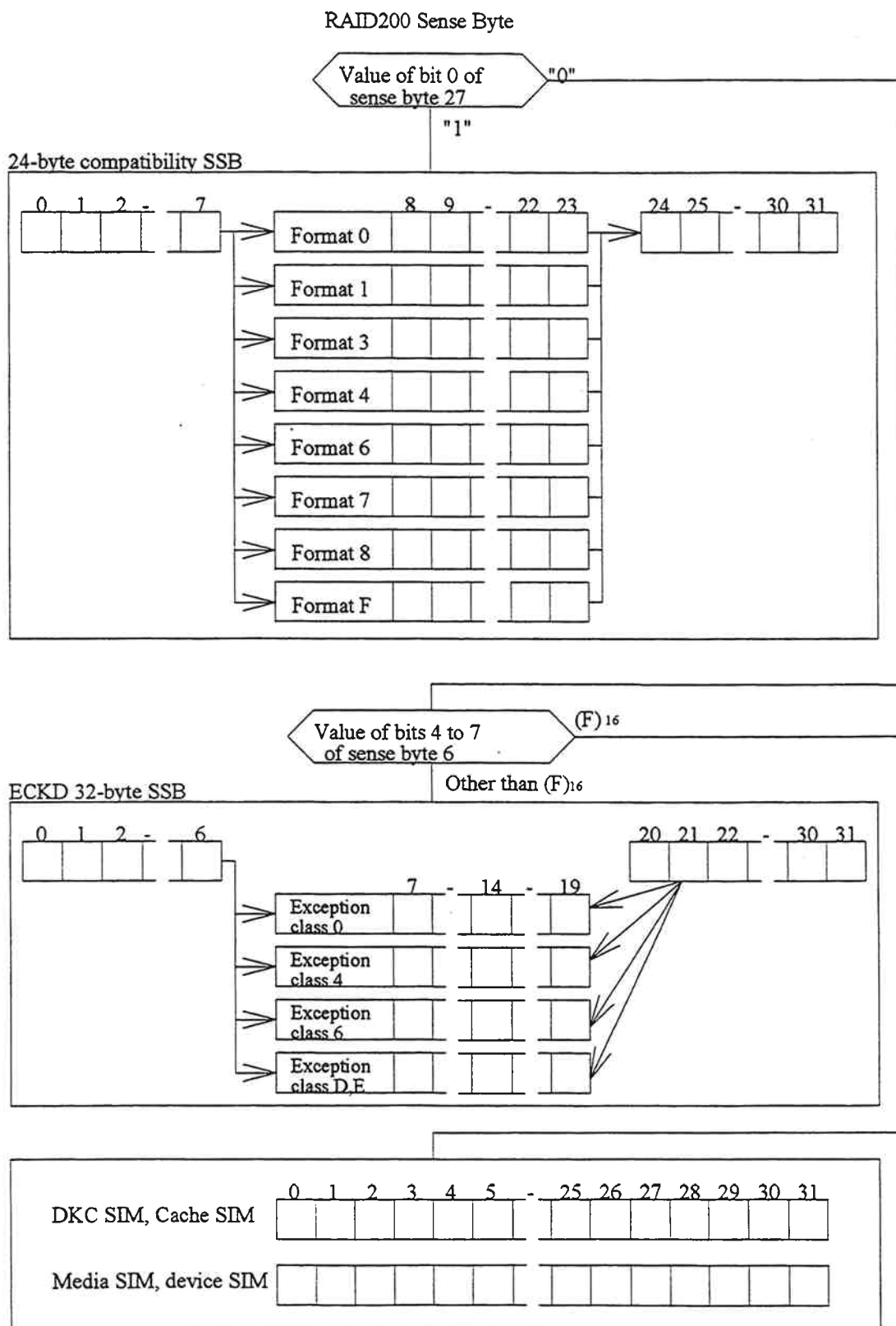


17. SSB SECTION

1. Sense Byte Analysis

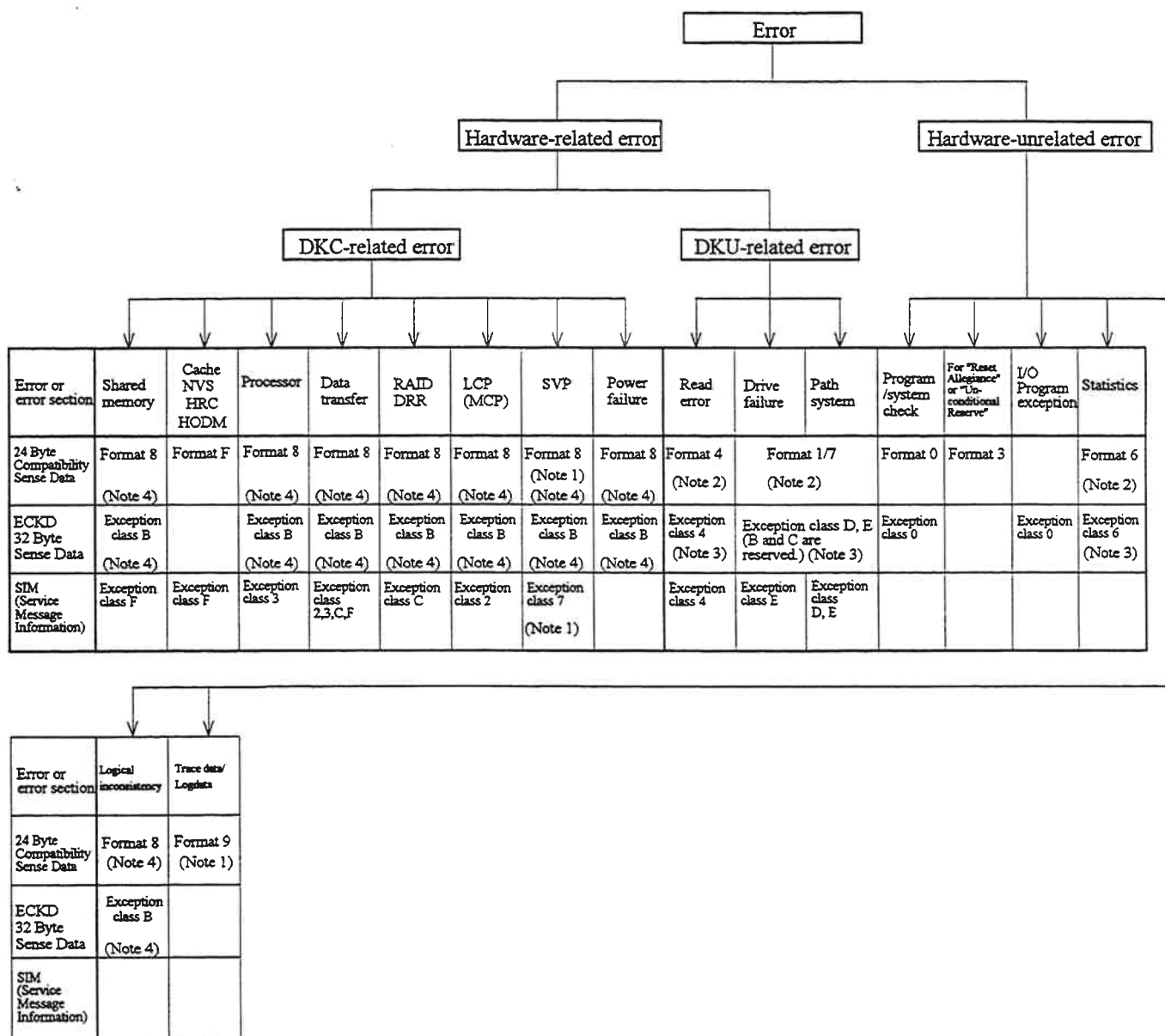


(Note) This section is corresponding to host reported SSBs.

If you want to know about ssblog on SVP, you should see SSBLOG section.

2. Sense Bytes and SIM Errors and SIM Errors

The following table shows the formats for trouble shooting in this disk.

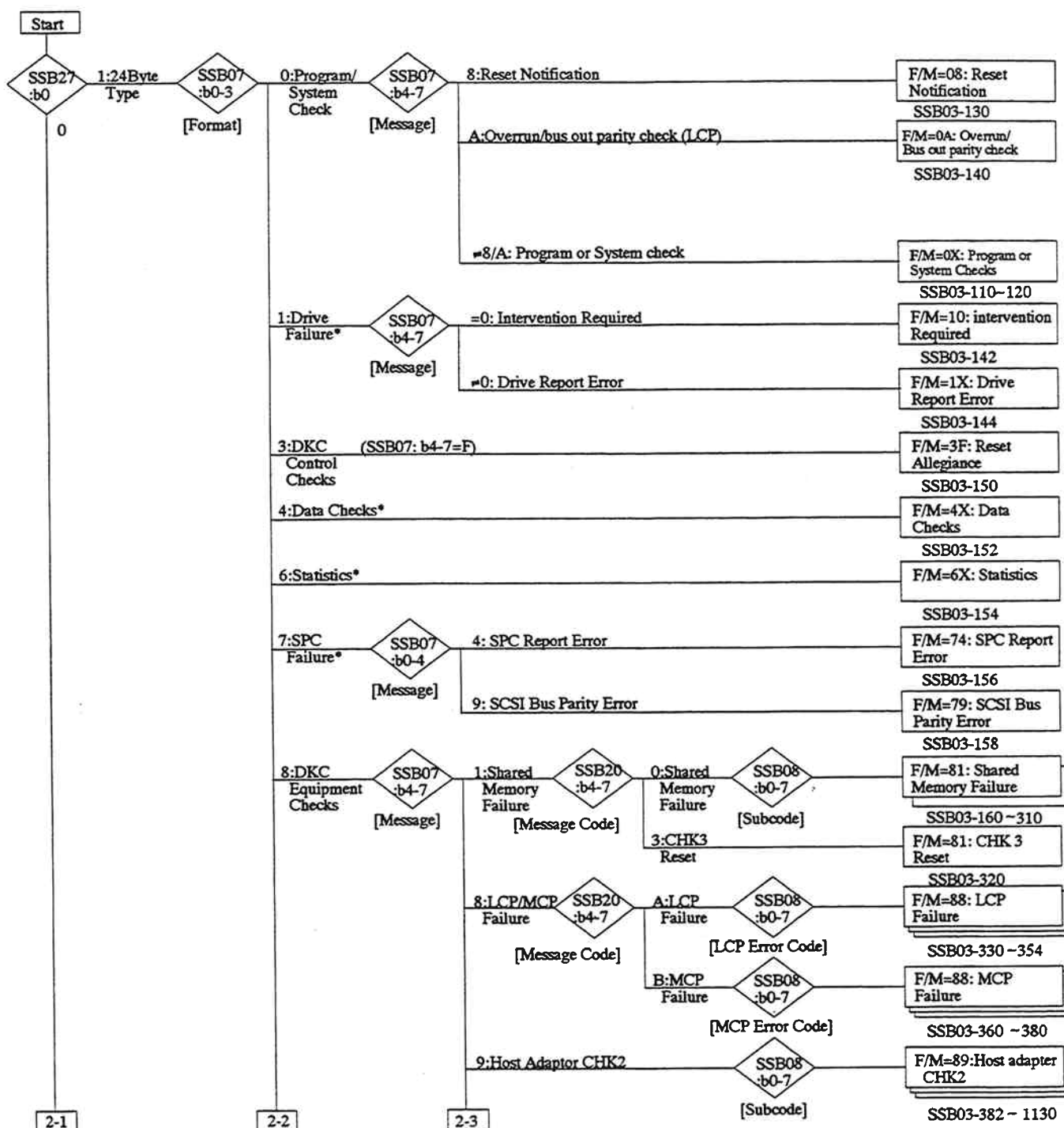


(Note 1) This error is not reported to host. (For SSB log)

(Note 2) For DKU86I (IBM 3380 emulation mode) only.

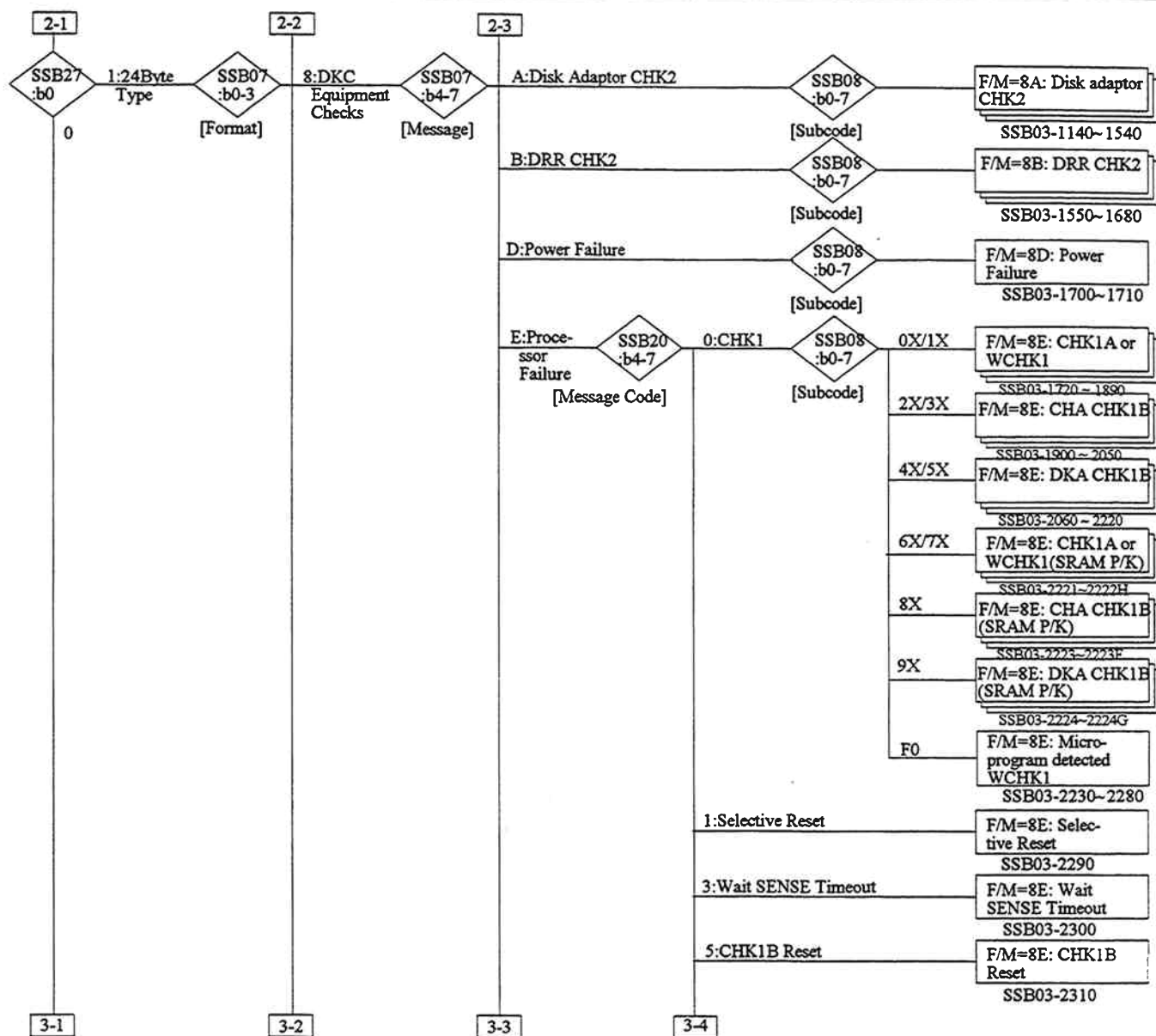
(Note 3) For DKU87I (IBM 3390 emulation mode) only.

