

AOS/VS Update Notice

Revision 7.62

Model Number 3900

July 1988

078-000105-19

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DATA GENERAL CORPORATION
4400 Computer Drive
Westboro, MA 01580

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1. Introduction

The purpose of this update notice is to provide you with information about Revision 7.62 of AOS/VS that is not available in the AOS/VS documentation.

This product consists of the following parts:

Part Description	Part Number
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1. AOS/VS Rev. 7.62 update notice	078-000105-19
2. AOS/VS Rev. 7.62 update media	Listed in Section 6 of this update notice

This printed update notice always accompanies the software. After you have installed this update, you can print additional copies of this notice. Its pathname is :UTIL:078_000105_19.

NOTE: Based on the part number of the update notice, :UTIL:078_000105_19 is a new pathname for the on-line update notice. To ease the transition to this new pathname, users who print or type :UTIL:AOSVS_UPDATE_NOTICE will see a note informing them of this change.

2. Environment

For details about hardware, microcode, and software, see the AOS/VS Model 3900 Rev. 7.60 Release Notice (whose pathname is :UTIL:085_000147_14). You must load and install AOS/VS Rev. 7.60 before loading and installing this update.

3. Enhancements and Changes

AOS/VS Rev. 7.62, a general update to AOS/VS Rev. 7.60 for Models 3900 and 31133, supports new hardware, offers several software enhancements, and fixes some software problems.

A. Enhancements

1. For AOS/VS Model 31133, Rev. 7.62 supports LAC-32, a 32-line controller for MV/1400s and MV/2000 DCs with extended memory. Model 4626 supports only RS-232 lines; Model 4627 supports RS-232 and RS-422 lines. Model 31133 also supports LAC-12, a 12-line controller. See the documentation-changes file for "How to Generate and Run AOS/VS," pathname :UTIL:093_000243_07, pages 4-15ff.
2. For AOS/VS Model 31133 systems, Rev. 7.62 supports Combined Storage Subsystem/DC (CSS/DC), a free-standing peripheral subsystem. A disk-only subsystem can have one, two, three, or four 234 Mbyte 5 1/4 inch Winchester disks. A disk-and-tape subsystem has one 130 Mbyte cartridge tape and one 234 Mbyte 5 1/4 inch Winchester disk, and you can add one or two additional disks.

When generating a tailored system via VSGEN, specify the disks as type DPJ and the tape as type MTJ. VSGEN asks you to specify a maximum buffer size for the tape. For MV/1400 DC, MV/2000 DC, and DS/7500, you can choose up to 16K buffers (16384), the default.

3. AOS/VS Rev. 7.60 and Rev. 7.62 support the R.A.M.S. (Rapid Access Mass Storage) disk subsystem. A Model 6580 disk controller supports one through eight 500 Mbyte eight inch Winchester disks. Disk models are Model 6581 (one disk), Model 6582 (two disks), and Model 6584 (four disks).
4. The AOS/VS Rev. 7.62 program :KANJI_IACRS.PR provides support for Japanese Kanji. Using Kanji also requires additional hardware and software; contact the Japanese Business Development group in Westboro.

5. AOS/VS Rev. 7.62 (:ALPHARS.PR, :IACRS.PR, :KANJI_IACRS.PR, and :LACRS.PR) provides a number of new features on modem lines: half-duplex support, dial out support, hardware input flow control, and control over a number of modem timing values. See "AOS/VS Modem Support" in :UTIL:093_000243_07, pages E-1ff; the mnemonics ?CHDPX (half duplex), ?CMDUA (direct access to the modem), and ?CHIFC (hardware input flow control) in :UTIL:PARU.32.SR; and the new CLI CHARACTERISTICS command switches, described next.
6. AOS/VS Rev. 7.62 provides enhanced modem support through ten new switches to the CLI command CHARACTERISTICS:

Switch	What it does
-----	-----
/HDPX	Enables half duplex
/HIFC	Enables hardware input flow control
/MDUA	Gives direct access to the modem, which allows a program to provide dial out support
/RTSCD	Directs the modem not to raise RTS (Ready to Send) until CD (Carrier Detect) drops (for half duplex)
/SMCD	Suppresses monitoring CD (for modem connection)
/TCC=	Specifies the time (in milliseconds) to wait for CD when the modem connects
/TCD=	Specifies the time (in milliseconds) to wait for CD if it drops
/TDW=	Specifies the time (in milliseconds) to wait after a modem connection before allowing I/O
/THC=	Specifies the time (in milliseconds) to wait after a modem disconnects for the modem to settle
/TLT=	Specifies the time (in milliseconds) to wait before turning the line around (i.e, from XMIT to REC) for half duplex

Type HELP/V CHARACTERISTICS for more information.

