




**SPERRY UNIVAC
Operating System/3
(OS/3)**

**Report Program
Generator II (RPG II)
Summary**

SUMMARY OF RPG II CALCULATION OPERATIONS

Conditions		Factor 1		Operation	Factor 2		Result Field		Resulting Indicators		
9	17	18	27	28	32	33	42	43	48	54	59
				ADD							
				BEGSR							
				BITOF							
				BITON							
				CHAIN							
				COMP							
				DEBUG							
				DIV							
				DSPLY							
				ENDSR							
				EXCPT							
				EXIT							
				EXSR							
				FORCE							
				GOTO							
				LOKUP							
				MHHZO							
				MHLZO							
				MLHZO							
				MLLZO							
				MOVE							
				MOVEA							
				MOVEL							
				MULT							
				MVR							
				READ							
				RLABL							
				SETLL							
				SETOF							
				SETON							
				SQRT							
				SUB							
				TAG							
				TESTB							
				TESTN							
				TESTZ							
				TIME							
				ULABL							
				XFOOT							
				Z-ADD							
				Z-SUB							

 REQUIRED
 OPTIONAL
 BLANK

RPG II INDICATORS

Indicator Definition

Indicator		Permissible Entries
Type	Where Defined	
Record identification indicator	Input format specifications form columns 19-20	01-99, L1-L9, LR, and H1-H9
Field indicator	Input format specifications form columns 65-70	01-99, and H1-H9
Control level indicator	Input format specifications form columns 59-60	L1-L9
Resulting indicator	Calculation specifications form columns 54-59	01-99, L1-L9, LR, H0, H1-H9, OA-OG, U1-U8 and OV
Overflow indicator	File description specifications form columns 33-34	OA-OG, and OV
Internal indicators	Internally by RPG II	1P, L0, LR, MR, and H0
External indicator	Internally by RPG II	U1-U8

Indicator Use

Indicators		Permissible Entries
How Used	Where Specified	
File conditioning	File description specifications form columns 71-72	U1-U8
Field record relation	Input format specifications form columns 63-64	01-99, L1-L9, MR, H1-H9, and U1-U8
Control level	Calculation specifications form columns 7-8	L0, L1-L9, and LR
Calculation conditioning	Calculation specifications form columns 9-17	01-99, L0-L9, LR, MR, H0, H1-H9, OA-OG, OV, and U1-U8
Output conditioning	Output format specifications form columns 23-31	01-99, 1P, L0-L9, LR, MR, H0, H1-H9, OA-OG, OV, and U1-U8

Setting Indicators On/Off

Indicator Type	When Set On	When Set Off
Record identification indicator	When the specified record is read and prior to the execution of total calculations.	After the current processing cycle is completed and before the next record is read during the next cycle.
Field indicator	When the condition the indicator represents is present in the specified field.	Prior to the next time the field is to be tested for the condition.
Control level indicator	When the value in the specified control field changes. (All lower level indicators are also set on.)	When the following detail cycle is completed.
Resulting indicator	When the calculation is performed and the condition that the indicator represents is present.	The next time the calculation is performed and the condition that the indicator represents is not present.
Overflow indicator	When a line is printed on the form on or past the forms overflow channel or if the form is spaced past that point.	After the following heading and detail lines are printed.
U1-U8 external indicators	By a // Δ SET Δ UPSI job control statement prior to the execution of your program or by a SETON operation within your program or when used as a resulting indicator in calculations.	By a SETOF operation within your program.
1P (first page) internal indicator	At the beginning of program execution.	Before the first input record is read
H0-H9 internal indicators	By an error condition (H0) or by a SETON operation within your program.	By a SETOF operation within your program.
L0 internal indicator	Always on.	Never
LR (last record) internal indicator	After the last record in the last file is processed or by a SETON operation in your program.	Never
MR (matching record) internal indicator	When all matching fields in a record of a secondary file match all the matching fields in the primary file.	When all total calculations, output, and overflow for the records have been executed.