(Note 4) These SSBs report to host with Exception-class B in 32 Byte SSB, when DKC-Type have configured 3990-6 (Enhance mode).

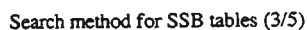


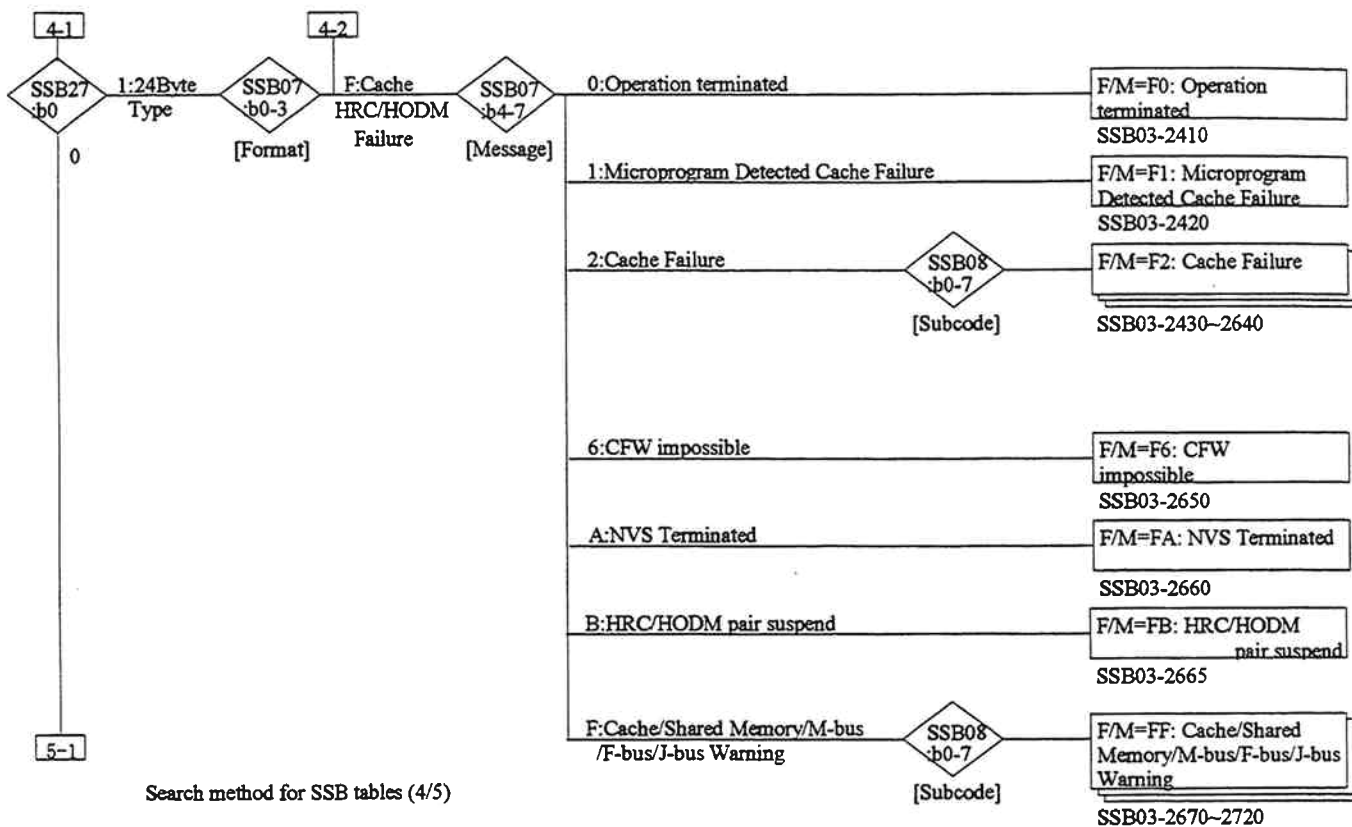
*: For DKU86I (IBM 3380 emulation mode) only.

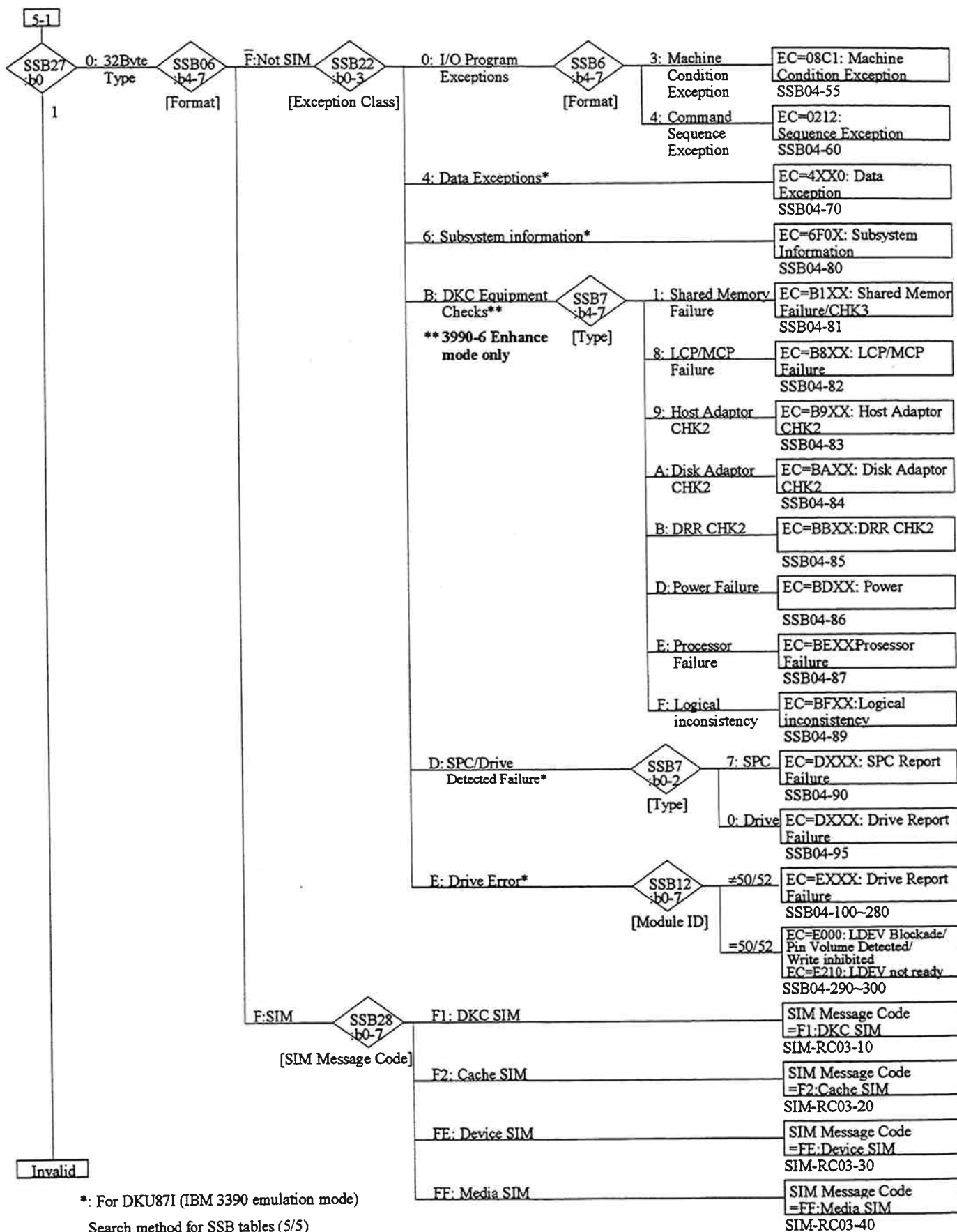
Search method for SSB tables (1/5)



Search method for SSB tables (2/5)







3. 24-BYTE COMPATIBILITY SSB

3.1 Basic Sense Bytes

Byte	Bit	24-Byte Compatibility Sense Data						
	0	1	2	3	4	5	6	7
0	Command reject	Intervention required	Busout parity check	Device check	Date check	Overrun	Not used	Incomplete domain
1	Permanent error	Invalid track format	End of cylinder	Operator message	No record found	File protection	Write inhibit	Imprecise ending
2	Request inhibit write	Correctable	First log mode error	Environmental data present	Not used	Imprecise ending	Not used	
3	Controller ID, number of retries, number of records							
4	Device address							
5	Low cylinder address, overflow flag of command overruns							
6	Head address and high cylinder address, overflow flag of data overruns							
7	Format				Message			
8 to 23	Bytes 8 to 23: Depends on the format and message.							
24	Logging and message control							
25	Duplex pair error	Program action code						
26	Dual frame	EDCC mode	Duplex pair	Sub-volume error	Nonsynchronous operation	Serial channel	Not used	Permanent path error
27	24-byte SSB	Device address valid	Track address valid	Not used	DKU86I track compatible mode	Not used	Path number	
28	Not used							
29	Cylinder address							
30								
31	Head address							

Byte	Bit	Name	Description
0	0	Command reject	- Invalid command was received - The sequence of commands is invalid - The number of bytes sent by a CONTROL command is insufficient or the value is invalid - A WRITE command that violates the file mask and search conditions was received. - A WRITE command was received when the R/W switch was set to READ. (In this case, bit 6 of byte 1 (write inhibit) also becomes "1".) - The WRITE SPECIAL HA command does not permit a short byte. - An attempt to write an Rn record to a defective track was made. - No link is established for a defective or alternate track. - The command issued in the LOCATE domain does not match the operation specified by the LOCATE command. - The operation specified by the LOCATE command has violated the file mask. - An attempt was made to access an alternate track beyond the user cylinder during multi-track operation in the LOCATE domain. (File protected (bit 5 of byte 1) is set at the same time.) - The status of the cache/device does not meet the requirement of the SET SUB MD/PERF SUB FUNC command
	1	Intervention required	- The addressed device is not READY. - The DKU is in the CE mode. - The addressed device is not physically connected
	2	Busout check	The data or command transferred from the channel has a parity error.
	3	Device check	A malfunction was detected in the subsystem. Details are indicated in Bytes 7 to 31.
	4	Data check	- A correctable read error was detected in the data read from the device. (Bit 1 of byte 2 ("correctable") is set at the same time. The information for correction is indicated in sense bytes 15 to 23.) - An uncorrectable read error was detected in the data read from the device. - The end by the PCI fetch mode is indicated. Bit 1 of byte 2 ("correctable") is set at the same time and restart displacement is guaranteed. Error displacement and error pattern are 0.
	5	Overrun	- A response to a data request or reconnection request could not be received within the predetermined time on the parallel channel. This error is reported with F/M=0A. - No response was made or an invalid frame was received when the serial channel was in a data transfer sequence; so, retry was impossible. - Command retry (overrun) was requested from the channel, but retry was impossible. This error is reported with F/M=0A. - Termination of overrun was requested from the channel. This error is reported with F/M=0A. Note: This bit is set on if ten overruns have occurred through command retry including the format write command. (Permanent error (bit 0 of byte 1) is not set.) If a data overrun has occurred with a WRITE command, data transfer is aborted immediately and (00H) is written till the end of that record.
	6	Not used	Always 0
	7	Incomplete domain	This bit is set if a short domain has been detected during a write in asynchronous transfer. Environmental data present (bit 3 of byte 2) is also set to '1'.
1	0	Permanent error	Command retry failed.

Byte	Bit	Name	Description
1	1	Invalid track format	1. An index was encountered during a data write. (A data write beyond the track capacity was made.) 2. An index marker was detected in the key or data field when the READ or SEARCH command (except SCH ID) was handling a record. 3. An updating write was attempted for a record with a different size from the record size specified in TLF of the LOCATE command or the block length of the DEF EXT command. 4. The length of the data field of R0 was not 8 bytes during WRITE TRK operation.
	2	End of cylinder	An attempt was made to perform track switching from the last track of the logical cylinder by a READ or SEARCH command with multi-track specification. (End of cylinder is not reported in the LOCATE domain.)
	3	Message to operator	This bit is set to display an error to the operator.
	4	No record found	1. Two index markers were detected in the same command chain without intervention of a WRITE or SENSE command or a read operation that handles the HA or data field. 2. The target record searched for by a LOCATE command could not be detected. Imprecise ending (bit 7 of byte 1) is also set at the same time.
	5	File protected	1. A SEEK command has violated the file mask or extent range. 2. A READ or SEARCH command with multi-track specification has violated the file mask or extent range. 3. An attempt was made to access an alternate track beyond the user cylinder during multi-track operation in the LOCATE domain. (Command reject (bit 0 of byte 0) is also set at the same time.) 4. Multi-track operation was tried directly to an alternate track in the asynchronous mode. 5. The track set is out of the extent specified for WRITE ANY/READ ANY. 6. The LOCATE RECORD/LOCATE RECORD EXTENDED domain is out of extent.
	6	Write inhibit	1. A WRITE command was received when the R/W switch was set to READ. (Bit 0 of byte 0 (command rejection) also becomes "1".) 2. Indicates that the write prohibition status has been established by the DIAG CTL command. (Bit 3 of byte 0 (device check) is also set at the same time.)
	7	Imprecise ending	Indicates that the error indicated in the sense byte is due to a command before the command that reported the unit check. (abnormal end in the LOCATE domain) Bit 5 of byte 2 is also set at the same time.
2	0	Request inhibit write	Requests issuance of a DIAG CTL command that instructs prohibition of a write through the path to avoid an error from which the path cannot recover. (At the same time, the faulty section is set in byte 25 "program action code".)
	1	Correctable	Indicates that bit 4 of sense byte 0 (data check) can be corrected. Restart displacement, error displacement, and error pattern are indicated in bytes 15 to 23.
	2	First log mode error	The number of occurrences of seek/data errors exceeded the threshold. (Bit 3 of byte 2 (environmental data present) is also set at the same time.)
	3	Environmental data present	Indicates that this SSB is not due to the current CCW chain but it is the statistics to be reported from the DKC to the host. The statistics include log information and reset notification.
	4	Not used	Always 0
	5	Imprecise ending	Same as bit 7 of byte 1
	6	Not used	Always 0
	7	Not used	Always 0

Byte	Bit	Name	Description
3	0 1 7	Controller ID, number of retries, number of records	1. Controller ID (Format 1, 6, 7, 8, or F, without imprecise ending) 2. Number of retries (Format 4 or 5, without imprecise ending, and environmental data present = 1) 3. Number of remaining records or tracks in the LOCATE domain (when indeterminate end or file protection is 1) 4. Zero (For other than 1 to 3 above)
4	0 1 2 3 1 7	SP number 2^1 SP number 2^0 Controller number DKU physical device number	
5	0 1 7	Lower digits of cylinder address Overflow flag of command overruns	Indicates the lower digits of the cylinder address of the seek address received from the last channel (2^7 to 2^0). Set to x'01' when the command overrun threshold is exceeded. (For format 6 only)

Byte	Bit	Name	Description
6	0	Upper digits of cylinder address	(1) Indicates the upper digits of sense byte 5.
	1		Indicates the upper digits of the cylinder address of the last seek address received from the channel.
	3		
	4	Head address	(1) Indicates the head address of the last seek address received from the channel. This address is updated in multi-track operation.
	1		
	7		
	0	Overflow flag of data overruns	(2) Set to x'01' when the data overrun threshold is exceeded. (For format 6 only)
	1		
	7		
7	0	Format	The following indicate the meanings of sense bytes 8 to 23.
	1		0000 Format 0 Program check or system check
	3		0001 Format 1 Drive failure *1
			0010 Format 2 DKC function check (Not used)
	0011 Format 3 DKC control check		
	0100 Format 4 Data check without information for correction *1		
	0101 Format 5 Data check with information for correction (Not used)		
	0110 Format 6 Statistics *1		
	0111 Format 7 SPC Failure *1		
	1000 Format 8 Microprogram detected error or DKC/DKU failure		
	1001 Format 9 Microprogram detected error		
	1110 Format E Service information message (SIM) (Not used)		
	1111 Format F Cache system error		
	4	Message	Indicates the determined characteristics of the error status for the above formats. Hexadecimal digits of 0 to F indicated in bits 4 to 7 correspond to 0 to F for messages.
1			
7			
24	0-2	Logging message control	Reserved
	3		Logging mode
	4		Logging action (only $\epsilon 01i$ used)
	1		00: Not logged
	5		01: Unconditionally logged
			10: Only the first record logged at retry
			11: Only the first record logged upon occurrence of a permanent error
	6		Operator message control (only $\epsilon 01i$ used)
	1		00: No operator message
	7	01: Message unconditionally output	
10: Message output only for the first record at retry			
	11: Message output only for the first record upon occurrence of a permanent error.		

