


```

FFFFFFFFF 000000 RRRRRRRR RRRRRRRR EEEEEEEEEE WW WW IIIIII NN NN DDDDDDDD
FFFFFFFFF 000000 RRRRRRRR RRRRRRRR EEEEEEEEEE WW WW IIIIII NN NN DDDDDDDD
FF 00 00 RR RR RR RR EE WW WW I I NN NN DD DD
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FF 00 00 RR RR RR RR EE WWW WWW I I NN NN DD DD
FF 000000 RR RR RR RR EEEEEEEEEE WW WW IIIIII NN NN DDDDDDDD
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LL IIIIII SSSSSSSS
LL IIIIII SSSSSSSS
LL II SS
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LLLLLLLLLL IIIIII SSSSSSSS
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```

1 0001 0 MODULE FOR$REWIND ( ! FORTRAN REWIND Statement
2 0002 0 IDENT = '1-007' ! File: FORREWIND.B32 ! Edit SBL1007
3 0003 0 ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1 |
7 0007 1 |*****|
8 0008 1 |*|
9 0009 1 |* COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *|
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26 0026 1 |*|
27 0027 1 |*|
28 0028 1 |*****|
29 0029 1 |
30 0030 1 |
31 0031 1 |++
32 0032 1 | FACILITY: FORTRAN Support Library, user callable
33 0033 1 |
34 0034 1 | ABSTRACT:
35 0035 1 |
36 0036 1 | Contains routine FOR$REWIND: rewind a FORTRAN sequential
37 0037 1 | access file.
38 0038 1 |
39 0039 1 | ENVIRONMENT: Mixture of AST level or not.
40 0040 1 |
41 0041 1 | AUTHOR: Jonathan M. Taylor, CREATION DATE: 10-OCT-77
42 0042 1 |
43 0043 1 | MODIFIED BY:
44 0044 1 |
45 0045 1 | Jonathan M. Taylor, 10-OCT-77 : VERSION 0
46 0046 1 | Previous edit history removed. SBL 16-June-1982
47 0047 1 | 1-001 - Update version number and copyright notice. JBS 16-NOV-78
48 0048 1 | 1-002 - Change REQUIRE file names from FOR... to OTS... JBS 06-DEC-78
49 0049 1 | 1-003 - Change prefix of LUN literals from OPEN to LUB. JBS 13-DEC-78
50 0050 1 | 1-004 - Implement ERR= and IOSTAT=. SBL 1-May-1979
51 0051 1 | 1-005 - Error instead of no-op on not open or direct. SBL 2-May-1979
52 0052 1 | 1-006 - 1-005 is a mistake. No-op if not open, error if not
53 0053 1 | sequential org and access. SBL 16-May-1979
54 0054 1 | 1-007 - Allow errors RMSS_IOP, RMSS_BOF and RMSS_EOF from $REWIND.
55 0055 1 | Move declaration of ACTUALCOUNT. Add SWITCHES. SBL 16-June-1982
56 0056 1 | --

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58 0057 1 |
59 0058 1 | SWITCHES:
60 0059 1 |
61 0060 1 |
62 0061 1 SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
63 0062 1 |
64 0063 1 |
65 0064 1 | LINKAGES:
66 0065 1 |
67 0066 1 REQUIRE 'RTLIN·OTSLNK';           ! Define all linkages
68 0495 1 |
69 0496 1 |
70 0497 1 | TABLE OF CONTENTS:
71 0498 1 |
72 0499 1 |
73 0500 1 FORWARD ROUTINE
74 0501 1     FOR$REWIND;                   ! FORTRAN REWIND statement processor
75 0502 1 |
76 0503 1 |
77 0504 1 | INCLUDE FILES:
78 0505 1 |
79 0506 1 |
80 0507 1 REQUIRE 'RTLML:FORERR';         ! FORTRAN error number definitions
81 0575 1 REQUIRE 'RTLML:OTSLUB';        ! Logical Unit Block definitions