7. AOS/VS Rev. 7.62 extends the uses of :UTIL:DISPLAY.PR's /CONVERT switch. As in the past, /CONVERT translates EBCDIC text to ASCII and leaves numeric values alone. But /CONVERT now takes arguments: /CONVERT=TEXT is the same as /CONVERT; /CONVERT=NUMERIC translates numeric values alone; /CONVERT=BOTH translates EBCDIC text and numeric values.

Type HELP/V *DISPLAY for more information.
8. AOS/VS Rev. 7.62 includes an enhanced, but preliminary alternative to :UTIL:DUMP_II.PR and :UTIL:LOAD_II.PR. In the new directory :UTIL:NEWFS_MIGRATION, DUMP_2.PR and LOAD_2.PR provide hard tape error recovery and multi-volume unlabeled tapes. For documentation about and known problems with this software, read :UTIL:NEWFS_MIGRATION:D2L2.DOC.
9. AOS/VS Rev. 7.62 offers three new EXEC enhancements:
 - o EXEC supports returning an IPC message for print notifications. The program must set up the ?EXEC offsets ?XPRV, ?XRES2/?XLPN, and ?XFGS correctly. In the documentation-changes file for "System Call Dictionary (AOS/VS and AOS/DVS)," pathname :UTIL:093_000241_03, see Figure 2-29, Table 2-18, and Figure 2-29A.
 - o Batch job output files now include the amount of CPU time and I/O usage.
 - o If a user uses the CLI command QCANCEL to cancel an inactive job in any queue, EXEC will remove the job from the queue. In order not to waste paper, EXEC will no longer print (by default, @LPT) a message that the user cancelled the job.
10. Since AOS/VS Rev. 7.50, but not documented until now, :GSMGR.PR supports user identification on point to point lines. (GSMGR.PR is not distributed with this update.) See the system calls ?SEBL (bit ?ENID), ?SSND (bit ?SNID), and ?SRCV (bit ?SRID) in :UTIL:093_000241_03.
11. AOS/VS Rev. 7.62 includes OIS CONNECTION software, a communications product which allows AOS/VS users to access the On-Line Information System from the CLI or from CEO. Its features include:
 - o Auto-dial with secondary number dialing (requires a Hayes-compatible modem)
 - o Manual dial capability
 - o Auto log-on to OIS (On-Line Information System)
 - o File transfer into the CLI
 - o Uploading capabilities
 - o Error-free file transfer

While all AOS/VS customers can use this software, in order to access the On-Line Information System Services, you must have a Data General OIS ID and Password. For information about obtaining them, please call the D.G. Telemarketing Representative at 1-800-325-3065 (inside MA call 1-800-952-4300). In Canada call 416-823-7830.

After you have loaded and installed this update, you'll find the OIS software (OIS_CONNECTION.<PR,ST>) and its installation instructions (OIS_INSTALL.DOC) in directory :UTIL:OIS. If you already have a directory :UTIL:OIS, you should rename it before loading this update.

For more information about OIS CONNECTION, see the OIS CONNECTION User's Guide (014-001426).