*1: For DKU86I (IBM 3380 emulation mode) only.

Byte	Bit	Name	Description
25	0	Program action code	Duplex pair volume error (Not used) Indicates the error on a duplex pair (neither pending nor suspended). This bit is set to 1 for device check or intervention request. F/M=1/7/8
	1-7		Instructs the method of error recovery. (00) ₁₆ : No action (10) ₁₆ : SIM (Not used) (16) ₁₆ : Reset notification (17) ₁₆ or (57) ₁₆ : Device check with FMT=7/8 during write operation. Prohibits write to the controller if a permanent error has occurred on that path. (18) ₁₆ or (58) ₁₆ : Device check during write operation. Prohibits write to the channel path if a permanent error has occurred on that path. (19) ₁₆ or (59) ₁₆ : Device check during write operation. Prohibits write to the storage path if a permanent error has occurred on that path. (70) ₁₆ : The command was rejected because the condition specified in the specific blocking condition setting order of the PERF SUB FUNC command was met. (71) ₁₆ : Attention was reported from the interface placed in the specific blocking status by the PERF SUB FUNC command. (1D) ₁₆ : The subsystem or device is in the State Change Pending status (statistics send (bit 3 of byte 2) = 1, F/M = F0).
26	0	Configuration information	Dual-frame configuration 0: Single-frame configuration 1: Dual-frame configuration
	1		EDCC mode 0: DCC 1: EDCC
	2		Duplex pair indication (Not used) 0: Simplex 1: Duplex pair
	3		Sub-volume error indication (Not used) 0: Not a sub-volume error 1: Sub-volume error
	4		Nonsynchronous operation 0: Synchronous operation 1: Nonsynchronous operation
	5		Serial channel 0: Parallel channel 1: Serial channel
	6		Not used
	7		Permanent path error 0: Permanent error for all paths 1: Permanent error for this path

Byte	Bit	Name	Description
27	0	Configuration information	24-byte SSB indication 0: Indicates 32-byte SSB. 1: Indicates 24-byte SSB.
	1		Device address valid 0: Device address in byte 4 is invalid. 1: Device address in byte 4 is valid.
	2		Track address valid 0: Track address in bytes 29 to 31 is invalid. 1: Track address in bytes 29 to 31 is valid.
	3		Not used
	4		DKU86I track compatible mode 0: Not in DKU86I track compatible mode 1: In DKU86I track compatible mode or changing to DKU86I track compatible mode
	5		Not used
	6-7		Fence path (1) Fence path: When operator message (bit 3 of byte 1) = 1 and F/M = 03 (2) SSB creation path: For other than the above
28	0 7	Message code	F/M=4X, MT0=1: Sub-retry succeeded ('01') F/M=F4, MT0=1: Cache stopped ('04') F/M=F7, MT0=1: Invalid track format ('07') F/M=FA, MT0=1: NVS stopped ('0A') F/M=FB, MT0=1: Suspend duplex ('0B')

Byte	Bit	Name	Description
29	0	Cylinder address	Not used
	1		
	3		
	4		Cylinder 2048
	5		Cylinder 1024
	6		Cylinder 512
	7		Cylinder 256
30	0		Cylinder 128
	1		Cylinder 64
	2		Cylinder 32
	3		Cylinder 16
	4		Cylinder 8
	5		Cylinder 4
	6		Cylinder 2
	7		Cylinder 1
31	0	Head address	Not used
	1		
	3		
	4		Head 8
	5		Head 4
	6		Head 2
	7		Head 1

3.2 Formats and messages

(1/2)

Format	Message	Description	
0		Operator message (bit 3 of byte 1) = 0	Operator message (bit 3 of byte 1) = 1
	0	No message	Not used
	1	Invalid command	Log mode end (Not used)
	2	Invalid sequence	Not used
	3	Data count is fewer than the specified number.	Device was fenced. (Not used)
	4	Data value differs from the specified number.	Not used
	5	The file mask allows neither RD SP HA nor WR SP HA.	
	6	The channel isolated the retry.	
	7	The channel sent an incorrect retry command.	
	8	System reset was received (reset notification).	
	9	Not used	
	A	Overrun/bus out parity check (LCP)	
	B	Improper instruction for a defective track or alternate track	
	C	Not used	
	D	ECM software error (Not used)	
	E	Invalid command for sub-volume (Not used)	
	F	Invalid status (reason code in byte 8)	
1	0	Intervention required	For DKU86I only
	1	Not used	
	2	Drive not ready	
	3	Not used	
	4	Drive report error	
	5-F	Not used	
3	0-E	Not used	
	F	Reset allegiance	
4	0	Data check in HA field	For DKU86I only
	1	Data check in C field	
	2	Data check in K field	
	3	Data check in D field	
	4	Not used	
	5	PA error	
	6-F	Not used	
6	0-7	Statistics	
	8-F	Not used	
7	0-3	Not used	
	4	SPC report error	
	5-8	Not used	
	9	SCSI bus parity error	
	A-F	Not used	

(2/2)

Format	Message	Description
8	0	Reserved
	1	Shared memory failure
	2	Not used
	3-7	Reserved
	8	LCP failure/MCP failure
	9	Host adapter CHK-2
	A	Disk adapter CHK-2
	B	DRR failure
	C	Reserved (for SSB log)
	D	Power failure
	E	Processor failure
	F	Microprogram detected error (Logical inconsistency)
9	0-E	Reserved
	F	Microprogram detected error (Trace data/Log data) (For SSB log)
F	0	Operation terminated
	1	Microprogram detected cache failure
	2	Cache failure
	3	Reserved
	4	Not used
	5	Reserved
	6	CFW impossible
	7	Invalid track format (Does not occur with RAID200.)
	8-9	Reserved
	A	NVS terminated
	B	HRC/HODM Pair suspend
	C-E	Reserved
	F	Cache/Shared memory/M-bus/F-bus/J-bus warning

3.3 Details of Sense Bytes

REV.1	Mar.1995	Jun.1995				
-------	----------	----------	--	--	--	--

Format 0, Message $\neq$ 8/A (Program or system check)

	0	1	2	3	4	5	6	7
7	Format (x'0')				Message(x'X': x ≠ 8, A)			
8	Reason code when F/M = 0F Command code when F/M ≠ 0F							
9	Error detail information (Note 1)							
10								
11								
12								
13	SSID of mate subsystem (x'0000' for EDCC)							
14								
15	Manufacturer code ('000000')						Factory code ('00')	
16	Module ID							
17	Routine ID							
18	Processor No. CHA (0-7) DKA (8-F)				Error detail information (Note 2)			
19								
20	SSID of self subsystem							
21								
22	Symptom code (x'0F0X': X = message code) (Note 3)							
23								

(Note 1) (1) Issued command information when F/M=02

B\b	0	1	2	3	4	5	6	7
9	SCH ID	SCH KEY	Locate, LC EXT	SK, SK CYL	RD IPL	RECAL	SUSP MPR	RD C
10	DIAG CTL	DIAG CTL (LOC DOM)	DEF EXT	SET FM	SET SUB MODE	SP C	WR CKD	WR R0
11	SET INTF ID	DIAG CTL (PRE REM)	0	Other command	RD C chaining	All byte match	LC domain	Erase execute
12	Pseud through	0	0	Allow WR KD	Allow WR D	Allow WR CKD	Allow WR R0	Allow WR HA

(2) Short byte flag when F/M=03

x'0040 0000'

(3) Mask information when F/M=05

Byte 9: Mask for write control

x'00': Allow all write operation
except WR HA, WR R0.
x'40': Inhibit all write operation.
x'80': Allow update write operation.
x'C0': Allow all write operation.

Byte 10: Mask for seek control

x'00': Allow all seek commands and RECAL.
x'08': Allow SK CYL and SK HD only.
x'10': Allow SK HD only.
x'18': Inhibit all seek command and multi operation.

Byte 11: Mask for access

x'00': Allow normal access.
x'02': Allow device support.
x'04': Allow diagnostic access.
x'06': Allow device support inhibit
data check correction and retry.

Byte 12: Not used

(4) Record address when other F/M

Byte 9 and 10 : Cylinder address

Byte 11 : Head address

Byte 12 : Record number

(Note 2) Bit 4-7 of byte 18: Type of byte 19

x'08': Byte 19 is cylinder address (high).

x'09': Byte 19 is cylinder address (low).

x'0A': Byte 19 is head address (high).

x'0B': Byte 19 is head address (low).

x'0C': Byte 19 is record number.

Byte 19: One byte of CCHHR.

(Note 3) x'2F00' for dummy SENSE

Reason code list for Format 0, Message F (1/2)

Code	Reason
00	No messages
01	An attempt was made to make a cache usable but the cache was in the pending status.
02	Not used
03	An attempt was made to forcibly make a cache unusable but the cache was not holding destage completion.
04	An attempt was made to activate a CFW but the CFW was in the ending status.
05	An attempt was made to perform caching for a device but a cache was in the pending status.
06	An attempt was made to destage a track but an NVS was in the failed status.
07	An attempt was made to make an NVS unusable but the NVS was being initialized.
08	An attempt was made to halt or discarded caching/DFW for a device but the DFW of the device was in the failed status.
09	An attempt was made to forcibly halt a DFW of a device but the device was not in the following status. · The DFW was in the pending status. · The DFW was in the failed status. · An NVS was failed. The data was in the NVS but not in the cache.
0A	An attempt was made to make an NVS usable but a DFW of a device was in the pending or failed status.
0B	An attempt was made to make an NVS usable but the NVS was in the pending status.
0C	An attempt was made to halt caching/DFW of a device when an NVS was failed but the data of the device was in the NVS but not in the cache.
0D	An NVS was requested by a command but the NVS was unusable.
0E	A cache was requested by a command but the cache was unusable.
0F	Not used
10-24	Not used
25	(TPF,RC) A SSM command(subcommand: Make Cache Unavailable to Subsystem) was received while a cache storage initialization procedure was underway.
26-27	Not used
28	(TPF,RC) A PSF command(Order: Prepare for Read Subsystem Data, Suborder: X'05') was received when cache was not available or pending.
29	The PSF command of specific blocking status setting order was issued from an interface having no path group.
2A	An attempt was made to make a path group having parallel and serial channels intermixed.
2B	A message buffer is full.
2C-2F	Not used
30	(TPF,RC) The cache partition indicated by PSF command(Order: Prepare for Read Subsystem Data) was not initialized.
31-34	Not used
35	SET GUARANTEED PATH sub-command was issued to a path in a fence.
36-39	Not used
3A	(TPF,RC) Read or Search or Write commands were received while 3380 Track Compatibility Mode.
3B-3E	Not used
3F	An attempt was made to execute the MAKE NVS AVAIL FOR SUB sub-command but the NVS was disabled because the enable/disable NVS capability has been set to disable in a VPD.
40	Not used
41	An ordinary command was issued to a device being reserved for media maintenance.
42-7F	Not used
80	A specific command was issued on an interface which has been in the specific command blocking status by the SET SPECIAL INTERCEPT CONDITION order of the PSF command.
81	An attention was reported to an interface which has been in the specific command blocking status by the SET SPECIAL INTERCEPT CONDITION order of the PSF command.
82-8F	Not used

Reason code list for Format 0, Message F (2/2)

Code	Reason
90	(TPF,RC) 1. A Locate Record Extended command was received on a 3990 that have ESCON channel capability. 2. A PSF command(one of these orders: Establish Duplex Pair, Terminate Duplex Pair, Suspend Duplex Pair, or Direct I/O to One Device of the Duplex Pair) was received. 3. A PSF command(Order: Prepare for Read Subsystem Data, Suborder: X'04') was received. 4. A PSF command(one of these orders: Prepare for Read Subsystem Data, Set Lock State, Purge Lock, Unlock, Connect, or Disconnect) was received in the case of MPLF feature was not installed.
91	(TPF,MPLF)Specified MPLP had not been initialized and the cache was not in an available status.
92	(TPF,RC) A SSS command was rejected because additional pinned data still existed.
93	(TPF,MPLF) A cache storage control command was received when Disconnect order was in progress for any MPLP.
94	(TPF,RC) Destage Modified Tracks order was received while a scan of the cache for modified data is underway, which was initiated from the receipt of a prior Destage Modified Tracks order.
95	(TPF,MPLF) The attention message buffer was full when the order which has the potential of generating attention interrupt was received.
96-FF	Not used

Format 0, Message 8 (reset notification)

	0	1	2	3	4	5	6	7
7	Format (x'0')				Message (x'8')			
8					x'00'			
9					x'00'			
10					x'00'			
11	Hardware level (Note)							
12								
13								
14	SSID of mate subsystem (x'0000' for EDCC)							
15	Manufacturer code ('000000')						Factory code ('00')	
16	Module ID							
17	Routine ID							
18	Processor No.				Not used			
19	Not used							
20	SSID of self subsystem							
21								
22	Symptom code (x'2FFF')							
23								

Note: Hardware level

Bit 0: Hardware level

When the bit 0 = 0,

- Bit 1: Not used
 Bit 2-3: Reported storage path
 Bit 4-5: Number of channels per cluster

00: 4
 01: 8
 10: Not used
 11: Not used

- Bit 6: NVS
 0: Not exist
 1: Exist

Bit 7: Not used

- Bit 8-10: Cache size
 000: Non cache
 001: 256MB
 010: 512MB
 011: 768MB
 100: 1024MB
 101: 1280MB
 110: 1536MB
 111: Over 1536MB

Bit 11-13: Cluster hardware level

Bit 14-15: Cache/NVS hardware level

When the bit 0 = 1,

- Bit 1: Not used
 Bit 2-3: Failed storage path
 Bit 4-7: Number of channels per cluster

0000: Parallel channel = 4, serial channel = 0
 0001: Parallel channel = 8, serial channel = 0
 0010: Parallel channel = 4, serial channel = 2
 0100: Parallel channel = 4, serial channel = 4
 0110: Parallel channel = 0, serial channel = 2
 1000: Parallel channel = 0, serial channel = 4
 1010: Parallel channel = 0, serial channel = 8
 1100: Parallel channel = 0, serial channel = 6

