  
P U T / O S / 3 6 0
- ④ Programming Language . . . . . 3 6 0 0 S A L F
- ⑤ Author's Name and Address . . . . . Office of Computer Services  
Central Intelligence Agency  
Washington, D.C.
- ⑥ Direct Inquiries to Name and Address  
(if different than Author) . . . . . Mr. William Eisner  
Office of Joint Computer Support  
CIA  
Washington, DC
- ⑦ Title of Program . . . . . STENO TO ENGLISH TRANSLATION
- ⑧ Submitter's User Group Affiliation Code and Installation Code . . . . . S C A D
- ⑨ Submitter's Own Program Identification and Suffix (optional) . . . . .
- ⑩ Primary Subject Code . . . . . 0 3 . 0
- ⑪ Secondary Subject Codes . . . . . 0 6 . 0 0 8 . 0
- ⑫ Operating or Monitor System Required . . . . . S E E A B S T R A C T
- ⑬ New or Revision Code (if revision, show prior Program Order Number in item 1) . . . . . N
- ⑭ Year Completed . . . . . 6 9
- ⑮ Date of Submittal . . . . . 0 6 1 2 6 9
- ⑯ Documentation (number of original pages submitted) . . . . . 9 3
- ⑰ Abstract (should contain sufficient information for a reader to determine the value of the program). Listed on the reverse side of this form are subjects which may serve as a guide for a descriptive abstract.

# CONTRIBUTED PROGRAM LIBRARY SUBMITTAL FORM

## Subject Guide

- Purpose
- Programming Language used
- Version and modification level or release number of IBM Programming System used, or program order number for non-IBM authored program used
- Field of application
- Type of routine (main program, subroutine, etc.)
- Specific description of machine requirements
- Engineering Changes (EC) level of equipment (if pertinent)

### ABSTRACT

The S/360 Steno to English program is designed to translate Stenographic input into English output. The program itself is written in ALC and has been compiled and tested using OS Version 17 on a S/360 model 40, 50 and 65 system. The Steno program should run on any S/360 model 30 and up. An on-line printer, 132 print positions, console typewriter, and one tape and 2314 disk drive are required. The output takes form in all upper case with an @ sign representing initial capitalization.

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(Please attach additional pages if necessary) . . . . . Total pages attached \_\_\_\_\_

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"I hereby give anyone permission to reprint, reproduce, and distribute this program to anyone else."

(18) Signature of Submitter and Date John P. Rafferty 11 June 69

(19) Signature of Installation Addressee John P. Rafferty 11 June 69

T4SF

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### TASK DESCRIPTION

The programs have been designed to take stenographic input in machine readable form, and to automatically transcribe it into hard copy, upper and lower case English output.

Stenotypy (also known as machine stenography, or machine shorthand) is a well established technique whereby an operator can convert speech, as rapidly as it is spoken, into printed stenographic symbols, using a special keyboard device called the Stenograph machine.

The Steno to English transcription program runs under Operating System 360 in a batch environment. The programs operate in five passes, including two passes using the IBM OS-360 sort package.

Input to the programs is provided on magnetic tape encoded with stenographic data. The English output is composed and formatted for operation on a printer with upper and lower case capability (the IBM 1403-N1 printer with TN chain configuration is used).

The programs incorporate a Steno to English dictionary which contains stenographic words in a highly coded format to provide a normalization and common ending capability.

### FUNCTIONAL AND MATHEMATICAL METHODS

The dictionary matching in the stenographic transcription programs is accomplished by using the basic sort-match-resort method with the imposition of the longest match bias. Using this method, the input is broken into segments, sorting these segments from low to high, comparing them in a merge phase with the steno dictionary and choosing the match which compares equally with the greatest number of characters of input. Substitution of English for Steno is accomplished in a pass following resort of the matched Steno words on their original position. This method was chosen over the more interactive direct access technique because of the efficiency of the batching operation on large volumes of text.

### EQUIPMENT SPECIFICATIONS

For assembling the programs in the Steno transcription system, the program requires a 360 capable of running the Operating System and using the conventional OS-360 Assembler. Hardware required for running the programs includes any 360 capable of running the OS-360 Sort, with at least one input tape as well as tapes, disks or drums for intermediate

sort volumes (this varies with required speed and volume) and an input device for storing the Steno to English dictionary. A model 1403-N1 IBM printer equipped with a TN chain is used for output. A device for encoding stenotype data into machine readable form is also required.

#### STORAGE REQUIREMENTS

Storage requirements for operation of the programs vary with the desirability for speed and volume handling. Minimum core for operating efficiently is 64 K bytes. Running times vary approximately at the same rate as sort running times on different configurations of 360 systems.

#### LIMITATIONS

The programs are restricted in the following manner. Dictionary entries operated on by the programs must include no more than eight Steno strokes and the functions of the dictionary entries (i.e., the English output) are restricted to 256 bytes of information coded in EBCDIC.

Volume of text restrictions depend on the number and size of intermediate storage devices utilized.

One of the limitations is to get the stenograph input tape, from the Stenograph machine, into machine readable form. A conventional Stenograph creates a paper tape 2-3/8 inches wide, and the machine spaces the tape automatically, one line after each stroke. Each character always prints in the same relative position on the recording tape. The keys on the Stenograph machine may be struck simultaneously.

The machine that was used to get the stenographic input into machine readable input was an optical reader. The stenotype shorthand system used to prepare stenotype for processing by the optical reader is a slightly modified version of the Ireland system.

The stenotype intended for use by the optical reader must meet several requirements. The paper is of high quality, white, dimensionally uniform, and relatively free from wood chips or other foreign matter which affects paper reflectivity. Printing is done with black dye-based ink made available for this purpose.

Because a knowledge of stroke boundaries is essential in deciphering stenotype shorthand, the optical reader generates an end-of-stroke mark after each stroke processed. The optical reader also generates a word

mark to indicate the end of a pad of stenotype. The word mark is converted to a tape mark for storage on magnetic tape. All stenotype character information is converted to binary code for storage on magnetic tape. Even parity is automatically assigned at this time.

After the stenotype is stored on magnetic tape, it is then ready for use in the system. The input-edit phase of the programs then converts the binary coded characters into a bit representation, having the twenty-three possible steno characters represented by three bytes of information. Maximum block size of 500 is used. Record size is treated as undefined.

Another limitation would be the freedom used by the stenotypists in their creation of stenographic outlines. There seems to be somewhat of a basic system, but no two stenotypists write the same way. Therefore, there are many different types of ambiguities created.

#### EXPERIENCE

The programs have been operational for about one year. During this time they were used approximately twice a day.

There is an extensive amount of work to be done in additional lexicography. Due to the numerous homonymic (homographic to the system) ambiguities associated with the English language and thus with the form of the stenographic recording, a continuing measure of analysis would have to be done. The building of a Steno to English dictionary is an endless task. This is mainly due to word boundary homographs and to more than one stenotypist using the same outline to represent a different English output.

#### OPERATING INSTRUCTIONS

The package contains one magnetic tape. Data sets 2 and 3 should be punched out using IBM Utility IEBCGENER in order to create run decks for the following computer runs:

RUN 1 - LIBJCL cards create library using IEHMOVE deck to restore the job library and IEHPROGM deck to catalog the JOBLIB. Note that the volume ID should be changed for an available user disk.

RUN 2 - RUNJCL cards - this run executes STENO #0 to create a library. STENINP - to create the steno input. STENO #1 - to edit the input. STENO #2 - to make a match against the dictionary and do a sort. STENO #3 - to do the recomposition, output edit and list.

## MAGNETIC TAPE KEY

The tape is a standard label (OS) tape containing three data sets as follows:

800 bpi; 9 track\*

Data Set 1 DSNNAME=STENLLIB  
EBCDIC

Assembled object deck, link edited and unloaded by  
the utility IEHMOVE.

Data Set 2 DSNNAME=RUNJCL  
EBCDIC

Job Control Language Cards required to execute the  
test translation (approximately 30 cards).

Data Set 3 DSNNAME=LIBJCL  
EBCDIC

JCL cards which can be used to move load module  
library onto tape (approximately 10 cards).

Data sets 2 and 3 may be punched using IBM utility IEBGENER.

The tape contains 10 tape marks and is formatted as follows:

VOL 1  
VOL 2  
EOF  
HDR1  
HDR2  
EOF  
DS1  
TRL1  
TRL2  
EOF  
HDR1  
HDR2  
EOF  
DS2  
EOF  
TRL1  
TRL2  
EOF

HDR1  
HDR2  
EOF  
DS3  
EOF  
TRL1  
TRL2  
EOF

## SUMMARY

Since the system has been in extensive operation for a year, it is considered stable and relatively bug free. However, the English language shifts over time with a subtle elusiveness, and maintenance of an efficient, sophisticated system requires continuing analysis, updating, and modification of the dictionary.

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IEF2361 ALLUC. FOR JOB      ASM
IEF2371 SYSLIB      ON 230
IEF2371      ON 236
IEF2371 SYSUT1      UN 231
IEF2371 SYSUT2      UN 232
IEF2371 SYSUT3      UN 233
IEF2371 SYSPUNCH    UN 000
IEF2371 SYSIN       ON 236

```

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```

ST#0
SYMBOL  TYPE ID  ADDR  LENGTH LO  IO

```

# EXTERNAL SYMBOL DICTIONARY

PAGE 1  
14.06 4/14/57

```

STEND#0  90  01 00A020 000E50
NURF     LD   00A560      01
DUNSTER  LD   00A2EE      01
STRG     LD   00A560      01
BDUN     LD   00A2E6      01
STEDIT   R4   02
AT1      R4   03
AT2      R4   04
AT3      R4   05
AT4      R4   06
AT5      R4   07
$SYNAD   R4   08
ESNAP    R3   09 00A230 000040
ESNAP    R4   0A
ALPTST   R4   0B

```



LOC	OBJ CT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
000020	000052			2	PRINT UN,NOGEN
				3	STENO#0 START X'A020'
				4	LKECL EQU 82
				5	ENTRY NURF
				6	ENTRY DUNSTER,STRO,BOUN
				7	EXTRN STEDIT,AT1,AT2,AT3,AT4,AT5,ASYNAD
000008				8	MAXSTKRS EQU 8
				9	SSAVE
				30	OPEN (DICTO,(OUTPUT))
				36	OPEN (CARDS,(INPUT))
				42	OPEN (DICTI,(INPUT))
J0A07E 9110 CCDE		JAD38		48	TM CARDS+48,X'10'
J0A082 47E0 C720		0A77A		49	BND TESTDI
				50	GET GET CARDS,CARD+1
				55	CLI CARD+11,C'
J0A094 9540 C737		JA791		56	BE ENDAT
J0A098 4780 C24E		0A2A8		57	MVC AREA+10(6),CARD+1
J0A09C 0205 CA58	C720	JAA82 0A787		58	MVC AREA+6(2),CARD+7
J0A0A2 0201 CA54	C733	JAAAB 0A780		59	MVI AREA+4,X'F0'
J0A0A8 92F0 CA52		JAAAC		60	CLI CARD+9,X'40'
J0A0AC 9540 C735		0A78F		61	BE TRIC
J0A0B0 4780 C060		0A08A		62	MVC AREA+4(1),CARD+9
J0A0B4 0200 CA52	C735	JAAAC 0A78F		63	TRTC CARO+11(70),TABBLNK
J0A0BA 0045 C737	C87F	JA791 0A809		64	S 1,=A(CARD+10)
J0A0C0 5810 C0CE		0AE28		65	STC 1,AREA+16
J0A0C4 4210 CA56		0AAB8		66	BCTR 1,0
J0A0C8 0610				67	LA 9,AREA+17(1)
J0A0CA 4191 CA5F		JAA89		68	EX 1,MOVUM1
J0A0CE 4410 C08C		0A116		69	MVI 0191,0
J0A0D2 9200 9000		00000		70	SR 2,2
J0A0D6 1822				71	LA 11,CARD+12(1)
J0A0D8 4181 C735		JA792		72	TRT 0188,11),TABBLNK
J0A0DC 0057 3000	C77F	00000	JA709	73	CL 2,=A(1)
J0A0E2 5520 C002		0AE2C		74	BE FNDAI
J0A0E6 4780 C24E		0A2A8		75	LR 11,1
J0A0EA 1881				76	TRT 0180,11),TABBLNK
J0A0EC 004F 0000	C87F	00000	JA809	77	BCTR 11,0
J0A0F4 1813				78	SX 1,11
J0A0F8 4210 C0C1		00001		79	STC 1,1(9)
J0A0FA 0610				80	BCTR 1,0
J0A0FC 4410 C056		0A110		81	EX 1,MOVUM2
J0A100 4191 C003		00003		82	LA 9,319,11
J0A104 5890 C0D6		0AE30		83	S 9,=A(AREA)
J0A108 5090 C0DA		0A664		84	ST 9,SAV2
J0A10C 47F0 C170		0A1CA		85	B DODICT
J0A110 0200 9002	8001	00002	00001	86	MOVUM2 MVC 210,91,1(11)
J0A116 0200 CA5F	C737	JAA89	0A791	87	MOVUM1 MVC AREA+17(0),CARD+11
				88	DONBLK GET DICTI
J0A126 92FF CA40		0AA9A		92	MVI SMOE,X'FF'
J0A12A 1831				93	LR 3,1 LOCATION OF TAPE RECORD
J0A12C 9110 CCDE		JAD38		94	TM CARDS+48,X'10'
J0A130 4710 C02C		0A086		95	BD GET
J0A134 45E0 C618		0A672		96	BAL 14,GETWORD
J0A138 0504 CA49	CE1E	0AAA3	0AE78	97	CLC 1WORK*3(5),=XLS'0' ZERO?
J0A13E 4780 C0C2		0A11C		98	BE DONBLK YES, GET NEXT BLOCK
J0A142 4140 CA52		0AAAC		99	LA 4,AREA+4 CREATE RECORD AT AREA+4

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A146 45E0 C6A2		0A6FC	100	BAL	14,UNPK6 INDICATOR
00A14A 45E0 C6A2		0A6FC	101	BAL	14,UNPK6 ACQ
00A14E 45E0 C63E		0A698	102	BAL	14,UNPK7 ARGUMENT
00A152 45E0 C6D0		0A72A	103	BAL	14,SKPFIELD CONFIX
00A156 45E0 C63E		0A698	104	BAL	14,UNPK7 FUNCTION
00A15A 5840 CDD6		0AE30	105	S	4,=A(AREA)
00A15E 4040 CA4E		0AAA8	106	STM	4,AREA
00A162 4140 C646		0ACAO	107	LA	4,SYM
00A166 0200 CA3F	CA40	0AA99	108	MVC	SMOES,SMOE
00A16C 1853			109	LR	5,3
00A16E 45E0 C6A2		0A6FC	110	BAL	14,UNPK6 UNPACK SYM FIELD
00A172 0200 CA52	CC48	0AAAC	0ACA2	111	MVC AREA+4(1),SYM*2 MOVE ENDING INDICATOR
00A178 0200 CA40	CA3F	0AA9A	0AA99	112	MVC SMOE,SMOES
00A17E 1835			113	LR	3,5
00A180 45E0 C6D0		0A72A	114	BAL	14,SKPFIELD SKIP SYM FIELD
00A184 45E0 C6D0		0A72A	115	BAL	14,SKPFIELD 6TH FIELD
00A188 45E0 C618		0A672	116	BAL	14,GETWORD CKSUM
00A18C 4810 CA48		0AAA8	117	LH	1,AREA
00A190 5810 CDDA		0AE3+	118	S	1,=F'4'
00A194 1821			119	LR	2,1
00A196 5020 C6DA		0A664	120	ST	2,SAV2
			121	****	CODE TO TRANSLATE ENTRY INTO EBCDIC
00A19A 0C08 CA52	C97F	0AAAC	0A9D9	122	TR AREA+4(12),TAB6
00A1A0 1822			123	SR	2,2
00A1A2 4320 CA5E		0AAB8	124	IC	2,AREA+16
00A1A6 0620			125	BCTR	2,0
00A1A8 0620			126	BCTR	2,0
00A1AA 4110 CA5F		0AA89	127	LA	1,AREA+17
00A1AE 4420 C612		0A66C	128	EX	2,TRTAB7
00A1B2 4111 2002		00002	129	LA	1,2(1,2)
00A1B6 4321 0000		00000	130	IC	2,0(1)
00A1BA 0620			131	BCTR	2,0
00A1BC 0620			132	BCTR	2,0
00A1BE 4111 0001		00001	133	LA	1,1(1)
00A1C2 4420 C612		0A66C	134	EX	2,TRTAB7
00A1C6 5820 C6DA		0A664	135	L	2,SAV2
			136	SSNAPC	AREA+4,(2),'
00A1CA			137	DODICT	EQU *
00A1CA 9039 C102		0A22C	138	STM	3,9,SAV39
00A1CE 95F6 CA58		0AAB2	139	CLI	AREA+10,C*6'
00A1D2 4720 C184		0A1DE	140	BH	KEEP6
00A1D6 95F6 CA52		0AAAC	141	CLI	AREA+4,C*6'
00A1DA 4780 C4FA		0A554	142	BE	FILTER
00A1DE 955C CA54		JAAAE	143	CLI	AREA+6,C*6'
00A1E2 4780 C4FA		0A554	144	BE	FILTER
00A1E6 9561 CA54		JAAAE	145	CLI	AREA+6,C*6'
00A1EA 4780 C4FA		0A554	146	BE	FILTER
00A1EE 9558 CA54		JAAAE	147	CLI	AREA+6,C*6'
00A1F2 4780 C4FA		0A554	148	BE	FILTER
00A1F6 954E CA54		JAAAE	149	CLI	AREA+6,C*6'
00A1FA 4780 C4FA		0A554	150	BE	FILTER
00A1FE 1784			151	XR	8,8
00A200 0703 C56E	C56E	0A5C8	0A5C8	152	XC STOKNO,STOKNO
00A206 4190 C572		0A5CC	153	LA	9,NAREA
00A20A 1150 CA5F		0AAB7	154	LA	5,AREA+17

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A42A	95FF 4000	00000		316	CLI 0(4),X'FF'
00A42E	4770 C3C2		0A41C	317	BNE DOPACK
00A432	1853			318	LR 5,3
00A434	5850 C0FE		0A5E8	319	S 5,=A(OUTPUT+9)
00A438	4250 C465		0A4BF	320	STC 5,OUTPUT+7
00A43C	4270 C466		0A4C0	321	STC 7,OUTPUT+8
00A440	4470 C44E		0A4A8	322	EX 7,MVCNOR
00A444	1A37			323	AR 3,7
00A446	4140 CA5E		0AAB8	324	LA 4,AREA+16
00A44A	4370 CA5E		0AA88	325	LC 7,AREA+16
00A44E	1A47			326	AR 4,7
00A450	4144 0001		00001	327	LA 4,1(4)
00A454	4374 0000		00000	328	LC 7,0(4)
00A458	18F3			329	LR 15,3
00A45A	4113 7001		00001	330	LA 1,1(3,7)
00A45E	5510 C4F6		0A550	331	CL 1,OUTPEND
00A462	4720 C52A		0A584	332	BH ERRHI
00A466	4470 C454		0A4AE	333	EX 7,MVCFUN
00A46A	1A37			334	AR 3,7
00A46C	0630			335	BCTR 3,0
00A46E	0670			336	BCTR 7,0
00A470	9540 3000	00000		337	CLI 0(3),C'
00A474	4780 C412		0A46C	338	BE CKE
00A478	956F 3000	00000		339	CLI 0(3),C'?
00A47C	4780 C412		0A46C	340	BE CKE
00A480	1277			341	LTR 7,7
00A482	4740 C24E		0A2A8	342	BM ENDAT
00A486	4177 0001		00001	343	LA 7,1(7)
00A48A	427F 0000		00000	344	STC 7,0(15)
00A48E	5830 CE02		0A5EC	345	S 3,=A(OUTPUT-1)
00A492	4030 C45A		0A484	346	STM 3,OUTPUFR
				347	\$SNAP OUTPUT,(3)
				348	PUT DICTO,OUTPUTR
				349	B DOLREC
00A4A4	47F0 C1C8		0A222	350	MVCNOR MVC 0(0,3),OUTNOR
00A4A8	0200 3000	C5D6 00000	0A630	351	MVCFUN MVC 0(0,3),0(4)
00A4AE	0200 3000	4000 00000	00000	352	OUTPUTR DC F'0'
00A4B4	00000000			353	OUTPUT JS 150C
00A4B8					
00A4C0	0000				
00A4C4	0000A54E				
00A4C8	5820 C60A		0A664	354	OUTPEND DC A(=2)
				355	FILTER L 2,SAV2
				356	\$SNAPC AREA+4,(2),'*****FILTERED ENTRY*****'
00A4D0	47F0 C1C8		0A222	357	B DOLREC
00A4D4	00000000			358	DC F'0' LENGTH OF ARG
00A4D8	1288			359	DC 8,8
00A4DC	4780 C24E		0A2A8	360	BZ ENDAT
00A4E0	4188 0000		00000	361	LA 8,0(8)
00A4E4	5089 0000		00000	362	ST 8,0(9)
00A4E8	4199 0004		00004	363	LA 9,4(9)
00A4EC	5880 C56E		0A5C8	364	L 8,STOKNO
00A4F0	4188 0008		00008	365	LA 8,8(8)
00A4F4	5083 C56E		0A5C8	366	ST 8,STOKNO
00A4F8	1888			367	SR 8,8
00A500	47F0 C21A		0A274	368	B RETFA
00A504	5820 C60A		0A664	369	L 2,SAV2
				370	\$SNAPC AREA+4,(2),' TOO LONG *****'
				371	
				372	
				373	
				374	

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A5C2	47F0 C1C8		0A222	386	B DOLREC
00A5C6	0000				
00A5C8	00000000				
00A5CC				387	STOKNO DC F'0'
00A5EC				388	NAREA DS CL(MAXSTRKS*4)
00A62C				389	STAB DS CL(MAXSTRKS*8)
00A630	0000000000000000			390	DS F BUUFFER
00A640	0000000000000000			391	OUTNOR DC (MAXSTRKS)XL2'0'
00A660	FFFFFFFF			392	INNOR DC (MAXSTRKS)XL4'0'
00A664				393	MORF DC X'FFFFFFFF'
00A668				394	SAV2 DS F
00A66C	80000080			395	DS OF
00A670	0C00 1000 C98F 00000	0AA19		396	MINSTR DC X'80000080'
00A672	97FF CA40	0AA9A		397	TRTAB7 TR 0(0,1),TAB7
00A676	4780 C62B		0A688	398	GETWORD XI SMOE,X'FF'
00A67A	F144 CA49 3000 0AAA3	0A688		399	BZ MVE
00A680	4133 0005		00005	400	MVO IWORK+3(5),0(5,3)
00A684	47F0 C638		0A692	401	LA 3,5(3)
00A688	0204 CA49 3000 0AAA3	0A692		402	B DONMV
00A68C	4133 0004		00004	403	MVE IWORK+3(5),0(3)
00A692	94F0 CA4D 0AAA7	0A692		404	LA 3,4(3)
00A696	07FE			405	DONMV NI IWORK+7,X'F0'
00A698	905E CC56		0AC80	406	BR 14
00A69C	5040 CC52		0ACAC	407	UNPK7 STM 5,14,SAVU7
00A6A0	4144 0001		00001	408	ST 4,STRT0
00A6A4	45E0 C618		0A672	409	LA 4,1(4)
00A6A8	0504 CA49 CE1E 0AAA3	0A672		410	NORU BAL 14,GETWORD
00A6AE	4780 C67C		0A678	411	CLC IWORK+3(5),=XL5'0'
00A6B2	9867 CA44		0A6D6	412	BE FNDZ YES
00A6B6	8C60 0001		00001	413	LM 6,7,IWORK
00A6BA	4264 0000		00000	414	SRDL BRING 90 WD. UP
00A6BE	9898 CE06		0A6E0	415	STC 6,1 TO STORE 1ST CHAR
00A6C2	1866			416	LM 6,0(4)
00A6C4	8D60 0007		00007	417	LOOPU SA 9,11,=A(1,1,4)
00A6C8	4264 9000		00000	418	SLDL 6,7 SET 7 MORE BITS
00A6CC	879A C668		0A6C2	419	STC 6,0(4,9)
00A6D0	1A49			420	BXLE 9,10,LOOPU
00A6D2	47F0 C64A		0A6A4	421	AR 4,9
00A6D6	0640			422	B MORU UPDATE OUT.REG
00A6D8	91FF 4000	00000		423	FNDZ BCTR TO GET NEXT WD
00A6DC	4780 C67C		0A6D6	424	FM 0(4),X'FF'
00A6E0	9200 0001	00001		425	BZ FNDZ
00A6E4	4144 0002		00002	426	MVI 1(4),X'00'
00A6E8	1854			427	LA 4,2(4)
00A6EA	5860 CC52		0ACAC	428	LR 5,4
00A6EE	1856			429	L 6,STRT0
00A6F0	0650			430	SR 5,6
00A6F2	4258 0000	00000		431	BCTR 5,0
00A6F6	985E CC56		0AC80	432	STC 5,0(6)
00A6FA	07FE			433	LM 5,14,SAVU7
00A6FC	905E CC7E		0ACD8	434	BR 14
00A700	45E0 C618		0A672	435	UNPK6 STM 5,14,SAVU6
00A704	9867 CA46		0AAA0	436	BAL 14,GETWORD
00A708	8C60 0002		00002	437	LM 6,7,IWORK
00A70C	4264 0000		00000	438	SRDL 6,2
00A710	9898 CE12		0A6C6	439	STC 6,0(4)
				440	LM 9,11,=A(1,1,5)

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A714	1866			441	LOOPI6 SK 6,6
00A715	8066 0006		00006	442	SLOL 6,6
00A716	4254 9C00		00009	443	STC 6,0(4,9)
00A717	679A 68BA		0A714	444	BALE 9,10,LOOPI6
00A722	1A49			445	AK 4,9
00A724	453E 6C7E		0A008	446	LM 5,14,SAVU6
00A728	07FE			447	BR 14
00A72A	0000 00A6		0A000	448	SKPSAV 14,SKPSAV
00A72E	4256 6618		0A572	449	SKF 14,GETWORD
00A732	0504 CA49 CE1E 0AAA3		0A578	450	LLC INWORK*3(5),=XL5*0' DELIM7
00A738	4770 6604		0A72E	451	BNE SKF
00A73C	58E0 6CA6		0A000	452	L 14,SKPSAV
00A740	07FE			453	BR 14
				454	ENDIT CLOSE (DICTO)
				460	EE \$RETURN
				472	ENDCDS CLOSE (CARDS)
00A77A	9110 C03E	0A098		478	TESTDI TM DICTI*48,X*10'
00A77E	47E0 66F4		0A74E	479	BNO EE
00A782	47F0 60C2		0A11C	480	B DUNBLK
00A786	4040404040404040			481	CARD DC CL82'
00A788	00			482	DC X*0'
				483	TABNBLNK STABLE (X*0',X*01',C' ',X*00'),B=X*FF'
				491	TABNBLNK STABLE (C' ',X*1'),B=X*00'
				497	TAB6 STABLE (X*00',C'0123456789',X*84',C***',X*10',C'+ABCDEFHGI',XX
					'18',C'.),',X*20',C'-JKLMNOPQR',X*2B',C'+*,X*31',C'/STJVA
					WXYZ,('),B=C' ',SIZE=64
				515	TAB7 STABLE (X*00',C' ',X*07',C' 7 ',X*1A',C***'),B=C*7',SIZE=64
				525	DC C'= " ?,-,_,*~ []#0123456789*()/+&ABCDEFHGIJKLMNOPQRSX
					TUVWXYZ&&<>@Z]'
00A859	7E7F5A6F4B6B607A				
00A899	40			526	SWOES DC C' '
00A89A	40			527	SWOE DC C' '
00A89B	0000000000				
00A8A0	0C0000C000000000			528	INORK DC D*0'
00A8A8	40404040			529	AREA DC CL4' '
00A8AC				530	DS 500C
00A8CA	4040404040404040			531	SYM DC CL10' '
00A8CC				532	STRTO DS F
00A8CD	0000000000000000			533	SAVU7 DC 10F*0'
00A8CE	0000000000000000			534	SAVU6 DC 10F*0'
00A8D0	00000000			535	SKPSAV DC F*0'
00A8D4				536	DS OF
00A8D6	FFFFFFF7F			537	PATCH1 DC X'FFFFFFF7F'
				538	CARDS DCB DSORG=PS,RECFM=F,LRECL=80,BLKSIZE=80,EQUAD=ENDCDS, X
					MACRF=GM,DDNAME=CARDS
				539	*** IH8063 DDNAME SHORT-PADED TO 8 CHAR
				595	DICTI DCB DSORG=PS,MACRF=GL,DDNAME=ALPDICT,DEVD=TA,TRTCH=C, X
					DEN=2,RECFM=U,BLKSIZE=6000,8PALN=0,EQUAD=ENDIT, X
					SYNAD=SSYNAD,EROPT=SKP
				596	*** IH8063 DDNAME SHORT-PADED TO 8 CHAR
				633	DICTO DCB DSORG=PS,MACRF=PM,DDNAME=APSDICT,RECFM=VB,LRECL=150, X
					SYNAD=SSYNAD
				654	*** IH8063 DDNAME SHORT-PADED TO 8 CHAR
00AE28				710	LTORG
00AE28	0000A790			711	=A(CARD+10)
00AE2C	00000001			712	=A(1)
00AE30	0000AAA8			713	=A(AREA)

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00AE34	00000004			714	=F*4'
00AE38	00000000			715	=V(ALPTEST)
00AE3C	0000000F			716	=A(X*OF')
00AE40	00000040			717	=A(MAXSTRK*8)
00AE44	FF000000			718	=X'FF000000'
00AE48	0000A5CC			719	=A(NAREA)
00AE4C	00000080			720	=A(X*80')
00AE50	00000000			721	=A(AT5)
00AE54	0000A630			722	=A(OUTNQR)
00AE58	0000A4C1			723	=A(OUTPUT*9)
00AE5C	0000A483			724	=A(OUTPUT*1)
00AE60	0000000100000001			725	=A(1,1,4)
00AE6C	0000000100000001			726	=A(1,1,5)
00AE78	0000000000			727	=XL5*0'
000000				728	ATEST JSECT
000000				729	ATEQ OS F
000004				730	ATFUN OS F
000008				731	ATARG OS F
				732	***
00A020				733	END STENO#0