12. AOS/VS Rev. 7.62 provides an enhanced :UTIL:PCOPY.PR. When restoring to an LDU that has an inconsistent format with the LDU that originally contained the data being restored, PCOPY will now display the format information that it requires to successfully recover. Previously, PCOPY would just report an error, giving no indication of how to correct the problem.
13. AOS/VS Rev. 7.62 supplies the directory :UTIL:FORMS and six character mapper files: ASCII, DGI, DGI_TO_ASCII, KANJI, KATAKANA, and UPPER. The new :UTIL:XLPT.PR can use these files. (If :UTIL:FORMS already exists, the update tool moves these mapper files into it.)
14. AOS/VS Rev. 7.62 :UTIL:SED.PR provides a new switch, /NO_RECREATE. This switch retains the file's original creation date and time.
15. AOS/VS Rev. 7.62 offers a new :UTIL:XLPT.PR, which provides these new features:
 - o XLPT and EXEC require only one XLPT process for every fifteen devices. Previous revisions of AOS/VS required one XLPT process for each device. This results in a significantly lower process overhead. One side affect of this new feature is that the XLPT process name is no longer OP:<devicename>. See the discussion about XLPT in the Warnings Section of this Update Notice.

NOTE: Changing process priority or type (using CONTROL @EXEC PRIORITY) for one printer changes these values for all printers run by the same XLPT process.

- o If you've enabled binary mode on a printer, XLPT will print the cleanup file after each copy in every job. In the past, XLPT printed the cleanup file only after the last copy of a binary job. We made this change because some printers need a cleanup, even after a non-binary job.
- o If binary mode is NOT enabled on a printer, and a printed file ends in a formfeed, or is zero-length, XLPT will not generate a second blank page at the end of the copy. Previously, XLPT always generated a formfeed at the end of each copy of a job, regardless of whether the job itself ended with one.

Note that because a formfeed on VFU-equipped printers may not position to line one, XLPT may still need to generate an extra blank page.

- o If a printer jams, runs out of paper, or is off-line for more than ten minutes, XLPT sends the following message to the operator logfile (@CON0 by default):

FROM PID 3 (EXEC): @LPB: please check this printer.
- o When a printer is ready for alignment after a CONTROL @EXEC ALIGN command, XLPT sends a message to the operator logfile (@CON0 by default) reporting that the printer is ready for alignment.
- o As long as you don't use any page-limiting options (for example, QPRINT /BEGIN= /END= /PAGES=, etc.), XLPT allows printing an unlimited number of pages in a non-binary job. Previously, XLPT limited all jobs to approximately 65K pages. This revision of XLPT allows page numbers to roll over to zero.
- o XLPT no longer opens cleanup files exclusively. But since XLPT buffers cleanup files, you still cannot change the contents of a cleanup file while XLPT is using it.
- o In the past, XLPT logged the number of pages printed in binary jobs as one. Now XLPT uses the page limit as the number of pages printed in binary jobs. Because page limiting is not applicable to binary jobs in any case, setting the logged page count is the only use for the page limit in binary jobs. You can set the page limit with the QPRINT switch /PAGES=. If you don't specify the limit, XLPT estimates it, using the formula:

page limit = ((file byte length / 1000) + 4) * number
 of copies

This is the same formula EXEC uses when a user does not specify page limiting for non-binary jobs.

B. Changes

1. The race conditions that could produce panic codes 14051 and 14442 have been fixed.
2. Changes to AGENT.PR:
 - o A deadlock caused by redirecting ?TLOCK tasks when user scheduling was disabled has been fixed.
 - o A deadlock that occurred when a program that had abnormally terminated attempted to reopen a pipe file to which it had performed I/O has been fixed.
3. The BROADCAST.CLI macro used to send a message to the system console twice on MV/2000 DC and DS/7500 systems. For AOS/VS Rev. 7.62, the macro will send only one message to the system console.
4. CLI changes
 - o The CLI will no longer give an error if it receives a termination message of 253 to 255 characters. If it receives a message longer than 256 characters, the CLI will give an error, but send the first 255 characters of the termination message.
 - o CONNECT now puts the PID into the string only if you use the /S switch.
 - o If you typed COPY/A filename1 filename2 ... filenameN and one of the arguments following filename1 did not exist, the user saw a warning but the command did not continue. Now, the user sees a warning and the COPY command will continue to completion.
 - o MOVE/BUFFERSIZE=65536 returned Unknown message 1131. Now it returns the correct error message, Illegal /BUFFERSIZE= value. (The largest legal value is 32768.)
 - o The POP command now turns off SUPERUSER and SUPERPROCESS on a locked :LOCK_CLI.PR.
 - o QDISPLAY/QUEUE=queueName hostID now functions properly.
 - o SEND/URGENT was documented but did not work. Now, the AOS/VS CLI does not support it.