- Bit 8: Dual frame
 0: Dual frame
 1: Modular power

- Bit 9-11: Cache size
 000: Non cache
 001: 256MB
 010: 512MB
 011: 768MB
 100: 1024MB
 101: 1280MB
 110: 1536MB
 111: Over 1536MB

Bit 12-13: Cluster hardware level

Bit 14-15: Cache/NVS hardware level

Format 0, Message A (LCP & overrun, bus out parity check)

	0	1	2	3	4	5	6	7
7	Format (x'0')				Message (x'A')			
8	Command code							
9	Cylinder address							
10								
11	Head address							
12	Record No.							
13	SSID of mate subsystem (x'0000' for EDCC)							
14								
15	Manufacturer code ('000000')						Factory code ('00')	
16	Module ID							
17	Routine ID							
18	Processor No. CHA(0-7)				BBF OVER (XR4B)	PND OVER (XR4B)	STOP (XR49)	OVER (XR4A)
19	Not used							
20	SSID of self subsystem							
21								
22	Symptom code (x'0F0A')							
23								

Format 1, Message 0 (Intervention required)

	0	1	2	3	4	5	6	7
7	Format (x'1')				Message (x'0')			
8	Ready	Enable	SSB PEND	Not used ('00000')				
9	Not used							
10	M.M.RSV	PIN VOL	Not used ('000000')					
11	Host type	DKC type	Not used ('00')			DKU type		
12	Module ID							
13	Routine ID							
14	Command code							
15	Not used (x'00')							
16	Not used (x'00')							
17	Not used (x'00')							
18	Processor number				Not used (x'0')			
19	Not used (x'00')							
20	SSID of self subsystem							
21								
22	Symptom code (x'9F10')							
23								

Format 1, Message X (Drive report error)

	0	1	2	3	4	5	6	7
7	Format (x'1')				Message (x'2/4')			
8	Additional sense code + Additional sense code qualifier (See EC = E SSB for detail)							
9								
10	SCSI Command code (See EC = E SSB for detail)							
11	Threshold type (See EC = E SSB for detail)							
12	Module ID							
13	Routine ID							
14	Not used (x'0')				DKA number			
15	CDEV number				RDEV number			
16	Type code ('000')			0	Sense key (See EC = E SSB for detail)			
17	Not used (x'00')							
18	Not used (x'00')							
19	Not used (x'00')							
20	SSID of self subsystem							
21								
22	Symptom code (x'9F1X' X:Message)							
23								

Format 3, Message F (reset allegiance)

	0	1	2	3	4	5	6	7
7	Format (x'3')				Message (x'F')			
8	Not used							
9	Activated LPN							
10	Device busy	ECI	Command chainning	Path reserve	Stack status	Wait sense	Lond busy	Processor connect
11	Single path mode	Guarant path mode	MCB chainning	0	Block switch	0	0	0
12	Command code							
13	SSID of mate subsystem (x'0000' for EDCC)							
14								
15	Manufacturer code ('000000')						Factory code ('00')	
16	Specific information (module ID, routine ID)							
17								
18	Processor No. CHA (0 - 7) DKA (8 - F)				Not used			
19	Not used							
20	SSID of self subsystem							
21	Symptom code (x'3F3F')							
22								
23								

Format 4, Message X (Data check)

	0	1	2	3	4	5	6	7
7	Format (x'4')				Message (x'X')			
8	Cylinder address							
9								
10								
11	Head address							
12	Record number							
13	Sector number							
14	Controller ID							
15	Not used (x'00')							
16	Not used (x'00')							
17	Not used (x'00')							
18	Processor number				Not used (x'0')			
19	Not used (x'00')							
20	Command code							
21	SSID of self subsystem (low order)							
22	Symptom code (x'4XYY' Note 1)							
23								

(Note 1) Symptom code

X : x'0' : Data check in HA field
 x'1' : Data check in C field
 x'2' : Data check in K field
 x'3' : Data check in D field
 x'5' : PA error

YY : x'80' : Correctable (Recovered)
 x'C0' : Uncorrectable

Format 6, Message X (Statistics)

	0	1	2	3	4	5	6	7
7	Format (x'6')				Message (x'X') (Note 1)			
8	Number of read or searched bytes							
9								
10								
11								
12	Seek count							
13								
14	Not used (x'00')							
15	Manufacture code ('000000')						Factory code ('00')	
16	Not used (x'00')							
17	DKC serial number							
18								
19								
20	SSID of self subsystem							
21								
22	Symptom code (x'6FYX') (Note 2)							
23								

(Note 1) X: When parallel channel connected, channel number.
When serial channel connected, LCP number in cluster.

(Note 2) Y: 0: Statistics or RRBL command
1: Channel data overrun

X: See note 1.

Format 7, Message 4 (SPC report error)

	0	1	2	3	4	5	6	7
7	Format (x'7')				Message (x'4')			
8	SPC interruption status register (See EC = D SSB for detail)							
9	SPC command step register (See EC = D SSB for detail)							
10	SCSI command code (See EC = D SSB for detail)							
11	Threshold type (See EC = D SSB for detail)							
12	Module ID							
13	Routine ID							
14	Not used (x'0')				DKA number			
15	CDEV number				RDEV number			
16	Type code ('111')			0	Not used (x'0')			
17	Not used (x'00')							
18	Not used (x'00')							
19	Not used (x'00')							
20	SSID of self subsystem							
21								
22	Symptom code (x'DF74')							
23								

Format 7, Message 9 (SCSI bus parity error)

	0	1	2	3	4	5	6	7
7	Format (x'7')				Message (x'9')			
8	Additional sense code + Additional sense code qualifier (See EC = E SSB for detail)							
9								
10	SCSI command code (See EC = E SSB for detail)							
11	Threshold type							
12	Module ID							
13	Routine ID							
14	Not used (x'0')				DKA number			
15	CDEV number				RDEV number			
16	Type code ('000')			0	Sense Key (See (EC = E SSB for detail)			
17	Not used (x'00')							
18	Not used (x'00')							
19	Not used (x'00')							
20	SSID of self subsystem							
21								
22	Symptom code (x'DF79')							
23								

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message(x'1')			
8	Subcode: x'10': M bus arbiter error x'20': M bus open error x'21': F bus open error x'22': M bus open error and F bus open error							
9	MIC:CHK3STS							
	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	Arbiter CHK3 in MIC	CHK3 in SMP
10	MIC:CHK3STS							
	SQST00	SQST01	SQST02	SQST03	SQST04	SQST05	SQST06	SQST07
	(Sequencer status)							
11	MIC:ABT ERR							
	SQST08	SQST09	SQST10	(Not used)	(Not used)	Transfer start timeout	LIVE INS delay timer parity error	Transfer start timeout timer parity error
	(Sequencer status)							
12	MIC:REQ MP							
	REQ0	REQ1	REQ2	REQ3	REQ4	REQ5	REQ6	REQ7
	(Input request from bus 0: negated, 1: request asserted)							
13	MIC:REQ MP							
	REQ8	REQ9	REQ10	REQ11	REQ12	REQ13	REQ14	REQ15
	(Input request from bus 0: negated, 1: request asserted)							
14	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
15	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
16	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
17	SMP:BMD							
	F bus valid	M bus valid	Pseudo- access mode	Shared memory diagnostics access	Request output enable	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode: x'30': M bus master error in single access to shared memory side A x'31': F bus master error in single access to shared memory side A x'32': M bus master error in single access to shared memory side B x'33': F bus master error in single access to shared memory side B x'40': M bus master error in access to SMC side A x'41': F bus master error in access to SMC side A x'42': M bus master error in access to SMC side B x'43': F bus master error in access to SMC side B x'50': M bus master error in MP communication x'51': F bus master error in MP communication							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E1D							
	E1D00	E1D01	E1D02	E1D03	E1D04	E1D05	E1D06	E1D07
			Error phase data from M bus/F bus					
14	SMP:E1D							
	E1D10	E1D11	E1D12	E1D13	E1D14	E1D15	E1D16	E1D17
			Error phase data from M bus/F bus					
15	SMP:E1D							
	E1D20	E1D21	E1D22	E1D23	E1D24	E1D25	E1D26	E1D27
			Error phase data from M bus/F bus					
16	SMP:TXC							
	TX DATA 00-07 valid	TX DATA 10-17 valid	TX DATA 20-27 valid	TX DATA 30-37 valid	TRF00	TRF01	TRF02	TRF03
	Bus transfer count							
17	SMP:TXC							
	(RSV)	Bus mode ('101' in MP bus space)			Transfer mode Simplex area write: 0 Simplex area read: 1 Duplex area write: 4 Duplex area read: 5 Broadcast: 8			
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode: x'34': M bus master error on side A in double access to shared memory side A x'35': F bus master error on side A in double access to shared memory side A							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E2D							
	E2D00	E2D01	E2D02	E2D03	E2D04	E2D05	E2D06	E2D07
14	SMP:E2D							
	E2D10	E2D11	E2D12	E2D13	E2D14	E2D15	E2D16	E2D17
15	SMP:E2D							
	E2D20	E2D21	E2D22	E2D23	E2D24	E2D25	E2D26	E2D27
16	SMP:TXC							
	TX DATA 00-07 valid	TX DATA 10-17 valid	TX DATA 20-27 valid	TX DATA 30-37 valid	TRF00	TRF01	TRF02	TRF03
17	SMP:TXC							
	(RSV)	Bus mode ('101' in access to MP bus space)			Transfer mode Simplex area write: 0 Simplex area read: 1 Duplex area write: 4 Duplex area read: 5 Broadcast: 8			
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7	
7	Format (x'8')				Message (x'1')				
8	Subcode: x'36': M bus master error on side B in double access to shared memory side A x'37': F bus master error on side B in double access to shared memory side A								
9	SMP:MSTERR								
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error	
10	SMP:MSTERR								
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error	
11	SMP:MSTERR								
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)	
12	SMP:BMD								
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction	
13	SMP:E1D								
	E1D00	E1D01	E1D02	E1D03	E1D04	E1D05	E1D06	E1D07	
			Error phase data from M bus/F bus (Double read slave 2, single read slave 1/2)						
14	SMP:E1D								
	E1D10	E1D11	E1D12	E1D13	E1D14	E1D15	E1D16	E1D17	
			Error phase data from M bus/F bus (Double read slave 2, single read slave 1/2)						
15	SMP:E1D								
	E1D20	E1D21	E1D22	E1D23	E1D24	E1D25	E1D26	E1D27	
			Error phase data from M bus/F bus (Double read slave 2, single read slave 1/2)						
16	SMP:TXC								
	TX DATA 00-07 valid	TX DATA 10-17 valid	TX DATA 20-27 valid	TX DATA 30-37 valid	TRF00	TRF01	TRF02	TRF03	
					Bus transfer count				
17	SMP:TXC								
	(RSV)	Bus mode ('101' in access to MP bus space)			Transfer mode Simplex area write: 0 Simplex area read: 1 Duplex area write: 4 Duplex area read: 5 Broadcast: 8				
18	Not used								
19	Not used								
20	Processor No.				Message code: x'0'				
21	SSID (low order)								
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)								
23	Symptom code (low order) (x'81')								

