

ASSIGN M:CI,(FILE,RDWR,;D00CI)

METASYM CI,CN,LB

•SS R0,R1,R2,R3,R4,R5,R6,R7,R8,R9,R10,R11,R12,R13,R14,R15

•SS SR1,SR2,SR3,SR4,D1,D2,D3,D4,§

•FND

ANDTBL							
ANSBLK	1701/AND	1723=DATA					
	81/REF	123/LW	126/LW	231/MTW	233/MTW	235/STW	247/MTW
	249/LW	473/MTW	509/MTW	767/MTW	776/AW	777/CW	784/LW
	787/LW	798/LW	1148/MTW	1150/MTW	1152/STW	1204/MTW	1206/MTW
	1208/STW						
ANSCVT							
	239/BE	798=LW					
ATTRB							
	65/REF	1452/STW	1456/LW				
BCD2BIN							
	82/REF	840/BAL	888/BAL	900/BAL			
BINVAL							
	342/CB	1189=DATA					
BIN2BCD							
	67/REF	361/BAL	372/BAL	396/BAL	409/BAL	828/BAL	1706/BAL
BLKBUFF							
	81/REF	150/STW	783/STW	788/LW	789/AWM		
BLKSIZE							
	83/REF	243/STW	874/CW	892/STW	916/STW	1155/STW	1213/STW
BLKTEST							
	327/BAL	765=EQU	1105/BAL	1502/BAL			
BLK2							
	778/BLE	785=EQU					
BRCHK							
	446/BAL	991=MTW	1114/BAL	1179/BAL			
BREAK							
	72/REF	991/MTW	1002/LB	1003/STW	1016/DATA		
BRKMSG							
	1011/DATA	1020/DATA	1025=TEXT				
BUFSIZE							
	62/REF	108/LW	541/STW				
CARDSEQ							
	64/REF	968/LW	970/LW	1088/LW	1090/LW	1700/LW	1703/STW
	1708/STW	1712/LI	1735/LI				
CBLANK							

CCTAB	26-EQU	1477/LI				
CFBF	74/DFE	1741/LH	1767-EQU			
CFBL	22-EQU	1407/LI				
CIBLEFT	21-EQU	1441/LI				
CIBTOTAL	63/REF	1264/STW	1297/LW	1327/STW	1334/STW	1372/LW
CIBUSED	63/REF	1263/STW	1365/CW			
CISEQ	63/REF	1265/STW	1296/LW	1326/STW	1333/STW	1371/LW
CITAB	63/REF	1054/STW	1237/LB	1238/MTB		
CIWORD	712/DATA	1314/LB	1605-EQU			
CLOSEB	63/REF	1269/STW	1376/LW	1383/STW		
CLOSEP	59/REF					
CMP10	663/LI	696-GEN				
CMP11	1406/BGZ	1420-LI				
CMP12	1423-LB	1436/BL				
CMP13	1428/BNEZ	1432-LI	1463/B			
CMP14	1434-AI	1459/B	1465/B			
CMP15	1438/BGEZ	1441-LI				
CMP17	1425/BLE	1446-LB				
	1430/B	1452-STW				

CMP20						
CMP25	1442/BF	1461-AI				
CMP5	1451/BF	1464-AI				
CMP60	1414-STW	1444/B	1510/B			
CMP62	1409/BAL	1433/BAL	1443/BAL	1455/BAL	1458/BAL	1468*PSW
CMP65	1471-BAL	1492/B				
CMP67	1470/BGZ	1475-LCI				
CMP68	1483/BLE	1484-BAL				
CMP70	1480/BEZ	1482-BAL				
CMP73	1471/BAL	1484/BAL	1488/BAL	1495-LW	1509/BEZ	
CMP75	1498/BLE	1511-LW				
CNBC1	1513/BGEZ	1521-SLS				
CNBC65	24-EQU	1481/LI				
CNEXT8	25-EQU	1484/LI				
C0BLEFT	23-EQU	1453/LI				
C0BTOTAL	64/REF	1135/STW	1404/LW	1414/STW		
C0BUSED	27-EQU	1497/CI				
C0DE	64/REF	1134/STW	1403/LW	1415/STW		
C0MPRESS	65/REF	192/CW	449/LW	480/CW	1027/LW	1047/CW

COPYSK	486/BAL	1174/BAL	1400-LCI		
COPYSTDF	78/REF	515/MTW	651/MTW	993/MTW	
COTAB	72/REF	995/MTW			
COWORD	1427/LB	1607-DATA			
CS	64/REF	1124/STW	1511/LW	1517/MTW	1581/STW
CS#1	956-BAL	983/B			
CS2	958/BNEZ	963-EQU			
CVT0	962/B	965/BLE	968-LW		
CVT1	808-BAL	812/BL			
CVT2	803/BAL	808/BAL	825-PSW		
CVT4	814/BAL	819/BAL	835-PSW		
DECCVT	819-BAL	823/BL			
DECOMPR	802/BE	814-BAL			
DFC10	1071/BAL	1293-LCI			
DFC15	1305-LI	1312/B	1319/B	1348/B	1357/B
DFC20	1310/BL	1314-LB			
DFC30	1308/BLE	1312-B			
DFC35	1320/B	1326-STW			
	1321/B	1333-STW			

DFC40						
DEC45	1322/B	1344=LI				
	1323/B	1350=LI				
DFC47						
	1353=LI	1362/B				
DEC50						
	1324/B	1359=LI				
DFC60						
	1306/BAL	1345/BAL	1351/BAL	1360/BAL	1364=AW	1373/B
DEC65						
	1366/BLE	1375=LI				
DFC67						
	1379/BGEZ	1390=SLD				
DFC70						
	1389/B	1391=STW				
DEC75						
	1369/BCR	1394=LCI				
DEV\$IN						
	50/REF	154/LW	272/LW	620/LW	1034/LW	
DEV\$BUT						
	50/REF	159/CW	591/LW	628/LW	672/LW	1039/CW
DEVERR						
	274/BE	274/BE	601=LI			
DEVICE						
	77/REF	152/LW	270/LW	618/LW	925/LW	1032/LW
EICV0L						
	583/CAL1	690=GEN				
EIERR						
	603=LB	724/DATA	725/DATA			
E0CV0L						
	598/CAL1	692=DATA				
E0CV0L2						
	580/LI	694=GEN				
E0D1						
	456/BF	459=EQU				
E0D2						

E8D3	462/BNE	465/BNE	468/BANZ	472-EQU			
E8D4	483/BNE	490-EQU					
EBERR	495/BAZ	500-EQU					
EOF1	489/BNEZ	582/BNE	646-EQU	729/DATA	730/DATA	745/DATA	
EOF11	452/BNE	504-EQU					
EOF2	140/BCS	172/BCS	519-EQU				
EOF3	513/BNE	523-EQU					
EOF4	533/BL	537-CI					
EOF5	530/BLE	532/BL	540-STW				
EOF6	472/BE	492/BNEZ	544-MTW				
EOF7	551/BGE	554/BE	562-MTW	576/B			
EOF8	542/BL	573-LI	707/DATA				
EOF9	564-CAL1						
EOR	265/BEZ	566-EQU					
ERROR	502/BNE	572-CI					
	59/REF	521/BAL	535/BAL	574/BAL	655/BAL	1063/BAL	1283/BAL
	1601/BAL	1632/BAL					
FPTEBD	471/CAL1	561/CAL1	752-GEN				
FPREL	684/CAL1	760-GEN					
GETPAGE							

GFTPG	59/REF	511/BAL					
GRANCNT	139/CAL1	177/CAL1	720=DATA				
HEXDUMP	79/REF	107/STW	514/MTW	650/MTW	666/MTW	1006/MTW	
I0BUF	61/REF	332/BAL	1098/BAL				
	60/REF	119/LI	145/AI	320/LI	326/LI	639/STM	643/STW
	644/CAL1	805/AI	816/AI	947/STW	948/STW	949/STW	952/STW
I0ERR	953/STW	969/STW	971/STW	1147/LI	1230/LI	1267/LI	1421/LI
I0ERR1	65/REF	482/LW	1060/MTW	1508/MTW			
I0ERR3	579/BNE	602/B	611/BNE	616/B	649=LI	737/DATA	1335/LI
IRDFPT	605/BNE	610=CI					
IWRTFPT	95/LW	732=DATA					
J:JIT	103/LW	742=DATA	751/EQU				
KEY	75/REF	557/MTW					
KEYX	66/REF	184/LI	1626/STW				
L	384/LD	709=TEXT					
LINE\$N0	1234/AND	1256/AND					
LINE\$N01	57/REF	414/STW					
LINE\$N02	58/REF	415/STW					
LINEN0	58/REF	416/STW					
	71/REF	362/STW	369/STW	370/STW	401/STW	402/STW	403/STW

LINENUM							
LINE20	976/BAL	1116/BAL	1592/BAL	1622=LW			
LN	1624/BG	1631=PSW					
M:EI	976=BAL	984/B					
	60/REF	110/CS	170/LH	215/LW	218/AND	221/LW	282/CS
	285/CS	292/CS	353/CS	355/LW	356/LB	464/CS	528/AND
	614/CS	690/GEN	702/DATA	704/GEN	722/DATA	732/DATA	749/GEN
	758/GEN	842/LB	858/LW	1138/LW	1141/AND	1144/LW	1197/LW
	1200/AND	1203/LW	1611/GEN				
M:EB	60/REF	112/CS	238/CS	433/CW	470/LI	677/LW	681/LW
	689/DATA	692/DATA	694/GEN	696/GEN	699/GEN	710/GEN	715/GEN
	727/DATA	743/DATA	760/GEN	770/AND	1187/GEN	1615/GEN	
M:LB	76/REF	560/LI					
M:UC	76/REF	556/LI	1009/GEN	1014/GEN	1018/GEN		
MAXCLMN							
MBS	22=EGU	1529/LI					
M:DE	82/REF	792/BAL					
NCCHK	69/REF	466/LW	493/LW	657/LW			
NCCHKX	316/BAL	922=LW	1079/BAL				
NCC1	931=AI	1164/BAL					
NCC2	932/BNE	941=AI					
NCC4	936/BE	939=LI					
NCS	927/BE	930=LW					

NCS1	944=LW	981/B					
NPAGE	946/BLE	951=LW					
ORTBL	84/REF	141/STW	179/STW				
PFIL	1702/BR	1707/BR	1724=DATA				
PFILB	277/CAL1	752=GEN					
PREC	699=GEN						
PREC2	542/CAL1	562/CAL1	702=DATA				
PRINT1	305/CAL1	311/CAL1	704=GEN				
PRINT2	390/CAL1	710=GEN					
PRNTBUF	393/CAL1	715=GEN					
PROMPT	80/REF	385/STW	386/STW	387/LI			
PROMPTR	998/CAL1	1023=GEN					
PRTBUF	1001/CAL1	1024=GEN					
	65/REF	1043/LI	1083/LI	1089/STW	1091/STW	1101/STW	1104/LI
	1107/LI	1126/STW	1298/LI	1410/LW	1412/STW	1501/LI	1527/LI
	1557/LI						
RCERR	1052/LI	1275=LB	1613/DATA	1614/DATA			
RCERR1	1050/LI	1282=LI					
RCERR2	1279/BE	1281/BE	1285=LW				
RC200	1197=LW	1277/BE					

RC205	1205/BEZ	1209=CI					
RC206	1195/BNEZ	1214=BAL					
RC207	1207/BNEZ	1210/BNE	1215/BCS	1222=EGU			
RC210	1224/BG	1230=LI					
RC212	1221/B	1231=LW					
RC290	1218/BLE	1225=LCI	1236/BNE	1243/BNE	1258/BNE	1284/B	
RDABN	454=LB	738/DATA	1066/B	1337/LI			
RDFPT	60/REF	94/AI	118/STW	121/STW	125/STW	172/STW	208/LW
	213/CAL1	241/LW	254/MTW	295/STW	524/LW	531/LW	540/STW
	633/LW	640/LW	800/LW	883/LW	893/LW	912/LW	959/LW
	1051/STW	1053/STW	1137/CAL1	1164/LW	1196/CAL1	1211/LW	1336/STW
	1338/STW	1544/LW					
RDREPLY	999/CAL1	1014=GEN					
RDWRT	2=DSECT	84/USECT					
RDWRTCB	194/BE	194/BE	481/BE	1027=LW	1072/BCS		
READCBMP	1055/BAL	1192=LCI	1368/BAL				
READ0	204=LI	289/B	328/B	335/B	452/B		
READ1	206=LW	283/BLE	297/B	300/BEZ	313/B	504/B	543/B
	625/LI						
RFAD1A	1036/BNE	1041=EGU					
RFAD10	1059=LI	1073/BCS					

READ11	1062-EQU	1062/B	1184/B	1186/B
READ12	1029/BF	1182-LI		
READ13	1031/BNEZ	1185-LI		
READ14	214-EQU	602/BNE		
READ15	989/B	1114-BAL		
READ16	113/BNE	112-STW		
READ17	260/BL	262/BL	279-LW	
READ17A	284/BNE	290-EQU		
READ18	982/B	1087-BAL		
READ19	1091-STW	1102/B		
READ2	256/BFZ	262/BLE	269/BF	314-EQU
READ20	985/B	987/B	1094-LI	1117/BCS
READ21	986/B	1100-LW		
READ22	1096/BNE	1103-EQU		
READ23	301-CI	309/B		
READ24	302/BLE	310-EQU		
READ25	293/BNE	292-EQU		
READ26	232/BFZ	236-CI		
READ26A				

READ27	240=EGU	799/BEZ				
RFAD28	234/BNEZ	245/BCS	251=EGU	813/B	824/B	
READ29	237/BNE	246=EGU				
READ3	244=BAI	282/BNEZ	334/BNEZ	448/BNEZ		
READ30	270=LW	572/BGE				
READ32	1057/BCS	1065=LW				
RFAD33	162/BNEZ	165/BANZ	168/BANZ	1038/BE	1040/BE	1067=LI
RFAD4	223/BNEZ	226/BL	230=EGU			
READ40	202=STW	272/B				
READ41	183/BNE	189=EGU				
READ42	138/BEZ	142=EGU				
RFAD43	127/BEZ	152=LW				
READ44	151/B	156/BNE	176/BEZ	180=EGU		
RFAD52	160/BNE	169=EGU				
READ6	319/BAZ	322=EGU				
READ7	451/BE	1056/BCS	1070=LI	1099/B	1106/B	1115/B
READ8	1042/BNE	1120=LI				
READ81	1136=EGU	1146/BEZ	1182/B			
	609/B	1132=LW				

RFAD82	1169/BAZ	1172-EQU					
RFAD84	1149/BEZ	1153-CI					
RFAD85	1156-BAL	1181/BNEZ					
RFAD86	1151/BNEZ	1154/BNE	1157/BCS	1162-EQU			
RFAD87	1161/B	1165-EQU					
READ9	197-CAL1						
RFCNUM	61/REF 312/AWM 1097/MTW	202/STW 371/LW	252/MTW 395/LW	258/LW 406/MTW	296/STW 408/LW	299/SW 546/LW	306/AWM 1042/STW
RFCSIZE	63/REF	484/STW	1405/LW	1435/CW	1541/STW		
RETURN	503/BF 978/B	522/B 1007/B	536/B 1061/BNEZ	545/BEZ 1064/B	565/B 1118/B	569/B 1178/BG	657-LW
RETURN1	518/B	654/B	662-EQU				
RETURN2	615/BF	669/BLE	676/BNE	679/BAZ	683/BANZ	685-LCI	
RSSAVE	70/REF	200/STW	496/LW				
R4TAB	1744/LB	1765-DATA					
SCCTAB	1312/LB	1446/LB	1447/CB	1604-TEXTC			
SELECT	75/REF 498/LI	199/LW 544/MTW	201/LI 562/MTW	255/MTW 1030/MTW	264/MTW	491/MTW	497/STW
SEQID	324/BNEZ	980-EQU					
SEQID2							

SEGNUM	985-B	1084/B		
	73/REF	373/STW	374/STW	
SEQBUT	956/BAL	1087/BAL	1576/BAL	1694-LCI
SEQBUTB	966/BAL	1577/BAL	1729-LCI	
SEQBUT1	1698/BLE	1704-BAL		
SEQBUT2	1710/BLEZ	1718-LW		
SEQ100	1739-LI	1749/BDR		
SETBIN	346/CAL1	1132/CAL1	1187-GEN	
SETEI	197/CAL1	722-DATA		
SETEIC	1049/CAL1	1611-GEN		
SETEB	198/CAL1	727-DATA		
SETEBC	1131/CAL1	1615-GEN		
SETEBD	1074/BAL	1527-LI		
SETEBDR	1173/BAL	1544-LW		
SHIFT	1743/EXU	1756-SLS		
SRS5	1537-CB	1548/B		
TABEXP	321/BAL	1084/BAL	1171/BAL	1641-LCI
TABSET	68/REF	1646/LW		
TAB10	1652/BE	1661-STB		

TAB12	1664-LB	1673/BL					
TAB13	1666-LI	1674/B					
TAB15	1665/BNEZ	1668-AI					
TAB17	1670/BG	1675-AI					
TAB19	1681-LB	1687/BGE					
TAB5	1651-CB	1655/BLE	1678/BFZ	1690/B			
TAB6	1653-AI	1663/BEZ	1667/B				
TAB8	1650/BLZ	1654-MTW					
TBARG	60/REF	157/CW	161/MTW	164/CS	167/CS	182/CW	188/STW
	195/CW	224/LW	317/LW	323/LW	330/CW	336/LW	348/LW
	428/LW	461/CW	482/CW	553/CW	589/LW	607/CW	626/LW
	670/LW	922/LW	1028/CW	1037/CW	1080/LW	1085/LW	1095/CW
	1110/LW	1167/LW	1572/LW	1622/LW	1623/CW	1627/LW	1628/AWM
	1696/LW	1697/CW	1699/LW	1705/STW	1718/LW	1719/AWM	
TBSWT							
ULBLCHK	60/REF	647/STW					
UNBADR	582/BAL	618-LW	665/BAL				
	83/REF	191/STW	287/MTW	333/MTW	447/MTW	863/MTW	873/AW
	877/STW	881/LW	895/STW	902/LW	910/LW	918/STW	1180/MTW
	1194/MTW						
UNBD							
	853/B	881-LW					
UNBD2							
	882/BNEZ	896-SW					
UNBD3							
	903-STW	920/B					

UNBF	851/B	852/B	858=LW				
UNBF2	873-AW	902/B					
UNBLK	244/BAL	847=LI	1156/BAL	1214/BAL			
UNBTAB	850/B	851=B					
UNBV	854/B	910=LW					
UNBV2	911/BNEZ	919=LH					
UNPRINT	80/REF	389/BAL					
VERSION	3-EQU	253/D81	294/D81	733/D81	735/D81		
WCABN	1129/LI	1597=LB					
WCERR	1127/LI	1595/B	1600=LI	1617/DATA	1618/DATA		
WF0F	501/CAL1	564/CAL1	567/CAL1	596/CAL1	597/CAL1	660/CAL1	689=DATA
WFPTSIZE	100/LI	751-EQU					
WRC010	1563/BLE	1580=AI					
WRC020	1589=LCI	1602/B					
WRC030	1575/BGZ	1592=BAL					
WRC05	1574/BLZ	1572=CAL1	1593/BCS				
WRITE\$5A	405-EQU	1112/BANZ					
WRITE\$5B	404/B	417-EQU					
WRITEC0							

	1413/BAL	1504/BAL	1552-LC1				
WRITE1	345/B	347/B	350/BAZ	381/B	394/B	424/B	426-EQU
WRITE2	325-EQU	950/B	954/B	967/B	974/B	977/BCS	982/B
WRITE3	332/BNE	342=LW					
WRITE4	331/BNE	336=LW					
WRITE5	354/BNE	395=LW					
WRITE6	352/BNE	383-EQU					
WRITE7	430/BNE	434/BANZ	436/BLEZ	444=CAL1			
WRITE8	435-AI	443/B					
WRTABN	586-LB	746/DATA	1599/BF				
WRTCR	1000/CAL1	1012=GEN					
WRTFPT	60/REF	102/AI	116/STW	117/STW	122/STW	147/STW	186/STW
	242/STW	250/STW	315/LW	339/LW	376/STW	377/LW	378/MTW
	380/AWM	419/STW	420/LW	421/MTW	423/AWM	427/LW	431/LW
	438/STW	439/CAL1	441/AWM	442/STW	444/CAL1	445/STW	475/CAL1
	775/LW	779/CAL1	780/LW	786/STW	860/STW	861/LW	866/LW
	871/STW	872/STW	903/STW	905/STW	930/LW	944/LW	957/LW
	973/STW	1045/STW	1078/STW	1093/STW	1109/STW	1113/CAL1	1128/STW
	1130/STW	1152/LW	1159/LW	1160/AW	1163/STW	1175/STW	1212/STW
	1216/LW	1219/LW	1545/LW	1578/CAL1	1649/MTW	1654/CW	1656/MTW
	1676/LW	1680/STW	1731/LW	1751/STW			
WRTMSG	997/CAL1	1009=GEN					