5. Changes to :DFMTR (standalone Disk Formatter) and :UTIL:DFMTR.PR (standamong Disk Formatter):
 - o If you run the Disk Formatter from STARTER.SYS on CSS 234 Mbyte disks, it will report an error if firmware is missing or if there is a hardware problem. This fixes the problem in AOS/VS Rev. 7.60, where STARTER.SYS did not properly detect these errors.
 - o The Disk Formatter now checks for bad blocks in the overlay area. Before AOS/VS Rev. 7.62, the Disk Formatter did not always check this.
6. Changes to drivers for magnetic tape controllers (MTB, MTC, and MTD):
 - o A problem that caused a 'Bad Transfer Count' error to be reported erroneously was fixed.
 - o ?GOPEN no longer returns an error when an MTC drive is opened and ADM density is selected.
 - o Format errors are now retried when other errors are present.
 - o Previously, the tape driver would 'forget' its file position when a tape operation was aborted. This is fixed.
 - o The retry policy for 'bad tape' errors on MTD drives (4307/6299/6300) has been changed so that most bad tape errors can be recovered from without rewinding and repositioning the tape.
 - o Tape drive density errors would occur when excessive data late errors had been detected. This is fixed.
 - o When issuing a ?TRUNCATE to tape file 0, record 0, the truncation would not occur. This is fixed.
 - o Format errors are now retried when automatic density matching fails.
7. If a user used the CLI COPY command to copy a file to an LPD printer, the printer would print bad characters. This is fixed.
8. The problem where ESD did not dump the contents of IAC memory has been fixed.

9. Changes to :UTIL:EXEC.PR:

- o While terminating a virtual console, if EXEC received a network error, it would crash, with the message "Invalid state reached in state machine." This has been fixed.
- o If a user modified a print job's page limit and then modified other information, the page limit reverted to the default. (The default is that set by the operator or by the formula $\text{page limit} = (\text{file byte length} / 1000) + 4) * \text{number of copies}.$)
- o If :QUEUE ran out of space, EXEC terminated or reported strange errors in the user's batch output or list files. Now, the user receives the correct message, "Control point directory max size exceeded."
- o EXEC would occasionally terminate with an internal consistency error while trying to service a job. EXEC now keeps its internal queue status up to date and no longer terminates in these cases. (The error occurred when a user issued CX STOP against a ready and idle queue, and then restarted the queue.)
- o EXEC erroneously allowed a user to issue the BINARY command to a device that was not first paused and idle. This resulted in the following problems:
 - * If a printer was printing a header page, the name of the cleanup file appeared as the destination.
 - * XLPT reported "illegal coop message."

EXEC now ensures that the device is paused and idle before it performs the BINARY command.

- o If several mount requests were active and an operator did not specify the mount ID, EXEC chose the job with the lowest mount ID, not necessarily the job the operator wanted performed. EXEC now requires the operator to specify the mount ID if there are several requests outstanding. This applies to the EXEC commands MOUNTED, DISMOUNT, and REFUSED.
- o EXEC did not always enqueue jobs in chronological order. This has been fixed.
- o Page limiting on a device has been modified. If a user issued a QPRINT command without the /PAGES= switch, EXEC's algorithm did not work well with files containing a large number of page breaks. EXEC now sets the limit to the maximum number of pages set for the device.

- o If a user issued CX SILENCE, EXEC still reported one additional message. This has been fixed.
 - o Control @EXEC EVEN devicename ON failed to enable even pagination on the first job printed. This has been fixed.
 - o EXEC now properly checks whether a user issuing CX MODIFY has the privilege to do so.
 - o If a user issued CX ENABLE to a line connected to a modem that would not open, the line would hang, even though a message would be sent to the operator console. This has been fixed.
10. :UTIL:FCU.PR will properly handle forms files with tab stops between columns 144 and 255. This fixes the problem where FCU could not handle tabs beyond column 144.
11. The problems using scriptfiles with the FIXUP utility (:FIXUP and :UTIL:FIXUP.PR) to fix mirrored LDUs have been fixed.
12. Changes to :PCOPY (standalone PCOPY):
- o Using PCOPY to copy disk to disk without all disks on-line now works.
 - o PCOPY would not read past physical end-of-tape. This has been fixed so that it will read until a file mark is encountered.
 - o The retry policy for 'bad tape' errors on MTD drives (4307/6299/6300) has been changed so that most bad tape errors can be recovered from without rewinding and repositioning the tape.
 - o Using PCOPY on multiple-disk LDUs would not work when data spanned the disk boundary. This has been fixed.
 - o A 'Bad Tape - Tape Error During Recovery of Tape Error' message was being printed erroneously. This has been fixed.
 - o PCOPY would not detect errors when physical end of tape was encountered during a write operation. Errors are now detected and retried.
 - o A 'Bad Sequence Number For PCOPY' error during tape verification has been fixed.