POS.ID	REL.ID	FLAGS	ADDRESS
01	01	08	00A061
01	01	08	00A060
01	01	08	00A079
01	01	08	00A281
01	01	08	00A285
01	01	0C	00A2CC
01	01	08	00A361
01	01	0C	00A550
01	01	08	00A580
01	01	08	00A591
01	01	0C	00A5AC
01	01	08	00A749
01	01	08	00A775
01	01	08	00A029
01	01	08	00A089
01	01	0C	00AE28
01	01	0C	00AE30
01	01	0C	00AE48
01	01	0C	00AE54
01	01	0C	00AE58
01	01	0C	00AE5C
01	02	1C	00A348
01	03	0C	00A350
01	04	0C	00A394
01	05	0C	00A358
01	06	0C	00A35C
01	07	0C	00AE50
01	08	0C	00ADAD
01	08	0C	00AE00
01	0A	1C	00A2D4
01	0A	1C	00A584
01	0B	1C	00AE38

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CROSS-REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
SSNAP	00001	00AE80	0193	
SSNAP1	00004	00A2D8	0223	0216
SSNAP1A	00004	00A2CC	0220	0217 0224
SSNAP2	00004	00A588	0383	0376
SSNAP2A	00004	00A5AC	0380	0377 0384
SSNLOAD	00004	00AE80	0208	0195
SSNPA	00004	00AEC8	0212	0209 0208
SSNPAR	00004	00AEC4	0211	0207
SSNSAV	00004	00AE88	0210	0196 0204
SSNSN	00004	00AE80	0195	0206
SSYNAD	00001	000000	0007	0636 0693
SS181	00001	00A288	0219	0218
SS281	00001	00A594	0379	0378
AREA	00004	00AAAA	0329	0057 0058 0059 0062 0065 0067 0083 0087 0099 0105 0106 0111 0117 0122 0124 0139 0141 0143 0145 0147 0149 0154 0220 0309 0310 0324 0325 0380 0713 0171 0177 0190 0166
ATARG	00004	000008	0731	0169
ATEQ	00004	000000	0729	0164
ATEQU	00004	00A26C	0174	0170
ATEST	00001	000000	0728	0158
ATFUN	00004	000004	0730	0181 0185
ATNEQ	00004	00A248	0164	0173
AT1	00001	000000	0007	0257
AT2	00001	000000	0007	0258
AT3	00001	000000	0007	0259
AT4	00001	000000	0007	0260
AT5	00001	000000	0007	0272 0721
BOUN	00004	00A2E6	0227	0006
CARD	00002	00A786	0481	0052 0055 0057 0058 0060 0062 0063 0064 0071 0087 0711
CARDS	00004	00AD08	0344	0040 0048 0051 0094 0476
CKE	00002	00A46C	0335	0340
COMPAT	00006	00A2A2	0190	0172
DICT1	00004	00AD08	0601	0046 0389 0478
DICT0	00004	00AD08	0659	0034 0349 0458
DUDICT	00001	00A1CA	0137	0085
DOLREC	00004	00A222	0161	0226 0353 0361 0386
DONBLK	00004	00A11C	0089	0480
DONENOR	00004	00A3E0	0247	0274
DONMY	00004	00A692	0405	0402
DOPACK	00006	00A41C	0313	0317
DUNSTER	00002	00A2EE	0229	0006
EE	00002	00A74E	0461	0479
ENDAT	00004	00A248	0191	0074 0168 0342 0364
ENDCDS	00004	00A770	0474	0563
ENDIT	00004	00A744	0456	0621
ERRHI	00004	00A584	0373	0237 0332
FILTER	00004	00A554	0359	0142 0144 0146 0148 0150
FNDZ	00002	00A6D6	0423	0412 0425
GET	00004	00A086	0051	0095
GETWORD	00004	00A672	0398	0096 0116 0410 0436 0449
IH80015H	00004	00A348	0253	0264
IH80016	00001	00A350	0256	
IH80016A	00001	00A364	0263	0255
INNOR	00004	00A640	0392	0262 0271
IWORK	00008	00AAAA	0528	0097 0400 0403 0405 0411 0413 0437 0450
KEEP6	00004	00A10E	0143	0140

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
LDUPU	00002	00A6C2	0417	0420
LDUPU6	00002	00A714	0441	0444
LKECL	00001	000052	0004	
MAXSTRK5	00001	000008	0008	0236 0388 0389 0391 0392 0717
MINSTR	00004	00A668	0396	0248
MUNDR	00006	00A330	0246	0302
MOKAT	00004	00A24E	0166	0160 0169
MORU	00004	00A6A4	0410	0422
MUVUM1	00006	00A116	0087	0068
MUVUM2	00006	00A110	0086	0081
MVCFUN	00006	00A4AE	0355	0333
MVCNUR	00006	00A4A8	0354	0322
MVE	00006	00A688	0403	0399
NAREA	00032	00A5CC	0388	0153 0239 0245 0312 0719
NEXTREC	00004	00A12C	0094	0162
NURF	00004	00A660	0393	0005
NUSH	00004	00A3C0	0289	0285
NUSTC	00002	00A29C	0188	0182
NQST9	00004	00A308	0236	0231
NQINDR	00004	00A3CC	0292	0232
NQUP	00001	00A280	0180	0178
ORC	00004	00A30C	0296	0289
OUTNUR	00002	00A630	0391	0244 0306 0354 0722
OUTPEND	00004	00A550	0358	0331
OUTPUT	00001	00A488	0357	0309 0310 0311 0319 0320 0321 0723
OUTPUTR	00004	00A484	0356	0345 0346 0350 0724
PATCH1	00004	00A004	0537	0249
RETFA	00004	00A274	0177	0228 0372
SAVU6	00004	00ACD8	0534	0435 0446
SAVU7	00004	00ACB0	0533	0407 0433
SAV2	00004	00A664	0394	0084 0120 0135 0191 0359 0373
SAV39	00004	00A22C	0163	0138 0161
SKF	00004	00A72E	0449	0451
SKFSAV	00004	00A000	0535	0448 0452
SKPFIELD	00004	00A72A	0448	0103 0114 0115
STEADIT	00001	000000	0007	
STENDW0	00001	00A020	0003	0214 0733
STNC	00004	00A3AC	0284	0242 0294
STOKNO	00004	00A5C8	0387	0152 0152 0184 0230 0243 0243 0279 0297 0299 0368 0370
STRO	00002	00A560	0363	0006
STRTO	00004	00ACAC	0532	0408 0429
STTAB	00004	00A5EC	0389	0155 0156 0156 0187 0280
SWOE	00001	00AA9A	0527	0092 0108 0112 0398
SWOES	00001	00AA99	0526	0108 0112
SYM	00010	00ACAO	0531	0107 0111
TABBLNK	00001	00A8D9	0492	0063 0076 0494 0496
TABNBLNK	00001	00A7D9	0484	0072 0486 0488 0490
TABY	00004	00A3D8	0295	0293
TAB6	00001	00A9D9	0498	0122 0500 0502 0504 0506 0508 0510 0512 0514
TAB7	00001	00AA19	0516	0397 0518 0520 0522 0524
TESTD1	00004	00A77A	0478	0049
TES6	00002	00A384	0273	0291
TRTAB7	00006	00A66C	0397	0128 0134
TRIC	00006	00A0BA	0063	0061
UNPK6	00004	00A6FC	0435	0100 0101 0110
UNPK7	00004	00A698	0407	0102 0104

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CROSS-REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
ZUUN	00006	00A408	0309	0307

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NO STATEMENTS FLAGGED IN THIS ASSEMBLY  
601 PRINTED LINES

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IEF285I	SYS1.MACLIB	KEPT
IEF285I	VOL SER NOS= RESVOL.	
IEF285I	STENSLIB	KEPT
IEF285I	VOL SER NOS= LNKVOL.	
IEF285I	SYSUT1	KEPT
IEF285I	VOL SER NOS= DISK01.	
IEF285I	SYSUT2	KEPT
IEF285I	VOL SER NOS= DISK02.	
IEF285I	SYSUT3	KEPT
IEF285I	VOL SER NOS= DISK03.	
IEF285I	SYSOUT	SYSOUT
IEF285I	VOL SER NOS=	
IEF285I	STENSLIB	KEPT
IEF285I	VOL SER NOS= LNKVOL.	
IEF236I	ALLGC. FOR JOB	ASM
IEF237I	SYSLIB ON 230	
IEF237I	ON 236	
IEF237I	SYSUT1 ON 231	
IEF237I	SYSUT2 ON 232	
IEF237I	SYSUT3 ON 233	
IEF237I	SYSPUNCH ON 000	
IEF237I	SYSIN ON 236	

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ST#1	SYMBOL	TYPE	ID	ADDR	LENGTH	LD	ID
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EXTERNAL SYMBOL DICTIONARY

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STENO#1	SD	01	00A020	001030			
TEST1	ER	02					
TEST2	ER	03					
TEST3	ER	04					
TEST4	ER	05					
TEST5	ER	06					
CHART	ER	07					
STEDIT	ER	08					
NORF	LD		00A3B9			01	
SPELT1	ER	09					
SPELT2	ER	0A					
SPELT3	ER	0B					
SPELT4	ER	0C					
SPELT5	ER	0D					

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
000020				2	STEND#1 START X'A020'
				3	PRINT UN,NUGEN
				4 *	THIS PROGRAM READS INPUT TAPE FROM THE STENO MARK HEADER AND
				5 *	PRODUCES SORT RECORDS FOR THE FIRST PHASE OF TRANSLATION.
				6 *	STENO STROKES ARE CONVERTED TO BINARY STRINGS WITH ONE BIT FOR
				7 *	EACH CHARACTER. THE STRINGS ARE EDITED TO PROVIDE MATCH
				8 *	NORMALIZATION, AND INDICATORS ARE PLACED AT THE END OF THE SORT
				9 *	RECORD.
				10 *	INFORMATION TO BE SPELLED IS HANDLED SPECIALLY, AND TRANS-
				11 *	LATED OUTPUT FOR THIS INFORMATION IS WRITTEN BY THE PROGRAM.
				12 **	

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STAL DEFINITIONS

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
				14	EXTN TEST1,TEST2,TEST3,TEST4,TEST5
				15	EXTN CHART,SFFDIT
				16	EXTN MARK
				17	EXTN SPECIAL,SPCL,SPCL2,SPCL3,SPCL4,SPCL5
000002				18	LRCELL EQU 82
000050				19	OUTLCELL EQU 80
000100				20	OUTSIZ EQU 256
000005				21	NUMSTKS EQU 1
000100				22	A EQU 100
				23	STL EQU 200
				50 *	
				57 **NOTE:	
				58 *	THE INFORMATION ON THE FOLLOWING 2 CARDS IS DEPENDANT ON THE
				59 *	ASSEMBLY OF THE TESTS FOR NORMALIZATION. THEY INDICATE THE POSITION
				60 *	OF THE MARK AND TEST TESTS WITHIN TEST1.
000001				61	STKNUM EQU 1 (HIGHEST S TEST)
000004				62	STKNUM EQU 4
				53	*****



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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
				65	*****
				66	\$SAVE
				87	OPEN (STOUT, (OUTPUT))
				93	OPEN (OUTSPEL, (OUTPUT))
				99	PUT OUTSPEL, OUTREC * DUMMY REC. IN CASE OF NO SPELL
00A080	45E0 C62A	0A6B4	104	DOST	8AL 14, STP
00A084	95FF 1000	00000	105		CLI 0(1), X'FF'
00A088	4770 C036	0A090	106		BNE OK88
00A08C	4110 C8F2	0AC4C	107		LA 1, BITBUF
00A090	5801 0000	00000	108	OK88	L 0, 0(1)
00A094	91FF 1000	00000	109		TM 0(1), X'FF'
00A098	4770 C094	0A0EE	110		BNEZ SPECTR
00A09C	4321 0005	00005	111	BACKS	LC 2, 5(1)
00A0A0	8920 0018	00018	112		SLL 2, 24
00A0A4	1632		113		OR 0, 2
00A0A8	1831		114		LR 3, 1
00A0AB	5400 C44E	0A4A8	115		N 0, MASKER
00A0AC	5000 C47E	0A408	116		ST 0, BEFORE
00A0B0	5600 C44A	0A4A4	117		D 0, MINUS
00A0B4	4110 C3F2	0A44C	118		LA 1, NORTAR
00A0B8	58F0 C87E	0A8D8	119		L 15, =A(STEDIT)
00A0BC	G5EF		120		BALR 14, 15
00A0BE	5000 C482	0A4DC	121		ST 0, BEFORE++
00A0C2	5820 C402	0A45C	122		L 2, NORMA
00A0C6	5620 C35A	0A384	123		D 2, UNALTERD
00A0CA	5D10 C402	0A45C	124		ST 1, NORMA
			125	*	CALL \$SNAPS, (BP, EDI), VL
			126	*	\$SNAPX MDRF, 32
			127		LR 1, 2
			128		LR 2, 0
00A0CE	1812		129		SRL 2, 24
00A0D0	1820	00018	130		STC 2, 5(3)
00A0D2	8820 0018	00005	131		TM 4(3), X'FF'
00A0D6	4223 0005		132		AND OKOK
00A0DA	91FF 3004	0A0E6	133		STC 2, BITBUF+1
00A0DE	47E0 C08C	0AC40	134	OKOK	BAL 14, WRTSTEN
00A0E2	4220 C8F4	0AAA2	135		D DOST
00A0E6	45E0 C440	0A080	136	SPECTR	CLI 0(1), X'F0'
00A0EA	47F0 C020		137		BE FORTN
00A0EE	95F0 1000	0A116	138		CLI 0(1), X'F1'
00A0F2	4780 C08C		139		BE FIRTN
00A0F6	95F1 1000	0A126	140		CLI 0(1), X'F2'
00A0FA	4780 C0CC		141		BE F2RTN
00A0FE	95F2 1000	0A3A0	142		ABEND 14, DUMP
00A102	4780 C346		143		MVI UNMATCH=1, X'00'
00A116	9200 C933	0A980	144	FORTN	N 0, =A(X'FFFFFF')
00A11A	5400 C882	0A8DC	145	FNDW	MVI 0(1), X'00'
00A11E	9200 1000		146		B BACKS
00A122	47F0 C042	0A09C	147		L 1, SAVI
00A126	5010 C356	0A380	148	FIRTN	L 14, STENID
00A12A	58E0 C38E	0A3E8	149		L 14, 8(14)
00A12E	41EE 0008	00008	150		ST 14, SPEND
00A132	50E0 C4EE	0A548	151		LA 0, 2
00A136	4100 0002	00002	152		LA 1, =C'??'
00A13A	4110 C8C2	0AC1C	153		LA 14, WRTSPEL
00A13E	45E0 C292	0A2EC	154		BAL 1, SAVI
00A142	5810 C356	0A380	155	MOSPEL	L 1, SAVI

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ST#1 MAIN ROUTINE

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A146	45E0 C208	0A262	161		BAL 14, UPPPOINT
00A14A	D503 1000	0A8E0	162		CLC 0(4, 1), =A(K+H+R+B+L+SG)
00A150	4780 C336	0A390	163		BE SPKLRL
00A154	D502 1001	0AC28	164		CLC 1(3, 1), =AL3(O+E+U+SC)
00A15A	4780 G126	0A180	165		BE SQUOTE
00A15E	D502 1001	0AC28	166		CLC 1(3, 1), =AL3(F+J+L+V+SG)
00A164	4780 C140	0A19A	167		BE SPERD
00A168	D502 1001	0AC2E	168		CLC 1(3, 1), =AL3(S+T+R+H+F+J+L+V+SG)
00A16E	4780 C1A0	0A1FA	169		BE SPAREN
00A172	D502 1001	0AC31	170		CLC 1(3, 1), =AL3(N+SC)
00A178	4780 C1C6	0A220	171		BE SAST
00A17C	47F0 C22A	0A284	172		B SPELTRAN
00A180	D502 1005	0AC28	173	SQUOTE	CLC 5(3, 1), =AL3(O+E+U+SG)
00A186	4770 C22A	0A284	174		BNE SPELTRAN
00A18A	45E0 C1FA	0A254	175		BAL 14, SKIPPEL
00A18E	4100 0002	00002	176		LA 0, 2
00A192	4110 08C4	0AC1E	177		LA 1, =C'??'
00A196	47F0 C284	0A2DE	178		B DOWSP
00A19A	D502 1006	0AC28	179	SPERD	CLC 5(3, 1), =AL3(F+J+L+V+SG)
00A1A0	4780 C160	0A18A	180		BE SCOLON
00A1A4	D502 1005	0AC28	181		CLC 5(3, 1), =AL3(O+E+U+SC)
00A1AA	4780 C170	0A1CA	182		BE SPERQUO
00A1A8	4100 0007	00007	183		LA 0, 7
00A1B2	4110 C8D4	0AC34	184		LA 1, =C'1.88(2)'
00A1B6	47F0 C284	0A2DE	185		B DOWSP
00A1BA	45E0 C1FA	0A254	186	SCOLON	BAL 14, SKIPPEL
00A1BE	4100 0001	00001	187		LA 0, 1
00A1C2	4110 C8E1	0AC38	188		LA 1, =C'1'
00A1C6	47F0 C284	0A2DE	189		B DOWSP
00A1CA	1800		190	SPERQUO	SR 0, 0
00A1CC	45E0 C292	0A2EC	191		BAL 14, WRTSPEL
00A1D0	45E0 C208	0A262	192		BAL 14, UPPPOINT
00A1D4	D502 1005	0AC28	193		CLC 5(3, 1), =AL3(O+E+U+SC)
00A1DA	4780 C190	0A1EA	194		BE SPERQUO
00A1DE	4100 0008	00008	195		LA 0, 8
00A1E2	4110 C85E	0A888	196		LA 1, =C'1.88(2)'
00A1E6	47F0 C284	0A2DE	197		B DOWSP
00A1EA	45E0 C1FA	0A254	198	SPERQUO	BAL 14, SKIPPEL
00A1EE	4100 0008	00008	199		LA 0, 8
00A1F2	4110 C85E	0A8C0	200		LA 1, =C'1.788(2)'
00A1F6	47F0 C284	0A2DE	201		B DOWSP
00A1FA	D502 1005	0AC2E	202	SPAREN	CLC 5(3, 1), =AL3(S+T+R+H+F+J+L+V+SG)
00A200	4780 C186	0A210	203		BE SCPAR
00A204	4100 0002	00002	204		LA 0, 2
00A208	4110 C8C6	0AC20	205		LA 1, =C'1(1)'
00A20C	47F0 C284	0A2DE	206		B DOWSP
00A210	45E0 C1FA	0A254	207	SCPAR	BAL 14, SKIPPEL
00A214	4100 0003	00003	208		LA 0, 3
00A218	4110 C8E2	0AC3C	209		LA 1, =C'1(1)'
00A21C	47F0 C234	0A2DE	210		B DOWSP
00A220	45E0 C1FA	0A254	211	SAST	BAL 14, SKIPPEL
00A224	D502 1005	0AC31	212		CLC 5(3, 1), =AL3(N+SC)
00A22A	4780 C1E0	0A23A	213		BE SDEL
00A22E	4100 0008	00008	214		LA 0, 11
00A232	4110 C8E5	0AC3F	215		LA 1, =C'1(1)(X)10(2)'
00A236	47F0 C234	0A2DE	216		B DOWSP

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A23A	45E0 C1FA		0A254	217	SDEL BAL 14,SKIPSP
00A23E	D502 1006	CBD7 80005	0AC31	218	CLC 5(3,1),=AL3(N+SC)
00A244	4780 C1E0		0A23A	219	BE SDEL
00A248	4100 0006		00006	220	LA 0,6
00A24C	4110 C8C8		0AC22	221	LA 1,=C(10)(2)
00A250	47F0 C284		0A2DE	222	B DOWSP
00A254	50E0 C226		0A280	223	SKIPSP ST 14,UPPSAV
00A258	1800			224	SR 0,0
00A25A	48E0 C292		0A2EC	225	BAL 14,WRITSP
00A25E	47F0 C20C		0A266	226	B UPPPOINT4
00A262	50E0 C226		0A280	227	UPPOINT ST 14,UPPSAV
00A266	45E0 C62A		0A584	228	BAL 14,STP
00A26A	95FF 1000	00000		229	CLI 0(1),X*FF
00A26E	4770 C21C		0A276	230	BNE **8
00A272	4110 C8F2		0AC4C	231	LA 1,BITBUF
00A276	5010 C356		0A380	232	ST 1,SAV1
00A27A	58E0 C226		0A280	233	L 14,UPPSAV
00A27E	07FE			234	BK 14
00A280	00000000			235	UPPSAV DC F*0
00A284	5801 0000	00000	00000	236	SPELTRAN L 0,0(1)
00A288	5600 C44A		0A4A4	237	B 0,MINUS
				238	CALL STEDIT,SPELT1,SPELT2,SPELT3,SPELT4,SPELAR
00A2B2	5810 C89A		0ABE4	254	S 1,=A(SPELAR)
00A2B6	1201			255	LTR 0,1
00A2B8	4720 C268		0A2C2	256	BH RECDOK
00A2BC	1800			257	SR 0,0
00A2BE	47F0 C284		0A2DE	258	B DOWSP
00A2C2	0610			259	RECDOK 3CTR 1,0
00A2C4	58E0 C88E		0ABE8	260	L 1,=V(SPELT5)
00A2C8	4410 C28C		0A2E6	261	EX 1,TRSP
00A2CC	4110 C48A		0A4E4	262	LA 1,SPELAR
00A2D0	9540 1000	00000		263	CLI 0(1),C*
00A2D4	4770 C284		0A2DE	264	BNE DOWSP
00A2D8	4111 0001		00001	265	LA 1,1(1)
00A2DC	0600			266	BCTR 0,0
00A2DE	45E0 C292		0A2EC	267	DOWSP BAL 14,WRITSP
00A2E2	47F0 C0E8		0A142	268	B MOSPEL
00A2E6	DC4F C48A	E000 0A4E4	00000	269	TRSP TR SPELAR,0(14)
00A2EC	50E0 CADA		0A534	270	WRITSP ST 14,SV14SP
00A2F0	58F0 C54E		0A5A8	271	L 15,LASTMSP
00A2F4	58E0 C48E		0A4E0	272	L 14,SPELCNT
00A2F8	41EE 0003		00003	273	LA 14,3(14)
00A2FC	50E0 C48E		0A4E0	274	ST 14,SPELCNT
00A300	1200			275	LTR 0,0
00A302	4740 C2D4		0A32E	276	BM ENOITSP
00A306	4780 C2C6		0A320	277	BZ SKIPITSP
00A30A	18E0			278	LR 14,0
00A30C	1A0F			279	BAKMISP AR 0,15
00A30E	5500 C892		0ABEC	280	CL 0,=A(OUTREC+OUTRECL-1)
00A312	4720 C2E0		0A33A	281	BH WRITTS
00A316	5000 C54E		0A5A8	282	ST 0,LASTMSP
00A31A	06E0			283	BCTR 14,0
00A31C	44E0 C330		0A38A	284	EX 14,MVSA
00A320	1811			285	SKIPITSP SR 1,1
00A322	1800			286	SR 0,0
00A324	45E0 C448		0AAA2	287	BAL 14,WRITSTEN

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A328	58E0 C4DA		0A534	288	L 14,SV14SP
00A32C	07FE			289	BR 14
00A32E	926C F000	00000		290	ENDIRSP MVI 0(15),C*8
00A332	41FF 0001		00001	291	LA 15,1(15)
00A336	47F0 C2E2		0A33C	292	B WRITTS
00A33A	180F			293	WRITTS SR 0,15
00A33C	90E1 C4DE		0A538	294	WRITTS STM 14,1,STMSP
00A340	58F0 C896		0A8F0	295	S 15,=A(OUTREC)
00A344	40F0 C4F2		0A54C	296	STH 15,OUTREC
00A348	D200 C4FA	C489 0A554	0A4E3	297	MVC OUTL1,SPELCNT+3
00A34E	D202 C4F6	C4EF 0A550	0A549	298	MVC OUT10,SPENID+1
				299	PUT OUTSPEL,OUTREC
00A362	58E0 C38E		0A3E8	304	L 14,STENID
00A366	41EE 0009		00009	305	LA 14,9(14)
00A36A	50E0 C4EE		0A548	306	ST 14,SPENID
00A36E	D703 C486	C486 0A4E0	0A4E0	307	XC SPELCNT,SPELCNT
00A374	98E1 C4DE		0A538	308	LM 14,1,STMSP
00A378	41F0 C4F8		0A555	309	LA 15,OUTFAN
00A37C	50F0 C54E		0A5A8	310	ST 15,LASTMSP
00A380	1200			311	LTR 0,0
00A382	4740 C2C6		0A320	312	BM SKIPITSP
00A386	47F0 C2B2		0A30C	313	B BAKMISP
00A38A	D200 F000	1000 00000	00000	314	MVSP 0(0,15),0(1)
00A390	5800 C89A		0ABF4	315	SPKLEL L 0,=F*-1
00A394	45E0 C292		0A2EC	316	BAL 14,WRITSP
00A398	5810 C356		0A380	317	L 1,SAV1
00A39C	47F0 C026		0ABF4	318	B DOST
00A3A0	5810 C89A		0ABF4	319	FZRTN L 1,=F*-1
00A3A4	1700			320	XR 0,0
00A3A6	45E0 C448		0AAA2	321	BAL 14,WRITSTEN
00A3AA	47F0 C346		0A3A0	322	B FZRTN
				323	*****

32

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
325 *****					
00A3AE	0000				
00A3B0	00000000			326 SAVI	DC F'0'
00A3B4	00000000			327 UNALTKD	DC F'0'
00A3B8	00			328 UNAL	DC X'0'
00A3B9	0000000000000000			329 NORF	DC (NUMSTRKS)XL4'0'
00A3D9	FF			330	DC X'FF'
00A3DA	0000				
00A3DC	0000A3EC0000001H			331 STEE	DC A(STENREC,24)
00A3E4	00000000			332 STENR	DC F'0'
00A3E8	00000000			333 STEND	DC F'0'
00A3EC	0000000000000000			334 STENREC	DC (NUMSTRKS)XL3'0'
00A3E9				335 STOUTPUT	EQU STENID+1
00A404	0000000000000000			336 STENORM	DC (NUMSTRKS)X'0'
00A40C				337 STREND	EQU *
000023				338 STRECL	EQU STREND-STOUTPUT
00A40C	0000000000000000			339 NORMAT	DC (NUMSTRKS)F'0'
00A42C				340 WSTENSAY	DS 8F
00A44C	0000000000000000			341 NORTAR	DC A( TEST1,TEST2,TEST3,TEST4)
00A45C	CC00A3B9			342 NORMA	DC A(NORF)
00A460				343 STPSAV	DS 8F
00A4B0	00000000000000AC50			344 STPREGS	DC A(0,BITBUF+4,0,1+0)
00A494	0000A498			345 STELLA	DC A(DUMST)
00A498	FFFFFFFF			346 JUMST	DC X'FFFFFFFF'
00A49C	F2000000			347 ENUFIL	DC X'F2000000'
00A4A0	40			348 IND	DC C' '
00A4A4				349	DS OF
00A4A4	80000000			350 MINUS	DC X'80000000'
00A4A8	FFFFFFFF7F			351 MASKER	DC X'FFFFFFFF7F'
00A4AC	F0000000			352 SPELK	DC X'F0000000'
00A4B0	0000AC4C000000404			353 BITAD	DC A(8BITBUF,BUFSIZ*4+4)
00A4B8	09			354 BITLE	DC AL11L'BITTLE)
00A4B9	404040C2C9E3C2E4			355 BITTLE	DC C' BITBUF'
00A4C2	0000				
00A4C4	0000A40800000008			356 BP	DC A(BEFORE,8)
00A4C8	08			357 EDI	DC AL11L'EDIT)
00A4CD	4040404040404040			358 EDIT	DC C' EDIT'
00A4D8	0000000000000000			359 BEFORE	DC A(0,0)
00A4E0	00000000			360 SPELCNT	DC F'0'
00A4E4				361 SPELAR	DS CL(OUTLRECL)
00A534				362 SVL4SP	DS F
00A538				363 STMSP	DS 4F'0'
00A548				364 SPENID	DS F
00A54C				365	DS OF
00A54C	000A0000			366 OUTREC	DC AL2(OUTFUN-OUTREC+1),H'0'
00A550	FFFFFF			367 OUTID	DC XL3'FFFFFF'
00A553	F0			368 OUTENDG	DC C'0'
00A554	01			369 OUTLL	DC X'1'
00A555	4040404040404040			370 OUTFUN	DC (OUTLRECL)C' "
00A5A5	000000				
00A5A8	0000A555			371 LASTWSP	DC A(OUTFUN)
00A5AC	0000A5B0			372 INNUMPT	DC A(INNUMS)
00A5B0	F1F2F3F4F5F6F7F8			373 INNUMS	DC C'123456789'
00A5B8				374 ASTBUF	DS 2F
00A5BC				375 STOUT	DC DSORG=PS,MACRF=PM,DDNAME=STOUTPUT,DEVD=TA,DEN=2, RECFM=FB,LRECL=STRECL,BLKSIZE=50*STRECL,BFTEK=S

33

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
432	OUTSPEL	DCB			DSORG=PS,MACRF=PM,LRECL=OUTLRECL+10,BLKSIZE=3600, X
433					RECFM=VB,DDNAME=OUTPU
434					*,*** INB063 DDNAME SHORT-PADDED TO 8 CHAR
484	*****				

LOG OBJECT CODE ADDR1 ADDR2 STMT SOURCE STATEMENT

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491 *****
492 ****STP SUBROUTINE *****
493 * THIS ROUTINE ACCESSES STENO STROKES AND CHANGES THEM TO BIT
494 * STRINGS. THE RESULTING BIT PATTERNS (WITH ONE BIT FOR EACH
495 * STENO CHARACTER IN A STROKE), ARE STORED IN TABLE 'BITBUF'.
496 * CONVERSION IS MADE BY MEANS OF TABLE LOOKUP IN TABLE 'CHART'.
497 *
498 * THE CALLING SEQUENCE OF THIS ROUTINE IS AS FOLLOWS:
499 * BAL 14,STP
500 * RETURN WITH REG. 1 POINTING TO NEXT LOC. IN BITBUF
501 *
502 * BITBUF IS A WRAP AROUND BUFFER OF LENGTH 'BUFSIZE'. THE FINAL
503 * WORD OF BITBUF BEGINS WITH CHARACTER-'X'FF', AND IS OTHERWISE
504 * IDENTICAL TO THE FIRST WORD OF THE BUFFER.
505 *
506 * STENO CHARACTERS ARE READ FROM THE MARK READER TAPE BY MEANS OF
507 * THE DCB 'STEN'.
508 *
509 * UPON ENTERING THIS ROUTINE FOR THE FIRST TIME, STP FILLS THE
510 * BUFFER. WHEN THE INPUT TAPE HAS BEEN EXHAUSTED, ONLY THE POINTER
511 * IS UPDATED.
512 *
513 * WHILE TRANSLATING THE STENO CHARACTERS INTO BITS, A COMPARISON
514 * IS MADE FOR THE STROKES 'STEL' AND 'KHREL' (FOR BEGIN AND END
515 * SPELLING), AND SPECIAL FLAGS ARE PLACED IN THE 'STEL' STROKES
516 * IN THE BUFFER:
517 * X'F0' -UNMATCHED STEL (NOT FOLLOWED BY KHREL)
518 * X'F1' -MATCHED STEL
519 * X'F2' -END OF INPUT REACHED
520 *
521 * SWITCH 'UNMATCH' IS USED TO TEST FOR THE CONDITION OF A 'STEL'-
522 * 'KHREL' PAIR CONTAINING MORE STROKES THAN FIT INTO THE BUFFER.
523 *
524 * MESSAGES (WTO):
525 * "UNMATCHED STEL-KHREL"
526 * "NON-STENO CHARACTER"
527 * "ERROR CHARACTER"
528 *
529 *****
530 *
531 *
532 STP STM 7,14,STPSAV
533 LM 7,11,STPREGS
534 SWEND NOP SWENDER
535 SWIL B GETSTEN
536 B BIX
537 DOSTRNG SR 1,1
538 IC 1,0(19)
539 SLL 1,2
540 L 15,=A(CHART)
541 AR 15,1
542 TM 0(15),X'F0'
543 BO SPEC
544 U 7,0(15)
545 REP EQU *
546 BIX BXLE 9,10,DOSTRNG