H01 17:49 SEP 08, 1975
1
2 02 00000
3 00000002

RDWRT
RDWRT READ M:EI / WRITE M:EO
RDWRT DSECT 1
VERSION EGU 2 1=BPM,2=UTS

HO1 17149 SEP 08, 1975

RDWRT

		PAGE	
4			
5	00000000	R0	0
6	00000001	R1	1
7	00000002	R2	2
8	00000003	R3	3
9	00000004	R4	4
10	00000005	R5	5
11	00000006	R6	6
12	00000007	R7	7
13	00000008	SR1	8
14	00000009	SR2	9
15	0000000A	SR3	10
16	0000000B	SR4	11
17	0000000C	D1	12
18	0000000D	D2	13
19	0000000E	D3	14
20	0000000F	D4	15
21	00000002	CE0L	2
22	00000003	CE0F	3
23	00000004	CNEXT8	4
24	00000005	CNBC1	5
25	00000006	CNBC65	6
26	00000007	CBLANK	7
27	00000360	COBTOTAL	108*8
28	0000008C	MAXCLMN	140

MAX BIT COUNT OF CO RECORD

H01 17:49 SEP 08, '75
29
30

PAGE
TITLE

RDWRT
'RDWRT'

```

31          *S*          SYSTEM  SIG7
32          *
33          *P*          NAME:   RDWRT
34          *P*
35          *P*          PURPOSE: THIS ROUTINE ISSUES THE READ AND WRITE CALLS THAT
36          *P*          PERFORM A FILE COPY. ALL OF THE MULTIPLE REEL LOGIC
37          *P*          IS CONTAINED IN THIS ROUTINE.
38          *P*
39          *DB*
40          *P*
41          *
42          * INPUT
43          *           MIEI    INPUT DCB
44          *           MIEO    OUTPUT DCB
45          *           TOARG   OUTPUT ARGUMENT TABLE
46          *           ARG_TBL INPUT ARGUMENT TABLE
47          *           IOBUF   I/O BUFFER
48          * OUTPUT
49          *           RDFPT   READ FPT
50          *           REF     DEV$IN,DEV$OUT
51          *           WRTFPT  WRITE FPT
52          *           TOSWT   DEFINED =TO=SWITCH
53          *           COMPLETE DEVICE/FILE COPY
54          *
55          *
56          *FIN*
57          REF          LINE$N0
58          REF          LINE$N01,LINE$N02
59          REF          ERROR,GETPAGE,CLOSE0
60          REF          M:EI,M:EO,TOARG,TOSWT,RDFPT,WRTFPT,IOBUF
61          REF          RECNUM,HEXDUMP
62          REF          BUFSIZE
63          REF          CIBUSED,CIBLEFT,CIBTOTAL,CIWORD,RECSIZE,CISEQ
64          REF          COBUSED,COBLEFT,COWORD
65          REF          PRTBUF,ATTRB,IOERR,CODE
66          REF          KEY,CARDSFQ
67          REF          BIN2BCD

```

RDWRT

68			REF	TABSET	
69			REF	MODE	
70			REF	RSSAVE	
71			REF	LINENO	
72			REF	BREAK,COPYSTDF	
73			REF	SEQNUM	
74			DEF	CCTAB	
75			REF	SELECT,UJIT	
76			REF	M:UC,M:LO	
77			REF	DEVICE	
78			REF	COPYSK	
79			REF	GRANCNT	
80			REF	PRNTBUF,UNPRINT	
81			REF	ANSBLK,BLKBUFF	
82			REF	MBS,BCD2BIN	
83			REF	UNBADR,BLKSIZE	
84			REF	NPAGE	
85			*		
86	02	00000	USECT	RDWRT	
87	02	00000	LCI	7	SAVE REGISTERS
88	02	00001	PSM,R5	*R7	
89			*		
90			*		
91			*		
92	02	00002	LI,R1	7	INITIALIZE READ FPT
93	02	00003	LW,R2	R7	
94	02	00004	AI,R2	RDFPT=1	
95	02	00005	LW,R3	IRDFPT=1,R1	
96	02	00006	STW,R3	*R2,R1	
97	02	00007	BDR,R1	S=2	
98			*		
99			*		
100	02	00008	LI,R1	WFPTSIZE	WRITE FPT SIZE
101	02	00009	LW,R2	R7	
102	02	0000A	AI,R2	WRWFPT=1	
103	02	0000B	LW,R3	IWRWFPT=1,R1	
104	02	0000C	STW,R3	*R2,R1	

142 02 00031
 143 02 00031 20100003 A
 144 02 00032 2510007E A
 145 02 00033 20100000 N
 146 02 00034 30100007 A
 147 02 00035 351E0004 N
 148 02 00036 38100007 A
 149 02 00037 25100002 A
 150 02 00038 35100000 X
 151 02 00039 68000055
 152 02 0003A 321E0000 X
 153 02 0003B 6930003D
 154 02 0003C 321E0000 X
 155 02 0003D 21100007 A
 156 02 0003E 69300055
 157 02 0003F 311E0000 X
 158 02 00040 68300043
 159 02 00041 311E0000 X
 160 02 00042 6930004B
 161 02 00043 330E000A N
 162 02 00044 69300038C
 163 02 00045 2210FF00 A
 164 02 00046 451E0008 N
 165 02 00047 69400038C
 166 02 00048 25100008 A
 167 02 00049 451E0009 N
 168 02 0004A 69400038C
 169 02 0004B 0004B
 170 02 0004B 52200003 N
 171 02 0004C 2520007F A
 172 02 0004D 352E0005 N
 173 02 0004E 202FFFFFF A
 174 02 0004F 25200075 A
 175 02 00050 20200000 A
 176 02 00051 68200055
 177 02 00052 04800246
 178 02 00053 6980018A

RDWRT
 READ41 FQU \$
 AI,R1 3
 SLS,R1 =2
 AI,R1 I8BUF
 AW,R1 R7
 STW,R1 WRTFPT+4,R7
 SW,R1 R7
 SLS,R1 2
 STW,R1 BLKBUFF
 B READ43
 READ42 LW,R1 DEVICE,R7
 BNEZ \$+2
 LW,R1 DEV\$IN,R7
 CI,R1 7
 BNE READ43
 CW,R1 T8ARG,R7
 BE \$+3
 CW,R1 DEV\$OUT,R7
 BNE READ44
 MTW,0 T8ARG+10,R7
 BNEZ READ32
 LI,R1 X1FF00!
 CS,R1 T8ARG+8,R7
 BANZ READ32
 SLS,R1 8
 CS,R1 T8ARG+9,R7
 BANZ READ32
 READ44 FQU \$
 LH,R2 M:EI+3
 SLS,R2 =1
 STW,R2 R8FPT+5,R7
 AI,R2 =1
 SLS,R2 =11
 AI,R2 0
 BLEZ READ43
 CAL1,8 GETPG
 BCS,8 E8F11

COMPUTE WORD SIZE OF REC
 BLOCK BUFFER ADDRESS
 SET WRITE ADR TO BLK BUF PTR
 INITIALIZE BLK BUFF POINTER
 PCL DEVICE.
 SYSTEM INPUT DEVICE.
 IS INPUT FROM ANS
 NO
 ANS TO ANS COPY
 PCL DEVICE.
 SYSTEM OUTPUT DEVICE.
 NO
 SEQ OPTION PRESENT
 YES = ERROR
 TX OPTION USED
 YES = ERROR
 NC OPTION USED.
 YES = ERROR
 GET BLKSZ
 SET SIZE FOR READ
 COMPUTE NUM OF EXTRA PAGES REQD
 NO MORE
 GET EXTRA PAGES
 NOT AVAILABLE

RDWRT

Line	Op	Key	Address	Mode	Control	Register	Value	Comment
179	02	00054	358E0000	X		STW,R1	NPAGE,R7	
180		02 00055			READ43	FGU	*	
181	02	00055	22100004	A		LI,R1	4	
182	02	00056	311E000A	N		CW,R1	TBARG+10,R7	LN OPTION SPECIFIED
183	02	00057	6930005D			BNE	READ40	NO
184	02	00058	22100000	N		LI,R1	KEY	
185	02	00059	30100007	A		AW,R1	R7	
186	02	0005A	351E0006	N		STW,R1	WRTFPT+6,R7	ENTER KEY ADDRESS IN WRITE FPT
187	02	0005B	321006AA			LW,R1	=9999999	
188	02	0005C	351E000E	N		STW,R1	TBARG+14,R7	SET MAX LN VALUE FOR COMPARE
189		02 0005U			READ40	FGU	*	
190	02	0005D	22600000	A		LI,R6	0	CLEAR E0D COUNTER
191	02	0005E	35000000	X		STW,R0	UNBADR	INITIALIZE FOR UNBLOCKING
192	02	0005F	22200003	A		LI,R2	3	
193	02	00060	312E0000	X		CW,R2	C0DE,R7	COMPRESSED INPUT
194	02	00061	68300367			BE	RDWRTC0	YES
195	02	00062	312E0005	N		CW,R2	TBARG+5,R7	COMPRESSED OUTPUT
196	02	00063	68300367			BE	RDWRTC0	YES
197	02	00064	04100247		READ9	CAL1,1	SETEI	
198	02	00065	0410024B			CAL1,1	SETE0	
199	02	00066	321E0000	X		LW,R1	SELECT,R7	
200	02	00067	351E0000	X		STW,R1	RSSAVE,R7	SAVE COUNT OF REC SELECTIONS
201	02	00068	22900001	N		LI,SR2	SELECT+1	INITIALIZE RS TABLE INDEX
202	02	00069	350E0000	X	READ4	STW,R0	RECNUM,R7	ZERO RECORD NUMBER COUNT
203					*			
204	02	0006A	22600000	A	READ0	LI,R6	0	CLEAR E0D COUNTER
205					*			
206	02	0006B	321006AB		READ1	LW,R1	=1 1	BLANK BUFFER
207	02	0006C	22300022	A		LI,R3	34	
208	02	0006D	322E0004	N		LW,R2	RDFPT+4,R7	
209	02	0006E	B5160002	A		STW,R1	+R2,R3	
210	02	0006F	6430006E			BDR,R3	=*1	
211	02	00070	321006AC			LW,R1	=X'00404040'	
212	02	00071	35140000	A		STW,R1	0,R2	INITIALIZE FIRST WORD
213	02	00072	041E0000	X		CAL1,1	RDFPT,R7	READ INPUT RECORD
214		02 00073			READ14	FGU	*	
215	02	00073	32300004	N		LW,R3	M:EI+4	TRANSFER RECORD SIZE TO WRITE FPT

216	02	00074	25300006F	A	SLS,R3	=17	
217	02	00075	22100000F	A	LI,R1	XIF'	
218	02	00076	4B1000000	X	AND,R1	MIEI	GET ASN FROM DCB
219	02	00077	211000002	A	CI,R1	2	IS IT DEVICE OR ANS
220	02	00078	69200007A		BG	\$+2	YES
221	02	00079	32300000D	N	LW,R3	MIEI+13	NO = GET SIZE FROM RWS WORD
222	02	0007A	203000000	A	AI,R3	0	TEST FOR NULL RECORD
223	02	0007B	693000082		BNEZ	READ33	NO
224	02	0007C	321E00000	X	LW,R1	T0ARG,R7	
225	02	0007D	211000008	A	CI,R1	8	TEST IF OUTPUT TO ME,LP,CP
226	02	0007E	691000082		BL	READ33	NO=OUTPUT NULL RECORD
227	02	0007F	203000001	A	AI,R3	1	FORCE ONE BLANK FOR OUTPUT
228	02	00080	221000040	A	LI,R1	X140'	
229	02	00081	F51000002	A	STB,R1	*R2	
230		02	00082		EQU	*	
231	02	00082	330000000	X	READ33		
232	02	00083	683000087		MTW,0	ANSBLK	IS BLOCKING WANTED FOR ANS
233	02	00084	330000001	N	BEZ	READ26	NO
234	02	00085	693000094		MTW,0	ANSBLK+1	YES = WAS REC SIZE GIVEN
235	02	00086	353000001	N	BNEZ	READ27	YES
236	02	00087	21100000A	A	STW,R3	ANSBLK+1	SET REC TO SIZE OF 1ST REC
237	02	00088	693000090		READ26	CI,R1	IS INPUT FROM ANS TAPE
238	02	00089	451000000	X	BNE	READ28	NO
239	02	0008A	68300028A		CS,R1	MIE0	
240		02	0008B		BE	ANS CVT	OUTPUT IS ANS
241	02	0008B	322E00004	N	READ26A	EQU	*
242	02	0008C	352E00004	N	LW,R2	RDFPT+4,R7	
243	02	0008D	353000000	X	STW,R2	WRTFPT+4,R7	RESET WRITE ADDRESS
244	02	0008E	6AB002B9		STW,R3	BLKSIZE	SET TO SIZE OF INPUT
245	02	0008F	692000094		READ29	BAL,SR4	OUTPUT NOT ANS = GO UNBLOCK
246		02	00090		BCS,2	READ27	BLOCKED FORMAT
247	02	00090	330000001	N	READ28	EQU	*
248	02	00091	683000093		MTW,0	ANSBLK+1	WAS REC SPECIFIED
249	02	00092	323000001	N	BEZ	\$+2	NO
250	02	00093	353E00005	N	LW,R3	ANSBLK+1	GET REC VALUE
251		02	00094		STW,R3	WRTFPT+5,R7	ENTER SIZE IN WRITE FPT
252	02	00094	331E00000	X	READ27	EQU	*
					MTW,1	RECNUM,R7	

253	02	00095			D01	VERSION#2	
254	02	00095	331E00006	N	MTW,1	RDFPT+6,R7	INC BLOCK FOR RANDOM
255	02	00096	330E00000	X	MTW,0	SELECT,R7	ANY RS OPTIONS IN EFFECT
256	02	00097	6830000CD		BEZ	READ2	NO
257	02	00098	321000009	A	LW,R1	SR2	GET X-Y POINTER
258	02	00099	322E00000	X	LW,R2	RECNUM,R7	GET CURRENT REC. NO.
259	02	0009A	B12200007	A	CW,R2	*R7,R1	COMPARE WITH X VALUE
260	02	0009B	6910000AE		BL	READ17	NOT IN RANGE
261	02	0009C	201000001	A	AI,R1	1	STEP TO Y VALUE
262	02	0009D	B12200007	A	CW,R2	*R7,R1	COMPARE
263	02	0009E	6820000CD		BLE	READ2	WITHIN RANGE - GO WRITE
264	02	0009F	33FE00000	X	MTW,-1	SELECT,R7	DECREMENT NO. OF RS OPTIONS
265	02	000A0	683001B7		BEZ	E0F9	NO MORE
266	02	000A1	209000002	A	AI,SR2	2	POINT INDEX TO NEXT PAIR
267	02	000A2	B12E00009	A	CW,R2	*SR2,R7	MUST FILE BE REPOSITIONED.
268	02	000A3	6910000AE		BL	READ17	NO
269	02	000A4	6830000CD		BE	READ2	GO WRITE RECORD
270	02	000A5	321E00000	X	LW,R1	DEVICE,R7	
271	02	000A6	6930000A8		BNEZ	*+2	PCL DEVICE.
272	02	000A7	321E00000	X	LW,R1	DEV*IN,R7	SYSTEM INPUT DEVICE.
273	02	000A8	211000001	A	CI,R1	1	IS INPUT FROM CR
274	02	000A9	683001D6		BE	DEVERR	YES = ERROR
275	02	000AA	211000007	A	CI,R1	7	IS INPUT FROM ANS TAPE
276	02	000AB	683001D6		BE	DEVERR	YES = ERROR
277	02	000AC	04100268		CAL1,1	PFIL	POSITION TO B0F
278	02	000AD	68000069		B	READ4	
279	02	000AE	B23E00009	A	LW,R3	*SR2,R7	
280	02	000AF	203FFFFFF	A	AI,R3	*1	IS RECORD NEEDED
281	02	000B0	221000003	A	LI,R1	3	
282	02	000B1	451000000	X	CS,R1	M:EI	TEST ASN
283	02	000B2	6820006B		BLE	READ1	NOT FILE OR LABEL - DONT RECORD
284	02	000B3	22100000A	A	LI,R1	XIA'	CHECK FOR ANS
285	02	000B4	451000000	X	CS,R1	M:EI	
286	02	000B5	6930000B9		BNE	READ17A	NOT ANS
287	02	000B6	330000000	X	MTW,0	UNBADR	
288	02	000B7	69300008E		BNEZ	READ29	MORE RECORDS IN BLOCK.
289	02	000B8	6800006A		B	READ0	

290		02 000B9		READ17A	FGU	*	
291	02	000B9	22100030		LI,R1	X1301	
292	02	000BA	45100005		CS,R1	MIEI+5	TEST IF BRG IS RANDOM
293	02	000BB	693000BF		BNE	READ25	NO
294	02	000BC			D01	VERSION=2	
295	02	000BC	353E0006		STW,R3	RDFPT+6,R7	SET BLOCK FOR NEXT READ
296	02	000BD	353E0000		STW,R3	RECNUM,R7	UPDATE RECORD NUMBER
297	02	000BE	6800006B		B	READ1	
298		02 000BF		READ25	FGU	*	
299	02	000BF	383E0000		SW,R3	RECNUM,R7	COMPUTE NO. OF RECS TO SKIP
300	02	000C0	6830006B		BEZ	READ1	NONE
301	02	000C1	21307FFF	READ23	CI,R3	32767	ONLY ONE PREC REQUIRED
302	02	000C2	682000CA		BLE	READ24	YES
303	02	000C3	32200003		LW,R2	R3	SAVE NO. RECS YET TO SKIP
304	02	000C4	22307FFF		LI,R3	32767	PREC COUNT
305	02	000C5	04100235		CAL1,1	PREC2	
306	02	000C6	663E0000		AWM,R3	RECNUM,R7	BUMP RECORD COUNT
307	02	000C7	32300002		LW,R3	R2	
308	02	000C8	203F8001		AI,R3	=32767	COMPUTE NO. RECS YET TO SKIP
309	02	000C9	680000C1		B	READ23	
310		02 000CA		READ24	FGU	*	
311	02	000CA	04100235		CAL1,1	PREC2	POSITION TO RECORD WANTED
312	02	000CB	663E0000		AWM,R3	RECNUM,R7	BUMP RECNUM BY PREC NUM
313	02	000CC	6800006B		B	READ1	GO READ
314		02 000CD		READ2	FGU	*	
315	02	000CD	323E0005		LW,R3	WRTFPT+5,R7	LOAD RECORD LENGTH.
316	02	000CE	6AB00300		BAL,SR4	NCCHK	CHECK FOR NC OPTION
317	02	000CF	321E0008		LW,R1	T0ARG+8,R7	
318	02	000D0	2110FF00		CI,R1	X1FF001	WAS TX OPTION SPECIFIED
319	02	000D1	684000D4		BAZ	READ52	NO
320	02	000D2	22100000		LI,R1	I0BUF	BUFFER DISPLACEMENT
321	02	000D3	6AB005AD		BAL,SR4	TABEXP	EXPAND TABS
322		02 000D4		READ52	FGU	*	
323	02	000D4	321E000A		LW,R1	T0ARG+10,R7	TEST IF ANY SEQUENCING WANTED
324	02	000D5	69320334		BNEZ	SEQID,R1	BR TO APPROPRIATE ROUTINE IF YES
325		02 000D6		WRITE2	FGU	*	
326	02	000D6	22E00000		LI,D3	I0BUF	BUFFER ADR