- o When reporting errors, PCOPY would sometimes jump to location zero. This has been corrected.
- o Tape units which were not on the first or second controller (e.g. MTJ20) will now work.
- o A 'Bad Sequence Number' error that would occur when using the SCP Continue command to restart PCOPY has been corrected.
- o When using PCOPY to restore, the Sysboot area was not always restored correctly. This has been fixed.

13. Changes to :UTIL:PCOPY.PR (standamong PCOPY):

- o PCOPY would abort after recovering from a bad tape error on the first record of the first tape in the dump set. This has been fixed.
- o Using PCOPY to copy disk to disk without all disks on-line now works.
- o Using 1KB buffers would cause an inward address error. This has been fixed.
- o Many problems that could cause a 'Bad Sequence Number' error have been fixed.
- o Using PCOPY on multiple-disk LDUs would not work when data spanned the disk boundary.
- o An 'Incorrect Disk Sequence Number' error would sometimes be returned when there were multiple disks in an LDU. This has been fixed.
- o When using PCOPY to restore, the Sysboot area was not always restored correctly. This has been fixed.

14. Changes to :UTIL:SED.PR:

- o The sequence of SED commands DELETE, UNDO, and MOVE will no longer cause SED to abort with a serious internal error.
- o SED now positions the current line to the first line restored by an UNDO command, the documented behavior.
- o SED now properly positions the cursor at the beginning of a search string in lines with leading tabs.
- o The SED commands VIEW and MODIFY will now work when SED is executed in batch or via the CLI PROCESS command. SED aborted in either of these cases, with error 71174, "Fixed point overflow."

- o SED's BACKFIND command will no longer cause SED to abort with a serious internal error.
- o SED will no longer abort with a serious internal error if you use the BACKFIND command following a SUBSTITUTE command ranging over multiple pages (and no strings were substituted on the last page).
- o The SED FIND command no longer requires placing quotation marks around search strings of the form `numeric_followed_by_alphabetic_character` (for example, 975A).
- o SED will set the terminal characteristics to CHAR/EB0/OFF/EB1, so that control characters will echo with a ^ prefix and ESC will echo as \$ during an editing session.
- o SED now permits cutting long lines properly in all cases. SED used to have an occasional problem when cutting a long line towards the end of the line.
- o SED will no longer take a serious internal error if you try to cut a line in a new file which does not yet have any lines.

15. Changes to VSGEN:

VSGEN will now allow you to specify the maximum number of cache buffers up to a maximum of 2048. Previously, the maximum number of cache buffers was 1024. Using a large number of cache buffers may improve system performance for systems with large memory configurations.

16. The new :UTIL:XLPT.PR makes these changes:

- o Two problems in printing binary and non-binary jobs on the same printer have been fixed:
 - * If a user printed a non-binary job with the /TITLES switch after a binary job, XLPT failed to print the /TITLES page header on the file's first page, and numbered subsequent pages so that they were off by one page.
 - * If a user printed a binary job after a non-binary job, the printer always printed a wasted sheet of paper. This has been fixed. But note that when you enable binary mode, the printer must first print a cleanup file. If the cleanup file contains a formfeed, and most do, the printer ejects a blank piece of paper.