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode: x'38': M bus master error on sides A and B in double access to shared memory side A x'39': F bus master error on sides A and B in double access to shared memory side A							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E2D							
	E2D00	E2D01	E2D02	E2D03	E2D04	E2D05	E2D06	E2D07
14	SMP:E2D							
	E2D10	E2D11	E2D12	E2D13	E2D14	E2D15	E2D16	E2D17
15	SMP:E1D							
	E1D00	E1D01	E1D02	E1D03	E1D04	E1D05	E1D06	E1D07
16	SMP:E1D							
	E1D10	E1D11	E1D12	E1D13	E1D14	E1D15	E1D16	E1D17
17	SMP:TXC							
	(RSV)	Bus mode ('101' in access to MP bus space)			Transfer mode Simplex area write: 0 Simplex area read: 1 Duplex area write: 4 Duplex area read: 5 Broadcast: 8			
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message(x'1')			
8	Subcode: x'70': Slave error in MP communication/broadcast scan reception							
9	SMP:SLVRR							
	Address bus code error	Command bus code error	Data bus code error	Bus parity error at writing	Transfer count specification error (command)	Bus mode specification error (command)	Transfer mode specification error (command)	(Not used)
10	SMP:SLVERR							
	(Not used)	(Not used)	(Not used)	Slave timeout error	Slave timer parity error	(Not used)	Sequencer condition error	(Not used)
11	SMP:CMD							
	CMD00	CMD01	CMD02	CMD03	CMD04	CMD05	CMD06	CMD07
	CMD data after M bus/F bus selection							
12	SMP:CMD							
	CMD20	CMD21	CMD22	CMD23	CMD24	CMD25	CMD26	CMD27
	CMD data after M bus/F bus selection							
13	SMP:CMD							
	CMD30	CMD31	CMD32	CMD33	CMD34	CMD35	CMD36	CMD37
	CMD data after M bus/F bus selection							
14	SMP:ADR							
	ADR10	ADR11	ADR12	ADR13	ADR14	ADR15	ADR16	ADR17
	ADR data after M bus/F bus selection							
15	SMP:ADR							
	ADR20	ADR21	ADR22	ADR23	ADR24	ADR25	ADR26	ADR27
	ADR data after M bus/F bus selection							
16	SMP:ADR							
	ADR30	ADR31	ADR32	ADR33	ADR34	ADR35	ADR36	ADR37
	ADR data after M bus/F bus selection							
17	SMP:DAT							
	DAT30	DAT31	DAT32	DAT33	DAT34	DAT35	DAT36	DAT37
	DAT data after M bus/F bus selection							
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode: x'80': M bus arbiter error and M bus master error on side A in single access to shared memory x'81': M bus arbiter error and F bus master error on side A in single access to shared memory x'82': M bus arbiter error and M bus master error on side B in single access to shared memory x'83': M bus arbiter error and F bus master error on side B in single access to shared memory x'90': M bus arbiter error and M bus master error in access to SMC side A x'91': M bus arbiter error and F bus master error in access to SMC side A x'92': M bus arbiter error and M bus master error in access to SMC side B x'93': M bus arbiter error and F bus master error in access to SMC side B x'A0': M bus arbiter error and M bus master error in MP communication x'A1': M bus arbiter error and F bus master error in MP communication							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E1D							
	E1D00	E1D01	E1D02	E1D03	E1D04	E1D05	E1D06	E1D07
14	SMP:E1D							
	E1D10	E1D11	E1D12	E1D13	E1D14	E1D15	E1D16	E1D17
15	SMP:E1D							
	E1D20	E1D21	E1D22	E1D23	E1D24	E1D25	E1D26	E1D27
16	MIC:ABTERR							
	SQST00	SQST01	SQST02	SQST03	SQST04	SQST05	SQST06	SQST07
17	MIC:ABTERR							
	SQST08 status	SQST09	SQST10 Sequencer	(Not used)	(Not used)	Transfer start timeout error	LIVE INS delay timer parity error	Transfer start timeout timer parity error
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode:x'84': M bus arbiter error and M bus master error on side A in double access to shared memory x'85': M bus arbiter error and F bus master error on side A in double access to shared memory							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E2D							
	E2D00	E2D01	E2D02	E2D03	E2D04	E2D05	E2D06	E2D07
14	SMP:E2D							
	E2D20	E2D21	E2D22	E2D13	E2D14	E2D15	E2D16	E2D17
15	SMP:E2D							
	E2D20	E2D21	E2D22	E2D23	E2D24	E2D25	E2D26	E2D27
16	MIC:ABTERR							
	SQST00	SQST01	SQST02	SQST03	SQST04	SQST05	SQST06	SQST07
17	MIC:ABTERR							
	SQST08 status	SQST09	SQST10 Sequencer	(Not used)	(Not used)	Transfer start timeout error	LIVE INS delay timer parity error	Transfer start timeout timer parity error
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode:x'86': M bus arbiter error and M bus master error on side B in double access to shared memory x'87': M bus arbiter error and F bus master error on side B in double access to shared memory							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E1D							
	E1D00	E1D01	E1D02	E1D03	E1D04	E1D05	E1D06	E1D07
14	SMP:E1D							
	E1D10	E1D11	E1D12	E1D13	E1D14	E1D15	E1D16	E1D17
15	SMP:E1D							
	E1D20	E1D21	E1D22	E1D23	E1D24	E1D25	E1D26	E1D27
16	MIC:ABTERR							
	SQST00	SQST01	SQST02	SQST03	SQST04	SQST05	SQST06	SQST07
17	MIC:ABTERR							
	SQST08 status	SQST09	SQST10 Sequencer	(Not used)	(Not used)	Transfer start timeout error	LIVE INS delay timer parity error	Transfer start timeout timer parity error
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode:x'88': M bus arbiter error and M bus master error on sides A and B in double access to shared memory x'89': M bus arbiter error and F bus master error on sides A and B in double access to shared memory							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E2D							
	E2D00	E2D01	E2D02	E2D03	E2D04	E2D05	E2D06	E2D07
	Error phase data from M bus/F bus (Double read slave 1)							
14	SMP:E2D							
	E2D20	E2D21	E2D22	E2D13	E2D14	E2D15	E2D16	E2D17
	Error phase data from M bus/F bus (Double read slave 1)							
15	SMP:E1D							
	E1D00	E1D01	E1D02	E1D03	E1D04	E1D05	E1D06	E1D07
	Error phase data from M bus/F bus (Double read slave 2, single read slave 1/2)							
16	SMP:E1D							
	E1D10	E1D11	E1D12	E1D13	E1D14	E1D15	E1D16	E1D17
	Error phase data from M bus/F bus (Double read slave 2, single read slave 1/2)							
17	MIC:ABTERR							
	SQST08 status	SQST09	SQST10 Sequencer	(Not used)	(Not used)	Transfer start timeout error	LIVE INS delay timer parity error	Transfer start timeout timer parity error
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode: x'C0': M bus artier error and slave error in MP communication/broadcast scan reception							
9	SMP:SLVERR							
	Address bus code error	Command bus code error	Data bus code error	Bus parity error at writing	Transfer start specification error	Bus mode specification error	Transfer mode specification error	(Not used)
10	SMP:SLVERR							
	(Not used)	(Not used)	(Not used)	Slave timeout error	Slave timer parity error	(Not used)	Sequencer condition error	(Not used)
11	SMP:CMD							
	CMD00	CMD01	CMD02	CMD03	CMD04	CMD05	CMD06	CMD07
	CMD data after M bus/F bus selection							
12	SMP:CMD							
	CMD20	CMD21	CMD22	CMD23	CMD024	CMD25	CMD26	CMD27
	CMD data after M bus/F bus selection							
13	SMP:CMD							
	CMD30	CMD31	CMD32	CMD33	CMD034	CMD35	CMD36	CMD37
	CMD data after M bus/F bus selection							
14	SMP:ADR							
	ADR10	ADR11	ADR12	ADR13	ADR14	ADR15	ADR16	ADR17
	ADR data after M bus/F bus selection							
15	SMP:ADR							
	ADR20	ADR21	ADR22	ADR23	ADR24	ADR25	ADR26	ADR27
	ADR data after M bus/F bus selection							
16	SMP:ADR							
	ADR30	ADR31	ADR32	ADR33	ADR34	ADR35	ADR36	ADR37
	ADR data after M bus/F bus selection							
17	MIC:ABTERR							
	SQST08 status	SQST09	SQST10 Sequencer	(Not used)	(Not used)	Transfer start timeout error	LIVE INS delay timer parity error	Transfer start timeout timer parity error
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode: x'D0': M bus master error and slave error in single access to shared memory side A x'D1': F bus master error and slave error in single access to shared memory side A x'D2': M bus master error and slave error in single access to shared memory side B x'D3': F bus master error and slave error in single access to shared memory side B x'E0': M bus master error and slave error in single access to SMC side A x'E1': F bus master error and slave error in single access to SMC side A x'E2': M bus master error and slave error in single access to SMC side B x'E3': F bus master error and slave error in single access to SMC side B x'E4': M bus master error and slave error in MP communication x'E5': F bus master error and slave error in MP communication							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E1D							
	E1D00	E1D01	E1D02	E1D03	E1D04	E1D05	E1D06	E1D07
14	SMP:E1D							
	E1D10	E1D11	E1D12	E1D13	E1D14	E1D15	E1D16	E1D17
15	SMP:E1D							
	E1D20	E1D21	E1D22	E1D23	E1D24	E1D25	E1D26	E1D27
16	SMP:SLVERR							
	Address bus code error	Command bus code error	Data bus code error	Bus parity error at writing	Transfer start specification error	Bus mode specification error	Transfer mode specification error	(Not used)
17	SMP:SLVERR							
	(Not used)	(Not used)	(Not used)	Slave timeout error	Slave timer parity error	(Not used)	Sequencer condition error	(Not used)
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode: x'D4': M bus master error and slave error on side A in double access to shared memory x'D5': F bus master error and slave error on side A in double access to shared memory							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E2D							
	E2D00	E2D01	E2D02	E2D03	E2D04	E2D05	E2D06	E2D07
Error phase data from M bus/F bus (Double read slave 1)								
14	SMP:E2D							
	E2D10	E2D11	E2D12	E2D13	E2D14	E2D15	E2D16	E2D17
Error phase data from M bus/F bus (Double read slave 1)								
15	SMP:E2D							
	E2D20	E2D21	E2D22	E2D23	E2D24	E2D25	E2D26	E2D27
Error phase data from M bus/F bus (Double read slave 1)								
16	SMP:SLVERR							
	Address bus code error	Command bus code error	Data bus code error	Bus parity error at writing	Transfer start specification error	Bus mode specification error	Transfer mode specification error	(Not used)
17	SMP:SLVERR							
	(Not used)	(Not used)	(Not used)	Slave timeout error	Slave timer parity error	(Not used)	Sequencer condition error	(Not used)
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode: x'D6': M bus master error and slave error on side B in double access to shared memory x'D7': F bus master error and slave error on side B in double access to shared memory							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E1D							
	E1D00	E1D01	E1D02	E1D03	E1D04	E1D05	E1D06	E1D07
	Error phase data from M bus/F bus (Double read slave 2, single read slave 1/2)							
14	SMP:E1D							
	E1D10	E1D11	E1D12	E1D13	E1D14	E1D15	E1D16	E1D17
	Error phase data from M bus/F bus (Double read slave 2, single read slave 1/2)							
15	SMP:E1D							
	E1D20	E1D21	E1D22	E1D23	E1D24	E1D25	E1D26	E1D27
	Error phase data from M bus/F bus (Double read slave 2, single read slave 1/2)							
16	SMP:SLVERR							
	Address bus code error	Command bus code error	Data bus code error	Bus parity error at writing	Transfer start specification error	Bus mode specification error	Transfer mode specification error	(Not used)
17	SMP:SLVERR							
	(Not used)	(Not used)	(Not used)	Slave timeout error	Slave timer parity error	(Not used)	Sequencer condition error	(Not used)
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode: x'D8': M bus master error and slave error on sides A and B in double access to shared memory x'D9': F bus master error and slave error on sides A and B in double access to shared memory							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E2D							
	E2D00	E2D01	E2D02	E2D03	E2D04	E2D05	E2D06	E2D07
Error phase data from M bus/F bus (Double read slave 1)								
14	SMP:E2D							
	E2D10	E2D11	E2D12	E2D13	E2D14	E2D15	E2D16	E2D17
Error phase data from M bus/F bus (Double read slave 1)								
15	SMP:E1D							
	E1D20	E1D21	E1D22	E1D23	E1D24	E1D25	E1D26	E1D27
Error phase data from M bus/F bus (Double read slave 2, single read slave 1/2)								
16	SMP:SLVERR							
	Address bus code error	Command bus code error	Data bus code error	Bus parity error at writing	Transfer start specification error	Bus mode specification error	Transfer mode specification error	(Not used)
17	SMP:SLVERR							
	(Not used)	(Not used)	(Not used)	Slave timeout error	Slave timer parity error	(Not used)	Sequencer condition error	(Not used)
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (shared memory failure)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Subcode: x'F0': M bus master error, slave error and arbiter error x'F1': F bus master error, slave error and arbiter error x'FF': Other errors							
9	SMP:MSTERR							
	Requester error (M bus)	Shared memory reduction setting error	Bus mode setting error	Address byte 0 parity error	Address byte 1 parity error	Address byte 2 parity error	1st read data bus code error	2nd read data bus code error
10	SMP:MSTERR							
	Read data compare error	1st error phase bus code error	2nd error phase bus code error	Error phase warning	Error phase any error	F bus check error	M bus check error	Master timeout error
11	SMP:MSTERR							
	Master timer parity error	F bus arbitration error	Address byte 3 parity error	Data parity error in SMP	Last data check error	F bus open detected	M bus open detected	(Not used)
12	SMP:BMD							
	F bus valid	M bus valid	Pseudo-access mode	Shared memory diagnostic access	Request output enabled	Shared memory copy mode	Shared memory side A reduction	Shared memory side B reduction
13	SMP:E2D							
	E2D00	E2D01	E2D02	E2D03	E2D04	E2D05	E2D06	E2D07
Error phase data from M bus/F bus (Double read slave 1)								
14	SMP:E1D							
	E1D00	E1D01	E1D02	E1D03	E1D04	E1D05	E1D06	E1D07
Error phase data from M bus/F bus (Double read slave 2, single read slave 1/2)								
15	MIC:ABT ERR							
	SQST08	SQST09	SQST10	(Not used)	(Not used)	Transfer start timeout error	LIVE INS delay timer parity error	Transfer start timeout error and parity error
16	SMP:SLVERR							
	Address bus code error	Command bus code error	Data bus code error	Bus parity error at writing	Transfer start specification error	Bus mode specification error	Transfer mode specification error	(Not used)
17	SMP:SLVERR							
	(Not used)	(Not used)	(Not used)	Slave timeout error	Slave timer parity error	(Not used)	Sequencer condition error	(Not used)
18	Not used							
19	Not used							
20	Processor No.				Message code: x'0'			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU871 / x'EF':LDEV type=DKU861)							
23	Symptom code (low order) (x'81')							

Format 8, Message 1 (CHK3 reset)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'1')			
8	Related internal SSB number for failure							
9								
10	Not used							
11	Not used							
12	Old PSW							
13								
14								
15								
16	Internal SSB log number							
17								
18	Related detail log number for reset							
19								
20	Processor No.				Message code: x'3' (Note)			
21	SSID (low order) of self subsystem							
22	Symptom code (x'FF81':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23								

(Note) Indicates CHK3 reset.

Format 8, Message 8 (LCP failure) (Note)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'8')			
8	LCP error message (x'01': LCP CHK-2/adapter interface error)							
9	LCP error code							
10								
11	XR4B(H)							
	BBF OVERRUN	PND OVERRUN	0	0	0	0	0	0
12	XR4B(L)							
	LRCA ERR	LRCB ERR	BBFP PER	BBIP PER	BBOP PER	PND CK2	CNT PER	REQ CNT OVERRUN
13	XR3E(H)							
	RBFA APER	RFBF APER	RBFC APER	RBF WRDER	MBFA APER	MBFB APER	MBFC APER	MBF WRDER
14	XR3E(L)							
	FRM RCTPE	CMP DPER	XFR CHRPER	XFR SEOPER	M-CNT PER	H-CNT PER	0	0
15	XR55(H)							
	BUSPE PA	LRCER PA	REQ ER A	ADTDT ER A	0	0	0	0
16	XR55(L)							
	BUSPE PB	LRCER PB	REQ ER B	ADTDT ER B	0	0	0	0
17								
	Control flag	0	0	STOP (XR49: bit15)	CK2 DTX (XR4A: bit0)	CK2 LIN (XR4A: bit1)	IFERA (XR51: bit12)	IFERB (XR51: bit13)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code: x'A' (Note)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'88')							

Note: Indicates LCP failure when SSB7=88 and SSB20:b4-7=A.

Format 8, Message 8 (LCP failure) (Note)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'8')			
8	LCP error message (x'02': Link reception error)							
9	LCP error code							
10								
11	XR36(H)							
	L-SIG ERR0	L-SIG ERR1	CONN ERR0	CONN ERR1	CONN ERR2	0	0	0
12	XR36(L)							
	0	0	0	0	0	0	0	0
13	XR37(H)							
	CONN ERR3	L-SIG ERR	CODE VIOA	SEQ ERR	CRC ERR	ABORT ERR	PROT ERR0	PROT ERR1
14	XR37(L)							
	ABORT ERR2	PROT ERR3	PROT ERR4	ABORT ERR5	PROT ERR6	PROT ERR7	PROT ERR8	PROT ERR9
15	XR33(H)							
	C-SOF ERR	P-SOF ERR	D-EOF ERR	P-EOF ERR	L-SIG ERR	CODE VIOLA	SEQ ERR	CRC ERR
16	XR33(L)							
	BUSPE PB	LRCER PB	REQ ER B	R-CNT 0	R-CNT 1	R-CNT 2	R-CNT 3	R-CNT 4
17								
	0	0	STOP (XR49: bit15)	ABORT (XR32: bit11)	ER RCV1 (XR4A: bit3)	ER RCV2 (XR4A: bit4)	ER RCV3 (XR4A: bit5)	OTHER (XR51: bit6)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code: x'A' (Note)			
21	SSID (low order)							
22	Symptom_code (high order) (x'FF':LDEV type=DKU871 / x'EF':LDEV type=DKU861)							
23	Symptom code (low order) (x'88')							

Note: Indicates LCP failure when SSB7=88 and SSB20:b4-7=A.

Format 8, Message 8 (LCP failure) (Note)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'8')			
8	LCP error message (x'0C': CHL data > DEV data at writing)							
9	LCP error code							
10								
11								
12	Request count							
13	Number of data received							
14								
15								
16	Not used (x'00')							
17	Not used (x'00')							
18	Module ID							
19	Routine ID							
20	Processor No.				Message code: x'A' (Note)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'88')							

Note: Indicates LCP failure when SSB7=88 and SSB20:b4-7=A.

Format 8, Message 8 (LCP failure) (Note 1)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'8')			
8	LCP error message (x'0E':Timeout)							
9	LCP error code							
10								
11	Reason code (Note2)							
12								
13	XR49(H)							
	ESYCN	END	RDYOK	RDYRCV	0	CMDFRM	ACPRSP	DATAXF
14	XR49(L)							
	XFREND	DEVEND	CNTFLG	EOF	CMPEQ	CMPGT	0	STOP
15	XR51(H)							
	CAL PA	CAL PB	RDY	P BSY	CALL	SELTD	CHK1	DCK1
16	XR51(L)							
	BFBSY	ATTN	0	0	IFERA	IFERB	PA BSY	PB BSY
17	XR48(H)							
	RUN BSY	RUN TRS	RUN ADP	DAR REQ MOD	XFSTOP	CDFLG	CMPA	CMPB
18	Module ID							
19	Routine ID							
20	Processor No.				Message code:x'A' (Note1)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'88')							

(Note1): Indicates LCP failure when SSB7=88 and SSB20:b4-7=A.