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00A684 907E C406 0A460 532 STP STM 7,14,STPSAV  
 00A688 9878 C426 0A480 533 LM 7,11,STPREGS  
 00A68C 4700 CA0E 0A468 534 SWEND NOP SWENDER  
 00A690 47F0 C65E 0A688 535 SWIL B GETSTEN  
 00A694 47F0 C65A 0A684 536 B BIX  
 00A698 1811 00000 537 DOSTRNG SR 1,1  
 00A69A 4319 0000 00000 538 IC 1,0(19)  
 00A69E 8910 0002 00000 539 SLL 1,2  
 00A6A2 58F0 C39E 0A8F8 540 L 15,=A(CHART)  
 00A6A6 1AF1 00000 541 AR 15,1  
 00A6A8 91F0 F000 00000 542 TM 0(15),X'F0'  
 00A6AC 4710 C3DE 0A688 543 BO SPEC  
 00A6B0 567F 0000 00000 544 U 7,0(15)  
 00A6B4 00000 545 REP EQU \*  
 00A6B8 479A C63E 0A698 546 BIX BXLE 9,10,DOSTRNG

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ST#1 STP ROUTINE- FILL BUFFER WITH INPUT STENO STROKES

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LOG OBJECT CODE ADDR1 ADDR2 STMT SOURCE STATEMENT

FOI JUN 67 4/14/69

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547 GETSTEN SGT STINPUT,BLKSIZE=500,TRICH=E,DEN=2
573 * ,*** IMB063 DDNAME SHORT-PADDED TO 8 CHAR
581 LTR 0,0
582 BZ ENDSTEN
583 BM THATSALL
584 MVI ENDSTEN+1,X'F0'
585 LR 9,1
586 LR 11,0
587 * $SNAPX (9),(11), ' INPUT'
588 AR 11,9
589 BCTR 11,0
590 B DOSTRNG
591 SPEC CLI 0(15),X'F1' STROKE
592 BNE TESP
593 FIRAST NOP SWAST
594 MVI FIRAST+1,X'F0'
595 ST 7,ASTBUF
596 SR 7,7
597 B BIX
598 NOP TESTAST
599 MVI SWAST+1,X'F0'
600 ST 7,ASTBUF+4
601 SR 7,7
602 B BIX
603 TESTAST CLC ASTBUF+4(4),=A(N)
604 BNE NOTAST
605 CL 7,=A(N)
606 BE NOTAST
607 CLC ASTBUF(4),=A(N)
608 BE NOTAST
609 ST 7,ASTBUF
610 SR 7,7
611 MVI SWAST+1,0
612 B BIX
613 NOTAST L 15,ASTBUF
614 MVC ASTBUF(4),ASTBUF+4
615 ST 7,ASTBUF+4
616 LR 7,15
617 CHKSPEL CL 7,=A(S+T+E+L)
618 BE STEL
619 CL 7,=A(K+H+R+E+L)
620 BE MLEL
621 RETS Q 7,=A(SC)
622 TM 0(8),X'FF'
623 ST 7,0(8)
624 BNO OK888
625 MVI 0(8),X'FF'
626 LA 8,BITBUF
627 ST 7,0(8)
628 * CALL $SNAPS,(BITAD,BITLE),VL
629 OK888 LA 8,4(8)
630 SW12 NOP STPOT
631 CL 8,=A(BITBUF+4)
632 BE STPOT
633 SR 7,1
634 B BIX

```

00A84E 1200 00000 547 GETSTEN SGT STINPUT,BLKSIZE=500,TRICH=E,DEN=2  
 00A850 4780 C9E0 0AA3A 573 \* ,\*\*\* IMB063 DDNAME SHORT-PADDED TO 8 CHAR  
 00A854 4740 CA0A 0AA64 581 LTR 0,0  
 00A858 92F0 C9E1 0AA38 582 BZ ENDSTEN  
 00A85C 1491 00000 583 BM THATSALL  
 00A85E 1880 00000 584 MVI ENDSTEN+1,X'F0'  
 00A860 1A89 00000 585 LR 9,1  
 00A862 0680 00000 586 LR 11,0  
 00A864 47F0 C63E 0A698 587 \* \$SNAPX (9),(11), ' INPUT'  
 00A868 95F1 F000 00000 588 AR 11,9  
 00A86C 4770 C95C 0A986 589 BCTR 11,0  
 00A870 4700 C828 0A882 590 B DOSTRNG  
 00A874 92F0 C817 0A871 591 SPEC CLI 0(15),X'F1' STROKE  
 00A878 5070 C562 0A58C 592 BNE TESP  
 00A87C 1877 0A684 593 FIRAST NOP SWAST  
 00A87E 47F0 C65A 0A894 594 MVI FIRAST+1,X'F0'  
 00A882 4700 C83A 0A883 595 ST 7,ASTBUF  
 00A886 92F0 C829 0A5C0 596 SR 7,7  
 00A88A 5070 C566 0A684 597 B BIX  
 00A88E 1877 0A894 598 NOP TESTAST  
 00A890 47F0 C65A CBA2 0A5C0 0A8FC 599 MVI SWAST+1,X'F0'  
 00A894 0503 C566 0A88E 600 ST 7,ASTBUF+4  
 00A89A 4770 C864 0A8FC 601 SR 7,7  
 00A89E 5570 C8A2 0A88E 602 B BIX  
 00A8A2 4780 C864 CBA2 0A58C 0A8FC 603 TESTAST CLC ASTBUF+4(4),=A(N)  
 00A8A6 0503 C562 0A88E 604 BNE NOTAST  
 00A8AC 4780 C864 0A88E 605 CL 7,=A(N)  
 00A8B0 5070 C562 0A58C 606 BE NOTAST  
 00A8B4 1877 0A883 607 CLC ASTBUF(4),=A(N)  
 00A8B8 9200 C829 0A88E 608 BE NOTAST  
 00A8BA 47F0 C65A 0A88E 609 ST 7,ASTBUF  
 00A8BE 58F0 C562 C566 0A58C 0A5C0 610 SR 7,7  
 00A8C2 0203 C562 0A5C0 611 MVI SWAST+1,0  
 00A8C6 5070 C566 0A5C0 612 B BIX  
 00A8CC 1877 0A8C0 613 NOTAST L 15,ASTBUF  
 00A8CE 5570 C8A6 0A942 614 MVC ASTBUF(4),ASTBUF+4  
 00A8D0 4780 C8E6 0A9C0 615 ST 7,ASTBUF+4  
 00A8D4 5570 C8AA 0A978 616 LR 7,15  
 00A8D8 4780 C91E 0A9C0 617 CHKSPEL CL 7,=A(S+T+E+L)  
 00A8DE 5670 C8AE 00000 618 BE STEL  
 00A8E2 91FF 8000 00000 619 CL 7,=A(K+H+R+E+L)  
 00A8E6 5078 0000 00000 620 BE MLEL  
 00A8EA 47E0 C8A0 00000 621 RETS Q 7,=A(SC)  
 00A8EE 92FF 8000 00000 622 TM 0(8),X'FF'  
 00A8F2 4180 C8F2 00000 623 ST 7,0(8)  
 00A8F6 5078 0000 00000 624 BNO OK888  
 00A8FA 4180 C8F2 00000 625 MVI 0(8),X'FF'  
 00A8FE 4180 C8F2 00000 626 LA 8,BITBUF  
 00A900 4180 C8F2 00000 627 ST 7,0(8)  
 00A904 47F0 C55A 0A884 628 \* CALL \$SNAPS,(BITAD,BITLE),VL  
 00A908 4180 C8F2 00000 629 OK888 LA 8,4(8)  
 00A90C 5580 C8B2 0A91E 630 SW12 NOP STPOT  
 00A90E 4780 C8B6 0A910 631 CL 8,=A(BITBUF+4)  
 00A90A 1877 0A910 632 BE STPOT  
 00A90C 47F0 C55A 0A884 633 SR 7,1  
 00A90E 47F0 C55A 0A884 634 B BIX

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LOC OBJECT CODE ADDR1 ADDR2 STMT SOURCE STATEMENT F01JUN67 4/14/69

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00A910 9200 C637 0A691 705 STPOTP MVI SW11+1,X*00'
00A914 92F0 C8A5 0A8FF 706 MVI SW12+1,X*F0'
00A918 0200 C35E C8F7 0A388 0AC51 707 MVC UNAL(1),BITBUF+5
00A91E 9088 C42A 0A484 708 6TPOT. STM 8,11,STPREGS+4
00A922 91FF 8000 00000 709 TM 0(8),X*FF'
00A926 47E0 C804 0A92E 710 BNO NOTBE
00A92A 4180 C8F2 0AC4C 711 LA 8,BITBUF
00A92E 0200 C35A C35E 0A3B4 0A3B8 712 NOTBE MVC UNALTERD(1),UNAL
00A934 0200 C35E 8005 0A3B8 00005 713 MVC UNAL(1),5(8)
00A93A 1818 714 LR 1,8
00A93C 987E C406 0A460 715 LM 7,14,STPSAV
00A940 07FE 716 BR 14
00A942 5810 C43A 0A494 717 STEL L 1,STELLA
00A946 95F1 1000 00000 718 CLI 0(1),X*F1'
00A94A 4740 C900 0A95A 719 BE STELO
00A94E 45F0 1000 00000 720 CLI 0(1),X*F0'
00A952 4770 C900 0A95A 721 BNE STELO
00A956 9200 1000 00000 722 MVI 0(1),X*00'
00A95A 42F0 C933 0A98D 723 STELO MVI UNMATCH+1,X*F0'
00A95E 5C80 C43A 0A494 724 ST 8,STELLA
00A962 91FF 8000 00000 725 TM 0(8),X*FF'
00A966 47E0 C916 0A970 726 BNO BADSTEL
00A96A 0203 C43A C886 0A494 0AC10 727 MVC STELLA(4),=A(BITBUF)
00A970 5670 C452 0A4AC 728 BADSTEL 0 7,SPELR
00A974 47F0 C884 0A8DE 729 B RETS
00A978 5810 C43A 0A494 730 KLEL L 1,STELLA
00A97C 95F0 1000 00000 731 CLI 0(1),X*F0'
00A980 4770 C932 0A98C 732 BNE UNMATCH
00A984 92F1 1000 00000 733 MVI 0(1),X*F1'
00A988 47F0 C884 0A8DE 734 B RETS
00A98C 47F0 C884 0A8DE 735 UNMATCH B RETS
00A990 92F0 C933 0A98D 736 MVI UNMATCH+1,X*F0'
00A992 47F0 C884 0A8DE 737 WTO *UNMATCHED STEL-KLEL'
00A996 95F0 F000 00000 746 B RETS
00A99A 4770 C98C 0A9E6 747 TESP CLI 0(15),X*F0'
00A9E2 47F0 C65A 0A684 748 BNE TESP1
00A9E6 95F2 F000 00000 749 WTO *ILLEGAL STENO CHARACTER'
00A9EA 4770 C984 0A684 758 B REP
00AA0A 47F0 C65A 0A984 759 TESP1 CLI 0(15),X*F2'
00AA0E 95F2 F000 00000 760 BNE TESP2
00AA12 4780 C65A 0A684 761 WTO *ERROR CHARACTER'
00AA16 95F4 F000 00000 770 B REP
00AA1A 4780 C65A 0A684 771 TESP2 CLI 0(15),X*F3'
00AA1E 4199 0001 00000 772 B REP
00AA22 95F5 F000 00000 773 CLI 0(15),X*F4'
00AA26 4780 C65A 0A684 774 B REP
00AA3A 47F0 CA3C 0AA96 775 LA 9,1(9)
00AA4A 92F0 C9E1 0AA38 776 CLI 0(15),X*F5'
00AA4E 5810 C552 0A5AC 777 B REP
00AA52 0200 C785 1000 0A70F 00000 778 ABEND 2,DUMP CHARACTER NOT IN TABLE
00AA58 4111 0001 00001 785 ENDSTEN B NOTENDY
00AA60 47F0 C65E 0A688 786 CLOSE (GETSTENX)
00AA64 0A68D 796 ST 1,INNUMPT
00AA68 1277 0A882 797 B GETSTEN
00AA6A 4770 C828 0A882 798 THATSALL EQU 7,7
00AA6E 4700 CA24 0AA7E 800 SWENDER LTR 7,7
00AA72 92F0 CA15 0AA6F 801 SWEND+1,X*F0'
00AA76 5870 C562 0A58C 802 ENDAST1 BNZ SWAST
00AA7A 47F0 C874 0A8CE 803 ENDAST2 NOP ENDAST1+1,X*F0'
00AA7E 4700 CA34 0AA8E 804 L 7,ASTBUF
00AA82 92F0 CA25 0AA7F 805 B CHKSPEL
00AA86 5870 C566 0A5C0 806 ENDAST2 NOP THATSIT
00AA8A 47F0 C874 0A8CE 807 ENDAST2+1,X*F0'
00AA8E 5670 C442 0A49C 808 L 7,ASTBUF+4
00AA92 47F0 C884 0A8DE 809 B CHKSPEL
00AA96 9200 C9E1 0AA38 810 THATSIT 0 7,ENDFILE
00AA9A 5870 C88A 0AC14 811 B RETS
00AA9E 47F0 C816 0A870 812 NOTENDY MVI ENDSTEN+1,X*00'
00AA9F 47F0 C816 0A870 813 L 7,=A(S+P)
00AA9F 47F0 C816 0A870 814 B FIRAST
00AA9F 47F0 C816 0A870 815 *
00AA9F 47F0 C816 0A870 816 *****

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LOC OBJECT CODE ADDR1 ADDR2 STMT SOURCE STATEMENT F01JUN67 4/14/69

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00AA5C 5010 C552 0A5AC 796 ST 1,INNUMPT
00AA60 47F0 C65E 0A688 797 B GETSTEN
00AA64 0A68D 798 THATSALL EQU 7,7
00AA68 92F0 C633 0A68D 799 SWENDER LTR 7,7
00AA68 1277 0A882 800 SWEND+1,X*F0'
00AA6A 4770 C828 0A882 801 BNZ SWAST
00AA6E 4700 CA24 0AA7E 802 ENDAST1 NOP ENDAST2
00AA72 92F0 CA15 0AA6F 803 ENDAST1+1,X*F0'
00AA76 5870 C562 0A58C 804 L 7,ASTBUF
00AA7A 47F0 C874 0A8CE 805 B CHKSPEL
00AA7E 4700 CA34 0AA8E 806 ENDAST2 NOP THATSIT
00AA82 92F0 CA25 0AA7F 807 ENDAST2+1,X*F0'
00AA86 5870 C566 0A5C0 808 L 7,ASTBUF+4
00AA8A 47F0 C874 0A8CE 809 B CHKSPEL
00AA8E 5670 C442 0A49C 810 THATSIT 0 7,ENDFILE
00AA92 47F0 C884 0A8DE 811 B RETS
00AA96 9200 C9E1 0AA38 812 NOTENDY MVI ENDSTEN+1,X*00'
00AA9A 5870 C88A 0AC14 813 L 7,=A(S+P)
00AA9E 47F0 C816 0A870 814 B FIRAST
00AA9F 47F0 C816 0A870 815 *
00AA9F 47F0 C816 0A870 816 *****

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LCC OBJECT CODE ADDR1 ADDR2 STMT SOURCE STATEMENT

FO1JUN67 4/14/69

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818 *****
819 *WRTSTEN - ASSEMBLE AND WRITE-OUT STENO SORT RECORDS*****
820 *
821 * THIS ROUTINE RECEIVES A STROKE AT A TIME AND CREATES A STRING
822 * MADE UP OF AN "ID" SEQUENCE NUMBER; A NUMBER OF STROKES (INDICA-
823 * TED BY 'NUMSTRKS'); AND A LENGTH OF PACKED NORMALIZATION BITS.
824 *
825 *CALLING SEQUENCE:
826 * BAL 14,WRTSTEN
827 *
828 * *REG 1 CONTAINS THE ADDRESS OF THE BEGINNING OF
829 * NORMALIZATION CHARACTERS IN THE LOWER 24 BITS, AND THE
830 * THE UNEDITED FIRST 7 BITS OF THE STROKE IN THE HIGH
831 * ORDER BITS OF THE REGISTER. (THIS IS USED TO CORRECT
832 * DELETIONS MADE TO THE FIRST STROKE DUE TO STROKE-BOUND
833 * NORMALIZATION.
834 * *REG. 0 CONTAIN THE STROKE TO OUTPUTED (IN LOW ORDER 24)
835 *
836 * THE ROUTINE WRITES OUTPUT USING THE DCB 'STOUT'.
837 * IF REG. 1 CONTAINS ZERO, OUTPUT BEGINNING WITH THAT STROKE WILL
838 * NOT BE WRITTEN.
839 * IF REGISTER 1 IS MINUS, THE PROGRAM WILL TERMINATE AFTER THE
840 * WRTSTEN BUFFERS HAVE BEEN EMPTIED
841 *
842 * WRTSTEN USES 2 "SLIDING" BUFFERS TO ASSEMBLE THE DATA:
843 * 'STENREC' - CONTAINS THE STENO STROKES. AS EACH NEW
844 * STROKE IS ADDED TO THE RIGHT, THE BUFFER IS
845 * SLID LEFTWORD.
846 * 'NORMAT' - CONTAINS THE CONTENTS OF REG 1 FOR EACH CALL TO
847 * THE ROUTINE.
848 *
849 * A SPECIAL TEST IS PERFORMED ON THE FIRST STROKE OF THE SEQUENCE
850 * EACH TIME ONE IS ASSEMBLED, TO SEE IF "STK" OR "S" NORMALIZATION
851 * WAS LOST DUE TO A STROKE BOUNDARY CONDITION. IF SO, THIS
852 * INDICATION IS ADDED.
853 *
854 *****
854 WRTSTEN ST 0,STENR
855 MVC STENREC(3*NUMSTRKS-3),STENREC*3
856 MVC STENREC(3*NUMSTRKS-3),STENR*1
857 MVC NORMAT(NUMSTRKS*4-4),NORMAT*4
858 ST 1,NORMAT+NUMSTRKS*4-4
859 L 1,STENID
860 LA 1,1(1)
861 ST 1,STENID
862 L 1,NORMAT
863 LTR 1,1
864 BCR 8,14
865 BM DONE
866 STM 7,14,WSTENSAV
867 LM 8,11,=A(0,STENORM,1,STENORM+NUMSTRKS-1)
868 XR 0,0
869 LR 7,1
870 SRL 1,24
871 STC 1,STENREC
872 TM 0(7),X'FF'
873 BNO OKNOW

```

00AAA2 5000 C38A 0A3E4  
 00AAA6 0214 C392 C395 0A3EC 0A3EF  
 00AAAC 0202 C3A7 C388 0A401 0A3E5  
 00AAB2 0218 C3B2 C3B6 0A40C 0A410  
 00AAB8 5010 C3CE 0A428  
 00AABC 5810 C38E 0A3E8  
 00AAC0 4111 0001 00001  
 00AAC4 5010 C38E 0A3E8  
 00AAC8 5810 C3B2 0A40C  
 00AAC 1211 862  
 00AAE 078E 863  
 00AAD0 4740 C838 0A892  
 00AAD4 907E C3D2 0A42C  
 00AAD8 9888 C86E 0A8C8  
 00AADC 1700 868  
 00AADE 1871 869  
 00AAE0 8810 0018 00018  
 00AAE4 4210 C392 0A3EC  
 00AAE8 91FF 7000 00000  
 00AAEC 47EQ CA9A 0A8F4

