TITLE Title Page

7012 RETAIN TIPS
(as of 05/09/98 at 09:00:46 EDT)

RETAIN Technical Data

May 9, 1998

IBM Confidential

IBM Confidential

PREFACE Preface
This document was edited on 05/09/98 at 09:01:01 by using the BKRETAIN package.

Technical data records obtained from the IBM RETAIN database have been sorted and categorized by type. Modification to the format of the online records has been limited to relocating the abstract to the beginning of the record. The records may have been translated to lower case if the original record was in upper case.

Special thanks to Terry Judkins in Atlanta for developing the BKRETAIN package utilized in this offering.

We also want to thank Dave Schaefer for developing the code to automate this process and sharing the code with us.

1.0 7012 RETAIN TIPS

Subtopics

1.1 Chapter 1. Engineering Change Announcements

Subtopics
1.1.1 ECA015 ETHERNET ADAPTER EPROMS
1.1.2 ECA060 DIAGNOSTIC DISKETTE UPDATE 2.1.1 FOR 7012
1.1.3 ECA079 UPDATE THE PUBLICATIONS ON 7012
1.1.4 ECA080 - 7012 MODEL 32H/340/350 1GB COOLING FAN
1.1.5 ECA091 X.25 ADAPTER FOR UPGRADE TO MOD 360 OR 370
1.1.6 ECA105 - POSSIBLE DATA CORRUPTION WITH 8MM 5GB TAPE DRIVE
1.1.7 ECA106 - POSSIBLE DATA CORRUPTION WITH 8MM 5GB TAPE DRIVE
1.1.8 ECA129 LED888/103 203/223 EPROM CHANGE
1.1.9 ECA 148 16 PORT CONCENTRATOR LINE PROTECTORS
1.1.10 ECA205 TURBOWAYS 100 ATM ADAPTER
1.1.11 ECA231 THUMBSCREW REPLACEMENT ON MODELS OF THE 7012 & 7030
1.1.12 ECA241 XIO PROBLEMS WHEN M/T7137 IS ATTACHED TO 7012/7030
1.1.13 ECA242 XIO PROBLEMS WHEN a 7137 IS ATTACHED TO 7012 MODELS
1.1.14 ECA243 XIO PROBLEMS WHEN 7137 IS ATTACHED TO MODELS OF 7012

1.1.1 ECA015 ETHERNET ADAPTER EPROMS
  Record number: H001081

```
     Device:               D/T701X      Service code:          33
     ECA number:           ECA015       Parts source:
     EC number:            ECC73857     Publish flag:          R
     Mandatory:            Y            Hit count:             UHC06365
     Automatic shipment:   Y            Success count:         USC0004
     Availability date:    87/12        Publication code:      PC50
     Plant of control:     11           Date created:          O91/11/07
     Tip key:                           Date last altered:     A97/11/18
                                        Owning B.U.:           USA
```

PURPOSE:

ECA015 PROVIDES A FIELD UPGRADE FOR ETHERNET ADAPTERS TO
CORRECT THE FOLLOWING LAN COMMUNICATION PROBLEMS:

- RECEIVER HANG CONDITIONS

- IPL TCP/IP PARITY ERROR

FEATURES:

Type, Model, Stage	With B/M	Machines Affected and/or Feature/Device Description	B/M to be Installed	Service Hours	System Hours
701X	B/M9999999	ETHERNET EPROM KIT	B/M32G0082	00.5	01.0

PHYSICAL CHECK:

1. REVIEW VITAL PRODUCT DATA (VPD) TO CONFIRM THE LEVEL OF THE
   ETHERNET ADAPTER.

   - ETHERNET ADAPTERS AT ROS LEVELS 0008, 0009 AND 0010 REQUIRE
     INSTALLATION OF ECA015. THIS WILL UPGRADE THE ADAPTER TO
     ROS LEVEL 0028.

     NOTE: IF AN ETHERNET ADAPTER IS AT ROS LEVEL 0013, 0014,
             0015, 0027 OR 0028, IT DOES NOT REQUIRE ECA015.

PREREQUISITES:
```
     To Install   ECA        EC           Physical Check
     B/M          Required   Required     for Prerequisites

     REREQUISIT   S:  NON
```

COMPANION: NONE

CONCURRENT: NONE

DETAIL:

ECA015 CONSISTS OF TWO MICROCODE EPROMS, A VPD MODULE, AND
THE INSTRUCTIONS. ON TOP OF EACH EPROM IS AN IDENTIFICATION
NUMBER WHICH CORRELATES TO A LOCATION ON THE ADAPTER. ENSURE
THAT THE EPROMS ARE INSTALLED CORRECTLY WITH NOTCH FACING
THE TOP EDGE OF THE ADAPTER. REFERENCE THE ECA INSTALLATION
INSTRUCTIONS TO PREVENT DAMAGE WHILE INSTALLING THE EPROMS.

NOTE: ECA015 ONLY APPLIES TO FRU P/N81F7913, P/N22F9382,
        AND P/N71F0974. IF UNSURE, VERIFY ROS LEVEL THROUGH
        VITAL PRODUCT DATA.

NOTES: PLEASE ORDER THIS ECA THROUGH THE NORMAL ECA
PROCEDURE..
PROVIDE THE M/T, S/N, AND THE CUSTOMER NAME
AND ADDRESS.

TIME FOR THIS ECA SHOULD BE WRITTEN TO SERVICE CODE 33,
ECA015.

** SERVICE CODE 33 WILL ONLY COVER THE TIME AND
   PARTS EXPENSE ASSOCIATED WITH THE INSTALLATION OF
   THE EPROMS/ECA015. IT WILL NOT REIMBURSE THE FIELD
   FOR ETHERNET ADAPTERS THAT ARE REPLACED IN LIEU OF
   ECA015.

WHEN THE ECA INSTALLATION IS COMPLETE, PERFORM THE TOPOLOGY
UPDATE BY FOLLOWING THE PROCEDURES LISTED IN THE INSTALLATION
INSTRUCTIONS UNDER SECTION "MACHINE RECORDS".

SPECIAL TOOL: MODULE REMOVAL TOOL P/N9900764

```
PARTS DISPOSITION:   DISPOSE OF LOCALLY.


SAS KEYWORDS:
  7012            7013            7015            7016
  7012LAN         7013LAN         7015LAN         7016LAN
  7012COMM        7013COMM        7015COMM        7016COMM
  7012ADAPT       7013ADAPT       7015ADAPT       7016ADAPT
  701XADAPT       701XLAN         701X            701XCOMM
  701XEC          701XECA         7012EC          7012ECA
  7013EC          7013ECA         7015EC          7015ECA
  7016EC          7016ECA         RS6000          R/S6000
  LED581          ECA015
```

1.1.2 ECA060 DIAGNOSTIC DISKETTE UPDATE 2.1.1 FOR 7012

Record number: H106822

```
          Device:              D/T7012        Service code:        33
          ECA number:          ECA060         Parts source:        AUST
          EC number:           ECC74357       Publish flag:        R
          Mandatory:           N              Hit count:           UHC00296
          Automatic shipment:  N              Success count:       USC0000
          Availability date:   92/08          Publication code:    PC50
          Plant of control:    26             Date created:        O92/08/06
          Tip key:                            Date last altered:   A92/08/06
                                              Owning B.U.:         USA
```

PURPOSE: TO PROVIDE THE LATEST LEVEL DISKETTE DIAGNOSTICS
             VER. 2.1.1.

             TO REPLACE THE PRIOR LEVEL DISKETTE DIAGNOSTICS.

FEATURES:

Type, Model, Stage	With B/M	Machines Affected and/or Feature/Device Description	B/M to be Installed	Service Hours	System Hours
7012	B/M41F0004	7012 320 AND 32H	B/M51G8638	01.0	01.0
7012	B/M00G2561	7012 340 AND 350	B/M51G8638	01.0	01.0
7012	B/M32G1571	7012 34R AND 35R	B/M51G8638	01.0	01.0

PHYSICAL CHECK: NONE

PREREQUISITES: NONE

COMPANION: MAY BE INSTALLED SEPARATELY.
             MACHINE TYPE 7012: EC A90903F, PRODUCT PUBLICATIONS.

CONCURRENT: NONE

DETAIL: PROVIDE THE LATEST LEVEL DIAGNOSTICS DISKETTE PACKAGE
           2.1.1 TO SUPPORT NEW MACHINES AND DEVICES.

           REPLACE DOWN LEVEL DISKETTE DIAGNOSTICS WITH THE LATEST
           RELEASED LEVEL DISKETTE DIAGNOSTICS.

           PREVIOUS LEVEL OF THE DISKETTE DIAGNOSTICS MAY BE
           DISPOSED OF LOCALLY.

NOTES: USE SERVICE CODE 33, ECA060.

```
 SAS KEYWORDS:
    701XECA          7012ECA          701XECA060        7012ECA060
    701XECA029       7012ECA029       701XDIAG          7012DIAG
    RS/6000          701XEC           7012EC            701XDISK
    7012DISK         701X             7012
```

1.1.3 ECA079 UPDATE THE PUBLICATIONS ON 7012

Record number: H084060

Device:	D/T7012	Service code:	33
ECA number:	ECA079	Parts source:	AUST
EC number:	ECC74253	Publish flag:	R
Mandatory:	N	Hit count:	UHC00168
Automatic shipment:	N	Success count:	USC0000
Availability date:	92/10	Publication code:	PC10
Plant of control:	26	Date created:	O92/10/26
Tip key:		Date last altered:	A93/01/04
		Owning B.U.:	USA

PURPOSE:

The purpose of this ECA is to install new service and operator
documentation for the M/T7012.

FEATURES:

Type, Model, Stage	With B/M	Machines Affected and/or Feature/Device Description	B/M to be Installed	Service Hours	System Hours
7012	B/M9999999	NEW PUBLICATIONS	B/M00G1136	00.4	00.0

PHYSICAL CHECK: NONE

PREREQUISITES: NONE

COMPANION: NONE

CONCURRENT: NONE

DETAIL:

Release new publications in multille languages for M/T7012.

NOTES: NONE

SAS KEYWORDS:

7012	7012DOC	7012PUB	7012EC
7012ECA	7012ECA079	RS6000	701XEC
701XECA	701XECA079		

1.1.4 ECA080 - 7012 MODEL 32H/340/350 1GB COOLING FAN
  Record number: H037404

```
        Device:                 D/T7012        Service code:          33
        ECA number:             ECA080         Parts source:          AUST
        EC number:              ECC74287A      Publish flag:          R
        Mandatory:              N              Hit count:             UHC00992
        Automatic shipment:     N              Success count:         USC0002
        Availability date:      92/10          Publication code:      PC30
        Plant of control:       26             Date created:          O92/10/28
        Tip key:                               Date last altered:     A94/09/21
                                               Owning B.U.:           USA
```

PURPOSE:
 INSTALLATION OF 40MM SUPPLEMENTAL FAN TO ADEQUATELY COOL 1GB
 DISK DRIVE INSTALLED IN REAR POSITION OF 7012 MODELS 340, 350
 AND SPECIFIC SERIAL NUMBER 32H. HARDWARE TO MOUNT THE FAN TO THE
 RISER CARD IS INCLUDED.

 RESTRICTIONS FOR 32H ONLY:
 BE AWARE FC 2550 AND 2555 (1GB SCSI-2 DISK DRIVE) SHOULD ONLY BE
 INSTALLED ON THE FOLLOWING SERIAL NUMBERS.

        SER # 26-21874 OR GREATER IF BUILT IN AUSTIN,TEXAS
        SER # 44-94964 OR GREATER IF BUILT IN SANTA PALOMBA,ITALY
        SER # 90-M1775 OR GREATER IF BUILT IN WANGARATTA,AUSTRALIA

 THE ROOM AMBIENT OPERATING TEMPERATURE MUST BE BELOW 87 DEGREES
 FAHRENHEIT. OPERATING THE DRIVE AT HIGHER TEMPERATURES WILL
 RESULT IN PREMATURE DRIVE FAILURE.

FEATURES:

Type, Model, Stage	With B/M	Machines Affected and/or Feature/Device Description	B/M to be Installed	Service Hours	System Hours
7012	B/M43G0353	MODELS 340 AND 350	B/M51G8668	01.0	01.0

PHYSICAL CHECK:
 CONFIRM FC 2550 OR 2555 IS INSTALLED W/O EC C74287. FAN IS
 MOUNTED ON SCSI RISER CARD.

PREREQUISITES: NONE

COMPANION: NONE

CONCURRENT: NONE

DETAIL:
 INSTALL SUPPLEMENTAL FAN.

NOTES: NONE

```
 SAS KEYWORDS:
   7012DISK        7012MISC        7012EC          7012ECA
   701XEC          701XECA         701XDISK        RS6000
   RS/6000         701XMISC        701X
```

1.1.5 ECA091 X.25 ADAPTER FOR UPGRADE TO MOD 360 OR 370

Record number: H093158

Device:	D/T7012	Service code:	33
ECA number:	ECA091	Parts source:	AUST
EC number:	ECD18448	Publish flag:	R
Mandatory:	N	Hit count:	UHC00126
Automatic shipment:	N	Success count:	USC0000
Availability date:	93/08	Publication code:	PC20
Plant of control:	26	Date created:	O93/09/30
Tip key:		Date last altered:	A93/10/14
		Owning B.U.:	USA

PURPOSE:
 ECA091 is only required when the 7012 is upgraded from a model
 340 or 350 to a 7012 model 360 or 370. This package includes
 a set of instructions and an up level X.25 adapter card.

FEATURES:

Type, Model, Stage	With B/M	Machines Affected and/or Feature/Device Description	B/M to be Installed	Service Hours	System Hours
7012	B/M9999999	7012 MOD 340 OR 350 WHEN UPGRADING TO A MOD 360 OR 370	B/M51G8933	01.0	00.0

PHYSICAL CHECK: NONE

PREREQUISITES: NONE

COMPANION: NONE

CONCURRENT: NONE

DETAIL:
 Install the X.25 card as directed by the instructions included
 in this package. This activity includes removal of the old
 X.25 and installation of the new X.25 adapter.

NOTES:
 Please account for your time and travel with S/C 33 and ECA 091

 SAS KEYWORDS:

7012	7012CA	7012MES	7012X.25
701X	701XCA	701XMES	701XX.25
701X			

1.1.6 ECA105 - POSSIBLE DATA CORRUPTION WITH 8MM 5GB TAPE DRIVE
  Record number: H121531

```
    Device:               D/T7012        Service code:        33
    ECA number:           ECA105         Parts source:        AUST
    EC number:            ECD18523       Publish flag:        H
    Mandatory:            N              Hit count:           UHC00523
    Automatic shipment:   N              Success count:       USC0000
    Availability date:    93/04          Publication code:    PC50
    Plant of control:     26             Date created:        O93/04/13
    Tip key:                             Date last altered:   A93/10/15
                                         Owning B.U.:         USA
```

PURPOSE:
  THIS EC RELEASES A NEW LEVEL OF MICROCODE TO CORRECT A POSSIBLE
  DATA CORRUPTION PROBLEM WHEN AN IBM 8MM 5GB TAPE DRIVE IS USED
  TO LOAD AIX BASE OPERATING SYSTEM SOFTWARE CODE.

FEATURES:

Type, Model, Stage	With B/M	Machines Affected and/or Feature/Device Description	B/M to be Installed	Service Hours	System Hours
7012	B/M9999999	ALL MODEL 340 WITH SYSTEM PLANAR ASSEMBLY P/N51G9052, P/N51G8631, OR P/N32G0163	B/M51G9546	01.3	01.3

PHYSICAL CHECK:
  THIS EC IS INSTALLED ON THE CPU CARD IF THE ASSEMBLY
  PART NUMBER IS P/N51G9538 OR HIGHER, OR THE FRU PART NUMBER IS
  P/N51G9539 OR HIGHER.
  THE ABOVE PART NUMBERS WILL APPEAR IN VITAL PRODUCT DATA (VPD)
  FOR DEVICE sysplanar0 AND ON LABELS ON THE CPU CARD.

PREREQUISITES: NONE

COMPANION: NONE

CONCURRENT: NONE

DETAIL:

  FOLLOW DETAIL INSTALLATION INSTRUCTIONS PROVIDED IN THE FB/M.
NOTES:
  NOTIFICATION ABOUT THIS POSSIBLE EXPOSURE IS ALSO RELEASED
  IN HONE FLASH AND IN NATBOARD CATEGORY "AIX + RS". A COPY OF
  THE NATBOARD NOTICE WILL BE MAILED TO ALL CUSTOMERS OF RECORD
  THAT HAVE PURCHASED AN IBM 8MM 5GB TAPE DRIVE.

  REFER TO RETAIN TDR #H094173 FOR A COPY OF THE NATBOARD NOTICE.

  RECORD MACHINE TYPE AND SERIAL NUMBER WHEN INSTALLING THIS EC.
  USE SC 33, ECA105 TO RECORD TIME AND TRAVEL ASSOCIATED WITH
  INSTALLATION OF THIS EC.

```
  SAS KEYWORDS:
    701X               7012            701XEC            7012EC
    D/T701X            D/T7012         RS6000            RS/6000
```

1.1.7 ECA106 - POSSIBLE DATA CORRUPTION WITH 8MM 5GB TAPE DRIVE
Record number: H106232

```
        Device:                D/T7012      Service code:         33
        ECA number:            ECA106       Parts source:         AUST
        EC number:             ECD18532     Publish flag:         H
        Mandatory:             N            Hit count:            UHC00447
        Automatic shipment:    N            Success count:        USC0000
        Availability date:     93/04        Publication code:     PC50
        Plant of control:      26           Date created:         O93/04/13
        Tip key:                            Date last altered:    A93/05/06
                                            Owning B.U.:          USA
```

PURPOSE:
 THIS EC RELEASES A NEW LEVEL OF MICROCODE TO CORRECT A POSSIBLE
 DATA CORRUPTION PROBLEM WHEN AN IBM 8MM 5GB TAPE DRIVE IS USED
 TO LOAD AIX BASE OPERATING SYSTEM SOFTWARE CODE.