327	02	000D7	6AB0026D		BAL,SR4	BLKTEST	TEST IF BLOCKING WANTED
328	02	000D8	6800006A		B	READ0	YES = GO GET NEXT RECORD
329	02	000D9	22500006	A	LI,R5	6	
330	02	000DA	315E0005	N	CW,R5	T0ARG+5,R7	IS THERE AN IXI PRESENT
331	02	000DB	693000E0		BNE	WRITE4	NO = HEX DUMP NOT WANTED
332	02	000DC	6AB00000	X	BAL,SR4	HEXDUMP	YES; GO DO A HEXDUMP
333	02	000DD	33000000	X	MTW,0	UNBADR	DO WE NEED TO UNBLOCK
334	02	000DE	6930008E		BNEZ	READ29	YES
335	02	000DF	6800006A		B	READ0	
336	02	000E0	322E0000	X	LW,R2	T0ARG,R7	
337	02	000E1	2120000A	A	CI,R2	10	TEST IF OUTPUT TO CP
338	02	000E2	693000EC		BNE	WRITE3	NO
339	02	000E3	322E0004	N	LW,R2	WRTFPT+4,R7	
340	02	000E4	F2200002	A	LB,R2	*R2	TEST FIRST BYTE OF RECORD
341	02	000E5	22100004	A	LI,R1	4	
342	02	000E6	712203FF		CB,R2	BINVAL,R1	IS IT STANDARD BINARY CODE
343	02	000E7	683000EA		BE	*+3	YES
344	02	000E8	641000E6		BDR,R1	*-2	
345	02	000E9	68000135		B	WRITE1	NO
346	02	000EA	041003FD		CAL1,1	SETBIN	SET BIN MODE IN DCB
347	02	000EB	68000135		B	WRITE1	
348	02	000EC	321E0008	N	LW,R1	T0ARG+8,R7	
349	02	000ED	311006AD		CW,R1	=X'00FF0000'	IS K OPTION PRESENT
350	02	000EE	68400135		BAZ	WRITE1	NO
351	02	000EF	223000F0	A	LI,R3	X'F0'	
352	02	000F0	22200020	A	LI,R2	X'20'	
353	02	000F1	45200005	N	CS,R2	MIEI+5	IS FILE KEYED
354	02	000F2	69300119		BNE	WRITE5	NO
355	02	000F3	3210000A	N	LW,R1	MIEI+10	KEY ADDRESS
356	02	000F4	7220000C	N	LB,R2	MIEI+12	GET KEY MAX
357	02	000F5	21200003	A	CI,R2	3	IS IT A 3-BYTE KEY
358	02	000F6	6930010E		BNE	WRITE6	NO
359	02	000F7	B2100001	A	LW,R1	*R1	
360	02	000F8	401006AE		AND,R1	=X'00FFFFFF'	GET KEY
361	02	000F9	6AB00000	X	BAL,SR4	BIN2BCD	CONVERT TO BCD
362	02	000FA	25200108	A	SLD,R2	8	
363	02	000FB	72100002	A	LB,R1	R2	FIRST BYTE OF VALUE

WRITE4

WRITE3

364 02 000FC 25200008 A
 365 02 000FD 491006AF
 366 02 000FE 492006B0
 367 02 000FF 493006B1
 368 02 00100 351E0000 X
 369 02 00101 352E0001 N
 370 02 00102 353E0002 N
 371 02 00103 321E0000 X
 372 02 00104 6AB00000 X
 373 02 00105 352E0000 X
 374 02 00106 353E0001 N
 375 02 00107 22100002 A
 376 02 00108 351E0007 N
 377 02 00109 324E0004 N
 378 02 0010A 33BE0004 N
 379 02 0010B 22100012 A
 380 02 0010C 661E0005 N
 381 02 0010D 68000136
 382
 383 02 0010E
 384 02 0010E 1220023A
 385 02 0010F 352E0000 X
 386 02 00110 353E0001 N
 387 02 00111 22E00001 N
 388 02 00112 30E00007 A
 389 02 00113 6AB00000 X
 390 02 00114 0410023C
 391 02 00115 20200005 A
 392 02 00116 20FFFFFF A
 393 02 00117 04100241
 394 02 00118 68000135
 395 02 00119 321E0000 X
 396 02 0011A 6AB00000 X
 397 02 0011B 22100000 A
 398 02 0011C 75300001 A
 399 02 0011D 491006B2
 400 02 0011E 25200178 A

SLS,R2 8
 BR,R1 =X140604000!
 BR,R2 =X10000F04B!
 BR,R3 =X1F0F0F040!
 STW,R1 LINEN0,R7
 STW,R2 LINEN0+1,R7
 STW,R3 LINEN0+2,R7
 LW,R1 RECNUM,R7
 BAL,SR4 BIN2BCD
 STW,R2 SEQNUM,R7
 STW,R3 SEQNUM+1,R7
 LI,R1 2
 STW,R1 WRTFPT+7,R7
 LW,R4 WRTFPT+4,R7
 MTW,-5 WRTFPT+4,R7
 LI,R1 18
 AWM,R1 WRTFPT+5,R7
 B WRITE1+1
 *
 WRITE6 FGU 8
 LD,R2 KEYX
 STW,R2 PRNTBUF,R7
 STW,R3 PRNTBUF+1,R7
 LI,D3 PRNTBUF+1
 AW,D3 R7
 BAL,SR4 UNPRINT
 CAL1,1 PRINT1
 AI,R2 5
 AI,D3 =1
 CAL1,1 PRINT2
 B WRITE1
 LW,R1 RECNUM,R7
 BAL,SR4 BIN2BCD
 LI,R1 0
 STB,R3 R1
 BR,R1 =X100406040!
 SLD,R2 =8

EDIT NB. TO XXXX.XXX

PUT IN BUFFER

GET RECRD NUMBER
 CONVERT TO BCD

PUT NUMBER IN BUFFER

ADD BTD
 SAVE BUFF ADR
 CHANGE BUFFER ADDRESS
 INCREMENT WRITE COUNT

SET UP LINE FOR PRINTING KEY

ENTER KEY IN BUFFER
 WRITE BLANK LINE
 LENGTH OF PRINT LINE
 COMPUTE BUFFER ADDRESS
 PRINT KEY

GET RECORD NUMBER
 CONVERT TO BCD

LAST BYTE TO R1
 ADD HYPHEN
 POSITION OTHER BYTES

WRITE5

RDWRT

401	02	0011F	352E0000	X	STW,R2	LINEN0,R7	ENTER IN BUFFER
402	02	00120	353E0001	N	STW,R3	LINEN0+1,R7	
403	02	00121	351E0002	N	STW,R1	LINEN0+2,R7	
404	02	00122	6800012E		B	WRITE#5B	
405	02	00123			WRITE#5A	EGU	*
406	02	00123	331E0000	X	MTW,R1	RECNUM,R7	UP RECORD COUNT.
407	02	00124	223000F0	A	LI,R3	X'F0'	
408	02	00125	321E0000	X	LW,R1	RECNUM,R7	GET RECORD NUMBER
409	02	00126	6A800000	X	BAL,SR4	BIN2BCD	CONVERT TO BCD
410	02	00127	22100000	A	LI,R1	0	
411	02	00128	75300001	A	STB,R3	R1	LAST BYTE TO R1
412	02	00129	491006B2		BR,R1	=X'00406040'	ADD HYPHEN
413	02	0012A	25200178	A	SLD,R2	=8	POSITION OTHER BYTES
414	02	0012B	352E0000	X	STW,R2	LINE#N0,R7	ENTER IN BUFFER.
415	02	0012C	353E0000	X	STW,R3	LINE#N01,R7	
416	02	0012D	351E0000	X	STW,R1	LINE#N02,R7	
417	02	0012E			WRITE#5B	EGU	*
418	02	0012E	22100003	A	LI,R1	3	
419	02	0012F	351E0007	N	STW,R1	WRTFPT+7,R7	BTD
420	02	00130	324E0004	N	LW,R4	WRTFPT+4,R7	SAVE BUFF ADR
421	02	00131	33DE0004	N	MTW,-3	WRTFPT+4,R7	CHANGE BUFFER ADDRESS
422	02	00132	22100009	A	LI,R1	9	INCREMENT WRITE COUNT
423	02	00133	661E0005	N	AWM,R1	WRTFPT+5,R7	
424	02	00134	68000136		B	WRITE1+1	
425					*		
426	02	00135			WRITE1	EGU	*
427	02	00135	324E0004	N	LW,R4	WRTFPT+4,R7	BUFFER ADDRESS
428	02	00136	322E0000	X	LW,R2	T0ARG,R7	
429	02	00137	21200009	A	CI,R2	9	IS OUTPUT TO LP
430	02	00138	69300146		BNE	WRITE7	N0
431	02	00139	322E0005	N	LW,R2	WRTFPT+5,R7	GET SIZE OF RECORD
432	02	0013A	22300100	A	LI,R3	X'100'	
433	02	0013B	31300000	X	CW,R3	MIE0	CHECK IF VFC OPTION SPECIFIED.
434	02	0013C	69400146		BANZ	WRITE7	VFC OPTION PRESENT.
435	02	0013D	202FFF7C	A	WRITE8	AI,R2	
436	02	0013E	68200146		BLEZ	=132	
437	02	0013F	22300084	A	LI,R3	132	ONLY ONE LINE REQUIRED

RDWRT

438	02	00140	353E0005	N		STW,R3	WRTFPT+5,R7	PRINT 1ST(NEXT) 132 CHARS
439	02	00141	041E0000	X		CAL1,1	WRTFPT,R7	
440	02	00142	22300021	A		LI,R3	33	
441	02	00143	663E0004	N		AWM,R3	WRTFPT+4,R7	UPDATE BUFFER ADDRESS
442	02	00144	352E0005	N		STW,R2	WRTFPT+5,R7	NO. REMAINING CHARS IN REC
443	02	00145	6800013D			B	WRITER	
444	02	00146	041E0000	X	WRITE7	CAL1,1	WRTFPT,R7	WRITE OUTPUT RECORD
445	02	00147	354E0004	N		STW,R4	WRTFPT+4,R7	RESTORE BUFFER ADDRESS
446	02	00148	6AB0033E			BAL,SR4	BRCHK	CHECK BREAK FLAG
447	02	00149	33000000	X		MTW,0	UNBADR	DO WE NEED TO UNBLOCK
448	02	0014A	6930008E			BNEZ	READ29	YES
449	02	0014B	321E0000	X		LW,R1	C0DE,R7	
450	02	0014C	21100003	A		CI,R1	3	
451	02	0014D	6830038E			BE	READ6	COMPRESSED INPUT
452	02	0014E	6800006A			B	READ0	
453								
454	02	0014F	7230000A	A	* RDABN	LB,R3	SR3	GET ABNORMAL CODE
455	02	00150	21300005	A		CI,R3	5	TEST FOR E0D
456	02	00151	68300154			BE	E0D1	E0D FOUND
457	02	00152	21300006	A		CI,R3	6	E0F ENCOUNTERED
458	02	00153	6930017E			BNE	E0F1	NO
459		02 00154			E0D1	EQU	*	
460	02	00154	22500006	A		LI,R5	6	
461	02	00155	315E0005	N		CW,R5	T0ARG+5,R7	DOING A HEX DUMP
462	02	00156	69300160			BNE	E0D2	NO
463	02	00157	22500003	A		LI,R5	3	
464	02	00158	45500000	X		CS,R5	M:EI	HEXDUMP FROM A DEVICE
465	02	00159	69300160			BNE	E0D2	NO
466	02	0015A	321E0003	N		LW,R1	M0DE+3,R7	
467	02	0015B	211000FF	A		CI,R1	X'FF'	TEST FOR DE0D OPTION
468	02	0015C	69400160			BANZ	E0D2	YES
469	02	0015D	22200012	A		LI,R2	18	MESSAGE SIZE
470	02	0015E	22100000	N		LI,R1	M:EO	DCB ADDRESS
471	02	0015F	0410025E			CAL1,1	FPTE0D	YES-INDICATE --E0D-- ENCOUNDED
472		02 00160			E0D2	EQU	*	
473	02	00160	33000000	X		MTW,0	ANSBLK	TEST IF BLOCKING FOR ANS
474	02	00161	68300163			BEZ	*+2	NO

Line	Op	Code	Address	Condition	Instruction	Register	Operation	Comment
475	02	00162	041E0000	X	CAL1,1	RDWRT	WRITE LAST BLOCK	
476	02	00163	20600001	A	AI,R6			
477	02	00164	21600002	A	CI,R6		TEST FOR DOUBLE EOD	
478	02	00165	683001A1		BE	EBF5		
479	02	00166	22500003	A	LI,R5			
480	02	00167	315E0000	X	CW,R5	CODE,R7	INPUT COMPRESSED WANTED	
481	02	00168	68300367		BE	RDWRTC0	YES	
482	02	00169	315E0005	N	CW,R5	T0ARG+5,R7	OUTPUT COMPRESSED WANTED	
483	02	0016A	69300171		BNE	E0D3	NO	
484	02	0016B	350E0000	X	STW,R0	RECSIZE,R7	INDICATE NO MORE INPUT	
485	02	0016C	32800003	A	LW,SR1	R3		
486	02	0016D	6AB004BE		BAL,SR4	COMPRESS	OUTPUT LAST RECORD	
487	02	0016E	32300008	A	LW,R3	SR1		
488	02	0016F	32AE0000	X	LW,SR3	I0ERR,R7	DID I0 ERROR OCCUR	
489	02	00170	69300202		BNEZ	E0ERR	YES	
490	02	00171			FQU	*		
491	02	00171	330E0000	X	MTW,0	SELECT,R7	ANY MORE RECORD SELECTIONS	
492	02	00172	693001A3		BNEZ	EBF5+2	YES	
493	02	00173	321E0003	N	LW,R1	M0DE+3,R7		
494	02	00174	211000FF	A	CI,R1	XIFF'	DE0D OPTION	
495	02	00175	6840017A		BAZ	E0D4	NO	
496	02	00176	321E0000	X	LW,R1	RSSAVE,R7	INITIALIZE FOR RECORD SELECTION	
497	02	00177	351E0000	X	STW,R1	SELECT,R7		
498	02	00178	22900001	N	LI,SR2	SELECT+1	INITIALIZE SELECT TABLE INDEX	
499	02	00179	6800017B		B	*+2		
500	02	0017A			FQU	*		
501	02	0017A	04100227		CAL1,1	W0BF	WRITE E0D	
502	02	0017B	21300006	A	CI,R3	6	E0F ENCOUNTERED	
503	02	0017C	6830020A		BE	RETURN	YES	
504	02	0017D	6800006B		B	READ1		
505								
506	02	0017E			FQU	*		
507	02	0017E	21300007	A	CI,R3	7	TEST FOR LOST DATA	
508	02	0017F	693001C1		BNE	E0R		
509	02	00180	33000001	N	MTW,0	ANSBLK+1		
510	02	00181	E9300008	A	BNEZ	*SR1	IGNORE IF REC SIZE GIVEN FOR ANS	
511	02	00182	6AB00000	X	BAL,SR4	GETPAGE	GET ADDITIONAL BUFFER PAGE	

512	02	00183	21800000	A		CI,SR1	0	DID WE GET SOME PAGES
513	02	00184	6930018D			BNE	EOF2	YES
514	02	00185	33100000	X		MTW,1	GRANCNT	SET ABORT FLAG
515	02	00186	33000000	X		MTW,0	COPYSK	TEST IF COPYALL
516	02	00187	6830018A			BEZ	*+3	NO
517	02	00188	32F006B3			LW,D4	=X'07000000'	SET ABN CODE
518	02	00189	6800020F			B	RETURN1	
519		02	0018A		EOF11	EQU	*	
520	02	0018A	22100021	A		LI,R1	33	ERROR=ADDITIONAL PAGE NOT AVAILABLE
521	02	0018B	6AB00000	X		BAL,SR4	ERROR	
522	02	0018C	6800020A			B	RETURN	
523		02	0018D		EOF2	EQU	*	
524	02	0018D	322E0005	N		LW,R2	RDFPT+5,R7	OLD BUFFER SIZE
525	02	0018E	2580000B	A		SLS,SR1	11	CONVERT PAGES TO BYTES
526	02	0018F	30200008	A		AW,R2	SR1	NEW BUFFER SIZE
527	02	00190	2210000F	A		LI,R1	X'F'	
528	02	00191	40100000	X		AND,R1	M;EI	GET ASN FROM DCB
529	02	00192	21100002	A		CI,R1	2	IS IT DEVICE OR ANS
530	02	00193	6820019D			BLE	EOF4	NO
531	02	00194	328E0005	N		LW,SR1	RDFPT+5,R7	
532	02	00195	21807FFF	A		CI,SR1	X'7FFF'	YES=BUFFER CAN NOT BE LARGER
533	02	00196	6910019A			BL	EOF3	THAN 15 BITS
534	02	00197	22100026	A		LI,R1	38	ERROR=RECORD SIZE LARGER THAN 15 BIT
535	02	00198	6AB00000	X		BAL,SR4	ERROR	
536	02	00199	6800020A			B	RETURN	
537	02	0019A	21207FFF	A	EOF3	CI,R2	X'7FFF'	
538	02	0019B	6910019D			BL	EOF4	IF BUFFER LARGER THAN 15 BITS
539	02	0019C	22207FFF	A		LI,R2	X'7FFF'	SET AT 15 BITS
540	02	0019D	352E0005	N	EOF4	STW,R2	RDFPT+5,R7	
541	02	0019E	352E0000	X		STW,R2	BUFSIZE,R7	
542	02	0019F	04100233			CAL1,1	PREC	POSITION BACK ONE RECORD
543	02	001A0	6800006B			B	READ1	
544	02	001A1	330E0000	X	EOF5	MTW,0	SELECT,R7	ANY RS OPTIONS
545	02	001A2	6830020A			BEZ	RETURN	NO
546	02	001A3	323E0000	X		LW,R3	RECNUM,R7	GET NO. OF LAST REC
547	02	001A4	B13E0009	A		CW,R3	*SR2,R7	COMPARE WITH X VALUE
548	02	001A5	6910018D			BL	EOF7	ERROR=ENTIRE SELECTION NOT IN FILE

549	02	001A6	20900001	A	AI,SR2	1	POSITION TO Y VALUE
550	02	001A7	B13E0009	A	CW,R3	*SR2,R7	LAST REC NO. VS Y VALUE
551	02	001A8	681001B3		BGE	EOF6	WITHIN FILE
552	02	001A9	22500006	A	LI,R5	6	
553	02	001AA	315E0005	N	CW,R5	T0ARG+5,R7	DOING A HEX DUMP
554	02	001AB	683001B3		BE	EOF6	YES = DON'T REPEAT MESSAGE
555	02	001AC	22200013	A	LI,R2	19	
556	02	001AD	22100000	N	LI,R1	M;UC	
557	02	001AE	33000000	X	MTW,0	J;JIT	ON-LINE
558	02	001AF	691001B2		BLZ	\$+3	YES
559	02	001B0	22200012	A	LI,R2	18	BATCH = DON'T PRINT NL CHAR
560	02	001B1	22100000	N	LI,R1	M;L0	
561	02	001B2	0410025E		CAL1,1	FPTE0D	PRINT 1E0D ENCOUNTERED,
562	02	001B3	33FE0000	X	MTW,-1	SELECT,R7	DECREMENT NO. OF RS OPTIONS
563	02	001B4	693001B7		BNEZ	\$+3	
564	02	001B5	04100227		CAL1,1	WE0F	NO MORE-WRITE EOF
565	02	001B6	6800020A		B	RETURN	
566	02	001B7	04100227		EGU	\$	
567	02	001B7	04100227		CAL1,1	WE0F	WRITE EOF
568	02	001B8	04100233		CAL1,1	PREC	BACKSPACE ONE RECORD.
569	02	001B9	6800020A		B	RETURN	
570	02	001BA	20900001	A	AI,SR2	1	POSITION TO X VALUE
571	02	001BB	B13E0009	A	CW,R3	*SR2,R7	TEST IF IN FILE
572	02	001BC	681000A5		BGE	READ3	YES = RE-READ FILE
573	02	001BD	22100029	A	LI,R1	41	ERROR = NOT IN FILE
574	02	001BE	6AB00000	X	BAL,SR4	ERROR	
575	02	001BF	20900001	A	AI,SR2	1	POSITION TO Y VALUE
576	02	001C0	680001B3		B	EOF6	TRY NEXT RS PAIR
577							
578	02	001C1	2130001C	A	CI,R3	X11C1	TEST FOR END OF REEL
579	02	001C2	69300203		BNE	10ERR1	
580	02	001C3	2230022C		LI,R3	E0CV0L2	
581	02	001C4	22400002	A	LI,R4	2	
582	02	001C5	6AB001E6		BAL,SR4	ULBLCHK	TEST FOR TRAILER LABEL
583	02	001C6	04100228		CAL1,1	E1CV0L	ADVANCE TO NEXT INPUT TAPE REEL
584	02	001C7	E8000008	A	B	*SR1	CONTINUE TO READ
585							