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ST#1 WRTSTEN - ASSEMBLE AND WRITE STENO SORT RECORDS

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LCC OBJECT CODE ADDR1 ADDR2 STMT SOURCE STATEMENT

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00AAFO 4170 C35F 0A3B9 874 LA 7,NORF
00AAF4 9170 C392 0A3EC 875 JKNOW TM STENREC,8*01110000' STK
00AAF8 4710 C8BE 0A818 876 BO STKFND
00Aafc 4780 CA0A 0A834 877 BNM NOSWEAT
00AB00 9140 C392 0A3EC 878 TM STENREC,8*01000000' S
00AB04 47E0 CA0A 0A834 879 BNO NOSWEAT
00AB08 9504 7000 0J000 880 CLT 0(7),STNUM
00AB0C 4700 CA0A 0A834 881 BNM NOSWEAT
00AB10 4310 C8F0 0AC4A 882 IC 1=ALL(STNUM)
00AB14 47F0 CAF8 0A852 883 B GC
00AB18 910F C392 0A3EC 884 STKFND TM STENREC,8*00001111'
00AB1C 4770 CA0A 0A808 885 BNZ SFND
00AB20 94CF C392 0A3EC 886 NI STENREC,8*11001111' DROP IK
00AB24 9501 7000 00000 887 CLT 0(7),STNUM
00AB28 4780 CA0A 0A834 888 BE NOSWEAT
00AB2C 4310 C8F1 0AC4B 889 IC 1=ALL(STNUM)
00AB30 47F0 CAF8 0A852 890 B GC
00AB34 1811 891 NOSWEAT SR 1,1
00AB36 91FF 7000 00000 892 LOOPN TM 0(7),X'FF'
00AB3A 47E0 CA0A 0A842 893 BNO OKNOR
00AB3E 4170 C35F 0A3B9 894 LA 7,NORF
00AB42 4317 0000 00000 895 OKNOR IC 1,0(7)
00AB46 4177 0001 00001 896 LA 7,1(7)
00AB4A 5A10 C88E 0AC18 897 A 1=A(TEST5)
00AB4E 4311 0000 00000 898 IC 1,0(1)
00AB52 4408 C806 0A860 899 GC EX 0,SHIFN(8)
00AB56 1601 900 UR 0,1
00AB58 4188 0004 00004 901 LA 8,4(8)
00AB5C 47F0 CA0A 0A834 902 B NOSWEAT
00AB60 8910 0006 00006 903 SHIFN SLL 1,6
00AB64 8910 0004 00004 904 SLL 1,4
00AB68 8910 0002 00002 905 SLL 1,2
00AB6C 47F0 C816 0A870 906 B STORN
00AB70 1601 907 STORN UR 0,1
00AB72 4209 0000 00000 908 STC 0,0(9)
00AB76 1700 909 XR 0,0
00AB78 1788 910 XR 8,8
00AB7A 379A CA0A 0A834 911 BXLE 9,10,NOSWEAT
912 PUT STOUT,STOUTPUT
917 # SNAPX STOUTPUT,STRECL,'STENO RECORD'
918 # CALL $SNAPSS,(STEE),VL
919 LM 7,14,WSTENSAV
920 BR 14
921 DONE $RETURN
922 LTORG
923
924 =C(1),##(2)*
925 =C(1),##(2)*
926 =A(0,STENORM,1,STENORM+NUMSTRKS-1)
927 =A(STEEDIT)
928 =A(X'FFFFFF')
929 =A(K+H+K+E+L+SC)
930 =A(SPELAR)
931 =V(13PELT5)
932 =A(OUTREC+OUTLRECL-1)
933 =A(OUTREC)
934 =F*-1

```

00AB88 4F4878787F4DE950  
 00AB8C 4F487878784UE950  
 00AB8D 000000000000A404  
 00AB8E 00000000  
 00AB8F 00FFFFF  
 00AB90 00110A0  
 00AB91 0000A4E4  
 00AB92 00000000  
 00AB93 0000A593  
 00AB94 0000A54C  
 00AB95 0000FFFF

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00ABF8	00000000			945	=ACCHART)
00ABFC	00000000			946	=A(N)
00AC00	00601020			947	=A(S+T+E+L)
00AC04	00131020			948	=A(K+M+R+E+L)
00AC08	00000080			949	=A(SC)
00AC0C	0000AC50			950	=A(BITBUF+4)
00AC10	0000AC4C			951	=A(BITBUF)
00AC14	00480000			952	=A(S+P)
00AC18	00000000			953	=A(REST5)
00AC1C	6C6C			954	=C'EE'
00AC1E	7F78			955	=C'EF'
00AC20	4D4D			956	=C'II'
00AC22	4DC45B4DE95D			957	=C'LD)(I)P
00AC24	003880			958	=AL3(T+E+U+SC)
00AC28	0005A8			959	=AL3(F+J+L+V+SC)
00AC2E	6A05A8			960	=AL3(S+T+P+H+F+J+L+V+SC)
00AC31	008080			961	=AL3(H+SC)
00AC34	4F4873734DE95D			962	=C'LB(Z)'
00AC38	7A			963	=C'Z'
00AC3C	4F5078			964	=C'J)A'
00AC3F	4DD3504DE75DF1F0			965	=C'(LI(X)1042)'
00AC4A	04			966	=AL1(STNUM)
00AC4B	01			967	=AL1(STKNUM)
00AC4C	003C000000000000			968	BITBUF DC (BUFSIZ)F'0'
00AC4E	FFFFFF			969	DC 'FFFFFFF'
00AC50				970	*****
00AC52				971	END SFEND#1

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ST#1

## RELOCATION DICTIONARY

PAGE 1

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POS.ID	REL.ID	FLAGS	ADDRESS
01	01	08	00A061
01	01	08	00A060
01	01	08	00A2A9
01	01	0C	00A3DC
01	01	0C	00A45C
01	01	0C	00A484
01	01	0C	00A494
01	01	0C	00A4B0
01	01	0C	00A4C4
01	01	0C	00A5A8
01	01	0C	00A5AC
01	01	04	00A6CD
01	01	08	00A6F1
01	01	08	00A6F0
01	01	04	00A7D1
01	01	08	00A7D5
01	01	08	00A829
01	01	04	00A845
01	01	0C	00A8CC
01	01	0C	00A8D4
01	01	0C	00A8E4
01	01	0C	00A8EC
01	01	0C	00A8F0
01	01	0C	00A8C0
01	01	0C	00AC10
01	02	0C	00A44C
01	03	0C	00A450
01	04	0C	00A454
01	05	0C	00A458
01	06	0C	00AC18
01	07	0C	00A8F8
01	08	1C	00A290
01	08	0C	00A8D8
01	09	0C	00A298
01	0A	0C	00A29C
01	0B	0C	00A2A0
01	0C	0C	00A2A4
01	0D	1C	00A8E8

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
A	00001	004000	0033	
ASTBUF	00004	00A58C	0374	0665 0670 0673 0677 0679 0683 0684 0684 0685 0804 0808
B	00001	000040	0840	
BALCKS	00004	00A09C	0111	0152
BAUSTEL	00004	00A970	0728	0726
BAKWLSP	00002	00A30E	0279	0313
BEFORE	00004	00A408	0359	0116 0121 0356
BITAD	00004	00A490	0383	
BITBUF	00004	00A44C	0968	0107 0133 0231 0344 0353 0696 0701 0707 0711 0727 0950 0951
BITLE	00001	00A488	0354	
BITTLE	00009	00A489	0355	0354
BIX	00004	00A684	0546	0536 0667 0672 0682 0704
BP	00004	00A4C4	0356	
BUFSIZ	00001	000100	0020	0353 0968
C	00001	000004	0044	
CHART	00001	000000	0015	0540 0945
CHKSPCL	00004	00A8CE	0687	0805 0809
D	00001	000002	0045	
DUNE	00002	00A892	0922	0865
DOST	00004	00A080	0104	0135 0318
DOSTRNG	00002	00A698	0537	0546 0660
DOWSP	00004	00A2DE	0267	0178 0185 0189 0197 0201 0206 0210 0216 0222 0258 0264
DUMST	00004	00A498	0346	0345
E	00001	001000	0035	0162 0164 0173 0181 0193 0687 0689 0939 0947 0948 0958
EDI	00001	00A4CC	0357	
EDII	00011	00A4C0	0358	0357
ENDAST1	00004	00A46E	0402	0803
ENDAST2	00004	00A47E	0306	0802 0907
ENDITSP	00004	00A32E	0290	0276
ENDSTEN	00004	00A43A	0785	0652 0654 0792 0812
ENOFIL	00004	00A49C	0347	0810
F	00001	000400	0037	0166 0168 0179 0202 0959 0960
FIRAST	00004	00A870	0663	0664 0814
FNUM	00004	00A11A	0150	
FORTN	00004	00A116	0149	0137
FIRTN	00004	00A126	0153	0139
F2RTN	00004	00A1A0	0319	0141 0322
G	00001	000010	0042	
GC	00004	00A852	0899	0883 0890
GETSTEN	00004	00A688	0548	0535 0549 0632 0797
GETSTENX	00004	00A780	0578	0550 0555 0567 0634 0639 0641 0646 0649 0790 0794
GETSTEN1	00004	00A6E4	0562	0548 0563 0643
GETSTEN3	00002	00A810	0630	0598
GETSTEN4	00001	00A6FC	0571	0600
GETSTEN5	00001	00A700	0572	0557 0561 0571
GETSTEN6	00001	00A84E	0650	0633 0645
GETSTEN7	00004	00A81C	0634	0562 0569
GETSTEN8	00004	00A840	0646	0635 0642
GETSTEN9	00004	00A6E8	0633	0551
H	00001	020000	0030	0162 0168 0202 0689 0939 0948 0960
HF	00001	000002	0053	
I	00001	000200	0038	
IHB00108	00004	00A290	0241	0252
IHB0011	00001	00A298	0244	
IHB0011A	00001	00A2AC	0251	0243
IHB0029	00001	00A9AF	0743	0740

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
IHB0029A	00002	00A980	0744	0739
IHB0030	00001	00A90F	0755	0752
IHB0030A	00002	00A9E0	0756	0751
IHB0031	00001	00A407	0767	0764
IHB0031A	00002	00A408	0768	0763
IND	00001	00A440	0348	
INNUMPT	00004	00A5AC	0372	0793 0796
INNUMS	00009	00A580	0373	0372
J	00001	000100	0039	0166 0168 0179 0202 0959 0960
K	00001	000000	0027	0162 0689 0939 0948
KF	00001	000010	0050	
KLEL	00004	00A978	0730	0690
L	00001	000020	0041	0162 0166 0168 0179 0202 0687 0689 0939 0947 0948 0959 0960
LASTWSP	00004	00A5A8	0371	0271 0282 0310
LODPN	00004	00A836	0892	
LRECL	00001	000052	0018	
MASKER	00004	00A4A8	0351	0115
MINUS	00004	00A4A4	0360	0117 0237
MOSPEL	00004	00A142	0160	0268
MVSP	00006	00A38A	0314	0284
N	00001	000000	0032	0170 0212 0218 0673 0675 0677 0946 0961
NORF	00004	00A389	0329	0016 0342 0874 0894
NORMA	00004	00A45C	0342	0122 0124
NORMAT	00004	00A40C	0339	0857 0857 0858 0862
NORTAR	00004	00A44C	0341	0118
NOSWEAT	00002	00A834	0891	0877 0879 0881 0888 0902 0911
NOTAST	00004	00A88E	0683	0674 0676 0678
NOTBE	00006	00A92E	0712	0710
NOTENOV	00004	00A966	0812	0785
NUMSTRKS	00001	000008	0021	0329 0334 0336 0339 0855 0856 0857 0858 0867 0936
J	00001	002000	0034	0164 0173 0181 0193 0958
OKBB	00004	00A090	0108	0106
OKBBB	00004	00A8FA	0699	0694
OKNOR	00004	00A842	0895	0893
OKNOW	00004	00A8F4	0875	0873
OKOK	00004	00A0E6	0134	0132
OUTENDG	00001	00A553	0368	
OUTFUN	00001	00A555	0370	0309 0366 0371
OUTID	00003	00A550	0367	0298
OUTLRECL	00001	000050	0019	0280 0361 0370 0484 0942
OUTL1	00001	00A554	0369	0297
OUTREC	00002	00A54C	0366	0101 0280 0295 0296 0301 0366 0942 0943
OUTSPEL	00004	00A624	0438	0097 0100 0300
P	00001	000000	0028	0168 0202 0813 0952 0960
PF	00001	000008	0051	
Q	00001	000080	0055	
R	00001	010000	0031	0162 0689 0939 0948
RECDOK	00002	00A2C2	0259	0256
REP	00001	00A684	0545	0758 0770 0772 0774 0777
RETS	00004	00A80E	0691	0729 0734 0735 0746 0811
RF	00001	000001	0054	
S	00001	400000	0025	0168 0202 0687 0813 0947 0952 0960
SAST	00004	00A220	0211	0171
SAVL	00004	00A380	0326	0153 0160 0232 0317
SS	00001	000080	0047	
SC	00001	000080	0024	0055 0167 0164 0166 0168 0170 0173 0179 0181 0193 0202 0212 0218 0691 0939

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SYMBOL	LEN	VALUE	DEFN	REFERENCES	4/14/69
SCOLON	00004	00A18A	0186	0949 0958 0959 0960 0961	
SGPAR	00004	00A210	0207	0180	
SDEL	00004	00A23A	0217	0203	
SF	00001	000040	0048	0213 0219	
SFND	00004	00A808	0880	0885	
SHIFN	00004	00A860	0903	0899	
SKIPITSP	00002	00A320	0285	0277 0312	
SKIPSPEL	00004	00A254	0223	0175 0186 0198 0207 0211 0217	
SPAREN	00006	00A1FA	0202	0169	
SPEC	00004	00A868	0661	0543	
SPECSTR	00004	00A0EE	0136	0110	
SPELAR	00004	00A4F4	0361	0250 0254 0262 0269 0940	
SPELCNT	00004	00A4E0	0360	0272 0274 0297 0307 0307	
SPELR	00004	00A4AC	0352	0728	
SPELTRAN	00004	00A284	0236	0172 0174	
SPELT1	00001	000000	0017	0245	
SPELT2	00001	000000	0017	0246	
SPELT3	00001	000000	0017	0247	
SPELT4	00001	000000	0017	0248	
SPELT5	00001	000000	0017		
SPENID	00004	00A548	0364	0156 0298 0306	
SPERCJU	00004	00A1EA	0198	0194	
SPERD	00006	00A19A	0179	0167	
SPERCUC	00002	00A1CA	0190	0142	
SPKLEL	00004	00A390	0315	0163	
SQUOTE	00006	00A180	0173	0165	
STEDIT	00001	000000	0015	0119 0937	
STEE	00004	00A30C	0331		
STEL	00004	00A942	0717	0688	
STELLA	00004	00A494	0345	0717 0724 0727 0730	
STELD	00004	00A95A	0723	0719 0721	
STENID	00004	00A3E8	0333	0154 0304 0335 0859 0861	
STENOM1	00001	00A020	0002	0971	
STENDRM	00001	00A404	0336	0867 0867 0936 0936	
STENR	00004	00A3E4	0332	0854 0856	
STENREC	00003	00A3EC	0334	0331 0855 0856 0871 0875 0878 0884 0886	
STKFND	00004	00A818	0884	0876	
STKNUM	00001	000001	0061	0887 0889 0967	
STNSP	00004	00A538	0363	0294 0308	
STNUM	00001	000004	0062	0880 0882 0966	
STORN	00002	00A870	0907	0906	
STOUT	00004	00A5C4	0380	0091 0913	
STUUTPUT	00004	00A3E9	0335	0338 0914	
STP	00004	00A684	0532	0104 0228	
STPOT	00004	00A91E	0708	0700	
STPOTP	00004	00A910	0705	0702	
STPREGS	00004	00A480	0344	0533 0708	
STPSAV	00004	00A460	0343	0532 0715	
STRECL	00001	000023	0338	0417 0427	
STREND	00001	00A40C	0337	0338	
SV14SP	00004	00A534	0362	0270 0288	
SWAST	00004	00A882	0668	0663 0669 0681 0801	
SWEND	00004	00A68C	0534	0799	
SWENDER	00002	00A468	0400	0534	
SWII	00004	00A690	0535	0705	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES	4/14/69
SW12	00004	00A8FE	0700	0706	
T	00001	000000	0026	0168 0202 0687 0947 0960	
TESP	00004	00A886	0747	0662	
TESP1	00004	00A9E6	0759	0748	
TESP2	00004	00A80E	0771	0760	
TESTAST	00006	00A874	0673	0668	
TEST1	00001	000000	0014	0341	
TEST2	00001	000000	0014	0341	
TEST3	00001	000000	0014	0341	
TEST4	00001	000000	0014	0341	
TEST5	00001	000000	0014	0897 0953	
TF	00001	000020	0049		
THATSALL	00001	00A464	0798	0653	
THATSIT	00004	00A48E	0810	0806	
TRSPEL	00006	00A2E6	0269	0261	
U	00001	000800	0036	0164 0173 0181 0193 0958	
UNAL	00001	00A388	0328	0707 0712 0713	
UNALTEAD	00004	00A384	0327	0123 0712	
JNMATCH	00004	00A98C	0735	0149 0723 0732 0736	
UPPOINT	00004	00A262	0227	0161 0192 0226	
UPPSAY	00004	00A280	0235	0223 0227 0233	
V	00001	000008	0043	0166 0168 0179 0202 0959 0960	
W	00001	000000	0029		
WF	00001	000004	0052		
WRITTS	00002	00A33A	0293	0281	
WRITTS	00004	00A33C	0294	0292	
WRITTSPEL	00004	00A2EC	0270	0159 0191 0225 0267 0316	
WRITSTEN	00004	00A4A2	0854	0134 0287 0321	
WSTENSAV	00004	00A42C	0340	0866 0919	
X	00001	000100	0022		
Z	00001	000001	0046		

NO STATEMENTS FLAGGED IN THIS ASSEMBLY  
913 PRINTED LINES

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IEF2851	SYS1.MACLIB		KEPT
IEF2851	VOL SER NOS= RESVOL.		
IEF2851	STENSLIB		KEPT
IEF2851	VOL SER NOS= LNKVOL.		
IEF2851	SYSUT1		KEPT
IEF2851	VOL SER NOS= DISK01.		
IEF2851	SYSUT2		KEPT
IEF2851	VOL SER NOS= DISK02.		
IEF2851	SYSUT3		KEPT
IEF2851	VOL SER NOS= DISK03.		
IEF2851	SYSOUT		SYSOUT
IEF2851	VOL SER NOS=		
IEF2851	STENSLIB		KEPT
IEF2851	VOL SER NOS= LNKVOL.		
IEF2361	ALLOC. FOR JCB	ASM	
IEF2371	SYSLIB	ON 230	
IEF2371		ON 236	
IEF2371	SYSUT1	ON 231	
IEF2371	SYSUT2	ON 232	
IEF2371	SYSUT3	ON 239	
IEF2371	SYS PUNCH	ON 000	
IEF2371	SYSIN	ON 236	

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ST#2					
SYMBOL	TYPE	LD	ADDR	LENGTH	LD ID

EXTERNAL SYMBOL DICTIONARY

PAGE 1  
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STENO#2	SD	C1	00A020	000F08	
NORF	LD		00AEF4		01
SPELT1	ER	02			
SPELT2	ER	03			
SPELT3	ER	04			
SPELT4	ER	05			
SPELT5	ER	06			
\$SYNAD	ER	07			
STEDIT	ER	08			

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A020				2	STENO#2 START X'A020'
				3	PRINT ON, NOGEN
				4	ENTRY MORF
				5	EXTRN SPELT1, SPELT2, SPELT3, SPELT4, SPELT5
				6	EXTRN \$SYNAD
				7	STEQU
0000C8				40	OUTLRECL EQU 200
000008				41	NUMSTRKS EQU 8
				42	\$SAVE
00A05A	4130 UOFF		000FF	63	LA 3,255
00A05E	4140 OOFF		000FF	64	LOOPMSK LA 4,255
00A062	4150 0001		00001	65	LA 5,1
00A066	4230 CAEE		0A848	66	STC 3,TESTC
00A06A	4450 C024		0A07E	67	EXTM EX 5,TIM
00A06E	4710 C028		0A082	68	BQ DOMSK
00A072	8950 0001		00001	69	SLL 5,1
00A076	8940 0001		00001	70	SLL 4,1
00A07A	47F0 C010		0A06A	71	B EXTM
00A07E	9100 CAEE	0A848		72	ITM TM TESTC,0
00A082	4243 C9EE		0A848	73	DOMSK STC 4,TABLEM(3)
00A086	4630 C004		0A05E	74	BCT 3,LOOPMSK
00A08A	9200 C9EE	0A848		75	MVI TABLE,0
				76	OPEN (OUTPUT,(OUTPUT))
				82	OPEN (ADICT,(INPUT))
				88	OPEN (INPUT,(INPUT),DICT,(INPUT))
				96	READIN GET INPUT,IMAREA
00A0C4	0217 C84E C869	0A8A8	0A8C3	101	MVC SAVIAREA,INARG
00A0CA	0617 C869 C9CE	0A8C3	0A828	102	OC INARG,SCOR
00A0D0	47F0 C5A2		0A5FC	103	READICTM
00A0D4	F3E7 C996 C881	CA9F0	0A808	104	UNPK UNNORM,INNORM
00A0DA	96F0 C9A4		0A9FE	105	DI UNNORM+L'UNNORM-1,X'F0'
00A0DE	0C0E C996 C8B5	CA9F0	0A90F	106	TR UNNORM,TABNORM-240
00A0E4	0703 C842 C842	0A89C	0A89C	107	XC LASTTEST,LASTTEST
00A0EA	0703 C98A C98A	0A814	0A814	108	XC MATCH,MATCH
00A0F0	92FF C832	CA88C		109	MVI THENING,X'FF'
00A0F4	5830 C846	0A8A0		110	L 3,WELLAD
000000				111	USING DBLOCK,3
00A0F8	1233			112	TESTWELL LTR 3,3
00A0FA	4780 C14E	0A1A8		113	BZ ENDWELL
00A0FE	4110 3006	00C06		114	LA 1,DBENTRY
00A102	45E0 C626	0A680		115	BAL 14,COMP
00A106	47FF C080	0A10A		116	B **4(15)
00A10A	47F0 C0CC	0A126		117	B MATCHWELL
00A10E	47F0 C0E6	0A140		118	B NEXTWELL
00A112	47F0 C0F2	0A14C		119	B FREEWELL
				120	ABEND 1,DUMP
00A126	95C5 3008	00008		127	MATCHWEL CLI DBENDG,E'E'
00A12A	4770 C00C	0A136		128	BNE NOTENG
00A12E	45E0 C2F2	0A34C		129	BAL 14,WRITE
00A132	47F0 C0E6	0A140		130	B NEXTWELL
00A136	5030 C98A	0A814		131	ST 3,MATCH
00A13A	0200 C832	0A888		132	MVC THENING,MTCHENDG
00A140	5030 C842	0A89C		133	NEXTWELL ST 3,LASTTEST
00A144	5830 3000	00000		134	CHENIT L 3,DBCHAIN
00A148	47F0 C09E	0A0F8		135	B TESTWELL
00A14C	4800 3004	00004		136	FREEWELL LH 0,DBLEN

OUT OF SORT

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A150	1813			137	LR 1,3
00A152	5850 3000	00000		138	L 5,DBCHAIN
00A156	5510 C09E	0A0F8		139	CL 1,=ALLEWEL
00A15A	4770 C10C	0A166		140	BNE FREIT
00A15E	92F0 C379	0A3D3		141	MVI PREQUAL+1,X'F0'
00A162	47F0 C10E	0A168		142	B NOFREE
				143	FREIT FREEMAIN R,LV=(0),A=(1)
00A168	1255			146	NOFREE LTR 5,5
00A16A	4780 C132	0A18C		147	BZ FREEDLST
00A16E	5830 C842	0A89C		148	L 3,LASTTEST
00A172	1233			149	LTR 3,3
00A174	4780 C128	0A182		150	BZ NOPREV
00A178	5050 3000	00000		151	ST 5,DBCHAIN
00A17C	1835			152	LR 3,5
00A17E	47F0 C09E	0A0F8		153	B TESTWELL
00A182	1835			154	NOPREV LR 3,5
00A184	5030 C846	0A8A0		155	ST 3,WELLAD
00A188	47F0 C09E	0A0F8		156	B TESTWELL
00A18C				157	FREEQLST EQU *
00A18C	5830 C842	0A89C		158	L 3,LASTTEST
00A190	5030 C84A	0A8A4		159	ST 3,LASTIN
00A194	1233			160	LTR 3,3
00A196	4770 C148	0A1A2		161	BNZ PENDWEL
00A19A	5030 C846	0A8A0		162	ST 3,WELLAD
00A19E	47F0 C146	0A1A8		163	B ENDWELL
00A1A2	0703 3000	00000		164	PENDWEL XC DBCHAIN,DBCHAIN
00A1A8	5810 C83A	0A894		165	ENDWELL L 1,PREWELL
00A1AC	45E0 C626	0A680		166	BAL 14,COMP
00A1B0	47FF C15A	0A184		167	B **4(15)
00A1B4	9200 C419	0A473		168	MVI STOWSW+1,X'0'
00A1B8	47F0 C378	0A3D2		169	B PREQUAL
00A1BC	47F0 C43C	0A496		170	B READICT
00A1C0	5830 C98A	0A814		171	L 3,MATCH
				172	WRITE OUT MATCH OR TRANSLITERATION HERE
00A1C4	1233			173	LTR 3,3
00A1C6	4770 C2EA	0A344		174	BNZ DMATCH
00A1CA	F373 C988	0A9E2		175	UNPK UNLIE,UNNORM(4)
00A1D0	4140 C988	0A9E2		176	LA 4,UNLIT
00A1D4	0202 C993	0A8E0		177	MVC TSTROK+1(3),SAVIAREA
00A1DA	9140 C993	0A8E0		178	TM TSTROK+1,5F
00A1DE	47E0 C198	0A1F2		179	BNO STRAN
00A1E2	4144 0001	00001		180	LA 4,1(4)
00A1E6	95F8 4000	00000		181	CLI 0(4),X'F8'
00A1EA	4780 C198	0A1F2		182	BE STRAN
00A1EE	9630 C993	0A8E0		183	OI TSTROK+1,TF+KF
00A1F2	9178 C994	0A8E8		184	TM TSTROK+2,(A+O+E+U)/X'100'
00A1F6	4780 C204	0A25E		185	BZ VTRAN
00A1FA	9180 C994	0A8E8		186	TM TSTROK+2,(A+O)/X'100'
00A1FE	4710 C204	0A25E		187	BQ VTRAN
00A202	4144 0001	00001		188	LA 4,1(4)
00A206	95F8 4000	00000		189	CLI 0(4),X'F8'
00A20A	4780 C204	0A25E		190	BE VTRAN
00A20E	95F1 4000	00000		191	CLI 0(4),X'F1'
00A212	4770 C1CC	0A226		192	BNE UTRAN
00A216	9108 C994	0A8EE		193	TM TSTROK+2,U/X'100'
00A21A	4710 C1CC	0A226		194	BQ UTRAN

EQ  
PRE IS LO  
ELSE WRITE FUNCTION

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
J0A21E	9608 C994	0A9EE		195	OI TSTROK+2,U/X*100*
00A222	47F0 C204		0A25E	196	B VTRAN
00A226	9160 C994	0A9EE		197	UTRAN TM TSTROK+2,(A+O)/X*100*
00A22A	4780 C1F4		0A24E	198	BZ AOTRAN
00A22E	95F4 4000	00000		199	CL1 0(4),X*F4*
00A232	4770 C1E4		0A23E	200	BNE ETRAN
00A236	9610 C994	0A9EE		201	OI TSTROK+2,E/X*100*
00A23A	47F0 C204		0A25E	202	B VTRAN
00A23E	95F2 4000	00000		203	CL1 0(4),X*F2*
00A242	4770 C1F4		0A24E	204	BNE AOTRAN
00A246	9618 C994	0A9EE		205	OI TSTROK+2,(E+U)/X*100*
00A24A	47F0 C204		0A25E	206	B VTRAN
00A24E	9660 C994	0A9EE		207	OI TSTROK+2,(A+O)/X*100*
00A252	95F4 4000	00000		208	CL1 0(4),X*F4*
00A256	4780 C204		0A25E	209	B VTRAN
00A25A	9608 C994	0A9EE		210	OI TSTROK+2,U/X*100*
00A25E	9104 C994	0A9EE		211	UTRAN TM TSTROK+2,F/X*100*
00A262	4780 C21C		0A276	212	BZ FTRAN
00A266	4144 0001		00001	213	LA 4,1(4)
00A26A	95F8 4000	00000		214	CL1 0(4),X*F8*
00A26E	4780 C21C		0A276	215	B FTRAN
00A272	9600 C994	0A9EE		216	OI TSTROK+2,B/X*100*
00A276	9108 C994	0A9EF		217	UTRAN TM TSTROK+3,V
00A27A	4780 C234		0A28E	218	BZ TTRAN
00A27E	4144 0001		00001	219	LA 4,1(4)
00A282	95F8 4000	00000		220	CL1 0(4),X*F8*
00A286	4780 C234		0A28E	221	B TTRAN
00A28A	9610 C994	0A9EF		222	OI TSTROK+3,G
00A28E	9104 C994	0A9EF		223	UTRAN TM TSTROK+3,C
00A292	4780 C25C		0A28E	224	BZ CTRAN
00A296	4144 0001		00001	225	LA 4,1(4)
00A29A	95F8 4000	00000		226	CL1 0(4),X*F8*
00A29E	4780 C25C		0A28E	227	BZ CTRAN
00A2A2	94F8 C994	0A9EF		228	NI TSTROK+3,X*FF*-C
00A2A6	9601 C994	0A9EF		229	OI TSTROK+3,2
00A2AA	95F4 4000	00000		230	CL1 0(4),X*F4*
00A2AE	4780 C25C		0A28E	231	B CTRAN
00A2B2	9604 C994	0A9EF		232	OI TSTROK+3,C
00A2B6	9180 C994	0A9EF		233	UTRAN TM TSTROK+3,SC
00A2BA	4780 C27C		0A2D6	234	BZ TRANSIT
00A2BE	92F0 C72F	0A789		235	MVI DONTSTRP+1,X*F0*
00A2C2	0201 C9EC	0A789		236	MVC LASTTWO1,TSTROK+2
00A2C6	47F0 C6AE	0A708		237	B TRNSTRIP
00A2CC	9200 C72F	0A789		238	TRANSTRP MVI DONTSTRP+1,0
00A2D0	0201 C994	0A789		239	MVC TSTROK+2(2),LASTTWO1
00A2D6	5800 C992	0A7EC		240	TRANSIT L 0,TSTROM
00A2DA	5600 CEA2	0AEFC		241	O 0,=A(5C)
				242	CALL STEDIT,1,SPELT1,SPELT2,SPELT3,SPELT4,TRAN+1
00A3C6	5810 CEA6	0AF00		258	S 1,=A(TRAN)
00A30A	4130 C958	0A985		259	LA 3,XLITOB
00A30E	1241			260	LTR 4,1
00A310	4720 C2C4	0A31E		261	BH OKTRAN
00A314	0205 C969	0AF1C		262	MVC TRAN-1(6),=X*065C5C5C5C5C*
00A31A	47F0 C2EA	0A344		263	B OKMTCH
00A31E	58E0 CEA4	0AF04		264	OKTRAN L 14,=V(5PELT5)
00A322	4440 C2E4	0A33E		265	EX 4,TRANR

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A326	925C C96A	0A9C4		266	MVI TRAN,C*#*
00A32A	4144 0002		00002	267	LA 4,2(4)
00A32E	4240 C969	0A9C3		268	STC 4,TRAN-1
00A332	4144 C968	0A9C2		269	LA 4,TRAN-2(4)
00A336	925C 4000	00000		270	MVI 0(4),C*#*
00A33A	47F0 C2EA	0A344		271	B OKMTCH