FEATURES:

Type, Model, Stage	With B/M	Machines Affected and/or Feature/Device Description	B/M to be Installed	Service Hours	System Hours
7012	B/M9999999	ALL MODEL 350 WITH SYSTEM PLANAR ASSEMBLY P/N51G9052, P/N51G8631, OR P/N32G0163	B/M52G4014	01.3	01.3

PHYSICAL CHECK:
 THIS EC IS INSTALLED ON THE CPU CARD IF THE ASSEMBLY PART
 NUMBER IS P/N52G4006 OR HIGHER, OR THE FRU PART NUMBER IS
 P/N52G4007 OR HIGHER.
 THE ABOVE PART NUMBERS WILL APPEAR IN VITAL PRODUCT DATA (VPD)
 FOR DEVICE sysplanar0 AND ON LABELS ON THE CPU CARD.

PREREQUISITES: NONE

COMPANION: NONE

CONCURRENT: NONE

DETAIL:

 FOLLOW DETAIL INSTALLATION INSTRUCTIONS PROVIDED IN THE FB/M.
NOTES:
 NOTIFICATION ABOUT THIS POSSIBLE EXPOSURE IS ALSO RELEASED
 IN HONE FLASH AND IN NATBOARD CATEGORY "AIX + RS". A COPY OF
 THE NATBOARD NOTICE WILL BE MAILED TO ALL CUSTOMERS OF RECORD
 THAT HAVE PURCHASED AN IBM 8MM 5GB TAPE DRIVE.

 REFER TO RETAIN TDR #H094173 FOR A COPY OF THE NATBOARD NOTICE.

 RECORD MACHINE TYPE AND SERIAL NUMBER WHEN INSTALLING THIS EC.
 USE SC 33, ECA106 TO RECORD TIME AND EXPENSES ASSOCIATED WITH
 INSTALLATION OF THIS EC.

```
 SAS KEYWORDS:
   701X              7012              701XEC            7012EC
   D/T701X           D/T7012           RS6000            RS/6000
```

1.1.8 ECA129 LED888/103 203/223 EPROM CHANGE

Record number: H007199

Device:	D/T7012	Service code:	33
ECA number:	ECA129	Parts source:	AUST
EC number:	ECD18569	Publish flag:	R
Mandatory:	N	Hit count:	UHC00383
Automatic shipment:	N	Success count:	USC0000
Availability date:	93/09	Publication code:	PC30
Plant of control:	26	Date created:	O93/09/13
Tip key:		Date last altered:	A97/04/21
		Owning B.U.:	USA

PURPOSE:
Replace the IPL ROS and VPD Eproms on the 7012 model 340 for
LED888/103/203/223 with color graphic display adapter 1-1
installed.

FEATURES:

Type, Model, Stage	With B/M	Machines Affected and/or Feature/Device Description	B/M to be Installed	Service Hours	System Hours
7012	B/M9999999	D/T7012 MODEL340 WITH COLOR GRAPHICS ADAPTER INSTALLED	B/M52G4311	00.5	00.0

PHYSICAL CHECK:
Please verify that the D/T7012 model 340 has a color graphics
adapter type installed, and the CPU planar FRU part number
P/N32G0060 EC C73978 or lower.

PREREQUISITES:
The prereqs are a D/T7012 model 340 with a color graphics
adapter type 1-1 installed failing with LED888/103 203/223.

COMPANION: NONE

CONCURRENT: NONE

DETAIL:
This ECA releases two EPROM's and a set of instructions.
Installation of these EPROM's is only required if the D/T7012
model 340 is failing with LED888/103 203/223. And the system
has a color graphics adapter type 1-1 installed in CPU card
level P/N00G3149 EC C73978 and below. The P/N and EC level
of the CPU card can be determined by running concurrent
diagnostics on the system. This activity includes being
signed on as the super user or in the root directory.
Next type 'diag' at the command line. At the next screen
press enter. At the Function Selection screen select
'Service Aid'and press enter. At the Service Aids Selection
Screen select 'Display or Change Configuration or Vital
Product Data' and press enter. At the Display or Change
Configuration or Vital Product Data ... screen select
'Display Vital Product Data' then press enter. At the
Installed Resource List with VPD find the listing for
the CPU card and review the CPU card P/N and EC level.

NOTES:
Please account for your time with S/C 33 and ECA 129.
SAS KEYWORDS:

7012	701X	7012CA	701XCA
7012ECA	7012ECA	701XEPROM	7012EPROM
7012VPD	701XVPD	7012CPU	701XCPU
7012LED	701XLED	7012888	701X888
SRN	SRN203/223		

1.1.9 ECA 148 16 PORT CONCENTRATOR LINE PROTECTORS
  Record number: H123714

```
        Device:              D/T7013        Service code:        33
        ECA number:          ECA148         Parts source:        AUST
        EC number:           ECD18314       Publish flag:        R
        Mandatory:           N              Hit count:           UHC01544
        Automatic shipment:  N              Success count:       USC0002
        Availability date:   94/05          Publication code:    PC30
        Plant of control:    26             Date created:        O94/04/26
        Tip key:                            Date last altered:   A98/02/23
                                            Owning B.U.:         USA
```

PURPOSE:
 Protect 16 port concentrators from lightning or ESD damage.
 Kit includes: two lightning protection devices (each protects
 8 ports) and short cables (16) and instructions.

FEATURES:

Type, Model, Stage	With B/M	Machines Affected and/or Feature/Device Description	B/M to be Installed	Service Hours	System Hours
701X	B/M9999999	ALL 701X WITH F/C 6401 W/O LIGHTNING PROTECTORS INSTALLED.	B/M8184324	01.0	00.0

PHYSICAL CHECK: NONE

PREREQUISITES: NONE

COMPANION: NONE

CONCURRENT: NONE

DETAIL:
 These 16 port lightning/ESD protector kits should be ordered for
 64 port customers with the following conditions:
 Concentrators that have been BLOWN DURING THUNDERSTORMS.
 (Replace currently bad concentrators and order this ECA for
 concentrators on the system)
 Concentrator port hangs that CANNOT BE RESET.
 (Replace currently bad concentrators if any, install LP kits on
 all concentrators on the system)
 Concentrator port hangs that CAN BE RESET.
 (Not necessary to replace concentrator, install LP kit which
 should prevent further occurances unless bad cable conditions
 exist)
 Customers located in storm hazardous area with medium to long
 (100 - 200ft) cabling distances to terminal devices.
 Customers located in highly industrial areas with long (150-
 200ft) cabling distances to terminal devices.
 THESE KITS SHOULD NEVER BE USED IN PLACE OF OUTDOOR SURGE PRO-
 TECTORS WHEN GOING OUT OF DOORS OR BETWEEN BUILDINGS.

NOTES:
 Please account for time and travel with S/C 33 and ECA 148.

```
 SAS KEYWORDS:
   701XECA          7011            701X            7012
   7013             7015            RS/6000         16 PORT ECA
   7013ECA          7011ECA         7012ECA         7013ECA
   7015ECA          7011COMM        7012COMM        7013COMM
   7015COMM         ECA148          ECA             148
```

1.1.10 ECA205 TURBOWAYS 100 ATM ADAPTER
Record number: H13692

Device:	D/T7012	Service code:	33
ECA number:	ECA205	Parts source:	AUS
EC number:	ECD28493	Publish flag:	R
Mandatory:	Y	Hit count:	UHC00277
Automatic shipment:	N	Success count:	USC0000
Availability date:	09/01	Publication code:	PC40
Plant of control:	26	Date created:	O95/08/31
Tip key:		Date last altered:	A95/09/13
		Owning B.U.:	USA

PURPOSE: IBM HAS IDENTIFIED A POSSIBLE EXPOSURE TO DATA
INTEGRITY WITH THE TURBOWAYS 100 ATM MICROCHANNEL ADAPTER
(FC 2984) UNDER VERY HEAVY NETWORK LOADS. ALTHOUGH IT IS
HIGHLY UNLIKELY THAT THIS PROBLEM WILL OCCUR, IBM WISHES TO
REPLACE ALL INSTALLED ADAPTERS. THIS EXPOSURE IS FURTHER
MINIMIZED UNDER AIX AND TCP/IP WHEN THE UDP CHECKSUM IS SET TO
ON.
ECA 205 IS PROVIDED TO REPLACE INSTALLED ADAPTERS WITH THE NEW
LEVEL. THE ECA CONTAINS A REPLACEMENT ADAPTER, INSTALLATION
INSTRUCTIONS AND A PRE-PAID MAILING LABLE FOR RETURNING THE
THE OLD ADAPTER TO THE FACTORY FOR REWORK.

ECA205 SHOULD BE ORDERED VIA NORMAL CHANNELS.

FEATURES:

Type, Model, Stage	With B/M	Machines Affected and/or Feature/Device Description	B/M to be Installed	Service Hours	System Hours
701X	B/M9999999	7006, 7009, 7012, 7013 7015, 7030	B/M40H3292	01.5	01.0

PHYSICAL CHECK: THE WAY TO IDENTIFY A DOWN LEVEL ADAPTER IS
BY PHYSICALLY CHECKING FOR ASSEMBLY P/N 10H4472, OR 73G6466.
THE NEW LEVEL WILL BE ASSEMBLY P/N10H4538, 10H4542, 10H4539
OR 13H5987.

THE FOLLOWING IS A LIST OF MACHINES THAT CONTAIN THIS FEATURE
AND SHOULD BE INSPECTED TO ENSURE THE PROPER LEVEL ADAPTER.

TYPE	MOD	MACHINE SERIAL	TYPE	MOD	MACHINE SERIAL
----	---	---------	----	---	---------
7006	41T	260000954	7013	520	260001755
7006	41T	260000968	7013	520	260001989
7006	41T	260000969	7013	520	260011031
7006	41T	260000970	7013	56F	260014381
7006	41T	260001155	7013	530	260015999
7006	41T	260004822	7013	56F	260023710
7006	41T	260005079	7013	560	260024770
7006	41T	260005080	7013	560	260027410
7006	41T	260005592	7013	550	260027885
7006	41T	260005593	7013	550	260027886
7006	41T	260005594	7013	560	260029603
7006	41T	260005595	7013	52H	260030120
7006	41T	260005596	7013	560	260030326
7006	41T	260005753	7013	53H	260031329
			7013	580	260034811
7009	C10	260003371	7013	580	260035678
7009	C10	260003372	7013	580	260037750
7009	C10	260004216	7013	580	260038350
7009	C10	260004275	7013	580	260038351
7009	C10	260006887	7013	55L	260038579
7009	C10	260007742	7013	55L	260038580
7009	C10	260008000	7013	580	260039415
			7013	590	260039485
			7013	590	260039512
			7013	590	260039513
7012	320	260024153	7013	590	260040844
7012	350	260036169	7013	570	260041872
7012	340	260036455	7013	590	260042375
7012	340	260037069	7013	590	260042450
7012	340	260037070	7013	590	260042488
7012	340	260037071	7013	59H	260042547
7012	340	260037072	7013	590	260043039
7012	340	260039748	7013	590	260043347
7012	340	260043019	7013	590	260043519
7012	340	260043341	7013	590	260043654
7012	340	260044694	7013	590	260043683
7012	340	260050384	7013	590	260043806
7012	370	260053278	7013	59H	260043923
7012	350	260053592	7013	59H	260044010

```
7012   350   260054631          7013   58H   260044112
7012   350   260054657          7013   590   260044321
7012   340   260056989          7013   590   260044472
7012   370   260057160          7013   590   260044479
7012   370   260058468          7013   590   260044480
7012   370   260059064          7013   570   260044843
7012   340   260060116          7013   570   260044844
7012   370   260060926          7013   570   260044845
7012   370   260060928          7013   570   260044872
7012   370   260060947          7013   590   260044948
7012   360   260061171          7013   570   260044985
7012   360   260062915          7013   590   260045017
7012   37T   260069087          7013   590   260045174
7012   370   260069900          7013   590   260045175
7012   370   260069917          7013   590   260045176
7012   370   260069928          7013   590   260045177
7012   370   260069957          7013   59H   260045411
7012   370   260069966          7013   590   260045669
7012   37T   260072918          7013   59H   260045727
7012   37T   260073098          7013   590   260045758
7012   37T   260074826          7013   59H   260045849
7012   37T   260074827          7013   570   260046032
7012   360   260075762          7013   570   260046301
7012   360   260076292          7013   570   260046785
7012   360   260076293          7013   59H   260046996
7012   360   260076294          7013   570   260047082
7012   390   260076309          7013   570   260047250
7012   390   260076310          7013   570   260047648
7012   370   260076397          7013   570   260047740
7012   390   260076414          7013   590   260048018
7012   390   260076415          7013   590   260048019
7012   390   260076416          7013   590   260048020
7012   390   260076417          7013   590   260048021
7012   390   260076584          7013   590   260048022
7012   370   260076737
7012   380   260076967          7015   99F   260002142
7012   370   260077529          7015   99F   260002142
7012   390   260078875          7015   97B   260004332
7012   390   260079192          7015   97B   260004539
7012   390   260079193          7015   990   260004736
7012   370   260080166          7015   990   260004736
7012   390   260080475          7015   990   260004753
7012   39H   260081538          7015   R20   260006044
7012   390   260081556          7015   R30   260006379
7012   390   260081651          7015   R30   260006380
7012   39H   260081766          7015   R24   260006424
7012   39H   260081767          7015   R24   260006428
7012   380   260081801          7015   R24   260006714
7012   380   260081802          7015   R24   260006825
7012   360   260081842          7015   R24   260007149
7012   360   260081843          7015   R24   260007202
7012   360   260081844          7015   R24   260007452
                                7015   R24   260007466
7030   3AT   2600AAAYT          7015   R24   260007468
7030   3AT   2600AABLG          7015   R24   260007556
7030   3BT   2600AABNR
7030   3BT   2600AACHK
7030   3BT   2600AACHL
7030   3BT   2600AACHM
7030   3BT   2600AACHN
7030   3AT   2600AAKWL
```

PREREQUISITES: NONE

COMPANION: NONE

CONCURRENT: NONE

DETAIL: NONE

NOTES: ALL LABOR SHOULD BE RECORDED USING SC 33 AGAINST ECA 205.

```
SAS KEYWORDS:
   ECA205              701XECA           TURBOWAYS           701XATM
   701XECA205          7006              7009                7012
   7013                7015              7006ECA             7009ECA
   7012ECA             7015ECA           7030                7030ECA
   7006ECA205          7009ECA205        7012ECA205          7013ECA205
   7015ECA205          7030ECA205        RS6000              ATM
   701X
```

1.1.11 ECA231 THUMBSCREW REPLACEMENT ON MODELS OF THE 7012 & 7030

Record number: H133538


```
     Device:              D/T7012          Date created:        O96/07/10
     Model:               M                Date last altered:   A96/07/10
     EC number:           ECE75819         Owning B.U.:         USA
     ECA number:          ECA231
     Index B/M:           B/M93H1620
     Tip key:             016


   BILL OF MATERIALS:
       B/M93H1620
```


 THIS ECA AFFECTS MACHINE TYPE 7012 MOD. 380, 390, 39H AND MACHINE TYPE 7030 MOD. 3AT, 3BT AND 3CT ONLY.

```
   THE INTENT OF THIS ECA IS TO PROVIDE A B/M THAT WILL ENABLE THE
   REPLACEMENT OF THE FRAME THUMBSCREW ASSLY EXPERIENCING BREAKAGE
   DUE TO OVER TORQUE OF THE KNURLED RETAINER.

   ALL TIME ASSOCIATED WITH THIS ECA SHOULD BE WRITTEN OFF TO SC 33

   SAS KEYWORDS:
     7012            7030            ECA231          THUMBSCREW
     380ECA          390ECA          39HECA          3ATECA
     3BTECA          3CTECA          7012ECA         7030ECA
     7012ECA231      7030ECA231      701XECA
```

1.1.12 ECA241 XIO PROBLEMS WHEN M/T7137 IS ATTACHED TO 7012/7030

Record number: H134233

```
        Device:               D/T7012        Date created:        O96/10/01
        Model:                M              Date last altered:   A96/12/13
        EC number:            ECE76229       Owning B.U.:         USA
        ECA number:           ECA241
        Index B/M:            B/M93H3703
        Tip key:              017


     BILL OF MATERIALS:
        B/M93H3703
```

This is an as required FB/M for the following models that could experience XIO problems and do not have an I/O Planar at EC level E76229 or higher. 7012-380,390,39H, 7030-3AT, 3BT and 3CT.   This EC is required to ensure proper operation of M/T7137 when attached via SCSI to one of the RS/6000 mentioned above.

```
 PHYSICAL CHECK:  If M/T7137 is connected to the RS/6000 and the
  I/O Planar is not at EC level E76229 or higher.
  The EC level can be determined electronically by interrogating
  VPD.  (M/T7137 with serial numbers 6000 and higher).

 DETAIL:  The installation instructions will refer the CSR/CE to
  the Service Manual for planar removal.

  - U.S. CSR/CEs should order this ECA via the normal ECA ordering
    process for their geography.

  - Customers should be advised not to reconfigure the RS/6000 and
    attach a 7137 unless they notify IBM service.

  SAS KEYWORDS:
    7012            ECA241          7012ECA         7012ECA241
    RISC            RISCECA         7012380         7012390
    701239H         70303AT         70303BT         70303CT
    7030            D/T7137         M/T7137         7137
    RS6000          3BT             3AT             380
    390
```

1.1.13 ECA242 XIO PROBLEMS WHEN a 7137 IS ATTACHED TO 7012 MODELS
Record number: H135016

```
        Device:              D/T7012        Date created:        O96/10/28
        Model:               M              Date last altered:   A96/10/28
        EC number:           ECE76276A      Owning B.U.:         USA
        ECA number:          ECA242
        Index B/M:           B/M93H4293
        Tip key:             018


     BILL OF MATERIALS:
         B/M93H4293
```

This is an as required FB/M for the following models that could experience XIO problems and do not have an I/O Planar at EC level E76276 or higher. 7012-315, 355, 365 and 375.

```
     This EC is required to ensure proper operation of M/T 7137 when
   attached via SCSI to one of the RS/6000 mentioned above.
```

PHYSICAL CHECK: If M/T 7137 is connected to the RS/6000 and the
 I/O Planar is not at EC level E76276 or higher.
 The EC level can be determined electronically by interrogating
 VPD.