82 0715 1 REQUIRE 'RTLIN:OTSMAC';        ! Macros
83 0909 1 REQUIRE 'RTLIN:RTLPSECT';     ! Define DECLARE_PSECTS macro
84 1004 1 REQUIRE 'RTLML:OTSISB';        ! ISB definitions
85 1172 1 REQUIRE 'RTLML:FORPAR';        ! FORTRAN inter-module parameters
86 1195 1     LIBRARY 'RTLSTARLE';       ! STARLET library for macros and symbols
87 1196 1 |
88 1197 1 | MACROS:
89 1198 1 |     NONE
90 1199 1 |
91 1200 1 |
92 1201 1 | EQUATED SYMBOLS:
93 1202 1 |     NONE
94 1203 1 |
95 1204 1 |
96 1205 1 |
97 1206 1 | OWN STORAGE:
98 1207 1 |     NONE
99 1208 1 |
100 1209 1 |
101 1210 1 | EXTERNAL REFERENCES:
102 1211 1 |
103 1212 1 EXTERNAL ROUTINE
104 1213 1     FOR$$IOSTAT_HND,             ! error condition handler
105 1214 1     FOR$$SIGNAL_STO: NOVALUE,   ! convert error number and signal
106 1215 1     FOR$$CB_PUSH: JSB_CB_PUSH NOVALUE, ! create LUB/ISB/RAB, if needed
107 1216 1     FOR$$CB_POP: JSB_CB_POP NOVALUE; ! return I/O system to previous state
108 1217 1 |
109 1218 1 |
110 1219 1 | PSECT DECLARATIONS:
111 1220 1 |
112 1221 1 |
113 1222 1     DECLARE_PSECTS (FOR);         ! declare PSECTS for FOR$ facility
```

```

115 1223 1 GLOBAL ROUTINE FOR$REWIND (
116 1224 1     UNIT
117 1225 1     ERR_EQL)
118 1226 1     =
119 1227 1
120 1228 1 +-+
121 1229 1 FUNCTIONAL DESCRIPTION:
122 1230 1
123 1231 1     Perform RMS rewind operation on the file specified by the
124 1232 1     UNIT parameter.
125 1233 1
126 1234 1 FORMAL PARAMETERS:
127 1235 1
128 1236 1     UNIT.rlu.v           Logical unit number
129 1237 1     ERR_EQL.rl.v        If 0 or not present, signal errors
130 1238 1                       If non-zero, unwind to caller.
131 1239 1
132 1240 1 IMPLICIT INPUTS:
133 1241 1
134 1242 1     LUB$V_DIRECT         This unit has previously been specified
135 1243 1                       for direct access by an OPEN statement or
136 1244 1     LUB$V_OPENED        DEFINE FILE.
137 1245 1                       This unit has already been opened by
138 1246 1     an OPEN statement or default open.
139 1247 1
140 1248 1 IMPLICIT OUTPUTS:
141 1249 1
142 1250 1     LUB$L_LOG_RECNO      set to 1.
143 1251 1
144 1252 1 ROUTINE VALUE:
145 1253 1
146 1254 1     An IOSTAT value.
147 1255 1
148 1256 1 SIDE EFFECTS:
149 1257 1
150 1258 1     SIGNAL_STOPs FOR$ REWERR if a non-EOF error is returned from
151 1259 1     the RMS rewind call.
152 1260 1
153 1261 1 --
154 1262 1
155 1263 2 BEGIN
156 1264 2
157 1265 2 GLOBAL REGISTER
158 1266 2     (CB = 11: REF BLOCK[, BYTE]);
159 1267 2
160 1268 2 LOCAL
161 1269 2     STATUS,                ! Return status from $REWIND
162 1270 2     L_UNWIND_ACTION: VOLATILE, ! Unwind action code (FOR$K_'INWIND{POP or NOP})
163 1271 2     L_ERR_EQL_PRES: VOLATILE; ! 1 if ERR= present
164 1272 2
165 1273 2 BUILTIN
166 1274 2     ACTUALCOUNT;
167 1275 2
168 1276 2 ENABLE
169 1277 2     FOR$$IOSTAT_HND (L_UNWIND_ACTION, L_ERR_EQL_PRES);
170 1278 2     ! pass info to error handler
171 1279 2