- o In non-binary jobs, XLPT prints the formfeed character as carriage-return/formfeed if you issued CONTROL @EXEC START/NL or set up the printer with CHARACTERISTICS/NAS. XLPT used to print NEW LINE as carriage-return/newline in both of these cases, but did not augment formfeed characters. On some printers, if TOF (top-of-form) was line one, the first line of each page was offset by the length of the last line of the previous page.
- o XLPT did not always correctly report the number of pages printed, as shown on trailer pages and in the system logfile (:SYSLOG). This has been fixed.
- o Starting with AOS/VS Rev. 7.50, if you used the command CONTROL @EXEC ALIGN/CONTINUE <page number>, XLPT lost track of the page number the user specified using QPRINT/BEGIN=. This has been fixed.
- o XLPT uses larger print buffers. Consequently, commands that interrupt the printing process (like CX ALIGN), which only take effect after XLPT flushes a printing buffer, will be slightly delayed. If you queue small files (like macros), a CX ALIGN command might not take effect until after the files are printed.
- o XLPT now downloads VFU information correctly. In the past, XLPT sometimes incorrectly set the printer's top-of-form position.
- o In the past, if XLPT could not read a specification from a forms file in :UTIL:FORMS, it printed a message on the user's output file, but continued to use the erroneous form. Now, XLPT sends a message to the operator (@CON0 by default) and stops using the printer.
- o With certain CPL (characters per line) settings, XLPT wrote out too-longlines in header and trailer pages. This has been corrected.

- o XLPT now incorporates the XPLT plotter cooperative, and consequently EXEC no longer looks for XPLT.PR when it starts a plot cooperative. This change fixes several problems:
 - * You can now flush, cancel, or restart active plot jobs.
 - * You can use cleanup files with plotters.
 - * CX STATUS functions correctly with plotters.
- o In the past, XLPT assumed 8-bit mode if you used mapper files. Now, XLPT does not assume that 8-bit mode is on. To set 8-bit mode on a printer, use the /8BIT switch on the CONTROL @EXEC START command.
- o XLPT now checks for some new errors:
 - * If the /BEGIN page number is greater than the actual last page in the printed file, XLPT prints an error.
 - * XLPT checks that any <377> character is paired with a second <377>. In the past, XLPT ignored lone <377>s.
 - * XLPT will not print files that don't contain text, based on a file's type. For example, XLPT won't print program files or symbol table files (types PRV and STF).
 - * XLPT reports an error if an operator (using CONTROL @EXEC RESTART) or the system or EXEC (following a failure of either) tries to restart a print job a user submitted with the /NORESTART switch.
- o If you start SYSLOG with detail=full, AOS/VS will log (in :SYSLOG) failed user accesses to XLPT.
- o XLPT does more extensive internal consistency error checking. If a message like the ones below appear on the operator logfile (@CON0 by default),

FROM PID 3 (EXEC): XLPT INTERNAL INCONSISTENCY ERROR

FROM PID 3 (EXEC): DUMP FILE IS IN
:UTIL:?000256XLPT.871002.093024.7.MDM

XLPT has taken an internal error. Please report such an error via an STR (see Section 9 in the AOS/VS Model 3900 Rev. 7.60 release notice), accompanying it with the XLPT .MDM dump file.

4. Notes and Warnings

A. Notes

1. Intelligent asynchronous controllers (such as CPI/24, IAC-16, IAC-8, LAC, LMC, and MCP1) allocate a portion of their memory for input and output buffers, also called ring buffers. The amount of memory available varies from revision to revision and update to update. If you have taken the VSGEN default answers for Input buffer byte length and Output buffer byte length, you will not have a problem. But if you specified larger-than-default answers and your system uses more space than actually exists, your system will come up, but the controller will not function properly. During system initialization (if the controller is IAC-8 or IAC-16), the system will print the message "IAC DEVICE CODE xxx IAC memory oversubscribed." You will have to generate a new system with permissible sizes for input and output buffers.

If you have allocated or want to allocate larger-than-default IAC buffer sizes, consult the following table. The table shows the total and average amounts of memory available for ring-buffer allocation (for average space, we round down odd numbers to the next even number).

The table below reflects actual patch space. All values are decimal bytes.