DETAIL: The installation instructions will refer the CSR/CE to
 the Service Manual for planar removal.

 - U.S. CSR/CEs should order this ECA via the normal ECA ordering
   process for their geography.

 - Customers should be advised not to reconfigure the RS/6000 and
   attach a 7137 unless they notify IBM service.

```
   SAS KEYWORDS:
     ECA242              7012            7012ECA            7012ECA242
     315                 355             365                375
     315ECA              355ECA          365ECA             375ECA
     RISC                RISCECA         RISCECA242         D/T7012
     D/T7137             7137            XIO                701X
     701XECA
```

1.1.14 ECA243 XIO PROBLEMS WHEN 7137 IS ATTACHED TO MODELS OF 7012

Record number: H135017

```
    Device:              D/T7012      Date created:        O96/10/28
    Model:               M            Date last altered:   A96/10/28
    EC number:           ECE76276A    Owning B.U.:         USA
    ECA number:          ECA243
    Index B/M:           B/M93H4309
    Tip key:             019


  BILL OF MATERIALS:
      B/M93H4309
```

This is an as required FB/M for the following models that could experience XIO problems and do not have an I/O Planar at EC level E76320 or higher. 7012-360, 370, 34H, 35T and 7013-55L.

```
    This EC is required to ensure proper operation of M/T 7137 when
   attached via SCSI to one of the RS/6000 mentioned above.
```

PHYSICAL CHECK: If M/T 7137 is connected to the RS/6000 and the
I/O Planar is not at EC level E76320 or higher.
The EC level can be determined electronically by interrogating
VPD.

DETAIL: The installation instructions will refer the CSR/CE to
the Service Manual for planar removal.

- U.S. CSR/CEs should order this ECA via the normal ECA ordering
  process for their geography.

- Customers should be advised not to reconfigure the RS/6000 and
  attach a 7137 unless they notify IBM service.

```
  SAS KEYWORDS:
    ECA243          7012            7012ECA         7012ECA243
    360             370             34H             35T
    360ECA          370ECA          34HECA          35TECA
    RISC            RISCECA         RISCECA243      D/T7012
    D/T7137         7137            XIO             701X
    701XECA         7013            7013ECA         7013ECA243
    55L             55LECA          55LECA243
```

1.2 Chapter 2. Service Aids and Additional Information

Subtopics
1.2.1 AIX 3.2.1 OR ABOVE LOADED ON SCSI DISK PRIOR TO 9333 INSTALL
1.2.2 CABLING TIPS&COLON. 64 PORT ASYNC CONTROLLER, 16 PORT CONCENTRATOR
1.2.3 CAMBEX DISK AND TAPE DRIVE DIAGNOSTICS AVAILABILITY
1.2.4 CURSOR KEYS DON'T WORK ON TTY AFTER INSTALLING AIX 3.2.3
1.2.5 ECA 148 (LINE SURGE PROTECTOR) JUMPER PLUG STICKING
1.2.6 ECA121 POSSIBLE DATA CORRUPTION WITH 8MM 5GB TAPE DRIVE
1.2.7 ETHERNET ADAPTER UPGRADE REQUIRED FOR AIX VER 3.2
1.2.8 ETHERNET RISER CARD JUMPER SETTING FOR 7012 MODELS 340 - 350
1.2.9 FIRMWARE FOR GXX, JXX AND RXX SMP SYSTEMS
1.2.10 G30 ELM AND MRE MEMORY
1.2.11 INVALID SIMM LOCATION FOR SRN'S 812/XXX OR 940/XXX
1.2.12 LED288 HANG ON SMP CPU WITH EXPANSION UNIT ATTACHED
1.2.13 LED8│-8 OR LED8T8
1.2.14 LED869 OR LED957 DURING IPL
1.2.15 LED888/102 700/XCX RUNNING 2.4.3 DIAGS
1.2.16 LEVEL 2 CACHE CONNECTORS MISLABELED ON CPU PLANAR
1.2.17 MACHINE TYPE 1333 (4MM TAPE DRIVE)
1.2.18 MEMORY CARDS AND SIMMS COMPATIBILITY
1.2.19 NIM INSTALL COMPATABILITY FOR 10/100 ETHERNET ADAPTER
1.2.20 ON CARD LED BLINK CODES FOR SCSI-2 ADAPTER 4-6 OR 4-7
1.2.21 PROBLEMS WITH AIX 3.2 MEMORY SCRUBBING FEATURE
1.2.22 RELOCATION KIT PART NUMBERS FOR RISC SYSTEMS
1.2.23 REMINDER&COLON. RESET DATE AND TIME AFTER DISCONNECTING BATTERY
1.2.24 SCSI-2 DIFFERENTIAL ADAPTER FAILURE ISOLATION PROCEDURE
1.2.25 SCSI-2 F/W CONTROLLERS (ALL VARIETIES) MAY CAUSE PROBLEMS
1.2.26 SMP BUMP CONSOLE FLAG
1.2.27 3153 INFO&COLON. MARKETING REFERENCE GUIDE (G520-9415)
1.2.28 5081,6091,POWERDISPLAYS 16,17 DISPLAYS
1.2.29 540MB DISK DRIVE - END OF MANUFACTURING
1.2.30 7012 AND 7030 MEMORY CARDS
1.2.31 7012 G30 MOUSE AND KEYBOARD SUPPORT
1.2.32 7012 WON'T BOOT TO DIAGNOSTICS FROM DISK
1.2.33 7012 397 & 39F FIRMWARE UPDATE FOR SYSTEM PLANAR
1.2.34 7012-G30 CPU AND MEMORY CARD REPLACEMENT PROCEDURES
1.2.35 7012-G30 DISK POWER CABLE
1.2.36 7012/3XX DOCUMENTATION ERRORS SA23-2624-XX
1.2.37 7012/39H MEMORY SIMM COMPATABILITY

1.2.1 AIX 3.2.1 OR ABOVE LOADED ON SCSI DISK PRIOR TO 9333 INSTALL
  Record number: H097801


```
     Device:                 D/T701X
     Model:                  M
     Tip key:                118
     Date created:           O92/05/29
     Date last altered:      A92/06/29
```


PRIOR TO INSTALLATION OF A 9333 MODEL 010 OR MODEL 500, AIX 3.2.1 OR ABOVE MUST BE INSTALLED ON A SCSI ATTACHED DISK DRIVE. THE CURRENT RELEASE OF AIX DOES NOT PROVIDE THE ABILITY TO LOAD SOFTWARE TO A SERIAL ATTACHED 9333.

```
   A FUTURE SOFTWARE RELEASE WILL ALLOW THE STANDALONE INSTALLATION
   OF 9333'S.

   SAS KEYWORDS:
     RS6000              RS/6000             RISC                RISC6000
     D/T7011             D/T7012             D/T7013             D/T7015
     D/T7016             D/T7018             D/T9333             9333
     7011                7012                7013                7015
     7016                7018                7011
```

```
   A FUTURE SOFTWARE RELEASE WILL ALLOW THE STANDALONE INSTALLATION
```

1.2.2 CABLING TIPS&COLON. 64 PORT ASYNC CONTROLLER, 16 PORT CONCENTRATOR
Record number: H087916

```
        Device:                 D/T701X
        Model:                  M
        Tip key:                065
        Date created:           O91/05/28
        Date last altered:      A91/11/21
```

THIS TDR LISTS CERTAIN GUIDELINES AND PRACTICES FOR THE
CABLES USED ON THE 16 PORT CONCENTRATOR ATTACHED TO THE
64 PORT ASYNC CONTROLLER IN THE RISC SYSTEM/6000.

WARNING THE RECEIVERS AND DRIVERS USED IN THE 16 PORT
           CONCENTRATOR ARE EXTREMELY SENSITIVE TO ESD
           (ELECTRO-STATIC DISCHARGES). THE ESD EXPOSURE
           CAN BE SIGNIFICANTLY REDUCED BY OBSERVING THE
           FOLLOWING CABLING PRACTICES ON DEVICE CABLES
           ATTACHED TO THE 16 PORT CONCENTRATOR (CLUSTER)
           BOXES.

1. DO NOT LEAVE ANY CONDUCTORS/LEADS/PINS EXPOSED WHERE THEY CAN
   BE TOUCHED BY A PERSON WHO IS NOT PROTECTED AGAINST ELECTO-
   STATIC DISCHARGE (ESD). AVOID THE USE OF TYPE 66 PUNCHDOWN
   BLOCKS OR SIMILAR TERMINAL BLOCKS.

2. DO NOT TOUCH ANY EXPOSED CONNECTOR PINS, WIRE LEADS OR ANY
   CONDUCTOR OF CABLES WITHOUT BEING THOROUGHLY GROUNDED.

3. DO NOT RUN ANY CABLES OUTDOORS WITHOUT PROPER TRANSIENT
   VOLTAGE SUPPRESSION DEVICES INSTALLED.

4. CARE MUST BE TAKEN WHEN CABLES ARE ROUTED NEAR OR AROUND
   POWER TRANSFORMERS, OR HIGH POWER SWITCHING DEVICES,
   REFRIGERATION UNITS,..ETC.

5. USE SHIELDED CABLES. ALL WIRES SHOULD BE TERMINATED, NOT
   FLOATING. THE SHIELD SHOULD BE CONNECTED TO SHIELD GROUND
   AT THE CONCENTRATOR OR DEVICE, NOT BOTH.

6. DO NOT TIE FRAME (SHIELD) GROUND AND SIGNAL GROUND TOGETHER
   IN THE CABLE OR AT THE CONCENTRATOR.

MACHINES AFFECTED:
D/T7012, D/T7013, D/T7015, D/T7016, D/T7018.

SAS KEYWORDS:

701X	701XCABLE	701XMISC	701X64PORT
7012	7012CABLE	7012MISC	701264PORT
7013	7013CABLE	7013MISC	701364PORT
7015	7015CABLE	7015MISC	701564PORT
7016	7016CABLE	7016MISC	701664PORT
7018	7018CABLE	7018MISC	701864PORT
RS6000	RS/6000	HOT	BOX
701XDISP			

1.2.3 CAMBEX DISK AND TAPE DRIVE DIAGNOSTICS AVAILABILITY
  Record number: H121562

      Device: D/T1535
      Model: M
      Tip key: 002
      Date created: O93/05/03
      Date last altered: A93/08/31

   Cambex Corporation ships diagnostics to distributors who re-sell
   their tape and disk drives. If these diagnostics are not
   present at the customer's machine, they may be acquired by
   calling Cambex Corporation Technical Support at 1-800-325-5594
   between the hours of 8: 30AM and 5: 30PM EST.

   These diagnostics come as installp images on diskette.

   SAS KEYWORDS:
     D/T1535   D/T7011   D/T7012   D/T7013
     D/T7015   1535   7011   7012
     7013   7015   POEM   701X

1.2.4 CURSOR KEYS DON'T WORK ON TTY AFTER INSTALLING AIX 3.2.3

Record number: H015309

```
     Device:               D/T701X
     Model:                M
     Tip key:              136
     Date created:         O92/10/28
     Date last altered:    A93/02/04
```

MACHINES AFFECTED: D/T7011, D/T7012, D/T7013, D/T7015

A PROBLEM HAS BEEN IDENTIFIED THAT CAUSES THE CURSOR MOVEMENT
KEYS TO BE NON-FUNCTIONAL ON ATTACHED ASCII TERMINALS (TTY)
AFTER INSTALLING AIX VERSION 3.2.3.

AS A TEMPORARY WORKAROUND <CNTL>N MAY BE USED TO MOVE THE CURSOR
DOWN AND <CNTL>P TO MOVE THE CURSOR UP WHEN SELECTING ITEMS IN
A LIST.

THIS PROBLEM WILL ALSO CAUSE GARBAGE TO BE DISPLAYED ON THE
TTY IDENTIFIED AS THE SYSTEM CONSOLE DURING IPL. ANY MESSAGES
DISPLAYED PRIOR TO THE LOGIN PROMPT WILL BE UNREADABLE.

PTF U412816 IS AVAILABLE FROM AIX SW DEFECT SUPPORT TO FIX
THIS PROBLEM.

```
SAS KEYWORDS:
    701X              7011              7012              7013
    7015              701XDISP          7011DISP          7012DISP
    7013DISP          7015DISP          701XMISC          7011MISC
    7012MISC          7013MISC          7015MISC          RS/6000
    RS6000            3151              AIX
```

1.2.5 ECA 148 (LINE SURGE PROTECTOR) JUMPER PLUG STICKING
  Record number: H125200

      Device: D/T701X
      Model: M
      Tip key: 193
      Date created: O94/09/12
      Date last altered: A94/09/14

   PROBLEM: SOME LINE PROTECTORS HAVE TIGHT SOCKETS THAT MAKE
   REMOVING THE JUMPER PLUGS VERY DIFFICULT.

  FIX: LOCATE THE TIGHT JUMPERS, GRIP THE CONNECTOR HOUSING AND
   SQUEEZE THE LOCK TAB (ON THE BOTTOM), PUSH THE CONNECTOR DEEPER
   INTO THE SOCKET. THEN WHILE COCKING THE WHOLE CONNECTOR SLIGHTLY
   UP,FORCEFULLY PULL UP AND OUT.

   THE CONNECTOR MAY NEED TO BE ROCKED UP AND DOWN A BIT TO LOOSEN,
   HOWEVER SUCCESSIVE REMOVALS SHOULD LESSEN THE TIGHTNESS.

   SAS KEYWORDS:
     D/T701X   D/T7011   D/T7012   D/T7013
     D/T7015   D/T7016   D/T7018   7011
     7012   7013   7015   7016
     7018   64PORT   ECA148

1.2.6 ECA121 POSSIBLE DATA CORRUPTION WITH 8MM 5GB TAPE DRIVE
  Record number: H133018


```
     Device:                 D/T7208
     Model:                  M
     Tip key:                011
     Date created:           O96/03/11
     Date last altered:      A96/03/11
```


 THIS EC RELEASES A NEW LEVEL OF MICROCODE TO CORRECT A POSSIBLE DATA CORRUPTION PROBLEM WHEN AN IBM
 8MM 5GB TAPE DRIVE IS USED TO LOAD AIX BASE OPERATING SYSTEM SOFTWARE CODE.


```
     If the SCSI microchannel adapter card is p/n 71f0913 or
     p/n 00G2362 or p/n 00G1887, then this ECA121 should be
     applied.

     NOTE:  THIS ECA WAS ORIGINALLY RELEASED AS ECA104 BUT THEN
     RE-RELEASED AS ECA121 BUT WAS INADVERNTENTLY REMOVED FROM RETAIN

     Notification about the possible exposure problem was released
     via HONE Flash and in NATBOARD in 05/93. A copy of the notice
     was also mailed to all customers of record whom had purchased
     a tape drive a that time.
     Since this time, newer hardware and uplevel software had
     resolved most field exposures but, there may be customers who
     are still using "older" hardware level and this eca121 may be
     needed.

     ECA121 can be ordered via the Chicago Advanced Workstation
     Support Center through TEMPEC.
     Please see eca105-eca108 for similar information.

     Use Service Code=33, Service Hours=01.3, System Hours=01.3
     to record time and expenses associated with installation of
     this eca.

     SAS KEYWORDS:
        701X            7208            5GB             TAPE DRIVE
        RS/6000         RS6000          RISC SYSTEM     AIX
        ECA121          ECA 121         7006            7009
        7011            7012            7013            7015
        7020            7248            7024            SCSI
        MICROCHANNEL    ADAPTER         DATA INTEGRITY  CORRUPTION
        MICROCODE       UCODE           D/T7011         D/T7012
        D/T7013         D/T7015         D/T7208         8MM
        MKSYSB
```

1.2.7 ETHERNET ADAPTER UPGRADE REQUIRED FOR AIX VER 3.2

Record number: H096592

```
      Device:              D/T701X
      Model:               M
      Tip key:             098
      Date created:        O92/02/23
      Date last altered:   A97/11/18
```

CUSTOMERS PLANNING TO INSTALL AIX VER 3.2 WILL BE ADVISED TO CONFIRM THE HARDWARE LEVEL OF THEIR ETHERNET ADAPTER(S). IF THE ETHERNET CARD HAS A ROS LEVEL 0008, 0009 OR 0010 THE CUSTOMER WILL BE ADVISED TO CONTACT THE IBM CUSTOMER ENGINEER REQUESTING ECA015.

```
    ******************************************************************
    DO NOT REPLACE THE ETHERNET ADAPTER; BUT INSTEAD INSTALL ECA015
    (ETHERNET EPROMS).
    ******************************************************************

    ECA015 SHOULD BE INSTALLED ON ALL APPLICABLE SYSTEMS PRIOR TO
    INSTALLATION OF AIX VERSION 3.2. FAILURE TO INSTALL ECA015
    WILL EXPOSE THE CUSTOMER TO POTENTIAL ETHERNET PROBLEMS.

    TO DETERMINE THE ADAPTER HARDWARE ROS LEVEL ENTER THE FOLLOWING
    COMMANDS:
      lsdev -C | grep ent (provides # of active ethernet adapters)
    then
      lscfg -v -l entx (x represents the card # in prior command)

    THE RESULTS OF THESE TWO COMMANDS WILL DISPLAY THE VITAL PRODUCT
    DATA (VPD) FOR INSTALLED ETHERNET ADAPTER(S).

    ECA015 IS AN "AS REQUIRED" ENGINEERING CHANGE TO UPGRADE EPROMS
    ON SPECIFIC ETHERNET ADAPTERS. ORDER VIA NORMAL EC ORDERING
    PROCESS. IN EMERGENCY SITUATIONS ORDER ECA015 "CODE A EXPEDITE".

    SAS KEYWORDS:
      701XLAN           701XCOMM          701XHANG          701XIPL
      701XECA           701XADAPT         701XADAPTCOMM     7012ECA
      7013ECA           7015ECA           7016ECA           7018ECA
      7012              7013              7015              701X
      7016              7018
```