586	02	001C8	7210000A	A	WRTABN	LB,R1	SR3	GET ABNORMAL CODE	
587	02	001C9	2110001C	A		CI,R1	X'1C'	TEST FOR END OF REEL	
588	02	001CA	69300202			BNE	E0ERR		
589	02	001CB	321E0000	X		LW,R1	T0ARG,R7		
590	02	001CC	693001CE			BNEZ	*+2	PCL DEVICE.	
591	02	001CD	321E0000	X		LW,R1	DEV*0UT,R7	SYSTEM OUTPUT DEVICE.	
592	02	001CE	21100004	A		CI,R1	4	OUTPUT TO LABELED TAPE	
593	02	001CF	693001D2			BNE	*+3	NO	
594	02	001D0	208FFFFFF	A		AI,SR1	=1	BACK UP TO WRITE CAL	
595	02	001D1	680001D4			B	*+3		
596	02	001D2	04100227			CAL1,1	WE0F	DOUBLE EOF	
597	02	001D3	04100227			CAL1,1	WE0F	WRITE EOF	
598	02	001D4	0410022A			CAL1,1	E0CV0L	CLOSE CURRENT OUTPUT VOLUME	
599	02	001D5	E8000008	A		B	*SR1	CONTINUE READING AND WRITING	
600									
601	02	001D6	2210001B	A	*	DEVERR	LI,R1	27	INVALID RS SPEC FOR DEVICE
602	02	001D7	68000204			B	I0ERR1+1	REPORT ERROR	
603	02	001D8	7210000A	A	EIERR	LB,R1	SR3	TEST FOR LAST REEL	
604	02	001D9	21100056	A		CI,R1	X'56'		
605	02	001DA	693001DF			BNE	I0ERR3	NO = SOME OTHER ERROR	
606	02	001DB	22100003	A		LI,R1	3		
607	02	001DC	311E0005	N		CW,R1	T0ARG+5,R7	COMPRESSED OUTPUT	
608	02	001DD	69300073			BNE	READ14	NO = WRITE LAST RECORD (FT)	
609	02	001DE	680003CF			B	READ81	WRITE COMPRESSED RECORD	
610	02	001DF	21100042	A	I0ERR3	CI,R1	X'42'		
611	02	001E0	69300203			BNE	I0ERR1		
612	02	001E1	22F00000	A		LI,D4	0		
613	02	001E2	22100030	A		LI,R1	X'30'		
614	02	001E3	45100005	N		CS,R1	M:EI+5		
615	02	001E4	68300224			BE	RETURN2	END OF RANDOM FILE	
616	02	001E5	68000203			B	I0ERR1		
617									
618	02	001E6	321E0000	X	*	ULBLCHK	LW,R1	DEVICE,R7	
619	02	001E7	693001E9			BNEZ	*+2	PCL DEVICE.	
620	02	001E8	321E0000	X		LW,R1	DEV\$IN,R7	SYSTEM INPUT DEVICE.	
621	02	001E9	21100004	A		CI,R1	4	IS INPUT FROM LT	
622	02	001EA	683001ED			BE	*+3	YES	


```

660 02 0020D 04100227
661 02 0020E 22F00000 A
662 02 0020F 2230022E
663 02 00210 22400003 A
664 02 00211 6A8001E6
665 02 00212 33000000 X
666 02 00213 69300216
667 02 00214 21D00001 A
668 02 00215 68200224
669 02 00216 321E0000 X
670 02 00217 69300219
671 02 00218 321E0000 X
672 02 00219 21100003 A
673 02 0021A 6830021D
674 02 0021B 21100005 A
675 02 0021C 69300224
676 02 0021D 32100000 X
677 02 0021E 311006B4
678 02 0021F 68400224
680
681 02 00220 32100001 N
682 02 00221 311006B5
683 02 00222 69400224
684 02 00223 0410026A
685 02 00224 02200070 A
686 02 00225 8A500007 A
687 02 00226 E800000B A
688
689 02 00227 02000000 N
690 02 00228 03000000 X
691 02 00229 00000000 A
692 02 0022A 03000000 N
693 02 0022B 00000000 A
694 02 0022C 03000000 N
695 02 0022D 40000000 A
696 02 0022E 15000000 N
    
```

RETURN1

* DON'T RELEASE IF FUN IS INOUT

RETURN2

*

CLOSE2

```

CAL1,1  WEOF
LI,D4    0
EQU      *
LI,R3    CLOSE2
LI,R4    3
BAL,SR4  ULBLCHK
MTW,0    GRANCNT
BNEZ     *+3
CI,D2    1
BLE      RETURN2
LW,R1    T0ARG,R7
BNEZ     *+2
LW,R1    DEV0OUT,R7
CI,R1    3
BE       *+3
CI,R1    5
BNE      RETURN2
LW,R1    M:EB
CW,R1    *X'00200000'
BAZ      RETURN2
* DON'T RELEASE IF FUN IS INOUT
LW,R1    M:EB+1
CW,R1    *X'00080000'
BANZ     RETURN2
CAL1,1  FPTREL
LCI      7
PLM,R5   *R7
B        *SR4
*
WEOF     DATA  X'02000000'+M:EB
EICV6L   GEN,8,7,17  X'03',0,M:EB
EBCV6L   DATA  0
EBCV6L   DATA  X'03000000'+M:EB
EBCV6L2  GEN,8,24  X'03',M:EB
          DATA  X'40000000'
          GEN,8,24  X'15',M:EB
    
```

YES • WRITE EOF

TEST FOR TRAILER LABEL
WAS COPY ABORTED

YES
ERROR CONDITION

NO

PCL DEVICE.
SYSTEM OUTPUT DEVICE.

GOING TO RAD FILE
YES

GOING TO DISK PACK
NO

IS OUTPUT FILE OPEN
NO

GET FUN
IS IT INOUT
YES, DON'T RELEASE
RELEASE BAD RAD FILE

697	02	0022F	C0000000	A		DATA	X: C0000000'	
698	02	00230	00000002	A		DATA	2	
699	02	00231	10000000	N	PFIL00	GEN,8,24	X: 1C',M:EB	
700	02	00232	00000010	A		DATA	X: 10'	
701					*			
702	02	00233	10000000	N	PREC	DATA	X: 1D000000'+M:EI	
703	02	00234	00000010	A		DATA	X: 10'	
704	02	00235	10000000	N	PREC2	GEN,8,24	X: 1D',M:EI	
705	02	00236	C0000000	A		DATA	X: C0000000'	
706	02	00237	80000003	A		PZE	*R3	C(R3)=N0: 0F RECORDS
707	02	00238	000001B0			DATA	EBF7	ABNORMAL
708						BOUND	8	
709	02	0023A	D2C5F87E	A	KEYX	TEXT	!KEY=	
	02	0023B	40404040	A				
710	02	0023C	11000000	N	PRINT1	GEN,8,24	X: 11',M:EB	
711	02	0023D	34000010	A		DATA	X: 34000010'	
712	02	0023E	0000057C			DATA	CITAB+1	BUFFER
713	02	0023F	00000002	A		DATA	2	SIZE
714	02	00240	00000000	A		DATA	0	BTD
715	02	00241	11000000	N	PRINT2	GEN,8,24	X: 11',M:EB	
716	02	00242	34000010	A		DATA	X: 34000010'	
717	02	00243	8000000E	A		PZE	*D3	BUFFER
718	02	00244	80000002	A		PZE	*R2	SIZE
719	02	00245	00000000	A		DATA	0	BTD
720	02	00246	88000002	A	GETPG	DATA	X: 88000002'	GET PAGE FPT
721					*			
722	02	00247	06000000	N	SETEI	DATA	X: 06000000'+M:EI	
723	02	00248	C0000000	A		DATA	X: C0000000'	
724	02	00249	000001D8			DATA	EIERR	ABNORMAL ADDRESS
725	02	0024A	000001D8			DATA	EIERR	ERROR ADDRESS
726					*			
727	02	0024B	06000000	N	SETE0	DATA	X: 06000000'+M:EB	
728	02	0024C	C0000000	A		DATA	X: C0000000'	
729	02	0024D	00000202			DATA	EBERR	ABNORMAL ADDRESS
730	02	0024E	00000202			DATA	EBERR	ERROR ADDRESS
731					*			
732	02	0024F	10000000	N	IRDFPT	DATA	X: 10000000'+M:EI	

RDWRT

733	02	00250				DB1	VERSION#2	
734	02	00250	F1000018	A		DATA	X'F1000018'	EXISTENCE FLAGS
735	02	00251				DB1	VERSION#1	
736					*S*	DATA	X'F0000018'	EXISTENCE FLAGS,
737	02	00251	00000203			DATA	IBERR1	ERROR ADDRESS
738	02	00252	0000014F			DATA	RDABN	ABNORMAL ADDRESS
739	02	00253	00000000	A		DATA	0	BUFFER ADDRESS
740	02	00254	00000000	A		DATA	0	BUFFER SIZE
741	02	00255	00000000	A		DATA	0	BLOCK
742					*			
743	02	00256	11000000	N	IWRTPPT	DATA	X'11000000'+MIEB	
744	02	00257	FC000050	A		DATA	X'FC000050'	EXISTANCE FLAGS
745	02	00258	00000202			DATA	EBERR	ERROR ADDRESS
746	02	00259	000001C8			DATA	WRTABN	ABNORMAL ADDRESS
747	02	0025A	00000000	A		DATA	0	BUFFER ADDRESS
748	02	0025B	00000000	A		DATA	0	BUFFER SIZE
749	02	0025C	8000000A	N		GEN,1,31	1,M:EI+10	KEY ADDRESS
750	02	0025D	00000000	A		DATA	0	NO BYTE DISPLACEMENT
751			00000008		WFPTSIZE	EGU	S=IWRTPPT	WRITE FPT SIZE
752	02	0025E	91000001	A	FPTEBD	GEN,8,7,17	X'91',0,R1	
753	02	0025F	34000000	A		DATA	X'34000000'	
754	02	00260	00000263			DATA	S+3	BUFFER
755	02	00261	80000002	A		PZE	*R2	SIZE
756	02	00262	00000000	A		DATA	0	NO DISPLACEMENT
757	02	00263	6060C5D6	A		TEXT	1==EBD==ENCOUNTEREDN'	
	02	00264	C460A0C5	A				
	02	00265	D5C3D6E4	A				
	02	00266	D5E3C5D9	A				
	02	00267	C5C41540	A				
758	02	00268	16000000	X	PFIL	GEN,8,7,17	X'1C',0,M:EI	
759	02	00269	00000010	A		DATA	X'10'	
760	02	0026A	15000000	N	FPTREL	GEN,8,24	X'15',M:EB	
761	02	0026B	80000000	A		DATA	X'80000000'	
762	02	0026C	00000001	A		DATA	1	

762
764
765 02 0026U
766 02 0026D 20B00001 A
767 02 0026E 33000000 X
768 02 0026F E830000B A
769 02 00270 22200040 A
770 02 00271 4B200005 N
771 02 00272 E930000B A
772 02 00273 20BFFFFFF A
773 02 00274 022000B0 A
774 02 00275 8B100007 A
775 02 00276 322E0005 N
776 02 00277 30200001 N
777 02 00278 31200000 X
778 02 00279 6B200280
779 02 0027A 041E0000 X
780 02 0027B 321E0004 N
781 02 0027C 3B100007 A
782 02 0027D 25100002 A
783 02 0027E 35100000 X
784 02 0027F 32200001 N
785 02 0028U
786 02 00280 352E0005 N
787 02 00281 32100001 N
788 02 00282 32300000 X
789 02 00283 66100000 X
790 02 00284 3220000E A
791 02 00285 25200002 A
792 02 00286 6AB00000 X
793 02 00287 022000B0 A
794 02 00288 8A100007 A
795 02 00289 E800000B A

	PAGE		
*TEST IF	BLOCKING	WANTED FOR ANS.	IF SB, ADD RECORD TO OUTPUT BLOCK.
BLKTEST	EQU	*	
	AI,SR4	1	BUMP IN CASE NO BLOCKING
	MTW,0	ANSBLK	TEST IF BLOCKING WANTED
	BEZ	*SR4	NO
	LI,R2	X'40'	
	AND,R2	M:EB+5	
	BNEZ	*SR4	U FORMAT
	AI,SR4	=1	RESTORE LINK REG
	LCI	11	
	PSM,R1	*R7	
	LW,R2	WRTFPT+5,R7	GET CURRENT SIZE
	AW,R2	ANSBLK+1	ADD NEW REC
	CW,R2	ANSBLK	IS BUFFER FULL
	BLE	BLK2	NO
	CAL1,1	WRTFPT,R7	WRITE BLOCK
	LW,R1	WRTFPT+4,R7	
	SW,R1	R7	
	SLS,R1	2	
	STW,R1	BLKBUFF	INITIALIZE BLK BUFFER PTR
	LW,R2	ANSBLK+1	INITIALIZE WRITE SIZE
BLK2	EQU	*	
	STW,R2	WRTFPT+5,R7	INCREMENT WRITE SIZE
	LW,R1	ANSBLK+1	CURRENT REC SIZE
	LW,R3	BLKBUFF	CURRENT BLOCK POINTER
	AWM,R1	BLKBUFF	UPDATE BLOCK POINTER
	LW,R2	D3	BUFFER DISPLACEMENT
	SLS,R2	2	BYTE DISP
	BAL,SR4	MBS	MOVE RECORD TO BLOCK
	LCI	11	
	PLM,R1	*R7	
	B	*SR4	

LINE	MODE	KEY	ADDRESS	CHAR	OPERATION	PARAMETERS	DESCRIPTION
796					PAGE		
797					*CONVERT FORMAT	ON ANS TO ANS COPY	IF REQUESTED.
798	02	0028A	32800002	N	ANSCVT	LW,SR1	ANSBLK+2
799	02	0028B	6830008B			BEZ	READ26A
800	02	0028C	325E0004	N		LW,R5	RDFPT+4,R7
801	02	0028D	21800002	A		CI,SR1	2
802	02	0028E	6830029A			BE	DECCVT
803	02	0028F	6AB002A5			BAL,SR4	CVT1
804	02	00290	20500001	A		AI,R5	1
805	02	00291	20100000	N		AI,R1	I8BUF
806	02	00292	30100007	A		AW,R1	R7
807	02	00293	32E00001	A		LW,D3	R1
808	02	00294	6AB002A5		CVT0	BAL,SR4	CVT1
809	02	00295	30500001	A		AW,R5	R1
810	02	00296	20500001	A		AI,R5	1
811	02	00297	3150000E	A		CW,R5	D3
812	02	00298	69100294			BL	CVT0
813	02	00299	68000094			B	READ27
814	02	0029A	6AB002AF		DECCVT	BAL,SR4	CVT2
815	02	0029B	20500001	A		AI,R5	1
816	02	0029C	20300000	N		AI,R3	I8BUF
817	02	0029D	30300007	A		AW,R3	R7
818	02	0029E	32E00003	A		LW,D3	R3
819	02	0029F	6AB002AF		CVT4	BAL,SR4	CVT2
820	02	002A0	30500003	A		AW,R5	R3
821	02	002A1	20500001	A		AI,R5	1
822	02	002A2	3150000E	A		CW,R5	D3
823	02	002A3	6910029F			BL	CVT4
824	02	002A4	68000094			B	READ27
825	02	002A5	89800007	A	CVT1	PSW,SR4	*R7
826	02	002A6	D2100005	A		LH,R1	*R5
827	02	002A7	89100007	A		PSW,R1	*R7
828	02	002A8	6AB00000	X		BAL,SR4	BIN2BCD
829	02	002A9	88100007	A		PLW,R1	*R7
830	02	002AA	20100003	A		AI,R1	3
831	02	002AB	2510007E	A		SLS,R1	=2
832	02	002AC	353A0000	A		STW,R3	0,R5

PUT CONVERSION IN HEADER

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RDWRT

43

833	02	002AD	88B00007	A
834	02	002AE	E800000B	A
835	02	002AF	89B00007	A
836	02	002B0	32100005	A
837	02	002B1	38100007	A
838	02	002B2	25100002	A
839	02	002B3	22200004	A
840	02	002B4	6AB00000	X
841	02	002B5	D5300005	A
842	02	002B6	20300003	A
843	02	002B7	25300007E	A
844	02	002B8	E800000B	A

CVT2

PLW,SR4	*R7
B	*SR4
PSW,SR4	*R7
LW,R1	R5
SW,R1	R7
SLS,R1	2
LI,R2	4
BAL,SR4	BCD2BIN
STH,R3	*R5
AI,R3	3
SLS,R3	*2
B	*SR4

BYTE DISP OF D VALUE
 SIZE
 CONVERT TO BINARY
 PUT IN FIRST HALF OF HEADER
 CONVERT TO WORDS

LINE	OP	KEY	ADDR	MODE	INSTR	REG	VAL	COMMENT
845					PAGE			
846					*UNBLOCK	ANS TR	NON-ANS.	
847	02	002B9	22200003	A	UNBLK	LI,R2	3	
848	02	002BA	72140005	N		LB,R1	M:EI+5,R2	GET FBRMAT CODE
849	02	002BB	2510007C	A		SLS,R1	=4	
850	02	002BC	680202BD			B	UNBTAB,R1	
851	02	002BD	680002C3		UNBTAB	B	UNBF	F FBRMAT
852	02	002BE	680002C3			B	UNBF	F FBRMAT
853	02	002BF	680002D9			B	UNBD	D FBRMAT
854	02	002C0	680002F5			B	UNBV	V FBRMAT
855	02	002C1	02200080	A		LCI	8	SIGNAL NOT BLOCKED
856	02	002C2	E800000B	A		B	*SR4	U FBRMAT = NO UNBLOCKING
857					*			
858	02	002C3	32300012	N	UNBF	LW,R3	M:EI+18	
859	02	002C4	2530006F	A		SLS,R3	=17	GET LRCSZ FROM DCB
860	02	002C5	353E0005	N		STW,R3	WRTFPT+5,R7	PUT IN WRITE FPT
861	02	002C6	324E0004	N		LW,R4	WRTFPT+4,R7	GET CURRENT WRITE ADR
862	02	002C7	25400002	A		SLS,R4	2	
863	02	002C8	33000000	X		MTW,0	UNBADR	IS THIS FIRST BLOCK
864	02	002C9	683002CD			BEZ	*+4	YES
865	02	002CA	30400003	A		AW,R4	R3	COMPUTE BYTE ADR FOR THIS WRITE
866	02	002CB	325E0007	N		LW,R5	WRTFPT+7,R7	GET LAST BTD USED
867	02	002CC	30400005	A		AW,R4	R5	ADD TO GET BYTE ADDRESS.
868	02	002CD	22500000	A		LI,R5	0	
869	02	002CE	2540017E	A		SLD,R4	=2	COMPUTE WRITE ADR AND BTD
870	02	002CF	25500202	A		SCS,R5	2	
871	02	002D0	355E0007	N		STW,R5	WRTFPT+7,R7	STORE BTD
872	02	002D1	354E0004	N		STW,R4	WRTFPT+4,R7	STORE NEW WRITE ADR
873	02	002D2	30300000	X	UNBF2	AW,R3	UNBADR	
874	02	002D3	31300000	X		CW,R3	BLKSIZE	COMPARE DISP WITH BLK SIZE
875	02	002D4	691002D6			BL	*+2	NOT THRU UNBLOCKING
876	02	002D5	22300000	A		LI,R3	0	INDICATE END OF BLOCK
877	02	002D6	35300000	X		STW,R3	UNBADR	UPDATE FOR NEXT WRITE
878	02	002D7	02200020	A		LCI	2	SIGNAL BLOCKED
879	02	002D8	E800000B	A		B	*SR4	
880					*			
881	02	002D9	32100000	X	UNBD	LW,R1	UNBADR	ARE WE AT BEG OF BLOCK

882	02	002DA	693002E8		BNEZ	UNBD2					
883	02	002DB	321E0004	N	LW,R1	RDFPT+4,R7					
884	02	002DC	38100007	A	SW,R1	R7					
885	02	002DD	25100002	A	SLS,R1	2					BYTE DISP OF BLK HEADER
886	02	002DE	22200004	A	LI,R2	4					SIZE
887	02	002DF	89B00007	A	PSW,SR4	*R7					
888	02	002E0	6AB00000	X	BAL,SR4	BCD2BIN					CONVERT BLK SIZE TO BINARY
889	02	002E1	88B00007	A	PLW,SR4	*R7					
890	02	002E2	20300003	A	AI,R3	3					
891	02	002E3	2530007E	A	SLS,R3	=2					COMPUTE NO. WDS IN BLOCK
892	02	002E4	35300000	X	STW,R3	BLKSIZE					SAVE BLOCK SIZE
893	02	002E5	321E0004	N	LW,R1	RDFPT+4,R7					
894	02	002E6	20100001	A	AI,R1	1					
895	02	002E7	35100000	X	STW,R1	UNBADR					ADR OF FIRST REC HEADER
896	02	002E8	38100007	A	SW,R1	R7					
897	02	002E9	25100002	A	SLS,R1	2					BYTE DISP OF REC HEADER
898	02	002EA	22200004	A	LI,R2	4					SIZE
899	02	002EB	89B00007	A	PSW,SR4	*R7					
900	02	002EC	6AB00000	X	BAL,SR4	BCD2BIN					CONVERT REC SIZE TO BINARY
901	02	002ED	88B00007	A	PLW,SR4	*R7					
902	02	002EE	32100000	X	LW,R1	UNBADR					
903	02	002EF	353E0005	N	STW,R3	WRTFPT+5,R7					PUT SIZE IN WRITE FPT
904	02	002F0	20100001	A	AI,R1	1					
905	02	002F1	351E0004	N	STW,R1	WRTFPT+4,R7					PUT WRITE ADR IN FPT
906	02	002F2	20300007	A	AI,R3	7					
907	02	002F3	2530007E	A	SLS,R3	=2					COMPUTE NO. WDS IN RECORD
908	02	002F4	680002D2		B	UNBF2					
909											
910	02	002F5	32100000	X	LW,R1	UNBADR					ARE WE AT BEG OF BLOCK
911	02	002F6	693002FE		BNEZ	UNBV2					NO
912	02	002F7	321E0004	N	LW,R1	RDFPT+4,R7					
913	02	002F8	02200001	A	LH,R2	*R1					GET BLOCK SIZE
914	02	002F9	20200003	A	AI,R2	3					
915	02	002FA	2520007E	A	SLS,R2	=2					COMPUTE NO. WDS IN BLOCK
916	02	002FB	35200000	X	STW,R2	BLKSIZE					
917	02	002FC	20100001	A	AI,R1	1					
918	02	002FD	35100000	X	STW,R1	UNBADR					ADR OF FIRST REC HEADER