***ERROR Field Format**

BYTE	0	1-3	4-7	8-11
CONTENTS	ERROR CODE	STATUS BYTES	ADDRESS POINTER 1	ADDRESS POINTER 2

Summary of Error Messages, *ERROR Field Contents, and Operator Control Options

Program Action ①	Error Message That Indicates Condition That Set HO Indicator On	Contents of *ERROR Fields				Operator Control Options ③
		Error Code		Address Pointer 1 ②	Address Pointer 2 ②	
		Graphic	Hexa-decimal			
C	RPG001 UNDEFINED RECORD TYPE	A	C1	-	IORB	1, 2, 3
C	RPG002 COLLATING SEQUENCE ERROR	B	C2	-	FILE DES	1, 2, 3
C	RPG003 RECORD SEQUENCE ERROR	C	C3	-	FILE DES	1, 2, 3
T	RPG004 INVALID ARRAY INDEX	D	C4	TLF	INDEX	0, 2, 3
T	RPG005 NEGATIVE SQUARE ROOT	E	C5	FIELD	-	0, 2, 3
T	RPG006 PUT (UPDATE) NO GET	F	C6	-	IORB	0, 2, 3
T	RPG007 FILE NOT OPENED	G	C7	-	-	2, 3
T	RPG008 TABLE SEQUENCE ERROR	H	C8	-	TLF	0, 2, 3
T	RPG009 TABLE FULL	I	C9	RECORD	TLF	0, 2, 3
T	RPG014 INVALID KEY FOR CHAINING	J	D1	KEY	IORB	2, 3
T	RPG036 SPECIAL FILE ERROR	K	D2	-	IORB	2, 3
T	RPG012 SAM ERROR	L	D3	-	IORB	2, 3
T	RPG013 READ ISSUED TO DEMAND FILE AT EOF	M	D4	-	FILE DES	0, 2, 3
C	RPG032 INVALID CHAINING REQUEST	N	D5	-	-	2, 3
-	RPG027 DISPLAY CONSOLE ERROR	O	D6	-	-	1, 2, 3
T	RPG034 CARD READ/PUNCH ERROR	P	D7	-	-	2, 3
T	RPG035 PRINTER ERROR	Q	D8	-	-	2, 3
C	RPG018 DAM NO RECORD FOUND	R	D9	KEY	IORB	1, 2, 3
T	RPG019 DAM OTHER	S	E2	KEY	IORB	2, 3
T	RPG020 ISAM ERROR	T	E3	-	IORB	2, 3
C	RPG021 ISAM NO RECORD FOUND	U	E4	KEY	IORB	1, 2, 3
T	RPG033 GETCS ERROR	V	E5	-	-	2, 3
C	RPG023 ISAM OVERFLOW AREA FULL	W	E6	KEY	IORB	0, 2, 3
T	RPG029 NON NUMERIC DATA INPUT TO NUMERIC FIELD	X	E7	FIELD	-	0, 2, 3
C	RPG025 ISAM DUPLICATE RECORD	Y	E8	KEY	IORB	0, 2, 3
T	RPG030 DIVIDE BY ZERO EXCEPTION	Z	E9	FIELD	-	0, 2, 3
T	RPG044 PROGRAM EXCEPTION ERROR	0	F0	-	-	2, 3
T	RPG042 UNRECOVERABLE TELECOMMUNICATIONS ERROR	1	F1	RCB	-	2, 3
T	RPG043 FILE ABORTED BY REMOTE TERMINAL OPERATOR	2	F2	RCB	-	2, 3
T	RPG041 CONSOLE I/O ERROR	3	F3	-	IORB	2, 3
T	RPG045 WORKSTATION ERROR	4	F4	-	-	2, 3

NOTES:

① Program Action

- C = program terminates after detail output; HO indicator can be set off unless it was set on during heading or detail output.
- T = program terminates immediately.

② Address Pointers

- FILE DES = address of file descriptor area.
- FIELD = address of field associated with the error condition.
- KEY = address of key field associated with the error condition.

② (Cont.)

- RECORD = address of the record associated with the error condition.
- RCB = address of remote control block.
- TLF = address of the table linkage field plus 16.
- IORB = address of input/output request block.

③ Operator Control Options

- 0 = continue
- 1 = bypass
- 2 = controlled termination
- 3 = program terminates immediately

