SY33-8555-1
File No. S370-36

Systems

DOS/VS
IPL and Job Control Logic

Program Numbers 5745-SC-IPL
5745-SC-JCL

Release 29

IBM

Second Edition (November 1973)

This is a major revision of, and obsoletes, SY33-8555-0. It includes changes to reflect the support for System/370 Model 115, the new devices 3340, 5425, 5203 and 3203, and other DOS/VS system enhancements.

This edition applies to Version 5, Release 29, of the IBM Disk Operating System/Virtual Storage, DOS/VS, and to all subsequent versions and editions until otherwise indicated in new editions or Technical Newsletters. Changes are continually made to the information herein. Before using this publication in connection with the operation of IBM systems, consult the IBM System/360 and System/370 Bibliography, GA22-6822, for the editions that are applicable and current.

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This Program Logic Manual (PLM) is a detailed guide to the IBM Disk Operating System IPL and Job Control programs. It supplements the program listings by providing descriptive text and flowcharts.

For overall system control logic description, this PLM is used with seven other PLMs:

- DOS/VS Supervisor Logic, SY33-8551.
- DOS/VS Error Recovery and Recording Transients, SY33-8552.
- DOS/VS Logical Transients, SY33-8553.
- DOS/VS Serviceability Aids, SY33-8554.
- DOS/VS Linkage Editor, SY33-8556.
- DOS/VS Librarian, SY33-8557.
- DOS/VS LIOCS Volume 1, Introduction and Imperative Macros, SY33-8559.

Prerequisite publications that will aid in the use of this manual are:

- IBM System/370 Principles of Operation, GA22-7000.
- DOS/VS System Control Statements, GC33-5376.
- OS/VS and DOS/VS Assembler Language, GC33-4010.

Publications related in subject matter to the eight system control PLMs are:

- Introduction to DOS/VS, GC33-5370.
- DOS/VS System Management Guide, GC33-5371.
- DOS/VS Data Management Guide, GC33-5372.
- DOS/VS Supervisor and I/O Macros, GC33-5373.
- DOS/VS System Generation, GC33-5377.
- DOS/VS Operating Procedures, GC33-5378.
- DOS/VS Messages, GC33-5379.

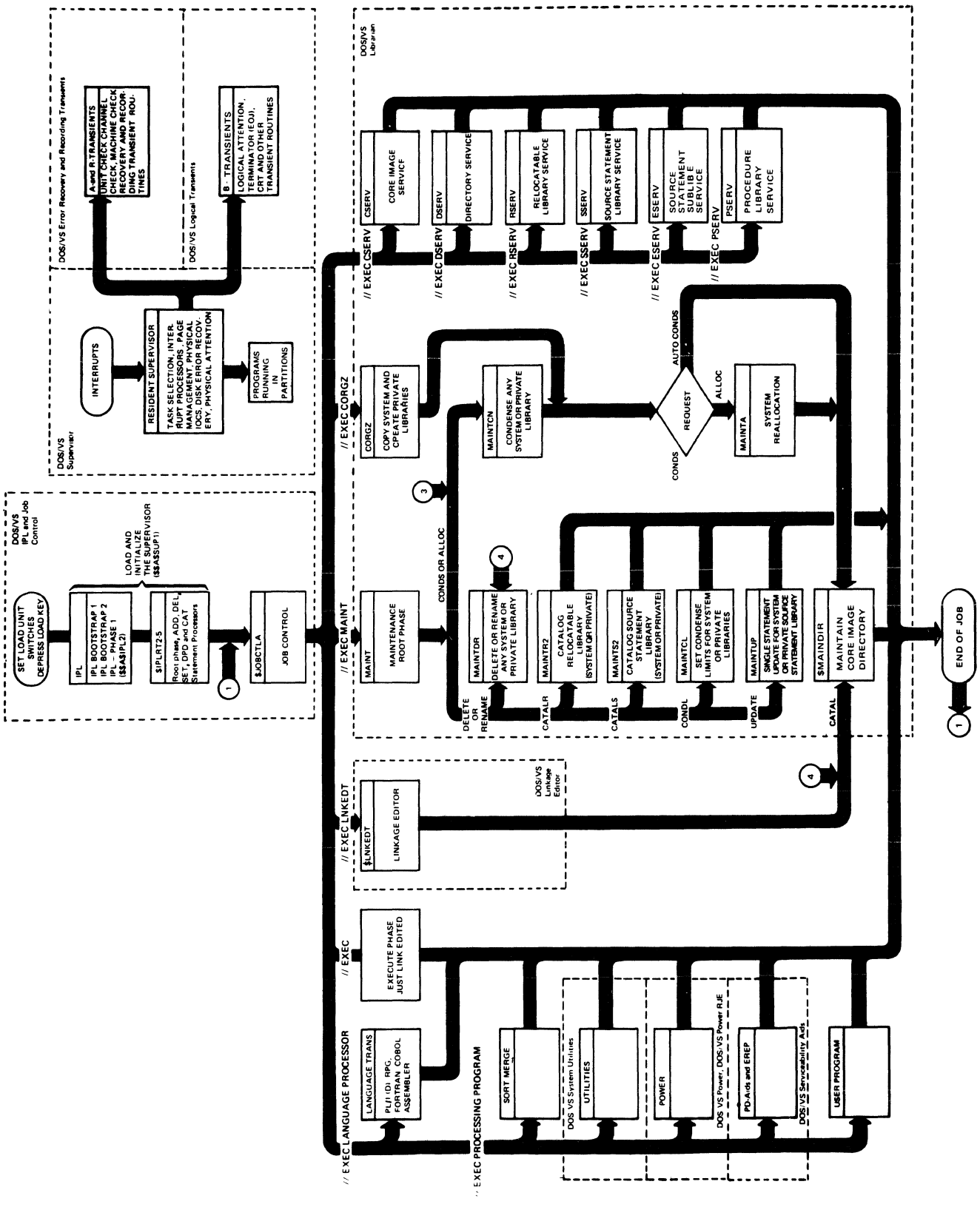
Titles and abstracts of other related publications are listed in the IBM System/360 and System/370 Bibliography, GA22-6822.

This manual consists of four major sections. The first section is an introduction to the IPL and Job Control programs. The next two sections are a discussion of contents of the IPL and Job Control phases. The last section of the manual, the appendixes, contains label lists, error messages, charts, and tables for use as references in analyzing program details.

The detailed flowcharts are identified by letters AA through ZZ. Numerals such as 00 for the program level flowcharts identify the more general flowcharts.

FIGURES

Chart 00. Disk Operating System/Virtual Storage Program Flow



INITIAL PROGRAM LOAD (IPL)

The IPL program must be executed each time it is necessary to load a new supervisor, to change the channel and unit assignment for SYSRES, SYSVIS or SYSCAT, or to change the contents of the Time-of-Day clock (if supported), and when the system is powered up. The IPL program:

- Operates in the supervisor mode.
- Loads the supervisor from SYSRES.
- Prepares the system for full EC (extended control) mode operation.
- Adds or deletes requested devices to the supervisor PUB table.
- Sets date and, with TOD support, zone values in the communication region(s) if required. Changes, at the request of the operator, the contents of the TOD clock (if supported).
- Builds the PUB2 table.
- Assigns SYSCAT if the CAT command is included (VSAM only).
- Assigns, formats, opens or reopens the page data set (SYSVIS) depending upon the operands in the DPD command.
- Places the system in the problem mode.
- Exits to EOJ when it is finished.

Additional information is supplied in the section, IPL Program.

JOB CONTROL PROGRAM ($JOBCTLA-$JOBCTLN)

The job control program provides job-to-job transition for all programs, background and foreground.

This program also prepares job steps for execution. (One or more programs can be executed within a single job. Each such execution is called a job step.)

On the basis of information provided in job control statements, the job control program:

- Prepares the system for execution of programs.
- Assigns physical device addresses to logical units.
- Includes cataloged procedures and procedure modifier statements.
- Sets up fields in the communication region(s).
- Edits and stores volume and file label information.
- Prepares the system for restarting checkpointed programs.
- Clears the partition to binary zeros between job steps, (if job step is in real mode), otherwise it causes the pages to be cleared as they are used.

The job control program is executed in the virtual partition of the partition it is preparing. For additional information, refer to the section, Job Control Program.

$$A$IPL1 AND $$A$IPL2, CHART 01

Before the supervisor is loaded and the IPL commands processed the system must be prepared by a special stand-alone program. This program consists of two phases:

- $$A$IPL1 (a 64-byte bootstrap routine), and
- $$A$IPL2 (less than 4096 bytes).

The $$A$IPL1 bootstrap program is located on SYSRES at 00 00 1 (CC HH R). The operator sets the channel and unit of SYSRES in the load unit switches (keyboard if model 115 or 125) and presses the load key (ENTER key if model 115 or 125). The microprogram reads the first record (24 bytes) from SYSRES into real storage starting at real storage location 00. This 24-byte record consists of a PSW starting at location 0 and two chained CCWs starting at location 8.

The microprogram executes the first CCW at location 8, which reads in the next 40 bytes (3 more chained CCWs and a seek address) from SYSRES (cylinder 0, track 0, record 2). The second CCW is a seek for the $$A$IPL2 program on SYSRES (cylinder 0, track 01, record 5). The next three CCWs are a search, transfer in channel, and read for cylinder 0, track 01, record 5 to load the $$A$IPL2 program. Control is transferred to the $$A$IPL2 program by loading the PSW at location 0.

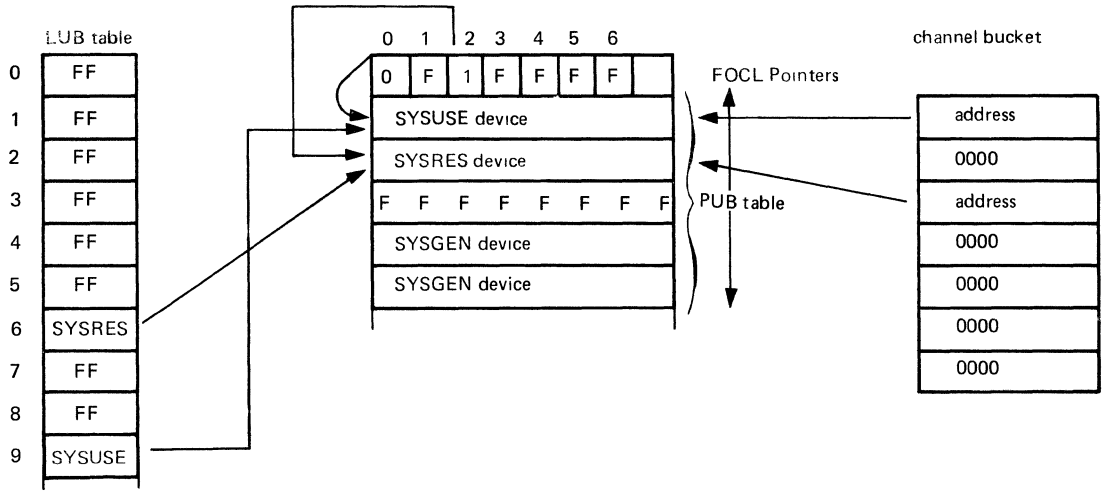
$$A$IPL2 clears real storage from its own end to the end of real storage. A program check is forced and the program check new PSW returns control to the $$A$IPL2 program. The storage address at which the addressing exception occurs is used as the address of the end-of-real-storage. Soft machine checks are accepted during the clearing of real storage.

After real storage has been cleared, the wait state is entered, at which time the operator can specify which supervisor is to be used. If the external interrupt button is pressed, the default supervisor will be loaded. If the request key on the console is hit, there will be a message on SYSLOG requesting to type in the name of the supervisor to be loaded. If the cardreader is used, the wanted supervisor name must be punched into the first card starting in column one.

The directory of the core image library is then searched for the disk address of the user-specified supervisor. The supervisor is read into storage starting at location 00. The storage protect key of the supervisor area is set to 0. The storage protect key of the problem program area is set to 1. The channel table containing the status of each channel is built. The SYSGEN I/O tables in the supervisor are moved to the beginning of the problem program area. These tables will be used by the $IPLRT phases to build the complete I/O tables. A 2-device system is built to be able to execute the $IPLRT phases.

After the supervisor has been loaded an SVC 33 is issued which transfers control to a temporary routine located in the copy buffer area of the supervisor. This routine (INITDAT) loads the control register and enables the DAT (Dynamic Address Translation) feature in the current PSW and in the SVC new PSW. It also determines if the end-of-storage address obtained when storage was cleared is the correct address to be used (if the value specified in RSIZE at system generation time is smaller than the actual size of real storage, the RSIZE value will be used and the excess real storage will be unused). If RSIZE was specified larger than the available real storage the page and page frame table entries for the excess are set to show that it is unusable.

Figure 1 shows an example of the I/O tables for a 2-device system built by $$A$IPL2.



Note: It is assumed that SYSRES is on channel 2 and that the communication device SYSUSE is on channel 0.

Figure 1. I/O Tables for Two-Device System

After the SYSGEN I/O tables have been moved, a PUB entry is made for SYSRES. The SYSRES LUB is assigned for this PUB. The system is put into the wait state and the operator has the option of selecting the communication device for IPL. If the desired communication device is:

1. A cardreader, and it is already assigned as SYSRDR, the operator presses the external interrupt key causing an external interrupt.

2. A cardreader, and it is not assigned as SYSRDR, the operator presses the start key on the reader causing an I/O interrupt (device end).

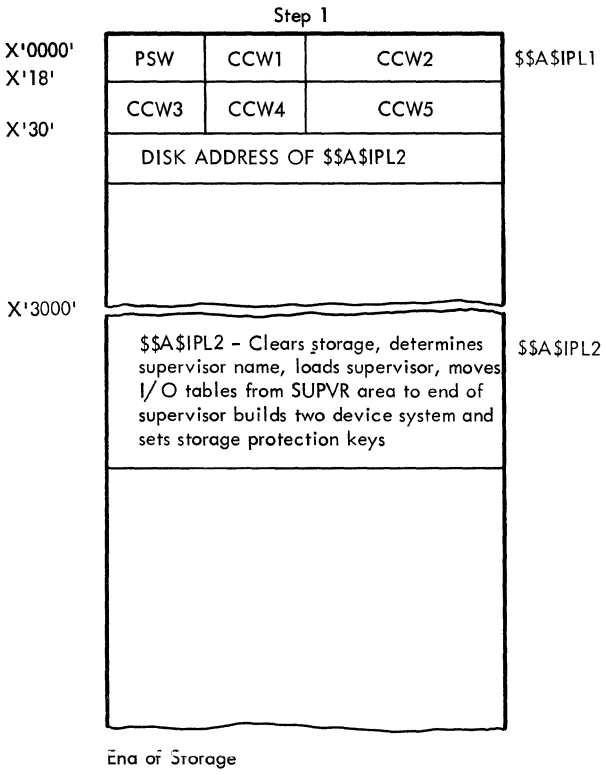
3. A console printer-keyboard, the operator presses the request key causing an I/O interrupt (attention).

After the operator has taken the appropriate action for choosing a communication device, a PUB entry for SYSUSE is made and the SYSUSE LUB is assigned for this PUB. The FOCL and the channel bucket are built for this 2-device system. This completes the building of the 2-device system for IPL.

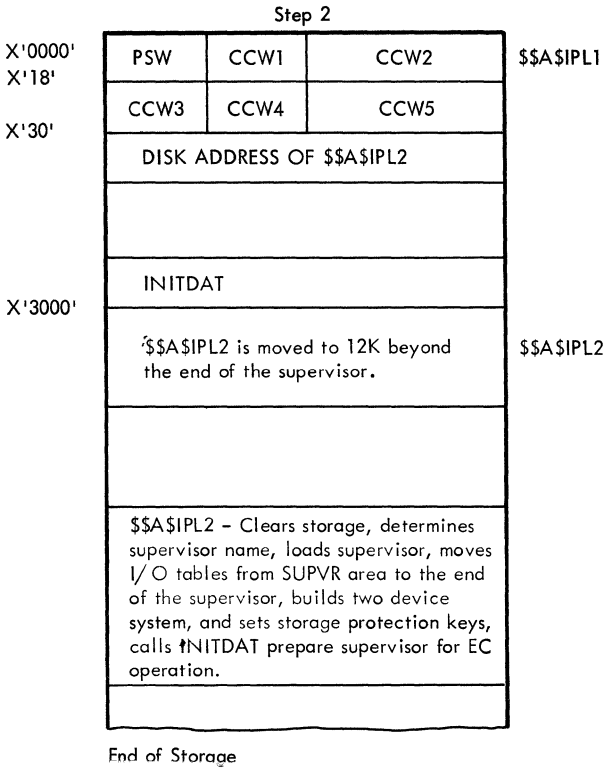
If a console printer-keyboard was used as communication device, an information message is given. This message contains the SYSRES device address, the SYSRES volume serial number, and the CPU identification.

The program enters the problem state and $IPLRT2 is loaded. Control is transferred to $IPLRT2.

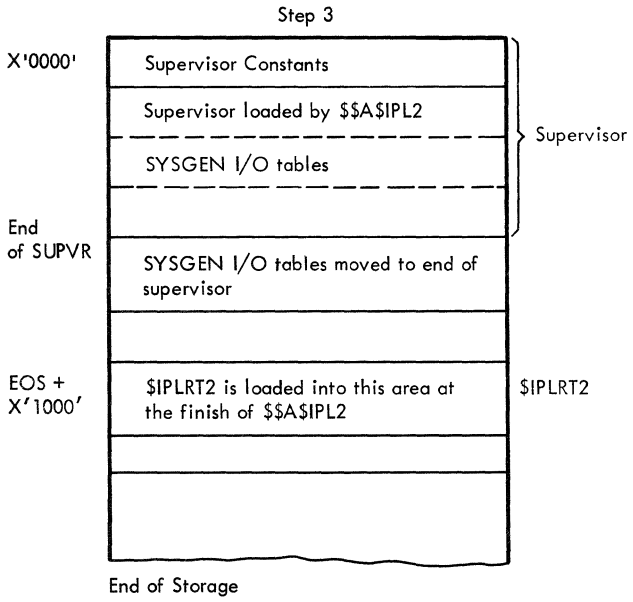
Figure 2 shows the storage layout during IPL.



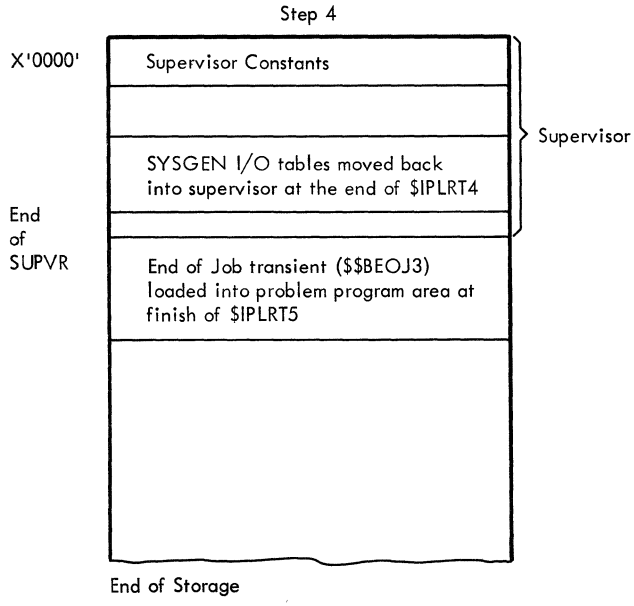
Step 1 - real storage map after $$A$IPL2 has been loaded.



Step 2 - real storage map after $$A$IPL2 has been moved.



Step 3 - real storage map after $$A$IPL2 has loaded the supervisor.



Step 4 - real storage map after $IPLRT5 has been executed.

Figure 2. IPL Real Stcrage Map

$IPLRT2, CHART 02

$IPLRT2 is the root phase of the program which completes system preparation and processes the IPL commands. It is loaded (by the $$A$IPL2 program) starting at location EOS (End-of-Supervisor) (see Figure 2, step 3).

$IPLRT2:

- Scans the LUB table entries in each partition and establishes partition ownership for each entry.
- Checks for TOD support. If TOD support is present, stores the TOD clock and, depending on the state of the clock, displays messages on SYSLOG or, if SYSRDR is the communication device, places them in lower storage. If the clock is in the 'set-state', displays the date, time-of-day and zone are on SYSLOG (if this is the communication device). A switch is set if the clock is in the 'error' or 'not-set' state.
- Checks for RMSR support. Finds the extended logout area and loads $$BCCHHR to build the load list.
- Monitors storage usage and indicates whether there is enough real storage available to have $IPLRT3, $IPLRT4, and $IPLRT5 in storage at the same time. When there is not enough real storage available, a switch is set, indicating that $IPLRT3, $IPLRT4, and $IPLRT5 will be separately loaded into the same area as needed.
- Contains the error subroutines to issue the error messages when necessary.
- Loads the appropriate phase(s) into real storage after the $IPLRT2 program. If the first command is a SET command, $IPLRT4 is loaded. If the first command read is a DEL or an ADD command and there is sufficient real storage available to allow both $IPLRT3 and $IPLRT4 to be loaded, both are loaded. If there is not sufficient real storage available to have $IPLRT4 loaded after $IPLRT3, each is loaded into the same area as it is needed. $IPLRT5 is loaded only after a DPD or CAT command is encountered. If there is enough room it is loaded after $IPLRT4, otherwise it is loaded after $IPLRT2.

The ADD, DEL, SET, CAT, and DPD commands are entered from the IPL communication device (SYSRDR or SYSLOG). The formats for these commands are described in Figure 3.

After a command is read, the operation code is evaluated and control is passed to the appropriate routine. If a CAT or DPD command is read before a SET command a message is issued asking for a SET command. The CAT or DPD command must then be reissued after the SET command has been processed.

$IPLRT3, CHART 03

$IPLRT3 is loaded and executed only when ADD or DEL commands are submitted.

$IPLRT3 does one or both of the following:

- Adds one or more devices to the system.
- Deletes one or more devices from the system.

Add Routine

The add routine ensures the device is not already present. It then determines where to add the PUB in the PUB table and moves all the PUB entries beyond this point down one PUB length to make room for the new PUB. The new PUB is then inserted in the area just vacated. The LUB table and FOCL pointers are updated to reflect the change in the PUB table and the routine returns to read another control statement.

Delete Routine

The delete routine first checks to see if the device to be deleted is in the PUB table and then determines the location in the PUB table of the PUB to be deleted. All PUBs beyond this point are moved up one PUB length overlaying the PUB to be deleted. The LUB table and FOCL pointers are updated to reflect this change. The routine returns to read another control statement.

$IPLRT4, CHART 03

$IPLRT4 is loaded by $IPLRT2 and executed for every IPL.

$IPLRT4:

- Sets the system date.
- Sets the system zone if required (if TOD supported).
- Resets the contents of the TOD clock, if required.

- Checks the channels for file-protect support for each device when DASDFP (DASD File Protect) option is specified during Supervisor generation.
- Scans the PUB table. If a 3203, 3211, or 5203 is found, $IPLRT4 loads $$BUFLDR.
- Checks for RMSR support and if present builds the PUB2 table.
- Checks whether RMS support has been generated for CPUs other than the 115 or 125. If not, IPL is terminated. For the models 115 and 125, checks for correct recording support and checks for hardware-recorded devices.
- Scans the PUB table. If a 3340 is found, $IPLRT4 loads $$ECARTR.

Set Routine

The set time of day routine determines the operand format of the SET command.

- No TOD support:
  The DATERT subroutine converts the month, day, and year to decimal. This information is then stored in the system date field of the communication region (displacement 79).
- TOD support:
  The DATIMERT subroutine converts the DATE, CLOCK, and ZONE specifications to a 64-bit binary value. This value represents the number of clock units (i.e., microseconds x 2^{12}) elapsed since January 1, 1900 at 0.00 a.m. GMT and is used to set the TOD clock. A GETIME macro is issued to obtain an automatic update of the midnight value in the supervisor.

The system assignments for SYSRES and the communication device (SYSRDR or SYSLOG) are checked and permanently assigned. The system I/O tables are moved from their temporary location in high real storage to their permanent location in the supervisor area. This move overlays the two-device IPL I/O tables that were built by $$A$IPL2.

$$ECARTR

$$ECARTR is loaded by $IPLRT4 and executed for every IPL whenever the 3340 is present in the system.

$$ECARTR:

- Checks those 3340 disk drives which area ready at IPL time and determines the size of the data modules.
- Updates the PUB entry according to the size of data module being used.

$IPLRT5, CHART 04

$IPLRT5 is loaded by $IPLRT2 and executed for every IPL.

$IPLRT5:

- Assigns the VSAM catalog, SYSCAT, to a physical unit (only if the CAT command is specified).
- Processes the DPD command.
- Calls the end-of-job transient to begin normal processing.

CAT Routine

The CAT command is an optional IPL command, which, if included, must follow the SET command. It is included only if a VSAM catalog is desired. If included $IPLRT5 assigns SYSCAT to the physical unit specified in the CAT command.

DPD Routine

The DPD command is the last command processed by IPL. It causes IPL to do the following:

- Assign the page data set, SYSVIS, to a physical unit.
- Open SYSVIS.
- Create a label for the page data set in the VTOC of the volume where it resides.
- Format the page data set if it has not been formatted or if it must be reformatted.
- If a VOLID was specified during supervisor generation or overridden in the DPD command, a check is made to see if the correct volume is mounted. If it is not a message is issued. If a VOLID has never been specified, no check is made for the correct volume.

The DPD command indicates the end of the IPL procedure. After it has been processed, the end-of-job transient is loaded to begin normal processing. If the supervisor contains teleprocessing support, $$BEOJ3 is fetched; otherwise $$BEOJ4 is fetched.

ADD - Add a Device to the PUB Table

Operation	Operand
ADD	X'cuu'[(k)],devicetype[,X'ss']

X'cuu' Channel and unit numbers in hexadecimal

k S, if the device is switchable (is physically attached to two adjacent channels). The designated channel is the lower of the two channels.

k 0-255 indicates the priority of the device, if the device cannot be switched. The highest priority is 0. If k is not given, a priority of 255 is assumed.

devicetype* (e.g.) = 2400T7 for 7-track, IBM 2400 Series Magnetic Tape Units.

X'ss' Device specifications used for tape mode. If device specifications are not specified, X'ss' has the following set values:

X'C0' for 9-track tape
X'90' for 7-track tape
X'00' for nontapes

If you specify X'C8' for an 800 BPI single-density 9-track tape drive, you will save time during the tape OPEN. X'00', X'01', X'02', and X'03' are invalid as X'ss' for magnetic tape. These four values are used to specify SADxxx requirements for IBM 2702 lines*. X'ss' is required for the IBM 1255, 1259, 1270**, 1275**, 1419, and 1419P device types. It specifies the external interrupt bit (in the old PSW) used by this device to indicate READ COMPLETE.
The specifications are:

X'01' PSW bit 31 X'08' PSW bit 28
X'02' PSW bit 30 X'10' PSW bit 27
X'04' PSW bit 29 X'20' PSW bit 26

*Device type codes and a complete list of density settings can be obtained from the Supervisor Logic PLM.

** This device is not available in the United States of America.

DEL - Delete a Device from PUB Table

Operation	Operand
DEL	X'cuu'

Where cuu is the channel and unit numbers, in hex, of the device to be deleted.

Figure 3. IPL Commands (Part 1 of 3)

SET - Set Date and Timer Reference (if Job Accounting or QTAM support, but no TOD support)

Operation	Operand
SET	[DATE=n1][,CLOCK=n2]

The entries in the operand represent the following:

DATE=n1 Sets the system date to the specified value. n1 has one of the following formats:

mm/dd/yy
dd/mm/yy

Where mm specifies the month, dd specifies the day, and yy specifies the year. The format used is that selected when the system was generated.

CLOCK=n2 Must be given at IPL time if Job Accounting is supported.
Sets the clock to the specified value, n2 has the following format:

hh/mm/ss

Where hh specifies hours (00-23), mm specifies minutes (00-59), and ss specifies seconds (00-59)

SET - Set Date, Time of Day and Zone (TOD support)

Operation	Operand
SET	[DATE=n1,CLOCK=n2][,ZONE=n3]

The entries in the operand represent the following:

DATE=n1 Sets the date fields to the specified value and alters the contents of the TOD clock to the value obtained by modifying the DATE and CLOCK values by the ZONE parameter.
n1 has one of the following formats:

mm/dd/yy
dd/mm/yy

Where mm specifies the month, dd specifies the day, and yy specifies the year. The format used is that selected when the system was generated.

CLOCK=n2 Must be present if DATE=n1 has been specified. It is used, in combination with the DATE and ZONE parameters, to alter the contents of the TOD clock.
n2 has the following format:

hh/mm/ss

Where hh specifies hours (00-23), mm specifies minutes (00-59), and ss specifies seconds (00-59).

ZONE = n3 Optional parameter. It overrides the value of the zone specified at system generation time.
n3 has one of the following formats:

EAST/hh/mm
WEST/hh/mm

Where hh specifies the number of hours (00 - 12) and mm the number of minutes (00 - 59) local time differs from Greenwich Mean Time. EAST specifies a geographical position east of, and WEST a geographical position west of Greenwich.

Figure 3. IPL Commands (Part 2 of 3)

CAT - Assign Logical Unit for VSAM Catalog

Operation	Operand	
CAT	UNIT=X'cuu'	IPL command

X'cuu' indicates the channel and unit number (in hexadecimal) of the device that contains the VSAM catalog. SYSCAT may only be assigned to a 2314, 2319,3330,3333 or 3340.

DPD - Define the Page Data Set

Operation	Operand	
DPD	[TYPE= N / F][,UNIT=X'cuu',CYL=xxx][,VOLID=xxxxxx]	IPL command

The operands of the DPD command may be given in any order.

TYPE=N — TYPE=N indicates that the page data set need not be formatted if it has already been formatted and the extent limits have not been changed.
If TYPE=N is specified but the page data set does not exist or the extent limits have been changed, TYPE=N is ignored and the page data set is formatted during IPL. In this case, the UNIT and CYL operands must either have been supplied during system generation, or they must be specified in the DPD command.

TYPE=F — TYPE=F indicates that the page data set is to be formatted during IPL. Formatting during IPL is required if the page data set is to be extended or if it is to be reallocated.

UNIT — UNIT=X'cuu' specifies the channel and unit number (in hexadecimal) of the device that is to contain the page data set. If UNIT is specified, CYL must also be specified. SYSVIS may only be assigned to a 2314, 2319,3330,3333 or 3340.

CYL — CYL=xxx specifies the sequential number of the cylinder, relative to zero, where the page data set is to begin. (The size of the page data set extent is calculated by the system.)
If CYL is specified, UNIT must also be specified.

VOLID — VOLID=xxxxxx identifies the volume serial number of the disk pack that contains the page data set. If this operand is omitted both during system generation and the DPD command, the volume serial number is not checked. In that case, however, files may be destroyed if the wrong volume is mounted.

Figure 3. IPL Commands (Part 3 of 3)

Chart 01. Initial Program Lcad ($$A$IPL1 and $$A$IPL2)

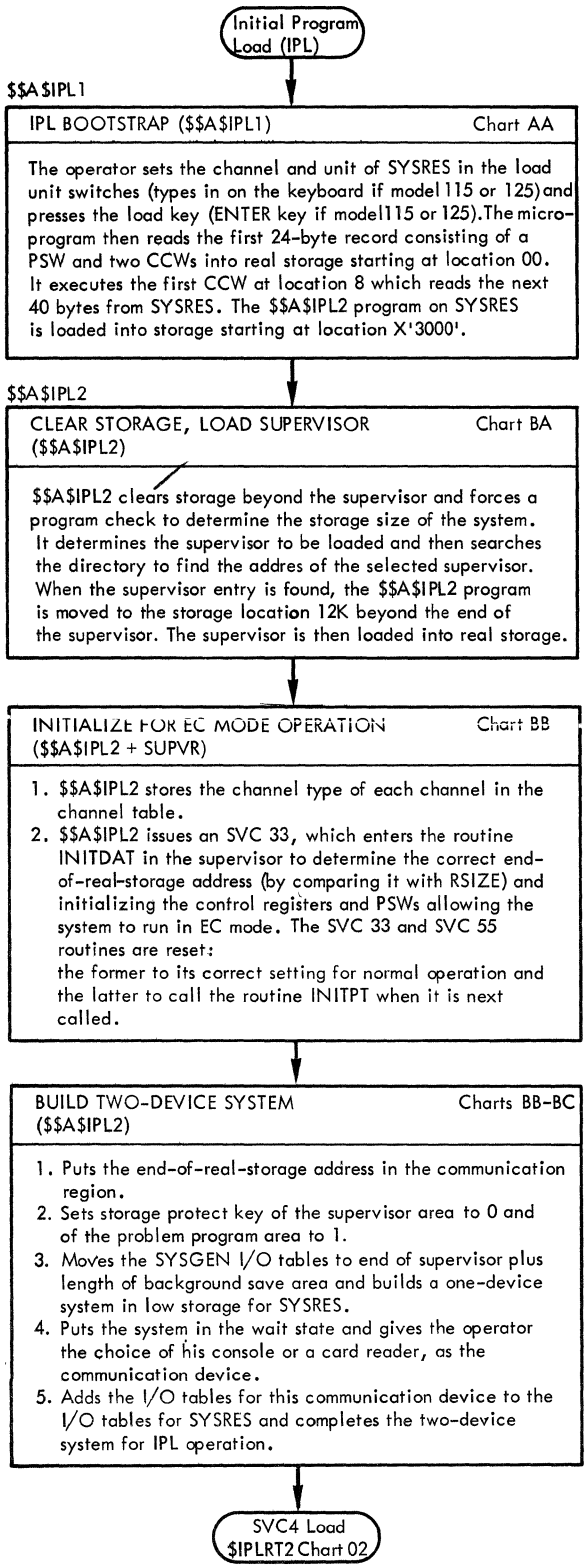


Chart 02. Initial Program Load ($IPLRT2)

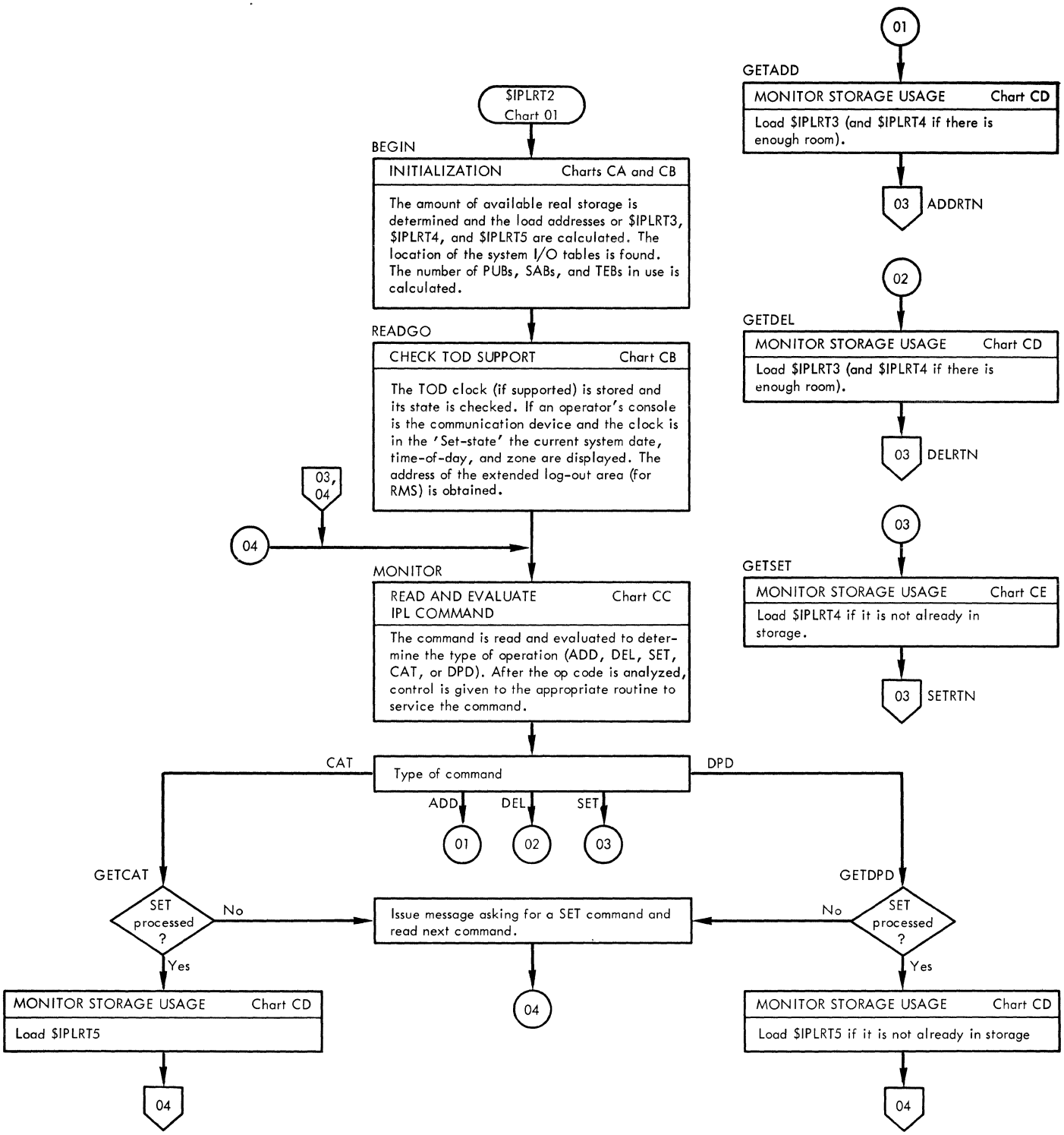


Chart 03. Initial Program Load ($IPLRT3 and $IPLRT4)

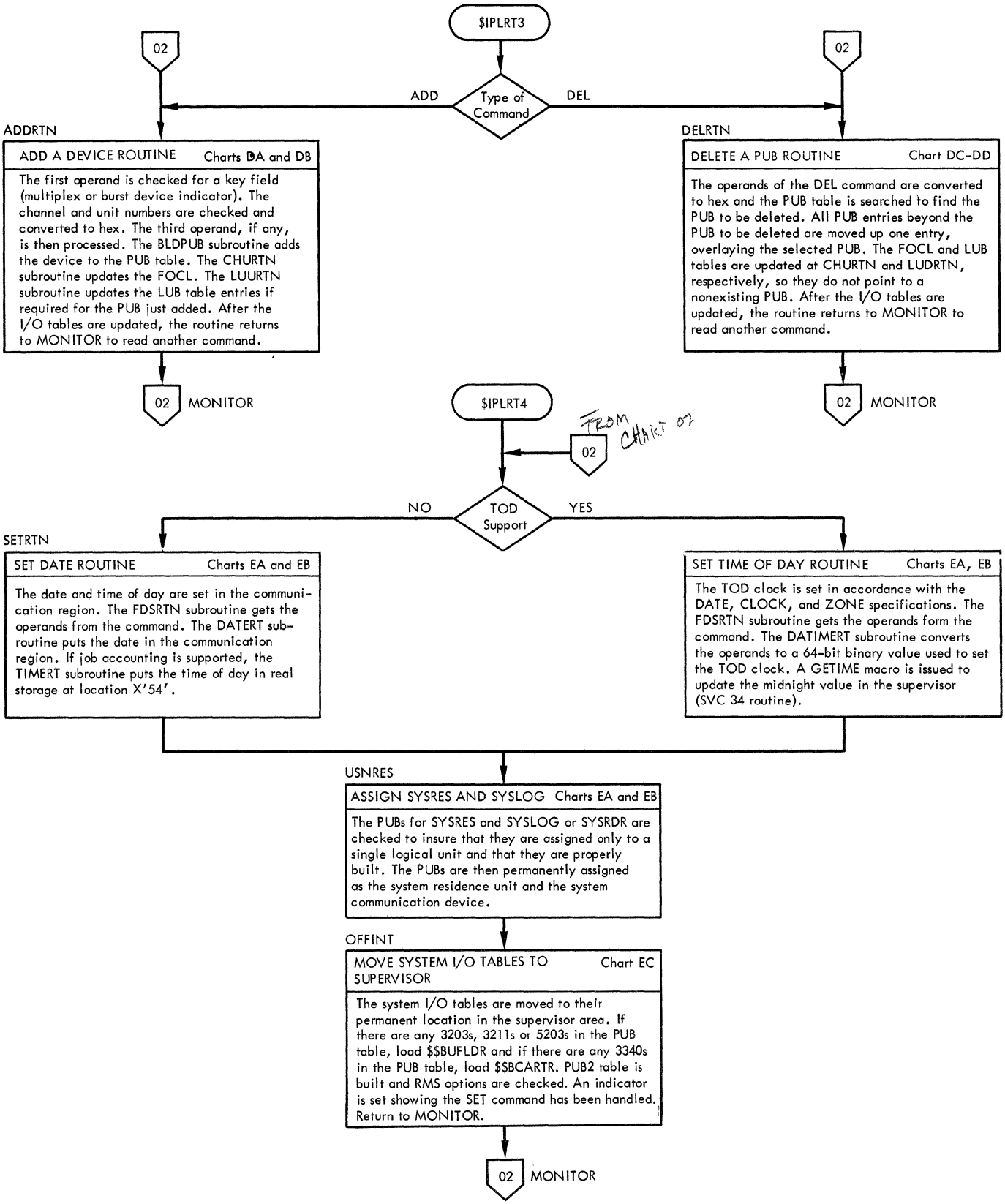
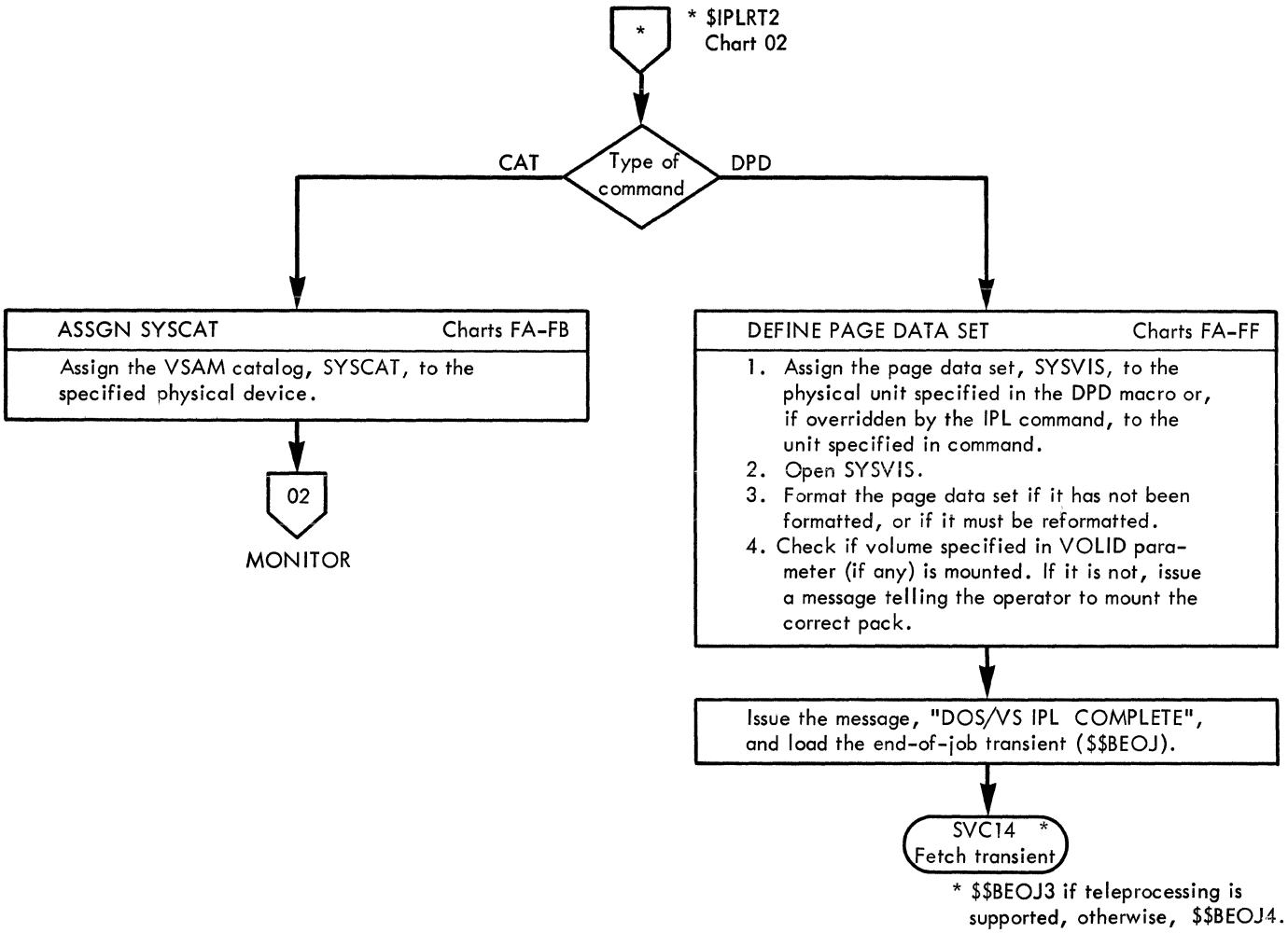


Chart 04. Initial Program Icad ($IPLRT5)



The job control program provides job-to-job transition for all programs. It also prepares program job steps for execution. (One or more programs can be executed within a single job. Each such execution is called a job step.) The job control program is automatically loaded into the background partition after IPL. To obtain the job control program in a foreground partition, a BATCH or START command must be issued for the desired partition. The job control program is then loaded into the desired partition if the following minimum requirements are met:

- At least 64K of virtual storage in the partition.
- Separate system I/O files for the partition.

The job control program does one or more of the following on the basis of information provided in job control statements:

- prepares programs for execution,
- evaluates control statements and reads cataloged SYSRDR and SYSIPT data for cataloged procedures, and calls the appropriate processing programs,
- assigns device addresses to symbolic units,
- sets up fields in the communication region(s),
- edits and stores volume and file label information,
- prepares for restarting checkpointed programs,
- clears the program area to binary zeros between job steps (real-mode job steps only, the pages of virtual partitions are cleared as they are used),
- prepares input for the linkage editor program if the LINK option has been specified. The statements: ENTRY, ACTION, PHASE, and INCLUDE, when present in the input stream, are copied to SYSLNK as card images. An INCLUDE statement with a blank operand causes the contents of SYSIPT to be copied to SYSLNK until a /* statement is read from SYSIPT. Blank cards from SYSIPT are ignored. This preparation for the linkage editor program is valid for the BG partition only, unless the supervisor includes the PCIL option.
- prepares input for the MAINT program by writing a CATALR statement (if included in SYSRDR job stream) and any following PHASE statement to SYSPCH. This is useful if a compilation or assembler run follows because the SYSPCH output can then be used as input (on SYSIPT) for a subsequent MAINT job step. This is only possible if the link option is not in effect.

The job control program is executed in the virtual partition of the partition it is preparing for use. If the job step being prepared is a virtual-mode job step it overlays the job control program.

A JOB statement in the input stream marks the beginning of a job and a /& statement marks the end of a job. An EXEC statement calls for execution of a job step or of a cataloged procedure. A job step is normally ended with the EOJ macro. A /+ statement marks the end of a cataloged procedure.

I/O FLOW

The I/O flow for the job control program consists of:

- Input
  - SYSRDR
  - SYSIPT
  - SYSRES (SYSRDR and SYSIPT data for cataloged procedures)
- Output
  - SYSLST
  - SYSLNK
  - SYSPCH
- I/O
  - SYSLOG

PROGRAM FLOW

The job control program consists of ten phases and one B-transient: $JOBCTLA, $JOBCTLB, $JOBCTLD, $JOBCTLE, $JOBCTLF, $JOBCTLG, $JOBCTLJ, $JOBCTLK, $JOBCTLM, $JOBCTLN, and $$BLSTIC.

$JCBCTLA (CHARTS 05 AND 06)

This phase is the initial entry into the job control program. It is loaded every time the job control program is fetched and is the root phase. (It is resident in virtual storage at all times during job control execution and contains routines that are used by the other job control phases.)

Job control input is read from SYSRDR or SYSLOG depending on the setting of the job control input switch (COMREG+56, bit 2). As each control statement or command is read, it is analyzed to determine which of the processing routines is to be used. The phase containing the correct processing routine is loaded if it is not already in virtual storage as a result of the previous statement or command.

$JOBCTLB (CHART 07)

This phase contains routines to prepare a partition for restarting a checkpointed job.

$JOBCTLD (CHARTS 08 AND 09)

Contains the processing routines for the following control statements or commands:

- ASSGN
- CLOSE

$JOBCTLE (CHART 10)

This phase contains processing routines for the EXEC statement or command.

$JCBCTLF (CHART 11)

This phase contains the processing routines for the following control statements or commands:

- DVCDN
- DVCUP
- LISTIO
- RESET
- UNBATCH
- MAP

$JCBCTLG (CHARTS 12 AND 13)

This phase contains the processing routines for the following control statements or commands:

- CANCEL
- /& (EOJ)
- /+ (EOP)
- JOB
- OPTION

$JCBCTLJ (CHARTS 14, 15, AND 16)

This phase contains processing routines for the following control statements or commands:

- ACTION
- ENTRY
- PHASE
- INCLUDE
- DATE
- SET
- UPSI
- MTC
- UCS
- HOLD
- CATALR
- NOLOG
- LOG
- STOP
- PAUSE
- ALLOC
- ALLOCR
- ZONE

$JCBCTLK (CHARTS 17 AND 18)

This phase contains processing routines for the following control statements or commands:

- RSTRT
- LBLTYP
- VOL
- TPLAB
- DLAB
- XTENT
- TLBL
- DLBL
- EXTENT

$JCBCTLM (CHART 19)

This phase initializes the recorder file, the hard copy file, the RF-table, and the CRTSAV table, and contains processing routines for the ROD command.

$JCBCTLN (CHART 20)

This phase provides interface between the DOS system and $JCBACCT to allow the user to access job accounting information. This phase contains processing routines for the following conditions:

- Normal end of job.
- Simulated end of job.
- End of job and pause.
- EXEC program card encountered.

Note: $JCBCTLN interfaces with the $JCBACCT phase supplied by the user.

$$BISTIO

This B-transient routine contains subroutines used by the DVCDN and IISTIO processors of $JOBCTLF. When required by these processors, $$BISTIC is fetched (SVC 2) into the supervisor B-transient area.

PHASE-VECTOR TABLE

The Phase-Vector table contained in the root phase ($JOBCTLA) is used to determine the correct phase and processing routine required to process a given control statement.

The operation field of the control statement is compared to each entry in the table until an equal is found. The equal entry identifies the correct phase and the displacement within the phase of the branch instruction that directs the program to the correct processing routine. The entry also contains a 1-byte condition switch bank used to control processing for format verification, logging conventions, and cancel procedures for the statement. Figure 4 shows the format of an entry in the Phase-Vector table.

Byte	0 . . . 6	7	8	9
	Operation Field	Condition Switches	Branch Vector Displacement	Phase Identification Letter

Figure 4. Phase-Vector Table Entry Format

Operation Field: EBCDIC representation of the operation field.

Condition Switches:

Bits

0 - reserved.
1 - statement is to be processed even though a cancel condition exists.
2,3 - Both on; suppress logging. 2 off, 3 on; unconditional SYSLOG logging and conditional SYSLST logging. Both off; conditional logging on SYSLOG and SYSLST.
4 - statement may start with //.
5 - statement may start without //.
6 - statement may start in column 1.
7 - statement may start in other than column 1.

Branch Vector Displacement: Displacement within the phase that is added to the phase origin address to develop the address of a branch instruction which transfers control to the correct processing routine.

Phase Identification Letter: Contains the EBCDIC character A, D, F, G, J, K, M, or N and identifies the job control phase containing the processing routine.

Example of the JOB control statement entry:

```
DC CL7'JCB'
DC X'7A'
DC AL1(12)
DC C'G'
```

1. The JCB statement is to be processed even if a cancel is being executed.
2. Logging on both SYSLOG and SYSLST is suppressed.
3. The statement may not start without // and must start in column one.
4. The branch-vector table entry is located at a displacement of 12 bytes from the beginning of the phase with suffix 'G' ($JOBCTLG).

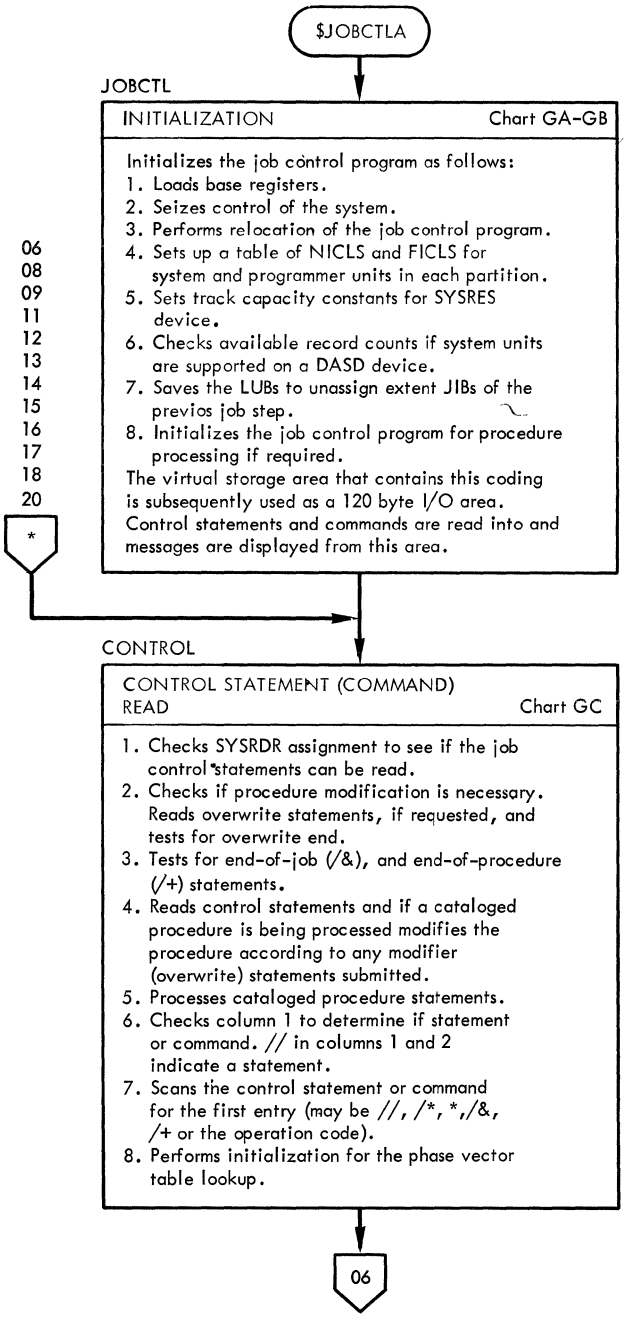
```
DFB      DS CL6
DFBCBL   DS CL2   Symbolic unit address      } CCB
DFBCBA   DS CL4   CCW address                }
         DS CL4                              }
DFBCWA   DS CL4   ASA CCW address            } U/R TAPE DASD
DFBCCU   DS CL2   Channel and unit           }
DFBDVC   DS CL1   Device type                }
DFBFLG   DS CL1   Flag byte (see Note)       }
DFBCCW   DS CL8   CCW (Not used for DASD)    }
         DS CL8   Seek                       } DASD Only
         DS CL8   Search                     }
         DS CL8   TIC                        }
         DS CL8   Write (count, key, and data) (chained data)
         DS CL8   Write (data)               }
         DS CL8   Search                     }
         DS CL8   TIC                        }
         DS CL8   Verify (count field) (chained data)
         DS CL8   Verify (data)              }
```

Note:

DFBFLG - flag byte bit 0:1 = Open
bit 1:1 = Unit Exception processing
bit 2:1 = U/R device
bit 3:1 = Overlap requested
bit 4:1 = ASA is supported on this device
bit 5: Not used
bit 6:1 = Attention routine switch
bit 7:1 = CCB has been initialize

Figure 5. DFB Format

Chart 05. Job Control ($JCBCTIA) Rcct Phase (Part 1 cf 2)



Note:
The job control program is entered from the supervisor fetch routine. It can be entered normally by means of the EOJ macro or abnormally from the B-transients $$BILSVC, $$BPCHK, $$BEOJI.
Phase $JOBCTLA includes:
1. The initialization routine (JOBCTL).
2. The control statement (command) read routine (CONTROL).
3. The phase vector table
4. The root phase subroutines
5. The root phase error message routines
6. The relocation subroutine
7. Subroutines for overwrite processing

Items 4 and 5 are used by other job control phases.

Chart 06. Job Control ($JCBCTLA) Root Phase (Part 2 of 2)

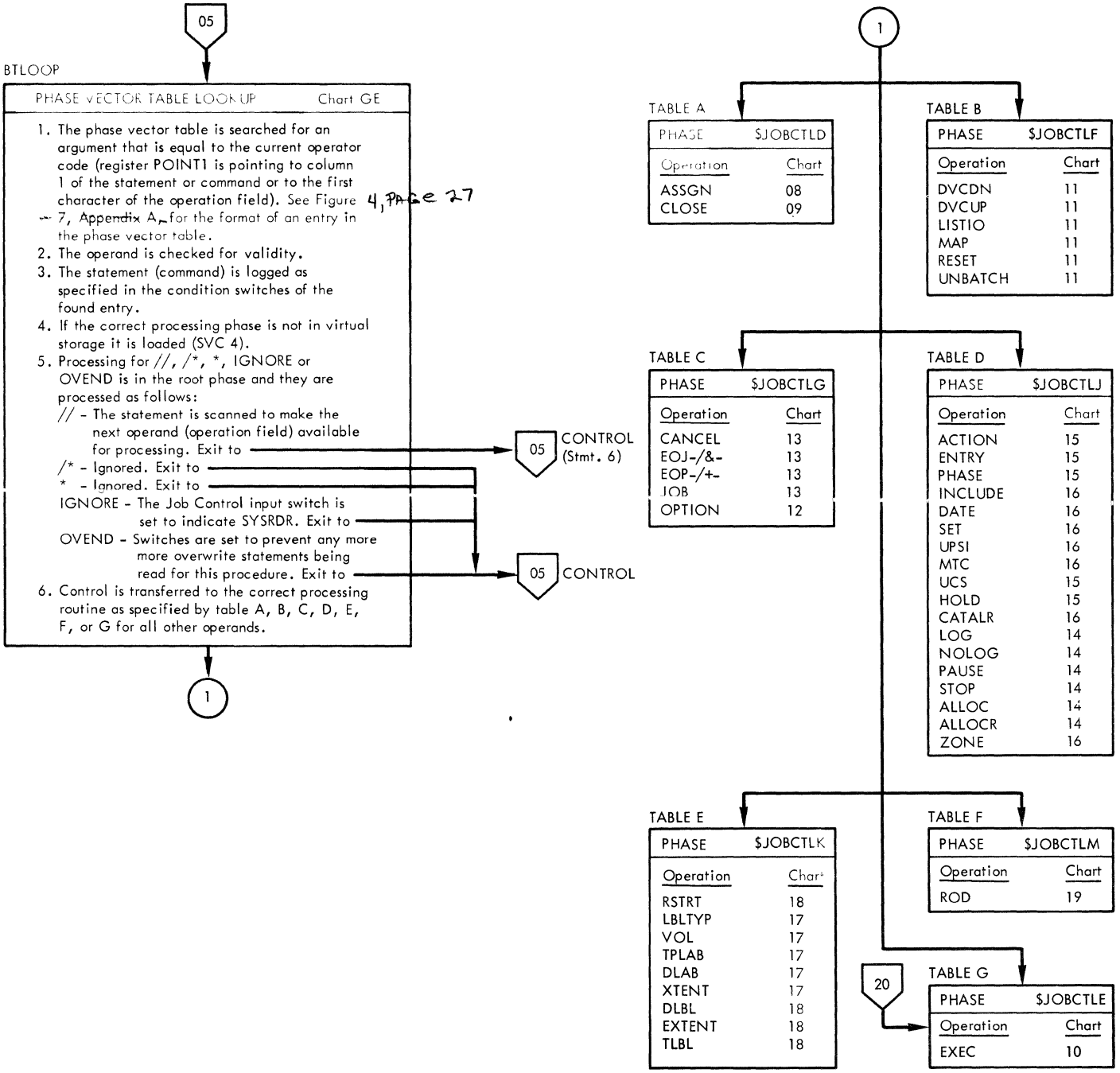


Chart 07. Jcb Control ($JCBCTLB) Restart Processor

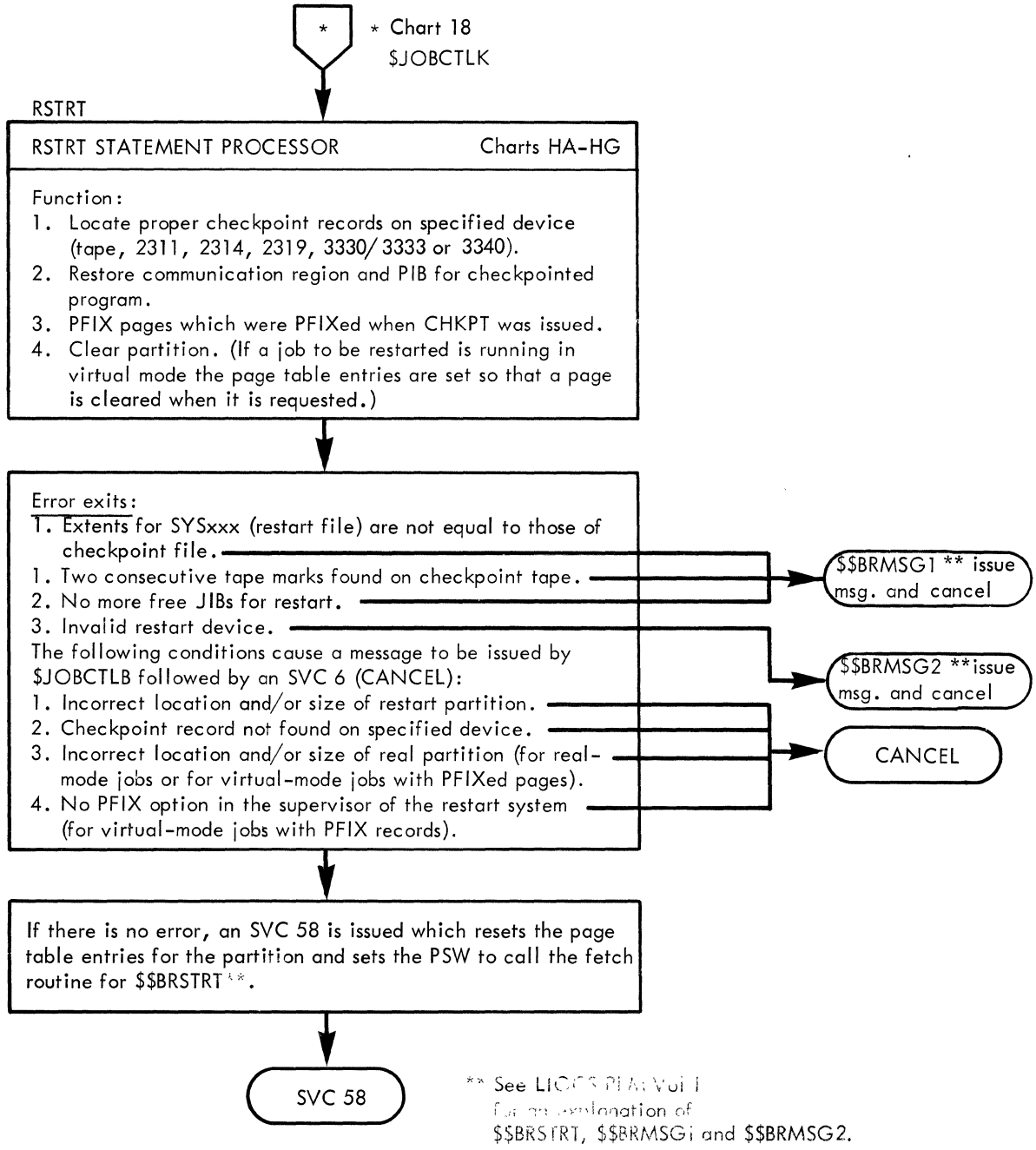


Chart 08. Jcb Control ($JCBCTLD) Statement Prccesscr (Part 1 cf 2)

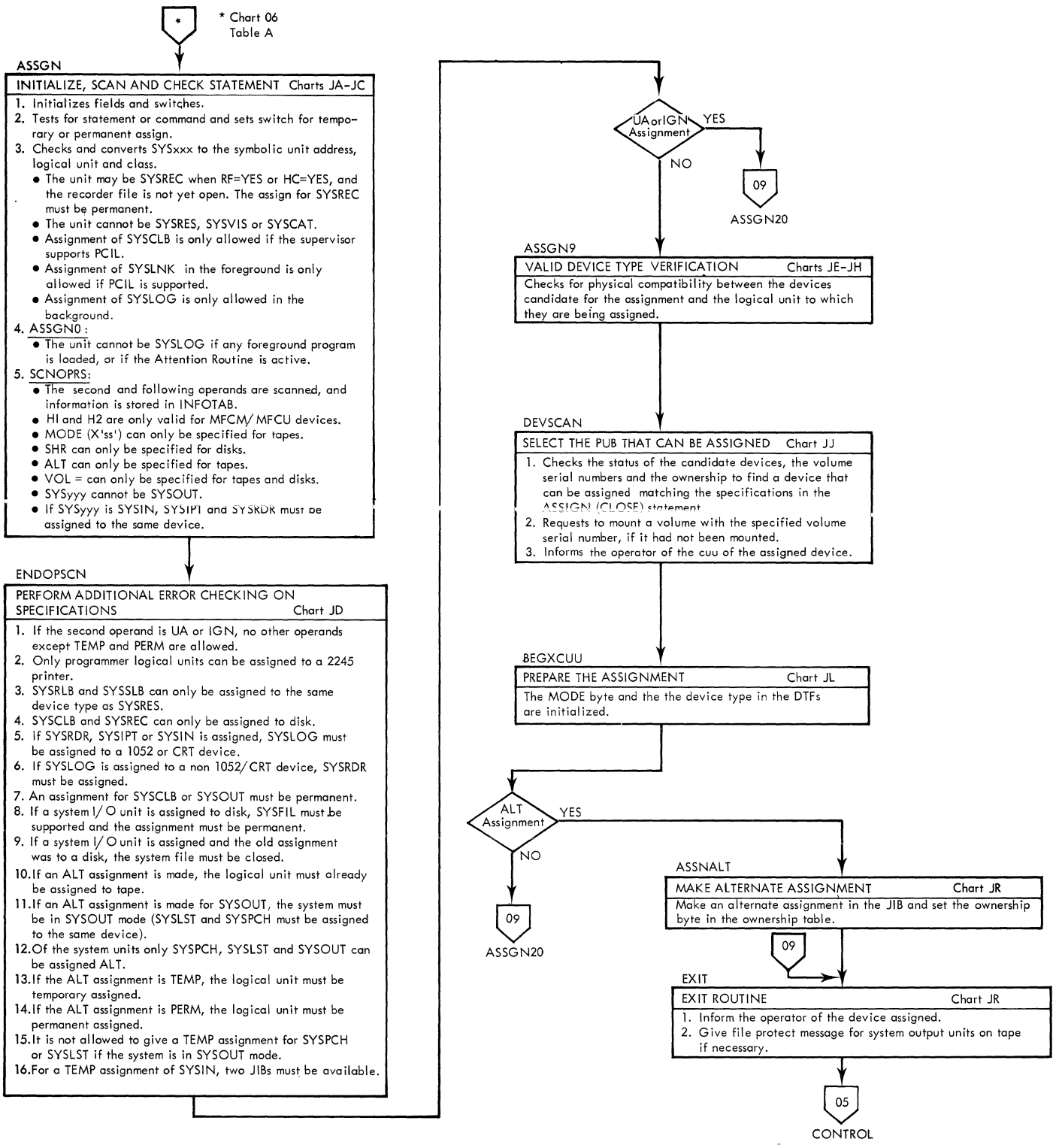


Chart 09. Job Control ($JCBCTID) Statement Prccessor (Part 2 of 2)

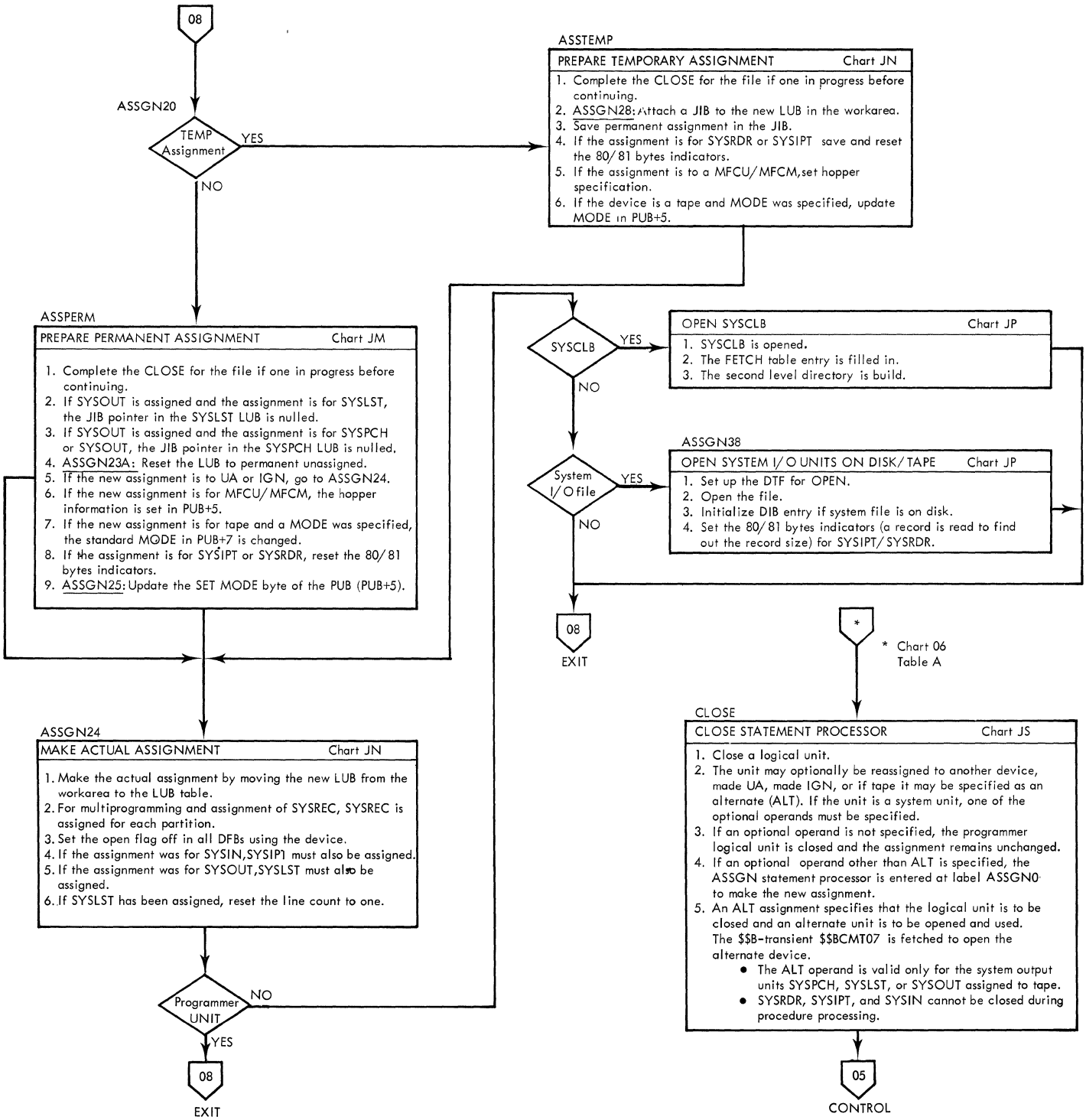


Chart 10. Job Control ($JCBCTLE) Statement Prccessor

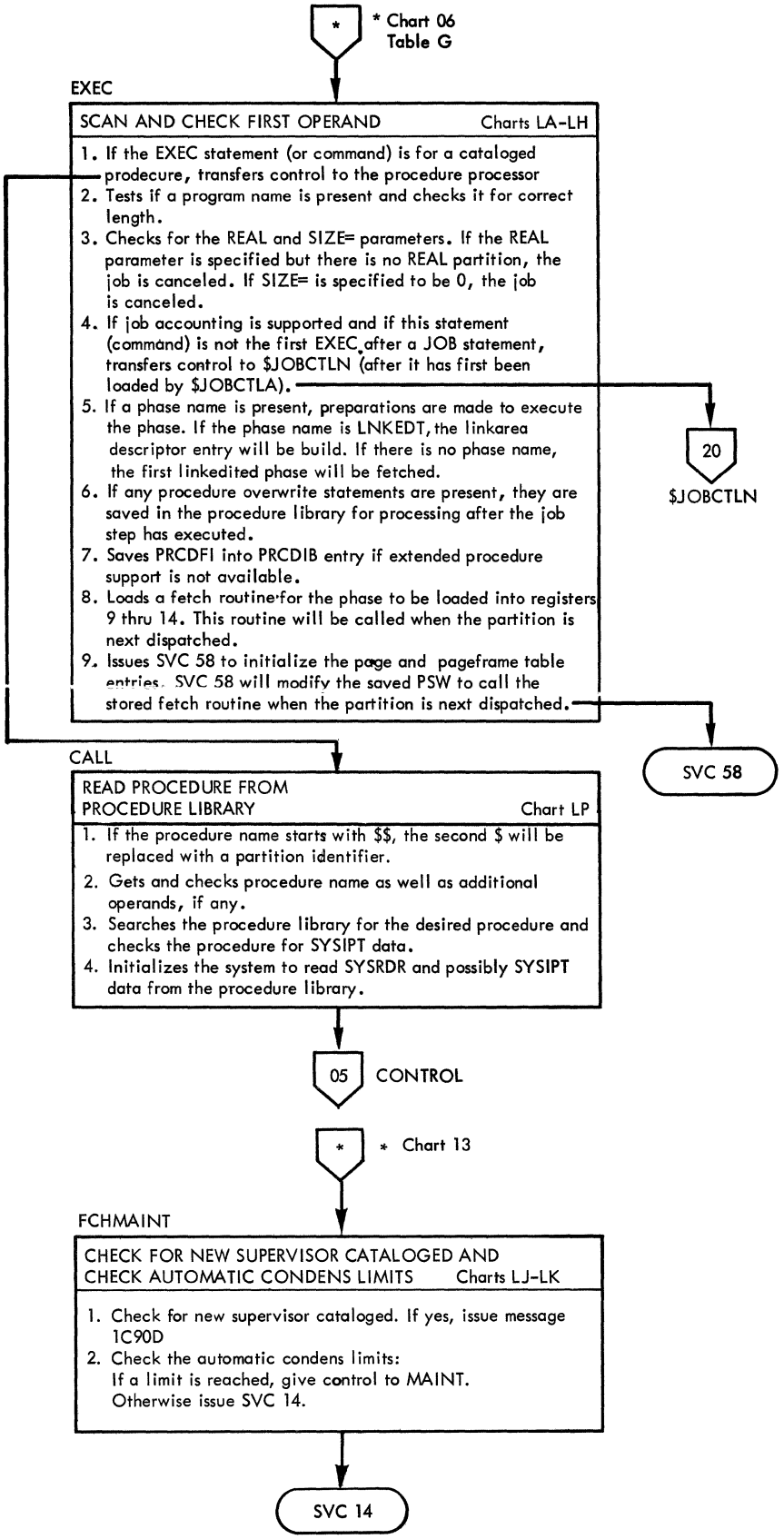


Chart 11. Jcb Control ($JCBCTLF) Statement Prccessor

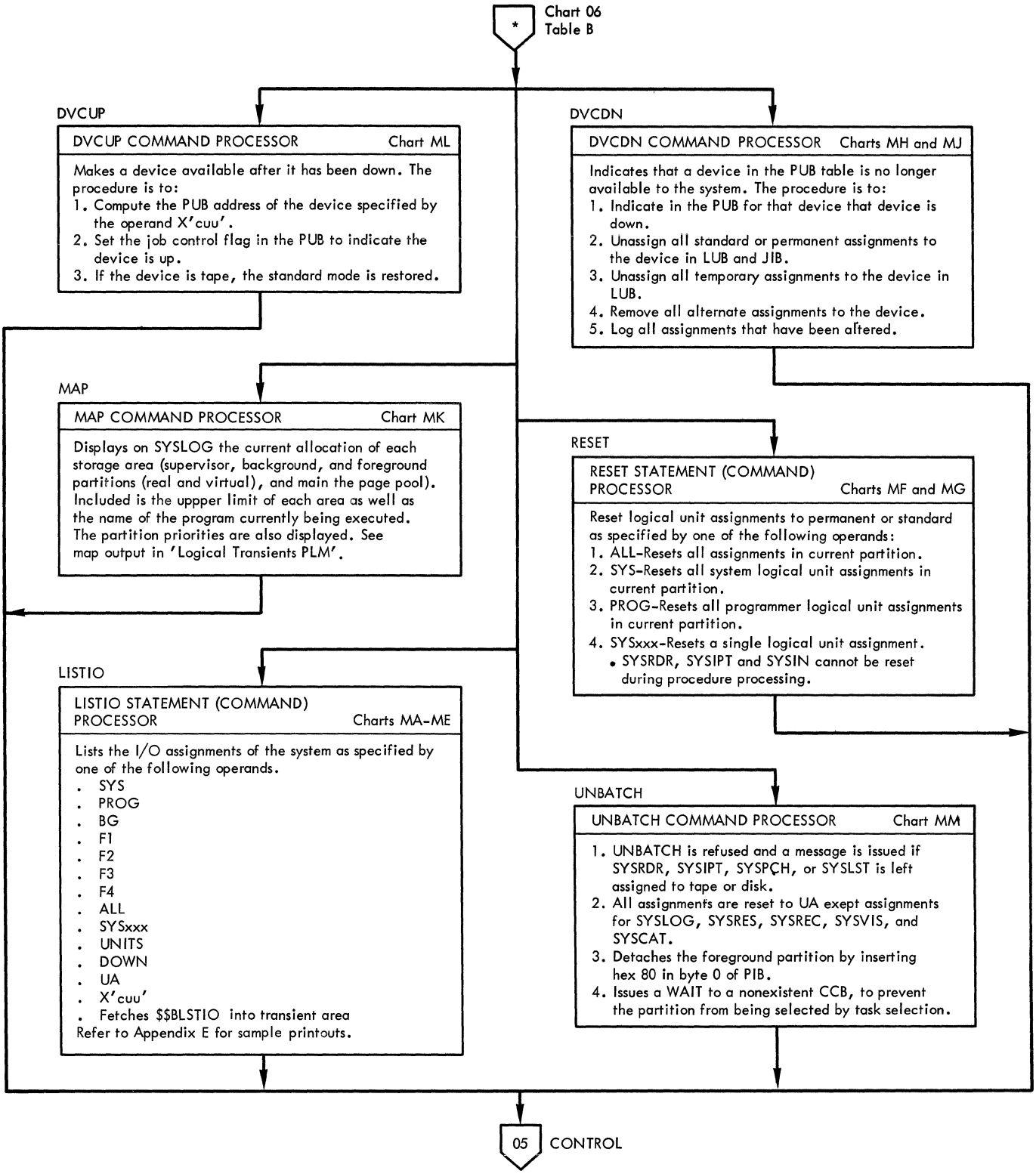


Chart 12. Job Control ($JCBCTLG) Statement Prccessor (Part 1 of 2)

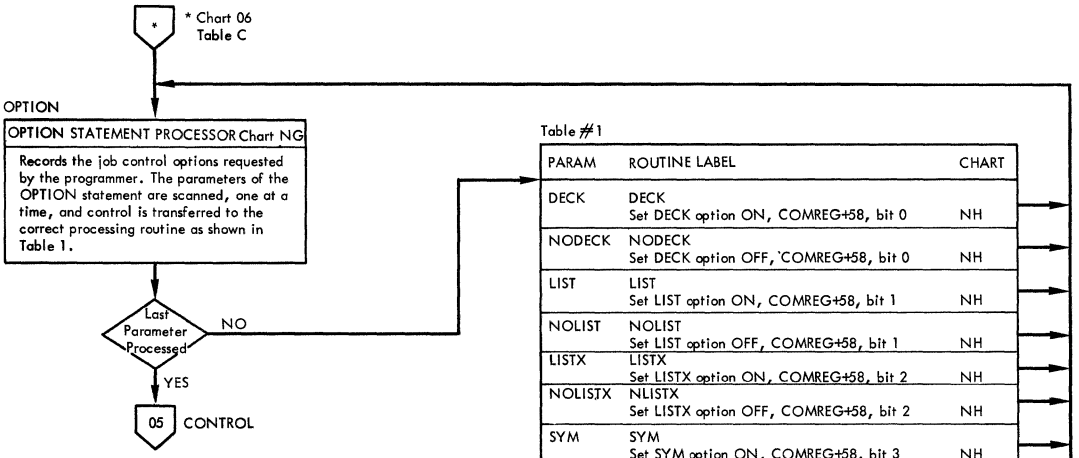


Table #1

PARAM	ROUTINE LABEL	CHART
DECK	DECK Set DECK option ON, COMREG+58, bit 0	NH
NODECK	NODECK Set DECK option OFF, COMREG+58, bit 0	NH
LIST	LIST Set LIST option ON, COMREG+58, bit 1	NH
NOLIST	NOLIST Set LIST option OFF, COMREG+58, bit 1	NH
LISTX	LISTX Set LISTX option ON, COMREG+58, bit 2	NH
NOLISTX	NLISTX Set LISTX option OFF, COMREG+58, bit 2	NH
SYM	SYM Set SYM option ON, COMREG+58, bit 3	NH
NOSYM	NOSYM Set SYM option OFF, COMREG+58, bit 3	NH
XREF	XREF Set XREF option ON, COMREG+58, bit 4	NH
NOXREF	NOXREF Set XREF option OFF, COMREG+58, bit 4	NH
ERRS	ERRS Set ERRS option ON, COMREG+58, bit 5	NH
NOERRS	NOERRS Set ERRS option OFF, COMREG+58, bit 5	NH
48C	C48 Set 48 character set option ON, COMREG+58, bit 6	NH
60C	C60 Set 60 character set option ON, COMREG+58, bit 6	NH
LOG	OPTLOG Set the SYSLST-LOG option ON, COMREG+59, bit 3	NK
NOLOG	OPTNLG Set the SYSLST-LOG option OFF, COMREG+59, bit 3	NH
USRLABEL	USRLBL Initialize job control label processing for USER LABEL processing	NJ
STDLABEL	STDLBL Initialize job control label processing for STANDARD LABEL processing. Labels available to programs in ANY partition.	NJ
PARSTD	PARSTD Initialize job control label processing for PARTITION STANDARD LABEL processing. Labels available to programs in only ONE partition.	NJ
DUMP	DUMP Set job control dump option ON, COMREG+59, bit 1	NK
NODUMP	NODUMP Set job control dump option OFF, COMREG+59, bit 1	NK
LINK	LINK Set LNKEDT control bits, COMREG+57, bits 0, 2 Valid for BG only, unless SYSCLB assigned.	NJ
NOLINK	NOLINK Set LINK option OFF, COMREG+57, bit 0	NK
CATAL	CATAL Set LNKEDT control bits, COMREG+57, bits 0,2,3 Valid for BG only, unless SYSCLB assigned.	NJ
SYSPARM	SYSPRM Save character string	NK
ALIGN	ALIGN Set ALIGN option ON, COMREG+141, bit 1	NH
NOALIGN	NOALIGN Set ALIGN option OFF, COMREG+141, bit 1	NH
EDECK	EDECK Set EDECK option ON, COMREG+141, bit 0	NH
NOEDECK	NOEDECK Set EDECK option OFF, COMREG+141, bit 0	NH
ACANCEL	Set ACANCEL option on COMREG+141, bit 7	
NOACANCEL	Set ACANCEL option off COMREG+141, bit 7	

Chart 13. Job Control ($JCBCTLG) Statement Prccesscr (Part 2 of 2)

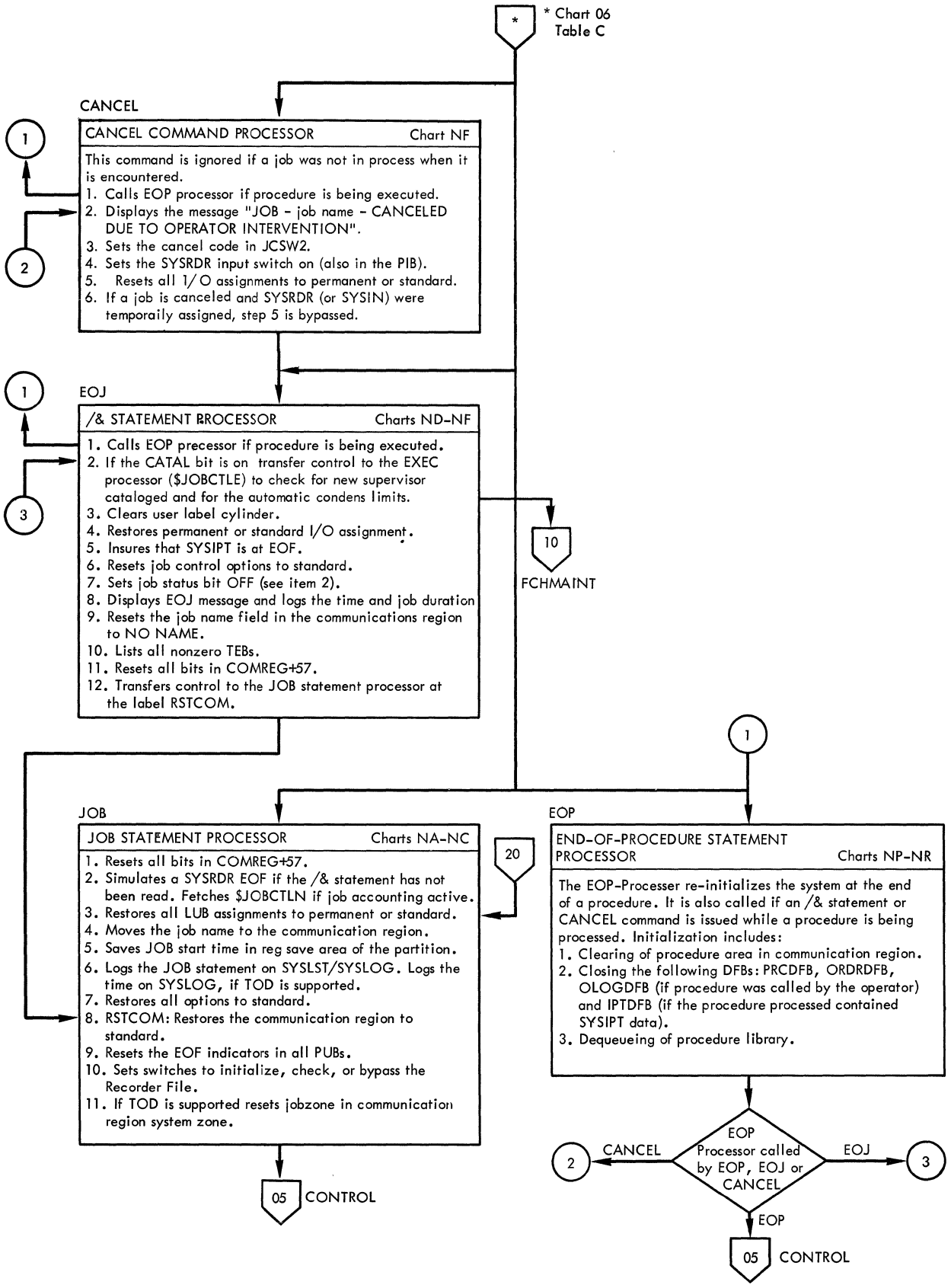


Chart 14. Job Control ($JCBCTIJ) Statement Processor (Part 1 of 3)

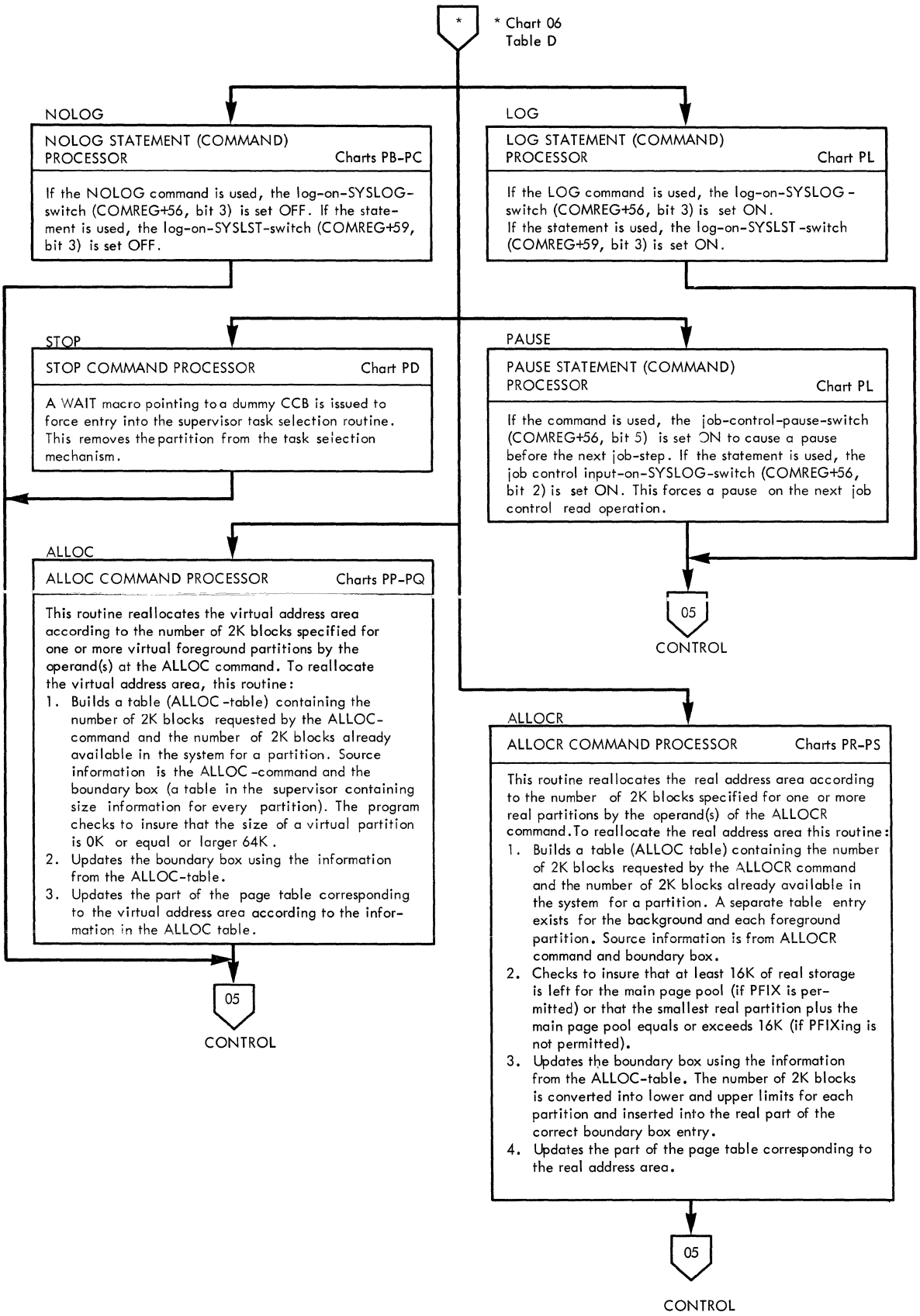


Chart 15. Job Control ($JCBCTLJ) Statement Prccesscr (Part 2 of 3)

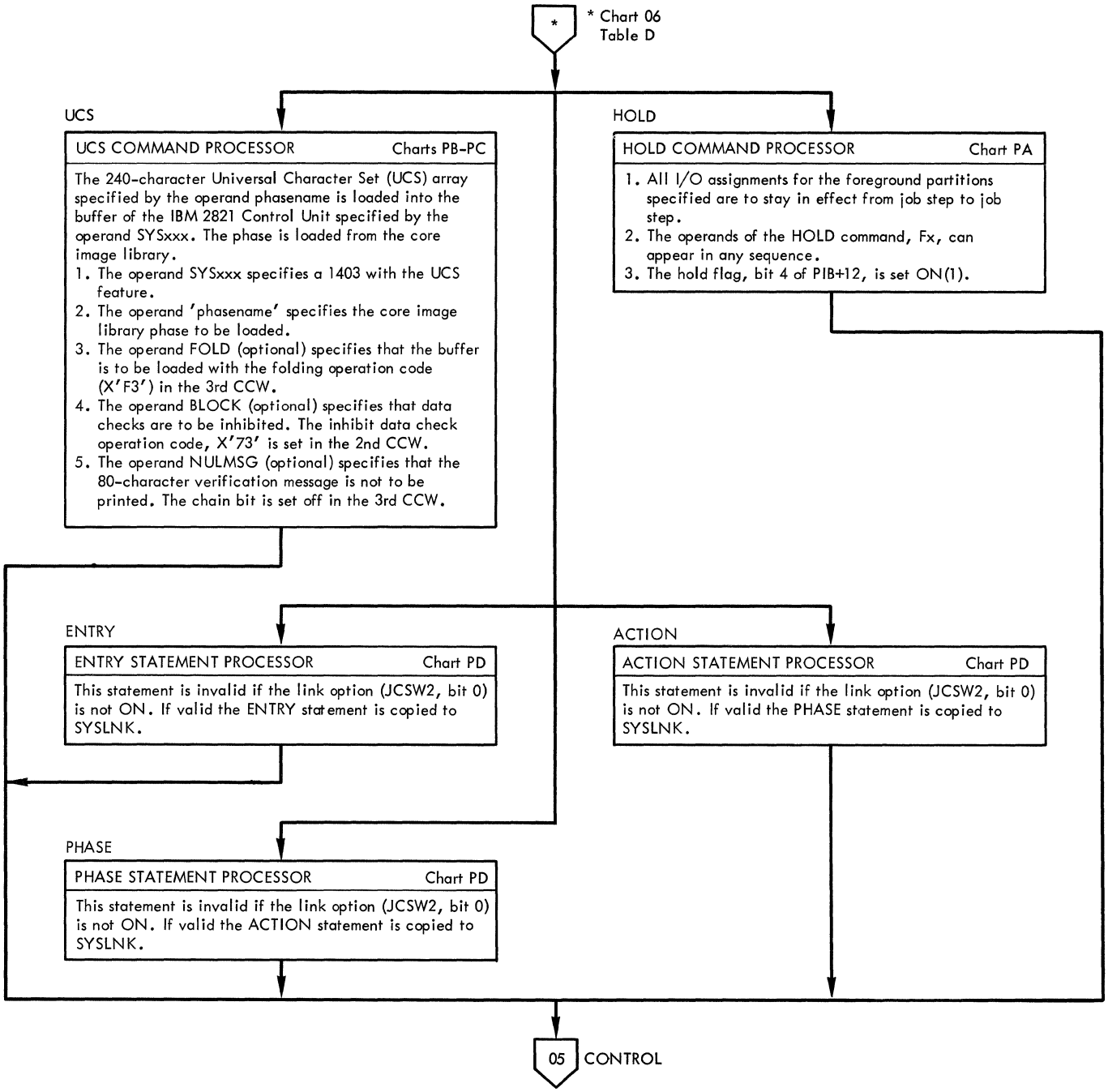


Chart 16. Job Control ($JCBCTLJ) Statement Processor (Part 3 of 3)

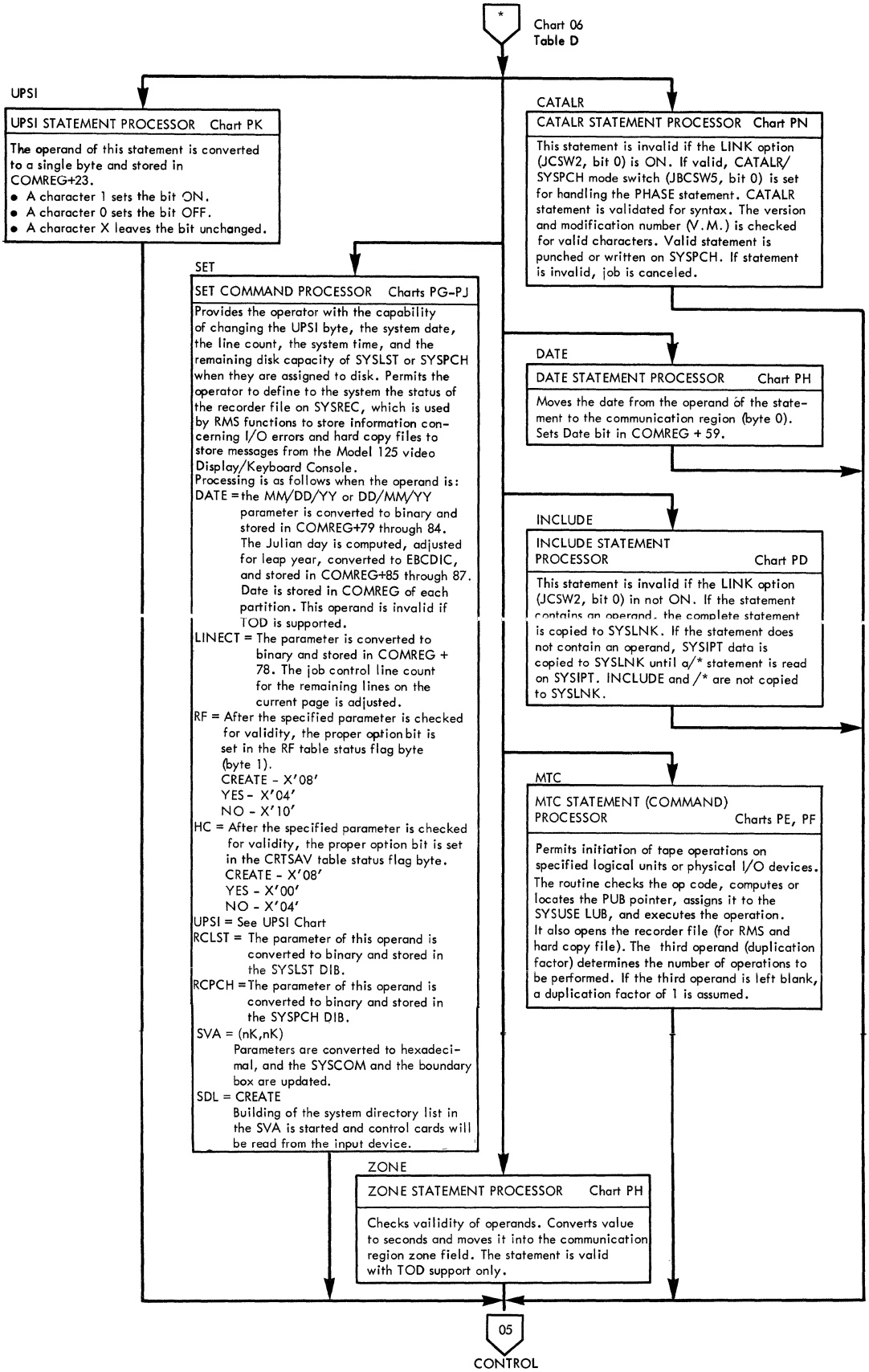


Chart 17. Jcb Control ($JCBCTLK) Statement Prccessor (Part 1 of 2)

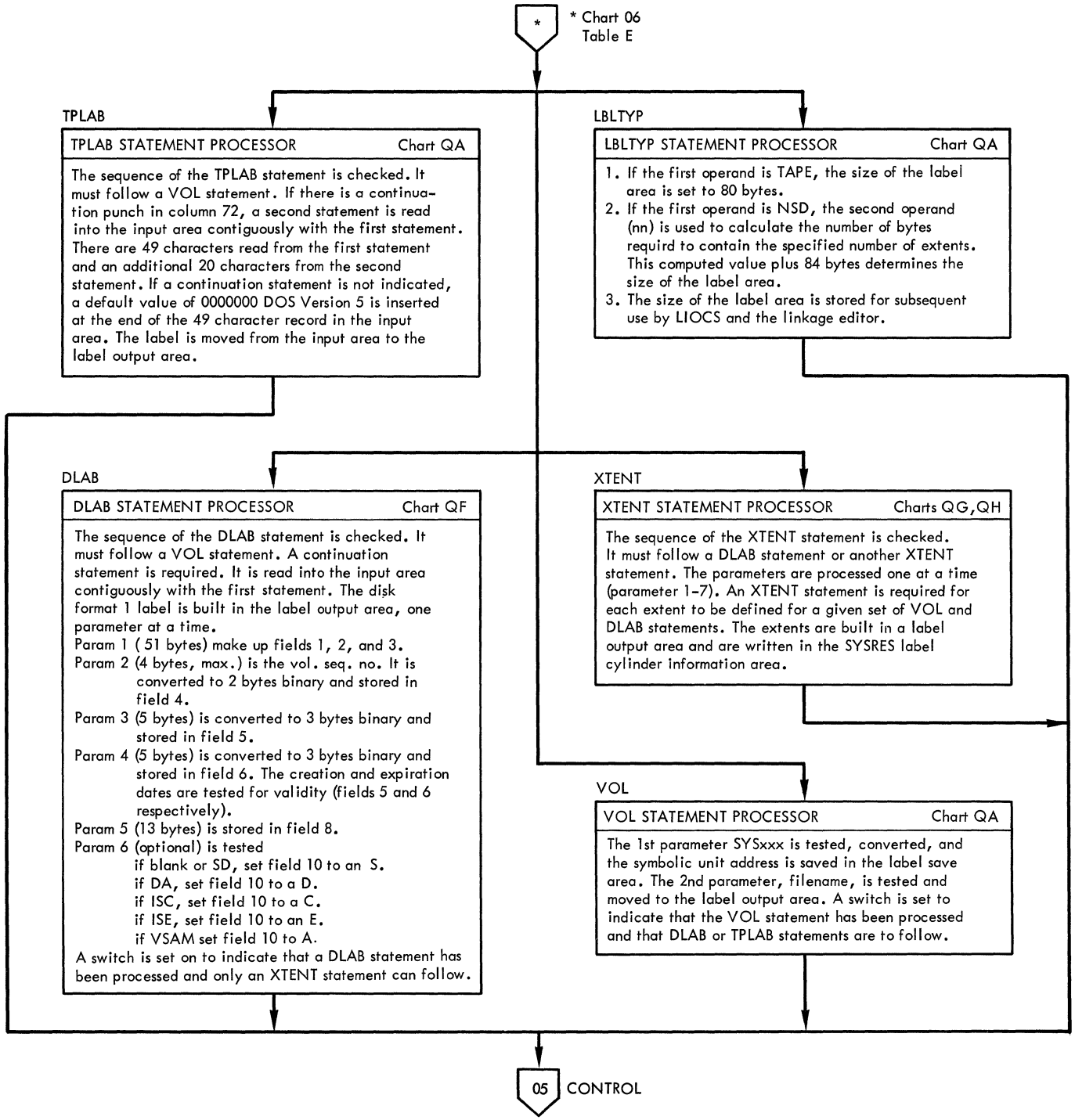


Chart 18. Job Control ($JCBCTLK) Statement Processor (Part 2 of 2)

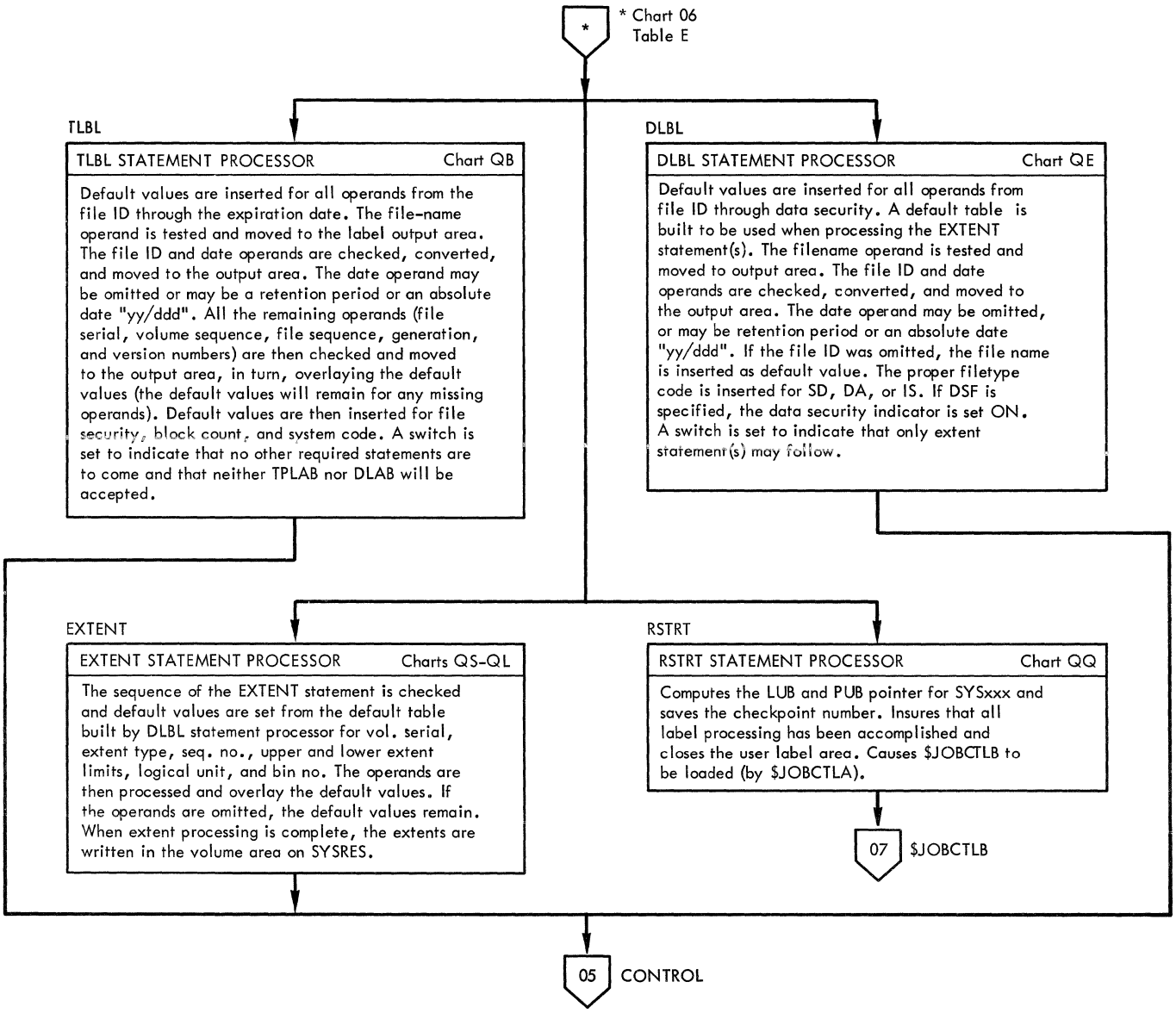


Chart 19. Job Control ($JCBCTLM)

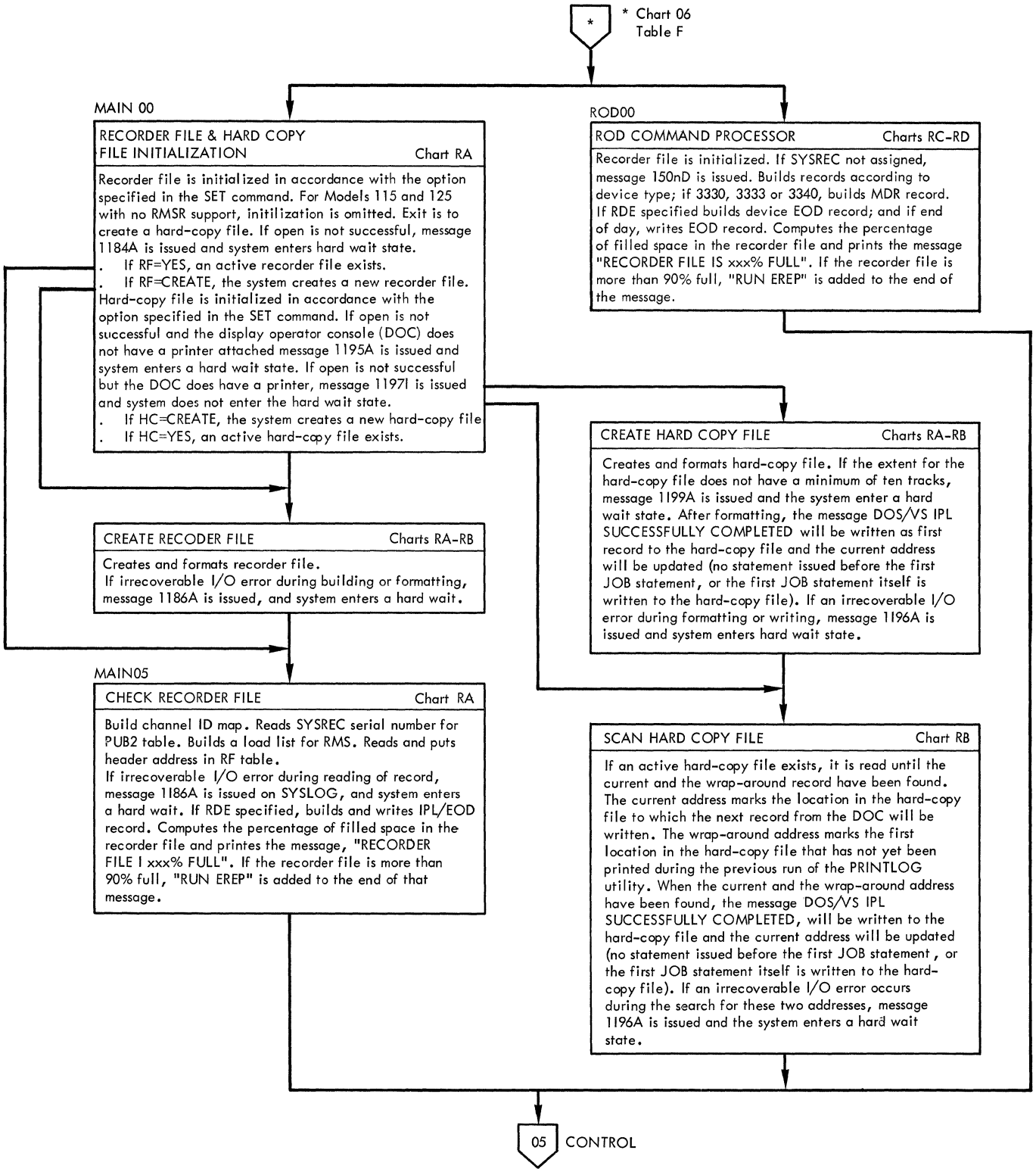


Chart 20. Job Control ($JOBCTLN)

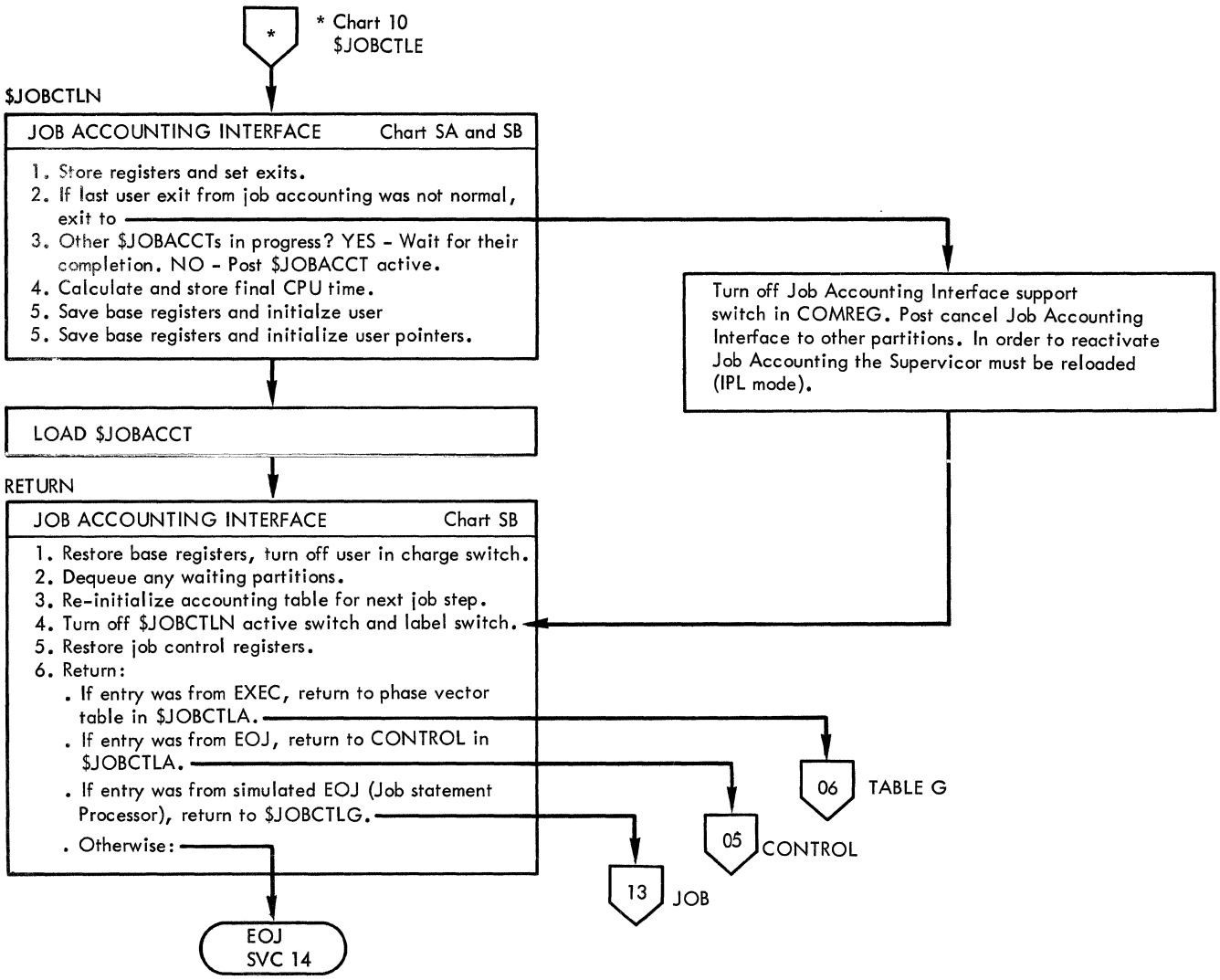


Chart AA. $$A$IPL1 - IPL Bootstrap

Refer to Chart 01.

```
06    00    00  18  60    00  00  28
CCW1
```

READ DISK INTO STORAGE LOCATION HEX 18. (40-BYTES OF DATA, CHAINED CCW, AND SUPPRESSED WLR.)

```
07    00    00  30  60    00  00  06
CCW2
```

SEEK THE DISK ADDRESS SPECIFIED BY FIRST 6-BYTES OF DATA IN THE SEEK ADDRESS LOCATED AT STORAGE LOCATION HEX 30. (CHAINED CCW AND SUPPRESSED WLR.)

```
31    00    00  32  60    00  00  05
CCW3
```

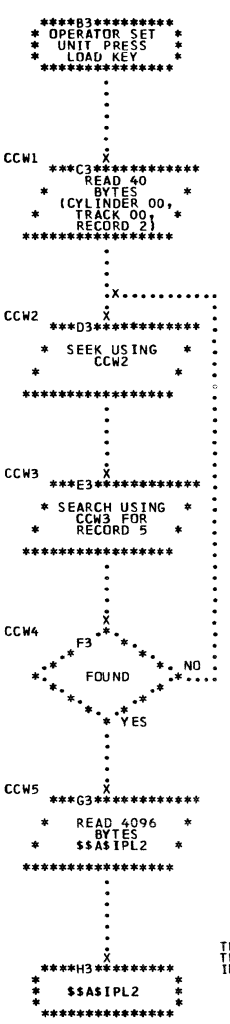
SEARCH FOR THE DISK RECORD SPECIFIED BY THE 5-BYTES OF DATA IN STORAGE LOCATION HEX 32 (SEEK ADDRESS PLUS 2-BYTES). THE CCW IS CHAINED AND WLR IS SUPPRESSED.

```
08    00    00  18  60    00  00  00
CCW4
```

TRANSFER IN CHANNEL (TIC) TO CCW3 UNTIL THE SEARCH ADDRESS SPECIFIED BY CCW3 IS FOUND. (CHAINED CCW AND SUPPRESSED WLR.)

```
06    00    30  00  20    00  10  00
CCW5
```

READ DISK INTO STORAGE LOCATION HEX 3000. (4096-BYTES OF DATA, SUPPRESSED WLR.) THIS CCW IS NOT CHAINED.



BY PRESSING THE LOAD KEY (ENTER ON 115/125), THE OPERATOR CAUSES THE MICROPROGRAM TO READ THE $$A$IPL RECORD FROM SYSRES(CYL 0,TRK 0,REC 1) INTO REAL STORAGE LOCATIONS 0-17(HEXADECIMAL). THIS RECORD CONSISTS OF:

HEX LOC	0	8	10	18
CONTENT	PSW	CCW1	CCW2	

THE MICROPROGRAM INITIATES A SIO COMMAND SPECIFYING SYSRES AS THE UNIT AND CCW1 (HEX LOC 8) AS THE FIRST CCW. THIS COMMAND CAUSES THE NEXT 40-BYTE RECORD TO BE READ FROM SYSRES INTO READ STORAGE LOCATIONS 18-3F(HEXADECIMAL) THIS RECORD CONSISTS OF:

HEX LOC	18	20	28	30	37 - 3F
CONTENT	CCW3	CCW4	CCW5	SEEK ADDRESS	UNUSED

- THE CCWS (1-5) ARE CHAINED TOGETHER.
- THE SEEK ADDRESS (HEX LOC 30) CONTAINS THE SYSRES DISK ADDRESS OF THE $$A$IPL2 PROGRAM. THE FORMAT OF THE SEEK ADDRESS FIELD IS

HEX LOC	30	31	32	33	34	35	36
DECIMAL	0	0	0	0	0	1	5
CONTENT							
MEANING	B	B	C	C	H	H	R

WHERE BB IS BIN NO.
CC IS CYLINDER NO.
HH IS TRACK NO.
R IS RECORD NO.

AT THE COMPLETION OF THIS BOOTSTRAP OPERATION, $$A$IPL2 HAS BEEN LOADED INTO REAL STORAGE AND THE MICROPROGRAM TRANSFERS CONTROL TO IT BY LOADING THE PSW REAL STORAGE LOCATION 0.

THE PSW AT LOCATION 0 CONTAINS THE ADRESS OF THE FIRST EXECUTABLE INSTRUCTION OF THE $$A$IPL2 PROGRAM.

Chart BA. **$$A$IPL2 - Clear Storage and Load Supervisor**
Refer to Chart 01.

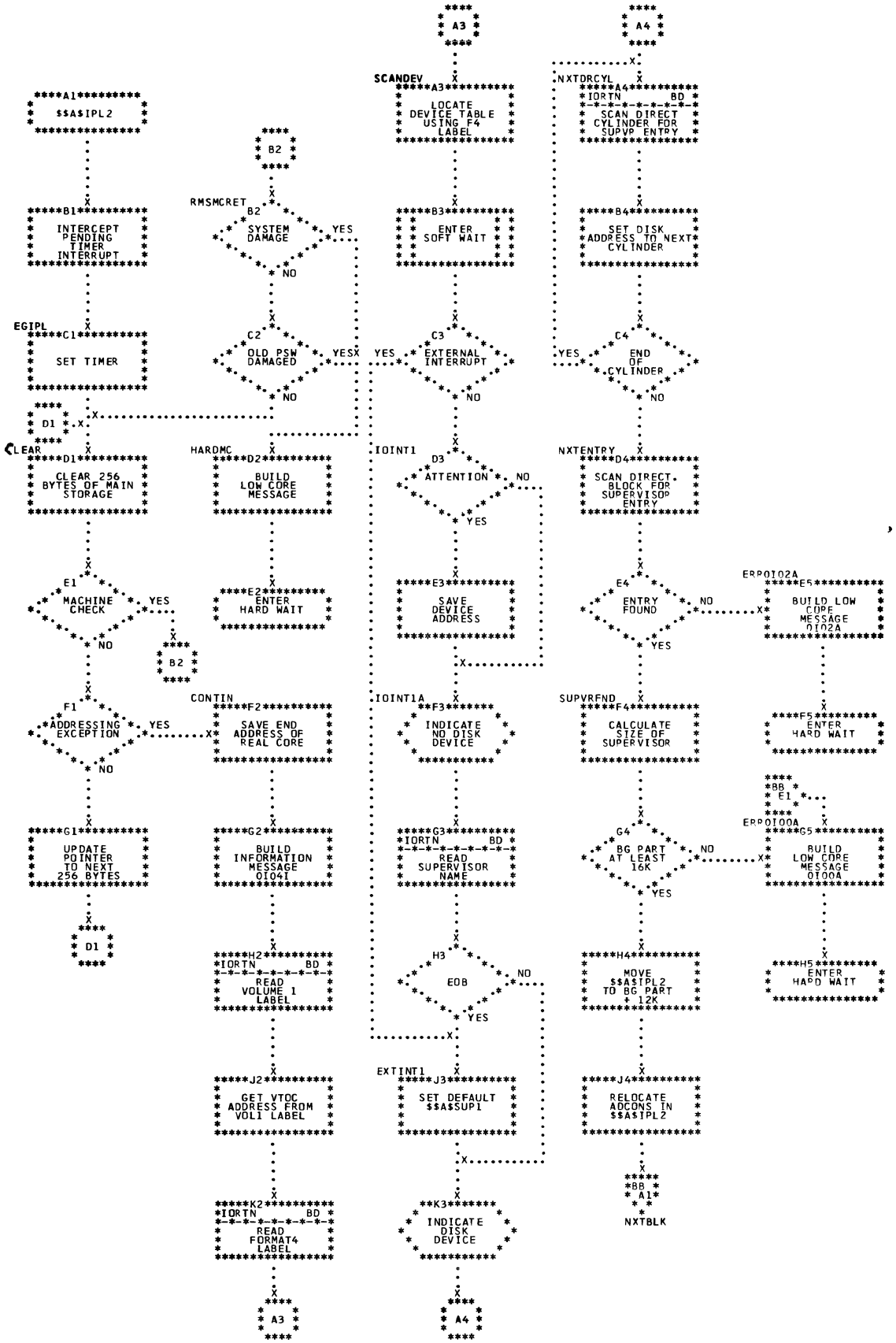


Chart BB. $$A$IPL2 - Initiate System (Part 1 of 2)
Refer to Chart 01.

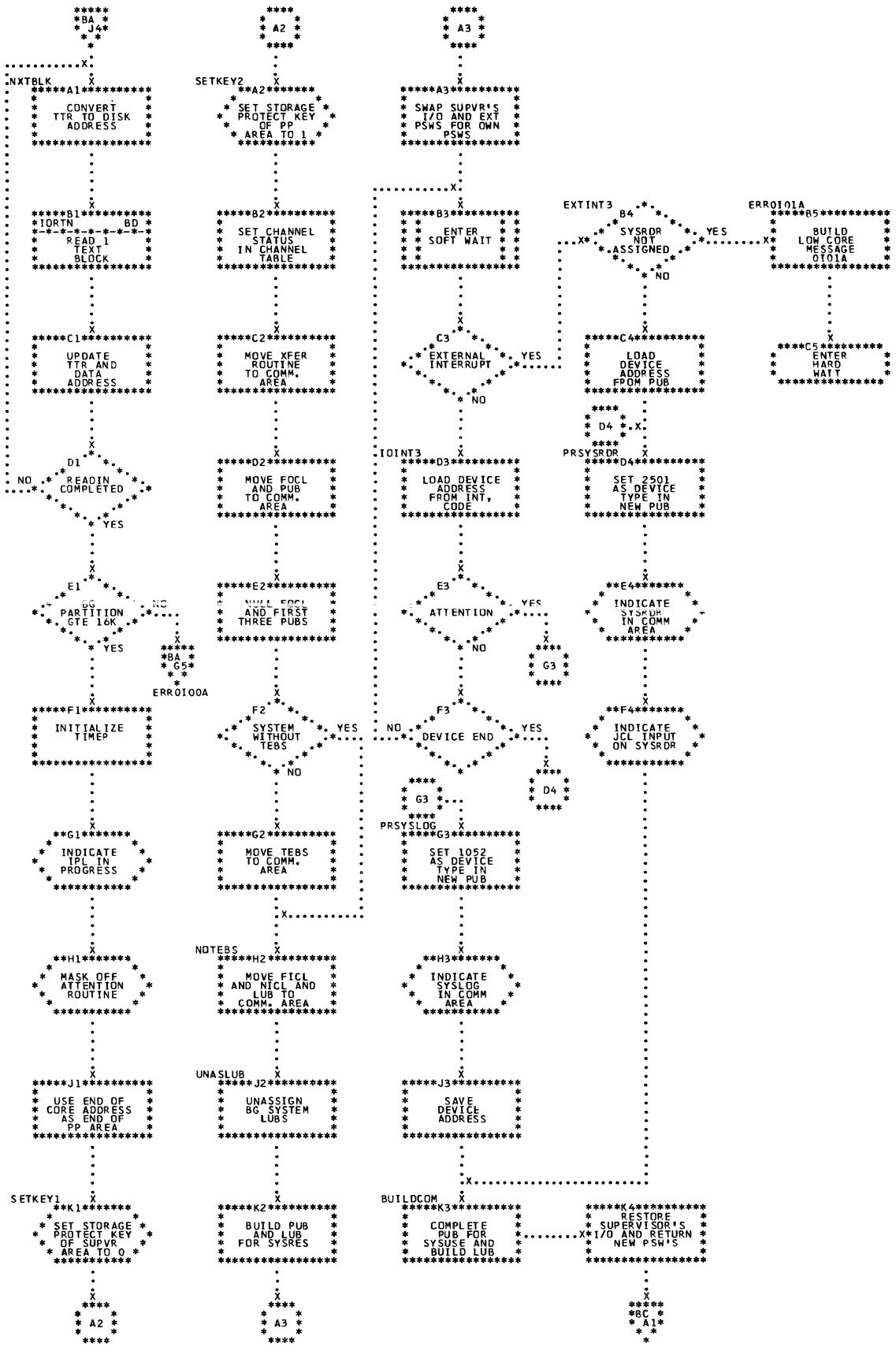


Chart BC. $$A$IPL2 - Initiate System (Part 2 of 2)
Refer to Chart 01.

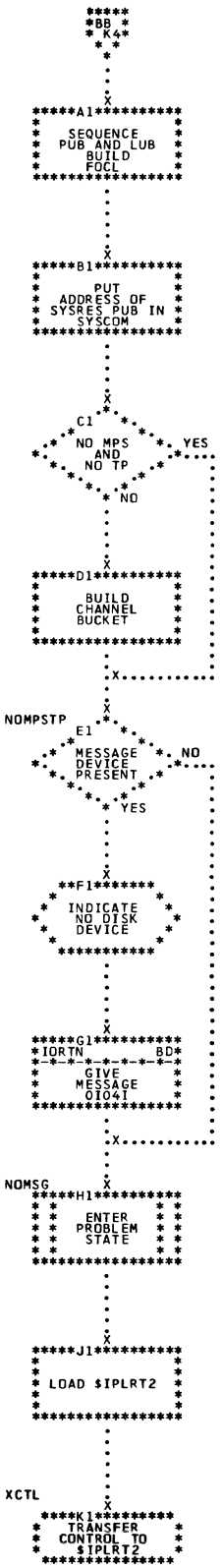


Chart BD. $$A$IPL2 - Input/Output Subroutine
Refer to Chart 01.

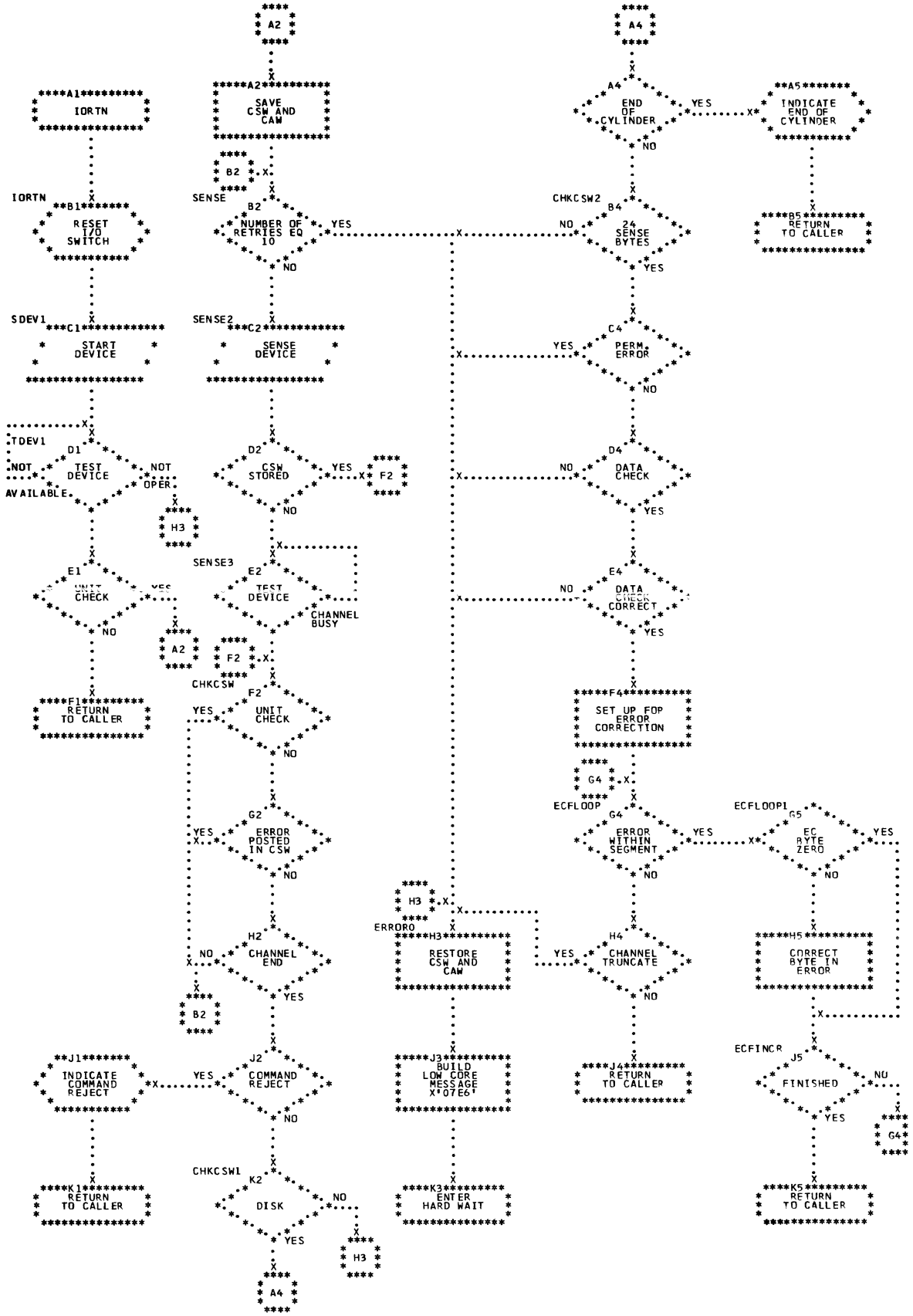


Chart CA. $IPIRT2 - Initialization Routine (Part 1 of 2)
Refer to Chart 02.

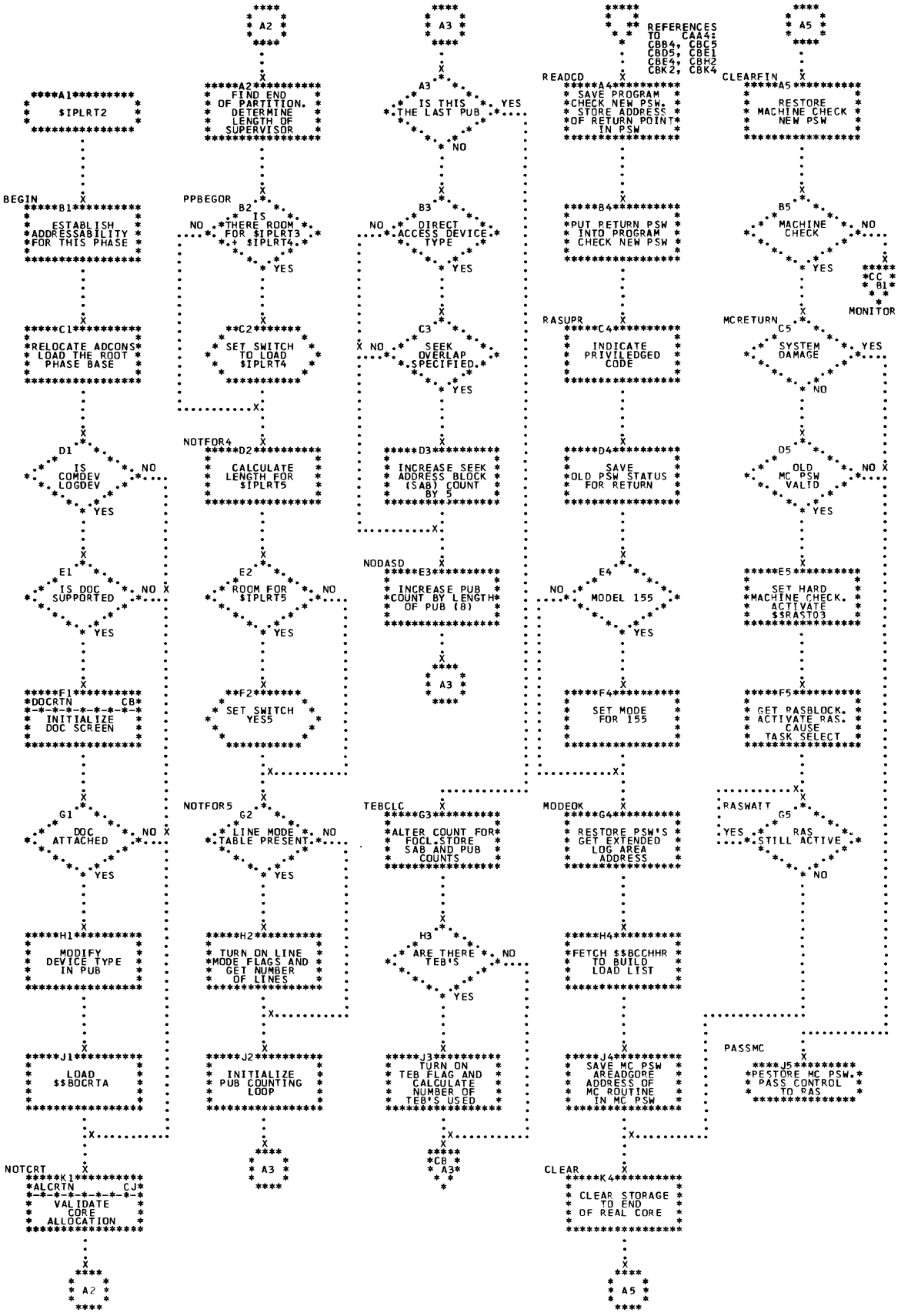


Chart CB. $IPIRT2 - Initialization Routine (Part 2 of 2)
Refer to Chart 02.

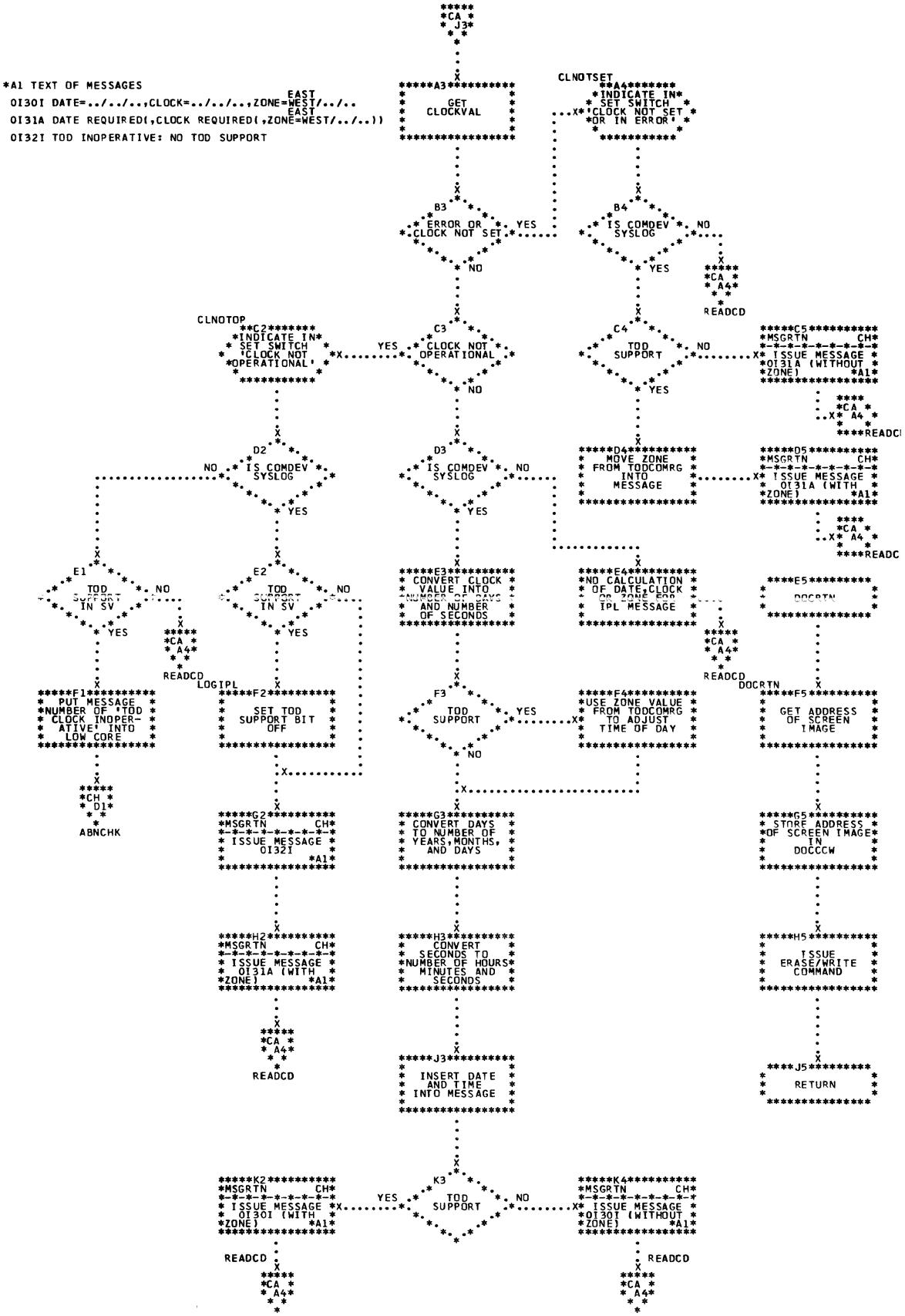


Chart CC. $IPLRT2 - Mcnitcr, Read Control Card, and Operation Scan Routines
Refer to Chart 02.