UNBD2

UNBD3

*UNBV

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919 02 002FE D2300001 A
920 02 002FF 680002EF

UNBV2

LH,R3
B

*R1
UNBD3

RDWRT

GET REC SIZE

Line	Code	Time	Address	Mode	Label	Page	Device	Options	Description
921						PAGE			
922	02	00300	325E0009	N	NCCHK	LW,R5	T0ARG+9,R7		
923	02	00301	315006B6			CW,R5	=X'00100000'		CR SPECIFIED
924	02	00302	E940000B	A		BANZ	*SR4		YES=EXIT
925	02	00303	321E0000	X		LW,R1	DEVICE,R7		
926	02	00304	21100008	A		CI,R1	8		INPUT FROM TERMINAL
927	02	00305	68300308			BE	NCC4		YES
928	02	00306	21520000	A		CI,R5	X'20000'		NC OPTION PRESENT
929	02	00307	E840000B	A		BAZ	*SR4		NO=EXIT
930	02	00308	325E0004	N	NCC4	LW,R5	WRTFPT+4,R7		GET LOCATION OF OUTPUT BUFFER
931	02	00309	20300000	A	NCCHKX	AI,R3	0		NULL RECORD
932	02	0030A	E830000B	A		BEZ	*SR4		YES
933	02	0030B	203FFFFFF	A		AI,R3	=1		
934	02	0030C	F2160005	A		LB,R1	*R5,R3		GET LAST BYTE OF RECORD
935	02	0030D	21100015	A		CI,R1	X'15'		TEST IF CARRIAGE RETURN
936	02	0030E	68300311			BE	NCC2		YES
937	02	0030F	2110000D	A		CI,R1	X'0D'		
938	02	00310	69300313			BNE	NCC1		
939	02	00311	22100040	A	NCC2	LI,R1	! !		
940	02	00312	F5160005	A		STB,R1	*R5,R3		STORE BLANK OVER CR
941	02	00313	20300001	A	NCC1	AI,R3	1		RESTORE RECORD SIZE
942	02	00314	E800000B	A		B	*SR4		EXIT
943					*				
944	02	00315	321E0005	N	NCS	LW,R1	WRTFPT+5,R7		RECORD SIZE
945	02	00316	21100050	A		CI,R1	80		IS RECORD BCD
946	02	00317	6820031C			BLE	NCS1		YES
947	02	00318	350E001B	N		STW,R0	I0BUF+27,R7		ZERO BINARY SEQ FIELD
948	02	00319	350E001C	N		STW,R0	I0BUF+28,R7		
949	02	0031A	350E001D	N		STW,R0	I0BUF+29,R7		
950	02	0031B	680000D6			B	WRITE2		
951	02	0031C	321006AB		NCS1	LW,R1	=1 !		BLANK OUT SEQUENCE FIELD
952	02	0031D	351E0012	N		STW,R1	I0BUF+18,R7		
953	02	0031E	351E0013	N		STW,R1	I0BUF+19,R7		
954	02	0031F	680000D6			B	WRITE2		
955					*				
956	02	00320	6AB005DE		CS	BAL,SR4	SEQOUT		CONSTRUCT SEQUENCE INFO
957	02	00321	321E0005	N		LW,R1	WRTFPT+5,R7		

990									
991	02	0033E	33000000	X	BRCHK	PAGE			
992	02	0033F	E830000B	A		MTW,0	BREAK	TEST FOR BREAK	
993	02	00340	33000000	X		BEZ	*SR4	NOT SET	
994	02	00341	E930000B	A		MTW,0	COPYSK		
995	02	00342	330E0000	X		BNEZ	*SR4	COPYALL	
996	02	00343	E930000B	A		MTW,0	COPYSTDF,R7		
997	02	00344	0410034F			BNEZ	*SR4	COPYSTD	
998	02	00345	0410035D			CAL1,1	WRTMSG	WRITE ENTER X...!	
999	02	00346	04100354			CAL1,1	PROMPT		
1000	02	00347	04100358			CAL1,1	RDREPLY	READ REPLY	
1001	02	00348	0410035E			CAL1,1	WRTCR	WRITE CR	
1002	02	00349	72300000	X		CAL1,1	PROMPTR		
1003	02	0034A	35000000	X		LB,R3	BREAK		
1004	02	0034B	213000E7	A		STW,R0	BREAK	ZERO BREAK FLAG	
1005	02	0034C	E930000B	A		CI,R3	'X'		
1006	02	0034D	33100000	X		BNE	*SR4	CONTINUE	
1007	02	0034E	6800020A			MTW,1	GRANCT	SET ABORT FLAG	
1008						B	RETURN	ABORT COPY	
1009	02	0034F	11000000	N	*				
1010	02	00350	34000000	A	WRTMSG	GEN,8,24	X'11',MIUC		
1011	02	00351	0000035F			DATA	X'34000000'		
1012	02	00352	0000001D	A		DATA	BRKMSG		
1013	02	00353	00000000	A		DATA	29		
1014	02	00354	10000000	N	RDREPLY	GEN,8,24	X'10',MIUC		
1015	02	00355	30000000	A		DATA	X'30000000'		
1016	02	00356	00000000	N		DATA	BREAK		
1017	02	00357	00000001	A		DATA	1		
1018	02	00358	11000000	N	WRTCR	GEN,8,24	X'11',MIUC		
1019	02	00359	34000000	A		DATA	X'34000000'		
1020	02	0035A	0000035F			DATA	BRKMSG		
1021	02	0035B	00000001	A		DATA	1	LENGTH	
1022	02	0035C	00000000	A		DATA	0	BTD	
1023	02	0035D	2C00004B	A	PROMPT	GEN,8,16,8	X'2C',0,1,1		
1024	02	0035E	2C00004C	A	PROMPTR	GEN,8,16,8	X'2C',0,1,1		
1025	02	0035F	1560A0C5	A	BRKMSG	TEXT	'N'='ENTER X TO ABORT COMMAND.N'		
	02	00360	D5E3C5D9	A					

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02	00361	40E740E3	A
02	00362	D640C1C2	A
02	00363	D6D9F340	A
02	00364	C3D6D4D4	A
02	00365	C1D5C44B	A
02	00366	15404040	A

Line	Op	Code	Address	Flags	Label	Page	Code	Register	Comment
1026						PAGE			
1027	02	00367	322E0000	X	RDWRTC0	LW,R2	CODE,R7		
1028	02	00368	312E0005	N		CW,R2	T0ARG+5,R7		C OPTION ON BOTH INPUT AND OUTPUT
1029	02	00369	683003F9			BE	READ12		YES = ERROR
1030	02	0036A	330E0000	X		MTW,0	SELECT,R7		RECORD SELECTION SPECIFIED
1031	02	0036B	693003FB			BNEZ	READ13		YES = ERROR
1032	02	0036C	322E0000	X		LW,R2	DEVICE,R7		
1033	02	0036D	6930036F			BNEZ	*+2		PCL DEVICE.
1034	02	0036E	322E0000	X		LW,R2	DEV#IN,R7		SYSTEM INPUT DEVICE
1035	02	0036F	21200007	A		CI,R2	7		IS INPUT FROM ANS
1036	02	00370	69300375			BNE	READ1A		NO.
1037	02	00371	312E0000	X		CW,R2	T0ARG,R7		ANS TO ANS COPY
1038	02	00372	6830038C			BE	READ32		YES = ERROR
1039	02	00373	312E0000	X		CW,R2	DEV#OUT,R7		
1040	02	00374	6830038C			BE	READ32		SYSTEM OUTPUT DEVICE.
1041	02	00375			READ1A	FGU	*		
1042	02	00375	350E0000	X		STW,R0	RECNUM,R7		INITIALIZE RECORD COUNT
1043	02	00376	22E00000	N		LI,D3	PRTBUF		
1044	02	00377	30E00007	A		AW,D3	R7		ENTER OUTPUT BUFFER LBC FOR
1045	02	00378	35EE0004	N		STW,D3	WRTFPT+4,R7		COMPRESSED IN FPT
1046	02	00379	22500003	A		LI,R5	3		
1047	02	0037A	315E0000	X		CW,R5	CODE,R7		COMPRESSED OPTION ON INPUT
1048	02	0037B	693003BE			BNE	READ7		NO
1049	02	0037C	04100596			CAL1,1	SFTEIC		SET ERR AND ABN IN MIEI DCB
1050	02	0037D	22100456			LI,R1	RCERR1		
1051	02	0037E	351E0002	N		STW,R1	RDFPT+2,R7		CHANGE ERR ADR IN FPT
1052	02	0037F	2210044F			LI,R1	RCERR		
1053	02	00380	351E0003	N		STW,R1	RDFPT+3,R7		CHANGE ABN ADR IN FPT
1054	02	00381	350E0000	X		STW,R0	CISEQ,R7		INITIALIZE FOR CI SEQUENCE CHECK
1055	02	00382	6AB00401			BAL,SR4	READCOMP		READ FIRST RECORD
1056	02	00383	6980038E			BCS,8	READ6		
1057	02	00384	6920038A			BCS,2	READ30		END OF FILE
1058					*				
1059	02	00385	2210002A	A	READ10	LI,R1	42		
1060	02	00386	330E0000	X		MTW,0	I0ERR,R7		DID I/O ERROR OCCUR
1061	02	00387	6930020A			BNEZ	RETURN		YES
1062	02	00388			READ11	FGU	*		

Line	Op	Code	Address	Mode	Label	Op	Code	Address	Mode	Label
1063	02	00388	6AB00000	X	BAL,SR4	ERROR				NO - ERROR IN COMPRESSED INPUT
1064	02	00389	6800020A		B	RETURN				
1065	02	0038A	3230000F	A	READ30	LW,R3	D4			
1066	02	0038B	68000150		B	RDABN+1				
1067	02	0038C	22100038	A	READ32	LI,R1	56			INVALID OPTION FOR ANS TO ANS
1068	02	0038D	68000388		B	RFAD11				
1069					*					
1070	02	0038E	22600000	A	READ6	LI,R6	0			CLEAR EOD COUNTER
1071	02	0038F	6AB0045E		BAL,SR4	DECOMP				DECOMPRESS INPUT RECORD
1072	02	00390	69800367		BCS,8	RDWRTCB				END OF INPUT
1073	02	00391	69200385		BCS,2	READ10				ERROR
1074	02	00392	6AB00531		BAL,SR4	SETEOD				
1075	02	00393	21300050	A	CI,R3	80				
1076	02	00394	68100396		BGE	*+2				
1077	02	00395	22300050	A	LI,R3	80				EXPAND RECORD SIZE TO 80 CHARACTERS
1078	02	00396	353E0005	N	STW,R3	WRTFPT+5,R7				RECORD SIZE TO FPT
1079	02	00397	6AB00300		BAL,SR4	NCCHK				CHECK FOR NC OPTION
1080	02	00398	321E0008	N	LW,R1	T0ARG+8,R7				
1081	02	00399	2110FF00	A	CI,R1	X'FF00'				WAS TX OPTION SPECIFIED
1082	02	0039A	6840039D		BAZ	*+3				NO
1083	02	0039B	22100000	N	LI,R1	PRTBUF				BUFFER DISPLACEMENT
1084	02	0039C	6AB005AD		BAL,SR4	TABEXP				EXPAND TABS
1085	02	0039D	321E000A	N	LW,R1	T0ARG+10,R7				GET SEQUENCE ID
1086	02	0039E	68020339		B	SEQID2,R1				MAKE APPROPRIATE BRANCH
1087	02	0039F	6AB005DE		READ18	SEQOUT				CONSTRUCT SEQUENCE INFO
1088	02	003A0	321E0000	X	LW,R1	CARDSEQ,R7				MOVE SEQUENCE INFO TO BUFFER
1089	02	003A1	351E0012	N	STW,R1	PRTBUF+18,R7				
1090	02	003A2	321E0001	N	LW,R1	CARDSEQ+1,R7				
1091	02	003A3	351E0013	N	READ19	PRTBUF+19,R7				
1092	02	003A4	22300050	A	LI,R3	80				
1093	02	003A5	353E0005	N	STW,R3	WRTFPT+5,R7				RECORD SIZE TO FPT
1094	02	003A6	22100006	A	READ20	LI,R1	6			
1095	02	003A7	311E0005	N	CW,R1	T0ARG+5,R7				HEX DUMP WANTED
1096	02	003A8	693003AF		BNE	READ22				NO
1097	02	003A9	331E0000	X	MTW,1	RECNUM,R7				INCREMENT RECORD COUNT
1098	02	003AA	6AB00000	X	BAL,SR4	HEXDUMP				
1099	02	003AB	6800038E		B	READ6				

```

1100 02 003AC 321006AB
1101 02 003AD 351E0012 N
1102 02 003AE 680003A3
1103 02 003AF
1104 02 003AF 22E00000 N
1105 02 003B0 6AB0026D
1106 02 003B1 6800038F
1107 02 003B2 22E00000 N
1108 02 003B3 30E00007 A
1109 02 003B4 35EE0004 N
1110 02 003B5 321E0008 N
1111 02 003B6 311006AD
1112 02 003B7 69400123
1113 02 003B8 041E0000 X
1114 02 003B9 6AB0033E
1115 02 003BA 6800038F
1116 02 003BB 6AB0059E
1117 02 003BC 698003A6
1118 02 003BD 6800020A
1119
1120 02 003BE 2220001D A
1121 02 003BF B504000E A
1122 02 003C0 642003BF
1123 02 003C1 20E00001 A
1124 02 003C2 35EE0000 X
1125 02 003C3 321006B7
1126 02 003C4 351E0000 X
1127 02 003C5 22100573
1128 02 003C6 351E0002 N
1129 02 003C7 22100570
1130 02 003C8 351E0003 N
1131 02 003C9 0410059A
1132 02 003CA 041003FD
1133 02 003CB 22100020 A
1134 02 003CC 351E0000 X
1135 02 003CD 351E0000 X
1136 02 003CE
    
```

```

RDWRT
READ21 LW,R1 #1 !
      STW,R1 PRTBUF+18,R7 REMOVE SEQUENCING
      B READ19
READ22 FGU *
      LI,D3 PRTBUF BUFFER ADR
      BAL,SR4 BLKTEST TEST IF BLOCKING WANTED
      B READ6 YES * GO GET NEXT RECORD
      LI,D3 PRTBUF
      AW,D3 R7
      STW,D3 WRTFPT+4,R7 SET BUFF ADDRESS
      LW,R1 TBARG+8,R7
      CW,R1 #X'00FF0000'
      BANZ WRITE,5A K OPTION USED,
      CAL1,1 WRTFPT,R7 WRITE RECORD
      BAL,SR4 BRCHK CHECK BREAK FLAG
      B READ6
READ15 BAL,SR4 LINENUM
      BCS,8 READ20
      B RETURN ERROR
*
READ7 LI,R2 29
      STW,R0 #D3,R2 ZERO C0 BUFFER
      BDR,R2 #-1
      AI,D3 1
      STW,D3 C0WORD,R7 INITIALIZE TO 2ND WORD OF BUFFER
      LW,R1 #X'38FF0000'
      STW,R1 PRTBUF,R7 INITIALIZE FIRST WORD OF BUFFER
      LI,R1 WCERR
      STW,R1 WRTFPT+2,R7 CHANGE ERR ADR IN FPT
      LI,R1 WCABN
      STW,R1 WRTFPT+3,R7 CHANGE ABN ADR IN FPT
      CAL1,1 SETE0C SET ERR AND ABN IN M:EO DCB
      CAL1,1 SETBIN SET BINARY MODE FOR OUTPUT
      LI,R1 32
      STW,R1 C0USED,R7
      STW,R1 C0LEFT,R7
READ8 FGU *
    
```

Line No	Op	Code	Address	Condition	Label	Instruction	Comment	
1137	02	003CE	041E0000	X		CAL1,R1	RDFPT,R7	READ INPUT
1138	02	003CF	32300004	N	READ81	LW,R3	MIEI+4	
1139	02	003D0	25300006	A		SLS,R3	=17	GET SIZE OF INPUT RECORD
1140	02	003D1	2210000F	A		LI,R1	X'F'	
1141	02	003D2	45100000	X		AND,R1	M:EI	GET ASN FIELD
1142	02	003D3	21100002	A		CI,R1	2	INPUT FROM A DEVICE OR ANS
1143	02	003D4	692003D6			BG	*+2	YES
1144	02	003D5	3230000D	N		LW,R3	M:EI+13	
1145	02	003D6	20300000	A		AI,R3	0	
1146	02	003D7	683003CE			BEZ	READ8	SKIP NULL RECORD
1147	02	003D8	22A00000	N		LI,SR3	I0BUF	DEFAULT BUFFER ADR
1148	02	003D9	33000000	X		MTW,0	ANSBLK	BLOCKING WANTED FOR ANS
1149	02	003DA	683003DE			BEZ	READ84	NO
1150	02	003DB	33000001	N		MTW,0	ANSBLK+1	WAS REC GIVEN
1151	02	003DC	693003E7			BNEZ	READ86	YES
1152	02	003DD	35300001	N		STW,R3	ANSBLK+1	SET TO SIZE OF THIS RECORD
1153	02	003DE	2110000A	A	READ84	CI,R1	X'A'	IS INPUT FROM ANS
1154	02	003DF	693003E7			BNE	READ86	NO
1155	02	003E0	35300000	X		STW,R3	BLKSIZE	YES = SET BLOCK SIZE
1156	02	003E1	6AB002B9		READ85	BAL,SR4	UNBLK	GO UNBLOCK
1157	02	003E2	698003E7			BCS,8	READ86	NOT BLOCKED FORMAT
1158	02	003E3	325E0004	N		LW,R5	WRTFPT+4,R7	LOC OF THIS RECORD
1159	02	003E4	323E0005	N		LW,R3	WRTFPT+5,R7	SIZE
1160	02	003E5	303E0007	N		AW,R3	WRTFPT+7,R7	+BTD
1161	02	003E6	680003E9			B	READ87	
1162		02 003E7			READ86	FGU	*	
1163	02	003E7	353E0005	N		STW,R3	WRTFPT+5,R7	ENTER SIZE IN OUTPUT FPT
1164	02	003E8	325E0004	N		LW,R5	RDFPT+4,R7	
1165		02 003E9			READ87	FGU	*	
1166	02	003E9	6AB00309			BAL,SR4	NCCHKX	TEST FOR CR ON RECORD
1167	02	003EA	321E0008	N		LW,R1	T0ARG+8,R7	
1168	02	003EB	2110FF00	A		CI,R1	X'FF00'	WAS TX OPTION SPECIFIED
1169	02	003EC	684003EF			BAZ	READ82	NO
1170	02	003ED	3210000A	A		LW,R1	SR3	BUFFER ADR
1171	02	003EE	6AB005AD			BAL,SR4	TABEXP	EXPAND TABS
1172		02 003EF			READ82	FGU	*	
1173	02	003EF	6AB00540			BAL,SR4	SETEBDR	