1.2.8 ETHERNET RISER CARD JUMPER SETTING FOR 7012 MODELS 340 - 350
   Record number: H097218

        Device: D/T7012
        Model: M
        Tip key: 007
        Date created: O92/03/12
        Date last altered: A92/09/16

   ETHERNET RISER CARD REQUIRE THE CORRECT JUMPER SETTINGS TO ENSURE ETHERNET OPERATION. THERE ARE 3
   ROWS OF 8 JUMPER PINS. REFERENCING FROM THE TOP OF THE RISER CARD POSITION 1 IS THE TOP MOST ROW
   (FARTHEST AWAY FROM MICROCHANNEL I/O CONTACTS).

```
        ------------------------------------------
        |1 ||||||||  \                   |-
        |           \___ THICK CABLE (DIX-AUI)| | -THICK CONN.
        |2 ||||||||   /                  |-
        |           _____ THIN CABLE (BNC)  |
        |3 ||||||||  /                        |) - THIN CONN.
        ------------|         |----------------
                    |_____|
```
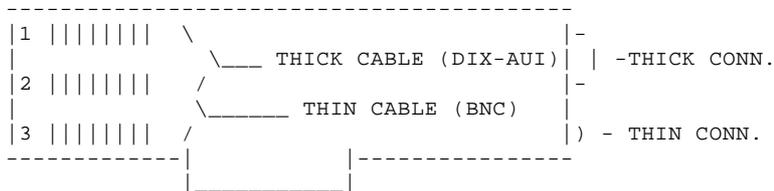
   ALL 8 JUMPERS MUST BE FROM ROW 1 TO ROW 2 WHEN USING THICK CABLE
   ALL 8 JUMPERS MUST BE FROM ROW 3 TO ROW 2 WHEN USING THIN CABLE
   IF INSTALLING TWISTED PAIR ETHERNET CARD ASK CUSTOMER IF " LINK
   INTEGRITY " WILL BE USED. THE SINGLE JUMPER MUST BE SET IN THE
   RIGHT TWO PINS FOR LINK INTEGRITY TO BE " ON " OR THE LEFT
   TWO PINS FOR LINK INTEGRITY TO BE " OFF ".

```
        ----------------------------------------
        |  OFF | | | ON                  |
        |                                |-
        |                                | |  - TWISTED PAIR
        |                                |-       CONN.
        |                                |
        |----------|         |-------------|
                   |_____|
```

   THIS INFORMATION WILL BE AVAILABLE IN THE NEXT RELEASE (04) OF
   THE INSTALLATION SERVICE GUIDE SA23-2624-04.
   THIS INFORMATION PERTAINS ONLY TO 7012 MODEL 340 AND MODEL 350

   SAS KEYWORDS:
     7012ADAPT   7012ADAPTCOMM   7012LANS   701X
     7012   RS6000   RS/6000   701XMISC
     701XLAN   701XADAPT   701XADAPTCOMM   701XETHERNET
     7012ETHERNET   701XJUMPERS   7012JUMPERS   701XRISER
     7012RISER   701XADAPTOTH   7012ADAPTOTH

1.2.9 FIRMWARE FOR GXX, JXX AND RXX SMP SYSTEMS

Record number: H161301

```
   Device:              D/T7012
   Model:               MG30
   Tip key:             024
   Date created:        O96/08/05
   Date last altered:   A98/04/24
```

This note is to inform the field that the latest level of
firmware (A9.50) is now available for distribution.

This new level of flash firmware includes the following
changes:

ENHANCEMENTS
----
1. Firmware integration (common code for GXX, JXX and RXX)
2. 604 processor support
3. 1gb memory support (stacked dimm)
4. Flash loading via a modem attached to a TTY (S2)
5. Additional power on tests
6. Improved power on tests
   Improved 409/022 SRN isolation
7. Improved diagnostic capability

FIXES
-----
1. Hang conditions during boot phase of AIX at led299 caused
   by invalid ipl control block
2. Network boot fails with graphics card installed (G30 only)
3. Incorrect memory error callout with off line tests
4. Incorrect error message for LOPP condition when operating
   with redundant power supply (R30 only)
5. Incorrect SRN callout for fan failures (R30 only) i.e. 407/
   075
6. Unable to select slot 8 as the boot slot from the maintenance
   menu (R30 only)
7. Unable to configure X.25 in the 2nd MCA planar (R30 only)
8. Incorrect text when booting from network when network
   adapters are in slots 4-7 of bus0 or slots 0-7 of bus1
9. Network boot timeout:
   During a boot from a NIM server, the transfer file by TFTP
   fails. The boot request is correct and it begins listening
   for boot request packets. The server always replies, but
   during the transfer by TFTP it seems that there is a timeout
   and the TFTP fails.

FIRMWARE INCOMPATIBILITY

Before installing the latest level of firmware, two things must
be determined.
1. Current level of firmware installed
2. Level of specific hardware currently installed

To determine the level of firmware, perform the following:
1. If the system is powered ON and AIX is operational, issue
   the following command at the prompt:
   lscfg -vl ioplanar0
   Refer to the heading "Device Specific (RM)". The first 4
   characters in the RIGHTMOST number is the flash firmware
   level.
2. If STANDBY POWER is ON and the standby menu is displayed,
   (key MUST be in service mode), select option 0 "Display
   Configuration" and check the FLASH_FW field for the current
   level.

DETERMINING THE CURRENT HARDWARE LEVEL

Before installing the new flash firmware, it is imperative
that the current hardware level is verified to determine if
an incompatibility exists. This current level of flash
firmware will not work with downlevel hardware. The steps
are different depending on the model of the machine.

G30 STEPS
----
1. If the system is powered on and AIX is operational, issue
   the following command:
   lscfg -vl sysplanar0
 a. Refer to the heading "Part Number". This field contains the
   assembly part number. Record this number for reference in the
   next step.
 b. Refer to the "Down level part number table" to compare the

down level assembly part number with the assembly part number
that was recorded in the previous step.
2. If the standby menu is displayed, select option 0 "Display
Configuration" and check the hardware level. For example,
the ELM card level will be shown under the field SP (system
planar). Record this number and refer to the abovementioned
table.
3. If the system is powered off (no AC), check the fru/assembly
part number of the elm by removing the card. Refer to the
down level part number table to compare the down level fru/
assembly part number with the fru/assembly part number of the
card.

J30 AND R30 STEPS
----
    1. If the system is powered on and AIX is operational, issue
    the following command:
    lscfg -vl ioplanar0
     a. Refer to the heading "Part Number". This field contains
     the assembly part number. Record this number.
     b. At the AIX prompt, execute the following command:
     lscfg -vl sif0
     c. Refer to the heading "Part Number". This field contains
     the assembly part number. Record this number.
     d. Refer to the "Down Level Part Number Table" to compare
     the down level assembly part number with the assembly part
     numbers that were recorded in the previous steps.

    2. If STANDBY POWER is ON and the standby menu is displayed,
       select option 0 "Display Configuration" and check hardware
       levels. IOD card level is indicated under the IOC field
       and SIB/SIF card level is under the SIB10 field. Record
       these numbers.

    3. If the system is powered off (no AC), check the fru/
       assembly part numbers of the IOD and SIF/SIB by removing
       the cards. Refer to the "Down Level Part Number Table" to
       compare the down level fru/assembly part number with
       the fru/assembly part number of the cards.

****************DOWN LEVEL PART NUMBER TABLE*****************
The table below indicates assembly part numbers to be used for
compatibility checks and the ECA to be used for each upgrade.
Read NOTE restrictions below each table.

ECA	TYPE	MODEL	NAME	FRU P/N	ASSEMBLY P/N
206	7012	G30	ELM	19H0228	19H0172,19H0369,19H0475
207	7015	R30	SIB	65G6131	11H8230,65G6108
207	7015	R30	SIB	11H8272	11H8245
207	7015	R30	IOD	19H0279	19H0304,19H0444,19H0463
208	7013	J30	IOD	19H0246	19H0303,19H0364,19H0462
208	7013	J30	SIF	19H0216	19H0385,19H0386,19H0460,19H0461

****NOTE**** The above assemblies will probably contain flash
firmware level 5.23 or 5.23P (R30); order appropriate ECA.
DO NOT RE-FLASH.

ECA	TYPE	MODEL	NAME	FRU P/N	ASSEMBLY P/N
206	7012	G30	ELM	19H0228	19H0482,19H0498,35H8707,35H8709 35H8752
207	7015	R30	IOD	19H0279	19H0481,96G4401
208	7013	J30	IOD	19H0246	19H0480,96G4400

****NOTE***** The above assemblies can accept flash firmware
level 7.04/7.04P; the MES upgrade enables use of these parts
for 604 machines.
Also, if either the assembly part number or fru part number on
the machine is on the above list, an incompatibility exists and
the flash firmware cannot be updated until the appropriate
fru(s) are installed in the machine.

The new level of firmware is available both on AIXTOOLS and
SIL. There are two versions of the flash firmware images on
AIXTOOLS and SIL. One is a binary image and the other is a
DOS emtcopy binary image.

Refer to the README file for creating diskettes and installation
instructions.

SAS KEYWORDS:
| 7012 | 7013 | 7015 | G30 |
| J30 | R30 | SMP | FIRMWARE |

```
FLASH           9.22            LEVEL           GXX
JXX             RXX
```

1.2.10 G30 ELM AND MRE MEMORY
  Record number: H024284

      Device: D/T7012
      Model: MG30
      Tip key: 022
      Date created: O96/08/30
      Date last altered: A97/04/21

  When replacing the system planar (ELM) on this machine, either
  for ECA206 or for regular maintenance, a problem may be
  encountered if MRE memory is installed. The ELM has standoffs
  that will NOT allow the MRE board to be installed. In order to
  install the memory board, the standoffs will have to be removed.
  This is done by removing a nut and washer from the UNDERSIDE
  of the ELM. If this hardware is removed, it should be given to
  the customer in case newer style memory is ordered in the
  future. Also, if this is checked ahead of time, it will prevent
  having to install the ELM twice.

  SAS KEYWORDS:
     7012/G30   G30   ELM   SYSTEM PLANAR
     ECA206   STANDOFFS   MRE   MEMORY
     SYSPLANAR   701X   SMP

1.2.11 INVALID SIMM LOCATION FOR SRN'S 812/XXX OR 940/XXX

Record number: H125984

```
        Device:               D/T701X
        Model:                M
        Tip key:              201
        Date created:         O95/01/12
        Date last altered:    A95/01/12
```

RISC6000 or 9076 (sp2) Some of the above SRN's, when encountered due to a SIMM error on a base memory card, will give invalid SIMM location information. SIMM errors are reported in the format 00-0x-00-0y, where x is the memory card location (A thru H) and y is the SIMM location (1 thru 8). The above SRN's are giving invalid SIMM locations on some models, giving letters for SIMM locations or leaving the SIMM location field blank. There is no way to translate this information into usable data. The Memory Card location is valid.

```
    IF THE SIMM LOCATION IS INVALID USE THE FOLLOWING PROCEDURE TO
    ISOLATE THE PROBLEM:
    Swap 4 SIMMs between the failing memory card and another card of
    the same size.  The next failure will isolate the error to 4
    SIMMs, depending on which memory card the failure now shows up
    on.  Next swap 2 of the suspect SIMMs back to their original
    card.  The next failure will isolate to 2 SIMMs. Swap 1 of these
    SIMMs back to the memory card it just came from and the next
    failure will identify the faulty SIMM.

    SAS KEYWORDS:
      701X             D/T7012          D/T7013          D/T7015
      7012             7013             7015             9076
      SP2              MEMORY           SIMM             SRN812-XXX
      SRN940-XXX       812-XXX          940-XXX          SRN812/XXX
      SRN940/XXX       SRN940           SRN812           RS6000
      RISC6000         D/T9076
```

1.2.12 LED288 HANG ON SMP CPU WITH EXPANSION UNIT ATTACHED
  Record number: H131122

        Device: D/T701X
        Model: M
        Tip key: 242
        Date created: O95/10/03
        Date last altered: A96/11/08

  LED288 on a 7013-J30 with a J01 expansion unit attached or 7012-
  G30 with a G01 expansion unit attached.
  This LED hang can occur any time that NVRAM is corrupted i.e.
  if battery runs low and needs to be replaced, or fru containing
  NVRAM is replaced. If the machine hangs at LED288 or a checkstop
  occurs with an expansion unit attached use the following
  procedure first before replacing any parts.

  The expansion unit must be unidentified to the cpu base unit.
  1. All connections to the expansion unit made
  2. Power applied to both the cpu and the expansion unit
  3. cpu keymode switch in Service position
  4. Type sbb at > sign to get standby menu
  5. At standby menu type a "2" (set unit number)
  6. The return message identifies the base unit a 0 and the
     expansion unit(s) as 1,2 etc. (done automatically by system
     and you will see 0-1-2 etc. displayed)

  IF A NEW INSTALL FOLLOW THE INSTRUCTIONS IN THE "HARDWARE SETUP
  PROCEDURE".

  SAS KEYWORDS:
     7013 - J30   D/T7013J30   7013MODJ30   7013MODELJ30
     J30   SMP   J01   RS6000
     LED288   288   101/288   101-288
     SRN101 - 288   SRN101/288   CONFIGURATION   EXPANSION
     7012 - G30   D/T7012G30   7012MODG30   7012MODELG30
     G01   G30   SMP   CHECKSTOP
     SP2   9076

1.2.13 LED8|-8 OR LED8T8
  Record number: H122733

```
        Device:             D/T701X
        Model:              M
        Tip key:            181
        Date created:       O94/02/15
        Date last altered:  A94/02/15
```

LED8T8 OR 8|-8 is an led indication that appears in the op panel display as an 8, the letter 'T' on its side, 8 or led8t8. This should be treated the same as an led185. To troubleshoot, use MAP1540 or miniumum configuration. This error usually is the result of a defective cpu, system planar or memory. As noted, minimum configuration should be used to isolate the problem.

```
     SAS KEYWORDS:
        7011             7012             7013             7015
        7018             RS6000           RISC6000         701X
        D/T7011          D/T7012          D/T7013          D/T7015
        LED8T8           8T8              LED 8T8          CPU
        RISC             MEMORY           SYSTEMPLANAR     SYSTEM PLANAR
```

1.2.14 LED869 OR LED957 DURING IPL
  Record number: H067665

       Device: D/T701X
       Model: M
       Tip key: 029
       Date created: O90/10/02
       Date last altered: A91/02/04

    MACHINES AFFECTED: D/T7012, D/T7013, D/T7015, D/T7016

    AUSTIN FSC HAS RECEIVED SEVERAL REPORTS OF LED 869 AND LED 957
    HALTS DURING IPL. THE PROBLEM IS CAUSED BY REMOVING MEMORY
    CARDS AFTER AIX SOFTWARE HAS BEEN INSTALLED.

    LED 869 WILL OCCUR WHEN ATTEMPTING TO IPL FROM A SCSI DISK
    DRIVE WHEN ONLY 8 MB OF MEMORY IS INSTALLED.

    LED 957 WILL OCCUR WHEN ATTEMPTING TO IPL FROM A DIRECT BUS
    ATTACHED (DBA) DRIVE WHEN ONLY 8 MB OF MEMORY IS INSTALLED.

    IF A CUSTOMER IS REPORTING ONE OF THE ABOVE SYMPTOMS, CHECK
    THAT MEMORY CARDS HAVE NOT BEEN REMOVED AFTER AIX WAS INSTALLED.
    IF YOU DETERMINE THAT THE CUSTOMER HAS NOT REMOVED MEMORY CARDS
    THEN FOLLOW NORMAL PROBLEM DETERMINATION PROCEDURES TO ISOLATE
    THE CAUSE OF THE PROBLEM.

    SAS KEYWORDS:
      701X   7012   7013   7015
      7016   701XIPL   7012IPL   7013IPL
      7015IPL   7016IPL   701XLED   7012LED
      7013LED   7015LED   7016LED   LED869
      LED957   RS6000   RS/6000

1.2.15 LED888/102 700/XCX RUNNING 2.4.3 DIAGS
  Record number: H124763

      Device: D/T701X
      Model: M
      Tip key: 188
      Date created: O94/07/29
      Date last altered: A94/07/29

  When running stand-alone diagnostics 2.4.3 and using a 3151 as a console be sure to hit the RETURN key and not the SEND key
  when identifying your terminal. If SEND is hit the machine may crash with an 888/102 700/xCx. This may cause someone to replace
  unneeded parts.