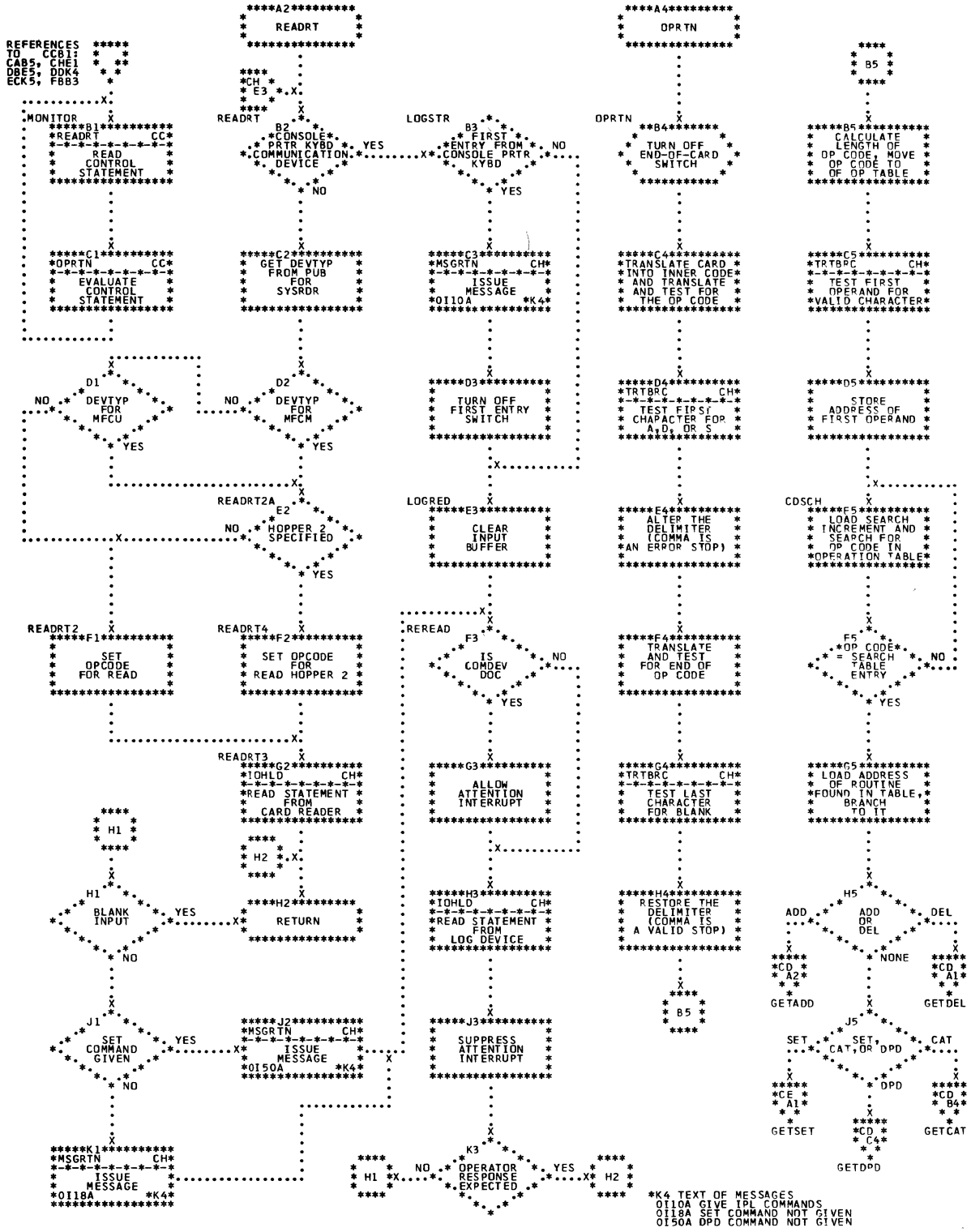


Chart CD. $IPLRT2 - Monitor Storage Usage for ADD, DEL, CAT and DPD Commands
Refer to Chart 02.

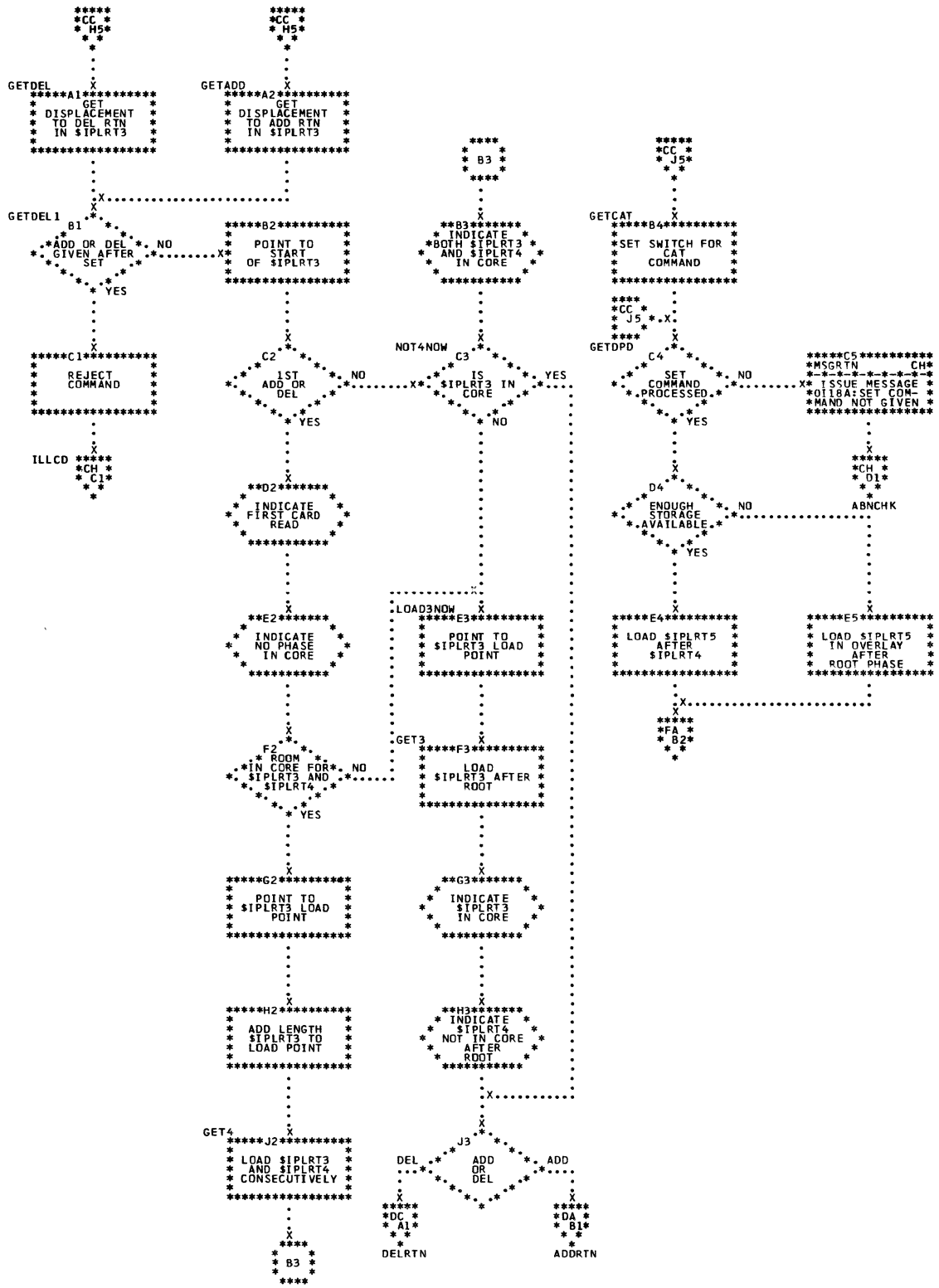


Chart CE. $IPIRT2 - Mcnitcr Stcrage Usage for SET Cormand
Refer to Chart 02.

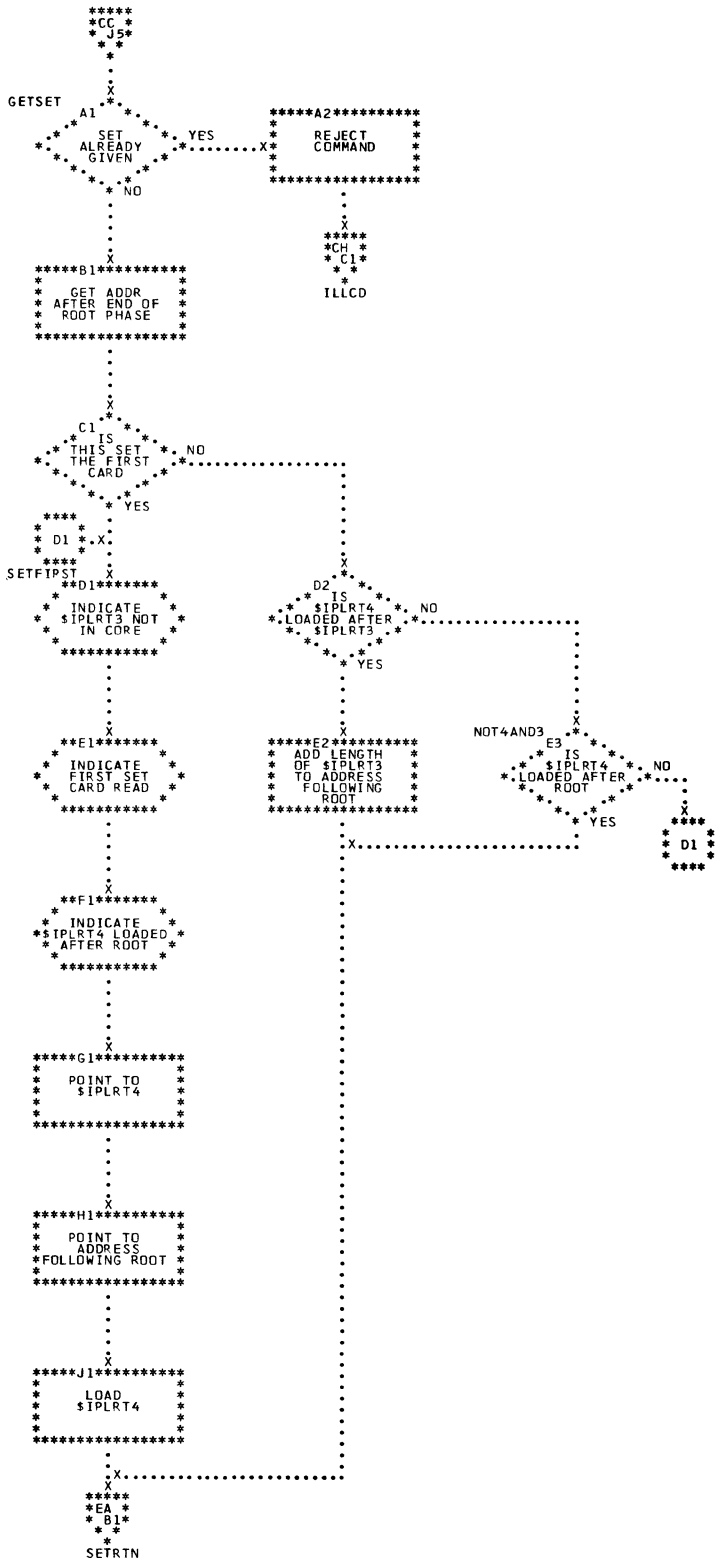


Chart CF. $IPIRT2 - Move Routine
Refer to Chart 02.

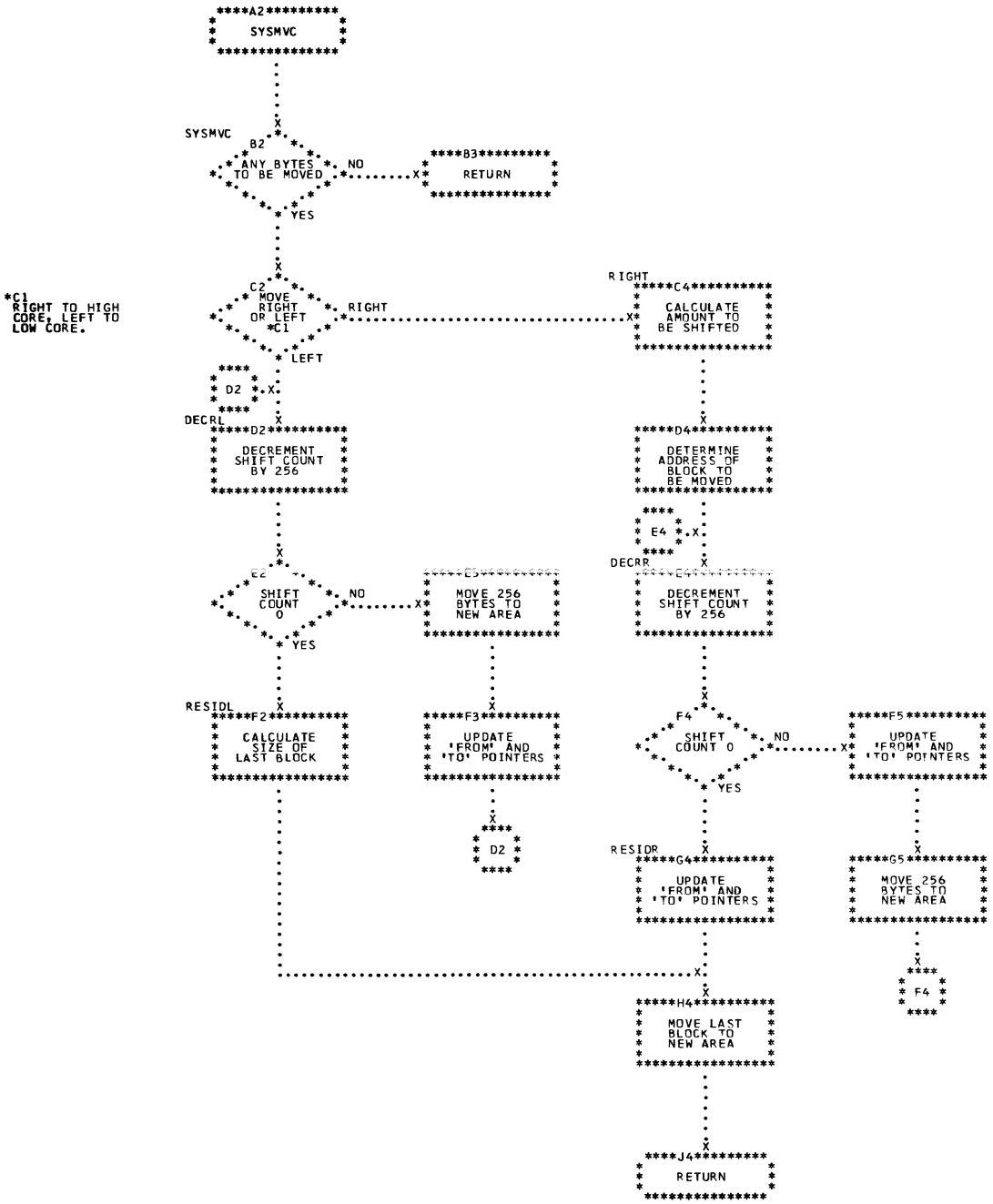


Chart CG. $IPIRT2 - Update LUB, Get Operand, and Conversion Subroutines
Refer to Chart 02.

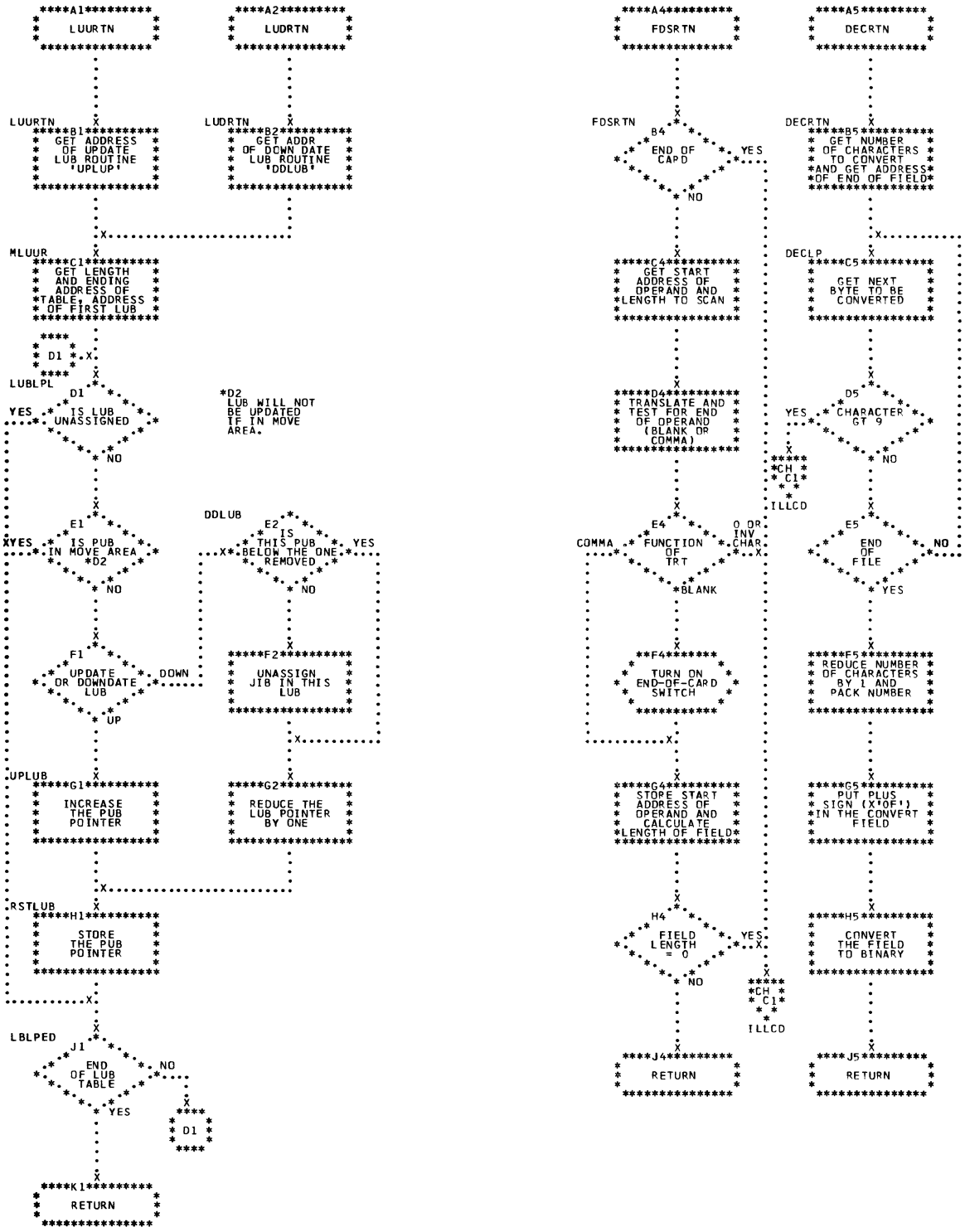


Chart CH. $IPLRT2 - I/O Subroutines
Refer to Chart 02.

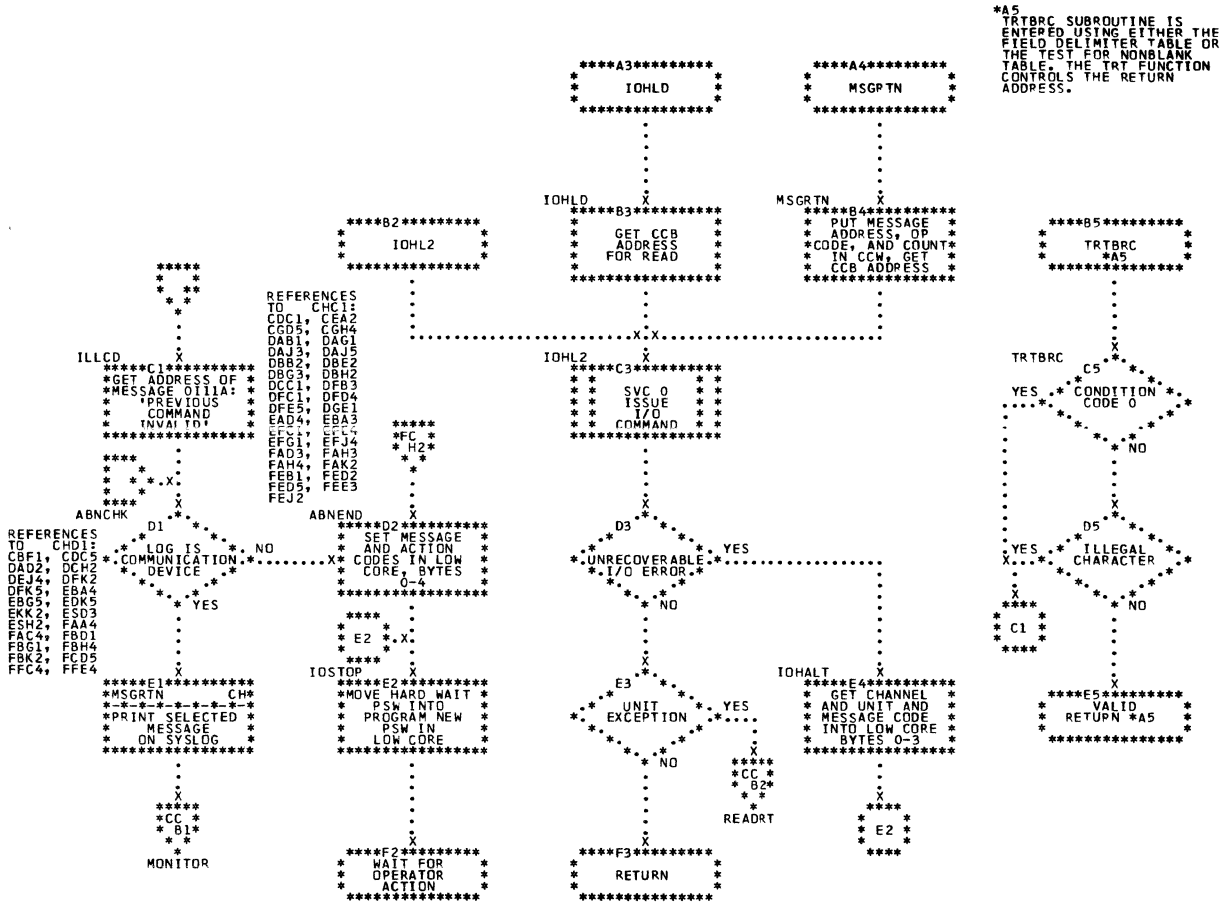


Chart CJ. $IPIRT2 - Allocate Ccre Routine
Refer to Chart 02.

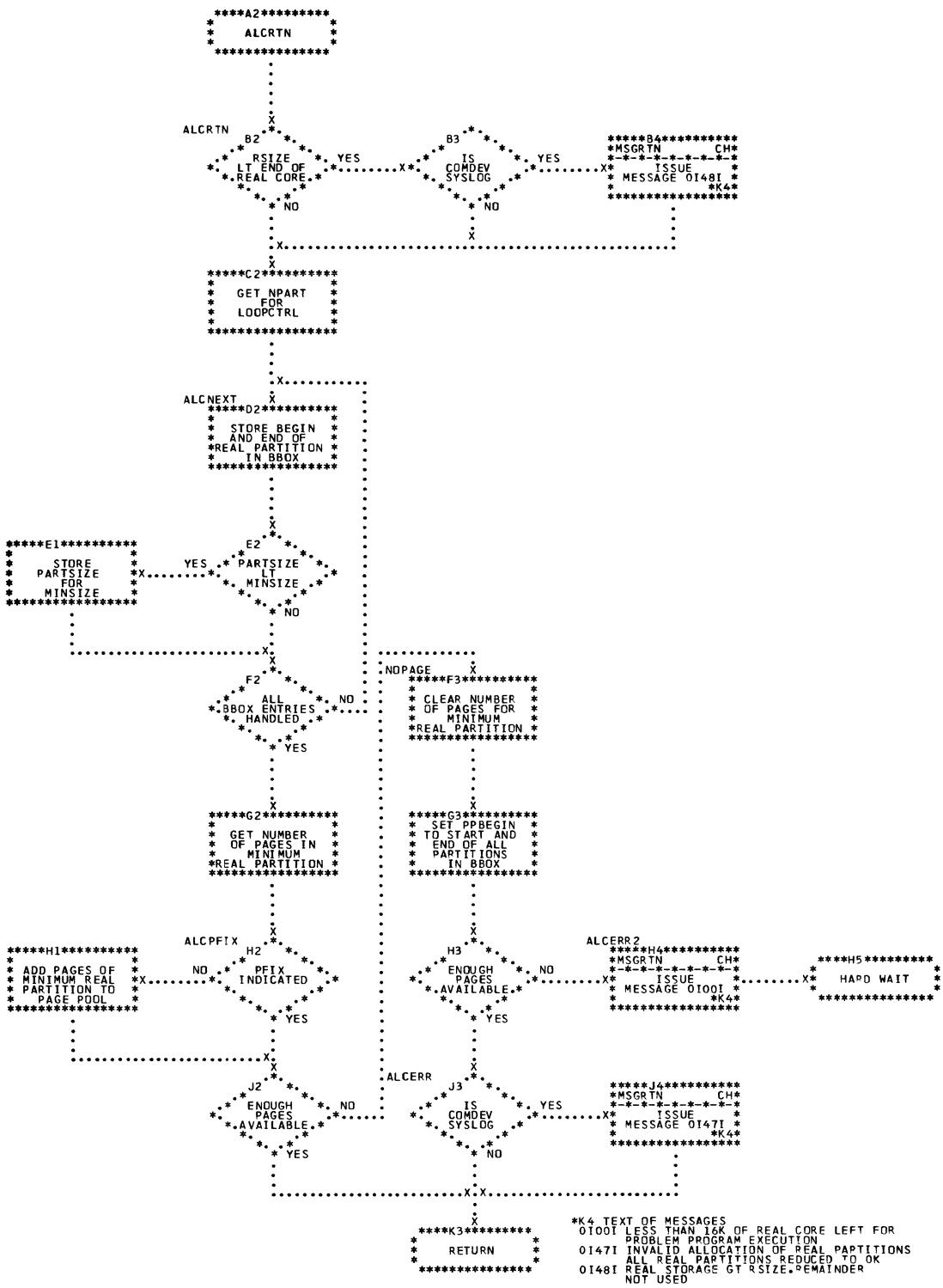


Chart DA. $IPIRT3 - ADD a Device (Part 1 of 2)
Refer to Chart 03.

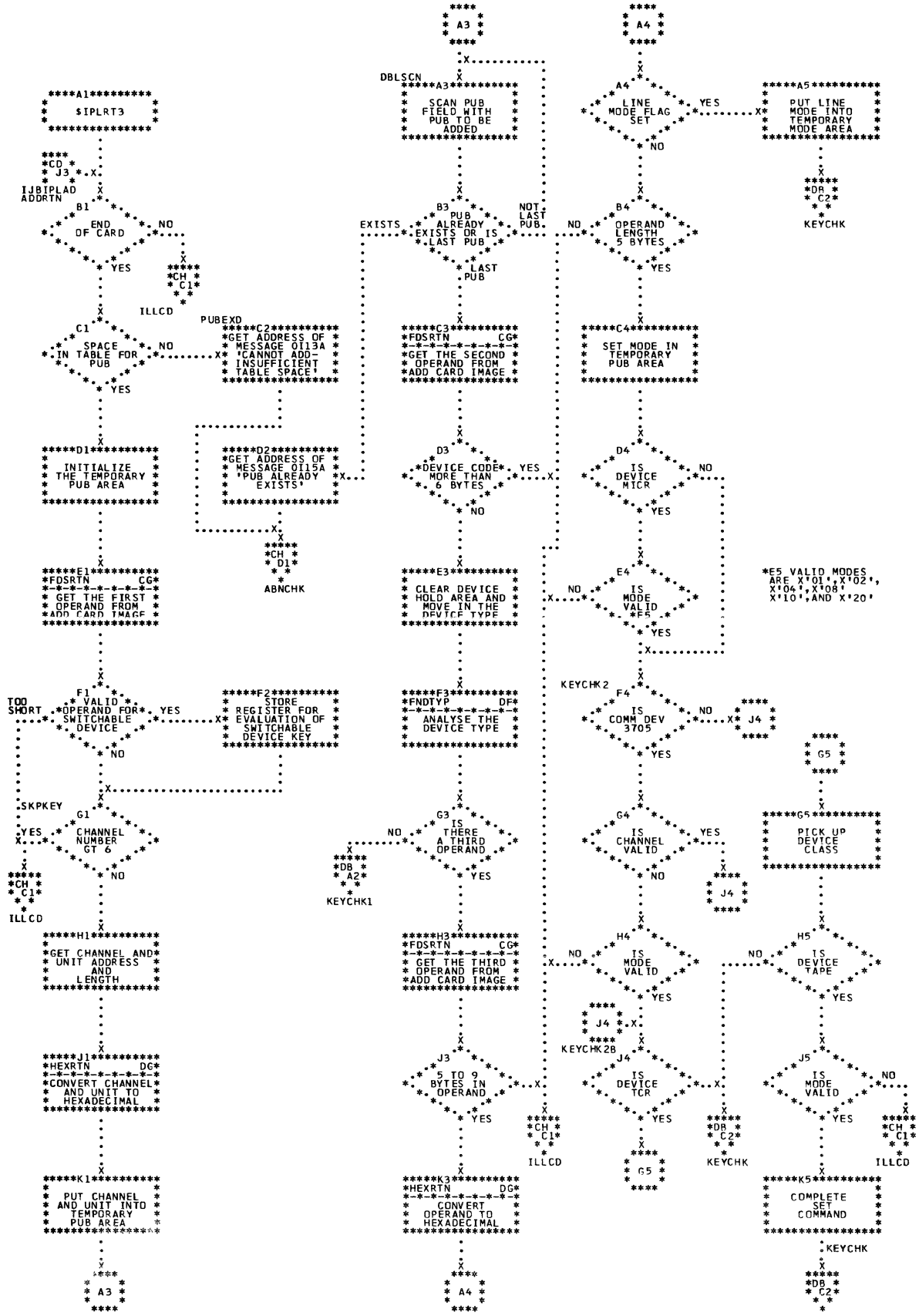


Chart DB. $IPIRT3 - ADD a Device (Part 2 of 2)
Refer to Chart 03.

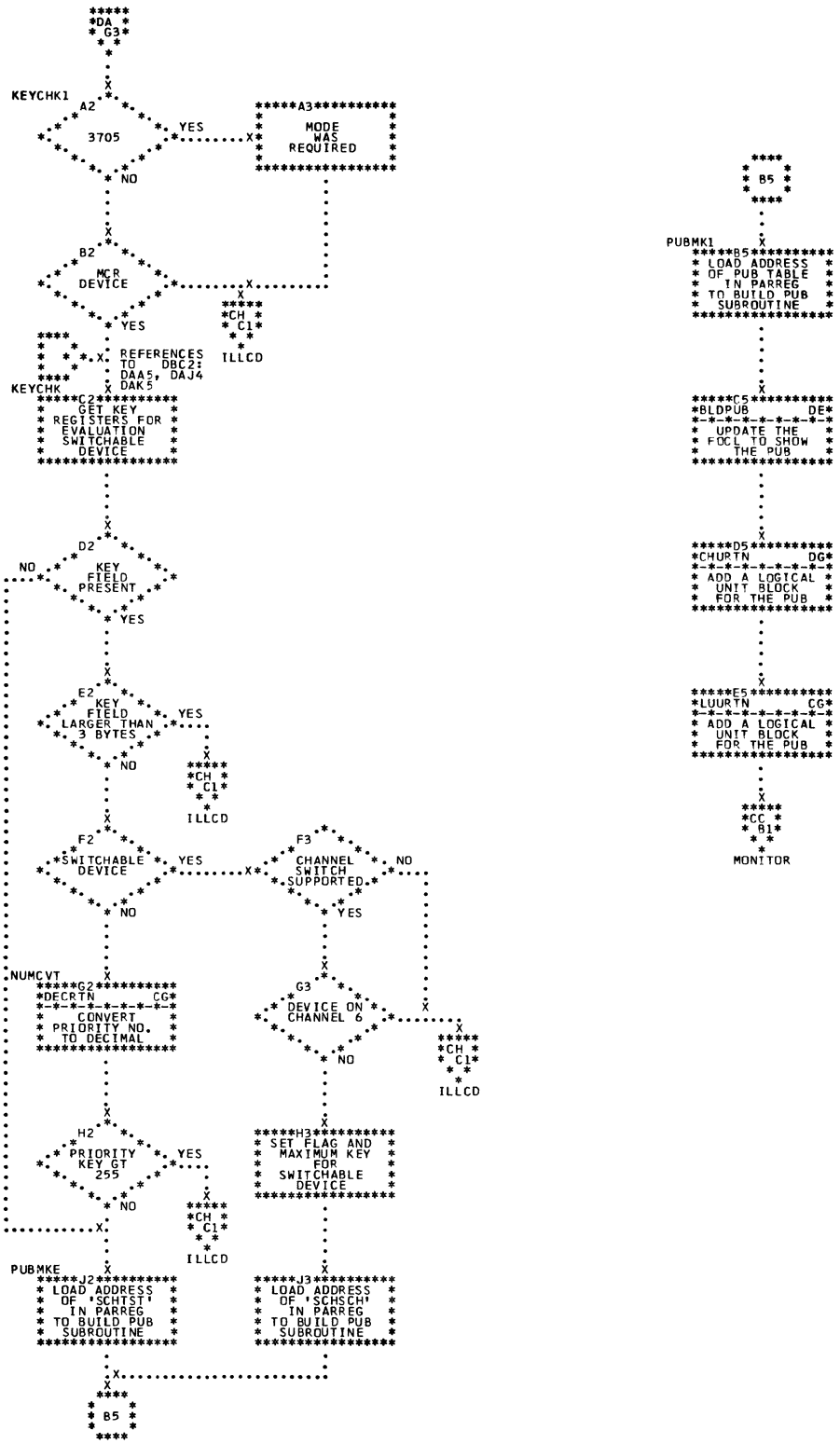


Chart DC. $IPIRT3 - Delete a PUB (Part 1 of 2)
Refer to Chart 03.

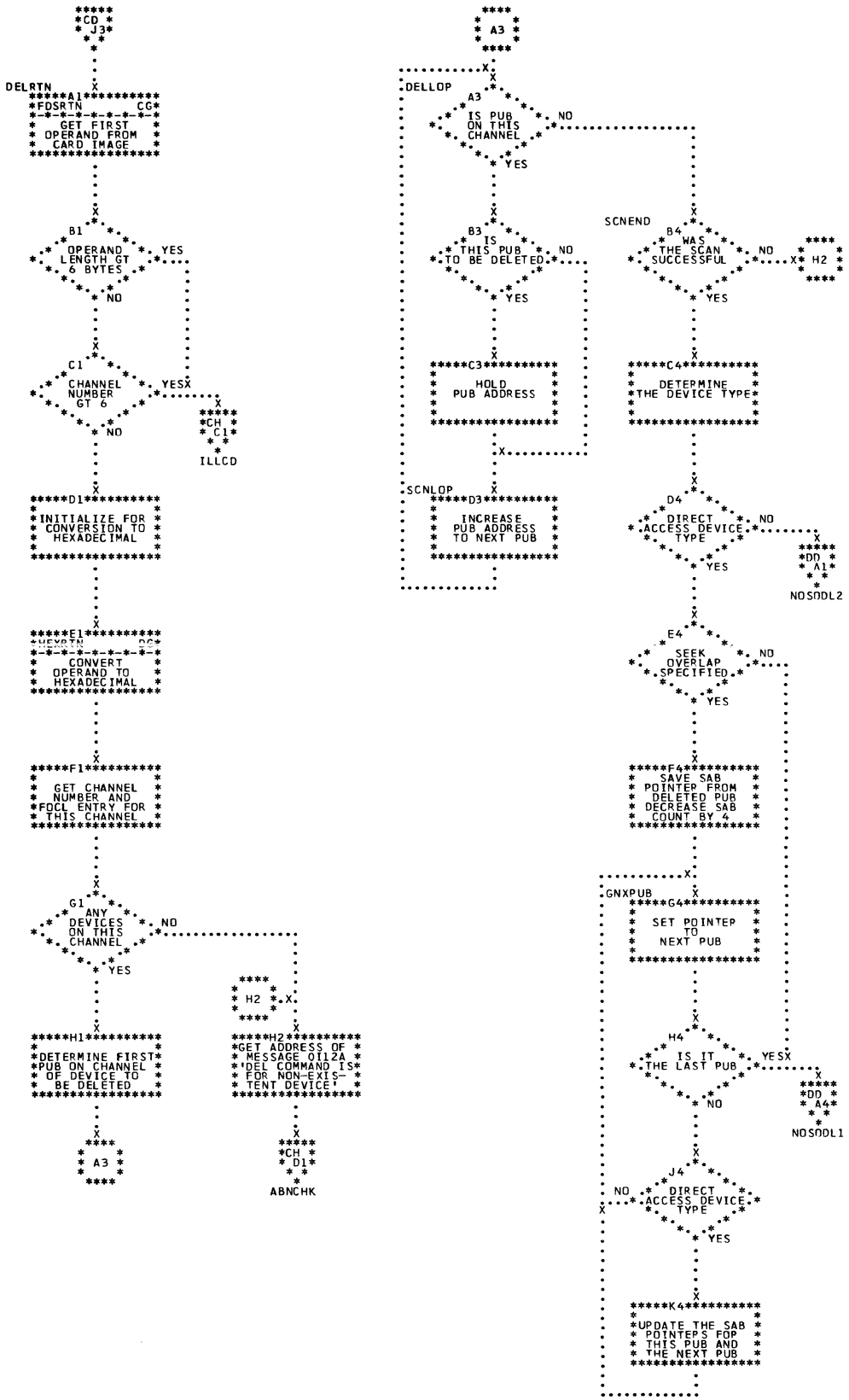


Chart DD. $IPLRT3 - Delete a PUB (Part 2 cf 2)
Refer to Chart 03.

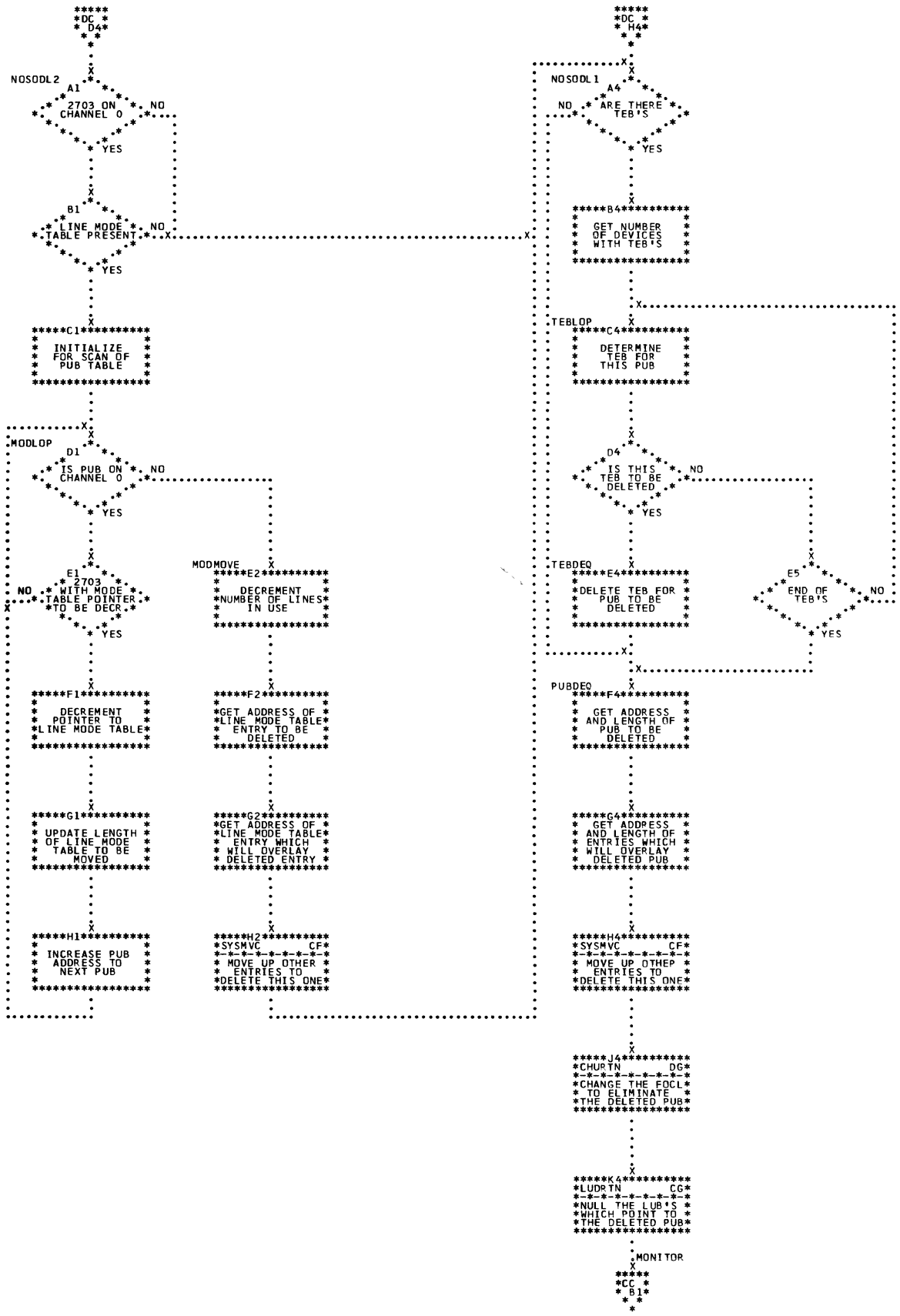


Chart DE. $IPIRT3 - Build PUB Table Subroutine
Refer to Chart 03.

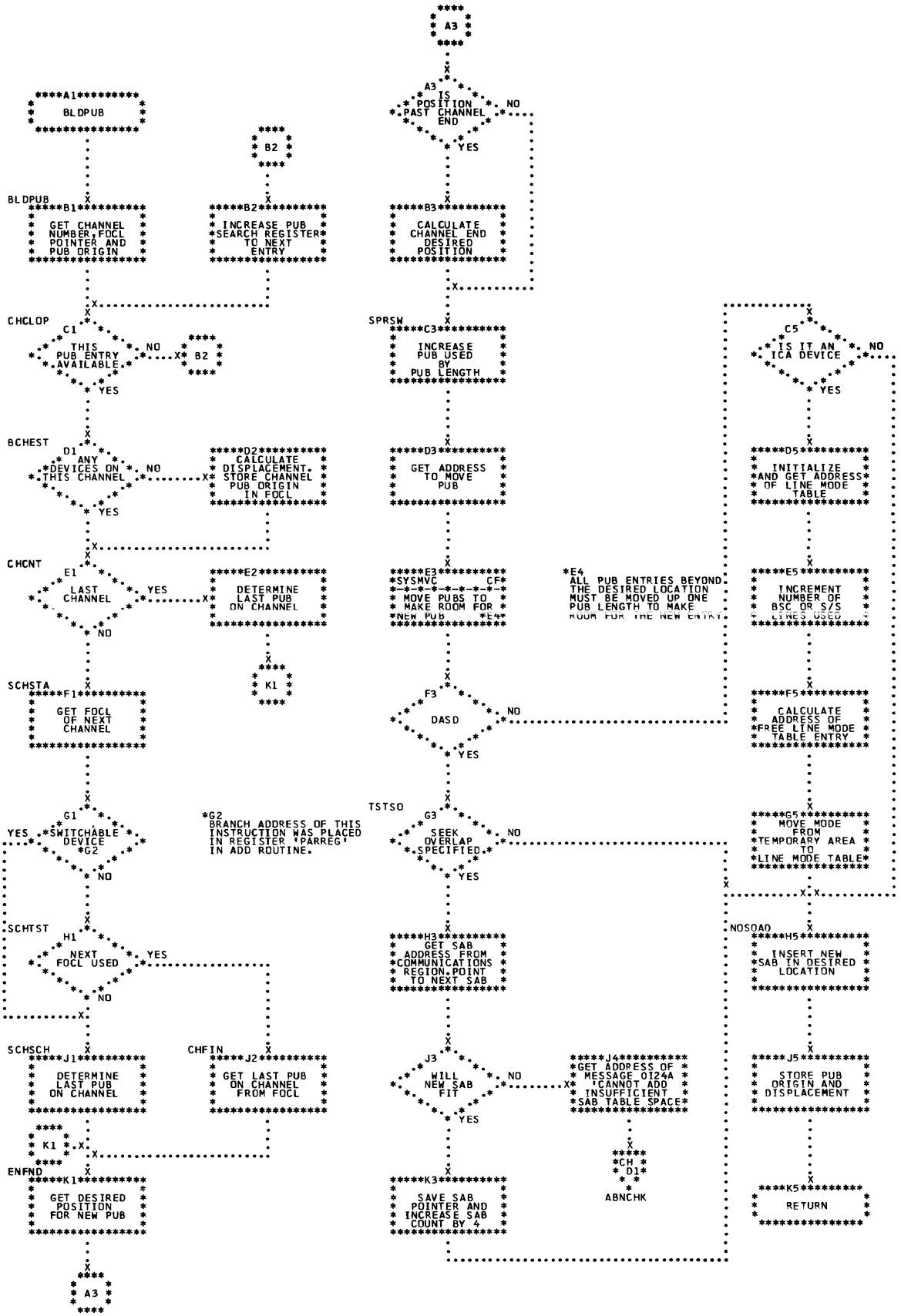


Chart DF. $IPIRT3 - Device Type Conversion Subroutine
Refer to Chart 03.

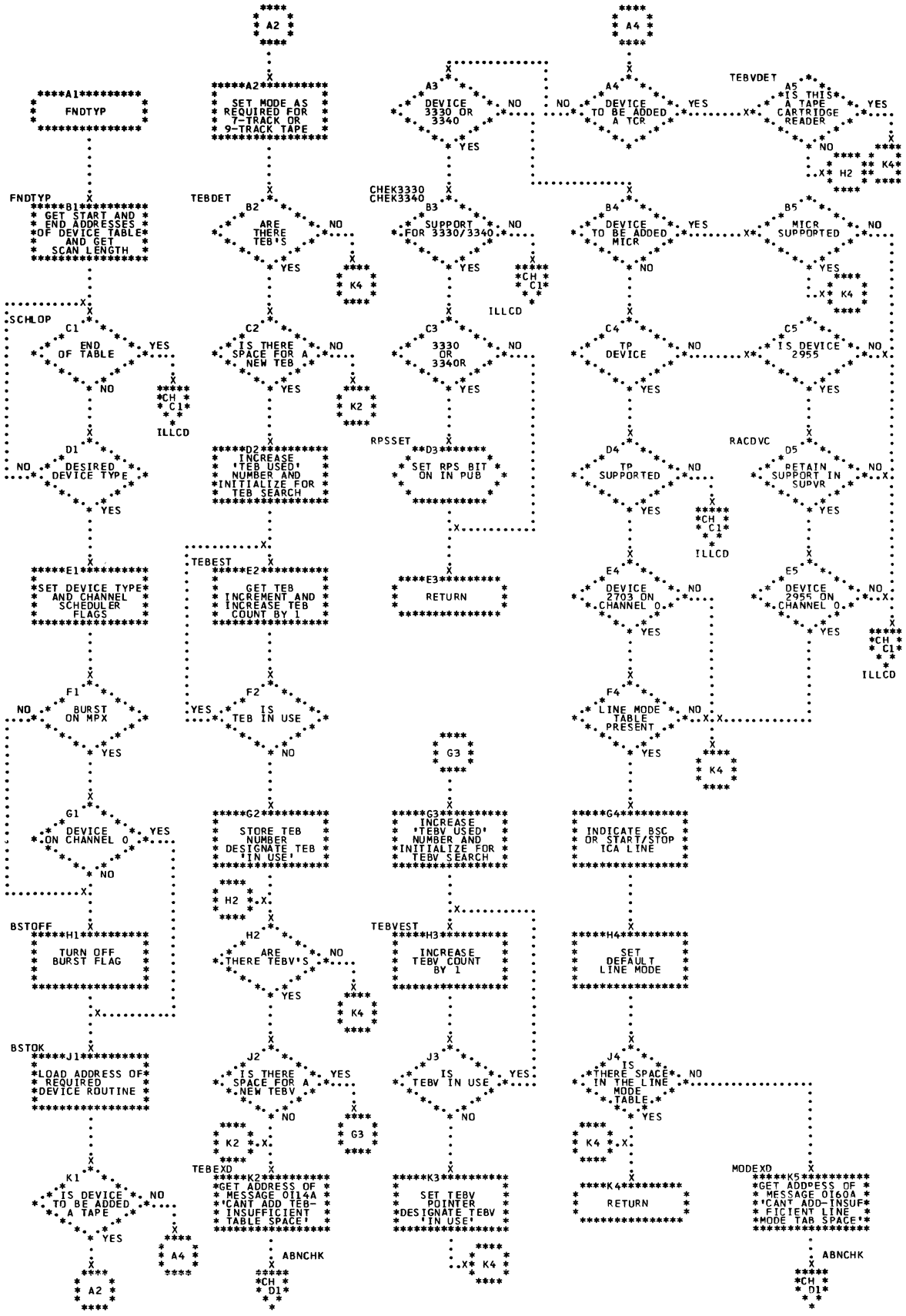


Chart DG. $IPIRT3 - Conversion and Update FOCI Subroutines
Refer to Chart 03.

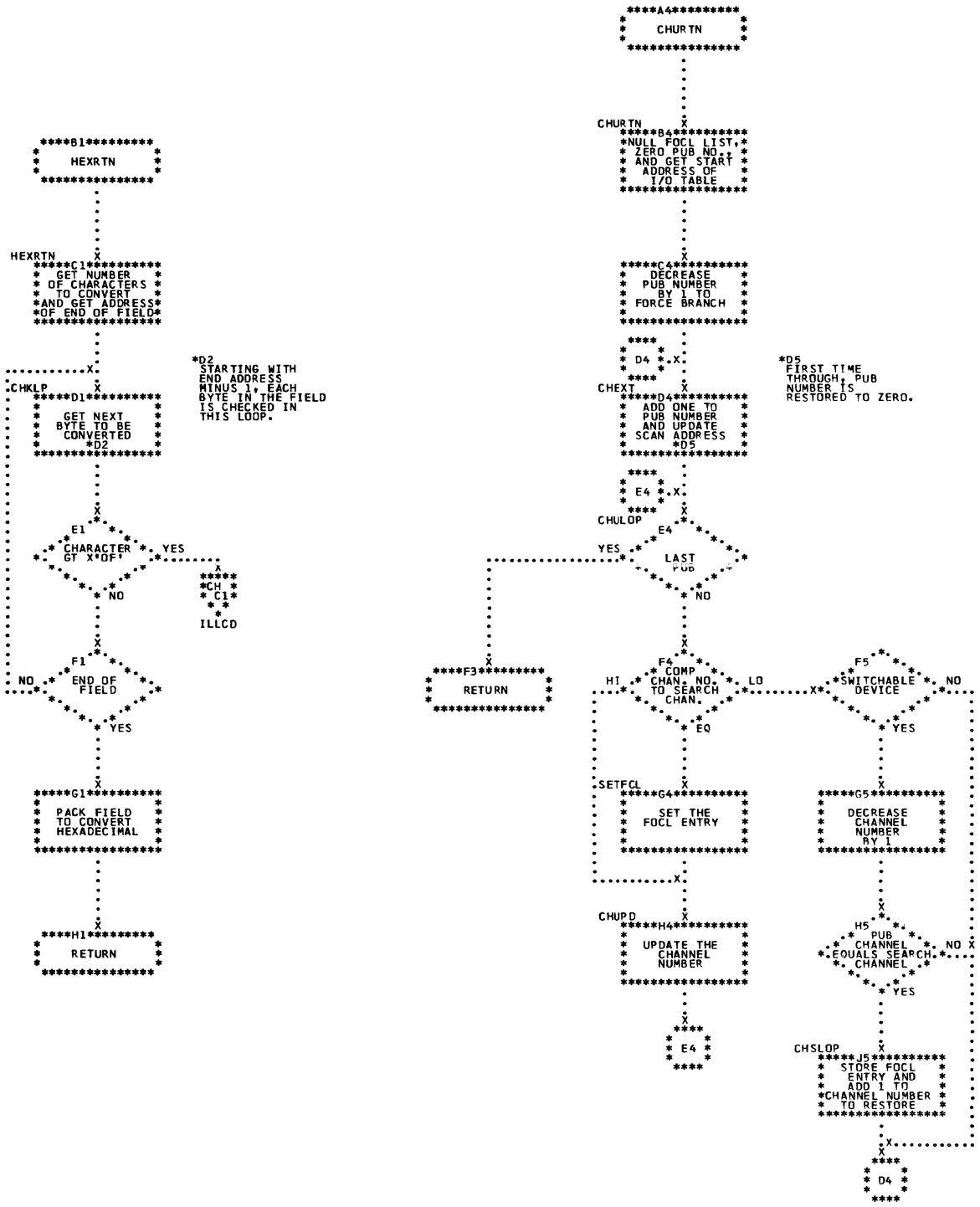


Chart EA. $IPIRT4 - SET Statement Processor and Assign SYSLOG (Part 1 of 2)
Refer to Chart 03.

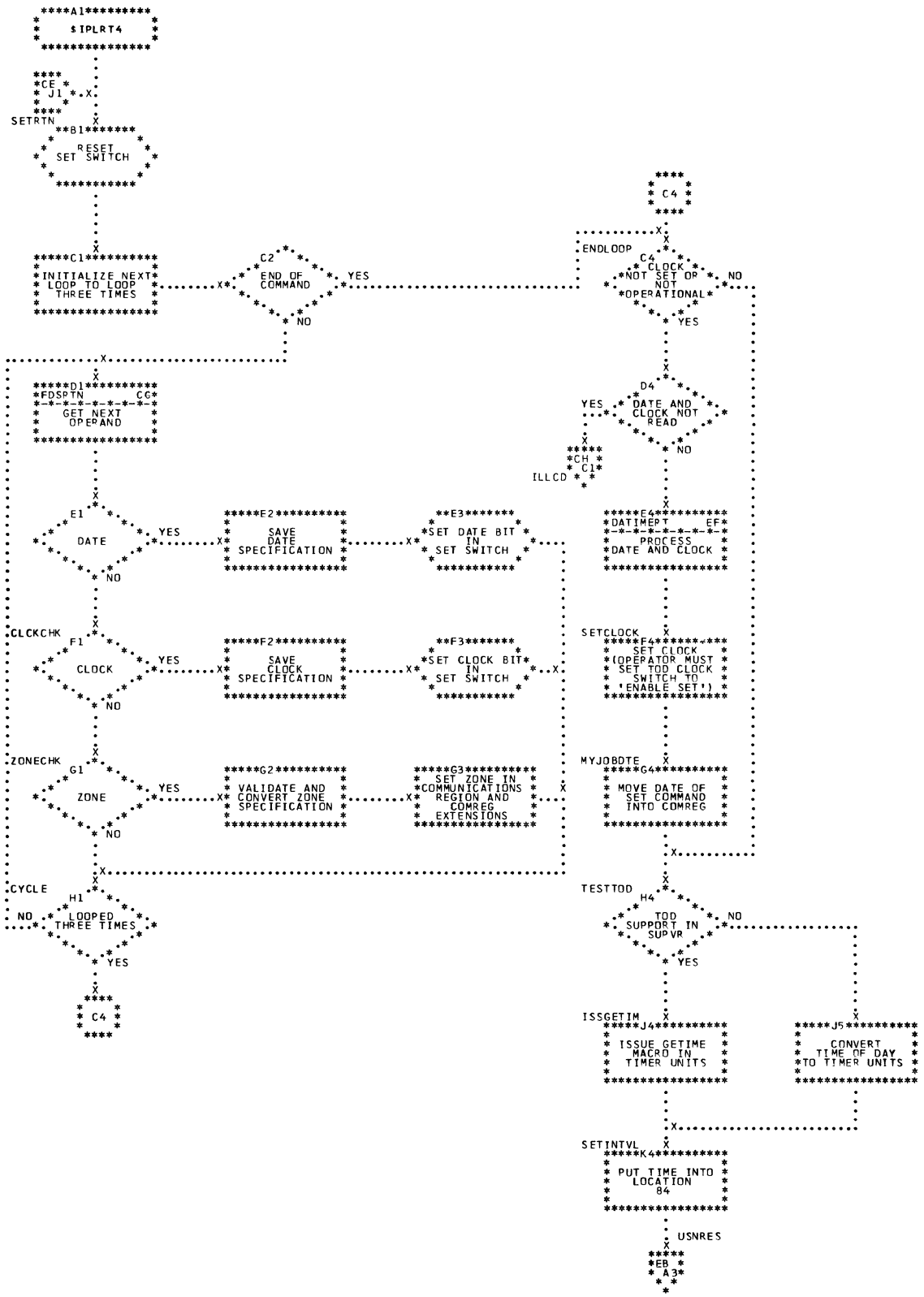


Chart EB. $IPIRT4 - SET Statement Processor and Assign SYSLOG (Part 2 of 2)
Refer to Chart 03.

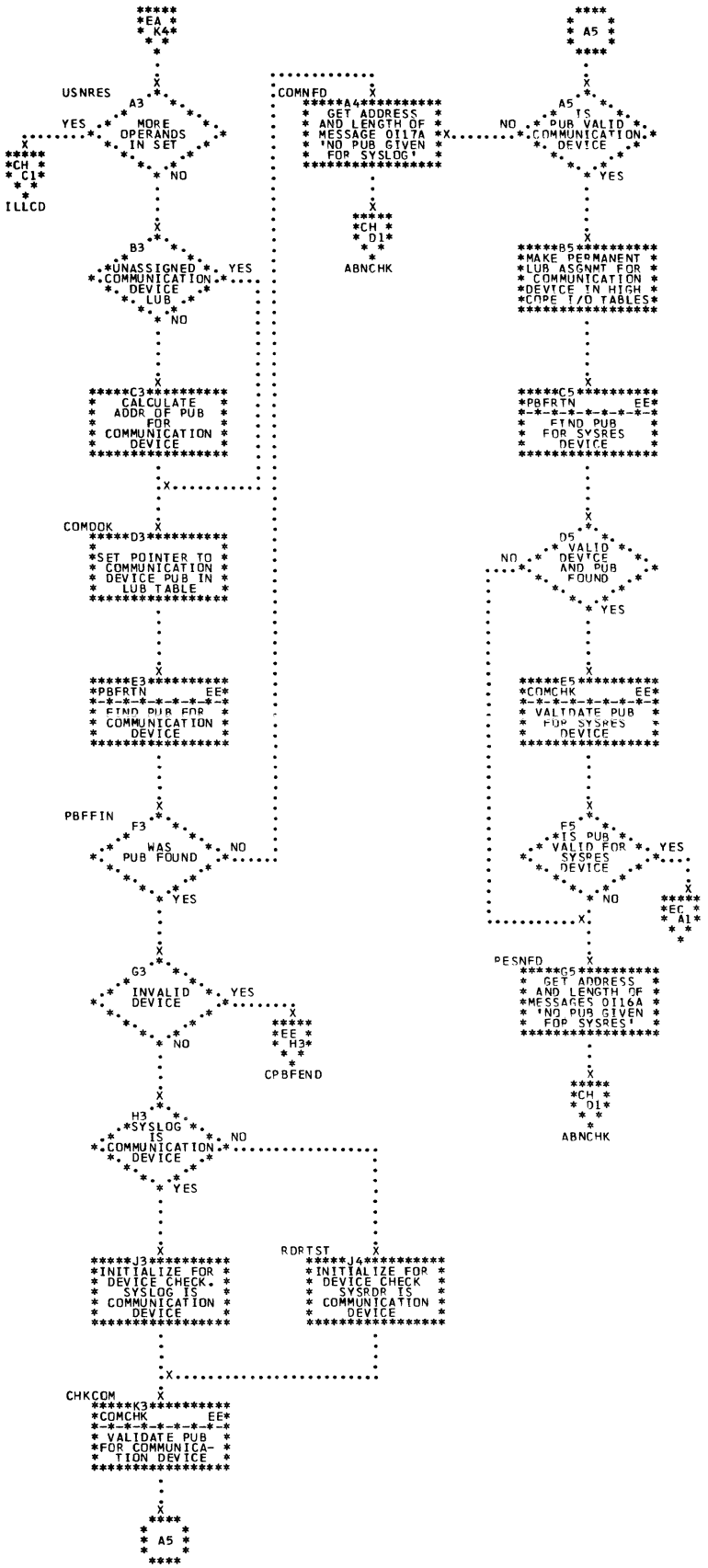


Chart EC. $IPIRT4 - Assign SYSRES and Move I/O Tables
Refer to Chart 03.

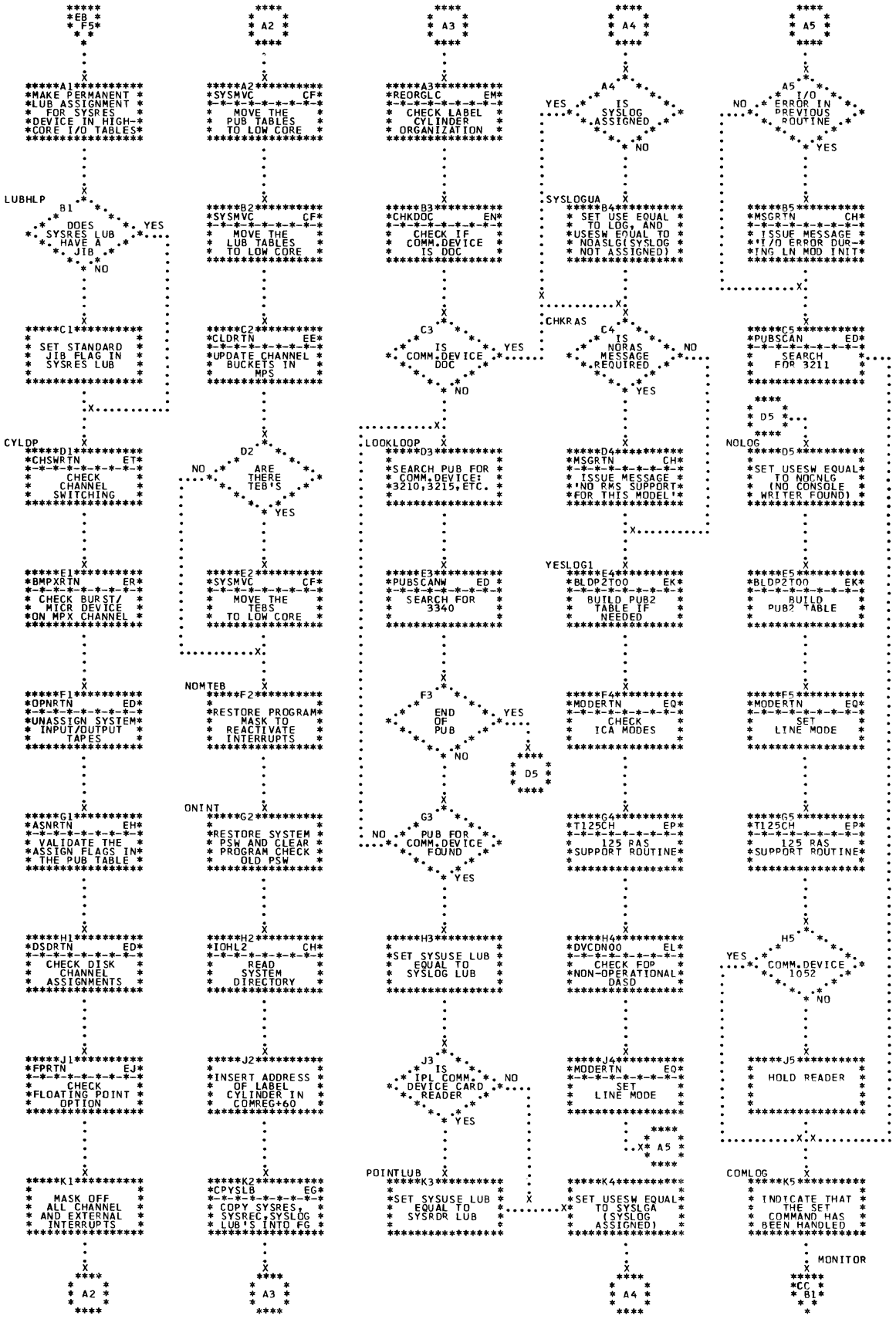


Chart ED. $IPLRT4 - I/O and Check Device Type Subroutines
Refer to Chart 03.

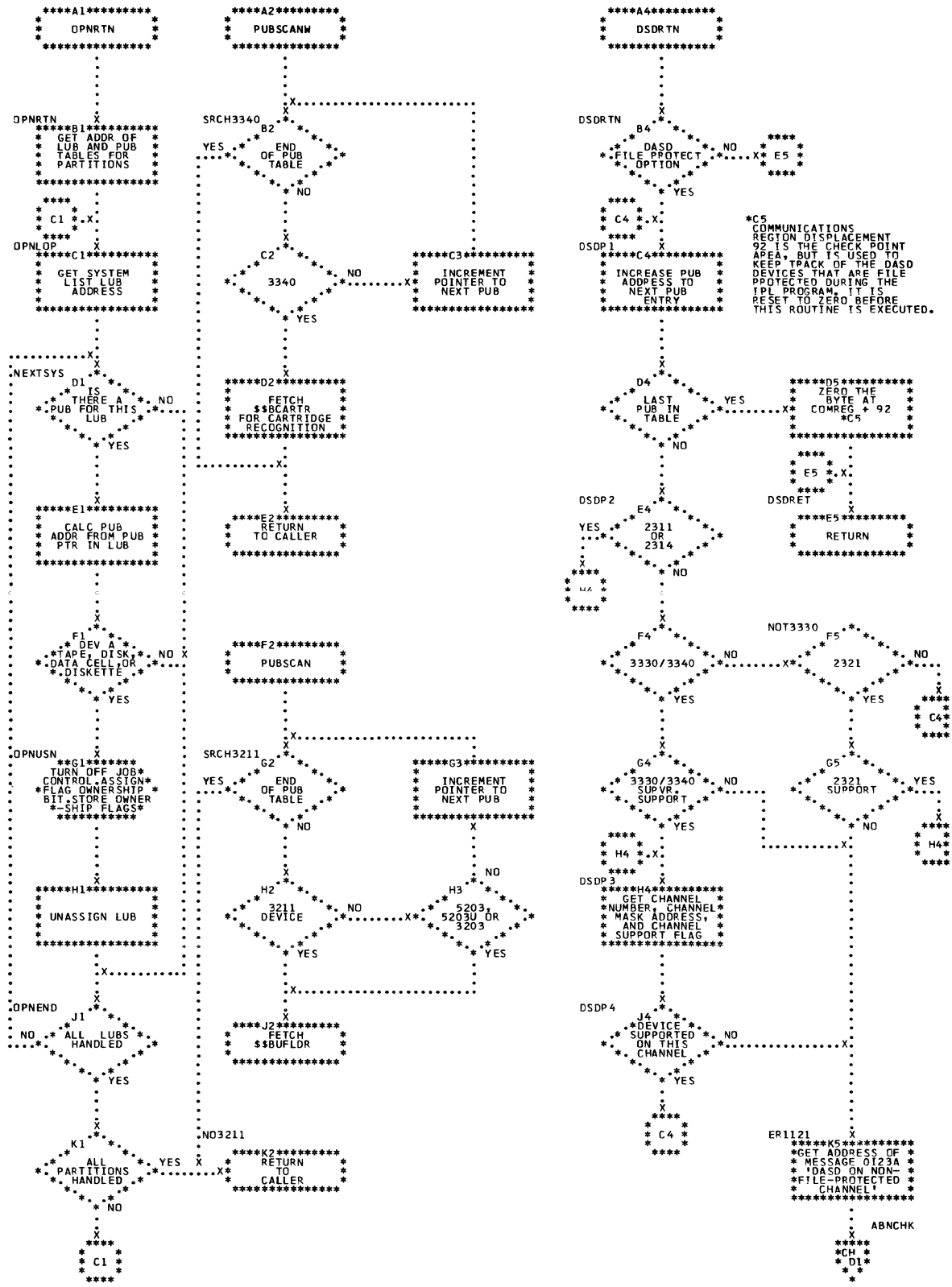


Chart EE. $IPIRT4 - Find PUB and I/O Subrcutines
Refer to Chart 03.

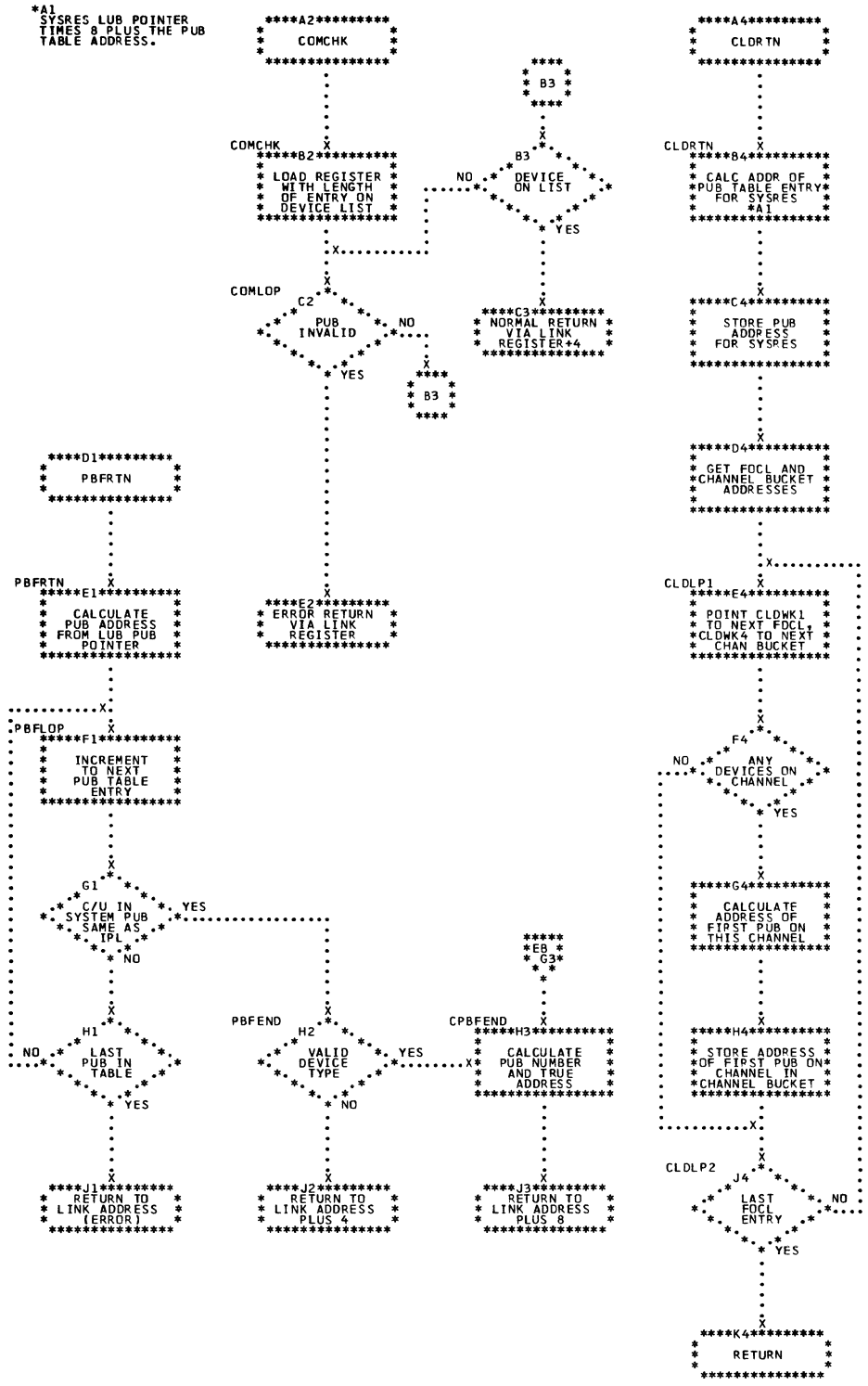


Chart EF. $IPIRT4 - Date and Time Subroutines
Refer to Chart 03.

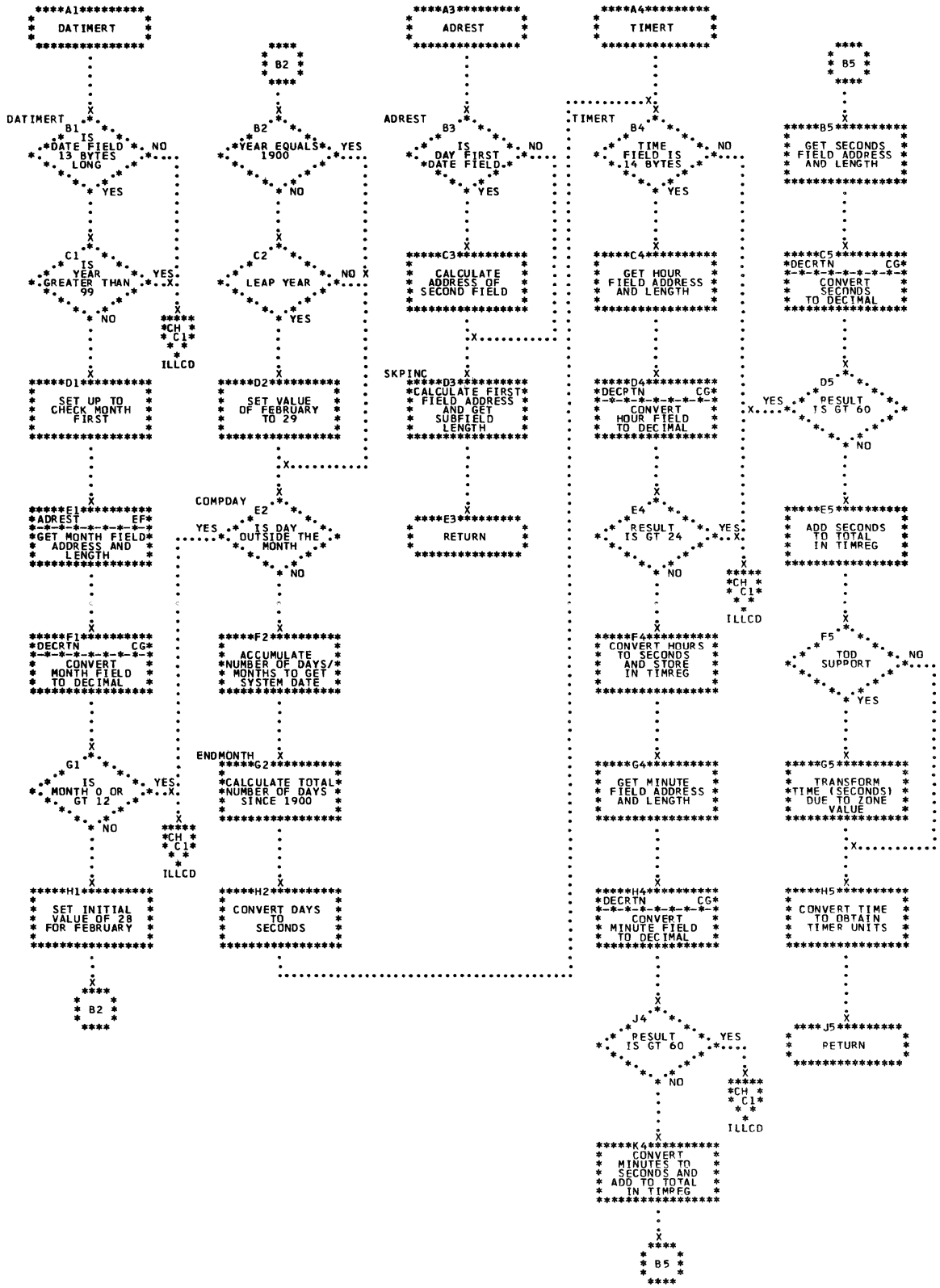


Chart EG. **$IPLRT4** - Copy Subroutine
Refer to Chart 03.

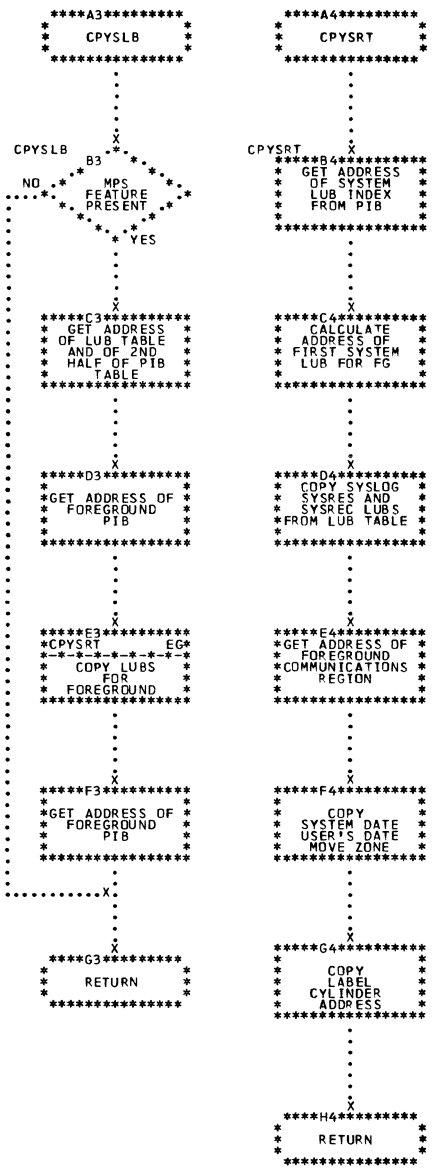


Chart EH. $IPIRT4 - Set Job Contrcl Flags Subroutine
Refer to Chart 03.

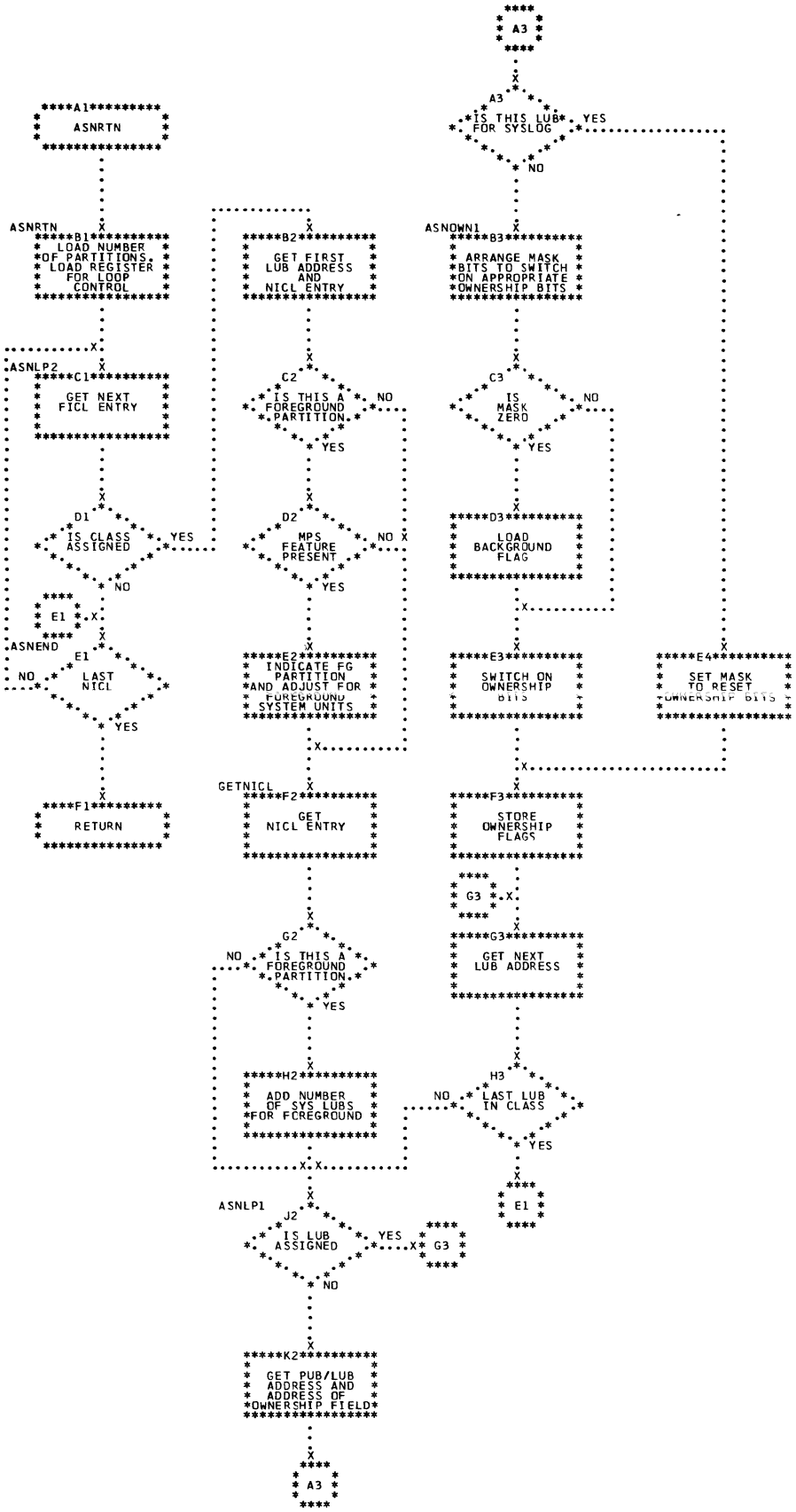


Chart EJ. $IPIRT4 - Reorder MPX Channel LUBs and PUBs
Refer to Chart 03.

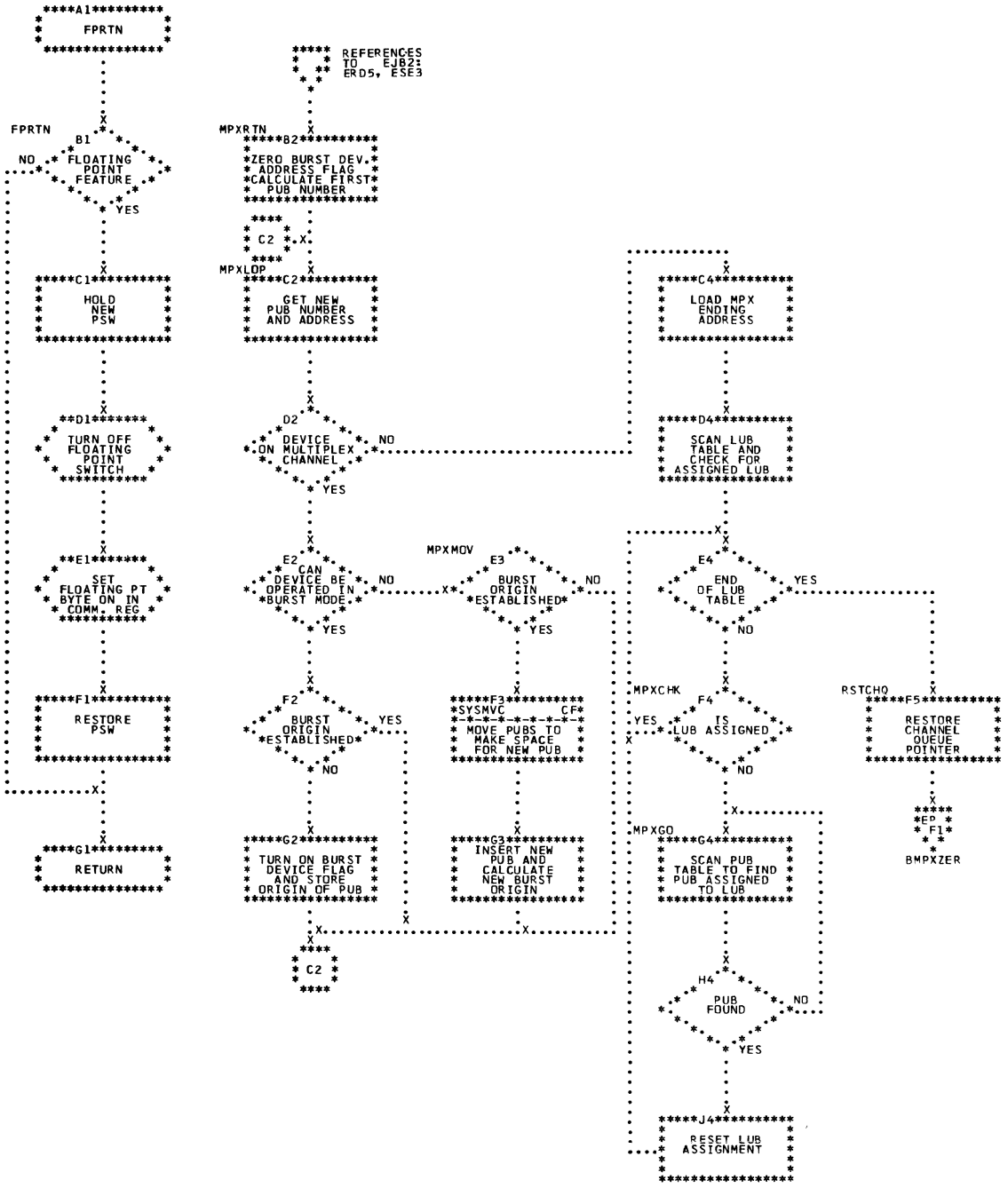


Chart EK. $IPIRT4 - Build PUB2 Table Subrcutine
Refer to Chart 03.

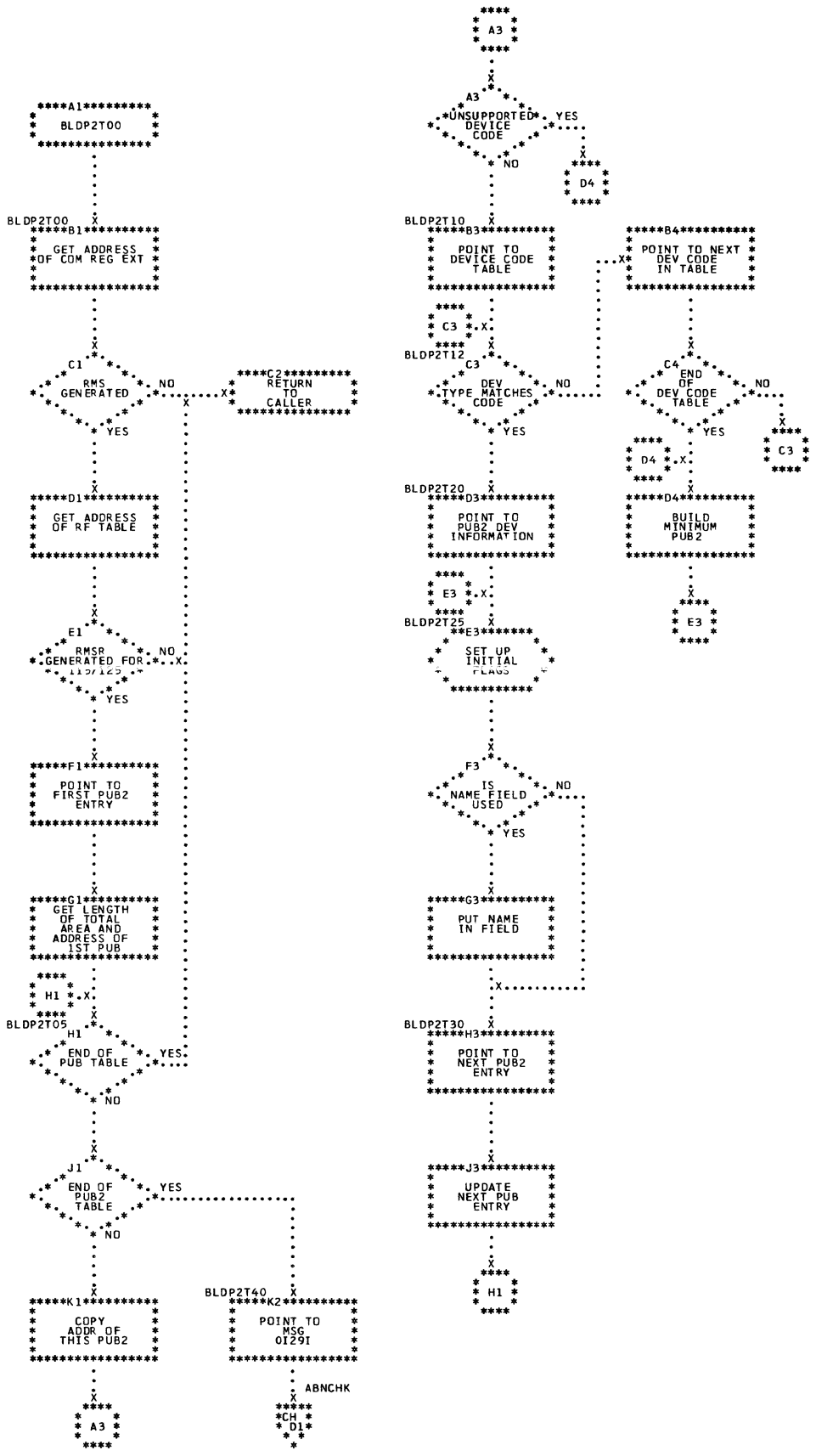


Chart EL. $IPIRT4 - Test for Not Operational DASD Devices
Refer to Chart 03.

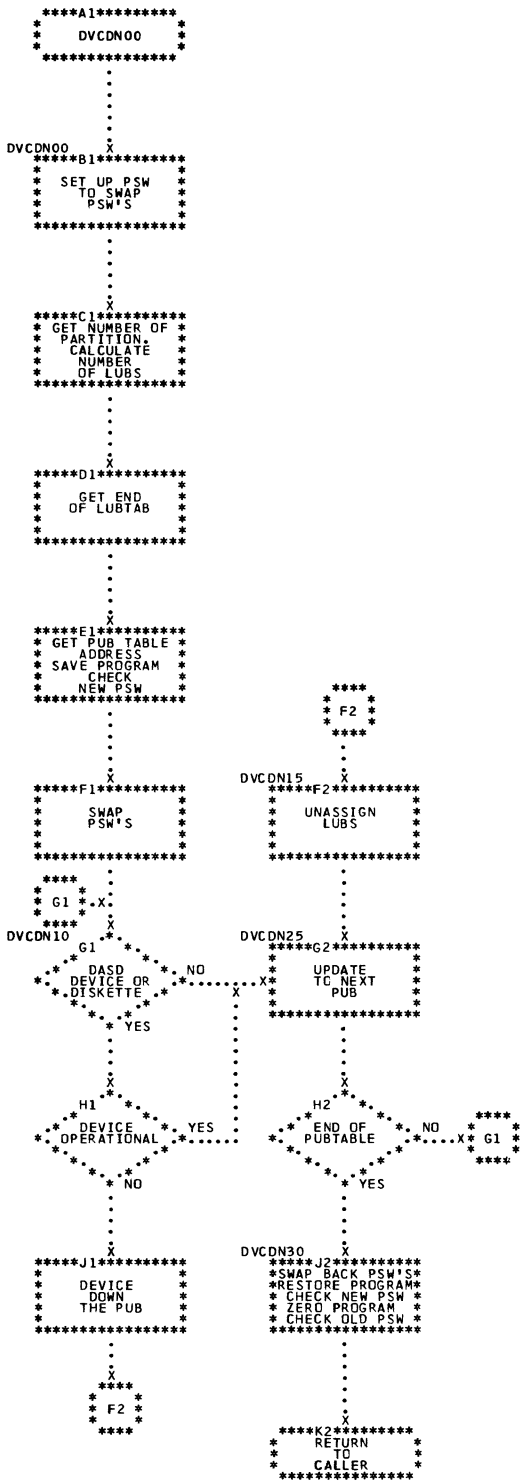


Chart EM. $IPIRT4 - Check Label Cylinder Organizatcn
Refer to Chart 03.

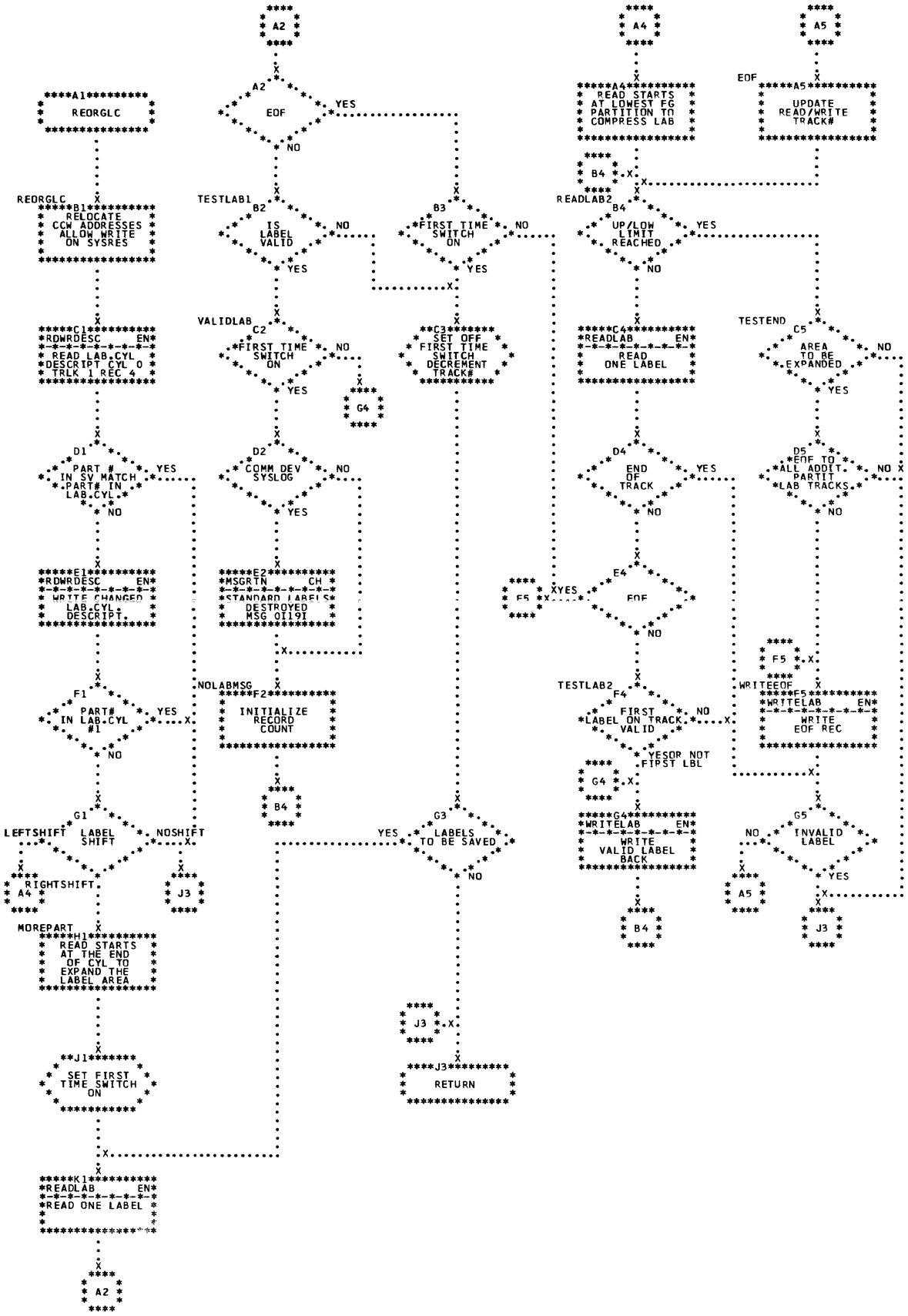


Chart EN. $IPLRT4 - Make a PUB Search for a DCC Device
Refer to Chart 03.

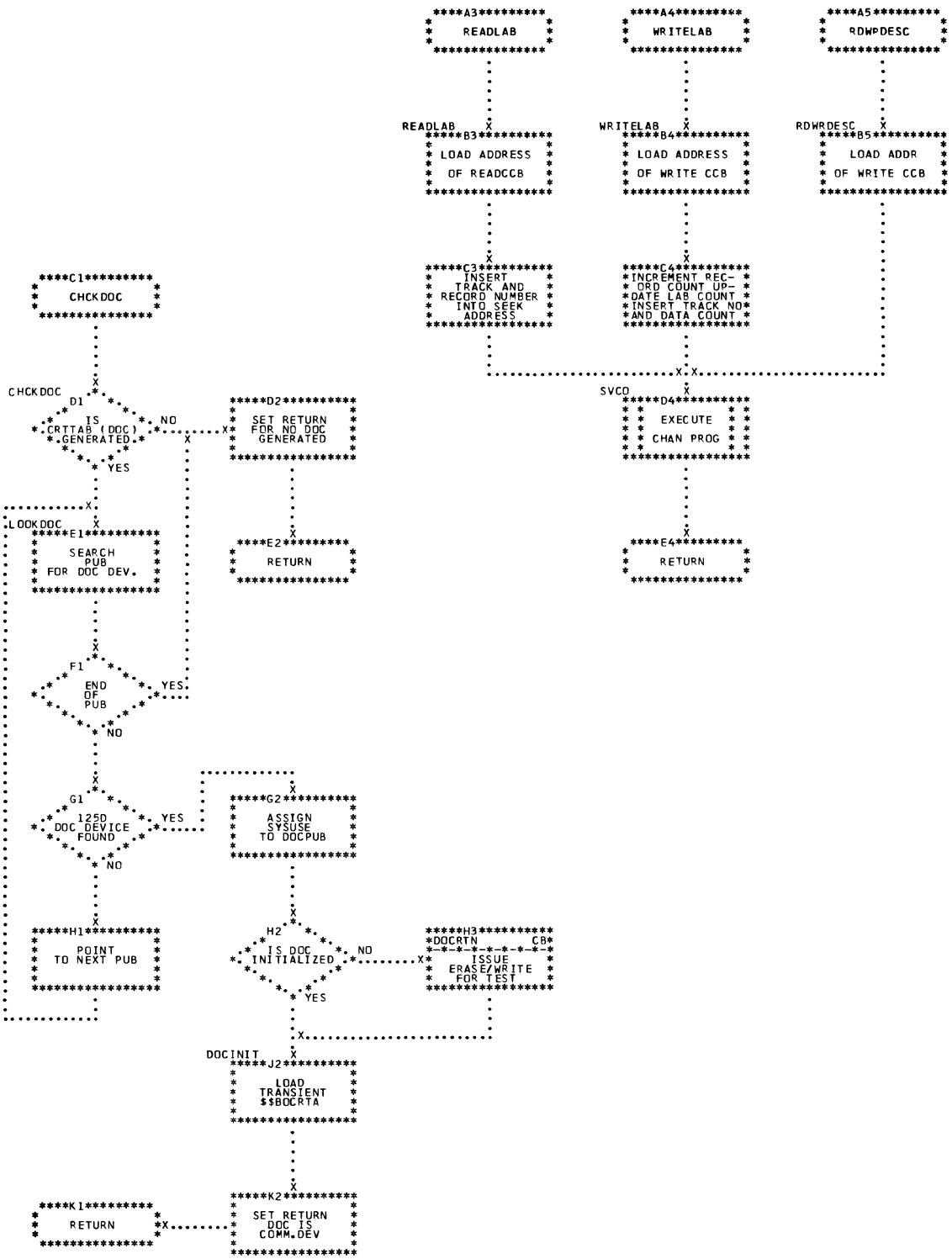


Chart EP. $IPIRT4 - Model 115/125 RMS Support
Refer to Chart 03.

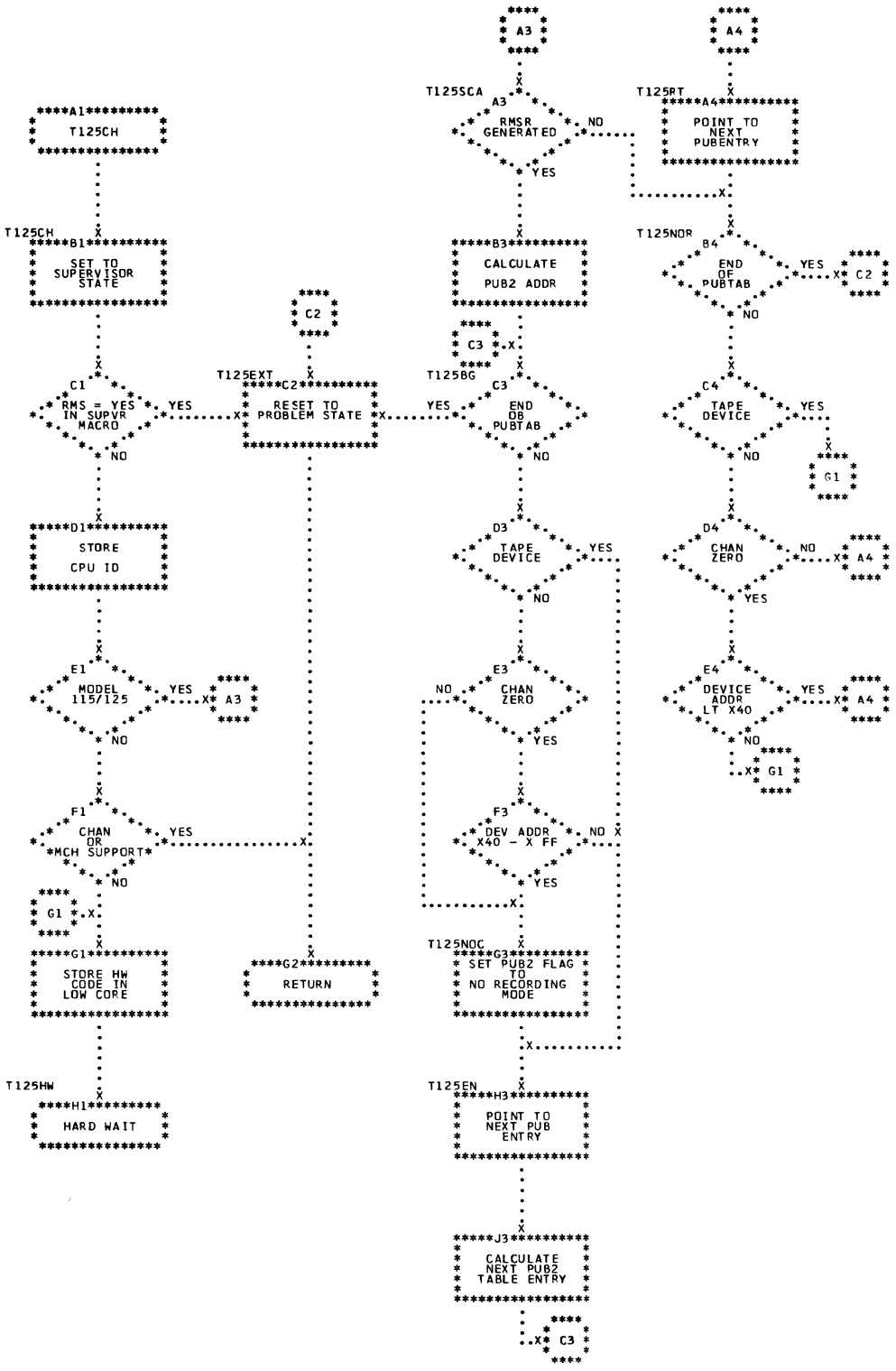


Chart EQ. $IPIRT4 - Set Line Mcde
Refer to Chart 03.

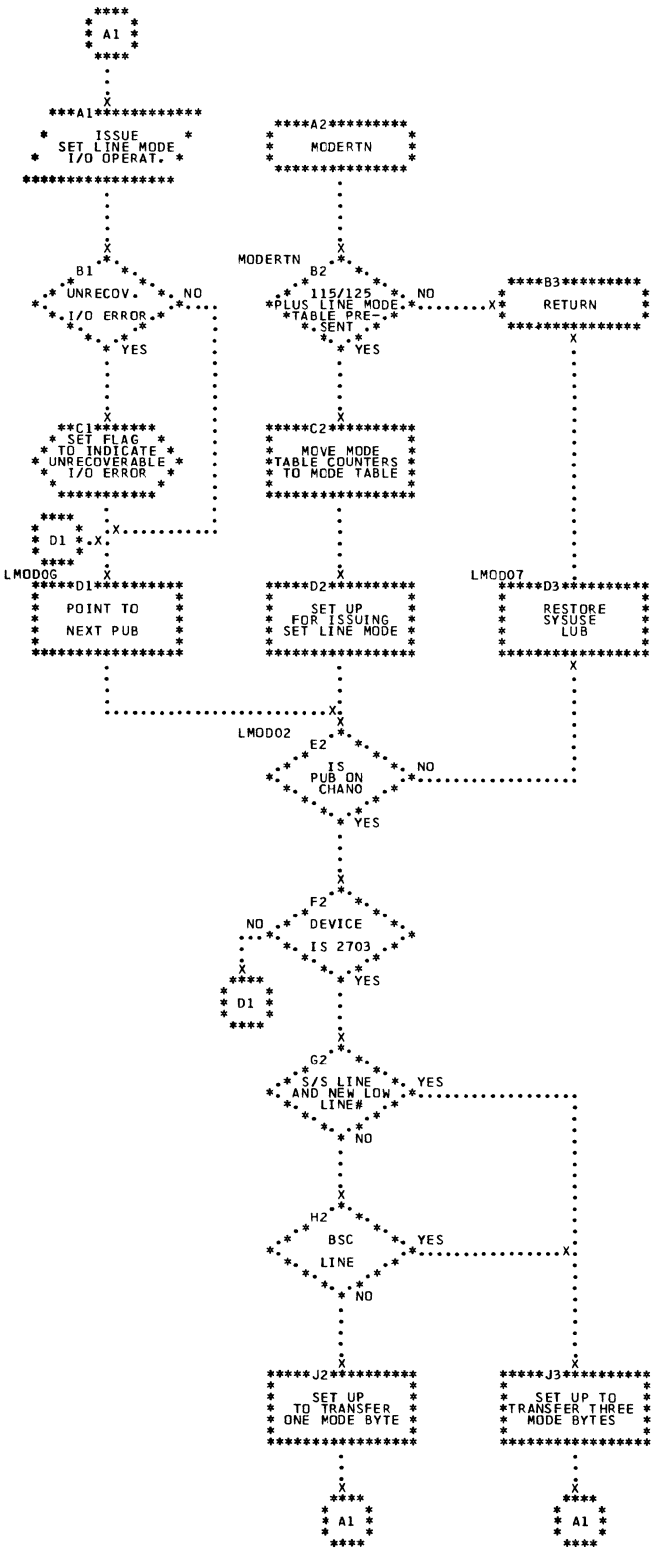


Chart ER. $IPLRT4 - Check Burst and MICR Device on Multiplex Channel (Part 1 of 2)
Refer to Chart 03.

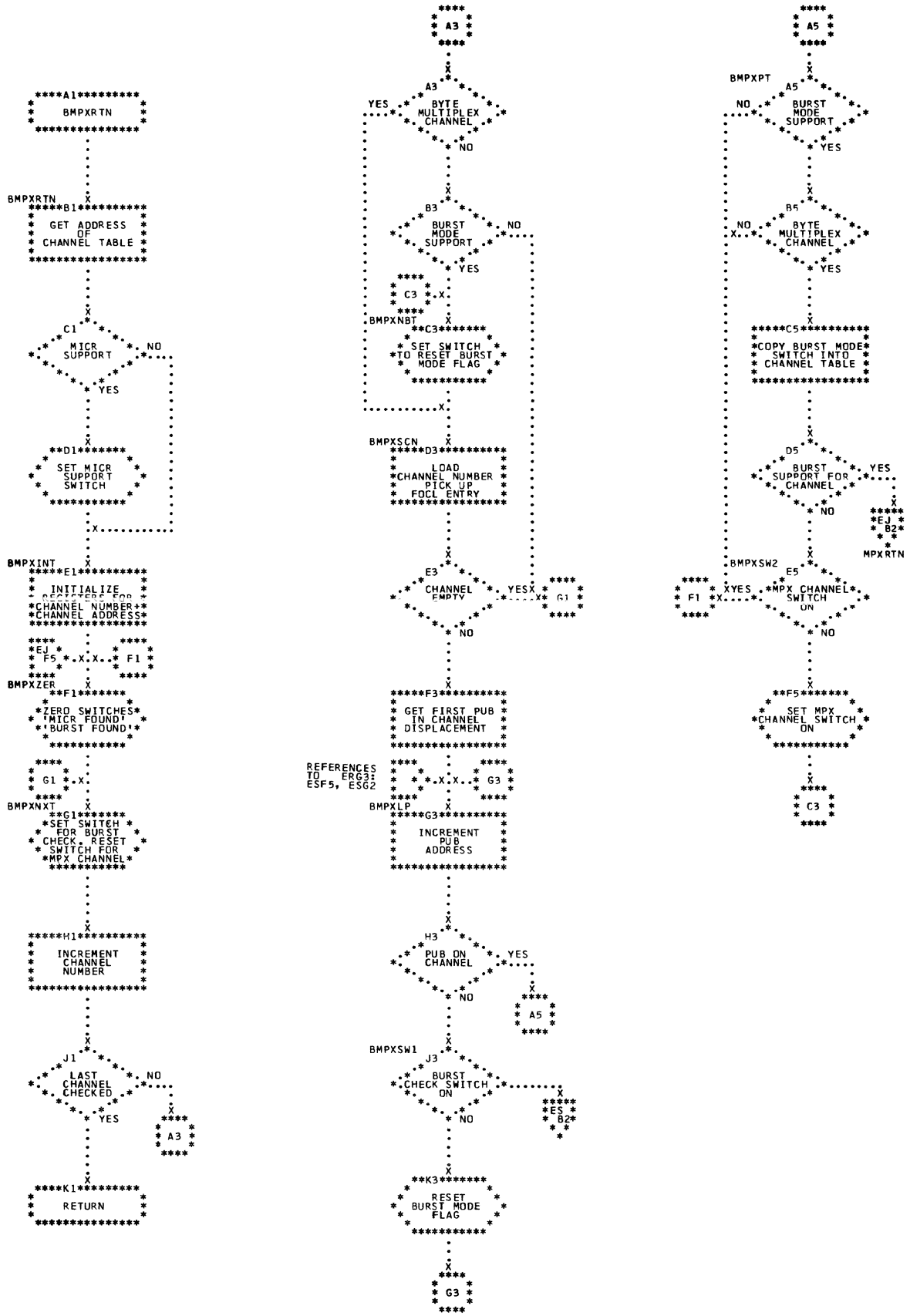


Chart ES. $IPIRT4 - Check Burst and MICR Device on Multiplex Channel (Part 2 of 2)
Refer to Chart 03.

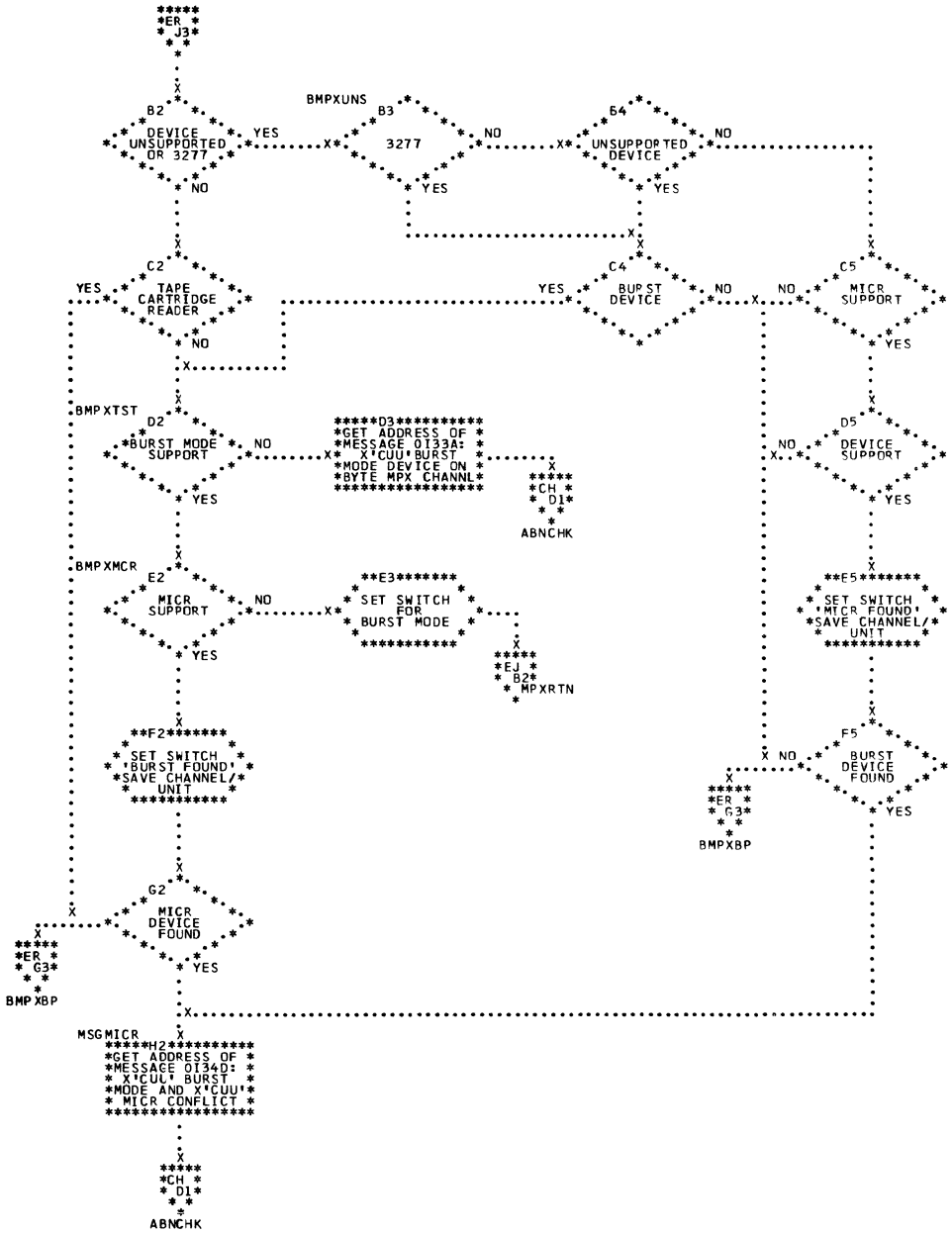


Chart ET. $IPIRT4 - Channel Switching Routine
Refer to Chart 03.

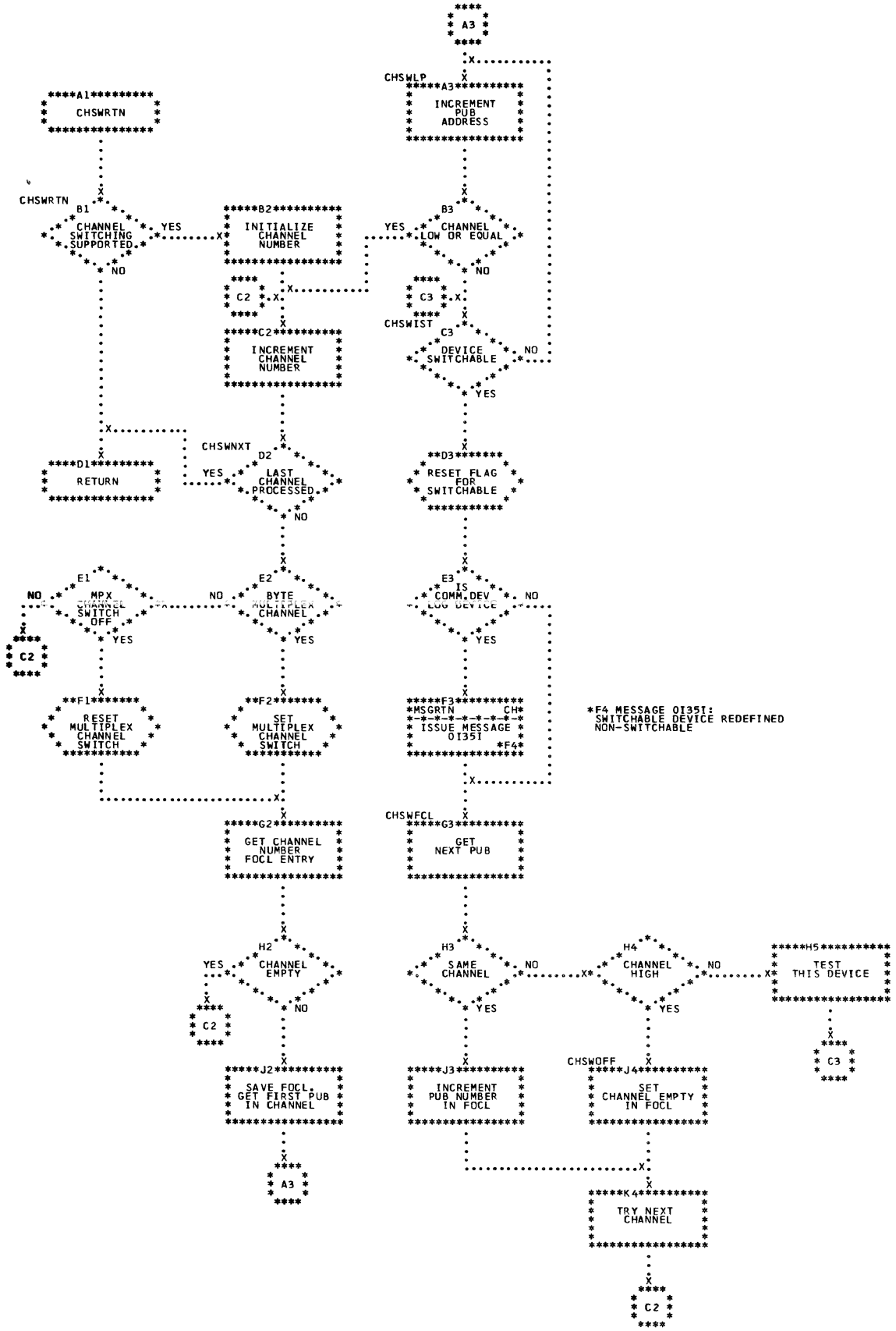


Chart FA. $IPIRT5 - CAT and DPD Processor
Refer to Chart 04.

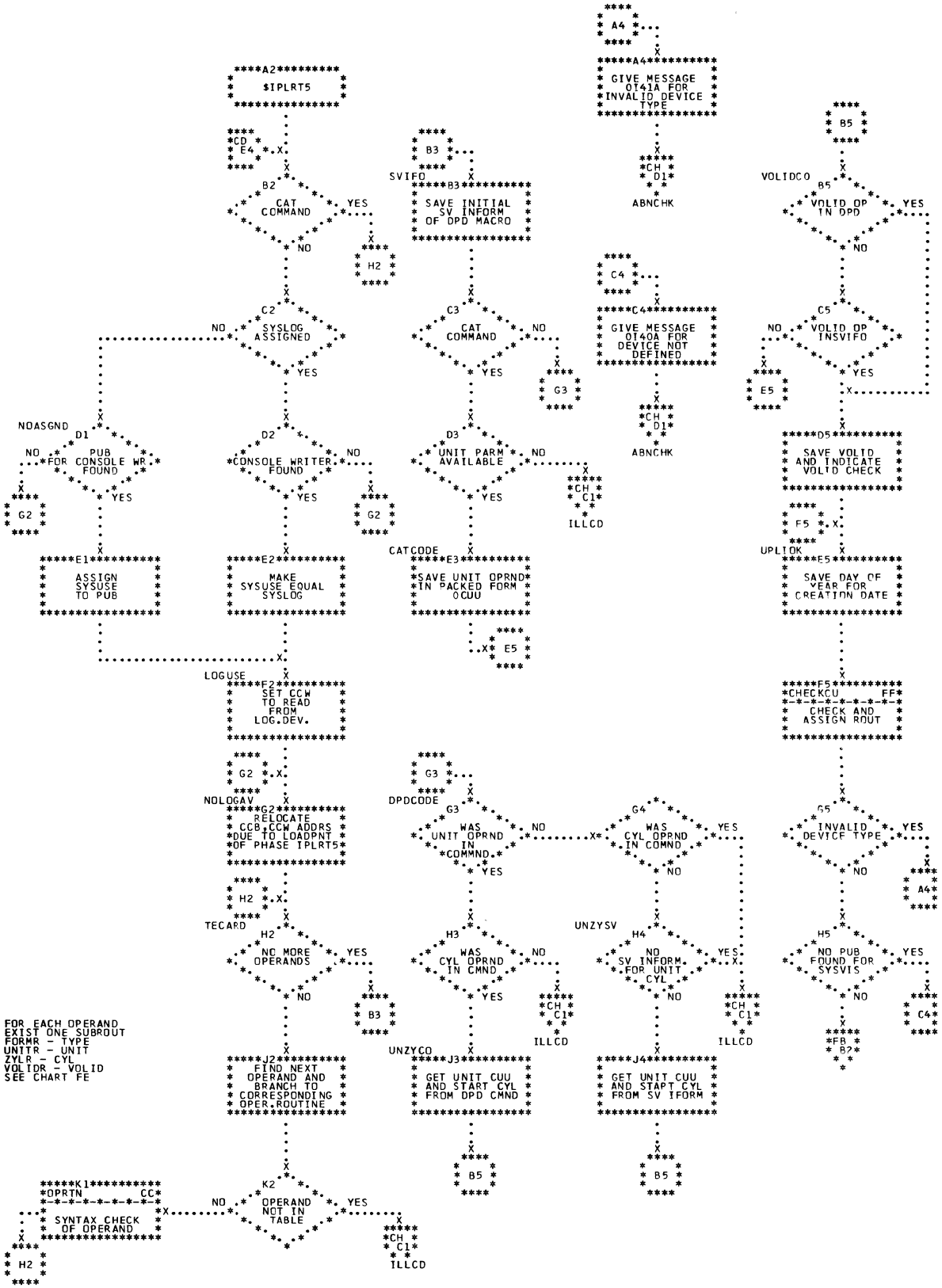


Chart FB. $IPIRT5 - DPD Prccesscr Open
Refer to Chart 04.

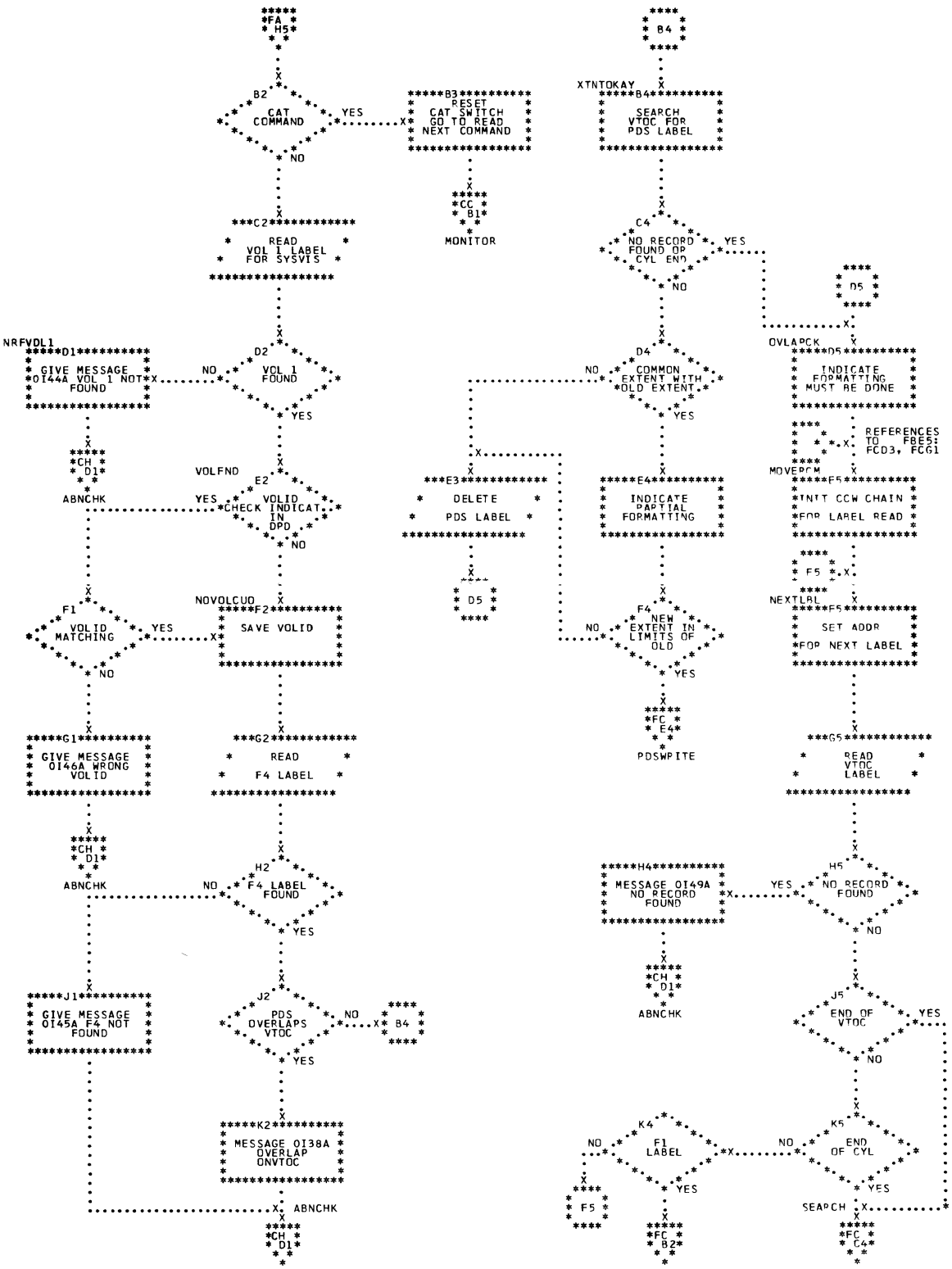


Chart FC. $IPLRT5 - Check DPD Overlap
Refer to Chart 04.

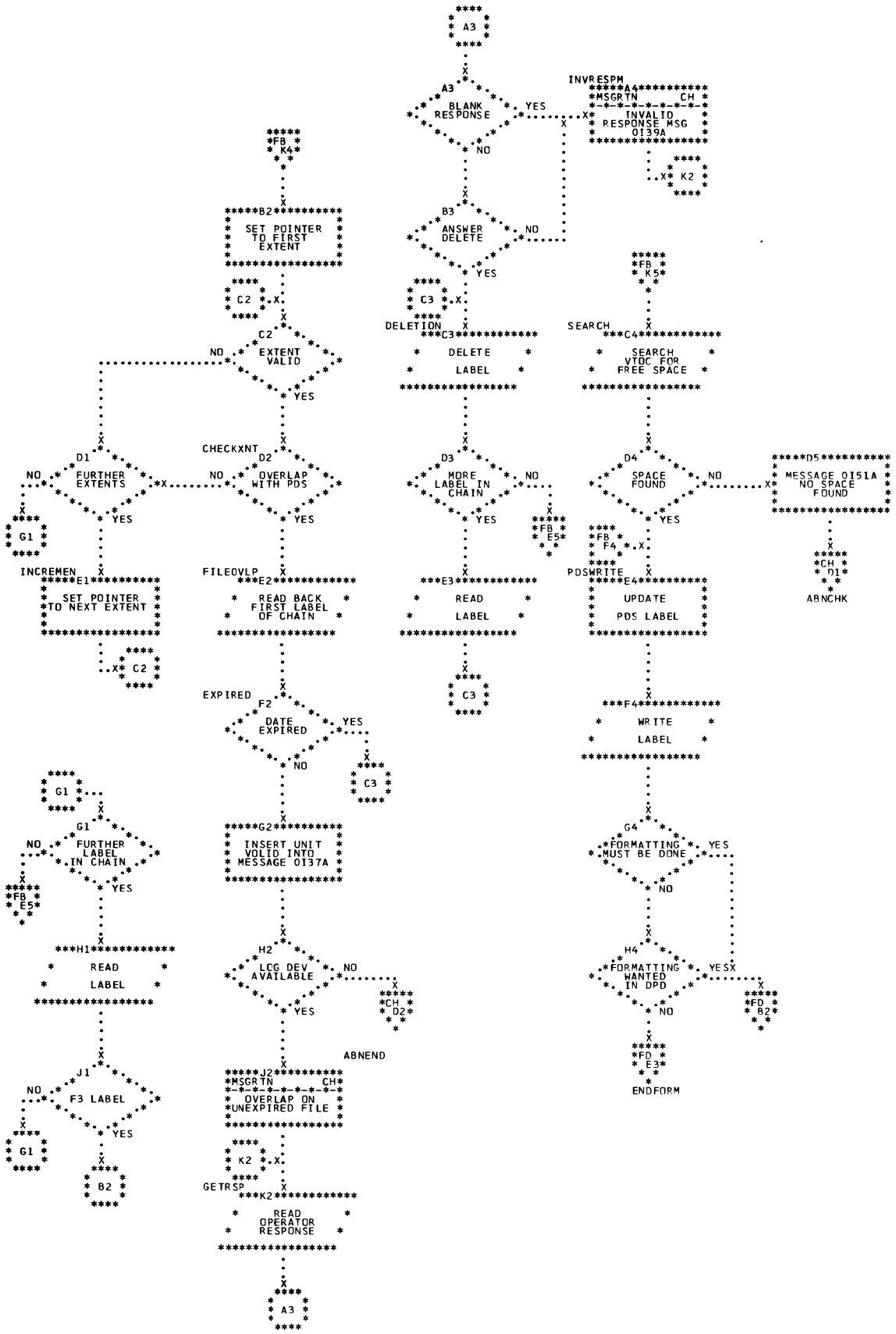


Chart FD. $IPLRT5 - DPD Processing Formatting
Refer to Chart 04.

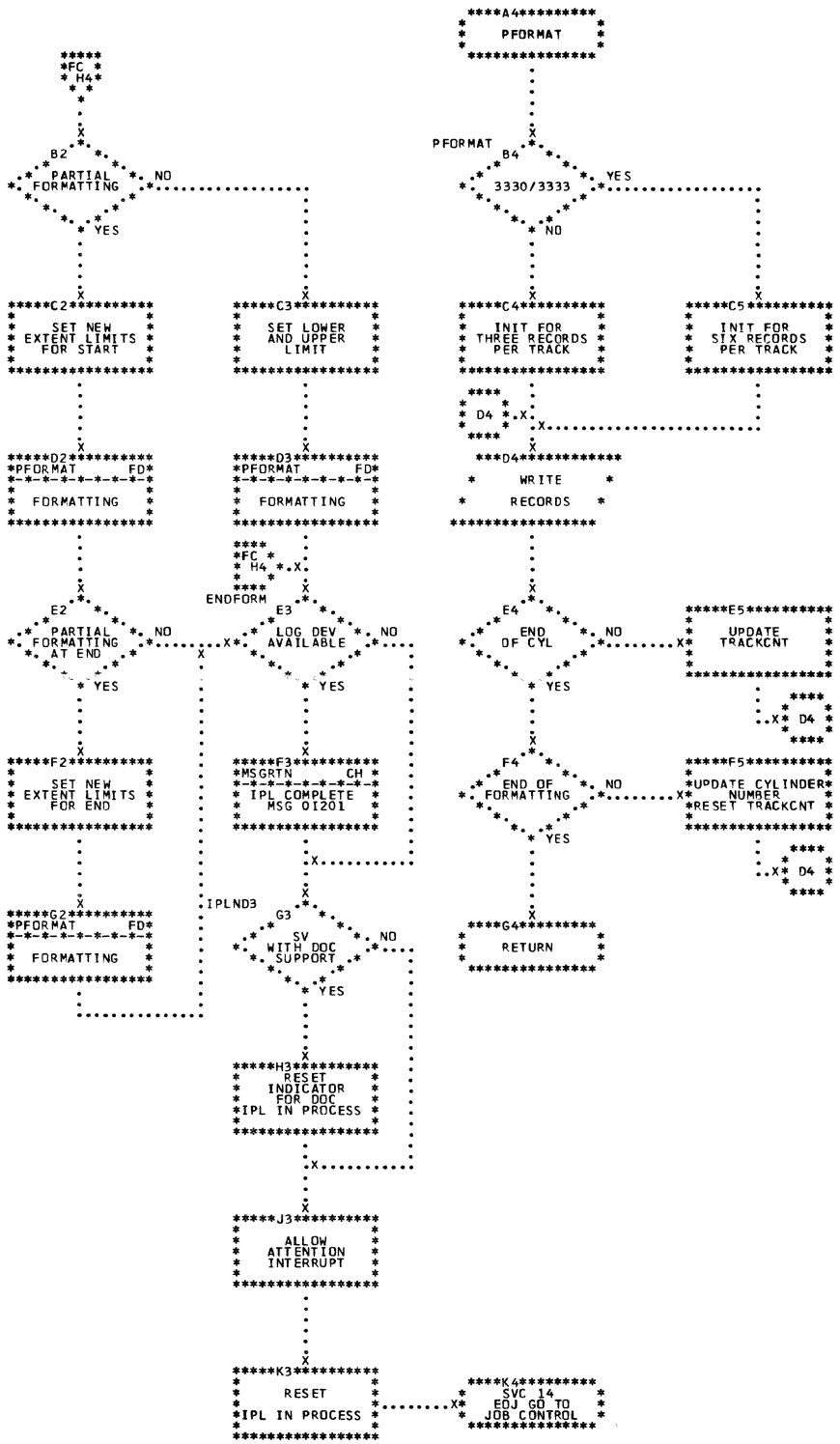


Chart FE. $IPIRT5 - DPD Prccessing cf Operands
Refer to Chart 04.

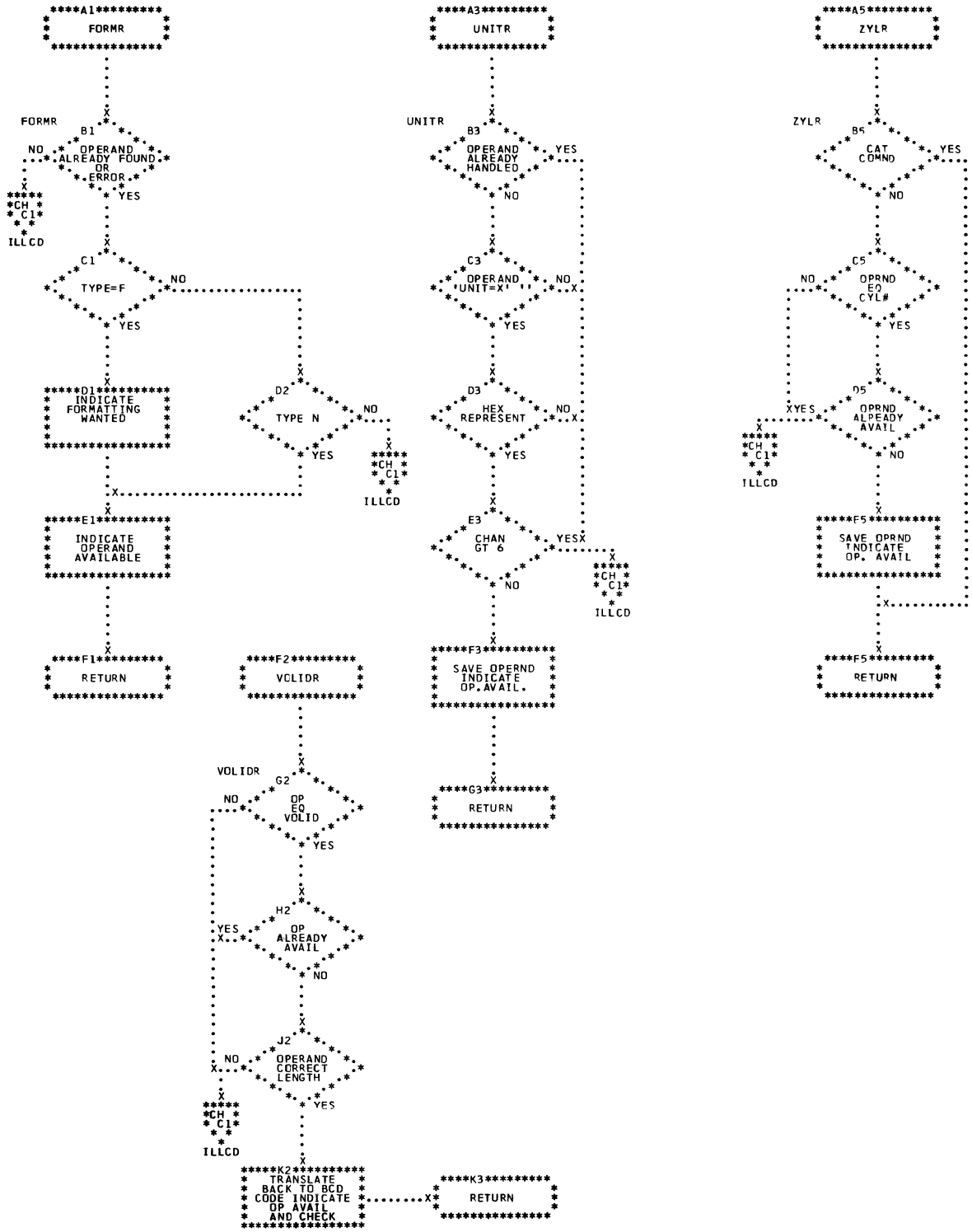


Chart FF. $IPIRT5 - DPD **Unit Check and Assign**
Refer to Chart 04.