Ring buffer space for	Rev. 7.60	Rev. 7.62
	Total/average	Total/average
CPI/24	11566/480	8930/372
IAC-16	4254/132	4278/132
IAC-8	9694/604	9430/588
KANJI_IACRS.PR (IAC-16)	n/a	2236/68
KANJI_IACRS.PR (IAC-8)	n/a	7388/460
LAC	20126/838	17368/724
LMC	26078/1628	25814/1612
MCP1	23148/1446	20246/1264

For more information about input and output buffers, see the manual "How to Generate and Run AOS/VS."

2. :UTIL:NEWFS_MIGRATION is a new directory containing the file NEWFS_MIGRATION.DOC. Print and read this file for information about planning for and implementing the New File System which AOS/VS Rev. 8.00 offers.
3. Because XLPT.PR includes the functions of XPLT.PR, EXEC no longer uses :UTIL:XPLT.PR to plot information and you can delete :UTIL:XPLT.<PR,ST>.
4. XLPT.PR supports a new mapper file format. You can delete from :UTIL the files MAPPER.1.SR, MAPPER.2.SR, and MAPPER.DOC.

B. Warnings

1. If you use the LOAD_II program (:UTIL:LOAD_II.PR) with the /CONFIRM and /DELETE switches, LOAD_II will trap if it finds a file with the same pathname as a file you are loading, and won't delete the file. If this happens, follow this three-step approach:
 - a. Restart LOAD_II without the /DELETE or /CONFIRM switches and note the pathnames of files that already exist in the disk directory structure.
 - b. Turn permanence on for any file you do NOT want to overwrite.
 - c. Restart LOAD_II with /DELETE switch but without the /CONFIRM switch to load and delete the files you want deleted.
2. There is a sporadic microcode problem on MV/8000 and MV/6000 computers: BREAK, HALT, RESET, START <address> can cause the system console to hang. To work around this problem, type TTY and then START <address>, or type BREAK, HALT, RESET, START <address>.
3. Users with devices that use data channel maps (via the system call ?IDEF) should avoid using the first 128 (A - D) data channel map slots, if possible. Many older controllers can use only the A - D maps (because they use a 17-, 16-, or 15-bit data channel address). Newer controllers can use any map slot (because they use a 19-bit address). This difference makes the A - D maps more valuable than the E - P maps. To permit controller coexistence, we suggest that you select a data channel map starting at the highest slot the device can access. If the request fails, try the next lower slot until the controller gets a map slot it can use.
4. AOS/VS Rev. 8.00 will not support the IOP device, which was shipped with MV/8000 Model 9300.
5. :UTIL:XLPT.PR included with this update will have a process name different from what it was in previous updates. The XLPT process no longer uses OP:<devicename> as the process name, therefore, do not refer to the process name OP:<devicename> to manage XLPT.

Normally, you should use CONTROL @ EXEC commands to manage printers. These commands will continue to work with the XLPT supplied with this update. However, if you previously managed printers using commands that referred to OP:<devicename>, these commands will no longer work.

For example, do not use the following command lines to manage the @LPB printer:

```
) TERM OP:LPB <NL>

) PRIORITY OP:LPB 1

) PRIORITY OP:LPB SWAPPABLE
```

Instead, you must now use the following command lines:

```
) CONTROL @EXEC TERM @LPB <NL>

) CONTROL @EXEC PRIORITY/SWAPPABLE @LPB <NL>
```

6. When issuing CONTROL @EXEC printer management commands, the error message "Cooperative termination in progress" may occur. This error message normally indicates that the printer was off-line when a CONTROL @EXEC START, STOP, or TERM command was issued.

In AOS/VS 7.62, if you have only one printer, this error message will cause the XLPT process to terminate. If there is more than one printer, the XLPT process will not terminate until all of the XLPT cooperative processes are terminated using either the CONTROL @EXEC STOP or TERM command.

5. Documentation

A. Manuals, Reference Cards and Templates

The following manual and templates are new since AOS/VS Rev. 7.60:

Part Number -----	Name ----
014-001426-00	OIS CONNECTION User's Guide
093-000603-00	OIS CONNECTION template (D200-series)
093-000604-00	OIS CONNECTION template (D210-series)

See also Section 6 in the AOS/VS 7.60 release notice for the rest of the AOS/VS document set.

B. Documentation-Changes Files

The following documentation-changes files have been substantially revised since AOS/VS Rev. 7.60. Print the files after installing this update. (The files are located in directory :UTIL.) Follow the instructions on the first page of each file. The documentation is incomplete without them.