      SAS KEYWORDS:
        LED888/102 700   888/102 700/XCX   888-102-700-XCX   LED888-102-700
        D/T7006_ 7006   D/T7009 7009   D/T7011 7011   D/T7012 7012
        D/T7013 7013   D/T7015 7015   D/T7018 7018   D/T7030 7030
        DIAGS   DIAGNOSTICS   DISKETTES   CDROM
        DIAGS2.4.3   2.4.3   RS6000   RISC6000
        FLASHING LED888   FLASHING 888   3151   CONSOLE
        IBM3151   888/102 700/0C4   888/102 700/0C0   888-102-700-0C0
        888 - 102 - 700-0C4   888/102 700/0CX

1.2.16 LEVEL 2 CACHE CONNECTORS MISLABELED ON CPU PLANAR
Record number: H126786

```
    Device:                 D/T7012
    Model:                  M
    Tip key:                012
    Date created:           O95/03/17
    Date last altered:      A97/04/15
```

There are two physical Level 2 cache connectors on the CPU planar. One is labeled "L1" and the other is labeled "L2" (L1 and L2 labels should not be interpreted as level 1 and level 2 cache). Connector "L1" should be "L2" and "L2" should be "L1".

```
    This creates a problem when diagnostics are run because they
    will point to the wrong Level 2 cache location.

    ### SEE NOTE BELOW ####

    If a fault exists on the Level 2 cache, the diagnostics will
    call out the following SRNs:
```

DIAGNOSTICS SRN	Diag FRU Callout	Actual Level 2 Cache FRU location
940-602	00-00-00-01	L2
940-602	00-00-00-02	L1
940-604	00-00-00-01	L2
940-604	00-00-00-02	L1

```
    NOTE:
    Approximately 200 CPU cards are affected in 7012-39H, 7030-3CT,
    and SP2 machines.
    To identify if a card has this problem it must satisfy the
    following criteria:
    1. Assembly P/N88g3541 (on barcode label)
    2. The level 2 cache connectors are labeled L1 and L2
    SAS KEYWORDS:
        7012            7012/39H        7012MOD39H        7012MODEL39H
        MODEL39H        MOD39H          7030              940/602
        7030/3CT        7030MOD3CT      7030MODEL3CT      MOD3CT
        MODEL3CT        SP2             SP2THIN           THINNODE
        SRN904/602      LEVEL2          L2CACHE           CACHE
        LEVEL 2
```

1.2.17 MACHINE TYPE 1333 (4MM TAPE DRIVE)
  Record number: H096323

        Device: D/T701X
        Model: M
        Tip key: 191
        Date created: O94/09/07
        Date last altered: A94/09/07

  Use the following procedure to remove a stuck cartridge in a 4mm tape drive m/t1333.

    1) Turn the power switch to the OFF position
    2) With the eraser end of a pencil or pen, apply pressure to the
       end of the cassette closest to the door. Lift gently to raise
       the end of the tape.
    3) While maintaining pressure on the "edge" of the cassette
       turn the power switch to the ON position.
    4) While continuing to apply pressure to the edge of the
       cassette press the EJECT button to dislogge the cassette.
    5) After removing the cassette, turn the power switch to the
       OFF position.
    6) Turn the power switch to the ON position to "recycle" the
       tape drive.
    IF THIS TAPE DRIVE P/N93F5556 IS REPLACED IT "MUST" BE WRITTEN
    OFF TO M/T1333.

    SAS KEYWORDS:
      M/T1333   M/T 1333   D/T1333   D/T 1333
      7006   7008   7011   7012
      7013   7015   D/T7006   D/T7008
      D/T7011   D/T7012   D/T7013   D/T7015
      RS6000   DICKENS   RISC   RISC
      TAPE   4MM

1.2.18 *MEMORY CARDS AND SIMMS COMPATIBILITY*
Record number: H122263

       Device: D/T701X
       Model: M
       Tip key: 178
       Date created: O94/01/10
       Date last altered: A97/12/04

    **   !!!!!!!!!!!!!!!!!!! WARNING !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
    ****

       BE SURE TO CHECK THE ENTIRE CHART BEFORE USING P/N'S AS NEW
       CARDS AND SIMMS HAVE BEEN ADDED....

Mem Card Type	Fru # Card #	Card Assm #s in MBs	Simm Upgrade in MBs	EC Lev lscfg -v	Model #s
S1	59f4433 594431	53f3089-8 53f3091-16	N/A	00	320/520/530 730/930/32h 52h
U1 not compatible with any other mem	59f4436	71f0855-32	N/A	XXXXX	540 only
S1.5	81f8926 81f8924	81f8925-32 81f8927-64	N/A	00	320/520/530 730/930/32h
S3.1	65g1803 00g2205	00g2206-8 00g2209-16 00g2211-32 00g2213-64	32, 64, 128	20	340/350/53h 550/950
S3.2	65g1803 32g0101	32g0102-8 32g0103-16 32g0104-32 32g0105-64	32, 64, 128	20	340/350/53h 550/580/950
S3.3	65g1803 32g1846	32g1858-8 32g1859-16 32g1860-32 32g1861-64 43g0591-128	32, 64, 128	21	340/350/355 360/365/370 375/53h/55L 550/560/570 580/950/97b 98b/980
S4.5	65g1803 52g4801 for 256mb see simms below	65g1793-8 65g1799-16 65g1800-32 65g1801-64 65g1802-128	32, 64, 128	33	58h/590/990
S4.5 256mb Downward compatible except with S1, S1.5 & U1	52g4801 for 256mb see simms chart below	52g4729-256	N/A	34	58h/590/990
S4.6 255mb Downward compatible except with S1, S1.5 & U1	56g4729 88g3680 for 256mb see simm chart below	same as S4.5	N/A	34	58h/590/990
S5.0 base card	12h1331	12H1325			
S5.0 info only		12H1326 (32M - Populated Assy number) 12H1327 (64M - Populated Assy number) 12H1328 (128M- Populated Assy number) 12H1329 (256M- Populated Assy number)			

3.0 MEMORY SIMM MATRIX

Simm Type	FRU #	Simm P/N	Card Size
1mb	59f4581	23f8549	8mb
2mb	59f4582	68x6271	16mb
4mb	70f9973	68x6356	32mb
8mb	70f9976	68x6357	64mb
16mb	43g1796	32g8212	128mb
32mb (s4.5)	65g6452	64g2074	256mb 4.5 card
32mb S4.6 & S5.0	39H8312	33g0728	256mb 4.6 card & 5.0 card

4.0 MEMORY SIMM KIT & RETURN KIT MATRIX

Simm Kit Memory Size	Memory Upgrade Kit P/N	Return Kit P/N
8mb	N/A	52g4078
16mb	N/A	52g4079
32mb	65g3583	52g4080
64mb	65g3584	52g4081
128mb	65g3585	52g4082

SAS KEYWORDS:
```
  701X              7012            7013            7015
  7018              7012-32X        7013-52X        7013-53X
  7013 - 54X        7013-55X         7013-56X         7013-57X
  7013 - 58X        7015-92X         7015-93X         7015-95X
  7015 - 97X        7015-98X         7015-99X         7013-59X
  7012 - 34X        7012-35X         7012-36X         7012-37X
  MOD32H MOD34H     MOD53H MOD55L    MOD58H          MOD98H
  MACH701X          D/T7012          D/T7013         D/T7015
  RS6000            MEMORY           COMPATIBILITY
```

1.2.19 NIM INSTALL COMPATABILITY FOR 10/100 ETHERNET ADAPTER
  Record number: H1665

        Device: D/T701X
        Model: M
        Tip key: 322
        Date created: O97/06/12
        Date last altered: A98/01/15

   To enable Network Install Manger (NIM) installs using the
   10/100 Mb Ethernet MC adapter (FC #2964 and FC #2994) a
   minimum level of IP ROS emulation/Firmware code is required
   as follows:

   -- The following systems require code level
      IPLROM.image.9705071651 or higher:
      D/T7006:   41T 41W 42T 42W
      D/T7012:   390 39H
      D/T7013:   590 591
      D/T7015:   99J 99K R20 R24
      D/T7030:   3BT 3CT
   -- If the above code is not available then the normal NIM
      IPLROS Emulation diskette can be used. Note: PTFs might
      be needed on the NIM server to complete installation.
      Contact software support if needed.

   -- The following systems require firmware level VER1.2 LVL2.07
      or above:
      D/T7009:   C10 C20
      D/T7013:   595

   -- The following systems require firmware level C9.43 or above:
      NOTE: 7012/G30 with 601 processors does NOT support C9.43
      D/T7012:   G30 (With 604 Processors Only) G40
      D/T7013:   J30 (604 Upgrade only) J40 J50
      D/T7015:   R30 (604 Upgrade only) R3U R4U R40 R50

   SAS KEYWORDS:
      701X   SP2   SMP   IPL
      ROM   FIRMWARE   IPLROM   VERSION
      LEVEL   LVL

1.2.20 ON CARD LED BLINK CODES FOR SCSI-2 ADAPTER 4-6 OR 4-7

Record number: H104172


```
      Device:               D/T9076
      Model:                M
      Tip key:              023
      Date created:         O96/04/17
      Date last altered:    A96/04/17
```


Meaning of On Card LED Blinking and Codes The on card LED will be ON while the adapter is running through the PowerOnSelfTest. If POST completes successfully, the LED will go OFF. If your system won't boot and your boot adapter is a 4 - 6 or 4 - 7 AND the LED stays ON, disconnect any external devices and run diagnostics to verify that the adapter and not an external device/s in the configuration is the cause of the problem. If the LED is blinking in a periodic fashion (on-off-on off-pause-on-off-on-off etc) it means that one of the POST tests has failed. The system may boot in this case, but will probably not function correctly. Diagnostics should be run to verify the failure or isolate the problem in the system configuration. The flashing LED blink codes are as follows:

```
      Number of       Meaning
      Flashes
         1    =    80C186 ROM test failed
         2    =    Local RAM test failed
         3    =    Terminator power circuit breaker open (PTC failure)
         4    =    80C186 Internal peripheral test failed
         5    =    Local transfer bus failed
         6    =    No value given N/A
         7    =    System interface control chip test failed
         8    =    SCSI internal interface test failed
         9    =    No value given N/A
        10    =    SCSI external interface test failed
```

```
   A blink code of 3, 8, or 10 may indicate a configuration problem
   like a shorted cable or bad device, or duplicate SCSI addresses
   on the same bus. Refer to the SCSI-2 Fast / Wide Problem
   Problem Determination Procedures in the MAPs section of the
   Common Diagnostics & Service Guide for further troubleshooting
   guidelines.

   During normal operation the device driver may issue a command
   reset to the adapter, when this occurs you will see the LED
   blink briefly.

   SAS KEYWORDS:
     7012            7013            9076            SP2
     D/T7012         D/T7013         D/T9076         RISC6000
     RISC6K          RISC
```

1.2.21 PROBLEMS WITH AIX 3.2 MEMORY SCRUBBING FEATURE
  Record number: H101858

      Device: D/T701X
      Model: M
      Tip key: 132
      Date created: O92/10/08
      Date last altered: A92/10/12

   MACHINES AFFECTED: D/T7011, D/T7012, D/T7013, D/T7015, D/T7016

   THE FOLLOWING PROBLEMS ARE ASSOCIATED WITH THE MEMORY SCRUBBING
   FEATURE PROVIDED IN AIX VERSION 3.2 AND ABOVE.

   1.   INTERMITTENT LED888 SYSTEM HALTS.

   2.   SYSTEM HANGS APPROXIMATELY 3-4 HOURS AFTER IPL. NO ERRORS
        ARE LOGGED IN THE ERROR LOG AND THE LED DISPLAY REMAINS
        BLANK. IF A SYSTEM DUMP IS ATTEMPTED BY TURNING THE KEY
        TO THE SERVICE POSITION AND PRESSING THE RESET BUTTON,
        LED100 WILL APPEAR IN THE LED DISPLAY. THIS SYMPTOM HAS
        BEEN REPORTED ON SYSTEMS WITH MORE THAN 128MB OF MEMORY
        INSTALLED.

   3.   ERROR LOG ENTRIES AND CONSOLE ERROR MESSAGES REPORTING
        DEFECTIVE MEMORY. IN SOME CASES THE AMOUNT OF DEFECTIVE
        MEMORY CONTINUES TO INCREASE EACH TIME DIAGNOSTICS ARE RUN.
        REPLACEMENT OF HARDWARE DOES NOT CORRECT THE PROBLEM.

   THESE THREE PROBLEMS ARE CURRENTLY BEING INVESTIGATED. IF THESE
   OR OTHER UNUSUAL SYMPTOMS ARE BEING REPORTED AND AIX VERSION
   3.2 OR ABOVE IS INSTALLED, MEMORY SCRUBBING SHOULD BE TURNED-
   OFF.

   DO THE FOLLOWING TO CHECK/TURN-OFF MEMORY SCRUBBING.

   1. Login as root
   2. ENTER smit AT AIX COMMAND PROMPT
   3. SELECT System Environments
   4. SELECT Change / Show Characteristics of Operating System
   5. CHANGE Enable memory SCRUBBING to FALSE
   6. Press ENTER

   After turning-off memory scrubbing the system should be shutdown
   and rebooted to clear the defective memory map created during
   memory scrubbing.

   SAS KEYWORDS:
     701X   7011   7012   7013
     7015   701XLED   7011LED   7012LED
     7013LED   7015LED   701XHANG   7011HANG
     7012HANG   7013HANG   7015HANG   7016
     7016LED   7016HANG

1.2.22 RELOCATION KIT PART NUMBERS FOR RISC SYSTEMS
  Record number: H096004

        Device: D/T701X
        Model: M
        Tip key: 093
        Date created: O92/01/13
        Date last altered: A93/04/19

    BELOW ARE THE PART NUMBERS FOR THE RISC SYSTEM/6000 RELOCATION
    KITS (PACKAGING):

      M/T   PART NUMBER

    D/T7012 - P/N58F2891
    D/T7013 - P/N58F2890
    D/T7015 - P/N72X5992
    D/T7016 - P/N59F3854

    ORDERING PROCEDURES:

    THESE RELOCATION KITS CAN BE ORDERED VIA REAL TIME SYSTEM (RTS).
    FOR QUESTIONS, REFER TO D/L FDS91-058-NS051 OR FDS91-075-NS062
    OR THE BRANCH OFFICE MANUAL SECTION 1, SUBSECTION 12.
    SAS KEYWORDS:
      701X   RS6000   RS/6000   7012
      7013   7015   7016   701X PART
      7012 PART   7013 PART   7015 PART   7016 PART
      701XMISC   PACKING   PACKAGING   701X PACKING
      7012PACKING   7013PACKING   7015PACKING   701X SHIPPING
      7012SHIPPING   7013SHIPPING   7015SHIPPING   701X PACKAGING
      7012PACKAGING   7013PACKAGING   7015PACKAGING

1.2.23 REMINDER&COLON. RESET DATE AND TIME AFTER DISCONNECTING BATTERY

Record number: H09180


```
      Device:              D/T701X
      Model:               M
      Tip key:             089
      Date created:        O91/12/13
      Date last altered:   A92/06/02
```

MACHINES AFFECTED: D/T7012, D/T7013, D/T7015, D/T7016, D/T7018

SOME SOFTWARE APPLICATIONS (IE. CATIA) MAY NOT RUN IF THE SYSTEM
DATE AND TIME IS NOT SET CORRECTLY.

THE LITHIUM BATTERY, P/N23F0168, MAINTAINS THE TIME-OF-DAY CLOCK
AND THE CONTENTS OF NVRAM WHEN THE SYSTEM IS POWERED-OFF.
THE DATE AND TIME MUST BE RESET ANYTIME THE BATTERY IS REPLACED
OR DISCONNECTED FOR MORE THAN 30 SECONDS.

THE DATE AND TIME CAN BE RESET BY USING THE FOLLOWING PROCEDURE:

1.   ENTER 'smit date' (IN LOWER CASE) ON THE COMMAND LINE.
2.   UPDATE THE DATE AND TIME FIELDS AND PRESS ENTER.

IF YOU DO NOT HAVE ACCESS TO THE ROOT PASSWORD, BE SURE TO
REMIND THE USER THAT THE DATE AND TIME MUST BE RESET.

```
SAS KEYWORDS:
   701X            7012            7013            7015
   7016            7018            701XMISC        7012MISC
   7013MISC        7015MISC        7016MISC        7018MISC
   RS6000          RS/6000         701XPWR         7012LOGIC
   701XLOGIC       7012PWR         7013LOGIC       7013PWR
   7015PWR         7015LOGIC
```

THE LITHIUM BATTERY, P/N23F0168, MAINTAINS THE TIME-OF-DAY CLOCK

1.2.24 SCSI-2 DIFFERENTIAL ADAPTER FAILURE ISOLATION PROCEDURE
  Record number: H20465

      Device: D/T701X
      Model: M
      Tip key: 150
      Date created: O93/02/19
      Date last altered: A95/03/30

 BEFORE REPLACING THE SUSPECTED SCSI-2 DIFFERENTIAL ADAPTER, THE POSITIVE TEMPERATURE COEFFICIENT (PTC)
 SHOULD BE CHECKED. THE PURPOSE OF THIS PTC IS TO PROTECT THE EXTERNAL BUS. THE PTC CAN BE TRIPPED BY A
 CABLE, TERMINATOR, OR ANY DEVICE ATTACHED TO THE DIFFERNTIAL BUS.
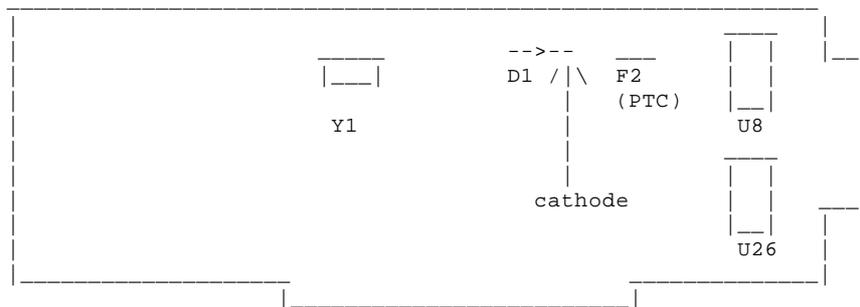
     A FAULT CAUSES AN INCREASE IN PTC RESISTANCE, AND THE RESULTANT
     HEAT TRIPS THE PTC. REMOVING THE FAULT AUTOMATICALLY ALLOWS THE
     PTC TO RESET (WITHIN 15 MINUTES THE PTC SHOULD RESET).