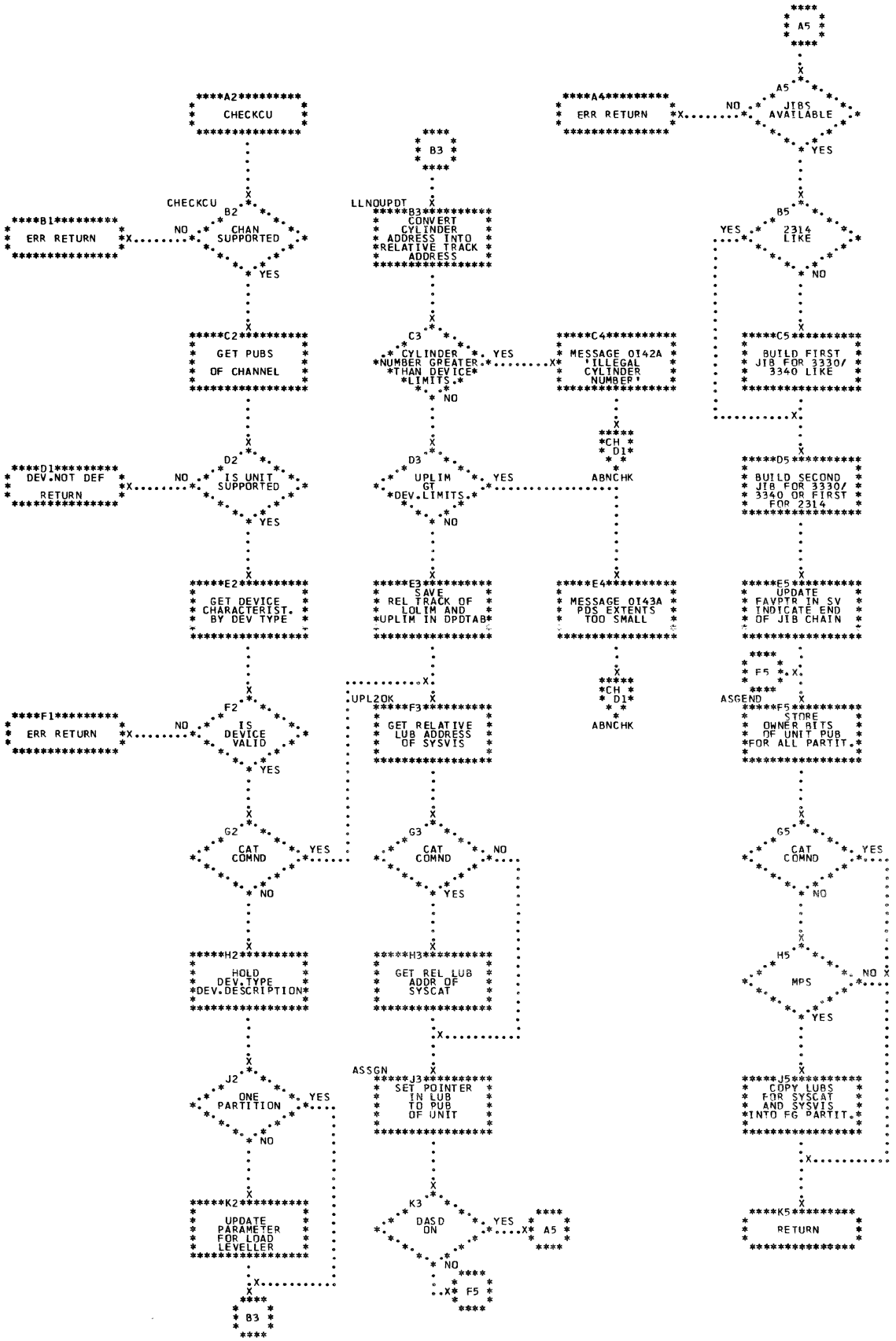


Chart FG. $$BCARTR - 3340 Cartridge Recognition Routine

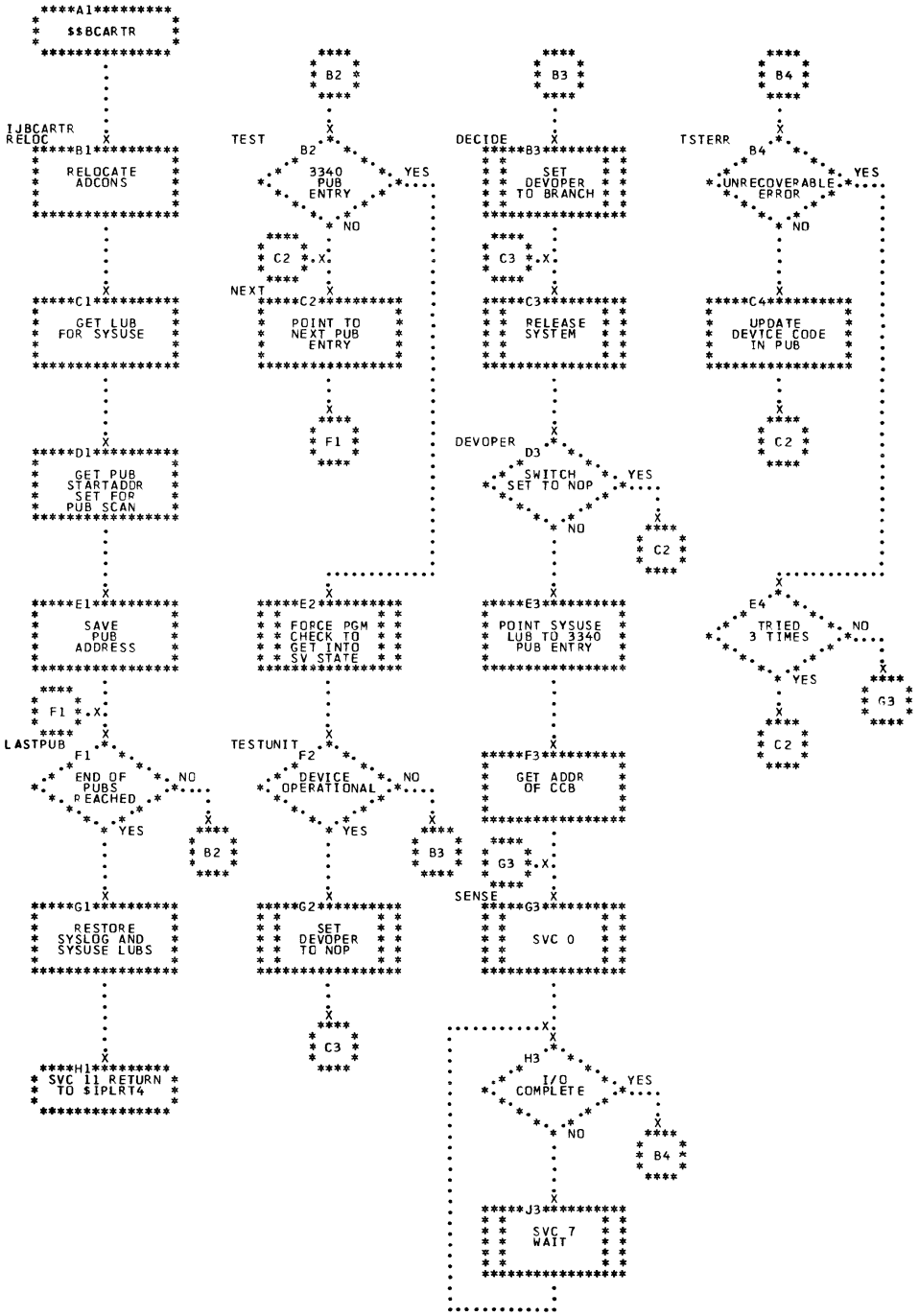


Chart GA. $JOBCTLA - Initializatcn (Part 1 of 2)

Refer to Chart 05.

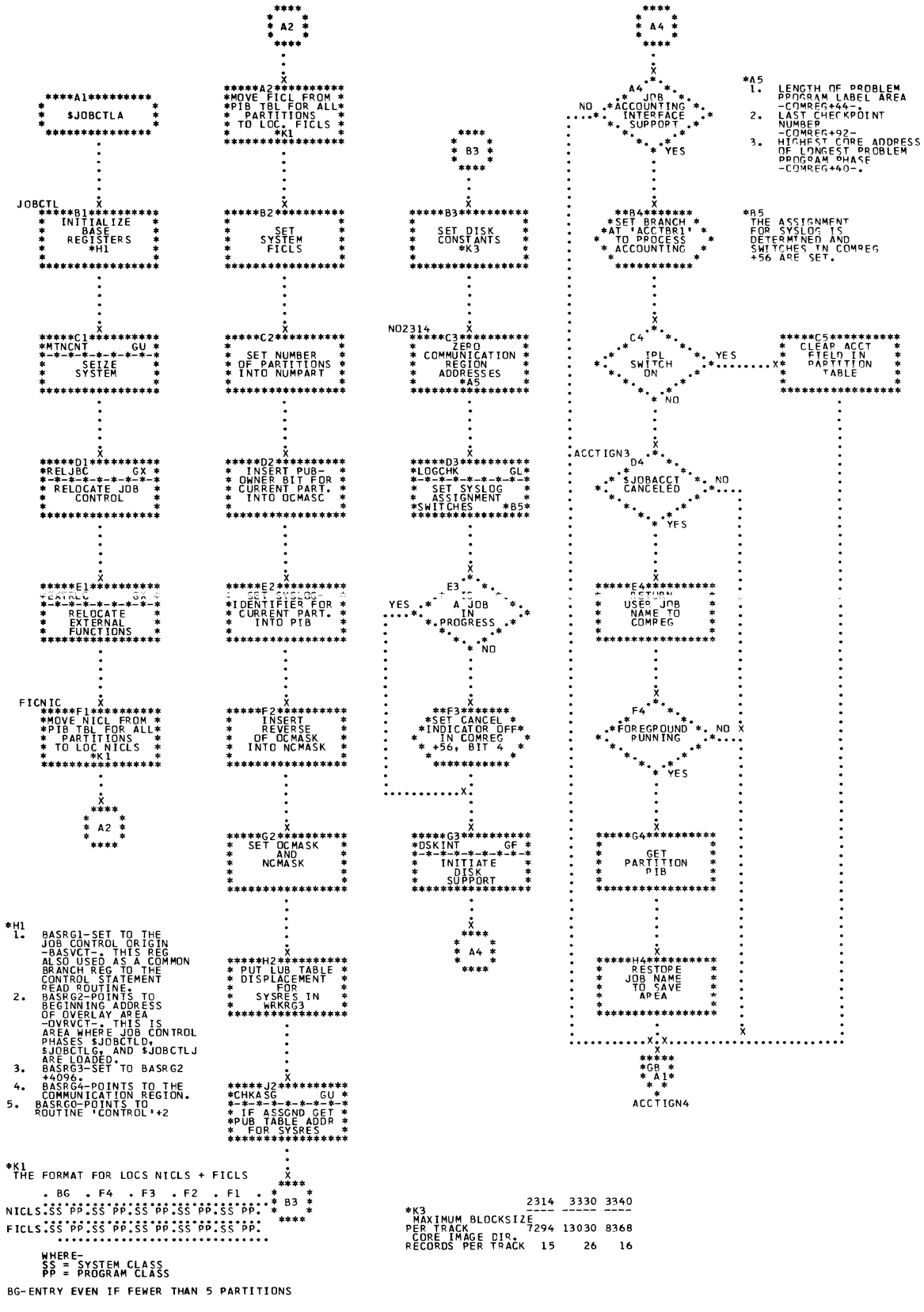


Chart GB. $JOBCTLA - Initializaticn (Part 2 cf 2)
Refer to Chart 05.

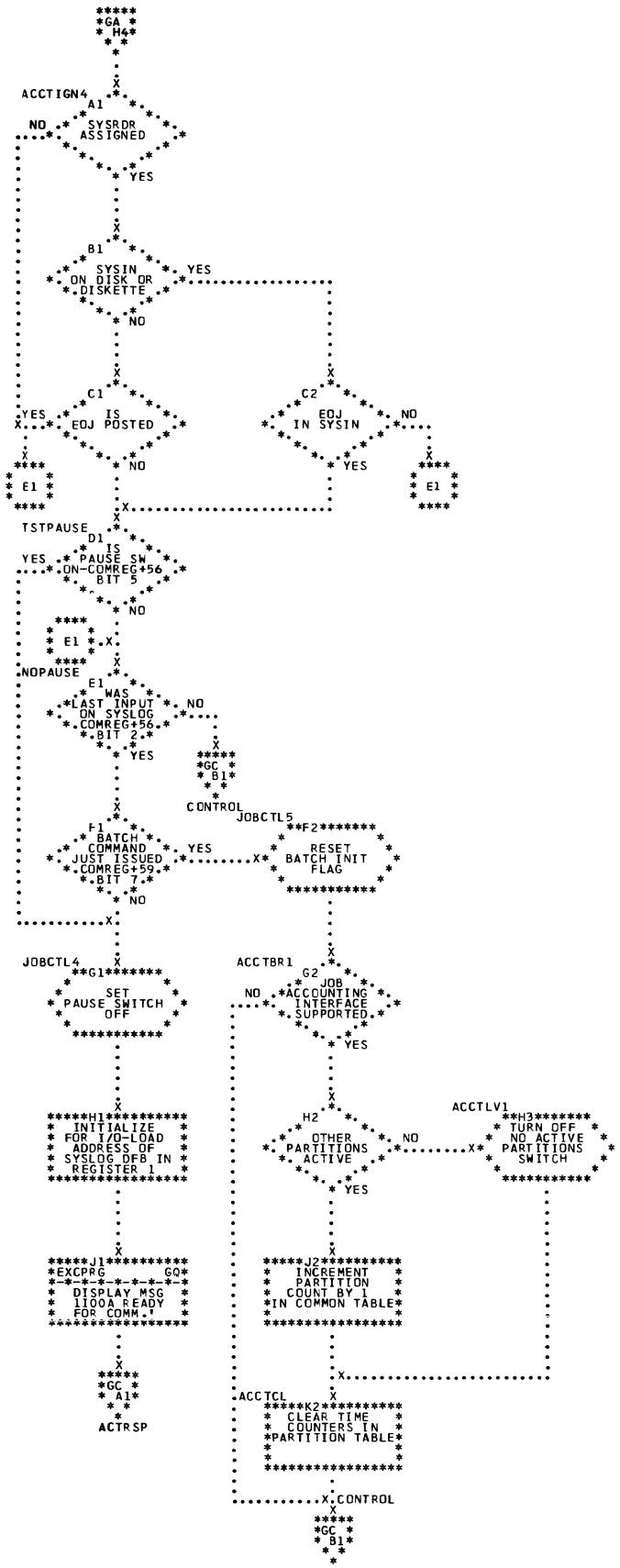


Chart GC. $JOBCTLA - Control Statement Read

Refer to Chart 05.

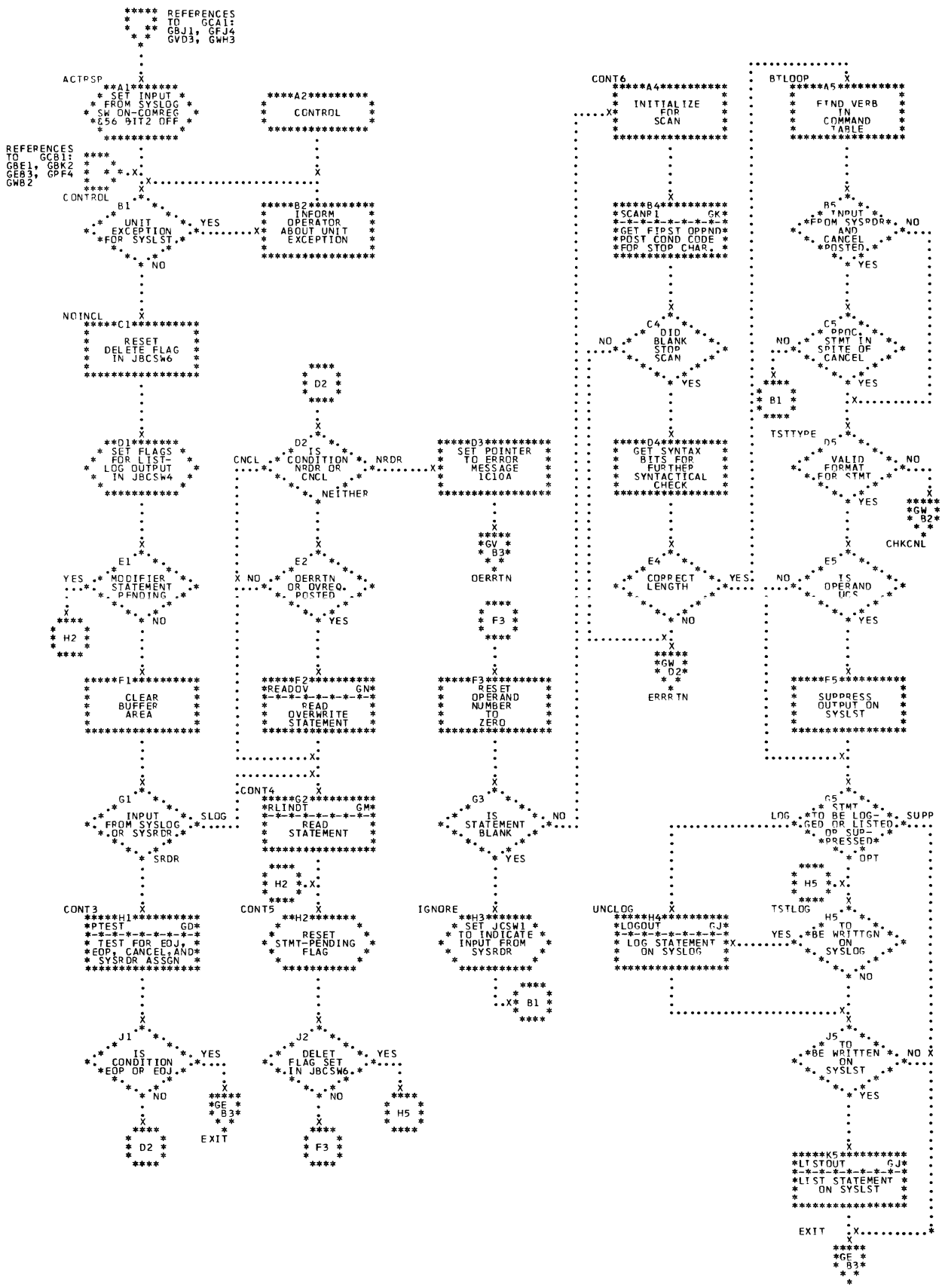


Chart GD. $JOBCTLA - Test ECJ, ECP, CANCEL and SYSRDR Assignment
Refer to Chart 05.

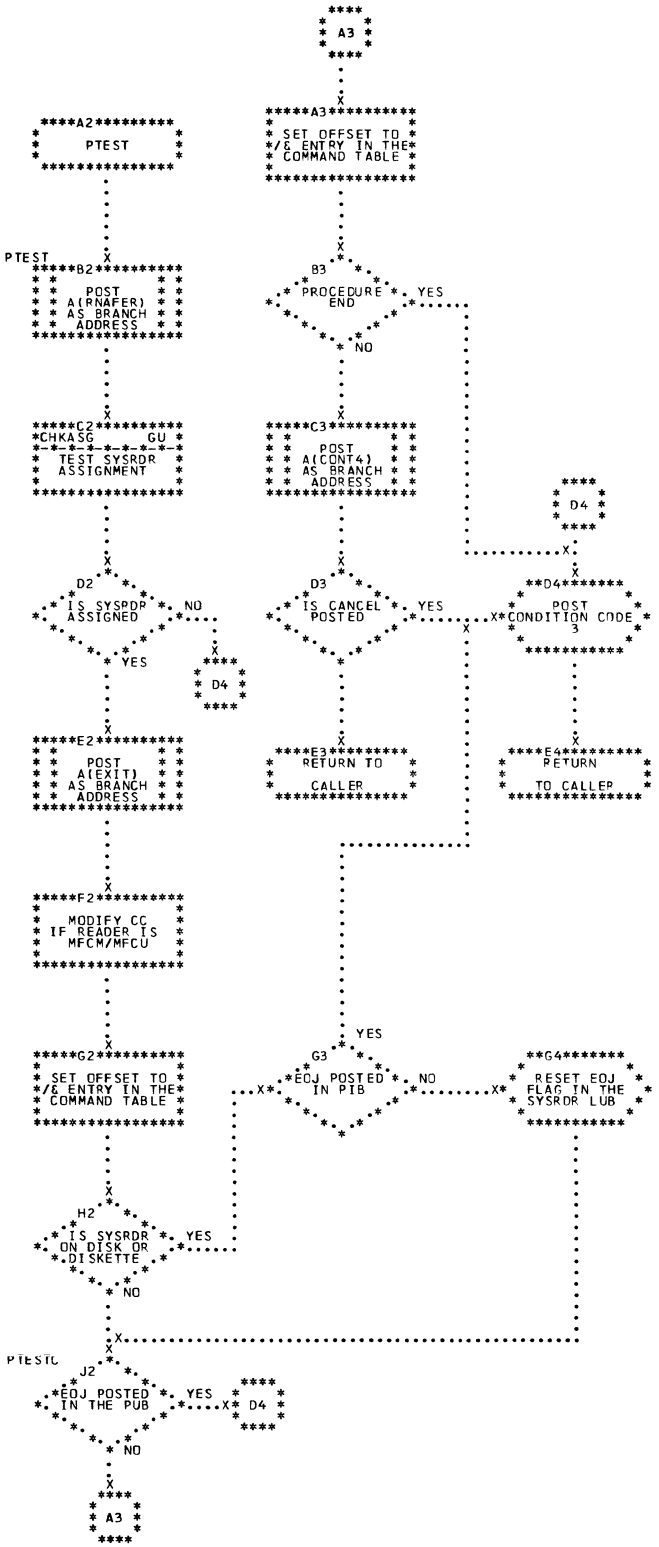


Chart GE. $JOBCTLA - Phase Vector Table Lookup
Refer to Chart 06.

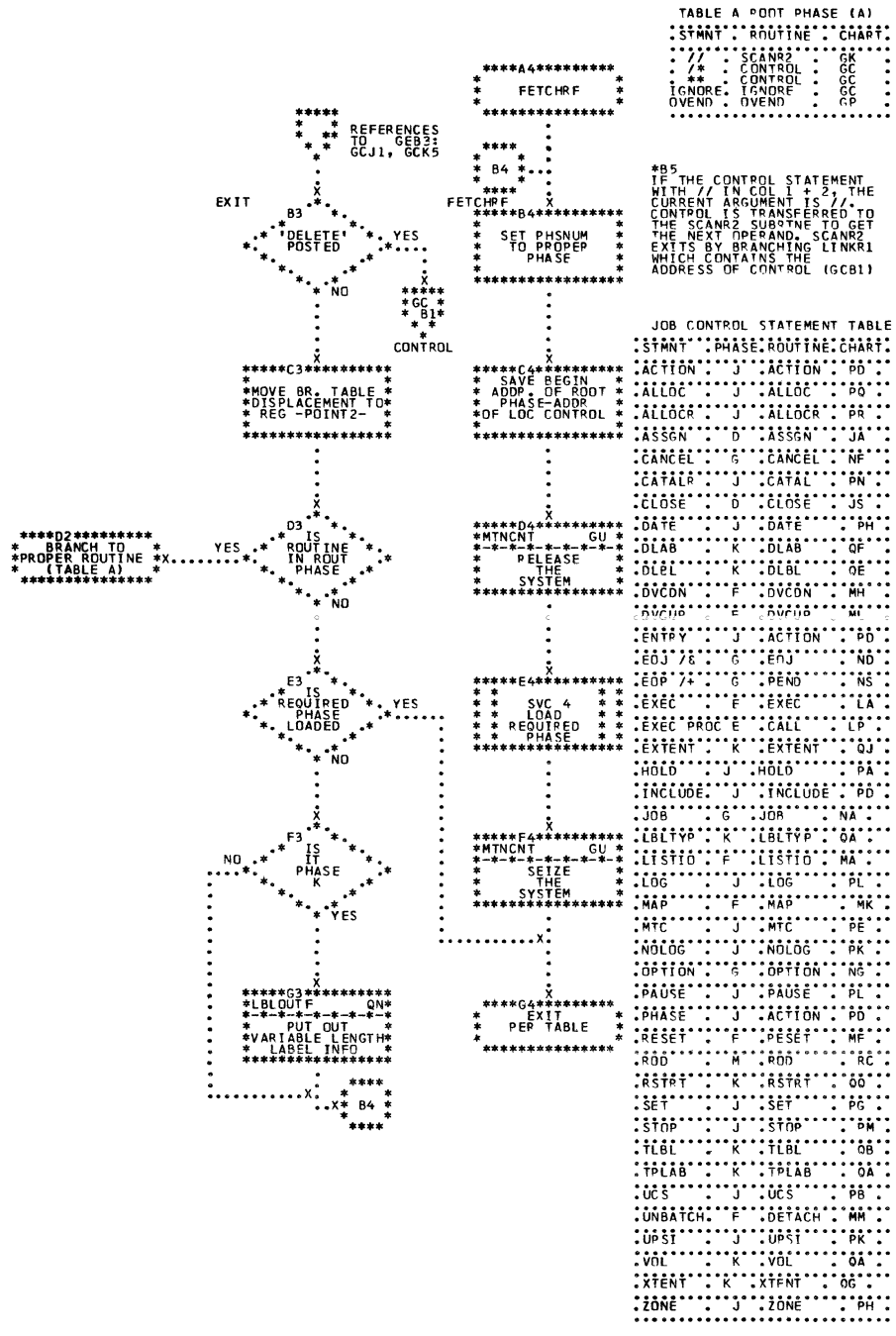


Chart GF. $JOBCTLA - DSKINT Subrcutine
Refer to Chart 06.

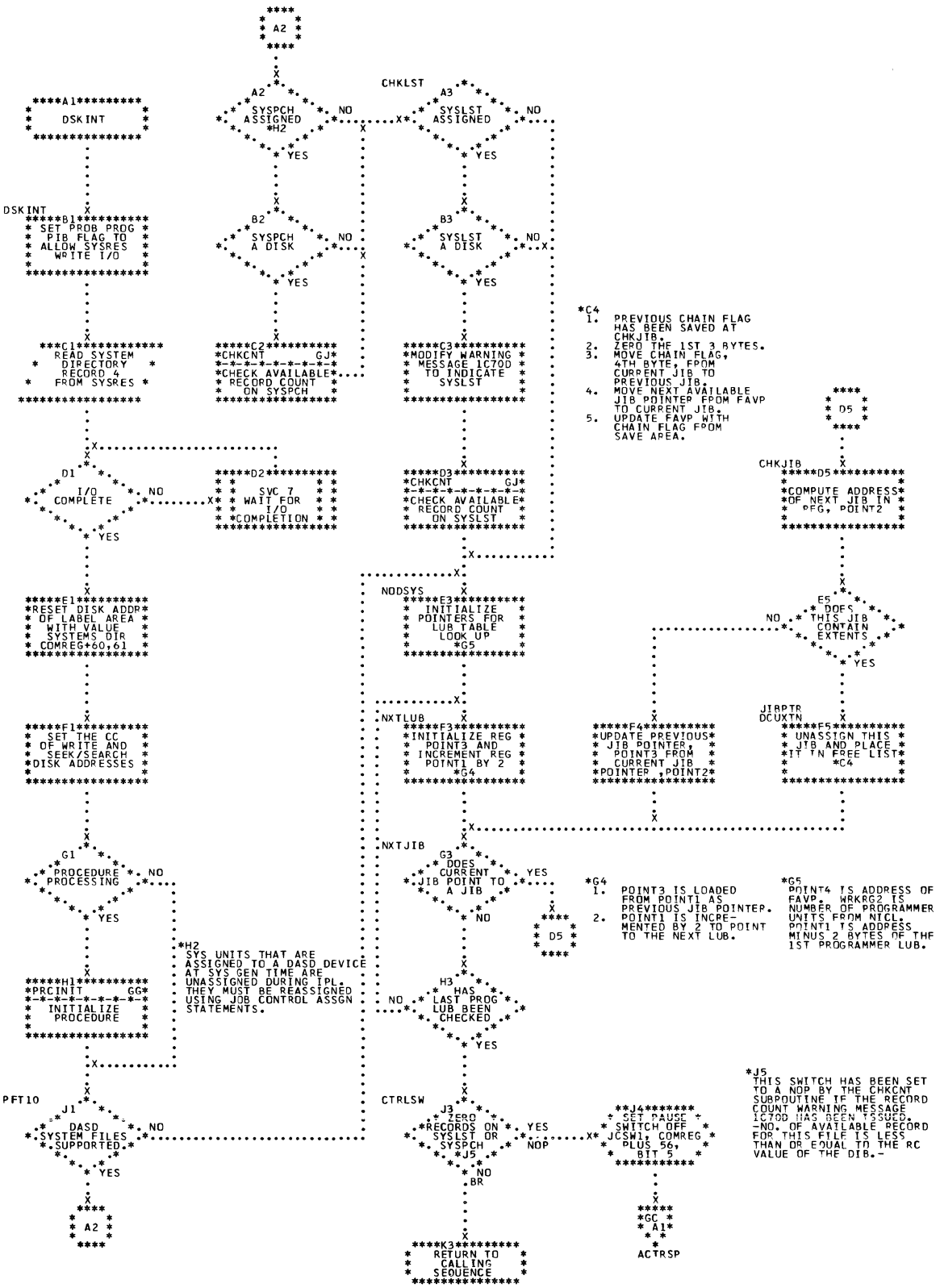


Chart GG. $JOBCTLA - Initializaticn of Procedure Processing
Refer to Chart 05.

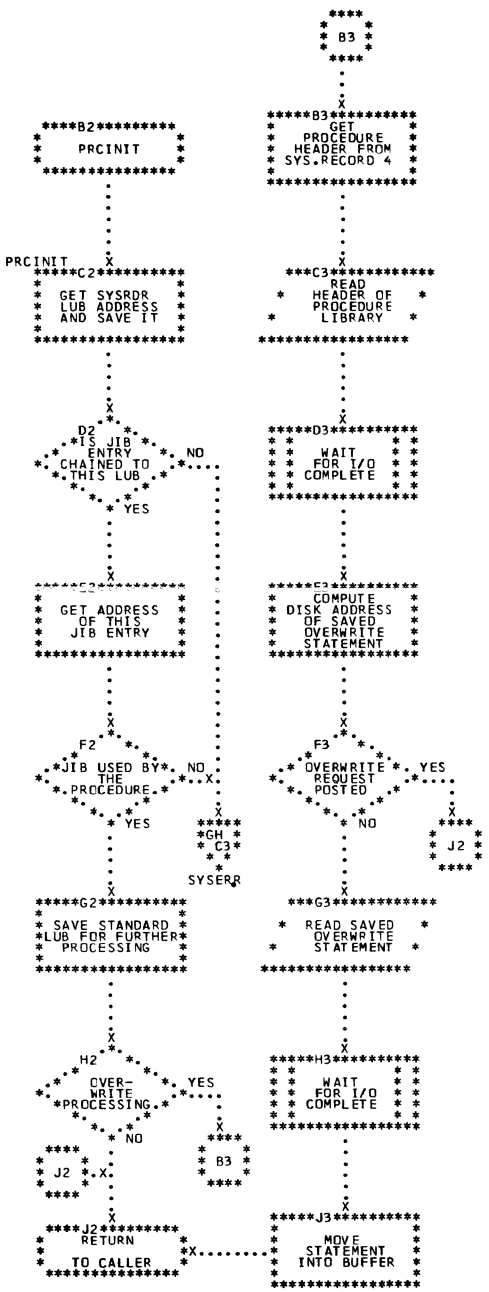


Chart GH. $JOBCTLA - Error Routine for Handling Lcst JIBs
Refer to Chart 05.

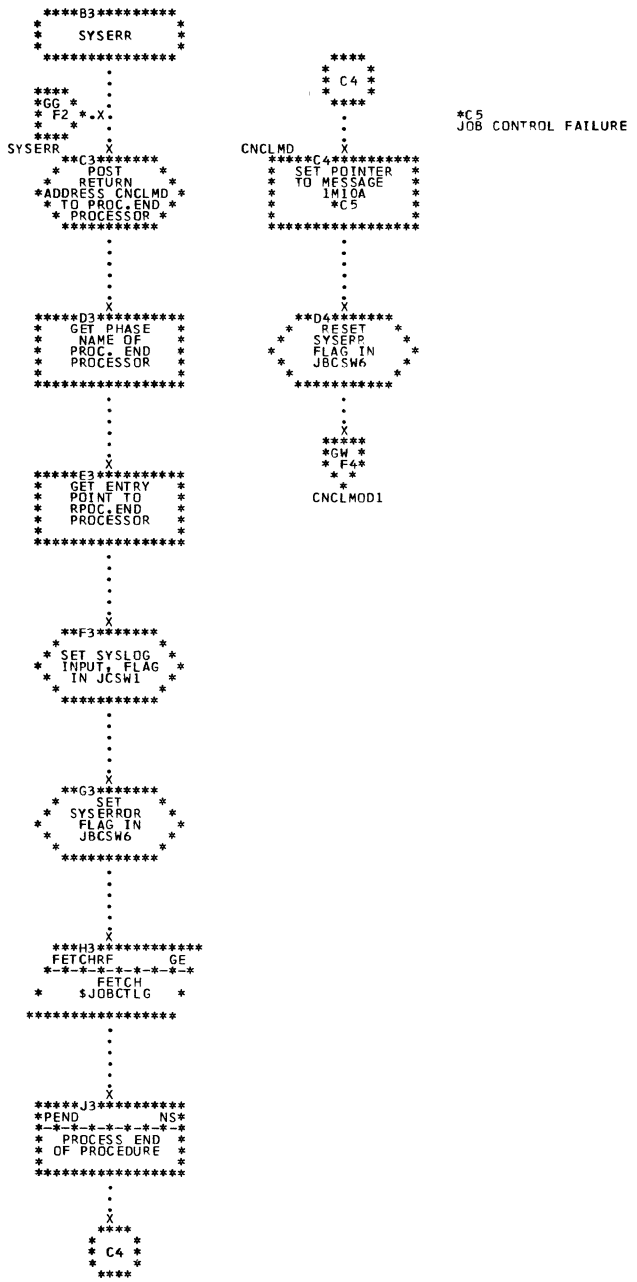


Chart GJ. $JOBCTLA - Message Subroutines

Refer to Chart 05.

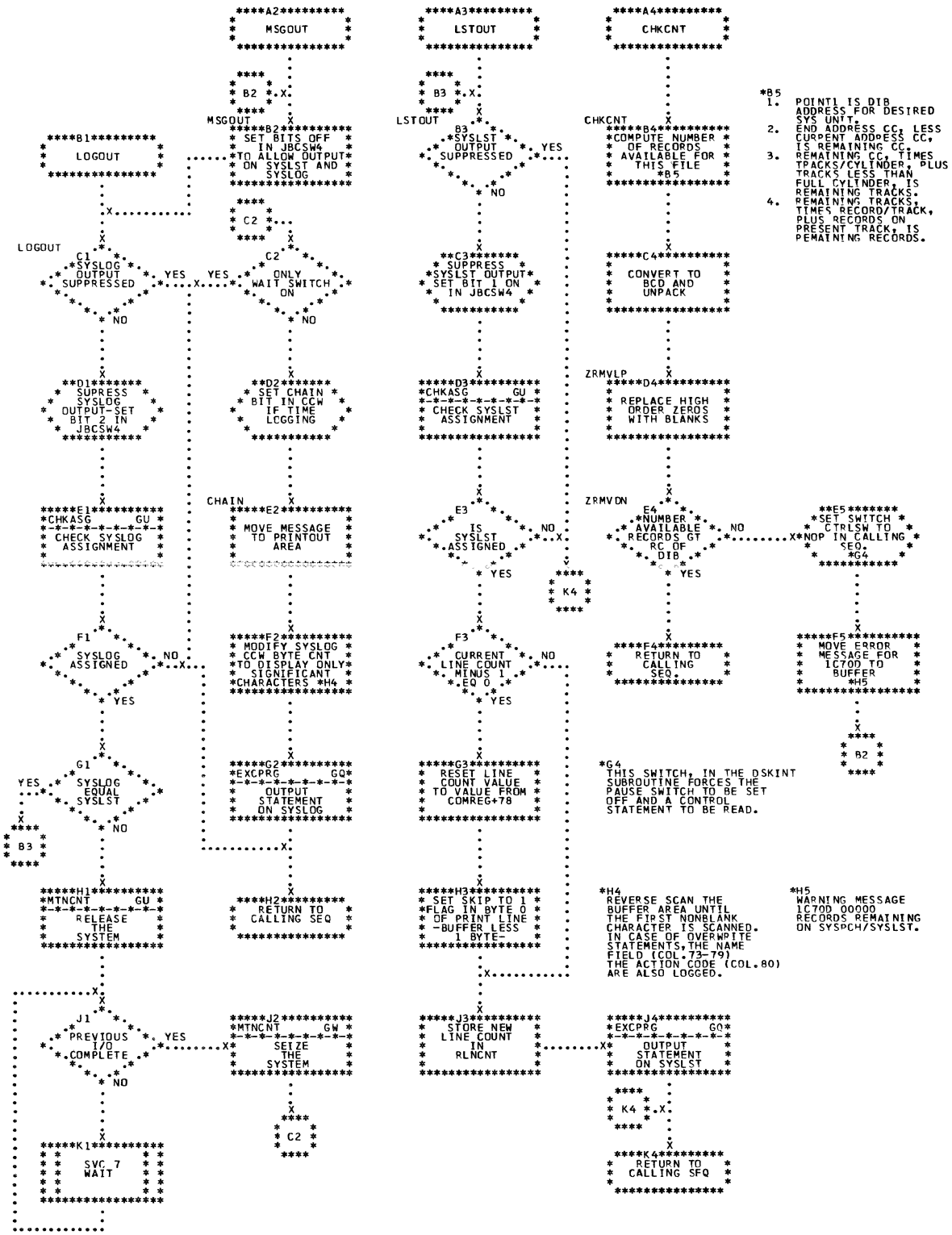


Chart GK. $JOBCTLA - Operand Scan Subroutines
Refer to Chart 05.

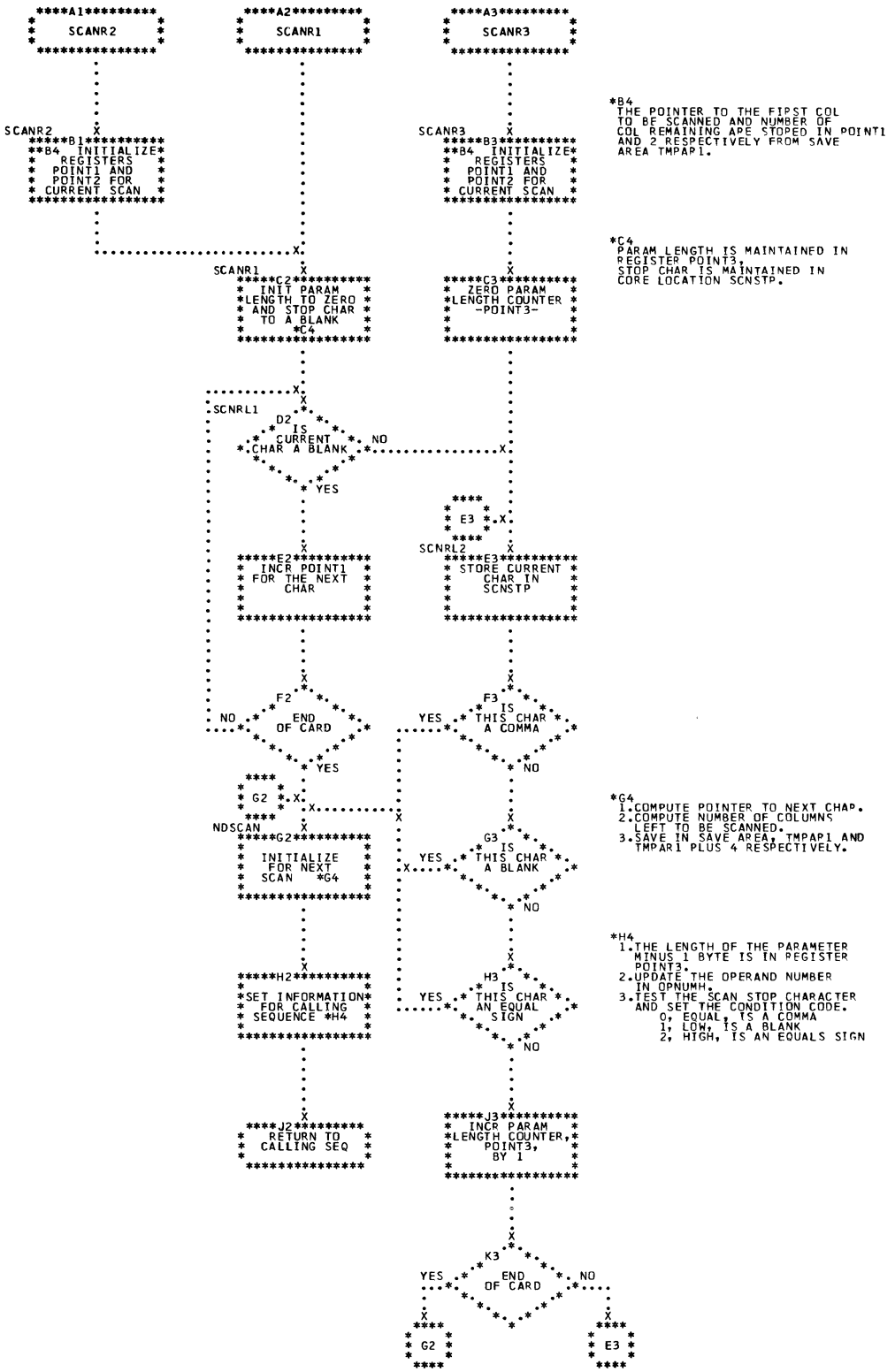


Chart GL. $JOBCTLA - Miscellaneous Subroutines
Refer to Chart 05.

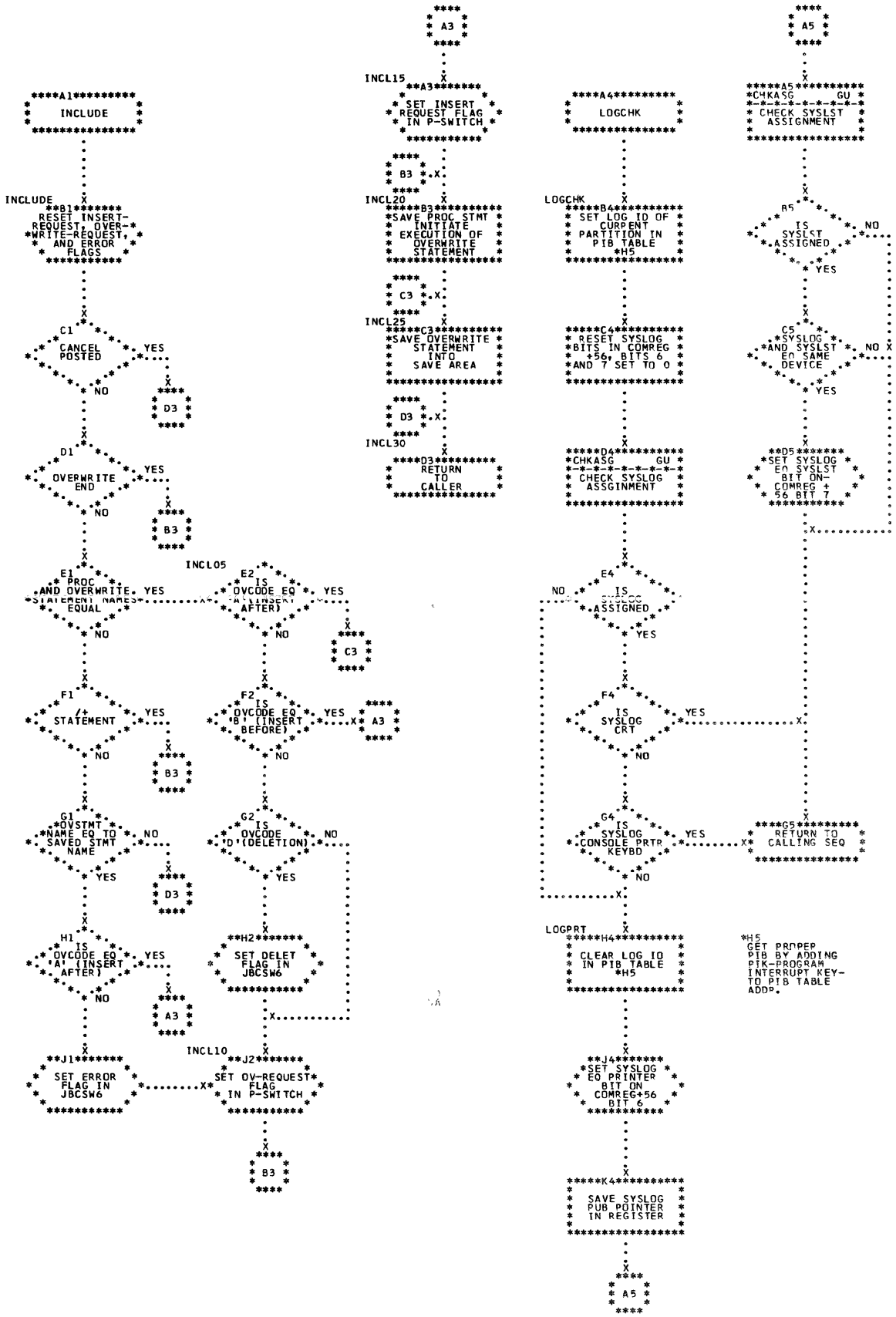


Chart GM. **$JOBCTLA - Read Control Statement from SYSLOG or SYSRDR**
Refer to Chart 05.

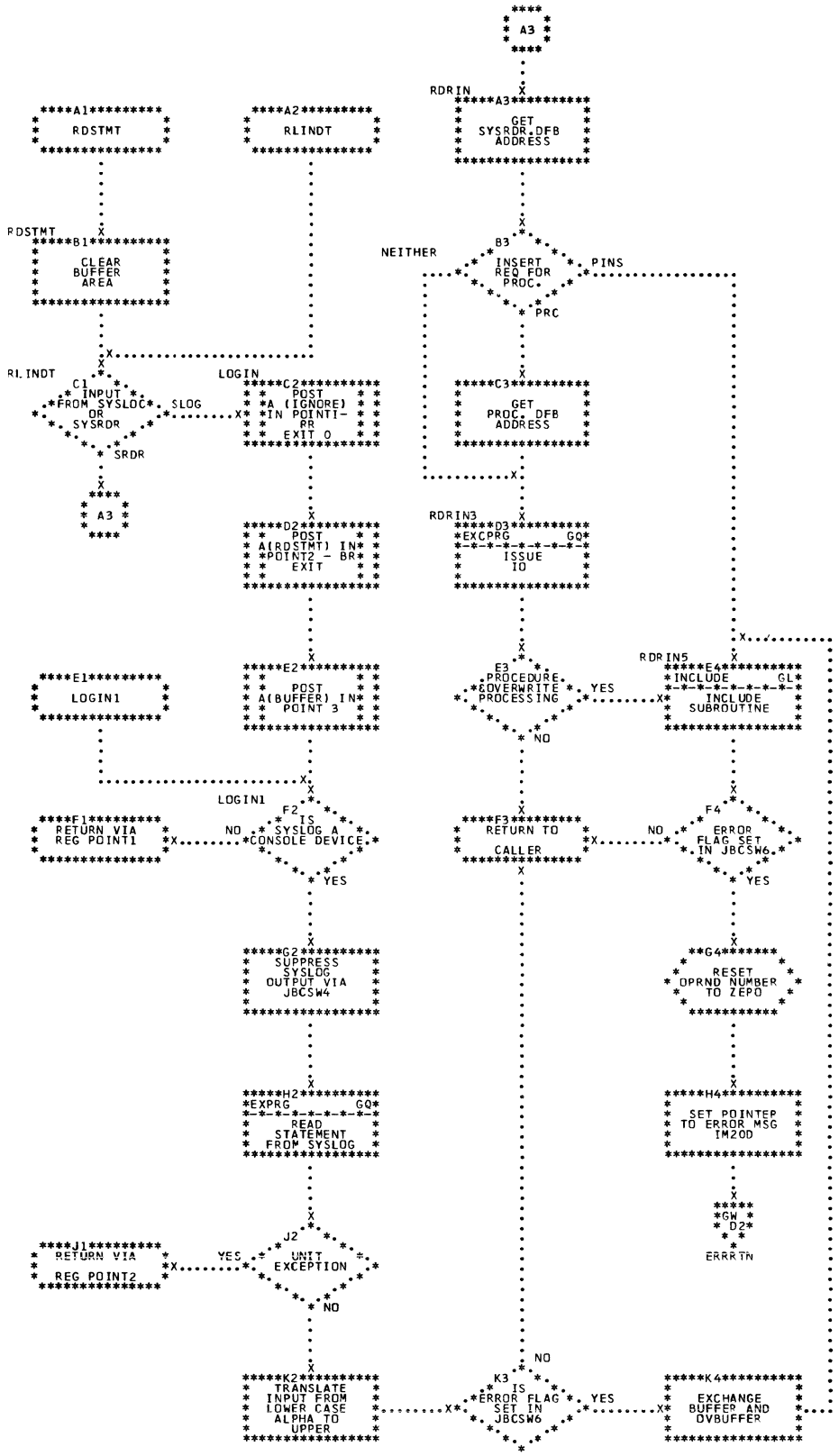


Chart GN. $JOBCTLA - Subrcutines fcr Catalcged Prccedure Overwrite Handling (Part 1 of 2)
Refer to Chart 05.

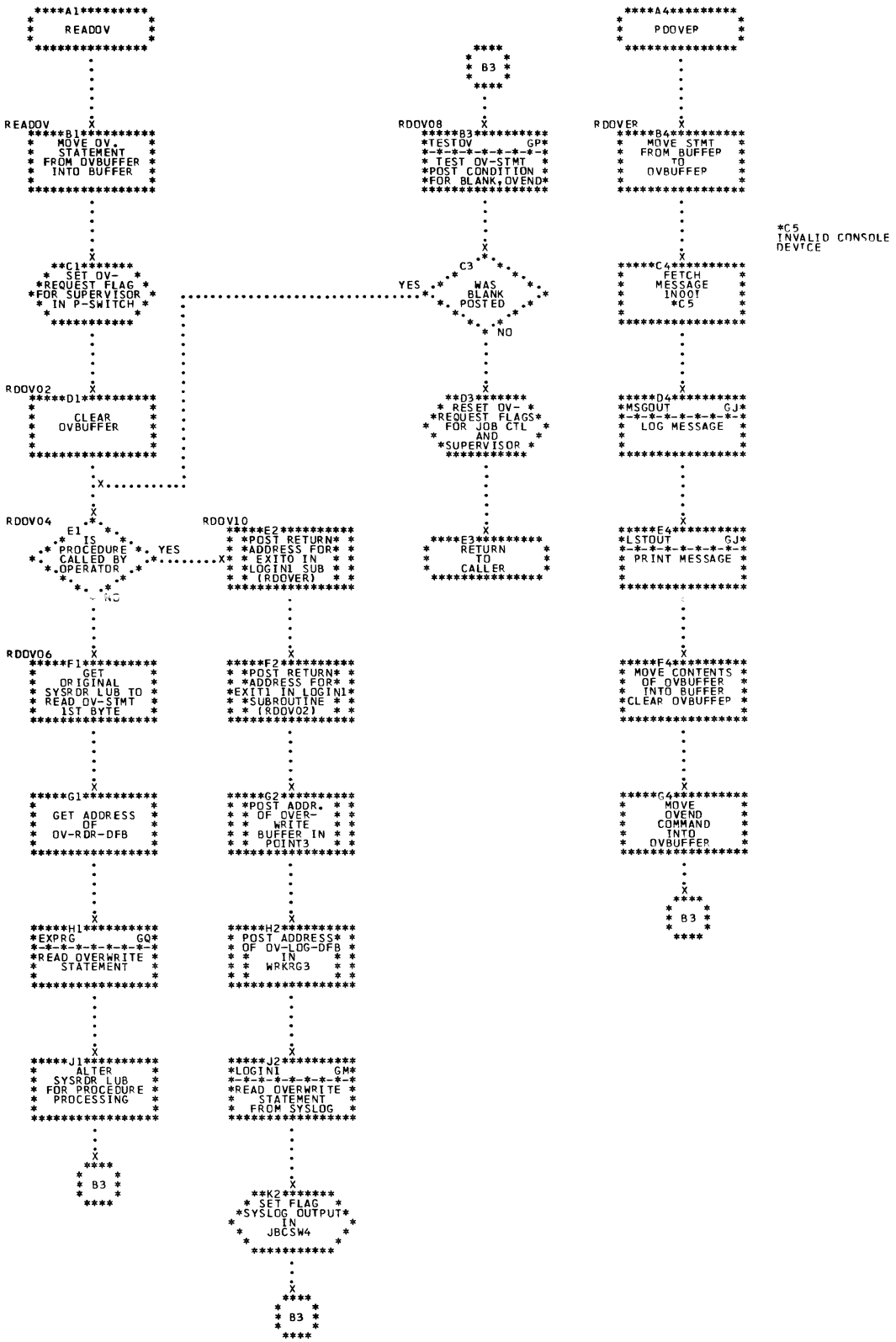


Chart GP. **$JOBCTLA - Subrcutines fcr Catalcged Prccedure Overwrite Handlirg (Part 2 of 2)**
Refer to Chart 05.

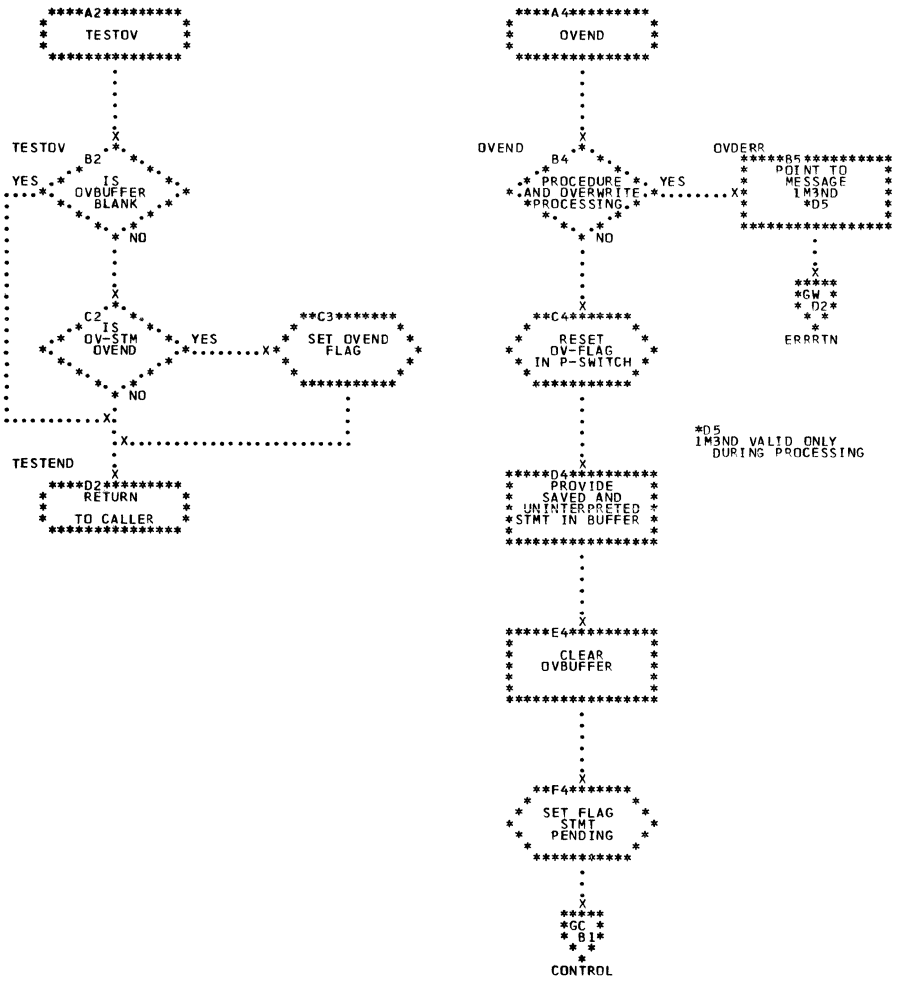


Chart GQ. $JOBCTLA - EXCP Subrcutines (Part 1 cf 4)
Refer to Chart 05.

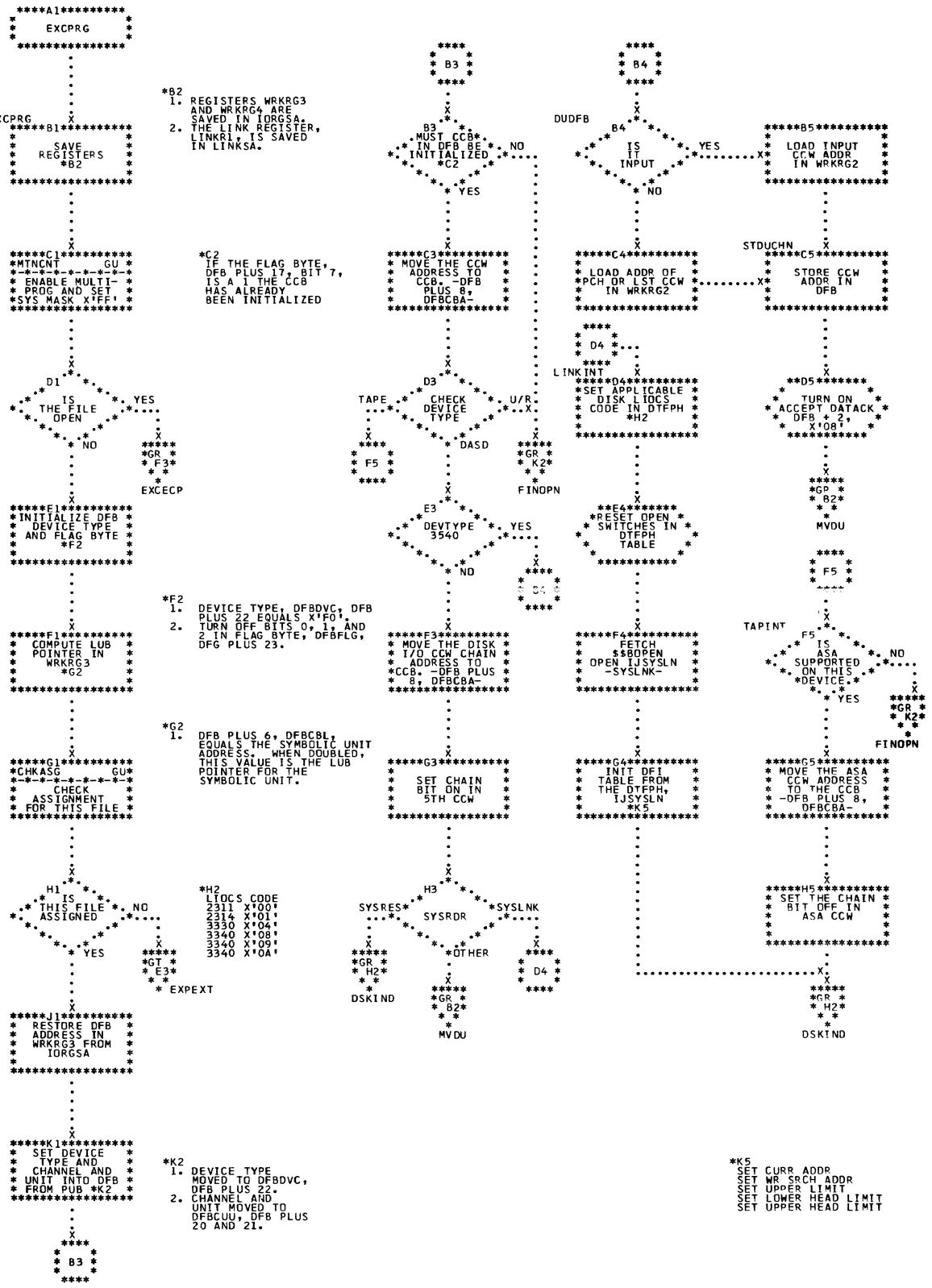


Chart GR. **$JOBCTLA - EXCP Subroutines (Part 2 of 4)**
Refer to Chart 05.

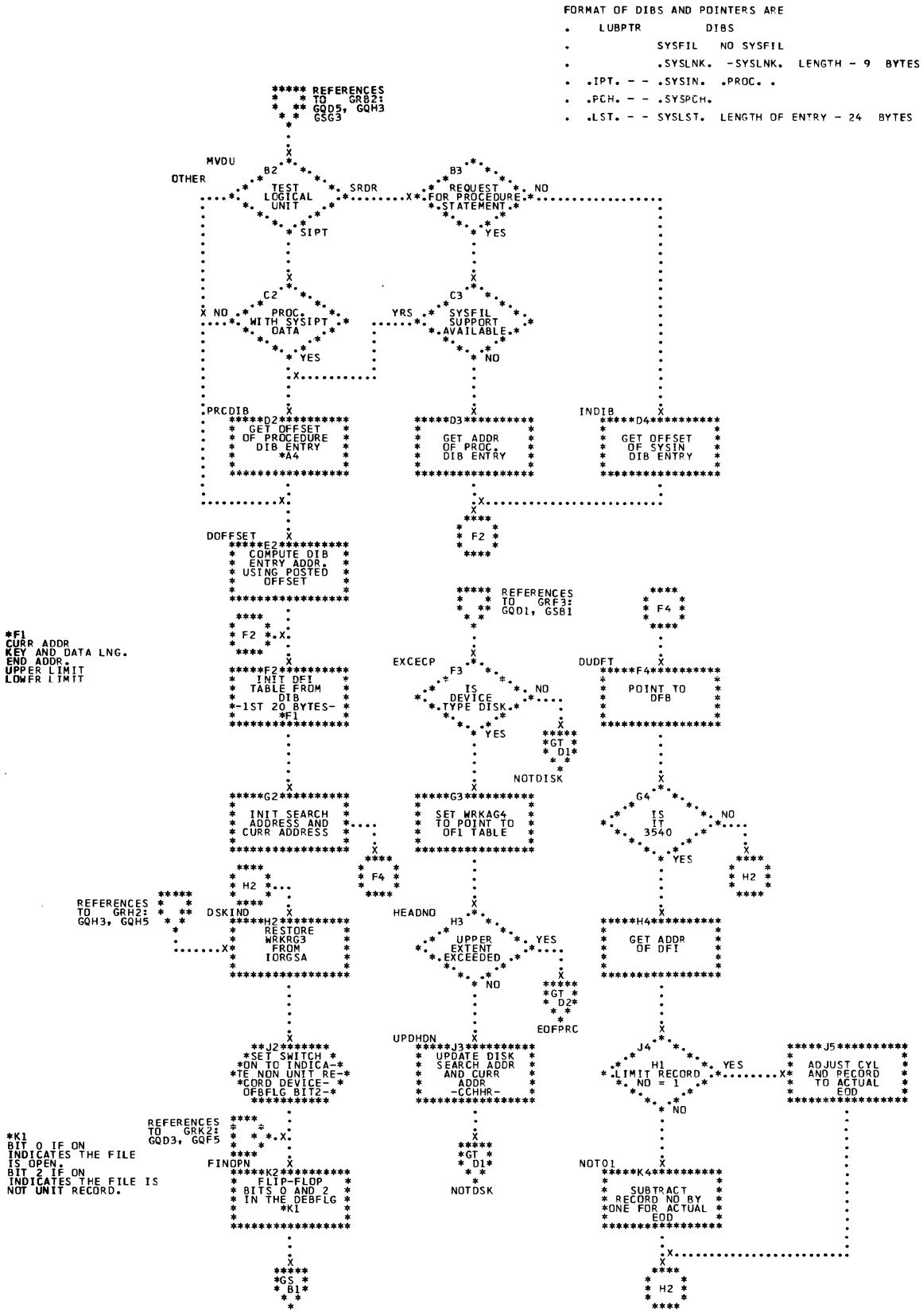


Chart GS. $JOBCTLA - EXCP Subrcutines (Part 3 cf 4)
Refer to Chart 05.

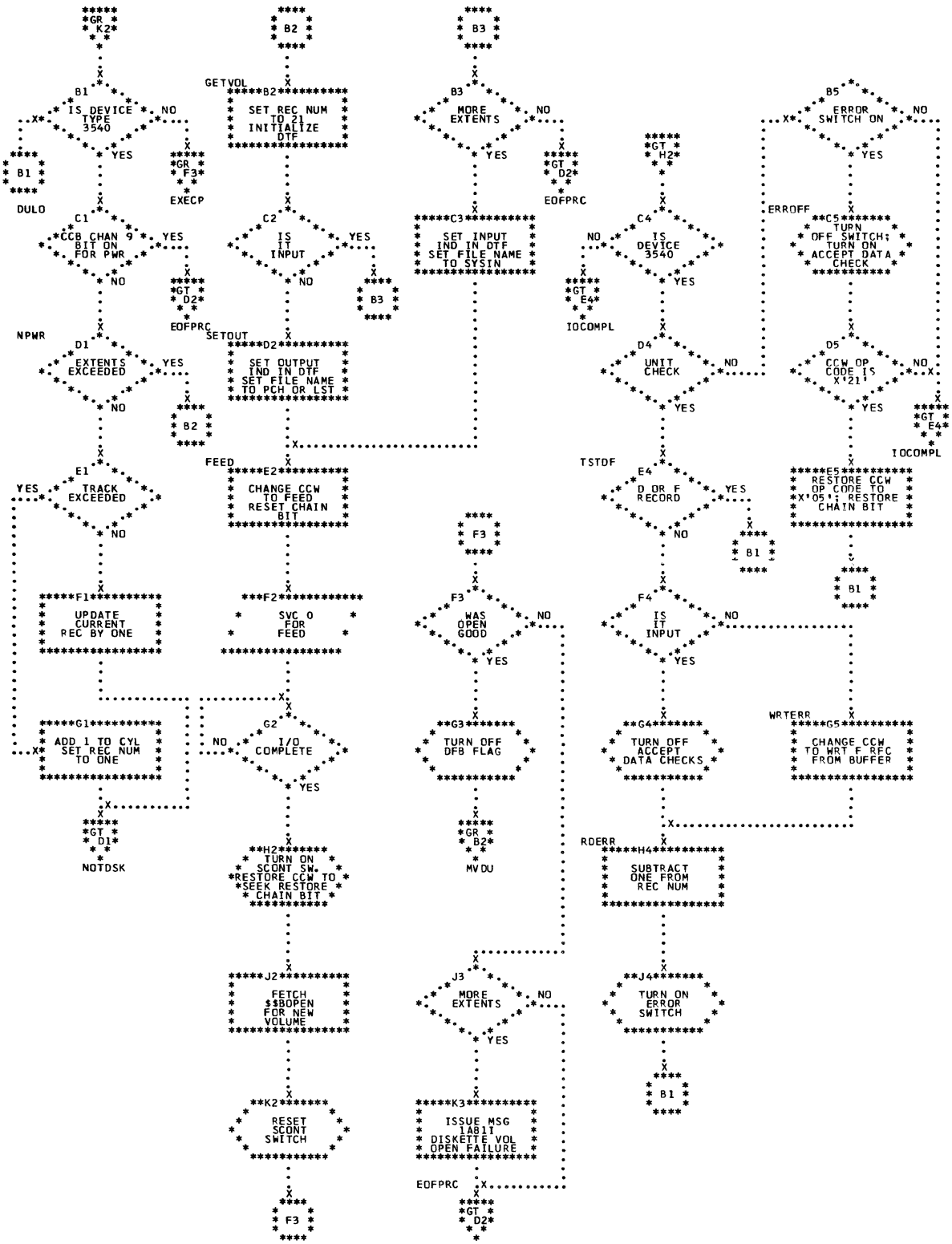


Chart GT. $JOBCTLA - EXCP Subroutines (Part 4 of 4)
Refer to Chart 05.

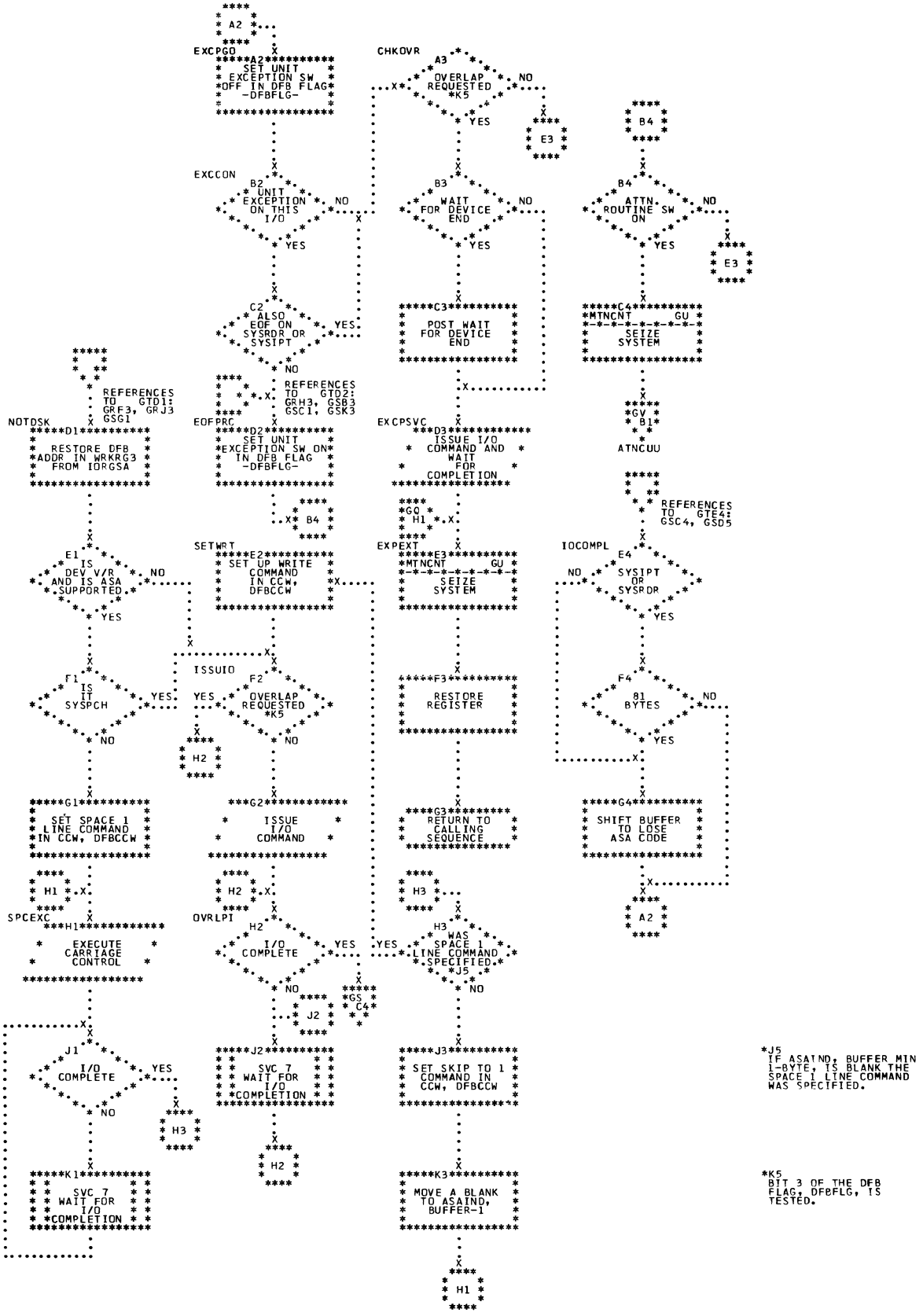


Chart GU. $JOBCTLA - Miscellaneous Subroutines
Refer to Chart 05.

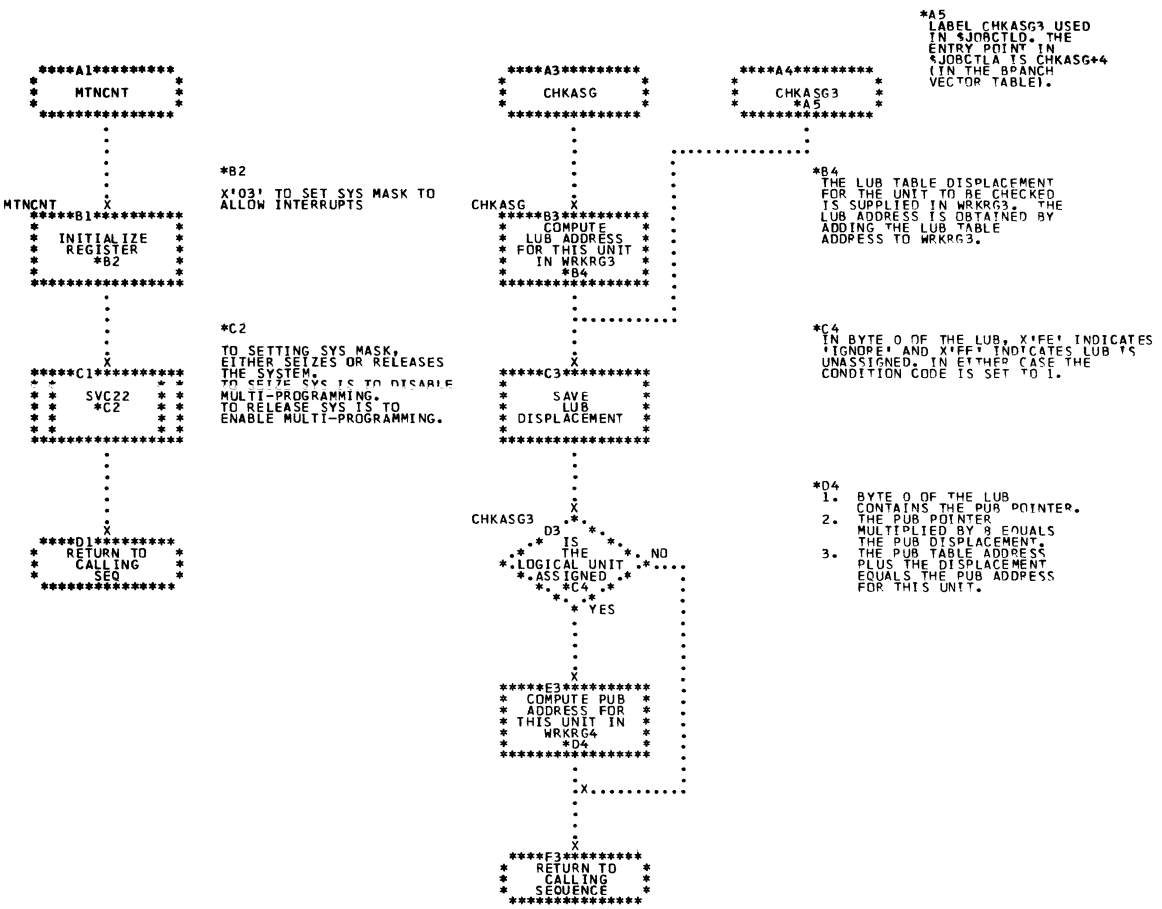


Chart GV. $JOBCTLA - Error Subroutines (Part 1 of 2)
Refer to Chart 05.

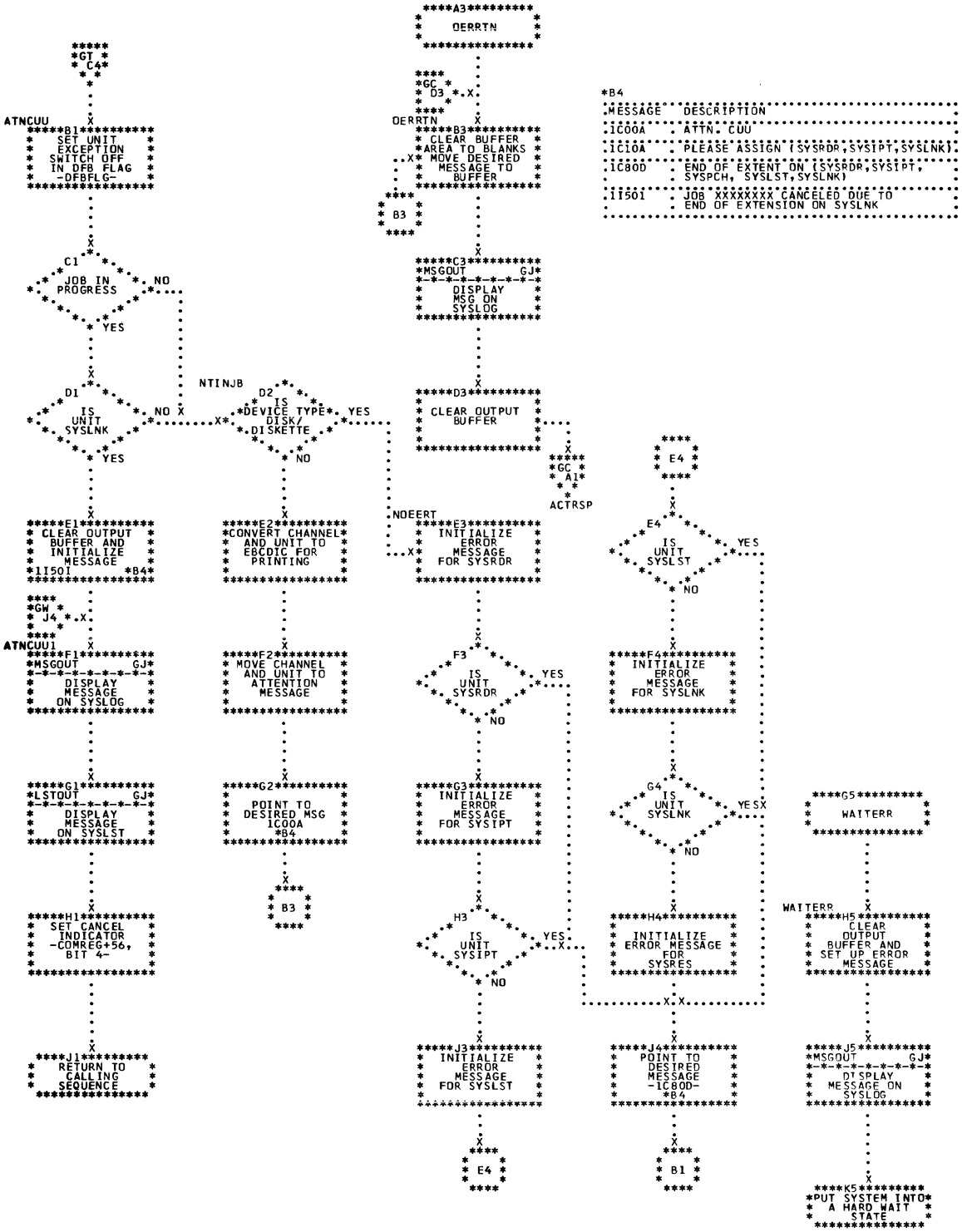


Chart GW. $JOBCTLA - Error Subroutines (Part 2 of 2)
Refer to Chart 05.

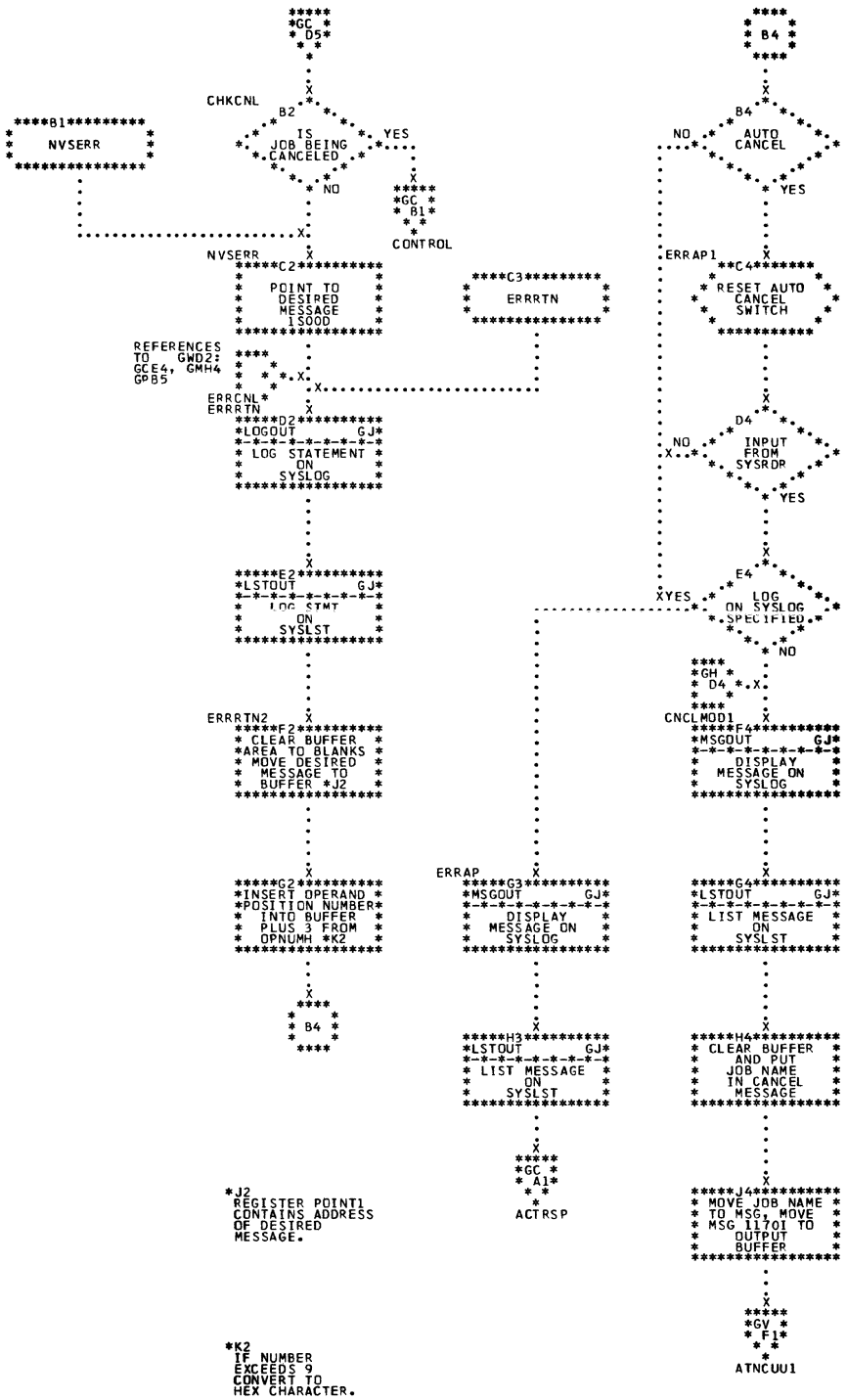


Chart GX. $JOBCTLA - Relocation Subroutines
Refer to Chart 05.

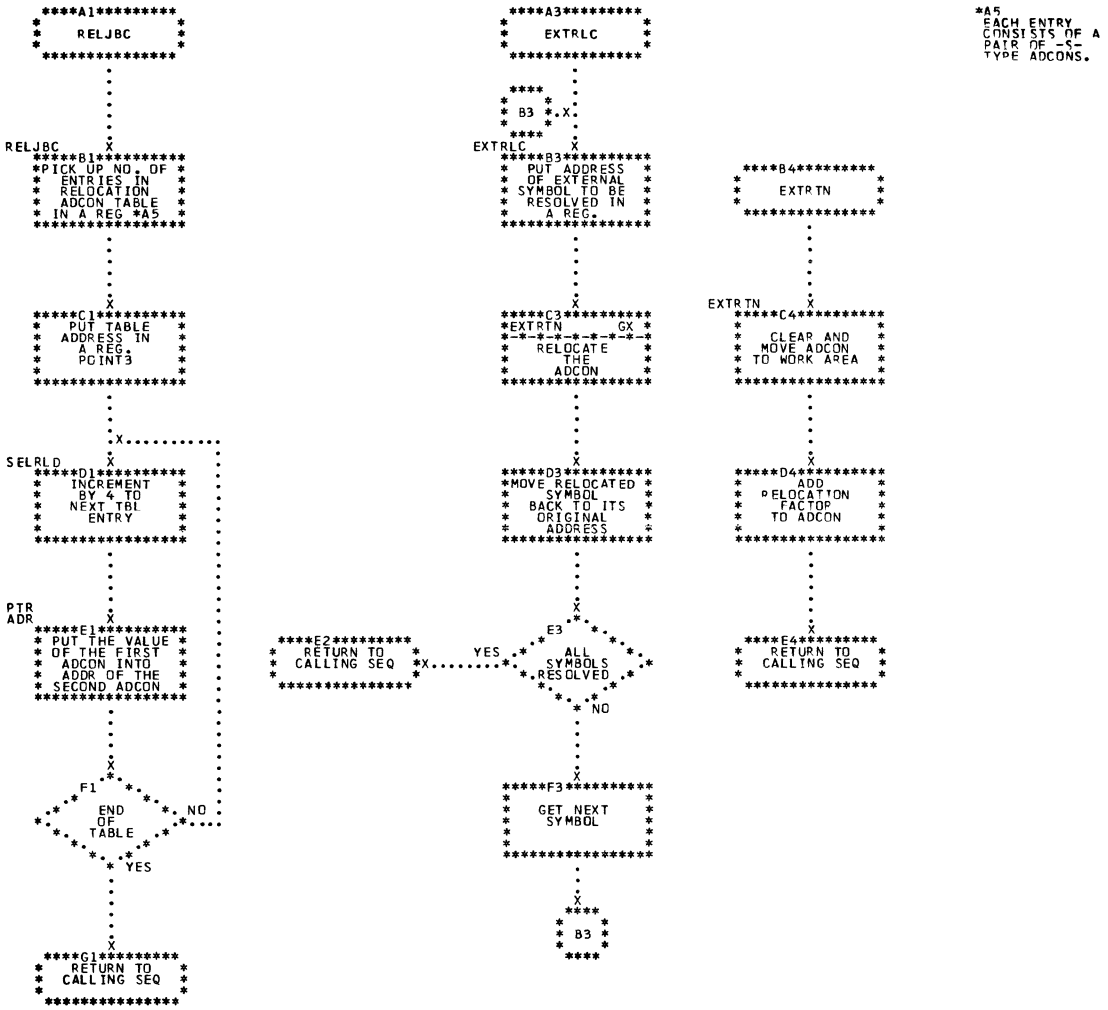


Chart HA. $JOBCTLB - Disk Restart Preparation (Part 1 of 3)
Refer to Chart 07.

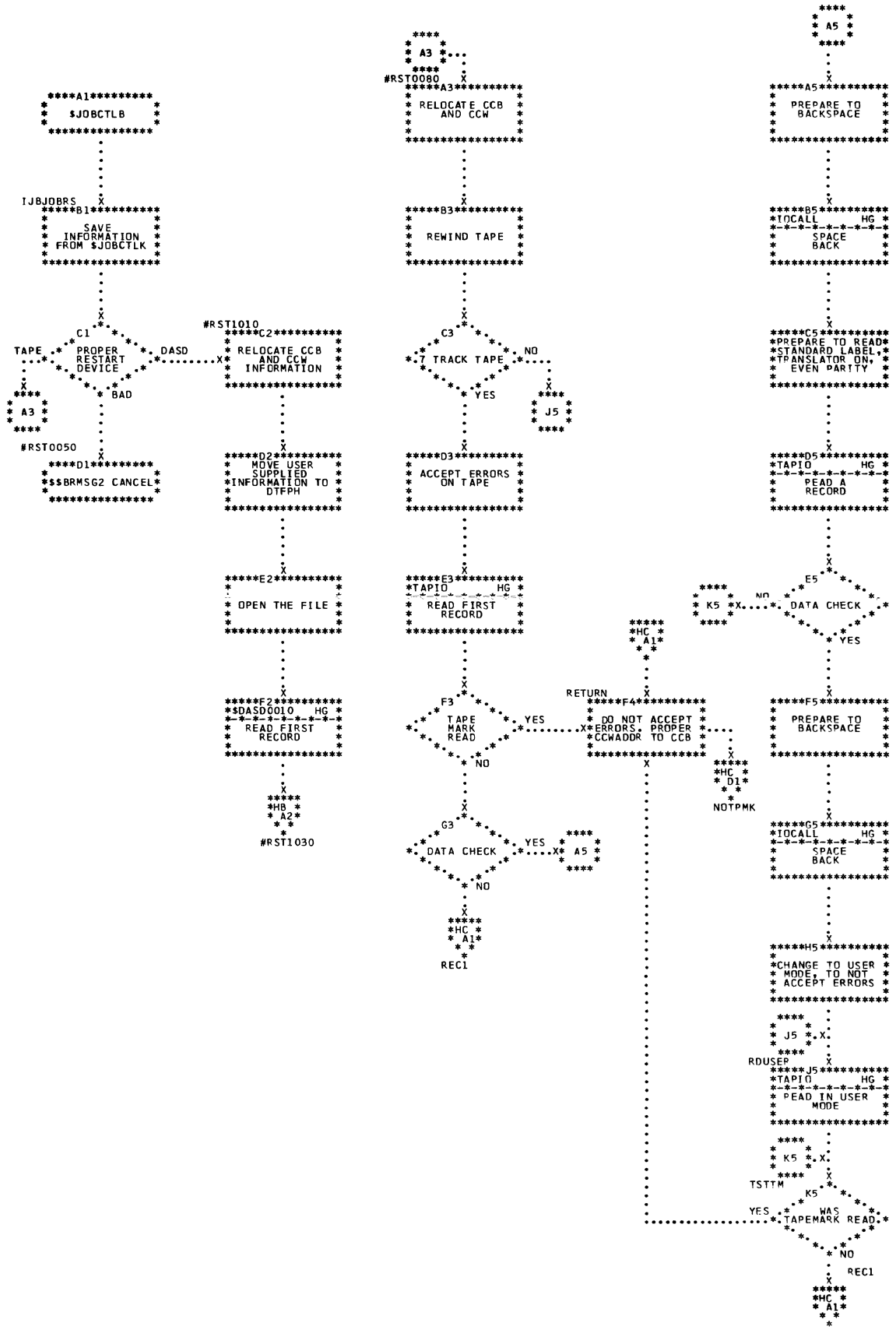


Chart HB. $JOBCTLB - Disk Restart Preparation (Part 2 of 3)
Refer to Chart 07.

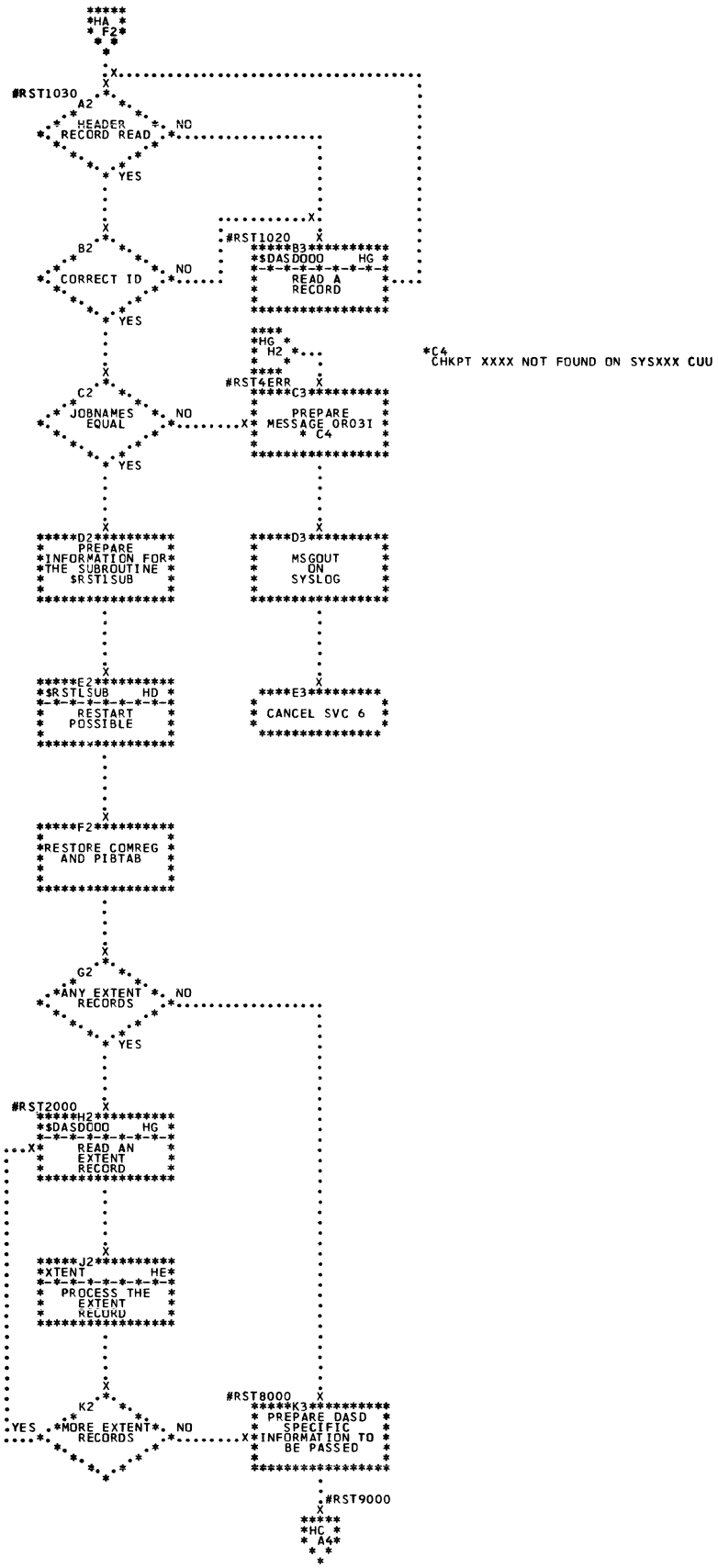


Chart HC. $JOBCTLB - Disk Restart Preparation (Part 3 of 3)
Refer to Chart 07.

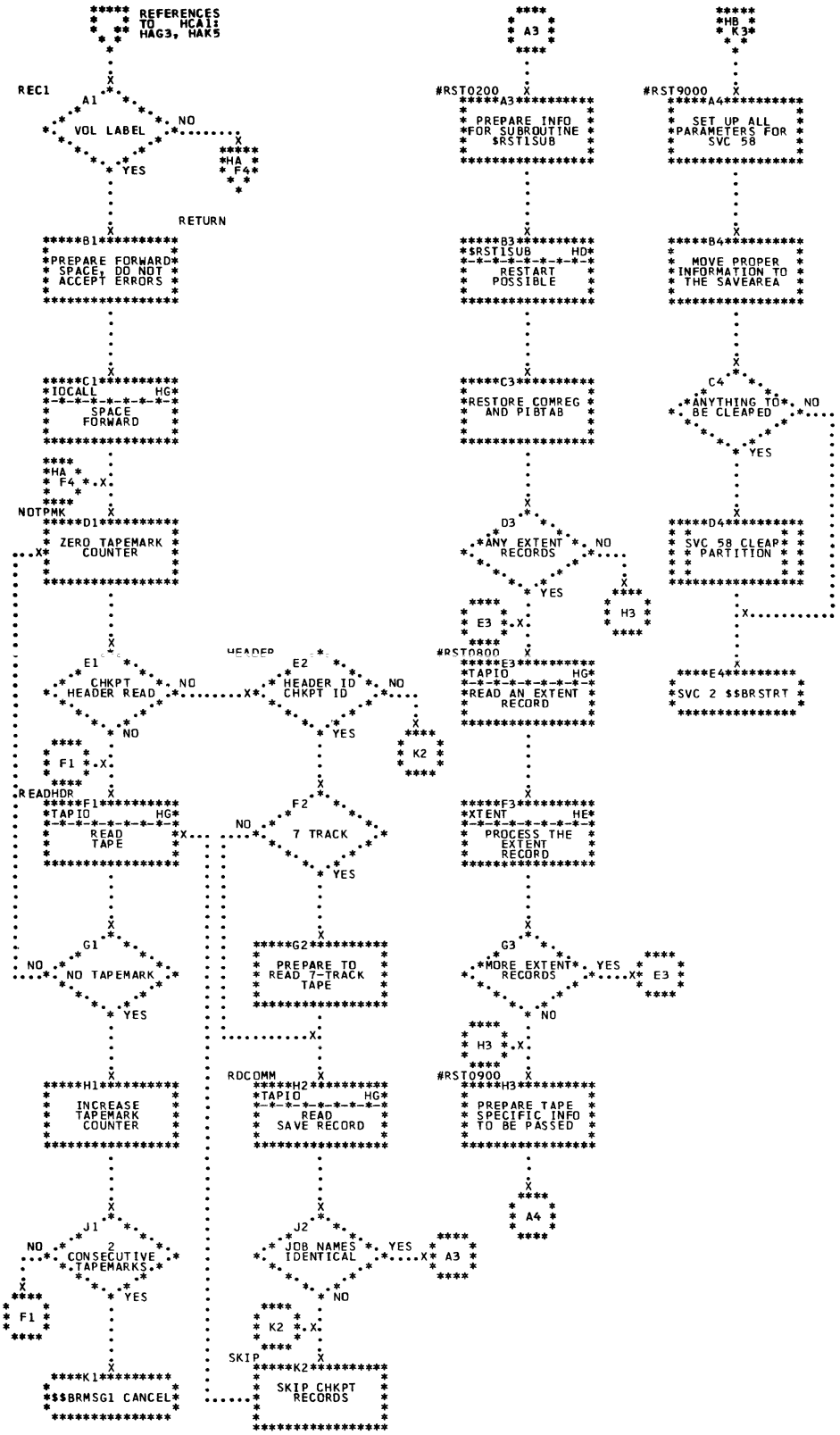


Chart HD. $JOBCTLB - Test Restart Partitiон
Refer to Chart 07.

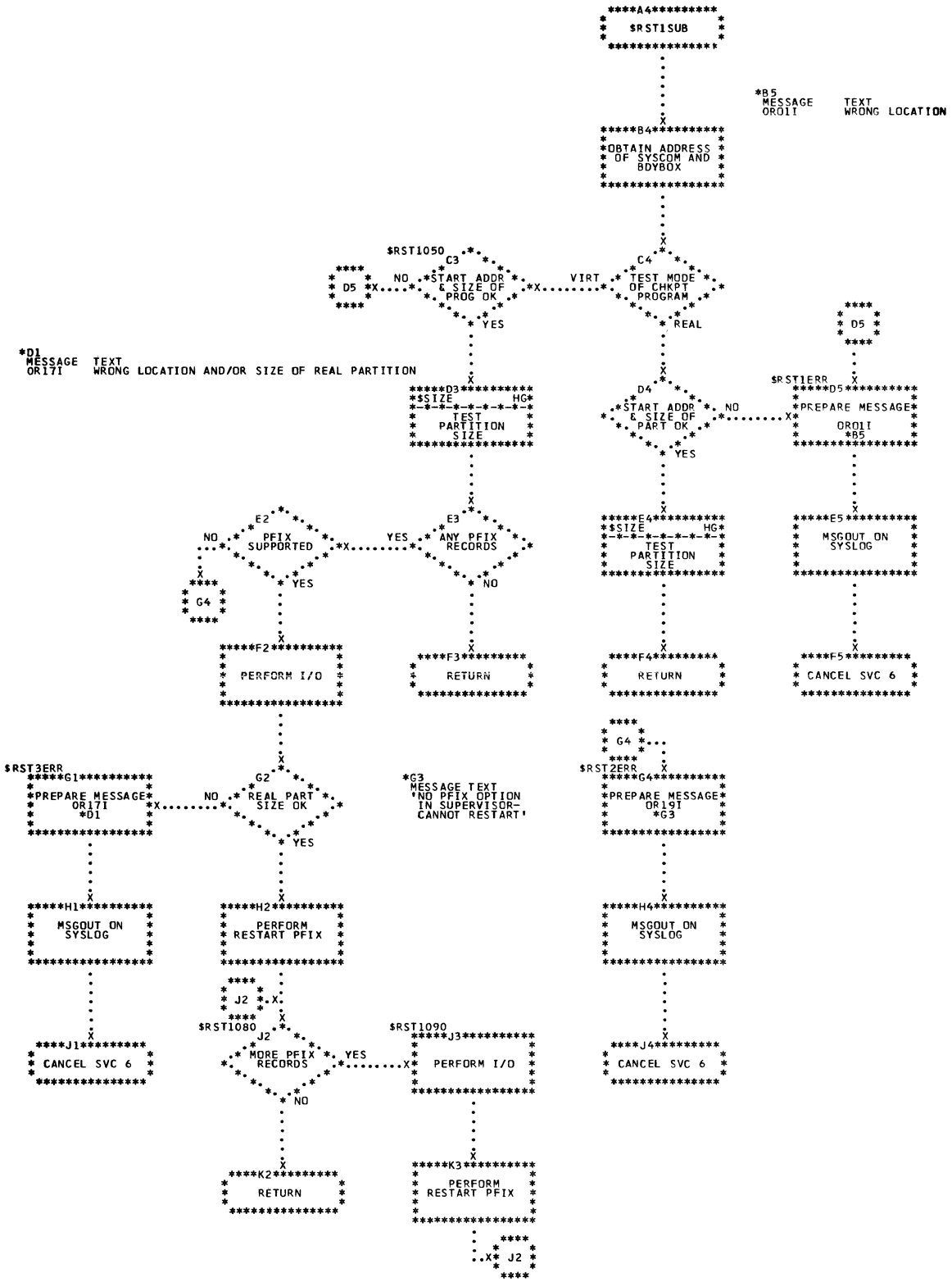


Chart HE. $JOBCTLB - Test Restart Record (Part 1 of 2)
Refer to Chart 07.

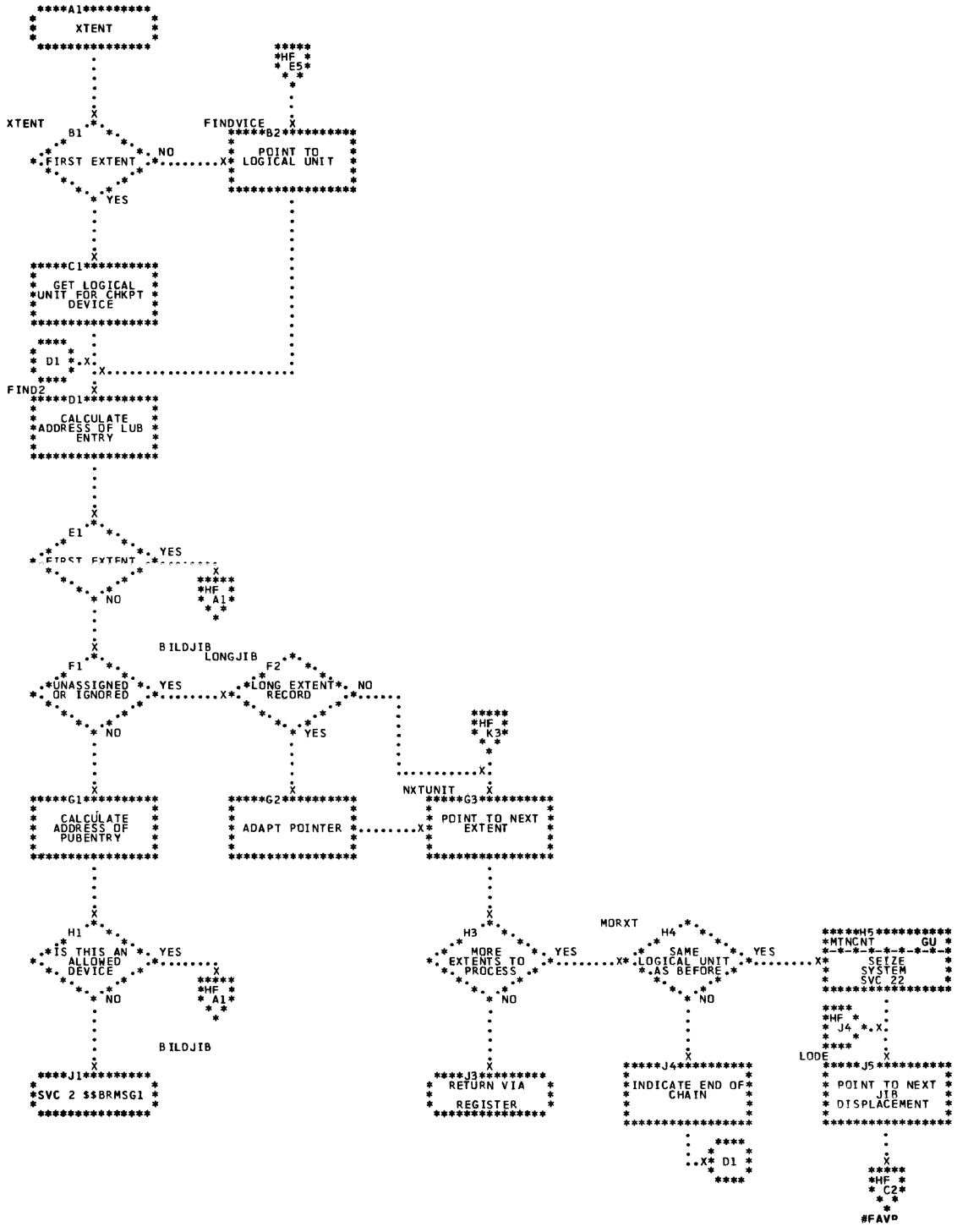


Chart HF. $JOBCTLB - Test Restart Reccrd (Part 2 cf 2)
Refer to Chart 07.

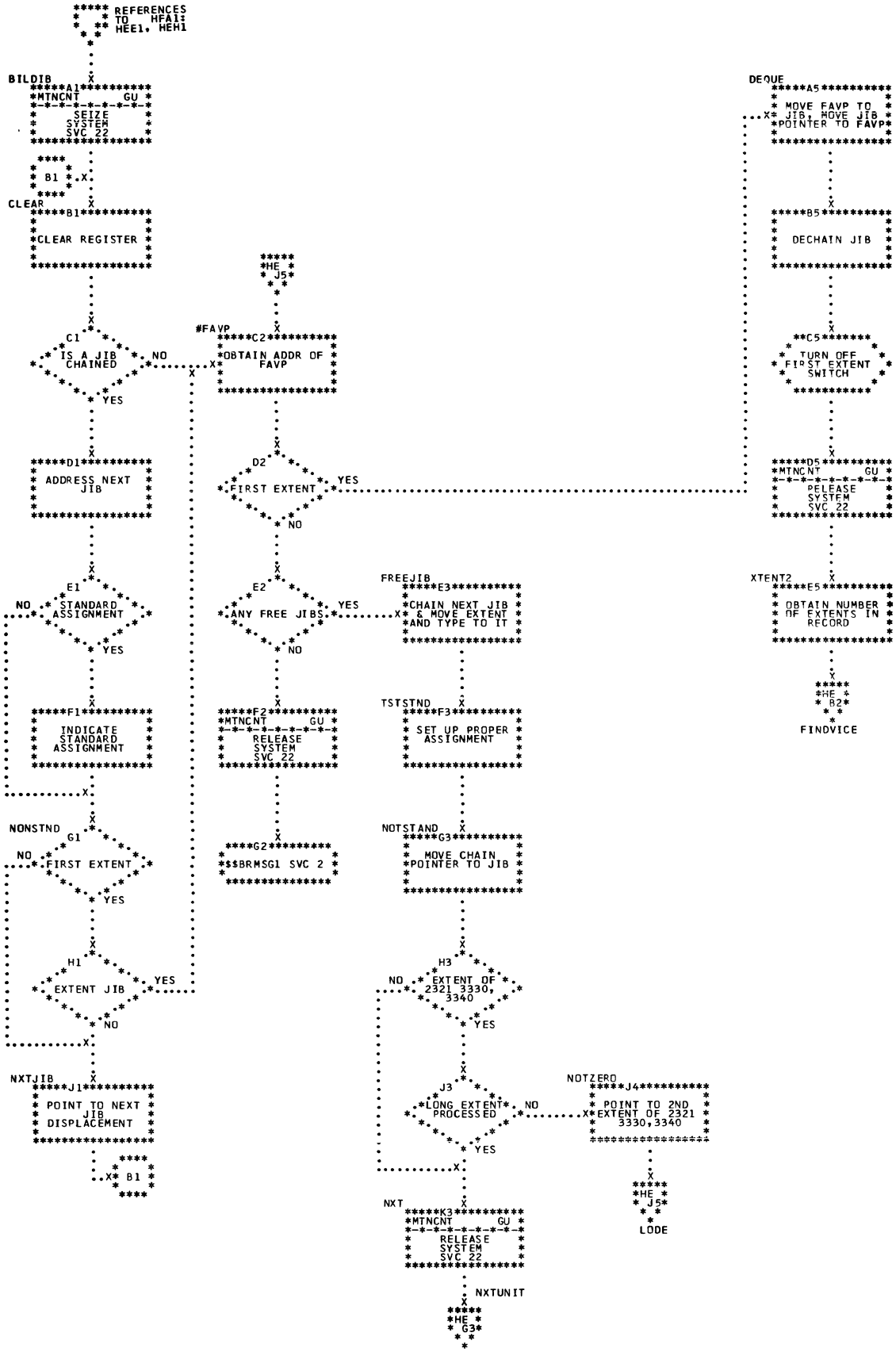


Chart HG. $JOBCTLB - Restart Subrcutines
Refer to Chart 07.

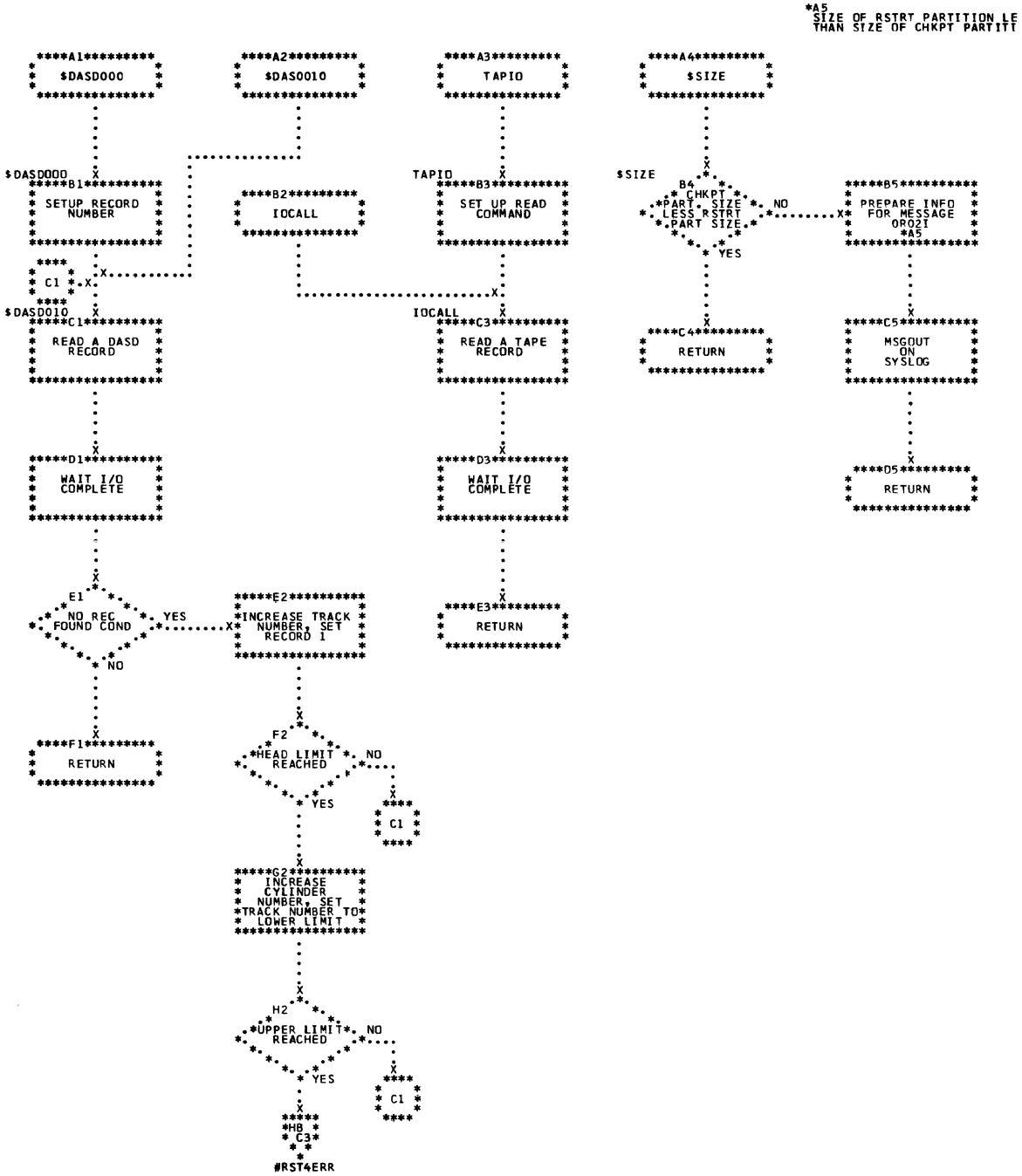


Chart JA. $JOBCTLD - ASSGN Statement Processor (Part 1 of 16)
Refer to Charts 08 and 09.

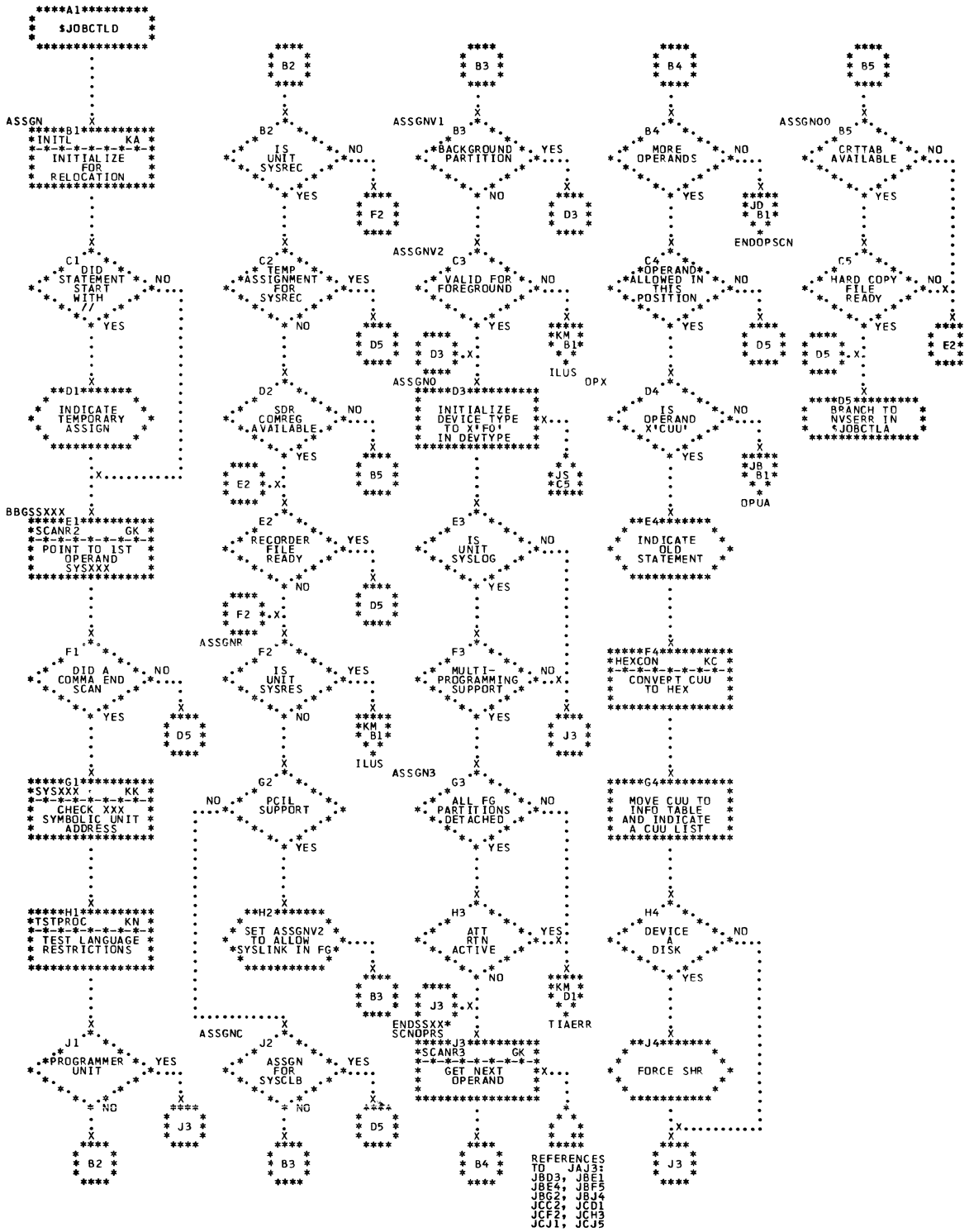


Chart JB. $JOBCTLD - ASSGN Statement Processor (Part 2 of 16)
Refer to Charts 08 and 09.

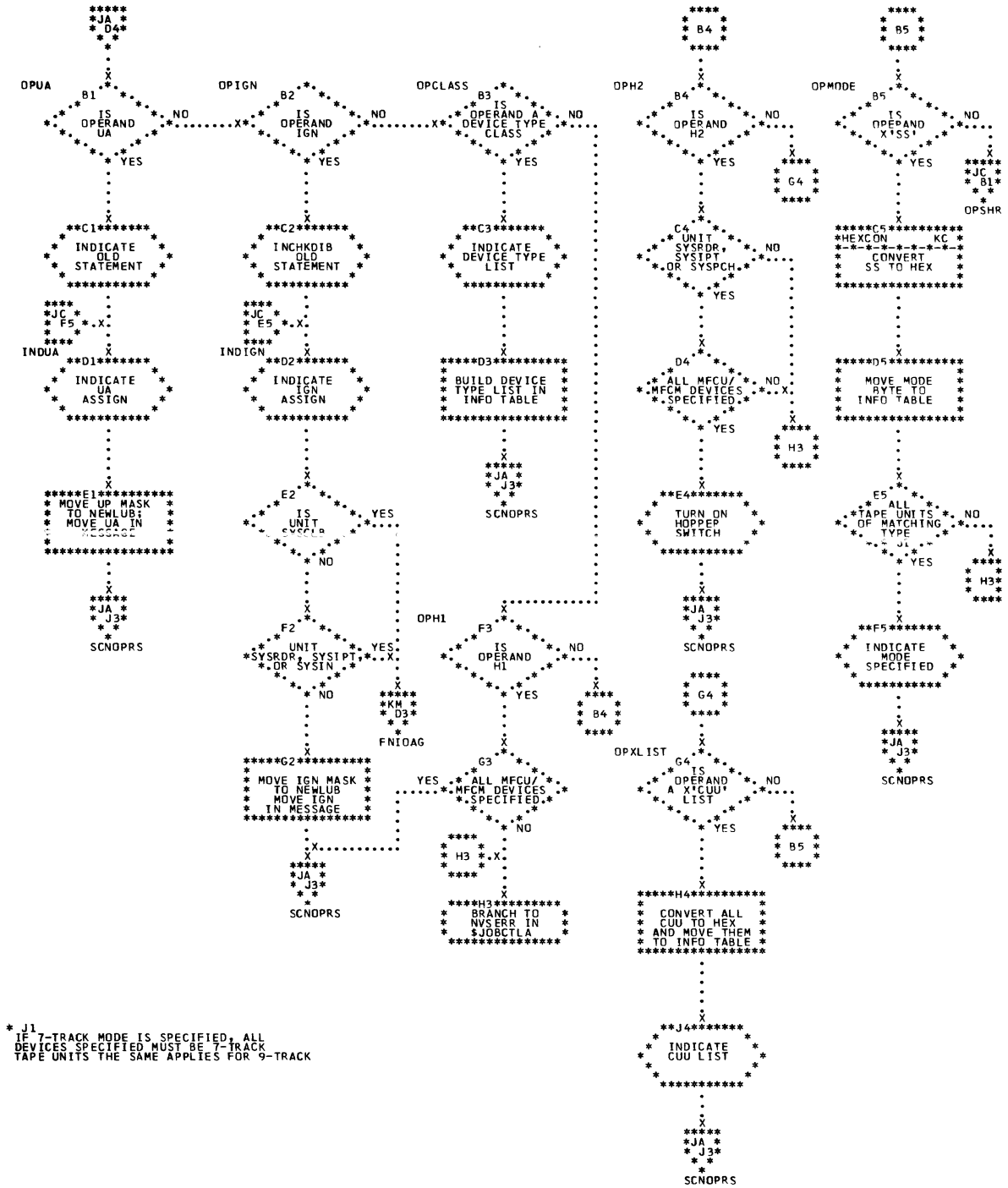


Chart JC. $JOBCTLD - ASSGN Statement Processor (Part 3 of 16)
Refer to Charts C8 and C9.

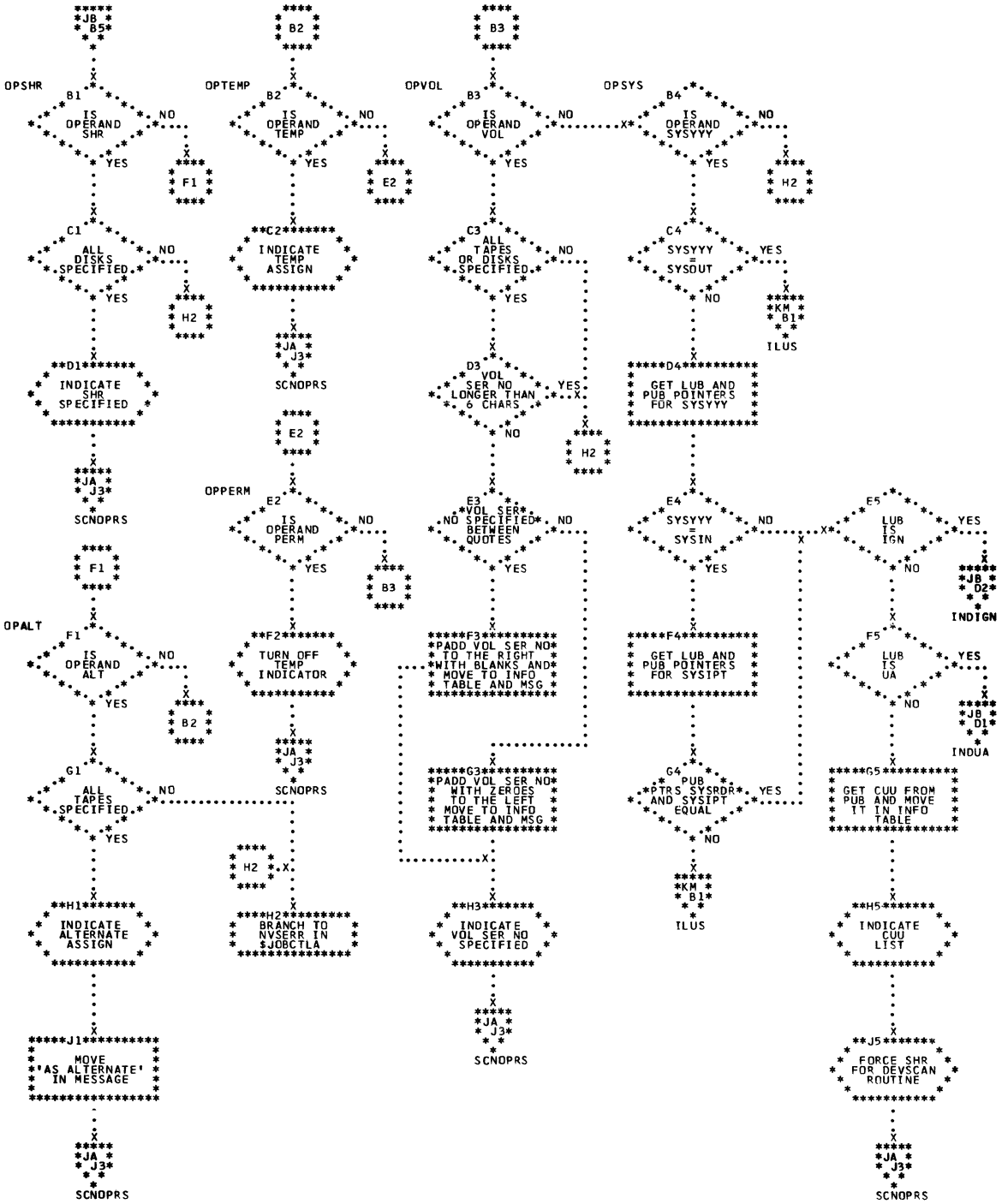


Chart JD. $JOBCTLD - ASSGN Statement Processor (Part 4 of 16)
Refer to Charts 08 and 09.

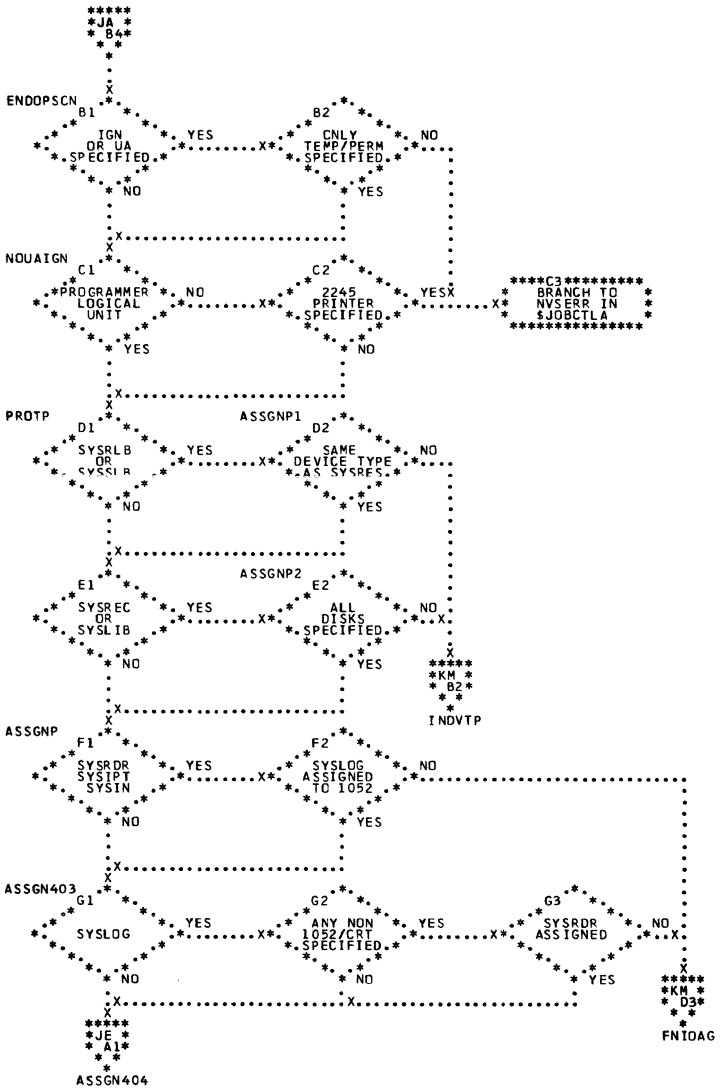


Chart JE. $JOBCTLD - ASSGN Statement Processor (Part 5 of 16)
Refer to Charts 08 and 09.

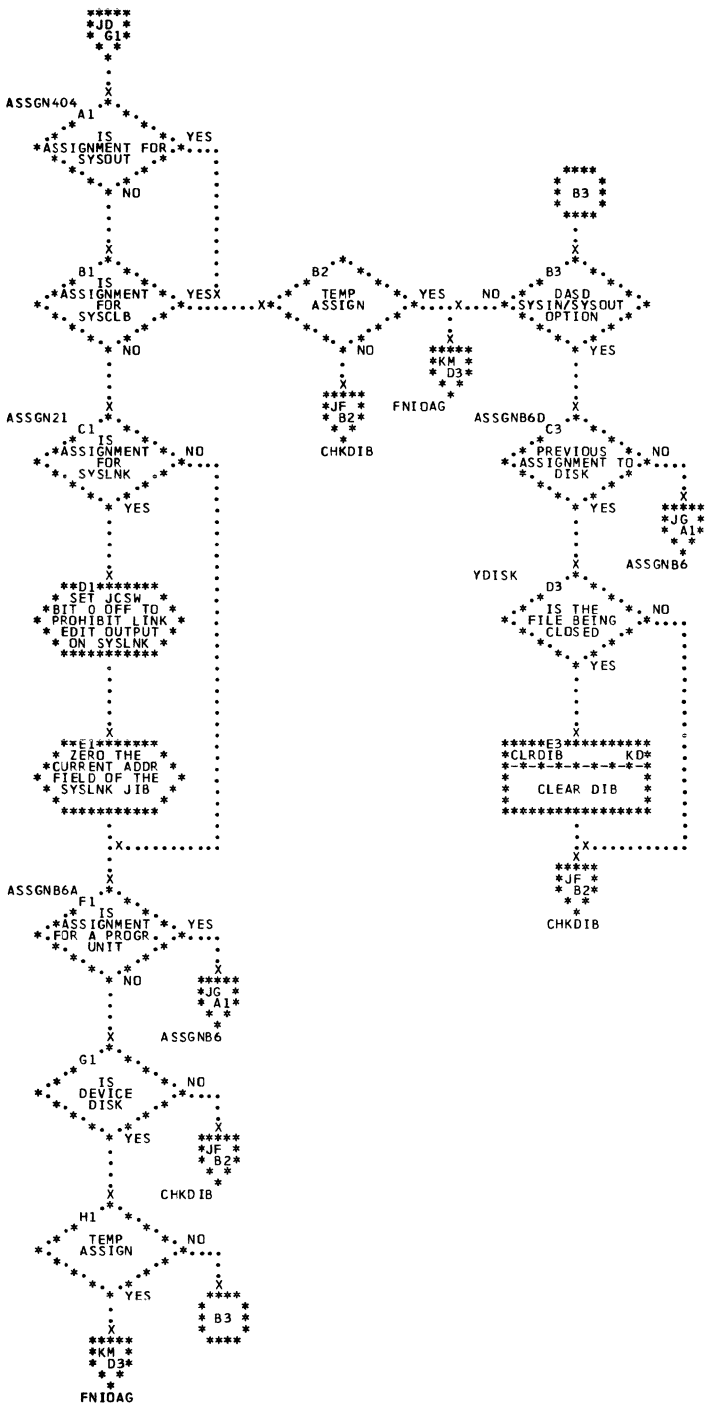


Chart JF. $JOBCTLD - **ASSGN** Statement Processor (Part 6 of 16)
Refer to Charts 08 and C9.

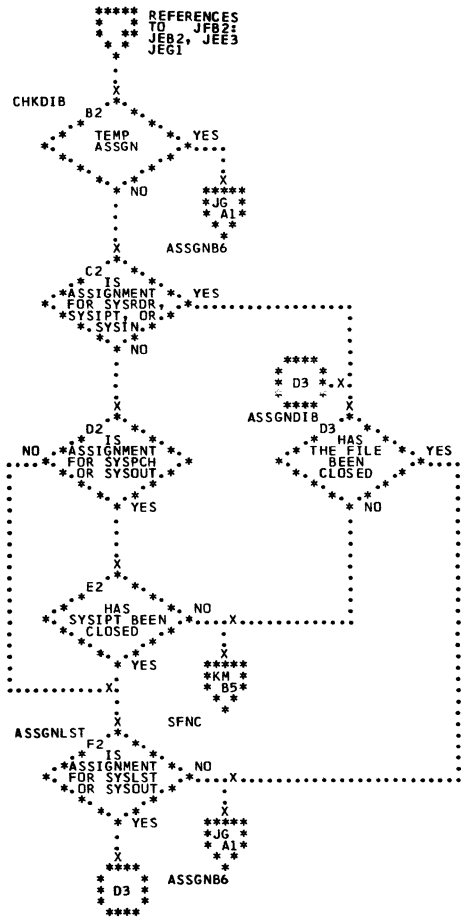


Chart JG. $JOBCTLD - ASSGN Statement Processor (Part 7 of 16)
Refer to Charts 08 and 09.

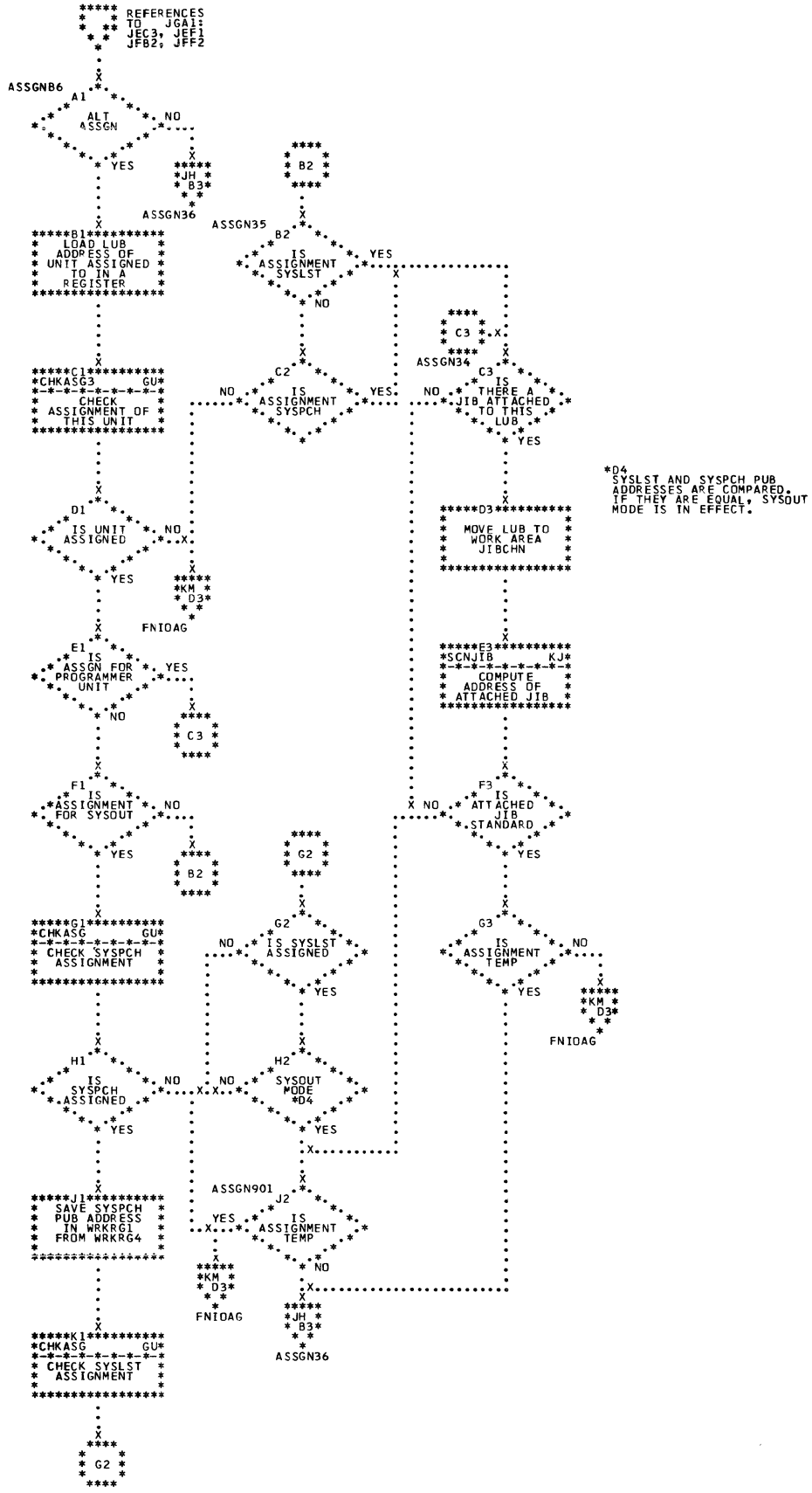


Chart JH. $JOBCTLD - ASSGN Statement Processor (Part 8 of 16)
Refer to Charts C8 and C9.

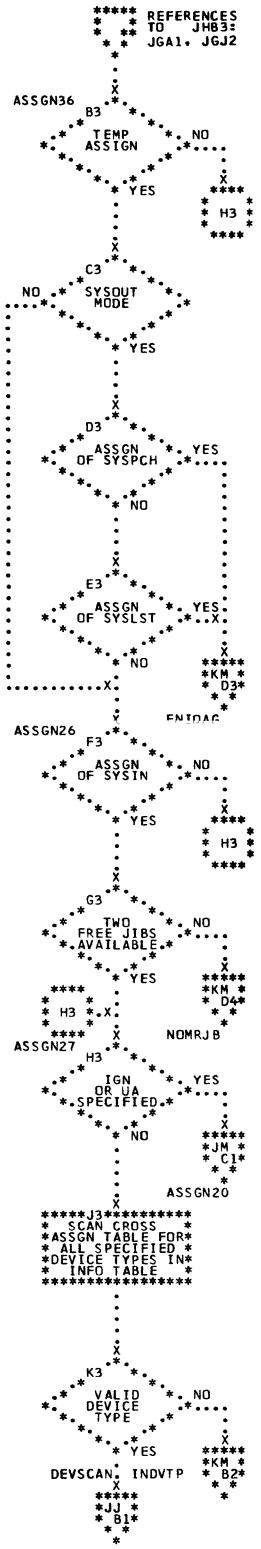


Chart JJ. $JOBCTLD - ASSGN Statement Processor (Part 9 of 16)
Refer to Charts 08 and 09.

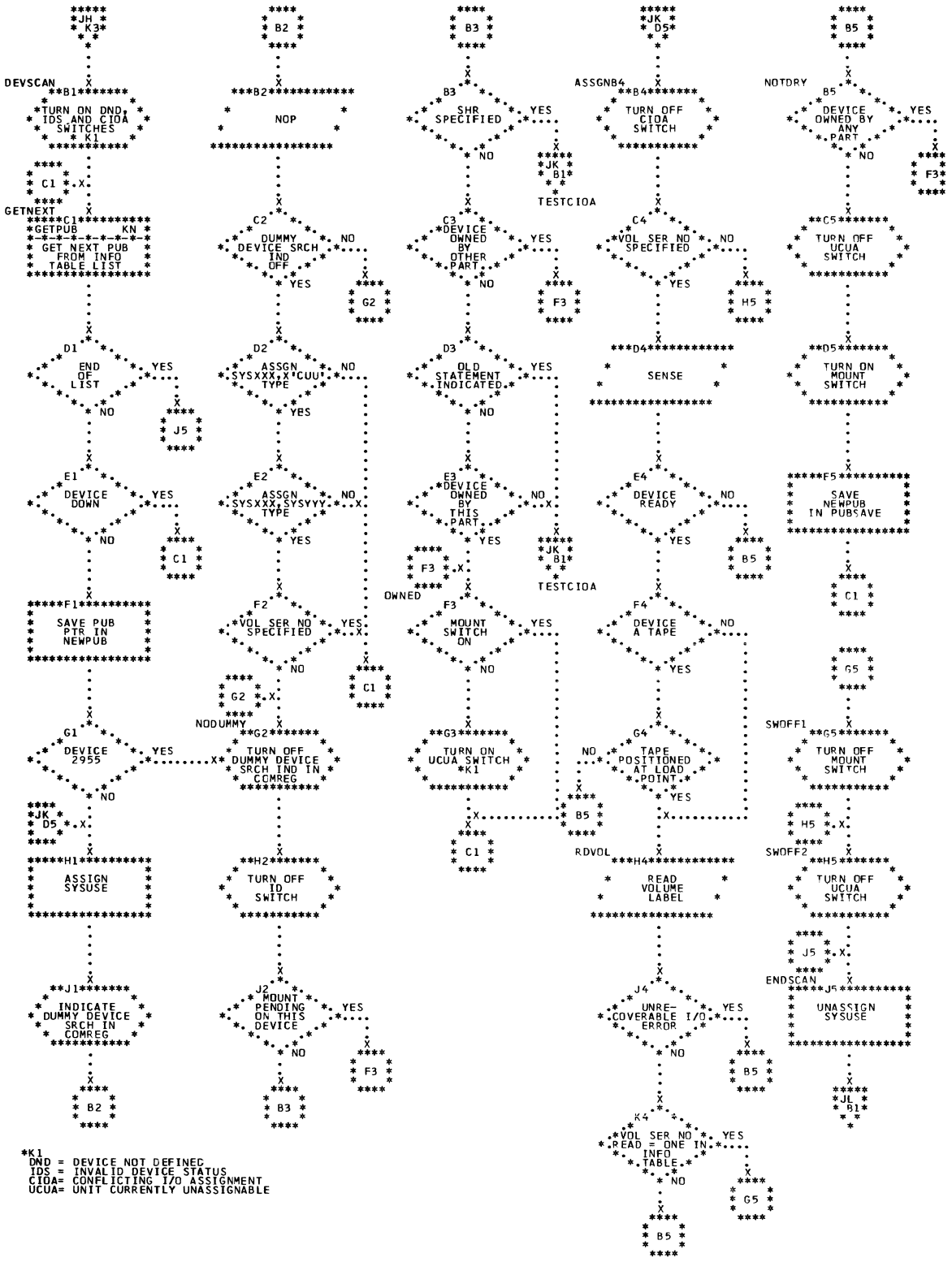
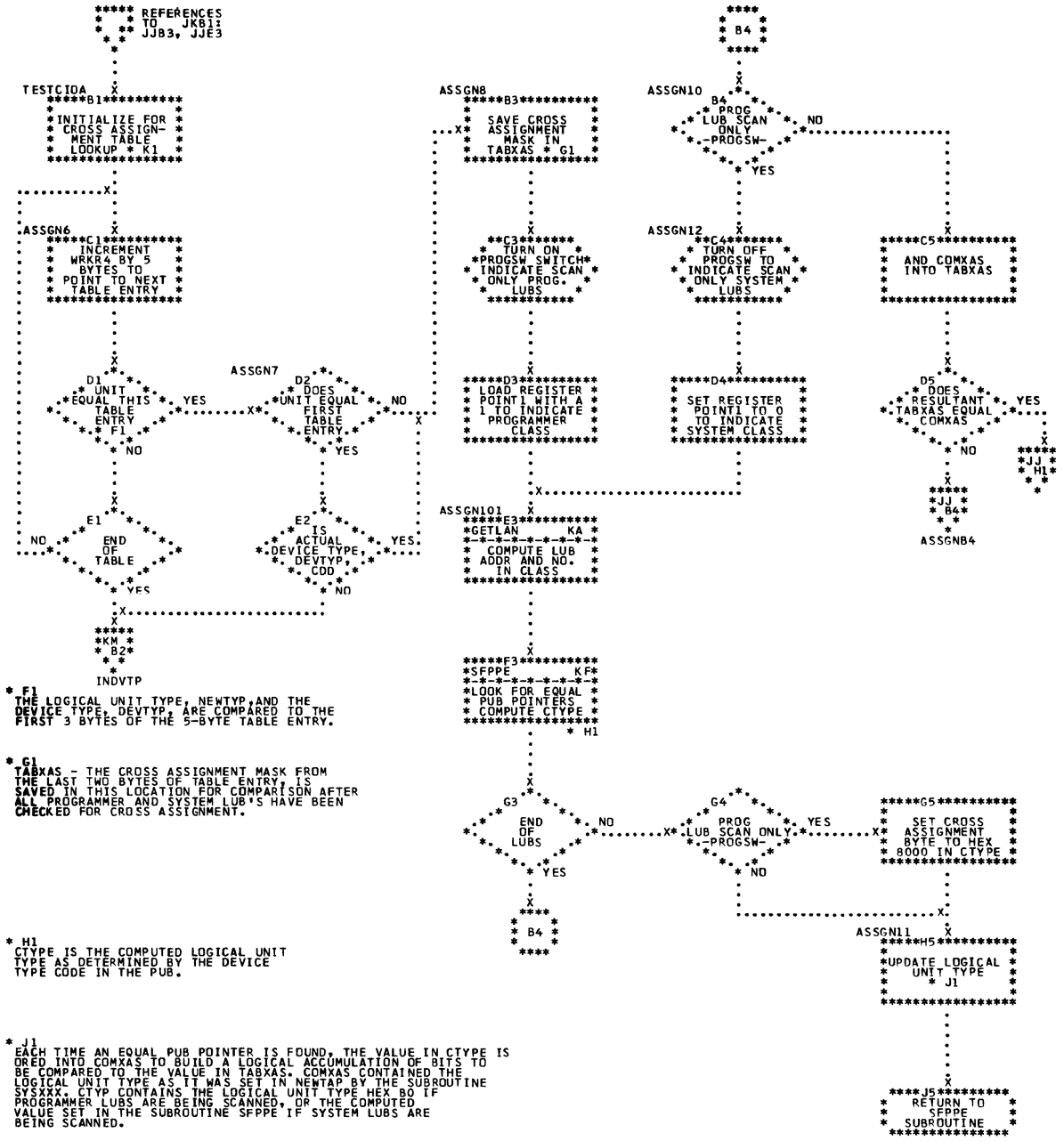


Chart JK. $JOBCTLD - ASSGN Statement Processor (Part 10 of 16)
Refer to Charts C8 and C9.