```

```

172 1280 2
173 1281 2
174 1282 2
175 1283 2
176 1284 2
177 1285 2
178 1286 2
179 1287 2
180 1288 2
181 1289 2
182 1290 2
183 1291 2
184 1292 2
185 1293 2
186 1294 2
187 1295 2
188 1296 2
189 1297 2
190 1298 2
191 1299 2
192 1300 2
193 1301 2
194 1302 2
195 1303 2
196 1304 2
197 1305 2
198 1306 2
199 1307 2
200 1308 2
201 1309 2
202 1310 2
203 1311 2
204 1312 2
205 1313 2
206 1314 2
207 1315 2
208 1316 2
209 1317 2
210 1318 3
211 1319 3
212 1320 3
213 1321 3
214 1322 3
215 1323 3
216 1324 3
217 1325 4
218 1326 3
219 1327 4
220 1328 4
221 1329 4
222 1330 4
223 1331 4
224 1332 5
225 1333 5
226 1334 5
227 1335 4
228 1336 3

```

```

: +
: - Determine if ERR= is present.
: -
: +
: - IF ACTUALCOUNT ( ) GTR 1
: - THEN
: -   L_ERR_EQL_PRES = .ERR_EQL
: - ELSE
: -   L_ERR_EQL_PRES = 0;
: +
: - Set up error handler conditions in case CB_PUSH bombs
: -
: +
: - L_UNWIND_ACTION = FOR$K_UNWINDNOP;
: -
: +
: - Get a LUB for this logical unit.
: - On return, CCB points to the current control block.
: -
: +
: - FOR$$CB_PUSH (.UNIT, LUB$K_LUN_MIN);
: -
: +
: - Unwind action (if an error occurs) is now to pop a LUB.
: -
: +
: - L_UNWIND_ACTION = FOR$K_UNWINDPOP;
: -
: +
: - Check the LUB. If file is not open, then this is a no-op.
: - Else must be sequential organization and access.
: -
: +
: - IF .CCB [LUB$V_OPENED]
: - THEN
: -   IF NOT .CCB [LUB$V_DIRECT] AND NOT .CCB [LUB$V_NOTSEQORG]
: -   THEN
: -     BEGIN
: -       +
: -       - Call RMS to REWIND the file, all failure codes returned
: -       - cause a SIGNAL_STOP to occur, except for IOP, EOF or BOF.
: -       -
: -       IF NOT (STATUS = $REWIND (RAB = .CCB))
: -       THEN
: -         BEGIN
: -           IF .STATUS NEQ RMSS_IOP AND
: -             .STATUS NEQ RMSS_EOF AND
: -             .STATUS NEQ RMSS_BOF
: -           THEN
: -             BEGIN
: -               FOR$$SIGNAL_STO (FOR$K_REWERR);
: -               RETURN 0;
: -             END;
: -           END;
: -       END;

```

```

229 1337
230 1338
231 1339
232 1340
233 1341
234 1342
235 1343
236 1344
237 1345
238 1346
239 1347
240 1348
241 1349
242 1350
243 1351
244 1352
245 1353
246 1354
247 1355
248 1356
249 1357
250 1358
251 1359
252 1360
253 1361
254 1362
255 1363

```

```

!+
- Clear APPEND flag - OK for backspace now
-
CCB[LUB$V_APPEND] = 0;

!+
- Set the logical record number to 1.
-
CCB[LUB$L_LOG_RECNO] = 1;

END
ELSE
BEGIN
FOR$$SIGNAL_STO (FOR$K_REWERR);
RETURN 0;
END;

!+
- Return the file system to its former state.
-
FOR$$CB_POP ();
RETURN 0;          ! Success IOSTAT value
END;