Filename -----	For manual -----
069_000031_02	Learning to Use Your AOS/VS System
069_000203_00	Using the AOS/VS System Management Interface (SMI)
093_000241_03	System Call Dictionary (AOS/VS and AOS/DVS)
093_000243_07	How to Generate and Run AOS/VS

6. Software

A. Media

Model Number	Part Number	Description
-----	-----	-----
3900H	071-000464-12	1600-bpi magnetic tape
3900C	071-000464-12	cartridge tape (15.2 Mbyte)
3900B	061-000463-00	cartridge tape (21 Mbyte)
3900J	070-000376-00	cartridge tape (130 Mbyte)
3900G	On 15 96-tpi 5-1/4 inch diskettes (737 Kbyte):	
	081-000226-04	VOL1
	081-000351-03	VOL2
	081-000794-01	VOL3
	081-000795-01	VOL4
	081-000809-01	VOL5
	081-000818-01	VOL6
	081-000900-01	VOL7
	081-000969-01	VOL8
	081-001031-00	VOL9
	081-001032-00	VOL10
	081-001033-00	VOL11
	081-001037-00	VOL12
	081-001039-00	VOL13
	081-001040-00	VOL14
	081-001041-00	VOL15

B. Files

The files shipped with AOS/VS Rev. 7.62 are listed in a separate text file that you can print. After you load this update, the pathname of this file is :UPDATE:7.62:7.62_AOSVS_FILES. After you install this update, the pathname is :UTIL:7.62_AOSVS_FILES.

C. Organization

Magnetic Tape Medium Organization (1600-bpi magnetic tape, 15.2 Mbyte and 130 Mbyte cartridge tape):

File ----	Contents -----	Description -----
0	Dump File	Patches to your AOS/VS system, other files (including system files), a copy of this update notice, and the Patch program and other macros, including the update tool.
1	FIXUP	(Disk Fixer utility)
2	DFMTR	(Disk Formatter)
3	INSTL	(Installer utility)
4	SYSBOOT	(System bootstrap)
5	Starter System	(:SYSGEN:SYS.PR)
6	Dump File	(First dump file)

Diskette Medium Organization (96-tpi 5-1/4 inch diskettes):

Diskette -----	Part Number -----	Contents -----
1 - 15	081-000226-04	Patches to your AOS/VS system, other files (including system files), a copy of this update notice, and the Patch program and other macros, including the update tool.
	081-000351-03	
	081-000794-01	
	081-000795-01	
	081-000809-01	
	081-000818-01	
	081-000900-01	
	081-000969-01	
	081-001031-00	
	081-001032-00	
	081-001033-00	
	081-001037-00	
	081-001039-00	
	081-001040-00	
	081-001041-00	

7. Installation Instructions

1. If you have files or directories named :UTIL:OIS or :UTIL:NEWFS_MIGRATION, rename them. If you have a file :UTIL:FORMS, rename it. If you have a directory :UTIL:FORMS, the update tool will move several small character mapping files into it. Set the ACL of :UTIL:FORMS to at least +,RE and, if :UTIL:FORMS is a CPD, make sure it is large enough to hold these files.
2. If you haven't already done so, load and install AOS/VS Rev. 7.60 as explained in the AOS/VS Model 3900 Rev. 7.60 release notice. You must build a tailored system, which the update tool (steps 6 and 8) needs to find.
3. Make sure you have enough space in both the root directory :, and :UPDATE directory to load this update, which requires nearly 22,000 blocks of disk space. To display the maximum, current, and remaining disk space in :, type the following commands:

```
) SUPERUSER ON <NL>
```

```
*) DIRECTORY : <NL>
```

```
*) SPACE <NL>
```

To display the maximum, current, and remaining disk space in :UPDATE, type the following commands:

```
) SUPERUSER ON <NL>
```

```
*) DIRECTORY :UPDATE <NL>
```

```
*) SPACE <NL>
```

The system will display something like this:

MAX number, CUR number, REM number

The REM number must be 22,000 or more. If it is not, you can delete :UPDATE:7.5

[***PAGES 25 & 26 MISSING***]