00A33E	45E0 C2F2	00000		272	TRANTR FR TRAN(0),0(14)
00A344	47F0 C05C	0A34C		273	OKMTCH BAL 14,WRITE
00A348	1B44	0A086		274	B READIN
00A34C	50E0 C844	0A8A4		275	WRITE SR 4,4
00A34E	1855			276	ST 14,SAV14
00A352	4340 3009	00009		277	SR 5,5
00A356	4350 300A	0000A		278	IC 4,DBL1
00A35C	1A45	0000B		279	IC 5,DBL2
00A35E	4144 300B	0000B		280	AR 4,5
00A362	4354 0000	00000		281	LA 4,DBARG(4)
00A366	0650	00000		282	IC 5,0(4)
00A36A	4450 C36C	0A3C6		283	BCTR 5,0
00A36E	0202 C88E	0A8E0		284	EX 5,MOVFUN
00A372	0200 C892	0A8EC		285	MVC OUT10,IN10
00A376	0200 C891	0A8E8		286	MVC OUT11,DBL1
00A37E	95C5 3008	00008		287	MVC OUTENDG,DBENDG
00A382	4780 C350	0A3AA		288	CL1 DBENDG,C*E*
00A386	95FF C832	0A88C		289	BE NOTNEW
00A38A	4740 C350	0A3AA		290	CL1 THENDING,X*FF*
00A38E	1811			291	BE NOTNEW
00A390	4310 C832	0A88C		292	SR 1,1
00A394	41F1 C80A	0A864		293	IC 1,THENDING
00A398	4311 C809	0A863		294	LA 15,8(1)
00A39C	41E5 C893	0A8E0		295	IC 1,8-1(1)
00A3A0	4410 C372	0A3CC		296	LA 14,OUTFUN(5)
00A3A4	1A51			297	EX 1,MOVEN
00A3A6	92F0 C891	0A8EB		298	AR 5,1
00A3AA				299	MVI OUTENDG,X*F0*
00A3AA	4155 0009	00009		300	EQU *
00A3AE	4050 C88A	0A8E4		301	LA 5,OUTFUN-OUTREC(5)
				302	STH 5,OUTREC
				303	PUT OUTPUT,OUTREC
00A3C0	58E0 C84A	0A8A4		304	L 14,SAV14
00A3C4	07FE			305	BR 14
00A3C6	0200 C893	0A8ED		306	MVC OUTFUN(0),1(4)
00A3CC	0200 E000	00000		307	MVC 0(0,14),0(15)
00A3D2	47F0 C3CE	0A428		308	B SKIPLY
00A3D6	4130 C0D2	0AE2C		309	LA 3,LEVEL
00A3DA	4800 3004	00004		310	LH 0,DBLEN
00A3DE	1840			311	LR 4,0
				312	GETMAIN 4,LV=10
00A3E6	0640			313	BCTR 4,0
00A3F8	4440 C3C2	0A41C		314	EX 4,MVLY
00A3EC	1831			315	LR 3,1
00A3EE	0203 3000	0AEF8		316	MVC C8CHAIN,=A(LEVEL)
00A3F4	0503 C98A	0AEF8		317	CLC MATCH,=A(LEVEL)
00A3FA	4770 C3A8	0A402		318	BNE OKMA
00A3FE	5030 C99A	0AA14		319	SR 3,MATCH
00A402	4140 C846	0A8A0		320	LA 4,WELLAD
00A406	5830 C846	0A8A0		321	L 3,WELLAD

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## ST#2 STENO#2 - MATCHING, ENDING, AND TRANSLITERATION PROGRAM

FOI JUN 67 4/14/69

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT
J0A40A	5330	CE9E	0AEF8	328	LOOKLV	CL 3,=A(LEVEL)
J0A40E	4780	C3C8	0A422	329		BE FNDLV
J0A412	1843			330		LR 4,3
J0A414	5830	3000	00000	331		L 3,DBCHAIN
J0A418	47F0	C380	0A40A	332		B LOOKLV
J0A41C	0200	1000	00000	333	MVLV	MVC 0(0,1),LEVEL
J0A422	1834			334	FNDLV	LR 3,4
J0A424	5010	3000	00000	335		ST 1,DBCHAIN
J0A428	9200	C379	0A3D3	336	SKIPLY	MVI PREQUAL+1,X*00'
J0A42C	5860	C83A	0A894	337		L 6,PREWELL
J0A430	5800	C83E	0A898	338		L 0,PREWELL
J0A434	1840			339		LR 4,0
J0A436	5A00	CEAE	0AF08	340		A 0,=(DBENTRY-DBLOCK)
J0A43A	1850			341		LR 5,0
J0A43C	4130	CD02	0AE2C	342		LA 3,LEVEL
J0A440	4440	C59C	0A5F6	343		EX 4,MVDBENT
J0A444	4050	3004	00004	344		STM 5,DBLEN
J0A448	0703	3000	00000	345		XC DBCHAIN,DBCHAIN
J0A44E	1843			346		LR 4,3
J0A450	5830	C84A	0A8A4	347		L 3,LASTIN
J0A454	5040	C84A	0A8A4	348		L 4,LASTIN
J0A458	1233			349		LTR 3,3
J0A45A	4730	C414	0A46E	350		BZ FIRSTIN
J0A45E	5530	CE9E	0AEF8	351		CL 3,=A(LEVEL)
J0A462	4780	C418	0A472	352		BE STOWSW
J0A466	5040	3000	00000	353		ST 4,DBCHAIN
J0A46A	47F0	C418	0A472	354		B STOWSW
J0A46E	5040	C846	0A8A0	355	FIRSTIN	ST 4,WELLAD
J0A472	47F0	C43C	0A496	356	STOWSW	B READICT
J0A476	92F0	C419	0A473	357		MVI STOWSW+1,X*F0'
J0A47A	1834			358		LR 3,4
J0A47C	35C9	3008	00008	359		CLL DBENDG,C'E'
J0A480	4770	C432	0A48C	360		BNE NOTENG2
J0A484	45E0	C2F2	0A34C	361		BAL 14,WRITEP
J0A488	47F0	C43C	0A496	362		B READICT
J0A48C	5040	C98A	0A414	363	NOTENG2	SK 4,MATCH
J0A490	0200	C832	0A888	364		MVC THENING,MTCENDG
J0A496	4700	C4E6	0A542	365	READICT	GB
J0A49A	5810	C842	0A89C	366		USING DICTREC,1
J0A49E	4120	100B	0000B	367		L 1,AREC
J0A4A2	5810	C846	0A8A0	368		LA 2,DICENTRY
J0A4A6	4140	100B	0000B	369		L 1,BREC
J0A4AA	1855			370		LA 4,DICENTRY
J0A4AC	4352	0000	00000	371		SR 5,5
J0A4B0	0500	2000	00000	372		IC 5,0(2)
J0A4B4	4740	C464	0A4BE	373		CLC 0(1,2),0(4)
J0A4B8	4354	0000	00000	374		BL TAKA
J0A4BE	0650			375		IC 5,0(4)
J0A4C0	4450	C82A	0A884	376	TAKA	BCTR 5,0
J0A4C4	4720	C4E8	0A542	377		EX 5,CLCAB1
J0A4C8	4740	C4CA	0A524	378		BH GB
J0A4CC	0500	2000	00000	379		BL GB
J0A4D2	4720	C4E8	0A542	380		CLC 0(1,2),0(4)
J0A4D6	4740	C4CA	0A524	381		BH GB
J0A4DA	0200	C84E	0A8A8	382		BL GB
			00001	383		MVC AL2,1(2)

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## ST#2 STENO#2 - MATCHING, ENDING, AND TRANSLITERATION PROGRAM

FOI JUN 67 4/14/69

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT
J0A4E0	0200	C84F	4001	0A8A9	00001	384 MVC BL2,1(4)
J0A4E6	4352	0000		00000	385	IC 5,0(2)
J0A4EA	4122	5002		00002	386	LA 2,2(2,5)
J0A4EE	4854	0000		00000	387	IC 5,0(4)
J0A4F2	4144	5002		00002	388	LA 4,2(4,5)
J0A4F6	4350	C84F		0A8A9	389	IC 5,8(2)
J0A4FA	0500	C84E	C84F	0A8A9	390	CLC AL2,BL2
J0A500	4720	C4AE		0A508	391	BH TAKB
J0A504	4350	C84E		0A8A8	392	IC 5,AL2
J0A508	0650			393	TAKB	BCTR 5,0
J0A50A	4450	C830		0A88A	394	EX 5,CLCAB
J0A50E	4740	C4CA		0A524	395	BL GA
J0A512	4720	C4E8		0A542	396	BH GB
J0A516	0500	C84E	C84F	0A8A9	397	CLC AL2,BL2
J0A51C	4720	C4E8		0A542	398	BH GB
J0A520	4780	C568		0A5C2	399	BE CHECKDEL
J0A524	5810	C842		0A89C	400	GA L 1,AREC
J0A528	4351	0001		00001	401	IC 5,1(1)
J0A52C	4450	C83A		0A894	402	EX 5,MV0IC
				403		GET ADICT
J0A53A	5010	C842		0A89C	407	ST 1,AREC
J0A53E	47F0	C502		0A55C	408	B PROCDIC
J0A542	5810	C846		0A8A0	409	GB L 1,BREC
J0A546	4351	0001		00001	410	IC 5,1(1)
J0A54A	4450	C83A		0A894	411	EX 5,MV0IC
				412		GET DICT
J0A558	5010	C846		0A8A0	416	ST 1,BREC
J0A55C	4110	C851		0A8A8	417	PROCDIC LA 1,DICHOLO
J0A560				418	MORINP	EQU *
J0A560	0201	C986	1000	0A410	00000	419 MVC HALF,0(1)
J0A566	4820	C986		0A410	420	LH 2,HALF
J0A56A	5820	C8E2		0AF0C	421	S 2,=A(DICENTRY-DICTREC-3)
J0A56E	5020	C83E		0A898	422	ST 2,PREWELL
J0A572	4130	1008		00008	423	LA 3,DICENTRY-3
J0A576	5030	C83A		0A894	424	ST 3,PREWELL
J0A57A	5830	CEAE		0AF08	425	S 3,=(DBENTRY-DBLOCK)
J0A57E	0200	3008	1004	00008	00004	426 MVC DBENDG,DICTENDG
J0A584	1811				427	SR 1,1
J0A586	4310	3009		00009	428	IC 1,DBL1
J0A58A	4141	300A		0000A	429	LA 4,DBARG-1(1)
J0A58E	9580	4000		00000	430	CLL 0(4),X*80'
J0A592	4780	C550		0A5AA	431	BE DOOMSK
J0A596	92FF	3006		00006	432	MVI DOOMSK,X*FF'
J0A59A	4311	300A		0000A	433	IC 1,DBARG-1(1)
J0A59E	4311	C9EE		0A448	434	IC 1,TABLEM(1)
J0A5A2	4210	3007		00007	435	STC 1,DBMSK+1
J0A5A6	47F0	C14E		0A1A8	436	B ENOWELL
J0A5AA	9280	3007		00007	437	DOOMSK MVI DOOMSK+1,X*80'
J0A5AE	4311	3009		00009	438	IC 1,DBARG-2(1)
J0A5B2	4311	C9EE		0A448	439	IC 1,TABLEM(1)
J0A5B6	4210	3006		00006	440	STC 1,DBMSK
J0A5BA	96F8	3006		00006	441	DI DOOMSK,X*F8'
J0A5BE	47F0	C14E		0A1A8	442	B ENOWELL
J0A5C2	5810	C842		0A89C	443	EHECKDEL L 1,AREC
J0A5C6	5510	C846		0A8A0	444	CL 1,BREC
J0A5CA	4780	C5D6		0A630	445	BE ENDT

\*SAME IF POINTING TO HIREC

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
PRINT	00004	00B040	0471	0038 0386 0398
PRIN	00004	00A058	0895	0700
PULLCB	00004	00A208	0175	0157
POTCB	00006	00A0AE	0935	0158 0178
RECN	00004	00A248	0144	0056 0057
RESCAP	00006	00A830	0746	0742
RESCNT	00004	00A4F8	0320	0298 0304
RESERV	00010	00A50E	0324	0292 0321 0322 0325 1091
RESSW	00004	00A4AE	0302	0299 0303
RESTOR	00006	00A4FC	0321	0305
RMAX	00004	00A8EE	0797	0783
RMARG	00004	00A0CC	0942	0191 0420 0450 0788 0792 0806
RMI	00001	000046	0006	0792 0937 0940 0942
SAYPAGE	00004	00A868	0536	0487 0533
SAV1	00004	00A0FC	0958	0287 0308
SAV14	00004	00A0FC	0959	0152 0165
SETMAR	00004	00A02A	0814	0812
SETMARKP	00004	00A660	0409	0449 0816
SHFTCB	00006	00A09C	0932	0254
SHIFTCB	00002	00A304	0242	0233
SINC	00004	00A026	0654	0650
SINGLEEC	00006	00A012	0649	0645
SKCRTN	00004	00A87A	0767	0765
SKIPUNL	00004	00A310	0191	0188
SPACER	00004	00A92C	0584	0571
SPACERP	00004	00A930	0585	0634 0636 0673
SPACES	00010	00A518	0325	0323
SPACING	00001	00A0DC	0946	0411 0752 0758 0775
SPACINGN	00002	00A07A	0916	0407 0753 0760 0776
SPNTAB	00004	00A86A	0763	0759
SPTAB	00004	00A866	0762	0757
SPX	00004	00A96C	0602	0588
SPY	00004	00A972	0604	0890
SRTN	00004	00A83E	0750	0692
STENO#3	00001	00A020	0003	1211
STILCLEN	00004	00A542	0335	0333 0440
STOLST	00006	00A0C0	0558	0549
SWCENT	00001	00A0B9	0920	0339 0342 0436 0499 0519 0527 0861 0863
TABRAG	00001	00A0E0	0704	0705
TABCASE	00001	00B3FB	1116	0220 0236 0239 1087 1117 1118 1120 1122 1124 1126 1128 1130
TABCTL	00004	00A8F0	0569	0185
TABLNK	00001	00B6F9	1184	1093 1186 1188
TABPAR	00001	00A01F	0707	0688 0708 0710 0712 0714 0716 0718 0720 0722 0724 0726 0728 0730 0732 0734
TABTRT	00001	00B5FB	1150	0735 0195 1086 1152 1154 1156 1158 1160 1162 1164 1166 1168 1170 1172 1174 1176
TEND	00004	00A182	0095	0101
TESTC	00004	00A570	0346	0363 0367 0371
TESTIC	00004	00A362	0213	0206
TESTUN	00004	00A438	0270	0262 0265 0268
TESTZ	00004	00A816	0515	0508
TRCASE	00006	00A3CA	0240	0223 0237
TRINV	00006	00A790	0485	0458
TRINV	00006	00A796	0486	0461
TRUNL	00006	00A032	0918	0380
TRAYEND	00004	00A170	0091	0096

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
TRYPN	00004	00A7F4	0507	0514
UNEND	00004	00A0D0	0943	0229 0278
UNLCNT	00004	00A0E4	0911	0272 0274 0840
UNLMOD	00001	00A0B6	0925	0187 0189 0190 0841
UNLOFF	00004	00A5D2	0368	0361
UNLON	00004	00A5C4	0365	0359
UNLONLOC	00004	00A0F0	0914	0366 0372 0394
UNLPRINT	00001	00A091	0928	0365 0370 0389
UNLTAB	00001	00B4FB	1132	0379 1092 1134 1136 1138 1140 1142 1144 1146 1148
UNMOD	00001	00A0B8	0926	0189 0270 0285 0830
UNPKLT	00006	00A8CA	0560	0557
UPCAP	00004	00A376	0218	0212
UPPERLOW	00001	00A0E8	0919	0032 0207 0215 0221
UPPN	00004	00A80E	0513	0516
URTN	00004	00A058	0826	0697
WRN	00002	00A894	0774	0894
XLITER	00004	00A04E	0666	0576
XRTN	00004	00A02E	0883	0701
XRTNSAV	00004	00A054	0894	0888 0892
Y#	00002	00B81E	1202	1192 1192 1201
YESTHIS	00004	00A19E	0102	0094
ZEROIT	00002	00A8DC	0565	0563
ZRTN	00004	00A036	0817	0702

NO STATEMENTS FLAGGED IN THIS ASSEMBLY  
1309 PRINTED LINES

IEF285I SYS1.MACLIB  
IEF285I VOL SER NOS= RESVOL.  
IEF285I STENSLIB  
IEF285I VOL SER NOS= LNKVOL.  
IEF285I SYSUT1  
IEF285I VOL SER NOS= DISK01.  
IEF285I SYSUT2  
IEF285I VOL SER NOS= DISK02.  
IEF285I SYSUT3  
IEF285I VOL SER NOS= DISK03.  
IEF285I SYSOUT  
IEF285I VOL SER NOS= .  
IEF285I STENSLIB  
IEF285I VOL SER NOS= LNKVOL.

KEPT  
KEPT  
KEPT  
KEPT  
KEPT  
SYSOUT  
KEPT

PJS-ID	REL-ID	FLAGS	ADDRESS
01	01	08	00A081
01	01	09	00A085
01	01	0C	00A0DC
01	01	0C	00A0E0
01	01	0C	00A0E8
01	01	0C	00A0EC
01	01	0C	00A0F8
01	01	0C	00A0FC
01	01	0C	00A0F0
01	01	0C	00A0F4
01	01	0C	00A0F8
01	01	08	00B0C1
01	01	0C	00B104
01	01	0C	00B108
01	01	0C	00B10C
01	01	0C	00B110
01	01	0C	00B118
01	01	0C	00B11C
01	01	0C	00B124
01	01	0C	00B130
01	01	0C	00B134
01	01	0C	00B138

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ST#3

CROSS-REFERENCE

PAGE 1

SYMBOL	LEN	VALUE	DEFN	REFERENCES
#	00003	008812	1194	0076 1084 1191 1191 1191 1191 1191 1192 1192 1192 1192 1193
#	00001	008816	1196	1191 1191 1191 1192 1192 1195
#	00002	008818	1198	1191 1197
ACTR	00006	00A9A6	0619	0583 0657 0677 0679 0682 0684 0738
ADD	00004	00A224	0134	0137
BACKER	00002	00A992	0613	0573
BCTLRIN	00004	00A020	0879	0877
BOL	00004	00AED8	0945	0046 0332 0418 0489 0602 0764 0769 0807 0843 0876
BUFCLEAR	00006	00AEA2	0933	0415
BUFENDT	00004	00ADE8	0912	0345
BUFLEND	00004	00AF08	0957	0336 0337 0338 0343 0347 0375 0383 0391 0409 0412 0416 0421 0431 0493 0521
BUFLIST	00004	00AEF8	0856	0526 0529 0811
CAPCNT	00004	00AEEC	0853	0335 0336 0336 0336 0394
CAPER	00004	00A9F6	0641	0263 0267 0633 0646 0651 0746 0869 0869
CAPS	00001	00AEDF	0949	0577
CB	10000	008820	1203	0205 0261 0269 0635 0647 0652 0748 0870
CBACKER	00004	00A986	0523	0048 0232 0232 0246 0256 0937 1082 1089 1089
CENTER	00004	00A708	0450	0341 0447
CHKREC	00004	00A0E8	0357	0138
CHKSHFT	00004	00A3E6	0247	0253
CHYPHER	00004	00A980	0608	0572
CLASS	00030	00B022	0864	0435 0446 0446 0498 0498 0525 0525 0768 0771 0771 0779 0780 0780 0780
CLEANPAG	00001	00AEE8	0322	0334 0429 0448 0532
CLSW	00001	00AEEC	0923	0329 0330 0767
CONTROL	00001	00AEC1	0939	0184 0197
CRTN	00004	00AB66	0764	0693
DELETE	00004	00A2C0	0167	0154
DOACT	00002	00AB0A	0736	0690
DOLINE	00004	00A336	0202	0309
DOLL	00006	00A4A4	0300	0289 0293
DUM	00004	00A37E	0220	0210 0214 0238 0241
DOOZ	00006	00A804	0511	0517
DOPR	00004	00A290	0155	0174 0235
DOUBLE	00008	00A8E8	0508	0560 0561
DOULCAPS	00004	00A38A	0236	0208
DOULIC	00004	00A3C6	0239	0216
DOUNL	00004	00A5E2	0372	0369 0393
DOWORD	00008	00A202	0126	0068 0070 0081 0116
DRTN	00006	00AC4C	0823	0703
DUBP	00004	00A9E8	0637	0632
E#	00002	00B818	1200	1191 1199
ENDER	00004	00A946	0591	0581
ENDER	00001	00AEE0	0938	0209 0300 0604 0610
ENDG	00006	00A148	0082	0064
ENDIT	00004	00A234	0139	0061 0142 1047
ENDMARK	00004	00AEE8	0952	0594
ENDREC	00020	00A26C	0149	0110 0111 0112 0115 0117
EOS	00004	00AE04	0444	0047 0817 0880 0900
EQUER	00004	00AA2C	0656	0580
ERDELET	00002	00A204	0173	0169
ERTN	00004	00A896	0775	0695
EVALCLAS	00004	00A682	0429	0331
EVALUNA	00001	00A410	0258	0186
EXRTN	00006	00AEA8	0934	0196
FFRTN	00004	00AB24	0743	0740

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
FINE	00004	00A100	0063	0059
FIXMAR	00004	00AC20	0811	0808
FORMAT	00001	00ABDE	0948	0741 0745 0867
FRTN	00006	00AB12	0739	0691
FUNCT	00004	000000	1206	0082 0126
FUNCTION	00004	0080A0	1028	0040 0051
FUNENOG	00001	000007	1208	0063 0112 0131
FUNFUN	00003	000009	1210	0090 0109 0111 0117 0128 0129 0145 1085
FUNID	00003	000006	1207	0056 0060
FUNL1	00001	000008	1209	0133
FUNREC	00001	000000	1205	0055 0109 0111 0111 0112 0117 0128 0145 1085
GETN	00002	00A86C	0537	0643 0751 0785 0799 0827 0852 0873 0884 0896
GETNXT	00004	00A006	0051	0058 0085 0121
HALF	00002	00A244	0143	0082 0083 0126 0127
HED1	00004	00ACDC	0861	0857
HED2	00004	00ACE4	0863	0858
HED3	00004	00ACEE	0866	0859 0862
HED4	00002	00AD04	0871	0860 0868
HO	00001	00A281	0151	0088 0114 0120
HULDENUG	00001	00A280	0150	0065 0067 0069 0071 0073 0084 0093 0131
HRTN	00004	00AC96	0843	0698
HYPPER	00004	00A9A2	0618	0574 0668
INITSP	00001	000040	0008	0752 0775 0946
INITSPN	00001	000001	0009	0753 0776
INVERT	00132	00AF18	0961	0459 0462 0481 0483 0484 0485 0486 1094
INVNDS	00001	00AF9C	0962	0456 0962
ISCLEAN	00004	00A6E2	0441	0430
LASTCLAS	00004	00AD7C	0904	0441 0526
LASTOUTC	00004	00A0EC	0913	0351 0358 0360 0362 0366 0368
LASTWD	00004	00A4F4	0319	0045 0288 0291 0295 0307 0419 0606 0611 0770
LASTZ	00004	00AF14	0360	0164 0167 0243 0245 0819 0821 0821
LIMCB	00004	00AE8C	0937	0156 0175 0234
LIMLIN	00004	00AEC4	0940	0203 0422 0772
LINE	00001	00A522	0326	0301 0491 0500 0520 0524 0528 0593 0743 0766 0809 0845 0878
LINECAP	00001	00AE8D	0924	0866
LINECNT	00004	00AE94	0930	0406 0408 0426 0437 0439 0488 0488 0492 0492 0847
LINESPPG	00004	00AE98	0931	0426 0846
LINSAY	00004	00A08C	0405	0328 0424 0814
LIN1	00132	008163	1110	0940 0956
LIN2	00132	0081E8	1111	0956
LIN3	00132	00826D	1112	0956
LIN4	00132	0082F2	1113	0956
LIN5	00132	008377	1114	0044 0457 1081
LMARG	00004	00AEC8	0941	0192 0417 0436 0445 0451 0793 0795 0803
LMI	00001	000005	0007	0044 0793 0937 0941 1081
LMNGK	00004	00A08A	0792	0787 0801 0805
LOOPEND	00004	00A94E	0593	0595
LOOPGETN	00004	00AD76	0540	0552
LOOPRTN	00004	00AD1C	0878	0879
LOOPRRTN	00004	00AD64	0898	0899
LOOPUPD	00006	00A752	0471	0478 0480
LOOPXRTN	00004	00AD46	0890	0891
LRTN	00004	00AD06	0872	0699
LSAV	00004	00AD84	0906	0327 0423 0815
MINHEDL	00001	000006	0005	0848 1098
MINIM	00001	0003E8	0010	0231 1088

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
MINLEN	00001	00001E	0004	0790 0804 1097
MISSFUN	00020	00A255	0147	0145
MISSREC	00002	00A24C	0145	0062
MOCOM	00004	00A1F4	0122	0119 0125
MOUEIC	00001	00AEEO	0950	0213 0225 0654 0818 0864 0881 0901
MOGETN	00004	00A8A4	0551	0541 0543
MRTN	00006	00A8B4	0782	0696
MVCINV	00006	00A78A	0484	0457
MVCLIN	00006	00AEB4	0936	0224
MVCRES	00006	00A502	0322	0296
MVCSPS	00006	00A508	0323	0297
MVCJNL	00006	00AETC	0917	0378
MVEF	00006	00A10C	0117	0107
MVIN	00006	00A784	0483	0469
MVINBLNK	00006	00A77E	0482	0467
MVOUT	00006	00A778	0481	0464
NEXTCOM	00004	00ALE2	0118	0097 0102 0104
NOCTL	00004	00A606	0383	0348 0350
NOMOD	00004	00A2E6	0179	0177
NONELINE	00002	00A3A4	0230	0200 0257
NONENL	00006	00A782	0492	0490
NONPAM	00002	00ADAC	0083	0029 0031
NOSEP	00004	00A940	0589	0586
NOTHIS	00004	00A18A	0097	0092
NOTUWORD	00001	00AE90	0927	0198
NOUNLP	00004	00A630	0395	0390
NOVERP	00001	00A654	0405	0396
NULL	00001	008804	1191	0074 1083
NUMER	00004	00A43A	0660	0578
NUMS	00002	00A8E0	0567	0539 0548 0550 0553 0555 0555 0556 0558 0560
OCTL	00004	00A4CE	0310	0497 0501
OCTL	00001	00AEDD	0947	0312 0496
OKLN	00004	00A8E6	0795	0791
OKMAR	00004	00AC12	0807	0794 0796
OKOTAB	00004	00AC88	0839	0832 0837
OKRES	00004	00A4C2	0307	0302
OKSHFI	00004	00A402	0254	0248
OKXRTN	00004	00AD4C	0888	0886
OUTAB	00004	00AD84	0907	0283 0316 0356 0479 0838 0909 0910
OUTABLOC	00004	00ADDC	0909	0277 0284 0310 0317 0425 0831 0839
OUTAN	00004	00A822	0518	0510
OUTCLOC	00004	00ACE0	0910	0346 0357
OUTGETN	00004	00A8AC	0553	0545 0547
QV	00006	00A1EA	0120	0099
OVEREND	00004	00AEE4	0951	0087 0098 0113 0118
OVERLIN	00004	00A474	0287	0204
OVERP	00001	00AE92	0929	0381 0395 0402
OVERPL	00133	00ADFA	0915	0376 0399 0403 0404 0404
PAGE	00004	00A79C	0487	0427 0591 0777 0850 0898
PAGENO	00002	00AEF4	0955	0503 0504 0778 0778
PAGENDU	00003	00A6F0	0954	0504 0505 0505 0506
PAGESW	00001	00AE8A	0921	0534
PARENER	00004	00A46E	0675	0579
PERSER	00004	00A4CC	0630	0582 0639
PR	00004	00A282	0152	0080 0130 0141
PREVQBK	00004	00AD78	0903	0425 0470

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00AC9A	4780	0062		0ACAZ	844 BE **8
00AC9E	4580	04E2		0AS22	845 BAL 11,LINE
00ACA2	5810	0E58		0AE98	846 L 1,LINESPPG
00ACAS	5810	0E54		0AE94	847 S 1,LINECNT
00ACAA	5910	0109		0B148	848 C 1,=ATMINHEOLJ
00ACAE	4720	0C76		0ACB6	849 BM **8
00ACB2	4580	075C		0AT9C	850 BAL 11,PAGE
00ACB6	4110	0004		00004	851 LA 1,4
00ACBA	4580	082C		0A86C	852 BAL 11,GETN
00ACBE	4810	0113		0B132	853 SH 1,=H*1*
00ACC2	074E			854 BCR 4,14	
00ACC4	8910	0002		00002	855 SLL 1,2
00ACCG	47F1	0C8C		0ACGC	856 B **4(1)
00ACCC	47F0	0C9C		0ACDC	857 B HED1
00ACD0	47F0	0CA4		0ACE4	858 B HED2
00ACD4	47F0	0CAE		0ACEE	859 B HED3
00ACD8	47F0	0CC4		0AD04	860 B HED4
00ACDC	92FF	0E49	0AE89	361 HED1	MVI SWCENT,K'FF'
00ALE0	47F0	0CAE	0ACEE	862 B HED3	
00ACE4	92FF	0E49	0AE89	363 HED2	MVI SWCENT,K'FF'
00ACE8	9200	0E40	0AEEO	864 MVI MODEIC,0	
00ACEC	07FE			865 BR 14	
00ACEE	92FF	0E40	0AE8D	366 HED3	MVI LINECAP,X'FF'
00ACF2	91FF	0E3E	0AE0B	367 TM	FORMAT,X'FF'
00ACF6	47E0	0CC4	0AD04	368 BND	HED4
00ACFA	0703	0EAC	0AEEC	369 XC	CAPCNT,CAPCNT
00AD00	92FF	0E9F	0AEUF	870 MVI CAPS,X'FF'	
00AD04	07FE			871 HED4	BR 14
00AD06	4110	0032	00032	872 LRIN	LA 1,50
00AD0A	4580	082C	0A86C	873 BAL	11,GETN
00AD0E	4111	0001	00001	874 LA	1,1(1)
00AD12	18A1			875 LR	10,1
00AD14	5580	0E98	0AED8	876 CL	8,BOL
00AD18	4780	0CE0	0AD20	877 BE	BCTLRIN
00AD1C	4580	04E2	0A522	878 LOOPLRIN	BAL 11,LINE
00AD20	46A0	0C0C	0AD1C	879 BCTLRIN	BCT 10,LOOPLRIN
00AD24	5080	0E34	0AED4	880 ST	8,EOS
00AD28	92FF	0EAD	0AEEO	881 MVI	MODEIC,X'FF'
00AD2C	07FE			882 BR	14
00AD2E	4110	0064	00064	883 XRTN	LA 1,100
00AD32	4580	082C	0A86C	884 BAL	11,GETN
00AD36	1211			885 LTR	1,1
00AD38	4770	0000	0AD40	886 BNZ	OKXRTN
00AD3C	4110	0001	00001	887 LA	1,1
00AD40	50E0	0014	0AD54	888 OKXRTN	ST 14,XRTNSAV
00AD44	18A1			889 LR	10,1
00AD48	45E0	0432	0A972	890 LOOPXRTN	BAL 14,SPY
00AD4A	46A0	0006	0AD46	891 BCT	10,LOOPXRTN
00AD4E	58E0	0014	0AD54	892 L	14,XRTNSAV
00AD52	07FE			893 BR	14
00AD54	00000000			894 XRTNSAV	DC F*0*
00AD58	4110	0003	00003	895 PRIN	LA 1,3
00AD5C	4580	082C	0A86C	896 BAL	11,GETN
00AD60	1411	0001	00001	897 LA	10,1(1)
00AD64	4580	075C	0A79C	898 LOOPPRIN	BAL 11,PAGE
00AD68	46A0	0024	0AD64	899 BCT	10,LOOPPRIN

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00AD6C	5080	0E94	0AED4	900	ST 8,EUS
00AD70	92FF	0EAD	0AEEO	901	MVI MODEIC,X'FF'
00AD74	07FE			902	BR 14
00AD76	0000				
00AD78	00000000			903	PREVOBK DC F*0*
00AD7C	00000000			904	LASTCLAS DC F*0*
00AD80	00000000			905	LINSAY DC F*0*
00AD84				906	LSAV DS F
00AD88	0000000000000000			907	OUTAB DC 20A(0)
00AD8C	FFFFFFFF			908	DC X'FFFFFFFF'
00AD90	0000A088			909	OUTABLOC DC A(OUTAB)
00AD94	0000A088			910	OUTCLOC DC A(OUTAB)