     ****
     DO NOT REPLACE THE SCSI-2 DIFFERNETIAL ADAPTER BECAUSE THE PTC
     HAS TRIPPED. USE THE FOLLOWING ISOLATION PROCEDURE TO LOCATE THE
     CABLE, TERMINATOR, OR DEVICE ON THE EXTERNAL BUS CAUSING THE PTC
     TO TRIP.
     ****

     IMPORTANT ENSURE THAT THE SYSTEM POWER AND ALL EXTERNALLY
     ATTACHED DEVICE POWER IS TURNED OFF. ALL TESTING WILL BE DONE
     WITH POWER OFF, USING DIGITAL OHMMETER FOR RESISTANCE READINGS.

     STEP 1. WITH THE SCSI-2 DIFFERNTIAL ADAPTER STILL INSTALLED IN
             THE SYSTEM UNIT (EXCEPT IN MODEL 9XX, WHERE THE ADAPTER,
             FOR ACCESSSIBILTY, SHOULD BE REMOVED AND THE EXTERNAL
             CABLE REMAIN ATTACHED), VERIFY THAT THE PTC IS COOL AND
             IS IN A LOW RESISTANCE STATE (200 MILLIOHMS OR LESS) BY
             CHECKING WITH A DIGITAL OHMMETER.

     STEP 2. LOCATE BELOW DIODE D1 AND CONNECT THE (+) POSITIVE OHM-
             METER LEAD TO THE CATHODE OF D1 (THE END NEAREST THE PTC
             F2).
             LOCATE BELOW OCILLATOR Y1 AND CONNECT THE (-) NEGATIVE
             OHMMETER LEAD TO THE CAN OF Y1.


```
 _____
 |                                                   ____  |
 |                           -->--    ___    | |  |__ |
 |       _____              D1 /|\  F2      | |    |   |
 |       |___|                  |   (PTC)    |__|    |   |
 |                             |             ____    |
 |       Y1                    |            |    |   |
 |                             |            | |  |   |
 |                             |          U8 |    |
 |                             |              ____    |
 |                             |            | |  |   |
 |                          cathode         | |   ___|
 |                                          |__|   |
 |                                          U26    |
 |_____          _____|
 |                   |_____|
                     |_____|
```

     STEP 3. IF BOTH DIFFERENTIAL TERMINATORS ARE INSTALLED ON THE
             ENDS OF THE SCSI-2 BUS (TWO TERMINATORS ON THE ADAPTER
             U8 AND U26 AS WELL AS THE TERMINATOR AT THE LAST DEVICE
             ON THE BUS), THE RESISTANCE SHOULD INDICATE BETWEEN 19
             AND 25 OHMS.

               * IF RESISTANCE IS BETWEEN 19 AND 25 OHMS THERE IS NO
                 APPARENT CAUSE FOR THE TRIPPED PTC.

               * IF RESISTANCE IS GREATER THAN 25 OHMS, ONE OF THE BUS
                 END TERMINATORS IS MISSING AND SHOULD BE REPLACED.

               * IF RESISTANCE IS LESS THAN 19 OHMS, TROUBLE SHOOT THE
                 SYSTEM BY DISCONNECTING CABLES, TERMINATORS AND THE
                 DEVICES ATTACHED TO THE BUS UNTIL THE CAUSE OF THE
                 LOW RESISTANCE IS FOUND.
     PROBABLE TRIPPED PTC CAUSES:

       1. MORE THAN TWO TERMINATORS ON THE BUS.

       2. A SHORTED TERMINATOR OR CABLE. (CHECK FOR BENT PINS)

       3. INTERMITTENT PTC TRIPPING MAY BE DUE TO A SHORTED CABLE OR
          IMPROPERLY SEATED CABLE CONNECTOR.

       4. A SHOTED DEVICE

       5. MISSING ON CARD TERMINATORS U8 AND U26.(TERMINATORS SHOULD

BE REMOVED ONLY ON INCREASED AVAILABILITY CONFIGURATIONS).

   6. HOT PLUGGING SCSI CABLES MAY TRIP PTC.

SAS KEYWORDS:
   RISC   RISC/6000   701X   7013
   7012   7015   7016   D/T701X
   D/T7012   D/T7013   D/T7015   D/T7016

1.2.25 SCSI-2 F/W CONTROLLERS (ALL VARIETIES) MAY CAUSE PROBLEMS
 Record number: H133050

        Device: D/T701X
        Model: M
        Tip key: 258
        Date created: O96/03/13
        Date last altered: A96/03/18

   ** MACHINES AFFECTED **:
   All M/T that use Corvette (SCSI-2 F/W), including integrated
   versions.

   ** PROBLEM **:
   The Corvette SCSI-2 F/W Controller contains a chip called
   Malibu which is used to interface with the MicroChannel.

   A problem was found with a certain datecode of Malibu that
   can cause system problems. The datecode is printed on the
   chip itself (NOT on the card/assy barcode). The Malibu chip
   contains three lines of markings. The first line should have
   the chip p/n (61G2323). Skip the second line. The datecode
   is printed on the third line and the following datecodes are
   suspect:
                        1Q010013N
                        1Q010023N
                        1Q03K023N
                        1Q04T003N
                        1Q06K013N

   The location of the Malibu chip on the card/assy varies
   depending on which version of the controller you have. Here
   is a list of the U-location on the card/assy of the Malibu
   chip for each controller type. The U number is silkscreened
   on the card assembly.

        SCSI-2 F/W
      Controller Type   FRU p/n   U-location
   * Integrated   52G4325   U60
    MicroChannel SE   11H3600   U5
    MicroChannel DE   11H7660   U13
    Enhanced Microchannel DE   52G3380   U16

    Note (*):   The Integrated SCSI-2 F/W controller is the one
                on the I/O planar of the 7012-380/390/39H and
                7012-3AT/3BT/3CT systems.

    Although you may have one of the suspect datecodes, be aware
    that this may not be your problem. The entire datecode is
    not bad, but because of this, the whole lot is suspect. If
    you have any of the symptoms below, keep in mind the SCSI-2
    F/W adapter may be the problem to assist in Problem
    Determination.

   ** SYMPTOMS **:
   There are three types of symptoms you may see....
   1) Checkstops
       For the 7012/7013/7015 boxes, analysis of the checkstop
       file will show an SCU (SIO BUS 0 PARITY, or SIO BUS 1
       PARITY) checkstop occurred.

       On the 7006/7009/7011 boxes, a checkstop cannot be
       decoded further.

       On the SMP boxes, you will get a "Data Bus Parity Error"
       checkstop.

   2) System Hang/Unresponsive
       The system may hang (with no other symptoms) or it may
       be unresponsive to any inputs typed in. In the latter
       case, you may enter a simple command like 'ls', but
       will receive no response. You can usually Ctl-C to
       break out to another prompt, but any other command
       will not produce any responses.

   3) DMA_ERR in the Error Log
       You may periodically see DMA_ERR in the error log.
       The "CHANNEL UNIT ADDRESS" will point to the arbitration
       level of the SCSI-2 F/W Controller.

   ** WORKAROUND **:
   None

   ** PERMANENT FIX **:

```
Replace the card/assy if you suspect this is your problem.
Insert a note with the suspect card/assy when returning it to
Austin with the words "Bad Malibu datecode lot".
SAS KEYWORDS:
   7006             7008             7009             7011
   7012             7013             7015             FAST/WIDE
   F/W              CORVETTE         MALIBU           CHECKSTOP
   HANG             DMA_ERR          SCSI-2           SCSI2
   I/O              INTEGRATED       U60              U5
   U13              U16              D/T7006          D/T7008
   D/T7009          D/T7011          D/T7012          D/T7013
   D/T7015
```

1.2.26 SMP BUMP CONSOLE FLAG
  Record number: H125985

        Device: D/T701X
        Model: M
        Tip key: 202
        Date created: O95/01/12
        Date last altered: A98/05/05

  1) SMP's are shipped with the BUMP console DISABLED. Because of
     this, when first booting your system, you will see LED 165 on
     the LED display for about 4 minutes, indicating that tests
     are being run. Since the BUMP CONSOLE is shipped as disabled,
     there will be nothing displayed on the BUMP CONSOLE. To
     enable the BUMP CONSOLE, the flag will have to be enabled
     from the STANDBY MENU. The flag will then stay enabled until
     disabled from the menu.
         According to the MAPs in the Diagnostic Information for
     Micro Channel Machines (SA38-0532-03) on page 2-5 it now
     states that on an SMP system the LED165 may display for about
     30 minutes.

  2) The default value of the BUMP Console Flag is incorrect in
     the manuals. As stated above, the flag is set to Disabled as
     the default, it is listed as Enabled in the documentation.
     Below are the locations where this information is listed
     incorrectly.
     7012 G Series Service Guide   - Pg A-13
     7012 G Series Operator Guide   - Pg 3-12
     7013 J Series Service Guide   - Pg 2-12
     7013 J Series Operator Guide   - Pg 3-12
     7015 Mod R30 CPU Encl. Service Guide - Pg 2-13
     7015 Mod R30 CPU Encl. Operator Guide - Pg 3-13

     SAS KEYWORDS:
     7012/G40   7013/J40   7015/R40   7015/R40
     D/T7013/J30   D/T7015/R30   7012MODG30   7013MODJ30
     7013MODR30   G30   J30   R30
     7012/G30   7013/J30   7013/R30   7012G30
     7013J30   7015R30   RS6000   RISC6000
     7012   7013   7015   SMP
     9076   SP2   7013/J50   7015/R50
     D/T7012   D/T7013   D/T7015   D/T701X
     701X

1.2.27 3153 INFO&COLON. MARKETING REFERENCE GUIDE (G520-9415)
Record number: H16288

         Device: D/T3153
         Model: M
         Tip key: 016
         Date created: O97/05/29
         Date last altered: A98/03/19

     A 30-page 3153 Marketing Reference Guide (G520-9415) is
     available for IBM Customers, IBM Representatives and IBM
     Business Partners. The 3153 Marketing Reference Guide contains:
       - 3153 Feature/Function Information
                 - Communication and Parallel Ports
                 - Dual Session
                 - Programmable Keys
                 - Setup Menu
                 - Character Sets and Code Pages
       - 3153 Keyboards and Keyboard Languages
       - 3153 Ordering Information
       - 3153 Warranty/Service/Maintenance Information
       - 3153 Model, Part Number Information (Worldwide)
       - 3153 Technical Specifications Information
                 - Communication and Parallel Ports
                 - Screen Formats
                 - Physical
       - 3153 Host/Printer Cabling/Communication Information
                 - RS/6000, AS/400
       - 3153 Recommended Setup Values/Configuration Information
                 - RS/6000, AS/400, 3745, 4690

     The 3153 Marketing Reference Guide is a great technical and
     sales support document.

     To obtain a copy of the 3153 Marketing Reference Guide via:

      IBM Market Tools (MKTTOOLS):
       - Enter the follow OV/VM Command:
         TOOLS SENDTO USDIST MKTTOOLS MKTTOOLS GET G5209415 PACKAGE
      IBMFAX Information Service:
       - call 1 - 800-IBM-4FAX (US only) and request document #5704
       - IBMFAX intranet: http: //w3.ibmfax.ibm.com
      IBM PC Company Fax System:
       - call 1 - 800-IBM-3395 (US only) and request document #10005
       - call 1 - 919-517-0011 (Worldwide - enter country code) and
         request document #10005
      IBM Austin Intranet:
         http: //w3.rs6000.ibm.com/mktmat
      IBM Canadian AIX Support Centre Intranet:
         http: //w3.toraix.can.ibm.com/hdw/menu/3153.mnu

     SAS KEYWORDS:
       D/T3153   7006   7015   3153
       7008   7024   MARKETING   7009
       7025   REFERENCE   7010   70XX
       GUIDE   7011   700X   RS/6000
       7012   701X   RS6000   ATTACHMENT
       702X   AS/400   CONFIGURE   3745
       AS400   CONFIGURATION   4680   G5209415
       4690   SCO   UNIX   OPENSERVER
       D/T701X   D/T70XX   D/T702X   SETUP
       CABLING   INFO   INFORMATION   GENERAL
       D/T7006   D/T7008   D/T7009   D/T7010
       D/T7011   D/T7012   D/T7015   D/T7024
       D/T7025   D/T4680   D/T4690   SERVER
       H16288   PART   PARTS   WARRANTY
       SERVICE   SPECIFICATIONS CABLING   ATTACH
       ATTACHMENT   AIX   OS400   OS/400
       HOST   PRINTER   CONSOLE   HELP
       RISC   RISC/SYSTEM

1.2.28 5081,6091,POWERDISPLAYS 16,17 DISPLAYS

Record number: H006167

```
        Device:                 D/T701X
        Model:                  M
        Tip key:                041
        Date created:           O90/12/13
        Date last altered:      A93/12/17
```

  IBM 5081's, 6091's, & POWERDISPLAYS MAY DISPLAY 2 VERY FINE HORIZONTAL LINES ACROSS THE SCREEN LOCATED
  APPROXIMATELY 1/3 AND 2/3 OF THE DISTANCE FROM THE TOP OF THE SCREEN.

```
    AT "NORMAL VIEWING DISTANCE", THESE HORIZONTAL LINES ARE NOT
    VISIBLE, AND ARE ONLY SEEN UPON CLOSE INSPECTION WHEN A FULL
    WHITE BACKGROUND FIELD DISPLAY IS USED.

    THE HORIZONTAL LINES ARE NOT A DEFECT. NO PARTS SHOULD BE
    REPLACED IN AN ATTEMPT TO CORRECT THIS PERCEIVED PROBLEM.
    THE HORIZONTAL LINES ARE THE RESULTS OF THE TECHNOLOGY USED
    IN THE MANUFACTURING OF THE 5081 AND 6091 DISPLAYS.
    THE HORIZONTAL LINES ARE NOT THE RESULTS OF A FAILING FRU AND/OR
    MANUFACTURING DEFECT.

    REPLACING DISPLAY ADAPTERS IN THE RISC SYSTEM/6000 OR FRU'S
    IN 5081'S, 6091'S, AND POWERDISPLAYS  WILL NOT REMOVE
    THE HORIZONTAL LINES
    MACHINES AFFECTED:  D/T7012, D/T7013, D/T7015, D/T7016, D/T5081,
                        D/T6091. POWERDISPLAYS 16 AND 17

    SAS KEYWORDS:
      5081DISP          6091DISP          DISPLAY           701X
      701XDISP          701XADPT          6091ADPT          5081ADPT
      701XSYSADPT       701X              7012              7013
      7015              7016              RS6000            RS/6000
      POWERDISPLAY      POWER DISPLAY
```

```
1.2.29 540MB DISK DRIVE - END OF MANUFACTURING
  Record number:    H163205


        Device:              D/T701X
        Model:               M
        Tip key:             344
        Date created:        O98/03/30
        Date last altered:   A98/03/30
```
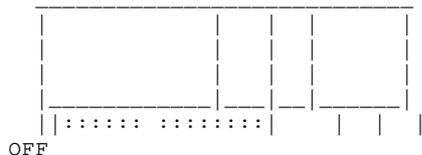
Due to the End of Manufacturing of the 540MB disk drive, P/N51G8237 will sub to a different drive. The replacement drive that will be used when the sub takes place will be the 2.2GB drive, P/N74G6996. The form factor will remain constant, however the address jumper setting will be different. Use the following table when setting the address jumpers on the replacement drive.
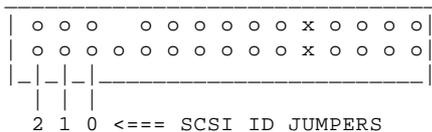
```
    ************************************************************

       2.2GB (new replacement)
      P/N74G6996
                                        VALID ADDRESSES
                        (end view)
     _____
     |          |    |  |  |    |
     |          |    |  |  |    |     Address|Jumper|Jumper|Jumper
     |          |    |  |  |    |        |  2   |  1   |  0
     |_____|___|__|____|    |     --------------------------
     ||::::::: :::::::::|   |  |  |       0    | OFF  | OFF  |
   OFF
     ---------------------------       1    | OFF  | OFF  | ON
       \            /                  2    | OFF  | ON   | OFF
        \          /                   3    | OFF  | ON   | ON
         \        /    REQUIRED JUMPER  4    | ON   | OFF  | OFF
          \      /          |          5    | ON   | OFF  | ON
           \    /           |          6    | ON   | ON   | OFF
            \  /            V
     _____
     | o o o   o o o o o o x o o o o|
     | o o o o o o o o o o x o o o o|
     |_|_|_|_____|
       | | |
       2 1 0 <=== SCSI ID JUMPERS
    ************************************************************

            540MB (old drive)
           P/N51G8237                  VALID ADDRESSES


     _____
     | |                       |    Address| Jumper| Jumper| Jumper
     | |                       |       | 5 - 6 | 3 - 4 | 1 - 2
     | |  _____               |    -------------------------------
     |-- |_____|               |       0    | OFF   | OFF   | OFF
     ||=  \                    |       1    | OFF   | OFF   | ON
     ||=   \     9 7 5 3 1      |       2    | OFF   | ON    | OFF
     ||=    \  ___|_|_|_|_|___  |       3    | OFF   | ON    | ON
     ||=    \|  | | | | |     | |       4    | ON    | OFF   | OFF
     ||=     |  o o o o o     | |       5    | ON    | OFF   | ON
     ||=     |  o o o o o     | |       6    | ON    | ON    | OFF
     ||=     |__|_|_|_|_|__   | |
     ||=        | | | | |      |
     ||=        10 8 6 4 2     |
     ||_____|


            (top view)


    ************************************************************

   Note:  The 540MB drive was use in the following RS6000 Machine
          types. 7006, 7011, 7012 and 7013.

   SAS KEYWORDS:
      710X                RISC              RS6000              DISK
      7013                7012              7011                7006
      D/T7006             D/T7011           D/T7012             D/T7013
```
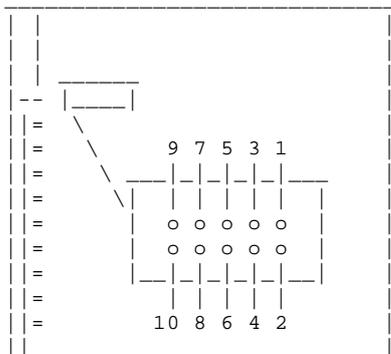
1.2.30 7012 AND 7030 MEMORY CARDS
  Record number: H126622

        Device: D/T7012
        Model: M
        Tip key: 011
        Date created: O95/03/07
        Date last altered: A95/10/02

  You can physically install an S3.x memory card in these
  systems. Even though we officially support S4.5 memory, or
  greater, on these systems, there is a potential for someone
  to put S3.x in. We have found the S3.3 cards installed in
  several instances. They can possibly result in random
  checkstops causing a reboot of the machine. Another symptom
  is that the customer may get a 15% INCREASE in processing
  speed with S3.x memory. Although this is good (from the
  customer's viewpoint), it is unstable (and unsupported).