* F1
THE LOGICAL UNIT TYPE, NEWTYP, AND THE DEVICE TYPE, DEVTYP, ARE COMPARED TO THE FIRST 3 BYTES OF THE 5-BYTE TABLE ENTRY.

* G1
TABXAS - THE CROSS ASSIGNMENT MASK FROM THE LAST TWO BYTES OF TABLE ENTRY, IS SAVED IN THIS LOCATION FOR COMPARISON AFTER ALL PROGRAMMER AND SYSTEM LUB'S HAVE BEEN CHECKED FOR CROSS ASSIGNMENT.

* H1
CTYPE IS THE COMPUTED LOGICAL UNIT TYPE AS DETERMINED BY THE DEVICE TYPE CODE IN THE PUB.

* J1
EACH TIME AN EQUAL PUB POINTER IS FOUND, THE VALUE IN CTYPE IS ORED INTO COMXAS TO BUILD A LOGICAL ACCUMULATION OF BITS TO BE COMPARED TO THE VALUE IN TABXAS. COMXAS CONTAINED THE LOGICAL UNIT TYPE AS IT WAS SET IN NEWTAP BY THE SUBROUTINE SYSXXX. CTYP CONTAINS THE LOGICAL UNIT TYPE HEX B0 IF PROGRAMMER LUBS ARE BEING SCANNED, OR THE COMPUTED VALUE SET IN THE SUBROUTINE SFPPE IF SYSTEM LUBS ARE BEING SCANNED.

* K1
1. THE DEVICE TYPE ZONE IS MOVED TO THE TABLE LOCATION EDXTAB
2. MOVE THE LOGICAL UNIT TYPE TO COMXAS FROM NEWTYP
3. LOAD WRKRG4 AS POINTER TO CROSS ASSIGNMENT TABLE LESS 5 BYTES (XATABLE-5)

Chart JL. $JOBCTLD - ASSGN Statement Prccesscr (Part 11 of 16)
Refer to Charts 08 and 09.

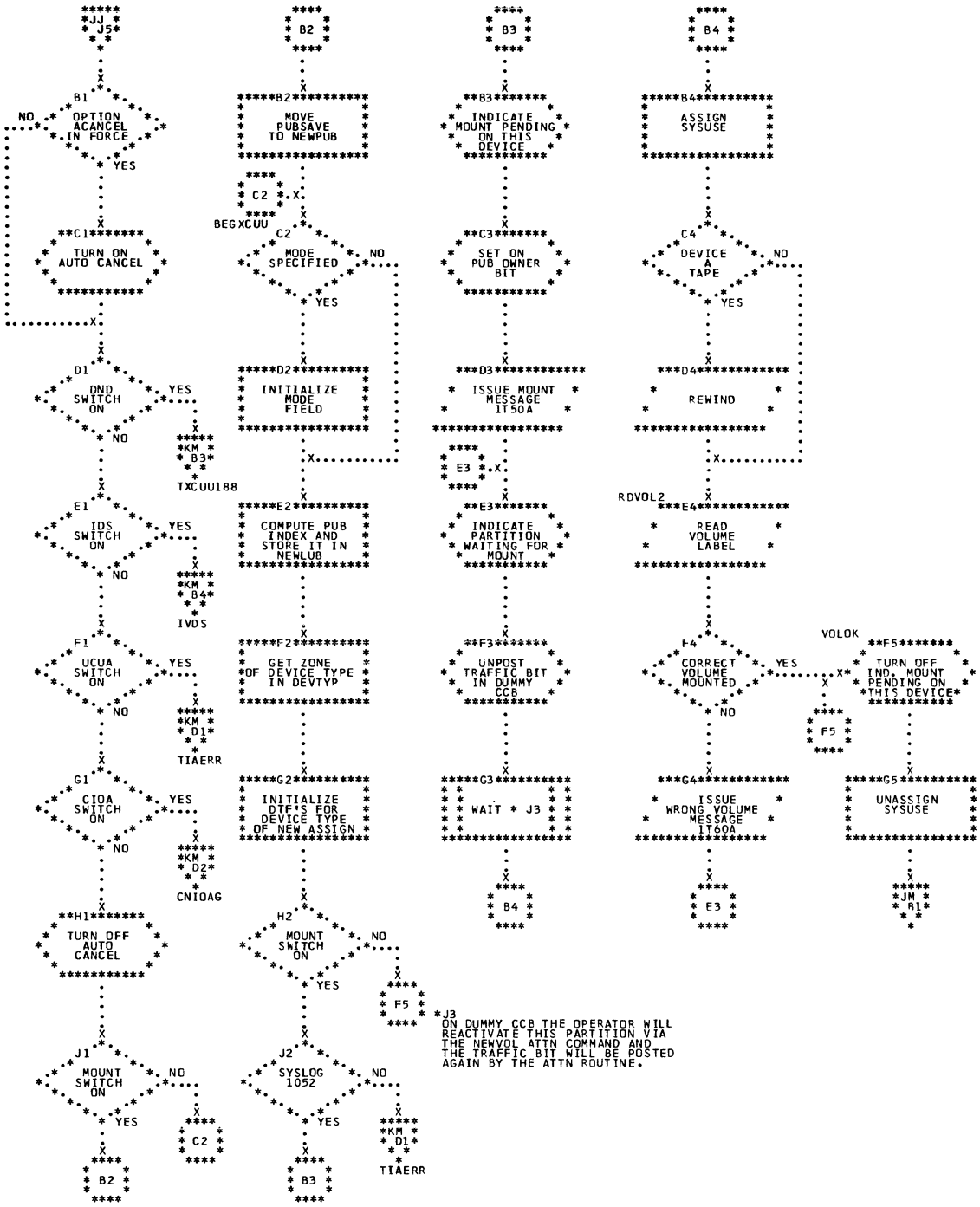


Chart JM. $JOBCTLD - ASSGN Statement Processor (Part 12 of 16)
Refer to Charts C8 and 09.

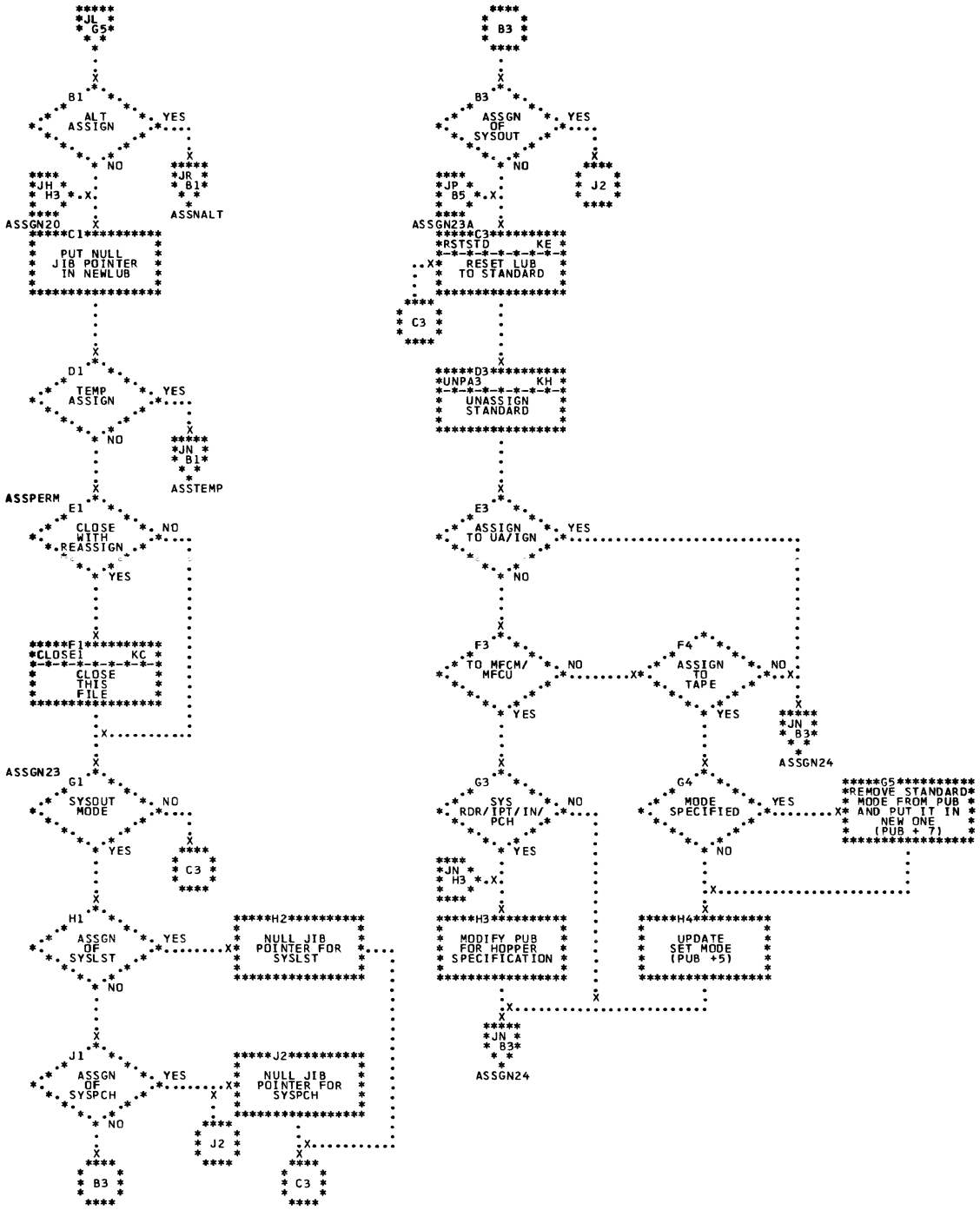


Chart JN. $JOBCTLD - ASSGN Statement Processor (Part 13 of 16)
Refer to Charts C8 and C9.

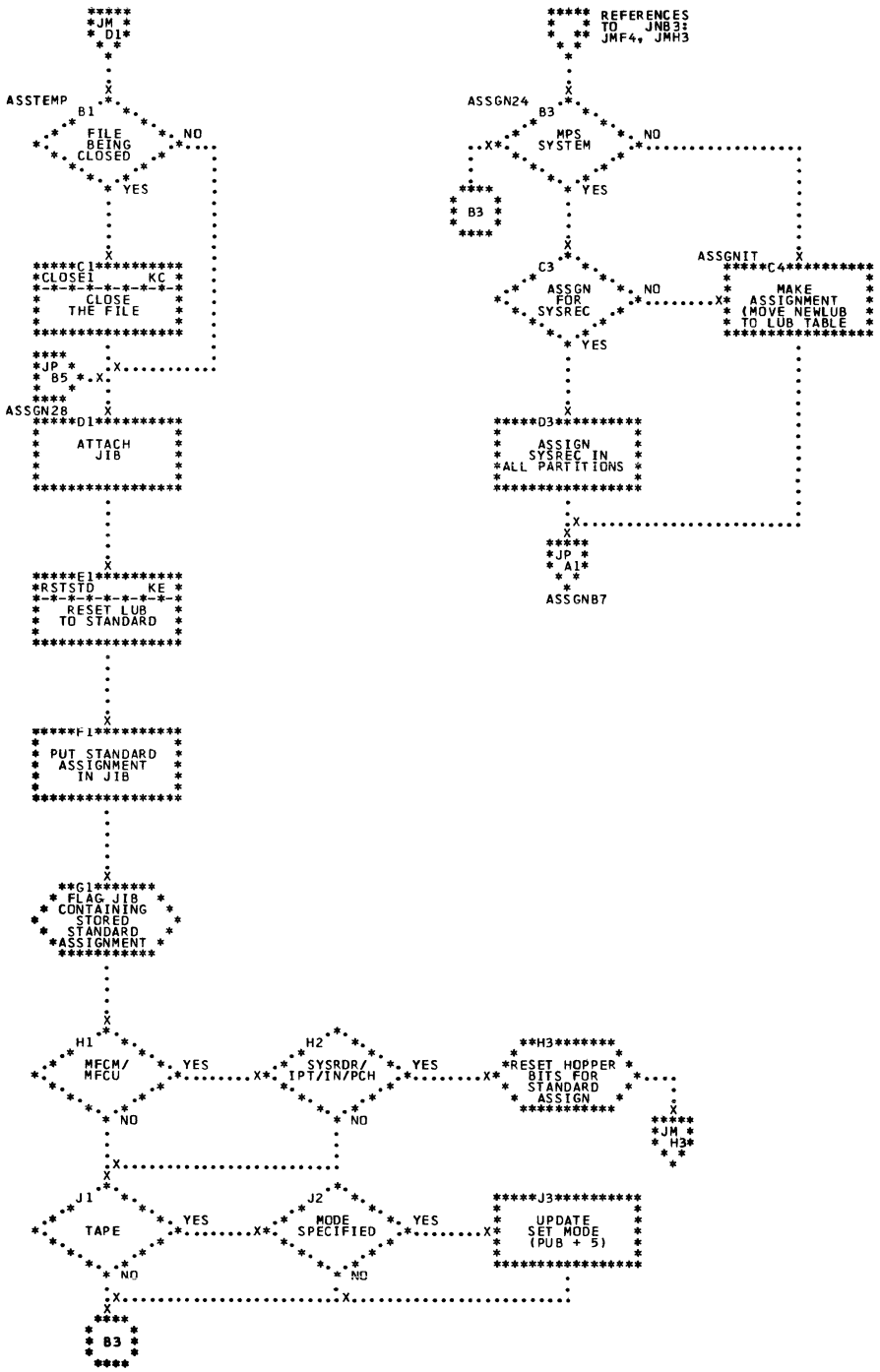


Chart JP. $JOBCTLD - ASSGN Statement Processor (Part 14 of 16)
Refer to Charts 08 and 09.

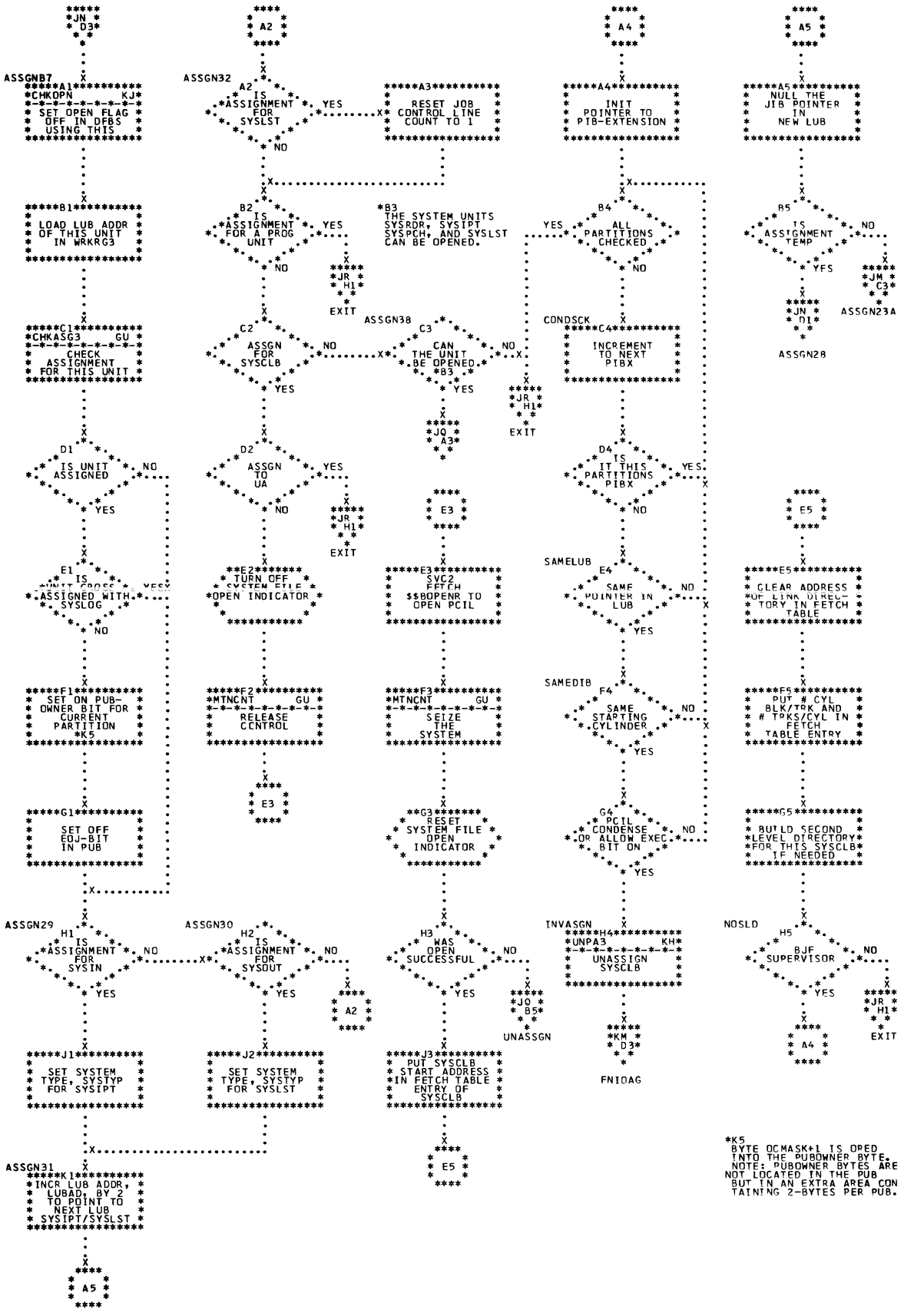


Chart JQ. $JOBCTLD - ASSGN Statement Processor (Part 15 of 16)
Refer to Charts 08 and 09.

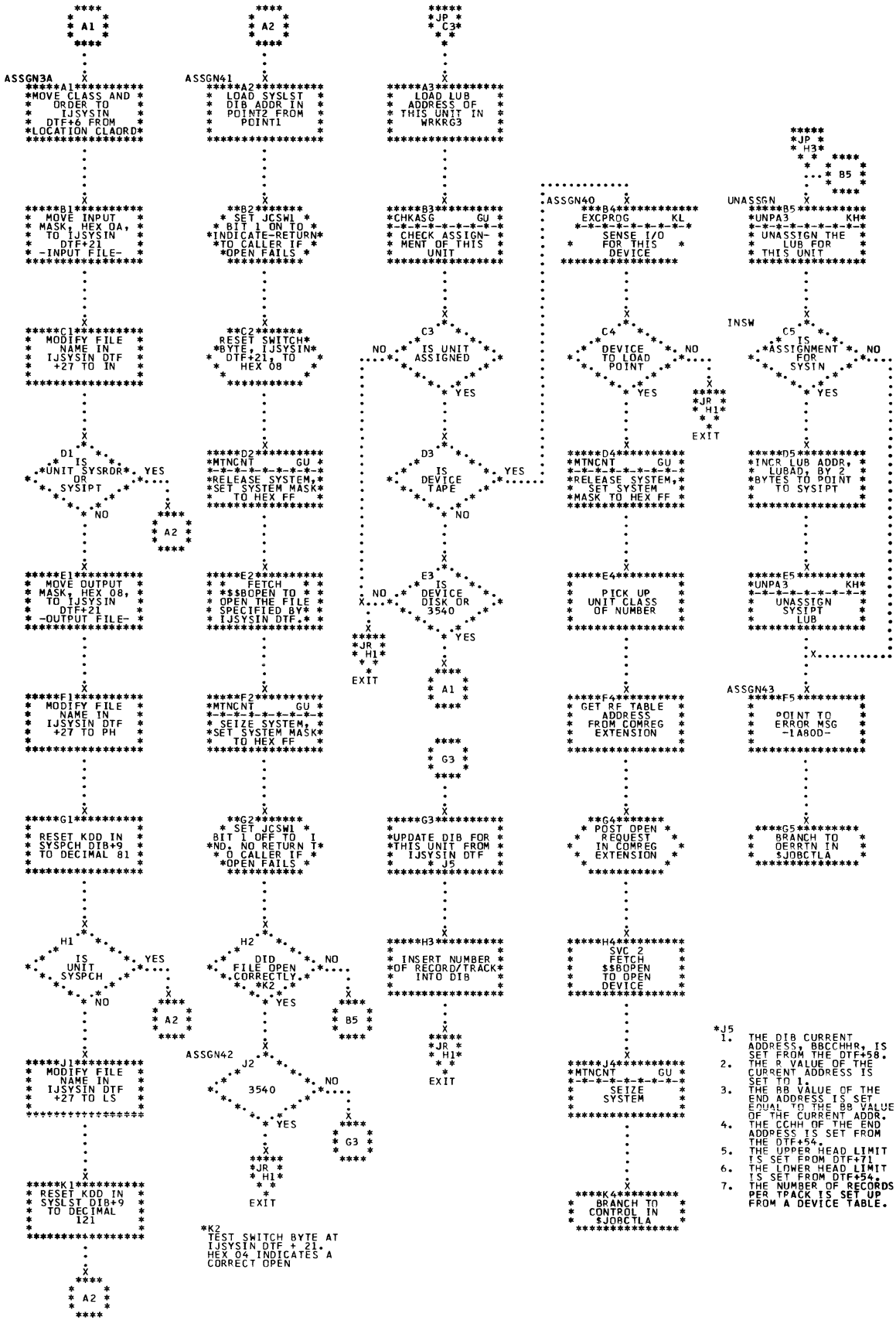


Chart JR. $JOBCTLD - ASSGN Statement Processor (Part 16 of 16)
Refer to Charts 08 and 09.

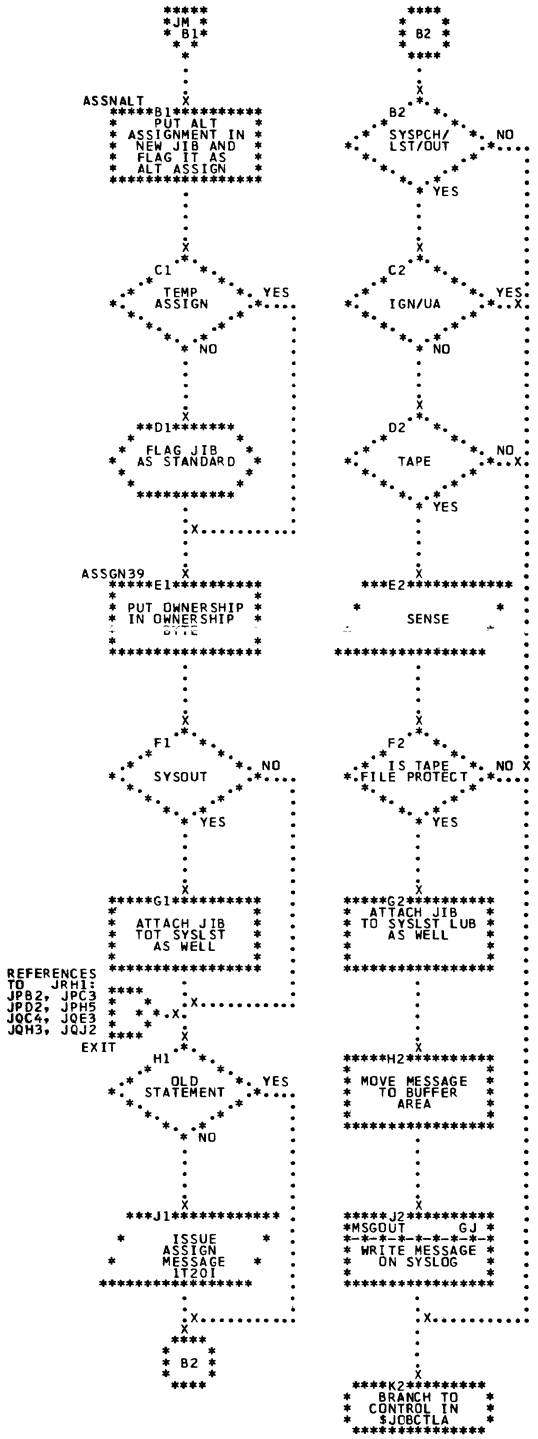


Chart JS. $JOBCTLD - CLOSE Statement Processor
Refer to Chart 09.

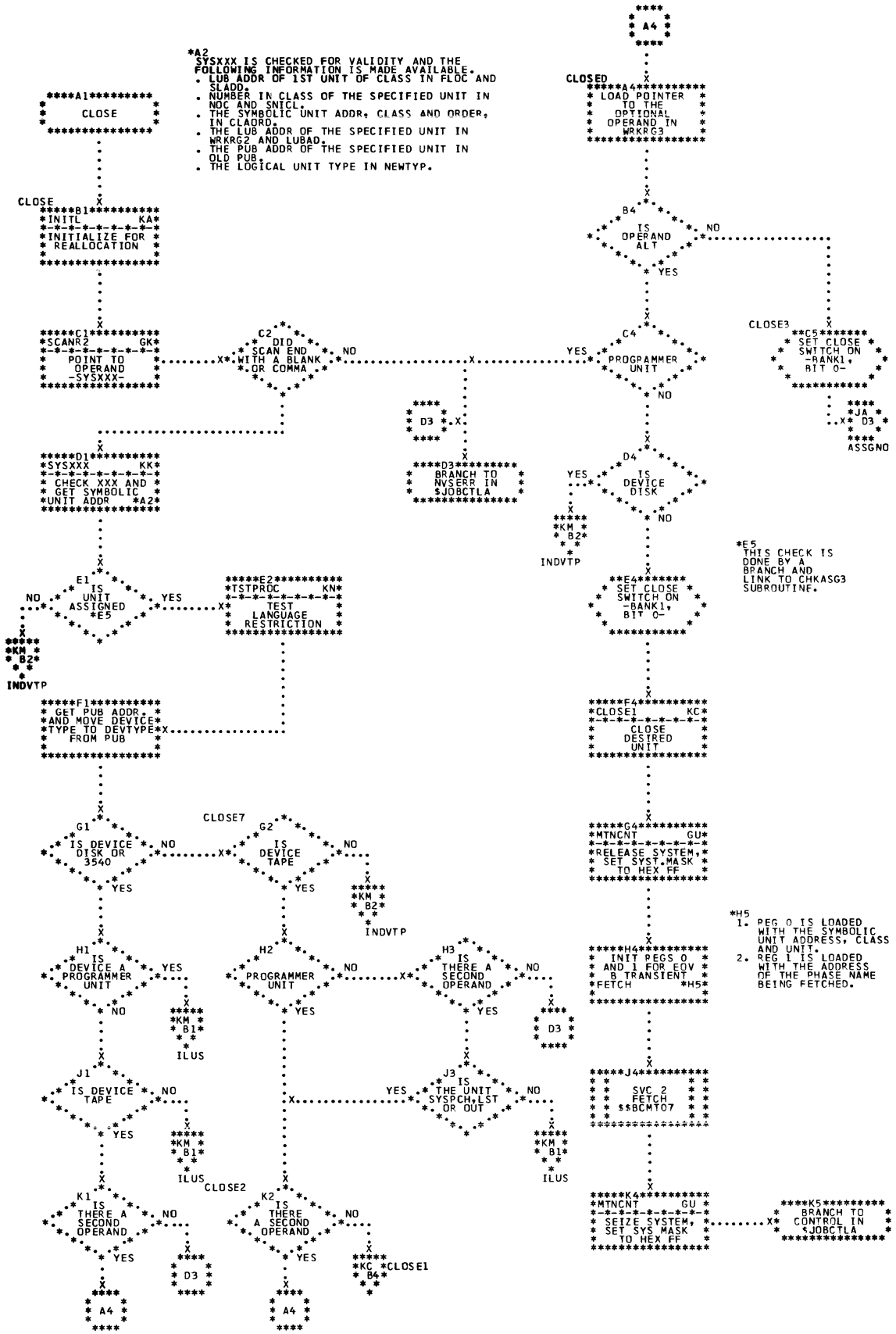


Chart KA. $JOBCTLD - Miscellaneous Subroutines (Part 1 of 9)
Refer to Charts C8 and C9.

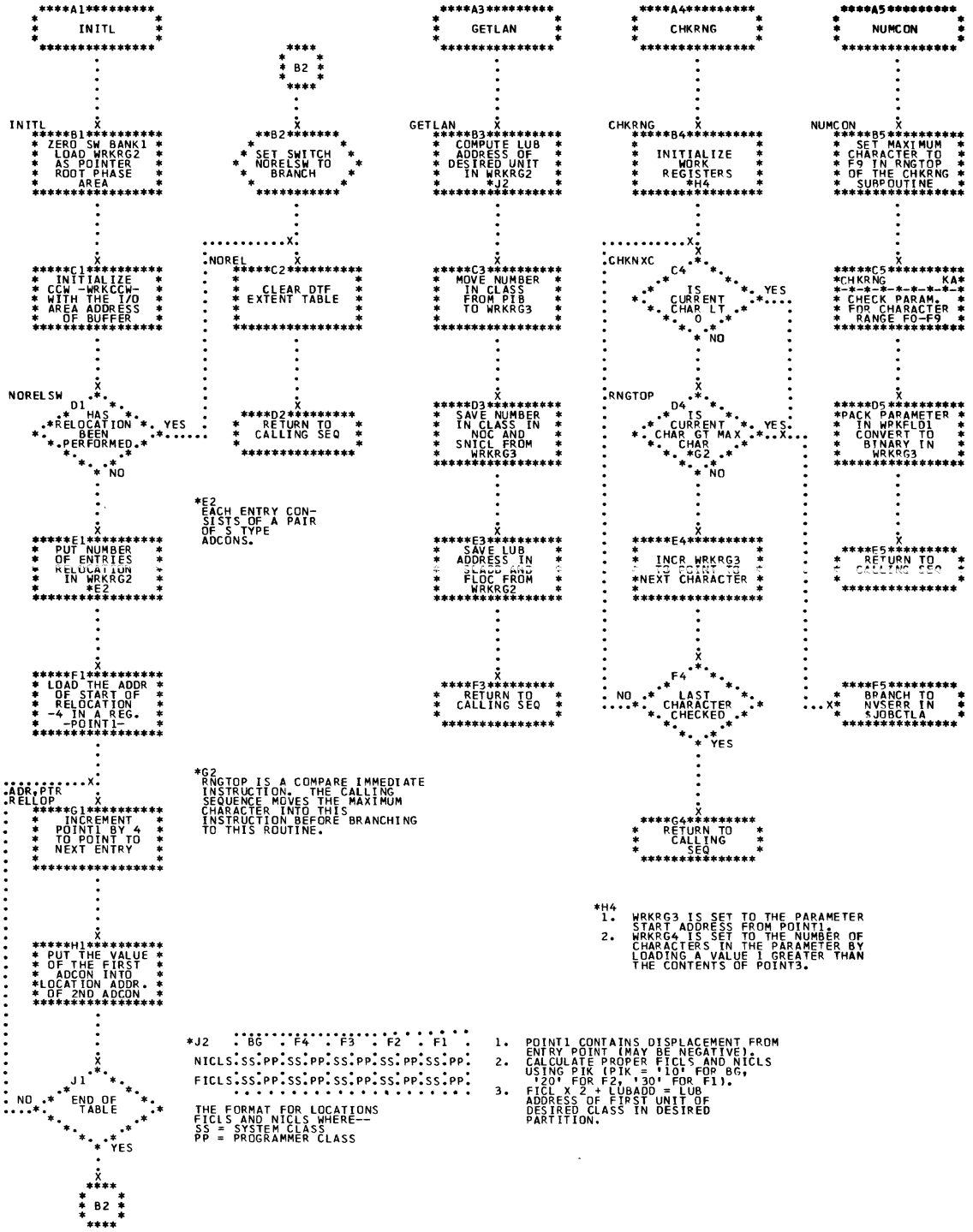


Chart KB. $JOBCTLD - Miscellaneous Subroutines (Part 2 of 9)
Refer to Charts 08 and 09.

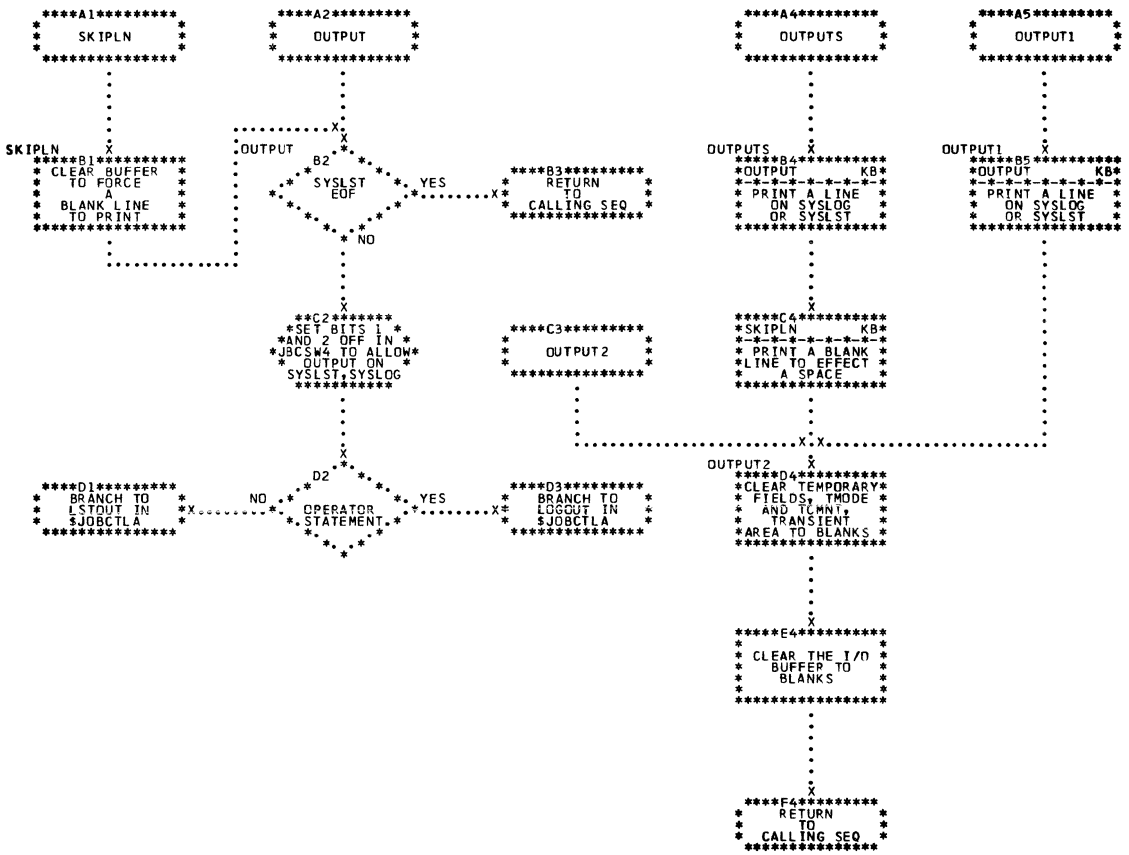


Chart KC. **$JOBCTLD - Miscellaneous Subroutines (Part 3 of 9)**
Refer to Charts C8 and C9.

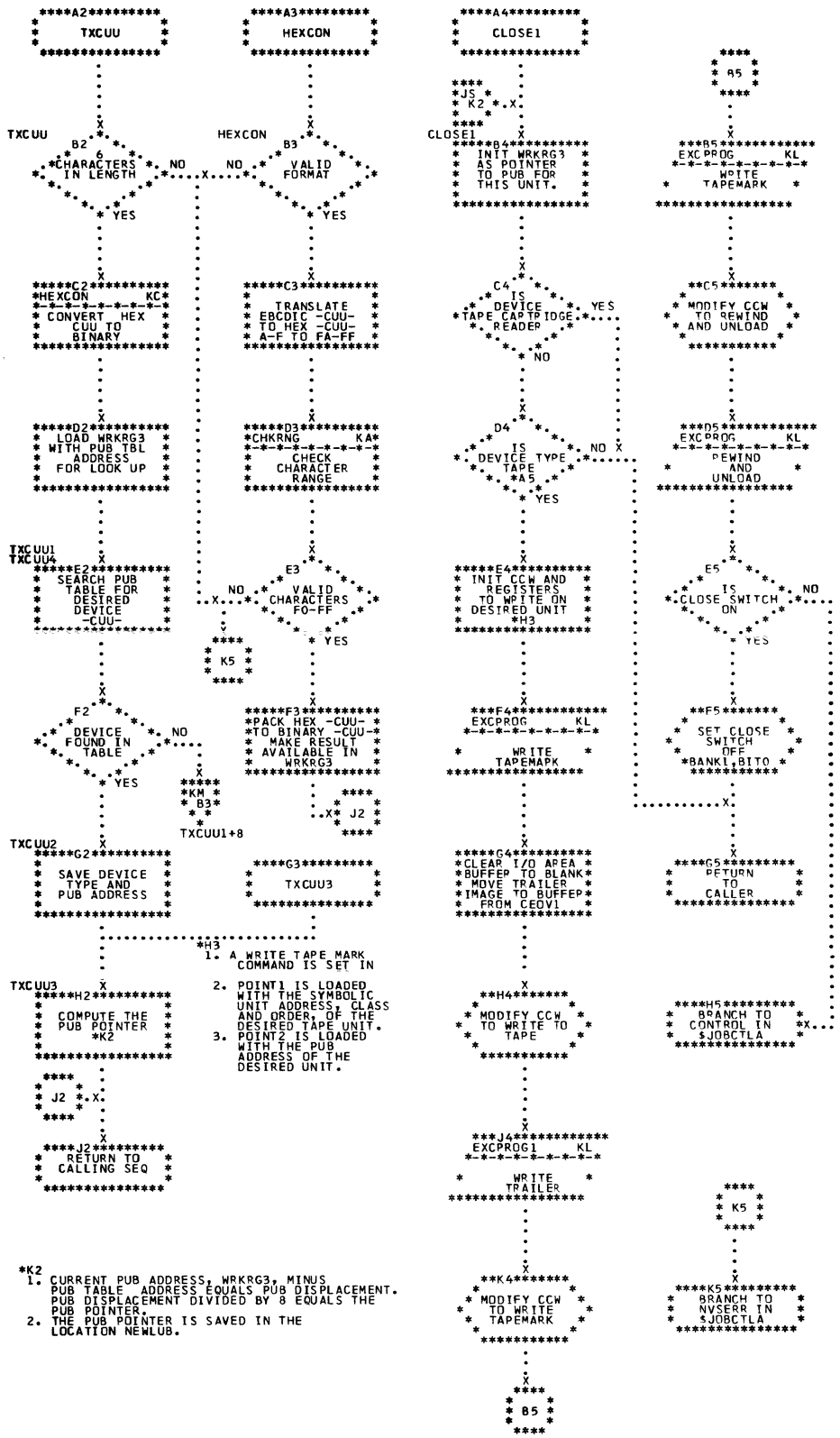


Chart KD. $JOBCTLD - Miscellaneous Subroutines (Part 4 of 9)
Refer to Charts C8 and C9.

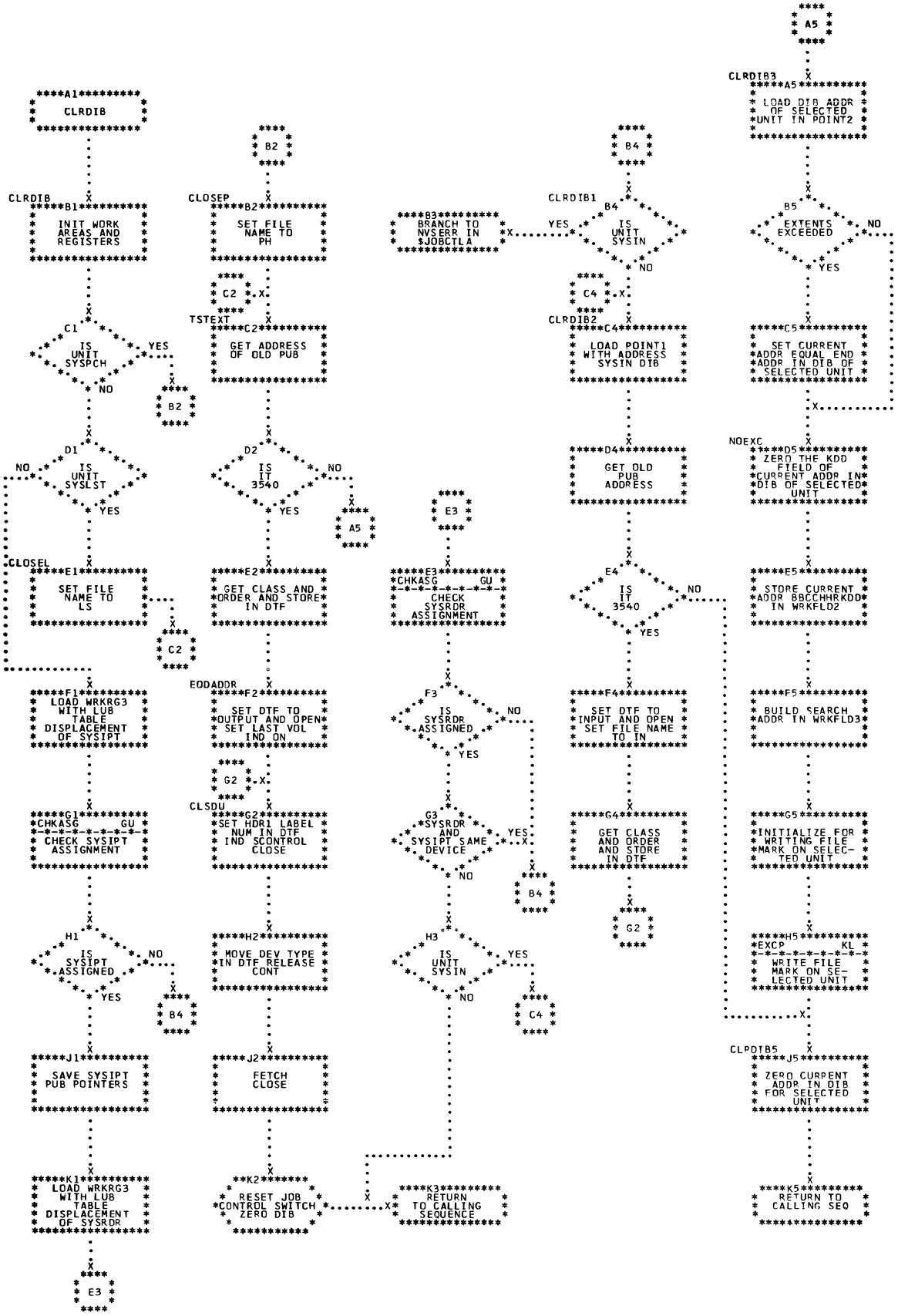


Chart KE. **$JOBCTLD - Miscellaneous Subroutines (Part 5 of 9)**
Refer to Charts 08 and 09.

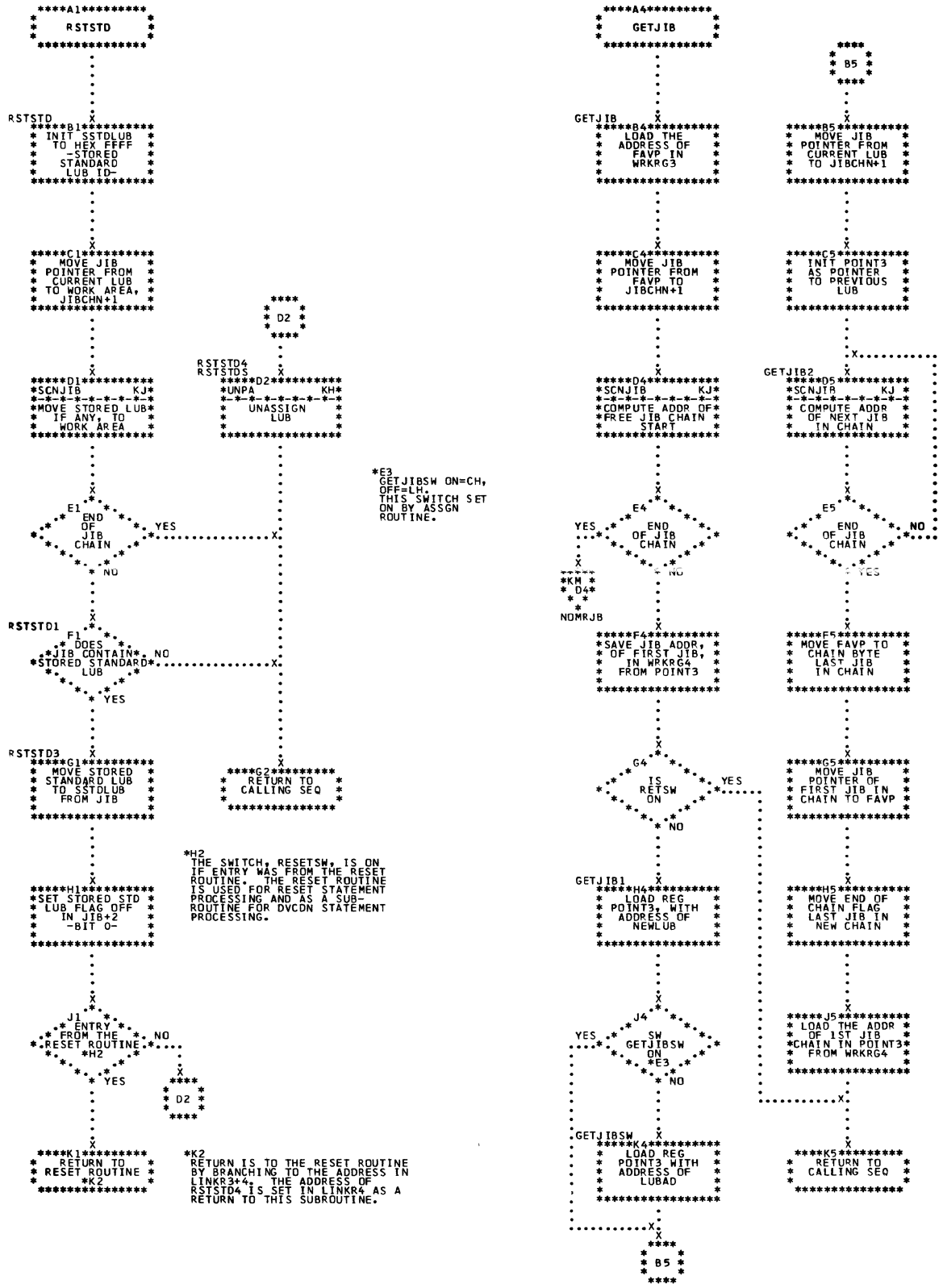


Chart KF. $JOBCTLD - Miscellaneous Subroutines (Part 6 of 9)
Refer to Charts C8 and C9.

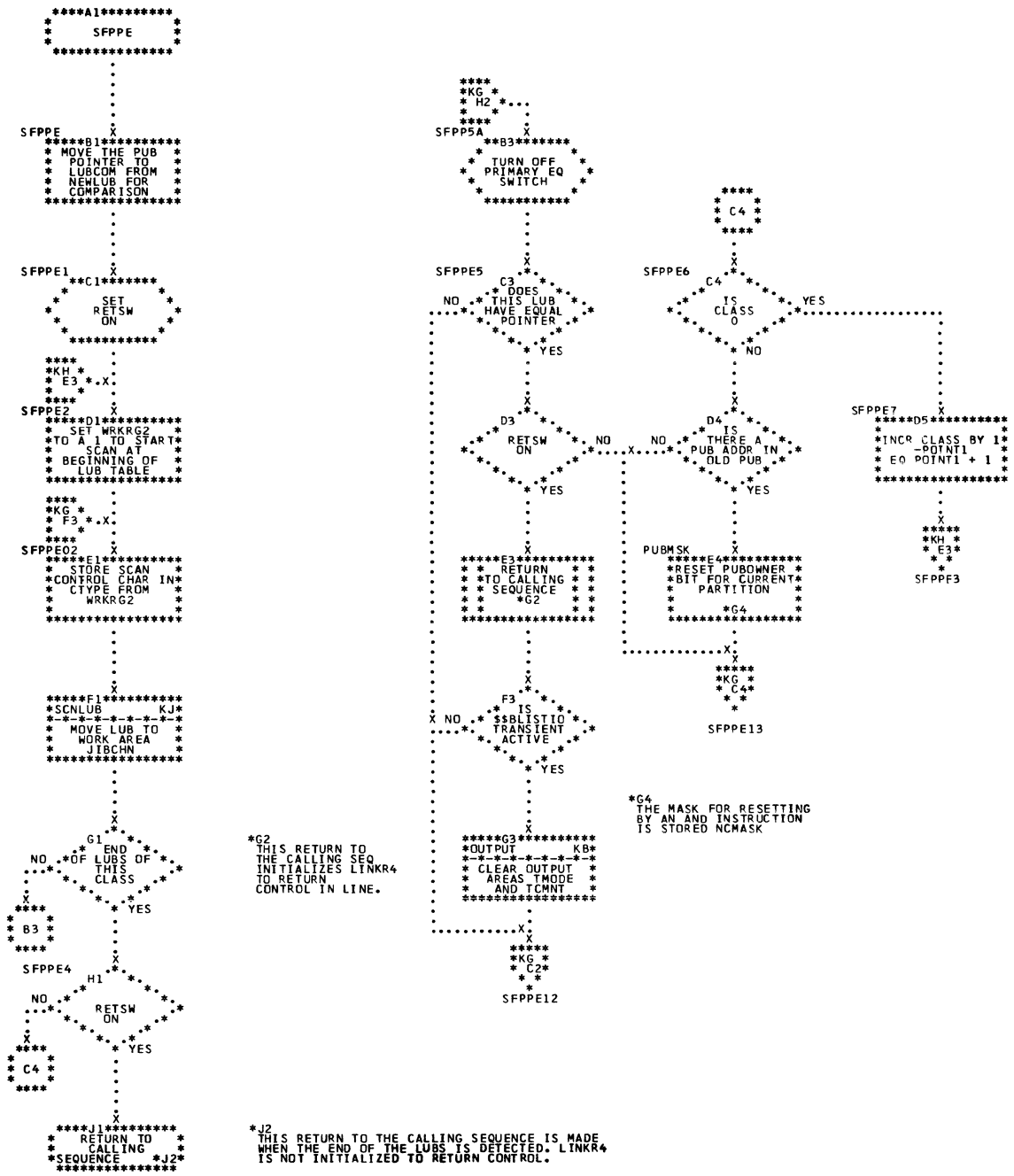


Chart KG. $JOBCTLD - Miscellanecus Subroutines (Part 7 cf 9)
Refer to Charts 08 and C9.

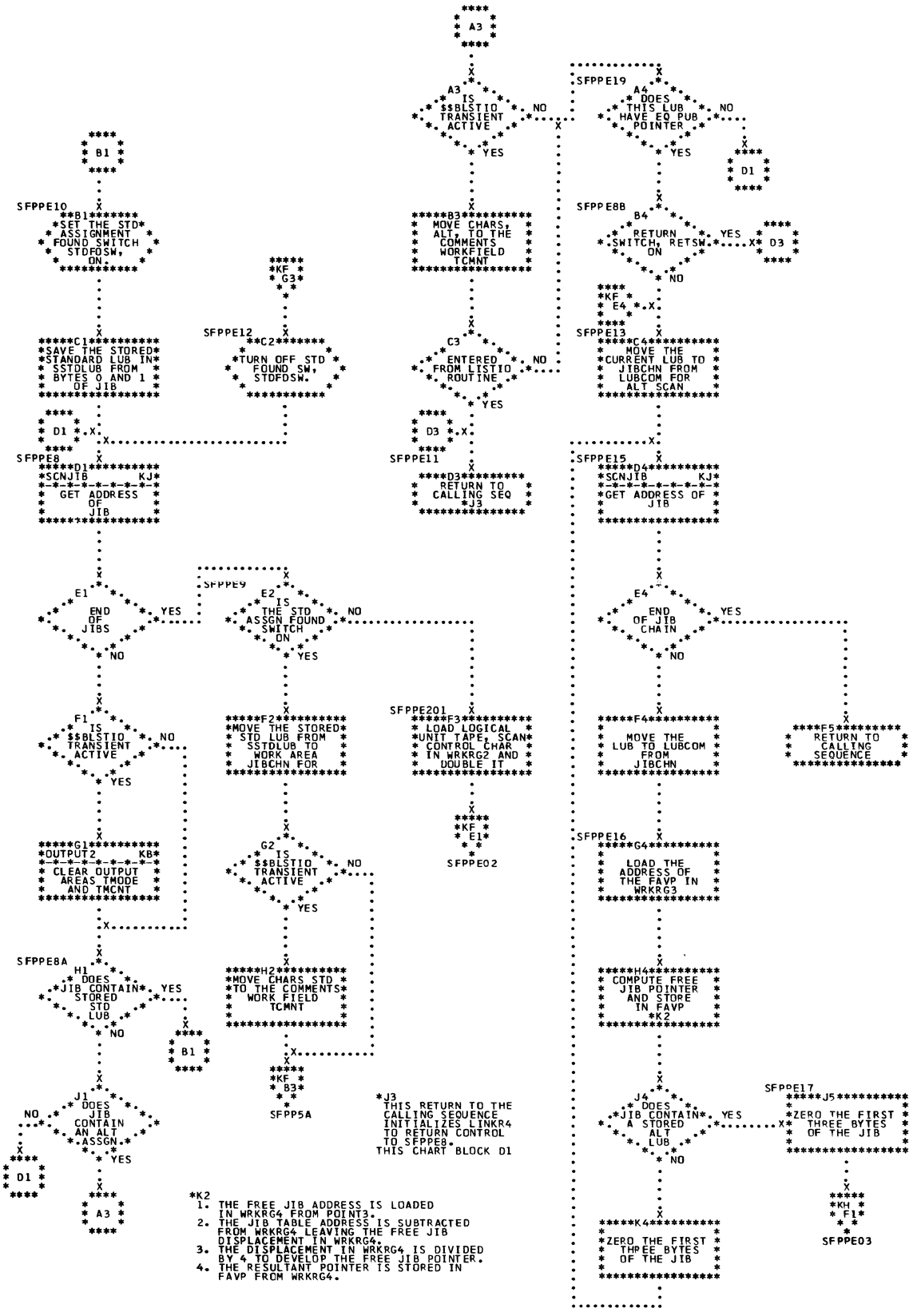
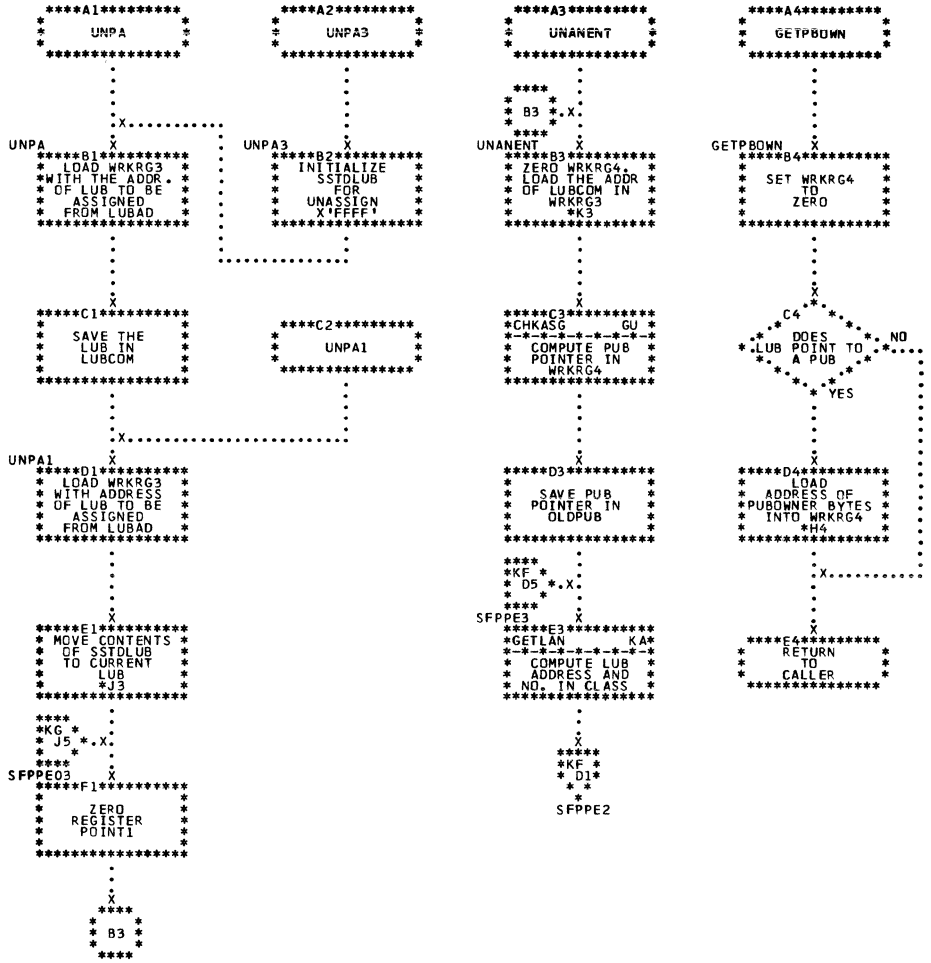


Chart KH. $JOBCTLD - Miscellaneous Subroutines (Part 8 of 9)
Refer to Charts 08 and 09.



*H4
WHEN GETPBOWN IS CALLED, WRKRG3 POINTS TO A LUB. IF THIS LUB HAS A PUB POINTER, THEN WRKRG4 IS LOADED WITH THE ADDRESS OF THE 1ST OWNER BYTE FRO THIS PUB (20 OWNER BYTES/PUB)

*J3
1. IF ENTERED AT UNPA1 THE LUB IS TO BE UNASSIGNED AND SSTDLUB CONTAINS HEX FFFF.
2. IF ENTERED AT UNPA THE LUB IS TO BE ASSIGNED AND SSTDLUB CONTAINS THE STORED STANDARD ASSIGNMENT-IF NONE X'FFFF'.

*K3
WRKRG3 CONTAINS THE ADDRESS OF LUBCOM. LUBCOM CONTAINS THE OLD LUB THAT IS TO BE USED BY THE SUBROUTINE CHKASG3.

Chart KJ. $JOBCTLD - Miscellanecus Subroutines (Part 9 of 9)
Refer to Charts 08 and 09.

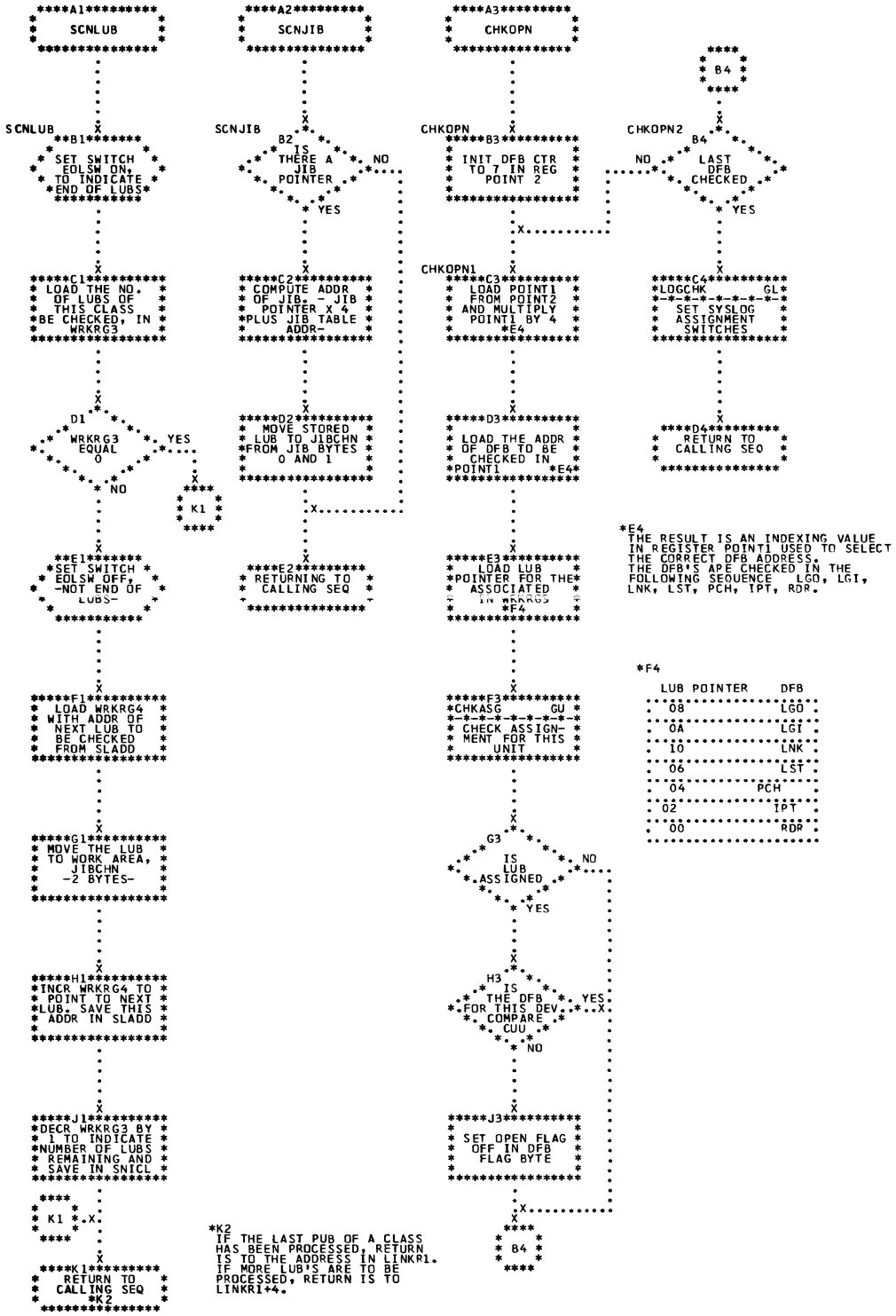


Chart KK. $JOBCTLD - SYSxxx Operand Processor
Refer to Charts C8 and C9.

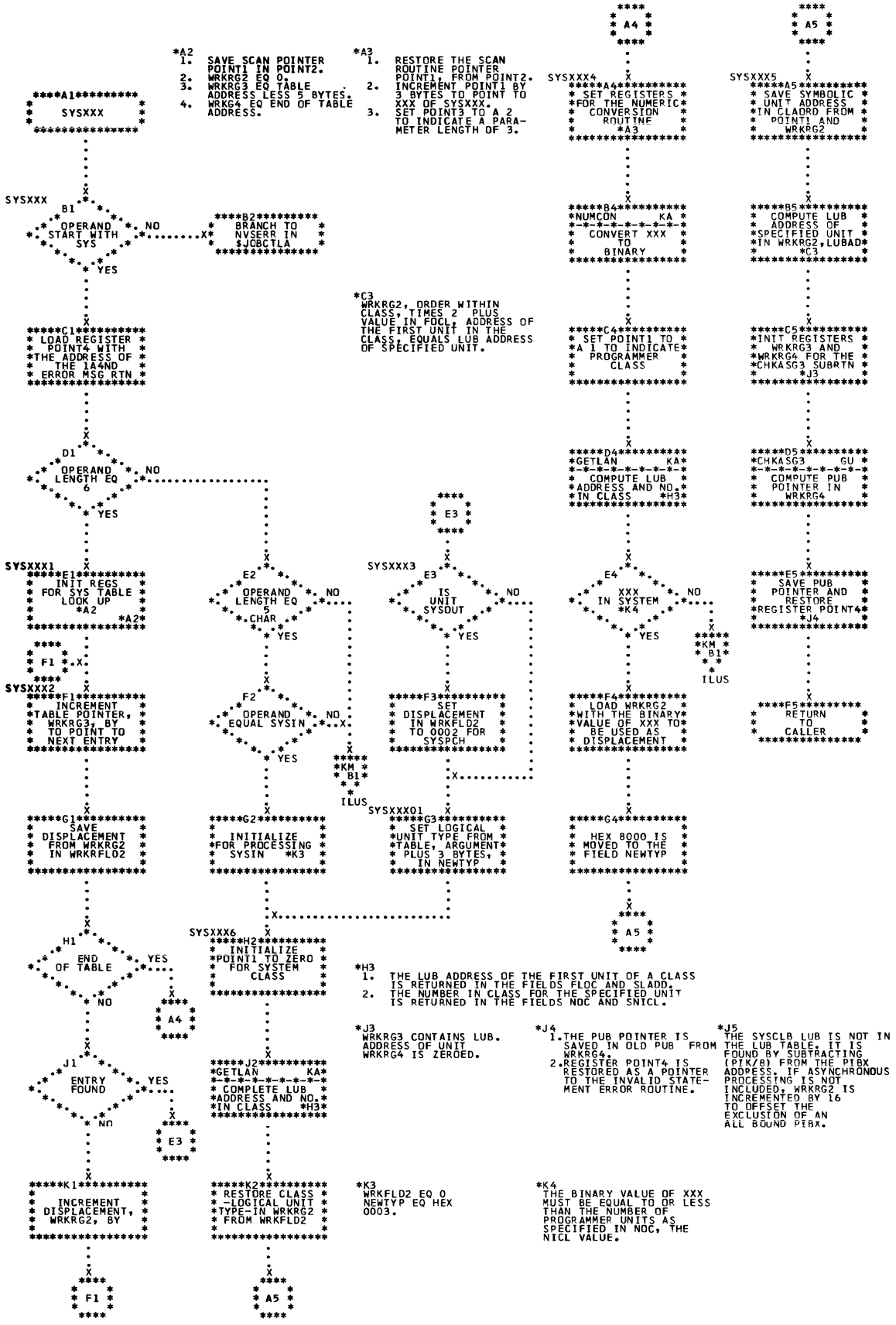


Chart KL. $JOBCTLD - EXCP Subrcutines
Refer to Charts 08 and C9.

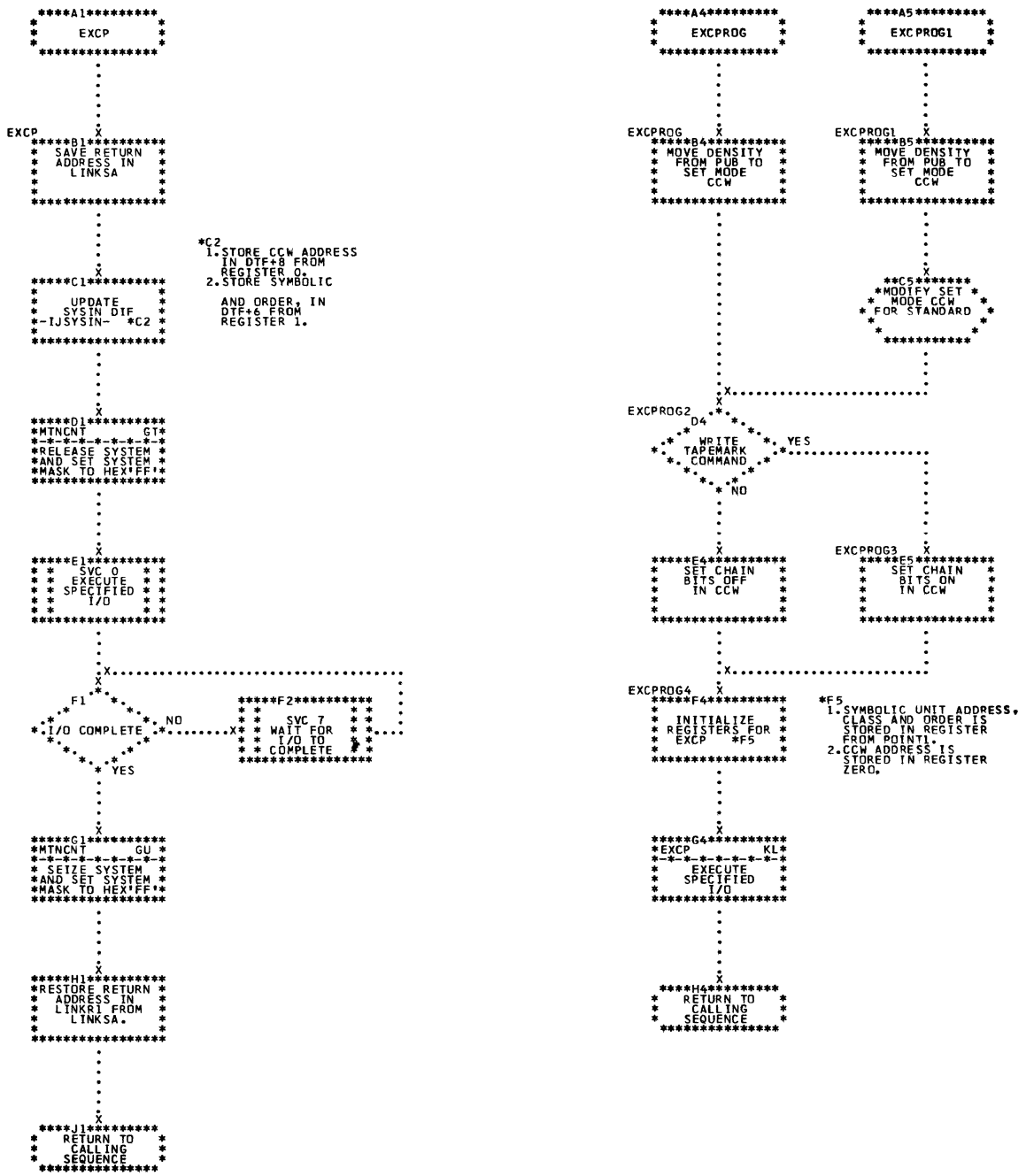


Chart KM. $JOBCTLD - Error Subroutines
Refer to Charts 08 and 09.

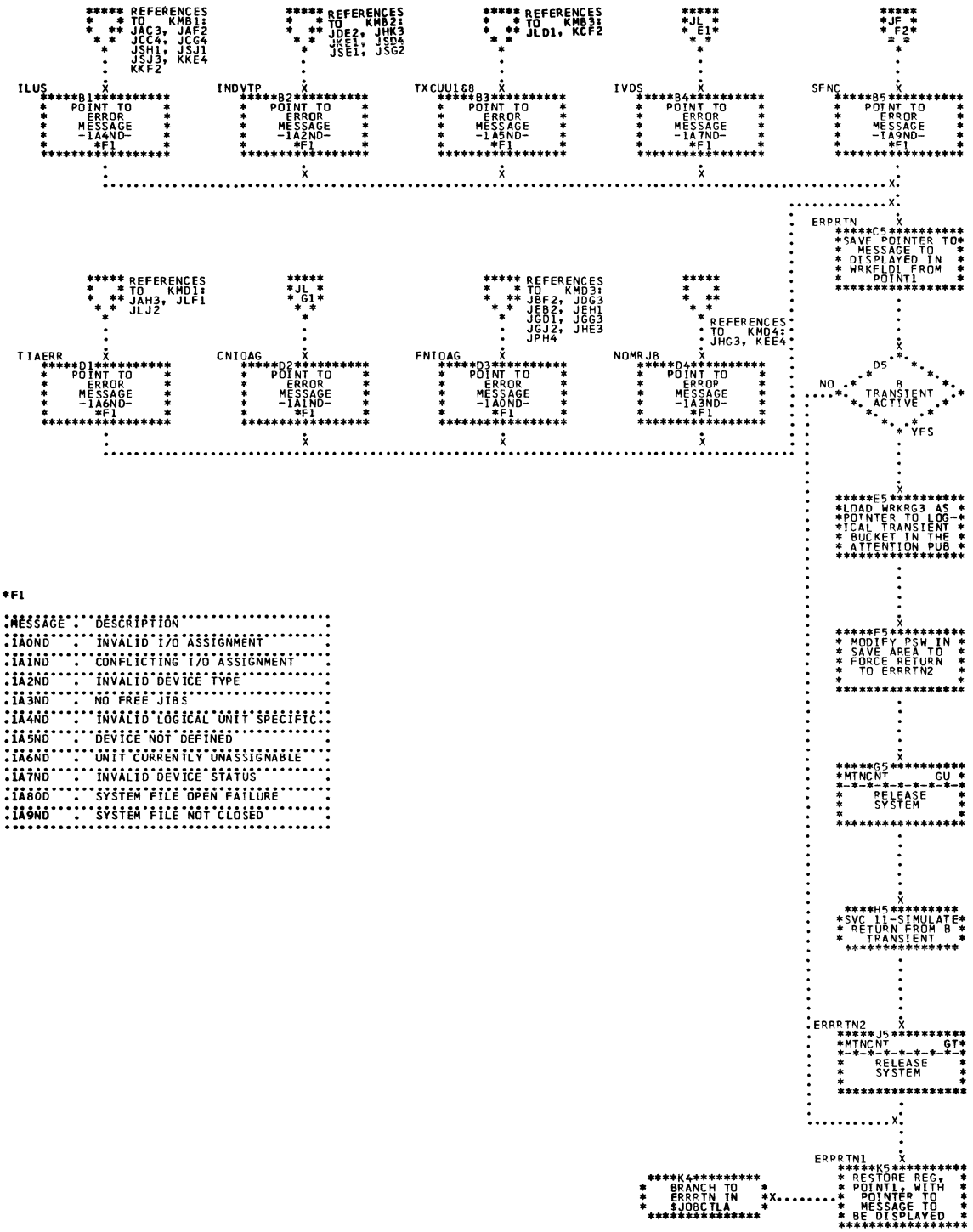


Chart KN. $JOBCTLD - Test Procedure and GETPUB Subroutines
Refer to Charts 08 and 09.

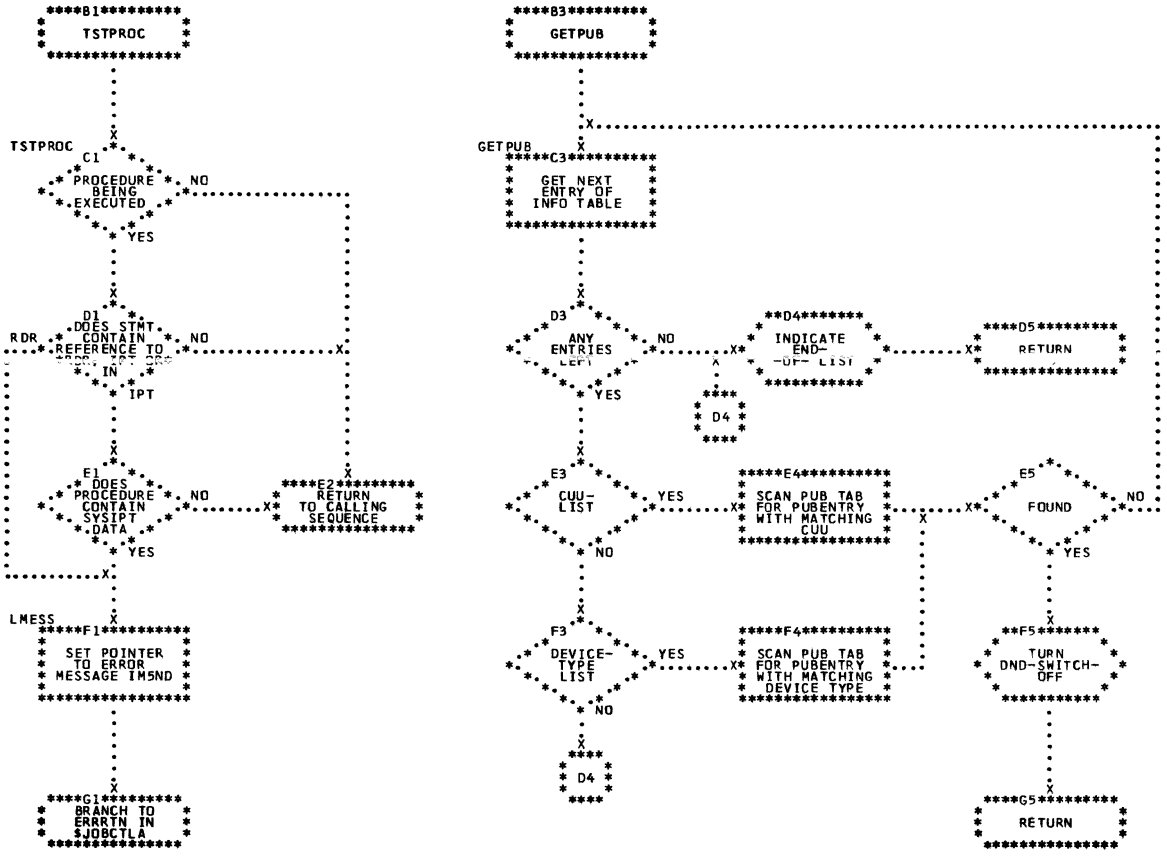


Chart LA. $JOBCTLE - EXEC Statement Processor (Part 1 of 8)
Refer to Chart 1C.

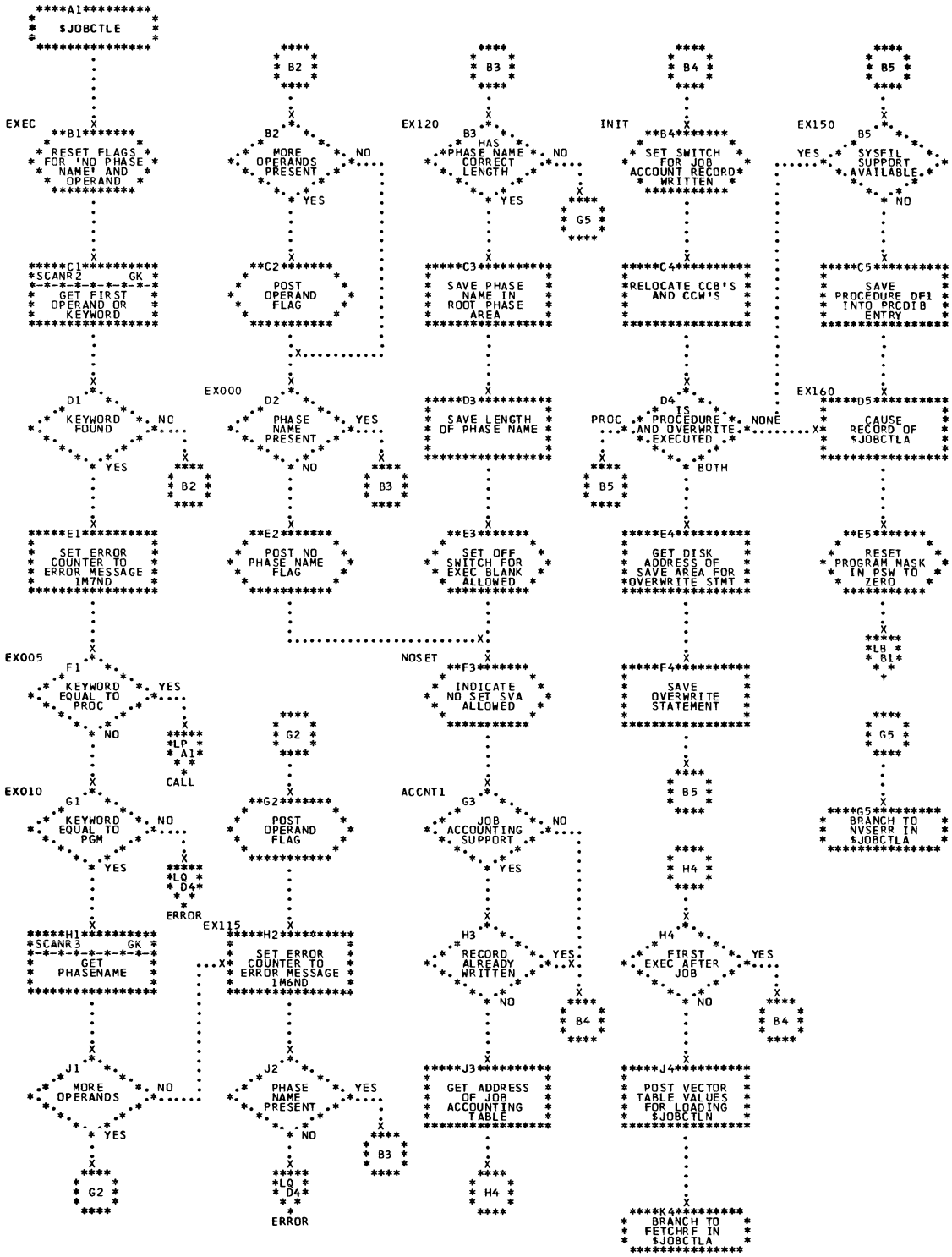


Chart LB. $JOBCTLE - EXEC Statement Processor (Part 2 of 8)
Refer to Chart 10.

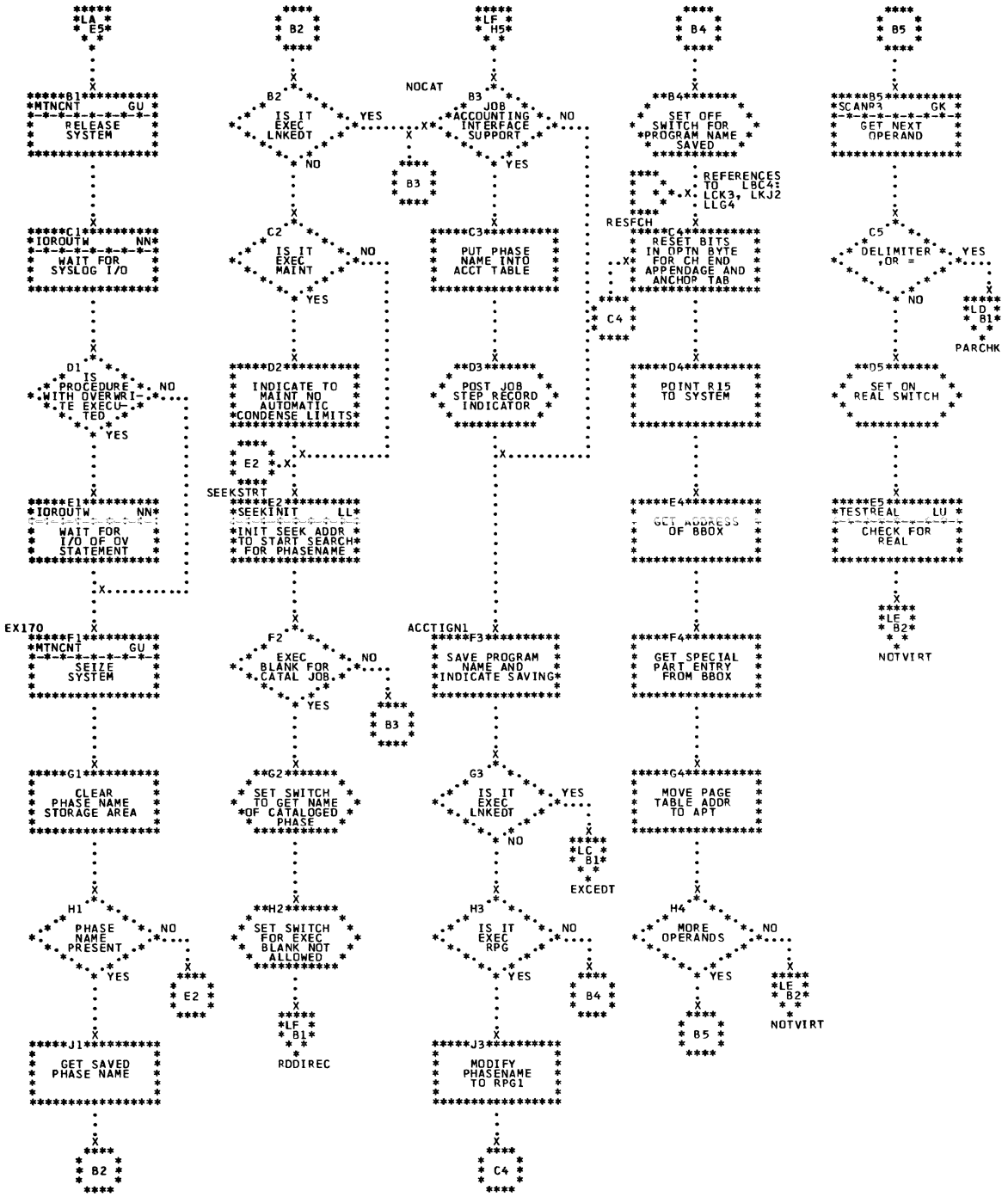


Chart LC. $JOECTLE - EXEC Statement Processor (Part 3 of 8)
Refer to Chart 10.

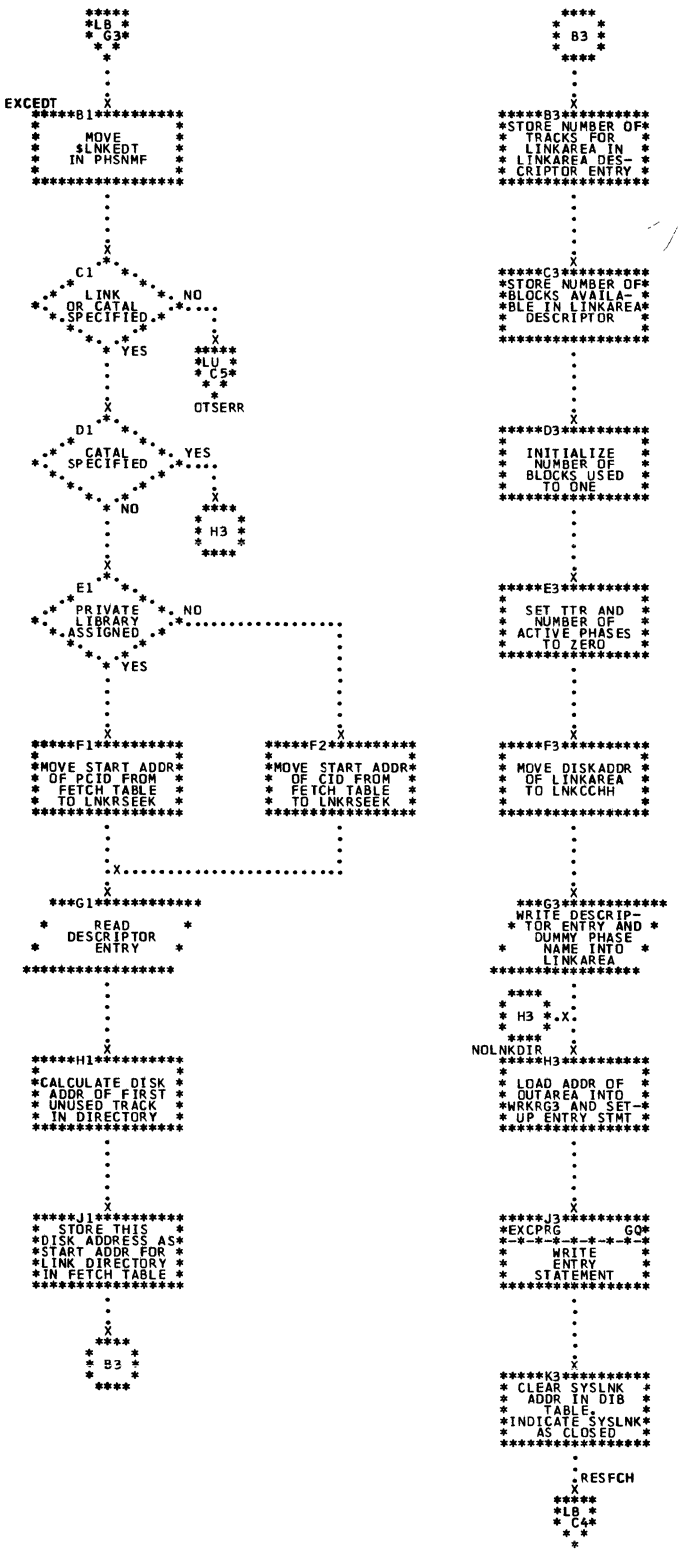


Chart LD. $JOBCTLE - EXEC Statement Processor (Part 4 of 8)
Refer to Chart 10.

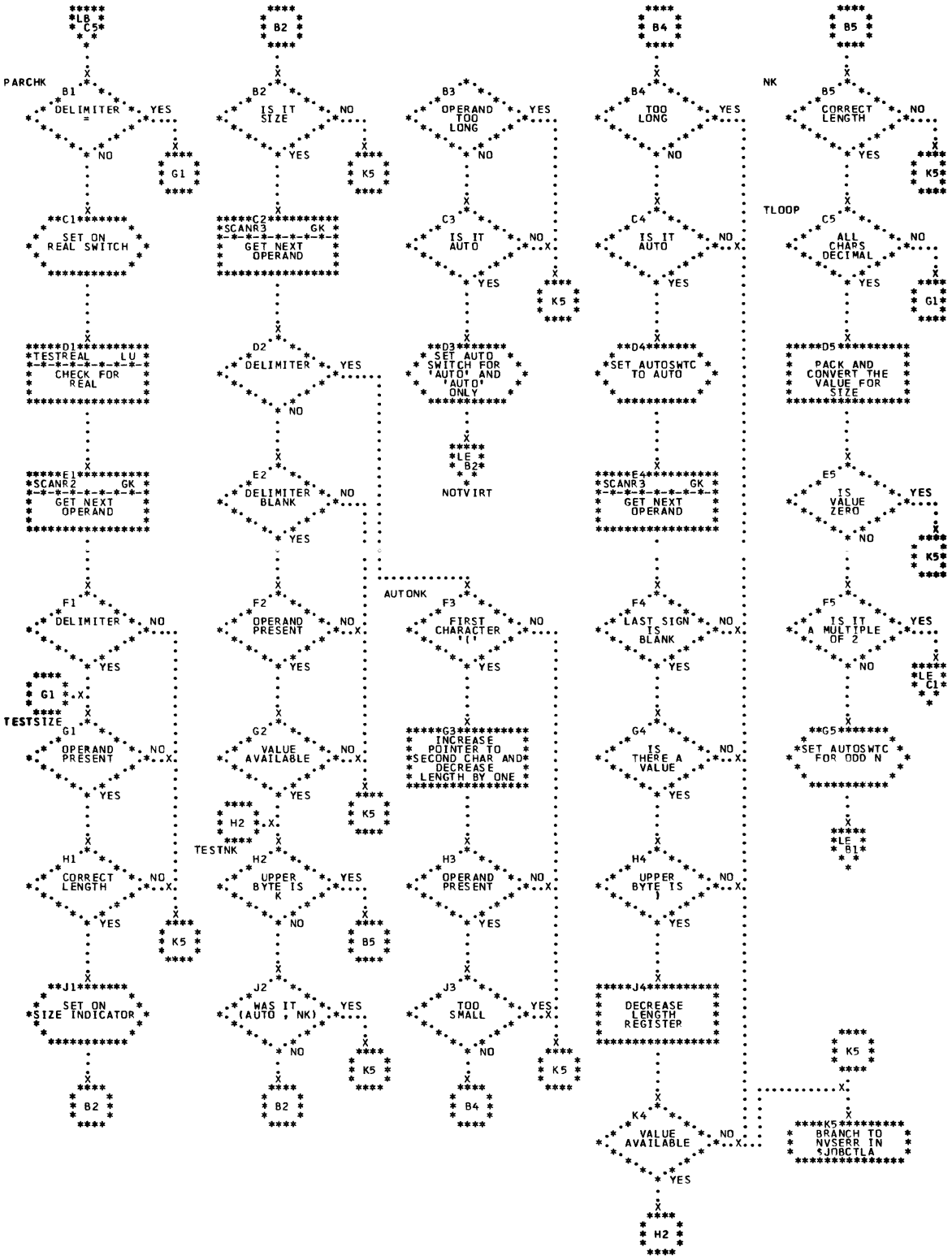


Chart LE. **$JOBCTLE - EXEC Statement Processor (Part 5 of 8)**
Refer to Chart 1C.

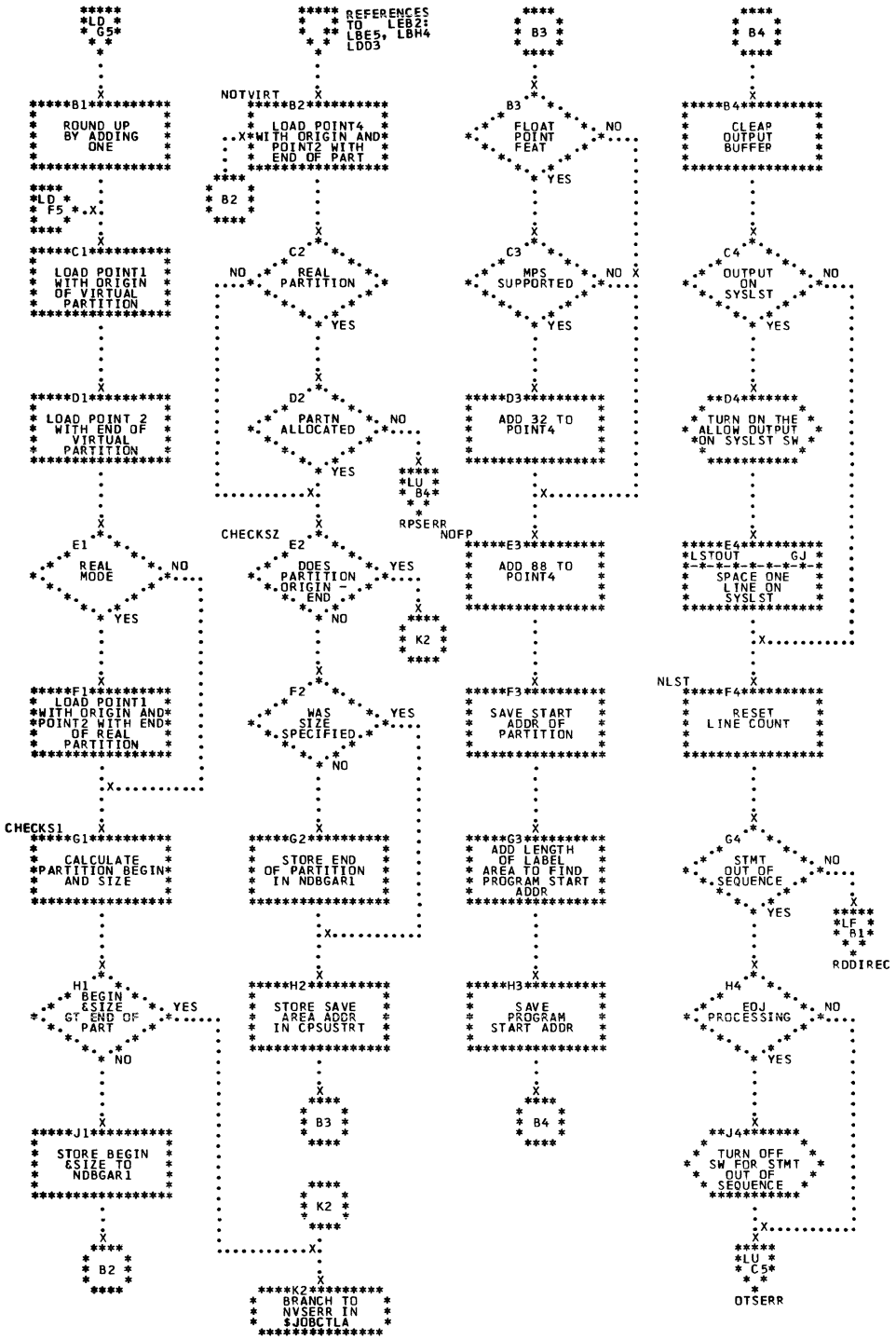


Chart LF. $JOBCTLE - EXEC Statement Processcr (Part 6 cf 8)
Refer to Chart 10.

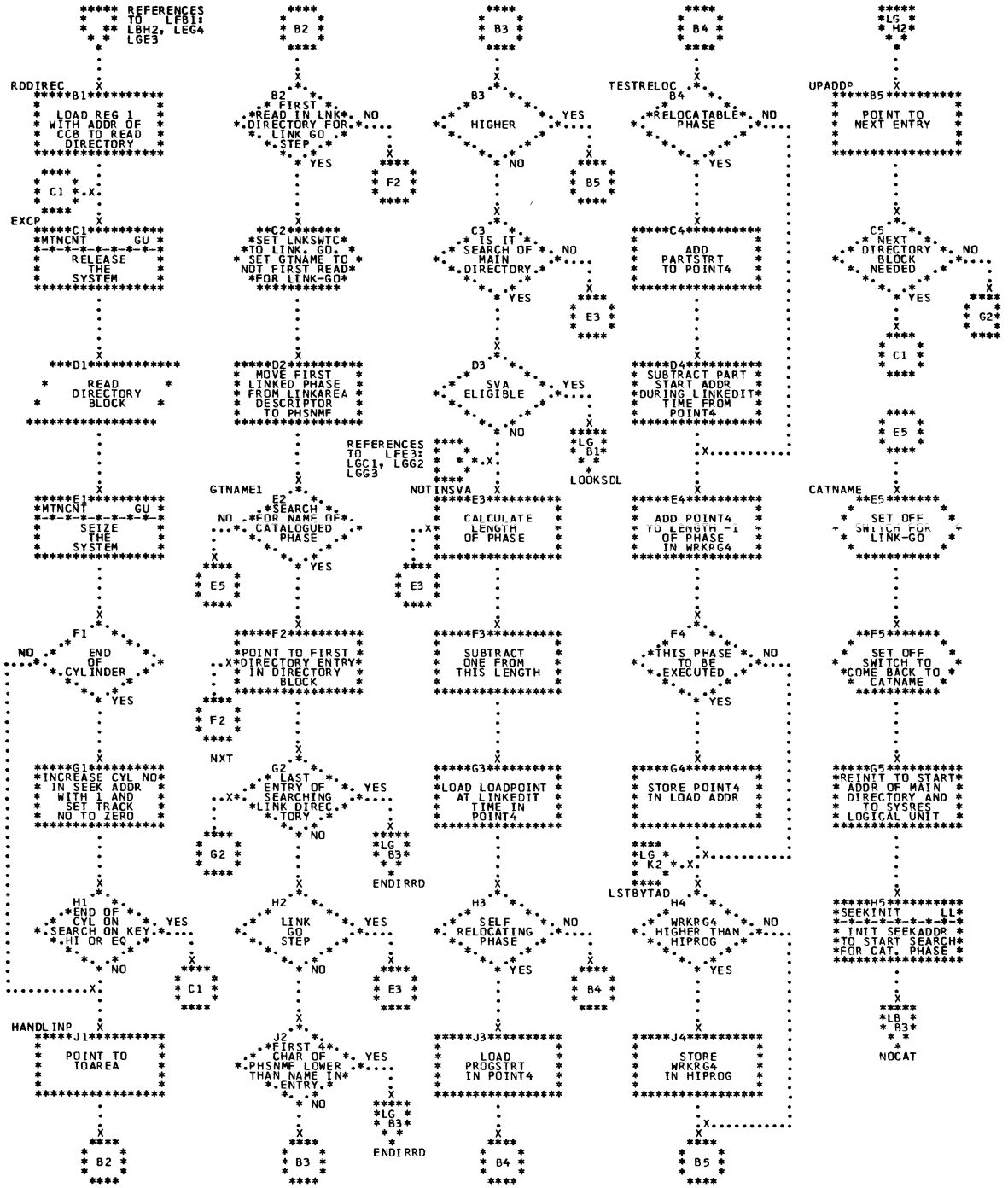


Chart LG. $JOBCTLE - EXEC Statement Processor (Part 7 of 8)
Refer to Chart 10.

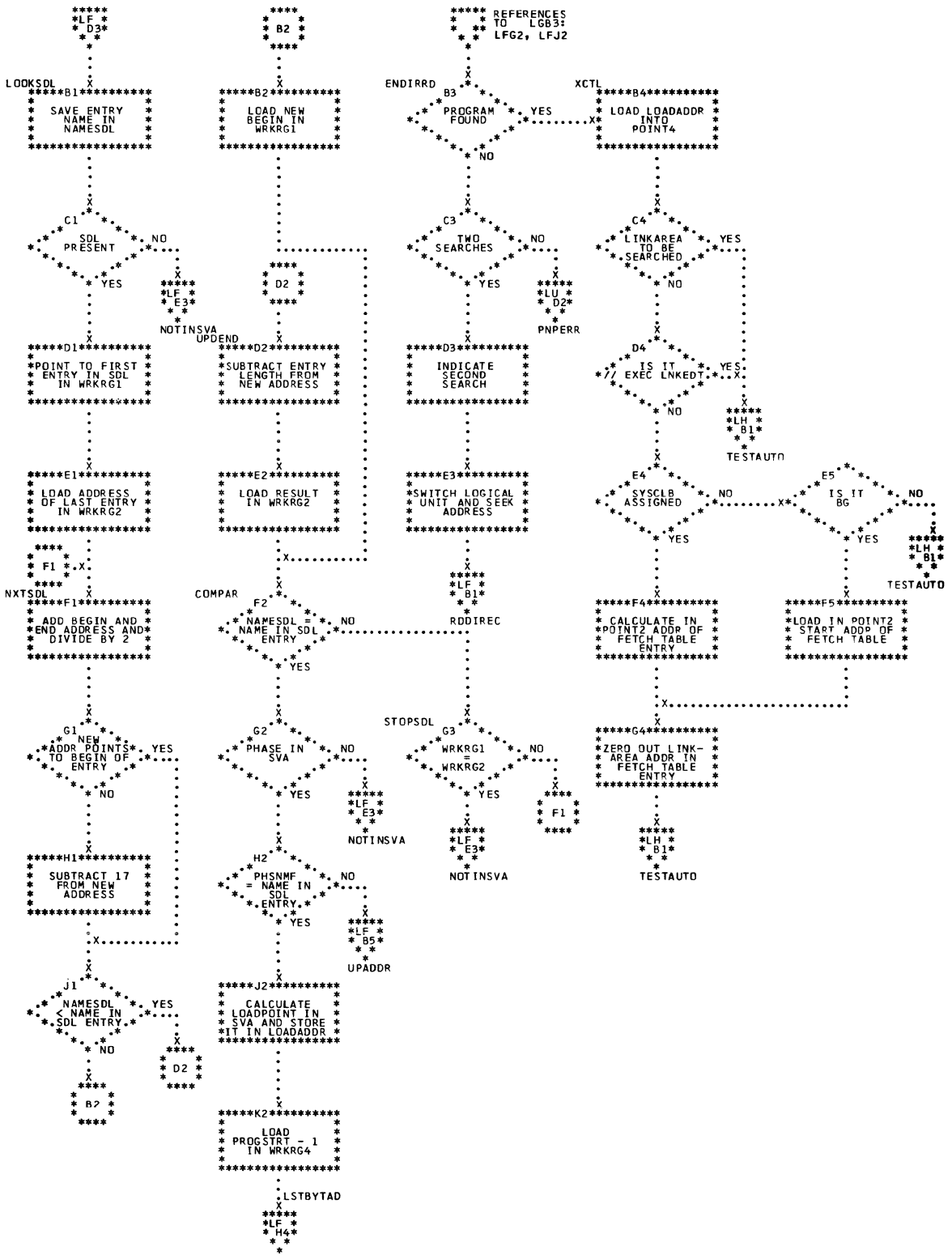


Chart LH. $JOBCTLE - EXEC Statement Processor (Part 8 of 8)
Refer to Chart 10.

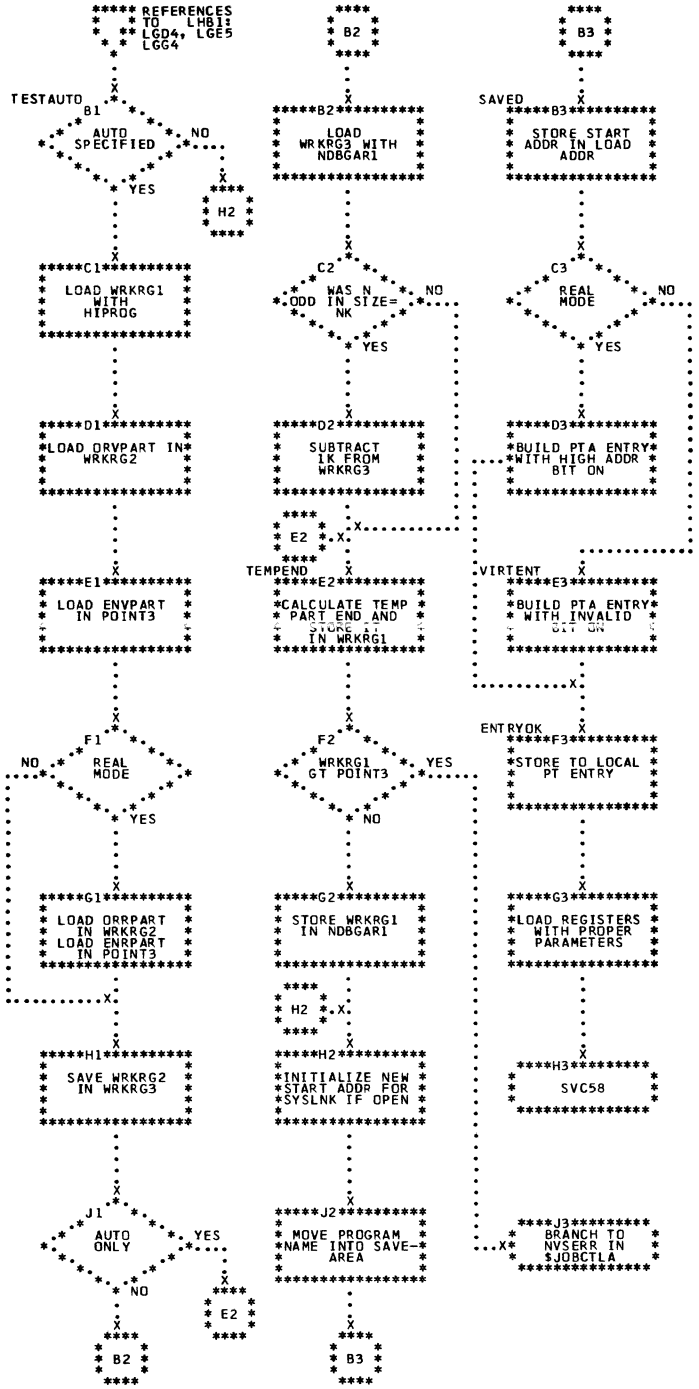


Chart LJ. $JOBCTLE - FCMAINT Routine (Part 1 of 2)
Refer to Chart 10.

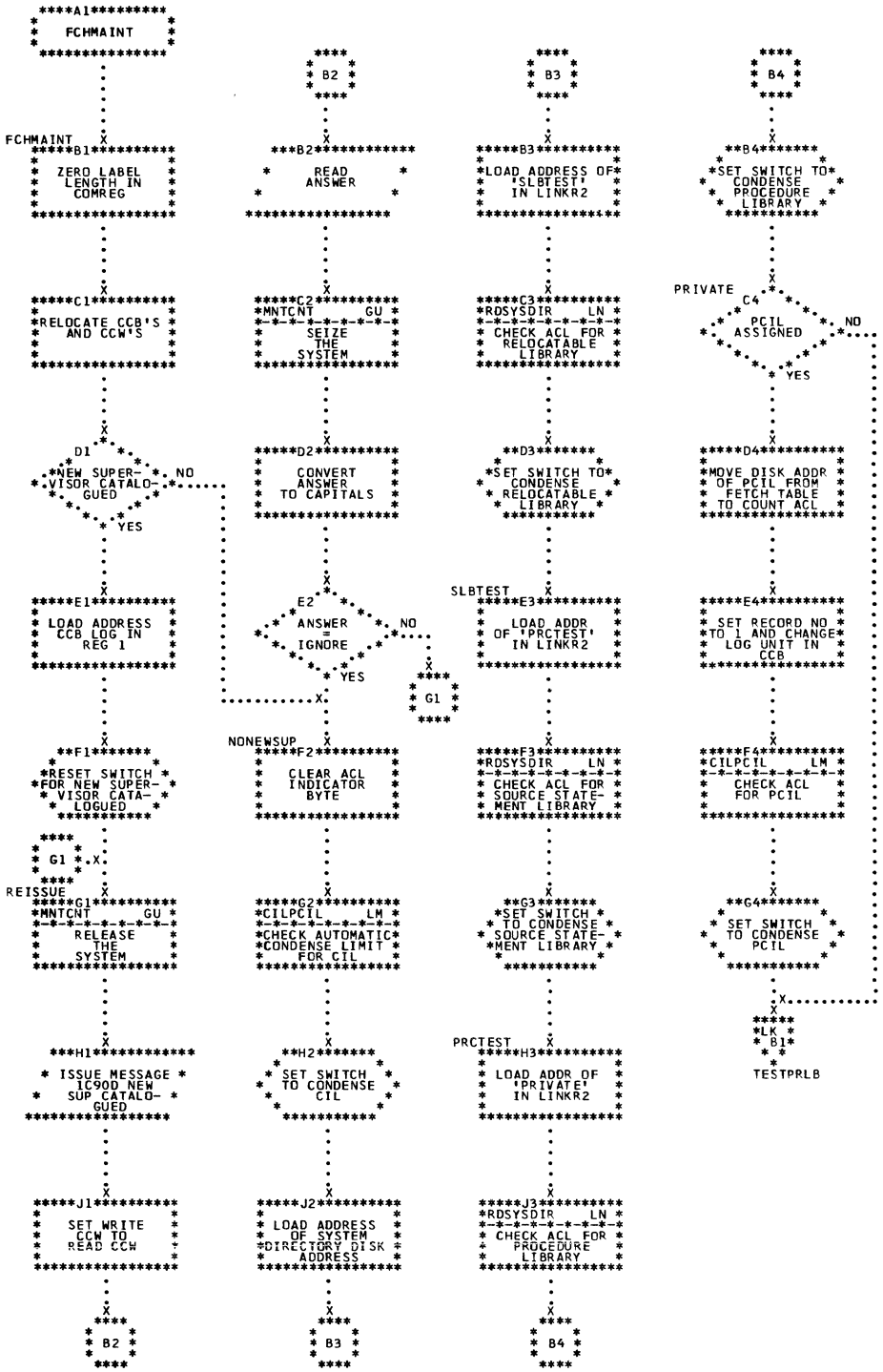


Chart LK. $JOBCTLE - FCMAINT Routine (Part 2 of 2)
Refer to Chart 10.

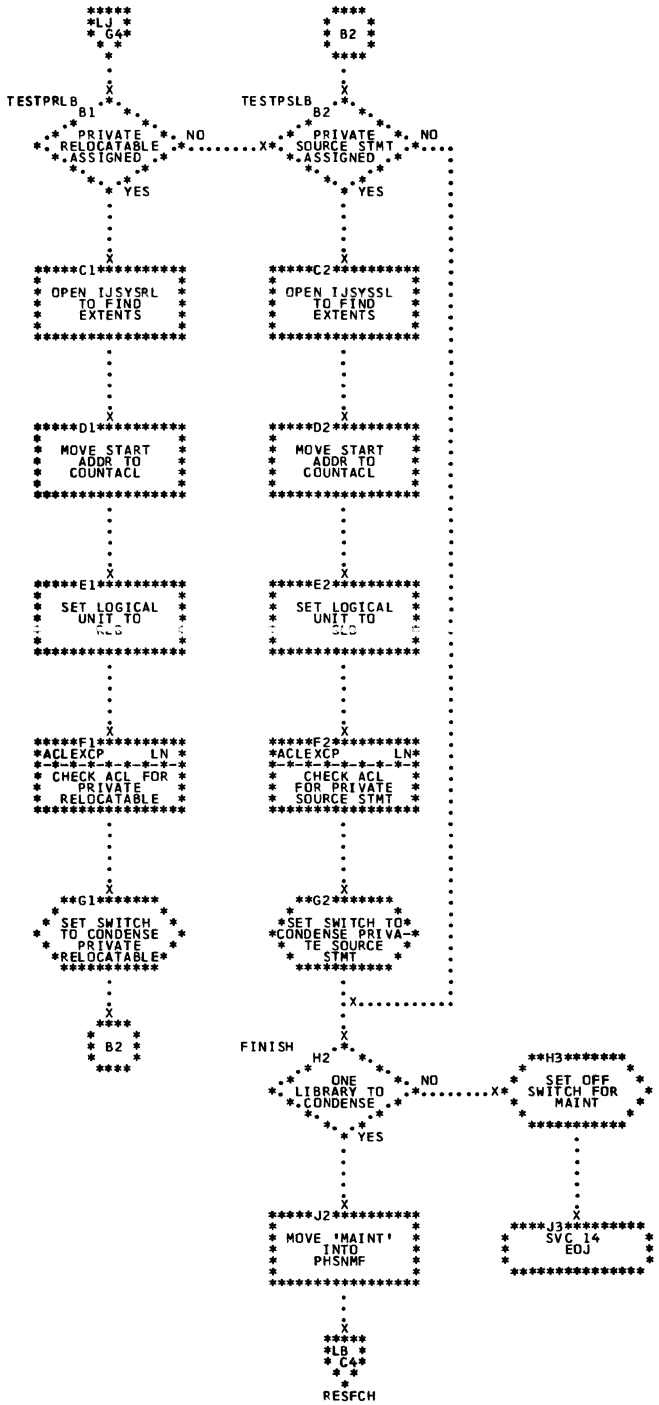


Chart LL. $JOBCTLE - SEEKINIT Subrcutine
Refer to Chart 10.

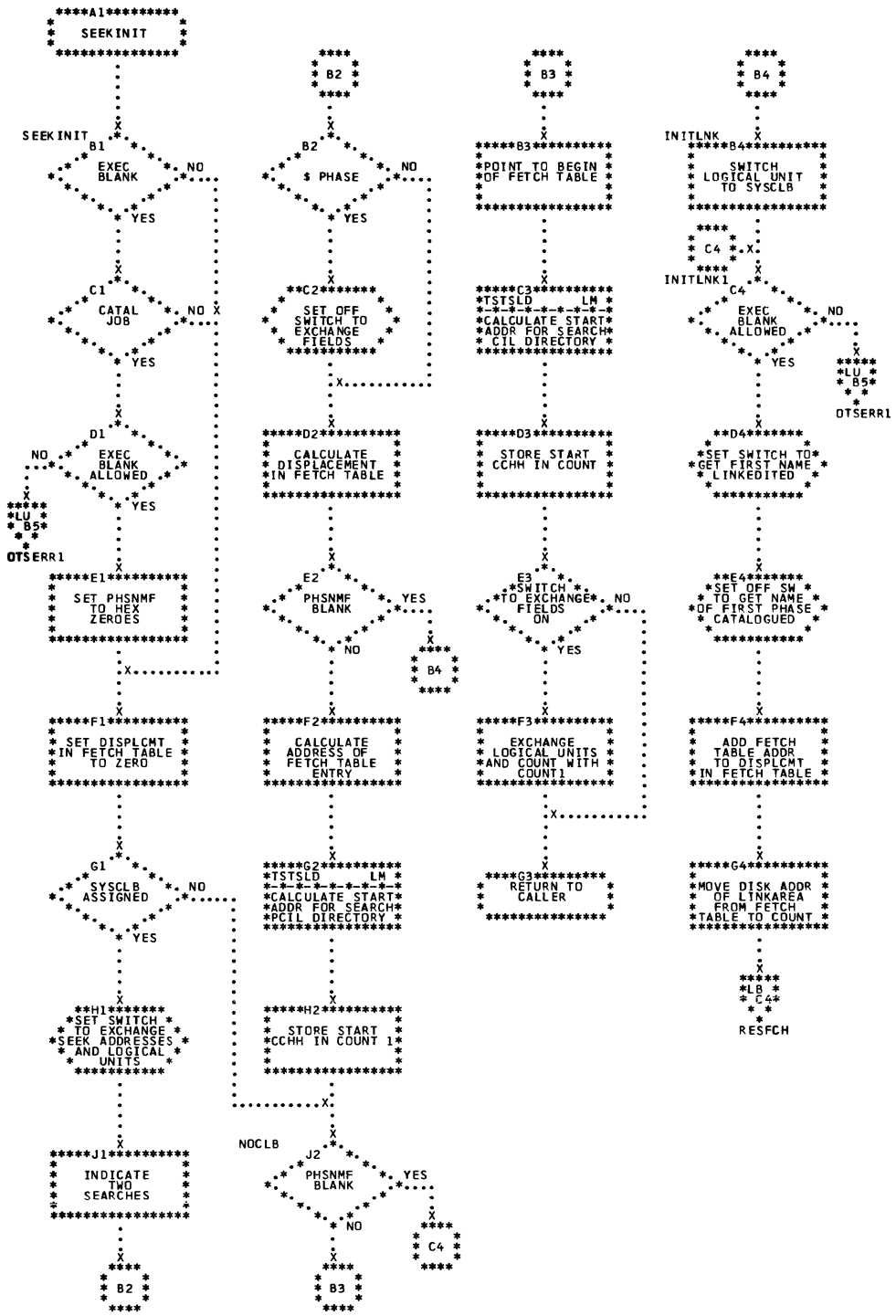


Chart LM. $JOBCTLE - TSTSLD and CILPCIL Subroutines
Refer to Chart 10.

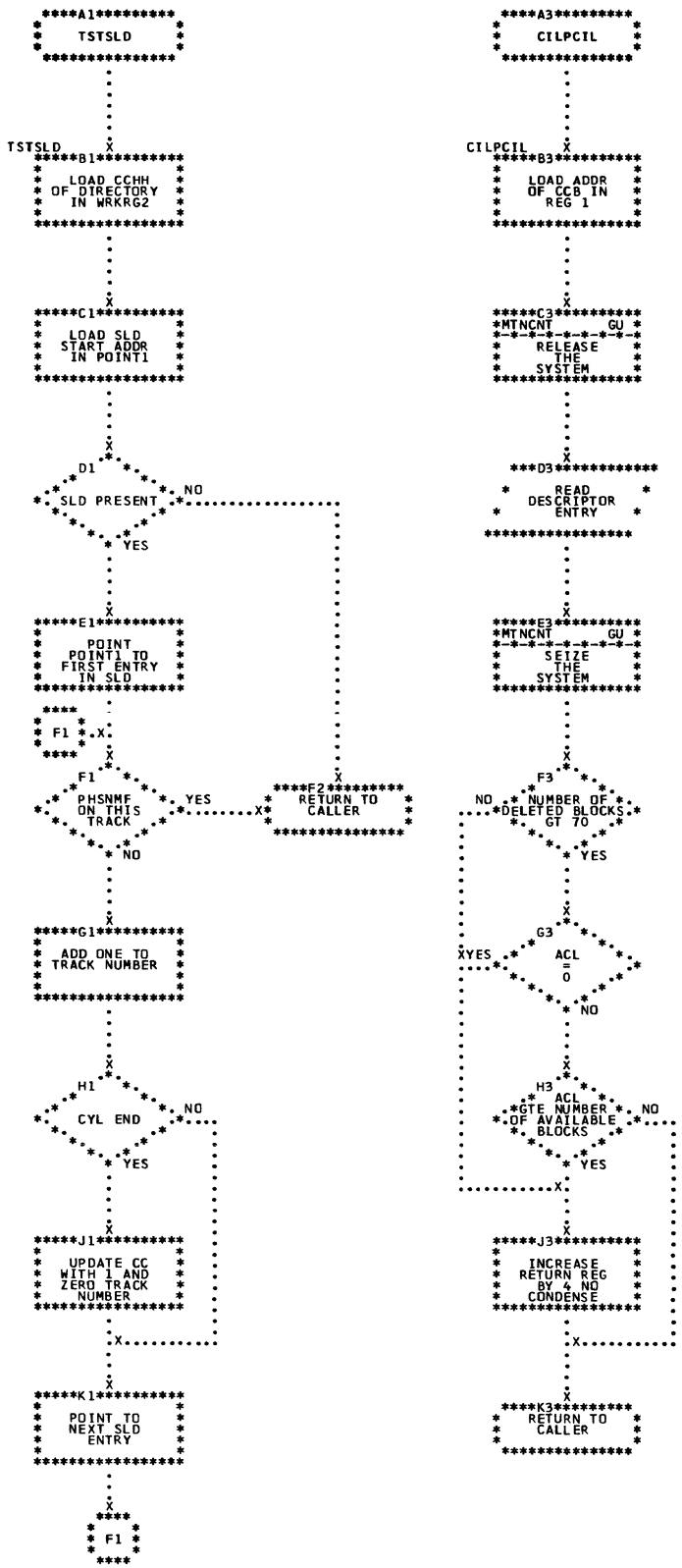


Chart LN. **$JOBCTLE - RDSYSDIR Subroutine**
Refer to Chart 10.

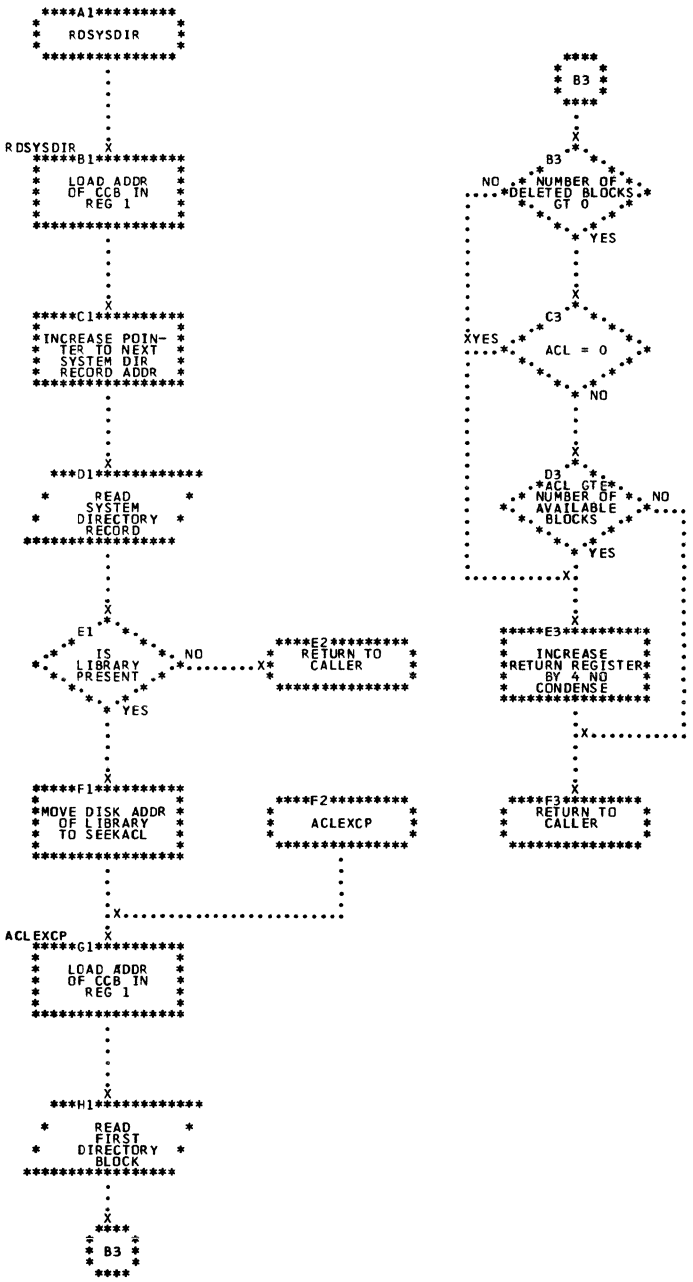


Chart LP. $JOBCTLE - EXEC PROC= Statement Processor
Refer to Chart 10.

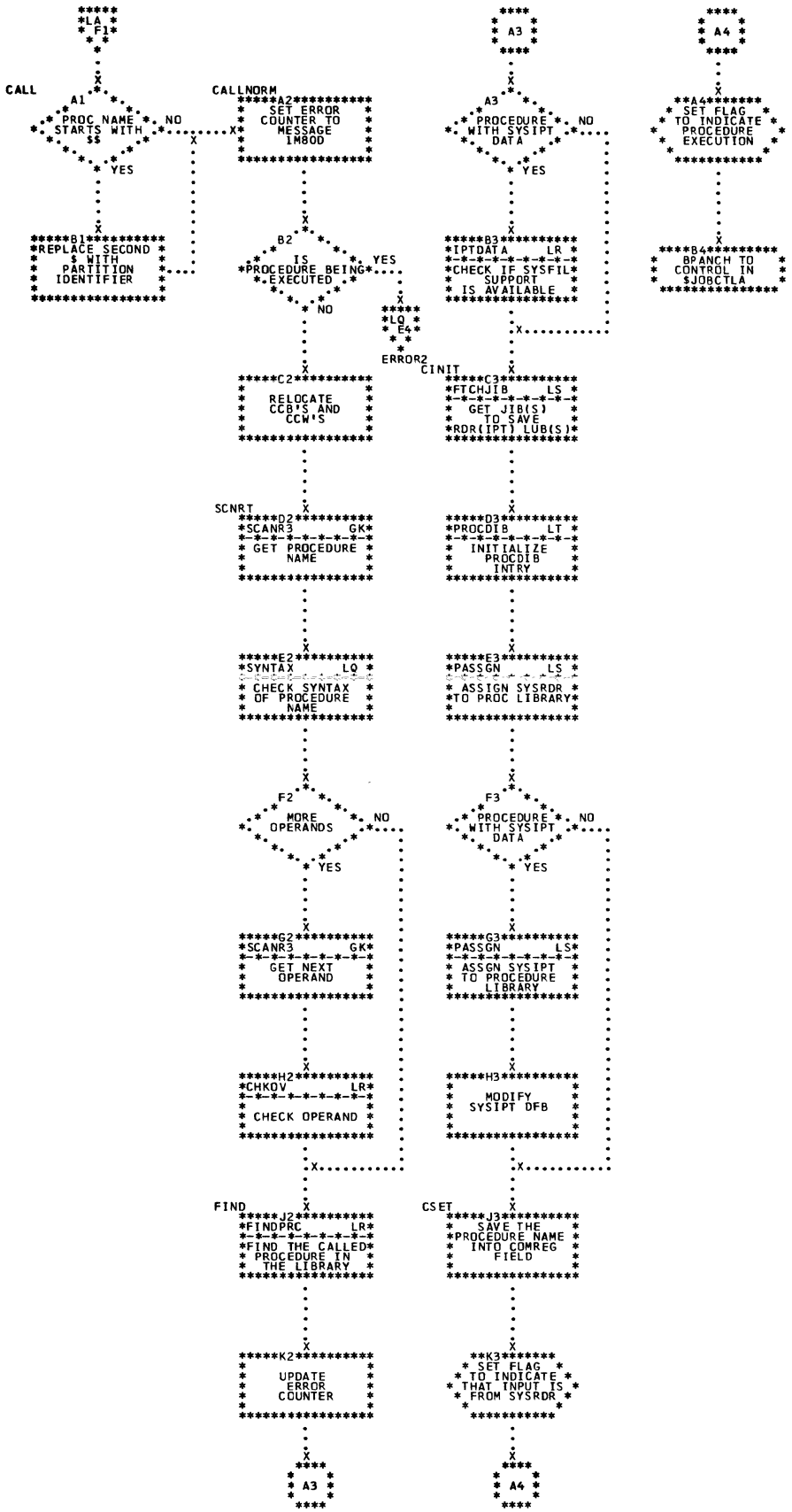


Chart LQ. $JOBCTLE - Syntax Checking Subroutine
Refer to Chart 1C.

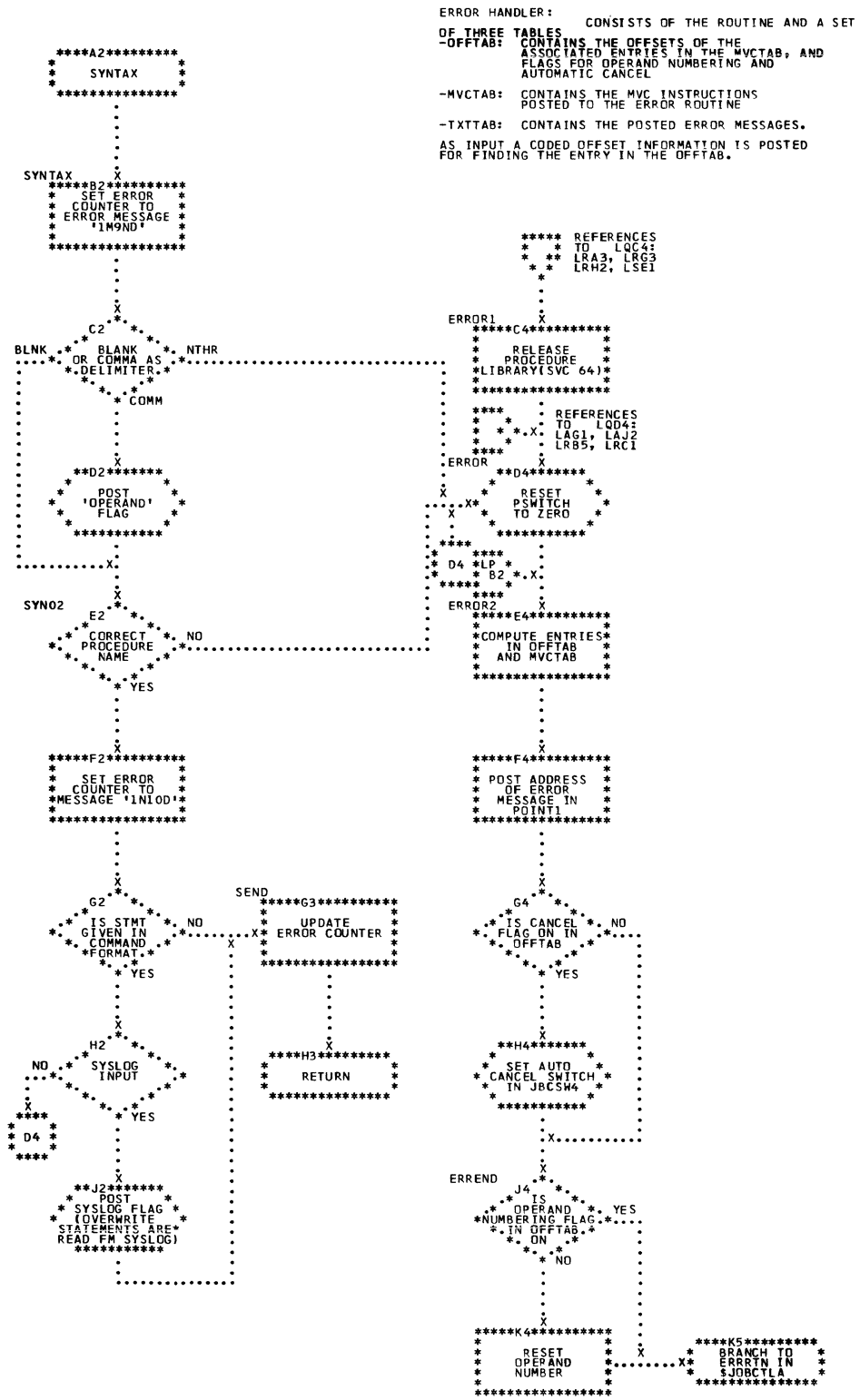


Chart LR. $JOBCTLE - Miscellaneous Subroutines (Part 1 of 3)
Refer to Chart 10.

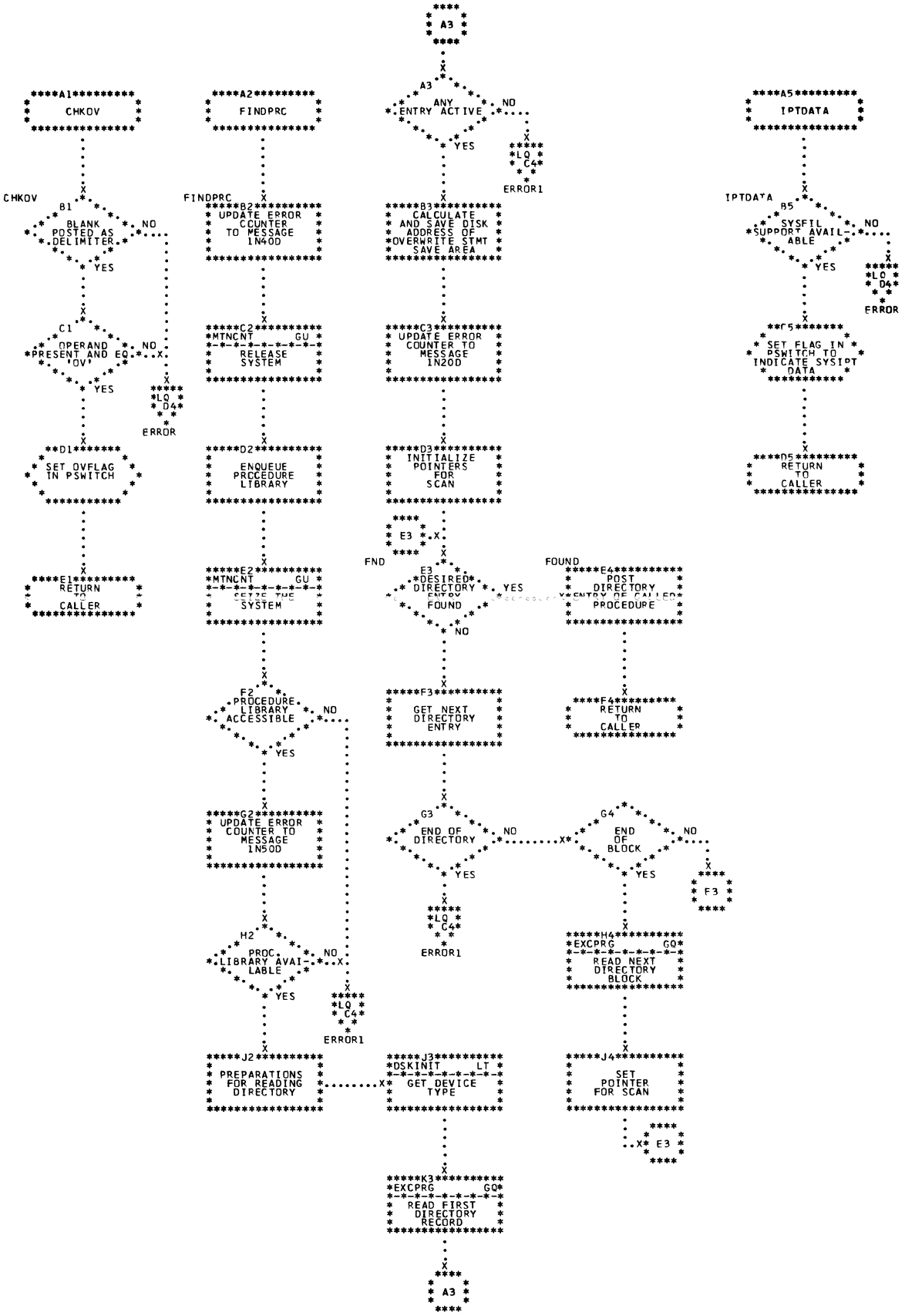


Chart LS. **$JOBCTLE - Miscellaneous Subroutines (Part 2 of 3)**
Refer to Chart 10.

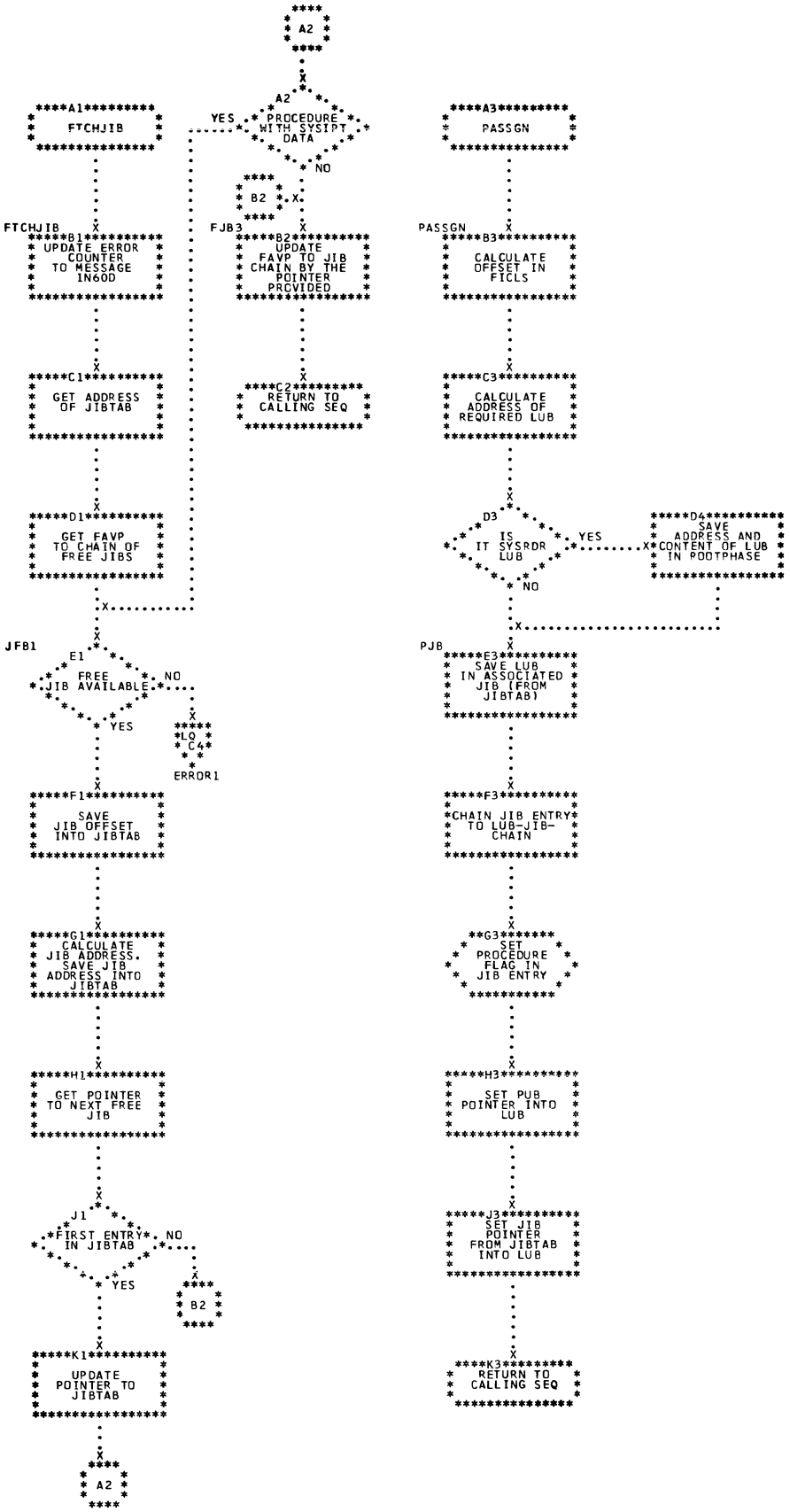


Chart LT. $JOBCTLE - Miscellaneous Subroutines (Part 3 of 3)
Refer to Chart 10.