00AD98	00000000			911	UNLCNT DC F*0*
00ADA0	00000000			912	BUFENDT DC F*0*
00ADA4	00000000			913	LASTOUTC DC F*0*
00ADA8	00000000			914	UNLONLOC DC F*0*
00ADAC	00000000			915	OVERPL DC CL133'*
00ADAF	4E40404040404040				
00AD79	00				
00AE7A	0001			916	SPACINGN DC H*1*
00AE7C	0200	E000	1000	00000	00000
00AE7E	0000	E000	2000	00000	00000
00AE80	FF			917	MVCUNL TRC 0(0,14),0(1)
00AE82	00			918	TRUNL TRC 0(0,14),0(12)
00AE84	00			919	UPPERLW DC X'FF'
00AE86	00			920	SWCENT DC X*0*
00AE88	00			921	PAGESW DC X*0*
00AE8A	00			922	CLEANPAG DC X*0*
00AE8C	00			923	GLSW DC X*0*
00AE8E	00			924	LINECAP DC X*0*
00AE90	00			925	UNLMOO DC X*0*
00AE92	00			926	UNMOO DC X*0*
00AE94	00			927	NOTUWORD DC X*0*
00AE96	00			928	UNLPRINT DC X*0*
00AE98	00			929	OVERP DC X*0*
00AE9A	00				
00AE9C	00000000			930	LINECNT DC F*0*
00AE9E	00000032			931	LINESPPG DC F*50*
00A99C	0200	F000	0000	00000	00000
00A9A2	0200	F001	0000	00001	00000
00A9A8	0000	8000	0000	00000	00000
00A9AE	0200	7000	0000	00000	00000
00A9B4	0200	8000	0000	00000	00000
00A9B8	0000			932	SHFTCB MVC 0(0,15),0(9)
00A9BC	0000B857			933	BUFCLEAR MVC 1(0,15),0(15)
00A9C0	40			934	EXTRT TRT 0(0,9),0(11)
00A9C4	00			935	PUTCB MVC 0(0,7),0(6)
00A9C8	00			936	MVCLIN MVC 0(0,8),0(9)
00A9CC	0000				
00A9D0	0000B857			937	LIMCB DC A(CB+RM-LMI-10)
00A9D4	40			938	ENDER DC C*
00A9D8	00			939	CONTROL DC X*0*
00A9DC	0000				
00A9E0	0000B1A9			940	LIMLIN DC A(LINI+RMI)
00A9E4	00000005			941	LMARG DC A(LMI)
00A9E8	00000046			942	RMARG DC A(RMI)
00A9EC	00000000			943	UNEND DS F
00A9F0	00000000			944	EOS DC F*0*
00A9F4	00000000			945	BOL DC F*0*
00A9F8	40			946	SPACING DC ALL(INITSP)
00A9FC	00			947	CTLC DC X*0*
00A9FF	00			948	FORMAT DC X*0*
00A9A0	00			949	CAPS DC X*0*
00A9A4	00			950	MODEIC DC X*0*

FOR U/L CASE (0=UPPER CASE)

UNDERLINE MODE  
SWITCH FOR INDICATING NO COUT DECR.

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	FO1JUN67	4/14/69
00AEE4				951	OVEREND JS F		
00AEE8	00000000			952	ENDMARK DC F'D*		
00AEEC	00000000			953	CAPCNT DC F'O*		
00AEF0	FOFJ+OFF			954	PAGENDU DC CL3*000*,X*FF*		
00AEF4	000C			955	PAGENO DC PL2*000*		
00AEF6	0000						
00AEF8	0000B1630000B1E8			956	BUFLIST DC A(LIN1,LIN2,LIN3,LIN4)		
00AF08	0000B377			957	BUFLEND DC A(LIN5)		
00AF0C				958	SAV1 OS F		
00AF10	00000000			959	SAV14 DC F'O*		
00AF14	00000000			960	LASTZ DC F'O*		
00AF18	0000000000000000			961	INVERT DC XL132*O*		
00AF9C	838281807F7E7D7C			962	INVNOS DC 132AL1(INVNOS+131-*)		
00B020	0000			963	DC X'0000*		
00B022	4040404040404040			964	CLASS DC CL30* *		
				965	PRINT DCB DSORG=PS,MACRF=PM,RECFM=FA,LRECL=133,BLKSIZE=133, X		
					DONAME=PRINT		
				966	*,*** IH063 DONAME SHORT-PADDED TO 8 CHAR		
				1022	FUNCTION DCB DSORG=PS,DONAME=FUNTAPE,MACRF=GL,LRECL=200,BLKSIZE=3600, X		
					RECFM=VB,EODAD=ENDIT		
					*,*** IH063 DONAME SHORT-PADDED TO 8 CHAR		
00B100				1079	LTORG		
00B100	00000001			1080	=F'1'		
00B104	0000B37C			1081	=A(LIN5+LMI)		
00B108	0000B420			1082	=A(CB)		
00B10C	0000B804			1083	=A(NULL)		
00B110	0000B811			1084	=A(8-1)		
00B114	0000000A			1085	=A(FUNFUN-FUNREC+1)		
00B118	0000B5F8			1086	=A(TABTRT)		
00B11C	0000B3F8			1087	=A(TABCASE)		
00B120	000003E8			1088	=A(MINIM)		
00B124	000003F2E			1089	=A(CB+L'CB-2)		
00B128	00000100			1090	=F'256'		
00B12C	0000000A			1091	=A(L'RESERV)		
00B130	0000B4F8			1092	=A(UNLTAB)		
00B134	0000B5F8			1093	=A(TABLNK)		
00B138	0000AF18			1094	=A(INVERT)		
00B13C	00000000			1095	=XL4*O*		
00B140	00000000			1096	=F'O*		
00B144	0000001E			1097	=A(MINLEN)		
00B148	00000006			1098	=A(MINMED)		
00B14C	0003			1099	=H'3'		
00B14E	0000			1100	=X'0000*		
00B150	6C6C			1101	=C'88'		
00B152	0C01			1102	=H'1'		
00B154	FF			1103	=X'FF'		
00B155	4DC45D			1104	=C'(D)'		
00B158	4DE95D			1105	=C'(Z)'		
00B15B	1C			1106	=P'1'		
00B15C	4DC45D			1107	=C'(F)'		
00B15F	4DD45D			1108	=C'(H)'		
00B162	40			1109	C' *		
00B163	4040404040404040			1110	LIN1 DC CL132* *,C' *		
00B1E8	4040404040404040			1111	LIN2 DC CL132* *,C' *		
00B260	4040404040404040			1112	LIN3 DC CL132* *,C' *		
00B2F2	4040404040404040			1113	LIN4 DC CL132* *,C' *		

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	FO1JUN67	4/14/69
00B377	4040404040404040			1114	LIN5 DC CL132* *		
				1115	TABCASE \$TABLE (A,X'818283848586878889',J,X'919293949596979899', X		
					S,X'AZA3A4A5A6A7A8A9',X'81',C'ABCDEFGHI', X		
					X'91',C'JKLMNOPQR',X'A2',C'STUVWXYZ'),T=2		
				1131	UNLTAB \$TABLE (A,_____,J,_____,S,_____,O,_____, X		
					X'81',_____,X'91',_____,X'A2',_____,),ARG=C, X		
					FUN=C,B=X'40'		
				1149	TABTRT \$TABLE (C' *,4,8,12,16,20,24,28,32,36,C'1',4X		
					0,44,X'FF',48,52,X'7F',56)		
				1183	TABLNK \$TABLE (C' *,0,B=X'FF'		
00B7F8	00			1189	DC F'O*		
00B7FC	00000000			1190	DC F'O*		
00B800	00000000			1191	DC F'O*,AL1(88-8),AL1(88-8),AL1(88-8),AL1(88-8),AL1(88-8)		
00B804	0004060404040404			1192	DC AL1(88-8),AL1(Y8-8),AL1(Y8-8),AL1(88-8),X'000000'		
00B80A	040C0C04000000			1193	DC AL1(L'8-1)		
00B811	02			1194	DC C'8888'		
00B812	5C5C78			1195	DC AL1(L'88-1)		
00B815	00			1196	DC C'8'		
00B816	78			1197	DC AL1(L'28-1)		
00B817	01			1198	DC C'88'		
00B818	5F78			1199	DC AL1(L'E8-1)		
00B81A	01			1200	DC C'E8'		
00B81B	C578			1201	DC AL1(L'Y8-1)		
00B81D	01			1202	DC C'Y8'		
00B81E	E878			1203	DC CL10000		
00B820				1204	DC X'O*		
00DF30	00			1205	FUNREC DSECT		
000000				1206	FUNCNT DC F'O*		
000000	00000000			1207	FUNID DC CL3* *		
000004	404040			1208	FUNENDC DC *		
000007	40			1209	FUNLI DC C' *		
000008	40			1210	FUNFUN DC CL3* *		
000009	404040			1211	END STENO#3		
00A020							

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LOC OBJECT CODE ADDR1 ADDR2 STMT SOURCE STATEMENT

FOI JUN 67 4/14/69

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00A940 4199 0001 00001 549 NBSF LA 9,1(9)
00A944 07FE 590 BR 14
00A946 4580 D75C 0A79C 591 ENDOR BAL 11,PAGE
00A94A 5080 DEAB 0AEEB 592 ST 8,ENDMARK
00A94E 4580 DAE2 0A522 593 LOUPEND BAL 11,LINE
00A952 5580 DEAB 0AEEB 594 CL 8,ENDMARK
00A956 4770 C90E 0A94E 595 BNE LOUPEND
596 $RETURN SAME
00A960 5580 DE98 0AEDB 602 SPX CL 8,BCL
00A970 07FE 603 BCR 8,14
00A972 9240 DE80 0AEC0 604 SPY MVI ENDOR,C' '
00A976 4188 0001 00001 605 LA 8,1(8)
00A97A 5080 D4B4 0A4F4 606 ST 8,LASTWD
00A97E 07FE 607 BR 14
00A980 4199 0001 00001 608 CHYPHER LA 9,1(9)
00A984 92FF DE50 0AE90 609 MVI NOTUMWORD,X'FF'
00A988 9260 DE80 0AEC0 610 MVI ENDOR,C'-'
00A98C 5080 D4B4 0A4F4 611 ST 8,LASTWD
00A990 07FE 612 BR 14
00A992 0680 0AE90 613 BACKER BCTR 8,0
00A994 92FF DE50 614 MVI NOTUMWORD,X'FF'
00A998 4199 0001 00001 615 LA 9,1(9)
00A99C 9240 8000 00000 616 MVI 0(8),C' '
00A9A0 07FE 617 BR 14
00A9A2 9260 9000 00000 618 HYPHER MVI 0(9),C'-'
00A9A6 0200 8000 90000 619 ACTER MVI 0(1,8),0(9)
00A9AC 4188 0001 00001 620 LA 8,1(8)
00A9B0 4199 0001 00001 621 LA 9,1(9)
00A9B4 07FE 622 BR 14
00A9B6 4199 0001 00001 623 CBACKER LA 9,1(9)
00A9BA 92FF DE50 0AE90 624 MVI NOTUMWORD,X'FF'
00A9BE 0680 625 BCTR 8,0
00A9C0 9540 8000 00000 626 CLI 0(8),C' '
00A9C4 078E 627 BCR 8,14
00A9C6 4188 0001 00001 628 LA 8,1(8)
00A9CA 07FE 629 BR 14
00A9CC 4199 0001 00001 630 PERSEK LA 9,1(9)
00A9D0 956C 9000 00000 631 CLI 0(9),C'X'
00A9D4 4780 D9AB 0A9EB 632 BE DUBP
00A9D8 9180 DEAC 0AEEC 633 TM CAPCNT,X'80'
00A9DC 47E0 D8F0 0A930 634 BND SPACERP
00A9E0 9200 DE9F 0AEDF 635 MVI CAPS,0
00A9E4 47F0 D8F0 0A930 636 B SPACERP
00A9E8 4199 0001 00001 637 DUBP LA 9,1(9)
00A9EC 956C 9000 00000 638 CLI 0(9),C'X'
00A9F0 4780 D98C 0A9CC 639 BE PERSEK
00A9F4 07FE 640 BR 14
00A9F6 4199 0001 00001 641 GAPER LA 9,1(9)
00A9FA 4110 D063 00063 642 LA 1,99
00A9FE 4580 D82C 0A86C 643 BAL 11,GETN
00AA02 1211 644 LTR 1,1
00AA04 4780 D9D2 0AA12 645 BZ SINGLEC
00AA08 5010 DEAC 0AEEC 646 ST 1,CAPCNT
00AA0C 92FF DE9F 0AEDF 647 MVI CAPS,X'FF'
00AA10 07FE 648 BR 14
00AA12 0501 9000 C111 00000 0B150 649 SINGLEC CLC 0(2,9),=C'??'

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LOC OBJECT CODE ADDR1 ADDR2 STMT SOURCE STATEMENT

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00AA18 4770 D9E6 0AA26 650 BNE SINC
00AA1C 9280 DEAC 0AEEC 651 MVI CAPCNT,X'80'
00AA20 92FF DE9F 0AEDF 652 MVI CAPS,X'FF'
00AA24 07FE 653 BR 14
00AA26 92FF DEAO 0AEE0 654 SINC MVI MODEIC,X'FF'
00AA2A 07FE 655 BR 14
00AA2C 9548 9001 00001 656 EQUER CLI 1(9),C'-'
00AA30 4770 D966 0A9A6 657 BNE ACTER
00AA34 4199 0002 00002 658 LA 9,2(9)
00AA38 07FE 659 BR 14
00AA3A 9278 9000 00000 660 NUMER MVI 0(9),C'8'
00AA3E 954C 8001 00001 661 CLI 1(9),C'<'
00AA42 07FE 662 BCR 7,14
00AA44 92FF DE50 0AE90 663 MVI NOTUMWORD,X'FF'
00AA48 4199 0002 00002 664 LA 9,2(9)
00AA4C 07FE 665 BR 14
00AA4E 4199 0001 00001 666 XLITER LA 9,1(9)
00AA52 955C 9000 00000 667 CLI 0(9),C'+'
00AA56 4780 D962 0A9A2 668 BE HYPHER
00AA5A 925C 8000 00000 669 MVI 0(8),C'+'
00AA5E 0680 670 BCTR 8,0
00AA60 9540 8000 00000 671 CLI 0(8),C' '
00AA64 4188 0002 00002 672 LA 8,2(8)
00AA68 4770 D8F0 0A930 673 BNE SPACERP
00AA6C 07FE 674 BR 14
00AA6E 4199 0001 00001 675 RARENER LA 9,1(9)
00AA72 9540 9000 00000 676 CLI 0(9),C'('
00AA76 4780 D966 0A9A6 677 BE ACTER
00AA7A 9550 9001 00001 678 CLI 1(9),C'')
00AA7E 4770 D966 0A9A6 679 BNE ACTER
00AA82 9240 9001 00001 680 MVI 1(9),C' '
00AA86 95C1 9000 00000 681 CLI 0(9),C'A'
00AA8A 4740 D966 0A9A6 682 BL ACTER
00AA8E 95E9 9000 00000 683 CLI 0(9),C'Z'
00AA92 4720 D966 0A9A6 684 BH ACTER
00AA96 18FF 685 SR 15,15
00AA98 43F9 0000 00000 686 IC 15,0(9)
00AA9C 4199 0002 00002 687 LA 9,2(9)
00AAA0 43FF D9DF 0AA1F 688 IC 15,TABPAR(15)
00AAA4 47FF DAE8 0AAA3 689 B **4(15)
00AAAB 47F0 DACA 0AB0A 690 B DOACT
00AAAC 47F0 DAD2 0AB12 691 B FRTN
00AAAD 47F0 DAFE 0AB3E 692 B SRTN
00AAAE 47F0 D82E 0AB6E 693 B CRTN
00AAAB 47F0 D854 0AB94 694 B WRTN
00AAAC 47F0 D856 0AB96 695 B ERTN
00AAAD 47F0 D874 0AB84 696 B MRTN
00AAAE 47F0 DC18 0AC58 697 B URTN
00AAAB 47F0 DC56 0AC96 698 B MRTN
00AAAC 47F0 DCC6 0AD06 699 B LRTN
00AAAD 47F0 DD18 0AD58 700 B PRTN
00AAAE 47F0 DCEE 0AD2E 701 B XRTN
00AAAB 47F0 D8F6 0AC36 702 B ZRTN
00AAAC 47F0 DC3C 0AC4C 703 B DRTN
00AAAE 0000000000000000 704 TABBKG JC (C'Z'-C'A'+1)AL1(0)
00AAAF 705 TABBKG ORG TABBKG-C'A'

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LUC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	FOI JUN67	4/14/69
				706	TABPAR STABLE (F=4,S=8,C=12,M=16,E=20,M=24,U=28,H=32,L=36,P=40,X=44,ZX		
				735	URG ,48,D,52),T=0 TABPAR+C*Z*+1		
J0A809							
J0A809 00							
J0A80A 0690				736	DOACT BCTR 9,0		
J0A80C 0690				737	BCTR 9,0		
J0A80E 47F0 D966			0A9A6	738	B ACTER		
J0A812 0502 9000 C11D 0000J			0815C	739	FRTN CLC 0(3,9),=C*(F)*		
J0A818 4780 0A64			0A824	740	BE FFRTN		
J0A81C 92FF 0E9E		0A8DE		741	MVI FORMAT,X'FF'		
J0A820 47F0 0AF0			0A830	742	B RESCAP		
J0A824 4580 04E2			0A522	743	FFRIN BAL 11,LINE		
J0A828 4199 0003			00003	744	LA 9,3(9)		
J0A82C 9200 0E9E		0A8DE		745	MVI FORMAT,0		
J0A830 0503 0EAC C101 0AEEC			08140	746	RESCAP CLC CAPCNT,=F*0'		
J0A836 077E				747	BCR 7,14		
J0A838 9200 0E9F		0A8DF		748	MVI CAPS,0		
J0A83C 07FE				749	BR 14		
J0A83E 4110 0003			00003	750	SRTN LA 1,3		
J0A842 4580 082C			0A86C	751	BAL 11,GETN		
J0A846 9240 0E9C		0A8DC		752	MVI SPACING,INITSP		
J0A84A 9201 0E38		0A878		753	MVI SPACINGN+1,INITSPN		
J0A84E 1211				754	LTR 1,1		
J0A850 078E				755	BCR 8,14		
J0A852 1881				756	LR 11,1		
J0A854 4311 0826			0A866	757	IC 1,SPTAB(1)		
J0A858 4210 0E9C		0A8DC		758	STC 1,SPACING		
J0A85C 4318 082A			0A86A	759	IC 1,SPTAB(1)		
J0A860 4210 0E38			0A878	760	STC 1,SPACINGN+1		
J0A864 07FE				761	BR 14		
J0A866 4040F060				762	SPTAB DC C' 0-		
J0A86A 01010203				763	SPNTAB DC X'01010203'		
J0A86E 5580 0E98		0A8D8		764	CRN CL 8,BOL		
J0A872 4780 083A			0A87A	765	BE SKCRTN		
J0A876 4580 04E2			0A522	766	BAL 11,LINE		
J0A87A 92FF 0E9C		0A8DC		767	SKCRTN MVI CLSW,X'FF'		
J0A87E 4180 0FE2			0B022	768	LA 8,CLASS		
J0A882 5080 0E98			0A8D8	769	ST 8,BOL		
J0A886 5080 048A			0A8F4	770	ST 8,LASTWD		
J0A88A 41F0 0FFE			0B03E	771	LA 15,CLASS+L*CLASS-2		
J0A88E 50F0 0E84		0A8C4		772	ST 15,LIMLIN		
J0A892 07FE				773	BR 14		
J0A894 07FE				774	MRTN BR 14		
J0A896 9240 0E9C		0A8DC		775	ERTN MVI SPACING,INITSP		
J0A89A 9201 0E38		0A878		776	MVI SPACINGN+1,INITSPN		
J0A89E 4580 075C			0A79C	777	BAL 11,PAGE		
J0A8A2 F811 0E84		0A8F4		778	SP PAGENO,PAGENO		
J0A8AB 9240 0FE2			0B022	779	MVI CLASS,X'40'		
J0A8AC 021C 0FE3		0FE2	0B023	780	MVC CLASS+14L*CLASS-1,CLASS		
J0A8B2 07FE				781	BR 14		
J0A8B4 0502 9000 C120 00000			0815F	782	MRTN CLC 0(3,9),=C*(N)*		
J0A8B8 4780 08AB			0A8EE	783	BE RMAR		
J0A8BE 4110 0032			00032	784	LA 1,50		
J0A8C2 4580 082C			0A86C	785	BAL 11,GETN		
J0A8C6 1211				786	LTR 1,1		
J0A8C8 4780 089A			0A8DA	787	BZ LMNOK		

LCC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	FOI JUN67	4/14/69
J0A8CC 58F0 0E8C		0A8CC		789	L 15,RMARG		
J0A8D0 18F1				789	SR 15,1		
J0A8D2 55F0 C105			08144	790	CL 15,=A(LIMLIN)		
J0A8D6 4780 08A6			0A8E6	791	BNL OKLM		
J0A8DA 9240 0E8F		0A8CF		792	LMNOK MVI RMARG+3,AMI		
J0A8DE 9205 0E88		0A8C8		793	MVI LMARG+3,LMI		
J0A8E2 47F0 0802			0AC12	794	B OKMAR		
J0A8E6 5010 0E88			0A8C8	795	OKLM ST 1,LMARG		
J0A8EA 47F0 0802			0AC12	796	B OKMAR		
J0A8EE 4110 0078			00078	797	RMAR LA 1,120		
J0A8F2 4199 0003			00003	798	LA 9,3(9)		
J0A8F6 4580 082C			0A86C	799	BAL 11,GETN		
J0A8FA 1211				800	LTR 1,1		
J0A8FC 4780 089A			0A8DA	801	BZ LMNOK		
J0A8D0 18F1				802	LA 15,1		
J0A8D2 58F0 0E88		0A8C8		803	S 15,LMARG		
J0A8D6 55F0 C105			08144	804	CL 15,=A(LIMLIN)		
J0A8DA 4740 089A			0A8DA	805	BL LMNOK		
J0A8DE 5010 0E8C		0A8CC		806	ST 1,RMARG		
J0A8E2 5580 0E98			0A8D8	807	OKMAR CL 8,BOL		
J0A8E6 4780 0802			0AC20	808	BE FIXMAR		
J0A8EA 4580 04E2			0A522	809	BAL 11,LINE		
J0A8EE 07FE				810	BR 14		
J0A8F2 5880 0E88		0AF08		811	FIXMAR L 8,BUFLND		
J0A8F6 4580 08FA			0AC24	812	BAL 11,SETMAR		
J0A8FA 07FE				813	BR 14		
J0A8FC 50E0 0D40			0AD80	814	SETMAR ST 14,LINSAV		
J0A8FE 5080 0D44			0AD84	815	ST 11,LSAV		
J0A902 47F0 0620			0A860	816	B SETMAR		
J0A906 5080 0E94			0A8D4	817	ZRTN SF 8,EDS		
J0A90A 92FF 0E40		0A8E0		818	MVI MODEIC,X'FF'		
J0A90E 5990 0ED4			0AF14	819	C 9,LASTZ		
J0A912 074E				820	BCR 4,14		
J0A916 0703 0ED4		0ED4	0AF14	821	XC LASTZ,LASTZ		
J0A91A 07FE				822	BR 14		
J0A91C 0202 8000 C116 00000			08155	823	DRTN MYC 0(3,9),=C*(D)*		
J0A91E 4188 0003			00003	824	LA 8,3(8)		
J0A922 07FE				825	BR 14		
J0A926 4110 0068			00063	826	MRTN LA 1,99		
J0A92A 4580 082C			0A86C	827	BAL 11,GETN		
J0A92E 1211				828	LTR 1,1		
J0A932 078E				829	BCR 8,14		
J0A936 92FF 0E4F		0A8F8		830	CLT UNMOD,X'FF'		
J0A93A 58F0 0D9C			0ADDC	831	L 15,OUTABLOC		
J0A93E 4780 0C48			0AC88	832	BE OKGTAB		
J0A942 508F 0000			00000	833	ST 8,0(15)		
J0A946 9201 F000		00000		834	MVI 0(15),1 INDICATE UNL ON		
J0A94A 41FF 0004		00004		835	LA 15,4(15)		
J0A94E 91FF F000		00000		836	TH 0(15),X'FF'		
J0A952 47E0 0C48			0AC88	837	BNL OKGTAB		
J0A956 41F0 0D48			0AD88	838	LA 15,OUTAB		
J0A95A 50F0 0D9C			0ADDC	839	OKGTAB ST 15,OUTABLOC		
J0A95E 5010 0D44			0AD84	840	ST 1,UNLCNT		
J0A962 92FF 0E4E		0A8E8		841	MVI UNLMOD,X'FF'		
J0A966 07FE				842	BR 14		
J0A96A 5580 0E98		0A8D8		843	MRTN CL 8,BOL		

LOW MEANS ANOTHER LZ FOLLOWS  
ELSE WE BECOME VULNERABLE

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A5AC	4780 D584		0A5C4	359	BE UNLON
00A5B0	9502 D0AC	0ADEC		360	CLI LASTOUTC,2
00A5B4	4780 D592		0A502	361	BE UNLOFF
00A5B8	9503 D0AC	0ADEC		362	CLI LASTOUTC,3
00A5BC	4780 D530		0A570	363	BE TESTC
00A5C0	00000000			364	DC F*0*
00A5C4	92FF DE51	0AE91		365	MVI UNLPRINF,X'FF'
00A5C8	0203 D0B0	0ADEC		366	MVC UNLONLOC, LASTOUTC
00A5CE	47F0 D530		0A570	367	B TESTC
00A5D2	58F0 D0AC		0ADEC	368	L 15, LASTOUTC
00A5D6	4580 D5A2		0A5E2	369	BAL 11, DOUML
00A5DA	9200 DE51	0AE91		370	MVI UNLPRINT, 0
00A5DE	47F0 D530		0A570	371	B TESTC
00A5E2	58E0 D0B0		0A0F0	372	L 14, UNLONLOC
00A5E6	18FE			373	SR 15, 14
00A5E8	181E			374	LR 1, 14
00A5EA	58E0 DEC8		0AF08	375	S 14, BUFLEND
00A5EE	41EE D0B5		0ADF5	376	LA 14, OVERPL+1(14)
00A5F2	06F0			377	BCTR 15, 0
00A5F4	44F3 DE3C		0AE7C	378	EX 15, MVCUNL
00A5F8	5820 C0F1		0B130	379	L 2, A(UNLTAB)
00A5FC	44F0 DE42		0AE82	380	EX 15, TRUML
00A600	92FF DE52	0AE92		381	MVI OVERP, X'FF'
00A604	07F8			382	BR 11
00A606	5800 DEC8		0AF08	383	L 0, BUFLEND
00A60A	0600			384	BCTR 0, 0
				385	PUT PRINT, (0)
00A616	91FF DE51	0AE91		389	TM UNLPRINT, X'FF'
00A61A	47E0 D5F0		0A630	390	BNO NOUNLP
00A61E	58F0 DEC8		0AF08	391	L 15, BUFLEND
00A622	41FF 0083		00083	392	LA 15, 131(15)
00A626	4580 D5A2		0A5E2	393	BAL 11, DOUML
00A62A	0203 D0B0	DE58	0ADF0	394	MVC UNLONLOC, BUFLIST
00A630	91FF DE52	0AE92		395	NOUNLP TM OVERP, X'FF'
00A634	47E0 D614		0A654	396	BNO NOVERP
				397	PUT PRINT, OVERPL
00A646	9200 DE52	0AE92		402	MVI OVERP, 0
00A64A	9240 D0B5	0AUF5		403	MVI OVERPL+1, C*
00A64E	0282 D0B6	0ADF5		404	MVC OVERPL+2(131), OVERPL+1
00A654				405	NOVERP EQU *
00A658	58E0 DE54		0AE94	406	L 14, LINECNT
00A65B	4AE0 DE3A		0AE7A	407	AH 14, SPACINGN
00A65C	50C0 DE54		0AE94	408	ST 14, LINECNT
00A660	58F0 DEC8		0AF08	409	SETMARP L 15, BUFLEND
00A664	06F0			410	BCTR 15, 0
00A666	D200 F000	DE9C	00000	411	MVC 0(1, 15), SPACING
00A66C	58F0 DEC8		0AF08	412	L 15, BUFLEND
00A670	4130 0082		00082	413	LA 8, 130
00A674	9240 F000	03000		414	MVI 0(15), C*
00A678	4480 DE92		0AE82	415	EX 8, BUFCLEAR
00A67C	5880 DEC8		0AF08	416	L 8, BUFLEND
00A680	5A80 DE88		0AEC8	417	A 8, LMARG
00A684	5080 DE98		0AED8	418	ST 8, 80L
00A688	5030 D4B4		0A4F4	419	ST 8, LASTWD
00A68C	58F0 DEC8		0AEC8	420	L 15, RMARG
00A690	5AF0 DEC8		0AF08	421	A 15, BUFLEND

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A694	50F0 DE84		0AEC4	422	ST 15, LIMLIN
00A698	58B0 D044		0AD84	423	L 11, LSAV
00A69C	58E0 D040		0AD80	424	L 14, LINSAY
00A6A0	0203 D038	DD9C	0AD78	425	MVC PREV0BK, ONTABLOC
00A6A6	0503 DE54	DE58	0AE94	426	CLC LINECNT, LINESPPG
00A6AC	4780 D75C		0A79C	427	BNI PAGE
00A6B0	07F8			428	BR 11
00A6B2	91FF DE48	0AE8B		429	EVALCLAS TM CLEANPAG, X'FF'
00A6B6	4710 D6A2		0A6E2	430	BQ ISCLEAN
00A6BA	5880 DEC8		0AF08	431	L 8, BUFLEND
00A6BE	0680			432	BCTR 8, 0
00A6C0	92F0 8000	00000		433	MVI 0(8), C*0*
00A6C4	5A80 DE88		0AEC8	434	A 8, LMARG
00A6C8	0210 8001	D0E2	00001	435	MVC 1(4), CLASS, 8), CLASS
00A6CE	92FF DE49	0AE89		436	MVI SWCENT, X'FF'
00A6D2	58E0 DE54		0AE94	437	L 14, LINECNT
00A6D6	41E5 0001		00001	438	LA 14, 1(14)
00A6DA	50E0 DE54		0AE94	439	ST 14, LINECNT
00A6DE	47F0 D502		0A542	440	B STILLCLEAN
00A6E2	5880 D03C		0AD7C	441	ISCLEAN L 11, LASTCLAS
00A6E6	9240 B000	00000		442	MVI 0(11), X*40*
00A6EA	0282 B001	B000	00001	443	MVC 1(131, 11), 0(11)
00A6F0	1808			444	LR 0, 11
00A6F2	5A80 DE88		0AEC8	445	A 11, LMARG
00A6F6	0210 B000	D0E2	00000	446	MVC 0(1), CLASS, 11), CLASS
00A6FC	4580 DEC8		0A708	447	BAL 11, CENTER
00A700	9200 DE48	0AE8B		448	MVI CLEANPAG, 0
00A704	47F0 D620		0A660	449	B SETMARP
00A708	58E0 DEC8		0AEC8	450	L 14, RMARG
00A70C	58F0 DEC8		0AEC8	451	L 15, LMARG
00A710	18EF			452	SR 14, 15
00A712	1AF0			453	AR 15, 0
00A714	4110 D084		00084	454	LA 1, 132
00A718	181E			455	SR 1, 14
00A71A	4111 DF5C		0AF9C	456	LA 1, INVNO(1)
00A71E	44E0 D74A		0A78A	457	EX 14, MVCINV
00A722	44E0 D750		0A790	458	EX 14, TRINV
00A726	4110 DE08		0AF18	459	LA 1, INVERT
00A72A	5820 C0F5		0B134	460	L 2, A(TABLNK)
00A72E	44E0 D756		0A796	461	EX 14, TR(INV
00A732	5810 C0F9		0B138	462	S 1, A(INVERT)
00A736	18E1			463	SR 14, 1
00A738	44E0 D738		0A778	464	EX 14, MVOU
00A73C	9240 F000	00000		465	MVI 0(15), X*40*
00A740	8810 0001		00001	466	SRL 1, 1
00A744	4410 D73E		0A77E	467	EX 1, MVINBLNK
00A748	1AF1			468	AR 15, 1
00A74A	44E0 D744		0A784	469	EX 14, MVIN
00A74E	58E0 D038		0AD78	470	L 14, PREV0BK
00A752	0503 E000	C0FD	00000	471	CLC 0(4, 14), X*40*
00A758	0788			472	BGR 8, 11
00A75A	58FE 0000		00000	473	L 15, 0(14)
00A75E	1AF1			474	AR 15, 1
00A760	50FE 0000		00000	475	ST 15, 0(14)
00A764	41EE 0004		00004	476	LA 14, 4(14)
00A768	91FF E000	00000		477	TM 0(14), X'FF'

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT
00A76C	47E0 D712		0A752	478	BNO	LOOPURO
00A770	41E0 D048		0A088	479	LA	14,OUTAB
00A774	47F0 D712		0A752	480	B	LOOPURO
00A778	0200 DED8 F000 0AF18 00000		481	MVOUT	MVC	INVERT(0),0(15)