```

				.TITLE	FOR\$REWIND	
				.IDENT	\1-007\	
				.EXTRN	FOR\$\$IOSTAT_HND	
				.EXTRN	FOR\$\$SIGNAL_STO	
				.EXTRN	FOR\$\$CB_PUSH, FOR\$\$CB_POP	
				.EXTRN	SY\$\$REWIND	
				.PSECT	_FOR\$CODE, NOWRT, SHR, PIC, 2	
			0804 0000	.ENTRY	FOR\$REWIND, Save R2, R11	: 1223
	SE		04 C2 00002	SUBL2	#4, SP	
			7E D4 00005	CLRL	L_ERR_EQL PRES	: 1263
		04	AE D4 00007	CLRL	L_UNWIND_ACTION	
	6D	0074	CF DE 0000A	MOVAL	7\$, (FP)	
	01		6C 91 0000F	CMPB	(AP), #1	: 1284
			06 1B 00012	BLEQU	1\$	
	6E	08	AC D0 00014	MOVL	ERR_EQL, L_ERR_EQL PRES	: 1286
			02 11 00018	BRB	2\$	
			6E D4 0001A 1\$:	CLRL	L_ERR_EQL PRES	: 1288
	04	AE	01 D0 0001C 2\$:	MOVL	#T, L_UNWIND_ACTION	: 1294
			50 D4 00020	CLRL	R0	: 1301
	52	04	AC D0 00022	MOVL	UNIT, R2	
		00000000G	00 16 00026	JSB	FOR\$\$CB_PUSH	
		04	AE D4 0002C	CLRL	L_UNWIND_ACTION	: 1307
		FC	AB E9 0002F	BLBC	-4(CCB), -5\$: 1314
36	FC	AB	04 E0 00033	BBS	#4, -4(CCB), 4\$: 1316
31	A1	AB	03 E0 00038	BBS	#3, -95(CCB), 4\$	

00000000G	00	5B	DD	0003D	PUSHL	CCB	:	1325
	1B	01	FB	0003F	CALLS	#1, SYSSREWIND	:	
00018574	8F	50	E8	00046	BLBS	STATUS, 3\$:	1328
		50	D1	00049	CMPL	STATUS, #99700	:	
0001827A	8F	12	13	00050	BEQL	3\$:	1329
		50	D1	00052	CMPL	STATUS, #98938	:	
00018198	8F	09	13	00059	BEQL	3\$:	1330
		50	D1	0005B	CMPL	STATUS, #98712	:	
		0A	12	00062	BNEQ	4\$:	
FD	AB	20	8A	00064	BICB2	#32, -3(CCB)	:	1342
EO	AB	01	DO	00068	MOVL	#1, -32(CCB)	:	1348
		0B	11	0006C	BRB	5\$:	1316
		14	DD	0006E	PUSHL	#20	:	1353
00000000G	00	01	FB	00070	CALLS	#1, FOR\$\$SIGNAL_STO	:	
		06	11	00077	BRB	6\$:	1354
		00	16	00079	JSB	FOR\$\$CB_POP	:	1361
		50	D4	0007F	CLRL	R0	:	1363
			04	00081	RET		:	
		0000	00082	7\$:	.WORD	Save nothing	:	1263
	50	08	AC	DO 00084	MOVL	8(AP), R0	:	
	50	04	A0	DO 00088	MOVL	4(R0), R0	:	
		F8	A0	9F 0008C	PUSHAB	L_ERR_EQL PRES	:	
		FC	A0	9F 0008F	PUSHAB	L_UNWIND_ACTION	:	
		02	DD	00092	PUSHL	#2	:	
		5E	DD	00094	PUSHL	SP	:	
	7E	04	AC	7D 00096	MOVQ	4(AP), -(SP)	:	
00000000G	00	03	FB	0009A	CALLS	#3, FOR\$\$IOSTAT_HND	:	
		04	000A1		RET		:	

: Routine Size: 162 bytes. Routine Base: _FOR\$CODE + 0000

```

: 256      1364 1
: 257      1365 1 END      !End of module
: 258      1366 0 ELUDOM

```

PSECT SUMMARY

Name	Bytes	Attributes
_FOR\$CODE	162	NOVEC, NOWRT, RD, EXE, SHR, LCL, REL, CON, PIC, ALIGN(2)

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]STARLET.L32:1	9776	7	0	581	00:01.3

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LISS:FORREWIND/OBJ=OBJ\$:FORREWIND MSRCS:FORREWIND/UPDATE=(ENHS:FORREWIND)

: Size: 162 code + 0 data bytes
: Run Time: 00:11.5
: Elapsed Time: 00:33.2
: Lines/CPU Min: 7158
: Lexemes/CPU-Min: 40302
: Memory Used: 146 pages
: Compilation Complete