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RDWRT

55

1174	02	003F0	22100006C	A		LI,R1	108	
1175	02	003F1	351E00005	N		STW,R1	WRTFPT+5,R7	SET SIZE OF OUTPUT RECORD
1176	02	003F2	6AB0004BE			BAL,SR4	COMPRESS	COMPRESS AND WRITE RECORD
1177	02	003F3	21D000001	A		CI,D2	1	
1178	02	003F4	69200020A			BG	RETURN	
1179	02	003F5	6AB00033E			BAL,SR4	BRCHK	TEST FOR BREAK
1180	02	003F6	330000000	X		MTW,0	UNBADR	TEST IF UNBLOCKING ANS TAPE
1181	02	003F7	6930003E1			BNEZ	READ85	YES
1182	02	003F8	6800003CE			B	READ8	
1183	02	003F9	22100002B	A	READ12	LI,R1	43	COMPRESSED ON INPUT AND OUTPUT
1184	02	003FA	680000388			B	READ11	
1185	02	003FB	22100002C	A	READ13	LI,R1	44	RECORD SELECTION USED W/COMP
1186	02	003FC	680000388			B	READ11	
1187	02	003FD	220000000	N	SETBIN	GEN,8,24	X'221,M:EB	
1188	02	003FE	000000010	A		DATA	X'10'	
1189	02	003FF	003C1C38	A	BINVAL	DATA	X'003C1C38',X'18000000'	STANDARD BINARY CODES
	02	00400	180000000	A				

			PAGE			
1190						
1191						
1192	02	00401	022000B0	A		
1193	02	00402	80100007	A		
1194	02	00403	33000000	X		
1195	02	00404	69300417			
1196	02	00405	041E0000	X		
1197	02	00406	32600004	N	RC200	
1198	02	00407	2560006F	A		
1199	02	00408	2250000F	A		
1200	02	00409	40500000	X		
1201	02	0040A	21500002	A		
1202	02	0040B	6920040D			
1203	02	0040C	3260000D	N		
1204	02	0040D	33000000	X		
1205	02	0040E	68300412			
1206	02	0040F	33000001	N		
1207	02	00410	6930041F			
1208	02	00411	35600001	N		
1209	02	00412	2150000A	A	RC205	
1210	02	00413	6930041F			
1211	02	00414	322E0004	N		
1212	02	00415	352E0004	N		
1213	02	00416	35600000	X		
1214	02	00417	6AB002B9		RC206	
1215	02	00418	6980041F			
1216	02	00419	326E0005	N		
1217	02	0041A	21600050	A		
1218	02	0041B	68200421			
1219	02	0041C	32AE0004	N		
1220	02	0041D	38A00007	A		
1221	02	0041E	68000426			
1222	02	0041F			RC207	
1223	02	0041F	21600050	A		
1224	02	00420	69200425			
1225	02	00421	022000B0	A	RC290	
1226	02	00422	8A100007	A		

* SUBROUTINE READCOMP READS COMPRESSED INPUT.			
READCOMP	LCI	11	
	PSM,R1	*R7	
	MTW,0	UNBADR	TEST IF UNBLOCKING ANS TAPE
	BNEZ	RC206	YES
	CAL,1	RDFPT,R7	READ RECORD
RC200	LW,R6	M:EI+4	
	SLS,R6	=17	
	LI,R5	X'F'	
	AND,R5	M:EI	GET ASN FIELD
	CI,R5	2	IS IT DEVICE OR ANS
	BG	*+2	
	LW,R6	M:EI+13	
	MTW,0	ANSBLK	ARE WE BLOCKING ANS TAPE
	BEZ	RC205	NO
	MTW,0	ANSBLK+1	WAS REC SPECIFIED
	BNEZ	RC207	YES
	STW,R6	ANSBLK+1	SET TO SIZE OF THIS REC
RC205	CI,R5	X'IA'	IS INPUT FROM ANS
	BNE	RC207	NO
	LW,R2	RDFPT+4,R7	
	STW,R2	WRTFPT+4,R7	RESET WRITE ADDRESS
	STW,R6	BLKSIZE	SET BLOCK SIZE
RC206	BAL,SR4	UNBLK	GO UNBLOCK
	BCS,8	RC207	NOT BLOCKED FORMAT
	LW,R6	WRTFPT+5,R7	GET RECORD SIZE
	CI,R6	80	
	BLE	RC290	ERROR
	LW,SR3	WRTFPT+4,R7	ADR OF THIS RECORD
	SW,SR3	R7	
	B	RC212	
RC207	EGU	*	
	CI,R6	80	CHECK LENGTH OF RECORD
	BG	RC210	OK
RC290	LCI	11	NOT COMPRESSED - MAKE ERROR EXIT
	PLM,R1	*R7	

1227	02	00423	02200000	A	LCI	0		
1228	02	00424	E800000B	A	B	*SR4		
1229								
1230	02	00425	22A00000	N	* RC210	LI,SR3	10BUF	DEFAULT REC ADR
1231	02	00426	32600007	A	RC212	LW,R6	R7	
1232	02	00427	25600002	A		SLS,R4	2	
1233	02	00428	F23C000A	A		LB,R3	*SR3,R6	CHECK ID
1234	02	00429	4B3006B8			AND,R3	L(X'1F')	
1235	02	0042A	21300018	A		CI,R3	X'18'	
1236	02	0042B	69300421			BNE	RC290	
1237	02	0042C	724C0000	X		LB,R4	CISEQ,R6	
1238	02	0042D	731C0000	X		MTB,1	CISEQ,R6	CHECK SEQ
1239	02	0042E	22300001	A		LI,R3	1	
1240	02	0042F	3260000A	A		LW,R6	SR3	RECORD ADDRESS
1241	02	00430	30600007	A		AW,R6	R7	
1242	02	00431	F1460006	A		CB,R4	*R6,R3	
1243	02	00432	69300421			BNE	RC290	
1244								
1245	02	00433	22300002	A	*	LI,R3	2	COMPUTE CHECKSUM
1246	02	00434	F2560006	A		LB,R5	*R6,R3	ORIGINAL TO R5
1247	02	00435	22400000	A		LI,R4	0	
1248	02	00436	F5460006	A		STB,R4	*R6,R3	ZERO BYTE IN RECORD
1249	02	00437	22300003	A		LI,R3	3	
1250	02	00438	F2460006	A		LB,R4	*R6,R3	GET BYTE COUNT IN R4
1251	02	00439	204FFFFFF	A		AI,R4	=1	DECREMENT
1252	02	0043A	F2200006	A		LB,R2	*R6	START SUM IN R2
1253	02	0043B	F2380006	A		LB,R3	*R6,R4	
1254	02	0043C	30200003	A		AW,R2	R3	ADD EACH BYTE
1255	02	0043D	6440043B			BDR,R4	=2	ITERATE
1256	02	0043E	4B2006B9			AND,R2	L(X'FF')	
1257	02	0043F	31500002	A		CW,R5	R2	CHECK ORIGINAL AGAINST NEW
1258	02	00440	69300421			BNE	RC290	
1259								
1260	02	00441	22300003	A	*	LI,R3	3	SET UP BIT COUNT FOR THIS RECORD
1261	02	00442	F2460006	A		LB,R4	*R6,R3	
1262	02	00443	25400003	A		SLS,R4	3	
1263	02	00444	354E0000	X		STW,R4	CIBTOTAL,R7	

```

1264 02 00445 22400020 A
1265 02 00446 354E0000 X
1266 02 00447 354E0000 X
1267 02 00448 22400001 N
1268 02 00449 30400007 A
1269 02 0044A 354E0000 X
1270 02 0044B 022000B0 A
1271 02 0044C 8A100007 A
1272 02 0044D 02200080 A
1273 02 0044E E800000B A
1274
1275 02 0044F 7210000A A
1276 02 00450 21100056 A
1277 02 00451 68300406
1278 02 00452 21100006 A
1279 02 00453 68300459
1280 02 00454 21100005 A
1281 02 00455 68300459
1282 02 00456 22100000 A
1283 02 00457 6A800000 X
1284 02 00458 68000421
1285 02 00459 32F00001 A
1286 02 0045A 022000B0 A
1287 02 0045B 8A100007 A
1288 02 0045C 02200020 A
1289 02 0045D E800000B A
    
```

*
RCERR

RCERR1

RCERR2

```

LI,R4 32
STW,R4 CIBUSFD,R7
STW,R4 CIBLEFT,R7
LI,R4 I0BUF+1
AW,R4 R7
STW,R4 CIWORD,R7
LCI 11
PLM,R1 *R7
LCI 8
B *SR4

LB,R1 SR3
CI,R1 X,561
BE RC200
CI,R1 6
BE RCERR2
CI,R1 5
BE RCERR2
LI,R1 0
BAL,SR4 ERROR
B RC290
LW,D4 R1
LCI 11
PLM,R1 *R7
LCI 2
B *SR4
    
```

RDWRT

INITIALIZE CONTROL WORDS

EXIT

REPORT IO ERROR

SAVE ABN CODE

PAGE

* SUBROUTINE DECOMPR RECONSTRUCTS A SYMBOLIC RECORD FROM COMPRESSED
* INPUT.

1290							
1291							
1292							
1293	02	0045E	02200070	A	DECOMPR	LCI	7
1294	02	0045F	85500007	A		PSM,R5	*R7
1295	02	00460	22100000	A		LI,R1	0
1296	02	00461	329E0000	X		LW,SR2	CIBUSED,R7
1297	02	00462	324E0000	X		LW,R4	CIBLEFT,R7
1298	02	00463	22FFFFFF	N		LI,D4	PRTBUF=1
1299	02	00464	30F00007	A		AW,D4	R7
1300	02	00465	22200023	A		LI,R2	35
1301	02	00466	323006AB			LW,R3	=1
1302	02	00467	B534000F	A		STW,R3	*D4,R2
1303	02	00468	64200467			BDR,R2	*-1
1304	02	00469	20F00001	A		AI,D4	1
1305	02	0046A	22600006	A	DEC10	LI,R6	6
1306	02	0046B	6AB0049E			BAL,SR4	DEC60
1307	02	0046C	21200006	A		CI,R2	6
1308	02	0046D	68240476			BLE	DEC20,R2
1309	02	0046E	2120002C	A		CI,R2	44
1310	02	0046F	69100473			BL	DEC15
1311	02	00470	202FFFD5	A		AI,R2	=43
1312	02	00471	72540576			LB,R5	SCCTAB,R2
1313	02	00472	68000474			B	*+2
1314	02	00473	7254057B		DEC15	LB,R5	CITAB,R2
1315	02	00474	F552000F	A		STB,R5	*D4,R1
1316	02	00475	20100001	A		AI,R1	1
1317					*		
1318	02	00476	6800046A		DEC20	B	DEC10
1319	02	00477	6800046A			B	DEC10
1320	02	00478	6800047D			B	DEC30
1321	02	00479	68000483			B	DEC35
1322	02	0047A	6800048D			B	DEC40
1323	02	0047B	68000492			B	DEC45
1324	02	0047C	6800049A			B	DEC50
1325					*		
1326	02	0047D	359E0000	X	DEC30	STW,SR2	CIBUSED,R7

START IN BYTE ZERO
INITIALIZE INPUT CONTROL WORDS

BLANK OUTPUT BUFFER

GET 6 BIT BYTE

IF CONTROL BYTE (0=6)
EXECUTE JUMP TABLE
IF NOT CONTROL, EXTRACT 8-BIT
EBCDIC CODE FROM APPROPRIATE
TABLE.

PUT CODE IN OUTPUT BUFFER
ITERATE

** CONTROL BYTE TABLE **

PADDING
UNASSIGNED
EOL
EOF
NEXT 8 BIT
NEXT COUNT+1
NEXT COUNT +65

RESTORE CONTROL WORDS

1327	02	0047E	354E0000	X		STW,R4	CIBLEFT,R7	
1328	02	0047F	02200070	A		LCI	7	
1329	02	00480	8A500007	A		PLM,R5	*R7	
1330	02	00481	02200000	A		LCI	0	SIGNAL E0L
1331	02	00482	E800000B	A		B	*SR4	EXIT
1332					*			
1333	02	00483	359E0000	X	DEC35	STW,SR2	CIBUSED,R7	RESTORE CONTROL WORDS
1334	02	00484	354E0000	X		STW,R4	CIBLEFT,R7	
1335	02	00485	22100203			LI,R1	I0ERR1	
1336	02	00486	351E0002	N		STW,R1	RDFPT+2,R7	RESET ERR ADR IN READ FPT
1337	02	00487	2210014F			LI,R1	RDABN	
1338	02	00488	351E0003	N		STW,R1	RDFPT+3,R7	RESET ABN ADR IN READ FPT
1339	02	00489	02200070	A		LCI	7	
1340	02	0048A	8A500007	A		PLM,R5	*R7	
1341	02	0048B	02200080	A		LCI	8	SIGNAL E0F
1342	02	0048C	E800000B	A		B	*SR4	EXIT
1343					*			
1344	02	0048D	22600008	A	DEC40	LI,R6	8	GET 8 BIT CODE FROM I0BUF
1345	02	0048E	6AB0049E			BAL,SR4	DEC60	
1346	02	0048F	F522000F	A		STB,R2	*D4,R1	PUT IN OUTPUT BUFFER
1347	02	00490	20100001	A		AI,R1	1	
1348	02	00491	6800046A			B	DEC10	ITERATE
1349					*			
1350	02	00492	22600006	A	DEC45	LI,R6	6	USE 6 BIT COUNT
1351	02	00493	6AB0049E			BAL,SR4	DEC60	
1352	02	00494	20200001	A		AI,R2	1	*1
1353	02	00495	22500040	A	DEC47	LI,R5	' '	
1354	02	00496	F522000F	A		STB,R5	*D4,R1	EXPAND BLANK FIELD IN BUFFER
1355	02	00497	20100001	A		AI,R1	1	
1356	02	00498	64200496			BDR,R2	*2	
1357	02	00499	6800046A			B	DEC10	ITERATE
1358					*			
1359	02	0049A	22600006	A	DEC50	LI,R6	6	USE 6 BIT COUNT
1360	02	0049B	6AB0049E			BAL,SR4	DEC60	
1361	02	0049C	20200041	A		AI,R2	65	*65
1362	02	0049D	68000495			B	DEC47	
1363					*			

1364	02	0049E	30900006	A	DEC60	AW,SR2	R6	EXTRACT (R6) BITS
1365	02	0049F	319E0000	X		CW,SR2	CIBTOTAL,R7	ENOUGH LEFT IN CURRENT RECORD
1366	02	004A0	682004A8			BLE	DEC65	YES
1367	02	004A1	3250000B	A		LW,R5	SR4	
1368	02	004A2	6AB00401			BAL,SR4	READCOMP	READ NEXT RECORD
1369	02	004A3	688004BA			BCR,8	DEC75	MUST BE COMPRESSED. BR IF NOT
1370	02	004A4	32800005	A		LW,SR4	R5	
1371	02	004A5	329E0000	X		LW,SR2	CIBUSED,R7	
1372	02	004A6	324E0000	X		LW,R4	CIBLEFT,R7	
1373	02	004A7	6800049E			B	DEC60	
1374								
1375	02	004A8	22200000	A	* DEC65	LI,R2	0	INITIALIZE RESULT REGISTER
1376	02	004A9	325E0000	X		LW,R5	CIWORD,R7	GET BUFFER POINTER
1377	02	004AA	323A0000	A		LW,R3	0,R5	PICK UP CURRENT WORD
1378	02	004AB	38400006	A		SW,R4	R6	CHECK IF R3 CONTAINS TOTAL BYTE
1379	02	004AC	681004B7			BGEZ	DEC67	BR IF YES
1380	02	004AD	30600004	A		AW,R6	R4	COMPUTE NO. OF BITS IN R3
1381	02	004AE	252C0100	A		SLD,R2	0,R6	AND SHIFT TO R2
1382	02	004AF	20500001	A		AI,R5	1	
1383	02	004B0	355E0000	X		STW,R5	CIWORD,R7	INCREMENT BUFFER POINTER
1384	02	004B1	323A0000	A		LW,R3	0,R5	GET WORD FROM BUFFER
1385	02	004B2	3A400004	A		LCW,R4	R4	GET NO. BITS NEEDED FROM R3
1386	02	004B3	25280100	A		SLD,R2	0,R4	SHIFT INTO R2
1387	02	004B4	204FFF00	A		AI,R4	*32	COMPUTE BITS LEFT IN CURRENT WORD
1388	02	004B5	3A400004	A		LCW,R4	R4	
1389	02	004B6	680004B8			B	DEC70	
1390	02	004B7	252C0100	A	DEC67	SLD,R2	0,R6	SHIFT TOTAL BYTE TO R2
1391	02	004B8	353A0000	A	DEC70	STW,R3	0,R5	PUT CURRENT WORD BACK
1392	02	004B9	E800000B	A		B	*SR4	EXIT
1393								
1394	02	004BA	02200070	A	* DEC75	LCI	7	
1395	02	004BB	8A500007	A		PLM,R5	*R7	
1396	02	004BC	02200020	A		LCI	2	SET ERROR FLAG
1397	02	004BD	E800000B	A		B	*SR4	EXIT

```

1398
1399
1400 02 004BE 02200070 A
1401 02 004BF 8A500007 A
1402 02 004C0 22800000 A
1403 02 004C1 329E0000 X
1404 02 004C2 324E0000 X
1405 02 004C3 321E0000 X
1406 02 004C4 692004D1
1407 02 004C5 22500003 A
1408 02 004C6 22600006 A
1409 02 004C7 6AB004FC
1410 02 004C8 321E0000 X
1411 02 004C9 4B1006BA
1412 02 004CA 351E0000 X
1413 02 004CB 6AB00545
1414 02 004CC 354E0000 X
1415 02 004CD 359E0000 X
1416 02 004CE 02200070 A
1417 02 004CF 8A500007 A
1418 02 004D0 E800000B A
1419
1420 02 004D1 22100000 A
1421 02 004D2 22F00000 N
1422 02 004D3 30F00007 A
1423 02 004D4 F252000F A
1424 02 004D5 215000C0 A
1425 02 004D6 682004E9
1426 02 004D7 4B5006BB
1427 02 004D8 725A0586
1428 02 004D9 693004DC
1429 02 004DA F252000F A
1430 02 004DB 680004EF
1431
1432 02 004DC 22600006 A
1433 02 004DD 6AB004FC
1434 02 004DE 20100001 A
    
```

```

PAGE
* SUBROUTINE COMPRESS PRODUCES A COMPRESSED OUTPUT RECORD AND WRITES IT.
COMPRESS LCI 7
PSM,R5 *R7
LI,SR1 0 SET BLANK COUNT ZERO
LW,SR2 C0BUSED,R7 PICK UP CONTROL WORDS
LW,R4 C0BLEFT,R7
LW,R1 RECSIZE,R7 CHECK RECORD SIZE
BGZ CMP10 ZERO IMPLIES END OF OUTPUT FILE
LI,R5 C0BF EDIT E0F CONTROL BYTE
LI,R6 6 IN 6 BITS
BAL,SR4 CMP60
LW,R1 PRTBUF,R7 CHANGE ID FROM X'38'
AND,R1 =X'18FFFFFF' TO X'18' FOR LAST C0 RECORD
STW,R1 PRTBUF,R7
BAL,SR4 WRITEC0 WRITE LAST RECORD
STW,R4 C0BLEFT,R7 RESTORE CONTROL WORDS
STW,SR2 C0BUSED,R7
LCI 7
PLM,R5 *R7
B *SR4 EXIT
*
CMP10 LI,R1 0 COMPRESS STARTING AT BYTE ZERO
LI,D4 I0BUF COMPUTE BUFFER ADDRESS
AW,D4 R7
CMP11 LB,R5 *D4,R1 GET NEXT BYTE
CI,R5 X'CO' CHECK FOR A-Z,0-9
BLE CMP15 CANT BE IF LESS THAN X'CO'
AND,R5 =X'3F'
LB,R5 C0TAB,R5 GET 6 BIT COMPRESSED CODE
BNEZ CMP12
LB,R5 *D4,R1 ZERO, USE ORIGINAL 8 BITS
B CMP17
*
CMP12 LI,R6 6 SET BIT COUNT
BAL,SR4 CMP60 ENTER IN OUTPUT BUFFER
AI,R1 1 POSITION TO NEXT BYTE
    
```