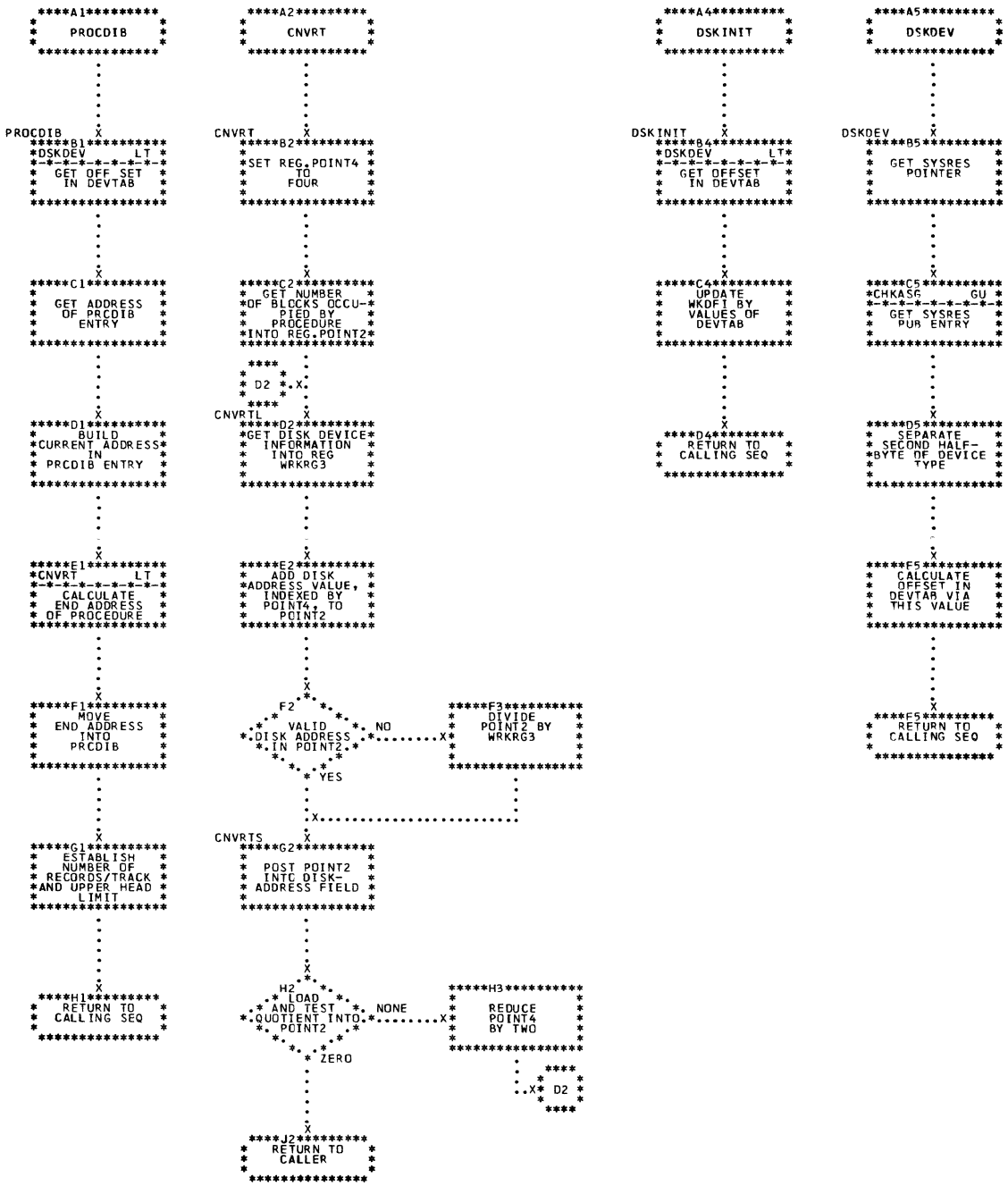


Chart LU. $JOBCTLE - Error Subroutines
Refer to Chart 10.

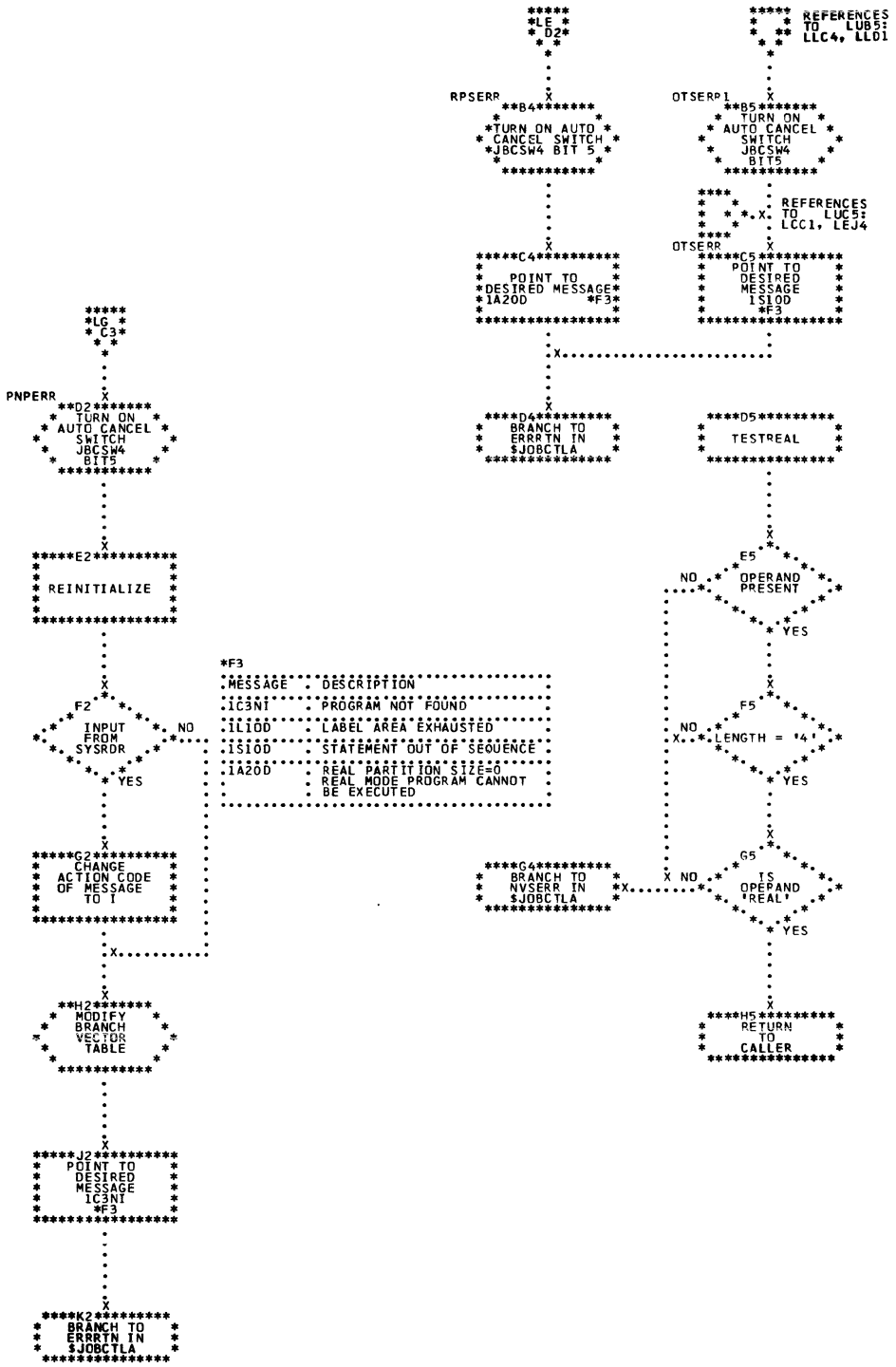


Chart MA. $JOBCTLF - LISTIC Statement Processor (Part 1 of 5)
Refer to Chart 11.

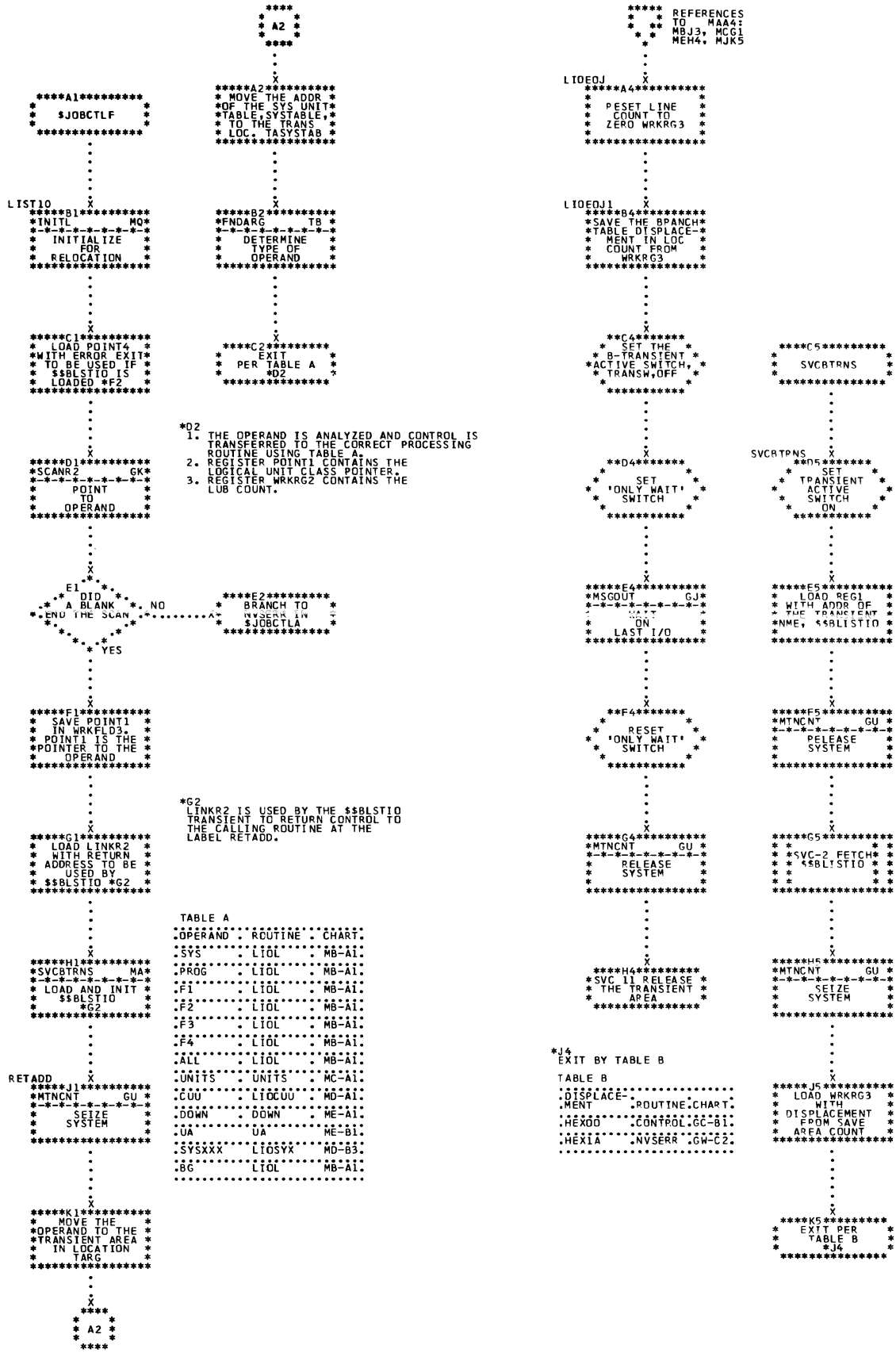


Chart MB. $JOBCTLF - LISTIC Statement Processor (Part 2 of 5)
Refer to Chart 11.

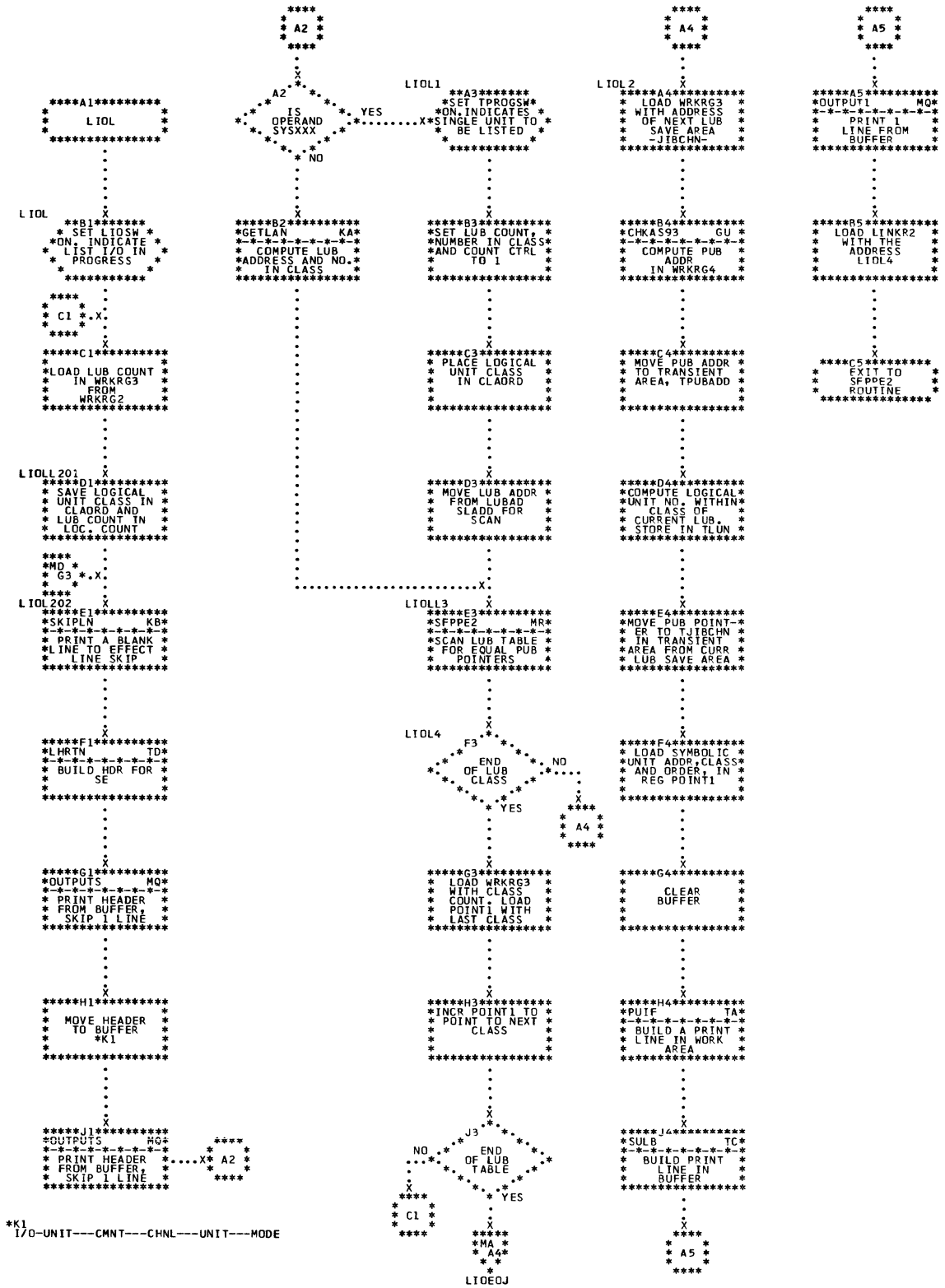


Chart MC. $JOBCTLF - LISTIO Statement Processcr (Part 3 of 5)
Refer to Chart 11.

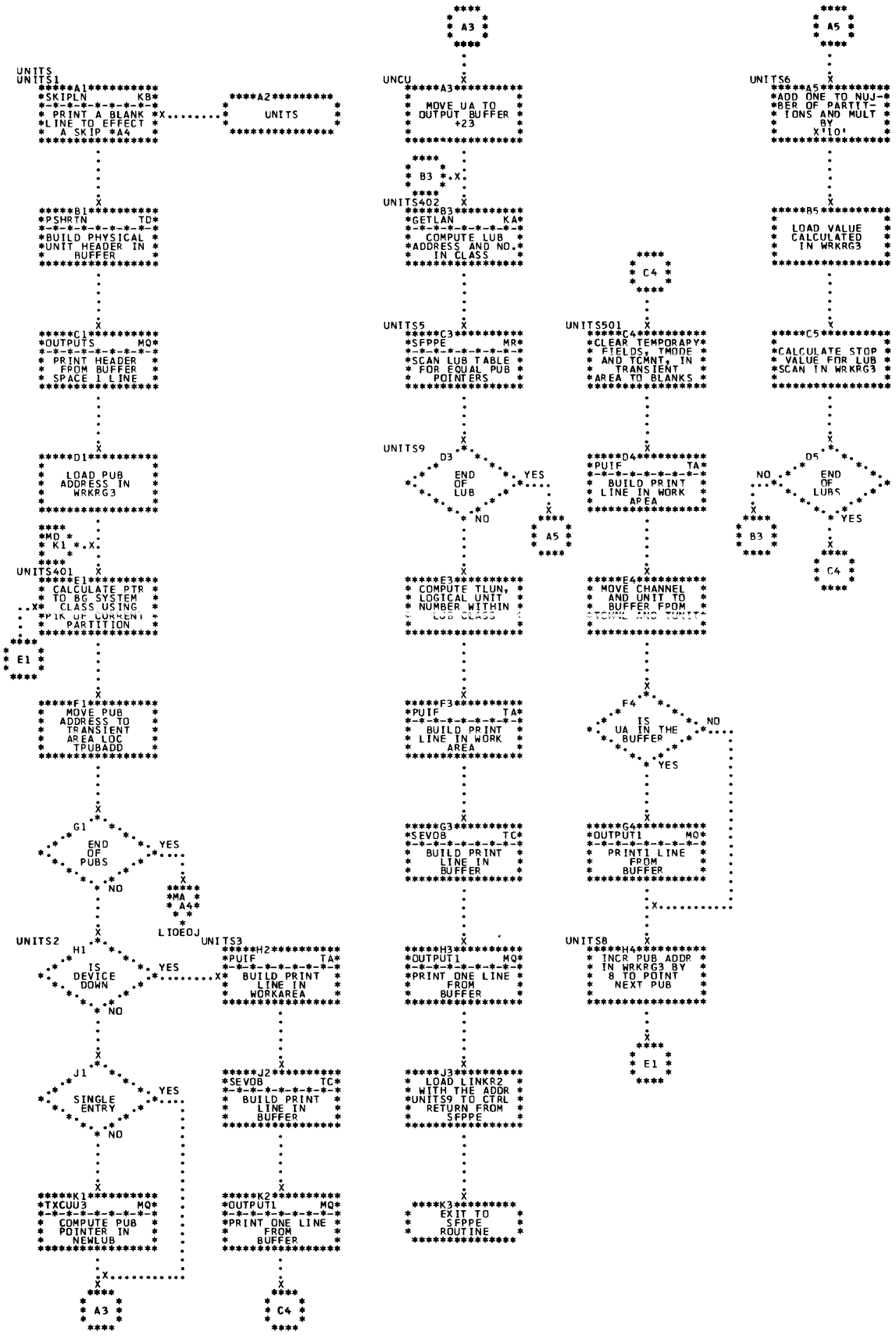


Chart MD. **$JOBCTLF - LISTIC Statement Processor (Part 4 of 5)**
Refer to Chart 11.

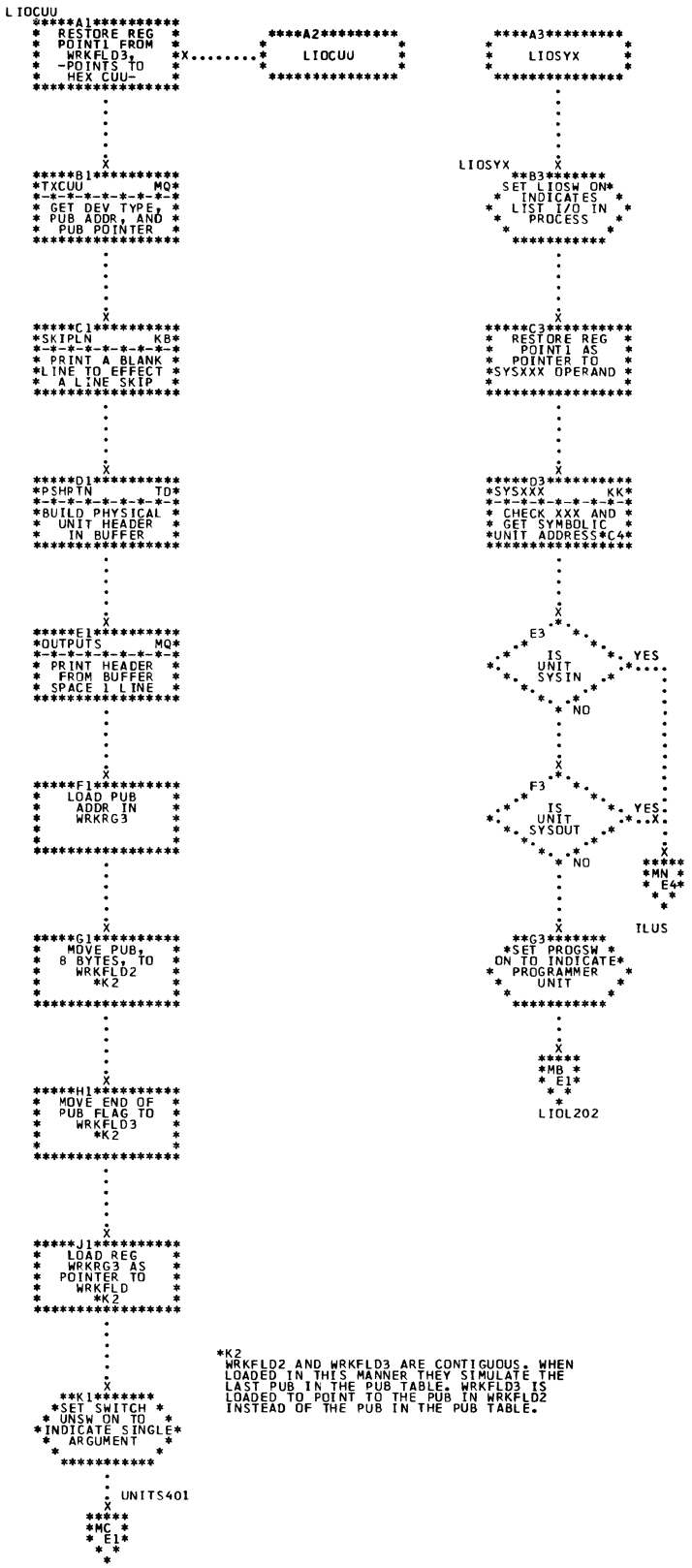


Chart ME. $JOBCTLF - LISTIC Statement Processor (Part 5 of 5)
Refer to Chart 11.

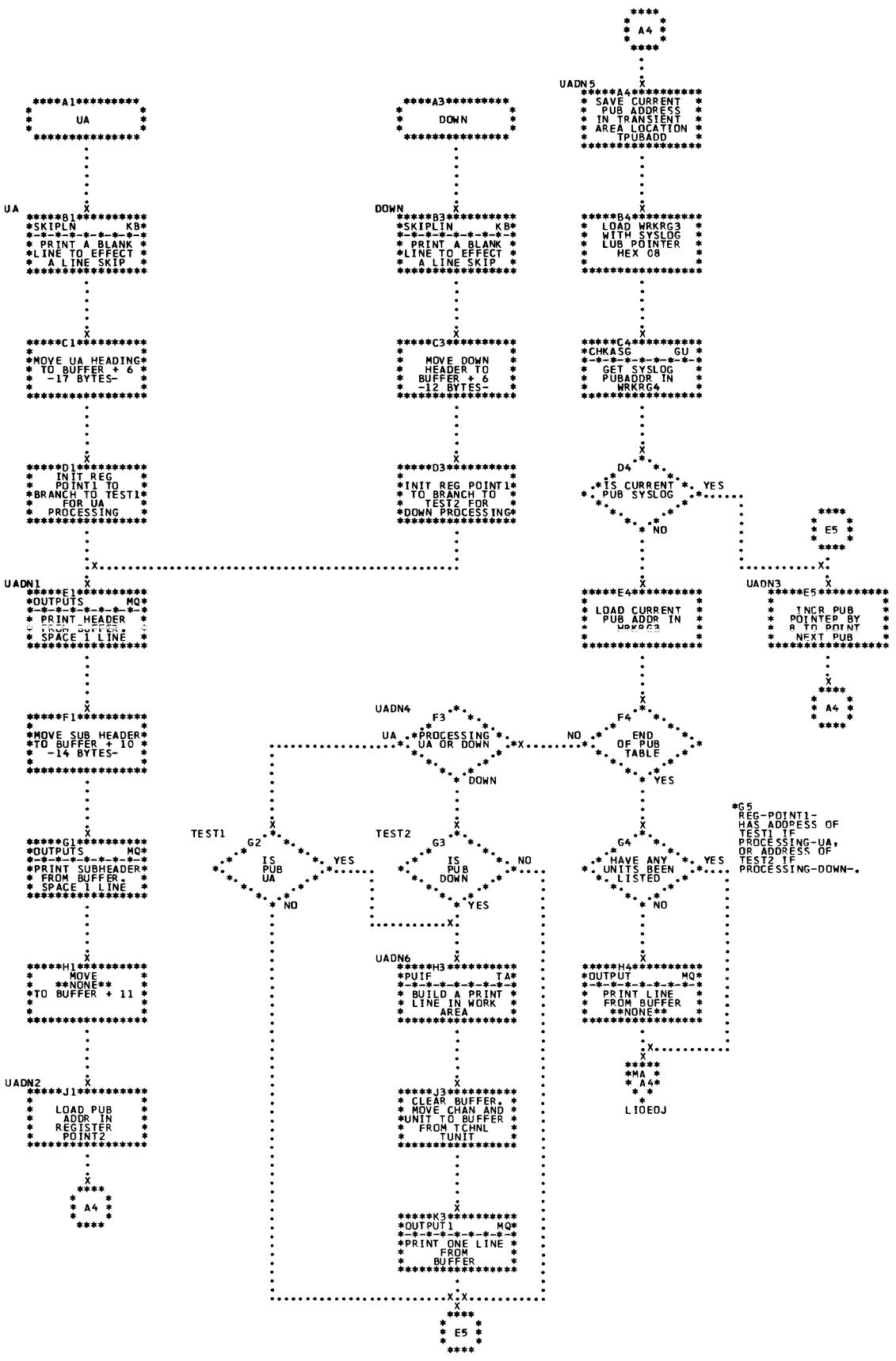


Chart MF. $JOBCTLF - RESET Statement Processor (Part 1 of 2)
Refer to Chart 11.

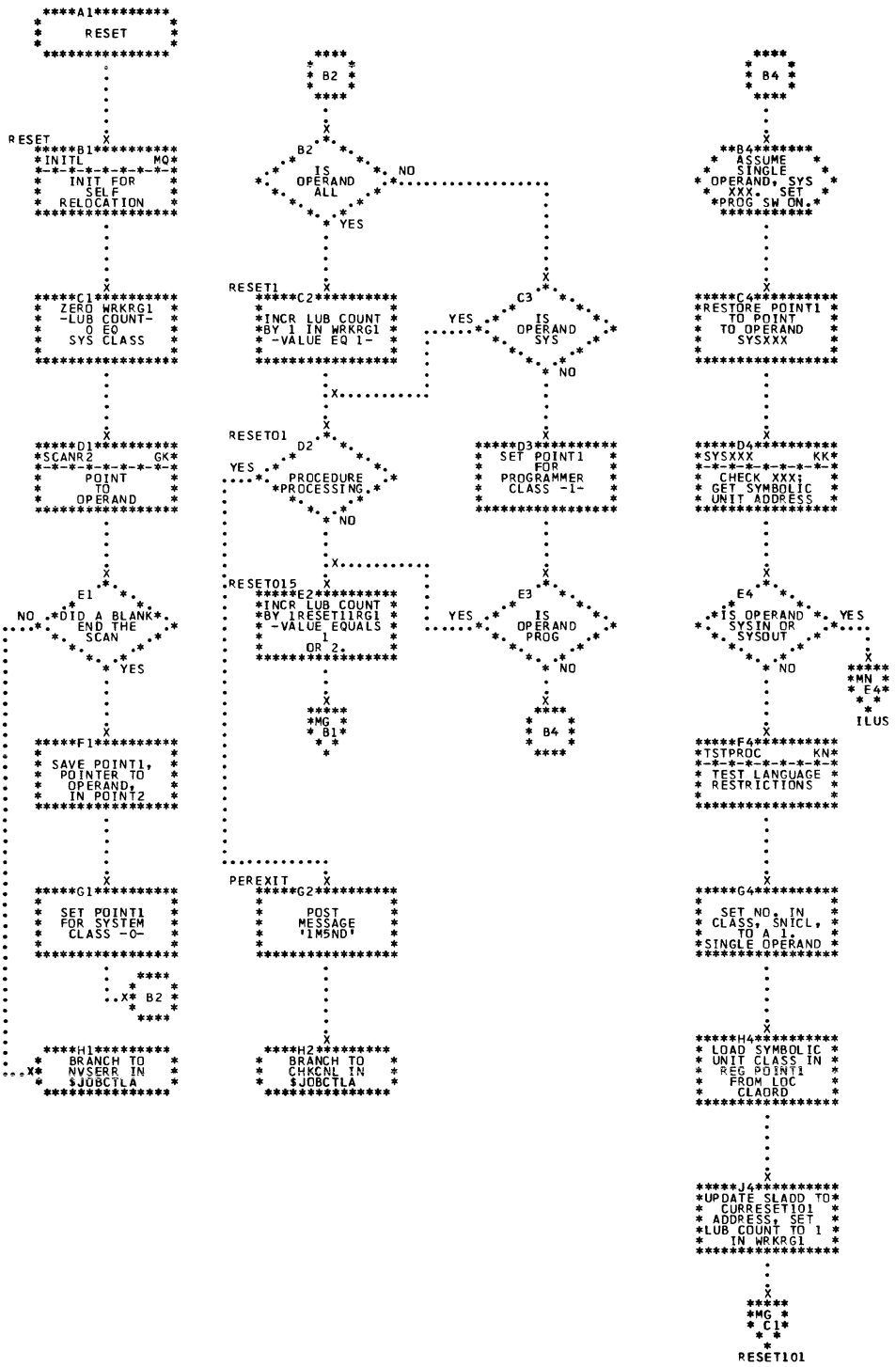


Chart MG. $JOBCTLF - RESET Statement Prccesscr (Part 2 cf 2)
Refer to Chart 11.

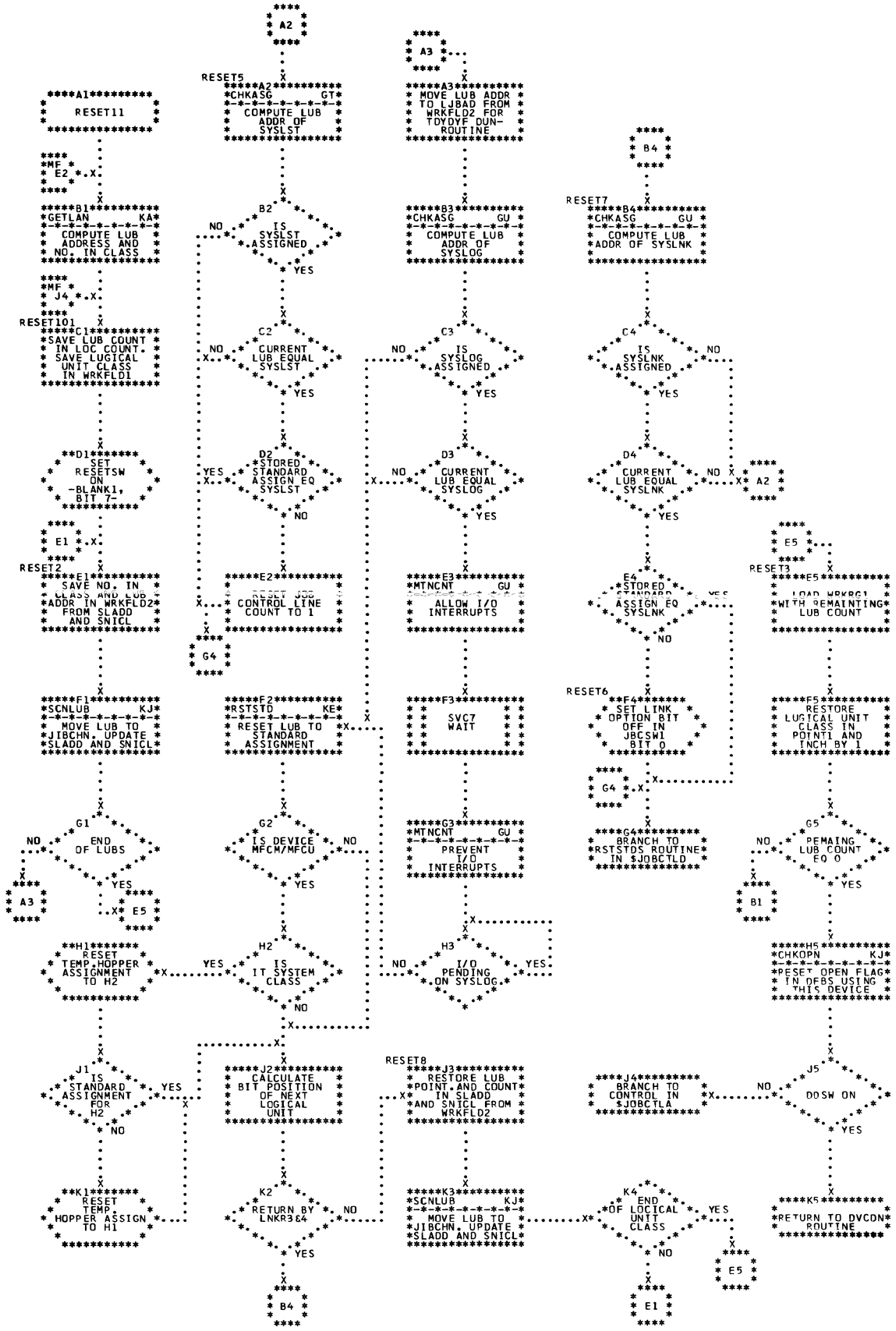


Chart MH. $JOBCTLF - DVCDN Statement Processor (Part 1 of 2)
Refer to Chart 11.

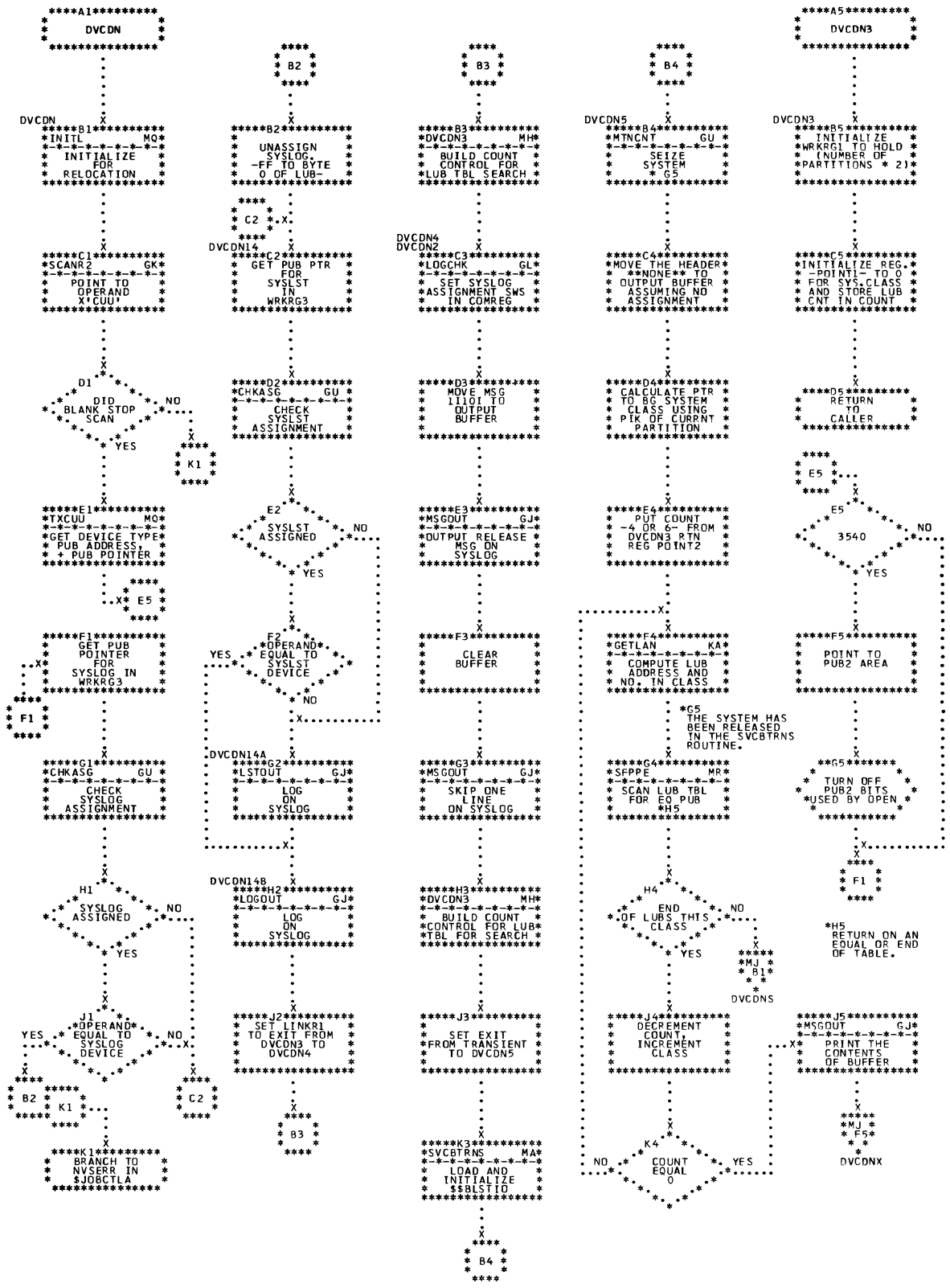


Chart MJ. $JOBCTLF - DVCDN Statement Processor (Part 2 of 2)
Refer to Chart 11.

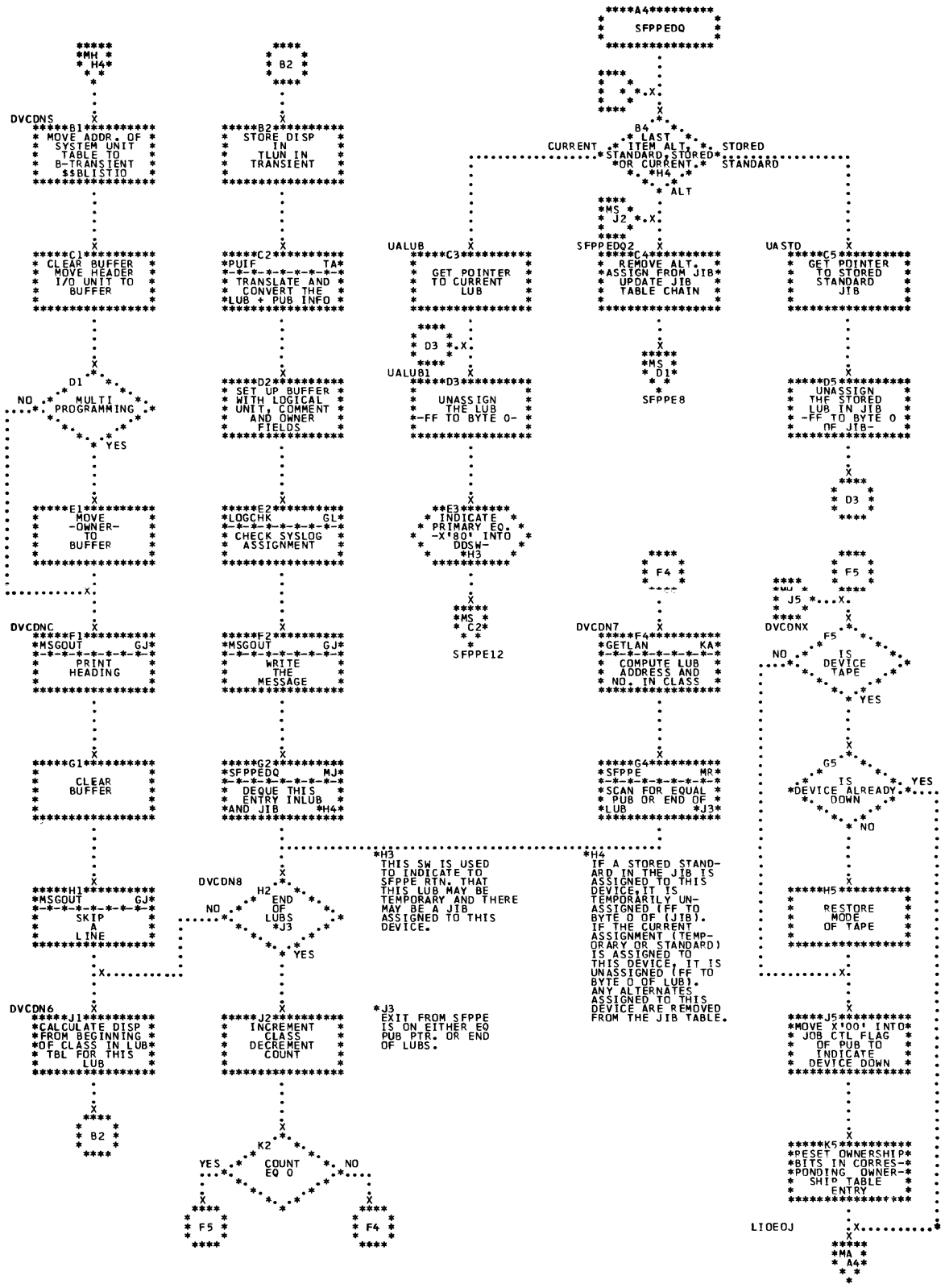


Chart MK. $JOBCTLF - MAP Command Processor (Part 1 of 2)
Refer to Chart 11.

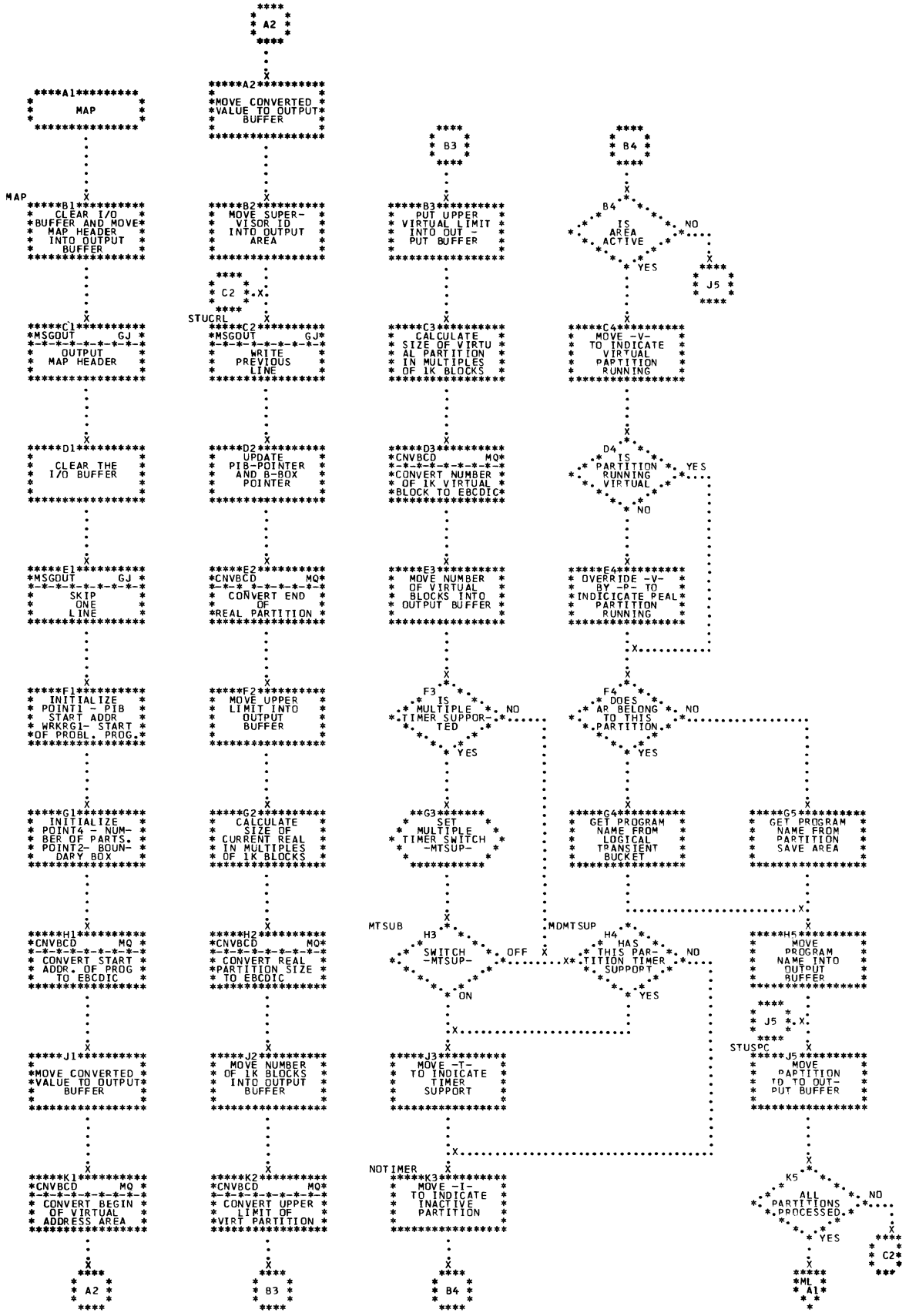


Chart ML. $JOBCTLF - Map Command Processor (Part 2 of 2) and DVCUP Statement Processor
Refer to Chart 11.

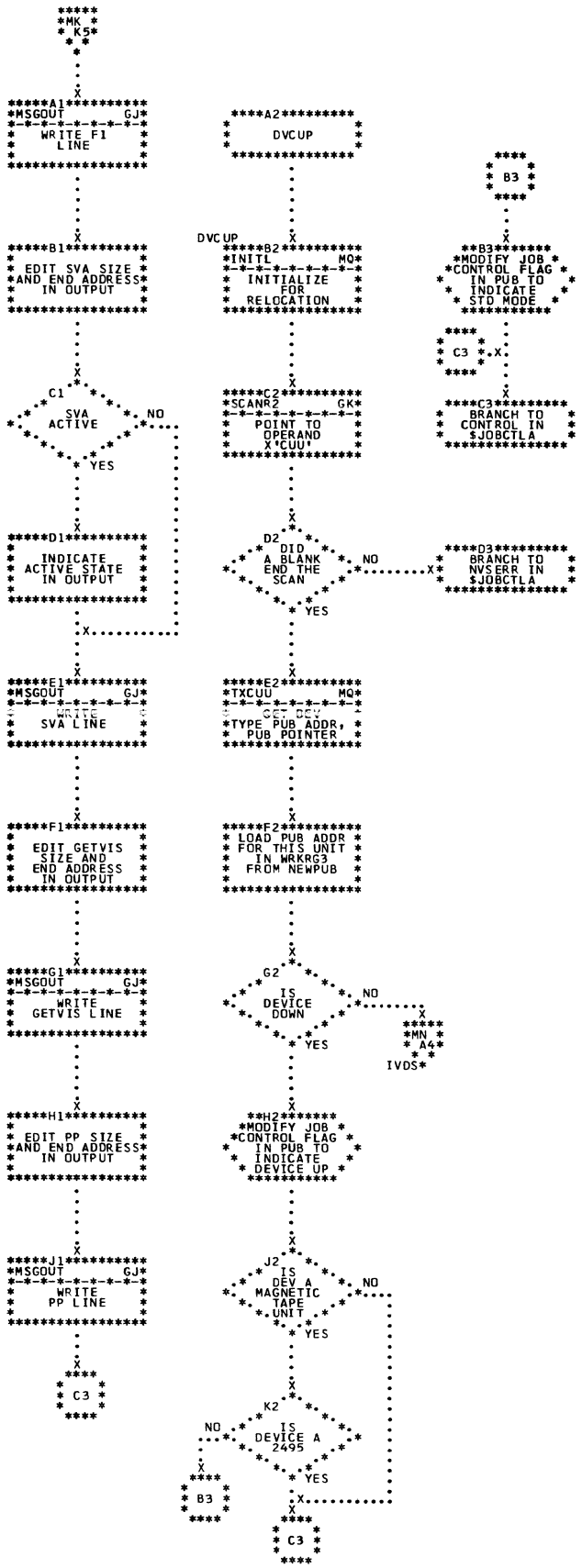


Chart MM. $JOBCTLF - UNBATCH Command Processor
Refer to Chart 11.

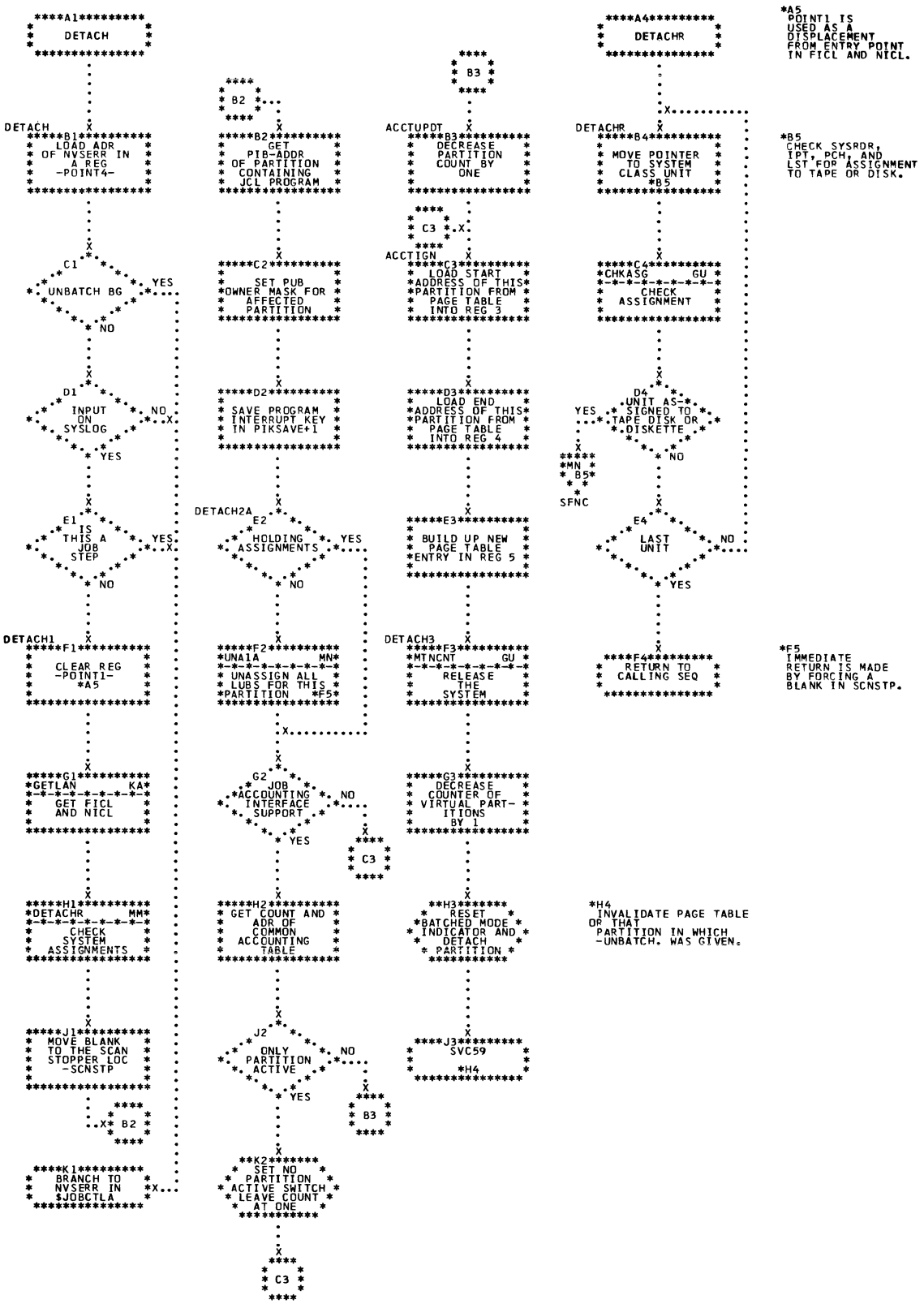


Chart MN. $JOBCTLF - UNA Statement Processor (Part 1 of 2)
Refer to Chart 11.

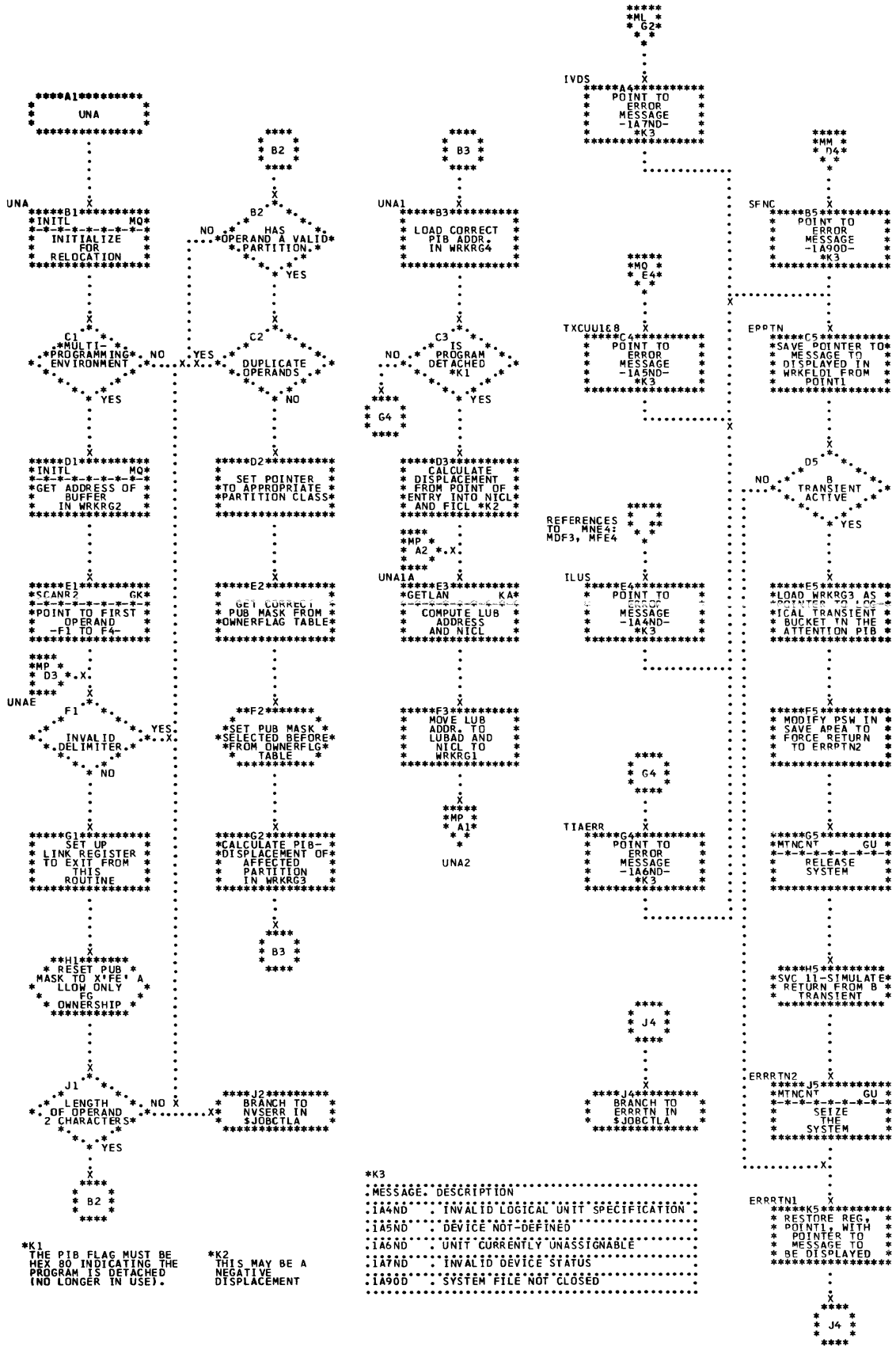


Chart MP. $JOBCTLF - UNA Statement Prccesscr (Part 2 cf 2)
Refer to Chart 11.

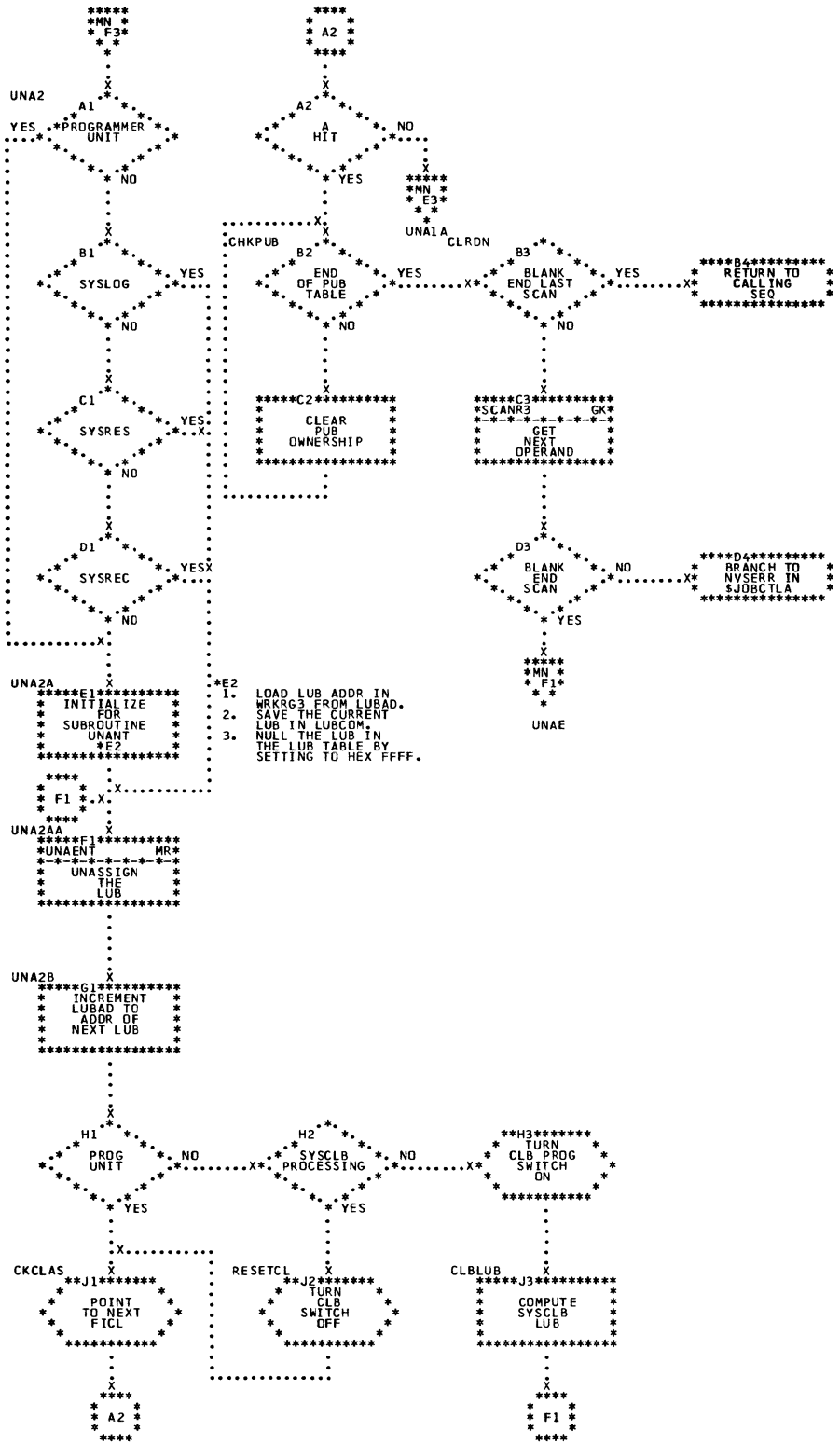


Chart MQ. $JOBCTLF - Miscellaneous Subroutines (Part 1 of 3)
Refer to Chart 11.

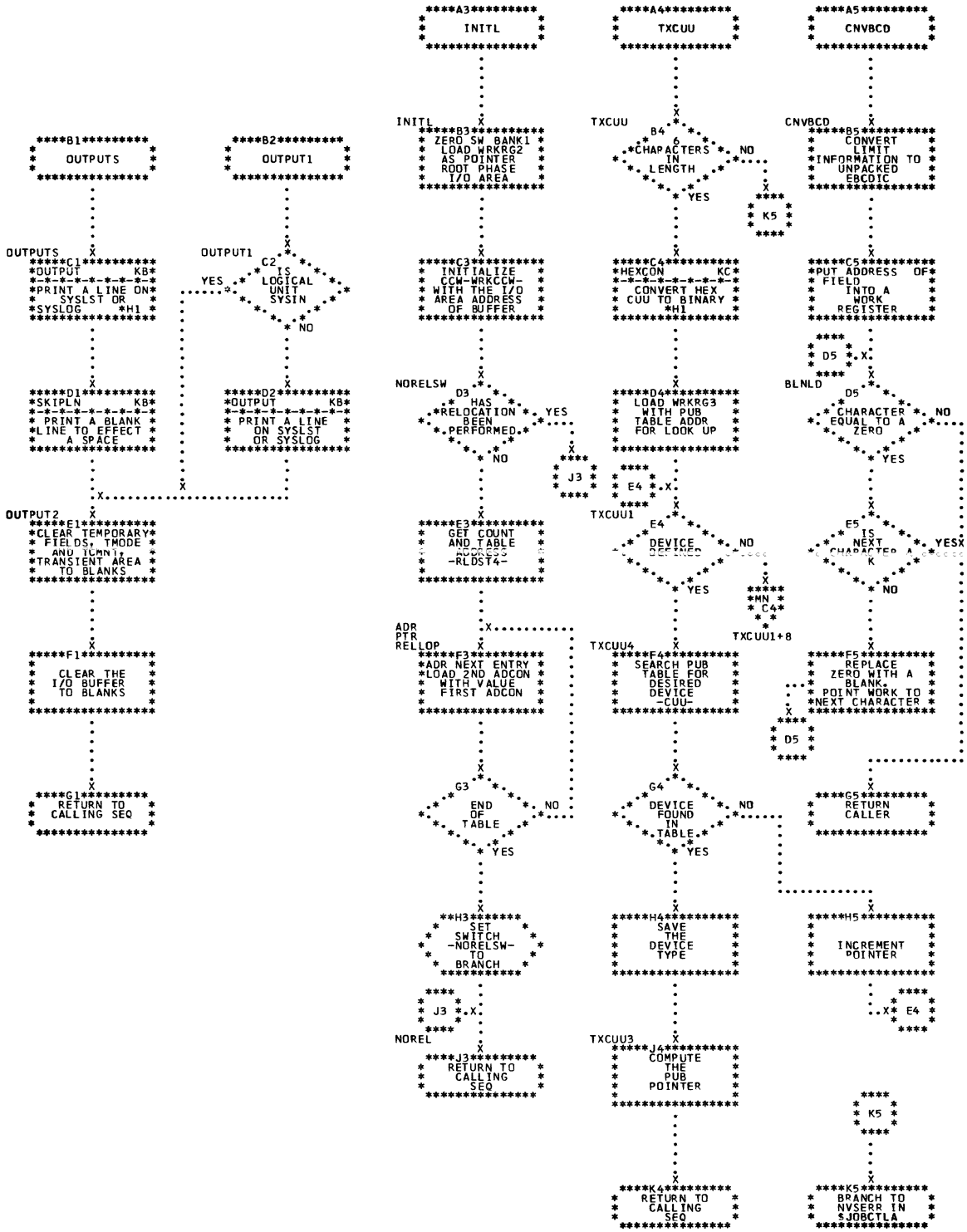


Chart MR. $JOBCTLF - Miscellaneous Subroutines (Part 2 of 3)
Refer to Chart 11.

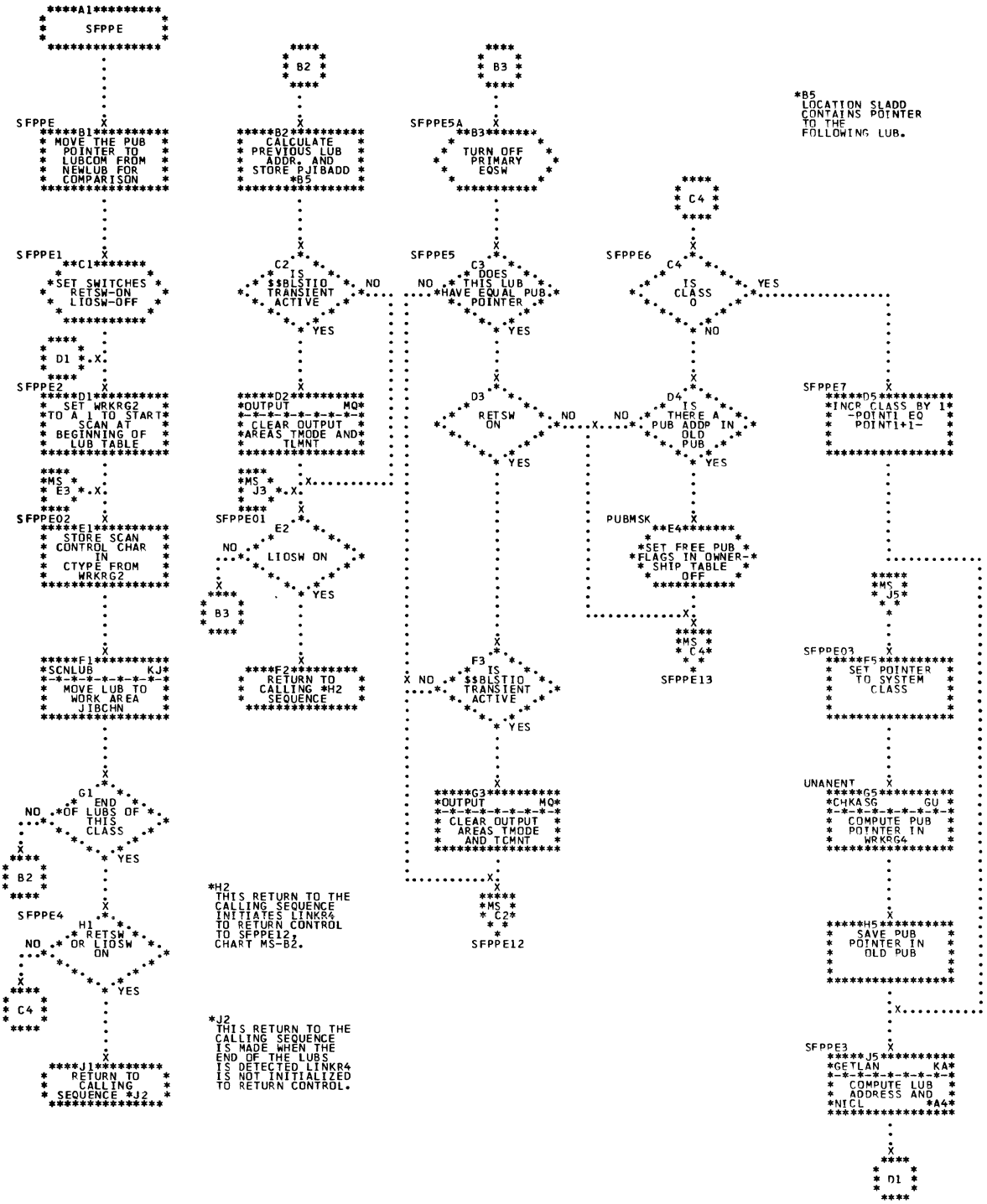


Chart MS. $JOBCTLF - Miscellaneous Subroutines (Part 3 of 3)
Refer to Chart 11.

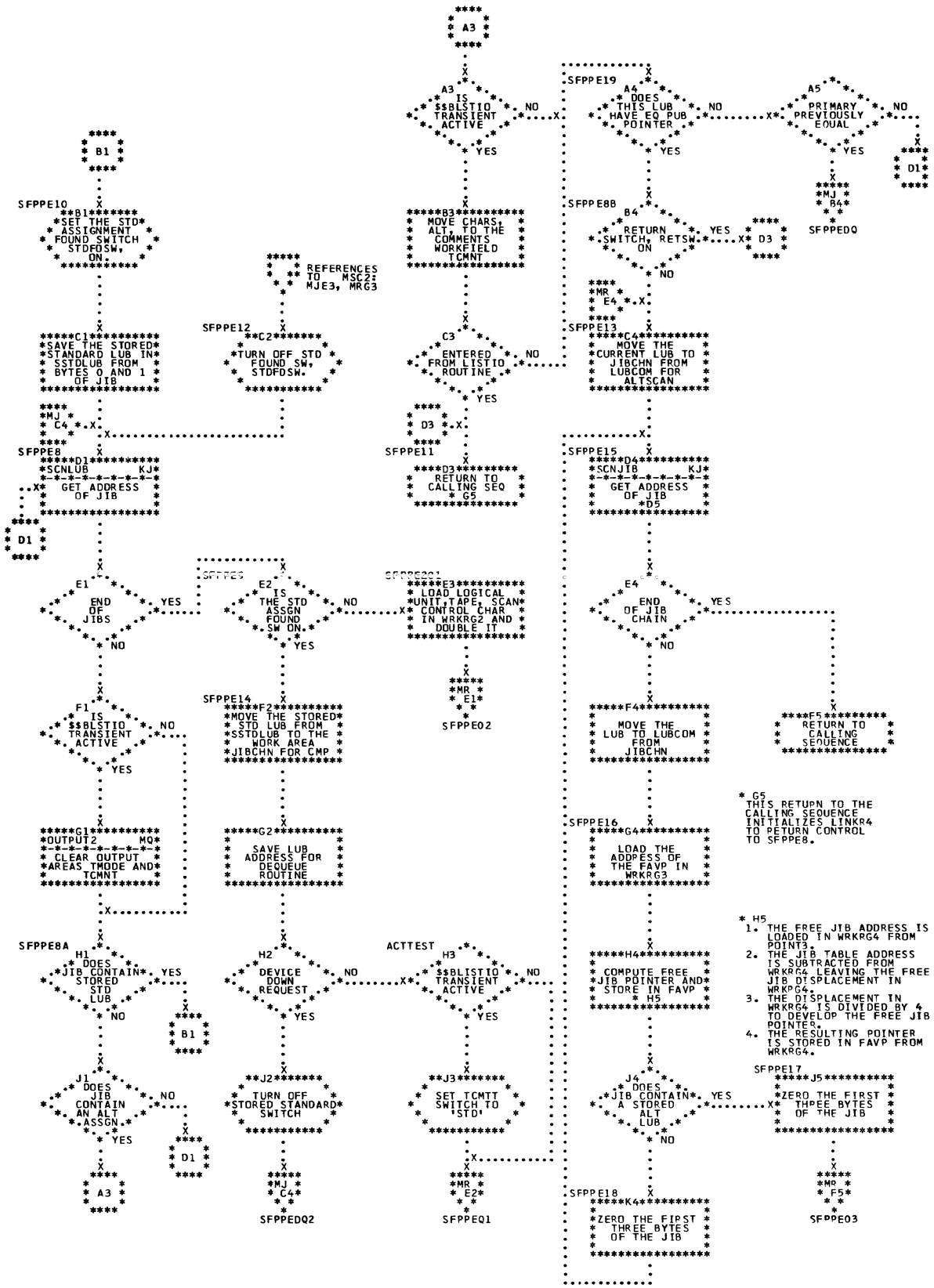


Chart NA. $JOBCTLG - JOB Statement Prccesscr (Part 1 cf 3)
Refer to Chart 13.

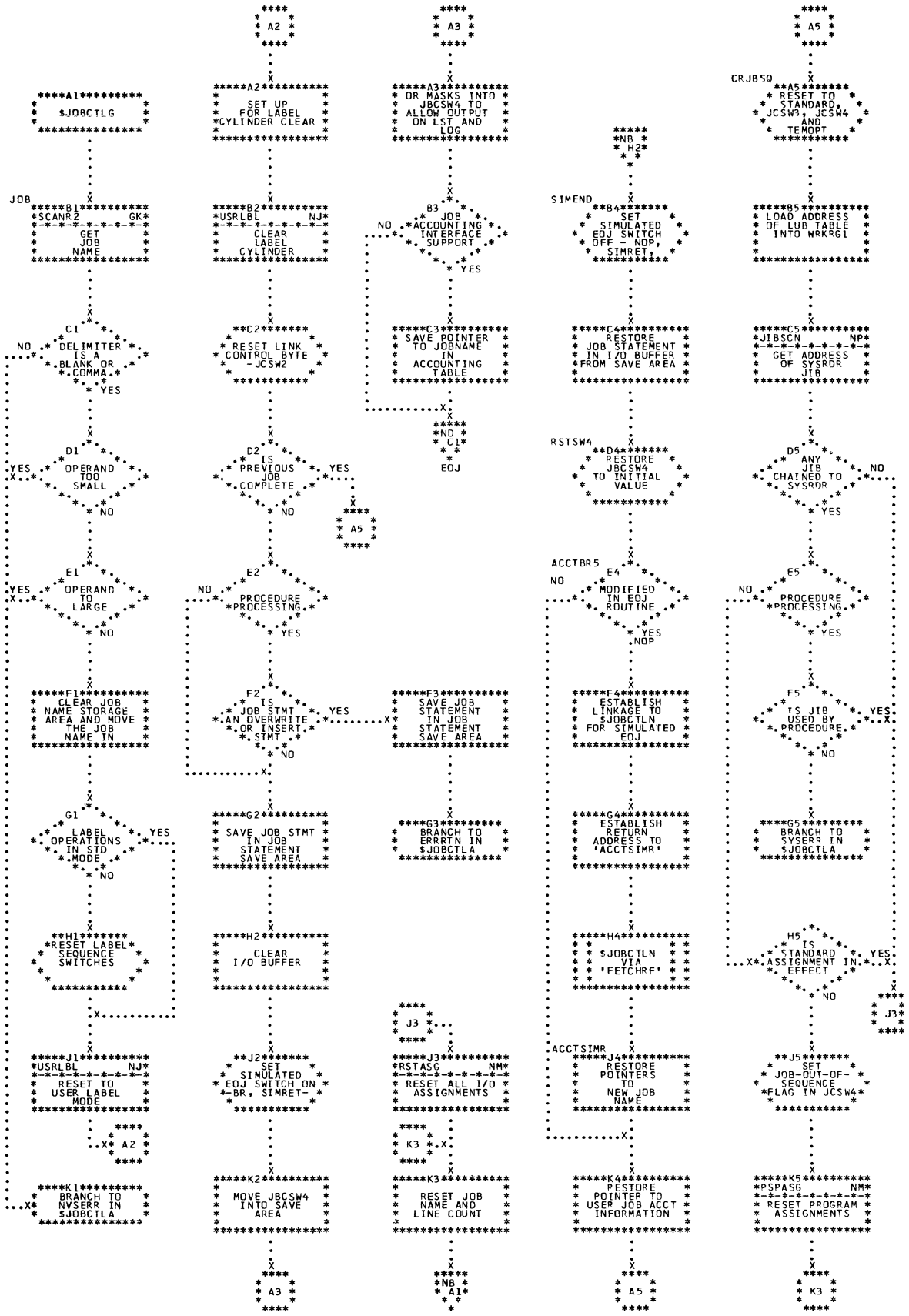


Chart NB. $JOBCTLG - JOB Statement Prccessor (Part 2 of 3)
Refer to Chart 13.

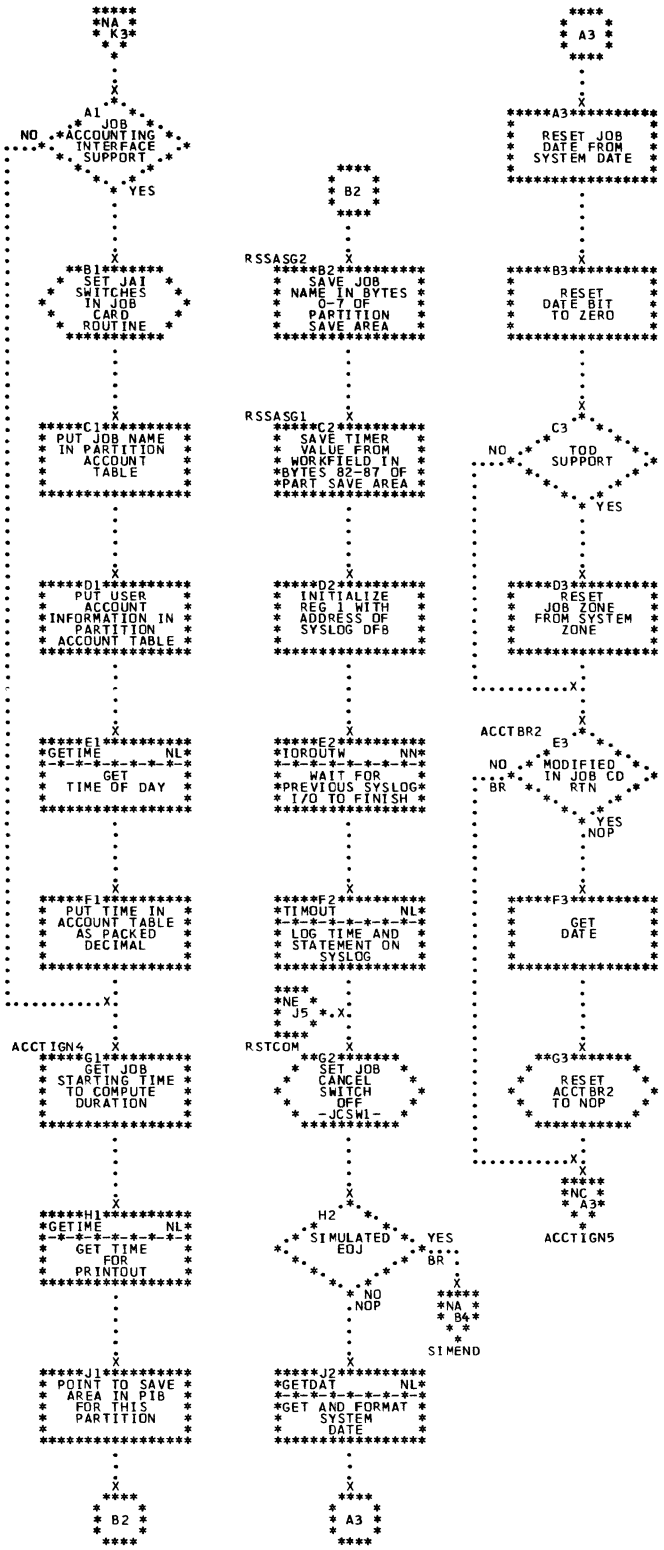


Chart NC. $JOBCTLG - JOB Statement Prccesscr (Part 3 cf 3)
Refer to Chart 13.

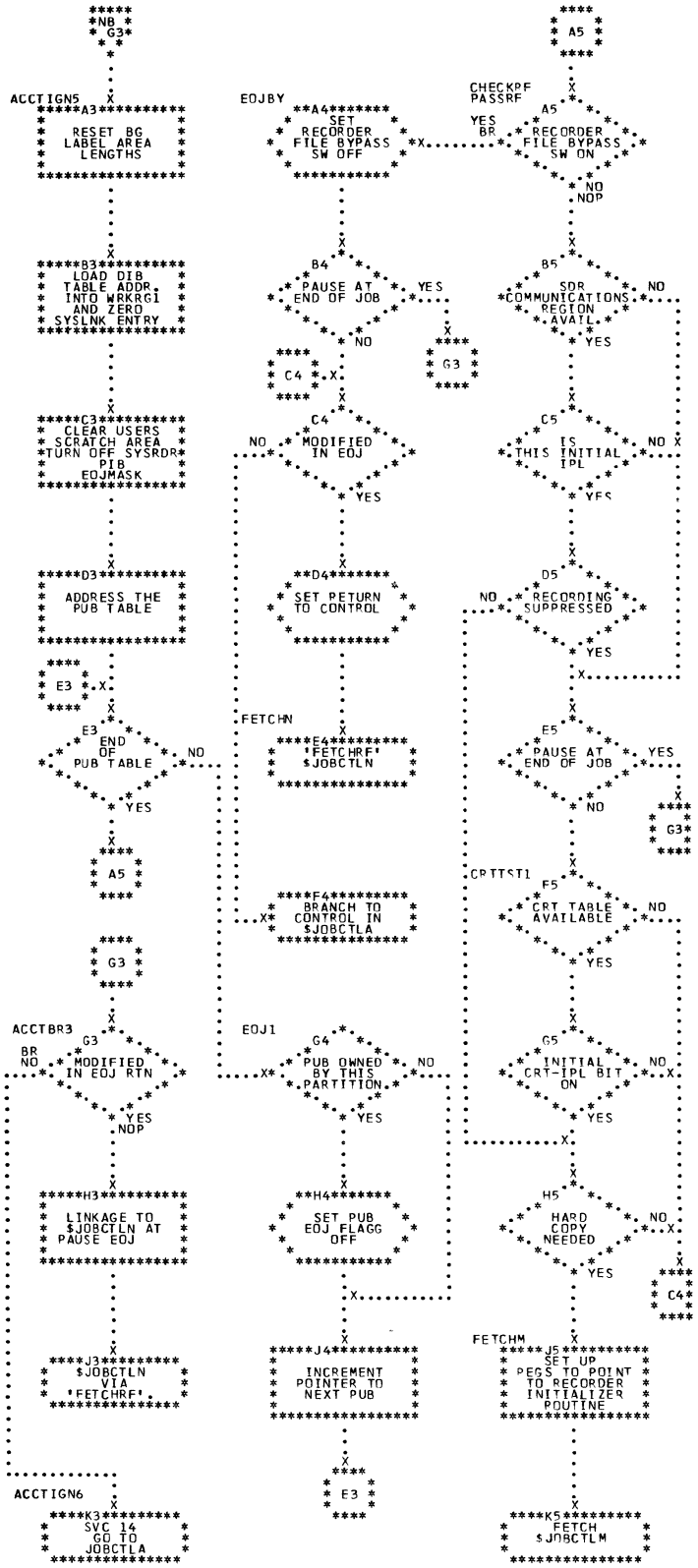


Chart ND. $JOBCTLG - /& Statement Processor (Part 1 of 3)
Refer to Chart 13.

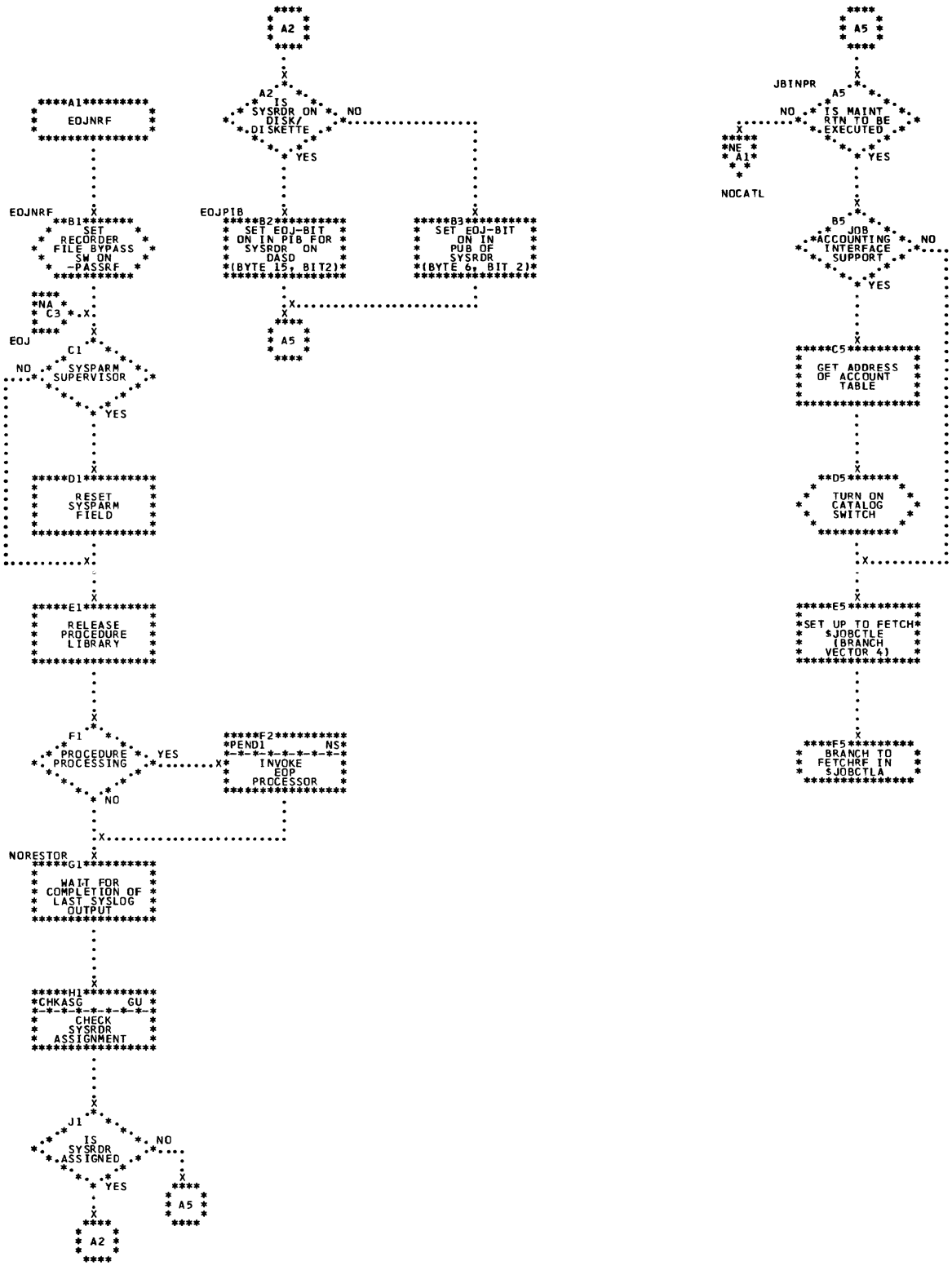


Chart NE. $JOBCTLG - /& Statement Processor (Part 2 of 3)
Refer to Chart 13.

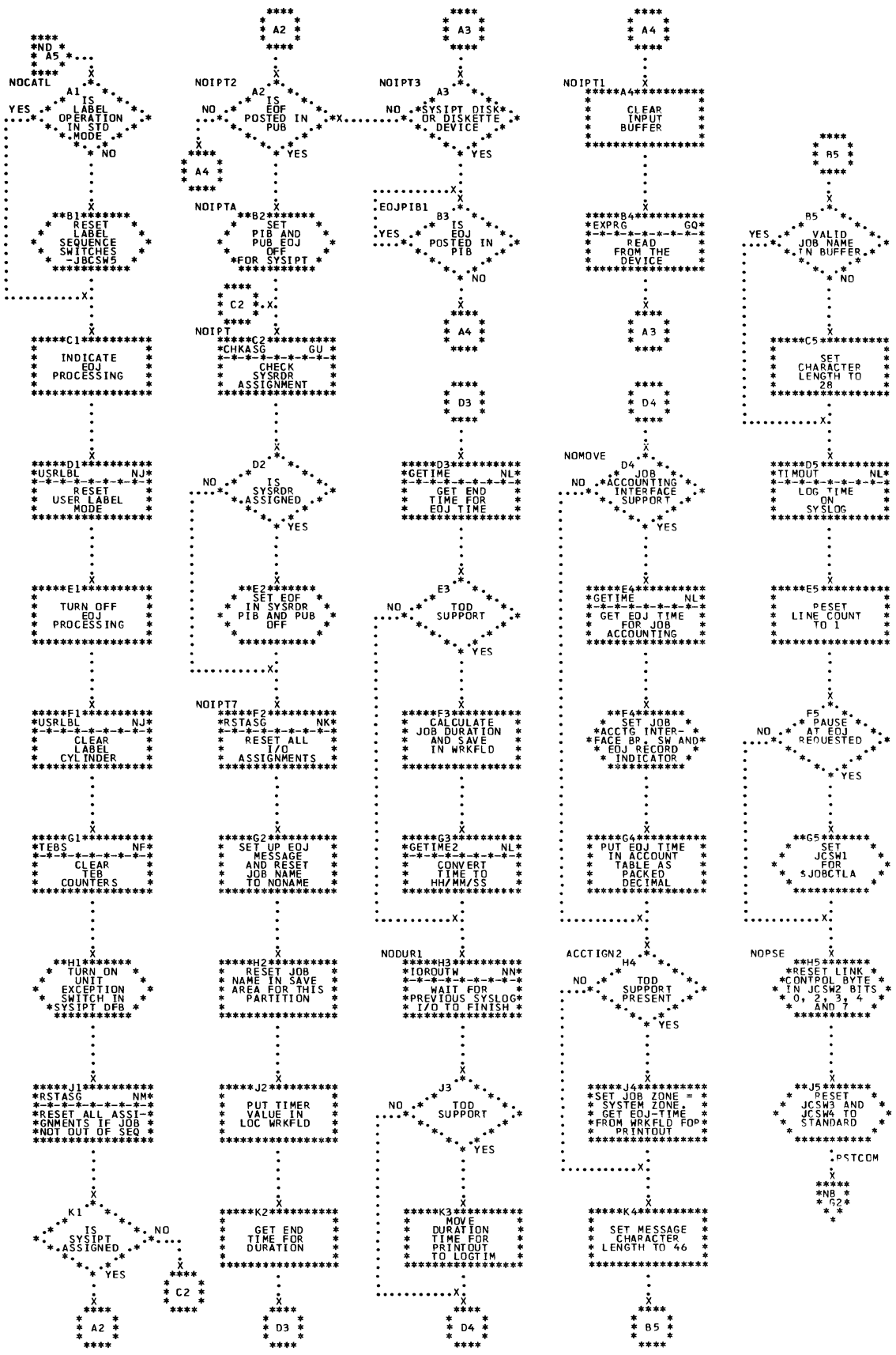


Chart NF. $JOBCTLG - /& Statement Processor (Part 3 of 3) and CANCEL Statement Processor
Refer to Chart 13.

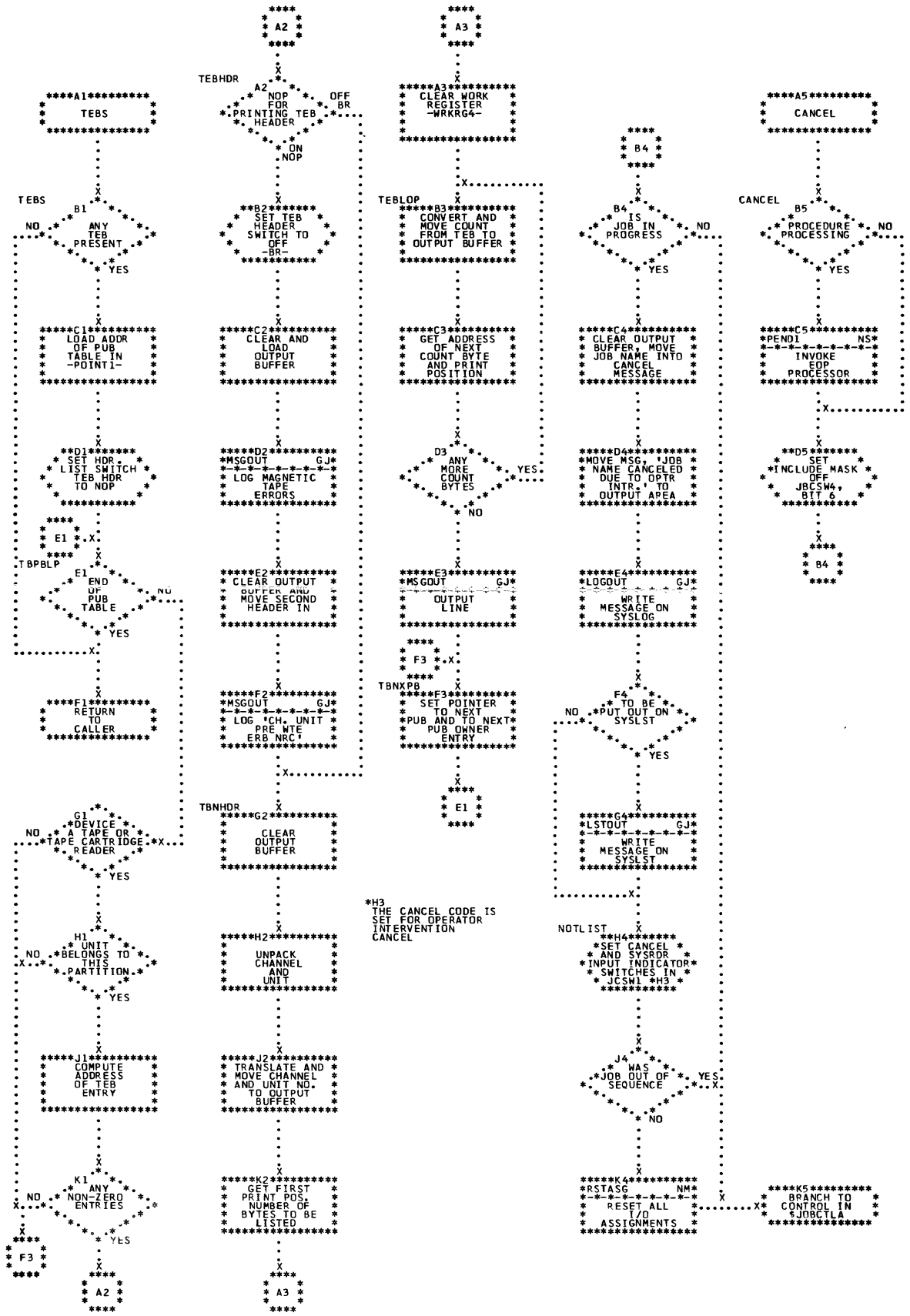


Chart NG. $JOBCTLG - CPTICN Statement Processcr (Part 1 cf 4)
Refer to Chart 12.

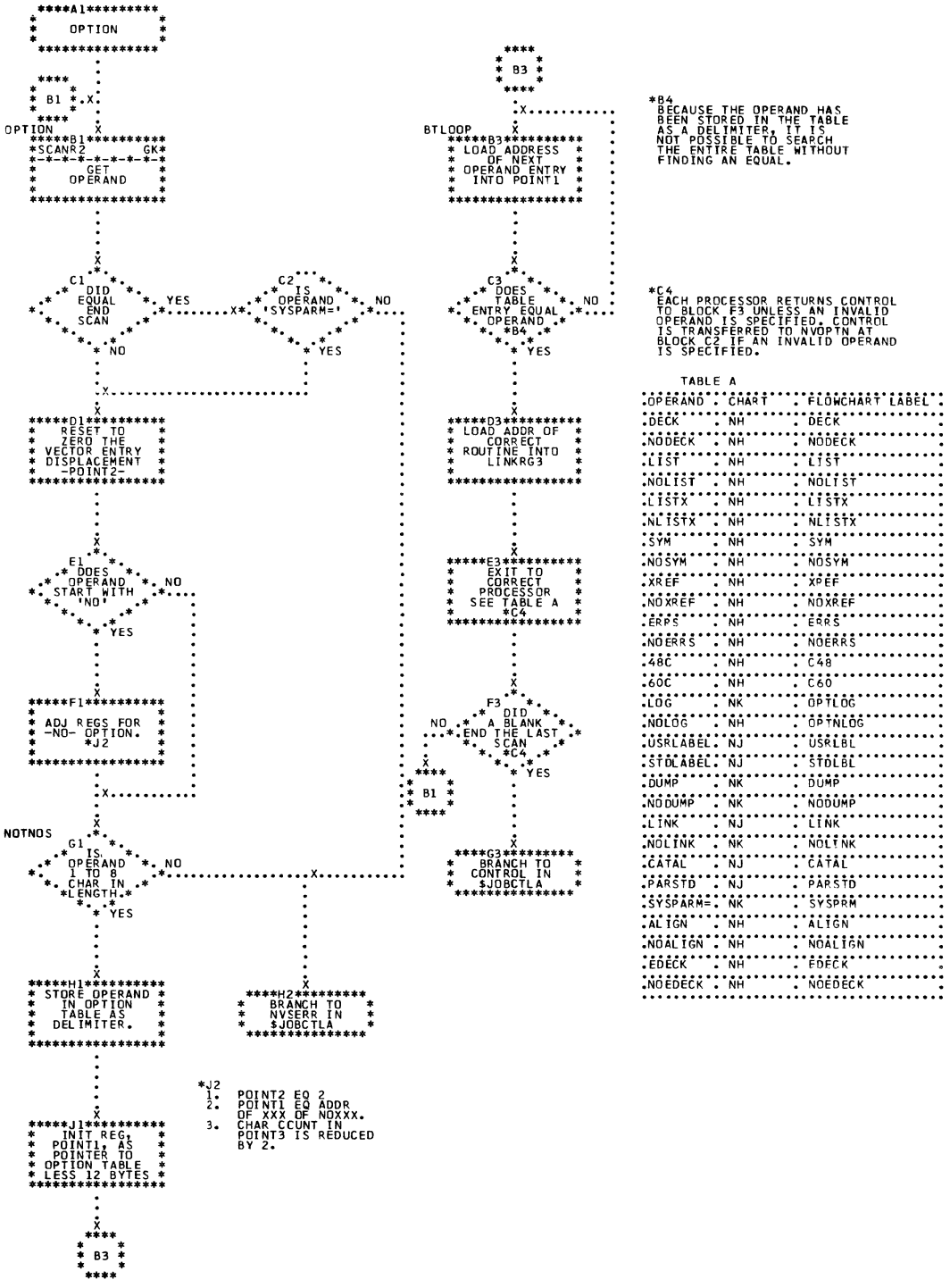


Chart NH. $JOBCTLG - CPTICN Statement Processcr (Part 2 of 4)
Refer to Chart 12.

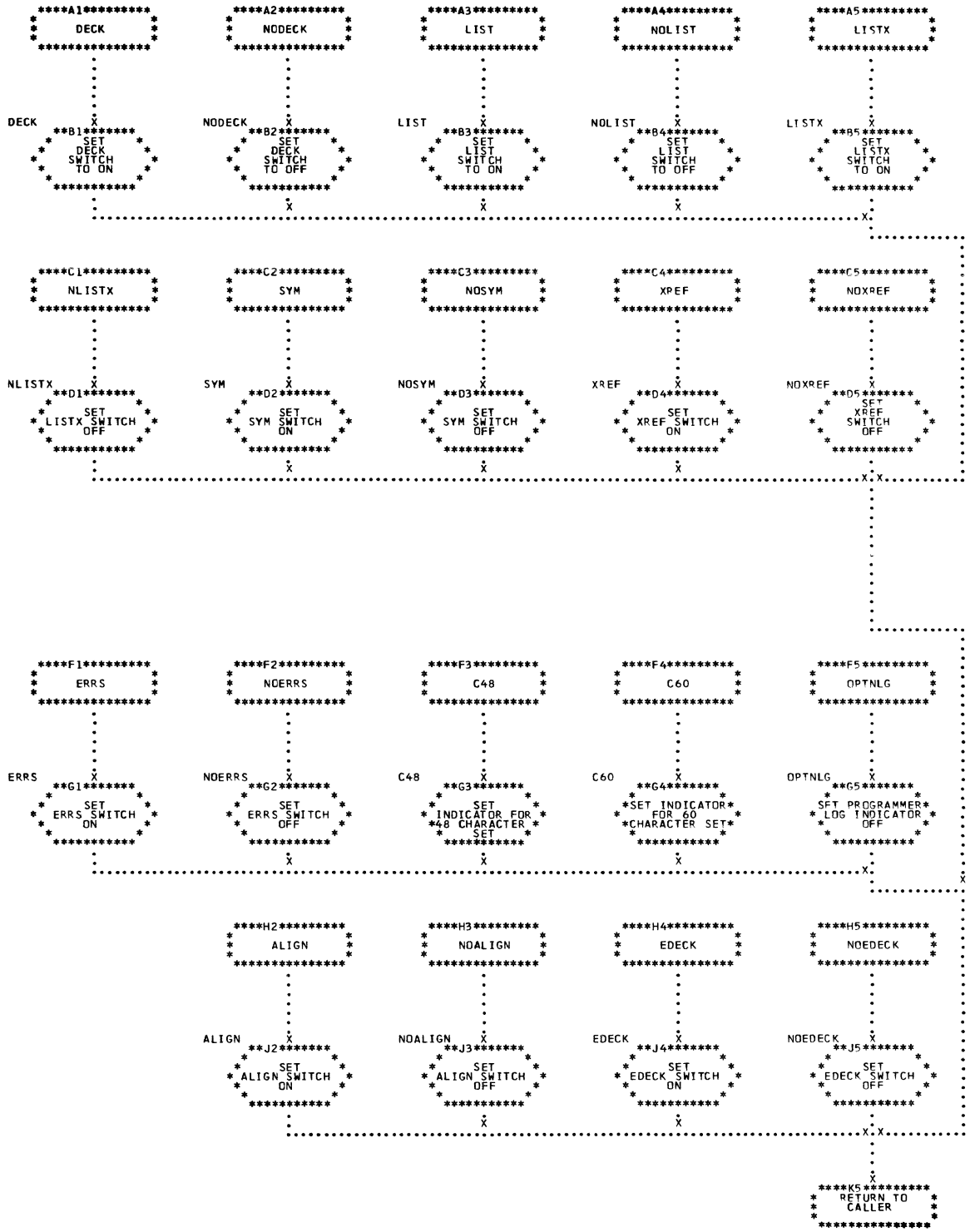


Chart NJ. $JOBCTLG - OPTION Statement Processor (Part 3 of 4)
Refer to Chart 12.

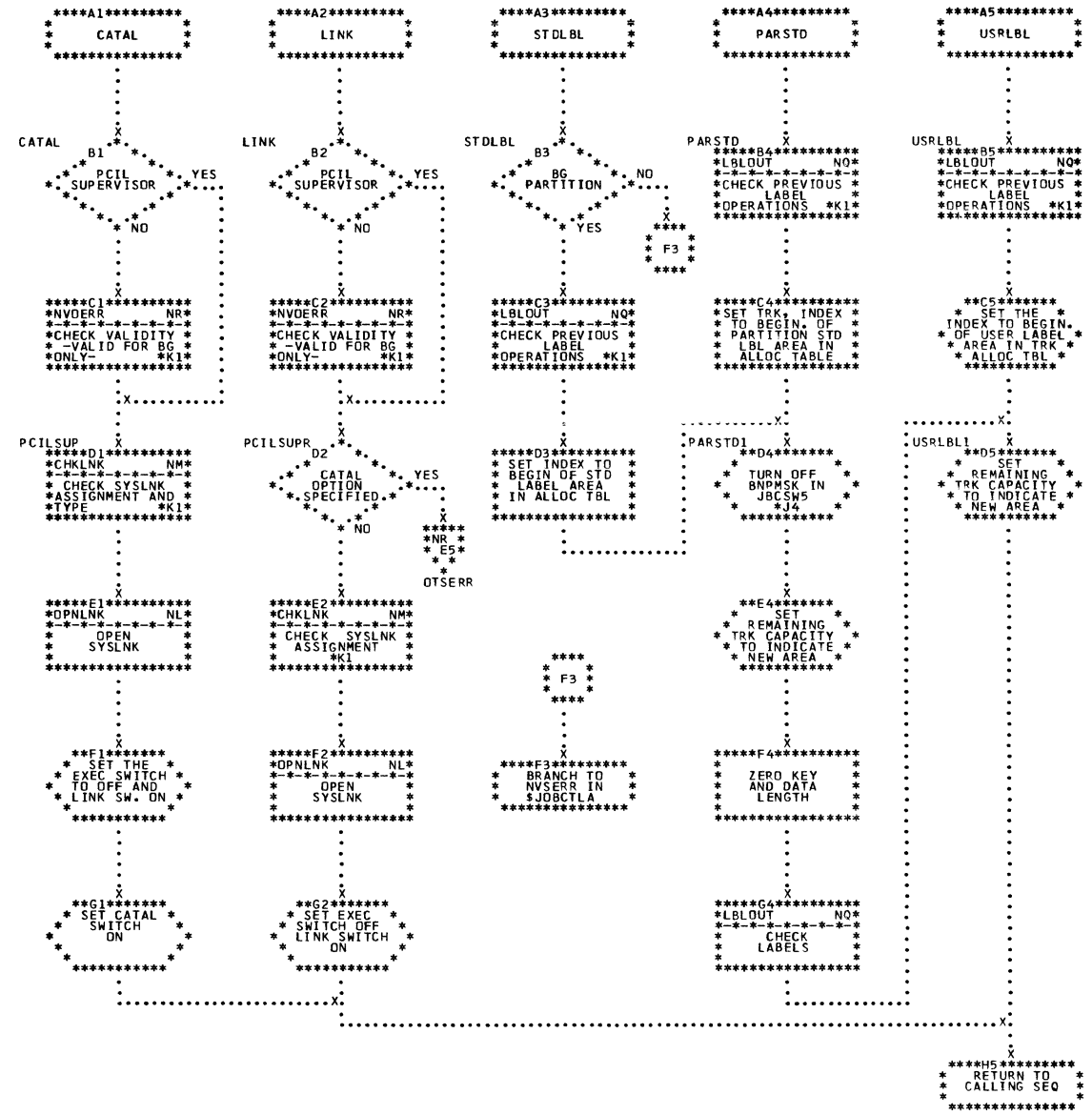


Chart NK. $JOBCTLG - CPTICN Statement Processcr (Part 4 of 4)
Refer to Chart 12.

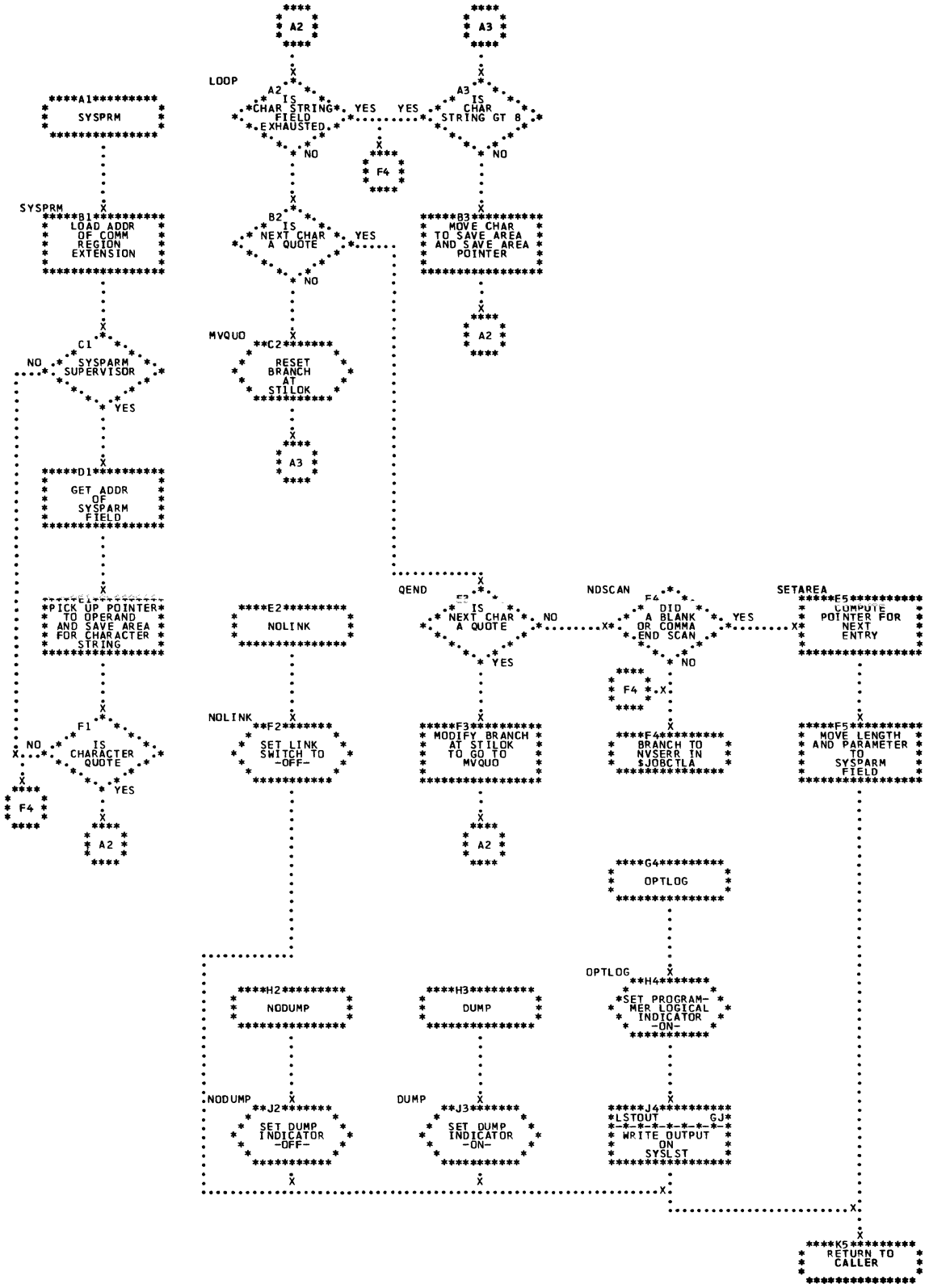


Chart NL. $JOBCTLG - Time Stamping Subroutines
Refer to Chart 13.

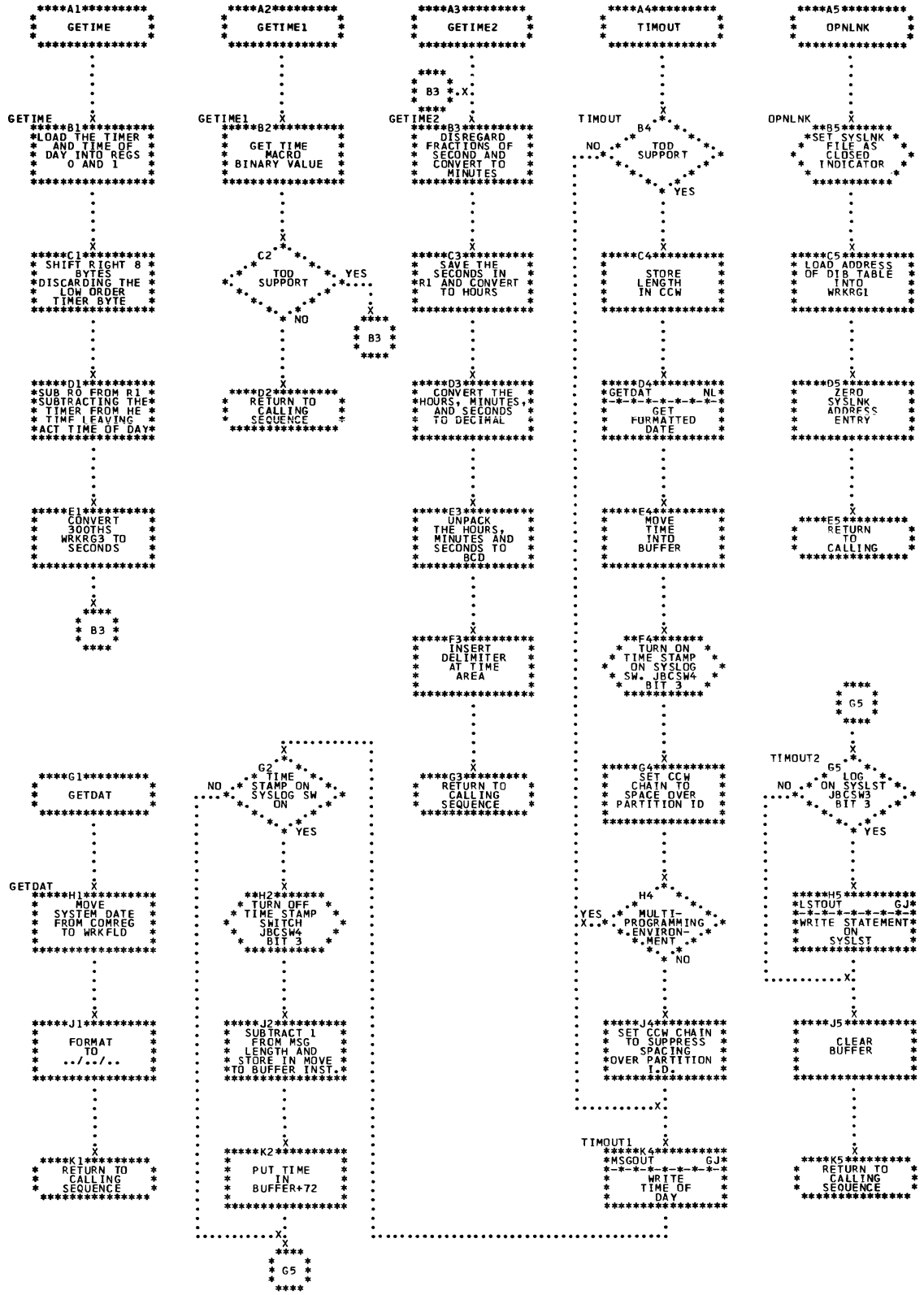


Chart NM. $JOBCTLG - Miscellaneous Subroutines (Part 1 of 3)
Refer to Chart 13.

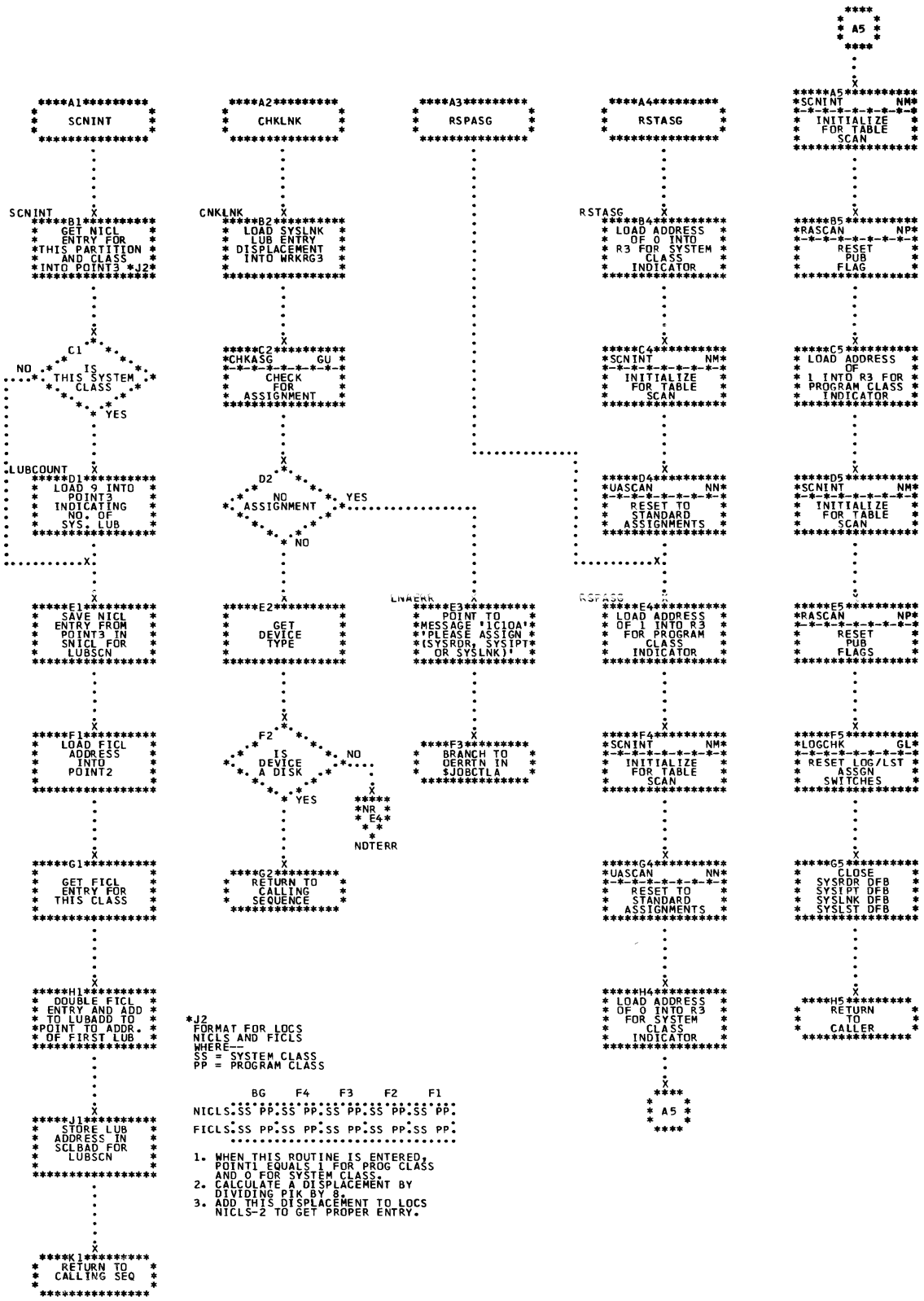


Chart NN. $JOBCTLG - Miscellaneous Subroutines (Part 2 of 3)
Refer to Chart 13.

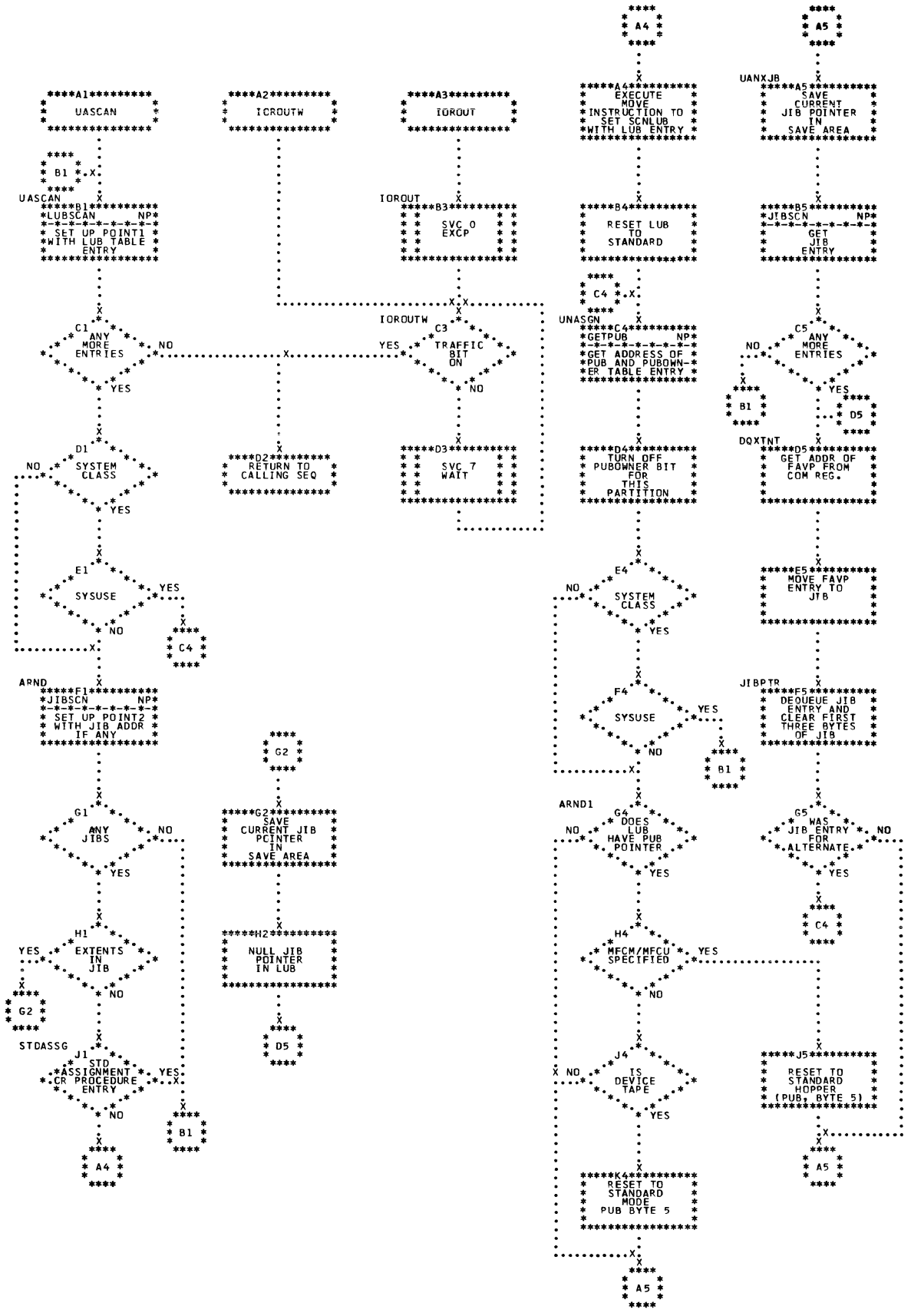


Chart NP. $JOBCTLG - Miscellaneous Subroutines (Part 3 of 3)
Refer to Chart 13.

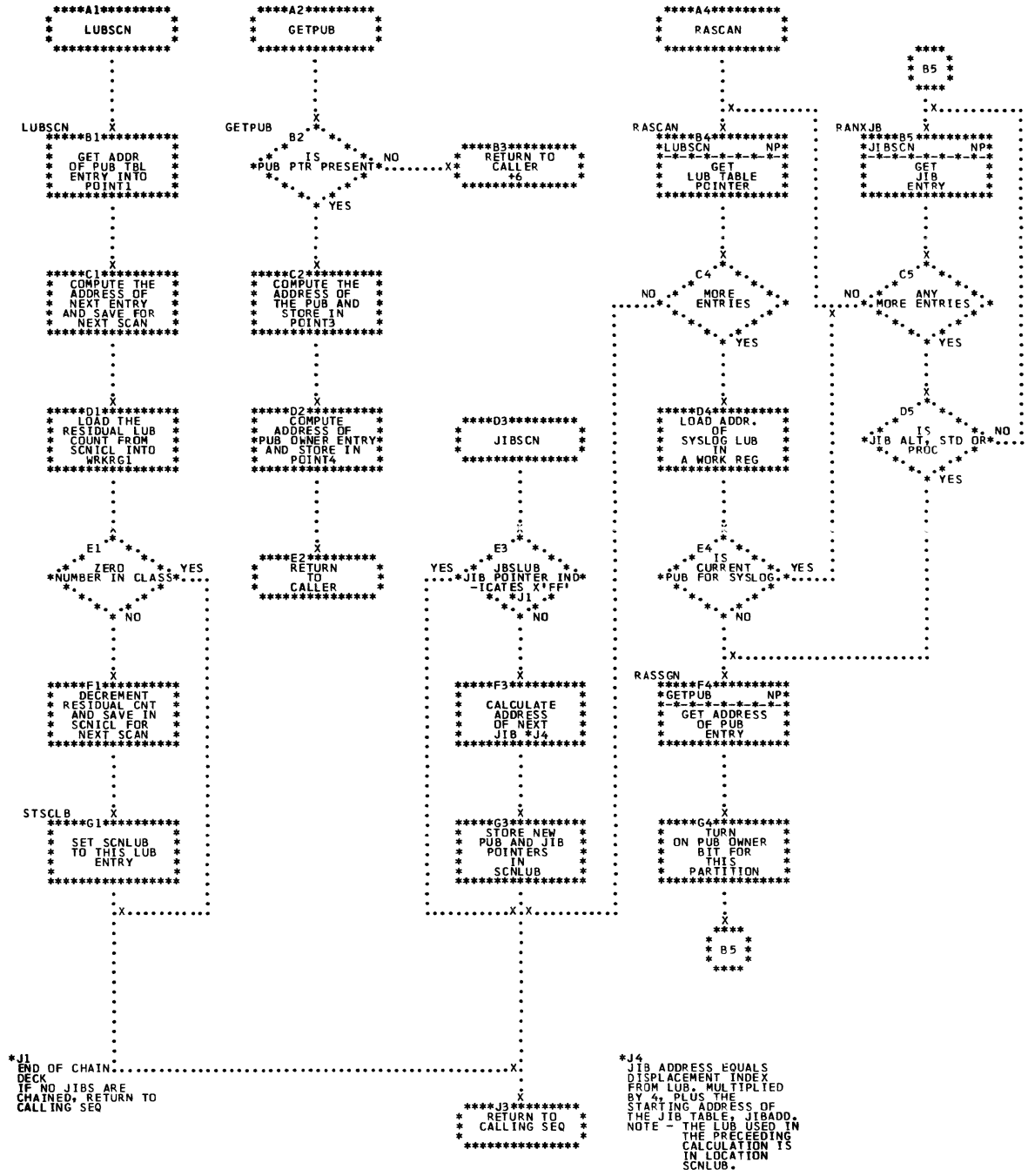


Chart NQ. $JOBCTLG - Label Prccessing Subrcutines (Part 1 of 2)
Refer to Charts 12 and 13.

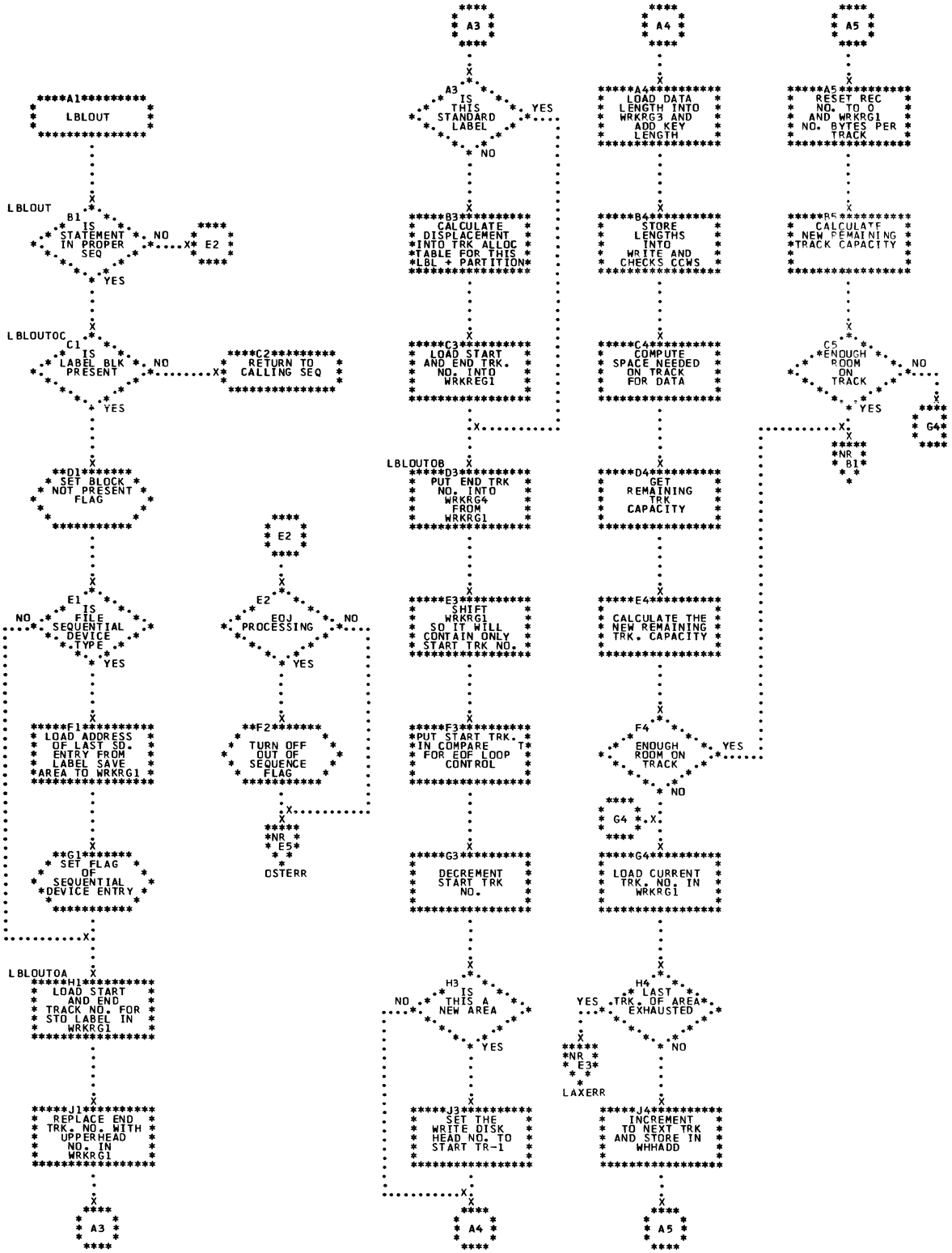


Chart NR. $JOBCTLG - Label Prccessing Subrcutines (Part 2 of 2)
Refer to Charts 13 and 13.

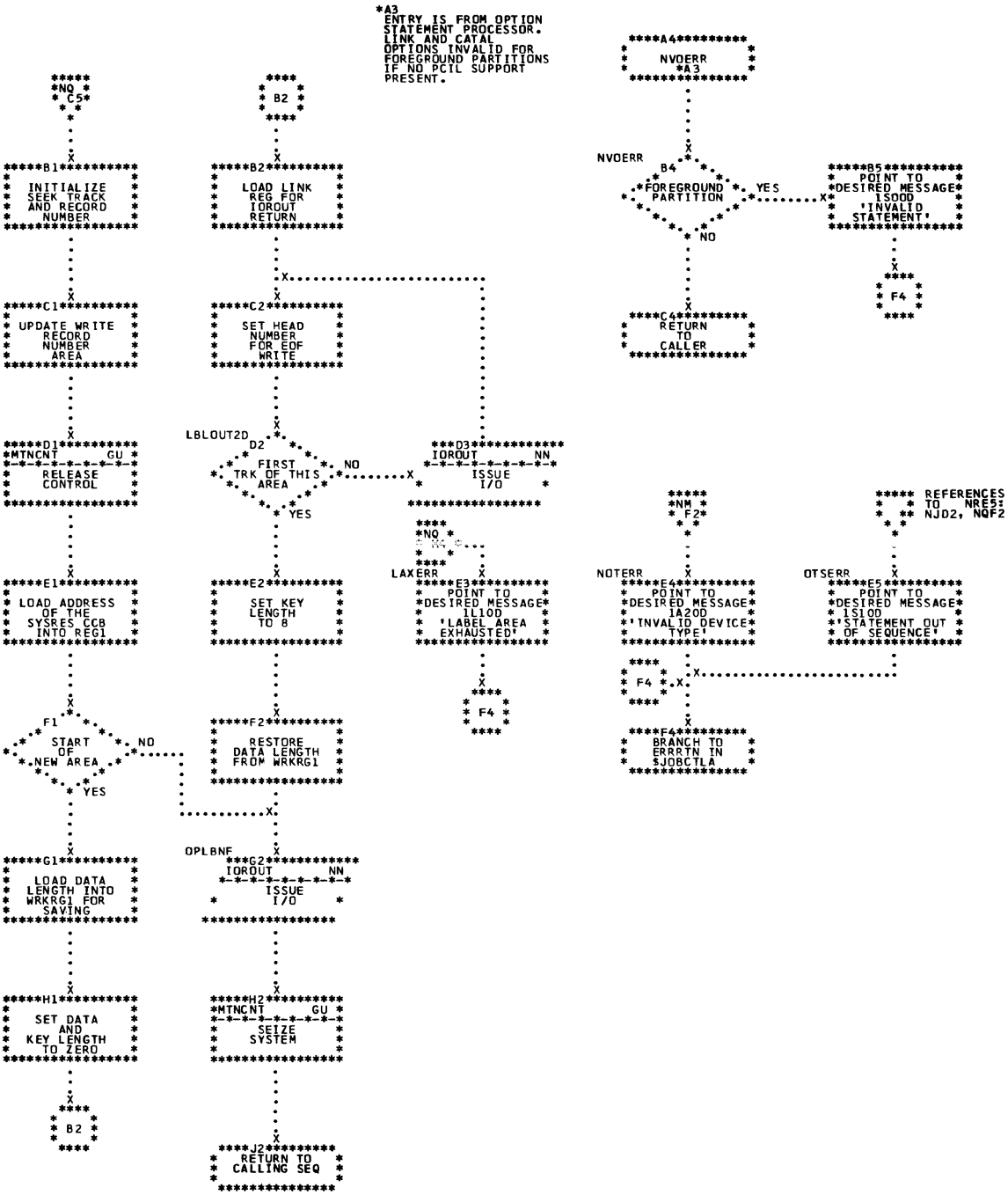


Chart NS. **$JOBCTLG - /+ (End of Procedure) Statement Processor**
Refer to Chart 13.

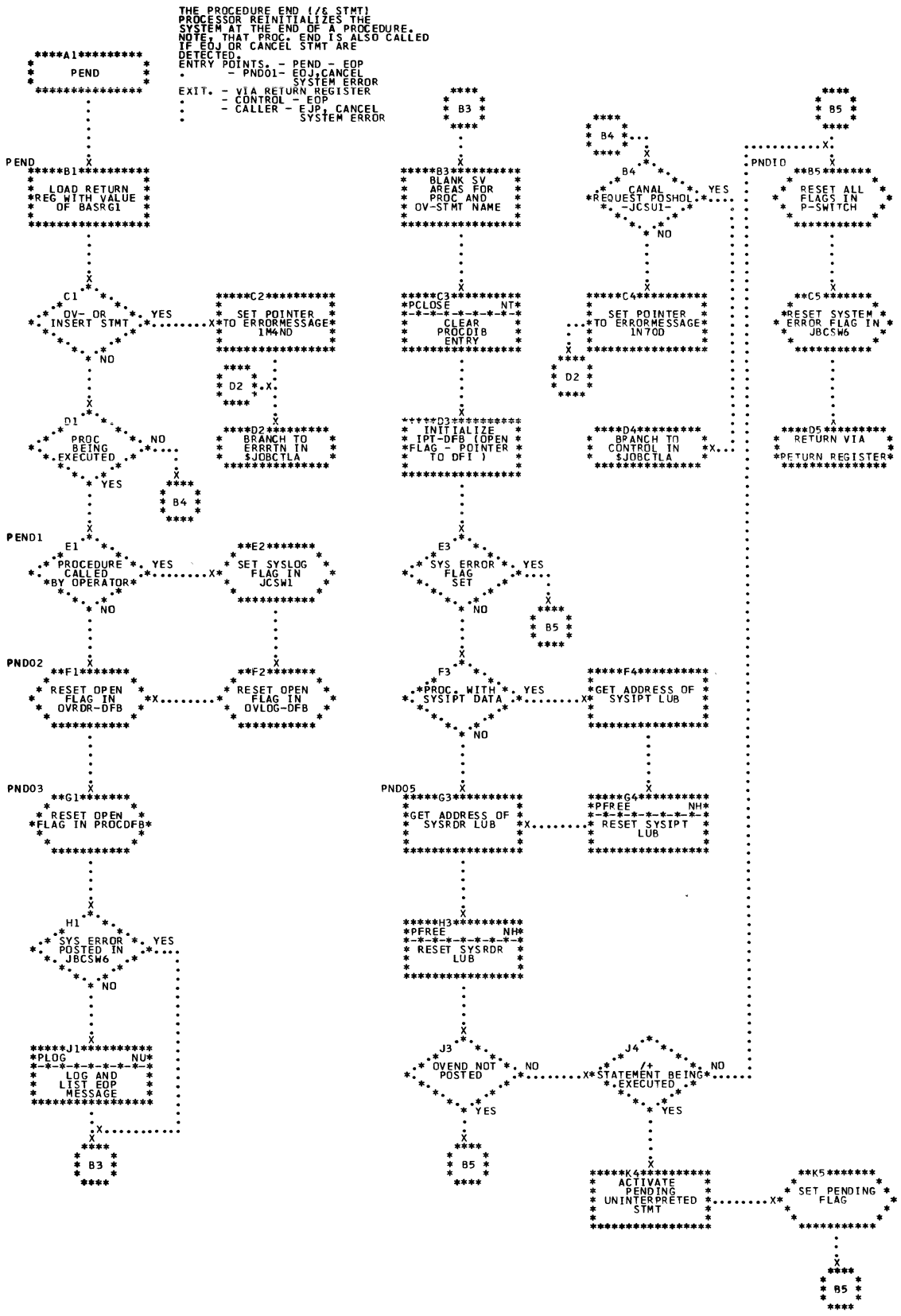


Chart NT. $JOBCTLG - EOP Subroutines (Part 1 of 2)
Refer to Chart 13.

SUBROUTINE PFREE --
ENQUES PROC.JIB ENTRY TO
CHAIN OF FREE JIBS
AND RESETS ORIGINAL LUB
CONTENT INTO POSTED
LUB ENTRY.
ERROR CONDITIONS.
- NO JIB CHAINED TO HANDLED LUB
- CHAINED JIB NO PROCEDURE JIB

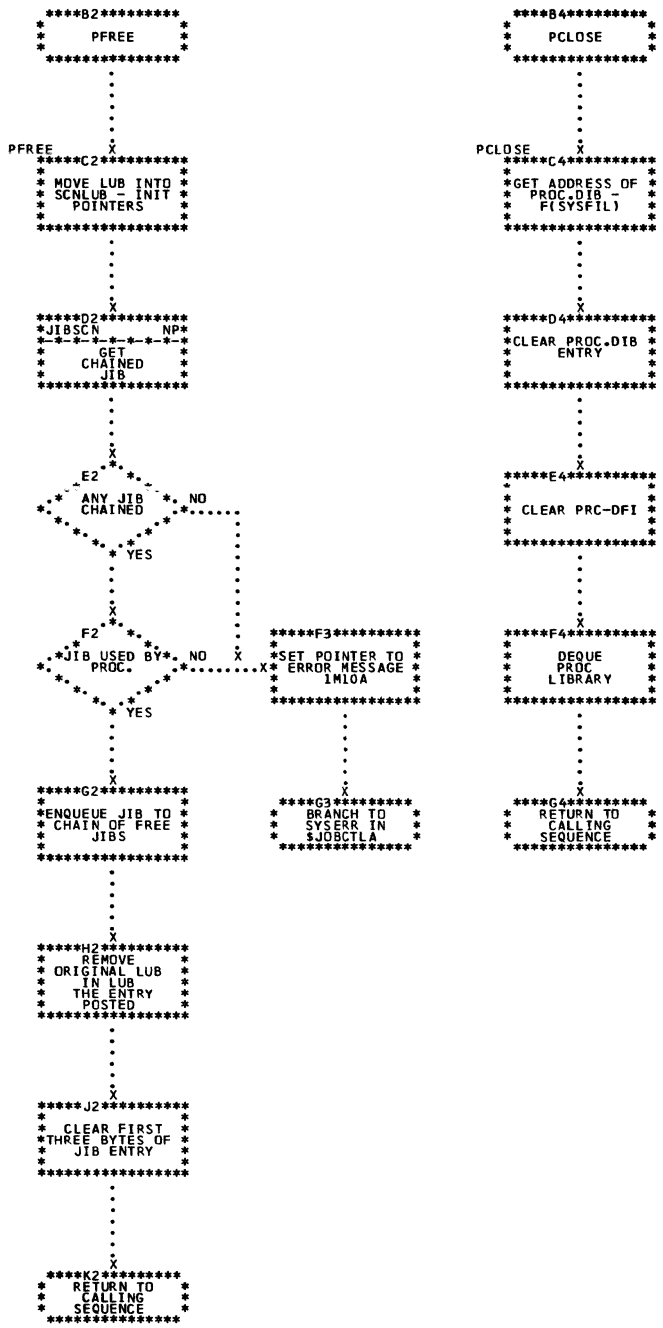


Chart NU. $JOBCTLG - EOP Subrcutines (Part 2 cf 2)
Refer to Chart 13.