(Note2): Reson code

- x'FF01': (READ) Timeout at waiting for ACP CMD RSP
- x'FF02': (READ) Timeout at waiting for frame header
- x'FF03': (READ) Timeout at waiting for data frame
- x'FF04': (READ) Timeout at waiting for end of data transfer
- x'FF05': (READ) Timeout at waiting for data frame
- x'FF06': (READ) Timeout at waiting for end of data transfer
- x'FF07': (READ) Timeout at waiting for command frame
- x'FF08': (READ) Timeout at waiting for DATA REQ
- x'FF09': (READ) Timeout at waiting for status
- x'FFF1': (WRITE) Timeout at waiting for ACP CMD RSP
- x'FFF2': (WRITE) Timeout at waiting for first data
- x'FFF3': (WRITE) Timeout at waiting for frame header
- x'FFF4': (WRITE) Timeout at waiting for frame header
- x'FFF5': (WRITE) Timeout at waiting for frame header
- x'FFF6': (WRITE) Timeout at waiting for command frame
- x'FFF7': (WRITE) Timeout at waiting for frame header
- x'FFF8': (WRITE) Timeout at waiting for end of data transfer
- x'FFF9': (WRITE) Timeout at waiting for status

Format 8, Message 8 (LCP failure) (Note1)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'8')			
8	LCP error message (except x'01'/x'02'/x'0C'/x'0E') (Note2)							
9	LCP error code							
10								
11	Not used							
12	Not used							
13	Not used							
14	Not used							
15	Not used							
16	Not used							
17	Not used							
18	Module ID							
19	Routine ID							
20	Processor No.				Message code: x'A' (Note)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'88')							

(Note1): Indicates LCP failure when SSB7=88 and SSB20:b4-7=A.

(Note2): LCP error message

x'00' : No message

x'08' : Transmission error

x'09' : Protocol error

x'0D' : Retry abort

Format 8, Message 8 (MCP failure) (Note)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'8')			
8	MCP error message (x'01': MCP CHK-2/adapter interface error/bus-out parity error)							
9	MCP error code							
10								
11	XRBS(H)							
	XFR END	CHK2	ADP ER	BO PER	CHL OVERRUN	TRUNCA- TION	HALT I/O	FCE END
12	XRBS(L)							
	ABEND	CHL END	DEV END	0	0	0	0	0
13	XRCK20(H)							
	MOD ERR	CAER	BSI0ER	BSI1ER	MBFAAPE R	MBFCAPE R	MBFWDPER	0
14	XRCK20(L)							
	SPC PER	CHC PER	PND C PER	PND OVRUN	CB I DER	BSI0 PER	BSI1 PER	0
15	XRCK21(H)							
	BBF I PER	LRCAER	LRCBER	BB I PER	BB OPPER	TG O PER	CB O B PER	FLG M PER
16	XRCK21(L)							
	CB O B LER	TAGSEQR	PLSWER	PLSDER	0	0	0	0
17	XRIFER							
	BUSPE0	LRCER0	SEQR0	ADPER0	BUSPE1	LRCER1	SEQR1	ADPDER1
18	Module ID							
19	Routine ID							
20	Processor No.				Message code: x'B' (Note)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'88')							

Note: Indicates MCP failure when SSB7=88 and SSB20:b4-7=B.

Format 8, Message 8 (MCP failure) (Note)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'8')			
8	MCP error message (x'0E': MCP timeout)							
9	MCP error code							
10								
11	Cause code (H)							
12	Cause code (L)							
13	XRBS(H)							
	XFR END	CHK2	ADP ER	BO PER	CHL OVERRUN	TRUNCA- TION	HALT I/O	FCE END
14	XRBS(L)							
	ABEND	CHL END	DEV END	0	0	0	0	0
15	XRSTS(H)							
	CALP0	CALP1	RDY	PBSY	CALL	SELTD	CHK1	DCK1
16	XRSTS(L)							
	BFBSY	ATTN	0	0	IFER0	IFER1	POBSY	P1BSY
17	XRBC0(H)							
	ENBL CHL	EXEC CHL	0	INC MODE	CHMODE0	CHMODE1	0	0
18	Module ID							
19	Routine ID							
20	Processor No.				Message code: x'B' (Note)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'88')							

Note: Indicates MCP failure when SSB7=88 and SSB20:b4-7=B.

Format 8, Message 8 (MCP failure) (Note)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'8')			
8	MCP error message (x'80': burst failed)							
9	MCP error code							
10								
11	Not used (x'0000')							
12								
13	Not used (x'0000')							
14								
15	Not used (x'00')							
16	Not used (x'00')							
17	Not used (x'00')							
18	Module ID							
19	Routine ID							
20	Processor No.				Message code: x'B' (Note)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'88')							

Note: Indicates MCP failure when SSB7=88 and SSB20:b4-7=B.

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'00': Other errors							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRTI/ PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	RCHA::CHK2ST0							
	M/E sequencer parity error	M/E loop pointer parity error	CHL transfer sequencer parity error	CHR/CBIR pointer parity error	CHR sequence pointer parity error	CHR/CHL pointer parity error	CBIR sequencer parity error	CBIR0/1 pointer parity error
13	RCHA::CHK2ST0							
	CBR pointer parity error	CBX sequencer parity error	CBX SEQ CBOR pointer parity error	CBOR counter parity error	CBOR/CHR /SHR compare error	CHC parity error	BSA data register counter parity error	SCH0/1 pointer parity error
14	BSA::BSASSB #12 (CHK2 information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/ sequence	F bus timeout	WCHK1 assert
15	BSA::BSASSB #13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
16	BSA::BSASSB #12 (CHK2 information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/ sequence	F bus timeout	WCHK1 assert
17	BSA::BSASSB #13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

(Notice) If Module ID, Routine ID (Reason code or SSB free area byte 2, 3) is C560 ~ C56A, format change to following:

byte 8	: Module ID 1	byte 9	: Routine ID 1
byte 10	: Module ID 2	byte 11	: Routine ID 2
byte 12-15	: Return code	byte 16-19	: Processor No.
byte 20	: (none)	byte 21	: SSID
byte 22	: Symptom code (high)	byte 23	: Symptom code (low)

Format 8, Message 9 (host adapter CHK-2 : Abnomal cache slot status 1)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'01': Abnomal cache slot status 1 (Note 1)							
9	Slot status							
10								
11								
12								
13	Write in progress	Make GAP	Erase	Update HA/R0	Update bit map	Not used	Not used	Not used
14	Subblock number (for transfer ready response)							
15	Start subblock number (for update)							
16	End subblock number (for update)							
17	Not used							
18	Module ID (Note 1)							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

(Note 1) Module ID = x'55' : After synchronous destage, cache slot with dirty attribute has been detected.

Module ID $\neq$ x'55' : In internal segrch or orientation process, incomplete subblock has been detected.

Format 8, Message 9 (host adapter CHK-2 : Abnomal cache slot status 2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'02': Abnomal cache slot status 2 (Note 1)							
9	Slot status							
10								
11								
12								
13	Write in progress	Make GAP	Erase	Update HA/R0	Update bit map	Not used	Not used	Not used
14	Subblock number (for transfer ready response)							
15	Start subblock number (for update)							
16	End subblock number (for update)							
17	Not used							
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

(Note 1) Cache ECC/LRC error has been detected in read side.