1435	02	004DF	311E0000	X	CW,R1	RECSIZE,R7	STOP AT END OF RECORD
1436	02	004E0	691004D4		BL	CMP11	
1437	02	004E1	201FFF80	A	AI,R1	=80	
1438	02	004E2	681004E5		BGEZ	CMP14	OUTPUT NOT LESS THAN 80 BYTES
1439	02	004E3	3A100001	A	LCW,R1	R1	PAD TO 80 BYTES
1440	02	004E4	30800001	A	AW,SR1	R1	
1441	02	004E5	22500002	A	CMP14	LI,R5	ADD E8L TO RECORD
1442	02	004E6	22600006	A		LI,R6	
1443	02	004E7	6AB004FC			BAL,SR4	
1444	02	004E8	680004CC			B	
1445					*		
1446	02	004E9	72600576	A	CMP15	LB,R6	NOT A-Z,0-9
1447	02	004EA	715C0576			CB,R5	
1448	02	004EB	683004F7			BE	CHECK SPECIAL 6 BIT CODES
1449	02	004EC	646004EA			BDR,R6	
1450	02	004ED	21500040	A		CI,R5	
1451	02	004EE	683004FA			BE	BLANK
1452	02	004EF	355E0000	X	CMP17	STW,R5	8-BIT CHAR MUST BE OUTPUT
1453	02	004F0	22500004	A		LI,R5	
1454	02	004F1	22600006	A		LI,R6	
1455	02	004F2	6AB004FC			BAL,SR4	OUTPUT 6 BIT CONTROL CHARACTER
1456	02	004F3	325E0000	X		LW,R5	
1457	02	004F4	22600008	A		LI,R6	
1458	02	004F5	6AB004FC			BAL,SR4	OUTPUT 8 BIT CHARACTER
1459	02	004F6	680004DE			B	ITERATE
1460					*		
1461	02	004F7	2060002B	A	CMP20	AI,R6	FOUND IN SCCTAB
1462	02	004F8	32500006	A		LW,R5	CODE IS INDEX+43
1463	02	004F9	680004DC			B	
1464	02	004FA	20800001	A	CMP25	AI,SR1	ACCUMULATE BLANK
1465	02	004FB	680004DE			B	
1466					*		
1467					*		
1468	02	004FC	89B00007	A	CMP60	PSW,SR4	*R7
1469	02	004FD	20800000	A		AI,SR1	IS BLANK COUNT ZERO
1470	02	004FE	69200502			BGZ	NO
1471	02	004FF	6AB00514		CMP62	BAL,SR4	

1472	02	00500	88B00007	A	PLW,SR4	*R7	
1473	02	00501	E800000B	A	B	*SR4	
1474							
1475	02	00502	02200020	A	* CMP65	LCI	2
1476	02	00503	85500007	A		PSM,R5	*R7
1477	02	00504	22500007	A		LI,R5	CBLANK
1478	02	00505	22600006	A		LI,R6	6
1479	02	00506	208FFFFFF	A		AI,SR1	*1
1480	02	00507	6830050F			BEZ	CMP68
1481	02	00508	22500005	A		LI,R5	CNBC1
1482	02	00509	2180003F	A		CI,SR1	63
1483	02	0050A	6820050D			BLE	CMP67
1484	02	0050B	22500006	A		LI,R5	CNBC65
1485	02	0050C	208FFFC0	A		AI,SR1	*64
1486	02	0050D	6AB00514		* CMP67	BAL,SR4	CMP70
1487	02	0050E	32500008	A		LW,R5	SR1
1488	02	0050F	6AB00514		* CMP68	BAL,SR4	CMP70
1489	02	00510	02200020	A		LCI	2
1490	02	00511	8A500007	A		PLM,R5	*R7
1491	02	00512	22800000	A		LI,SR1	0
1492	02	00513	680004FF			B	CMP62
1493							
1494							
1495	02	00514	32200005	A	* CMP70	LW,R2	R5
1496	02	00515	30900006	A		AW,SR2	R6
1497	02	00516	21900360	A		CI,SR2	C0BT0TAL
1498	02	00517	68200524			BLE	CMP73
1499	02	00518	89B00007	A		PSW,SR4	*R7
1500	02	00519	38900006	A		SW,SR2	R6
1501	02	0051A	22E00000	N		LI,D3	PRTBUF
1502	02	0051B	6AB0026D			BAL,SR4	BLKTEST
1503	02	0051C	6800051E			B	*+2
1504	02	0051D	6AB00545			BAL,SR4	WRITEC0
1505	02	0051E	88B00007	A		PLW,SR4	*R7
1506	02	0051F	22900020	A		LI,SR2	32
1507	02	00520	22400020	A		LI,R4	32
1508	02	00521	330E0000	X		MTW,0	I0ERR,R7

ENTER BLANK IN 6 BITS

ONLY ONE BLANK

*64 BLANKS, ENTER COUNT+1

ENTER COUNT+65

ADJUST COUNT

OUTPUT CONTROL BYTE

GET COUNT

OUTPUT COUNT

SET NO. OF BLANKS TO ZERO

OUTPUT ORIGINAL BYTE

POSITION BYTE IN EVEN REGISTER

INCREMENT TOTAL BIT COUNT

CAN FIT IN CURRENT RECORD

RESTORE PREVIOUS BIT COUNT

BUFFER ADR

GO TEST IF BLOCKING WANTED

YES = SKIP WRITE

WRITE RECORD

DID IO ERROR OCCUR

H01 17:49 SEP 08, 1975

RDWRT

65

1509 02 00522 68300514
 1510 02 00523 680004CC
 1511 02 00524 325E0000 X
 1512 02 00525 38400006 A
 1513 02 00526 6810052E
 1514 02 00527 22300000 A
 1515 02 00528 25280100 A
 1516 02 00529 662A0000 A
 1517 02 0052A 331E0000 X
 1518 02 0052B 663A0001 A
 1519 02 0052C 20400020 A
 1520 02 0052D E800000B A
 1521 02 0052E 25280000 A
 1522 02 0052F 662A0000 A
 1523 02 00530 E800000B A

CMP73

CMP75

BEZ CMP70
 B CMP5
 LW,R5 CBWORD,R7
 SW,R4 R6
 BGEZ CMP75
 LI,R3 0
 SLD,R2 0,R4
 AWM,R2 0,R5
 MTW,1 CBWORD,R7
 AWM,R3 1,R5
 AI,R4 32
 B *SR4
 SLS,R2 0,R4
 AWM,R2 0,R5
 B *SR4

NO
 YES = EXIT
 GET BUFFER POINTER
 BYTE WILL FIT IN CURRENT C0 WORD
 ADJUST NUMBER OF BITS WHICH WILL FIT
 ENTER IN C0 WORD
 PUT OVERFLOW BITS IN NEXT WORD
 NUMBER OF BITS LEFT IN C0 WORD
 EXIT
 POSITION BYTE
 ENTER IN C0 WORD
 EXIT

PAGE

1524
 1525
 1526
 1527 02 00531 22200000 N
 1528 02 00532 30200007 A
 1529 02 00533 22300022 A
 1530 02 00534 3240006AB
 1531 02 00535 B1460002 A
 1532 02 00536 69300538
 1533 02 00537 64300535
 1534
 1535 02 00538 25300002 A
 1536 02 00539 20300003 A
 1537 02 0053A F1460002 A
 1538 02 0053B 6930053D
 1539 02 0053C 6430053A
 1540 02 0053D 20300001 A
 1541 02 0053E 353E0000 X
 1542 02 0053F E800000B A
 1543
 1544 02 00540 322E0004 N
 1545 02 00541 323E0005 N
 1546 02 00542 203FFFFFF A
 1547 02 00543 22400040 A
 1548 02 00544 6800053A

* SUBROUTINE SETE0D FINDS COLUMN OF LAST NON-BLANK AND SETS RECSIZE
 * TO TRUE BYTE COUNT.
 SETE0D LI,R2 PRTBUF MAKE GROSS COMPARISON
 AW,R2 R7
 LI,R3 MAXCLMN/4-1
 LW,R4 #1
 CW,R4 *R2,R3
 BNE #+2
 BDR,R3 #-2
 *
 SRS5 SLS,R3 2 REVERT TO BYTE INDEXING
 AI,R3 3
 CB,R4 *R2,R3 ITERATE THROUGH BYTES OF WORD
 BNE #+2
 BDR,R3 #-2
 AI,R3 1
 STW,R3 RECSIZE,R7 SAVE TRUE RECORD SIZE
 B *SR4 EXIT
 *
 SETE0DR LW,R2 RDFPT+4,R7 BUFFER ADDRESS
 LW,R3 WRTFPT+5,R7 SIZE
 AI,R3 =1 ADJUST FOR INDEXING
 LI,R4 X1401
 B SRS5 GO STRIP TRAILING BLANKS

PAGE

* SUBROUTINE WRITECB APPENDS CONTROL INFO. TO BUFFER AND WRITES
* COMPRESSED RECORD.

Address	Op	Op Code	Target	Control	Register	Value	Description
1549							
1550							
1551							
1552	02	00545	02200080	A	WRITECB	LCI	11
1553	02	00546	85100007	A		PSM,R1	*R7
1554	02	00547	20900007	A		AI,SR2	7
1555	02	00548	2590007D	A		SLS,SR2	*3
1556	02	00549	22500003	A		LI,R5	3
1557	02	0054A	22E00000	N		LI,D3	PRTBUF
1558	02	0054B	30E00007	A		AW,D3	R7
1559	02	0054C	F59A000E	A		STB,SR2	*D3,R5
1560	02	0054D	22500001	A		LI,R5	1
1561	02	0054E	F31A000E	A		MTB,1	*D3,R5
1562	02	0054F	21900004	A		CI,SR2	4
1563	02	00550	68200560			BLE	WRCB10
1564	02	00551	F250000E	A		LB,R5	*D3
1565	02	00552	32200009	A		LW,R2	SR2
1566	02	00553	202FFFFFF	A		AI,R2	*1
1567	02	00554	F264000E	A		LB,R6	*D3,R2
1568	02	00555	30500006	A		AW,R5	R6
1569	02	00556	64200554			BDR,R2	*-2
1570	02	00557	22600002	A		LI,R6	2
1571	02	00558	F55C000E	A		STB,R5	*D3,R6
1572	02	00559	321E000A	N		LW,R1	T0ARG+10,R7
1573	02	0055A	201FFFFFFD	A		AI,R1	*3
1574	02	0055B	6910055F			BLZ	WRCB5
1575	02	0055C	6920056C			BGZ	WRCB30
1576	02	0055D	6AB005DE			BAL,SR4	SEQBUT
1577	02	0055E	6AB00605			BAL,SR4	SEQBUTB
1578	02	0055F	041E0000	X	WRCB5	CAL1,1	WRTFPT,R7
1579							
1580	02	00560	20E00001	A	* WRCB10	AI,D3	1
1581	02	00561	35EE0000	X		STW,D3	CBWORD,R7
1582	02	00562	22400001	A		LI,R4	1
1583	02	00563	22600000	A		LI,R6	0
1584	02	00564	20FFFFFF	A		AI,D3	*1
1585	02	00565	D568000E	A		STH,R6	*D3,R4

COMPUTE NO. OF BYTES
FROM BIT COUNT

GET BUFFER LOCATION

PUT IN BUFFER

INCREMENT SEQUENCE

BYTE CNT NOT GR 4 = DONT WRITE

GET ALL BYTES
FORM CHECKSUM

PUT IN BUFFER
SEQUENCE OPTION SPECIFIED

NLN OR NCS OR NONE
LN
PREPARE SEQUENCE INFORMATION
SEQUENCE RECORD
WRITE RECORD

INITIALIZE POINTER

H01 17:49 SEP 08, 175

RDWRT

68

1586 02 00566 2240001D A
 1587 02 00567 B568000E A
 1588 02 00568 64400567
 1589 02 00569 022000B0 A
 1590 02 0056A 8A100007 A
 1591 02 0056B E800000B A
 1592 02 0056C 6AB0059E
 1593 02 0056D 6980055F
 1594 02 0056E 2210002D A
 1595 02 0056F 68000574
 1596
 1597 02 00570 7210000A A
 1598 02 00571 2110001C A
 1599 02 00572 683001C8
 1600 02 00573 22100000 A
 1601 02 00574 6AB00000 X
 1602 02 00575 68000569

WRC020

WRC030

WCABN

WCERR

LI,R4 29
 STW,R6 *D3,R4
 BDR,R4 s-1
 LCI 11
 PLM,R1 *R7
 B *SR4
 BAL,SR4 LINENUM
 BCS,8 WRC05
 LI,R1 45
 B WCERR+1
 *
 LB,R1 SR3
 CI,R1 X1C1
 BE WRTABN
 LI,R1 0
 BAL,SR4 ERROR
 B WRC020

ZERO BUFFER

CONSTRUCT EDIT KEY

OVERFLOW OF MAX VALUE

1603
 1604 02 00576 144B4C4D A
 02 00577 4E4F505B A
 02 00578 5C5D5E5F A
 02 00579 60616B6C A
 02 0057A 6D6E7A7D A
 02 0057B 7E404040 A

SCCTAB

PAGE
TEXTC

!,<(*|&@*)| * / % > ! ! ! ! ! SPECIAL 4-BIT CHARACTERS

1605 02 0057B
 1606 02 0057C 40404040 A
 02 0057D F0F1F2F3 A
 02 0057E F4F5F6F7 A
 02 0057F F8F9C1C2 A
 02 00580 C3C4C5C6 A
 02 00581 C7C8C9D1 A
 02 00582 D2D3D4D5 A
 02 00583 D6D7D8D9 A
 02 00584 E2E3F4E5 A
 02 00585 E6E7F8E9 A

CITAB

FGU
TEXT

*=1
! 0123456789ABCDEFGHIJKLMNPQRSTUVWXYZ!

1607
 1608
 1609
 1610 02 00586 00 A
 02 00586 1 12 A
 02 00586 2 13 A
 02 00586 3 14 A
 02 00587 15 A
 02 00587 1 16 A
 02 00587 2 17 A
 02 00587 3 18 A
 02 00588 19 A
 02 00588 1 1A A
 02 00588 2 00 A
 02 00588 3 00 A
 02 00589 00 A
 02 00589 1 00 A
 02 00589 2 00 A
 02 00589 3 00 A

CBTAB

DATA, 1

0,18,19,20,21,22,23,24,25,26,0,0,0,0,0,0,
 0,27,28,29,30,31,32,33,34,35,0,0,0,0,0,0,
 0,0,36,37,38,39,40,41,42,43,0,0,0,0,0,0,
 8,9,10,11,12,13,14,15,16,17,0,0,0,0,0,0

H01 17149 SEP 08, 1975

RDWRT

70

02	0058A		00	A
02	0058A	1	1B	A
02	0058A	2	1C	A
02	0058A	3	1D	A
02	0058B		1E	A
02	0058B	1	1F	A
02	0058B	2	20	A
02	0058B	3	21	A
02	0058C		22	A
02	0058C	1	23	A
02	0058C	2	00	A
02	0058C	3	00	A
02	0058D		00	A
02	0058D	1	00	A
02	0058D	2	00	A
02	0058D	3	00	A
02	0058E		00	A
02	0058E	1	00	A
02	0058E	2	24	A
02	0058E	3	25	A
02	0058F		26	A
02	0058F	1	27	A
02	0058F	2	28	A
02	0058F	3	29	A
02	00590		2A	A
02	00590	1	2B	A
02	00590	2	00	A
02	00590	3	00	A
02	00591		00	A
02	00591	1	00	A
02	00591	2	00	A
02	00591	3	00	A
02	00592		0B	A
02	00592	1	09	A
02	00592	2	0A	A
02	00592	3	0C	A
02	00593		0C	A

H01 17149 SEP 08, '75

RDWRT

02	00593	1	00	A
02	00593	2	0E	A
02	00593	3	0F	A
02	00594		10	A
02	00594	1	11	A
02	00594	2	00	A
02	00594	3	00	A
02	00595		00	A
02	00595	1	00	A
02	00595	2	00	A
02	00595	3	00	A

1611	02	00596	06000000	X
1612	02	00597	C0000000	A
1613	02	00598	0000044F	
1614	02	00599	0000044F	
1615	02	0059A	06000000	X
1616	02	0059B	C0000000	A
1617	02	0059C	00000573	
1618	02	0059D	00000573	

SETEIC	GEN,8,7,17	X1061,0,M,EI
	DATA	X1C0000000!
	DATA	RCERR
	DATA	RCERR
SETE0C	GEN,8,7,17	X1061,0,M,EB
	DATA	X1C0000000!
	DATA	WCERR
	DATA	WCERR

PAGE

* SUBROUTINE LINENUM CONSTRUCTS A WRITE KEY FROM THE CURRENT
 * LINE NUMBER.

1619							
1620							
1621							
1622	02	0059E	321E000C	N	LINENUM	LW,R1	T0ARG+12,R7
1623	02	0059F	311E000E	N		CW,R1	T0ARG+14,R7
1624	02	005A0	692005A7			BG	LINE20
1625	02	005A1	491006BC			BR,R1	'X'03000000'
1626	02	005A2	351E0000	X		STW,R1	KEY,R7
1627	02	005A3	321E000D	N		LW,R1	T0ARG+13,R7
1628	02	005A4	661E000C	N		AWM,R1	T0ARG+12,R7
1629	02	005A5	02200080	A		LCI	8
1630	02	005A6	E800000B	A		B	*SR4
1631	02	005A7	89B00007	A	LINE20	PSW,SR4	*R7
1632	02	005A8	2210002E	A		LI,R1	46
1633	02	005A9	6AB00000	X		BAL,SR4	ERR0R
1634	02	005AA	88B00007	A		PLW,SR4	*R7
1635	02	005AB	02200000	A		LCI	0
1636	02	005AC	E800000B	A		B	*SR4

GR THAN MAX
 CONSTRUCT KEY
 INCREMENT FOR NEXT KEY
 EXIT
 ERROR FLAG

PAGE

* SUBROUTINE TABEXP EXPANDS EMBEDDED TAB CHARACTERS IN A RECORD
 * WHENEVER THE OUTPUT OPTION TX IS SPECIFIED, R1 CONTAINS BUFFER
 * DISPLACEMENT RELATIVE TO R7.

1637								
1638								
1639								
1640								
1641	02	005AD	02200070	A	TABEXP	LCI	7	
1642	02	005AE	8A500007	A		PSM,R5	*R7	
1643	02	005AF	30100007	A		AW,R1	R7	COMPUTE ACTUAL BUFFER ADDRESS
1644	02	005B0	22500000	A		LI,R5	0	START AT FIRST TAB
1645	02	005B1	22600000	A		LI,R6	0	START AT FIRST CHAR IN BUFFER
1646	02	005B2	328E0004	N		LW,SR1	TABSET+4,R7	GET TAB TABLE ADDRESS
1647	02	005B3	22200005	A		LI,R2	X'05'	
1648	02	005B4	22900040	A		LI,SR2	1 1	
1649	02	005B5	33FE0005	N		MTW,-1	WRTFPT+5,R7	DISPLACEMENT OF LAST CHAR IN RECORD
1650	02	005B6	691005BC			BLZ	TAB8	NULL RECORD
1651	02	005B7	F12C0001	A	TAB5	CB,R2	*R1,R6	TEST FOR TAB CHARACTER
1652	02	005B8	683005C0			BE	TAB10	
1653	02	005B9	20600001	A	TAB6	AI,R6	1	POSITION TO NEXT CHAR IN BUFFER
1654	02	005BA	316E0005	N		CW,R6	WRTFPT+5,R7	
1655	02	005BB	682005B7			BLE	TAB5	
1656	02	005BC	331E0005	N	TAB8	MTW,1	WRTFPT+5,R7	SET TRUE RECORD SIZE
1657	02	005BD	02200070	A		LCI	7	END OF BUFFER - EXIT
1658	02	005BE	8A500007	A		PLM,R5	*R7	
1659	02	005BF	E800000B	A		B	*SR4	
1660								
1661	02	005C0	F59C0001	A	* TAB10	STB,SR2	*R1,R6	STORE BLANK OVER TAB CHAR
1662	02	005C1	20800000	A		AI,SR1	0	WERE TABS SPECIFIED
1663	02	005C2	683005B9			BEZ	TAB6	NO
1664	02	005C3	F23A0008	A	TAB12	LB,R3	*SR1,R5	GET TAB VALUE
1665	02	005C4	693005C7			BNEZ	TAB15	
1666	02	005C5	22800000	A	TAB13	LI,SR1	0	NO MORE VALUES
1667	02	005C6	680005B9			B	TAB6	
1668	02	005C7	203FFFFFF	A	TAB15	AI,R3	*1	IS THIS TAB POSITION GREATER THAN
1669	02	005C8	31300006	A		CW,R3	R6	POSITION OF TAB CODE
1670	02	005C9	692005CE			BG	TAB17	
1671	02	005CA	20500001	A		AI,R5	1	NO - TRY NEXT TAB POSITION
1672	02	005CB	21500010	A		CI,R5	16	
1673	02	005CC	691005C3			BL	TAB12	

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1674 02 005CD 680005C5
 1675 02 005CE 20600001 A
 1676 02 005CF 324E0005 N
 1677 02 005D0 38300006 A
 1678 02 005D1 683005B7
 1679 02 005D2 30300004 A
 1680 02 005D3 353E0005 N
 1681 02 005D4 F2A80001 A
 1682 02 005D5 F5980001 A
 1683 02 005D6 F5A60001 A
 1684 02 005D7 203FFFFFF A
 1685 02 005D8 204FFFFFF A
 1686 02 005D9 31400006 A
 1687 02 005DA 681005D4
 1688 02 005DB 32600003 A
 1689 02 005DC 20500001 A
 1690 02 005DD 680005B7

TAB17

TAB19

B
 AI,R6
 LW,R4
 SW,R3
 BEZ
 AW,R3
 STW,R3
 LB,SR3
 STB,SR2
 STB,SR3
 AI,R3
 AI,R4
 CW,R4
 BGE
 LW,R6
 AI,R5
 B

RDWRT

TAB13
 1
 WRTFPT+5,R7
 R6
 TAB5
 R4
 WRTFPT+5,R7
 *R1,R4
 *R1,R4
 *R1,R3
 =1
 =1
 R6
 TAB19
 R3
 1
 TAB5

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MAX NUM OF TABS
 INCREMENT TO NEXT CHAR IN BUFFER
 DETERMINE LAST CHAR POSITION
 COMPUTE NUMBER OF BLANKS TO INSERT
 NONE
 INCREMENT TO NEW LAST CHAR
 SET NEW RECORD SIZE
 GET LAST CHAR OF RECORD
 BLANK THIS CHAR IN RECORD
 MOVE CHAR UP TO NEW POSITION

 GO TO CHAR JUST ABOVE TAB BLANK

 INC CHAR POSITION TO LAST MOVED
 INC TAB TABLE POINTER
 LOOK FOR MORE TABS

PAGE

* SUBROUTINE SEQOUT CONSTRUCTS SEQUENCE INFORMATION IN LOCATION
 * CARDSEQ.