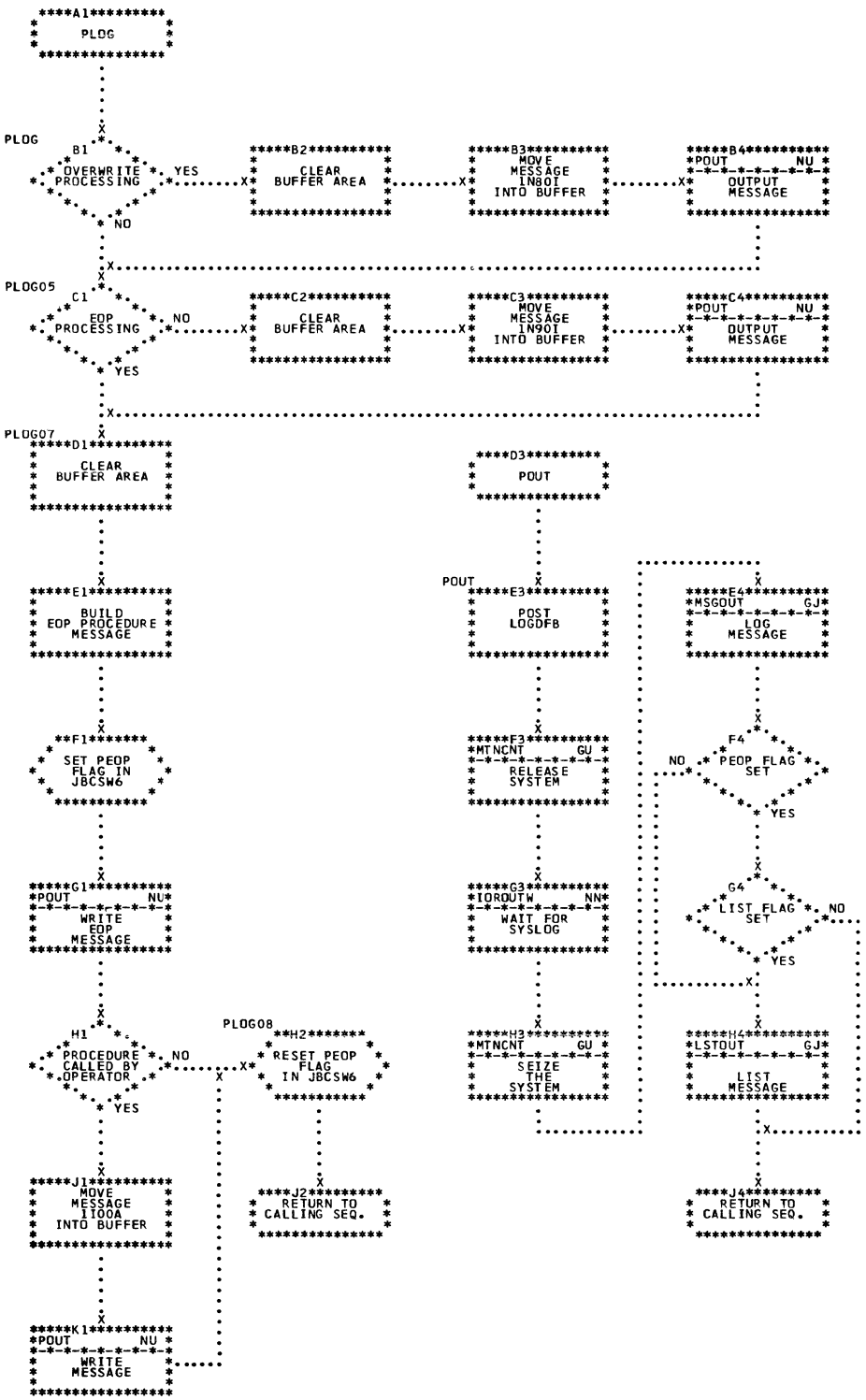


Chart PA. $JOBCTLJ - HOLD Command Processor
Refer to Chart 15.

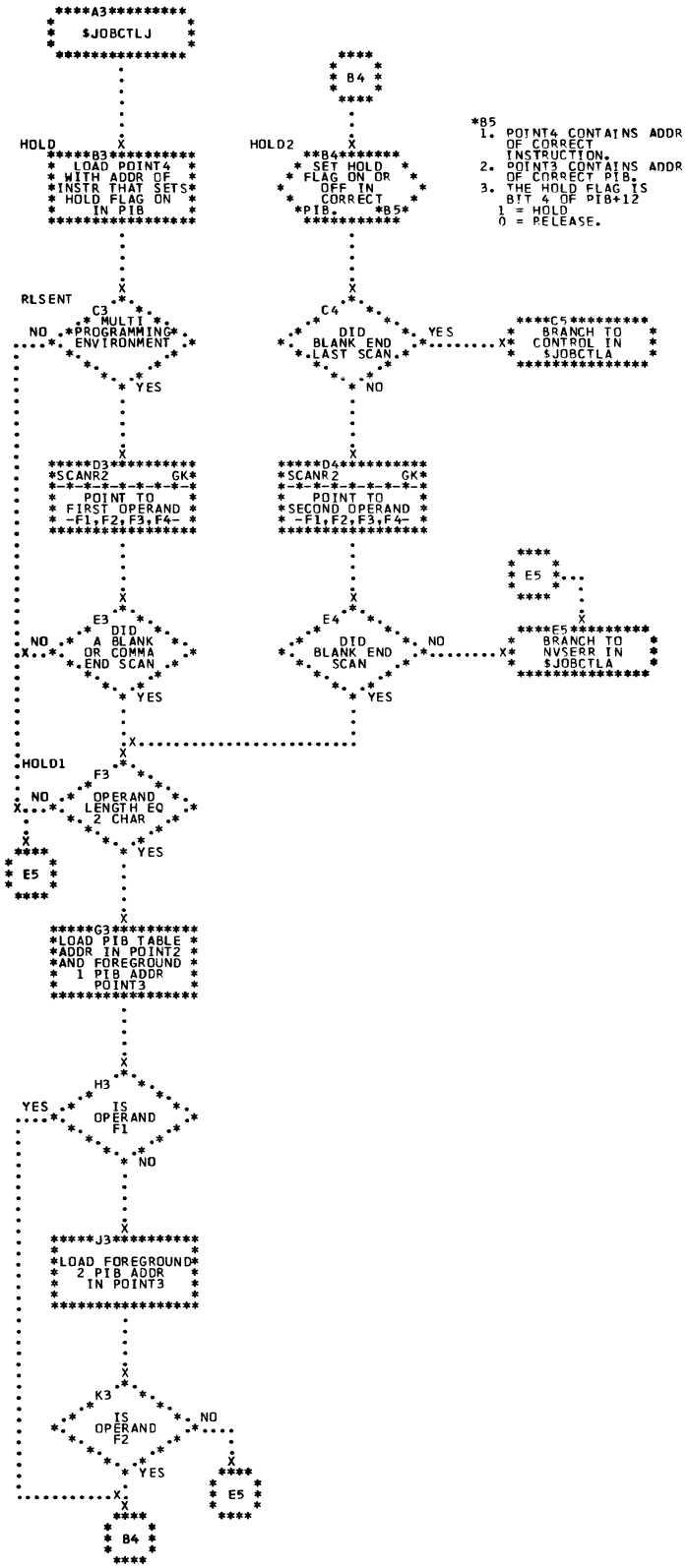


Chart PB. $JOBCTLJ - UCS Command Processor (Part 1 of 2)
Refer to Chart 15.

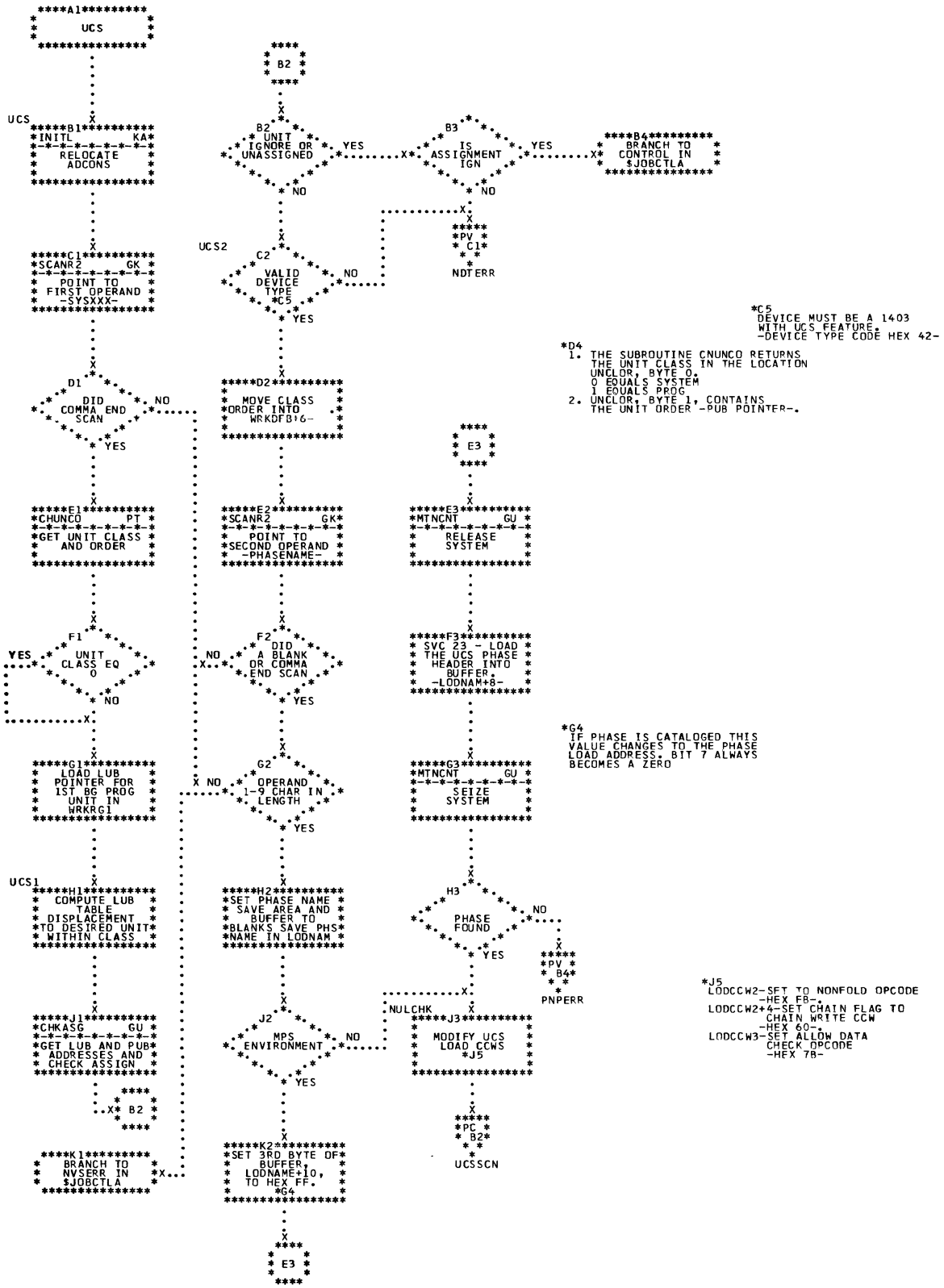


Chart PC. $JOBCTLJ - UCS Command Processor (Part 2 of 2)
Refer to Chart 15.

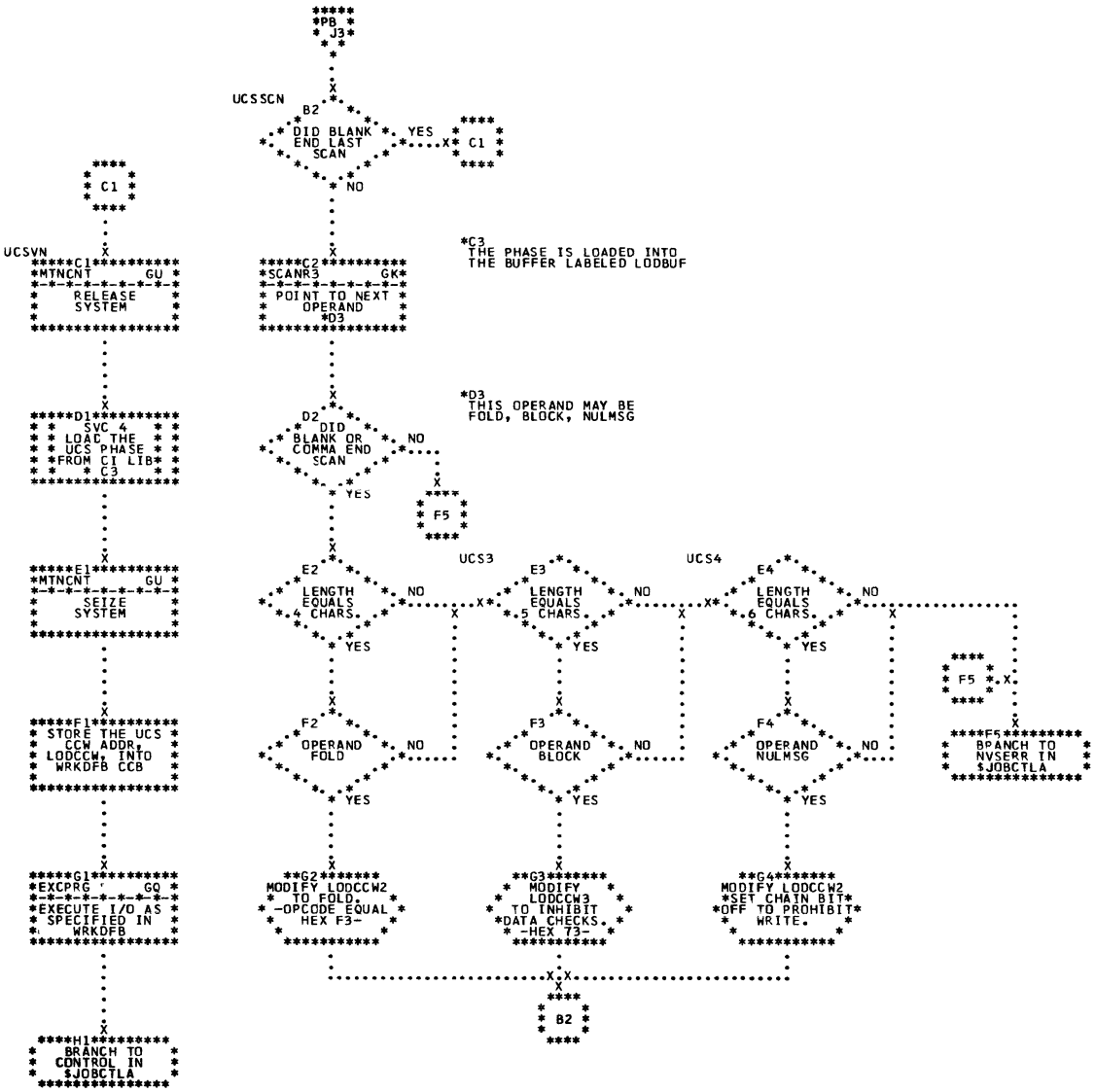


Chart PD. $JOBCTLJ - ACTICN and INCLUDE Statement Processors
Refer to Charts 15 and 16.

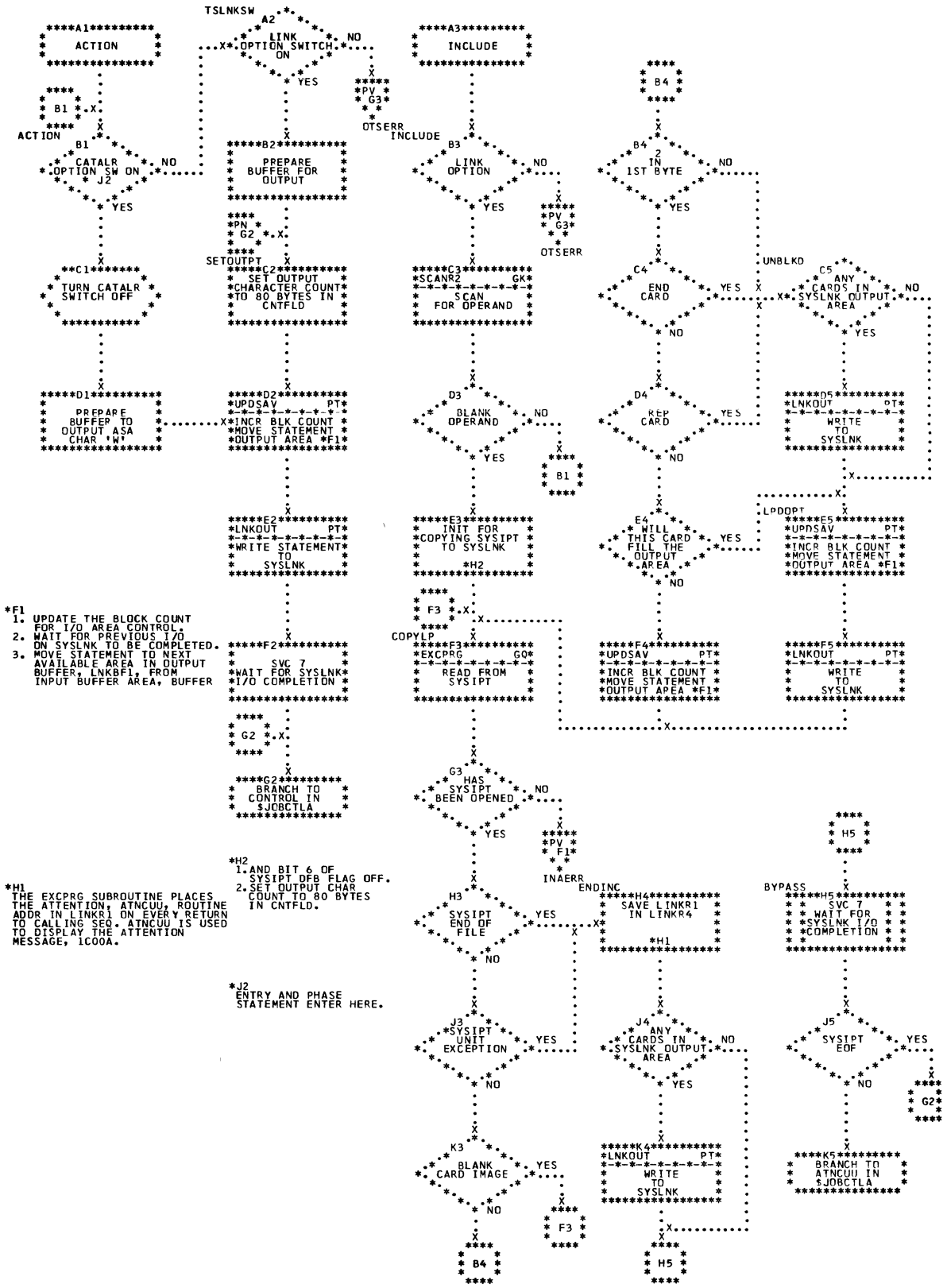


Chart PE. $JOBCTLJ - MTC Statement Prccessor (Part 1 of 2)
Refer to Chart 16.

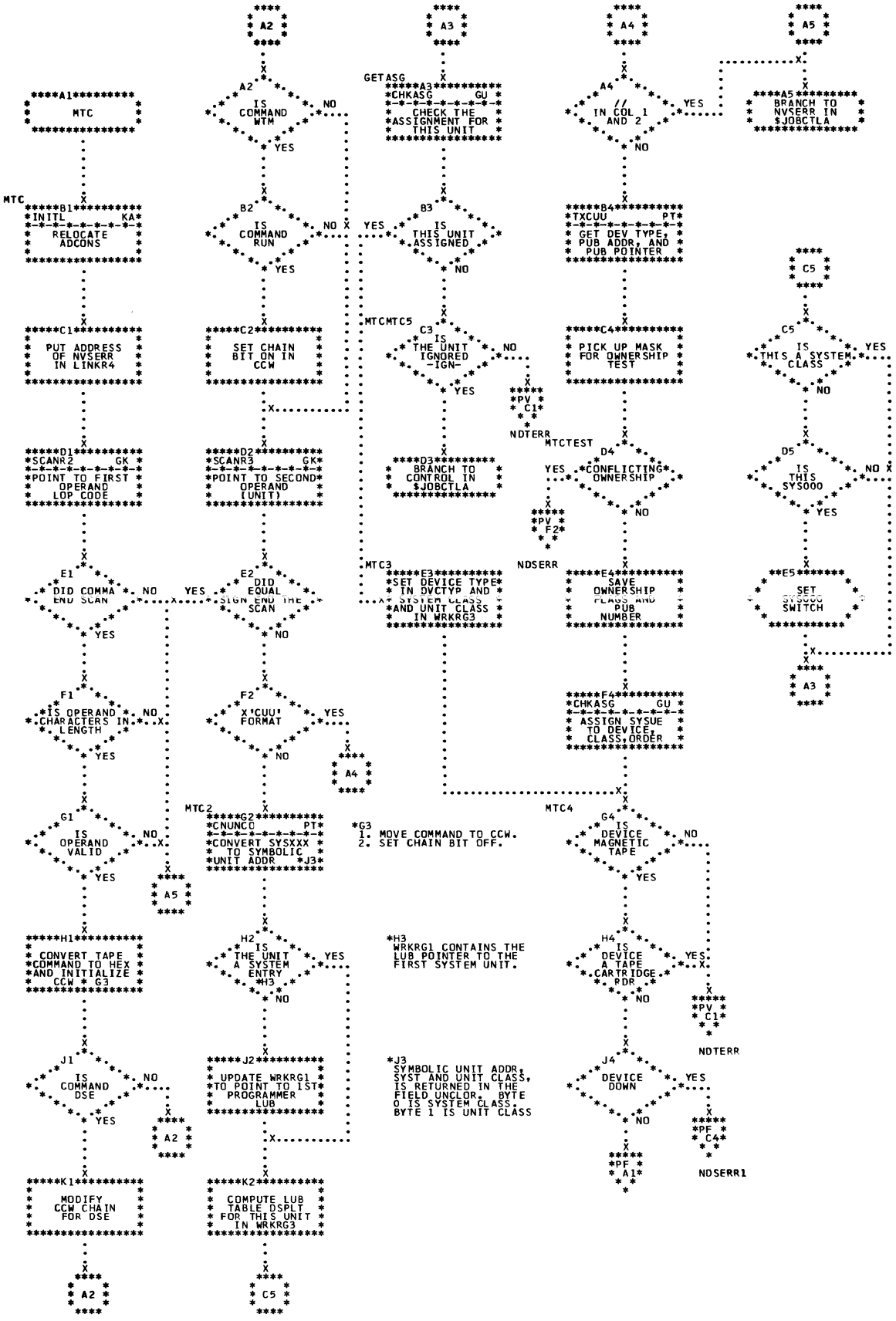


Chart PF. $JOBCTLJ - MTC Statement Processor (Part 2 of 2)
Refer to Chart 16.

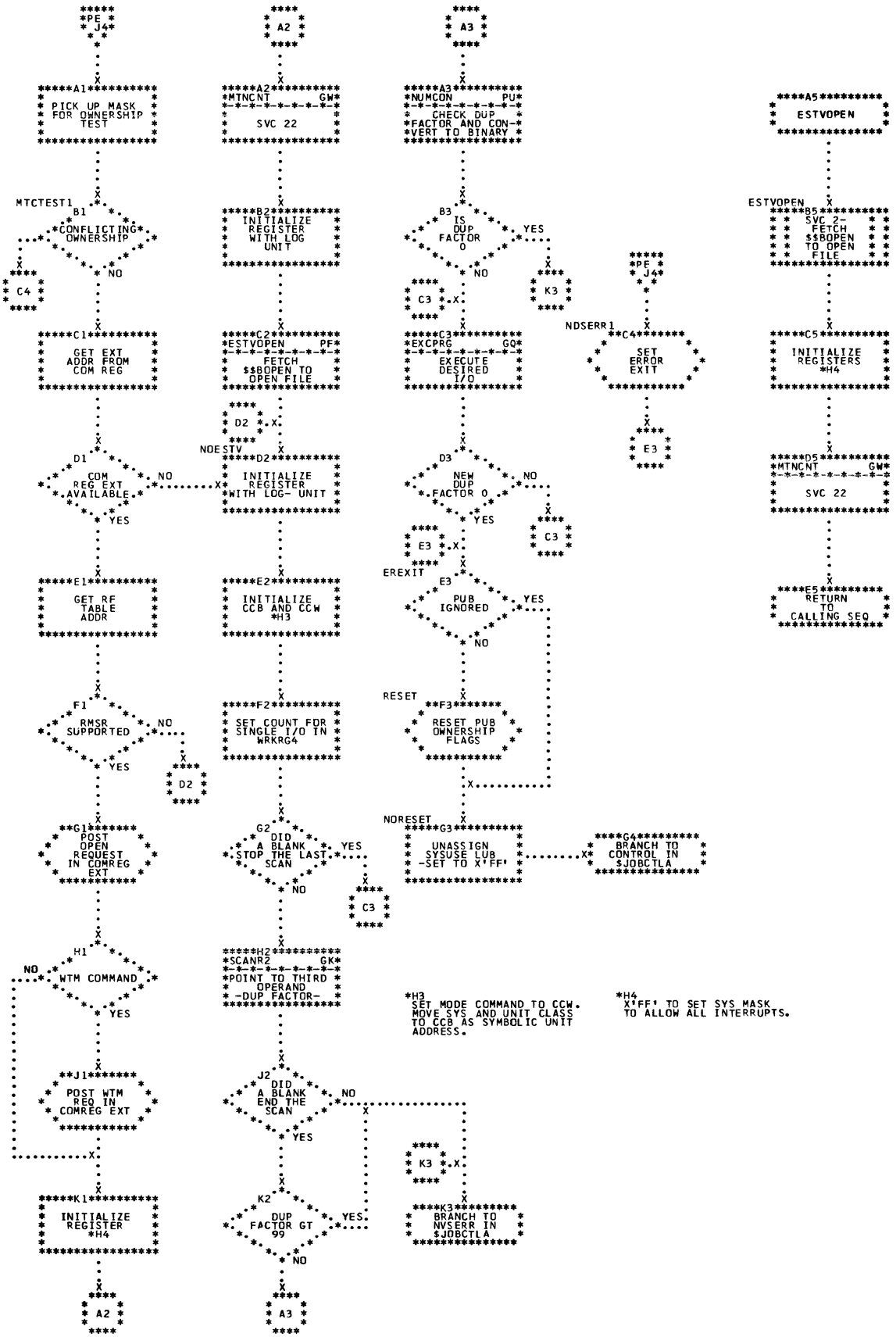


Chart PG. $JOBCTLJ - SET Statement Prccesscr (Part 1 cf 3)
Refer to Chart 16.

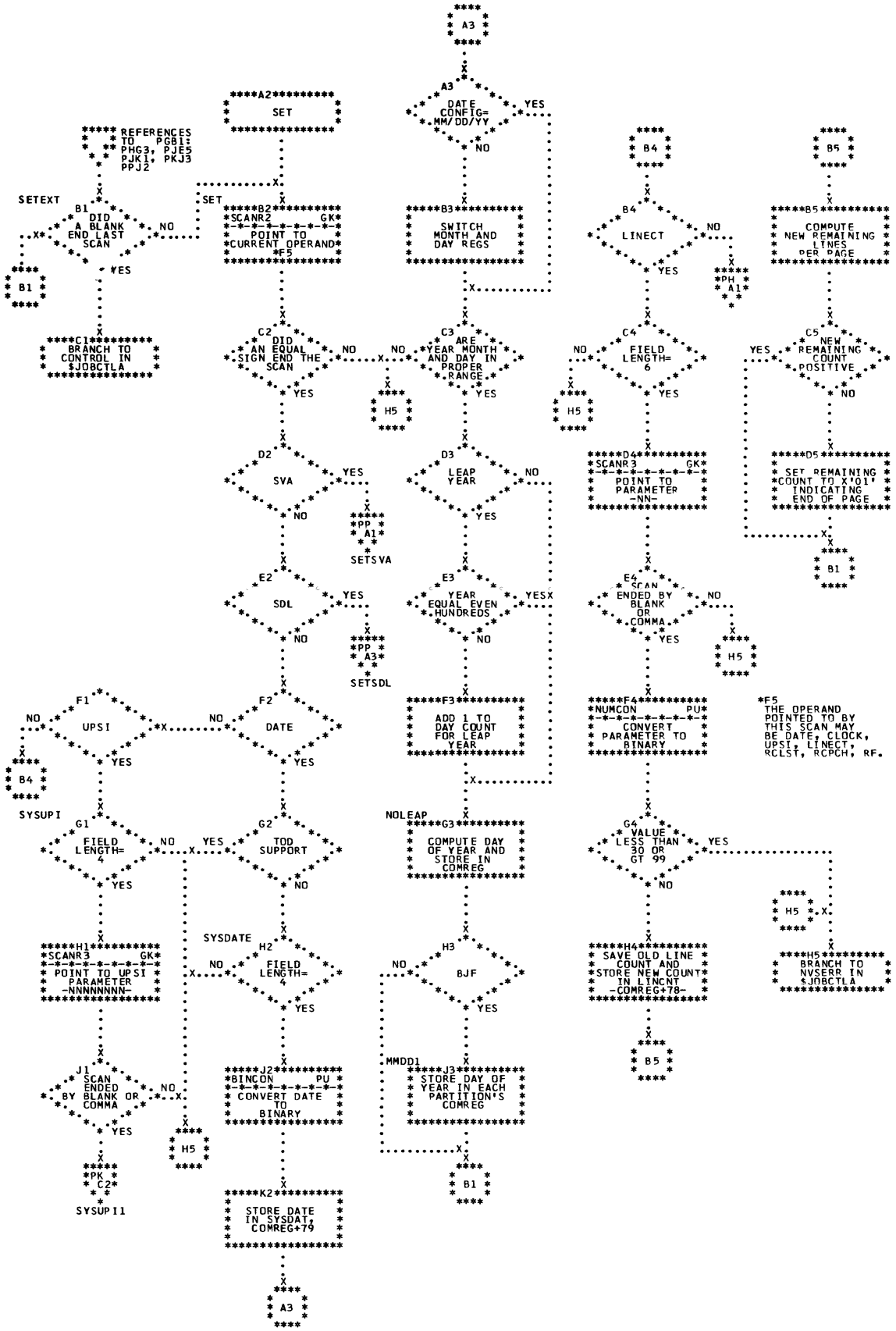


Chart PH. $JOBCTLJ - SET Statement Prccesscr (Part 2 cf 3)
Refer to Chart 16.

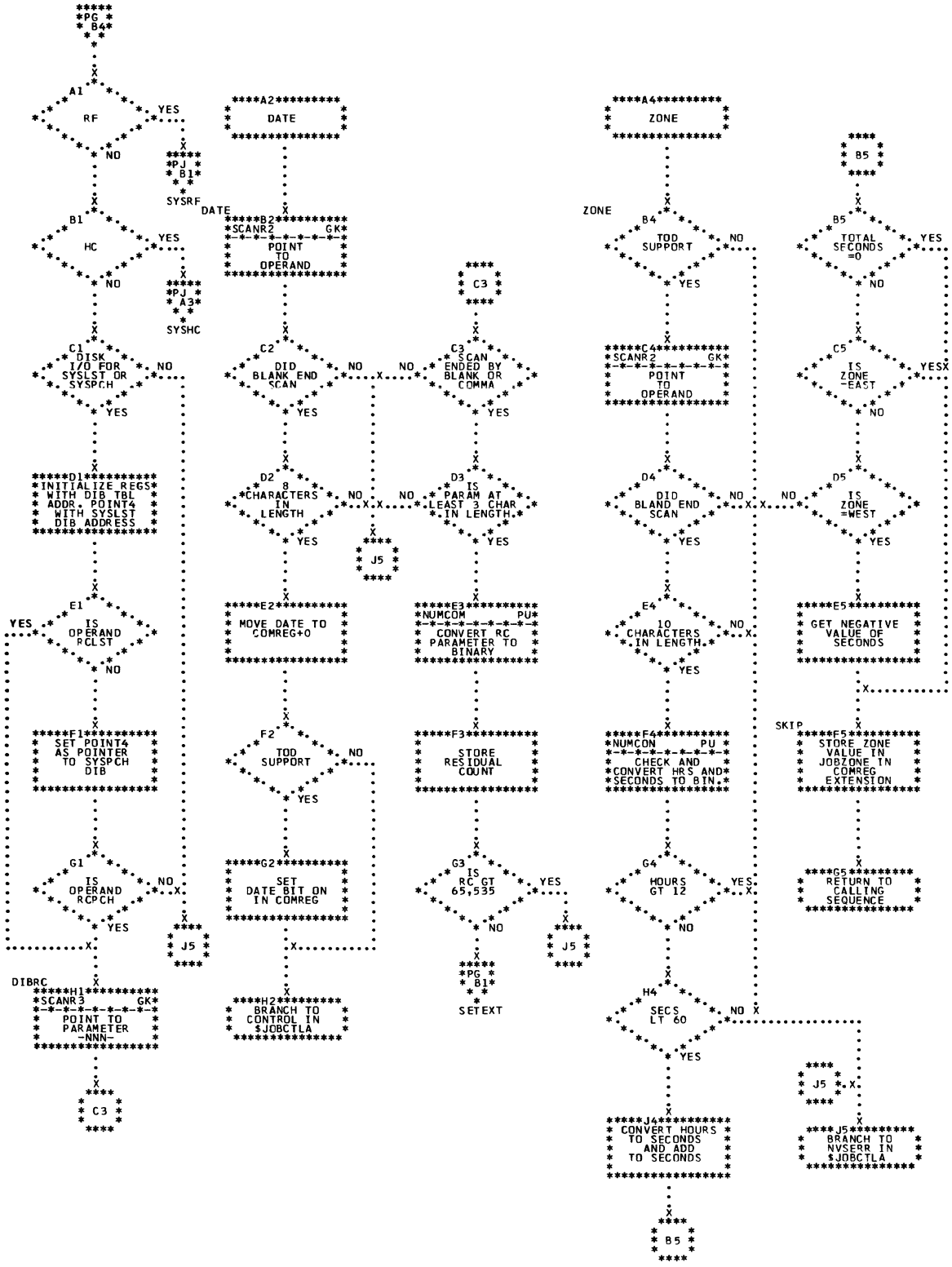


Chart PJ. $JOBCTLJ - SET Statement Prccesscr (Part 3 cf 3)
Refer to Chart 16.

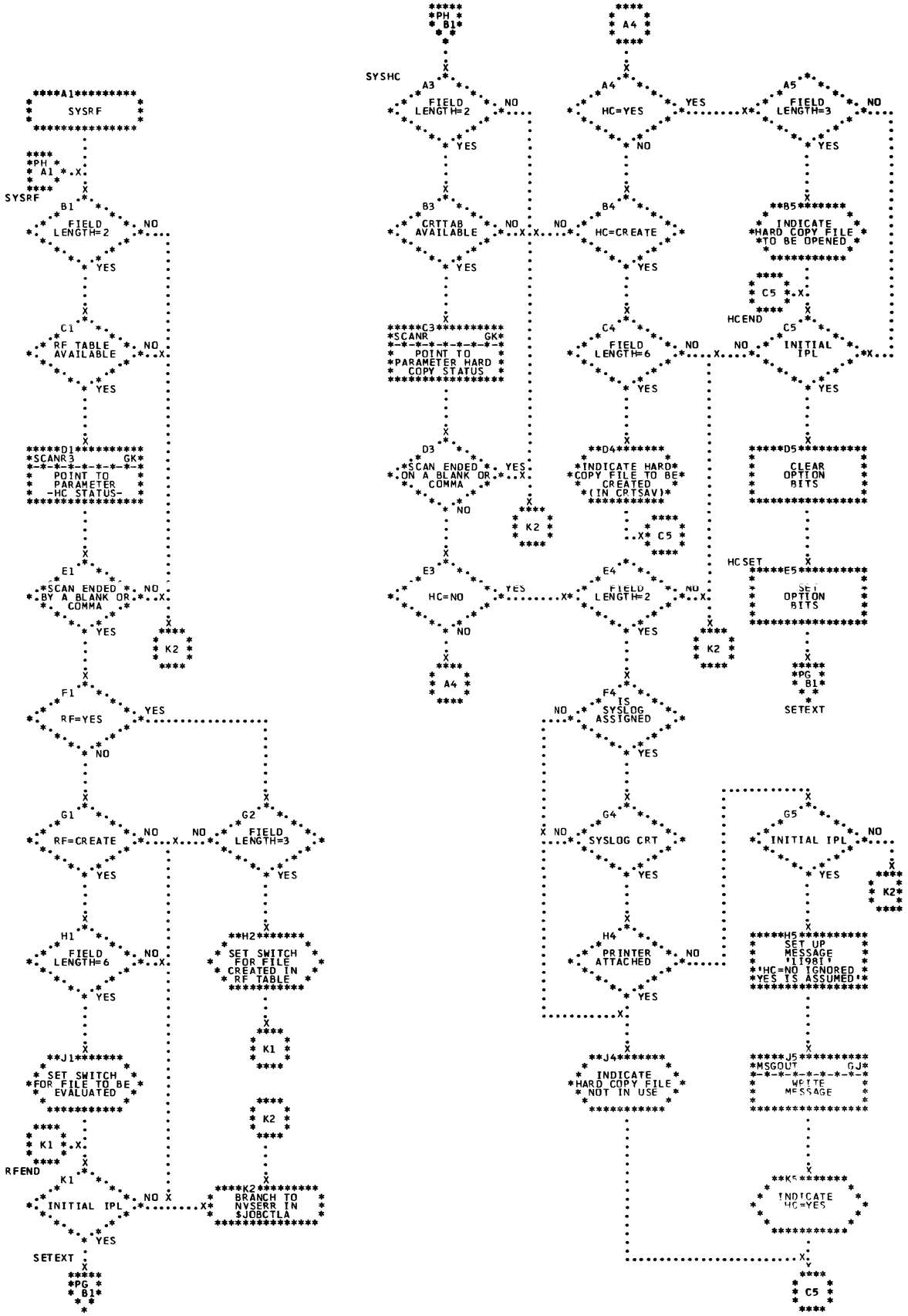


Chart PK. $JOBCTLJ - UPSI Statement Processcr
Refer to Chart 16.

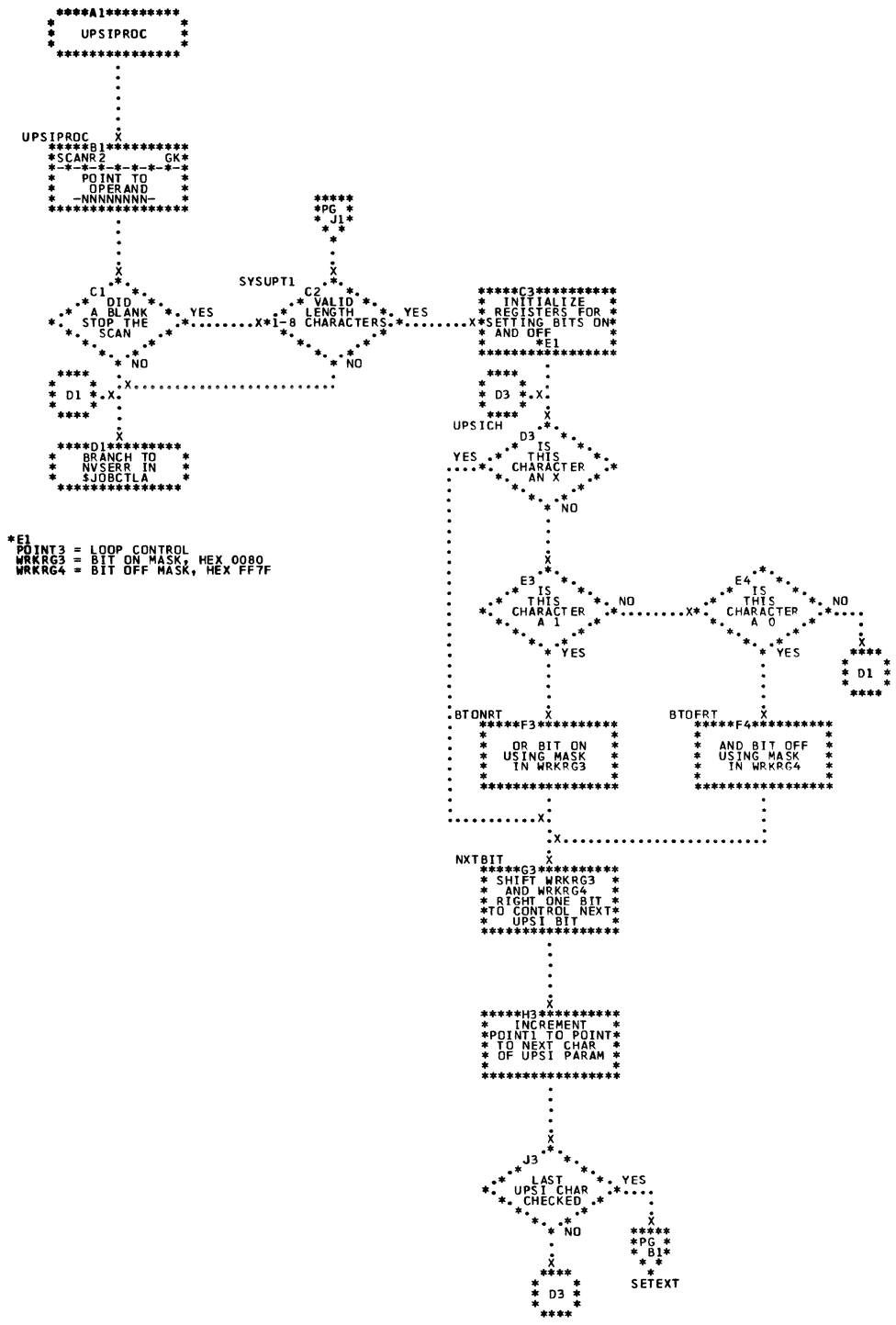


Chart PL. $JOBCTLJ - PAUSE, LOG, and NOLOG Command Processors
Refer to Chart 14.

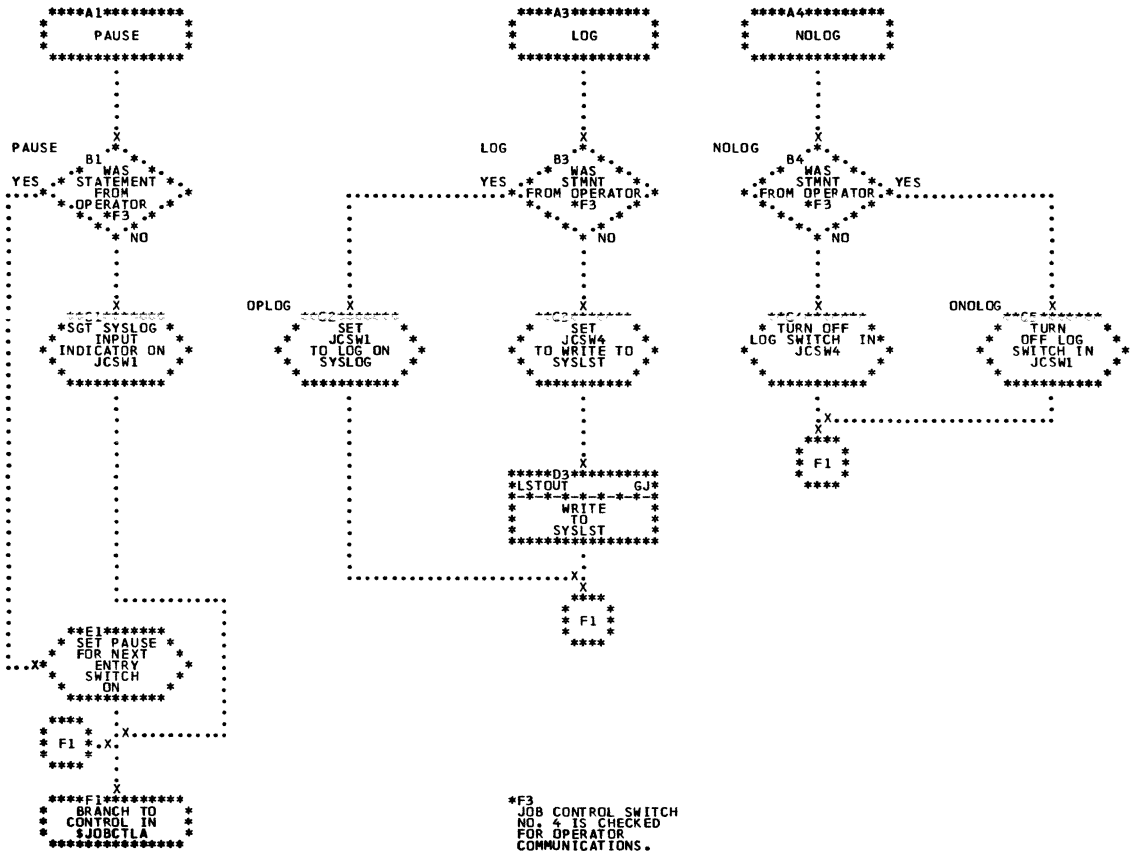


Chart PM. $JOBCTLJ - STOP Statement Processor
Refer to Chart 14.

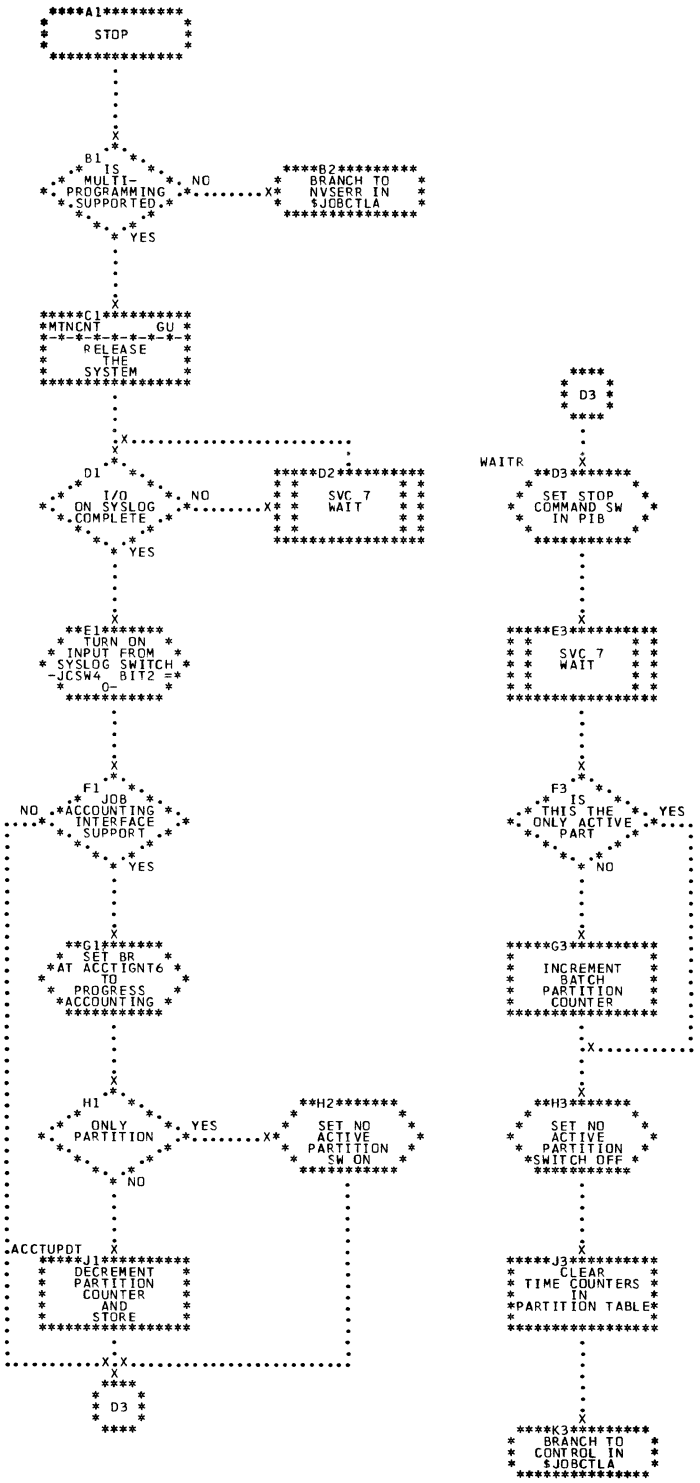


Chart PN. $JOBCTLJ - CATAIR Statement Processor
Refer to Chart 16.

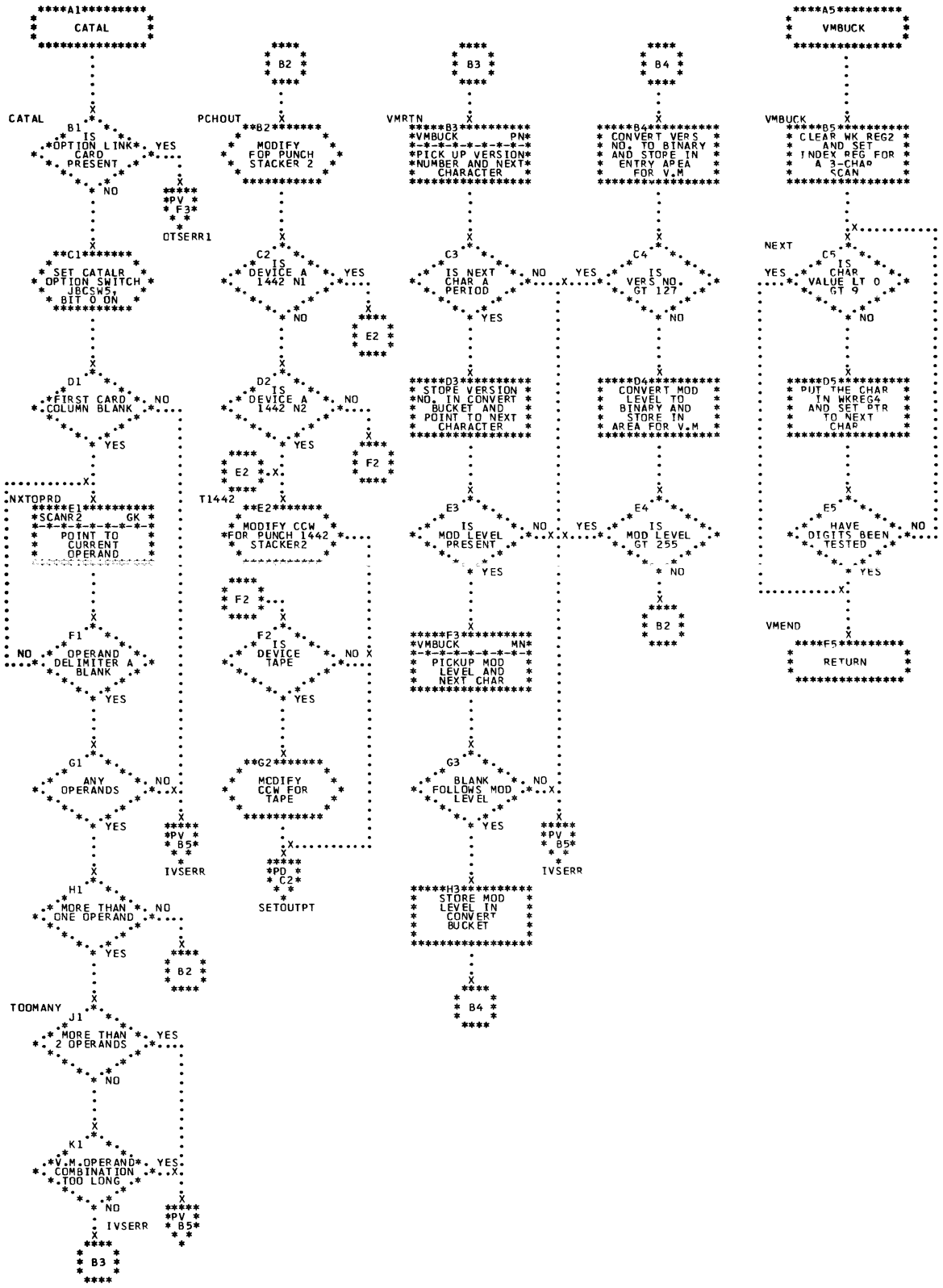


Chart PP. $JOBCTLJ - SETSVA and SETSDI Statement Processors
Refer to Chart 16.

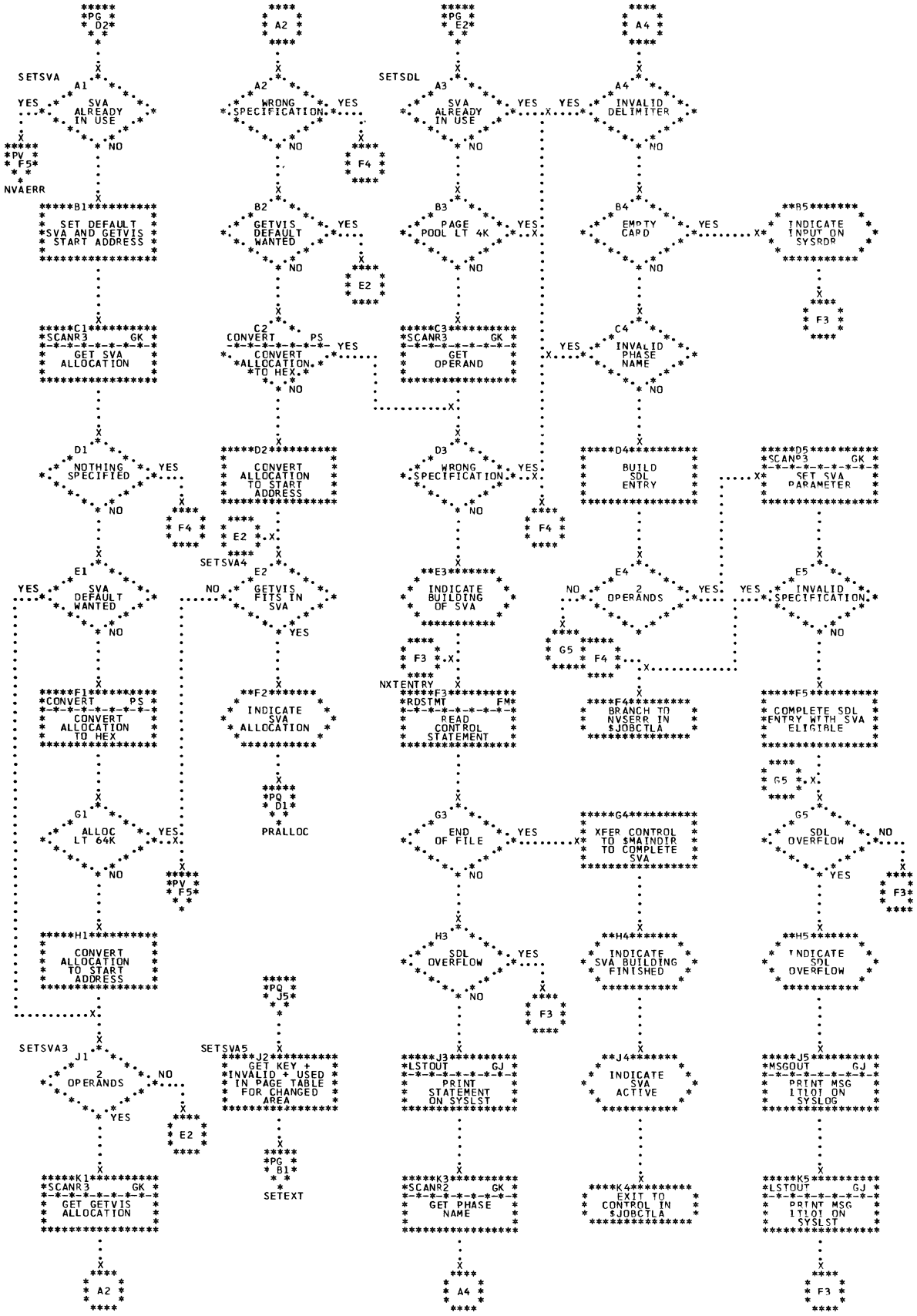


Chart PQ. $JOBCTLJ - ALLOC Statement Processor
Refer to Chart 14.

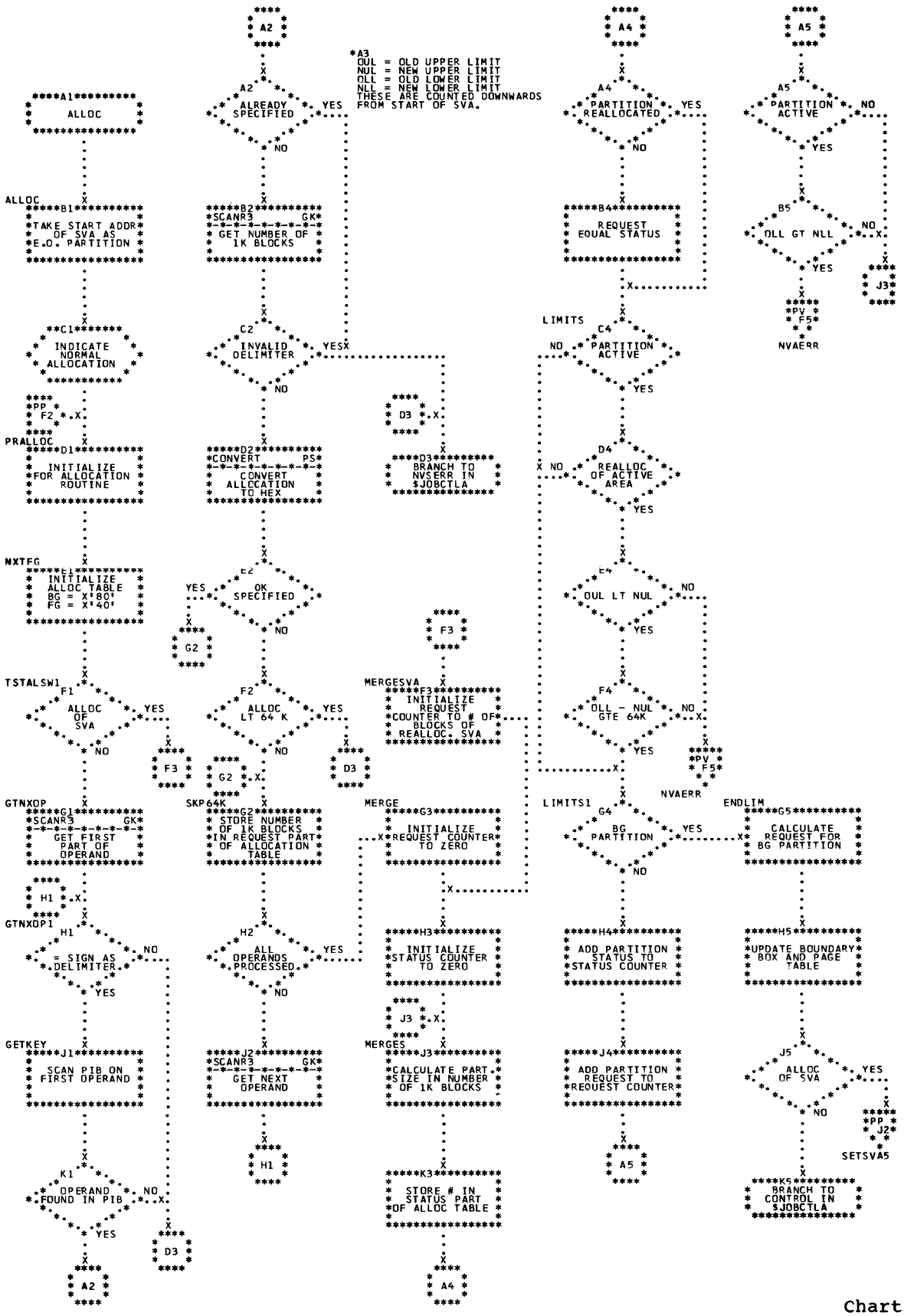


Chart PR. $JOBCTLJ - ALLOCR Statement Processcr (Part 1 of 2)
Refer to Chart 14.

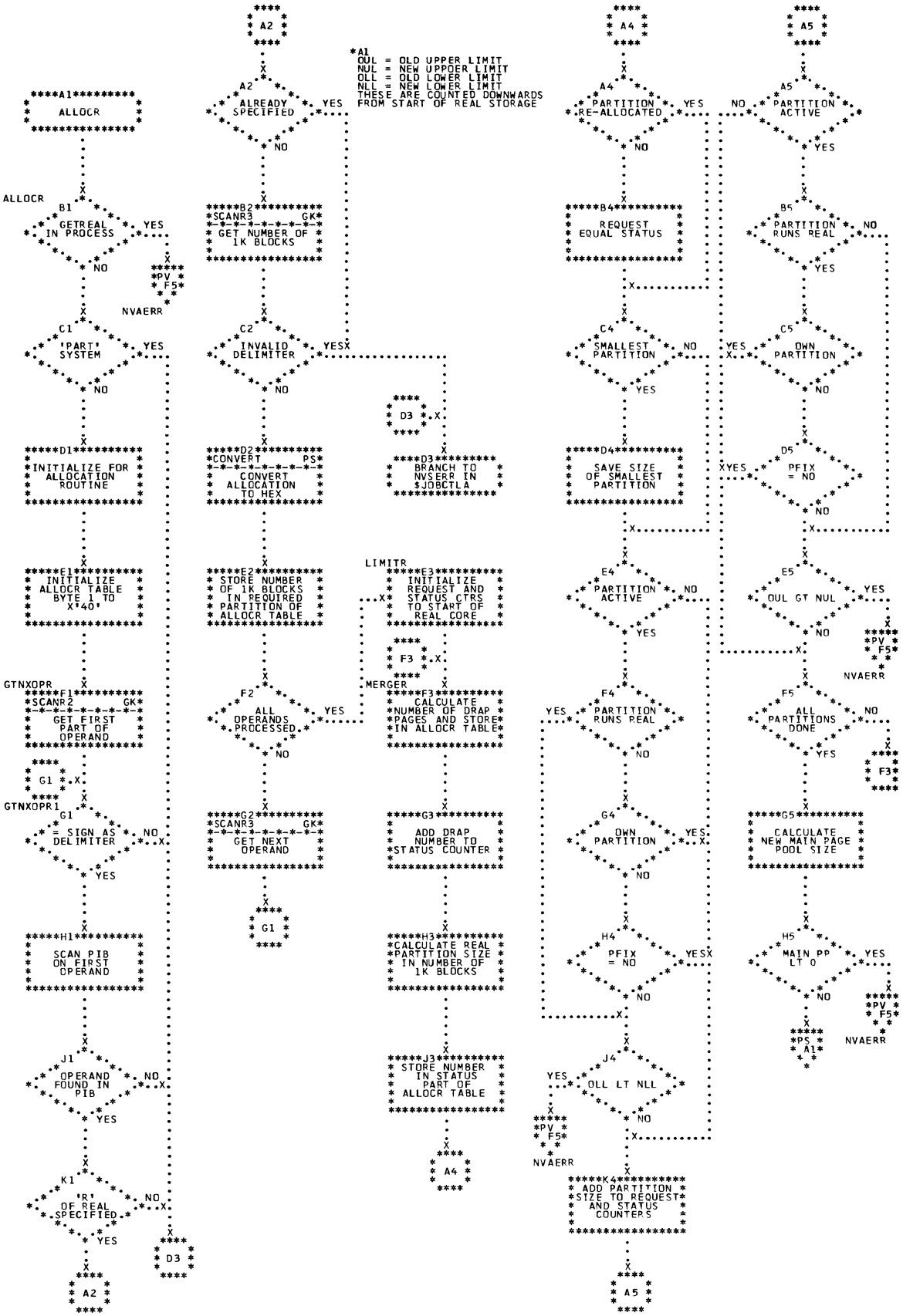


Chart PS. $JOBCTLJ - ALLOCR Statement Processcr (Part 2 of 2)
Refer to Chart 14.

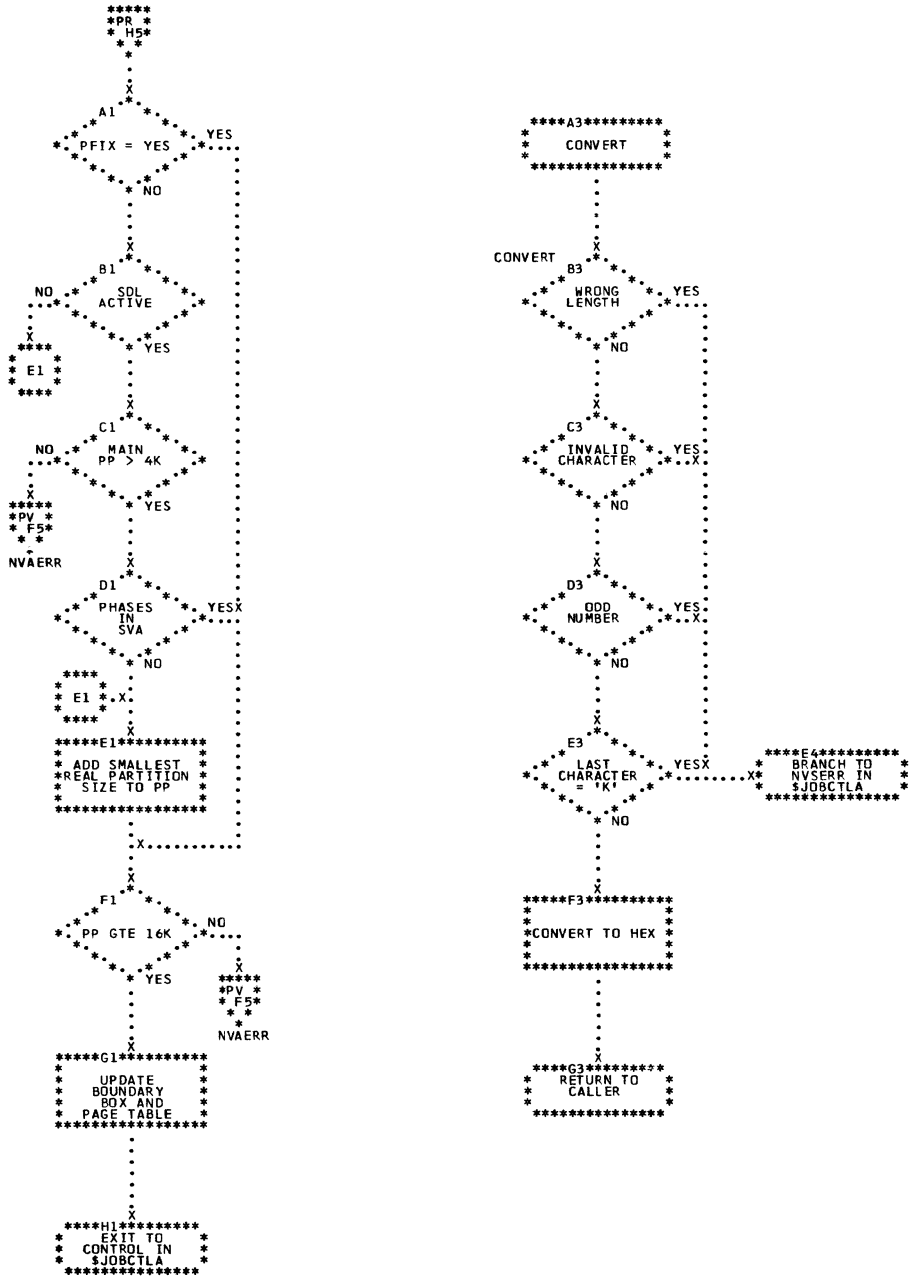
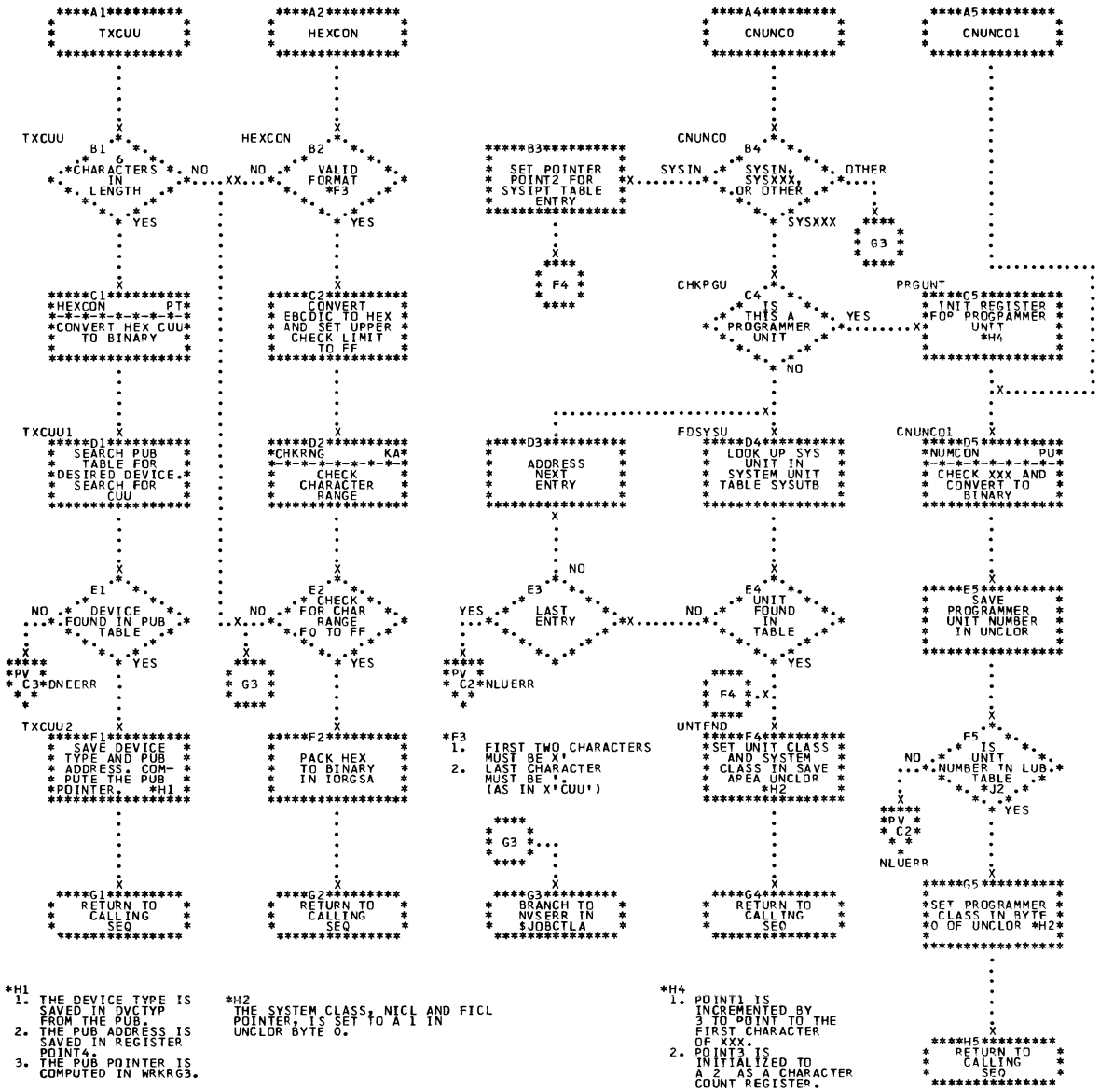


Chart PT. $JOBCTLJ - Miscellaneous Subroutines (Part 1 of 2)
Refer to Charts 14-16.



*H1
1. THE DEVICE TYPE IS SAVED IN DVCTYP FROM THE PUB.
2. THE PUB ADDRESS IS SAVED IN REGISTER POINT4.
3. THE PUB POINTER IS COMPUTED IN WRKRG3.

*H2
THE SYSTEM CLASS, NICL AND FICL POINTER, IS SET TO A 1 IN UNCLOR BYTE 0.

*H4
1. POINT1 IS INCREMENTED BY 3 TO POINT TO THE FIRST CHARACTER OF XXX.
2. POINT3 IS INITIALIZED TO A 2 AS A CHARACTER COUNT REGISTER.

*F3
1. FIRST TWO CHARACTERS MUST BE X'
2. LAST CHARACTER MUST BE ', (AS IN X'CUU')

*J2
1. UNCLOR, BYTE 1, THE UNIT CLASS, LUB POINTER, IS THE FUNCTION OF THE SYS ARGUMENT IN THE TABLE SYSUTB.
2. UNCLOR, BYTE 0, THE SYSTEM CLASS, NICL AND FICL POINTER, IS SET TO ZERO BECAUSE THE ROUTINE IS WORKING WITH A SYSTEM UNIT.

*K2
CHECK ONLY LUBS FOR THIS PARTITION

Chart PU. $JOBCTLJ - Miscellanecus Subroutines (Part 2 cf 2)
Refer to Charts 14-16.

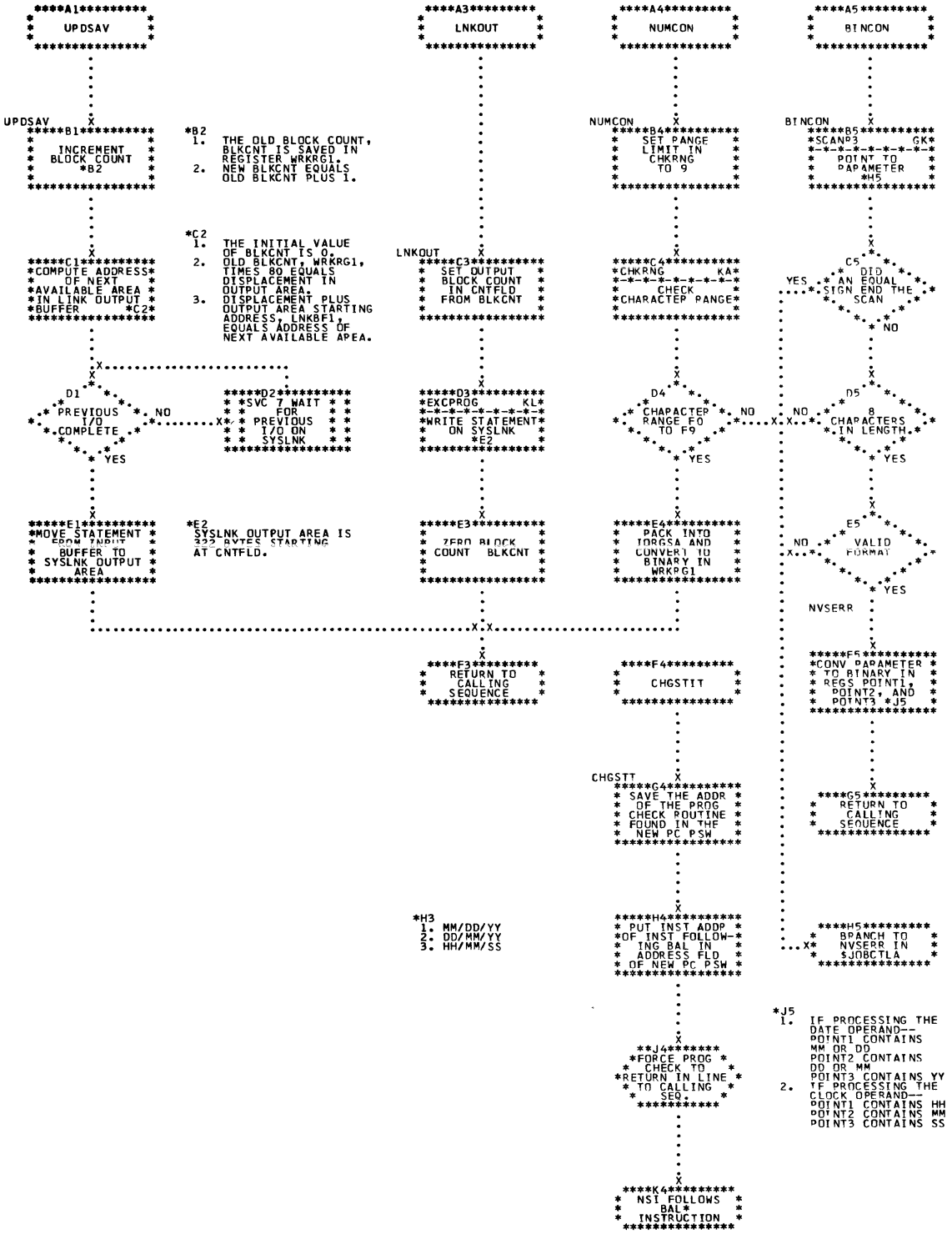
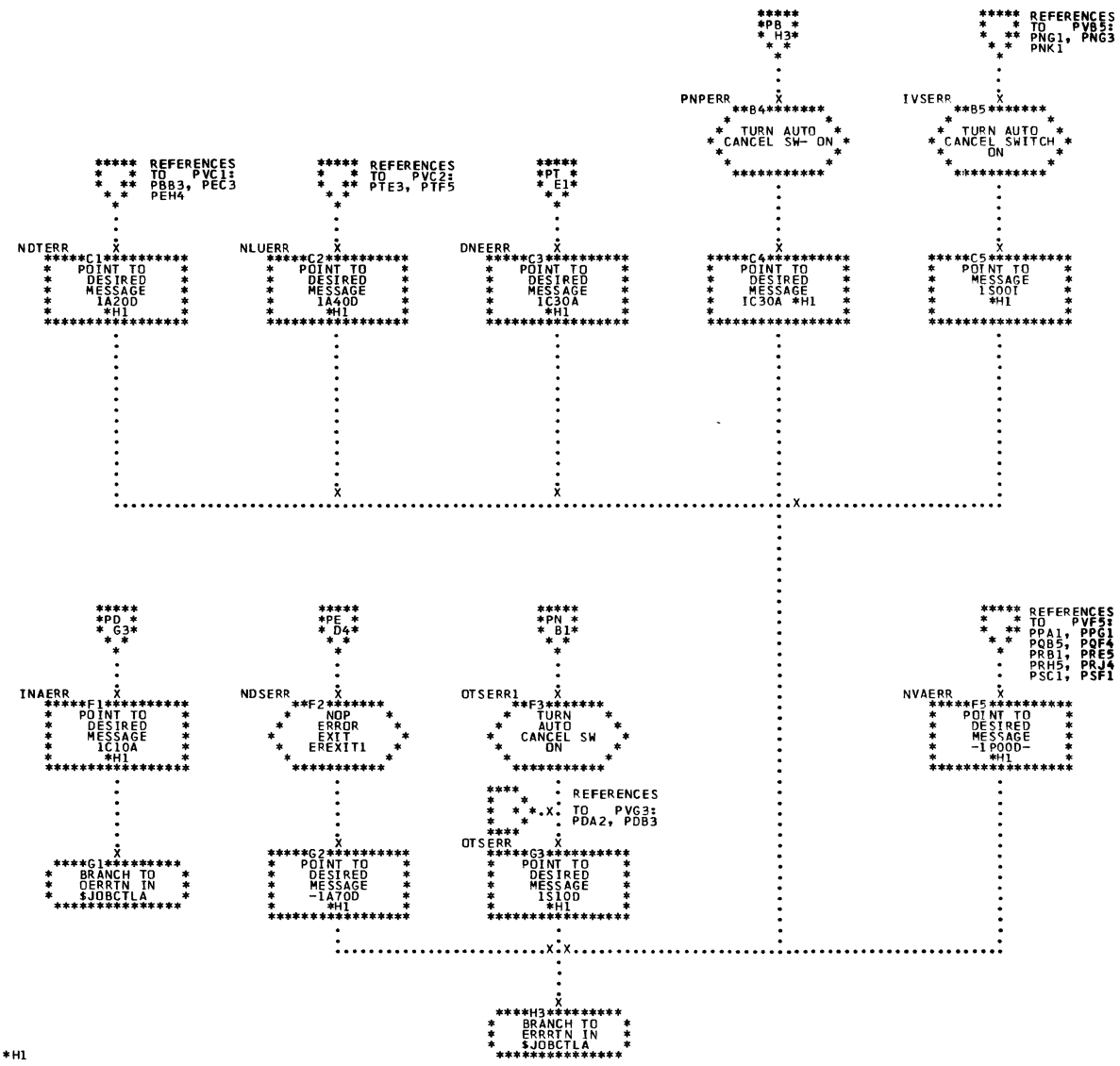


Chart PV. $JOBCTLJ - Error Subroutines
Refer to Charts 14-16.



*H1

MESSAGE	DESCRIPTION
IA20D	INVALID DEVICE TYPE
IA40D	INVALID LOGICAL UNIT SPECIFICATION
IA50D	DEVICE NOT-DEFINED
IA70D	INVALID DEVICE STATUS
IC10A	PLEASE ASSIGN-SYSRDR,SYSIPT,SYSLNK-
IC30A	PROGRAM NOT FOUND
IP00D	INVALID ALLOCATION
IS03I	INVALID STATEMENT
IS10D	STATEMENT OUT OF SEQUENCE

Chart QA. $JOBCTLK - LBLTYP, VOL, & TPLAB Statement Processors
Refer to Chart 17.

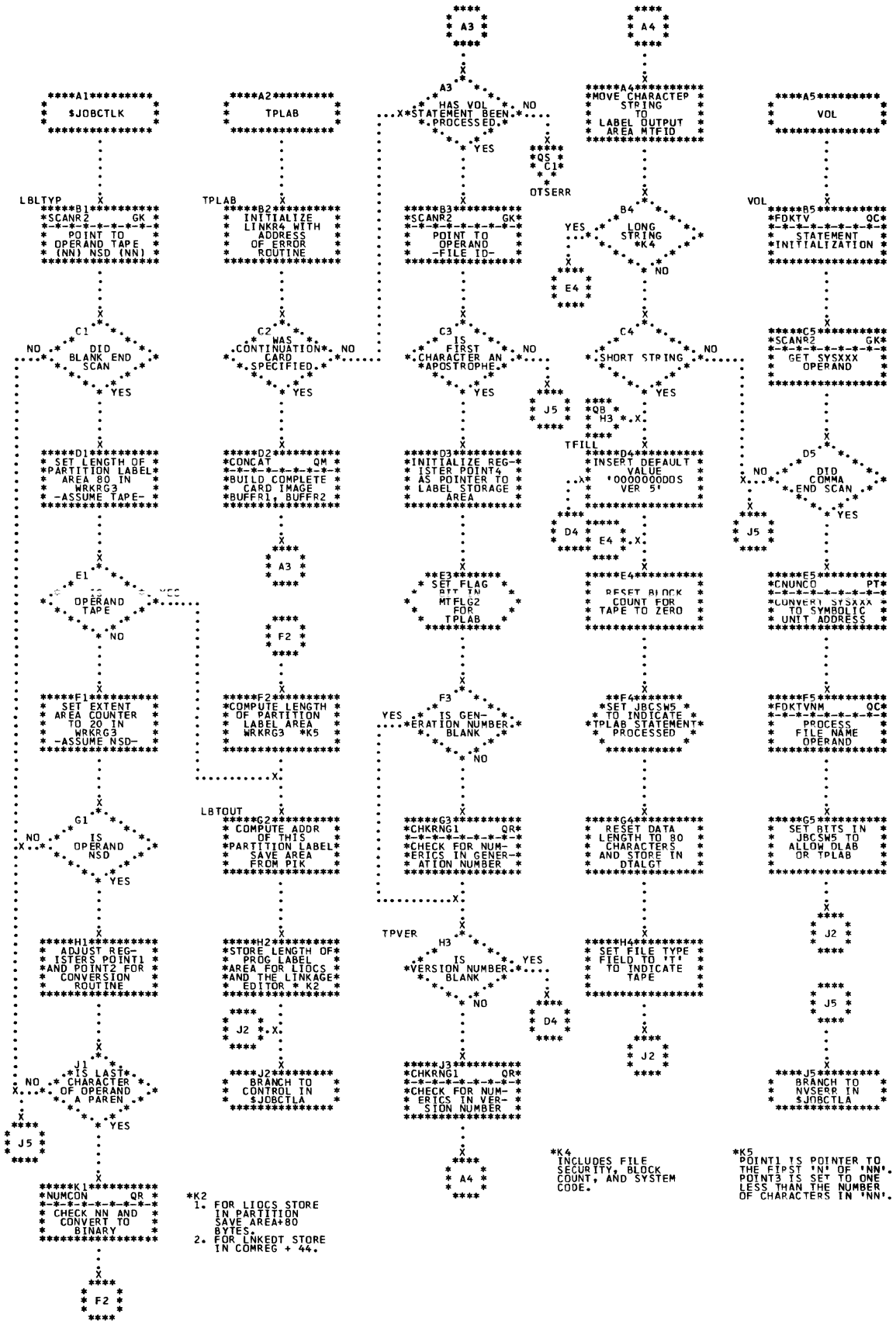


Chart QB. $JOBCTLK - TLBL Statement Processor
Refer to Chart 18.

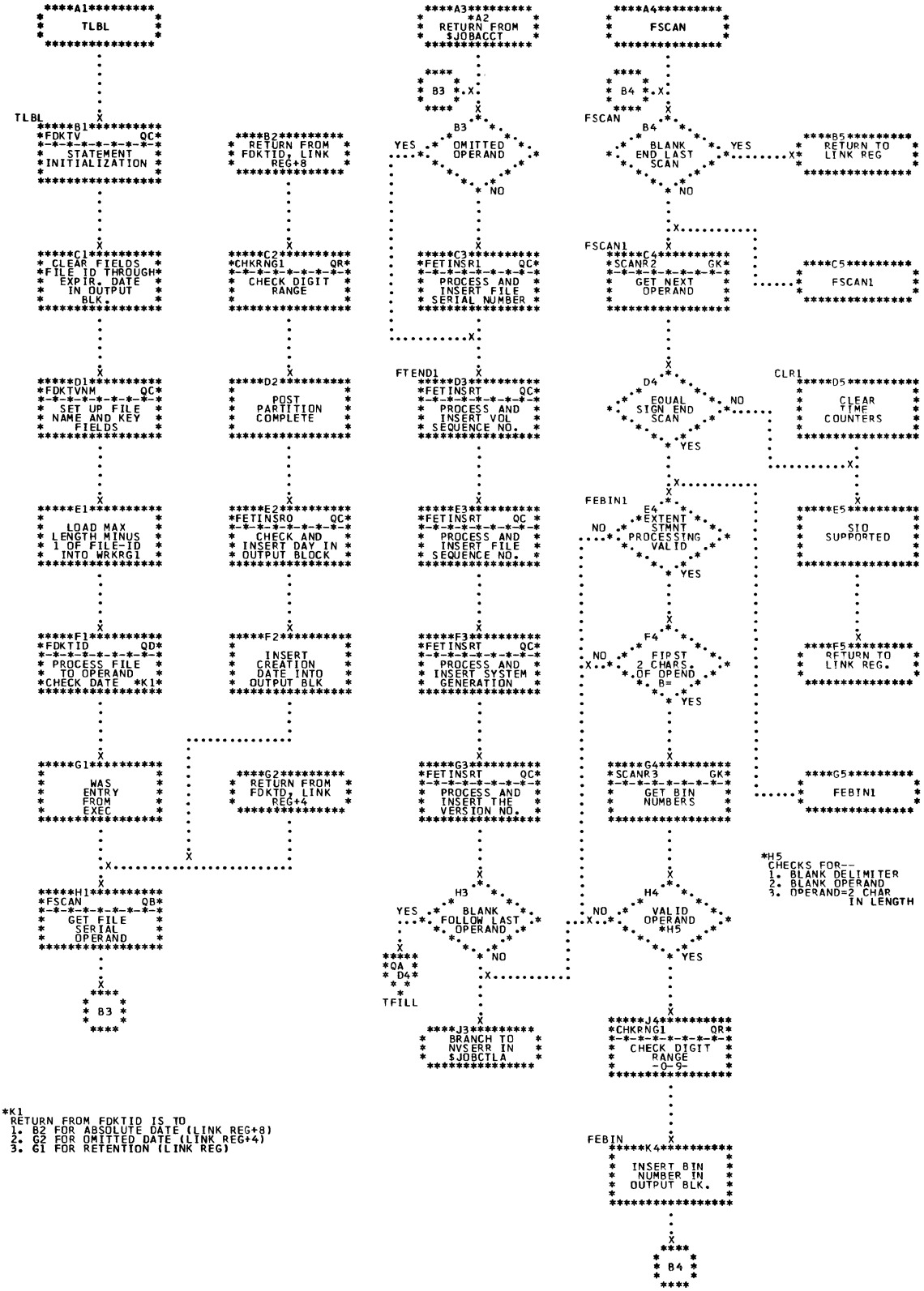


Chart QC. $JOBCTLK - Label Processing Subroutines (Part 1 of 2)
Refer to Charts 17 and 18.

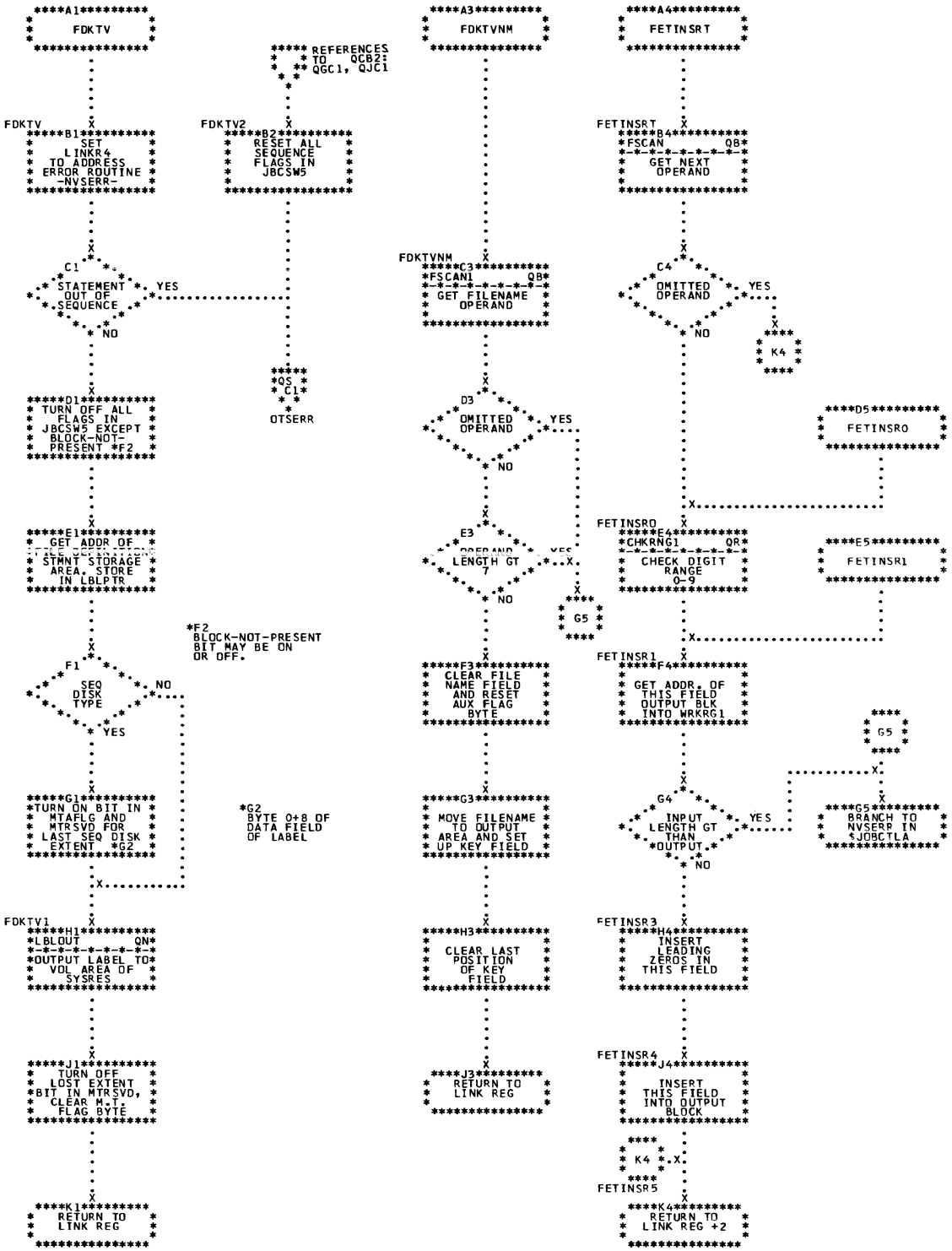


Chart QD. $JOBCTLK - Label Processing Subroutines (Part 2 of 2)
Refer to Charts 17 and 18.

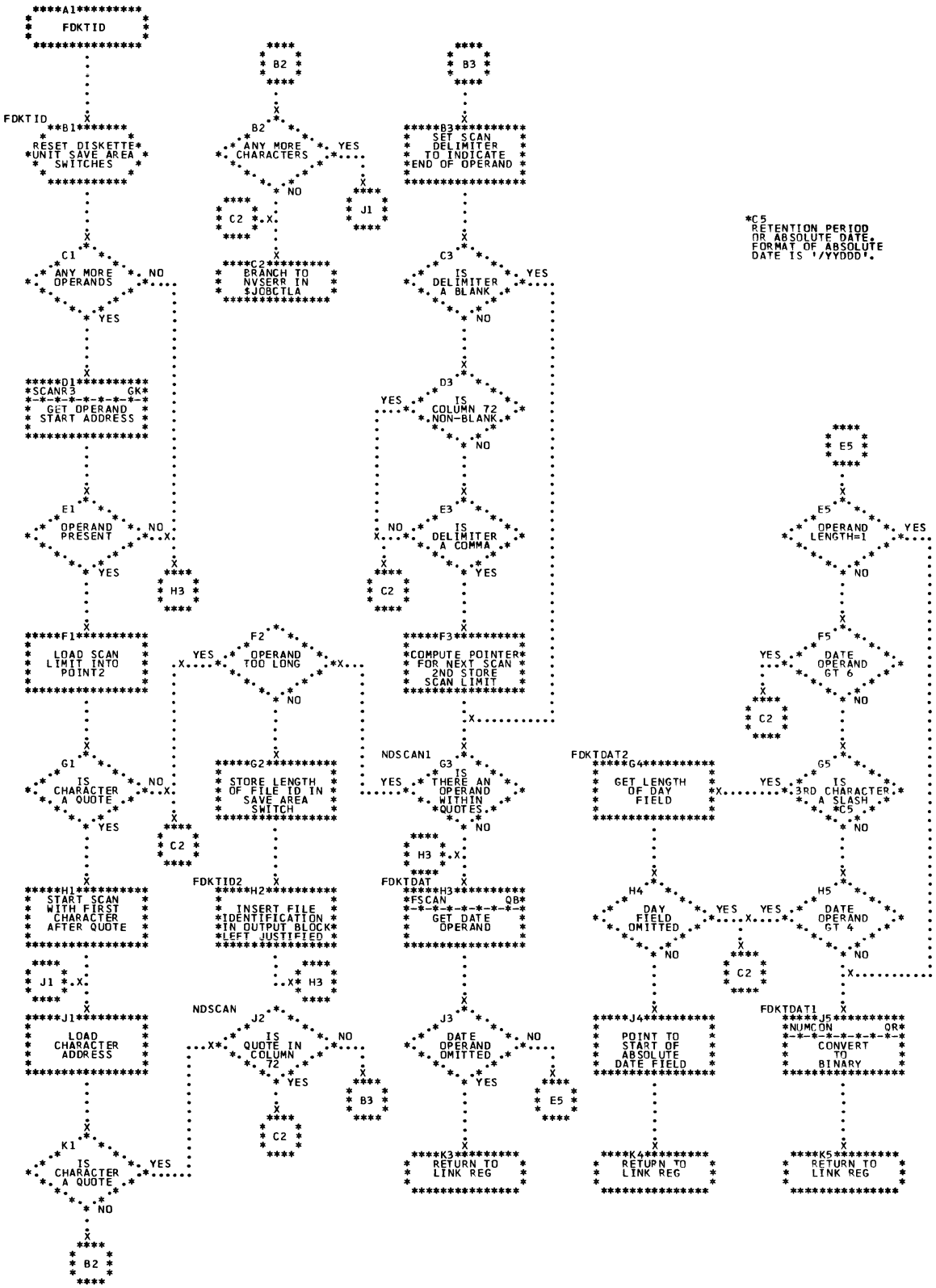


Chart QE. $JOBCTLK - DLBL Statement Processor
Refer to Chart 18.

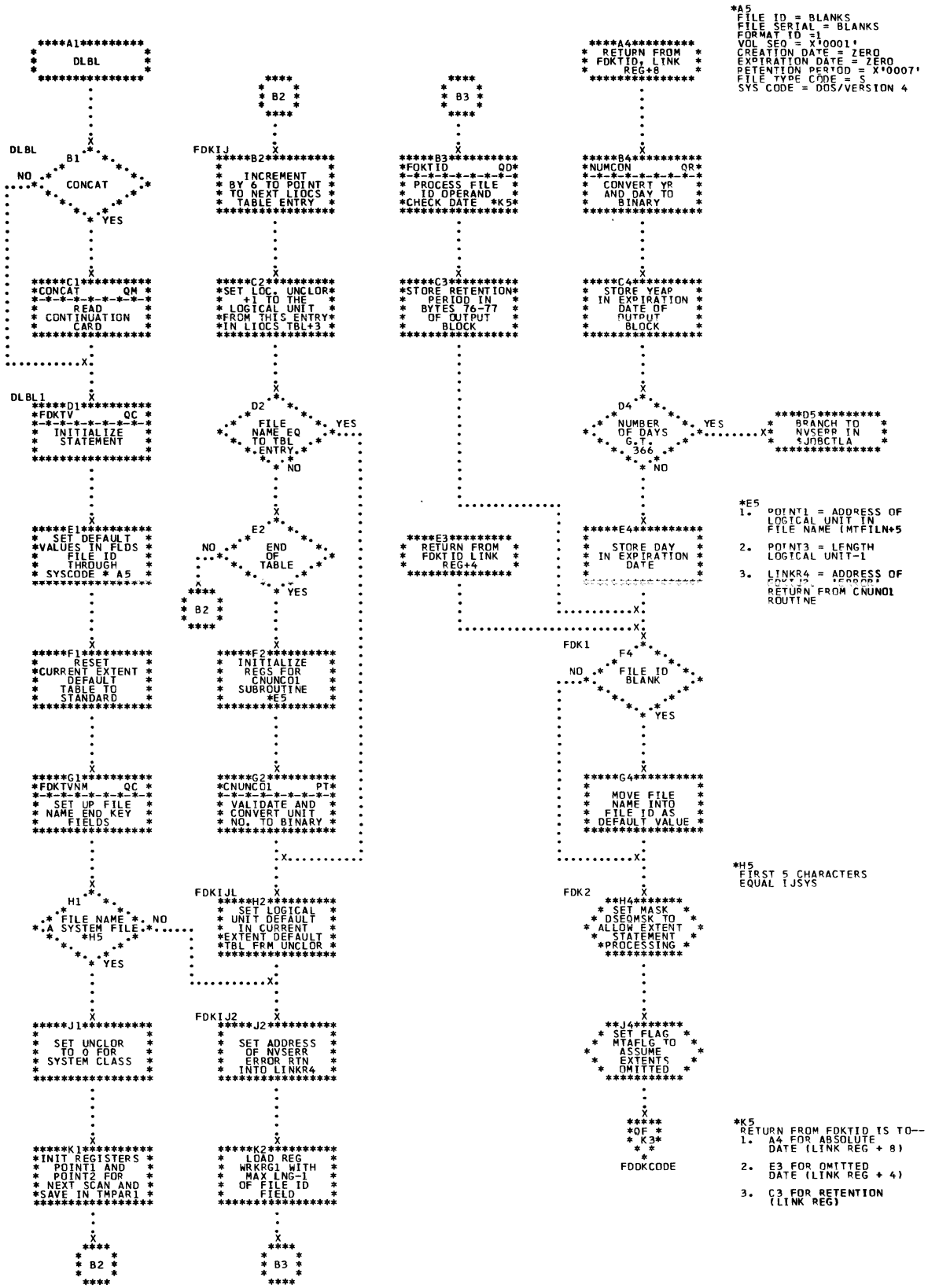


Chart QF. $JOBCTLK - DLAB Statement Processor
Refer to Chart 17.

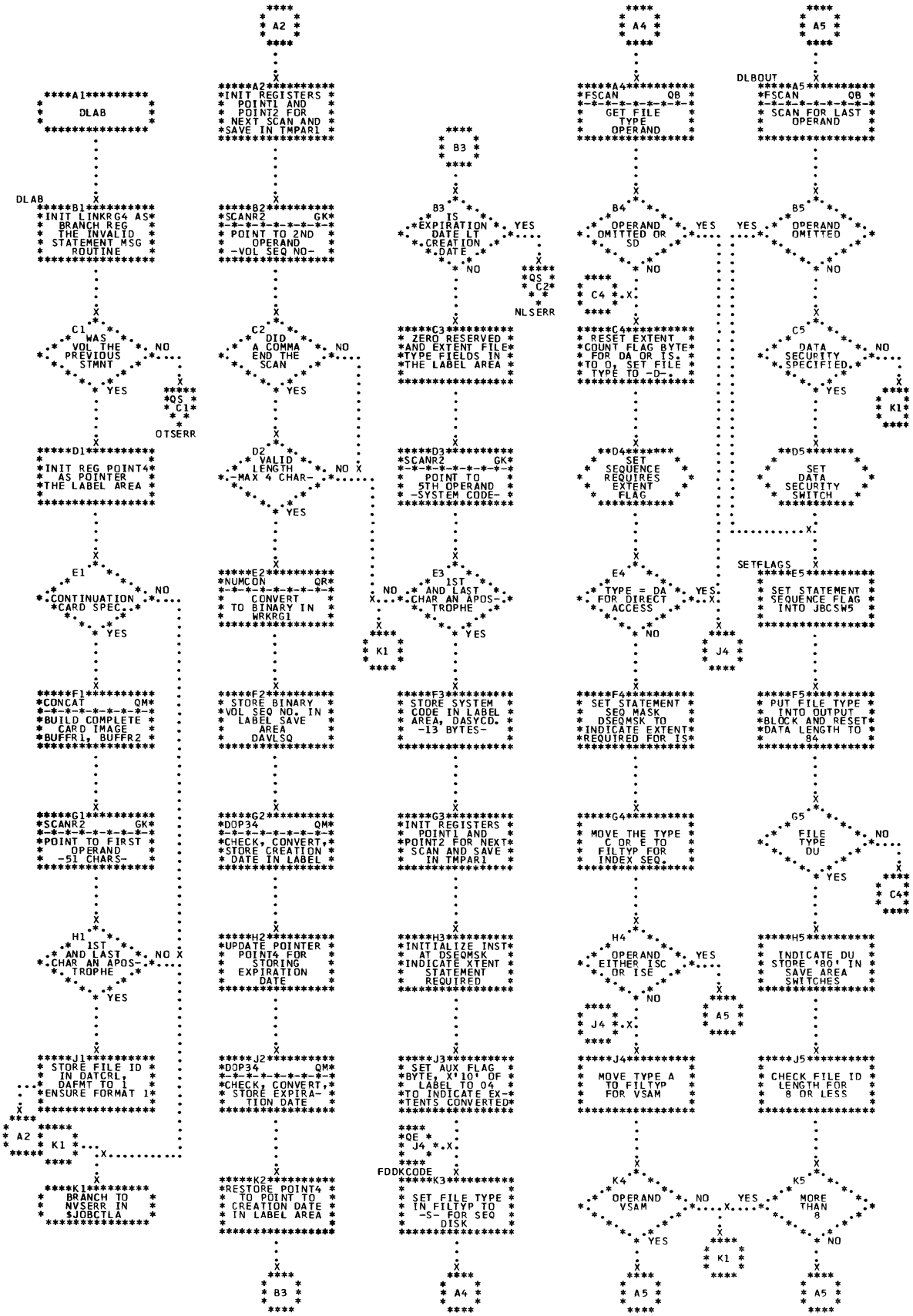


Chart QG. $JOBCTLK - **XTENT** Statement Processor (Part 1 of 2)
Refer to Chart 17.

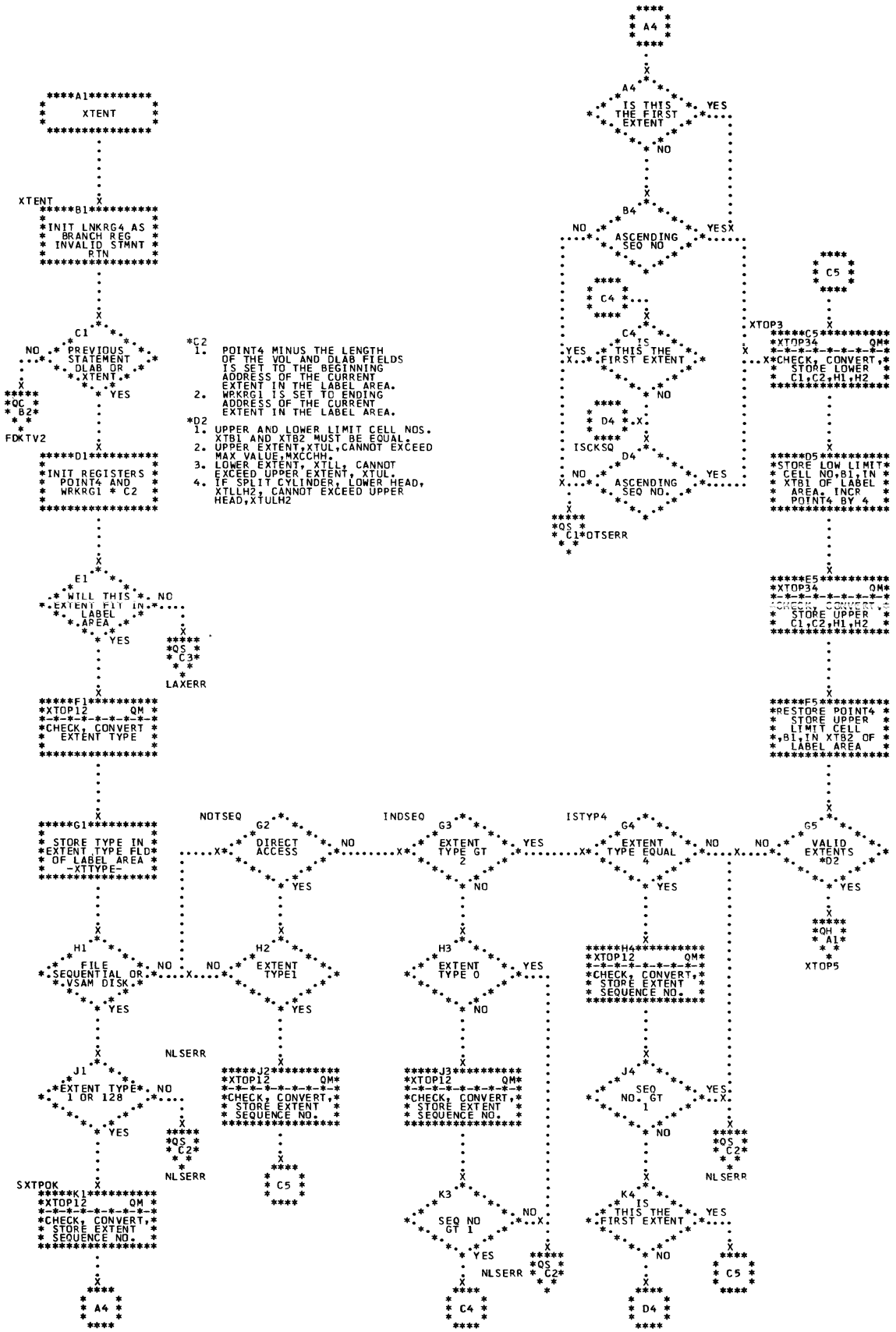


Chart QH. $JOBCTLK - XTENT Statement Prccesscr (Part 2 cf 2)
Refer to Chart 17.

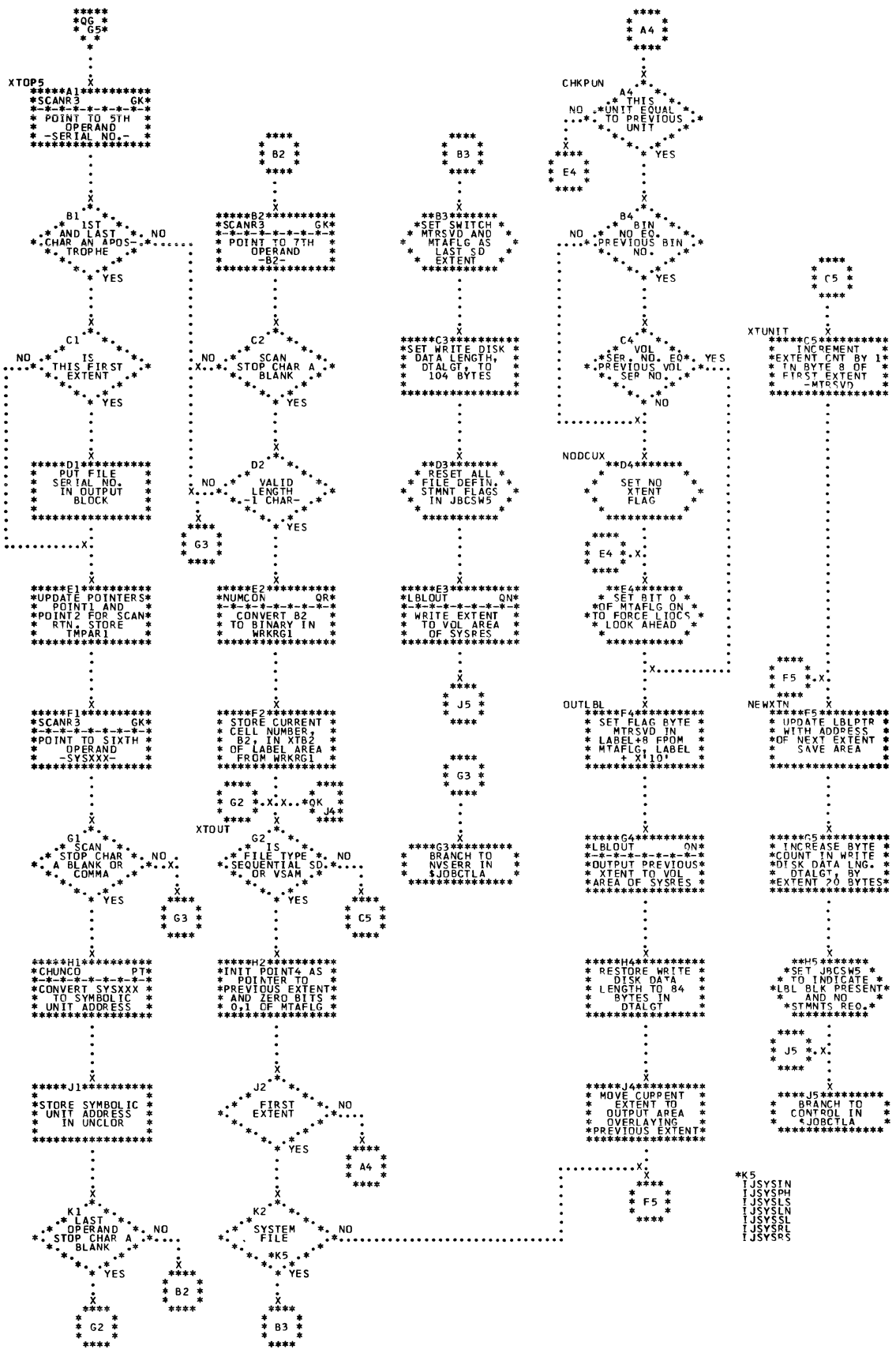


Chart QJ. $JOBCTLK - EXTENT Statement Processor (Part 1 of 3)
Refer to Chart 18.

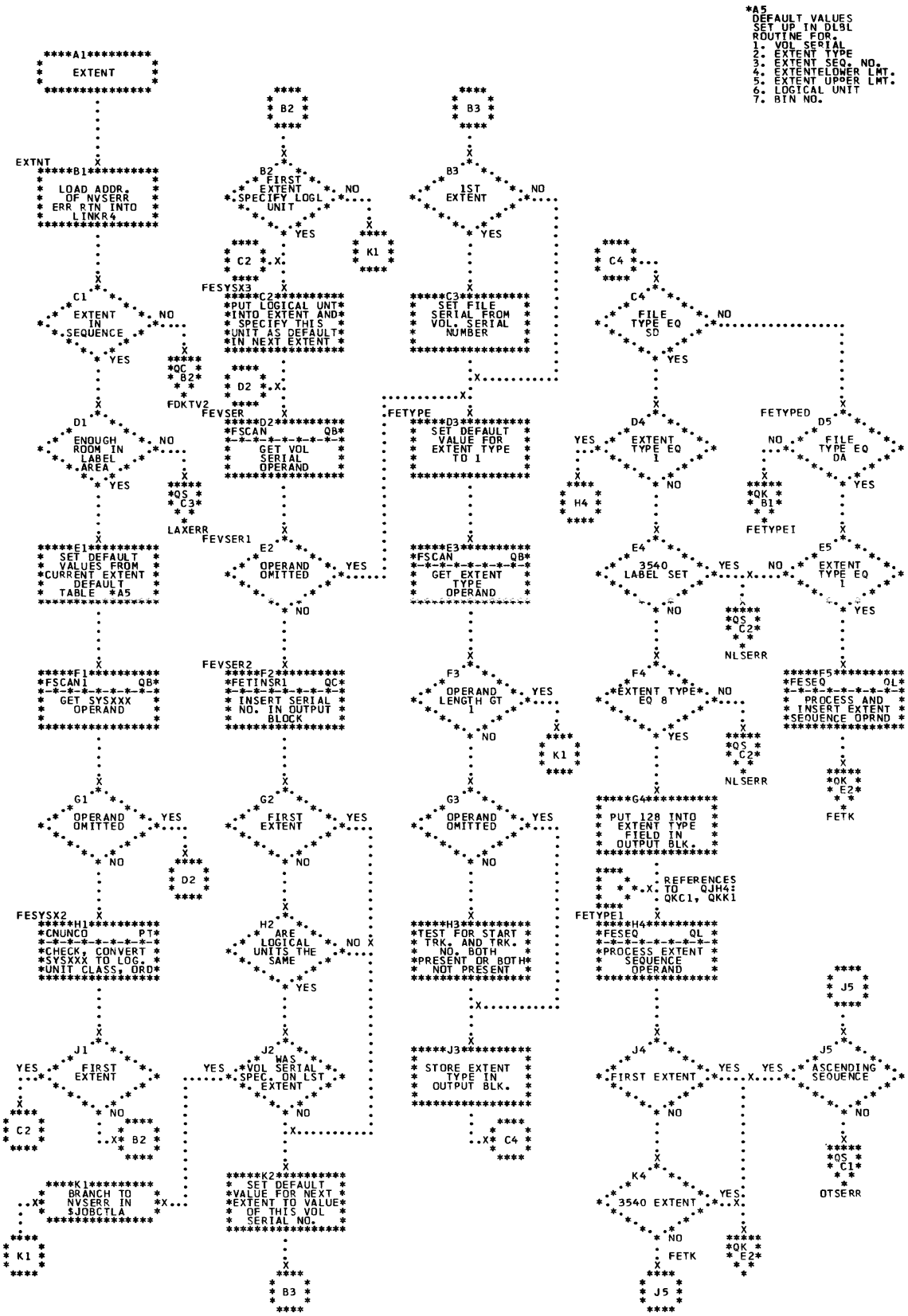


Chart QK. $JOBCTLK - EXTENT Statement Processor (Part 2 of 3)
Refer to Chart 18.

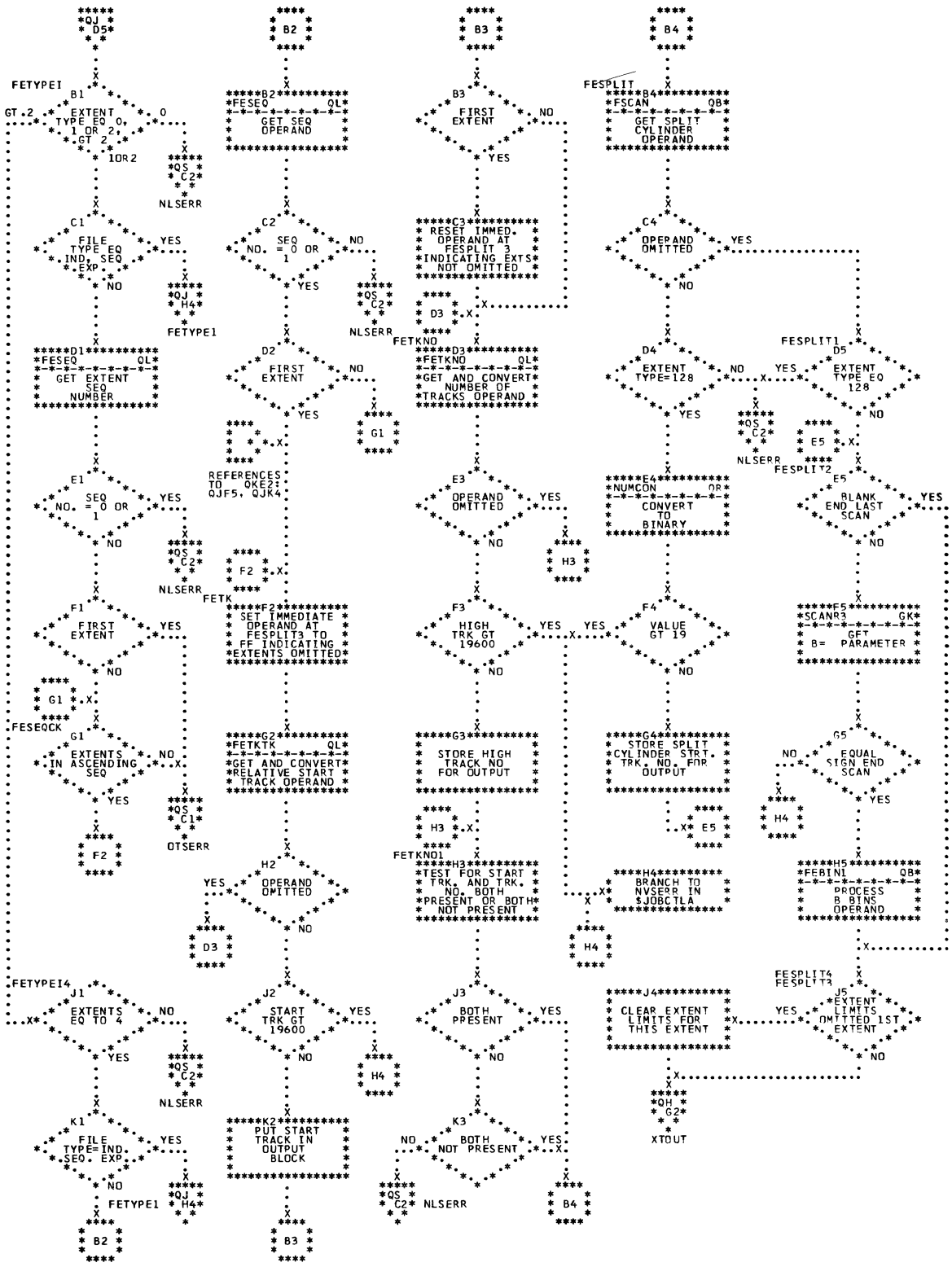


Chart QL. $JOBCTLK - EXTENT Statement Processor (Part 3 of 3)
Refer to Chart 18.

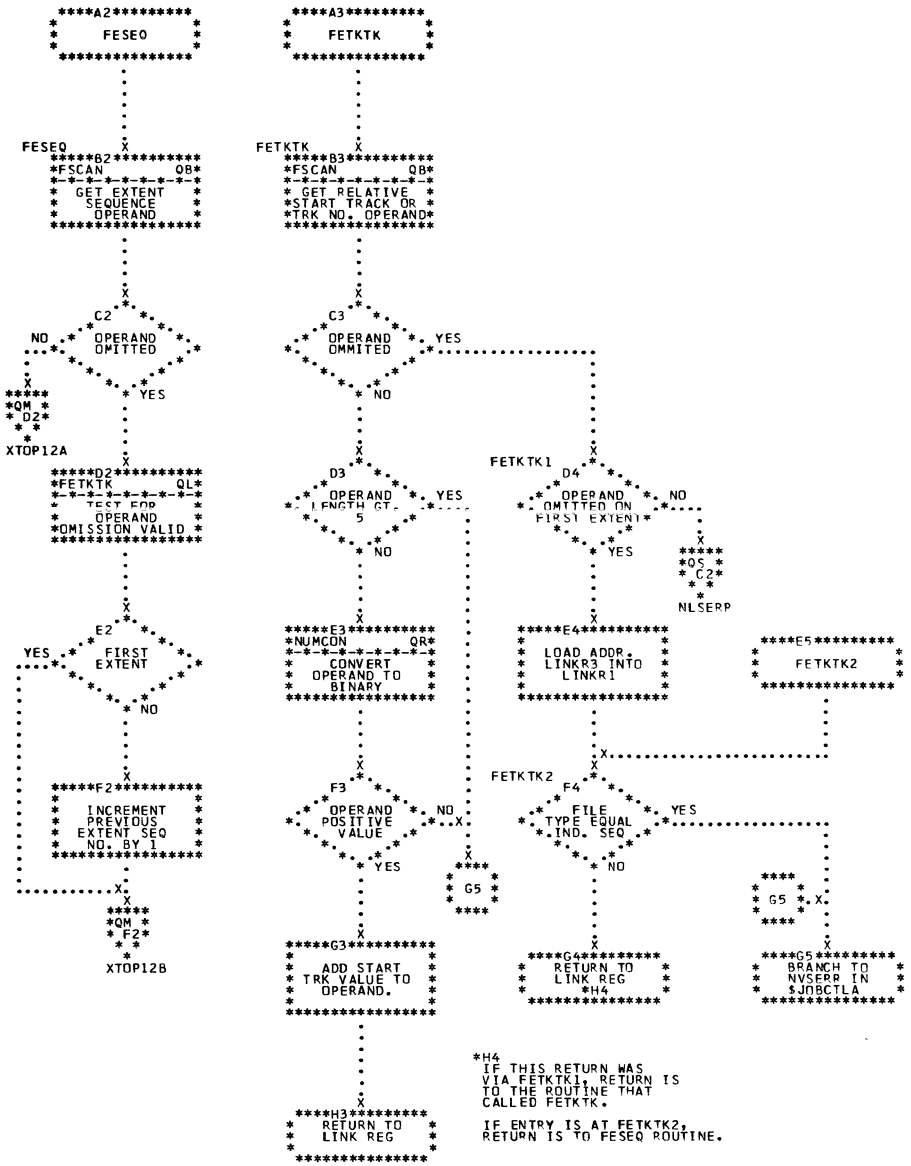


Chart QM. $JOBCTLK - Label Prccessing Subrcutines (Part 1 cf 3)
Refer to Charts 17 and 18.

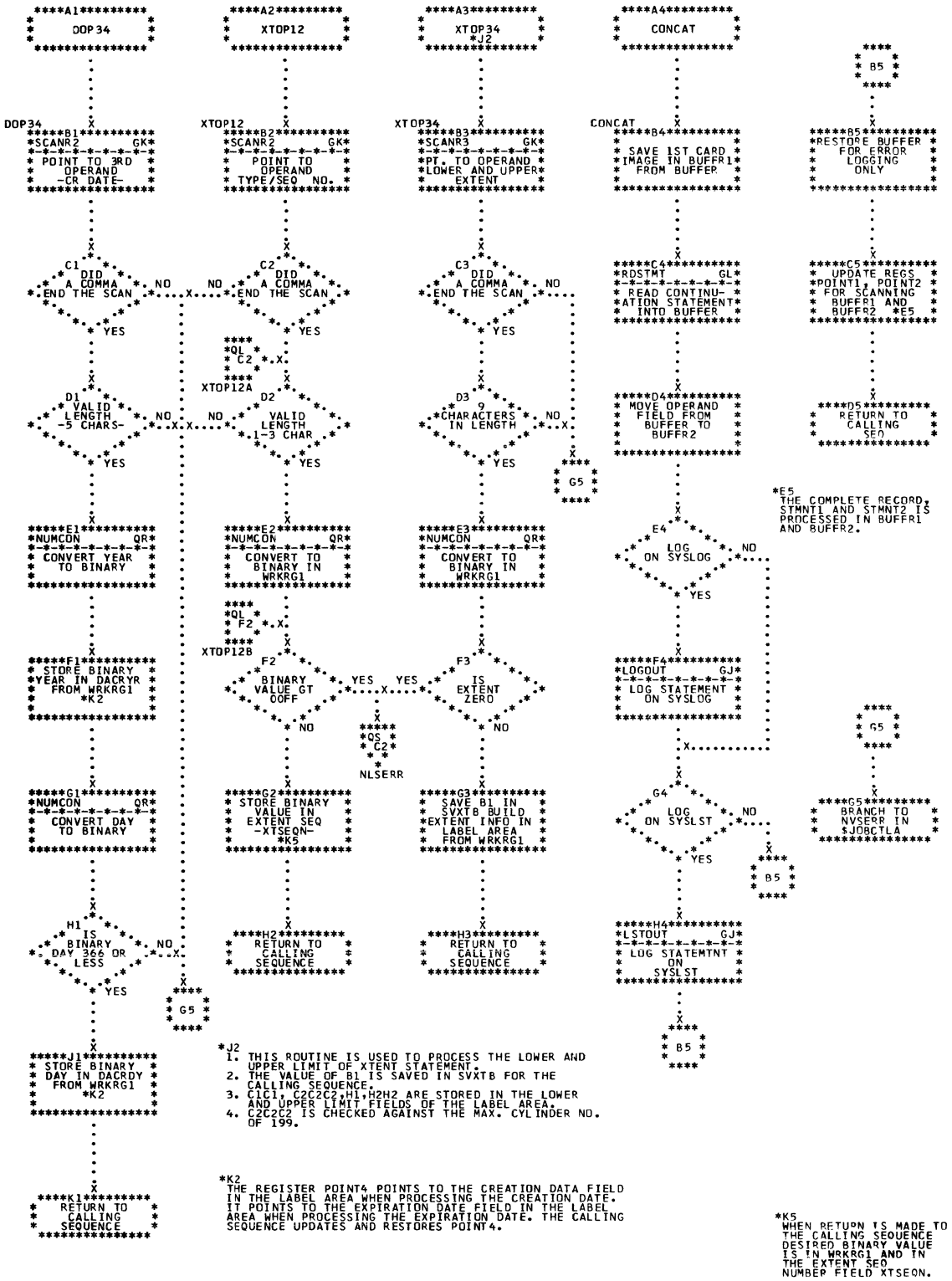
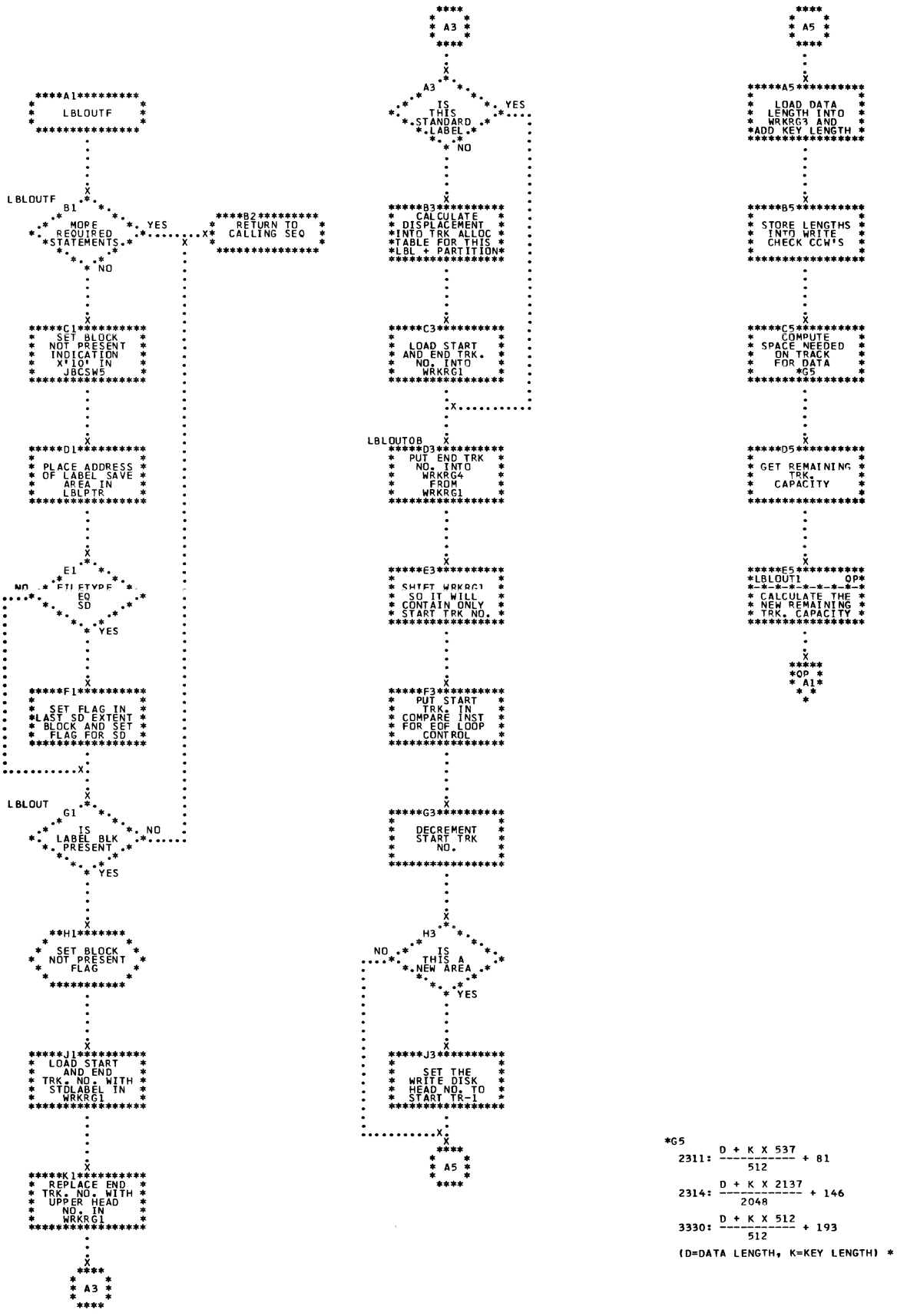


Chart QN. $JOBCTLK - Label Processing Subroutines (Part 2 of 3)
Refer to Charts 17 and 18.



*G5

2311: $\frac{D + K \times 537}{512} + 81$

2314: $\frac{D + K \times 2137}{2048} + 146$

3330: $\frac{D + K \times 512}{512} + 193$

(D=DATA LENGTH, K=KEY LENGTH) *

Chart QP. $JOBCTLK - Label Processing Subroutines (Part 3 of 3)
Refer to Charts 17 and 18.

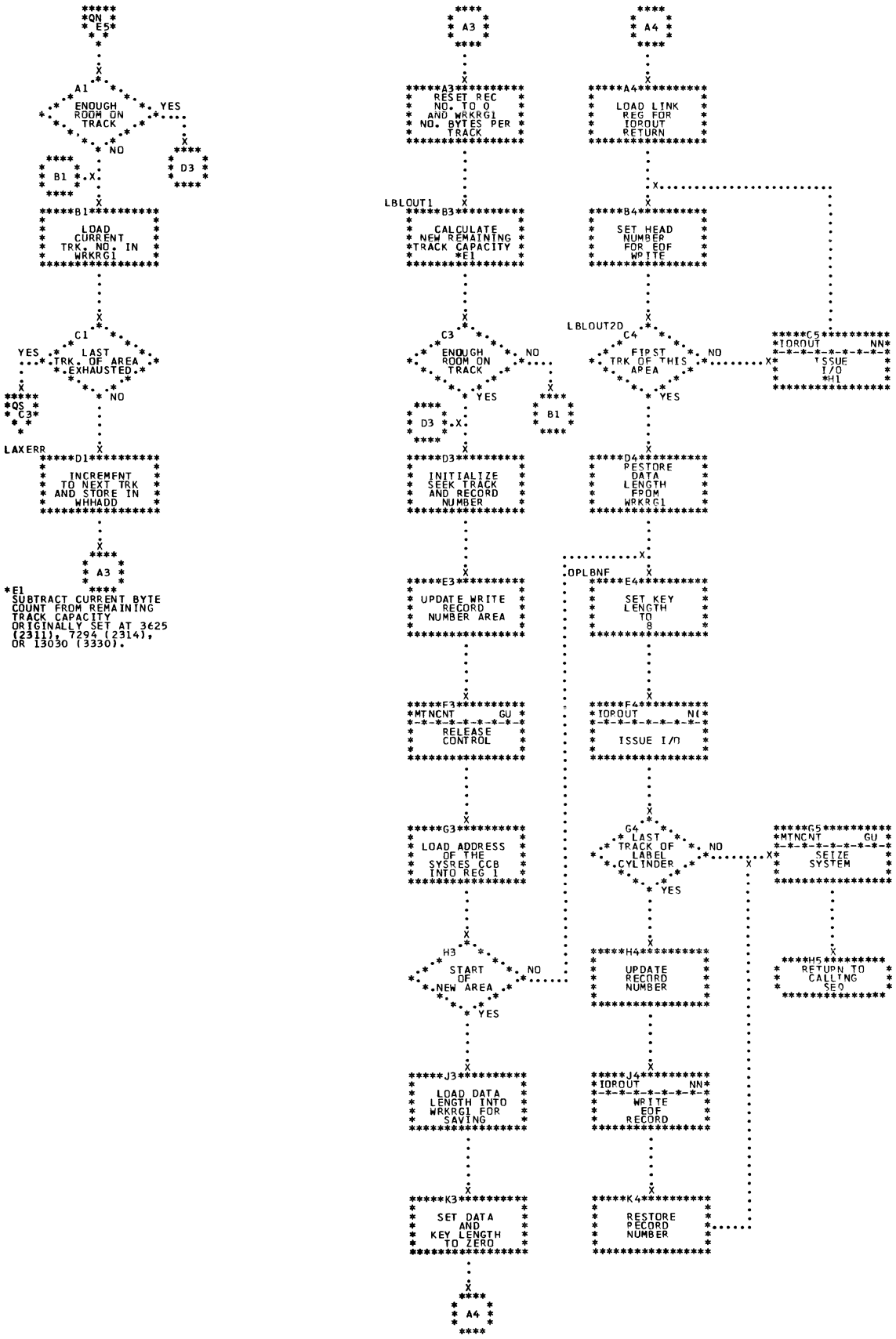


Chart QQ. $JOBCTLK - RSTRT Statement Processor
Refer to Chart 18.

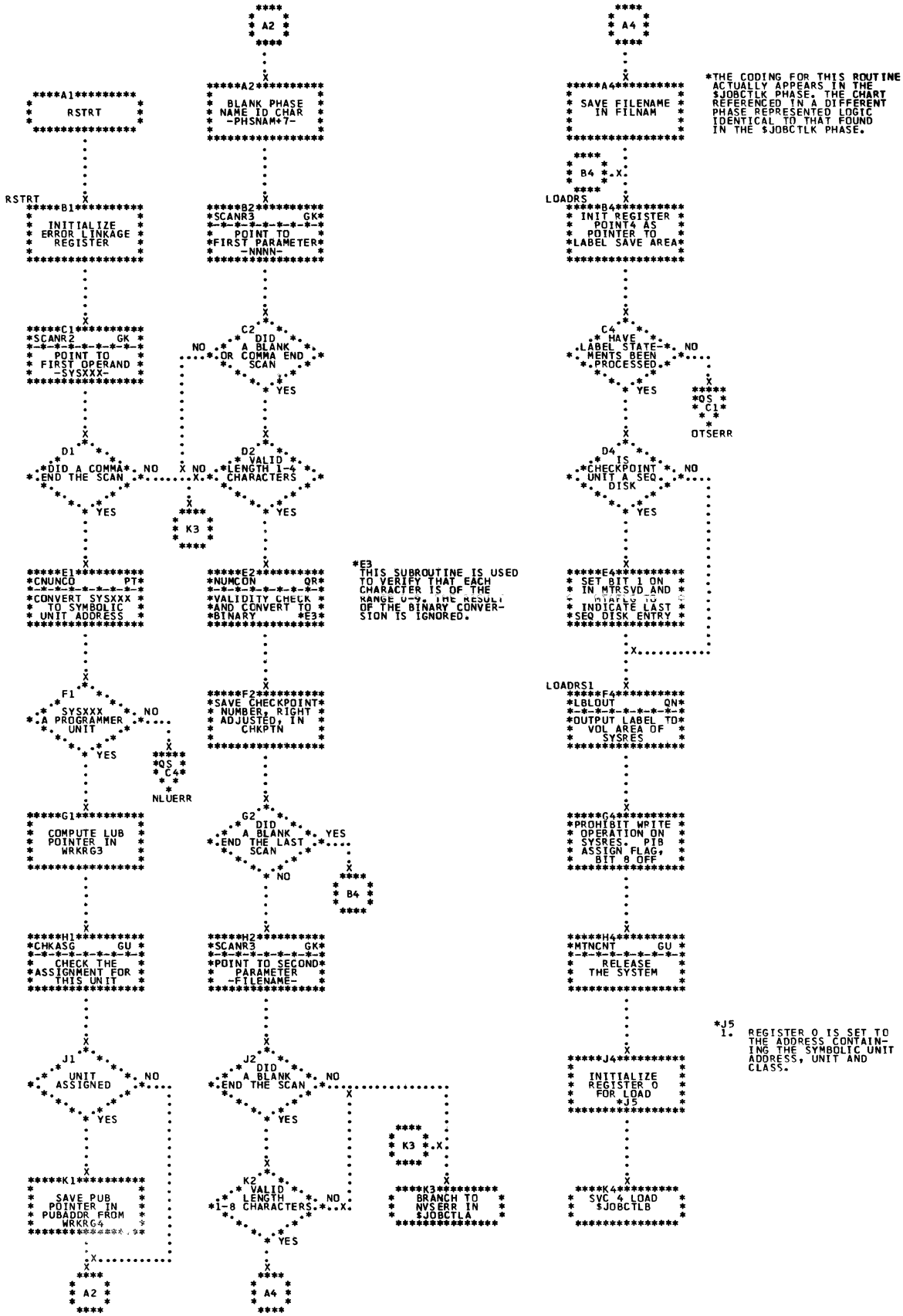


Chart QR. **$JOBCTLK - Miscellaneous Subroutines**
Refer to Charts 17 and 18.

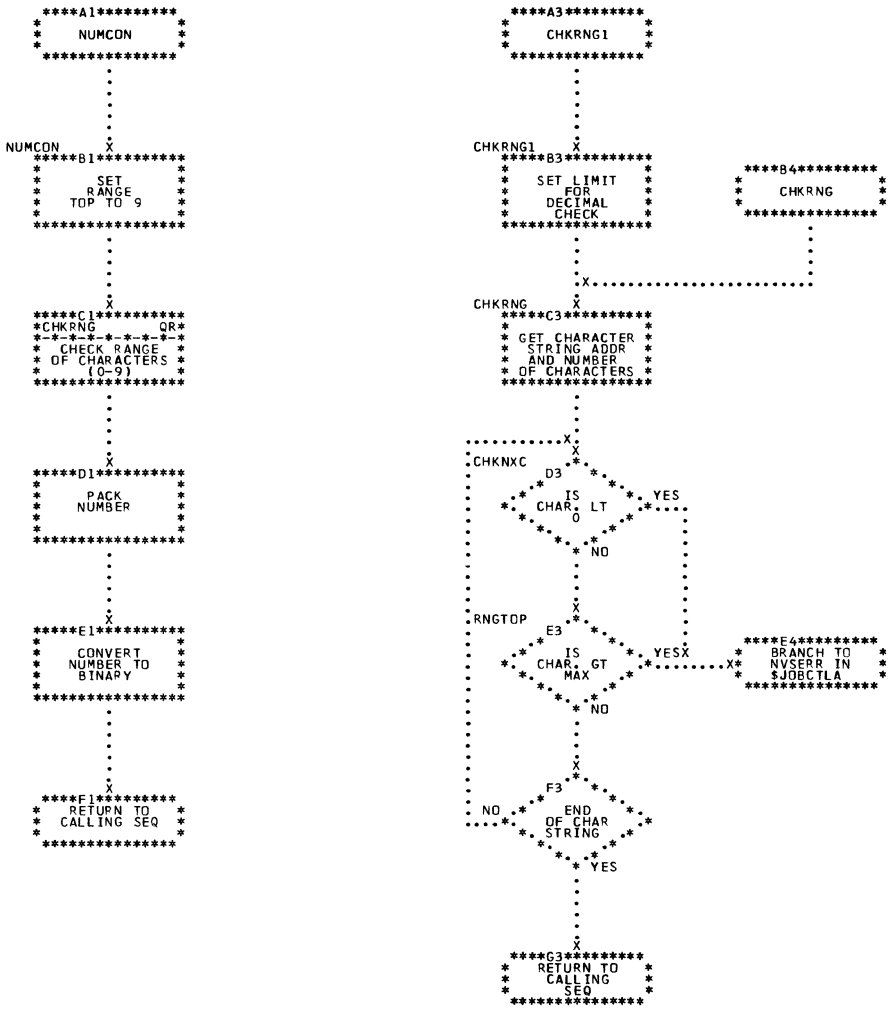
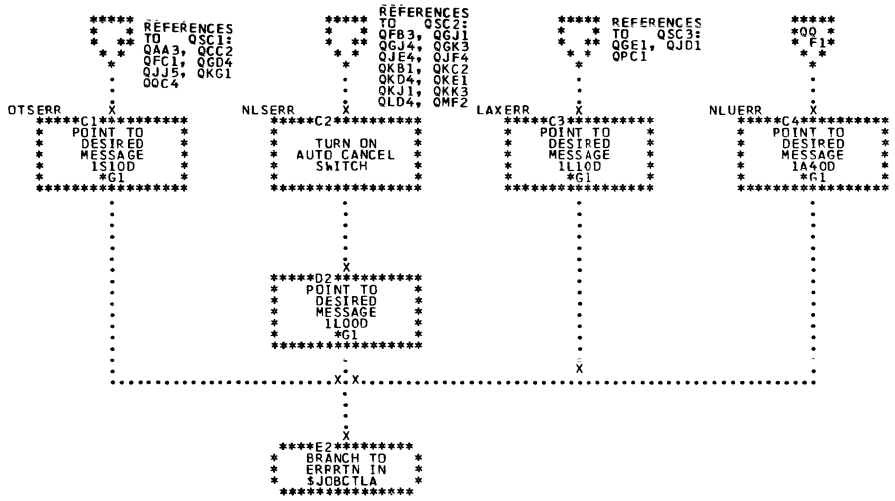


Chart QS. $JOBCTLK - Error Subroutines
Refer to Charts 17 and 18.