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'10i: BSA1 CHK2 error							
9	BSA::BSASSB_#00 (CHK2A information)							
	CHK error	Last cycle error	Slave 1 parity error	Slave 2 parity error	Slave ID error	FBS read data error	FBS read P-LRC error	FDB parity error
10	BSA::BSASSB_#01 (CHK2A information)							
	Slave 1 error	Slave 1 warning	Slave 1 error	Slave 1 warning	(RSV)	(RSV)	(RSV)	(RSV)
11	BSA::BSASSB_#03 (CHK2B information)							
	HDB 1 parity error	HDB 3 parity error	HDB 2 parity error	HDB 4 parity error	LRC GEN parity error	HDB 1/2 data parity error	HDB 3/4 data parity error	(RSV)
12	BSA::BSASSB_#04 (CHK2C information)							
	Side-A access parity error	Side-B access parity error	Side-A invalid error	Side-B invalid error	F bus timeout	(RSV)	WCHK1 assert	F bus timer parity error
13	BSA::BSASSB_#05 (CHK2C information)							
	(RSV)	Request sequencer parity error	Request counter/pointer parity error	MYGRANT parity error	ABT count over	DBF access parity error	CHA invalid read	Bus mode error
14	BSA::BSASSB_#06 (CHK2C information)							
	WRS counter/pointer parity error	WR1 sequence error	WR1 counter/pointer parity error	WR2 sequence error	WR2 counter/pointer parity error	WR3 sequence error	WR3 counter/pointer parity error	DBF address counter (A) parity error
15	BSA::BSASSB_#07 (CHK2C information)							
	DBF address counter (B) parity error	Transfer count over	Command/status A inconsistent	Command/status B inconsistent	RD1 sequence error	RD1 counter/pointer parity error	RD2 sequence error	RD2 counter/pointer parity error
16	BSA::BSASSB_#08 (CHK2C information)							
	RD3 sequence error	RD3 counter/pointer parity error	RD4 sequence error	RD4 counter/pointer parity error	DKA sequence error	DKA counter/pointer parity error	(RSV)	(RSV)
17	BSA::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'20': BSA0 CHK2 error							
9	BSA ::BSASSB_#00 (CHK2A information)							
	CHK error	Last cycle error	Slave 1 parity error	Slave 2 parity error	Slave ID error	FBS read data error	FBS read P-LRC error	FDB parity error
10	BSA ::BSASSB_#01 (CHK2A information)							
	Slave 1 error	Slave 1 warning	Slave 2 error	Slave 2 warning	(RSV)	(RSV)	(RSV)	(RSV)
11	BSA ::BSASSB_#03 (CHK2B information)							
	HDB 1 parity error	HDB 3 parity error	HDB 2 parity error	HDB 4 parity error	LRC GEN parity error	HDB 1/2 data parity error	HDB 3/4 data parity error	(RSV)
12	BSA ::BSASSB_#04 (CHK2C information)							
	Side-A access parity error	Side-B access parity error	Side-A invalid error	Side-B invalid error	F bus timeout	(RSV)	WCHK1 assert	F bus timer parity error
13	BSA ::BSASSB_#05 (CHK2C information)							
	(RSV)	Request sequencer parity error	Request counter/pointer parity error	MYGRANT parity error	ABT count over	DBF access parity error	CHA invalid read	Bus mode error
14	BSA ::BSASSB_#06 (CHK2C information)							
	WRS counter/pointer parity error	WR1 sequence error	WR1 counter/pointer parity error	WR2 sequence error	WR2 counter/pointer parity error	WR3 sequence error	WR3 counter/pointer parity error	DBF address counter (A) parity error
15	BSA ::BSASSB_#07 (CHK2C information)							
	DBF address counter (B) parity error	Transfer count over	Command/ status A inconsistent	Command/ status B inconsistent	RD1 sequence error	RD1 counter/pointer parity error	RD2 sequence error	RD2 counter/pointer parity error
16	BSA ::BSASSB_#08 (CHK2C information)							
	RD3 sequence error	RD3 counter/pointer parity error	RD4 sequence error	RD4 counter/pointer parity error	DKA sequence error	DKA counter/pointer parity error	(RSV)	(RSV)
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU871 / x'EF':LDEV type=DKU861)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'30': BSA0-1 CHK2 error							
9	BSA::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
10	BSA::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer parity error	Request sequence error
11	BSA::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
12	BSA::BSASSB_#11 (CHK2C information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
13	BSA::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
14	BSA::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer parity error	Request sequence error
15	BSA::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
16	BSA::BSASSB_#11 (CHK2C information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
17	RCHA::BSACK2							
	BSA0 packet retry possible	BSA0 packet retry impossible: data transfer interruption CHK	BSA0 packet retry impossible: data transfer continuation CHK2	BSA0 CHK2: asynchronous CHK2	BSA1 packet retry possible	BSA1 packet retry impossible: data transfer interruption CHK	BSA1 packet retry impossible: data transfer continuation CHK2	BSA1 CHK2: asynchronous CHK2
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'40': RCHA CHK2 ST0 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST0							
	M/E sequencer parity error	M/E loop pointer parity error	CHL transfer sequencer parity error	CHR/CBIR pointer parity error	CHR sequence pointer parity error	CHR/CHL pointer parity error	CBIR sequencer parity error	CBIR0/1 pointer parity error
12	RCHA::CHK2ST0							
	CBR pointer parity error	CBX sequencer parity error	CBX SEQ CBOR pointer parity error	CBOR counter parity error	CBOR/CHR/SHR compare error	CHC parity error	BSA data register counter parity error	SCH0/1 pointer parity error
13	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
14	RCHA::CHK2ST1							
	CHL/CHR pointer parity error	CBF transfer W/R pointer parity error	BSA packet reception halt error	CBIR0 FLRC compare error	CBX FLRC compare error	CHC parity error	BSA data register counter parity error	CBXSQ CBR pointer parity error
15	RCHA::CHK2ST2							
	Pending counter hardware	CBIRDY/AL WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC compare error	CBIR1 input data parity error
16	RCHA::CHK2ST2							
	CBF input data parity error	CBOR input data parity error	LA compare error	SHRA LRC compare error	SHRB LRC compare error	SHRA input data parity error	SHRA output data parity error	SHRB input data parity error
17	RCHA::CHK2ST3							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/PRTOUT/PRTOUT parity error	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU871 / x'EF':LDEV type=DKU861)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'41': RCHA CHK2 ST1 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0,1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
12	RCHA::CHK2ST1							
	CHL/CHR pointer parity error	CBF transfer W/R pointer parity error	BSA packet reception halt error	CBIR0 FLRC compare error	CBX FLRC compare error	CHC parity error	BSA data register counter parity error	CBXSQ CBR pointer parity error
13	RCHA::CHK2ST2							
	Pending counter hardware	CBIRDY/AL WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC compare error	CBIR1 input data parity error
14	RCHA::CHK2ST2							
	CBF input data parity error	CBOR input data parity error	LA compare error	SHRA LRC compare error	SHRB LRC compare error	SHRA input data parity error	SHRA output data parity error	SHRB input data parity error
15	RCHA::CHK2ST3							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/PRTOUT/P-ERR	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
16	RCHA::CHK2ST3							
	XFREND1 counter parity error	Write BSA0/1 pointer parity error	Read BSA0/1 pointer parity error	CSA0 counter parity error	CSA1 counter parity error	CBP R/W pointer parity error	PFC counter overflow	Reduction CBIR pointer parity error
17	RCHA::CHK2ST4							
	Subsequent segment address REG remained at transfer end	Data remained in CHR at transfer end	Data remained in CBIR0 at transfer end	Data remained in CBIR1 at transfer end	Data remained in CBR at transfer end	Data remained in CBOR at transfer end	(RSV)	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'42': RCHA CHK2 ST2, 3, 4 errors							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST2							
	Pending counter hardware	CBIRDY/AL WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC compare error	CBIR1 input data parity error
12	RCHA::CHK2ST2							
	CBF input data parity error	CBOR input data parity error	LA compare error	SHRA LRC compare error	SHRB LRC compare error	SHRA input data parity error	SHRA output data parity error	SHRB input data parity error
13	RCHA::CHK2ST3							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/P RTOUT/ PRTOUTP P-ERR	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
14	RCHA::CHK2ST3							
	XFREND1 counter parity error	Write BSA0/1 pointer parity error	Read BSA0/1 pointer parity error	CSA0 counter parity error	CSA1 counter parity error	CBP R/W pointer parity error	PFC counter overflow	Reduction CBIR pointer parity error
15	RCHA::CHK2ST4							
	Subsequent segment address REG remained at transfer end	Data remained in CHR at transfer end	Data remained in CBIR0 at transfer end	Data remained in CBIR1 at transfer end	Data remained in CBR at transfer end	Data remained in CBOR at transfer end	(RSV)	(RSV)
16	RCHA::CHK2ST4							
	Micro access error (CKDDL error)	Micro access error (FBADL error)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)
17	RCHA::ADPCK2							
	CHL transfer check	CHL overrun	CHACH2 (CHA)	CHACH2 (ADP)	CHACH2 (BSA)	CHACH2 (MP)	CHC=0 at channel	FBADL=0 at BSA
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU871 / x'EF':LDEV type=DKU861)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'50': RCHA CHK2 ST0 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST0							
	M/E sequencer parity error	M/E loop pointer parity error	CHL transfer sequencer parity error	CHR/CBIR pointer parity error	CHR sequence pointer parity error	CHR/CHL pointer parity error	CBIR sequencer parity error	CBIR0/1 pointer parity error
12	RCHA::CHK2ST0							
	CBF pointer parity error	CBX sequencer parity error	CBX SEQ CBOR pointer parity error	CBOR sequencer parity error	CBOR/CHR/SHR pointer parity error	Packet sequencer parity error	Search sequencer parity error	SCH0/1 pointer parity error
13	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'51': RCHA CHK2 ST1 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
12	RCHA::CHK2ST1							
	CHL/CHR pointer parity error	CBF transfer W/R pointer parity error	BSA packet reception halt error	CBIR0 FLRC compare error	CBX FLRC compare error	CHC parity error	BSA data register counter parity error	CBXSQ CBR pointer parity error
13	RCHA::CHK2ST2							
	Pending counter hardware	CBIRDY/AL WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC compare error	CBIR1 input data parity error
14	BSA::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'52': RCHA CHK2 ST error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST2							
	Pending counter hardware	CBIRDY/AL WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC compare error	CBIR1 input data parity error
12	RCHA::CHK2ST2							
	CBF input data parity error	CBOR input data parity error	LA compare error	SHRA LRC compare error	SHRB LRC compare error	SHRA input data parity error	SHRA output data parity error	SHRB input data parity error
13	RCHA::CHK2ST3							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/PRTOUT/PRTOUTP parity error	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micropacket counter parity error	XFREND0 counter parity error
14	BSA::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'53': RCHA CHK2 ST3 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST3							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/ PRTOUT/ PRTOUTP P-ERR	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
12	RCHA::CHK2ST3							
	XFREND0 counter parity error	Last BSA0/ pointer parity error	Read BSA0/1 [pointer parity error	CSA0 counter parity error	CSA1 counter parity error	CBP R/W pointer parity error	PFC counter parity error	Reduction CBIR pointer parity error
13	RCHA::CHK2ST4							
	Subsequent segment address REG remained at transfer end	Data remained in CHR at transfer end	Data remained in CBIR0 at transfer end	Data remained in CBIR1 at transfer end	Data remained in CBR at transfer end	Data remained in CBOR at transfer end	(RSV)	(RSV)
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'54': RCHA CHK2 ST4 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
13	RCHA::CHK2ST4							
	Subsequent segment address REG remained at transfer end	Data remained in CHR at transfer end	Data remained in CBIR0 at transfer end	Data remained in CBIR1 at transfer end	Data remained in CBR at transfer end	Data remained in CBOR at transfer end	(RSV)	(RSV)
12	RCHA::CHK2ST4							
	Micro access error (CKDDL error)	Micro access error (FBADL error)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)
13	RCHA::ADPCK2							
	CHL transfer check	CHL overrun	CHACHK2 (CHA)	CHACHK2 (EADP)	CHACHK2 (BSA)	CHACHK2 (MP)	CHC=0 at channel	FBADL=0 at BSA
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'60': RCHA CHK2 ST0 error & BSA0 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST0							
	M/E sequencer parity error	M/E loop pointer parity error	CHL transfer sequencer parity error	CHR/CBIR pointer parity error	CHR sequence pointer parity error	CHR/CHL pointer parity error	CBIR sequencer parity error	CBIR0/1 pointer parity error
12	RCHA::CHK2ST0							
	CBR pointer parity error	CBX sequencer parity error	CBX SEQ CBOR pointer parity error	CBOR sequencer parity error	CBOR/CHR/SHR pointer parity error	Packet sequencer parity error	Search sequencer parity error	SCH0/1 pointer parity error
13	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU871 / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'61': RCHA CHK2 ST1 error & BSA0 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
12	RCHA::CHK2ST1							
	CHL/CHR pointer parity error	CBF transfer W/R pointer parity error	BSA packet reception halt error	CBIR0 FLRC compare error	CBX FLRC compare error	CHC parity error	BSA data register counter parity error	CBXSQ CBR pointer parity error
13	RCHA::CHK2ST2							
	Pending counter hardware	CBIRDY/A L WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC parity error	CBIR1 input data parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'62': RCHA CHK2 ST2 error & BSA0 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST2							
	Pending counter hardware	CBIRDY/A L WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error C	CBIR0 input data parity error	CBIR0 LRC parity error	CBIR1 input data parity error
12	RCHA::CHK2ST2							
	CBF input data parity error	CBOR input data parity error	LA compare error	SHRA LRC compare error	SHRB LRC compare error	SHRA input data parity error	SHRA output data parity error	SHRB input data parity error
13	RCHA::CHK2ST							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/ PRTOUT/ PRTOUTP parity error	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC.GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'63': RCHA CHK2 ST3 error & BSA0 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST3							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/ PRTOUT/ PRTOUTP P-ERR	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
12	RCHA::CHK2ST3							
	XFREND0 counter parity error	Last BSA 0/1 pointer parity error	Read BSA0/1 pointer parity error	CSA0 counter parity error	CSA1 pointer parity error	CBP R/W pointer parity error	PFC counter overflow	Reduction CBIR pointer parity error
13	RCHA::CHK2ST4							
	Subsequent segment address REG remained at transfer end	Data remained in CHR at transfer end	Data remained in CBIR0 at transfer end	Data remained in CBIR1 at transfer end	Data remained in CBR at transfer end	Data remained in CBOR at transfer end	(RSV)	(RSV)
14	BSA::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF':LDEV type=DKU87I / x'EF':LDEV type=DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'64': RCHA CHK2 ST4 error & BSA0 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST4							
	Subsequent segment address REG remained at transfer end	Data remained in CHR at transfer end	Data remained in CBIR0 at transfer end	Data remained in CBIR1 at transfer end	Data remained in CBR at transfer end	Data remained in CBOR at transfer end	(RSV)	(RSV)
12	RCHA::CHK2ST4							
	Micro access error (CKDDL error)	Micro access error (FBADL error)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)
13	RCHA::ADPCK2							
	CHL transfer check	CHL overrun	CHACHK2 (CHA)	CHACHK2 (EADP)	CHACHK2 (BSA)	CHACHK2 (MP)	CHC=0 at channel	FBADL=0 at BSA
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'70': RCHA CHK2 ST0 error & BSA0-1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST0							
	M/E sequencer parity error	M/E loop pointer parity error	CHL transfer sequencer parity error	CHR/CBIR pointer parity error	CHR sequence pointer parity error	CHR/CHL pointer parity error	CBIR sequencer parity error	SCH0/1 pointer parity error
12	RCHA::CHK2ST0							
	CBR pointer parity error	CBX sequencer parity error	CBX SEQ CBOR pointer parity error	CBOR sequencer parity error	CBOR/CH R/SHR pointer parity error	Packet sequencer parity error	Search sequencer parity error	SCH0/1 pointer parity error
13	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
14	BSA ::BSASSB_#12 (CHK2 information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/ sequence	F bus timeout	WCHK1 ASSERT
15	BSA ::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
16	BSA ::BSASSB_#12 (CHK2 information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/ sequence	F bus timeout	WCHK1 ASSERT
17	BSA ::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'71': RCHA CHK2 ST1 error & BSA0-1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length register counter parity error	CBXSQ CBR pointer parity error
12	RCHA::CHK2ST1							
	CHL/CHR pointer parity error	CBF transfer W/R pointer parity error	BSA packet reception halt error	CBIR0 FLRC compare error	CBX FLRC compare error	CHC parity error	BSA data register counter parity error	CBXSQ input data parity error
13	RCHA::CHK2ST2							
	Pending counter hardware	CBIRDY/A L WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC compare error	CHR input data parity error
14	BSA ::BSASSB_#12 (CHK2 information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/ sequence	F bus timeout	WCHK1 ASSERT
15	BSA ::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
16	BSA ::BSASSB_#12 (CHK2 information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/ sequence	F bus timeout	WCHK1 ASSERT
17	BSA ::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'72': RCHA CHK2 ST2 error & BSA0-1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/CHA abort
11	RCHA::CHK2ST2							
	Pending counter parity error	CBIRDY/AL WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC compare error	CHR input data parity error
12	RCHA::CHK2ST2							
	CBF input data parity error	CBOR input data parity error	LA compare error	SHRA LRC compare error	SHRB LRC compare error	SHRA input data parity error	SHRA output data parity error	SHRB input data parity error
13	RCHA::CHK2ST3							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/PRTOUT/PRTOUTP parity error	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
14	BSA::BSASSB_#12 (CHK2 information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/sequence	F bus timeout	WCHK1 assert
15	BSA::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
16	BSA::BSASSB_#12 (CHK2 information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/sequence	F bus timeout	WCHK1 assert
17	BSA::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'73': RCHA CHK2 ST3 error & BSA0-1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST3							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/ PRTOUT/ PRTOUTP parity error	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
12	RCHA::CHK2ST3							
	XFREND0 counter parity error	Write BSA0/1 pointer parity error	Read BSA0/1 pointer parity error	CSA0 counter parity error	CSA1 counter parity error	CBP R/W pointer parity error	PFC counter overflow	Reduction CBIR pointer parity error
13	RCHA::CHK2ST4							
	Subsequent segment address RE remained at transfe end	Data remained in CHR at transfer end	Data remained in CBIR0 at transfer end	Data remained in CBIR1 at transfer end	Data remained in CBR at transfer end	Data remained in CBOR at transfer end	(RSV)	(RSV)
14	BSA ::BSASSB_#12 (CHK2 information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/ sequence	F bus timeout	WCHK1 assert
15	BSA ::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
16	BSA ::BSASSB_#12 (CHK2 information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/ sequence	F bus timeout	WCHK1 assert
17	BSA ::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'74': RCHA CHK2 ST4 error & BSA0-1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CHK2ST4							
	Subsequent segment address RE remained at transfer end	Data remained in CHR at transfer end	Data remained in CBIR0 at transfer end	Data remained in CBIR1 at transfer end	Data remained in CBR at transfer end	Data remained in CBOR at transfer end	(RSV)	(RSV)
12	RCHA::CHK2ST4							
	Micro access error (CKDDL error)	Micro access error (FBADL error)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)
13	RCHA::ADPCK2							
	CHL transfer check	CHL overrun	CHACHK2 (CHA)	CHACHK2 (EADP)	CHACHK2 (BSA)	CHACHK2 (MP)	CHC=0 at channel	FBADL=0 at BSA
14	BSA ::BSASSB_#12 (CHK2A information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/ sequence	F bus timeout	WCHK1 assert
15	BSA ::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
16	BSA ::BSASSB_#12 (CHK2 information)							
	CHK error	FDB parity error	F bus error	Slave error	CHK2B	Invalid command/ sequence	F bus timeout	WCHK1 assert
17	BSA ::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'80': EADP CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::ADPCK2							
	CHL transfer check	CHL overrun	CHACHK2 (CHA)	CHACHK2 (EADP)	CHACHK2 (BSA)	CHACHK2 (MP)	CHC=0 at channel	FBADL=0 at BSA
12	EADP::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
13	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
14	EADP::CK22 (ADP-LCM interface error)							
	LCM-ADP I/F ERR at LCMA	LCM-ADP I/F ERR at LCMB	LCM-ADP I/F ERR at LCMC	LCM-ADP I/F ERR at LCMD	LCM-ADP I/F ERR at LCME	LCM-ADP I/F ERR at LCMF	LCM-ADP I/F ERR at LCMG	LCM-ADP I/F ERR at LCMH
15	EADP::CS1							
	System reset	Selective reset	Panel reset (enable→disable)	HALT I/O	LCM transfer terminated	(RSV)	(RSV)	(RSV)
16	EADP::SELP							
	Path A activation request acceptable	Path B activation request acceptable	Path C activation request acceptable	Path D activation request acceptable	Path E activation request acceptable	Path F activation request acceptable	Path G activation request acceptable	Path H activation request acceptable
17	EADP::LSTA							
	LCM BUSY	LCP STOP	LCP ADRCMP consistent	LCM TRACER stop	LCM detected communication error between ADP-LCM	LCM detected WCHK1	LCM PATH DISABLE	Parallel channel
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'90': EADP CHK2 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
13	EADP::CK22 (ADP-LCM interface error)							
	LCM-ADP I/F ERR at LCMA	LCM-ADP I/F ERR at LCMB	LCM-ADP I/F ERR at LCMC	LCM-ADP I/F ERR at LCMD	LCM-ADP I/F ERR at LCME	LCM-ADP I/F ERR at LCMF	LCM-ADP I/F ERR at LCMG	LCM-ADP I/F ERR at LCMH
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'A0': EADP CHK2 error & BSA0 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
13	EADP::CK22 (ADP-LCM interface error)							
	LCM-ADP I/F ERR at LCMA	LCM-ADP I/F ERR at LCMB	LCM-ADP I/F ERR at LCMC	LCM-ADP I/F ERR at LCMD	LCM-ADP I/F ERR at LCME	LCM-ADP I/F ERR at LCMF	LCM-ADP I/F ERR at LCMG	LCM-ADP I/F ERR at LCMH
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'B0': EADP CHK2 error & BSA0-1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	RCHA::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
13	EADP::CK22 (ADP-LCM interface error)							
	LCM-ADP I/F ERR at LCMA	LCM-ADP I/F ERR at LCMB	LCM-ADP I/F ERR at LCMC	LCM-ADP I/F ERR at LCMD	LCM-ADP I/F ERR at LCME	LCM-ADP I/F ERR at LCMF	LCM-ADP I/F ERR at LCMG	LCM-ADP I/F ERR at LCMH
14	BSA ::BSASSB_#12 (CHK2 information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
16	BSA ::BSASSB_#12 (CHK2 information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
17	BSA ::BSASSB_#13 (CHK2 information)							
	BSA data parity error	BSA counter parity error	Request error	Sequencer parity error	LIVE INS	F bus open	ABT error	ABT timeout
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'C0': EADP CHK2 error & RCHA CHK2 ST0 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
13	EADP::CK22 (ADP-LCM interface error)							
	LCM-ADP I/F ERR at LCMA	LCM-ADP I/F ERR at LCMB	LCM-ADP I/F ERR at LCMC	LCM-ADP I/F ERR at LCMD	LCM-ADP I/F ERR at LCME	LCM-ADP I/F ERR at LCMF	LCM-ADP I/F ERR at LCMG	LCM-ADP I/F ERR at LCMH
14	RCHA::CHK2T0							
	M/E sequencer parity error	M/E loop pointer parity error	CBX SEQ CBOR pointer parity error	CHR/CBIR pointer parity error	CHR sequence pointer parity error	CHR/CHL pointer parity error	CBIR sequencer parity error	CBIR0/1 pointer parity error
15	RCHA::CHK2T0							
	CBR pointer parity error	CBX sequencer parity error	CBX SEQ CBOR pointer parity error	CBOR sequencer parity error	CBOR/CH R/SHR pointer parity error	Packet sequencer parity error	Search sequencer parity error	SCH0/1 pointer parity error
16	RCHA::CHK2T1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
17	RCHA::CHK2T1							
	CHR/CHR pointer parity error	CBF transfer W/R pointer parity error	BSA packet reception halt error	CBIR0 FIRC compare error	CBX FLRC compare error	CHC parity error	BSA data register counter parity error	CBXSQ CBR pointer parity error
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8. Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'C1': EADP CHK2 error & RCHA CHK2 ST1 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
13	EADP::CK22 (ADP-LCM interface error)							
	LCM-ADP I/F ERR at LCMA	LCM-ADP I/F ERR at LCMB	LCM-ADP I/F ERR at LCMC	LCM-ADP I/F ERR at LCMD	LCM-ADP I/F ERR at LCME	LCM-ADP I/F ERR at LCMF	LCM-ADP I/F ERR at LCMG	LCM-ADP I/F ERR at LCMH
14	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
15	RCHA::CHK2ST1							
	CHL/CHR pointer parity error	CBF transfer W/R pointer parity error	BSA packet reception halt error	CBIR0 FLRC compare error	CBX FLRC compare error	CHC parity error	BSA data register counter parity error	CBXSQ CBR pointer parity error
16	RCHA::CHK2ST2							
	Pending counter parity error	CBIRDY/AL WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC parity error	CBIR1 input data parity error
17	RCHA::CHK2ST2							
	CBF input data parity error	CBOR input data parity error	LA compare error	SHRA LRC compare error	SHRB LRC compare error	SHRA input data parity error	SHRA input data parity error	SHRB input data parity error
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'C2': EADP CHK2 error & RCHA CHK2 ST2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
13	EADP::CK22 (ADP-LCM interface error)							
	LCM-ADP I/F ERR at LCMA	LCM-ADP I/F ERR at LCMB	LCM-ADP I/F ERR at LCMC	LCM-ADP I/F ERR at LCMD	LCM-ADP I/F ERR at LCME	LCM-ADP I/F ERR at LCMF	LCM-ADP I/F ERR at LCMG	LCM-ADP I/F ERR at LCMH
14	RCHA::CHK2ST2							
	Pending counter hardware	CBIRDY/AL WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC parity error	CBIR1 input data parity error
15	RCHA::CHK2ST2							
	CBF input data parity error	CBOR input data parity error	LA compare error	SHRA LRC compare error	SHRB LRC compare error	SHRA input data parity error	SHRA output data parity error	SHRB input data parity error
16	RCHA::CHK2ST3							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/PRTOUT/PRTOUTP parity error	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
17	RCHA::CHK2ST3							
	XFREND1 counter parity error	Write BSA0/1 pointer parity error	Read BSA0/1 pointer parity error	CSA0 counter parity error	CSA1 counter parity error	CBP R/W pointer parity error	PFC counter parity error	Reduction CBIR pointer parity error
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'C3': EADP CHK2 error & RCHA CHK2 ST3, 4 errors							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
13	EADP::CK22 (ADP-LCM interface error)							
	LCM-ADP I/F ERR at LCMA	LCM-ADP I/F ERR at LCMB	LCM-ADP I/F ERR at LCMC	LCM-ADP I/F ERR at LCMD	LCM-ADP I/F ERR at LCME	LCM-ADP I/F ERR at LCMF	LCM-ADP I/F ERR at LCMG	LCM-ADP I/F ERR at LCMH
14	RCHA::CHK2ST3							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/ PRTOUT/ PRTOUTP parity error	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
15	RCHA::CHK2ST3							
	XFREND1 counter parity error	Write BSA0/1 pointer parity error	Read BSA0/1 pointer parity error	CSA0 counter parity error	CSA1 counter parity error	CBP R/W pointer parity error	PFC counter parity error	Reduction CBIR pointer parity error
16	RCHA::CHK2ST4							
	Subsequent segment address REG remained at transfer end	Data remained in CHR at transfer end	Data remained in CBIR0 at transfer end	Data remained in CBIR1 at transfer end	Data remained in CBR at transfer end	Data remained in CBOR at transfer end	(RSV)	(RSV)
17	RCHA::CHK2ST4							
	Micro access error (CKDDL error)	Micro access error (FBADL error)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'D0': EADP CHK2 CK20 error & RCKA CHK2 ST0 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	RCHA::CHK2ST0							
	M/E sequencer parity error	M/E loop pointer parity error	CHL transfer sequencer parity error	CHR/CBIR pointer parity error	CHR sequence pointer parity error	CHR/CHL pointer parity error	CBIR sequencer parity error	CBIR0/1 pointer parity error
13	RCHA::CHK2ST0							
	CBR pointer parity error	CBX sequencer parity error	CBX SEQ CBOR pointer parity error	CBOR counter parity error	CBOR/CH R/SHR compare error	CHC parity error	BSA data register counter parity error	SCH0/1 pointer parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 ASSERT	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'D1': EADP CHK2 CK20 error & RCHA CHK2 ST1 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
13	RCHA::CHK2ST1							
	CHL/CHR pointer parity error	CBF transfer W/R pointer parity error	BSA packet reception halt error	CBIR0 FLRC compare error	CBX FLRC compare error	CHC parity error	BSA data register counter parity error	CBXSQ CBR pointer parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 ASSERT	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'D2': EADP CHK2 CK20 error & RCHA CHK2 ST2 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	RCHA::CHK2ST2							
	Pending counter hardware	CBIRDY/AL WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC parity error	CBIR1 input data parity error
13	RCHA::CHK2ST2							
	CBF input data parity error	CBOR input data parity error	LA compare error	SHRA LRC compare error	SHRB LRC compare error	SHRA input data parity error	SHRA output data parity error	SHRB input data parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'D3': EADP CHK2 CK20 error & RCHA CHK2 ST3 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	RCHA::CHK2ST3							
	CHRB output data parity error	CHR compare error 0	CHR compare error 1	MRKOUT/ TOUT/ PRTOUTP parity error	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
13	RCHA::CHK2ST3							
	XFREND1 counter parity error	Write BSA0/1 pointer parity error	Read BSA0/1 pointer parity error	CSA0 counter parity error	CSA1 counter parity error	CBP R/W pointer parity error	PFC counter parity error	Reduction CBIR pointer parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'D4': EADP CHK2 CK20 error & RCHA CHK2 ST4 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK20 (at data transfer between ADP and CHA)							
	MRKI/PRT I/PRTIP parity error	CHBUS0 parity error (RD XFR)	CHBUS1 parity error (RD XFR)	CHBUS0 parity error (WR XFR)	CHBSU1 parity error (WR XFR)	LRC ERR (RD XFR)	LRC ERR (WR XFR)	(RSV)
12	RCHA::CHK2ST4							
	Subsequent segment address REG remained at transfer end	Data remained in CHR at transfer end	Data remained in CBIR0 at transfer end	Data remained in CBIR1 at transfer end	Data remained in CBR at transfer end	Data remained in CBOR at transfer end	(RSV)	(RSV)
13	RCHA::CHK2ST4							
	Micro access error (CKDDL error)	Micro access error (FBADL error)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'D5': EADP CHK2 CK21 error & RCHA CHK2 ST0 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
12	RCHA::CHK2ST0							
	M/E sequencer parity error	M/E loop pointer parity error	CHL transfer sequencer parity error	CHR/CBIR pointer parity error	CHR sequence pointer parity error	CHR/CHL pointer parity error	CBIR sequencer parity error	CBIR0/1 pointer parity error
13	RCHA::CHK2ST0							
	CBR pointer parity error	CBX sequencer parity error	CBX SEQ CBOR pointer parity error	CBOR sequencer parity error	CBOR/CH R/SHR pointer parity error	Packet sequencer parity error	Search sequencer parity error	SCH0/1 pointer parity error
14	BSA::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'D6': EADP CHK2 CK21 error & RCHA CHK2 ST1 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
12	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
13	RCHA::CHK2ST1							
	CHL/CHR pointer parity error	CBF transfer W/R pointer parity error	BSA packet reception halt error	CBIR0 FLRC compare error	CBX FLRC compare error	CHC parity error	BSA data register counter parity error	CBXSQ CBR pointer parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'D7': EADP CHK2 CK21 error & RCHA CHK2 ST2 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
12	RCHA::CHK2ST2							
	Pending counter hardware	CBIRDY/AL WCBI counter parity error	CBI ready counter overflow	CHR input data parity error	CHR output data parity error	CBIR0 input data parity error	CBIR0 LRC parity error	CBIR1 input data parity error
13	RCHA::CHK2ST2							
	CBF input data parity error	CBOR input data parity error	LA compare error	SHRA LRC compare error	SHRB LRC compare error	SHRA input data parity error	SHRA output data parity error	SHRB input data parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'D8': EADP CHK2 CK21 error & RCHA CHK2 ST3 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
12	RCHA::CHK2ST3							
	SHRB output data parity error	SHR compare error 0	SHR compare error 1	MRKOUT/ TOUT/ PRTOUTP parity error	CBIR0 SEL pointer parity error	CBIR1 SEL pointer parity error	Micro-packet counter parity error	XFREND0 counter parity error
13	RCHA::CHK2ST3							
	XFREND1 counter parity error	Write BSA0/1 pointer parity error	Read BSA0/1 pointer parity error	CSA0 counter parity error	CSA1 counter parity error	CBP R/W pointer parity error	PFC counter parity error	Reduction CBIR pointer parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'D9': EADP CHK2 CK21 error & RCHA CHK2 ST4 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK21 (at data transfer between LCM and ADP)							
	Micro-frame LRC error	BUS0 parity error	BUS1 parity error	Sequencer detected parity error	(RSV)	(RSV)	(RSV)	(RSV)
12	RCHA::CHK2ST4							
	Subsequent segment address REG remained at transfer end	Data remained in CHR at transfer end	Data remained in CBIR0 at transfer end	Data remained in CBIR1 at transfer end	Data remained in CBR at transfer end	Data remained in CBOR at transfer end	(RSV)	(RSV)
13	RCHA::CHK2ST4							
	Micro access error (CKDDL error)	Micro access error (FBADL error)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)	(RSV)
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 : (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU871/x'EF' : LDEV type = DKU861)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'DA': EADP CHK2 CK22 error & RCHA CHK2 ST0 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/ CHA abort
11	EADP::CK22 (ADP-LCM interface error)							
	LCM-ADP I/F ERR at LCMA	LCM-ADP I/F ERR at LCMB	LCM-ADP I/F ERR at LCMC	LCM-ADP I/F ERR at LCMD	LCM-ADP I/F ERR at LCME	LCM-ADP I/F ERR at LCMF	LCM-ADP I/F ERR at LCMG	LCM-ADP I/F ERR at LCMH
12	RCHA::CHK2ST0							
	M/E sequencer parity error	M/E loop pointer parity error	CHL transfer sequencer parity error	CHR/CBIR pointer parity error	CHR sequence pointer parity error	CHR/CHL pointer parity error	CBIR sequencer parity error	CBIR0/1 pointer parity error
13	RCHA::CHK2ST0							
	CBR pointer parity error	CBX sequencer parity error	CBX SEQ CBOR pointer parity error	CBOR counter parity error	CBOR/CH R/SHR compare error	CHC parity error	BSA data register counter parity error	SCH0/1 pointer parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'DB': EADP CHK2 CK22 error & RCHA CHK2 ST1 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/CHA abort
11	EADP::CK22 (ADP-LCM interface error)							
	LCM-ADP I/F ERR at LCMA	LCM-ADP I/F ERR at LCMB	LCM-ADP I/F ERR at LCMC	LCM-ADP I/F ERR at LCMD	LCM-ADP I/F ERR at LCME	LCM-ADP I/F ERR at LCMF	LCM-ADP I/F ERR at LCMG	LCM-ADP I/F ERR at LCMH
12	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
13	RCHA::CHK2ST1							
	CHL/CHR pointer parity error	CBF transfer W/R pointer parity error	BSA packet reception halt error	CBIR0 FLRC compare error	CBX FLRC compare error	CHC parity error	BSA data register counter parity error	CBXSQ CBR pointer parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 : (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							