  The deskside (7013) and rack (7015) models that require memory
  cards at S4.5 or higher, have a physical interlock in their
  design to prevent plugging in lower level cards, but the
  desktops (7012) do not.

  SAS KEYWORDS:
    D/T7012   7012MOD380   7012MOD390   7012MOD39H
    D/T7030   7030MOD3AT   7030MOD3BT   7030MOD3CT
    7012 - 380   7012-390   7012-39H   7030-3AT
    7030-3BT   7030-3CT   7012/380   7012/390
    7012/39H   7030/3AT   7030/3BT   7030/3CT
    3AT   3BT   3CT   380
    390   39H   MEMORY   3.3
    4.5   CHECKSTOPS   CHECKSTOP   S3.3
    7012   7030   RS6000   RISC

1.2.31 7012 G30 MOUSE AND KEYBOARD SUPPORT
  Record number: H131557

        Device: D/T7012
        Model: M
        Tip key: 014
        Date created: O95/11/03
        Date last altered: A96/11/11

     WHEN INSTALLING A GRAPHICS ADAPTER INTO THE 7012 G30, IN ORDER
     FOR THE KEYBOARD AND MOUSE TO WORK, THE FOLLOWING MUST BE
     INSTALLED:
     KEYBOARD/MOUSE CARD ASSEMBLY P/N11H3890
     SYSTEM MUST BE AIX VER 4.1.3 OR HIGHER

     SAS KEYWORDS:
        7012 G30   7012MODG30   7012MODELG30   4.1.3
        V4.1.3   AIX4.1.3   KEYBOARD   MOUSE
        SMP   GRAPHICS   7012-G30   7012/G30
        RS6000   RISC   SP2   9076

1.2.32 7012 WON'T BOOT TO DIAGNOSTICS FROM DISK
  Record number: H086502

     Device: D/T7012
     Model: M
     Tip key: 003
     Date created: O90/11/08
     Date last altered: A92/10/07

  7012'S THAT ARE CONFIGURED WITH A SCSI ADAPTER AND AT LEAST
  ONE 120MB DISK DRIVE MAY NOT LOAD DIAGNOSTICS FROM THE DISK
  DRIVE WHEN THE SYSTEM IS BOOTED WITH THE KEY IN THE SERVICE
  POSITION. DIAGNOSTICS WILL, HOWEVER, LOAD AND RUN IN CONCURRENT
  MODE BY LOGING IN AS ROOT OR SUPERUSER AND ENTERING 'DIAG' AT
  THE COMMAND LINE.

  TO CORRECT THIS PROBLEM, IT MAY BE NECESSARY TO CHANGE THE
  BOOTLIST CONTAINED IN NVRAM. TO DO THIS, HAVE THE CUSTOMER
  LOGIN AS ROOT AND TYPE THE FOLLOWING AT THE AIX COMMAND LINE:

          BOOTLIST -M SERVICE FD RMT CD BADISK SCDISK
                 (ALL ENTERED IN LOWER CASE).

  THIS CHANGES THE ORDER THE DRIVES ARE SEARCHED WHEN THE KEY IS
  IN THE SERVICE POSITION TO FLOPPY DRIVE FIRST, REMOTE DRIVE
  SECOND, CD ROM DRIVE THIRD, DIRECT BUS ATTACHED DRIVE FOURTH,
  AND SCSI ATTACHED DRIVE FIFTH.

  SAS KEYWORDS:
    7012   701X   7012DIAG   7012MISC
    701XDIAG   701XMISC   701XDISK   7012DISK

1.2.33 7012 397 & 39F FIRMWARE UPDATE FOR SYSTEM PLANAR
 Record number: H161546

        Device: D/T7012
        Model: M397
        Tip key: 026
        Date created: O97/10/24
        Date last altered: A97/10/24

 At this time there is no new Flash firmware for the System   Planar. This RETAIN tip will be updated whenever a Flash   Firmware change occurs. Please reference this RETAIN tip   every time you replace this part to see if any flash change   has occured.

     The following note will be included in the FRU box. This note
     will be used so the service representative can identify the
     lastest level of microcode, and upgrade if needed.

     *
     The Flash memory on this part contains "down loadable" firmware
     at the lastest level available on the day the part was shipped
     to field stock. NEWER FIRMWARE LEVELS MAY EXIST. Depending upon
     the "date of manufacture" of your customer's machine, it may
     have a more current level of firmware than that contained on
     this part. To ensure proper operation of your customer's
     machine you MUST review and adhere to the information and pro-
     cedures outlined in RETAIN TIP _____ before installing this
     part.
     *

   SAS KEYWORDS:
     701X   7012   397   39F
      FIRMWARE   FLASH   UPGRADE   PLANAR

1.2.34 7012-G30 CPU AND MEMORY CARD REPLACEMENT PROCEDURES
  Record number: H13188


```
     Device:              D/T7012
     Model:               M
     Tip key:             013
     Date created:        O95/06/20
     Date last altered:   A96/11/08
```

  The 7012 - G30 can be somewhat prone to bending pins on the ELM
  card and/or CPU and memory cards during removal/replacement.
  To minimize this risk it is recommended that the CPU amd
  memory cards only be replaced on machines which are laid on the
  side. With the machines on the side rather than in the upright
  position you have the best access to these cards. It is still
  imperative that the card extraction tools be used to extract
  these cards.

```
  SAS KEYWORDS:
    7012 - G30        7012/G30          7012MODG30        7012MODELG30
    7012              G30               SMP               RISC
    RS6000            RISC6000          TOOL              CPU
    MEMORY            SP2               9076
```

1.2.35 7012-G30 DISK POWER CABLE
  Record number: H132519

      Device: D/T7012
      Model: M
      Tip key: 015
      Date created: O96/02/02
      Date last altered: A97/04/15

 D/T7012/G30 When going from 2 hard disks to 4 you must order a six drop internal scsi cable p/n11h3929 and "2" power "Y" cables
 p/n32g0218

    SAS KEYWORDS:
      7012 - G30   7012/G30   7012MODG30   7012MODELG30
      G30   SMP   Y CABLE   SCSI CABLE
      POWER   DISKS   DISK   UPGRADE

1.2.36 7012/3XX DOCUMENTATION ERRORS SA23-2624-XX
  Record number: H126141

      Device: D/T7012
      Model: M
      Tip key: 010
      Date created: O95/01/25
      Date last altered: A97/05/06

  SA23 - 2624 - 00 7012 Install & Service Guide
  1) Page 5 - 5:   Index Number 1 shows FRU p/n52G4128
     for the planar board. The correct FRU is p/n52G4325.

  2) Page 5 - 9:   Index Number 8 shows FRU is p/n88G3983.
      The correct FRU should be p/n88G3991.

  3) Page 5 - 8 and 5-9 the drawing shows Item 8 pointing to two
     different parts (the 3 digit LED display and the Power
     Button) the 3 digit LED display is p/n00g2230.

  SA23 - 2624 - 06
  1) Page 5 - 10: Ref 10 power supply p/n32g0005 is incorrect.
                   Ref 10 power supply should be p/n91f0844

  SA23 - 2624 - 07
  1) Page 5 - 13: Missing DASD cage (same as in 7030) p/n52g4906

  2) Page 5 - 7: Missing Voltage Regulator p/n11h3747

  3) Page 5 - 7: Ref 13 Front Bezel for the 380,390,39H p/n51g9519
                   is not orderable. The covers are built as an asm
                   from the vendor, use ref 10 FRU p/n11h3758

      SAS KEYWORDS:
        701X   7012   POWER BUTTON   PLANAR
        BUTTON   LED   ERRORS   DOCUMENTATION
        701X   DESKTOP   3XX   SA232624
        D/T7012

1.2.37 7012/39H MEMORY SIMM COMPATABILITY
Record number: H137357

```
     Device:              D/T7012
     Model:               M39H
     Tip key:             021
     Date created:        O97/04/11
     Date last altered:   A97/12/08
```

The S4.5 and the S4.6 memory base cards will support 2 different
FRU number simms that are equivalent.
```
      4mb simm:  p/n70f9973 = p/n12h1677
      8mb simm:  p/n70f9976 = p/n12h1678
     16mb simm:  p/n43g1796 = p/n12h1679
     32mb simm:  p/n39h8312 = p/n12h1680
```

The problem of LED888/103 145/912 on boot at minimum config with
the memory card plugged in and the 8 simms installed on the CPU
of the 39H, will occur if the simm FRUs p/n12h16XX numbers are
installed on the CPU.

NOTE: The base card and CPU must both be fully populated with
the same size simms.
The FRU p/n12h16XX simms were developed with a resistor on the
simm for the older S4.5 noise problem. They were not approved
for installation on CPUs that support simm modules.

Times this might occur is model upgrades and or EC/MES activity.

```
SAS KEYWORDS:
   7012           701X           RISC6000       RISC
   SRN145/912     39H            390H           P/N52G4801
   RS6000         MEMORY
```

1.3 Chapter 3.   Parts Information Tips

Subtopics
1.3.1 CABLE P/N TO ATTACH 6091 TO 7010 X-STATION
1.3.2 GROUND STRAP PART NUMBER
1.3.3 5 PACK (8MM TAPES) NO LONGER AVAILABLE THROUGH PARTS SYSTEM

1.3.1 CABLE P/N TO ATTACH 6091 TO 7010 X-STATION

Record number: H037506

        Device: D/T701X
        Model: M
        Part number: P/N58F2901
        Tip key: 005
        Date created: O90/04/09
        Date last altered: A93/04/06

    THE CABLE REQUIRED TO ATTACH THE 6091 GRAPHICS DISPLAY, MODEL 19
    TO THE 7010 X-STATION IS P/N58F2901.

    THIS CABLE HAS FIVE CONNECTORS THAT ATTACH TO THE REAR OF THE
    6091 M19 (RED, GREEN, BLUE, BLACK, AND WHITE).

    THIS INFORMATION IS AVAILABLE IN THE SERVICE DOCUMENTATION FOR
    THE 7010 X-STATION. THE FORM NUMBER FOR THE SERVICE GUIDE IS:
    SA23 - 2657 - 00.

    MACHINES AFFECTED: 7010, 7012, 7013, 7015, 7016.

    NOTE: THE CABLE P/N58F2903 IS A THREE CONNECTOR RGB CABLE AND
           CANNOT BE USED ON THE 7010 X-STATION AT THIS TIME.
    SAS KEYWORDS:
        701X   D/T7010   D/T7012   D/T7013
        D/T7015   D/T7016   701XPART   7010PART
        7012PART   7013PART   7015PART   7016PART
        RS6000   RS/6000   D/T6091

1.3.2 GROUND STRAP PART NUMBER
  Record number: H096360

        Device: D/T7012
        Model: M
        Part number: P/N40F9958
        Tip key: 006
        Date created: O92/01/28
        Date last altered: A92/02/18

   THE GROUND STRAP FOR THE D/T7012 KEYLOCK ASSEMBLY (EARLY
   MACHINES) HAS BEEN OBSOLETED WITH NO COUNTER PART NUMBER FOR
   THE NEW COVER DESIGN. THIS STRAP, P/N40F9958, IS NOT USED IN
   THE NEW COVER DESIGN.

   IF THE STRAP IS NEEDED, THE CE MUST ORDER ANOTHER COVER SET
   AS FOLLOWS:

    P/N81F9025 - FRONT BEZEL   (QTY 1)
    P/N81F9039 - CARD GUIDE   (QTY 1)
    P/N00G2981 - FAN ASSEMBLY   (QTY 1)
    P/N00G2259 - FAN FOAM   (QTY 1)
    P/N00G2258 - FRONT FAN DUCT (QTY 1)
    P/N81F7977 - SHOCK MOUNTS   (QTY 1, 4 IN A PACKAGE)

   THERE WILL ONLY BE A FEW CASES WHEN THE GROUND STRAP IS
   NEEDED, THEREFORE, AN ECA WILL NOT BE AVAILABLE.
   BRANCH OFFICE COST OF THESE FRU'S ARE MINIMAL.

   SAS KEYWORDS:
     701X   7012   7012PART   701XMISC
     7012MISC   RS6000   RS/6000   D/T701X

1.3.3 5 PACK (8MM TAPES) NO LONGER AVAILABLE THROUGH PARTS SYSTEM
Record number: H037577

```
      Device:               D/T701X
      Model:                M
      Part number:          P/N21F8595
      Tip key:              117
      Date created:         O92/05/21
      Date last altered:    A92/05/21
```

THE PACKAGE OF FIVE 8MM BLANK TAPES (P/N 21F8595) HAS BEEN REMOVED FROM THE MECHANICSBURG PART SYSTEM. THIS SUPPLY ITEM CAN BE ORDERED FROM IBM'S AUTHORIZED DISTRIBUTORS OR BY PART NUMBER FROM IBM DIRECT RESPONSE MARKETING AT 1-800-426-2468.

```
  CE'S NEEDING A BLANK TAPE FOR TEST PURPOSES ONLY SHOULD ORDER
  P/N 21F8575.

  SAS KEYWORDS:
    RS6000          RS/6000         D/T7012         D/T7013
    D/T7011         D/T7015         D/T7016         D/T7018
    8MM             MEDIA           D/T7208         7011
    7012            7013            7015            7016
    7018            RISC            RISC/6000       701XTAPE
    701XPART        701XMISC
```

1.4 Chapter 4. Symptom/Fix Tips

1.4.1 CHECKSTOP ERRORS WITH S4.5 BASE MEMORY CARDS
  Record number: H123163

       Device: D/T701X
       Model: M
       Tip key:
       Date created: O94/03/03
       Date last altered: A97/04/15

  SYMPTOM:
   MACHINES AFFECTED: D/T7012 MODELS 37x
                        D/T7013 MODELS 58x & 59x
                        D/T7015 MODELS 98x & 99x -

  SYMPTOM:
   SYSTEM RE-IPLS INTERMITTENTLY. CHECKSTOP ERROR IS RECORDED IN
   SYSTEM ERROR LOG AT TIME OF RE-IPL.

  PROBLEM ISOLATION AIDS:
   IF CHECKSTOP ERRORS ARE IDENTIFIED ON THE ABOVE MACHINE TYPES &
   MODELS VERIFY THE SYSTEM MEMORY CONFIGURATION BY RUNNING THE
   COMMAND:

   Lscfg -v | pg
   CHECK THE EC LEVEL OF ANY 64MB S4.5 MEMORY CARDS INSTALLED.

   IF THE EC LEVEL IS 33, THEN THE CHECKSTOP FILES IN AIX MUST
   BE ANALYZED BY CHICAGO SUPPORT BEFORE REPLACING ANY PARTS.

   IF THE EC LEVEL IS < 21 ON A 58x, 98x, or 37x; OR < 33 ON A
   59x or 99x SYSTEM, THEN THE CARD FRU PART NUMBER WILL NEED TO
   BE READ DIRECTLY FROM THE CARD (INCORRECT EC LEVEL INFORMATION
   COULD BE OBTAINED AT SOME AIX LEVELS). IF THE CARD IS FRU
   P/N65G1803, THEN THE CHECKSTOP FILES IN AIX MUST BE ANALYZED BY
   AUSTIN PRODUCT ENGINEERING BEFORE REPLACING ANY PARTS.

  FIX:
   REFER TO RETAIN TDR #H096637 FOR INSTRUCTIONS TO COPY CHECKSTOP
   FILES TO DISKETTE. CONTACT THE SUPPORT CENTER TO OPEN A PROBLEM
   RECORD.
   CHICAGO SUPPORT WILL PROVIDE AN ACTION PLAN AFTER ANALYZING THE
   CHECKSTOP FILES.

   SAS KEYWORDS:
      701X   7013   7015   RISC
      701XHALT   7013HALT   7015HALT   RS6000
      RISC/6000   4.5   590   58H
      990   370   701358H   7012370
      7013590   7015990   MEMORY   EC 33

1.4.2 D/T7012 BASE WILL NOT ATTACH TO THE SIDE MOUNTING HOLES
  Record number: H066964

        Device: D/T7012
        Model: M
        Tip key:
        Date created: O90/06/11
        Date last altered: A91/02/14

  SYMPTOM:
   THE BASE ON THE 7012 SYSTEM UNIT IS DESIGNED TO ATTACH TO EITHER
   THE BOTTOM OR SIDE MOUNTING HOLES. SOME EARLY PRODUCTION SYSTEM
   UNITS WERE MANUFACTURED WITH THE SIDE MOUNTING BRACKETS ALIGNED
   IMPROPERLY. THE BASE WILL NOT ATTACH TO THE SIDE MOUNTING HOLES
   ON THESE EARLY PRODUCTION SYSTEMS.

   DO NOT USE LONGER SCREWS TO MOUNT THE BASE.

  PROBLEM ISOLATION AIDS:
   CHECK THAT THE THREADED MOUNTING BRACKETS ARE ALIGNED FLUSH
   AGAINST THE SIDE COVER. THERE SHOULD NOT BE ANY SPACE BETWEEN
   THE BRACKET AND SIDE COVER.