*G1

MESSAGE	DESCRIPTION
1A40D	INVALID LOGICAL UNIT SPECIFICATION
1L00D	INVALID LABEL SYNTAX
1L10D	LABEL AREA EXHAUSTED
1S10D	STATEMENT OUT OF SEQUENCE

Chart RA. $JOBCTLM - Recorder File Initializaticn (Part 1 of 2)
Refer to Chart 19.

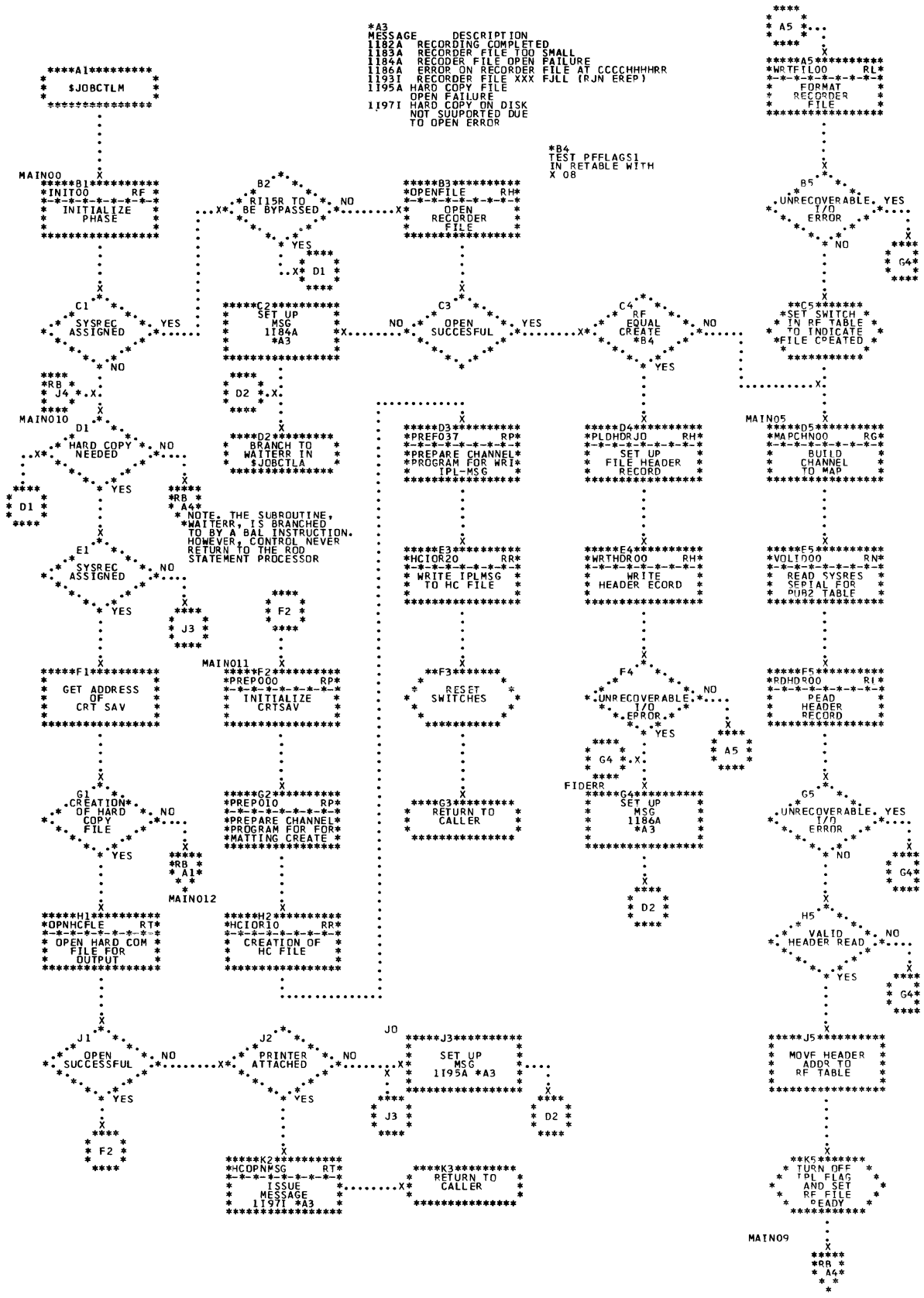


Chart RB. $JOBCTLM - Recorder File Initialization (Part 2 of 2)
Refer to Chart 19.

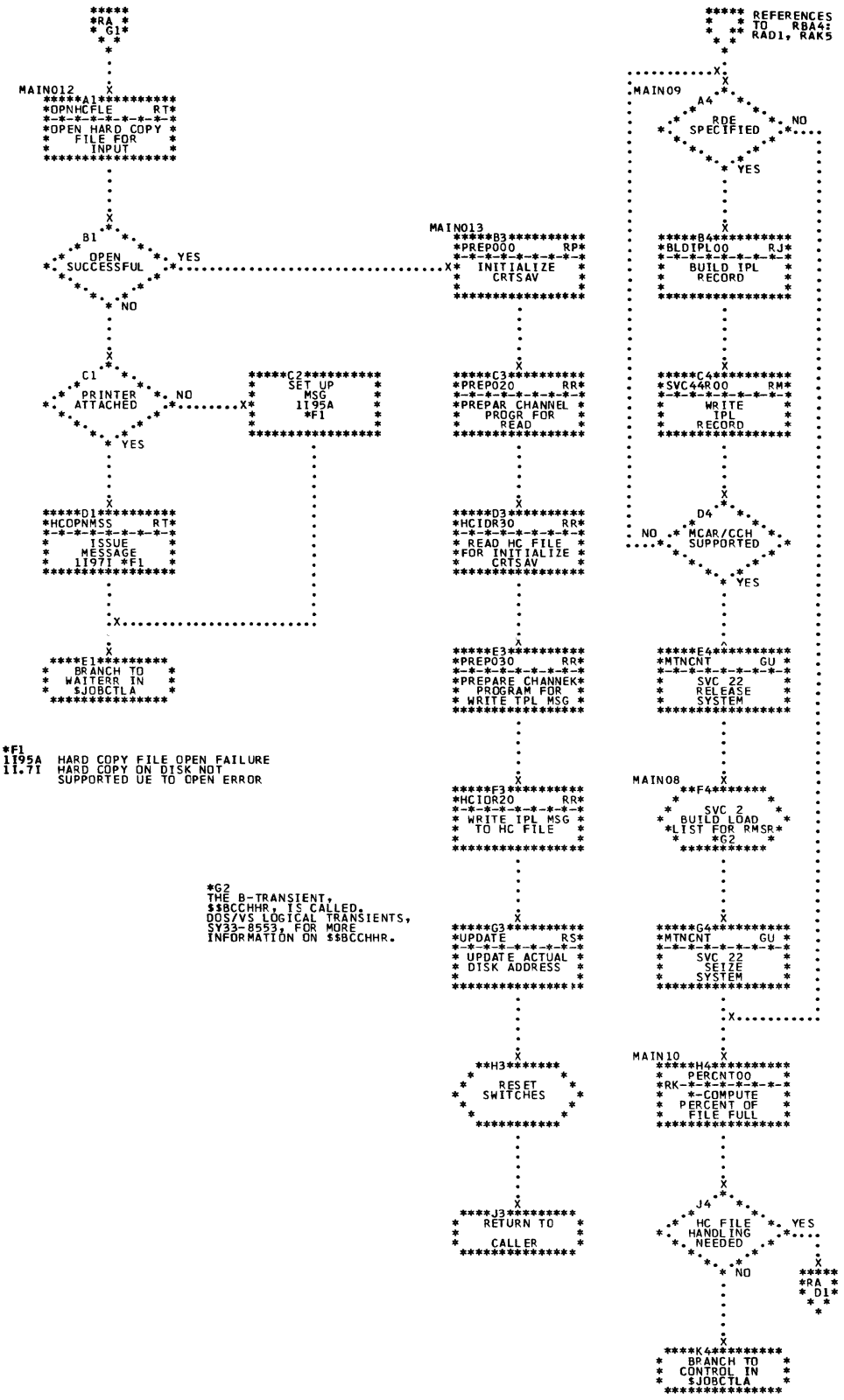


Chart RC. $JOBCTLM - ROD Statement Prccesscr
Refer to Chart 19.

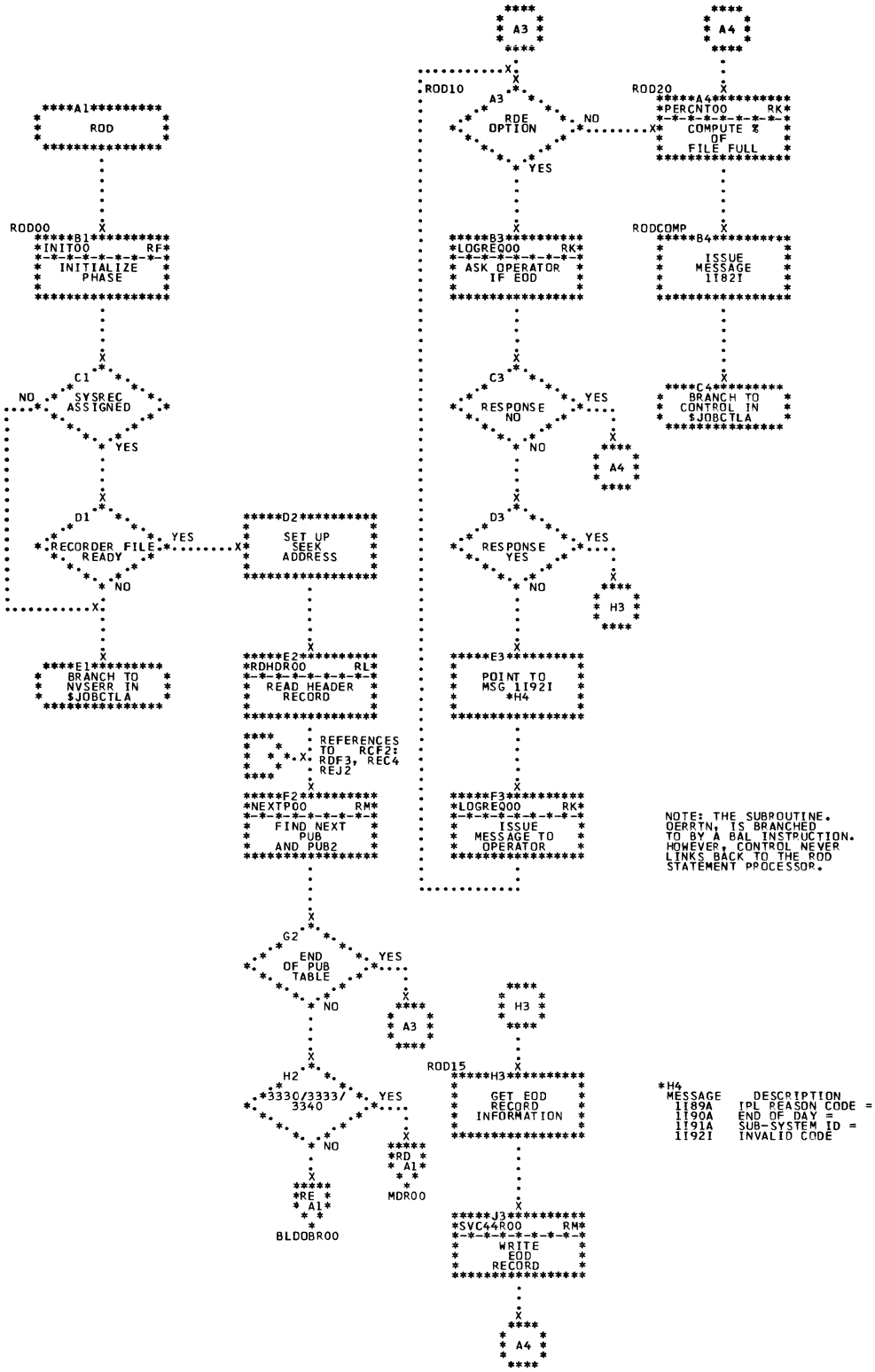


Chart RD. $JOBCTLM - MDR Records for 3330/3333/3340
Refer to Chart 19.

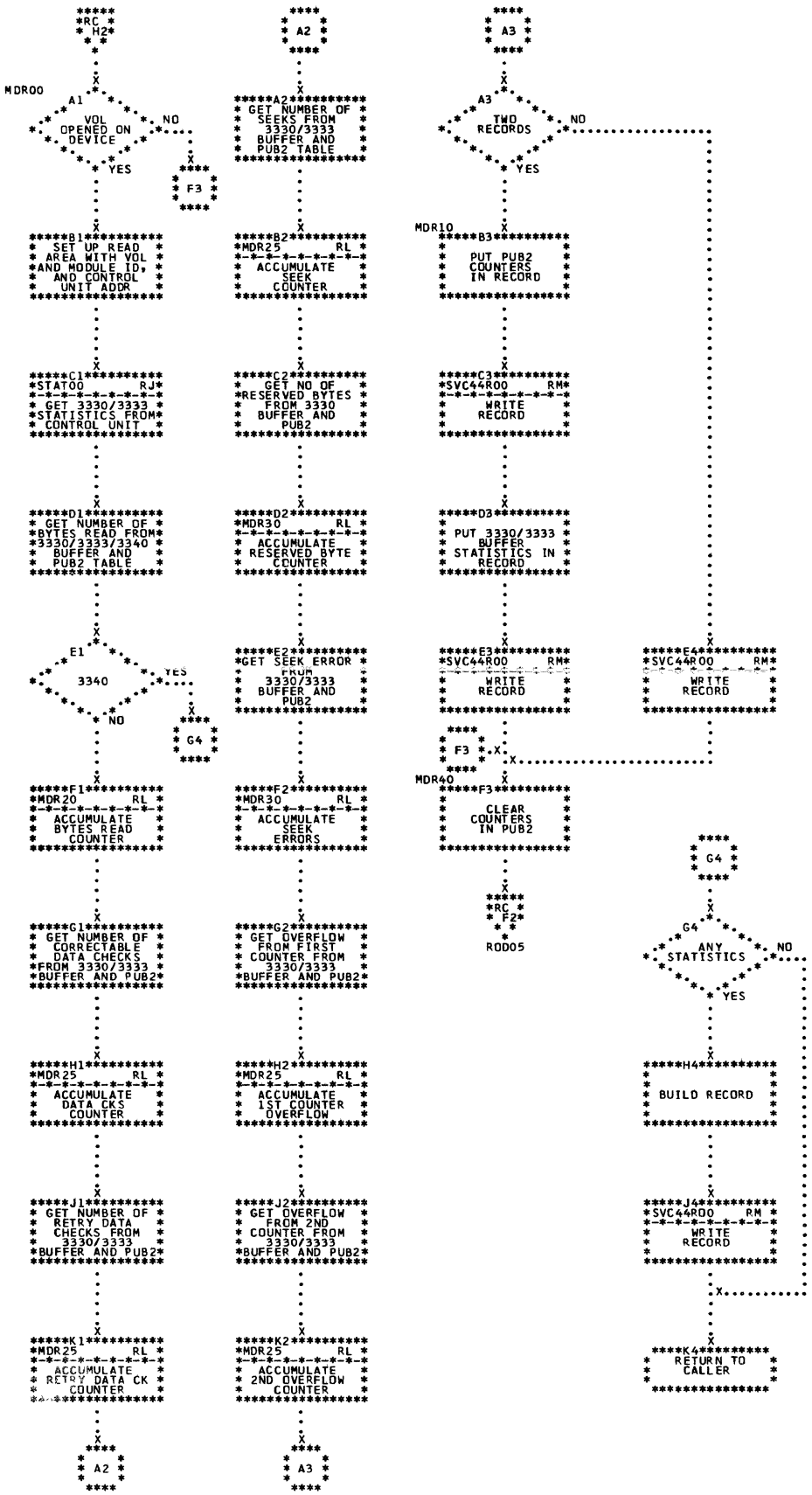


Chart RE. $JOBCTLM - Build EOE Outboard Record
Refer to Chart 19.

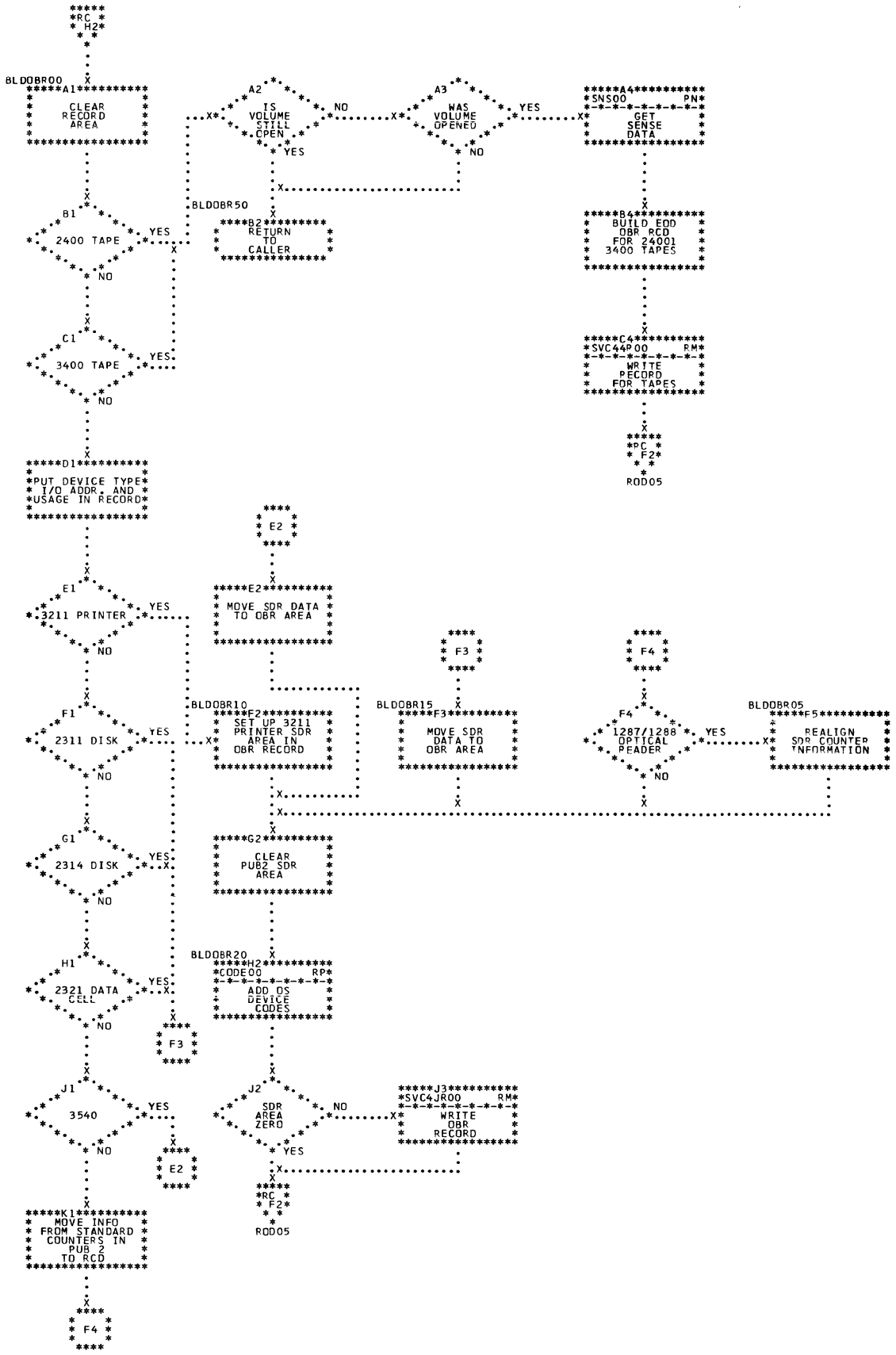


Chart RF. $JOBCTLM - Phase Initialization Routine
Refer to Chart 19.

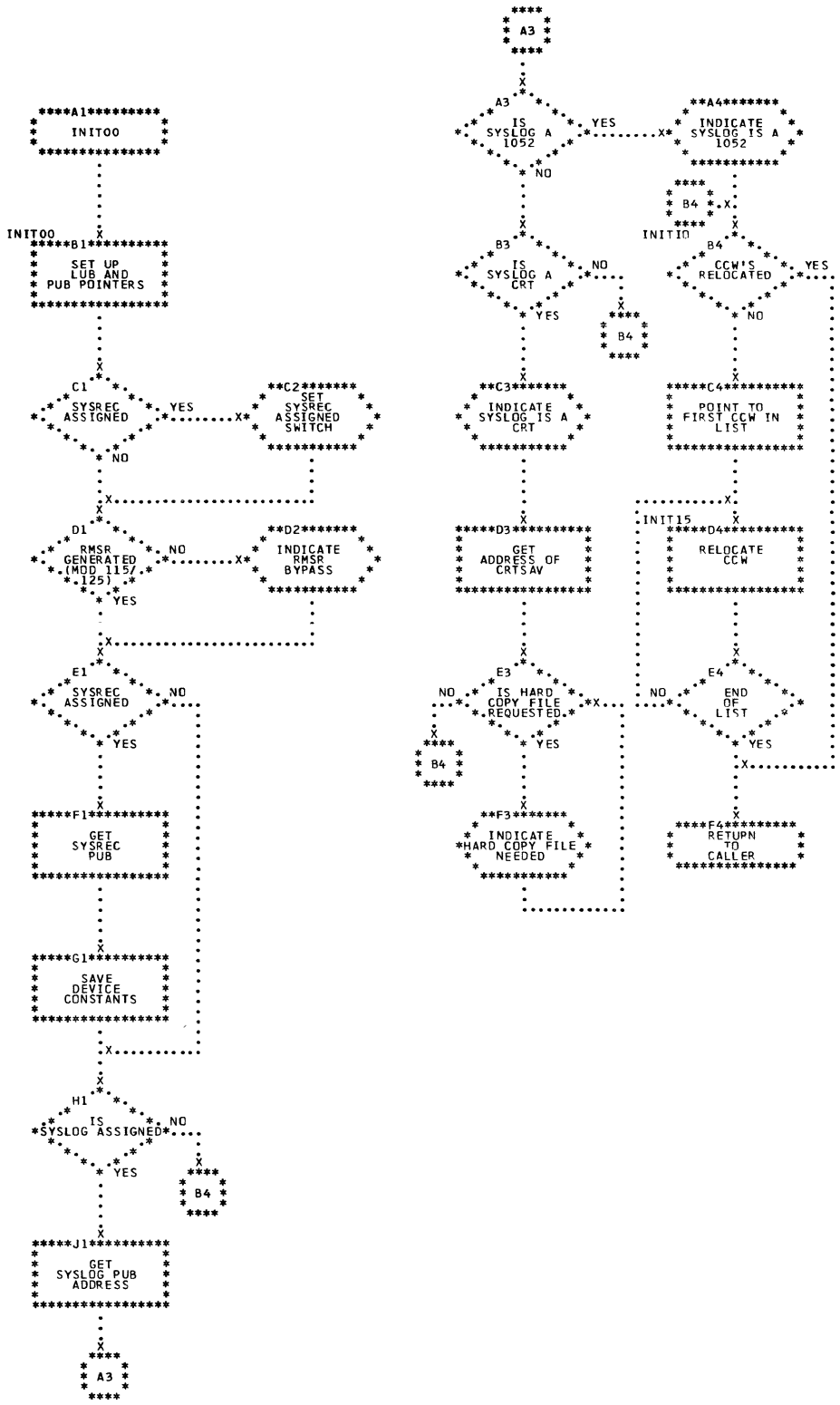


Chart RG. $JOBCTLM - Build Channel Map Routine
Refer to Chart 19.

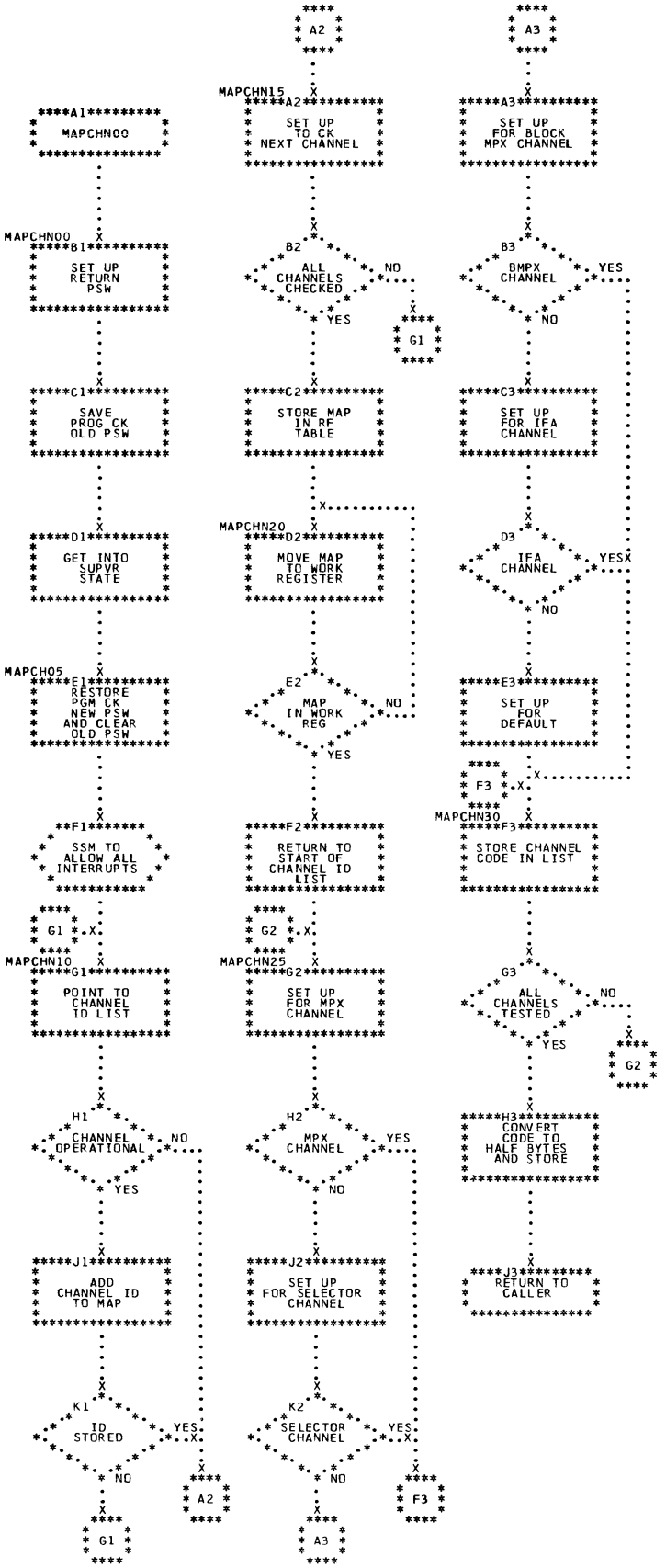


Chart RH. $JOBCTLM - Miscellaneous Subroutines (Part 1 of 10)
Refer to Chart 19.

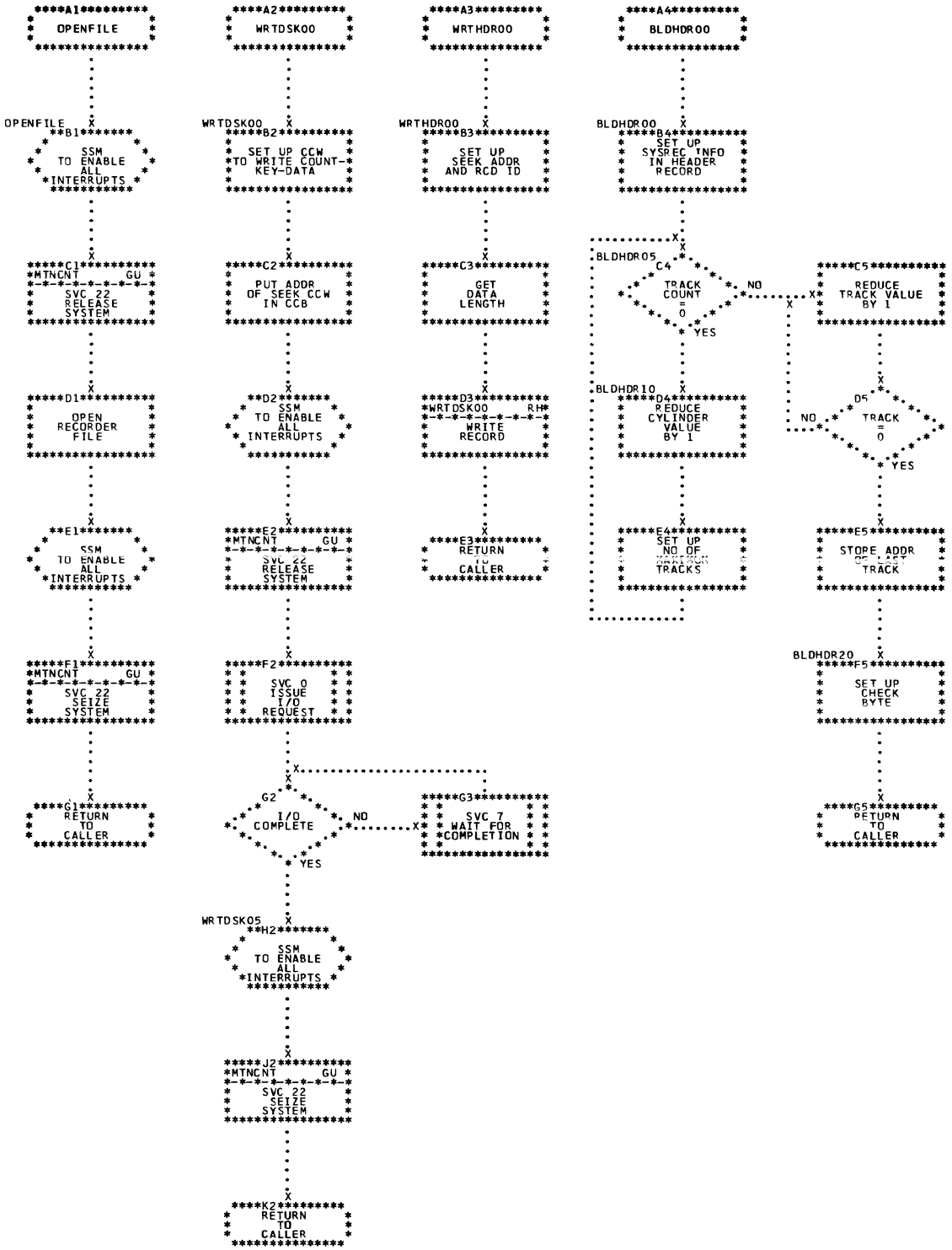


Chart RJ. $JOBCTLM - Miscellaneous Subroutines (Part 2 of 10)
Refer to Chart 19.

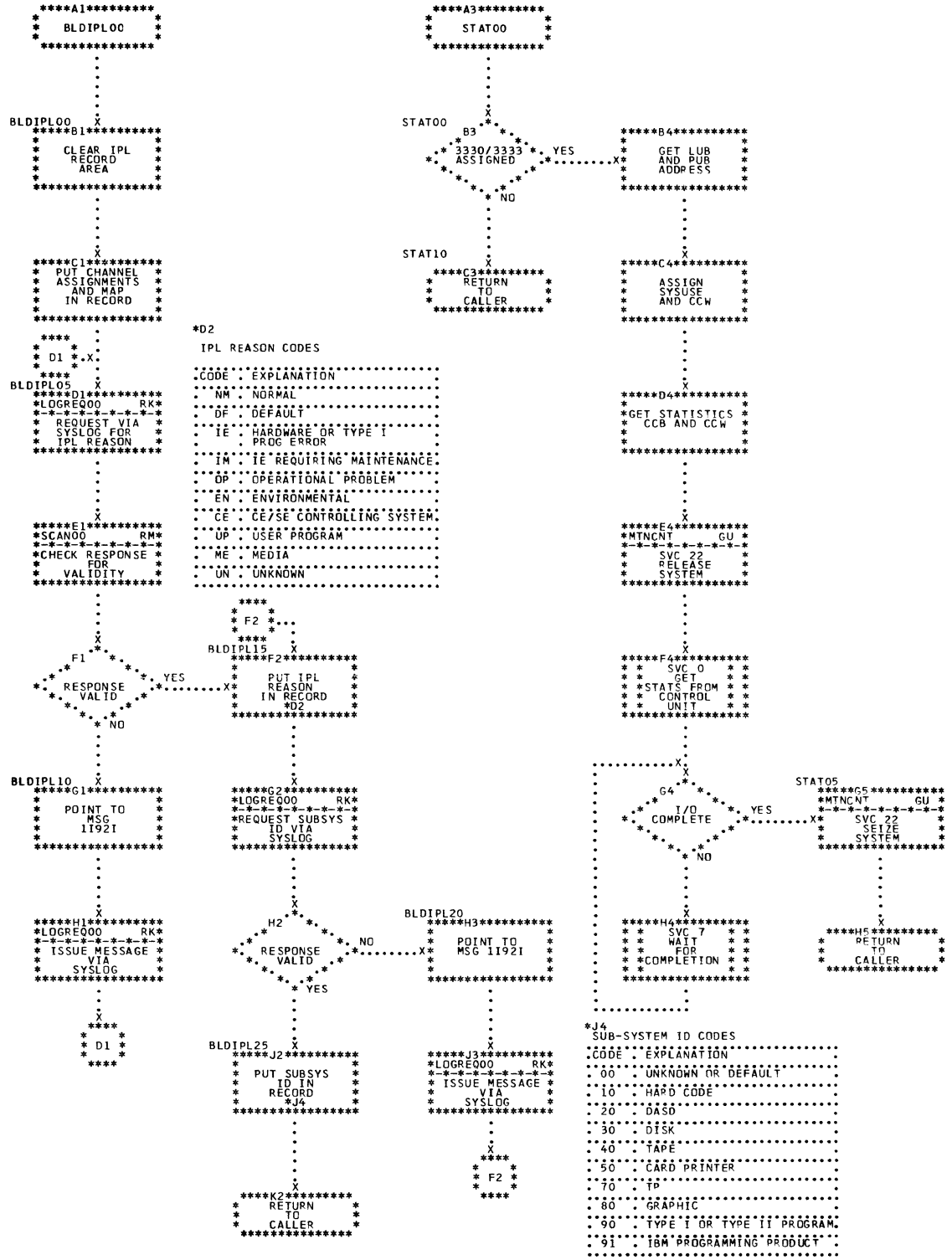


Chart RK. $JOBCTLM - Miscellaneous Subroutines (Part 3 of 10)
Refer to Chart 19.

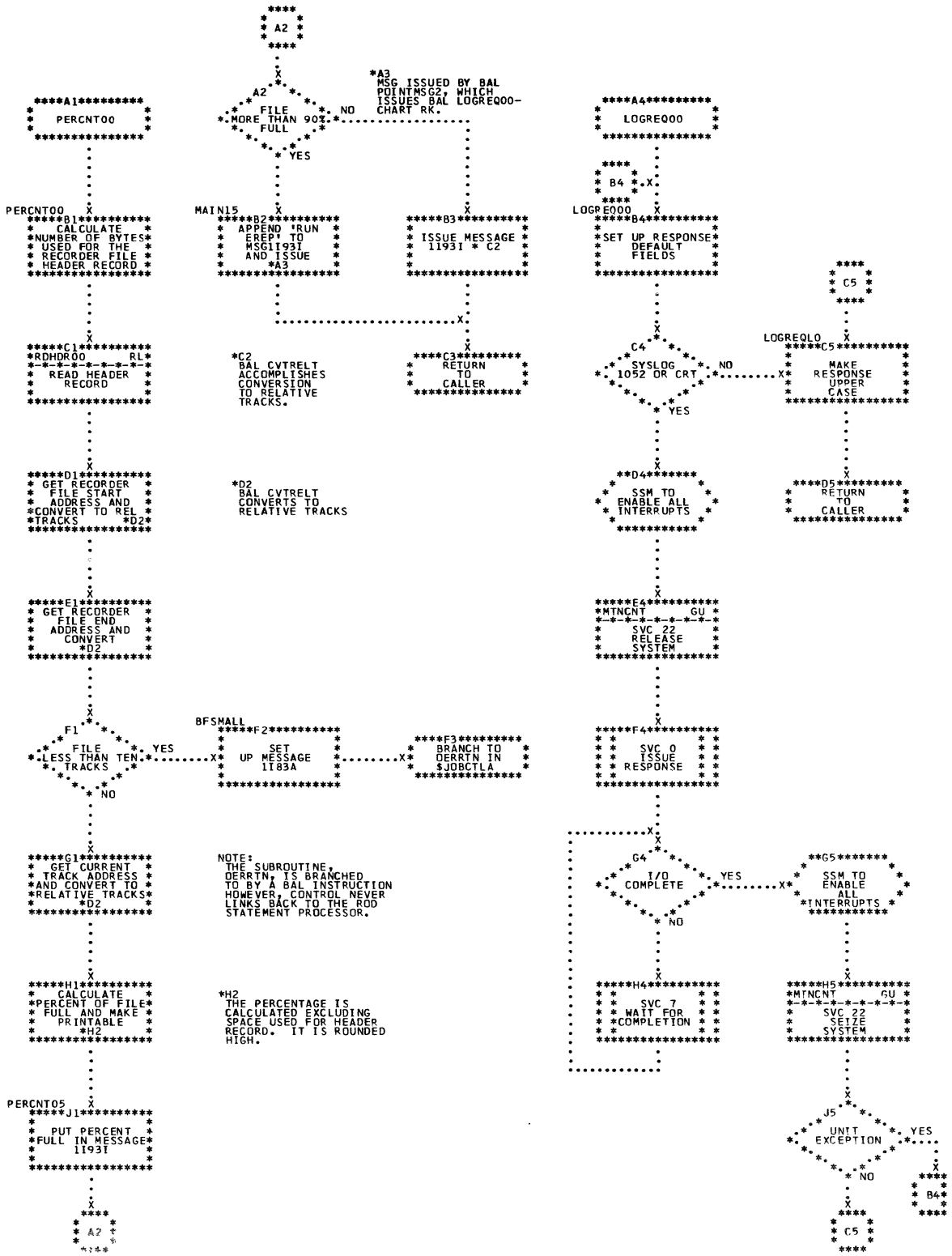


Chart RL. $JOBCTLM - Miscellanecus Subroutines (Part 4 of 10)
Refer to Chart 19.

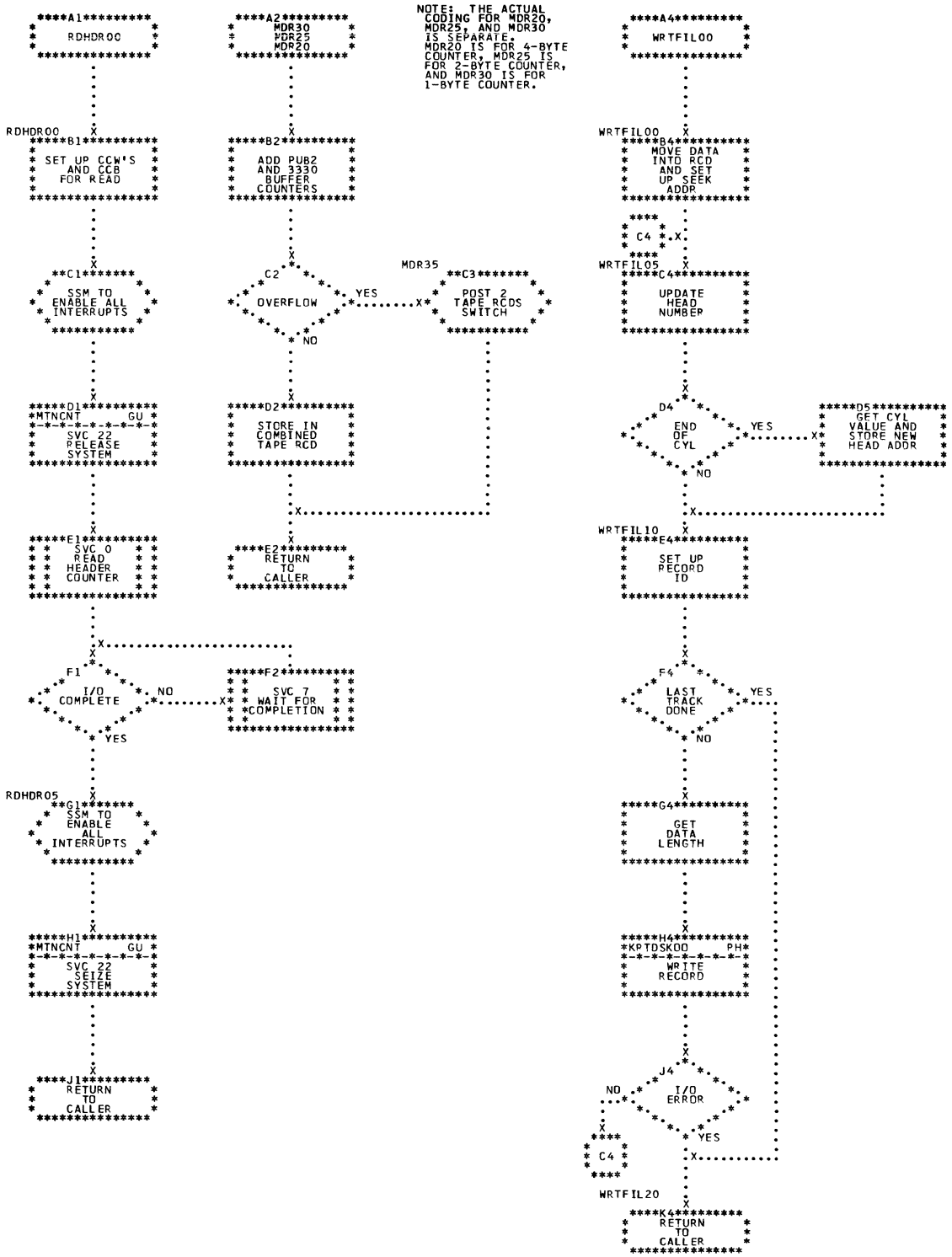


Chart RM. $JOBCTLM - Miscellanecus Subrcutines (Part 5 cf 10)
Refer to Chart 19.

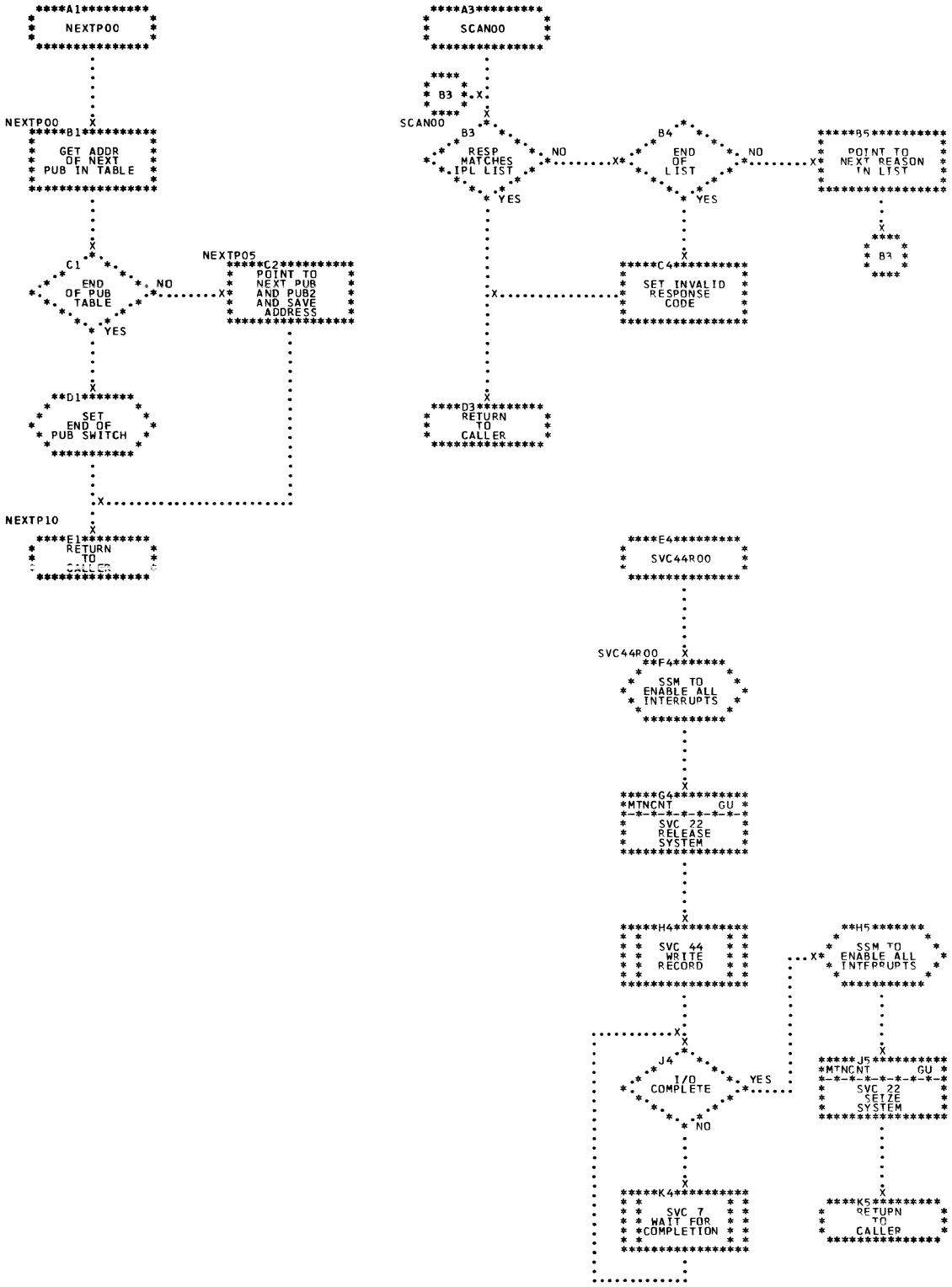


Chart RN. $JOBCTLM - Miscellaneous Subroutines (Part 6 of 10)
Refer to Chart 19.

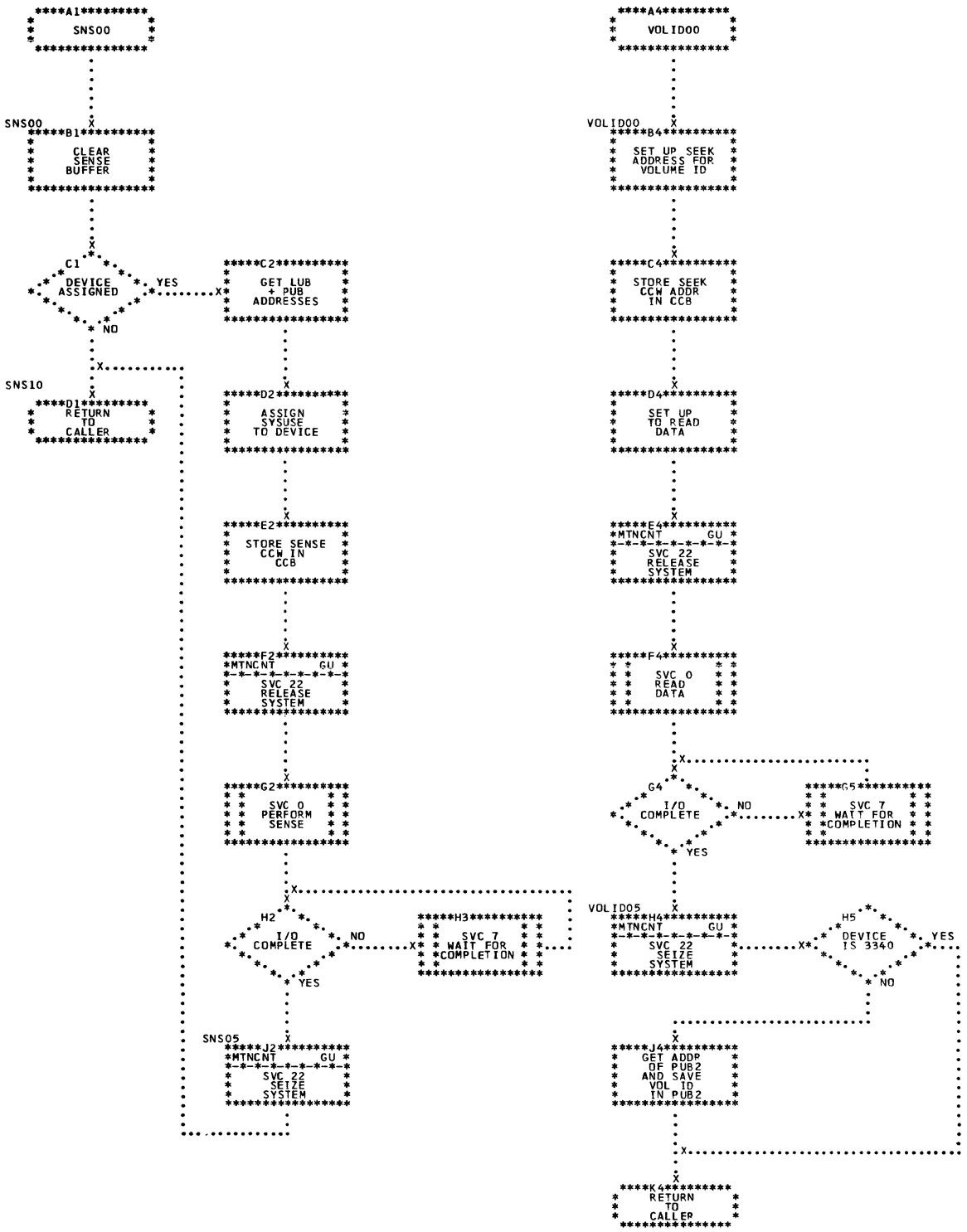


Chart RP. $JOBCTLM - Miscellaneous Subroutines (Part 7 of 10)
Refer to Chart 19.

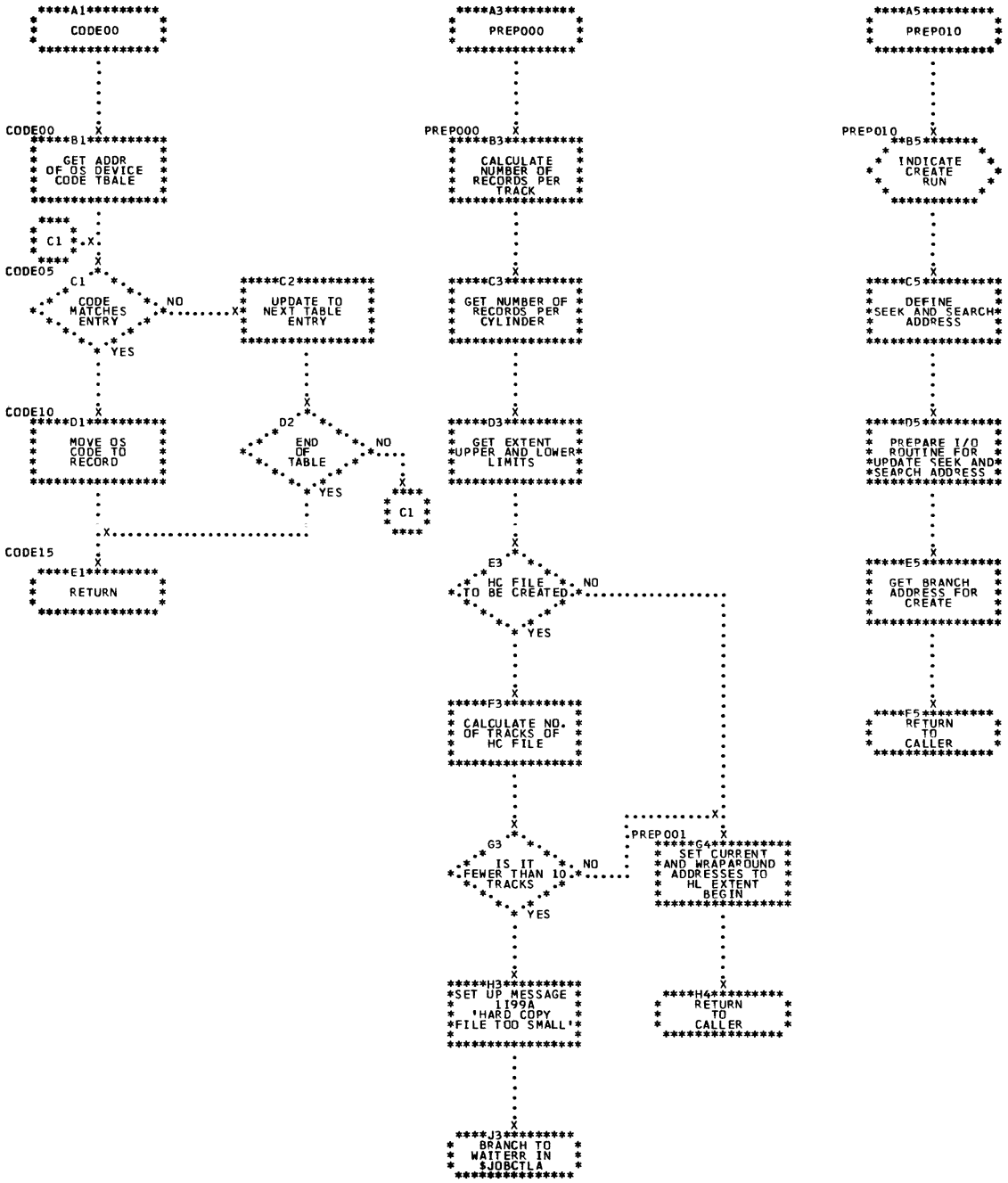


Chart RQ. $JOBCTLM - Miscellaneous Subroutines (Part 8 of 10)
Refer to Chart 19.

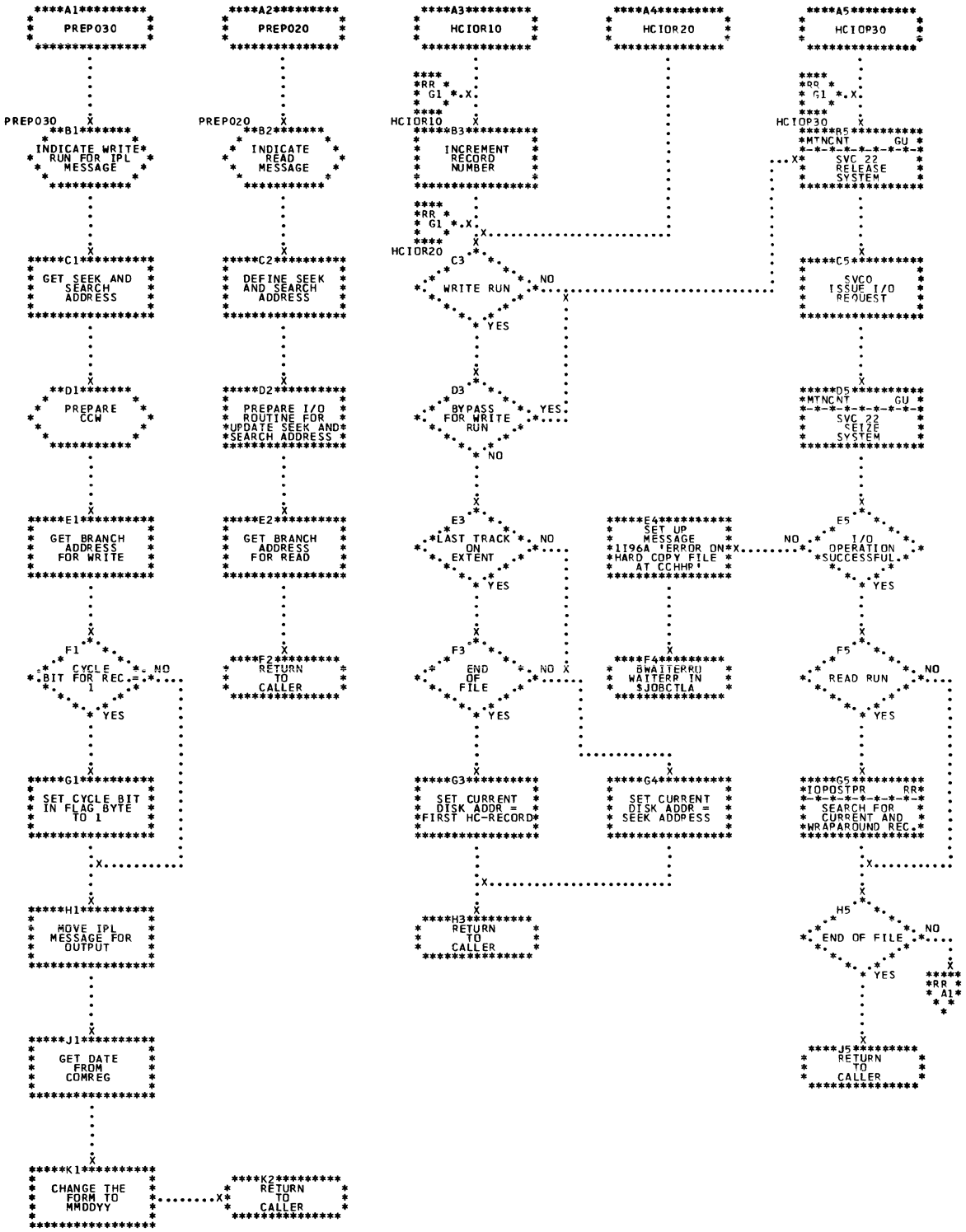


Chart RR. $JOBCTLM - Miscellaneous Subroutines (Part 9 of 10)
Refer to Chart 19.

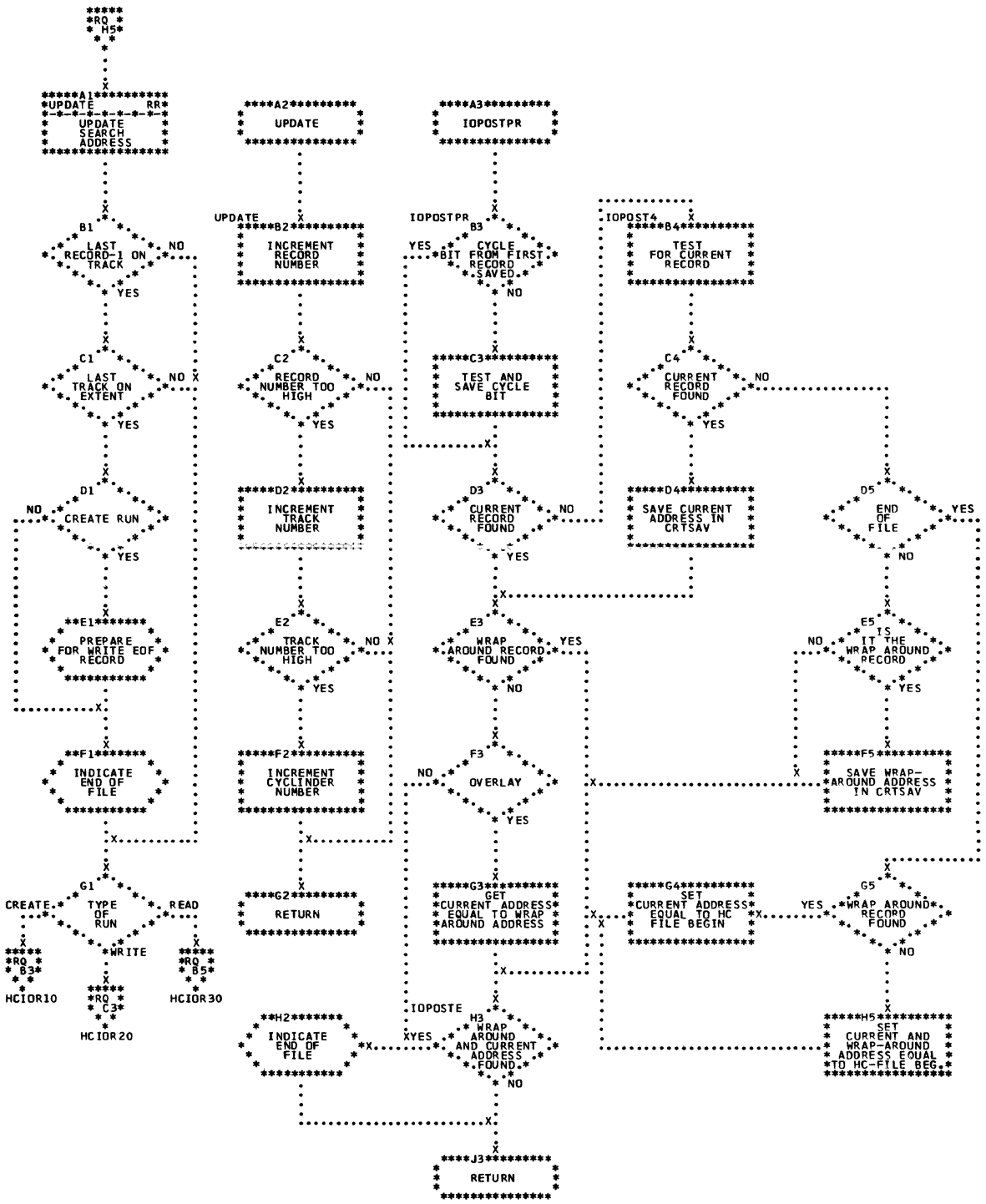


Chart RS. **$JOBCTLM - Miscellaneous Subroutines (Part 10 of 10)**
Refer to Chart 19.

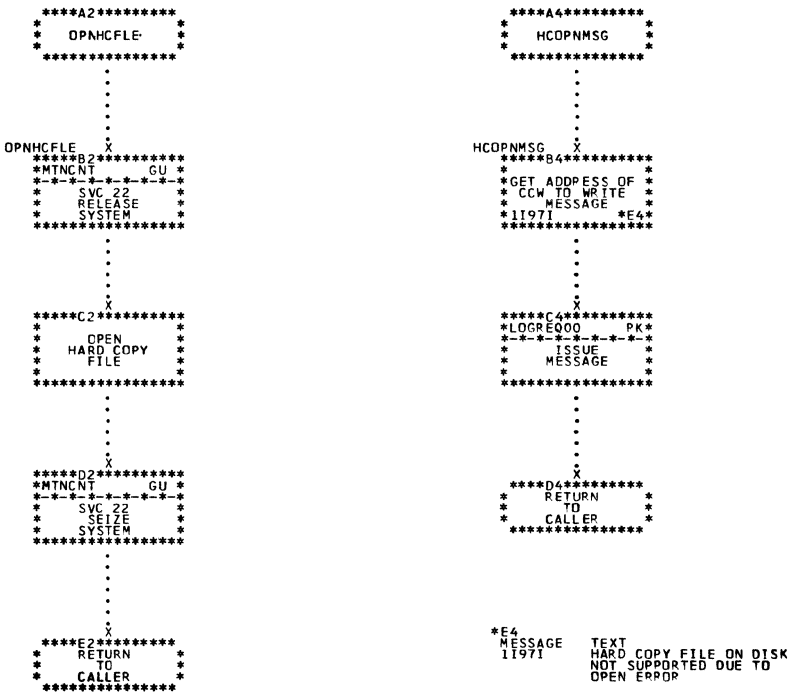


Chart SA. $JOBCTLN - Job Accounting Interface (Part 1 of 2)
Refer to Chart 20.

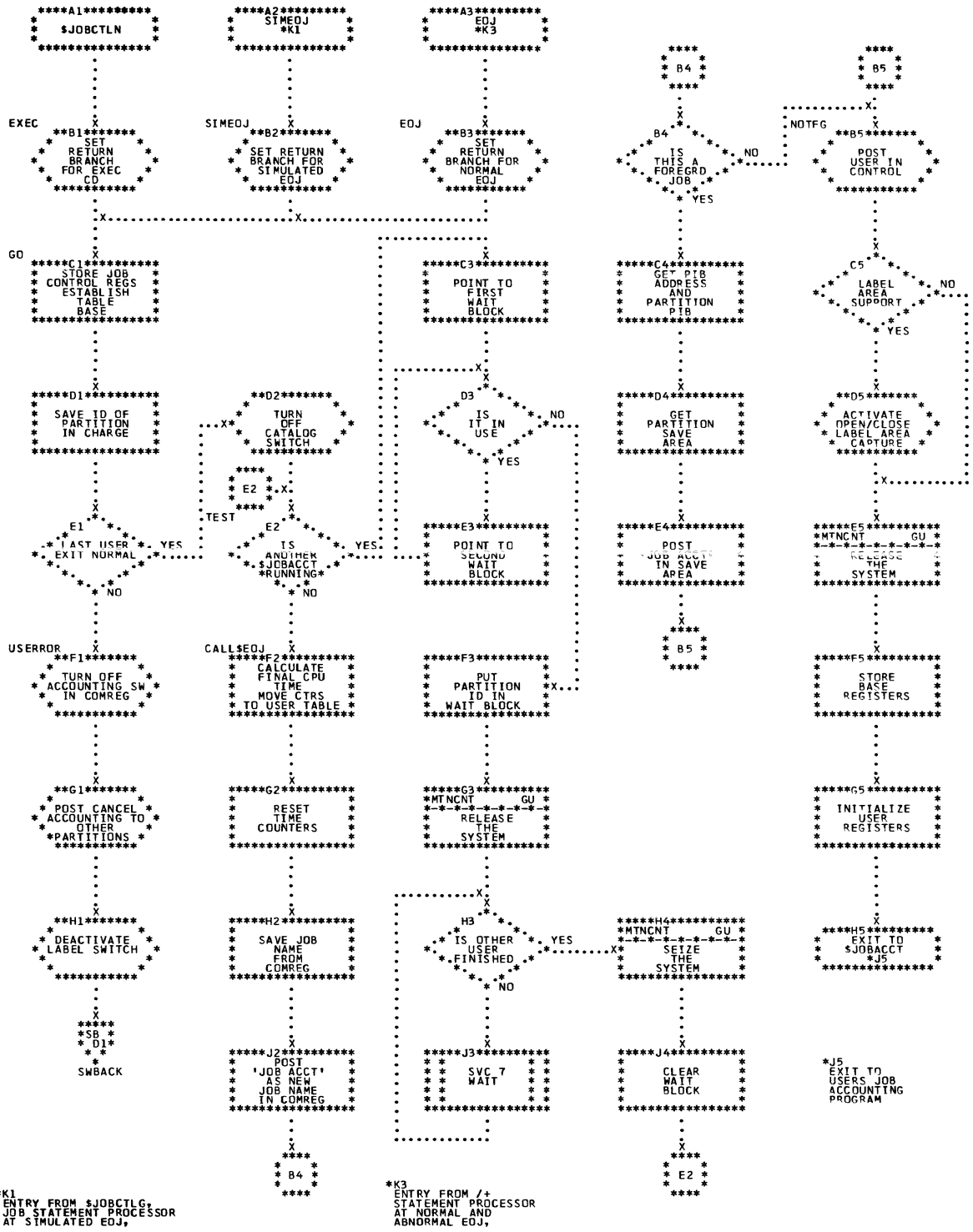


Chart SB. **$JOBCTLN - Job Accounting Interface (Part 2 of 2)**
Refer to Chart 20.

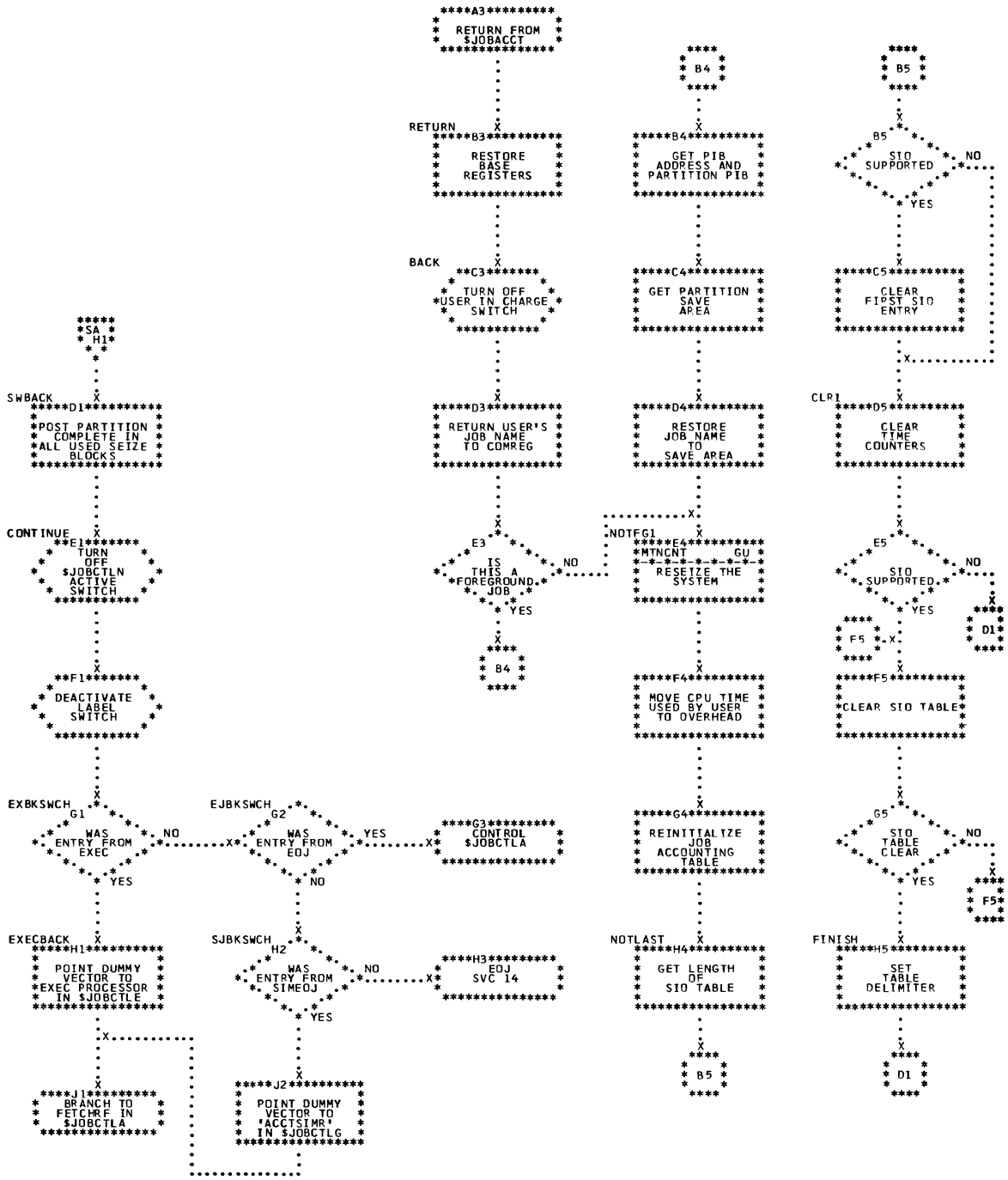


Chart TA. $$BLSTIO - Initializaticn
Refer to Chart 11.

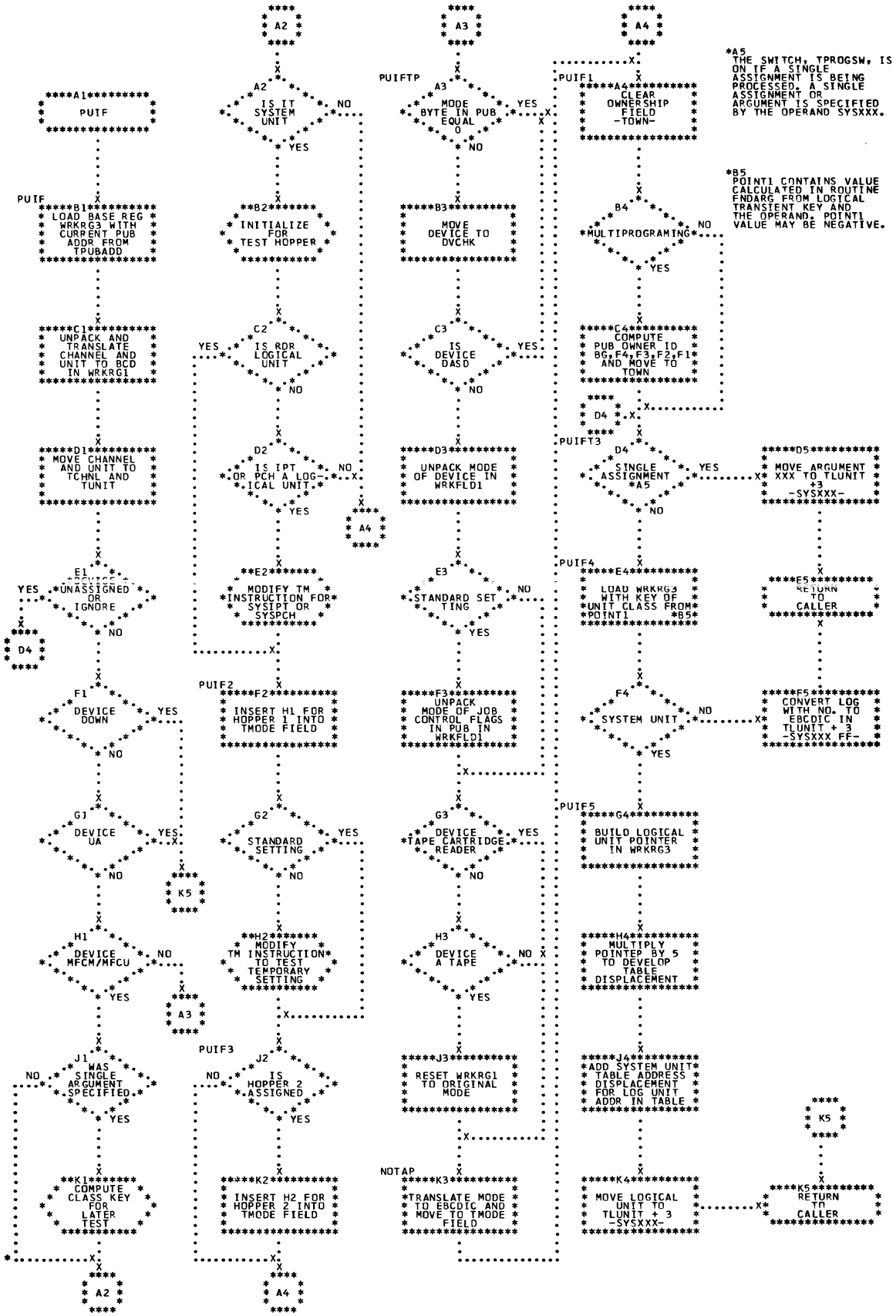


Chart TB. $$BISTIO - Cperand Identificaticn Subrcutine
Refer to Chart 11.

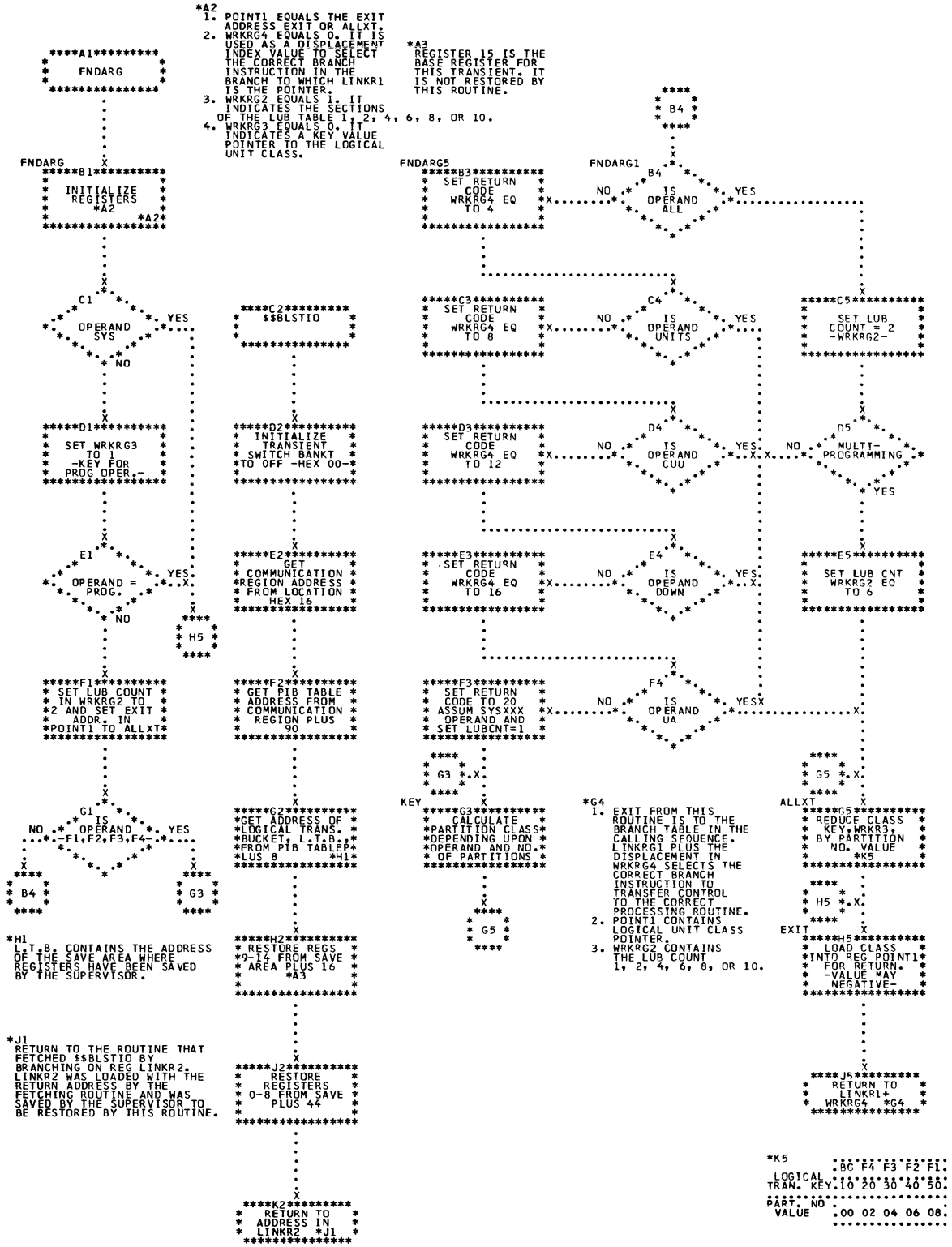
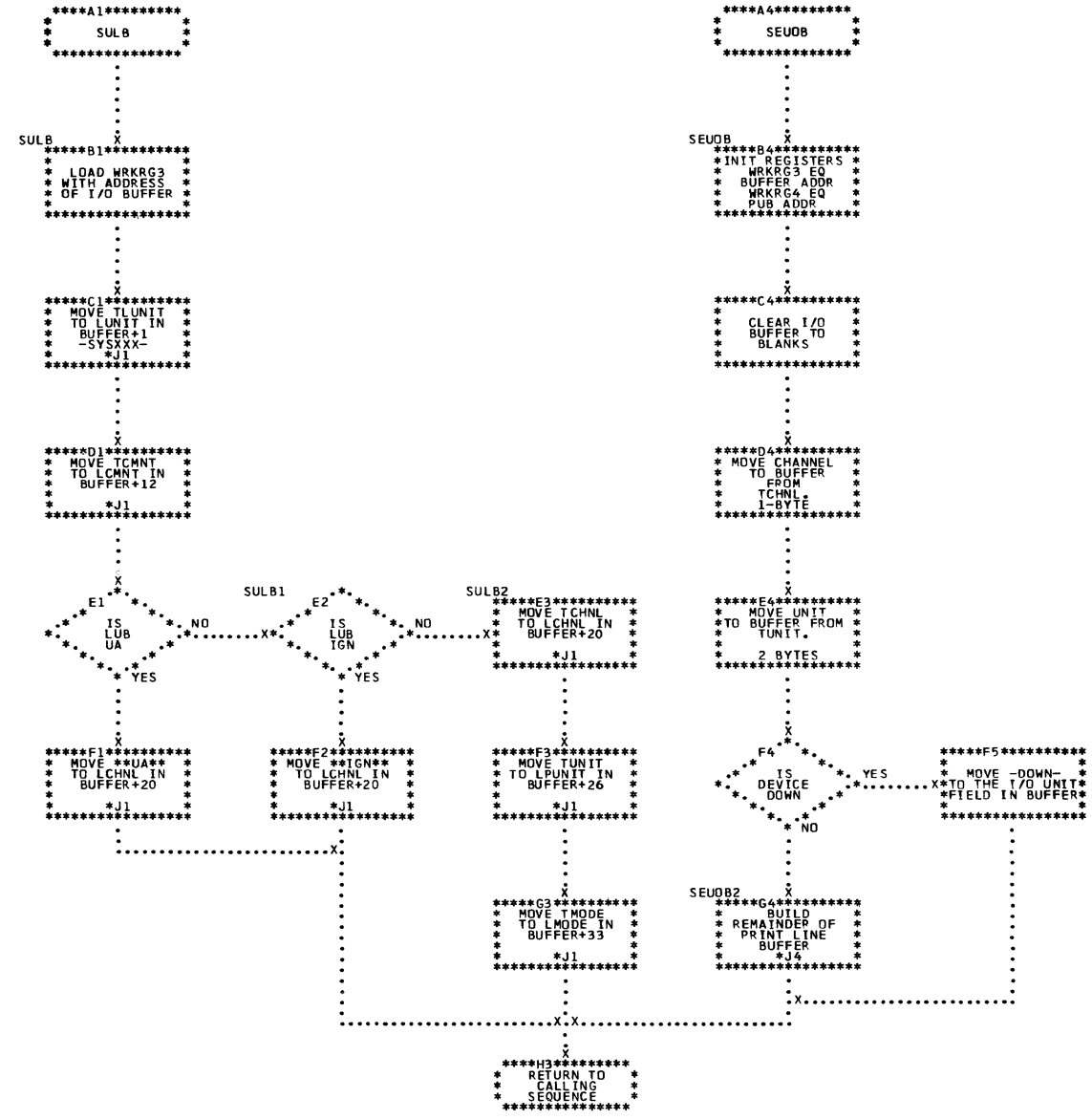


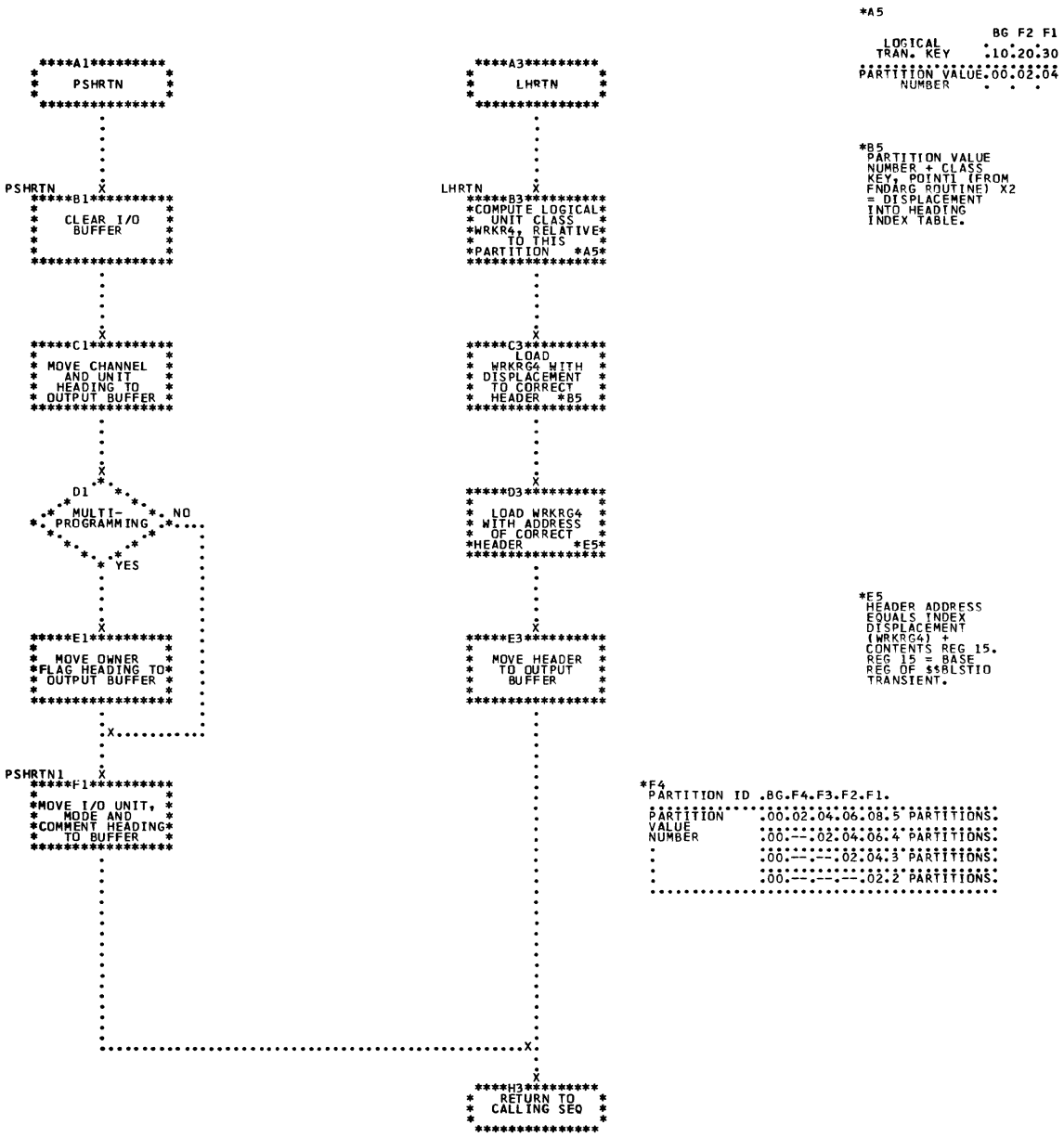
Chart TC. $$BLSTIO - Build Print Line Subrcutine
Refer to Chart 11.



*J1
LUNIT LCMNT LCHNL LPUNIT LMODE
-SYSXXX- XXX **-UA-** XX XX
-IGN-

*J4
1. MOVE OWNER TO OWNER FIELD
2. MOVE MODE FROM TMODE TO MODE FIELD
3. MOVE LOGICAL UNIT FROM TLUNIT TO I/O UNIT FIELD
4. MOVE THE COMMENT FROM TCMNT TO THE COMMENT FIELD-MODE LESS 6 BYTES

Chart TD. $$BLSTIO - Build Header Subroutine
Refer to Chart 11.



Label	Phase	Location
$DASD000	$JOBCTLB	HGB1
$DASD010	$JOBCTLB	HGC1
$RST1ERR	$JOBCTLB	HDD5
$RST1050	$JOBCTLB	HDC3
$RST1080	$JOBCTLB	HDJ2
$RST1090	$JOBCTLB	HDJ3
$RST2ERR	$JOBCTLB	HDG4
$RST3ERR	$JOBCTLB	HDG1
$SIZE	$JOBCTLB	HGB4
#FAVP	$JOBCTLB	HFC2
#RSTC050	$JOBCTLB	HAD1
#RST0080	$JOBCTLB	HAA3
#RST0200	$JOBCTLB	HCA3
#RST0800	$JOBCTLB	HCE3
#RST0900	$JOBCTLB	HCH3
#RST1010	$JOBCTLB	HAC2
#RST1020	$JOBCTLB	HBB3
#RST1030	$JOBCTLB	HBA2
#RST2000	$JOBCTLB	HBH2
#RST4ERR	$JOBCTLB	HBC3
#RST8000	$JOBCTLB	HBK3
#RST9000	$JOBCTLB	HCA4
ABNCHK	$IPLRT2	CHD1
ABNEND	$IPLRT2	CHD2
ACCNTI	$JOBCTLE	LAG3
ACCTBR1	$JOBCTLA	GBG2
ACCTBR2	$JOBCTLG	NBE3
ACCTBR3	$JOBCTLG	NCG3
ACCTBR5	$JOBCTLG	NAE4
ACCTCL	$JOBCTLA	GBK2
ACCTIGN	$JOBCTLF	MMC3
ACCTIGN1	$JOBCTLE	LBF3
ACCTIGN2	$JOBCTLG	NEH4
ACCTIGN3	$JOBCTLA	GAD4
ACCTIGN4	$JOBCTLA	GBA1
ACCTIGN4	$JOBCTLG	NBG1
ACCTIGN5	$JOBCTLG	NCA3
ACCTIGN6	$JOBCTLG	NCK3
ACCTLV1	$JOBCTLA	GBH3
ACCTSIMR	$JOBCTLG	NAJ4
ACCTUPDT	$JOBCTLF	MMB3
ACCTUPDT	$JOBCTLJ	PMJ1
ACLEXCP	$JOBCTLE	LNG1
ACTION	$JOBCTLJ	PDB1
ACTRSP	$JOBCTLA	GCA1
ACTTEST	$JOBCTLF	MSH3
ADDRTN	$IPLRT3	DAB1
ADR	$JOBCTLA	GXE1
ADREST	$IPLRT4	EFB3
ALCERR	$IPLRT2	CJJ3
ALCERR2	$IPLRT2	CJH4
ALCNEXT	$IPLRT2	CJD2
ALCPFIX	$IPLRT2	CJH2
ALCRTN	$IPLRT2	CJB2
ALIGN	$JOBCTLG	NHJ2
ALLOC	$JOBCTLJ	PQB1
ALLOCR	$JOBCTLJ	PRB1
ALLXT	$$BLSTIO	TBG5
ARND	$JOBCTLG	NNF1

Label	Phase	Location
ARND1	$JOBCTLG	NNG4
ASGEND	$IPLRT5	FFF5
ASNEND	$IPLRT4	EHE1
ASNLP1	$IPLRT4	EHJ2
ASNLP2	$IPLRT4	EHC1
ASNOWN1	$IPLRT4	EHB3
ASNRTN	$IPLRT4	EHB1
ASSGN	$IPLRT5	FFJ3
ASSGN	$JOBCTLD	JAB1
ASSGNB4	$JOBCTLD	JJB4
ASSGNB6	$JOBCTLD	JGA1
ASSGNB6A	$JOBCTLD	JEF1
ASSGNB6D	$JOBCTLD	JEC3
ASSGNB7	$JOBCTLD	JPA1
ASSGNC	$JOBCTLD	JAJ2
ASSGNDIB	$JOBCTLD	JFD3
ASSGNIT	$JOBCTLD	JNC4
ASSGNLST	$JOBCTLD	JFF2
ASSGNP	$JOBCTLD	JDF1
ASSGNP1	$JOBCTLD	JDD2
ASSGNP2	$JOBCTLD	JDE2
ASSGNR	$JOBCTLD	JAF2
ASSGNV1	$JOBCTLD	JAB3
ASSGNV2	$JOBCTLD	JAC3
ASSGN0	$JOBCTLD	JAD3
ASSGN00	$JOBCTLD	JAB5
ASSGN10	$JOBCTLD	JKB4
ASSGN101	$JOBCTLD	JKE3
ASSGN11	$JOBCTLD	JKH5
ASSGN12	$JOBCTLD	JKC4
ASSGN20	$JOBCTLD	JMC1
ASSGN21	$JOBCTLD	JEC1
ASSGN23	$JOBCTLD	JMG1
ASSGN23A	$JOBCTLD	JMC3
ASSGN24	$JOBCTLD	JNB3
ASSGN26	$JOBCTLD	JHF3
ASSGN27	$JOBCTLD	JHH3
ASSGN28	$JOBCTLD	JND1
ASSGN29	$JOBCTLD	JPH1
ASSGN3	$JOBCTLD	JAG3
ASSGN3A	$JOBCTLD	JQA1
ASSGN30	$JOBCTLD	JPH2
ASSGN31	$JOBCTLD	JPK1
ASSGN32	$JOBCTLD	JPA2
ASSGN34	$JOBCTLD	JGC3
ASSGN35	$JOBCTLD	JGB2
ASSGN36	$JOBCTLD	JHB3
ASSGN38	$JOBCTLD	JPC3
ASSGN39	$JOBCTLD	JPE1
ASSGN40	$JOBCTLD	JQB4
ASSGN403	$JOBCTLD	JDG1
ASSGN404	$JOBCTLD	JEA1
ASSGN41	$JOBCTLD	JQA2
ASSGN42	$JOBCTLD	JQJ2
ASSGN43	$JOBCTLD	JQF5
ASSGN6	$JOBCTLD	JKC1
ASSGN7	$JOBCTLD	JKD2
ASSGN8	$JOBCTLD	JKB3
ASSGN901	$JOBCTLD	JGJ2
ASSNALT	$JOBCTLD	JRB1
ASSPERM	$JOBCTLD	JME1

Label	Phase	Location
ASSTEMP	$JOBCTLD	JNB1
ATNCUU	$JOBCTLA	GVB1
ATNCUU1	$JOBCTLA	GVF1
AUTONK	$JOBCTLE	LDF3
BACK	$JOBCTLN	SBC3
BBGSSXXX	$JOBCTLD	JAE1
BCHEST	$IPLRT3	DED1
BEGIN	$IPLRT2	CAB1
BEGIPL	$$A$IPL2	BAC1
BEGXCUU	$JOBCTLD	JLC2
BFSMALL	$JOBCTLM	RKF2
BILDIB	$JOBCTLB	HFA1
BINCON	$JOBCTLJ	PUB5
BLDHDR00	$JOBCTLM	RHB4
BLDHDR05	$JOBCTLM	RHC4
BLDHDR10	$JOBCTLM	RHD4
BLDHDR20	$JOBCTLM	RHF5
BLDIPL00	$JOBCTLM	RJB1
BLDIPL05	$JOBCTLM	RJD1
BLDIPL10	$JOBCTLM	RJG1
BLDIPL15	$JOBCTLM	RJF2
BLDIPL20	$JOBCTLM	RJH3
BLDIPL25	$JOBCTLM	RJJ2
BLDOBR00	$JOBCTLM	REA1
BLDOBR05	$JOBCTLM	REF5
BLDOBR10	$JOBCTLM	REF2
BLDOBR15	$JOBCTLM	REF3
BLDOBR20	$JOBCTLM	REH2
BLDOBR50	$JOBCTLM	REB2
BLDPUB	$IPLRT3	DEB1
BLDP2T00	$IPLRT4	EKB1
BLDP2T05	$IPLRT4	EKH1
BLDP2T10	$IPLRT4	EKB3
BLDP2T12	$IPLRT4	EKC3
BLDP2T20	$IPLRT4	EKD3
BLDP2T25	$IPLRT4	EKE3
BLDP2T30	$IPLRT4	EKH3
BLDP2T40	$IPLRT4	EKK2
BLNLD	$JOBCTLF	MQD5
BMPXINT	$IPLRT4	ERE1
BMPXLP	$IPLRT4	ERG3
BMPXMCR	$IPLRT4	ESE2
BMPXNBT	$IPLRT4	ERC3
BMPXNXT	$IPLRT4	ERG1
BMPXPT	$IPLRT4	ERA5
BMPXRTN	$IPLRT4	ERB1
BMPXSCN	$IPLRT4	ERD3
BMPXSW1	$IPLRT4	ERJ3
BMPXSW2	$IPLRT4	ERE5
BMPXTST	$IPLRT4	ESD2
BMPXUNS	$IPLRT4	ESB3
BMPXZER	$IPLRT4	ERF1
BSTOFF	$IPLRT3	DFH1
BSTOK	$IPLRT3	DFJ1
BTLOOP	$JOBCTLA	GCA5
BTLOOP	$JOBCTLG	NGB3
BTOFRT	$JOBCTLJ	PKF4
BTONRT	$JOBCTLJ	PKF3
BUILDCOM	$$A$IPL2	BBK3
BYPASS	$JOBCTLJ	PDH5
CALL	$JOBCTLE	LPA1
CALL$EOJ	$JOBCTLN	SAF2
CALLNORM	$JOBCTLE	LPA2
CANCEL	$JOBCTLG	NFB5
CATAL	$JOBCTLG	NJB1
CATAL	$JOBCTLJ	PNB1
CATCODE	$IPLRT5	FAE3
CATNAME	$JOBCTLE	LFE5
CCW1	$$A$IPL1	AAC3
CCW2	$$A$IPL1	AAD3
CCW3	$$A$IPL1	AAE3
CCW4	$$A$IPL1	AAF3
CCW5	$$A$IPL1	AAG3
CDSCH	$IPLRT2	CCE5
CHAIN	$JOBCTLA	GJE2
CHCKDOC	$IPLRT4	END1
CHCLOP	$IPLRT3	DEC1
CHCNT	$IPLRT3	DEE1
CHECKCU	$IPLRT5	FFB2
CHECKSZ	$JOBCTLE	LEE2
CHECKS1	$JOBCTLE	LEG1
CHECKXNT	$IPLRT5	FCD2
CHEK3340	$IPLRT3	DFB3
CHEXT	$IPLRT3	DGD4
CHFIN	$IPLRT3	DEJ2
CHGSTT	$JOBCTLJ	PUG4
CHKASG	$JOBCTLA	GUB3
CHKASG3	$JOBCTLA	GUD3
CHKCNL	$JOBCTLA	GWB2
CHKCNT	$JOBCTLA	GJB4
CHKCOM	$IPLRT4	EBK3
CHKCSW	$$A$IPL2	BDF2
CHKCSW1	$$A$IPL2	BDK2
CHKCSW2	$$A$IPL2	BDB4
CHKDIB	$JOBCTLD	JFB2
CHKJIB	$JOBCTLA	GFD5
CHKLP	$IPLRT3	DGD1
CHKLST	$JOBCTLA	GFA3
CHKNXC	$JOBCTLD	KAC4
CHKNXC	$JOBCTLK	QRD3
CHKOPN	$JOBCTLD	KJB3
CHKOPN1	$JOBCTLD	KJC3
CHKOPN2	$JOBCTLD	KJB4
CHKOV	$JOBCTLE	LRB1
CHKOVR	$JOBCTLA	GTA3
CHKPGU	$JOBCTLJ	PTC4
CHKPUB	$JOBCTLF	MPB2
CHKPUN	$JOBCTLK	QHA4
CHKRAS	$IPLRT4	ECC4
CHKRNG	$JOBCTLD	KAB4
CHKRNG	$JOBCTLK	QRC3
CHKRNG1	$JOBCTLK	QRB3
CHSLOP	$IPLRT3	DGJ5
CHSWFCL	$IPLRT4	ETG3
CHSWIST	$IPLRT4	ETC3
CHSWLP	$IPLRT4	ETA3
CHSWNXT	$IPLRT4	ETD2
CHSWOFF	$IPLRT4	ETJ4
CHSWRTN	$IPLRT4	ETB1
CHULOP	$IPLRT3	DGE4
CHUPD	$IPLRT3	DGH4
CHURTN	$IPLRT3	DGB4
CILPCIL	$JOBCTLE	LMB3
CINIT	$JOBCTLE	LPC3
CKCLAS	$JOBCTLF	MPJ1
CLBLUB	$JOBCTLF	MPJ3
CLCKCHK	$IPLRT4	EAF1
CLDLP1	$IPLRT4	EEE4
CLDLP2	$IPLRT4	EEJ4
CLDRTN	$IPLRT4	EEB4

Label	Phase	Location
CLEAR	$$A$IPL2	BAD1
CLEAR	$IPLRT2	CAK4
CLEAR	$JOBCTLB	HFB1
CLEARFIN	$IPLRT2	CAA5
CLNOTOP	$IPLRT2	CBC2
CLNOTSET	$IPLRT2	CBA4
CLOSE	$JOBCTLD	JSB1
CLOSED	$JOBCTLD	JSA4
CLOSEL	$JOBCTLD	KDE1
CLOSEP	$JOBCTLD	KDB2
CLOSE1	$JOBCTLD	KCB4
CLOSE2	$JOBCTLD	JSK2
CLOSE3	$JOBCTLD	JSC5
CLOSE7	$JOBCTLD	JSG2
CLRDIB	$JOBCTLD	KDB1
CLRDIB1	$JOBCTLD	KDB4
CLRDIB2	$JOBCTLD	KDC4
CLRDIB3	$JOBCTLD	KDA5
CLRDIB5	$JOBCTLD	KDJ5
CLRDN	$JOBCTLF	MPB3
CLR1	$JOBCTLK	QBD5
CLR1	$JOBCTLN	SBD5
CLSDU	$JOBCTLD	KDG2
CNCLMD	$JOBCTLA	GHC4
CNCLMOD1	$JOBCTLA	GWF4
CNIOAG	$JOBCTLD	KMD2
CNKLNK	$JOBCTLG	NMB2
CNUNCO	$JOBCTLJ	PTB4
CNUNCO1	$JOBCTLJ	PTD5
CNVBCD	$JOBCTLF	MQB5
CNVRT	$JOBCTLE	LTB2
CNVRTL	$JOBCTLE	LTD2
CNVRTS	$JOBCTLE	LTG2
CODE00	$JOBCTLM	RPB1
CODE05	$JOBCTLM	RPC1
CODE10	$JOBCTLM	RPD1
CODE15	$JOBCTLM	RPE1
COMCHK	$IPLRT4	EEB2
COMDOK	$IPLRT4	EBD3
COMLOG	$IPLRT4	ECK5
COMLOP	$IPLRT4	EEC2
COMNFD	$IPLRT4	EBA4
COMPAR	$JOBCTLE	LGF2
COMPDAY	$IPLRT4	EFE2
CONCAT	$JOBCTLK	QMB4
CONDSCK	$JOBCTLD	JPC4
CONTIN	$$A$IPL2	BAF2
CONTINUE	$JOBCTLN	SBE1
CONTROL	$JOBCTLA	GCB1
CONT3	$JOBCTLA	GCH1
CONT4	$JOBCTLA	GCG2
CONT5	$JOBCTLA	GCH2
CONT6	$JOBCTLA	GCA4
CONVERT	$JOBCTLJ	PSB3
COPYLP	$JOBCTLJ	PDF3
CPBFEND	$IPLRT4	EEH3
CPYSLB	$IPLRT4	EGB3
CPYSRT	$IPLRT4	EGB4
CRJBSQ	$JOBCTLG	NAA5
CRTTST1	$JOBCTLG	NCF5
CSET	$JOBCTLE	LPJ3
CTRLSW	$JOBCTLA	GFJ3
CYCLE	$IPLRT4	EAH1
CYLDP	$IPLRT4	ECD1
C48	$JOBCTLG	NHG3
C60	$JOBCTLG	NHG4

Label	Phase	Location
DATE	$JOBCTLJ	PHB2
DATIMERT	$IPLRT4	EFB1
DBLSCN	$IPLRT3	DAA3
DCUXTN	$JOBCTLA	GFF5
DDLUB	$IPLRT2	CGE2
DECIDE	$$BCARTR	FGB3
DECK	$JOBCTLG	NHB1
DECLP	$IPLRT2	CGC5
DECRL	$IPLRT2	CFD2
DECRR	$IPLRT2	CFE4
DECRTN	$IPLRT2	CGB5
DELETION	$IPLRT5	FCC3
DELLOP	$IPLRT3	DCA3
DELRTN	$IPLRT3	DCA1
DEQUE	$JOBCTLB	HFA5
DETACH	$JOBCTLF	MMB1
DETACHR	$JOBCTLF	MMB4
DETACH1	$JOBCTLF	MMF1
DETACH2A	$JOBCTLF	MME2
DETACH3	$JOBCTLF	MMF3
DEVOPER	$$BCARTR	FGD3
DEVSCAN	$JOBCTLD	JJB1
DIBRC	$JOBCTLJ	PHH1
DLAB	$JOBCTLK	QFB1
DLBL	$JOBCTLK	QEB1
DLBL1	$JOBCTLK	QED1
DLBOUT	$JOBCTLK	QFA5
DNEERR	$JOBCTLJ	PVC3
DOCINIT	$IPLRT4	ENJ2
DOCRTN	$IPLRT2	CBF5
DOFFSET	$JOBCTLA	GRE2
DOP34	$JOBCTLK	QMB1
DOWN	$JOBCTLF	MEB3
DPDCODE	$IPLRT5	FAG3
DQXTNT	$JOBCTLG	NND5
DSDP1	$IPLRT4	EDC4
DSDP2	$IPLRT4	EDE4
DSDP3	$IPLRT4	EDH4
DSDP4	$IPLRT4	EDJ4
DSDRET	$IPLRT4	EDE5
DSDRTN	$IPLRT4	EDB4
DSKDEV	$JOBCTLE	LTB5
DSKIND	$JOBCTLA	GRH2
DSKINIT	$JOBCTLE	LTB4
DSKINT	$JOBCTLA	GFB1
DUDFB	$JOBCTLA	GQB4
DUDFT	$JOBCTLA	GRF4
DULO	$JOBCTLA	GSC1
DUMP	$JOBCTLG	NKJ3
DVCDN	$JOBCTLF	MHB1
DVCDNC	$JOBCTLF	MJF1
DVCDNS	$JOBCTLF	MJB1
DVCDNX	$JOBCTLF	MJF5
DVCDN00	$IPLRT4	ELB1
DVCDN10	$IPLRT4	ELG1
DVCDN14	$JOBCTLF	MHC2
DVCDN14A	$JOBCTLF	MHG2
DVCDN14B	$JOBCTLF	MHH2
DVCDN15	$IPLRT4	ELF2
DVCDN25	$IPLRT4	ELG2
DVCDN3	$JOBCTLF	MHB5
DVCDN30	$IPLRT4	ELJ2
DVCDN5	$JOBCTLF	MHB4
DVCDN6	$JOBCTLF	MJJ1
DVCDN7	$JOBCTLF	MJF4
DVCDN8	$JOBCTLF	MJH2

Label	Phase	Location
DVCUP	$JOBCTLF	MLB2
ECFINCR	$$A$IPL2	BDJ5
ECFLOOP	$$A$IPL2	BDG4
ECFLOOP1	$$A$IPL2	BDG5
EDECK	$JOBCTLG	NHJ4
EJBKSWCH	$JOBCTLN	SBG2
ENDFORM	$IPLRT5	FDE3
ENDINC	$JOBCTLJ	PDH4
ENDIRRD	$JOBCTLE	LGB3
ENDLIM	$JOBCTLJ	PQG5
ENDLOOP	$IPLRT4	EAC4
ENDMONTH	$IPLRT4	EFG2
ENDOPSCN	$JOBCTLD	JDB1
ENDSCAN	$JOBCTLD	JJJ5
ENFND	$IPLRT3	DEK1
ENTRYOK	$JOBCTLE	LHF3
EODADDR	$JOBCTLD	KDF2
EOF	$IPLRT4	EMA5
EOFPRC	$JOBCTLA	GTD2
EOJ	$JOBCTLG	NDC1
EOJ	$JOBCTLN	SAB3
EOJBY	$JOBCTLG	NCA4
EOJNRF	$JOBCTLG	NDB1
EOJPIB	$JOBCTLG	NDB2
EOJPIB1	$JOBCTLG	NEB3
EOJ1	$JOBCTLG	NCG4
EREXIT	$JOBCTLJ	PFE3
ERRAP	$JOBCTLA	GWG3
ERRAP1	$JOBCTLA	GWC4
ERREND	$JOBCTLE	LQJ4
ERROFF	$JOBCTLA	GSC5
ERROR	$JOBCTLE	LQD4
ERROR0	$$A$IPL2	BDH3
ERROR1	$JOBCTLE	LQC4
ERROR2	$JOBCTLE	LQE4
ERRRTN	$JOBCTLA	GWD2
ERRRTN	$JOBCTLD	KMC5
ERRRTN1	$JOBCTLD	KMK5
ERRRTN1	$JOBCTLF	MNK5
ERRRTN2	$JOBCTLA	GWF2
ERRRTN2	$JOBCTLD	KMJ5
ERRRTN2	$JOBCTLF	MNJ5
ERRS	$JOBCTLG	NHG1
ERRTN	$JOBCTLF	MNC5
ERR0I00A	$$A$IPL2	BAG5
ERR0I01A	$$A$IPL2	BBB5
ERR0I02A	$$A$IPL2	BAE5
ER1121	$IPLRT4	EDK5
ESTVOPEN	$JOBCTLJ	PFB5
EXBKSWCH	$JOBCTLN	SBG1
EXCCON	$JOBCTLA	GTB2
EXCECP	$JOBCTLA	GRF3
EXCEDT	$JOBCTLE	LCB1
EXCP	$JOBCTLD	KLB1
EXCP	$JOBCTLE	LFC1
EXCPGO	$JOBCTLA	GTA2
EXCPRG	$JOBCTLA	GQB1
EXCPROG	$JOBCTLD	KLB4
EXCPROG1	$JOBCTLD	KLB5
EXCPROG2	$JOBCTLD	KLD4
EXCPROG3	$JOBCTLD	KLE5
EXCPROG4	$JOBCTLD	KLF4
EXCPSVC	$JOBCTLA	GTD3
EXEC	$JOBCTLE	LAB1
EXEC	$JOBCTLN	SAB1
EXECBACK	$JOBCTLN	SBH1
EXIT	$JOBCTLA	GEB3
EXIT	$JOBCTLD	JRH1
EXIT	$$BLSTIO	TBH5
EXPEXT	$JOBCTLA	GTE3
EXPIRED	$IPLRT5	FCF2
EXTINT1	$$A$IPL2	BAJ3
EXTINT3	$$A$IPL2	BBB4
EXTNT	$JOBCTLK	QJB1
EXTRLC	$JOBCTLA	GXB3
EXTRTN	$JOBCTLA	GXC4
EX000	$JOBCTLE	LAD2
EX005	$JOBCTLE	LAF1
EX010	$JOBCTLE	LAG1
EX115	$JOBCTLE	LAH2
EX120	$JOBCTLE	LAB3
EX150	$JOBCTLE	LAB5
EX160	$JOBCTLE	LAD5
EX170	$JOBCTLE	LBF1
FCHMAINT	$JOBCTLE	LJB1
FDDKCODE	$JOBCTLK	QFK3
FDKIJ	$JOBCTLK	QEB2
FDKIJL	$JOBCTLK	QEH2
FDKIJ2	$JOBCTLK	QEJ2
FDKTDAT	$JOBCTLK	QDH3
FDKTDAT1	$JOBCTLK	QDJ5
FDKTDAT2	$JOBCTLK	QDG4
FDKTID	$JOBCTLK	QDB1
FDKTID2	$JOBCTLK	QDH2
FDKTV	$JOBCTLK	QCB1
FDKTVNM	$JOBCTLK	QCC3
FDKTV1	$JOBCTLK	QCH1
FDKTV2	$JOBCTLK	QCB2
FDK1	$JOBCTLK	QEF4
FDK2	$JOBCTLK	QEH4
FDSRTN	$IPLRT2	CGB4
FDSYSU	$JOBCTLJ	PTD4
FEBIN	$JOBCTLK	QBK4
FEBIN1	$JOBCTLK	QBE4
FEED	$JOBCTLA	GSE2
FESEQ	$JOBCTLK	QLB2
FFSEQCK	$JOBCTLK	QKG1
FESPLIT	$JOBCTLK	QKB4
FESPLIT2	$JOBCTLK	QKE5
FESPLIT3	$JOBCTLK	QKJ5
FESYSX2	$JOBCTLK	QJH1
FESYSX3	$JOBCTLK	QJC2
FETCHM	$JOBCTLG	NCJ5
FETCHN	$JOBCTLG	NCE4
FETCHRF	$JOBCTLA	GEB4
FETINSR0	$JOBCTLK	QCE4
FETINSRT	$JOBCTLK	QCB4
FETINSR1	$JOBCTLK	QCF4
FETINSR3	$JOBCTLK	QCH4
FETINSR4	$JOBCTLK	QCJ4
FETINSR5	$JOBCTLK	QCK4
FETK	$JOBCTLK	QKF2
FETKNO	$JOBCTLK	QKD3
FETKNO1	$JOBCTLK	QKH3
FETKTK	$JOBCTLK	QLB3
FETKTK1	$JOBCTLK	QLD4
FETKTK2	$JOBCTLK	QLF4
FETYPE	$JOBCTLK	QJD3
FETYPED	$JOBCTLK	QJD5
FETYPEI	$JOBCTLK	QKB1

Label	Phase	Location
FETYPEI4	$JOBCTLK	QKJ1
FETYPE1	$JOBCTLK	QJH4
FEVSER	$JOBCTLK	QJD2
FEVSER1	$JOBCTLK	QJE2
FEVSER2	$JOBCTLK	QJF2
FICNIC	$JOBCTLA	GAF1
FIDERR	$JOBCTLM	RAG4
FILEOVLP	$IPLRT5	FCE2
FIND	$JOBCTLE	LPJ2
FINDPRC	$JOBCTLE	LRB2
FINDVICE	$JOBCTLB	HEB2
FIND2	$JOBCTLB	HED1
FINISH	$JOBCTLE	LKH2
FINISH	$JOBCTLN	SBH5
FINOPN	$JOBCTLA	GRK2
FJB3	$JOBCTLE	LSB2
FND	$JOBCTLE	LRE3
FNDARG	$$BLSTIO	TBB1
FNDARG1	$$BLSTIO	TBB4
FNDARG5	$$BLSTIO	TBB3
FNDTYP	$IPLRT3	DFB1
FNIOAG	$JOBCTLD	KMD3
FORMR	$IPLRT5	FEB1
FOUND	$JOBCTLE	LRE4
FPRTN	$IPLRT4	EJB1
FREEJIB	$JOBCTLB	HFE3
FSCAN	$JOBCTLK	QBB4
FSCAN1	$JOBCTLK	QBC4
FTCHJIB	$JOBCTLE	LSB1
FTEND1	$JOBCTLK	QBD3
GETADD	$IPLRT2	CDA2
GETASG	$JOBCTLJ	PEA3
GETCAT	$IPLRT2	CDB4
GETDAT	$JOBCTLG	NLH1
GETDEL	$IPLRT2	CDA1
GETDEL1	$IPLRT2	CDB1
GETDPD	$IPLRT2	CDC4
GETIME	$JOBCTLG	NLB1
GETIME1	$JOBCTLG	NLB2
GETIME2	$JOBCTLG	NLB3
GETJIB	$JOBCTLD	KEB4
GETJIBSW	$JOBCTLD	KEK4
GETJIB1	$JOBCTLD	KEH4
GETJIB2	$JOBCTLD	KED5
GETKEY	$JOBCTLJ	PQJ1
GETLAN	$JOBCTLD	KAB3
GETNEXT	$JOBCTLD	JJC1
GETNICL	$IPLRT4	EHF2
GETPBOWN	$JOBCTLD	KHB4
GETPUB	$JOBCTLD	KNC3
GETPUB	$JOBCTLG	NPB2
GETRSP	$IPLRT5	FCK2
GETSET	$IPLRT2	CEA1
GETVOL	$JOBCTLA	GSB2
GET3	$IPLRT2	CDF3
GET4	$IPLRT2	CDJ2
GNXPUB	$IPLRT3	DCG4
GO	$JOBCTLN	SAC1
GTNAME1	$JOBCTLE	LFE2
GTNXOP	$JOBCTLJ	PQG1
GTNXOPR	$JOBCTLJ	PRF1
GTNXOPR1	$JOBCTLJ	PRG1
GTNXOP1	$JOBCTLJ	PQH1
HANDLINP	$JOBCTLE	LFJ1
HARDMC	$$A$IPL2	BAD2
HCEND	$JOBCTLJ	PJC5
HCIOR10	$JOBCTLM	RQB3
HCIOR20	$JOBCTLM	RQC3
HCIOR30	$JOBCTLM	RQB5
HCOPNMSG	$JOBCTLM	RSB4
HCSET	$JOBCTLJ	PJE5
HEADER	$JOBCTLB	HCE2
HEADNO	$JOBCTLA	GRH3
HEXCON	$JOBCTLD	KCB3
HEXCON	$JOBCTLJ	PTB2
HEXRTN	$IPLRT3	DGC1
HOLD	$JOBCTLJ	PAB3
HOLD1	$JOBCTLJ	PAF3
HOLD2	$JOBCTLJ	PAB4
IGNORE	$JOBCTLA	GCH3
IJBJOBRS	$JOBCTLB	HAB1
ILLCD	$IPLRT2	CHC1
ILUS	$JOBCTLD	KMB1
ILUS	$JOBCTLF	MNE4
INAERR	$JOBCTLJ	PVF1
INCLUDE	$JOBCTLA	GLB1
INCLUDE	$JOBCTLJ	PDB3
INCL05	$JOBCTLA	GLE2
INCL10	$JOBCTLA	GLJ2
INCL15	$JOBCTLA	GLA3
INCL20	$JOBCTLA	GLB3
INCL25	$JOBCTLA	GLC3
INCL30	$JOBCTLA	GLD3
INCREMEN	$IPLRT5	FCE1
INDIB	$JOBCTLA	GRD4
INDIGN	$JOBCTLD	JBD2
INDSEQ	$JOBCTLK	QGG3
INDUA	$JOBCTLD	JBD1
INDVTP	$JOBCTLD	KMB2
INIT	$JOBCTLE	LAB4
INITIO	$JOBCTLM	RFB4
INITL	$JOBCTLD	KAB1
INITL	$JOBCTLF	MQB3
INITLNK	$JOBCTLE	LLB4
INITLNK1	$JOBCTLE	LLC4
INIT00	$JOBCTLM	RFB1
INIT15	$JOBCTLM	RFD4
INSW	$JOBCTLD	JQC5
INVASGN	$JOBCTLD	JPH4
INVRESPM	$IPLRT5	FCA4
IOCALL	$JOBCTLB	HGC3
IOCOMPL	$JOBCTLA	GTE4
IOHALT	$IPLRT2	CHE4
IOHLD	$IPLRT2	CHB3
IOHL2	$IPLRT2	CHC3
IOINT1	$$A$IPL2	BAD3
IOINT1A	$$A$IPL2	BAF3
IOINT3	$$A$IPL2	BBD3
IOPOSTE	$JOBCTLM	RRH3
IOPOSTPR	$JOBCTLM	RRB3
IOPOST4	$JOBCTLM	RRB4
IOROUT	$JOBCTLG	NNB3
IOROUTW	$JOBCTLG	NNC3
IORTN	$$A$IPL2	BDB1
IOSTOP	$IPLRT2	CHE2
IPLND3	$IPLRT5	FDG3
IPTDATA	$JOBCTLE	LRB5
ISSGETIM	$IPLRT4	EAJ4
ISSUIO	$JOBCTLA	GTF2

Label	Phase	Location
ISTYP4	$JOBCTLK	QGG4
IVDS	$JOBCTLD	KMB4
IVDS	$JOBCTLF	MNA4
IVSERR	$JOBCTLJ	PVB5
JBINPR	$JOBCTLG	NDA5
JFB1	$JOBCTLE	LSE1
JIBPTR	$JOBCTLG	NNF5
JO	$JOBCTLM	RAJ3
JOB	$JOBCTLG	NAB1
JOBCTL	$JOBCTLA	GAB1
JOBCTL4	$JOBCTLA	GBG1
JOBCTL5	$JOBCTLA	GBF2
KEY	$$BLSTIO	TBG3
KEYCHK	$IPLRT3	DBC2
KEYCHK1	$IPLRT3	DBA2
KEYCHK2	$IPLRT3	DAF4
KEYCHK2B	$IPLRT3	DAJ4
LASTPUB	$$BCARTR	FGF1
LAXERR	$JOBCTLG	NRE3
LAXERR	$JOBCTLK	QSC3
LBLOUT	$JOBCTLG	NQB1
LBLOUT	$JOBCTLK	QNG1
LBLOUTF	$JOBCTLK	QNB1
LBLOUTOB	$JOBCTLG	NQD3
LBLOUTOA	$JOBCTLG	NQH1
LBLOUTOB	$JOBCTLK	QND3
LBLOUTOC	$JOBCTLG	NQC1
LBLOUT1	$JOBCTLK	QPB3
LBLOUT2D	$JOBCTLG	NRD2
LBLOUT2D	$JOBCTLK	QPC4
LBLPED	$IPLRT2	CGJ1
LBLTYP	$JOBCTLK	QAB1
LBTOUT	$JOBCTLK	QAG2
LHRTN	$$BLSTIO	TDB3
LIMITR	$JOBCTLJ	PRE3
LIMITS	$JOBCTLJ	PQC4
LIMITS1	$JOBCTLJ	PQG4
LINK	$JOBCTLG	NJB2
LINKINT	$JOBCTLA	GQD4
LIOCUU	$JOBCTLF	MDA1
LIOEOJ	$JOBCTLF	MAA4
LIOEOJ1	$JOBCTLF	MAB4
LIOL	$JOBCTLF	MBB1
LIOLL201	$JOBCTLF	MBD1
LIOLL3	$JOBCTLF	MBE3
LIOL1	$JOBCTLF	MBA3
LIOL2	$JOBCTLF	MBA4
LIOL202	$JOBCTLF	MBE1
LIOL4	$JOBCTLF	MBF3
LIOSYX	$JOBCTLF	MDB3
LIST	$JOBCTLG	NHB3
LISTX	$JOBCTLG	NHB5
LIST10	$JOBCTLF	MAB1
LLNOUPDT	$IPLRT5	FFB3
LMESS	$JOBCTLD	KNF1
LMOD0G	$IPLRT4	EQD1
LMOD02	$IPLRT4	EQE2
LMOD07	$IPLRT4	EQD3
LNAERR	$JOBCTLG	NME3
LNKOUT	$JOBCTLJ	PUC3
LOADRS	$JOBCTLK	QQB4
LOADRS1	$JOBCTLK	QQF4
LOAD3NOW	$IPLRT2	CDE3

Label	Phase	Location
LODE	$JOBCTLB	HEJ5
LOG	$JOBCTLJ	PLB3
LOGCHK	$JOBCTLA	GLB4
LOGIN	$JOBCTLA	GMC2
LOGIN1	$JOBCTLA	GMF2
LOGIPL	$IPLRT2	CBF2
LOGOUT	$JOBCTLA	GJC1
LOGPRT	$JOBCTLA	GLH4
LOGRED	$IPLRT2	CCE3
LOGREQL0	$JOBCTLM	RKC5
LOGREQ00	$JOBCTLM	RKB4
LOGSTR	$IPLRT2	CCB3
LOGUSE	$IPLRT5	FAF2
LONGJIB	$JOBCTLB	HEF2
LOOKDOC	$IPLRT4	ENE1
LOOKLOOP	$IPLRT4	ECD3
LOOKSDL	$JOBCTLE	LGB1
LOOP	$JOBCTLG	NKA2
LPDOPT	$JOBCTLJ	PDE5
LSTBYTAD	$JOBCTLE	LFH4
LSTOUT	$JOBCTLA	GJB3
LUBCOUNT	$JOBCTLG	NMD1
LUBHLP	$IPLRT4	ECB1
LUBLPL	$IPLRT2	CGD1
LUBSCN	$JOBCTLG	NPB1
LUDRTN	$IPLRT2	CGB2
LUURTN	$IPLRT2	CGB1
MAIN00	$JOBCTLM	RAB1
MAIN010	$JOBCTLM	RAD1
MAIN011	$JOBCTLM	RAF2
MAIN012	$JOBCTLM	RBA1
MAIN013	$JOBCTLM	RBB3
MAIN05	$JOBCTLM	RAD5
MAIN08	$JOBCTLM	RBF4
MAIN09	$JOBCTLM	RBA4
MAIN10	$JOBCTLM	RBH4
MAIN15	$JOBCTLM	RKB2
MAP	$JOBCTLF	MKB1
MAPCHN00	$JOBCTLM	RGB1
MAPCHN10	$JOBCTLM	RGG1
MAPCHN15	$JOBCTLM	RGA2
MAPCHN20	$JOBCTLM	RGD2
MAPCHN25	$JOBCTLM	RGG2
MAPCHN30	$JOBCTLM	RGF3
MAPCH05	$JOBCTLM	RGE1
MCRETURN	$IPLRT2	CAC5
MDMTSUP	$JOBCTLF	MKH4
MDR00	$JOBCTLM	RDA1
MDR10	$JOBCTLM	RDB3
MDR35	$JOBCTLM	RLC3
MDR40	$JOBCTLM	RDF3
MERGE	$JOBCTLJ	PQG3
MERGER	$JOBCTLJ	PRF3
MERGES	$JOBCTLJ	PQJ3
MERGESVA	$JOBCTLJ	PQF3
MLUUR	$IPLRT2	CGC1
MMDD1	$JOBCTLJ	PGJ3
MODEOK	$IPLRT2	CAG4
MODERTN	$IPLRT4	EQB2
MODEXD	$IPLRT3	DFK5
MODLOP	$IPLRT3	DDD1
MODMOVE	$IPLRT3	DDE2
MONITOR	$IPLRT2	CCB1
MOREPART	$IPLRT4	EMH1
MORXT	$JOBCTLB	HEH4

Label	Phase	Location
MOVERCM	$IPLRT5	FBE5
MPXCHK	$IPLRT4	EJF4
MPXGO	$IPLRT4	EJG4
MPXLOP	$IPLRT4	EJC2
MPXMOV	$IPLRT4	EJE3
MPXRTN	$IPLRT4	EJB2
MSGMICR	$IPLRT4	ESH2
MSGOUT	$JOBCTLA	GJB2
MSGRTN	$IPLRT2	CHB4
MTC	$JOBCTLJ	PEB1
MTCMTCS	$JOBCTLJ	PEC3
MTCTEST	$JOBCTLJ	PED4
MTCTEST1	$JOBCTLJ	PFB1
MTC2	$JOBCTLJ	PEG2
MTC3	$JOBCTLJ	PEE3
MTC4	$JOBCTLJ	PEG4
MTNCNT	$JOBCTLA	GUB1
MTSUB	$JOBCTLF	MKH3
MVDU	$JOBCTLA	GRB2
MVQUO	$JOBCTLG	NKC2
MYJOBDTE	$IPLRT4	EAG4
NDSCAN	$JOBCTLA	GKG2
NDSCAN	$JOBCTLG	NKE4
NDSCAN	$JOBCTLK	QDJ2
NDSCAN1	$JOBCTLK	QDG3
NDSERR	$JOBCTLJ	PVF2
NDSERR1	$JOBCTLJ	PFC4
NDTERR	$JOBCTLJ	PVC1
NEWXTN	$JOBCTLK	QHF5
NEXT	$$BCARTR	FGC2
NEXT	$JOBCTLJ	PNC5
NEXTLBL	$IPLRT5	FBF5
NEXTP00	$JOBCTLM	RMB1
NEXTP05	$JOBCTLM	RMC2
NEXTP10	$JOBCTLM	RME1
NEXTSYS	$IPLRT4	EDD1
NK	$JOBCTLE	LDB5
NLISTX	$JOBCTLG	NHD1
NLSERR	$JOBCTLK	QSC2
NLST	$JOBCTLE	LEF4
NLUERR	$JOBCTLJ	PVC2
NLUERR	$JOBCTLK	QSC4
NOALIGN	$JOBCTLG	NHJ3
NOASGND	$IPLRT5	FAD1
NOCAT	$JOBCTLE	LBB3
NOCATL	$JOBCTLG	NEA1
NOCLB	$JOBCTLE	LLJ2
NODASD	$IPLRT2	CAE3
NODCUX	$JOBCTLK	QHD4
NODECK	$JOBCTLG	NHB2
NODSYS	$JOBCTLA	GFE3
NODUMMY	$JOBCTLD	JJG2
NODUMP	$JOBCTLG	NKJ2
NODUR1	$JOBCTLG	NEH3
NOEDECK	$JOBCTLG	NHJ5
NOEERT	$JOBCTLA	GVE3
NOERRS	$JOBCTLG	NHG2
NOESTV	$JOBCTLJ	PFD2
NOEXC	$JOBCTLD	KDD5
NOFP	$JOBCTLE	LEE3
NOINCL	$JOBCTLA	GCC1
NOIPT	$JOBCTLG	NEC2
NOIPTA	$JOBCTLG	NEB2
NOIPT1	$JOBCTLG	NEA4
NOIPT2	$JOBCTLG	NEA2
NOIPT3	$JOBCTLG	NEA3
NOIPT7	$JOBCTLG	NEF2
NOLABMSG	$IPLRT4	EMF2
NOLEAP	$JOBCTLJ	PGG3
NOLINK	$JOBCTLG	NKF2
NOLIST	$JOBCTLG	NHB4
NOLNKDIR	$JOBCTLE	LCH3
NOLOG	$IPLRT4	ECD5
NOLOG	$JOBCTLJ	PLB4
NOLOGAV	$IPLRT5	FAG2
NOMOVE	$JOBCTLG	NED4
NOMPSTP	$$A$IPL2	BCE1
NOMRJB	$JOBCTLD	KMD4
NOMSG	$$A$IPL2	BCH1
NOMTEB	$IPLRT4	ECF2
NONEWSUP	$JOBCTLE	LJF2
NONSTND	$JOBCTLB	HFG1
NOPAGE	$IPLRT2	CJF3
NOPAUSE	$JOBCTLA	GBE1
NOPSE	$JOBCTLG	NEH5
NOREL	$JOBCTLD	KAC2
NOREL	$JOBCTLF	MQJ3
NORELSW	$JOBCTLD	KAD1
NORELSW	$JOBCTLF	MQD3
NORESET	$JOBCTLJ	PFG3
NORESTOR	$JOBCTLG	NDG1
NOSET	$JOBCTLE	LAF3
NOSLD	$JOBCTLD	JPH5
NOSOAD	$IPLRT3	DEH5
NOSODL1	$IPLRT3	DDA4
NOSODL2	$IPLRT3	DDA1
NOSYM	$JOBCTLG	NHD3
NOTAP	$$BLSTIO	TAK3
NOTCRT	$IPLRT2	CAK1
NOTDRY	$JOBCTLD	JJB5
NOTDSK	$JOBCTLA	GTD1
NOTEBS	$$A$IPL2	BBH2
NOTERR	$JOBCTLG	NRE4
NOTFG	$JOBCTLN	SAB5
NOTFG1	$JOBCTLN	SBE4
NOTFOR4	$IPLRT2	CAD2
NOTFOR5	$IPLRT2	CAG2
NOTIMER	$JOBCTLF	MKK3
NOTINSVA	$JOBCTLE	LFE3
NOTLAST	$JOBCTLN	SBH4
NOTLIST	$JOBCTLG	NFH4
NOTNOS	$JOBCTLG	NGG1
NOTPMK	$JOBCTLB	HCD1
NOTSEQ	$JOBCTLK	QGG2
NOTSTAND	$JOBCTLB	HFG3
NOTVIRT	$JOBCTLE	LEB2
NOTZERO	$JOBCTLB	HFJ4
NOT01	$JOBCTLA	GRK4
NOT3330	$IPLRT4	EDF5
NOT4AND3	$IPLRT2	CEE3
NOT4NOW	$IPLRT2	CDC3
NOUAIGN	$JOBCTLD	JDC1
NOVOLCUO	$IPLRT5	FBF2
NOXREF	$JOBCTLG	NHD5
NO2314	$JOBCTLA	GAC3
NO3211	$IPLRT4	EDK2
NPWR	$JOBCTLA	GSD1
NRFVDL1	$IPLRT5	FBD1
NTINJB	$JOBCTLA	GVD2
NULCHK	$JOBCTLJ	PBJ3
NUMCON	$JOBCTLD	KAB5

Label	Phase	Location
NUMCON	$JOBCTLJ	PUB4
NUMCON	$JOBCTLK	QRB1
NUMCVT	$IPLRT3	DBG2
NVAERR	$JOBCTLJ	PVF5
NVOERR	$JOBCTLG	NRB4
NVSERR	$JOBCTLA	GWC2
NXT	$JOBCTLB	HFK3
NXT	$JOBCTLE	LFG2
NXTBIT	$JOBCTLJ	PKG3
NXTBLK	$$A$IPL2	BBA1
NXTDRCYL	$$A$IPL2	BAA4
NXTENTRY	$$A$IPL2	BAD4
NXTENTRY	$JOBCTLJ	PPF3
NXTFG	$JOBCTLJ	PQE1
NXTJIB	$JOBCTLA	GFG3
NXTJIB	$JOBCTLB	HFJ1
NXTLUB	$JOBCTLA	GFF3
NXTOPRD	$JOBCTLJ	PNE1
NXTSDL	$JOBCTLE	LGF1
NXTUNIT	$JOBCTLB	HEG3
OERRTN	$JOBCTLA	GVB3
ONINT	$IPLRT4	ECG2
ONOLOG	$JOBCTLJ	PLC5
OPALT	$JOBCTLD	JCF1
OPCLASS	$JOBCTLD	JBB3
OPENFILE	$JOBCTLM	RHB1
OPH1	$JOBCTLD	JBF3
OPH2	$JOBCTLD	JBB4
OPIGN	$JOBCTLD	JBB2
OPLBNF	$JOBCTLG	NRG2
OPLBNF	$JOBCTLK	QPE4
OPLOG	$JOBCTLJ	PLC2
OPMODE	$JOBCTLD	JBB5
OPNEND	$IPLRT4	EDJ1
OPNHCFLE	$JOBCTLM	RSB2
OPNLNK	$JOBCTLG	NLB5
OPNLOP	$IPLRT4	EDC1
OPNRTN	$IPLRT4	EDB1
OPNUSN	$IPLRT4	EDG1
OPPERM	$JOBCTLD	JCE2
OPRTN	$IPLRT2	CCB4
OPSHR	$JOBCTLD	JCB1
OPSYS	$JOBCTLD	JCB4
OPTEMP	$JOBCTLD	JCB2
OPTION	$JOBCTLG	NGB1
OPTLOG	$JOBCTLG	NKH4
OPTNLG	$JOBCTLG	NHG5
OPUA	$JOBCTLD	JBB1
OPVOL	$JOBCTLD	JCB3
OPX	$JOBCTLD	JAD4
OPXLIST	$JOBCTLD	JBG4
OTSERR	$JOBCTLE	LUC5
OTSERR	$JOBCTLG	NRE5
OTSERR	$JOBCTLJ	PVG3
OTSERR	$JOBCTLK	QSC1
OTSERR1	$JOBCTLE	LUB5
OTSERR1	$JOBCTLJ	PVF3
OUTLBL	$JOBCTLK	QHF4
OUTPUT	$JOBCTLD	KBB2
OUTPUTS	$JOBCTLD	KBB4
OUTPUTS	$JOBCTLF	MQC1
OUTPUT1	$JOBCTLD	KBB5
OUTPUT1	$JOBCTLF	MQC2
OUTPUT2	$JOBCTLD	KBD4
OUTPUT2	$JOBCTLF	MQE1

Label	Phase	Location
OVDERR	$JOBCTLA	GPB5
OVEND	$JOBCTLA	GPB4
OVLAPCK	$IPLRT5	FBD5
OVRLPI	$JOBCTLA	GTH2
OWNED	$JOBCTLD	JJF3
PARCHK	$JOBCTLE	LDB1
PARSTD	$JOBCTLG	NJB4
PARSTD1	$JOBCTLG	NJD4
PASSGN	$JOBCTLE	LSB3
PASSMC	$IPLRT2	CAJ5
PASSRF	$JOBCTLG	NCA5
PAUSE	$JOBCTLJ	PLB1
PBFEND	$IPLRT4	EEH2
PBFFIN	$IPLRT4	EBF3
PBFLOP	$IPLRT4	EEF1
PBFRTN	$IPLRT4	EEE1
PCHOUT	$JOBCTLJ	PNB2
PCILSUP	$JOBCTLG	NJD1
PCILSUPR	$JOBCTLG	NJD2
PCLOSE	$JOBCTLG	NTC4
PDSWRITE	$IPLRT5	FCE4
PEND	$JOBCTLG	NSB1
PEND1	$JOBCTLG	NSE1
PERCNT00	$JOBCTLM	RKB1
PERCNT05	$JOBCTLM	RKJ1
PEREXIT	$JOBCTLF	MFG2
PFORMAT	$IPLRT5	FDB4
PFREE	$JOBCTLG	NTC2
PFT10	$JOBCTLA	GFJ1
PJB	$JOBCTLE	LSE3
PLOG	$JOBCTLG	NUB1
PLOG05	$JOBCTLG	NUC1
PLOG07	$JOBCTLG	NUD1
PLOG08	$JOBCTLG	NUH2
PNDIO	$JOBCTLG	NSB5
PND02	$JOBCTLG	NSF1
PND03	$JOBCTLG	NSG1
PND05	$JOBCTLG	NSG3
PNPERR	$JOBCTLE	LUD2
PNPERR	$JOBCTLJ	PVB4
POINTLUB	$IPLRT4	ECK3
POUT	$JOBCTLG	NUE3
PPBEGOR	$IPLRT2	CAB2
PRALLOC	$JOBCTLJ	PQD1
PRCDIB	$JOBCTLA	GRD2
PRCINIT	$JOBCTLA	GGC2
PRCTEST	$JOBCTLE	LJH3
PREP000	$JOBCTLM	RPB3
PREP001	$JOBCTLM	RPG4
PREP010	$JOBCTLM	RPB5
PREP020	$JOBCTLM	RQB2
PREP030	$JOBCTLM	RQB1
PRGUNT	$JOBCTLJ	PTC5
PRIVATE	$JOBCTLE	LJC4
PROCDIB	$JOBCTLE	LTB1
PROTP	$JOBCTLD	JDD1
PRSYSLOG	$$A$IPL2	BBG3
PRSYSRDR	$$A$IPL2	BBD4
PSHRTN	$$BLSTIO	TDB1
PSHRTN1	$$BLSTIO	TDF1
PTEST	$JOBCTLA	GDB2
PTESTC	$JOBCTLA	GDJ2
PUBDEQ	$IPLRT3	DDF4
PUBEXD	$IPLRT3	DAC2
PUBMKE	$IPLRT3	DBJ2