Format 8, Message 9 (host adapter CHK-2)

	0	1	2	3	4	5	6	7
7	Format (x'8')				Message (x'9')			
8	Subcode: x'DB': EADP CHK2 CK22 error & RCHA CHK2 ST1 error & BSA1 CHK2 error							
9	RCHA::XFS0							
	CHA transfer terminated	BSA0 retry request	BSA1 retry request	Packet flow count register status	CHK2	EADP CHK2	CHA CHK2	BSA0 CHK2
10	RCHA::XFS0							
	BSA1 CHK2	Truncation	Halt I/O	Search result: DASD = CPU	Search result: DASD > CPU	Search result: DASD < CPU	BSA0, 1 retry MP request	BSA0, 1 MP abort/CHA abort
11	EADP::CK22 (ADP-LCM interface error)							
	LCM-ADP I/F ERR at LCMA	LCM-ADP I/F ERR at LCMB	LCM-ADP I/F ERR at LCMC	LCM-ADP I/F ERR at LCMD	LCM-ADP I/F ERR at LCME	LCM-ADP I/F ERR at LCMF	LCM-ADP I/F ERR at LCMG	LCM-ADP I/F ERR at LCMH
12	RCHA::CHK2ST1							
	Pending counter parity error	Sub-block offset counter parity error	CKD data length counter parity error	Transfer length counter parity error	Block length counter parity error	Segment length counter parity error	FBA data length counter parity error	Packet length counter parity error
13	RCHA::CHK2ST1							
	CHL/CHR pointer parity error	CBF transfer W/R pointer parity error	BSA packet reception halt error	CBIR0 FLRC compare error	CBX FLRC compare error	CHC parity error	BSA data register counter parity error	CBXSQ CBR pointer parity error
14	BSA ::BSASSB_#02 (CHK2A information)							
	CHK error	Last cycle error	Error phase parity error	Slave ID error	F bus read data error	FDB parity error	Slave 1 error	Slave 2 error
15	BSA ::BSASSB_#09 (CHK2B & CHK2C information)							
	HDB parity error	LRC GEN parity error	Access parity error	Invalid command	F bus timeout	WCHK1 assert	F bus timer	Request sequence error
16	BSA ::BSASSB_#10 (CHK2C information)							
	Request error	Control parity error	Transfer count over	DBF address counter parity error	WRS/WR1 parity error	WR2/WR3 parity error	RD1/RD2 parity error	RD3/RD4 parity error
17	BSA ::BSASSB_#11 : (CHK2D information)							
	LIVE INS	F bus open	ABT sequencer parity error	LI counter parity error	ABT timeout	ABT timer parity error	Request protocol error	(RSV)
18	Module ID							
19	Routine ID							
20	Processor No.				Message code (don't care)			
21	SSID (low order)							
22	Symptom code (high order) (x'FF' : LDEV type = DKU87I/x'EF' : LDEV type = DKU86I)							
23	Symptom code (low order) (x'89')							