00A77E	0200 F001 F000 00001 00000		482	MVINBLNK	MVC	1(0,15),0(15)
00A784	0200 F000 DED8 00000 0AF18		483	MVIN	MVC	0(0,15),INVERT
00A78A	0200 DED8 1000 0AF18 00000		484	MVCINV	MVC	INVERT(0),0(1)
00A790	0C00 DED8 F000 0AF18 00000		485	TRINV	TR	INVERT(0),0(15)
00A798	0000 DED8 2000 0AF18 00000		486	TRINV	TRT	INVERT(0),0(2)
00A79C	5080 D828		0A868	487	PAGE	11,SAVPAGE
00A7A0	0703 D54 DE54 0AE94		0AE94	488	XC	LINECNT,LINECNT
00A7A6	5580 D98		0AE08	489	CL	8,BOL
00A7AA	4780 D772		0A782	490	BE	NONEWL
00A7AE	4580 D4E2		0A522	491	BAL	11,LINE
00A7B2	0703 D54 DE54 0AE94		0AE94	492	XC	LINECNT,LINECNT
00A7B8	5880 DEC8		0AF08	493	L	11,BUFLND
00A7BC	0680			494	BCTR	11,0
00A7BE	92C2 B000		00000	495	MVI	0(11),C*8
00A7C2	9203 D9D		0AEDD	496	MVI	0CTLC,3
00A7C6	4580 D48E		0A4CE	497	BAL	11,0CTL
00A7CA	0210 B000 DFE2 00000 0B022		00000	498	MVC	0(1*CLASS,8),CLASS
00A7D0	92FF DE49		0AE89	499	MVI	SWCENT,X*FF
00A7D4	4580 D4E2		0A522	500	BAL	11,LINE
00A7D8	4580 D48E		0A4CE	501	BAL	11,0CTL
00A7DC	9260 B000		00000	502	MVI	0(8),C*-
00A7E0	F410 D884 C11C 0AEF4		0B158	503	AP	PAGENO,=P*1
00A7E6	F321 D880 D884 0AEF0		0AEF4	504	UNPK	PAGENDU,PAGENO
00A7EC	96F0 D882		0AEF2	505	OI	PAGENDU*L,PAGENDU-1,X*F0
00A7F0	4180 D880		0AEF0	506	LA	11,PAGENDU
00A7F4	95F3 B000		00000	507	TRYPN	CL1
00A7F8	4740 D7D6		0A816	508	BE	TESTZ
00A7FC	95FF B000		00000	509	CL1	0(11),X*FF
00A800	4730 D7E2		0A822	510	BE	OUTAN
00A804	0200 B001 B000 00001 00000		00000	511	DOUZ	MVC
00A80A	4188 0001		00001	512	LA	8,1(8)
00A80E	4188 0001		00001	513	UPPN	LA
00A812	47F0 D784		0A7F4	514	B	TRYPN
00A816	9560 B000		00000	515	TESTZ	CL1
00A81A	4780 D7CE		0A80E	516	BE	UPPN
00A81E	47F0 D7C4		0A804	517	B	DOOZ
00A822	9260 B001		00001	518	OUTAN	MVI
00A826	92FF DE49		0AE89	519	MVI	SWCENT,X*FF
00A82A	4580 D4E2		0A522	520	BAL	11,LINE
00A82E	5880 DEC8		0AF08	521	L	8,BUFLND
00A832	0680			522	BCTR	8,0
00A836	92F1 B000		00000	523	MVI	0(8),C*1
00A838	4580 D4E2		0A522	524	BAL	11,LINE
00A83C	0210 B000 DFE2 00000 0B022		00000	525	MVC	0(1*CLASS,8),CLASS
00A842	0203 D03C DEC8 0A07C		0AF08	526	MVC	LASTCLAS,BUFLND
00A848	92FF DE49		0AE89	527	MVI	SWCENT,X*FF
00A84C	4580 D4E2		0A522	528	BAL	11,LINE
00A850	5880 DEC8		0AF08	529	L	11,BUFLND
00A854	0680			530	BCTR	11,0
00A858	92F0 B000		00000	531	MVI	0(11),C*0
00A85A	92FF DE48		0AE88	532	MVI	CLEANPAG,X*FF
00A85E	5880 D828		0A868	533	L	11,SAVPAGE

SKIP TO CHANNEL 11

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT
00A862	9200 DE4A		0AE8A	534	MVI	PAGESH,0
00A866	07F8			535	BR	11
00A868	00000000			536	SAVPAGE	DC
00A86C	18F1			537	GETN	LR
00A86E	1811			538	SA	1,1
00A870	0201 D8A0 C10F 0A8E0		0B14E	539	MVC	NUMS,=X*0000
00A876	954C 9000		00000	540	LOOPGETN	CL1
00A87A	4780 D864		0A8A4	541	BE	MOGETN
00A87E	956E 9000		00000	542	CL1	0(9),C*8
00A882	4780 D864		0A8A4	543	BE	MOGETN
00A886	95F0 9000		00000	544	CL1	0(9),C*0
00A88A	4740 D86C		0A8AC	545	BL	OUTGETN
00A88E	95F9 9000		00000	546	CL1	0(9),C*9
00A892	4720 D86C		0A8AC	547	BM	OUTGETN
00A896	917F D8A0		0A8E0	548	TM	NUMS,X*FF
00A89A	4770 D880		0A8C0	549	BNZ	STOLST
00A89E	0200 D8A0 9000 0A8E0		00000	550	MVC	NUMS(1),0(9)
00A8A4	4199 0001		00001	551	MOGETN	LA
00A8A8	47F0 D838		0A876	552	B	LOOPGETN
00A8AC	91FF D8A0		0A8E0	553	OUTGETN	TM
00A8B0	0788			554	BCR	8,11
00A8B2	0200 D8A1 D8A0 0A8E1		0A8E0	555	MVC	NUMS+1(1),NUMS
00A8B8	92F0 D8A0		0A8E0	556	MVI	NUMS,C*0
00A8BC	47F0 D88A		0A8CA	557	B	UNPKIT
00A8C0	0200 D8A1 9000 0A8E1		00000	558	STOLST	MVC
00A8C6	4199 0001		00001	559	LA	NUMS+1(1),0(9)
00A8CA	F271 D8A8 D8A0 0A8E8		0A8E0	560	UNPKIT	PACK
00A8D0	4F10 D8A8		0A8E8	561	CV8	1,DOUBLE
00A8D4	191F			562	CR	1,15
00A8D6	4720 D89C		0A8DC	563	BH	ZEROIT
00A8DA	07F8			564	BR	11
00A8DC	1811			565	ZEROIT	SR
00A8DE	07F8			566	BR	11
00A8E0	0000			567	NUMS	DC
00A8E2	00000000000000					H*0
00A8E8	0000000000000000			568	DOUBLE	DC
00A8F0	4700 0000		00000	569	TABCL	NOP
00A8F4	4199 0001		00001	570	LA	9,1(9)
00A8F8	45E0 D8EC		0A92C	571	BAL	14,SPACER
00A8FC	45E0 D940		0A980	572	BAL	14,CHYPHER
00A900	45E0 D952		0A992	573	BAL	14,BACKER
00A904	45E0 D962		0A9A2	574	BAL	14,HYPHER
00A908	45E0 D976		0A9B6	575	BAL	14,CBACKER
00A90C	45E0 D98E		0A9C6	576	BAL	14,XLITER
00A910	45E0 D996		0A9F6	577	BAL	14,CAPEK
00A914	45E0 D9FA		0A9A8	578	BAL	14,NUMER
00A918	45E0 D9A2		0A9E6	579	BAL	14,PAREMER
00A91C	45E0 D9EC		0A92C	580	BAL	14,EQUER
00A920	45E0 D906		0A946	581	BAL	14,ENDER
00A924	45E0 D98C		0A9CC	582	BAL	14,PERSER
00A928	45E0 D966		0A9A6	583	BAL	14,ACTER
00A92C	4199 0001		00001	584	SPACER	LA
00A930	955F 9000		00000	585	SPACER	CL1
00A934	4730 D900		0A940	586	BE	0(9),C*4
00A938	954F 9000		00000	587	CL1	NOSP
00A93C	4770 D92C		0A96C	588	BNE	0(9),C*4

(PACKIT)

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LCC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT
J0A22C	4620 01E4		0A224	137	BCT	2,ADD
J0A230	47F0 00A8		0A0E8	138	A	CHKREC
J0A234	4150 C115		0B154	139	ENDIT	6,=X*FF*
J0A238	4150 0001		00001	140	LA	5,1
J0A23C	45E0 0242		0A282	141	BAL	14,PR
J0A240	47F0 01F4		0A234	142	B	ENDIT
J0A244	0000			143	HALF	HC0*
J0A246	0000					
J0A248	00C00000			144	RECNT	DC
J0A24C	001D			145	MISSREC	DC
J0A24E	0000000000F003			146	DC	AL2(L*(MISSFUN+FUNFUN-FUNREC)
J0A255	405C04C9E2E2C905			147	MISSFUN	DC
J0A26C				148	DS	OF
J0A26C	00C000C000000000			149	ENDREC	DC
J0A280	F0			150	HOLDENDG	DC
J0A281	00			151	HO	DC
J0A282	50E0 DE00		0AF10	152	PR	ST
J0A286	3502 C116 6000 0B155		00000	153	CLC	=C*(0)*,0(16)
J0A28C	4730 0280		0A2C0	154	SE	DELETE
J0A290	4117 5000		00000	155	DOPR	LA
J0A294	5510 DE7C		0AEB0	156	CL	1,LIMCB
J0A298	4720 0298		0A208	157	BH	PULLCB
J0A29C	4450 DE66		0AEAE	158	EX	5,PUTCB
J0A2A0	4171 0001		00001	159	LA	7,1(1)
J0A2A4	4670 C100		0B14C	160	SH	7,=H*3*
J0A2A8	3502 C119 7000 0B158		00000	161	CLC	=C*(2)*,0(17)
J0A2AE	4177 0003		00003	162	LA	7,3(7)
J0A2B2	4770 027A		0A28A	163	BNE	*+8
J0A2B6	5070 DE04		0AF14	164	ST	7,LASTZ
J0A2BA	53E0 DE00		0AF10	165	L	14,SAVL4
J0A2BE	07FE			166	BR	14
J0A2C0	58E0 DE04		0AF14	167	DELETE	L
J0A2C4	12EE			168	LTR	14,14
J0A2C6	4700 0294		0A2D4	169	BNH	ERDELET
J0A2CA	187E			170	LR	7,14
J0A2CC	4166 0003		00003	171	LA	6,3(6)
J0A2D0	4850 C100		0B14C	172	SH	5,=H*3*
J0A2D4				173	ERDELET	DS
J0A2D4	47F0 D250		0A290	174	B	COPR
J0A2D8	58F0 DE7C		0AEB0	175	PULLCB	L
J0A2DC	18F7			176	SR	15,7
J0A2DE	4740 D2A6		0A2E6	177	BM	NOMOD
J0A2E2	44F0 DE6E		0AEAE	178	EX	15,PUTCB
J0A2E6	41FF 0001		00001	179	NOMOD	LA
J0A2EA	1A6F			180	AR	6,15
J0A2EC	1A7F			181	AR	7,15
J0A2EE	185F			182	SR	5,15
J0A2F0	1822			183	SR	2,2
J0A2F2	4320 DE81		0AEC1	184	IC	2,CONTROL
J0A2F6	4402 D880		0A8F0	185	EX	0,TABCT1(2)
J0A2FA	4580 0300		0A410	186	BAL	11,EVALUNL
J0A2FE	95FF DE4E	0AE8E		187	CLI	UNLMOO,X*FF*
J0A302	4770 D200		0A310	188	BNE	SKIPUNL
J0A306	4200 DE4F	DE4E 0AE8F	0AE8E	189	MVC	UNMOD,UNLMOO
J0A30C	4200 DE4E	0AE8E		190	MVI	UNLMOO,0
J0A310	58F0 DE8C		0AECC	191	SKIPUNL	L

NOT DELETED (OUT RANGE)

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LCC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT
J0A314	58F0 DE33		0AEC8	192	S	15,LMARG
J0A318	4119 F000		00000	193	LA	1,0(9,15)
J0A31C	1822			194	SR	2,2
J0A31E	5880 C0D9		0B118	195	L	11,=A(TABTRT)
J0A322	44F0 DE68		0AE88	196	EX	15,EXTAT
J0A326	4220 DE81		0AEC1	197	STC	2,CONTROL
J0A32A	92FF DE50	0AE9D		198	MVI	NOTUMWORD,X*FF*
J0A32E	1819			199	SR	1,9
J0A330	4780 0364		0A3A4	200	BZ	NONELINE
J0A334	0610			201	BCTR	1,0
J0A336	41F1 8001		00001	202	DOLINE	LA
J0A33A	55F0 DE84		0AEC4	203	CL	15,LIMLIN
J0A33E	4720 0434		0A474	204	BH	OVERLIN
J0A342	91FF DE9F	0AEDF		205	TM	CAPS,X*FF*
J0A346	47E0 0322		0A362	206	BNO	TESTIC
J0A34A	95FF DE48	0AE88		207	CLI	UPPERLOW,X*FF*
J0A34E	4780 037A		0A38A	208	BE	DOULCAPS
J0A352	9560 DE80	0AECO		209	CLI	ENDER,C*--
J0A356	4780 033E		0A37E	210	BE	DOM
J0A35A	926C 8000	00000		211	MVI	0(8),C*3*
J0A35E	47F0 0336		0A376	212	B	UPCAP
J0A362	91FF DEA0	0A8E0		213	TESTIC	TM
J0A366	47E0 033B		0A37E	214	BNO	DOM
J0A36A	95FF DE48	0AE88		215	CLI	UPPERLOW,X*FF*
J0A36E	4780 0386		0A3C6	216	BE	DOULIC
J0A372	927C 8000	00000		217	MVI	0(8),C*2*
J0A376	41FF 0001		00001	218	UPCAP	LA
J0A37A	4188 0001		00001	219	LA	8,1(8)
J0A37E	5820 C0D0		0B11C	220	DOM	L
J0A382	95FF DE48	0AE88		221	CLI	UPPERLOW,X*FF*
J0A386	4770 034E		0A38E	222	BNE	*+8
J0A38A	4410 038A		0A3CA	223	EX	1,TRCASE
J0A38E	4410 DE74		0AEB4	224	EX	1,MVCLIN
J0A392	9200 DEA0	0AEEO		225	MVI	MODEIC,0
J0A396	188F			226	LR	8,15
J0A398	4191 9001		00001	227	LA	9,1(1,9)
J0A39C	9200 DE50	0AE9D		228	MVI	NOTUMWORD,0
J0A3A0	5080 DE90		0AED0	229	ST	8,UNEND
J0A3A4	18F9			230	NONELINE	LR
J0A3A6	5AF0 C0E1		0B120	231	A	15,=A(MINIM)
J0A3AA	55F0 C0E5		0B124	232	CL	15,=A(CB+L*CB-2)
J0A3AE	4720 0394		0A3D4	233	BH	SHIFTCB
J0A3B2	50F0 DE7C		0AEB0	234	ST	15,LIMCB
J0A3B6	47F0 0250		0A290	235	B	DOPR
J0A3BA	5820 C0D0		0B11C	236	DOULCAPS	L
J0A3BE	4410 038A		0A3CA	237	EX	1,TRCASE
J0A3C2	47F0 033E		0A37E	238	B	DOM
J0A3C6	5820 C0D0		0B11C	239	DOULIC	L
J0A3CA	4C00 9000	2000 00000	00000	240	TRCASE	TR
J0A3D0	47F0 033E		0A37E	241	B	DOM
J0A3D4	1879			242	SHIFTCB	SR
J0A3D6	58F0 DE04		0AF14	243	L	15,LASTZ
J0A3DA	18F7			244	SR	15,7
J0A3DC	50F0 DE04		0AF14	245	ST	15,LASTZ
J0A3E0	58F0 C0C9		0B138	246	L	15,=A(CB)
J0A3E4	5970 C0E9		0B128	247	CHKSHFT	C

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A3E8	4700 D3C2		0A402	248	BNH OKSHFT
00A3EC	02FF F000	9000	00000	249	MVC 0(256,15),0(19)
00A3F2	41FF 0100		00100	250	LA 15,256(15)
00A3F6	4199 0100		00100	251	LA 9,256(9)
00A3FA	5870 C0E4		0B128	252	S 7,=F*256*
00A3FE	47F0 D3A4		0A3E4	253	B CHKSHFT
00A402	4470 DE5C		0A29C	254	OKSHFT EX 7,SHFTCB
00A406	1A7F			255	AR 7,15
00A408	5890 C0C9		0B108	256	L 9,=A(1CB)
00A40C	47F0 D364		0A3A4	257	B NONELINE
00A410				258	EVALUNL EQU *
00A410	95FF DE50	0AE90		259	CLT NOTUNWORD,X'FF'
00A414	07B8			260	BCR 8,11
00A416	91FF DE9F	0AE0F		261	TM CAPS,X'FF'
00A41A	47E0 D3F8		0A438	262	BNO TESTUN
00A41E	58F0 DEAC		0AE0C	263	L 15,CAPCNT
00A422	12FF			264	LTR 15,15
00A424	4700 D3F8		0A434	265	BNH TESTUN
00A428	58F0 C0C1		0B100	266	S 15,=F*1*
00A42C	50F0 DEAC		0AE0C	267	ST 15,CAPCNT
00A430	4770 D3F8		0A438	268	BNZ TESTUN
00A434	9200 DE9F	0AE0F		269	MVI CAPS,0
00A438	95FF DE4F	0AE8F		270	TESTUN CLT UNMOD,X'FF'
00A43C	0778			271	BCR 7,11
00A43E	58F0 D0A4		0ADE4	272	L 15,UNLCNT
00A442	06F0			273	BCTR 15,0
00A444	50F0 D0A4		0ADE4	274	ST 15,UNLCNT
00A448	12FF			275	LTR 15,15
00A44A	0778			276	BCR 7,11
00A44C	58F0 D09C		0ADDC	277	L 15,OUTABLOC
00A450	0202 F001	DE91	00001	278	MVC 1(3,15),UNEND*1
00A456	9202 F000		00000	279	MVI 0(15),2 INDICATE UNL OFF
00A45A	41FF 0004		00004	280	LA 15,4(15)
00A45E	91FF F000	00000		281	TM 0(15),X'FF'
00A462	47E0 D42A		0A46A	282	BNO **8
00A466	41F0 D048		0A088	283	LA 15,OUTAB
00A46A	50F0 D09C		0ADDC	284	ST 15,OUTABLOC
00A46E	9200 DE4F	0AE8F		285	MVI UNMOD,0
00A472	07F8			286	BR 11
00A474	5010 DECE		0AF0C	287	OVERLIN ST 1,SAV1
00A478	5580 D484		0A4F4	288	CL 8,LASTWD
00A47C	4780 D464		0A4A4	289	BE DOLL
00A480	18F8			290	LR 15,8
00A482	58F0 D484		0A4F4	291	S 15,LASTWD
00A486	55F0 C0ED		0B12C	292	CL 15,=A(1*RESERV)
00A48A	4720 D464		0A4A4	293	BH DOLL
00A48E	06F0			294	BCTR 15,0
00A490	5880 D484		0A4F4	295	L 8,LASTWD
00A494	44F0 D4C2		0A502	296	EX 15,MVCRES
00A498	44F0 D4C8		0A508	297	EX 15,MVCSPS
00A49C	50F0 D488		0A4F8	298	ST 15,RESCNT
00A4A0	9200 D46F	0A4AF		299	MVI RESSW+1,X'00'
00A4A4	0200 8000	DE80	00000	300	DOLL MVC 0(1,8),ENDER
00A4A8	4580 D4E2		0A522	301	BAL 11,LINE
00A4AE	47F0 D482		0A4C2	302	RESSW B OKRES
00A4B2	92F0 D46F	0A4AF		303	MVI RESSW+1,X'F0'

UNDERLINE AND CAPS

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A4B6	58F0 D488		0A4F8	304	L 15,RESCNT
00A4BA	44F0 D4BC		0A4FC	305	EX 15,RESTOR
00A4BE	4188 F001		00001	306	LA 8,1(8,15)
00A4C2	5080 D4B4		0A4F4	307	OKRES ST 8,LASTWD
00A4C6	5810 DECC		0AF0C	308	L 1,SAV1
00A4CA	47F0 D2F6		0A336	309	B DOLINE
00A4CE	58F0 D09C		0ADDC	310	DCTL L 15,OUTABLOC
00A4D2	508F 0000		00000	311	ST 8,0(15)
00A4D6	0200 F000	DE9D	00000	312	MVC 0(1,15),DCTL
00A4DC	41FF 0004		00004	313	LA 15,4(15)
00A4E0	91FF F000	00000		314	TM 0(15),X'FF'
00A4E4	47E0 D4AC		0A4EC	315	BNO **8
00A4E8	41F0 D048		0AD88	316	LA 15,OUTAB
00A4EC	50F0 D09C		0ADDC	317	ST 15,OUTABLOC
00A4F0	07F8			318	BR 11
00A4F2	0000				
00A4F4	00000000			319	LASTWD DC F'0'
00A4F8	00000000			320	RESCNT DC F'0'
00A4FC	0200 8000	D4CE	00000	321	RESTOR MVC 0(0,8),RESERV
00A502	0200 D4CE	8000	0A50E	322	MVCRES MVC RESERV(0),0(8)
00A508	0200 8000	D4D8	00000	323	MVCSPS MVC 0(0,8),SPACES
00A50E	4040404040404040			324	RESERV DC CL(0,*)
00A518	4040404040404040			325	SPACES DC CL(1*,RESERV)*
00A522				326	LINE EQU *
00A522	5080 D044		0AD84	327	ST 11,LSAV
00A526	50E0 D040		0A080	328	ST 14,LINSAV
00A52A	95FA DE4C	0A88C		329	CLI CLSW,X'FF'
00A52E	9200 DE4C	0AE8C		330	MVI CLSW,0
00A532	4780 D672		0A682	331	BE EVALCLAS
00A536	5580 DE98		0AE08	332	CL 8,BOL
00A53A	4780 D502		0A542	333	BE STILCLEN
00A53E	9200 DE48	0AE88		334	MVI CLEANPAC,0
00A542	5800 DE88		0AEF8	335	STILCLEN L 0,BUFLIST
00A546	020F DE98	DEBC	0AEF8	336	MVC BUFLIST(BUFLEND-BUFLIST),BUFLIST+4
00A54C	5000 DE88		0AF08	337	ST 0,BUFLEND
00A550	5800 DE4C		0AF04	338	L 0,BUFLEND-4
00A554	91FF DE48	0AE88		339	TM SWCENT,X'FF'
00A558	47E0 D520		0A560	340	BNO **8
00A55C	4580 D6C8		0A708	341	BAL 11,CENTER
00A560	9200 DE48	0AE88		342	MVI SWCENT,0
00A564	58E0 DE88		0AF08	343	L 14,BUFLEND
00A568	41EE 0084		00084	344	LA 14,132(14)
00A56C	50E0 D0A8		0AE88	345	ST 14,BUFENDOT
00A570	58F0 D0A0		0ADE0	346	TESTC L 15,OUTCLOC
00A574	0502 F001	DEB9	00001	347	CLC 1(3,15),BUFLEND+1
00A57A	4740 D5C6		0A606	348	BL NOCTL
00A57E	0502 F001	D0A9	00001	349	CLC 1(3,15),BUFLEND+1
00A584	4720 D5C6		0A606	350	BH NOCTL
00A588	0203 D0AC	F000	0ADE0	351	MVC LASTOUTC,0(15)
00A58E	0703 F000	F000	00000	352	XC 0(4,15),0(15)
00A594	41FF 0004		00004	353	LA 15,4(15)
00A598	91FF F000	00000		354	TM 0(15),X'FF'
00A59C	47E0 D564		0A5A4	355	BNO **8
00A5A0	41F0 D048		0AD88	356	LA 15,OUTAB
00A5A4	50F0 D0A0		0AE00	357	ST 15,OUTCLOC
00A5A8	9501 D0AC	0ADE0		358	CLI LASTOUTC,1

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IEF285I	SYS1.MACLIB	KEPT
IEF285I	VOL SER NOS= RESVOL.	KEPT
IEF285I	STENSLIB	KEPT
IEF285I	VOL SER NOS= LNKVOL.	KEPT
IEF285I	SYSUT1	KEPT
IEF285I	VOL SER NOS= DISK01.	KEPT
IEF285I	SYSUT2	KEPT
IEF285I	VOL SER NOS= DISK02.	KEPT
IEF285I	SYSUT3	KEPT
IEF285I	VOL SER NOS= DISK03.	KEPT
IEF285I	SYSOUT	KEPT
IEF285I	VOL SER NOS=	KEPT
IEF285I	STENSLIB	KEPT
IEF285I	VOL SER NOS= LNKVOL.	KEPT
IEF236I	ALLOC. FOR JOB	ASM
IEF237I	SYSLIB	DN 230
IEF237I		DN 23*
IEF237I	SYSUT1	DN 231
IEF237I	SYSUT2	DN 232
IEF237I	SYSUT3	DN 233
IEF237I	SYSPUNCH	DN 000
IEF237I	SYSIN	DN 234

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ST#3	SYMBOL	TYPE	ID	ADDR	LENGTH	LD	ID
STENO#3	SD	G1	00A020	003F11			

# EXTERNAL SYMBOL DICTIONARY

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LCC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
				2	PRINT ON,NOGEN
JUAU20				3	STENO#3 START X'A020'
JU001E				4	MINLEN EQU 30
000006				5	MINHEOL EQU 6
000046				6	RMI EQU 70
000005				7	EMI EQU 5
000040				8	INITSP EQU X'40'
JU0001				9	INITSPN EQU 1
0001E8				10	MINIM EQU 1000 MINIMUM NO. CHARS IN CB
				11	\$SAVE BASE=(10,12)
00A08C 5811 0000	00000			25	L 1,0(1)
00A090 4821 0000	00000			26	LH 2,0(1)
00A094 4111 0002	00002			27	LA 1,2(1)
00A098 5820 C0C1	0B100			28	S 2,=F*1'
00A09C 4740 006C	0A0AC			29	NOPARM
00A0A0 95E4 1000	00000			30	CLI 0(1),C*U'
00A0A4 4770 006C	0A0AC			31	NOPARM
00A0A8 9200 0E48	0A088			32	MVI UPPERLOW,0
00A0AC				33	NOPARM DS OH
				34	OPEN IPRINT,(OUTPUT),FUNCTION,(INPUT)
00A0BA 4140 0008	00008			42	LA 4,8
00A0BE 1822				43	SR 2,2
00A0C0 5880 C0C5	0B104			44	L 8,=A(LIN54LM1)
00A0C4 5080 0484	0A4F4			45	ST 8,LASTWD
00A0C8 5080 0E98	0AED8			46	ST 8,BOL
00A0CC 5080 0E94	0AED4			47	ST 8,EOS
00A0D0 5890 C0C9	0B108			48	L 9,=A(CB)
00A0D4 1879				49	LR 7,9
				50	GETNX GET FUNCTION
00A0E0 1831				54	LR 3,1
JU0000				55	USING FUNREC,3
00A0E2 0202 0209 3004 CA249 00004				56	MVC RECNT+1(3),FUNID
00A0E8 5540 0208	0A248			57	CHKREC CL 4,RECNT
00A0EC 4720 0096	0A006			58	BM GETNXT
00A0F0 4780 00C0	0A100			59	BE FINE
00A0F4 95FF 3004	00004			60	CLI FUNID,X'FF'
00A0F8 4780 01F4	0A234			61	BE ENDIT
00A0FC 4130 020C	0A24C			62	LA 3,MISREC
00A100 95C3 3007	00007			63	CLI FUNENDG,C'E'
00A104 4780 0108	0A148			64	BE ENDG
00A108 95F0 0240	0A280			65	CLI HOLDENDG,C'D'
00A10C 4780 01C2	0A202			66	BE DOWORD
00A110 91F0 0240	0A280			67	FM HOLDENDG,X'F0'
00A114 47E0 01C2	0A202			68	BND DOWORD
00A118 95F9 0240	0A280			69	CLI HOLDENDG,X'F9'
00A11C 4720 01C2	0A202			70	BM DOWORD
00A120 940F 0240	0A280			71	NI HOLDENDG,X'OF'
00A124 1855				72	SR 5,5
00A126 4350 0240	0A280			73	IC 5,HOLDENDG
00A12A 5880 C0C0	0B10C			74	L 6,=A(NULL)
00A12E 4356 5000	00000			75	IC 5,0(6,5)
00A132 5880 C001	0B110			76	L 6,=A(8-1)
00A136 1465				77	AR 6,5
00A138 4356 0000	00000			78	IC 5,0(6)
00A13C 4166 0001	00001			79	LA 6,14(6)
00A140 43E0 0242	0A282			80	BAL 14,PR

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LCC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A144 47F0 01C2		0A202		81	B DOWORD
00A148 0201 0204 3000 0A244 00000		0A244		82	ENDG MVC HALF,FUNCT
00A14E 4850 0204		0A244		83	LH 5,HALF
00A152 95F0 0240	CA280			84	CLI HOLDENDG,C'D'
00A156 4780 0096	0A006			85	BE GETNXT
00A15A 4163 5000	00000			86	LA 6,0(13,5)
00A15E 5060 0E44	0AEE4			87	ST 6,OVEREND
00A162 0200 0241 6000 0A281 00000				88	MVC MO,0(6)
00A168 9268 6000	00000			89	MVI 0(6),C*,'
00A16C 4160 3009	00009			90	LA 6,FUNFUN
00A170 9568 6000	00000			91	TRYEND CLI 0(6),C*,'
00A174 4780 0144	0A18A			92	BE NOTHIS
00A178 0500 0240 6000 0A280 00000				93	CLC HOLDENDG,0(6)
00A17E 4780 015E	0A19E			94	BE YESTHIS
00A182 4166 0001	00001			95	TEND LA 6,1(6)
00A186 47F0 0130	0A170			96	B TRYEND
00A18A 45E0 01A2	0A1E2			97	NOTHIS BAL 14,NEXTCOM
00A18E 5560 0E44	0AEE4			98	CL 6,OVEREND
00A192 4780 01A4	0A1EA			99	BE OV
00A196 9568 6001	00001			100	CLI 1(6),C*,'
00A19A 4770 01A2	0A182			101	TEND BNE
00A19E 45E0 01A2	0A1E2			102	YESTHIS BAL 14,NEXTCOM
00A1A2 4156 0001	00001			103	LA 5,1(6)
00A1A6 45E0 01A2	0A1E2			104	BAL 14,NEXTCOM
00A1AA 9278 6000	00000			105	MVI 0(6),C*,'
00A1AE 1865				106	SR 6,5
00A1B0 4460 019C	0A1DC			107	EX 6,MVEF
00A1B4 4166 0001	00001			108	LA 6,1(6)
00A1B8 4156 0009	00009			109	LA 5,FUNFUN-FUNREC(6)
00A1BC 4050 022C	0A26C			110	STM 5,ENDREC
00A1C0 0204 0230 3004 CA270 00004				111	MVC ENDREC+4(FUNFUN-FUNREC-4),FUNREC+4
00A1C4 92F0 0233	0A273			112	MVI 6,OVEREND
00A1C8 5860 0E44	0AEE4			113	L 6,OVEREND
00A1CC 0200 6000 0241 00000	0A281			114	MVC 0(6),MO
00A1D4 4130 022C	0A26C			115	LA 3,ENDREC
00A1D8 47F0 01C2	0A202			116	B DOWORD
00A1DC 0200 0235 5000 0A275 00000				117	MVEF MVC ENDREC+FUNFUN-FUNREC(0),0(5)
00A1E2 5560 0E44	0AEE4			118	NEXTCOM CL 6,OVEREND
00A1E6 4770 01B4	0A1F4			119	BNE MOCOM
00A1EA 0200 6000 0241 00000	0A281			120	OV MVC 0(1,6),MO
00A1F0 47F0 0096	0A006			121	B GETNXT
00A1F4 4166 0001	00001			122	MOCOM LA 6,1(6)
00A1F8 9568 6000	00000			123	CLI 0(6),C*,'
00A1FC 078E				124	BCR 8,14
00A1FE 47F0 01B4	0A1F4			125	B MOCOM
00A202 0201 0204 3000 0A244 00000				126	DOWORD MVC HALF,FUNCT
00A208 4850 0204	0A244			127	LH 5,HALF
00A20C 5850 C005	0B114			128	S 5,=A(FUNFUN-FUNREC+1)
00A210 4160 3009	00009			129	LA 6,FUNFUN
00A214 45E0 0242	0A282			130	BAL 14,PR
00A218 0200 0240 3007 0A280 00007				131	MVC HOLDENDG,FUNENDG
00A21E 1822				132	SR 2,2
00A220 4320 3008	00008			133	IC 2,FUNL1
00A224 4144 0001	00001			134	ADD LA 4,1(4)
00A228 0620				135	BCTR 2,0
00A22A 0620				136	BCTR 2,0

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
SYNAD	00001	000000	0006	0746 0803 0860
JJJJ3	00003	000864	0032	0294 0295 0624 0624 0624 0624 0625 0625 0625 0626 0627 0627 0627 0627
JS#	00003	000864	0036	0624 0635
A	00001	000000	0017	0184 0186 0197 0207
AUICL	00004	000000	0017	0086 0404 0449 0467 0472
AL1	00001	000000	0017	0697
AL2	00001	000000	0017	0383 0390 0342 0397
ANDER	00006	000000	0017	0535
AUTHAN	00004	000000	0017	0198 0204
AREC	00004	000000	0017	0367 0400 0407 0443 0452 0475 0480
B	00001	000000	0017	0216 0342 0348 0350 0356 0358 0360 0348 0349
BL2	00001	000000	0017	0384 0389 0390 0397
BREC	00004	000000	0017	0369 0409 0416 0444 0457 0466 0501