Label	Phase	Location
PUBMK1	$IPLRT3	DBB5
PUBMSK	$JOBCTLD	KFE4
PUBMSK	$JOBCTLF	MRE4
PUIF	$$BLSTIO	TAB1
PUIFTP	$$BLSTIO	TAA3
PUIFT3	$$BLSTIO	TAD4
PUIF1	$$BLSTIO	TAA4
PUIF2	$$BLSTIO	TAF2
PUIF3	$$BLSTIO	TAJ2
PUIF4	$$BLSTIO	TAE4
PUIF5	$$BLSTIO	TAG4
QEND	$JOBCTLG	NKE3
RACDVC	$IPLRT3	DFD5
RANXJB	$JOBCTLG	NPB5
RASCAN	$JOBCTLG	NPB4
RASSGN	$JOBCTLG	NPF4
RASUPR	$IPLRT2	CAC4
RASWAIT	$IPLRT2	CAG5
RDCOMM	$JOBCTLB	HCH2
RDDIREC	$JOBCTLE	LFB1
RDERR	$JOBCTLA	GSH4
RDHDR00	$JOBCTLM	RLB1
RDHDR05	$JOBCTLM	RLG1
RDOVER	$JOBCTLA	GNB4
RDOVO6	$JOBCTLA	GNF1
RDOVC2	$JOBCTLA	GND1
RDOVC4	$JOBCTLA	GNE1
RDOVC8	$JOBCTLA	GNB3
RDOV10	$JOBCTLA	GNE2
RDRIN	$JOBCTLA	GMA3
RDRIN3	$JOBCTLA	GMD3
RDRIN5	$JOBCTLA	GME4
RDRTST	$IPLRT4	EBJ4
RDSTMT	$JOBCTLA	GMB1
RDSYSDIR	$JOBCTLE	LNB1
RDUSER	$JOBCTLB	HAJ5
RDVOL	$JOBCTLD	JJH4
RDVOL2	$JOBCTLD	JLE4
RDWRDESC	$IPLRT4	ENB5
READCD	$IPLRT2	CAA4
READHDR	$JOBCTLB	HCF1
READLAB	$IPLRT4	ENB3
READLAB2	$IPLRT4	EMB4
READOV	$JOBCTLA	GNB1
READRT	$IPLRT2	CCB2
READRT2	$IPLRT2	CCF1
READRT2A	$IPLRT2	CCE2
READRT3	$IPLRT2	CCG2
READRT4	$IPLRT2	CCF2
REC1	$JOBCTLB	HCA1
REISSUE	$JOBCTLE	LJG1
RELJBC	$JOBCTLA	GXB1
RELLOP	$JOBCTLD	KAG1
RELOC	$$BCARTR	FGB1
REORGLC	$IPLRT4	EMB1
REREAD	$IPLRT2	CCF3
RESET	$JOBCTLF	MFB1
RESET	$JOBCTLJ	PFF3
RESETCL	$JOBCTLF	MPJ2
RESETO1	$JOBCTLF	MFD2
RESETO15	$JOBCTLF	MFE2
RESET1	$JOBCTLF	MFC2
RESET101	$JOBCTLF	MGC1
RESET2	$JOBCTLF	MGE1
RESET3	$JOBCTLF	MGE5
RESET5	$JOBCTLF	MGA2
RESET6	$JOBCTLF	MGF4
RESET7	$JOBCTLF	MGB4
RESET8	$JOBCTLF	MGJ3
RESFCH	$JOBCTLE	LBC4
RESIDL	$IPLRT2	CFF2
RESIDR	$IPLRT2	CFG4
RESNFD	$IPLRT4	EBG5
RETADD	$JOBCTLF	MAJ1
RETURN	$JOBCTLB	HAF4
RETURN	$JOBCTLN	SBB3
RFEND	$JOBCTLJ	PJK1
RIGHT	$IPLRT2	CFC4
RLINDT	$JOBCTLA	GMC1
RLSENT	$JOBCTLJ	PAC3
RMSMCRET	$$A$IPL2	BAB2
RNGTOP	$JOBCTLD	KAD4
RNGTOP	$JOBCTLK	QRE3
RODCOMP	$JOBCTLM	RCB4
ROD00	$JOBCTLM	RCB1
ROD10	$JOBCTLM	RCA3
ROD15	$JOBCTLM	RCH3
ROD20	$JOBCTLM	RCA4
RPSERR	$JOBCTLE	LUB4
RPSSET	$IPLRT3	DFD3
RSPASG	$JOBCTLG	NME4
RSSASG1	$JOBCTLG	NBC2
RSSASG2	$JOBCTLG	NBB2
RSTASG	$JOBCTLG	NMB4
RSTCHQ	$IPLRT4	EJF5
RSTCOM	$JOBCTLG	NBG2
RSTLUB	$IPLRT2	CGH1
RSTRT	$JOBCTLK	QQB1
RSTSTD	$JOBCTLD	KEB1
RSTSTDS	$JOBCTLD	KED2
RSTSTD1	$JOBCTLD	KEF1
RSTSTD3	$JOBCTLD	KEG1
RSTSW4	$JOBCTLG	NAD4
SAMEDIB	$JOBCTLD	JPF4
SAMELUB	$JOBCTLD	JPE4
SAVED	$JOBCTLE	LHB3
SCANDEV	$$A$IPL2	BAA3
SCANR1	$JOBCTLA	GKC2
SCANR2	$JOBCTLA	GKB1
SCANR3	$JOBCTLA	GKB3
SCAN00	$JOBCTLM	RMB3
SCHLOP	$IPLRT3	DFC1
SCHSCH	$IPLRT3	DEJ1
SCHSTA	$IPLRT3	DEF1
SCHTST	$IPLRT3	DEH1
SCNEND	$IPLRT3	DCB4
SCNINT	$JOBCTLG	NMB1
SCNJIB	$JOBCTLD	KJB2
SCNLOP	$IPLRT3	DCD3
SCNLUB	$JOBCTLD	KJB1
SCNOPRS	$JOBCTLD	JAJ3
SCNRL1	$JOBCTLA	GKD2
SCNRL2	$JOBCTLA	GKE3
SCNRT	$JOBCTLE	LPD2
SDEV1	$$A$IPL2	BDC1
SEARCH	$IPLRT5	FCC4
SEEKINIT	$JOBCTLE	LLB1
SEEKSTRT	$JOBCTLE	LBE2
SELRLD	$JOBCTLA	GXD1

Label	Phase	Location
SEND	$JOBCTLE	LQG3
SENSE	$$A$IPL2	BDB2
SENSE	$$BCARTR	FGG3
SENSE2	$$A$IPL2	BDC2
SENSE3	$$A$IPL2	BDE2
SET	$JOBCTLJ	PGB2
SETAREA	$JOBCTLG	NKE5
SETCLOCK	$IPLRT4	EAF4
SETEXT	$JOBCTLJ	PGB1
SETFCL	$IPLRT3	DGG4
SETFIRST	$IPLRT2	CED1
SETFLAGS	$JOBCTLK	QFE5
SETINTVL	$IPLRT4	EAK4
SETKEY1	$$A$IPL2	BBK1
SETKEY2	$$A$IPL2	BBA2
SETOUT	$JOBCTLA	GSD2
SETOUTPT	$JOBCTLJ	PDC2
SETRTN	$IPLRT4	EAB1
SETSDL	$JOBCTLJ	PPA3
SETSVA	$JOBCTLJ	PPA1
SETSVA3	$JOBCTLJ	PPJ1
SETSVA4	$JOBCTLJ	PPE2
SETSVA5	$JOBCTLJ	PPJ2
SETWRT	$JOBCTLA	GTE2
SEUOB	$$BLSTIO	TCB4
SEUOB2	$$BLSTIO	TCG4
SFNC	$JOBCTLD	KMB5
SFNC	$JOBCTLF	MNB5
SFPPE	$JOBCTLD	KFB1
SFPPE	$JOBCTLF	MRB1
SFPPEDQ2	$JOBCTLF	MJC4
SFPPE01	$JOBCTLF	MRE2
SFPPE02	$JOBCTLD	KFE1
SFPPE02	$JOBCTLF	MRE1
SFPPE03	$JOBCTLD	KHF1
SFPPE03	$JOBCTLF	MRF5
SFPPE1	$JOBCTLD	KFC1
SFPPE1	$JOBCTLF	MRC1
SFPPE10	$JOBCTLD	KGB1
SFPPE10	$JOBCTLF	MSB1
SFPPE11	$JOBCTLD	KGD3
SFPPE11	$JOBCTLF	MSD3
SFPPE12	$JOBCTLD	KGC2
SFPPE12	$JOBCTLF	MSC2
SFPPE13	$JOBCTLD	KGC4
SFPPE13	$JOBCTLF	MSC4
SFPPE14	$JOBCTLF	MSF2
SFPPE15	$JOBCTLD	KGD4
SFPPE15	$JOBCTLF	MSD4
SFPPE16	$JOBCTLD	KGG4
SFPPE16	$JOBCTLF	MSG4
SFPPE17	$JOBCTLD	KGJ5
SFPPE17	$JOBCTLF	MSJ5
SFPPE18	$JOBCTLF	MSK4
SFPPE19	$JOBCTLD	KGA4
SFPPE19	$JOBCTLF	MSA4
SFPPE2	$JOBCTLD	KFD1
SFPPE2	$JOBCTLF	MRD1
SFPPE201	$JOBCTLD	KGF3
SFPPE201	$JOBCTLF	MSE3
SFPPE3	$JOBCTLD	KHE3
SFPPE3	$JOBCTLF	MRJ5
SFPPE4	$JOBCTLD	KFH1
SFPPE4	$JOBCTLF	MRH1
SFPPE5	$JOBCTLD	KFC3
SFPPE5	$JOBCTLF	MRC3
SFPPE5A	$JOBCTLF	MRB3
SFPPE6	$JOBCTLD	KFC4
SFPPE6	$JOBCTLF	MRC4
SFPPE7	$JOBCTLD	KFD5
SFPPE7	$JOBCTLF	MRD5
SFPPE8	$JOBCTLD	KGD1
SFPPE8	$JOBCTLF	MSD1
SFPPE8A	$JOBCTLD	KGH1
SFPPE8A	$JOBCTLF	MSH1
SFPPE8B	$JOBCTLD	KGB4
SFPPE8B	$JOBCTLF	MSB4
SFPPE9	$JOBCTLD	KGE2
SFPPE9	$JOBCTLF	MSE2
SFPP5A	$JOBCTLD	KFB3
SIMEND	$JOBCTLG	NAB4
SIMEOJ	$JOBCTLN	SAB2
SJBKSWCH	$JOBCTLN	SBH2
SKIP	$JOBCTLB	HCK2
SKIP	$JOBCTLJ	PHF5
SKIPLN	$JOBCTLD	KBB1
SKPINC	$IPLRT4	EFD3
SKPKEY	$IPLRT3	DAG1
SKP64K	$JOBCTLJ	PQG2
SLBTEST	$JOBCTLE	LJE3
SNS00	$JOBCTLM	RNB1
SNS05	$JOBCTLM	RNJ2
SNS10	$JOBCTLM	RND1
SPCEXC	$JOBCTLA	GTH1
SPRSW	$IPLRT3	DEC3
SRCH3211	$IPLRT4	EDG2
SRCH3340	$IPLRT4	EDB2
STAT00	$JOBCTLM	RJB3
STAT05	$JOBCTLM	RJG5
STAT10	$JOBCTLM	RJC3
STDASSG	$JOBCTLG	NNJ1
STDLBL	$JOBCTLG	NJB3
STDUCHN	$JOBCTLA	GQC5
STOPSDL	$JOBCTLE	LGG3
STSCLB	$JOBCTLG	NPG1
STUCRL	$JOBCTLF	MKC2
STUSPC	$JOBCTLF	MKJ5
SULB	$$BLSTIO	TCB1
SULB1	$$BLSTIO	TCE2
SULB2	$$BLSTIO	TCE3
SUPVRFND	$$A$IPL2	BAF4
SVCBTRNS	$JOBCTLF	MAD5
SVCO	$IPLRT4	END4
SVC44R00	$JOBCTLM	RMF4
SVIFO	$IPLRT5	FAB3
SWBACK	$JOBCTLN	SBD1
SWOFF1	$JOBCTLD	JJG5
SWOFF2	$JOBCTLD	JJH5
SXTPOK	$JOBCTLK	QGK1
SYM	$JOBCTLG	NHD2
SYNTAX	$JOBCTLE	LQB2
SYNO2	$JOBCTLE	LQE2
SYSDATE	$JOBCTLJ	PGH2
SYSERR	$JOBCTLA	GHC3
SYSHC	$JOBCTLJ	PJA3
SYSLOGUA	$IPLRT4	ECB4
SYSMVC	$IPLRT2	CFB2
SYSPRM	$JOBCTLG	NKB1
SYSRF	$JOBCTLJ	PJB1
SYSUPI	$JOBCTLJ	PGG1
SYSUPT1	$JOBCTLJ	PKC2
SYSXXX	$JOBCTLD	KKB1

Label	Phase	Location
SYSXXX01	$JOBCTLD	KKG3
SYSXXX1	$JOBCTLD	KKE1
SYSXXX2	$JOBCTLD	KKF1
SYSXXX3	$JOBCTLD	KKE3
SYSXXX4	$JOBCTLD	KKA4
SYSXXX5	$JOBCTLD	KKA5
SYSXXX6	$JOBCTLD	KKH2
TAPINT	$JOBCTLA	GQF5
TAPIO	$JOBCTLB	HGB3
TBNHDR	$JOBCTLG	NFG2
TBNXPB	$JOBCTLG	NFF3
TBPBLP	$JOBCTLG	NFE1
TDEV1	$$A$IPL2	BDD1
TEBCLC	$IPLRT2	CAG3
TEBDEQ	$IPLRT3	DDE4
TEBDET	$IPLRT3	DFB2
TEBEST	$IPLRT3	DFE2
TEBEXD	$IPLRT3	DFK2
TEBHDR	$JOBCTLG	NFA2
TEBLOP	$IPLRT3	DDC4
TEBLOP	$JOBCTLG	NFB3
TEBS	$JOBCTLG	NFB1
TEBVDET	$IPLRT3	DFA5
TEBVEST	$IPLRT3	DFH3
TECARD	$IPLRT5	FAH2
TEMPEND	$JOBCTLE	LHE2
TEST	$$BCARTR	FGB2
TEST	$JOBCTLN	SAE2
TESTAUTO	$JOBCTLE	LHB1
TESTCIOA	$JOBCTLD	JKB1
TESTEND	$IPLRT4	EMC5
TESTEND	$JOBCTLA	GPD2
TESTLAB1	$IPLRT4	EMB2
TESTLAB2	$IPLRT4	EMF4
TESTNK	$JOBCTLE	LDH2
TESTOV	$JOBCTLA	GPB2
TESTPRLB	$JOBCTLE	LKB1
TESTPSLB	$JOBCTLE	LKB2
TESTRELOC	$JOBCTLE	LFB4
TESTSIZE	$JOBCTLE	LDG1
TESTTOD	$IPLRT4	EAH4
TESTUNIT	$$BCARTR	FGF2
TEST1	$JOBCTLF	MEG2
TEST2	$JOBCTLF	MEG3
TFILL	$JOBCTLK	QAD4
TIAERR	$JOBCTLD	KMD1
TIAERR	$JOBCTLF	MNG4
TIMERT	$IPLRT4	EFB4
TIMOUT	$JOBCTLG	NLB4
TIMOUT1	$JOBCTLG	NLK4
TIMOUT2	$JOBCTLG	NLG5
TLBL	$JOBCTLK	QBB1
TLOOP	$JOBCTLE	LDC5
TOOMANY	$JOBCTLJ	PNJ1
TPLAB	$JOBCTLK	QAB2
TPVER	$JOBCTLK	QAH3
TRTBRC	$IPLRT2	CHC5
TSLNKSW	$JOBCTLJ	PDA2
TSTALSW1	$JOBCTLJ	PQF1
TSTDF	$JOBCTLA	GSE4
TSTERR	$$BCARTR	FGB4
TSTEXT	$JOBCTLD	KDC2
TSTLOG	$JOBCTLA	GCH5
TSTPAUSE	$JOBCTLA	GBD1
TSTPROC	$JOBCTLD	KNC1
TSTSLD	$JOBCTLE	LMB1
TSTSO	$IPLRT3	DEG3
TSTSTND	$JOBCTLB	HFF3
TSTTM	$JOBCTLB	HAK5
TSTTYPE	$JOBCTLA	GCD5
TXCUU	$JOBCTLD	KCB2
TXCUU	$JOBCTLF	MQB4
TXCUU	$JOBCTLJ	PTB1
TXCUU1	$JOBCTLF	MQE4
TXCUU1	$JOBCTLJ	PTD1
TXCUU1&8	$JOBCTLD	KMB3
TXCUU1&8	$JOBCTLF	MNC4
TXCUU2	$JOBCTLD	KCG2
TXCUU2	$JOBCTLJ	PTF1
TXCUU3	$JOBCTLD	KCH2
TXCUU3	$JOBCTLF	MQJ4
TXCUU4	$JOBCTLD	KCE2
TXCUU4	$JOBCTLF	MQF4
T125BG	$IPLRT4	EPC3
T125CH	$IPLRT4	EPB1
T125EN	$IPLRT4	EPH3
T125EXT	$IPLRT4	EPC2
T125HW	$IPLRT4	EPH1
T125NOC	$IPLRT4	EPG3
T125NOR	$IPLRT4	EPB4
T125RT	$IPLRT4	EPA4
T125SCA	$IPLRT4	EPA3
T1442	$JOBCTLJ	PNE2
UA	$JOBCTLF	MEB1
UADN1	$JOBCTLF	MEE1
UADN2	$JOBCTLF	MEJ1
UADN3	$JOBCTLF	MEE5
UADN4	$JOBCTLF	MEF3
UADN5	$JOBCTLF	MEA4
UADN6	$JOBCTLF	MEH3
UALUB	$JOBCTLF	MJC3
UALUB1	$JOBCTLF	MJD3
UANXJB	$JOBCTLG	NNA5
UASCAN	$JOBCTLG	NNB1
UASTD	$JOBCTLF	MJC5
UCS	$JOBCTLJ	PBB1
UCSSCN	$JOBCTLJ	PCB2
UCSVN	$JOBCTLJ	PCC1
UCS1	$JOBCTLJ	PBH1
UCS2	$JOBCTLJ	PBC2
UCS3	$JOBCTLJ	PCE3
UCS4	$JOBCTLJ	PCE4
UNA	$JOBCTLF	MNB1
UNAE	$JOBCTLF	MNF1
UNANENT	$JOBCTLD	KHB3
UNANENT	$JOBCTLF	MRG5
UNASGN	$JOBCTLG	NNC4
UNASLUB	$$A$IPL2	BBJ2
UNASSGN	$JOBCTLD	JQB5
UNA1	$JOBCTLF	MNB3
UNA1A	$JOBCTLF	MNE3
UNA2	$JOBCTLF	MPA1
UNA2A	$JOBCTLF	MPE1
UNA2AA	$JOBCTLF	MPF1
UNA2B	$JOBCTLF	MPG1
UNBLKD	$JOBCTLJ	PDC5
UNCLOG	$JOBCTLA	GCH4
UNCU	$JOBCTLF	MCA3
UNITR	$IPLRT5	FEB3
UNITS1	$JOBCTLF	MCA1

Label	Phase	Location
UNITS2	$JOBCTLF	MCH1
UNITS3	$JOBCTLF	MCH2
UNITS401	$JOBCTLF	MCE1
UNITS402	$JOBCTLF	MCB3
UNITS5	$JOBCTLF	MCC3
UNITS501	$JOBCTLF	MCC4
UNITS6	$JOBCTLF	MCA5
UNITS8	$JOBCTLF	MCH4
UNITS9	$JOBCTLF	MCD3
UNPA	$JOBCTLD	KHB1
UNPA1	$JOBCTLD	KHD1
UNPA3	$JOBCTLD	KHB2
UNTFND	$JOBCTLJ	PTF4
UNZYCO	$IPLRT5	FAJ3
UNZYSV	$IPLRT5	FAH4
UPADDR	$JOBCTLE	LFB5
UPDATE	$JOBCTLM	RRB2
UPDEND	$JOBCTLE	LGD2
UPDHDN	$JOBCTLA	GRJ3
UPDSAV	$JOBCTLJ	PUB1
UPLIOK	$IPLRT5	FAE5
UPLUB	$IPLRT2	CGG1
UPL2OK	$IPLRT5	FFF3
UPSICH	$JOBCTLJ	PKD3
UPSIPROC	$JOBCTLJ	PKB1
USERROR	$JOBCTLN	SAF1
USNRES	$IPLRT4	EBA3
USRLBL	$JOBCTLG	NJB5
USRLBL1	$JOBCTLG	NJD5
VALIDLAB	$IPLRT4	EMC2
VIRTENT	$JOBCTLE	LHE3
VMBUCK	$JOBCTLJ	PNB5
VMEND	$JOBCTLJ	PNF5
VMRTN	$JOBCTLJ	PNB3
VOL	$JOBCTLK	QAB5
VOLFND	$IPLRT5	FBE2
VOLIDCO	$IPLRT5	FAB5
VOLIDR	$IPLRT5	FEG2
VOLIDOO	$JOBCTLM	RNB4
VOLIDO5	$JOBCTLM	RNH4
VOLOK	$JOBCTLD	JLF5
WAITERR	$JOBCTLA	GVH5
WAITR	$JOBCTLJ	PMD3
WRITEEOF	$IPLRT4	EMF5
WRITELAB	$IPLRT4	ENB4
WRTDSKOO	$JOBCTLM	RHB2
WRTDSKO5	$JOBCTLM	RHH2
WRTERR	$JOBCTLA	GSG5
WRTFILOO	$JOBCTLM	RLB4
WRTFILO5	$JOBCTLM	RLC4
WRTFIL10	$JOBCTLM	RLE4
WRTFIL20	$JOBCTLM	RLK4
WRTHDROO	$JOBCTLM	RHB3
XCTL	$$A$IPL2	BCK1
XCTL	$JOBCTLE	LGB4
XREF	$JOBCTLG	NHD4
XTENT	$JOBCTLB	HEB1
XTENT	$JOBCTLK	QGB1
XTENT2	$JOBCTLB	HFE5
XTNTOKAY	$IPLRT5	FBB4
XTOP12	$JOBCTLK	QMB2
XTOP12A	$JOBCTLK	QMD2
XTOP12B	$JOBCTLK	QMF2
XTOP3	$JOBCTLK	QGC5
XTOP34	$JOBCTLK	QMB3
XTOP5	$JOBCTLK	QHA1
XTOUT	$JOBCTLK	QHG2
XTUNIT	$JOBCTLK	QHC5
YDISK	$JOBCTLD	JED3
YESLOG1	$IPLRT4	ECE4
ZONE	$JOBCTLJ	PHB4
ZONECHK	$IPLRT4	EAG1
ZRMVDN	$JOBCTLA	GJE4
ZRMVLP	$JOBCTLA	GJD4
ZYLR	$IPLRT5	FEB5

Message	Phase	Chart
0I00A	$$A$IPL2	BA
0I00I	$IPLRT2	CJ
0I01A	$$A$IPL2	BB
0I02A	$$A$IPL2	BA
0I03A	$$A$IPL2	BA
0I04I	$$A$IPL2	BA
0I10A	$IPLRT2	CC
0I11A	$IPLRT2	CH
0I12A	$IPLRT3	DC
0I13A	$IPLRT3	DA
0I14A	$IPLRT3	DF
0I15A	$IPLRT3	DA
0I16A	$IPLRT4	EB
0I17A	$IPLRT4	EB
0I18A	$IPLRT2	CC
0I19I	$IPLRT4	EM
0I20I	$IPLRT5	FD
0I23A	$IPLRT4	ED
0I24A	$IPLRT3	DE
0I25I	$IPLRT4	EC
0I29I	$IPLRT4	ED
0I30I	$IPLRT2	CB
0I31A	$IPLRT2	CB
0I32I	$IPLRT2	CB
0I33A	$IPLRT4	ES
0I34D	$IPLRT4	ES
0I35I	$IPLRT4	ET
0I37A	$IPLRT5	FC
0I38A	$IPLRT5	FB
0I39A	$IPLRT5	FC
0I40A	$IPLRT5	FA
0I41A	$IPLRT5	FA
0I42A	$IPLRT5	FF
0I43A	$IPLRT5	FF
0I44A	$IPLRT5	FB
0I45A	$IPLRT5	FB
0I46A	$IPLRT5	FB
0I47I	$IPLRT2	CJ
0I48I	$IPLRT2	CJ
0I49A	$IPLRT5	FB
0I50A	$IPLRT2	CC
0I51A	$IPLRT5	FC
0I52I	$IPLRT5	FF
0I60A	$IPLRT3	DF
0I61I	$IPLRT4	EC
0R01I	$JOBCTLB	HD
0R02I	$JOBCTLB	HG
0R03I	$JOBCTLB	HB
0R17I	$JOBCTLB	HD
0R19I	$JOBCTLB	HD
1A0nD	$JOBCTLD	KM
1A1nD	$JOBCTLD	KM
1A2nD	$JOBCTLD	KM
	$JOBCTLG	NR
	$JOBCTLJ	PV
1A3nD	$JOBCTLD	KM
1A4nD	$JOBCTLD	KM
	$JOBCTLF	MN
	$JOBCTLJ	PV
	$JOBCTLK	QS
1A5nD	$JOBCTLD	KM
	$JOBCTLF	MN
	$JOBCTLJ	PV
1A6nD	$JOBCTLD	KM
	$JOBCTLF	MN
1A7nD	$JOBCTLD	KM
	$JOBCTLF	MN
	$JOBCTLJ	PV
1A80D	$JOBCTLD	JQ
1A81I	$JOBCTLA	GS
1A9nD	$JOBCTLD	KM
	$JOBCTLF	MN
1C00A	$JOBCTLA	GV
1C10A	$JOBCTLA	GC
	$JOBCTLG	NM
	$JOBCTLJ	PV
1C30A	$JOBCTLJ	PV
1C33I	$JOBCTLE	LU
1C70D	$JOBCTLA	GJ
1C80D	$JOBCTLA	GV
1C90D	$JOBCTLE	LJ
1I00A	$JOBCTLA	GB
	$JOBCTLG	NU
1I10I	$JOBCTLF	MH
1I50I	$JOBCTLA	GV
1I70I	$JOBCTLA	GW
1I82I	$JOBCTLM	RA
1I83A	$JOBCTLM	RK
1I84A	$JOBCTLM	RA
1I86A	$JOBCTLM	RA
1I89A	$JOBCTLM	RC
1I90A	$JOBCTLM	RC
1I91A	$JOBCTLM	RC
1I92I	$JOBCTLM	RA
1I93I	$JOBCTLM	RK
1I95A	$JOBCTLM	RA
1I96A	$JOBCTLM	RQ
1I97I	$JOBCTLM	RA
1I98I	$JOBCTLJ	PJ
1I99A	$JOBCTLM	RP
1I0nD	$JOBCTLK	QS
1I1nD	$JOBCTLE	LU
	$JOBCTLG	NR
	$JOBCTLK	QS
1M10A	$JOBCTLA	GB
	$JOBCTLG	NT
1M20D	$JOBCTLA	GM
1M3nD	$JOBCTLA	GP
1M4nD	$JOBCTLG	NS
1M5nD	$JOBCTLD	KN
	$JOBCTLF	MP
1M6nD	$JOBCTLE	LA
1M7nD	$JOBCTLE	LA
1M8nD	$JOBCTLE	LP
1M9nD	$JOBCTLE	LQ
1N00I	$JOBCTLA	GN
1N10D	$JOBCTLE	LQ
1N2nD	$JOBCTLE	LR
1N30D	$JOBCTLE	--
1N40D	$JOBCTLE	LR

Message	Phase	Chart	Message	Phase	Chart
1N50D	$JOBCTLE	LR	1S1nD	$JOBCTLG	NR
1N60D	$JOBCTLE	LS		$JOBCTLJ	PV
1N7nD	$JOBCTLG	NS		$JOBCTLK	QS
1N80I	$JOBCTLG	NU	1T00A	$JOBCTLA	--
1N90I	$JOBCTLG	NU	1T10I	$JOBCTLA	--
1P0nD	$JOBCTLJ	PV	1T20I	$JOBCTLD	JR
1P20D	$JOBCTLE	LU	1T50A	$JOBCTLD	JI
1S00D	$JOBCTLA	GW	1T60A	$JOBCTLD	JI
	$JOBCTLG	NR	1T70A	$JOBCTLD	JR

All messages issued by the DOS/VS system control programs are listed in this appendix with a reference to the PLM and issuing phase. For cause and action of each message, see DOS/VS Messages, GC33-5379.

Message	Phase	PLM
0D01A	$$BOCRTV	SY33-8553
0D02I	$$BOCRTM	SY33-8553
0D03A	$$BOCRTX	SY33-8553
0D04A	$$BOCRTV	SY33-8553
0D05A	$$BOCRTW	SY33-8553
0D05A	$$BOCRT1	SY33-8553
0D06A	$$BOCRTY	SY33-8553
0D07D	$$BOCRTS	SY33-8553
0D08A	$$BOCRTS	SY33-8553
0D09D	$$BOCRTR	SY33-8553
0D20E	$$BOCRTB	SY33-8553
0D25E	$$BOCRTB	SY33-8553
0D26A	$$BOCRTG	SY33-8553
0D26E	$$BOCRTB	SY33-8553
0D29E	$$BOCRTB	SY33-8553
0D30A	$$BOCRTV	SY33-8553
0D30A	$$BOCRT1	SY33-8553
0D33A	$$BOCRTE	SY33-8553
0D34E	$$BOCRTF	SY33-8553
0D35E	$$BOCRTF	SY33-8553
0D36E	$$BOCRTF	SY33-8553
0D97A	$$BOCRT1	SY33-8553
0I00A	$$A$IPL2	SY33-8555
0I00I	$IPLRT2	SY33-8555
0I01A	$$A$IPL2	SY33-8555
0I02A	$$A$IPL2	SY33-8555
0I03A	$$A$IPL2	SY33-8555
0I04I	$$A$IPL2	SY33-8555
0I10A	$IPLRT2	SY33-8555
0I11A	$IPLRT2	SY33-8555
0I12A	$IPLRT3	SY33-8555
0I13A	$IPLRT3	SY33-8555
0I14A	$IPLRT3	SY33-8555
0I15A	$IPLRT3	SY33-8555
0I16A	$IPLRT4	SY33-8555
0I17A	$IPLRT4	SY33-8555
0I18A	$IPLRT2	SY33-8555
0I19I	$IPLRT4	SY33-8555
0I20I	$IPLRT5	SY33-8555
0I23A	$IPLRT4	SY33-8555
0I24A	$IPLRT3	SY33-8555
0I25I	$IPLRT4	SY33-8555
0I26I	$$BFLDR	SY33-8554
0I26I	$$BUFLDR	SY33-8553
0I26I	$IPLRT4	SY33-8555
0I27I	$$BUFLD2	SY33-8553
0I27I	$IPLRT4	SY33-8555
0I28D	$$BUFLD2	SY33-8553
0I28D	$IPLRT4	SY33-8555
0I28I	$$BFLD2	SY33-8554
0I29I	$IPLRT4	SY33-8555
0I30I	$IPLRT2	SY33-8555
0I31A	$IPLRT2	SY33-8555
0I32I	$IPLRT2	SY33-8555
0I33A	$IPLRT4	SY33-8555
0I34D	$IPLRT4	SY33-8555
0I35I	$IPLRT4	SY33-8555
0I37A	$IPLRT5	SY33-8555
0I38A	$IPLRT5	SY33-8555
0I39A	$IPLRT5	SY33-8555
0I40A	$IPLRT5	SY33-8555
0I41A	$IPLRT5	SY33-8555
0I42A	$IPLRT5	SY33-8555
0I43A	$IPLRT5	SY33-8555
0I44A	$IPLRT5	SY33-8555
0I45A	$IPLRT5	SY33-8555
0I46A	$IPLRT5	SY33-8555
0I47I	$IPLRT2	SY33-8555
0I48I	$IPLRT2	SY33-8555
0I49A	$IPLRT5	SY33-8555
0I50A	$IPLRT2	SY33-8555
0I51A	$IPLRT5	SY33-8555
0I52I	$IPLRT5	SY33-8555
0I60A	$IPLRT3	SY33-8555
0I61I	$IPLRT4	SY33-8555
0P08	$$ABERAE	SY33-8552
0P08	$$ABERAH	SY33-8552
0P08	$$ABERAN	SY33-8552
0P08	$$ABERRB	SY33-8552
0P08	$$ABERRF	SY33-8552
0P08	$$ABERRG	SY33-8552
0P08	$$ABERRH	SY33-8552
0P08	$$ABERRI	SY33-8552
0P08	$$ABERRS	SY33-8552
0P08	$$ABERRT	SY33-8552
0P08	$$ABERRU	SY33-8552
0P08	$$ABERRV	SY33-8552
0P08	$$ABERRW	SY33-8552
0P08	$$ABERRY	SY33-8552
0P08	$$ABERR1	SY33-8552
0P08	$$ABERR7	SY33-8552
0P09	$$ABERAE	SY33-8552
0P09	$$ABERAH	SY33-8552
0P09	$$ABERAN	SY33-8552
0P09	$$ABERRB	SY33-8552
0P09	$$ABERRF	SY33-8552
0P09	$$ABERRG	SY33-8552
0P09	$$ABERRH	SY33-8552
0P09	$$ABERRI	SY33-8552
0P09	$$ABERRS	SY33-8552
0P09	$$ABERRT	SY33-8552
0P09	$$ABERRU	SY33-8552
0P09	$$ABERRV	SY33-8552
0P09	$$ABERRW	SY33-8552
0P09	$$ABERRY	SY33-8552
0P09	$$ABERR1	SY33-8552
0P09	$$ABERR7	SY33-8552
0P10	$$ABERAC	SY33-8552
0P10	$$ABERAE	SY33-8552
0P10	$$ABERAF	SY33-8552
0P10	$$ABERAH	SY33-8552
0P10	$$ABERAN	SY33-8552
0P10	$$ABERRB	SY33-8552
0P10	$$ABERRF	SY33-8552

Message	Phase	PLM
0P10	$$ABERRG	SY33-8552
0P10	$$ABERRH	SY33-8552
0P10	$$ABERRI	SY33-8552
0P10	$$ABERRU	SY33-8552
0P10	$$ABERRV	SY33-8552
0P10	$$ABERRW	SY33-8552
0P10	$$ABERRY	SY33-8552
0P10	$$ABERR1	SY33-8552
0P10	$$ABERR7	SY33-8552
0P11	$$ABERAE	SY33-8552
0P11	$$ABERAC	SY33-8552
0P11	$$ABERAF	SY33-8552
0P11	$$ABERAH	SY33-8552
0P11	$$ABERAI	SY33-8552
0P11	$$ABERRE	SY33-8552
0P11	$$ABERRF	SY33-8552
0P11	$$ABERRG	SY33-8552
0P11	$$ABERRH	SY33-8552
0P11	$$ABERRI	SY33-8552
0P11	$$ABERRU	SY33-8552
0P11	$$ABERRV	SY33-8552
0P11	$$ABERRY	SY33-8552
0P11	$$ABERR5	SY33-8552
0P11	$$ABERR7	SY33-8552
0P12	$$ABERRE	SY33-8552
0P12	$$ABERR5	SY33-8552
0P13	$$ABERRE	SY33-8552
0P13	$$ABERR5	SY33-8552
0P13A	$$RAST10	SY33-8552
0P14	$$ABERAE	SY33-8552
0P14	$$ABERAH	SY33-8552
0P14	$$ABERRE	SY33-8552
0P14	$$ABERRT	SY33-8552
0P14	$$ABERRY	SY33-8552
0P14	$$ABERR1	SY33-8552
0P15	$$ABERRE	SY33-8552
0P15	$$ABERR4	SY33-8552
0P16	$$ABERRE	SY33-8552
0P16	$$ABERR5	SY33-8552
0P17	$$ABERAE	SY33-8552
0P17	$$ABERAH	SY33-8552
0P17	$$ABERRE	SY33-8552
0P17	$$ABERR1	SY33-8552
0P18	$$ABERAE	SY33-8552
0P18	$$ABERAH	SY33-8552
0P18	$$ABERAN	SY33-8552
0P18	$$ABERRE	SY33-8552
0P18	$$ABERRF	SY33-8552
0P18	$$ABERRG	SY33-8552
0P18	$$ABERRH	SY33-8552
0P18	$$ABERRI	SY33-8552
0P18	$$ABERRS	SY33-8552
0P18	$$ABERRT	SY33-8552
0P18	$$ABERRU	SY33-8552
0P18	$$ABERRV	SY33-8552
0P18	$$ABERRW	SY33-8552
0P18	$$ABERRY	SY33-8552
0P18	$$ABERR1	SY33-8552
0P18	$$ABERR7	SY33-8552
0P19	$$ABERAE	SY33-8552
0P19	$$ABERAH	SY33-8552
0P19	$$ABERAN	SY33-8552
0P19	$$ABERRE	SY33-8552
0P19	$$ABERRF	SY33-8552
0P19	$$ABERRG	SY33-8552
0P19	$$ABERRH	SY33-8552
0P19	$$ABERRI	SY33-8552
0P19	$$ABERRS	SY33-8552
0P19	$$ABERRT	SY33-8552
0P19	$$ABERRU	SY33-8552
0P19	$$ABERRV	SY33-8552
0P19	$$ABERRW	SY33-8552
0P19	$$ABERRY	SY33-8552
0P19	$$ABERR1	SY33-8552
0P19	$$ABERR7	SY33-8552
0P20	$$A$SUP1	SY33-8552
0P20	$$ABERAC	SY33-8552
0P20	$$ABERAF	SY33-8552
0P20	$$ABERAG	SY33-8552
0P20	$$ABERRD	SY33-8552
0P20	$$ABERRF	SY33-8552
0P20	$$ABERRI	SY33-8552
0P20	$$ABERRU	SY33-8552
0P20	$$ABERR2	SY33-8552
0P20	$$ABERR4	SY33-8552
0P21	$$ABERRE	SY33-8552
0P21	$$ABERR4	SY33-8552
0P22	$$ABERR1	SY33-8552
0P22	$$ABERR4	SY33-8552
0P23	$$ABERR4	SY33-8552
0P24	$$ABERAE	SY33-8552
0P24	$$ABERAH	SY33-8552
0P24	$$ABERRA	SY33-8552
0P24	$$ABERRI	SY33-8552
0P25	$$ABERAE	SY33-8552
0P25	$$ABERAH	SY33-8552
0P25	$$ABERRA	SY33-8552
0P25	$$ABERRI	SY33-8552
0P26	$$ABERRE	SY33-8552
0P26	$$ABERR1	SY33-8552
0P27	$$ABERRA	SY33-8552
0P27	$$ABERRY	SY33-8552
0P28	$$ABERAE	SY33-8552
0P28	$$ABERAH	SY33-8552
0P28	$$ABERAN	SY33-8552
0P28	$$ABERRE	SY33-8552
0P28	$$ABERRF	SY33-8552
0P28	$$ABERRG	SY33-8552
0P28	$$ABERRH	SY33-8552
0P28	$$ABERRI	SY33-8552
0P28	$$ABERRS	SY33-8552
0P28	$$ABERRT	SY33-8552
0P28	$$ABERRU	SY33-8552
0P28	$$ABERRV	SY33-8552
0P28	$$ABERRW	SY33-8552
0P28	$$ABERRY	SY33-8552
0P28	$$ABERR1	SY33-8552
0P28	$$ABERR7	SY33-8552
0P29	$$ABERAE	SY33-8552
0P29	$$ABERAH	SY33-8552
0P30	$$ABERAE	SY33-8552
0P30	$$ABERAH	SY33-8552
0P31	$$ABERAE	SY33-8552
0P31	$$ABERAH	SY33-8552
0P31	$$ABERRA	SY33-8552
0P31	$$ABERRI	SY33-8552
0P32	$$ABERAE	SY33-8552
0P32	$$ABERAH	SY33-8552
0P33	$$ABERRF	SY33-8552
0P33	$$ABERRY	SY33-8552
0P34	$$ABERRS	SY33-8552
0P35	$$ABERAN	SY33-8552

Message	Phase	PLM
0P35	$$ABERRT	SY33-8552
0P36	$$ABERRE	SY33-8552
0P36	$$ABERR4	SY33-8552
0P37	$$ABERRS	SY33-8552
0P38	$$ABERRT	SY33-8552
0P39	$$ABERRI	SY33-8552
0P40	$$ABERRU	SY33-8552
0P41	$$ABERRF	SY33-8552
0P41	$$ABERRH	SY33-8552
0P42	$$ABERAE	SY33-8552
0P42	$$ABERAG	SY33-8552
0P42	$$ABERAH	SY33-8552
0P43	$$ABERAG	SY33-8552
0P44	$$ABERAC	SY33-8552
0P44	$$ABERAH	SY33-8552
0P45	$$ABERRE	SY33-8552
0P46	$$ABERAG	SY33-8552
0P47	$$ABERAE	SY33-8552
0P47	$$ABERAH	SY33-8552
0P48	$$ABERRG	SY33-8552
0P49	$$ABERRG	SY33-8552
0P49	$$ABERR7	SY33-8552
0P50	$$ABERRY	SY33-8552
0P51	$$ABERAN	SY33-8552
0P52	$$ABERAN	SY33-8552
0P53	$$ABERAN	SY33-8552
0P54	$$ABERAN	SY33-8552
0P55	$$ABERR7	SY33-8552
0P60D	$$ABERRZ	SY33-8551
0P70I	$$BEOJ2	SY33-8553
0P71I	$$BEOJ2	SY33-8553
0P72I	$$BEOJ2	SY33-8553
0P73I	$$BEOJ2A	SY33-8553
0P74I	$$BEOJ2A	SY33-8553
0P75I	$$BEOJ2	SY33-8553
0P76I	$$BEOJ2	SY33-8553
0P77I	$$BEOJ2	SY33-8553
0P78I	$$BEOJS2	SY33-8553
0P79I	$$BEOJ2A	SY33-8553
0P81I	$$BEOJ2A	SY33-8553
0P82I	$$BEOJ2A	SY33-8553
0P83A	$$BEOJ2A	SY33-8553
0P84I	$$BEOJ2A	SY33-8553
0P85I	$$BEOJ2A	SY33-8553
0P87A	$$BEOJS2	SY33-8553
0P88I	$$BEOJS2	SY33-8553
0P89I	$$ABERRZ	SY33-8551
0R01I	$JOBCTLB	SY33-8555
0R02I	$JOBCTLB	SY33-8555
0R03I	$JOBCTLB	SY33-8555
0R17I	$JOBCTLB	SY33-8555
0R19I	$JOBCTLB	SY33-8555
0S00I	$$BILSVC	SY33-8553
0S00I	$$BPCHK	SY33-8553
0S01I	$$BEOJ2	SY33-8553
0S02I	$$BEOJ2	SY33-8553
0S03I	$$BPCHK	SY33-8553
0S04I	$$BILSVC	SY33-8553
0S05I	$$BILSVC	SY33-8553
0S06I	$$BEOJ1	SY33-8553
0S07I	$$BPSW	SY33-8553
0S08I	$$BEOJ	SY33-8553
0S09I	$$BEOJ1	SY33-8553
0S11I	$$BEOJ1	SY33-8553
0S12I	$$BEOJ2A	SY33-8553
0S13I	$$BEOJ2A	SY33-8553
0S14I	$$BEOJ2A	SY33-8553
0S15I	$$BEOJ2A	SY33-8553
0S16I	$$BEOJ2A	SY33-8553
0S17I	$$BMVKEY	SY33-8553
0T00I	$$ABERA1	SY33-8552
0T00I	$$ABERA2	SY33-8552
0T00I	$$ABERA3	SY33-8552
0T00I	$$RAST08	SY33-8552
0T00I	$$RAST11	SY33-8552
0T03I	$$ABERA1	SY33-8552
0T03I	$$ABERA2	SY33-8552
0T03I	$$ABERA3	SY33-8552
0T03I	$$RAST08	SY33-8552
0T03I	$$RAST11	SY33-8552
0T05E	$$RAST08	SY33-8552
0T05E	$$RAST11	SY33-8552
0T05I	$$ABERA1	SY33-8552
0T05I	$$ABERA2	SY33-8552
0T05I	$$ABERA3	SY33-8552
0T06I	$$RAST03	SY33-8552
0T06I	$$RAST11	SY33-8552
0T07I	$$RAST03	SY33-8552
0T07I	$$RAST11	SY33-8552
0T08I	$$RAST03	SY33-8552
0T08I	$$RAST11	SY33-8552
0T09I	$$RAST03	SY33-8552
0T09I	$$RAST11	SY33-8552
0T10I	$$RAST02	SY33-8552
0T10I	$$RAST04	SY33-8552
0T10I	$$RAST05	SY33-8552
0T10I	$$RAST06	SY33-8552
0T10I	$$RAST07	SY33-8552
0T10I	$$RAST10	SY33-8552
0T10I	$$RAST12	SY33-8552
0T11W	$$RAST00	SY33-8552
0T12I	$$RAST02	SY33-8552
0T12I	$$RAST04	SY33-8552
0T12I	$$RAST05	SY33-8552
0T12I	$$RAST06	SY33-8552
0T12I	$$RAST07	SY33-8552
0T12I	$$RAST10	SY33-8552
0T12I	$$RAST12	SY33-8552
0T13A	$$RAST04	SY33-8552
0T13A	$$RAST05	SY33-8552
0T13A	$$RAST06	SY33-8552
0T13A	$$RAST10	SY33-8552
0T14E	$$RAST03	SY33-8552
0T14E	$$RAST11	SY33-8552
0T15E	$$RAST09	SY33-8552
0T15E	$$RAST13	SY33-8552
0T16I	$$RAST03	SY33-8552
0T16I	$$RAST11	SY33-8552
0T17I	$$RAST03	SY33-8552
0T17I	$$RAST11	SY33-8552
0T18E	$$RAST03	SY33-8552
0T18E	$$RAST11	SY33-8552
0T19E	$$RAST09	SY33-8552
0T20E	$$RAST13	SY33-8552
0V01I	$$BEOJS2	SY33-8553
0V02I	$$BEOJS2	SY33-8553
0V03I	$$BEOJS2	SY33-8553
0V04I	$$BEOJS2	SY33-8553
0V05I	$$BEOJS2	SY33-8553
0V06I	$$BEOJS2	SY33-8553
0V07I	$$BEOJS2	SY33-8553
0V08I	$$BEOJS2	SY33-8553

Message	Phase	PLM
0V09I	$$BEOJS2	SY33-8553
0V10I	$$BEOJ2A	SY33-8553
0V11I	$$BEOJ2	SY33-8553
0V20D	PDSDM	SY33-8554
0V21D	PDSDM	SY33-8554
0V22D	PDSDM	SY33-8554
0V23D	PDSDM	SY33-8554
0V24I	PDSDM	SY33-8554
0V25I	PDSDM	SY33-8554
0V26I	PDSDM	SY33-8554
0V27I	PDSDM	SY33-8554
0V28I	PDSDM	SY33-8554
0V29I	PDSDM	SY33-8554
0V30I	PDSDM	SY33-8554
0V31I	PDSDM	SY33-8554
0V32I	PDSDM	SY33-8554
0V33I	PDSDM	SY33-8554
0V34I	PDSDM	SY33-8554
0V35I	PDSDM	SY33-8554
0V36I	PDSDM	SY33-8554
0V37I	PDSDM	SY33-8554
0V39I	PDSDM	SY33-8554
0V40I	PDSDM	SY33-8554
0V41I	PDSDM	SY33-8554
0V42I	PDSDM	SY33-8554
0V43I	PDSDM	SY33-8554
0V44I	PDSDM	SY33-8554
04E6	SDEHR	SY33-8554
1A0ND	$JOBCTLD	SY33-8555
1A1ND	$JOBCTLD	SY33-8555
1A2ND	$JOBCTLD	SY33-8555
1A2ND	$JOBCTLG	SY33-8555
1A2ND	$JOBCTLJ	SY33-8555
1A3ND	$JOBCTLD	SY33-8555
1A4ND	$JOBCTLD	SY33-8555
1A4ND	$JOBCTLF	SY33-8555
1A4ND	$JOBCTLJ	SY33-8555
1A4ND	$JOBCTLK	SY33-8555
1A5ND	$JOBCTLD	SY33-8555
1A5ND	$JOBCTLF	SY33-8555
1A5ND	$JOBCTLJ	SY33-8555
1A6ND	$JOBCTLD	SY33-8555
1A6ND	$JOBCTLF	SY33-8555
1A7ND	$JOBCTLD	SY33-8555
1A7ND	$JOBCTLF	SY33-8555
1A7ND	$JOBCTLJ	SY33-8555
1A80D	$JOBCTLD	SY33-8555
1A81I	$JOBCTLA	SY33-8555
1A9ND	$JOBCTLD	SY33-8555
1A9ND	$JOBCTLF	SY33-8555
1B01A	SYSBUFLD	SY33-8554
1B02A	SYSBUFLD	SY33-8554
1B03I	SYSBUFLD	SY33-8554
1B10I	SYSBUFLD	SY33-8554
1B11D	SYSBUFLD	SY33-8554
1C00A	$JOBCTLA	SY33-8555
1C10A	$JOBCTLA	SY33-8555
1C10A	$JOBCTLJ	SY33-8555
1C30A	$JOBCTLJ	SY33-8555
1C33I	$JOBCTLE	SY33-8555
1C40I	$$BATTNA	SY33-8553
1C40I	$$BATTNE	SY33-8553
1C50I	$$BATTNA	SY33-8553
1C50I	$$BATTNE	SY33-8553
1C60D	$$BATTNN	SY33-8553
1C70D	$JOBCTLA	SY33-8555
1C80D	$JOBCTLA	SY33-8555
1C90D	$JOBCTLE	SY33-8555
1I00A	$JOBCTLA	SY33-8555
1I00A	$JOBCTLG	SY33-8555
1I10I	$JOBCTLF	SY33-8555
1I30D	$$BATTNC	SY33-8553
1I32D	$$ABERRZ	SY33-8551
1I40D	$$ABERRZ	SY33-8551
1I41D	$$BATTNT	SY33-8553
1I41D	$$BATTNU	SY33-8553
1I42D	$$BATTNT	SY33-8553
1I43D	$$BATTNV	SY33-8553
1I44I	$$BATTNX	SY33-8553
1I45D	$$BATTNT	SY33-8553
1I46D	$$BATTNT	SY33-8553
1I46D	$$BATTNW	SY33-8553
1I47I	$$BATTNT	SY33-8553
1I48I	$$BATTNU	SY33-8553
1I50I	$JOBCTLA	SY33-8555
1I60A	$$BATTNA	SY33-8553
1I70I	$JOBCTLA	SY33-8555
1I82I	$JCBCTLM	SY33-8555
1I83A	$JOBCTLM	SY33-8555
1I84A	$JCBCTLM	SY33-8555
1I86A	$JOBCTLM	SY33-8555
1I89A	$JCBCTLM	SY33-8555
1I90A	$JOBCTLM	SY33-8555
1I91A	$JOBCTLM	SY33-8555
1I92I	$JOBCTLM	SY33-8555
1I93I	$JOBCTLM	SY33-8555
1I95A	$JCBCTLM	SY33-8555
1I96A	$JOBCTLM	SY33-8555
1I97I	$JCBCTLM	SY33-8555
1I98I	$JOBCTLJ	SY33-8555
1I99A	$JOBCTLM	SY33-8555
1L0ND	$JOBCTLK	SY33-8555
1L1ND	$JOBCTLE	SY33-8555
1L1ND	$JCBCTLG	SY33-8555
1L1ND	$JOBCTLK	SY33-8555
1M10A	$JCBCTLA	SY33-8555
1M10A	$JOBCTLG	SY33-8555
1M20D	$JOBCTLA	SY33-8555
1M3ND	$JOBCTLA	SY33-8555
1M4ND	$JCBCTLG	SY33-8555
1M5ND	$JOBCTLD	SY33-8555
1M5ND	$JCBCTLF	SY33-8555
1M6ND	$JOBCTLE	SY33-8555
1M7ND	$JCBCTLE	SY33-8555
1M8ND	$JOBCTLE	SY33-8555
1M9ND	$JCBCTLE	SY33-8555
1N00I	$JOBCTLA	SY33-8555
1N10D	$JCBCTLE	SY33-8555
1N2ND	$JOBCTLE	SY33-8555
1N30D	$JCBCTLE	SY33-8555
1N40D	$JOBCTLE	SY33-8555
1N50D	$JCBCTLE	SY33-8555
1N60D	$JOBCTLE	SY33-8555
1N7ND	$JOBCTLG	SY33-8555
1N80I	$JOBCTLG	SY33-8555
1N90I	$JCBCTLG	SY33-8555
1P0ND	$JOBCTLJ	SY33-8555
1P00D	$$BATTNE	SY33-8553
1P00D	$$BATTNF	SY33-8553
1P1ND	$JOBCTLJ	SY33-8555
1P10D	$$BATTNG	SY33-8553
1P20D	$JCBCTLE	SY33-8555

Message	Phase	PLM
1Q62I	$$ABERRZ	SY33-8551
1R79I	$$BATTNC	SY33-8553
1S0ND	$JOBCTLE	SY33-8555
1S00D	$$BATTNB	SY33-8553
1S00D	$$BATTNC	SY33-8553
1S00D	$$BATTNE	SY33-8553
1S00D	$$BATTNF	SY33-8553
1S00D	$$BATTNG	SY33-8553
1S00D	$$BATTNH	SY33-8553
1S00D	$$BATTNN	SY33-8553
1S00D	$$BATTNQ	SY33-8553
1S00D	$$BATTNS	SY33-8553
1S00D	$$BATTNT	SY33-8553
1S00D	$$BATTNU	SY33-8553
1S00D	$$BATTNY	SY33-8553
1S00D	$$BATTNZ	SY33-8553
1S00D	$$BATTN2	SY33-8553
1S01D	$$ABERRZ	SY33-8551
1S02D	$$ABERRZ	SY33-8551
1S1ND	$JOBCTLG	SY33-8555
1S1ND	$JOBCTLJ	SY33-8555
1S1ND	$JOBCTLK	SY33-8555
1S1NI	$JOBCTLA	SY33-8555
1S1NI	$JOBCTLB	SY33-8555
1S1NI	$JOBCTLD	SY33-8555
1S1NI	$JOBCTLE	SY33-8555
1S1NI	$JOBCTLF	SY33-8555
1S1NI	$JOBCTLG	SY33-8555
1S1NI	$JOBCTLJ	SY33-8555
1S1NI	$JOBCTLK	SY33-8555
1S1NI	$JOBCTLM	SY33-8555
1T00A	$JOBCTLA	SY33-8555
1T10I	$JOBCTLA	SY33-8555
1T20I	$JOBCTLD	SY33-8555
1T50A	$JOBCTLD	SY33-8555
1T60A	$JOBCTLD	SY33-8555
1T70A	$JOBCTLD	SY33-8555
2100I	$LNKEDT	SY33-8556
2101I	$LNKEDT	SY33-8556
2102I	$LNKEDT	SY33-8556
2110I	$LNKEDT	SY33-8556
2111I	$LNKEDT	SY33-8556
2112I	$LNKEDT	SY33-8556
2113I	$LNKEDT	SY33-8556
2114I	$LNKEDT	SY33-8556
2116I	$LNKEDT	SY33-8556
2120I	$LNKEDT	SY33-8556
2121I	$LNKEDT	SY33-8556
2122I	$LNKEDT	SY33-8556
2123I	$LNKEDT	SY33-8556
2124I	$LNKEDT	SY33-8556
2125I	$LNKEDT	SY33-8556
2130I	$LNKEDT	SY33-8556
2131I	$LNKEDT	SY33-8556
2132I	$LNKEDT	SY33-8556
2133I	$LNKEDT	SY33-8556
2135I	$LNKEDT	SY33-8556
2136I	$LNKEDT	SY33-8556
2140I	$LNKEDT	SY33-8556
2141I	$LNKEDT	SY33-8556
2142I	$LNKEDT	SY33-8556
2143I	$LNKEDT	SY33-8556
2144I	$LNKEDT	SY33-8556
2145I	$LNKEDT	SY33-8556
2146I	$LNKEDT	SY33-8556
2147I	$LNKEDT	SY33-8556

Message	Phase	PLM
2150I	$LNKEDT	SY33-8556
2151I	$LNKEDT	SY33-8556
2155I	$LNKEDT	SY33-8556
2156I	$LNKEDT	SY33-8556
2158I	$LNKEDT	SY33-8556
2170I	$LNKEDT	SY33-8556
2181I	$LNKEDT	SY33-8556
2182I	$LNKEDT	SY33-8556
2184I	$LNKEDT	SY33-8556
2185I	$LNKEDT	SY33-8556
2191I	$LNKEDT	SY33-8556
2192I	$LNKEDT	SY33-8556
2193I	$LNKEDT	SY33-8556
2194I	$LNKEDT	SY33-8556
2195I	$LNKEDT	SY33-8556
2197I	$LNKEDT	SY33-8556
2199I	$LNKEDT	SY33-8556
3C30I	CORGZ	SY33-8557
3C30I	CORGZ1	SY33-8557
3C66I	CORGZ	SY33-8557
3C66I	CORGZ4	SY33-8557
3C66I	CORGZ5	SY33-8557
3C66I	CORGZ6	SY33-8557
3C66I	CORGZ7	SY33-8557
3C67I	CORGZ	SY33-8557
3C67I	CORGZ5	SY33-8557
3C67I	CORGZ6	SY33-8557
3C67I	CORGZ7	SY33-8557
3E01I	EREPMNTR	SY33-8554
3E02I	EREPMNTR	SY33-8554
3E04I	EREPMNTR	SY33-8554
3E06I	EREPMNTR	SY33-8554
3E07D	EREPESWK	SY33-8554
3E07D	EREPTES	SY33-8554
3E08A	EREPESWK	SY33-8554
3E09A	EREPESTR	SY33-8554
3E10I	EREPEDIT	SY33-8554
3E10I	EREPSMCP	SY33-8554
3E11D	EREPMNTR	SY33-8554
3E12D	EREPMNTR	SY33-8554
3E14A	EREPMNTR	SY33-8554
3E15A	EREPESTR	SY33-8554
3E15A	EREPHIST	SY33-8554
3E15A	EREPTES	SY33-8554
3E18A	EREPHIST	SY33-8554
3E20I	EREPESWK	SY33-8554
3E21I	EREPEDIT	SY33-8554
3E22I	EREPEDIT	SY33-8554
3E25I	EREPESTR	SY33-8554
3E25I	EREPHIST	SY33-8554
3E25I	EREPMNTR	SY33-8554
3E25I	EREPTES	SY33-8554
3E26I	EREPMNTR	SY33-8554
3E27I	EREPMNTR	SY33-8554
3E28I	EREPMNTR	SY33-8554
3E29I	EREPMNTR	SY33-8554
3E30A	EREPHIST	SY33-8554
3E31A	EREPESTR	SY33-8554
3E31A	EREPHIST	SY33-8554
3E31A	EREPTES	SY33-8554
3E32A	EREPRDE	SY33-8554
3E33A	EREPRDE	SY33-8554
3E34I	EREPRDE	SY33-8554
3E35I	EREPRDE	SY33-8554
3E36I	EREPRDE	SY33-8554
3E37I	EREPRDE	SY33-8554

Message	Phase	PLM
3E38I	EREPRDE	SY33-8554
3E40I	EREPRDE	SY33-8554
3E41I	EREPRDE	SY33-8554
3E42I	EREPRDE	SY33-8554
3E43I	EREPRDE	SY33-8554
3E67I	CORGZ6	SY33-8557
3H30I	MAINTP2	SY33-8557
3M00I	PSERV	SY33-8557
3M09I	PSERV	SY33-8557
3M10I	CORGZ	SY33-8557
3M10I	CORGZ1	SY33-8557
3M10I	DSERV	SY33-8557
3M10I	MAINT	SY33-8557
3M10I	MAINTA	SY33-8557
3M10I	PSERV	SY33-8557
3M10I	RSERV	SY33-8557
3M10I	SSERV	SY33-8557
3M11I	MAINTR2	SY33-8557
3M20I	PSERV	SY33-8557
3M21I	CORGZ	SY33-8557
3M21I	CORGZ1	SY33-8557
3M21I	CORGZ3	SY33-8557
3M21I	CORGZ4	SY33-8557
3M21I	CORGZ5	SY33-8557
3M21I	CORGZ6	SY33-8557
3M21I	CORGZ7	SY33-8557
3M21I	CORGZ8	SY33-8557
3M21I	DSERV	SY33-8557
3M21I	MAINRTN	SY33-8557
3M21I	MAINTCL	SY33-8557
3M21I	MAINTCN	SY33-8557
3M21I	MAINTDR	SY33-8557
3M21I	MAINTR2	SY33-8557
3M21I	PSERV	SY33-8557
3M21I	RSERV	SY33-8557
3M21I	SSERV	SY33-8557
3M23I	MAINTS2	SY33-8557
3M24I	MAINTS2	SY33-8557
3M25I	MAINTS2	SY33-8557
3M26I	MAINTS2	SY33-8557
3M27I	MAINTP2	SY33-8557
3M27I	MAINTR2	SY33-8557
3M27I	MAINTS2	SY33-8557
3M28I	MAINTS2	SY33-8557
3M29I	MAINTP2	SY33-8557
3M32I	MAINTP2	SY33-8557
3M33I	$MAINDIR	SY33-8557
3M33I	CORGZ3	SY33-8557
3M33I	MAINRTN	SY33-8557
3M33I	MAINTUP	SY33-8557
3M33I	PSERV	SY33-8557
3M33I	RSERV	SY33-8557
3M33I	SSERV	SY33-8557
3M34I	MAINT	SY33-8557
3M34I	MAINTP2	SY33-8557
3M35I	DSERV	SY33-8557
3M37I	MAINT	SY33-8557
3M37I	MAINTA	SY33-8557
3M37I	MAINTCL	SY33-8557
3M37I	MAINTCN	SY33-8557
3M37I	MAINTDR	SY33-8557
3M38I	MAINTP2	SY33-8557
3M43I	CORGZ1	SY33-8557
3M43I	CORGZ3	SY33-8557
3M43I	CORGZ4	SY33-8557
3M43I	DSERV	SY33-8557

Message	Phase	PLM
3M43I	MAINT	SY33-8557
3M43I	MAINTCL	SY33-8557
3M43I	MAINTDR	SY33-8557
3M43I	MAINTP2	SY33-8557
3M43I	MAINTR2	SY33-8557
3M43I	MAINTS2	SY33-8557
3M43I	MAINTUP	SY33-8557
3M43I	PSERV	SY33-8557
3M43I	RSERV	SY33-8557
3M43I	SSERV	SY33-8557
3M44I	CORGZ6	SY33-8557
3M44I	MAINT	SY33-8557
3M44I	MAINTCN	SY33-8557
3M45I	DSERV	SY33-8557
3M52I	$MAINDIR	SY33-8557
3M52I	CORGZ3	SY33-8557
3M52I	MAINTP2	SY33-8557
3M52I	MAINTR2	SY33-8557
3M52I	MAINTS2	SY33-8557
3M52I	MAINTUP	SY33-8557
3M53I	CORGZ3	SY33-8557
3M53I	MAINTP2	SY33-8557
3M53I	MAINTR2	SY33-8557
3M53I	MAINTS2	SY33-8557
3M53I	MAINTUP	SY33-8557
3M53I	MAINTUP	SY33-8557
3M54I	$MAINDIR	SY33-8557
3M54I	MAINTDR	SY33-8557
3M54I	MAINTUP	SY33-8557
3M55I	MAINTR2	SY33-8557
3M62I	CORGZ7	SY33-8557
3M62I	MAINTA	SY33-8557
3M63I	CORGZ1	SY33-8557
3M63I	CORGZ7	SY33-8557
3M63I	MAINTA	SY33-8557
3M64I	MAINTA	SY33-8557
3M65I	CORGZ	SY33-8557
3M65I	CORGZ7	SY33-8557
3M65I	MAINTA	SY33-8557
3M66I	CORGZ7	SY33-8557
3M67I	CORGZ7	SY33-8557
3M68I	MAINTA	SY33-8557
3M68I	MAINTCN	SY33-8557
3M70A	MAINTA	SY33-8557
3M70I	MAINTCN	SY33-8557
3M75I	MAINTCN	SY33-8557
3M80I	MAINTA	SY33-8557
3M80I	MAINTCN	SY33-8557
3M81I	MAINTCN	SY33-8557
3M90I	$MAINDIR	SY33-8557
3M92I	$MAINDIR	SY33-8557
3M93I	$MAINDIR	SY33-8557
3N43I	DSERV	SY33-8557
3U10I	MAINTUP	SY33-8557
3U11I	MAINTUP	SY33-8557
3U20I	MAINTUP	SY33-8557
3U21I	MAINTUP	SY33-8557
3U30I	MAINTUP	SY33-8557
3U31I	MAINTUP	SY33-8557
3U32I	MAINTUP	SY33-8557
3U33I	MAINTUP	SY33-8557
4C10D	PDAID	SY33-8554
4C11D	PDAID	SY33-8554
4C12D	PDAID	SY33-8554
4C13D	PDAID	SY33-8554
4C14D	PDAID	SY33-8554

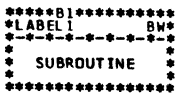
Message	Phase	PLM
4C15D	PDAID	SY33-8554
4C16D	PDAID	SY33-8554
4C17D	PDAID	SY33-8554
4C17D	SDAID1	SY33-8554
4C17D	SDPAR	SY33-8554
4C20D	PDAID	SY33-8554
4C21A	PDAID	SY33-8554
4C22A	PDAID	SY33-8554
4C23D	PDAID	SY33-8554
4C24A	$$BPDAID	SY33-8554
4C24A	PDAIDFTT	SY33-8554
4C24A	PDAIDGTP	SY33-8554
4C24A	PDAIDGTT	SY33-8554
4C24A	PDAIDITP	SY33-8554
4C24A	PDAIDITT	SY33-8554
4C24A	PDAIDTDT	SY33-8554
4C26I	PDLIST	SY33-8554
4C27D	PDAID	SY33-8554
4C28D	PDAID	SY33-8554
4C42A	DUMPGEN	SY33-8554
4C43A	DUMPGEN	SY33-8554
4C44A	DUMPGEN	SY33-8554
4C46A	DUMPGEN	SY33-8554
4C50E	PDAID	SY33-8554
4C51D	PDAID	SY33-8554
4C52E	PDAID	SY33-8554
4C53I	SDAID1	SY33-8554
4C54I	SDAID1	SY33-8554
4C55D	SDAID1	SY33-8554
4C56E	SDAID1	SY33-8554
4C57E	SDAID2	SY33-8554
4C58D	SDPAR	SY33-8554
4C59D	SDPAR	SY33-8554
4C60D	SDPAR	SY33-8554
4C61D	SDPAR	SY33-8554
4C62D	SDPAR	SY33-8554
4C63D	SDPAR	SY33-8554
4C64D	SDPAR	SY33-8554
4C65D	SDPAR	SY33-8554
4C66D	SDPAR	SY33-8554
4C67D	SDPAR	SY33-8554
4C68D	SDPAR	SY33-8554
4C69D	SDPAR	SY33-8554
4E10I	$$ABERAA	SY33-8552

APPENDIX D: EXPLANATION OF FLOWCHART SYMBOLS

DESCRIPTION

A group of program instructions that perform a processing function of the program. The label, if any, is shown above the block.

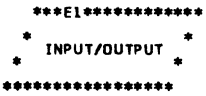
*B2
IF ANY ADDITIONAL EXPLANATION IS REQUIRED, ITS LOCATION ON THE CHART IS IDENTIFIED BY AN ASTERISK AND THE BLOCK ID.



Description or title of a routine that is detailed on another flowchart. The starting label of the routine and the flowchart ID appear above the stripe.

An instruction, or group of instructions, that changes portion of a routine or initializes a routine for a given condition.

A group of operations not detailed in the flowcharts in this manual, such as user routines.



Any function of an input/output device or program, usually branching to an I/O routine to perform the function stated in the block.

Points where the program branches to alternate processing, based upon variable conditions such as program switch settings and test results.

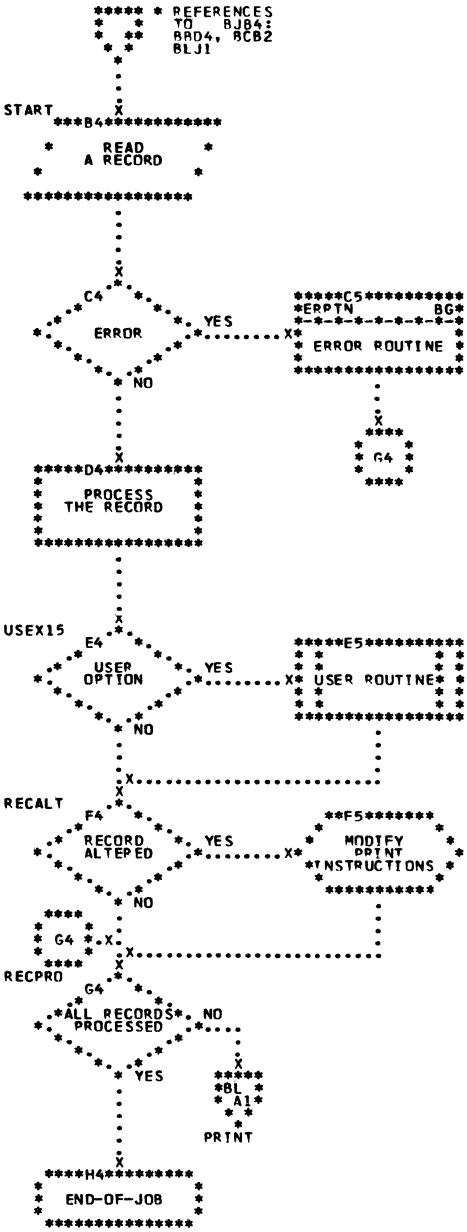
The beginning or end of a program or routine.

On-page connector. An entry from or an exit to another function on the same flowchart. The location in the connector identifies the block to which entry on a chart is made.

FILINPT

Off-page connector. An entry from, or exit to, a given point on another flowchart. The characters in the connector identify the chart and block to which or from which control is passed. The corresponding label, if any, is placed outside the outgoing connector. For multiple entries, an asterisk is placed in the connector and the locations from which control is passed are listed nearby.

EXAMPLE



1

```
// LISTIO SYS

              *** BACKGROUND ***

I/O UNIT   CMNT    CHNL    UNIT    MODE

 SYSRDR              0       0C
 SYSIPT              0       0C
 SYSPCH              0       0D
 SYSLST              1       0A
 SYSLOG              0       1F
 SYSLNK              1       91
 SYSRES              1       92
 SYSSLB             ** UA **
 SYSRLB             ** UA **
 SYSREC              1       91
```

2

```
// LISTIO PROG

              *** BACKGROUND ***

I/O UNIT   CMNT    CHNL    UNIT   MODE

 SYS000              0       91
 SYS001              0       91
 SYS002              0       91
 SYS003              0       91
 SYS004             ** UA **
 SYS005             ** UA **
```

3

```
// LISTIO F2

              *** FOREGROUND 2 ***

I/O UNIT   CMNT    CHNL    UNIT    MODE

 SYSRDR             ** UA **
 SYSIPT             ** UA **
 SYSPCH             ** UA **
 SYSLST             ** UA **
 SYSLOG             ** UA **
 SYSLNK             ** UA **
 SYSRES              1       92
 SYSSLB             ** UA **
 SYSRLB             ** UA **
 SYSREC              1       91

              *** FOREGROUND 2 ***

I/O UNIT   CMNT    CHNL    UNIT    MODE

 SYS000             ** UA **
 SYS001             ** UA **
 SYS002             ** UA **
 SYS003             ** UA **
 SYS004             ** UA **
 SYS005             ** UA **
 SYS006             ** UA **
 SYS007             ** UA **
 SYS008             ** UA **
 SYS009             ** UA **
 SYS010             ** UA **
 SYS011             ** UA **
 SYS012             ** UA **
 SYS013             ** UA **
 SYS014             ** UA **
 SYS015             ** UA **
```

Note: The 1st line of each sample shows the control statement as it was logged by job control.

1. List all background system units.
2. List all background programmer units.
3. List all foreground 2 units.
4. List all units.
5. List a specific unit (SYSXXX).
6. List the logical units assigned to all physical devices.
7. List all unassigned units.
8. List all down units.
9. List all logical units assigned to a specified physical unit.

4

```
// LISTIO ALL

              *** BACKGROUND ***

I/O UNIT   CMNT    CHNL    UNIT    MODE

 SYSRDR              0       0C
 SYSIPT              0       0C
 SYSPCH              0       0D
 SYSLST              1       0A
 SYSLOG              0       1F
 SYSLNK              1       91
 SYSRES              1       92
 SYSSLB             ** UA **
 SYSRLB             ** UA **
 SYSREC              1       91

              *** BACKGROUND ***

I/O UNIT   CMNT    CHNL    UNIT    MODE

 SYS000             ** UA **
 SYS001              1       91
 SYS002              1       91
 SYS003              1       91
 SYS004             ** UA **
 SYS005             ** UA **
 SYS006             ** UA **
 SYS007             ** UA **
 SYS008             ** UA **
 SYS009             ** UA **
 SYS010             ** UA **
 SYS011             ** UA **
 SYS012             ** UA **
 SYS013             ** UA **
 SYS014             ** UA **
 SYS015             ** UA **

              *** FOREGROUND 2 ***

I/O UNIT   CMNT    CHNL    UNIT    MODE

 SYSRDR             ** UA **
 SYSIPT             ** UA **
 SYSPCH             ** UA **
 SYSLST             ** UA **
 SYSLOG             ** UA **
 SYSLNK             ** UA **
 SYSRES              1       92
 SYSSLB             ** UA **
 SYSRLB             ** UA **
 SYSREC              1       91

              *** FOREGROUND 2 ***

I/O UNIT   CMNT    CHNL    UNIT    MODE

 SYS000             ** UA **
 SYS001             ** UA **
 SYS002             ** UA **
 SYS003             ** UA **
 SYS004             ** UA **
 SYS005             ** UA **
 SYS006             ** UA **
 SYS007             ** UA **
 SYS008             ** UA **
 SYS009             ** UA **
 SYS010             ** UA **
 SYS011             ** UA **
 SYS012             ** UA **
 SYS013             ** UA **
 SYS014             ** UA **
 SYS015             ** UA **

              *** FOREGROUND 1 ***

I/O UNIT   CMNT    CHNL    UNIT    MODE

 SYSRDR             ** UA **
 SYSIPT             ** UA **
 SYSPCH             ** UA **
 SYSLST             ** UA **
 SYSLOG             ** UA **
 SYSLNK             ** UA **
 SYSRES              1       92
 SYSSLB             ** UA **
 SYSRLB             ** UA **
 SYSREC              1       91
```

```
              *** FOREGROUND 1 ***

I/O UNIT   CMNT    CHNL    UNIT    MODE

 SYS000             ** UA **
 SYS001             ** UA **
 SYS002             ** UA **
 SYS003             ** UA **
 SYS004             ** UA **
 SYS005             ** UA **
 SYS006             ** UA **
 SYS007             ** UA **
 SYS008             ** UA **
 SYS009             ** UA **
 SYS010             ** UA **
 SYS011             ** UA **
 SYS012             ** UA **
 SYS013             ** UA **
 SYS014             ** UA **
 SYS015             ** UA **
```

5

```
// LISTIO SYSRDR

              *** BACKGROUND ***

I/O UNIT   CMNT    CHNL    UNIT   MODE

 SYSRDR              0       0C
```

6

```
// LISTIO UNITS

CHNL    UNIT     OWNER    I/O UNIT    CMNT    MOD

  0      0C       BG       SYSRDR
  0      0C       BG       SYSIPT
  0      0D       BG       SYSPCH
  0      0E                * UA *
  0      1F       BG       SYSLOG
  0      1F       BG       SYSIN
  1      0A       BG       SYSLST
  1      90                * UA *
  1      91       BG       SYSLNK
  1      91       BG       SYSREC
  1      91       BG       SYS001
  1      91       BG       SYS002
  1      91       BG       SYS003
  1      91       F2       SYSREC
  1      91       F1       SYSREC
  1      92       BG       SYSRES
  1      92       F2       SYSRES
  1      92       F1       SYSRES
  1      80                * UA *
  1      81                * UA *
  1      82                * UA *
  1      83                * UA *
  1      84                * UA *
```

7

```
// LISTIO UA

        *** UNASSIGNED ***

            CHNL    UNIT

              1       80
              1       81
              1       82
              1       83
```

8

```
// LISTIO DOWN

            *** DOWN ***

            CHNL    UNIT

             ** NONE **
```

9

```
// LISTIO X'01F'

CHNL    UNIT    OWNER    I/O UNIT    CMNT    MODE

  0      1F      BG       SYSLOG
```

Figure 6. Sample LISTIO Printcuts

nnCOMREG

Displacement (Hex / Dec)

Hex	0	8	0A	0C	17	18	20	24	28	2C
Dec	0	8	10	12	23	24	32	36	40	44
Field	Date	Address of PPBEG	Address of EOSSP	Problem Program Use	UPSI Byte	Job Name	Highest Storage Address of the Partition	End Address of Last Phase Fetched or loaded	Address of uppermost Byte of Phase with highest Ending Address	Label Area Length
Length	xxxxxxxx	xx	xx	xxxxxxxxxxx	x	xxxxxxxx	xxxx	xxxx	xxxx	xx

Hex	2E	30	34	35	36	37	38	39	3A	3B	3C	3E
Dec	46	48	52	53	54	55	56	57	58	59	60	62
Field	PIK	End of Virtual Storage Address	Machine Configur. Byte	System Configur. Byte	Standard Language Translator I/O Options	Dump, Log, RELLDR and ASCII Options	Job Control Byte	Linkage Control Byte	Language Translator Control Byte	Job Duration Indicator Byte	Disk Address of Label Cylinder	Address of FOCL
Length	xx	xxxx	x	x	x	x	x	x	x	x	xx	xx
					Job Control Switches							

Hex	40	42	44	46	48	4A	4C	4E	4F	58	5A	5C
Dec	64	66	68	70	72	74	76	78	79	88	90	92
Field	Address of PUBTAB	Address of FAVP	Address of JIBTAB	Address of TEBTAB	Address of FICL	Address of NICL	Address of LUBTAB	Line Count for SYSLST	System Date	LIOCS Comm. Bytes	Address of PIB Table	ID Number of last Checkpoint or DASDFP Indicator
Length	xx	xx	xx	xx	xx	xx	xx	x	xxxxxxxxx	xx	xx	xx

Hex	5E	60	62	64	66	68	6A	6C	6E
Dec	94	96	98	100	102	104	106	108	110
Field	Job Zone in Minutes	Address of Disk Information Block (DIB)	Reserved	Address of PC Option Table less 8 bytes	Address of IT Option Table	Address of OC Option Table less 8 bytes	Key of Program with Timer Support	Reserved	Logical Transient Key (LTK)
Length	xx	xx	xx	xx	xx	xx	xx	xx	xx

Hex	70	74	78	7C	7E	80	84	86	87
Dec	112	116	120	124	126	128	132	134	135
Field	Address of SYSPARM	Address of J.A. Partition Table	Address of TOD clock Common Area	Address of PIB Table Extension	Address of MICR DTF Table(PDTABB)	Address of QTAM Vector Table	Address of BG Comm. Region	Option Indicator	System Configuration Byte 2 and RMSR Open Flag Byte
Length	xxxx	xxxx	xxxx	xx	xx	xxxx	xx	x	x

Hex	88	8C	8D	8E	8F	97	98	9F
Dec	136	140	141	142	143	151	152	159
Field	Pointer to Option Table in SYSCOM Reserved for compatibility reasons	Standard Job Control Options	Temporary Job Control Options	Disk Configuration	Catalog Procedure Name	Switch for Catalog Procedure	JCL Statement Name	81 bytes SYSIN Indicator
Length	xxxx	x	x	x	xxxxxxxx	x	xxxxxxx	x

Note: A communication region exists from each partition supported by the system. The address of the communication region of the active partition is in fixed location X'14'-X'17'

Figure 7. Partition Communications Region (Part 1 of 6)

Key to Communication Region Displacement

Key	Description of Use
0	MM/DD/YY or DD/MM/YY either set permanently by the job control date statement, or updated every time a GETIME macro is issued when Time-of-Day support is provided. Format controlled by EGCOMREG+53. (System Configuration Byte, date convention bit 0.)
8	Address of the problem program area.
10	Address of the beginning of the problem program area. Y(EOSSP) equals Y(PPBEG)
12	User area. If seek separation option is specified, bytes 12 and 13 are used at IPL time for the address of the seek address block.
23	User program switch indicator.
24	Job name set by the job control program from information found in the job statement
32	Address of the uppermost byte available to the problem program, that is, either the address of the uppermost byte of the partition as determined during processing of the ALLOC or ALLOCR macro or statement, or the end address of the area specified by the SIZE parameter in the EXEC statement.
36	Address of the uppermost byte of the last phase of the problem program fetched or loaded. Not filled in when phase is in SVA.
40	Highest ending main-storage address of all the phases having the same first four characters as operand on the EXEC statement. For the phase $LNKEDT, this field is not filled in. The address value may be incorrect if the program loads any of this phase above or below its link-edited origin address. If the EXEC statement has no operand, job control places in this location the highest ending address of all programs just link-edited.
44	Length of the problem program label area.
46	Partition Identification Key (PIK). The low-order byte identifies the active partition. Only significant for BG communication region.
48	End address of virtual storage.
52	Machine Configuration Byte (values set at supervisor generation time). Bit 0: Always set to indicate standard storage protect 1: 1 = Decimal feature (always set) 2: 1 = Floating-point feature 3: 1 = Physical transient overlap option 4: Always set to indicate standard timer feature 5: 1 = Channel switching device 6: 1 = Burst mode on multiplex channel support 7: Indicates MCH/CCH in system

Figure 7. Partition Communications Region (Part 2 of 6)

Key	Description of Use
53	System Configuration byte. Bit 0: 1 = DDMMYY (Date convention bit set at generation time by STIDJC) 0 = MMDDYY (Date convention bit set at generation time by STIDJC) 1: 1 = Two or more partitions 0 = One partition only 2: 1 = DASD file-protect supported 3: 1 = DASD SYSIN - SYSOUT 4: 1 = Teleprocessing 5: 1 = Two or more partitions 0 = One partition only 6: 1 = Asynchronous processing 7: 1 = Track Hold
54	This byte contains the standard language translator I/O options (set by STIDJC macro). Bit 0: DECK option 1 = yes, output object modules on SYSPCH 1: LIST option 1 = yes, output source module listings and diagnostics on SYSLST 2: LISTX option 1 = yes, output hexadecimal object module listings on SYSLST (compilers only) 3: SYM option 1 = yes, output symbol tables on SYSLST/SYSPCH 4: XREF option 1 = yes, output symbolic cross-reference list on SYSLST 5: ERRS option 1 = yes, output diagnostics on SYSLST (compilers only) 6: CHARSET option 1 = 48, input on SYSIPT is 48 or 60 character set 7: Reserved
55	This byte contains the standard supervisor options for abnormal EOJ, Relocating Loader and Control statement display and the indicator for the presence of the ASCII-EBCDIC and EBCDIC-ASCII translation tables. Bit 0: Always on 1: DUMP option 1 = yes, dump registers and storage on SYSLST 2: 1 = partition in wait state, because a volume is to be mounted 3: LOG option 1 = yes, list all control statements on SYSLST 4: 1 = dummy device search in progress; do not enter ERP 5: Not used 6: Relocating Load option 1 = yes, Relocating Loader supported 7: ASCII option 1 = yes, ASCII supported
56	Job Control byte. Bit 0: 1 = Job Accounting Interface (JA) not supported 1: 1 = Return to caller on LIOCS disk open failure 2: 1 = Job Control input from SYSRDR 0 = Job Control input from SYSLOG 3: 1 = Job Control output on SYSLOG 0 = Job Control output not on SYSLOG 4: 1 = Cancel job 5: 1 = Pause at End-of-Job step 6: 1 = SYSLOG is not a console printer-keyboard or DOC 0 = SYSLOG is a console printer-keyboard or DOC 7: 1 = SYSLOG is assigned to the same device as SYSLST

Figure 7. Partition Communications Region (Part 3 of 6)

Key	Description of Use
57	Linkage control byte. Bit 0: 1 = SYSLNK open for output 1: 1 = Update of Second Level Directory and RAS Load list in progress (interface between $MAINDIR and supervisor) 2: 1 = Allow EXEC 0 = Suppress EXEC 3: 1 = Catalog Linkage Editor output 4: 1 = Supervisor has been updated 5: Reserved 6: 1 = Update of System Core Image Library in progress (interface between $MAINDIR and Supervisor) 7: 1 = Check automatic condense limits and End-of-Job (interface between Librarian and Job Control)
58	Language processor control byte. This is a set of switches used to specify nonstandard language translator options. The switches within the byte are controlled by job control OPTION statements and when set to 1, override standard options. The format of this byte is identical to the standard option byte (displacement 54) with one exception: Bit 7 in this byte is used to indicate to LIOCS that the rewind and unload option has been specified.
59	Job duration indicator byte. Bit 0: 1 = Job in progress 1: 1 = Dump on an abnormal End-of-Job condition 2: 1 = Pause at EOJ step (Set by attention routine for Job Control) 3: 1 = Job control output on SYSLST 4: 1 = Job is being run out of sequence with a temporary assignment for SYSRDR 0 = Conditions for 1-setting not met 5: 1 = PCIL is being condensed 6: 1 = //DATE statement processed for current job 7: 1 = Batch command just issued 0 = Condition for 1-setting did not occur
60	Binary disk address of the volume label area (label cylinder).
62	As illustrated (for detailed figures see Index).
76	As illustrated (for detailed figures see Index).
78	Set to the value nn specified in the LINES=nn parameter of the STDJC macro.
79	The format of the system date contained within this field is determined by the IPL program from information supplied in the date convention bit (displacement 53). Bytes 85-87 contain the day count.
88	Bytes reserved for use by LIOCS. Transient dump programs insert a key to indicate to the LIOCS End-of-Volume routine, $$BCMT07, that it was called by a B-transient.
90	Address of the first part of the Program Information Block (PIB) table.

Figure 7. Partition Communications Region (Part 4 of 6)

Key	Description of Use
92	ID number of the last checkpoint. Byte 92 is also the temporary indicator of file protected DASD. Bits 0-6 correspond to channels 0-6. A bit ON means DASDFP for that channel. Bit 7 indicates 2321 DASDFP support. Byte 93 is used at IPL time by PIOCS. Bit 0: 1 = 3330 file protection 1: 1 = 3340 file protection
94	Job zone for Time-of-Day. If ZONE=EAST, value is positive; if ZONE=WEST, value is negative.
96	Address of disk I/O position data. This is the starting address of the Disk Information Block (DIB) table for the partition.
98	Reserved.
100	PC option table (zero if not specified).
102	IT option table (zero if not specified).
104	OC option table (zero if not specified).
106	X'0010' if interval timer support. X'0000' if no interval timer support.
108	Reserved.
110	Logical Transient Key (LTK) contains the same value as the PIK (PID) (Displacement 46) when the logical transient is requested. When the transient area is not in use, LTK is equal to zero. The SVC 2 routine sets the LTK. The SVC 11 routine resets the LTK. (Only significant in BG communication regions.)
112	Address of SYSPARM field.
116	Address of Job Accounting partition table.
120	Address of the Time-of-Day Clock comman area.
124	Address of second part of Program Information Block (PIB) table.
126	Address of PDTABB, table of DTF addresses for MICR support.
128	Address of QTAM vector table (IJLQTTAD).
132	Address of background communications region.
134	Option Indicator byte. Bit 0: Reserved 1: 1 = EU interface active 2: 1 = Teleprocessing request 3: 1 = Supervisor support for tape 4: Reserved 5: 1 = RETAIN support generated 6: 1 = Linkage to Channel End Appendage Routine allowed 7: 1 = GETVIS function has been initiated

Figure 7. Partition Communications Region (Part 5 of 6)

Key	Description of Use
135	System Configuration byte 2 and RMSR Open Flag byte. Bit 0: 1 = PCIL supported 1: 1 = TOD-clock supported 2: 1 = PFIX macro supported 3: 1 = Fetch $$BOPEN by $JOBCTLJ 4: 1 = Fetch $$BOPEN by $JOBCTLD 5: 1 = Fetch $$BOPEN by $JOBCTLJ for WTM 6: 1 = QTAM supported 7: Reserved
136	Pointer to Option table in SYSCOM Reserved for compatibility reasons.
140	Standard Job Control Option byte. Bit 0: 1 = EDECK Standard Option 1: 1 = ALIGN Standard Option 2-6: Not used 7: 1 = ACANCEL Standard Option
141	Temporary Job Control Option byte. Bit 0: 1 = EDECK Temporary Option 1: 1 = ALIGN Temporary Option 2-6: Not used 7: 1 = ACANCEL Temporary Option
142	Disk Configuration byte. Bit 0-4: Not used 5: 1 = 3340 supported 6: 1 = 3330 supported 7: Always 1; indicates 2311 and 2314/2319 supported
143	Cataloged Procedure Name.
151	Interface byte for Cataloged Procedures. Bit 0: 1 = Procedure being executed 1: 1 = Overwrite processing 2: 1 = Procedure with data 3: 1 = Overwrite request for Job Control 4: 1 = Insert request for Job Control 5: 1 = Procedure end 6: 1 = SYSLOG procedure 7: 1 = Overwrite request for Supevisor
152	JCL statement name for Cataloged Procedure.
159	SYSIN 81 bytes indicator. Bit 0: 1 = Permanent 81 bytes on SYSRDR 1: 1 = Permanent 81 bytes on SYSIPT 2: 1 = Temporary 81 bytes on SYSRDR 3: 1 = Temporary 81 bytes on SYSIPT 4-6: Not used 7: 1 = Allow /& for MAINT CATALS

Figure 7. Partition Communications Region (Part 6 of 6)

SYSCOM

Hex / Dec	Displacement	Address of Error Block	Address of Attention Exit	Address of Operator Option Cancel Exit	Address of Operator Request Cancel Exit	Address of SYSRES PUB	Address of Fetch Routine	Address of I/O Interr. Routine	Address of Ext. Interr. Routine
0 / 0		0 / 0	4 / 4	8 / 8	0A / 10	0C / 12	10 / 16	14 / 20	18 / 24
		XXXX	XXXX	XX	XX	XXXX	XXXX	XXXX	XXXX

Displacement	Address of Logical Transient Area	Address of 1st byte of Problem Program Area	Free List Pointer	Address of Channel Queue	Number of Channel Queue Entries	Length of One Error Queue Entry	Number of Partitions	Not used	Address of Channel Buckets	Address of CRT Table
1C / 28	20 / 32	24 / 36	25 / 37	28 / 40	2A / 42	2C / 44	2E / 46	30 / 48	34 / 52	
	XXXX	XXXX	X	XXX	XX	XX	XX	XX	XXXX	XXXX

Displacement	Address of SAB Table	Address of Channel Control Table	Flags and Switches (See expansion) *	System Task Selection Control Field *	Address of Task Selection	Address of PD Area	TH Free List Pointer	Address of TH Table	Address of Timer Request Table
38 / 56	3C / 60	40 / 64	44 / 68	46 / 70	48 / 72	4C / 76	4D / 77	50 / 80	
	XXXX	XXXX	XXXX	XX	XX	XXXX	X	XXX	XXXX

Displacement	Address of AB Table	Key of Task owning LTA (LIK)	Key of Task running (TIK)	Address of POWER Table	Reserved	Address of RF Table	Address of EU ECB Table	Address of OLTEP bucket	Address of RAS Linkage Area
54 / 84	58 / 88	5A / 90	5C / 92	60 / 96	64 / 100	68 / 104	6C / 108	70 / 112	
	XXXX	XX	XX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Displacement	Address of ASCII Translate Table	Address of PUB Ownership Table	Address of Job Accounting Common Table	Base Address of Page Management Routine	Base Address of Channel Program Translation Routine	Address of SDAID Comm. Area	Address of Line Mode Table	Address of VSAM Communication Area
74 / 116	78 / 120	7C / 124	80 / 128	84 / 132	88 / 136	8C / 140	90 / 144	
	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Displacement	Address of PTA	Address of first System Task Block	Address of Task Block of Active System Task	1 byte for Alignment	Pointer to RAS Task Block	Pointer to PMGR Task Block	Pointer to SUPVR Task Block	Pointer to CRT Task Block	Pointer to ERP Task Block	Pointer to PAGEIN Task Block	Reserved (9 X'00')
94 / 148	98 / 152	9C / 156	A0 / 160	A1 / 161	A2 / 162	A3 / 163	A4 / 164	A5 / 165	A6 / 166	A7 / 167	
	XXXX	XXXX	XXXX	X	X	X	X	X	X	X	XXXXXXXXX

Displacement	Not used	Address of MVCFLD	Not used	Not used	Not used	Repositioning Information for MFCM ERP	Number of Error Queue Entries	Length of PUB Table in bytes	Number of Active Partitions
B0 / 176	B4 / 180	B8 / 184	BC / 188	BE / 190	C0 / 192		CB / 203	CC / 204	CE / 206
	XXXX	XXXX	XXXX	XX	XX	XXXXXXXXXX	X	XX	XX

Displacement	Address of Segment Table	Address of Page Frame Table	Address of Page Frame Table Extension	Address of Boundary Box	Address of DPD Table	Reserved	Address of VIRTAD Routine	Address of End of Real Storage
D0 / 208	D4 / 212	D8 / 216	DC / 220	E0 / 224	E4 / 228	E8 / 232	EC / 236	
	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Displacement	Address of Fetch Table	SVA Flag (see expansion)	Address of SVA	Address of System GETVIS AREA
F0 / 240	F4 / 244	F5 / 245	F8 / 248	
	XXXX	X	XXX	XXXX

*See next page for further explanation.

Figure 8. System Communication Region (SYSCOM) (Part 1 of 2)

Expansion of SYSCOM Flag Bytes

Byte Dec	Byte Hex	Description
64	40	Reserved for RMS in Model 115 and 125
		X'80' RMSR for channel attached devices, tapes and TP devices
		X'40' Full RMS support (MCAR/CCH and RMSR)
		X'20' MCAR/CCH support
65	41	X'80' Initial selection of ERP
		X'40' Reserved
		X'20' Timer interrupt pending
		X'10' MICR Stacker-select active
		X'08' Invalid address during fetch
		X'04' SIO routine entered after interrupt
		X'06' Reserved
		X'01' IPL in progress
66	42	X'80' Initial RAS request
		X'40' RAS Wait request outstanding
		X'20' RAS IPL in progress
		X'10' Reserved
		X'08' POWER supported
		X'06' POWER initialized
		X'02' GETREAL for SDAID or PDAID in progress
		X'01' Fetch for system task in progress (used by PDAID)
67	43	Reserved
244	F4	SVA Flag
		X'00' Do not test for warm start copy of SVA
		X'40' SDL active
		X'20' No 'Set SVA' or 'Set SDL' allowed
		X'10' Build of SDL in progress
		X'08' SDL overflow
		X'04' Reserved
		X'02' Reserved
		X'01' Reserved

Layout of System Task Selection Control Field

Byte Dec	Byte Hex	Description
68	44	Always zero
69	45	SELECT byte:
		X'00' No system task active
		X'01' RAS active
		X'02' PMGR active
		X'03' SUPVR active
		X'04' CRT active
		X'05' ERP active
		X'06' PAGEIN active

Note: The address of SYSCOM can be found at fixed location X'80' - X'83'.

Figure 8. System Communications Region (SYSCOM) (Part 2 of 2)

Count	Trans-mission Informa-tion	CSW Status Bits	Type Code and Logical Unit	Reserved for Logical IOCS	CCW Address	Reserved for Physical IOCS	CCW Address in CSW	Optional Sense CCW
0 1	2 3	4 5	6 7	8	9 11	12	13 15	16 23

Byte(s)	Description	
0-1 Used for residual count.		
2-3 Transmitting information between Physical IOCS and Problem Program	Byte 2	Set on by
	Bit 0: Traffic Bit (Wait) (Note 5).	PIOCS*
	Bit 1: End-of-File (/* or /&) 3211-UCSB Parity Check (Line Complete) (Note 2).	PIOCS
	Bit 2: Irrecoverable I/O error.	PIOCS
	Bit 3: Accept Irrecoverable I/O error.	Pr.Pr.**
	Bit 4: Return DASD Data Checks, 3540 Diskette Data Checks, 2671 errors, or 1017/1018 errors to the user; indicate action-type messages for DOC; return 5425 not ready.	Pr.Pr.
	Bit 5: Post at Device End (Note 5).	Pr.Pr.
	Bit 6: Return Tape Read Data Check; 1018 or 2560 Data Check; 2520, 2540, 2560, 3881, or 5425 Equipment Check; Accept 3504, 3505, or 3525 Permanent Error; DASD Data Checks on Read or Verify Command on 3203, 3211, 2245, or 5203 Passback Requested. (Notes 3, 6, and 8)	Pr.Pr.
	Bit 7: User Error Routine, (Note 10).	Pr.Pr.
	Byte 3	Set on by
	Bit 0: DASD Data Check in Count Area; Permanent Error for 3330, or 3340; MICR-SCU Not Operational; 1287/1288 Data Check; 3203, 3211 or 5203 Print Check/Equipment Check; 3540 Special Record Transferred.	PIOCS
	Bit 1: DASD Track Overrun; MICR Intervention required; 1287-Keyboard Correction in Journal Tape Mode; 1017-Broken Tape; 3211-Print Quality/Equipment Check.	PIOCS
	Bit 2: DASD End-of-Cylinder; MICR-(Note 4) 1287/1288-Hopper Empty in Document Mode; 3211/2245 Line Position Error (Note 7).	
	Bit 3: 2520, 2540, 3881-Equipment Check; 2560, 3203, 5203, 5425 Data Check/Equipment Check; Tape-Read Data Check; DASD-Any Data Check; 1287-Equipment Check; 1017/1018-Data Check; 3211-Print Check/Data Check; 3504, 3505, 3525 Permanent Error (Note 8); 3540 Diskette Data Check.	PIOCS
	Bit 4: Non-Recovery Questionable Condition: Card-Unusual Command Sequence; DASD-No Record Found; 1287/1288-Document Jam or Torn Tape; 3211-UCB Parity Check (Command retry); 5425 not ready.	PIOCS

Figure 9. Command Control Block (CCB) (Part 1 of 3)

Count	Trans-mission Informa-tion	CCW Status Bits	Type Code and Logical Unit	Reserved for Logical IOCS	CCW Address	Reserved for Physical IOCS	CCW Address in CSW	Optional Sense CCW
0 1	2 3	4 5	6 7	8	9 11	12	13 15	16 23

Byte(s)	Description	Set on by
	Bit 5: No Record Found Condition (Retry on 2311, 2314, 2319, 3330, or 3340).	Pr.Pr.
	Bit 6: Carriage Channel 9 Overflow or Verify Error for DASD; 1287-Document Mode-Late, Stacker Select; 1288-End of Page.	PIOCS
	Bit 7: Command Chaining, Retry from the next CCW to be executed.	Pr.Pr.
4-5 CSW Status Bits	Byte 4 (Note 1) / Byte 5	
	Bits: / Bits:	
	0(32): Attention / 0(40): Program Controlled Interruption	
	1(33): Status Modifier / 1(41): Incorrect Length	
	2(34): Control Unit End / 2(42): Program Check	
	3(35): Busy / 3(43): Protection Check	
	4(36): Channel End / 4(44): Channel Data Check	
	5(37): Device End / 5(45): Channel Control Check	
	6(38): Unit Check / 6(46): Interface Control Check	
	7(39): Unit Exception / 7(47): Chaining Check	
6-7 Type Code and Logical Unit	Byte 6	
	X'0u' Original CCB (Bytes 9-11 and 13-15 contain virtual addresses)	
	X'2u' Translated CCB (Bytes 9-11 contain real address, bytes 13-15 virtual address)	
	X'4u' BTAM request original CCB (Bytes 9-11 and 13-15 contain virtual address)	
	X'6u' BTAM request translated CCB (Bytes 9-11 contain real address, bytes 13-15 virtual address)	
	X'8u' User-translated CCB in virtual partition (Bytes 9-11 and 13-15 contain real addresses)	
	Note: Any one of the above incremented by X'10' (bit 3 on) indicates automatic switching to the beginning of the next cylinder at End-of-Cylinder condition.	
	u: 0 = The address in byte 7 refers to a System Logical Unit. 1 = The address in byte 7 refers to a Programmer Logical Unit.	
	Byte 7	
	Hexadecimal representation of SYSnnn:	
	SYSRDR = C0 SYSSLB = 07 SYS000 = 00 SYSIPT = C1 SYSRLB = 08 SYS001 = 01 SYSPCH = 02 SYSUSE = 09 SYS002 = 02 SYSLST = C3 SYSREC = 0A . SYSLOG = 04 SYSCLB = 0B . SYSLNK = C5 SYSVIS = 0C SYSnnn SYSRES = 06 SYSCAT = CD (Note 9)	
8 Reserved for Logical IOCS	Buffer Offset:	
	ASCII Input Tapes	X'00' - X'63'
	ASCII Output Tapes Fixed	X'00'
	Variable	X'00' or X'04'
	Undefined	X'00'

Figure 9. Command Control Block (CCB) (Part 2 of 3)

Count	Trans-mission Informa-tion	CSW Status Bits	Type Code and Logical Unit	Reserved for Logical IOCS	CCW Address	Reserved for Physical IOCS	CCW Address in CSW	Optional Sense CCW
0 1	2 3	4 5	6 7	8	9 11	12	13 15	16 23

Byte(s)	Description
9-11 CCW Address	Virtual or real address of CCW associated with this CCB depending on byte 6: Real address if byte 6=X'2u', X'6u', or X'8u'; Virtual address if byte 6=X'0u', or X'4u'.
12 Reserved for Physical IOCS	X'80' CCB being used by ERP X'40' Channel Appendage Routine present for TP device, VSAM or POWER. X'20' Sense Information desired (Note 10) X'10' Message writer X'08' EU Tape Error X'04' OLTEP Appendage available X'02' Tape ERP Read Opposite Recovery X'01' Seek Separation
13-15 CCW Address in CSW	Virtual Address of CCW pointed to by CSW at Channel End (if byte 6 = X'8u', it is the real address) or address of the Channel End Appendage Routine for TP devices, VSAM or POWER.
16-23 Optional Sense CCW	8 bytes appended to the CCB when Sense Information is desired.

Figure 9. Command Control Block (CCB) (Part 3 of 3)

Notes:

* = Physical IOCS ** = Problem Program

1. Bytes 4 and 5 contain the status bytes of the Channel Status Word (Bits 32-47). If byte 2, bit 5 is on and device end results as a separate interrupt, device end will be ORed into CCB byte 4.
2. Indicates /* or /& statement on SYSRDR or SYSIPT. Byte 4, bit 7 (unit exception) is also on.
3. DASD data checks on count not returned.
4. For 1255/1259/1270/1275/1419, disengage. For 1275/1419D, I/O Error is external interrupt routine (Channel data check or bus-out check).
5. The traffic bit (Byte 2, bit 0) is normally set on at channel end to signify that the I/O was completed. If byte 2, bit 5 has been set on, the traffic bit and bits 2 and 6 in byte 3 will be set on at device end. Also see Note 1.
6. 1018 ERP does not support the Error Correction Function.
7. This error occurs as an equipment check, data check or FCB parity check. For 2245, this error occurs as a data check or FCB parity check.
8. For 3504, 3505, 3525 input or output files using ERROPT, byte 3, bit 3 is set on if a permanent error occurs. Byte 2, bit 6 is set on to allow you to accept permanent errors.
9. SYSnnn=255 - (Number of partitions times 14).
10. If User Error Routine is specified and the user needs the sense information to further process the error, byte 12, bit 2 must also be set. Otherwise, the supervisor error routine will mask off the status on return and the sense information is not available.

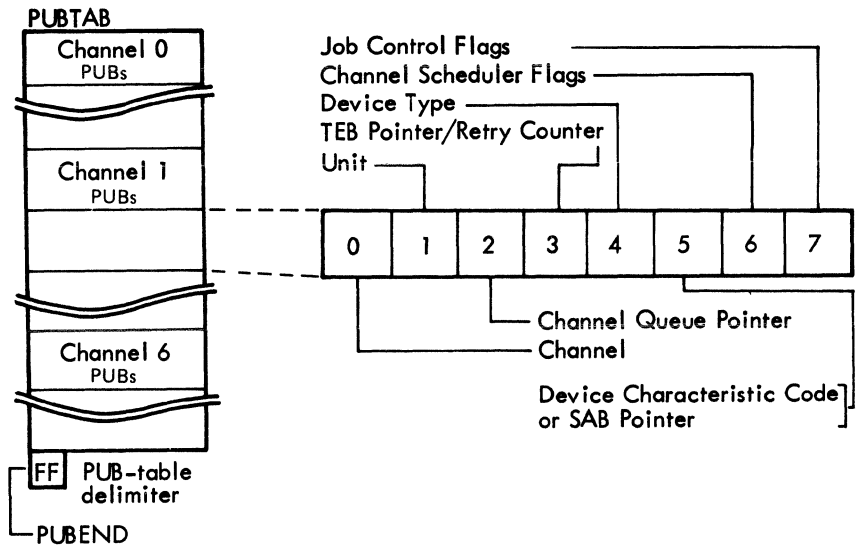


Figure 10. Physical Unit Block (PUB) Table

Bytes:

0: Channel number. (Hex 0-6, FF=NULL)

1: I/O device unit number

2: Hex 0, 1, 2, ... points to the first channel queue entry for this device

3: If device is a 2495 Tape Cartridge Reader and TEBs are specified, this byte is a TEB pointer. (Hex 1, 2, 3, ...). Otherwise, this byte is an ERP retry counter.

4: Device type code

5: SS of the MODE=parameter in the DVCGEN macro for tape unit.

For ICA line (Model 115, or 125), this byte contains the displacement index of the entry in the Line Mode Table (LMT). The address of the LMT is in SYSCOM.

For DASD with seek separation, this byte is used as the SAB Pointer. With Track Hold but not seek separation supported, this byte contains a pointer to the Track-Hold Table entry or X'FF' (with both SKSEP and TRKHLD specified, the Track-Hold pointer is found in the SAB entry).

For MICR type devices, this byte indicates which external interrupt line is in use.

For a 3704/3705 Communications Controller, this byte contains the type number of the Channel Adapter.

For MFCM or MFCU:

Bit 0: 1 = Repositioning required

1: 0 = SYSPCH temporarily assigned to hopper 1
1 = SYSPCH temporarily assigned to hopper 2

2: 0 = SYSIPT temporarily assigned to hopper 1
1 = SYSIPT temporarily assigned to hopper 2

3: 0 = SYSRDR temporarily assigned to hopper 1
1 = SYSRDR temporarily assigned to hopper 2

5: 0 = SYSPCH permanently assigned to hopper 1
1 = SYSPCH permanently assigned to hopper 2

6: 0 = SYSIPT permanently assigned to hopper 1
1 = SYSIPT permanently assigned to hopper 2

7: 0 = SYSRDR permanently assigned to hopper 1
1 = SYSRDR permanently assigned to hopper 2

6: Channel Scheduler Flags

Bit 0: 1 = Device busy
1: 1 = Switchable device
2: 1 = EOJ for SYSRDR or SYSIPT
3: 1 = I/O error queued for recovery
4: 1 = Operator intervention required
5: 1 = Device End posting required
6: 1 = Burst or overrunable device on Byte MPX channel
7: 1 = 7-track tape unit

7: Job Control Flags

Bit 0-4: Standard MODE assignment for 7-track tape (all ones if not tape, all zeros if device is down)
5: 1 = DASD device with disconnect command chaining feature
6-7: B'11' (both on) = Headqueue in progress*
B'01' = Headqueue requested*

*No I/O is started on a PUB or copied PUB that has both these switches on. If only bit 7 is on I/O can be started after seek separation.

Notes: A null entry is generated at supervisor generation time for each device to be supported by the supervisor. Then standard physical unit assignments are made to the PUB table. Physical unit assignments can also be made during IPL. PUBs are ordered by channel and priority within a channel.

An entry in the PUB Ownership Table is associated with each entry in the PUB Table, if the supervisor has been generated to support multiprogramming.

Bytes 64-65 (X'40' - X'41') of the partition communication region contain the address of the PUB Table entry. Label PUBTAB identifies the first byte of the table.

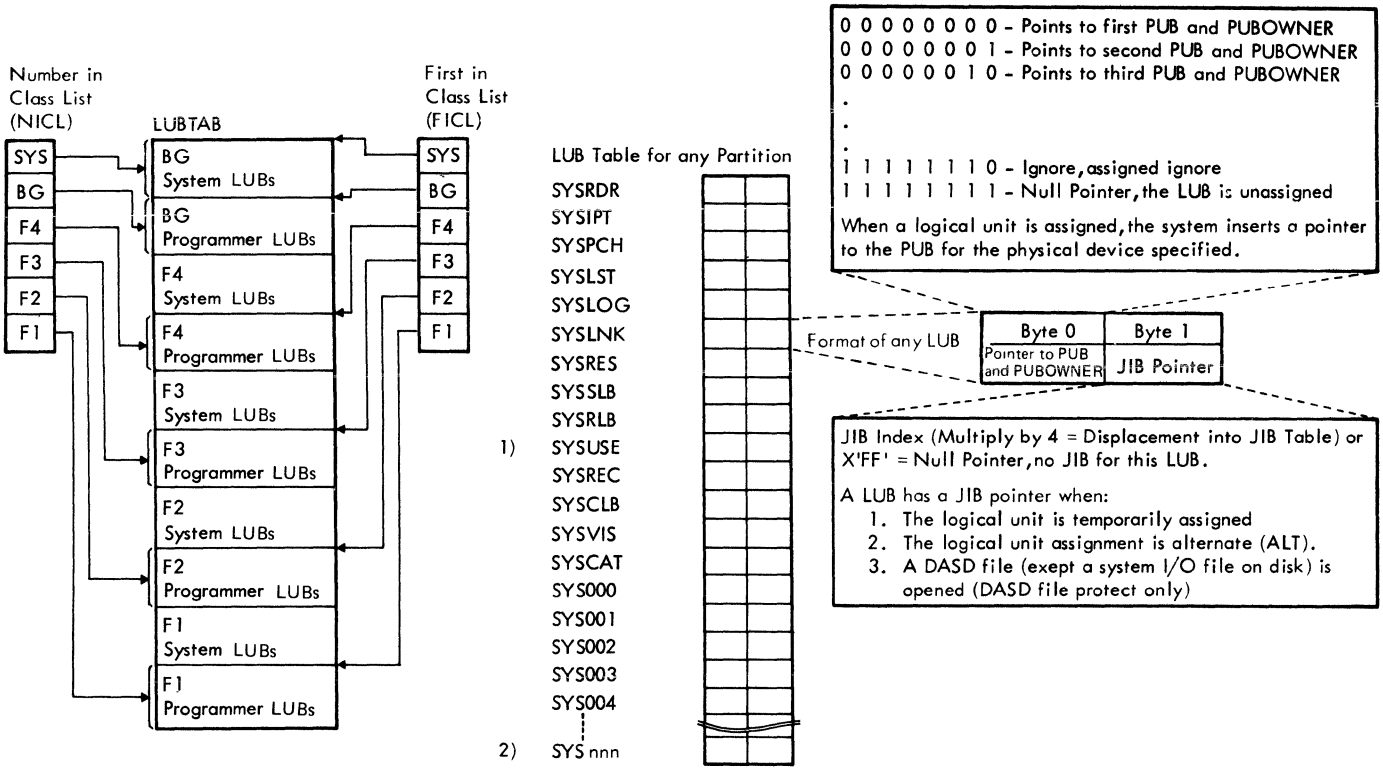


Figure 11. NICL, FICL and LUB Tables

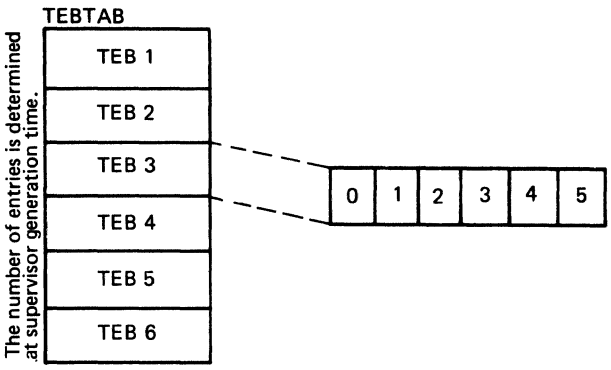


Figure 12. Tape Error Block Table (TEBTAB)

Bytes:

0: Error recovery retry count.

1: Permanent read data check error count.

2: Number of times the read data check error routine is entered.

3: Number of times the write data check error routine is entered.

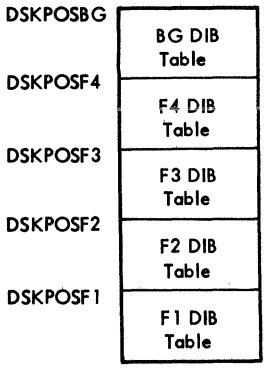
4: Write skip (erase gap) count.

5: Noise record count.

One TEB is generated for each 2495 Tape Cartridge Reader unit if the FOPT macro contains the TEB=n parameter. Job Control resets each TEB at normal or abnormal End-of-Job. An unused TEB contains HEX'FF0000000000'. A TEB is referenced from byte 3 of a Tape Cartridge Reader unit PUB.

Bytes 70-71 (X'46' - X'47') of the partition communications region(s) contain the address of the TEB Table entry. Label TEBTAB identifies the first byte of the table.

DISK INFORMATION BLOCK (DIB) TABLE



The number of DIB tables depends on the number of partitions specified at supervisor generation.

Format of any DIB table if SYSFIL= YES

	0						6	7		9	10						16	17	18	19	20		21	22	23
	Current Address							K	D	D	End Address							UL	LL	M	RC				
SYSLNK	C	C	H	H	00	00	00	P	P	00■	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
SYSIN	B	B	C	C	H	H	R	00	00	50	B	B	C	C	H	H	R	H	H	XX	XX	XX	00	00
SYSPCH	B	B	C	C	H	H	R	00	00	51	B	B	C	C	H	H	R	H	H	XX	XX	XX	00	00
SYSLST	B	B	C	C	H	H	R	00	00	78	B	B	C	C	H	H	R	H	H	XX	XX	XX	00	00
PRCDIB	B	B	C	C	H	H	R	00	00	50	B	B	C	C	H	H	R	H	H	XX	XX	XX	00	00

Format of any DIB table if SYSFIL= NO

	0						6	7		9	10						16	17	18	19	20		21	22	23
	Current Address							K	D	D	End Address							UL	LL	M	RC				
SYSLNK	C	C	H	H	00	00	00	P	P	00■															
PRCDIB	B	B	C	C	H	H	R	00	00	50	B	B	C	C	H	H	R	H	H	XX	XX	XX	00	00

■) BG SYSLNK DIB contains the PUB pointer for CLB. For FG SYSLNK DIBs this byte is unused.

Format of 3540 Diskette DIB table

	0						6	7		9	10						16	17	18	19	20		21	22	23
	Current Address							K	D	D	End Address									M	RC				
SYSIN	00	00	00	00	C	H	R	00	00	00	FLG	EXT #	HDR #	00	C	H	R	00	00	XX	00	00	00	00
SYSPCH	00	00	00	00	C	H	R	00	00	00	FLG	EXT #	HDR #	00	C	H	R	00	00	XX	00	00	00	00
SYSLST	00	00	00	00	C	H	R	00	00	00	FLG	EXT #	HDR #	00	C	H	R	00	00	XX	00	00	00	00

Figure 13. Disk Information Block (DIB) Table

Bytes

0-6 Current Address

0-5: Current address of key: the next address to be used (both for input and output).
6: Record number of current address.

7-9 KDD

Key and data length of the symbolic device. PP: starting cylinder of Private Core Image Library if PCIL is assigned; otherwise zero.

10-16: End Address

10-15: End address of key: the last address within the limits of the extent.
16: Record number of end address.

17: UI Upper head limit.

18: LI Lower head limit.

19: M Maximum number of records per track.

20: RC Record count: Residual capacity for beginning of operator notification. Set at system generation time with SYSFIL parameter, or after IPL with SET statement (RCLST and/or PCPCH operands). A warning message is issued by job control after End-of-Job step when the minimum number of remaining records has been reached or exceeded during the previous job. Not supported for 3540.

22-23: Reserved.

Note: The block is initialized by job control with extent information and updated by physical IOCS. When the PCIL option is used the DIB is updated each time the PCIL is assigned.

There is one DIB table for each partition. Label DSKPCSBG identifies the first byte of the BG DIB Table (DSKPCSF1, DSKPOSF2, DSKPCSF3, DSKPOSF4, for the other partitions). The addresses of the DIB tables are contained in bytes 96 and 97 (X'60' and X'61') of the appropriate partition communication region.

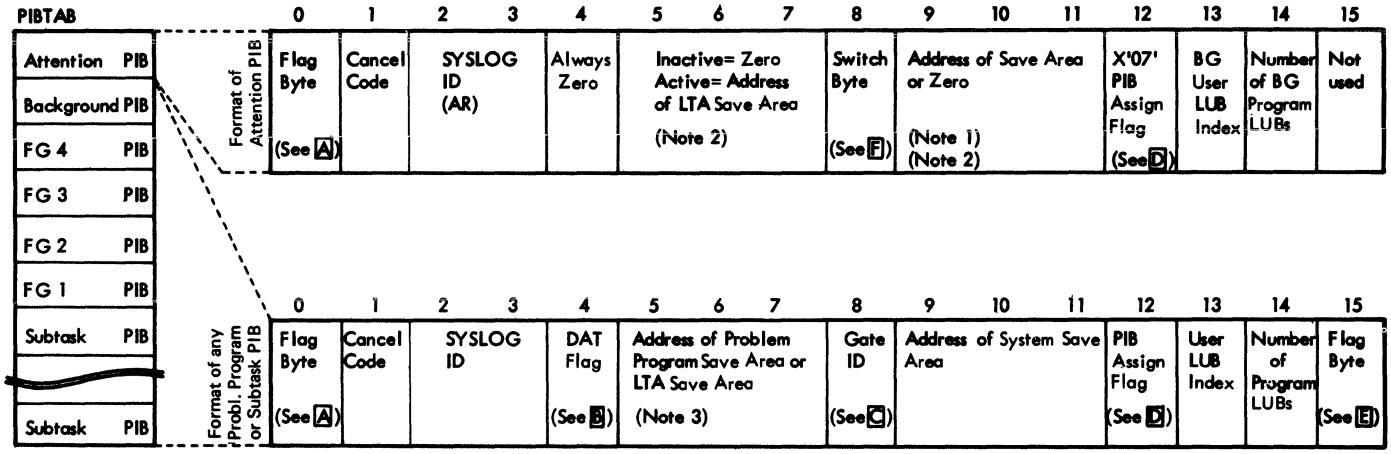


Figure 14. Program Information Block (PIB) Table (Part 1 of 2)

Notes:

1. a. When LTA is inactive = LTA save area address.

   b. When LTA is active for Problem Programs, this address is exchanged with that in the Problem Program PIB.

2. When LTA is active for Logical Attention, bytes 9-11 are zero and bytes 5-7 contain the LTA save area address.

3. When the Logical Transient Area is active the save area address in the Problem Program PIB is exchanged with that in the Attention PIB.

The number of Problem Program PIBs generated depends on the number of partitions specified during system generation. Subtask PIBs are generated only if AP=YES has been specified during system generation. The number of subtask PIBs generated depends on the number of partitions, that is:

Number of Partitions	Number of Subtasks
2	13
3	12
4	11
5	10

Bytes 90-91 (X'5A' - X'5B') of the partition communication region(s) contain the address of the PIB table. Label PIBTAB identifies the first byte of the table.

[A] Flag Byte (First byte in PIB)

The following flags are always used:

X'71' = Program is waiting for SVC 58
X'73' = Program is waiting because system is seized
X'75' = Program is waiting for copy block
X'77' = Program is waiting for TFREE
X'79' = Program is waiting for channel queue entry
X'7B' = Program is waiting for CCW translation
X'7D' = Program is waiting for free console buffer table entry (used only when CBF=n)
X'80' = Program is not active
X'81' = Program is SVC 2-bound (waiting for the LTA to be released)
X'82' = Program is SVC 7-bound (waiting for an I/O interruption)
X'83' = Program is ready to run
X'85' = Program is SVC 5-bound (waiting for the PTA to be released)
X'86' = Initial selection of RAS (used only for RAS PIB Flag)
X'87' = Program is set to common bound condition

The following flags are used only if NPARTS>1. X'61' through X'69' are used by the load leveller to deactivate a partition. The partition to which a flag refers depends on NPARTS as follows:

		NPARTS= 2	3	4	5
X'61'	refers to	BG	BG	BG	BG
X'63'	refers to	F1	F2	F3	F4
X'65'	refers to	-	F1	F2	F3
X'67'	refers to	-	-	F1	F2
X'69'	refers to	-	-	-	F1

X'6B' = Program is SVC 35-bound
X'6D' = Program is waiting for next freed page frame
X'6F' = Program is IDRA-bound

The following flags are only used if AP=YES:

X'51' = Program is SVC 38-bound
X'53' = Program is SVC 41/42-bound

The following codes are only used if AP=YES and PFIX=YES. The codes are used by the PFIX routines to set a partition PFIX-bound. The partition to which a flag refers depends on NPARTS as follows:

		NPARTS= 2	3	4	5
X'47'	refers to	BG	BG	BG	BG
X'49'	refers to	F1	F2	F3	F4
X'4B'	refers to	-	F1	F2	F3
X'4D'	refers to	-	-	F1	F2
X'4F'	refers to	-	-	-	F1

The following codes are used only if AP=YES and VSAM=YES. The codes are used by the VSAM routines to set a partition PFIX-bound. The partition to which a flag refers depends on NPARTS as follows:

		NPARTS= 2	3	4	5
X'3D'	refers to	BG	BG	BG	BG
X'3F'	refers to	F1	F2	F3	F4
X'41'	refers to	-	F1	F2	F3
X'43'	refers to	-	-	F1	F2
X'45'	refers to	-	-	-	F1

The following flag is only used when CBF=n:

X'7D' = Program is waiting for free console buffer table entry.

The following flag is only used when TP=QTAM:

X'8B' = Task in QTAM wait.

[E] PIB DAT Flag

X'01' = Return to reentrant supervisor routine
X'02' = Return to gated supervisor routine
X'04' = Move CCB at dispatching time
X'08' = Service delayed external interrupt
X'10' = Deactivation of this task is being delayed
X'20' = Reserved
X'40' = Task has seized the system
X'80' = Program is running in virtual mode

[C] Gate Identifier

X'71' = Gating of SVC 58 required
X'53' = Gating of SVC 41/42 required

The flags are only used if the PIB DAT Flag is X'03', that is, the first two flags are on. (See [E].)

[D] PIB Assign Flag

X'80' = SYSRES DASD file protect inhibited (allow write operation on SYSRES)
X'40' = Channel appendage exit allowed (BTAM)
X'20' = Cancel in progress (used in terminator function)
X'10' = Cancel control (set on a foreground cancel)
X'08' = Hold foreground assignments
X'07' = Attention PIB

[E] Program Program PIB Flag (Last byte in PIB)

Bit 0: 1 = Batched job in foreground (always on when tested)
1: 1 = Cancel in ITA and device not assigned
2: 1 = /& on SYSIN if DASD
3: 1 = Partition in stopped state
4: 1 = Fetch EOJ monitor
5: 1 = Task is canceled
6: 1 = Subtask(s) attached
7: 1 = in AB routine

[F] Attention PIB Switch Byte

Bit 0: Reserved
1: 1 = Fetch Physical Attention Transient $$ABERRZ
2: 1 = Delay cancellation (fetch $$ABERZ1)
3: 1 = Emergency cancel request
4: Reserved
5: 1 = Command available (DOC)
6: 1 = Fetch Logical Attention Routine ($$BATTNA)
7: 1 = External Interrupt request

Figure 14. Program Information Block (PIB) Table (Part 2 of 2)

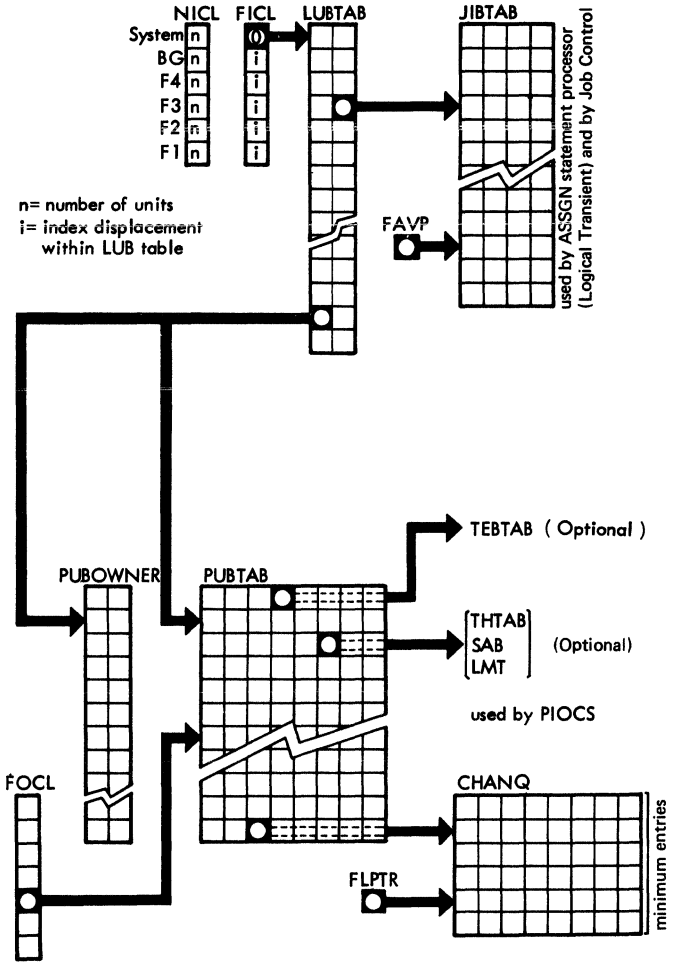


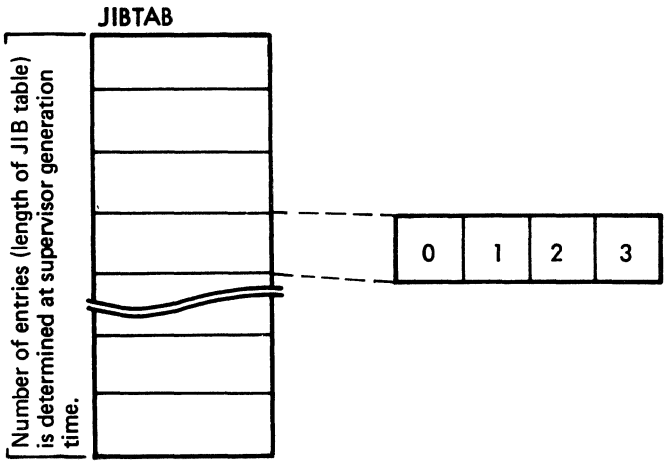
Figure 15. I/O Table Interrelationships (Part 1 of 3)

Key	Explanation
NICL (Number in Class)	Byte 0 contains the number of system class LUBs. The remaining bytes contain the number of programmer class LUBs for each partition. The total number of bytes is one more than the number of partitions supported.
FICL (First in Class)	Byte 0 points to the first system class LUB in the LUB table (LUBTAB). This is always the first entry in the LUB table. The remaining bytes point to the first programmer class LUBs in the LUB table partition areas. The total number of bytes is one more than the number of partitions supported.
LUBTAB (Logical Unit Block Table)	Byte 0 of each entry is an index pointer to an entry in the PUB Table (PUBTAB) and to an entry in the PUB Ownership Table (PUBOWNER), or contains X'FF' if no logical unit is assigned. Byte 1 points to an entry in the JIB Table (JIBTAB) or contains X'FF'.
PUBTAB (Physical Unit Block Table)	Bytes 0 and 1 of each entry contain the channel and unit address of the physical device. Byte 2 points to the entry in the channel queue (CHANQ) table or contains X'FF'. Byte 3 is a retry counter or, if the unit is a tape cartridge reader and the TEB=n parameter was included in the FCPT macro, it contains a pointer to the Tape Error Block table (TEBTAB) entry for the device. Byte 4 contains the device type code. Byte 5 is an index pointer to the entry in the Track-Hold Table, the seek-address block table, or the mode table (MODEL 125 only) when one of these options is active for the device. Otherwise this byte contains X'FF'. Byte 6 contains the channel scheduler flags and byte 7 the job control flags.
FOCL (First on Channel List)	Byte 0 points to the first PUBTAB entry for a device on channel 0. Byte 1 points to the first PUBTAB entry for a device on channel 1, and so on. X'FF' indicates that the associated channel is not supported.
PUBOWNER	Byte 0 of each entry is reserved. Byte 1 identifies the partition that owns the corresponding PUB.
FAVP (First Available Pointer)	This one-byte pointer to the next available entry in the JIB Table (JIBTAB) is used by the ASSGN statement processor and by job control.
JIBTAB (Job Information Block Table	Bytes 0 and 1 of each entry contain extent or LUB information used by job control and the ASSGN statement processor. Byte 2 is a flag byte. Byte 3 is a chain byte.

Figure 15. I/O Table Interrelationships (Part 2 of 3)

Key	Explanation
CHANQ (Channel Queue Table)	Byte 0 in each entry points to the next entry in the queue for the same device (or the next free entry if in the free list), or it contains X'FF' if the entry is the last in a chain. Bytes 1, 2, and 3 contain the CCB address. Byte 4, if I/O was requested by a user program, contains the Partition Identification Key (PIK). If a system task requested I/O, then the zone field is all zeros and the numeric field contains the ID of the specific system task. Byte 5 contains a displacement index pointing to the LUBTAB entry related to the I/O request (absolute LUBTAB index). Byte 6 contains the relative LUBTAB index for system LUBs, or X'FF' for programmer LUBs. Byte 7 contains the displacement index of the PIPTAB entry for the task requesting I/O (TIK), or X'FF' if the channel queue entry is free.
FLPTR (Free List Pointer)	This one-byte pointer contains the displacement index of the next free entry in the channel queue table (CHANQ).
TEBTAB (Tape Error Block Table)	One entry is built for each tape cartridge reader at supervisor generation time if the FOPT macro parameter TEB=n is included.
THTAB (Track-Hold Table)	This table is built at supervisor generation time if the TRKHLD=n parameter is included in the FOPT macro. Byte 0 in each entry points to the next entry in the chain of requests for a track to be held on a specific DASD (or the next free entry if in the free list), or it contains X'FF' if the entry is the last in a chain. Bytes 1, 2, and 3 contain the CCB address. Bytes 4 through 9 contain the disk address (BBCCHH) of the held track. Byte 10 contains the key of the owning task, or all zeros when the entry is free. Byte 11 is a flag and counter byte: bit 0 is turned on when a task requests a track already held by another task, and the value in the low-order half-byte is incremented by one each time a task requests a hold on a track that it already holds itself. Note: when multiple holds by one task are effective, the value in the lower-order half-byte is one less than the actual number of holds.
SAB (Seek Address Block)	This table is built at supervisor generation time if the SKSEP=n or YES parameter is included in the FOPT macro. Bytes 0 through 3 of each entry contain the current disk address (BBCH) for the device. Byte 4 contains X'FF' or points to the THTAB entry.
LMT (Line Mode Table)	This table is built at supervisor generation time when the TP=BTAM, or QTAM parameter is included in the SUPVR macro, and MODEL=115 or 125. An entry is built for each device for which the DVGEN macro includes the MODE=X'ssss' or X'ssssss' parameter. Each entry contains the actual mode setting for the device.

Figure 15. I/O Table Interrelationships (Part 3 of 3)



Byte(s)	Description	
0-1 (Contents depends on the bit setting in byte 2)	Bit Setting Byte 2	Contents
	Bit 0=1 Stored standard assignment	LUB entry of stored standard assignment. (PUB and JIB pointer)
	Bit 1=1 Alternate assignment	Byte 0: PUB pointer Byte 1: X'00'
	Bit 2=1 2311/2314/2319 Extent	Byte 0: Cylinder lower limit Byte 1: Cylinder upper limit (Note 1)
	Bit 3=1 2321/3330/3340 Extent	For 2321: Lower limit (Cell or combined subcell and strip), or Upper limit (Cell or combined subcell and strip) For 3330 or 3340: Cylinder lower limit, or Cylinder upper limit (One cylinder number uses two bytes) (Note 2) (Note 3)
2	Meaning if bit = 1: Bit 0: Stored standard assignment 1: Alternate assignment 2: 2311/2314/2319 extent 3: 2321/3330/3340 extent 4: The alternate assignment indicated in bit 1 is permanent. This bit is also on when one of the extent indicators (bit 2 and bit 3) is on. 5: Catalged procedures processing 6/7: Reserved	
3	Chain byte Contains the displacement index of the next JIB. X'FF' defines the end of the chain.	

Figure 16. Job Information Block (JIB) Table

Note 1: Only when file-protect on DASD.

Note 2: Two JIBs are required for a 2321/3330/3340 extent; one for lower limit and one for upper limit.

The lower limit defining JIB must be chained to the upper limit defining JIB.

For 2321, byte 1 of this type JIB contains the subcell number times 10 plus the strip number in binary.

Note 3: Extent information is supplied by the program initiator and logical IOCS open transient routines. The supervisor can then perform the file protect function for the specified file limits. File protection does not include supervisor and transient originated I/O.

Bytes 68-69 (X'44' - X'45') of the partition communication region contain the address of the JIB table entry. Label JIBTAB identifies the first byte of the table.

Displacement	Label	Description
	(ACCTABLE)	
0-3	ACCTWK1	Work area used in SIO update
4-7	ACCTWK2	Work area used with ACCTWK1 in start/stop time routine
8-11	ACCTSVPT	Job card pointer; address of job card field following jobname
12-13	ACCTPART	ID of partition in charge (partition switch name)
14-15	ACCTLEN	Length of SIO area=6n+1, where n=number of devices for this partition in SYSGEN option JA=(n1,n2,n3,n4,n5)
16-21	ACCTLOAD	Label area instruction; moves JAI label area address to OPEN/CLOSE transients
22-23	ACCTRES3	Reserved
24-27	ACCTLADD	Address of alternate label area
28-31	ACCTCPUT	Counter for CPU time elapsed in a jobstep, counted in 300th of a second
32-35	ACCTOVHT	Counter for overhead time; time not charged to any partition
36-39	ACCTBNDT	Counter for all-bound time; system wait state time divided between running partitions
40-47	ACCTSVJN	Save area for job name during simulated EOJ

Figure 17. Job Accounting Interface Partition Table (ACCTxx) (Part 1 of 2)

User's Portion of Partition Table

Displacement	Label	Description
48-55	ACCTJBNM	Job name; taken from job card
56-71	ACCTUSRS	User information; 16 bytes from job card
72-73	ACCTPTID	Partition ID: 'BG', 'F4', 'F3', 'F2', or 'F1' in EBCDIC format
74	ACCTCNCL	Cancel code
75	ACCTYPER	Type of record: 'S' = job step, 'L' = last step of job
76-83	ACCTDATE	Date in format specified at SYSGEN (MM/DD/YY or DD/MM/YY)
84-87	ACCTSTRT	Start time of job, in packed decimal (DHHMMSSF; F = sign)
88-91	ACCTSTOP	Stop time of job, in same format as ACCTSTRT
92-95	ACCTRES	Reserved
96-103	ACCTEXEC	Phase name; taken from execute card
104-107	ACCTHICR	End address of active program phase, from COMREG
108-111	ACCTIMES	CPU time elapsed in a job step; counted in 300th of a second
112-115	--------	Overhead time; elapsed time not charged to any partition, in 300th of a second
116-119	--------	I/O-bound time; system wait state time divided between running partitions, in 300th of a second
120	ACCTSIOS	SIO tables: 6 bytes for each device specified by SYSGEN options, as follows: 2 bytes for device address (0cuu), 4 bytes for count of SIOs in current jobstep
------	--------	Overflow byte: normally X'20', but is X'30' if more devices are used within a partition than specified by SYSGEN options

Notes:

1. DSECT ACCTABLE symbolically addresses the JAI Partition Tables with labels as shown. Each partition in which JAI is supported has its own JAI Partition Table, labeled ACCTBG, ACCTF4, ACCTF3, ACCTF2, ACCTF1, for active partitions BG, F4, F3, F2, and F1, respectively.
2. The address of this table is in the partition Communication Region at displacement 116 (X'74').

Figure 17. Job Accounting Interface Partition Table (ACCTxx) (Part 2 of 2)

Displacement	Label	Description
	(ACCTCOMN)	
0-15	ACCTSVRG	Temporary register save area
16-17	ACCTSVRX	Save area for remainder of overhead counter times distributed by partition on exit
18-19	ACCTSVRE	Save area for remainder of all-bound counter times distributed by partitions on entry
20-23	ACCTPCNT	Count of partitions using the Job Accounting interface
24	ACCTSAID	Owner of physical transient area *)
25	ACCTFAID	Interrupted program *)
26	ACCTRAID	Active program *)
27	ACCTSWCH	Accounting switches: if bit=1, true; if bit=0, not true bit 0: cancel accounting bit 4: IPL indicator bit 1: no active partitions bit 5: not used bit 2: catalog in process bit 6: not used bit 3: alternate label area bit 7: not used
28-31	ACCTIME	Start time of current accounting interval, in complement format
32-33	ACCTRESC	Reserved
34-35	ACCTUSEP	Address of user save area (ACCTUSER)
36-37	ACCTUSEL	Length of user save area (set with 1st operand of FOPT macro parameter JALIOCS)
38-39	ACCT$JOB	Job accounting partition indication
40-43	ACCTBLES	Address of BG Job Accounting Table

If multiprogramming is supported, this table is to be extended with one of the following fields (depending on the number of supported partitions), otherwise the table ends here.

NPARTS=2

44-47		Address of F1 Job Accounting Table
48-51	ACCTSEAS	Control Field: prevents the accounting routine being loaded twice

NPARTS=3

44-47		Address of F2 Job Accounting Table
48-51		Address of F1 Job Accounting Table
52-57	ACCTSEAS	Control Field: prevents the accounting routine being loaded twice

*) These values are the same as the PIK values for the relevant tasks.

Figure 18. Job Accounting Interface Common Table (ACCTCOMN) (Part 1 of 2)

NPARTS=4

Displacement	Label	Description
44-47		Address of F3 Job Accounting Table
48-51		Address of F2 Job Accounting Table
52-55		Address of F1 Job Accounting Table
56-63	ACCTSEAS	Control Field: prevents the accounting routine being loaded twice

NPARTS=5

44-47		Address of F4 Job Accounting Table
48-51		Address of F3 Job Accounting Table
52-55		Address of F2 Job Accounting Table
56-59		Address of F1 Job Accounting Table
60-69	ACCTSEAS	Control Field: prevents the accounting routine being loaded twice

Bytes 124-127 (X'7C' - X'7F') of the System Communication Region (SYSCOM) contain the address of the Job Accounting Interface Common Table. Label ACCTCOMN identifies the first byte of the table.

Figure 18. Job Accounting Interface Common Table (ACCTCOMN) (Part 2 of 2)

Decimal Displacement	Label	Byte Length	Description
	RFTABLE		Label of Starting Address
0	RFFLAGS1	1	Bit 0: 1 = File full 1: 1 = RDE option included 2: 1 = Initial IPL 3: Reserved 4: 1 = File is to be created 5: 1 = File has been created 6: Reserved 7: 1 = File open and ready
1	RFFLAGS	1	Bit 0: 1 = File full message request 1: 1 = Last track message request 2: 1 = I/O error message request 3: 1 = Data lost message request 4: 1 = EVA message request 5: 1 = File owned by RTA recorder 6: 1 = File owned by PTA recorder 7: 1 = File being accessed by EREP
2	RFFLAGS3	1	Bit 0: 1 = Last track message issued once 1: 1 = Error is to be recorded 2: 1 = Short form record request 3: 1 = Individual records for unlabeled tapes 4: Reserved 5: Reserved 6: 1 = Exit to $$EOMT05 indicator for $$EOPEN 7: 1 = Exit to $$EOMT01 indicator for $$EOPEN
3	RFFLAGS4	1	Work area switches for various transients including ETAM
4	RFFLAGS5	1	Reserved
5	RFNOFN	1	N of N records (low order 4 bits contain the number of records to be processed, and high order bits contain the number of the record being processed.
6	RFRECTYP	1	Record type code
7	RFREL	1	DOS ID/Release level code
8	RFRDSW1	1	Record dependent switch 1
9	RFRDSW2	1	Record dependent switch 2
10	RFEXIT	2	Exit phase name or exit address

Figure 19. Recorder File Table (Part 1 of 2)