  FIX:
   USE ONE OF THE TOP COVER REAR MOUNTING SCREWS TO DRAW THE
   THREADED BRACKETS AGAINST THE SIDE COVER. USE THE FOLLOWING
   PROCEDURE:

   1.   REMOVE ONE OF THE TOP COVER KNURLED MOUNTING SCREWS
   2.   UNSCREW THE PLASTIC BUSHING THAT HOLDS THE TOP COVER
        SCREW IN PLACE
   3.   PLACE A WASHER AGAINST THE OUTSIDE OF THE SIDE COVER TO
        PREVENT COVER DAMAGE
   4.   INSERT THE SCREW THROUGH THE WASHER & SIDE COVER AND THREAD
        INTO THE MOUNTING BRACKET
   5.   TIGHTEN THE SCREW UNTIL THE BRACKET IS PULLED AGAINST THE
        SIDE COVER
   6.   FOLLOW STEPS 3 - 5 TO ALIGN THE SECOND MOUNTING BRACKET
   7.   REINSTALL THE BUSHING ON THE TOP COVER SCREW
   8.   REINSTALL THE SCREW AND BUSHING IN THE TOP COVER

   THE BASE CAN NOW BE ATTACHED TO THE SIDE COVER.

   THE ABOVE PROCEDURE WILL ALIGN THE BRACKETS WITHOUT HAVING TO
   REMOVE ANY INTERNAL COMPONENTS.

   SAS KEYWORDS:
     D/T701X   D/T7012   RS6000   RS/6000
     701XMISC   7012MISC   701X   7012

1.4.3 DIFFICULTY INSERTING IBM AND 3M LOGO 1/4 " TAPE CARTRIDGES.
Record number: H095354

       Device: D/T7207
       Model: M
       Tip key:
       Date created: O91/06/14
       Date last altered: A91/09/13

 SYMPTOM: THERE IS A SLIGHT MANUFACTURING DEFECT IN SOME IBM LOGO
 AND 3M BRAND TAPE CARTRIDGES, CAUSING THE TAPE DRIVE DOOR TO BE
 HARD TO CLOSE AFTER INSERTING THE TAPE CARTRIDGE. THE CAUSE OF
 THIS PROBLEM IS A SHARP EDGE ON THE ALUMINUM BASE PLATE, LOCATED
 AT THE CORNER OF THE TAPE CARTRIDGE NEAR THE (SAFE) PLUG. THE
 SHARP EDGE THAT NEEDS TO BE REMOVED IS A SMALL 5/16TH INCH WIDE
 AREA AT THE CORNER OF THE PLATE.

 PROBLEM ISOLATION AIDS:
 THIS PROBLEM WILL ONLY BE FOUND ON CARTRIDGES WITH THE FOLLOWING
 DATE CODES:
 1/4" DC 6150 CARTRIDGES MANUFACTURED 10/26/90 THROUGH 01/30/91.
 1/4" DC 6037 CARTRIDGES MANUFACTURED 07/19/90 THROUGH 01/30/91.
 .
 .
 .
 .
 .
 DATE CODES ON CARTRIDES CAN BE READ AS FOLLOWS:
        XX   XX   XX   XX   XX
         | | | | |____ YEAR
         | | | |_____ DAY
         | | |_____ MONTH
         | |_____ MINUTE
         |_____ HOUR

 FIX:
 THE BURR CAN BE ELIMINATED BY LIGHTLY RUBBING THE SHARP EDGE
 WITH A METAL OBJECT (A COIN WILL WORK FINE). WIPE OFF METAL
 DUST BEFORE INSERTING THE CARTRIDGE.

 SAS KEYWORDS:
   701X   7207   7207MISC   7207SAS
   7012   7013   7012MISC   7013MISC
   7015   7016   7015MISC   7016MISC
   7016TAPE   7015TAPE   7012TAPE   7013TAPE
   701XTAPE   D/T7207   D/T7012   D/T7013
   D/T7015   D/T7016   RS6000   RS/6000
   7018   7018MISC   7018TAPE   D/T7018

1.4.4 FLASHING 888 DURING NETWORK BOOT ON 7012/7030 SYSTEMS
Record number: H002043

```
     Device:                D/T7012
     Model:                 M
     Tip key:
     Date created:          O96/05/09
     Date last altered:     A97/09/02
```

SYMPTOM:
A flashing 888-103-202-226 -or- 888-103-202-231 may occur
during a network boot from an ethernet adapter. The ethernet
adapter can be either the integrated Ethernet or Microchannel
ethernet adapter. This error will only occur during the IPLROS
bootup phase (ie when the 3-digit LED display is rolling
through the 2xx-series numbers) and the ethernet network boot
option is selected.

PROBLEM ISOLATION AIDS:
WORKAROUND:
Try the remote boot again. If possible, reduce the network
traffic or boot during times of low traffic on the network.
If particular, if more than one machine is attempting network
boot, scale it to only this machine. The more machines
attempting to network boot, the greater the chance of hitting
this problem.

FIX:
This problem is only on a certain vintage of CPUs. The
part numbers (located on the barcode label on the CPU
card) affected are listed below:

```
        380/3AT CPUs:   40H2707
        390/3BT CPUs:   40H2695, 40H2702
```

The permanent fix requires a new IPLROS module. The offending
IPLROS level is "IPLVER1.2 LVL1.05". You can get this
information by typing in the command "lscfg -vl sysplanar0"
and looking at the "ROS Level and ID" field. This change
has already been incorporated into manufacturing and reflected
in FRU numbers 40H6723 (380/3AT) and 40H6717 (390/3BT).
If you need a corrected IPLROS module, have Chicago contact
the 7012/7030 Product Engineer in Austin.

```
SAS KEYWORDS:
   7012              7030              380/3AT           390/3BT
   380               7012/380          7012MOD380        7012MODEL380
   390               7012/390          7012MOD390        7012MODEL390
   7030/3AT          7030MOD3AT        7030MODEL3AT      7030/3BT
   7030MOD3BT        7030MODEL3BT      3AT               3BT
   LED888/103        IPLROS            ROS               PLANAR
   SYSPLANAR         LED888            SRN202/226        SRN202/231
   202/231           888/103 202/226   888/103 202/231   202/226
```

1.4.5 LED 201 HALT CAUSED BY AIX SW ON RS/6000
  Record number: H064698

      Device: D/T701X
      Model: M
      Tip key:
      Date created: O90/09/11
      Date last altered: A92/08/03

  SYMPTOM:
   SYSTEM HALTS WITH A 201 IN THE THREE DIGIT LED DISPLAY DURING
   DISK IPL FROM EITHER THE NORMAL OR SERVICE POSITION.
   IPL FROM DIAGNOSTIC DISKETTES COMPLETES SUCCESSFULLY.

    MACHINES AFFECTED: 7012, 7013, 7015, 7016

  PROBLEM ISOLATION AIDS:
   VERIFY THE SEQUENCE OF LED'S DURING IPL. IF THE LED'S GO PAST
   299 AND THEN HALT WITH A 201, SUSPECT SW. THIS SYMPTOM OCCURS
   ON SYSTEMS THAT HAVE RECENTLY INSTALLED AIX VERSION 3, REL 1.
   THE AIX BASE OPERATING SYSTEM CODE AND LICENSED PROGRAM PRODUCTS
   APPEAR TO INSTALL SUCCESSFULLY. HOWEVER, THE SYMPTOM USUALLY
   OCCURS AT THE FIRST IPL AFTER THE NEW VERSION OF AIX HAS BEEN
   INSTALLED.

  FIX:
   DIRECT THE USER TO CONTACT AIX SOFTWARE DEFECT SUPPORT AT
   1 - 800-237 - 5511 FOR ASSISTANCE. A WORKAROUND IS AVAILABLE
   AND A FIX WILL BE INCLUDED IN A FUTURE RELEASE OF AIX.

   IF DISKETTE DIAGNOSTICS LOAD AND RUN SUCCESSFULLY DO NOT REPLACE
   ANY HARDWARE FOR THIS PROBLEM.

   SAS KEYWORDS:
    RS6000   701X   7012   7013
    7015   7016   D/T7012   D/T7013
    D/T7015   D/T7016   701XIPL   7012IPL
    7013IPL   7015IPL   7016IPL   701XLED
    7012LED   7013LED   7015LED   7016LED
    701XMISC   7012MISC   7013MISC   7015MISC
    7016MISC   LED201

1.4.6 LED888/103 123/711 AFTER DISCONNECTING BATTERY
Record number: H097770

```
    Device:               D/T7012
    Model:                M
    Tip key:
    Date created:         O92/05/18
    Date last altered:    A97/04/15
```

SYMPTOM:
 MACHINE AFFECTED: 7012 Models 340 and 350, only.

SYMPTOM:
 Flashing LED888 may appear during the first power on cycle
 after disconnecting the battery. This occurs within 30
 seconds after power on during BIST. The last LED prior to the
 flashing LED888 is LED153. The LED sequence obtained from
 pushing the reset button is:

        LED888/103 123/711 ccc/104 003/c10

 This problem is intermittent.

PROBLEM ISOLATION AIDS:
 This failure is intermittent. It may, or may not, occur
 during the first IPL. If it does occur, power off and on
 again. The error should not reoccur unless the battery
 is disconnected. If it does not occur on the first
 power on cycle, the error will not occur unless the
 battery is disconnected again.

FIX:
 An EC is being processed to update the OCS to level 7.2
 which contains the fix for both 340 and 350 units.
 The OCS is located on the CPU card.

```
 SAS KEYWORDS:
   701X              7012            701XLED           7012LED
   701XPOST          7012POST        RS6000            RS/6000
   701XPWR           7012PWR         701XLOGICPROC     7012LOGICPROC
```

1.4.7 LOSS OF CONNECTIVITY TROUGH ETHERNET TP RISER CARD 00G1276
Record number: H002545

```
        Device:               D/T7012
        Model:                M
        Tip key:
        Date created:         O97/03/06
        Date last altered:    A98/03/12
```

SYMPTOM:
A LOSS OF CONNECTIVITY WITH THE ETHERNET LAN PROBLEM MAY BE
INTERMITTANT.

PROBLEM ISOLATION AIDS: A problem has arisen with Ethernet Riser
Card , Twisted Pair (UTP) P/N 32G2000, EC#C74129, FRU#00G1276.
The RJ45, female connector on the adapter (IBM P/N 02G7328) ,
by AMP (P/N 555162-1) , Location J2 , may have the recessed
contacts inside a connector NOT providing the parallel contact
surface to the inserted 8-pin RJ45 modular male plug. In some
cases,each individual contact may be projecting inward at a
different angle, and also NOT at a sufficient angle to provide
good, reliable contact. Typically, the outer contacts (pins 1,2
7,8) seem to be "ramping up" at the higher angle than the
middle pins.

The problem has been reported as intermittant and prone to show
up with the box sitting in the vertical position. In this
position , the weight of the attached cable may be pulling a
male plug away from already "too low" female connectors.

FIX:
The stock has been purged. If a system appears to have the
"connectivity" problem in the field, one should be advised to
attempt to lift the contact and to order the above FRU as a
replacement.

```
SAS KEYWORDS:
   7012              7030             ETHERNET          RISER
      TWISTED PAIR
```

1.4.8 MALL, RECEIVE TIMEOUT FROM NEW RS6000 (D/T701)*
  Record number: H124151

        Device: D/T3745
        Model: MALL
        Tip key:
        Date created: O94/05/26
        Date last altered: A94/06/02

 SYMPTOM: Ce had just installed a RISC6000 system to a 3745 via a
  direct attached v.35 LIC3. The line would not activate.
  This problem could arise when attaching a RISC 6000 to a d/t3720
  d/t3721 , d/t3746 , d/t3725 , d/t3726 and d/t3705 .

  _____
  3745 3746 3720 3721 3725 3726 3705 7012 risc6000 6000 d/t7012
  rs/6000 rs6000 d/t701x 701x d/t7013 7013 d/t7015 7015 d/t7016
  7016 d/t7018 7018 d/t7011 7011

 PROBLEM ISOLATION AIDS: No BERs were logged. All TSS diags and
  wrap tests ran without errors.
  We compared the NCP gen parameters that we saw in the LID with
  the setup screens on the d/t 7012 . All seemed to be correct.
  Next we ran a SIT trace on the failing line from the support
  center. We saw " RECEIVE TIMEOUT , (no response from SDLC
  ADDRESS " 21 "). At that point we knew that problem was
  either a broken or incorrectly configured RISC6000 .

 FIX: The configuration setup screens on the D/T7012 use DECIMAL
  values instead of HEX. They had entered " 21 " into the setup
  screen thinking that it was SDLC station address HEX 21.
  When they changed it to " 33 " and reactivated the line it came
  right up !

  SAS KEYWORDS:
     3745CNFG   3745CS   3745CSSIT   3745FESL
     3745LSSERR   3745TSS   3745INST   3745LIC
     3745LIC1   3745LIC3   3745MODALL   3720CNFG
     3720CS   3720CSSIT   3720FESL   3720LSSERR
     3720TSS   3720INST   3720LIC   3720LIC1
     3720LIC3   3746CNFG   3746CS   3746CSSIT
     3746FESL   3746LSSERR   3746TSS   3746INST
     3746LIC   3746LIC1   3746LIC3   3721CNFG
     3721CS   3721CSSIT   3721FESL   3721LSSERR
     3721TSS   3721INST   3721LIC1   3721LIC3
     3725CNFG   3725CS   3725CSSIT   3725FESL
     3725LSSERR   3725TSS   3725INST   3725LIC
     3725LIC1   3725LIC3   3725MODALL   3726CNFG
     3726CS   3726CSSIT   3726FESL   3726LSSERR
     3726TSS   3726INST   3726LIC   3726LIC1
     3726LIC3   3705CNFG   3705CS   3705CSSIT
     3705FESL   3705LSSERR   3705TSS   3705INST
     3705LIC   37051D   1D

1.4.9 SYSDMA (OR DMA_ERR) ENTRIES WITH GT3I IN 7012/7030 MACHINES
Record number: H13596

```
     Device:                 D/T7012
     Model:                  M
     Tip key:
     Date created:           O95/08/24
     Date last altered:      A95/11/15
```

SYMPTOM:
Error log will report SYSDMA (UNDETERMINED ERROR) with a
GT3i (LEGA2) graphics adapter populated in slot 4 and
Microchannel slots 1 through 3 empty. It doesn't happen
on every machine and may range from zero to multiple
error entries per day dependent on the amount of GT3i
activity. This will not affect overall system performance.
and in most cases will go unnoticed by the customer other
than the error entries.

A problem has also been reported with a GXT150M (Neptune)
adapter in slot 4 and is a potential for any busy master
adapters in this slot. The probability, however, is minimal
that any adapter will see this problem.

PROBLEM ISOLATION AIDS:
Move the microchannel adapter in slot 4 to a lower slot
number or add more microchannel adapters to the system (thus
creating a heavier load on the microchannel bus). If the
failing symptoms go away, then it is symptomatic of this
problem.

FIX:
Workaround:
Move the microchannel adapter from slot 4 to a lower slot
(i.e. slot 1), which should fix the problem. No replacement
of the I/O planar is necessary. Mfg. has advised to restrict
th GT3i adapter in slot 1 when no other microchannel adapter
slots are populated.

Permanent Fix:
ECD74660 is forthcoming which includes a fix to this problem
(-CMD signal reflection problem). There will be a new FRU
number p/n40H6690 released as part of this EC for this I/O
planar and will be installed on subsequent new build machines.
Expected availability of the new FRU is January 1996.

```
SAS KEYWORDS:
   7030               7012               7012/390           7012-390
   7012/380           7012-380           7030/3AT           7030-3AT
   7030/3BT           7030-3BT           RS6000             RISC
   GT3I               DMA_ERR            DMA ERROR          SYSDMA
   GRAPHICS
```

1.4.10 UNABLE TO READ/RESTORE 8MM TAPES
  Record number: H066069

       Device: D/T701X
       Model: M
       Tip key:
       Date created: O90/11/14
       Date last altered: A95/03/13

   SYMPTOM:
   1. USER IS UNABLE TO READ 8MM TAPES CREATED ON ANOTHER SYSTEM
       OR ON ANOTHER 7208 TAPE DRIVE.
   2. USER IS UNABLE TO RESTORE 8MM TAPES THAT WERE CREATED OR
       BACKED UP PRIOR TO A RELOAD OF AIX OPERATING SYSTEM
       CODE.

   MACHINES AFFECTED: D/T7012, D/T7013, D/T7015, D/T7016, D/T7208

   PROBLEM ISOLATION AIDS: NONE
   FIX:
   HAVE THE USER CHECK THE "BLOCK SIZE" VALUE FOR THE 8MM TAPE
   DRIVE IN AIX. THE "BLOCK SIZE" MUST BE SET TO THE SAME VALUE
   WHEN WRITING AND READING TAPES.

   THE DEFAULT "BLOCK SIZE" VALUE SET BY AIX IS EITHER 512 OR
   1024.

   THE PARAMETERS FOR THE 2.3 GB 8MM TAPE DRIVE MAY BE DISPLAYED/
   CHANGED BY ENTERING 'SMIT' FROM THE AIX PROMPT.

   SELECT 'DEVICES'
   SELECT 'TAPE DRIVE'
   SELECT 'CHANGE/SHOW CHARACTERISTICS OF A TAPE DRIVE'
   SELECT '2.3GB 8MM TAPE DRIVE'

   IF THE "BLOCK SIZE" VALUE IS SET TO 512, CHANGE TO 1024.
   IF THE "BLOCK SIZE" VALUE IS SET TO 1024, CHANGE TO 512.
   THEN TRY THE TAPE READ/RESTORE OPERATION AGAIN.

   SAS KEYWORDS:
     701X   7012   7013   7015
     7016   7208   701XMISC   7012MISC
     7013MISC   7015MISC   7016MISC   7208MISC
     RS6000   701XTAPE   7012TAPE   7013TAPE
     7015TAPE   7016TAPE

  L A S T   P A G E