C	00001	000000	0017	0223 0228 0232 0544 0597
CHECKDEL	00004	000000	0017	0399
CHENIT	00004	000000	0017	0512
CLC	00006	000000	0017	0394
CLCAB	00006	000000	0017	0377
CLCAB1	00006	000000	0017	
CLIAB	00004	000000	0017	
COMP	00002	000000	0017	0115 0166
CTRAN	00004	000000	0017	0224 0227 0231
J	00001	000000	0017	0544 0595
DBARG	00001	000000	0017	0281 0429 0433 0438 0523 0621
DBCHAIN	00004	000000	0017	0134 0138 0151 0164 0164 0322 0331 0335 0345 0345 0353
DBENDG	00001	000000	0017	0127 0287 0288 0359 0426 0574 0580 0593 0609 0611 0613
DBENTRY	00001	000000	0017	0114 0340 0425 0460 0504 0941
DBLEN	00002	000000	0017	0136 0314 0344
DBLOCK	00001	000000	0017	0111 0340 0425 0941 0538
DBL1	00001	000000	0017	0278 0286 0428 0507
DBL2	00001	000000	0017	0279 0519
DBMSK	00002	000000	0017	0432 0435 0437 0440 0441 0510
DICENTRY	00001	000000	0017	0368 0370 0421 0423 0942
DICHCLO	00001	000000	0017	0417 0477 0698
DICT	00004	000000	0017	0094 0413 0454 0463 0486
DICTCNT	00002	000000	0017	
DICTENDG	00001	000000	0017	0426 0446 0964
DICTIND	00007	000000	0017	
DICTREC	00001	000000	0017	0366 0421 0942
DIST	00004	000000	0017	
DBMSK	00004	000000	0017	0068
DBNTSTR	00004	000000	0017	0235 0238 0541 0555 0557 0559 0561
DBMSK	00004	000000	0017	0431
DBSTR	00004	000000	0017	0564
E	00001	000000	0017	0184 0201 0205
ED#	00003	000000	0017	0627 0627 0627 0628 0643
ENDDA	00004	000000	0017	0731
ENDDB	00004	000000	0017	0845
ENDFI	00006	000000	0017	0445
ENDIN	00004	000000	0017	0788
ENDMTCH	00004	000000	0017	0606
ENDWELL	00004	000000	0017	0113 0163 0436 0442
ES#	00003	000000	0017	0624 0525 0626 0633
ETRAN	00004	000000	0017	0200
EXTTM	00004	000000	0017	0071

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
F	00001	000000	0021	0211
FIRSTIN	00004	000000	0021	0350
FNDC	00004	000000	0021	0598 0600
FNDD	00001	000000	0021	0596
FNDC	00004	000000	0021	0603
FNOLV	00002	000000	0021	0329
FREEDST	00001	000000	0021	0147
FREEWELL	00004	000000	0021	0119
FREIT	00002	000000	0021	0140
FSTHF	00004	000000	0021	0530
FTRAN	00004	000000	0021	0212 0215
G	00001	000000	0021	0222 0542 0548 0556 0560 0602 0949
GA	00004	000000	0021	0379 0382 0395
GB	00004	000000	0021	0365 0378 0381 0396 0398 0447
GBI	00004	000000	0021	0468
H	00001	000000	0021	
HALF	00002	000000	0021	0419 0420
HF	00001	000000	0021	
HILEN	00001	000000	0021	0477 0693
HIREC	00002	000000	0021	0477 0479 0500 0694
I	00001	000000	0021	
IED#	00004	000000	0021	0628 0641
IES#	00004	000000	0021	0625 0625 0639
IMB00128	00004	000000	0021	0256
IMB0013	00001	000000	0021	
IMB0013A	00001	000000	0021	0247
INAREA	00001	000000	0021	0098 0662
INARG	00004	000000	0021	0101 0102 0508 0621 0686
ING#	00004	000000	0021	0629 0629 0629 0630 0630 0647
INTD	00003	000000	0021	0285
INLRECL	00001	000000	0021	0805 0815
INNORM	00008	000000	0021	0104
INPUT	00004	000000	0021	0092 0097
INST	00004	000000	0021	
ISENDG	00004	000000	0021	0575
ISMTCH	00004	000000	0021	0588 0616
J	00001	000000	0021	0554 0558 0560 0947 0948 0949
K	00001	000000	0021	
KF	00001	000000	0021	0183
L	00001	000000	0021	0544 0548 0552 0554 0560 0947 0949
LASTIN	00004	000000	0021	0159 0347 0348
LASTTEST	00004	000000	0021	0107 0107 0133 0148 0158
LASTTMC	00002	000000	0021	0584 0587
LASTTMC1	00002	000000	0021	0585
LASTTMC2	00002	000000	0021	0524 0576 0582 0585
LASTTMC3	00002	000000	0021	0236 0239 0509 0513 0542 0544 0546 0548 0550 0552 0554 0556 0558 0560 0562
LASTTMC4	00002	000000	0021	0563 0576 0587 0589 0595 0597 0599 0602
LASTTMC5	00002	000000	0021	0139 0313 0322 0323 0328 0333 0342 0351 0937
LEVEL	00001	000000	0021	
LOOKLV	00004	000000	0021	0332
LOOPMSK	00004	000000	0021	0074
LOOPSTR	00004	000000	0021	0570
LSTMSK	00001	000000	0021	0528 0531 0533
MASK	00004	000000	0021	0572
MATCH	00004	000000	0021	0108 0108 0131 0171 0323 0325 0363
MATCHWEL	00004	000000	0021	0117
MURINP	00001	000000	0021	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
MORSTR	00004	00A75E	0562	0547 0553
MOVFN	00006	00A3CC	0311	0297
MOVFUN	00006	00A3C6	0310	0284
MS1	00014	00A85D	0689	0688
MS2	00006	00A86C	0691	0690
MTCENDG	00001	00A888	0649	0132 0364 0506 0615
MVCNOR	00006	00A832	0620	0526
MVDENT	00006	00A5F6	0460	0343
MVDIC	00006	00A894	0698	0402 0411
MVLV	00006	00A41C	0333	0320
N	00001	008000	0016	
NEXTWELL	00004	00A140	0133	0118 0130
NDFREE	00002	00A168	0146	0142
NOPREV	00002	00A182	0154	0150
NORF	00002	00AEF4	0335	0004
NORTA	00016	00AA18	0677	0532 0619 0620
NOTENDG	00006	00A794	0576	0581
NOTENG	00004	00A136	0131	0128
NOTENG2	00004	00A48C	0363	0360
NOTNEW	00001	00A3AA	0300	0289 0291
NUMSTRKS	00001	000008	0041	0657 0660 0661 0677 0678
O	00001	002000	0018	0184 0186 0197 0207
OKMA	00004	00A402	0326	0324
OKMICH	00004	00A344	0273	0174 0263 0271
OKTRAN	00004	00A31E	0264	0261
OUTENDG	00001	00A8E8	0665	0287 0299
OUTFUN	00001	00A8ED	0667	0296 0301 0310
OUTID	00003	00A8E8	0664	0285
OUTLRECL	00001	0000C8	0040	0667 0929
OUTLI	00001	00A8EC	0666	0286
OUTPUT	00004	00A0CC	0883	0080 0304
OUTREC	00004	00A8E4	0663	0301 0302 0305
P	00001	000000	0012	
PENDWEL	00006	00A1A2	0144	0161
PF	00001	000008	0035	
PREJUAL	00004	00A302	0312	0141 0169 0336
PREWELL	00004	00A894	0652	0165 0337 0424
PREWLEN	00004	00A898	0653	0338 0422
PROCDIC	00004	00A55C	0417	0408 0478 0481 0502
Q	00001	000080	0039	
R	00001	010000	0015	
READICT	00004	00A496	0365	0170 0356 0362 0458 0469 0470 0476
READICTM	00004	00A5FC	0461	0103
READIN	00004	00A086	0397	0274
READSW	00004	00A000	0103	0461
RF	00001	000001	0038	
S	00001	400000	0009	
S#	00002	00A870	0638	0624 0624 0625 0637
SAVIAREA	00024	00A8A8	0657	0101 0177 0539
SAV14	00004	00A8A4	0701	0276 0308
SB	00001	000080	0031	0548 0550 0552 0563
SC	00001	000080	0008	0039 0233 0241 0540 0678 0938
SCOR	00003	00AA28	0678	0102
SF	00001	000040	0032	0178
SKIPLV	00004	00A428	0336	0312
SPELT1	00001	000000	0005	0249

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
SPELT2	00001	000000	0005	0250
SPELT3	00001	000000	0005	0251
SPELT4	00001	000000	0005	0252
SPELT5	00001	000000	0005	
STEND#2	00001	00A020	0002	0968
STOWSW	00004	00A472	0356	0168 0352 0354 0357
STRAN	00004	00A1F2	0184	0179 0182
STRIPBG	00004	00A742	0556	0545
STRIPJB	00006	00A74A	0558	0551
STRIPJJ	00006	00A754	0560	0549
T	00001	200000	0010	
TABDENDG	00001	00A848	0627	0608
TABGENDG	00001	00A857	0629	0601
TABLEM	00001	00AA48	0684	0073 0075 0434 0439
TABNORM	00016	00A9FF	0674	0106
TABSENDG	00001	00A83E	0624	0605
TAKA	00002	00A48E	0376	0374
TAKB	00002	00A508	0393	0391
TESTC	00001	00A848	0685	0066 0072
TESTJ	00004	00A718	0546	0543
TESTWELL	00002	00A0F8	0112	0135 0153 0156
TEST#	00004	00A890	0651	
TF	00001	000020	0033	0183
THENDING	00001	00A88C	0660	0109 0132 0290 0293 0364
TM	00004	00A824	0617	0569
TRAN	00001	00A9C4	0670	0254 0258 0262 0266 0268 0269 0272 0939
TRANSIT	00004	00A206	0240	0234
TRANSTRP	00004	00A2CC	0238	0573
TRANTR	00006	00A33E	0272	0265
TRANSTRP	00004	00A708	0542	0237
ISTRQK	00004	00A9EC	0672	0177 0178 0183 0184 0186 0193 0195 0197 0201 0205 0207 0210 0211 0216 0217
TSTSTRP	00004	00A778	0569	0567
TTM	00004	00A07E	0072	0067
TTRAN	00004	00A28E	0223	0218 0221
U	00001	000800	0020	0184 0193 0195 0205 0210
UNLII	00008	00A9E2	0671	0175 0176
UNNORM	00015	00A9F0	0673	0104 0105 0106 0175 0620
UTRAN	00004	00A226	0197	0192 0194
V	00001	000008	0027	0217 0544
VTRAN	00004	00A25E	0211	0185 0187 0190 0196 0202 0206 0209
W	00001	040000	0013	
WELLAD	00004	00A8A0	0655	0110 0155 0162 0326 0327 0355
WF	00001	000004	0036	
WRITF	00002	00A34C	0275	0129 0273 0361
XLITDB	00008	00A985	0668	0259
YING#	00005	00A881	0646	0630 0645
Z	00001	000001	0030	0229 0544 0599

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LCC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	FOI JUN 67	4/14/69
J0A83E	0004080CC			624	TABSENDG DC	X'0',ALL(ES#-#),ALL(ES#-#),ALL(ES#-#),ALL(ES#-#)	
J0A843	040C0F0F			625	DC	ALL(ES#-#),ALL(ES#-#),ALL(IES#-#),ALL(IES#-#)	
J0A847	04000000			626	DC	ALL(ES#-#),X'000000'	
J0A848	001919001919			627	TABSENDG DC	X'0',ALL(ED#-#),ALL(ED#-#),X'0',ALL(ED#-#),ALL(ED#-#)	
J0A851	191400000000			628	DC	ALL(ED#-#),ALL(ED#-#),X'00000000'	
J0A857	0023230023			629	TABGENDG DC	X'0',ALL(ING#-#),ALL(ING#-#),X'0',ALL(ING#-#)	
J0A85C	2323100000000			630	DC	ALL(ING#-#),ALL(ING#-#),ALL(ING#-#),X'00000000'	
J0A863	03			631	DC	ALL(L'ES#)	
J0A864	5C5C7B			632	DC	C'ES#	
J0A867	03			633	DC	ALL(L'ES#)	
J0A868	C5E27B			634	ES#	C'ES#	
J0A868	03			635	DC	ALL(L'ES#)	
J0A86C	5FE27B			636	ES#	C'ES#	
J0A86F	02			637	DC	ALL(L'ES#)	
J0A870	E27B			638	ES#	C'ES#	
J0A872	04			639	DC	ALL(L'IES#)	
J0A873	L9C5E27B			640	IES#	C'IES#	
J0A877	04			641	DC	ALL(L'ED#)	
J0A878	C9C5C47B			642	ED#	C'ED#	
J0A87C	03			643	DC	ALL(L'ED#)	
J0A87D	C5C47B			644	ED#	C'ED#	
J0A880	05			645	DC	ALL(L'YING#)	
J0A881	E8C9D5C77B			646	YING#	C'YING#	
J0A886	04			647	DC	ALL(L'ING#)	
J0A887	C9D5C77B			648	ING#	C'ING#	
J0A888	00			649	MTCHENDG DC	X'0'	
J0A88C	FF			650	THENDING DC	X'FF'	
J0A88D	000000						
J0A890	00000000			651	TEST6 DC	F'0'	FOR TEST
J0A894	00000000			652	PREWELL DC	F'0'	
J0A898	00000000			653	PREWLEN DC	F'0'	
J0A89C	00000000			654	LASTTEST DC	F'0'	
J0A8A0	00000000			655	WELLAD DC	F'0'	
J0A8A4	00000000			656	LASTIN DC	F'0'	
J0A8A8	4040404040404040			657	SAVIAREA DC	CL(NUMSTRKS*3)'	
J0A8C0				658	INAREA EQU	*	
J0A8C0				659	INID DS	CL3'	
J0A8C3				660	INARG DS	CL(NUMSTRKS*3)'	
J0A8D8				661	INNORM DS	CL(NUMSTRKS)'	
J00023				662	INLRECL EQU	=INAREA	
J0A8E3	00						
J0A8E4	00000000			663	OUTREC DC	F'0'	
J0A8E8	404040			664	OUTID DC	CL3'	
J0A8E8	40			665	OUTENDG DC	C'	
J0A8EC	40			666	OUTL1 DC	C'	
J0A8ED				667	OUTFUN DS	(OUTLRECLJC	
J0A9B5	4040404040404040			668	XLIT0B DC	CL8'	
J0A9B0	F0030000000000			669	DC	X'F0030000000000'	
J0A9C4	4040404040404040			670	TRAN DC	30C'	
J0A9E2				671	UNLIF DS	CL8'	
J0A9EC				672	ESTROK DS	F	
J0A9F0				673	UNNORM DS	CL15'	
J0A9FF	8884828148444241			674	TABNORM DC	X'88848281484442412824222118141211'	
J0A9UF	00						
J0A910	0000			675	HALF DC	H'0'	
J0A912	0000						

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LCC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	FOI JUN 67	4/14/69
J0A914	00000000			676	WATCH DC	F'0'	
J0A918				677	NORTA DS	CL(NUMSTRKS*2)'	
J0A928	0000800000000000			678	SCOR DC	(NUMSTRKS*1AL3(SC)	
J0A940				679	US	OF	
J0A940	0000			680	LASTRWCD DC	H'0'	
J0A942	0000			681	LASTTWCI DC	H'0'	
J0A944	0000			682	LASTRWGD DC	H'0'	
J0A946	0000			683	LASTTWGI DC	H'0'	
J0A948				684	TABLEM DS	256C	
J0A948	40			685	TESTG DC	C'	
J0A949	000000						
J0A94C	0000A8C300000018			686	INST DC	A(INARG,24)	
J0A954	0000000000000000			687	LIST DC	A(0,0)	
J0A95C	0E			688	DC	ALL(L'M61)	
J0A95D	C6D6E4D5C440C9D5			689	MS1 DC	C'FOUND IN WELL'	
J0A968	06			690	DC	ALL(L'M52)	
J0A96C	C6D6E4D5C440			691	MS2 DC	C'FOUND	
J0A972	40			692	LSTMSK DC	C'	
J0A973	0011000000000000			693	WIREC DC	AL2(HILEN),XL9'0',X'0301FFFFFFFF'	
J00011				694	HILEN EQU	=HIREC	
J0A984	0500 2002 4002 00002 00002			695	CLCAB1 CLC	2(0,2),2(4)	
J0A98A	0500 2000 4000 00000 00000			696	CLCAB CLC	0(0,2),0(4)	
J0A990	9500 C850	0A8AA		697	CL1A8 CL1	AL1,0	
J0A994	0200 C851 1000 0A8AB 00000			698	MVDIC MVC	DICHOLO(0),0(1)	
J0A99A	0000						
J0A99C	00000000			699	AREC DC	F'0'	
J0A9A0	00000000			700	BREC DC	F'0'	
J0A9A4	00000000			701	SAV14 DC	F'0'	
J0A9A8	00			702	AL2 DC	ALL(0)	
J0A9A9	00			703	BL2 DC	ALL(0)	
J0A9AA	00			704	AL1 DC	X'0'	
J0A9AB				705	DICHOLO DS	256C	
				706	ADICT DCB	DDNAME=ADICT,DSORG=PS,MACRF=GL,RECFM=VB,LRECL=150,	X
						SYNAD=SYNAD,EOAD=ENDAD	
				707		*,*** IH8063 DDNAME SHORT-PADDED TO 8 CHAR	
				708	INPUT DCB	DSORG=PS,MACRF=GM,LRECL=INLRECL,BLKSIZE=50*INLRECL,	X
						SYNAD=SYNAD,RECFM=FB,EOAD=ENDIN,EROPT=ACC,DDNAME=INPU	
				764		*,*** IH8063 DDNAME SHORT-PADDED TO 8 CHAR	
				820	DICT DCB	DDNAME=DICT,DSORG=PS,MACRF=GL,RECFM=VB,LRECL=150,	X
						SYNAD=SYNAD,EOAD=ENDAD	
				821		*,*** IH8063 DDNAME SHORT-PADDED TO 8 CHAR	
				877	OUTPUT DCB	DSORG=PS,MACRF=PM,LRECL=OUTLRECL,BLKSIZE=3600,	X
						RECFM=VB,DDNAME=OUTPU	
						*,*** IH8063 DDNAME SHORT-PADDED TO 8 CHAR	
J0A9E2C				878		200C	
J0A9F4	0CFF			935	NORF DC	X'0DFF'	
J0A9F8				936	LTORG		
J0A9F8	0000JAE2C			937		=A(LEVEL)	
J0A9FC	00000080			938		=A(ISC)	
J0A9FD	0000A9C4			939		=A(TRAN)	
J0A9FE	00000000			940		=V(SPELT5)	
J0A9F8	00000000			941		=A(DBENTRY-DBLOCK)	
J0A9FC	00000008			942		=A(DICENTRY-DICTREG-3)	
J0A9FD	000000FF			943		=A(X'FF')	
J0A9FE	FFFFFFFF			944		=F'-1'	
J0A9F8	0000000F			945		=A(X'F')	

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00AF1C	065C5C5C5C5C			946	=X'065C5C5C5C5C'
00AF22	FEDF			947	=AL2(X'FFFF'-J-L)
00AF24	FEBF			948	=AL2(X'FFFF'-J-B)
00AF26	FEBF			949	=AL2(X'FFFF'-J-B-L-G)
000000				950	DBLOCK DSECT
000000	00000000			951	DBCHAIN DC F'0'
000004	0000			952	DBLEN DC H'0'
000006				953	DBENTRY EQU *
000006				954	DBMSK DS CL2
000008				955	DBENDG DS C
000009				956	DBL1 DS C
00000A				957	DBL2 DS C
00000B				958	DBARG EQU *
00000C				959	DS F
000000				960	DICTREC DSECT
000000	0000			961	DICTCNT DC H'0'
000002	0000			962	DC H'0'
000004	40			963	DICTENDG DC C'
000004				964	OMG DICTENDG
000004	404040404040			965	DICTIND DC CL7'
00000B				966	DICENTRY EQU *
00000C				967	DS F
00A020				968	END STENO#2

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ST#2

RELOCATION DICTIONARY

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POS.ID	REL.ID	FLAG9	ADDRESS
01	01	08	00A095
01	01	08	00A0A1
01	01	08	00A0AD
01	01	08	00A0B1
01	01	08	00A2F0
01	01	08	00A640
01	01	0C	00AB4C
01	01	08	00ACCD
01	01	08	00AD2D
01	01	08	00AD8D
01	01	0C	0CAEF8
01	01	0C	0CAF00
01	02	0C	00A2EC
01	03	0C	00A2F0
01	04	0C	00A2F4
01	05	0C	00A2F8
01	06	1C	00AF04
01	07	0C	00ACE4
01	07	0C	00AD44
01	07	0C	00ADA4
01	08	1C	00A2E4

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
00A5CF	95C4 1004	00004		446	CLI DICTENDG,C'D'
00A5D2	4770 C4E8		0A542	447	BNE GB
				448	GET ADICT
00A5E0	5010 C842		0A89C	452	ST 1,AREC
				453	GET DICT
00A5EE	5010 C846		0A8A0	457	ST 1,BREC
00A5F2	47F0 C43C		0A496	458	B READICT
				459	DROP 1
00A5F6	0200 3006 6000 00006	0000J		460	MVDBENT MVC DBENTRY(01,016)
00A5FC	9200 C077	0A0D1		461	READICTM MVI READSW+1,X'0'
				462	GET DICT
00A60A	5010 C846		0A8A0	466	ST 1,BREC
00A60E	9110 C082	0A0DC		467	TM ADICT+48,X'10'
00A612	4710 C5C4		0A01E	468	BO GB1
00A616	92F0 C43D	0A497		469	MVI READICT+1,X'F0'
00A61A	47F0 C43C		0A496	470	B READICT
				471	GB1 GET ADICT
00A628	5010 C842		0A89C	475	ST 1,AREC
00A62C	47F0 C43C		0A496	476	B READICT
00A630	0210 C851 C819 0A8A8		0A873	477	ENDFI MVC DICHOLO(HILEN),HIREC
00A636	47F0 C502		0A55C	478	B PROCDIC
00A63A	4110 C819		0A873	479	ENDDA LA 1,HIREC
00A63E	5010 C842		0A89C	480	ST 1,AREC
00A642	47F0 C502		0A55C	481	B PROCDIC
				482	ENDIN CLOSE (DICT,LEAVE)
				488	\$RETURN
00A674	4110 C819		0A873	500	ENDU8 LA 1,HIREC
00A678	5010 C846		0A8A0	501	ST 1,BREC
00A67C	47F0 C502		0A55C	502	B PROCDIC

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SI#2 COMP ROUTINE --- CHECKS MATCH,EQUAL,LU,HI

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
000006				504	USING DBENTRY,1
00A680	1844			505	COMP SR 4,4
00A682	92FF C831	0A888		506	MVI MICHENDG,X'FF'
00A686	4340 1003		00009	507	IC 4,DBL1
00A68A	41F4 C867		0A8C1	508	LA 15,INARG-2(4)
00A68E	0201 C9EC F000 0A446	00000		509	MVC LASTTWOI,0(15)
00A694	0401 F000 1000 00000	00006		510	NC 0(2,15),DBMSK
00A69A	0640			511	BCTR 4,0
00A69C	4440 C7DE	0A838		512	EX 4,CLC
00A6A0	0201 F000 C9EC 00000	0A446		513	MVC 0(2,15),LASTTWOI
00A6A6	41F0 0008		00008	514	LA 15,8
00A6AA	074E			515	BCR 4,14
00A6AC	41F0 000C		0000C	516	LA 15,12
00A6B0	072E			517	BCR 2,14
00A6B2	1855			518	SR 5,5
00A6B4	4350 1004		0000A	519	IC 5,DBL2
00A6B8	0650			520	BCTR 5,0
00A6BA	0640			521	BCTR 4,0
00A6BC	0640			522	BCTR 4,0
00A6BE	4164 1006		0000C	523	LA 6,DBARG+1(4)
00A6C2	0201 C9EA 6000 0A446	00000		524	MVC LASTTWOI,0(16)
00A6C8	4176 0002		00002	525	LA 7,2(6)
00A6CC	4450 C7D8		0A832	526	EX 5,MVCNDR
00A6D0	1A65			527	AR 6,5
00A6D2	9200 C818	0A872		528	MVI LSTMSK,X'0'
00A6D6	9570 6002	00702		529	CLI 2(6),X'70'
00A6DA	4780 C688		0A6E2	530	BE FSTHF
00A6DE	92F0 C818	0A872		531	MVI LSTMSK,X'F0'
00A6E2	4165 998E		0A418	532	LA 6,NORTA(5)
00A6E6	0400 6000 C818 0000J	0A872		533	NC 0(1,6),LSTMSK
00A6EC	41F0 0004		00004	534	LA 15,4
00A6F0	4450 C7D2		0A82C	535	EX 5,ANDER
00A6F4	077E			536	BCR 7,14
00A6F6	1866			537	SR 6,6
00A6F8	4360 1003		00009	538	IC 6,DBL1
00A6FC	4166 C840		0A8A7	539	LA 6,SAVIAAREA-1(6)
00A700	9180 6000		0000D	540	TM 0(6),SC
00A704	47E0 C72B		0A788	541	BNO DONTSTRP
00A708	9150 C9E0	0A447		542	TRNSTRIP TM LASTTWOI+1,8+G
00A70C	47E0 C68E		0A718	543	BNO TESTJ
00A710	912F C9E0	0A447		544	TM LASTTWOI+L,L+V+C+D+Z
00A714	4780 C6E8		0A742	545	BZ STRIPBG
00A718	9101 C9EC	0A446		546	TM LASTTWOI,1 *** THIS IS A J
00A71C	47E0 C704		0A75E	547	BNO MOKSTR
00A720	95F0 C9E0	0A447		548	CLI LASTTWOI+1,8+L+G+SB
00A724	4780 C6FA		0A754	549	BE STRIPJJ
00A728	95C0 C9E0	0A447		550	CLI LASTTWOI+1,8+SB
00A72C	4780 C6F0		0A74A	551	BE STRIPJB
00A730	95A0 C9E0	0A447		552	CLI LASTTWOI+1,L+SB
00A734	4770 C704		0A75E	553	BNE MURSTR
00A738	0401 C9EC CEC8 0A446	0A872		554	NC LASTTWOI,=AL2(X'FFFF'-J-L)
00A73E	47F0 C72E		0A788	555	B DONTSTRP
00A742	94AF C9E0	0A447		556	STRIPBG NI LASTTWOI+L,X'FF'-8-G
00A746	47F0 C72E		0A788	557	B DONTSTRP
00A74A	0401 C9EC CEC8 0A446	0A872		558	STRIPJB NC LASTTWOI,=AL2(X'FFFF'-J-B)
00A750	47F0 C72E		0A788	559	B DONTSTRP

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
J0A754	D401 C9EC	CECC	0AA46	0AF26	560 STRIPJJ NC LASTTWOI,=AL2(X'FFFF'-J-B-L-G)
J0A75A	47F0 C72B		0A788	561	DONTSTRP
J0A75E	4170 C9ED		0AA47	562	MORSTR LA 7,LASTTWOI+1
J0A762	917F C9ED		0AA47	563	TM LASTTWOI+1,X'FF'-SB
J0A766	4770 C712		0A76C	564	BNZ DOSTRP
J0A76A	0670			565	BCTR 7,0
J0A76C	4160 0001		00001	566	DOSTRP LA 6,1
J0A770	47F0 C71E		0A778	567	B FSTSTRP
J0A774	8960 0001		00001	568	LOOPSTRP SLL 6,1
J0A778	4460 C7CA		0A824	569	TSTSTRP EX 6,1M
J0A77C	47E0 C71A		0A774	570	BNZ LOOPSTRP
J0A780	5760 C6B6		0AF10	571	X 6,=A(X'FF')
J0A784	4460 C7CE		0A828	572	EX 6,MASK
J0A788	4700 C272		0A2CC	573	DONTSTRP NOP
J0A78C	95F0 1002	00008		574	CLI DBENDG,6*0*
J0A790	4770 C748		0A7A2	575	BNE ISENOG
J0A794	0501 C9EA	C9EC	0AA44	0AA46	576 NOTENDG CLC LASTTWOI,LASTTWOI
J0A79A	077E			577	BGR 7,14
J0A79C	41F0 0000		00000	578	ISMTCH LA 15,0
J0A7A0	07FE			579	BR 14
J0A7A2	91F0 1002	00008		580	ISENOG IM DBENDG,X*F0*
J0A7A6	47E0 C73A		0A794	581	BNZ NOTENDG
J0A7AA	5860 C9EA		0AA44	582	L 6,LASTTWOI
J0A7AE	5760 C6BA		0AF14	583	X 6,=F'-1*
J0A7B2	5060 C9EA		0AA40	584	ST 6,LASTTWOI
J0A7B6	0401 C9EB	C9EA	0AA42	0AA44	585 NC LASTTWOI,LASTTWOI
J0A7BC	077E			586	BGR 7,14
J0A7BE	0401 C9EC	C9EA	0AA46	0AA40	587 NC LASTTWOI,LASTTWOI
J0A7C4	4780 C742		0A79C	588	BZ ISMTCH
J0A7C8	91FF C9EC		0AA46	589	TM LASTTWOI,X'FF'
J0A7CC	077E			590	BGR 7,14
J0A7CE	1866			591	** OTHERWISE ENDING CHARACTERS ARE IN LASTTWOI+1
J0A7D0	4360 1002		00008	592	SR 6,6
J0A7D4	5460 C6BE		0AF18	593	IC 6,DBENDG
J0A7D8	9502 C9ED	0AA47		594	N 6,=A(X'F')
J0A7DC	4780 C7AC		0A806	595	CLI LASTTWOI+1,D
J0A7E0	9504 C9ED	0AA47		596	BE FNDD
J0A7E4	4780 C7A4		0A7FE	597	CLI LASTTWOI+1,C
J0A7E8	9501 C9ED	0AA47		598	BE FNDC
J0A7EC	4780 C7A4		0A7FE	599	CLI LASTTWOI+1,Z
J0A7F0	4366 C7FD		0A857	600	BE FNDC
J0A7F4	9510 C9ED	0AA47		601	IC 6,TABSENDG(6)
J0A7F8	4780 C7B0		0A80A	602	CLI LASTTWOI+1,G
J0A7FC	07FE			603	BE FNDC
J0A7FE	4366 C7E4		0A83E	604	BR 14
J0A802	47F0 C7C2		0A81C	605	IC 6,TABSENDG(6)
J0A806				606	B ENDMTCH
J0A808				607	FNDD EQU *
J0A80C	4366 C7F1		0A84B	608	IC 6,TABSENDG(6)
J0A80E	95F3 1002	00008		609	CLI DBENDG,X*F3*
J0A810	95F8 1002	00008		610	BGR 8,14
J0A814	078E			611	CLI DBENDG,X*F8*
J0A816	95F9 1002	00008		612	BGR 8,14
J0A81A	078E			613	CLI DBENDG,X*F9*
J0A81C	4260 C831		0A88B	614	BGR 8,14
				615	ENDMTCH STC 6,MTCHENDG

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT
J0A820	47F0 C742		0A79C	616	B ISMTCH
J0A824	9100 7000	00000		617	TM 0173,0
J0A828	9400 7000	00000		618	NI 0173,0
J0A82C	0400 C9BE	7000	0AA18	00000	619 ANDER NC MORTA(0),0(17)
J0A832	0200 C9BE	C996	0AA18	0A9F0	620 MVC MORTA(0),UNWORM
J0A838	0500 1005	C869	00008	0A8C3	621 CLC DBARG(0),INARG
				622	DROP 1

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