1691						
1692						
1693						
1694	02	005DE	02200070	A	SEQOUT	LCI 7
1695	02	005DF	8A500007	A		PSM,R5 *R7
1696	02	005E0	321E000C	N		LW,R1 T0ARG+12,R7 GET SEQUENCE NUMBER
1697	02	005E1	311E000E	N		CW,R1 T0ARG+14,R7
1698	02	005E2	682005EA			BLE SEQOUT1
1699	02	005E3	321E000B	N		LW,R1 T0ARG+11,R7 NCHAR IN SEQ ID
1700	02	005E4	322E0000	X		LW,R2 CARDSEQ,R7
1701	02	005E5	4B2205FB			AND,R2 ANDTBL,R1
1702	02	005E6	49220600			BR,R2 BRTBL,R1
1703	02	005E7	352E0000	X		STW,R2 CARDSEQ,R7 RESET 1ST WORD OF SEQ INFO
1704	02	005E8	22100000	A		LI,R1 0 GR THAN MAX = REVERT TO 0
1705	02	005E9	351E000C	N		STW,R1 T0ARG+12,R7
1706	02	005EA	6AB00000	X	SEQOUT1	BAL,SR4 BIN2BCD CONVERT TO BCD
1707	02	005EB	49300600			BR,R3 BRTBL
1708	02	005EC	353E0001	N		STW,R3 CARDSEQ+1,R7 ENTER LAST 4 CHARS
1709	02	005ED	204FFFFC	A		AI,R4 =4
1710	02	005EE	682005F6			BLEZ SEQOUT2
1711	02	005EF	22300003	A		LI,R3 3 GR THAN 4 CHARS
1712	02	005F0	22500000	N		LI,R5 CARDSEQ
1713	02	005F1	30500007	A		AW,R5 R7
1714	02	005F2	72160002	A		LB,R1 R2,R3 ENTER REST OF NUMBER
1715	02	005F3	F5160005	A		STB,R1 *R5,R3
1716	02	005F4	203FFFFFF	A		AI,R3 =1
1717	02	005F5	644005F2			BDR,R4 9=3 LOOP ON SIGNIFICANT DIGITS =4
1718	02	005F6	321E000D	N	SEQOUT2	LW,R1 T0ARG+13,R7
1719	02	005F7	661E000C	N		AWM,R1 T0ARG+12,R7 INCREMENT SEQUENCE NUMBER
1720	02	005F8	02200070	A		LCI 7
1721	02	005F9	8A500007	A		PLM,R5 *R7
1722	02	005FA	E800000B	A		B *SR4 EXIT
1723	02	005FB	00000000	A	ANDTBL	DATA 0,X'FF000000',X'FFFF0000',X'FFFFFF00',X'FFFFFFFF'
	02	005FC	FF000000	A		
	02	005FD	FFFF0000	A		
	02	005FE	FFFFFF00	A		
	02	005FF	FFFFFFFF	A		

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1724	02 00600	F0F0F0F0 A	8RTBL	DATA	X'F0F0F0F0',X'00F0F0F0',X'0000F0F0',X'000000F0',0
	02 00601	00F0F0F0 A			
	02 00602	0000F0F0 A			
	02 00603	000000F0 A			
	02 00604	00000000 A			

PAGE

* SUBROUTINE SEQOUTB CONVERTS SEQUENCE INFO IN LOCATION CARDSEQ TO
 * BINARY FORMAT AND ENTERS IT IN THE LAST 3 WORDS OF THE OUTPUT
 * BUFFER.

1725
 1726
 1727
 1728
 1729 02 00605 02200040 A
 1730 02 00606 84500007 A
 1731 02 00607 325E0004 N
 1732 02 00608 350A001B A
 1733 02 00609 350A001C A
 1734 02 0060A 350A001D A
 1735 02 0060B 22800000 N
 1736 02 0060C 30800007 A
 1737 02 0060D 22600008 A
 1738 02 0060E 22100007 A
 1739 02 0060F 22300000 A
 1740 02 00610 F2220008 A
 1741 02 00611 52240629
 1742 02 00612 452006BD
 1743 02 00613 6702061F
 1744 02 00614 72420627
 1745 02 00615 E6280005 A
 1746 02 00616 20400001 A
 1747 02 00617 E6380005 A
 1748 02 00618 201FFFFFF A
 1749 02 00619 6460060F
 1750 02 0061A 22100078 A
 1751 02 0061B 351E0005 N
 1752 02 0061C 02200040 A
 1753 02 0061D 84500007 A
 1754 02 0061E E8000008 A
 1755
 1756 02 0061F 25200014 A
 1757 02 00620 25200008 A
 1758 02 00621 2520017C A
 1759 02 00622 25200010 A
 1760 02 00623 25200004 A
 1761 02 00624 25200178 A

SEQOUTB LCI 4
 PSM,R5 *R7
 LW,R5 WRTFPT+4,R7
 STW,R0 27,R5 ZERO SEQUENCE FIELD OF BUFFER
 STW,R0 28,R5
 STW,R0 29,R5
 LI,SR1 CARDSEQ
 AW,SR1 R7 LOCATION OF CARDSEQ
 LI,R6 8
 LI,R1 7 BYTE DISP IN CARDSEQ
 SEQ100 LI,R3 0
 LB,R2 *SR1,R1 GET BYTE FROM CARDSEQ
 LH,R2 CCTAB,R2 GET CONVERTED VALUE
 AND,R2 *X'00000FFF' MASK OUT FLAG BITS
 FXU SHIFT,R1 POSITION IN R2=R3
 LB,R4 R4TAB,R1 SET R4 TO BUFFER DISP
 AWM,R2 *R5,R4 ENTER VALUE IN BUFFER
 AI,R4 1
 AWM,R3 *R5,R4
 AI,R1 =1
 BDR,R6 SEQ100 LOOP TO CONVERT 8 BYTES
 LI,R1 120
 STW,R1 WRTFPT+5,R7 SET RECORD SIZE IN FPT
 LCI 4
 PLM,R5 *R7
 B *SR4 EXIT
 * SHIFT
 SLS,R2 20
 SLS,R2 8
 SLD,R2 =4
 SLS,R2 16
 SLS,R2 4
 SLD,R2 =8

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1762 02 00625 25200000 A

SLS,R2 12

1763 02 00626 02000000 A

NBP

1764

*

1765 02 00627 1B A

R4TAB DATA,1 27,27,27,28,28,28,29,29

02 00627 1 1B A

02 00627 2 1B A

02 00627 3 1C A

02 00628 1C A

02 00628 1 1C A

02 00628 2 1U A

02 00628 3 1U A

1766									
1767		02	00629						
1768	02	00629	8803	A					
	02	00629	2 8901	A					
	02	0062A	8881	A					
	02	0062A	2 8841	A					
	02	0062B	8821	A					
	02	0062B	2 8811	A					
1769	02	0062C	8809	A	DATA,2				
	02	0062C	2 8805	A					
	02	0062D	8803	A					
	02	0062D	2 8903	A					
	02	0062E	8883	A					
	02	0062E	2 8843	A					
1770	02	0062F	8823	A	DATA,2				
	02	0062F	2 8813	A					
	02	00630	8808	A					
	02	00630	2 8807	A					
	02	00631	8803	A					
	02	00631	2 8501	A					
1771	02	00632	8481	A	DATA,2				
	02	00632	2 8441	A					
	02	00633	8421	A					
	02	00633	2 8411	A					
	02	00634	8409	A					
	02	00634	2 8405	A					
1772	02	00635	8403	A	DATA,2				
	02	00635	2 8503	A					
	02	00636	8483	A					
	02	00636	2 8443	A					
	02	00637	8423	A					
	02	00637	2 8413	A					
1773	02	00638	8408	A	DATA,2				
	02	00638	2 8407	A					
	02	00639	8703	A					
	02	00639	2 8301	A					
	02	0063A	8281	A					

CCTAB

PAGE
FQU
DATA,2

\$
X'8B03',X'8901',X'8881',X'8841',X'8821',X'8811'

DATA,2 X'8809',X'8805',X'8803',X'8903',X'8883',X'8843'

DATA,2 X'8823',X'8813',X'880B',X'8807',X'8D03',X'8501'

DATA,2 X'8481',X'8441',X'8421',X'8411',X'8409',X'8405'

DATA,2 X'8403',X'8503',X'8483',X'8443',X'8423',X'8413'

DATA,2 X'840B',X'8407',X'8703',X'8301',X'8281',X'8241'

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1774	02	0063A	2	8241	A						
	02	0063B		8221	A	DATA,2	X'8221',X'8211',X'8209',X'8205',X'8203',X'8303'				
	02	0063B	2	8211	A						
	02	0063C		8209	A						
	02	0063C	2	8205	A						
	02	0063D		8203	A						
	02	0063D	2	8303	A						
1775	02	0063E		8283	A	DATA,2	X'8283',X'8243',X'8223',X'8213',X'820B',X'8207'				
	02	0063E	2	8243	A						
	02	0063F		8223	A						
	02	0063F	2	8213	A						
	02	00640		820B	A						
	02	00640	2	8207	A						
1776	02	00641		8F03	A	DATA,2	X'8F03',X'8101',X'8081',X'8041',X'8021',X'8011'				
	02	00641	2	8101	A						
	02	00642		8081	A						
	02	00642	2	8041	A						
	02	00643		8021	A						
	02	00643	2	8011	A						
1777	02	00644		8009	A	DATA,2	X'8009',X'8005',X'8003',X'8103',X'8083',X'8043'				
	02	00644	2	8005	A						
	02	00645		8003	A						
	02	00645	2	8103	A						
	02	00646		8083	A						
	02	00646	2	8043	A						
1778	02	00647		8023	A	DATA,2	X'8023',X'8013',X'800B',X'8007',X'0000',X'8B01'				
	02	00647	2	8013	A						
	02	00648		800B	A						
	02	00648	2	8007	A						
	02	00649		0000	A						
	02	00649	2	8B01	A						
1779	02	0064A		8A81	A	DATA,2	X'8A81',X'8A41',X'8A21',X'8A11',X'8A09',X'8A05'				
	02	0064A	2	8A41	A						
	02	0064B		8A21	A						
	02	0064B	2	8A11	A						
	02	0064C		8A09	A						
	02	0064C	2	8A05	A						

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1780	02	0064D	8A03	A	DATA,2	X'8A03',X'8902',X'8882',X'0000',X'0822',X'0000'
	02	0064D	2 8902	A		
	02	0064E	8882	A		
	02	0064E	2 0000	A		
	02	0064F	0822	A		
	02	0064F	2 0000	A		
1781	02	00650	080A	A	DATA,2	X'080A',X'0806',X'0800',X'8D01',X'8C81',X'8C41'
	02	00650	2 0806	A		
	02	00651	0800	A		
	02	00651	2 8D01	A		
	02	00652	8C81	A		
	02	00652	2 8C41	A		
1782	02	00653	8C21	A	DATA,2	X'8C21',X'8C11',X'8C09',X'8C05',X'8C03',X'8502'
	02	00653	2 8C11	A		
	02	00654	8C09	A		
	02	00654	2 8C05	A		
	02	00655	8C03	A		
	02	00655	2 8502	A		
1783	02	00656	8482	A	DATA,2	X'8482',X'0442',X'0422',X'0000',X'0000',X'8406'
	02	00656	2 0442	A		
	02	00657	0422	A		
	02	00657	2 0000	A		
	02	00658	0000	A		
	02	00658	2 8406	A		
1784	02	00659	0400	A	DATA,2	X'0400',X'0000',X'8681',X'8641',X'8621',X'8611'
	02	00659	2 0000	A		
	02	0065A	8681	A		
	02	0065A	2 8641	A		
	02	0065B	8621	A		
	02	0065B	2 8611	A		
1785	02	0065C	8609	A	DATA,2	X'8609',X'8605',X'8603',X'8302',X'8C00',X'0000'
	02	0065C	2 8605	A		
	02	0065D	8603	A		
	02	0065D	2 8302	A		
	02	0065E	8C00	A		
	02	0065E	2 0000	A		
1786	02	0065F	0222	A	DATA,2	X'0222',X'8212',X'020A',X'8206',X'8E00',X'8F01'

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	02	0065F	2	8212	A		
	02	00660		020A	A		
	02	00660	2	8206	A		
	02	00661		8E0C	A		
	02	00661	2	8F01	A		
1787	02	00662		8E81	A	DATA,2	X'8E81',X'8E41',X'8E21',X'8E11',X'8F09',X'8E05'
	02	00662	2	8E41	A		
	02	00663		8E21	A		
	02	00663	2	8E11	A		
	02	00664		8E09	A		
	02	00664	2	8E05	A		
1788	02	00665		8E03	A	DATA,2	X'8E03',X'8102',X'0082',X'0042',X'0022',X'0012'
	02	00665	2	8102	A		
	02	00666		0082	A		
	02	00666	2	0042	A		
	02	00667		0022	A		
	02	00667	2	0012	A		
1789	02	00668		000A	A	DATA,2	X'000A',X'8006',X'8B02',X'8B00',X'8A80',X'8A40'
	02	00668	2	8006	A		
	02	00669		8B02	A		
	02	00669	2	8B00	A		
	02	0066A		8A80	A		
	02	0066A	2	8A40	A		
1790	02	0066B		8A20	A	DATA,2	X'8A20',X'8A10',X'8A08',X'8A04',X'8A02',X'8A01'
	02	0066B	2	8A10	A		
	02	0066C		8A08	A		
	02	0066C	2	8A04	A		
	02	0066D		8A02	A		
	02	0066D	2	8A01	A		
1791	02	0066E		8A82	A	DATA,2	X'8A82',X'8A42',X'8A22',X'8A12',X'8A0A',X'8A06'
	02	0066E	2	8A42	A		
	02	0066F		8A22	A		
	02	0066F	2	8A12	A		
	02	00670		8A0A	A		
	02	00670	2	8A06	A		
1792	02	00671		8D02	A	DATA,2	X'8D02',X'8D00',X'8C80',X'8C40',X'8C20',X'8C10'
	02	00671	2	8D00	A		

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	02	00672		8C80	A		
	02	00672	2	8C40	A		
	02	00673		8C20	A		
	02	00673	2	8C10	A		
1793	02	00674		8C08	A	DATA,2	X'8C08',X'8C04',X'8C02',X'8C01',X'8C82',X'8C42'
	02	00674	2	8C04	A		
	02	00675		8C02	A		
	02	00675	2	8C01	A		
	02	00676		8C82	A		
	02	00676	2	8C42	A		
1794	02	00677		8C22	A	DATA,2	X'8C22',X'8C12',X'8C0A',X'8C06',X'8702',X'8700'
	02	00677	2	8C12	A		
	02	00678		8C0A	A		
	02	00678	2	8C06	A		
	02	00679		8702	A		
	02	00679	2	8700	A		
1795	02	0067A		8680	A	DATA,2	X'8680',X'8640',X'8620',X'8610',X'8608',X'8604'
	02	0067A	2	8640	A		
	02	0067B		8620	A		
	02	0067B	2	8610	A		
	02	0067C		8608	A		
	02	0067C	2	8604	A		
1796	02	0067D		8602	A	DATA,2	X'8602',X'8601',X'8682',X'8642',X'8622',X'8612'
	02	0067D	2	8601	A		
	02	0067E		8682	A		
	02	0067E	2	8642	A		
	02	0067F		8622	A		
	02	0067F	2	8612	A		
1797	02	00680		860A	A	DATA,2	X'860A',X'8606',X'8F02',X'8F00',X'8E80',X'8E40'
	02	00680	2	8606	A		
	02	00681		8F02	A		
	02	00681	2	8F00	A		
	02	00682		8E80	A		
	02	00682	2	8E40	A		
1798	02	00683		8E20	A	DATA,2	X'8E20',X'8E10',X'8E08',X'8E04',X'8E02',X'8E01'
	02	00683	2	8E10	A		
	02	00684		8E08	A		

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	02	00684	2	8E04	A							
	02	00685		8E02	A							
	02	00685	2	8E01	A							
1799	02	00686		8E82	A	DATA,2	X'18E82'	X'18E42'	X'18E22'	X'18E12'	X'18E0A'	X'18E06'
	02	00686	2	8E42	A							
	02	00687		8E22	A							
	02	00687	2	8E12	A							
	02	00688		8E0A	A							
	02	00688	2	8E06	A							
1800	02	00689		8A00	A	DATA,2	X'18A00'	X'10900'	X'10880'	X'10840'	X'10820'	X'10810'
	02	00689	2	0900	A							
	02	0068A		0880	A							
	02	0068A	2	0840	A							
	02	0068B		0820	A							
	02	0068B	2	0810	A							
1801	02	0068C		0808	A	DATA,2	X'10808'	X'10804'	X'10802'	X'10801'	X'18A83'	X'18A43'
	02	0068C	2	0804	A							
	02	0068D		0802	A							
	02	0068D	2	0801	A							
	02	0068E		8A83	A							
	02	0068E	2	8A43	A							
1802	02	0068F		8A23	A	DATA,2	X'18A23'	X'18A13'	X'18A0B'	X'18A07'	X'18600'	X'10500'
	02	0068F	2	8A13	A							
	02	00690		8A0B	A							
	02	00690	2	8A07	A							
	02	00691		8600	A							
	02	00691	2	0500	A							
1803	02	00692		0480	A	DATA,2	X'10480'	X'10440'	X'10420'	X'10410'	X'10408'	X'10404'
	02	00692	2	0440	A							
	02	00693		0420	A							
	02	00693	2	0410	A							
	02	00694		0408	A							
	02	00694	2	0404	A							
1804	02	00695		0402	A	DATA,2	X'10402'	X'10401'	X'18C83'	X'18C43'	X'18C23'	X'18C13'
	02	00695	2	0401	A							
	02	00696		8C83	A							
	02	00696	2	8C43	A							

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02 006A9	F4000050	A
02 006AA	0098967F	A
02 006AB	40404040	A
02 006AC	00404040	A
02 006AD	00FF0000	A
02 006AE	00FFFFFF	A
02 006AF	40604000	A
02 006B0	0000F04B	A
02 006B1	F0F0F040	A
02 006B2	00406040	A
02 006B3	07000000	A
02 006B4	00200000	A
02 006B5	00080000	A
02 006B6	00100000	A
02 006B7	38FF0000	A
02 006B8	0000001F	A
02 006B9	000000FF	A
02 006BA	18FFFFFF	A
02 006BB	0000003F	A
02 006BC	03000000	A
02 006BD	00000FFF	A

CONTROL SECTION SUMMARY: 01 00000 PT 0 02 006BE PT 1

ANDTBL/02 005FB
BLK2/02 00280
CE8F/00000003
CMP10/02 004D1
CMP14/02 004E8
CMP25/02 004FA
CMP65/02 00502
CMP73/02 00524
CNEXT8/00000004
CS/02 00320
CVT1/02 002A5
DECMMPR/02 0045E
DEC30/02 0047D
DEC47/02 00495
DEC67/02 004B7
D1/0000000C
EICV8L/02 00228
E8D1/02 00154
E8ERR/02 00202
E8F3/02 0019A
E8F7/02 0018D
FPT88D/02 0025E
I8ERR3/02 001DF
LINENUM/02 0059E
NCCHK/02 00300
NCC4/02 00308
PFIL/02 00268
PRINT1/02 0023C
RCERR/02 0044F
RC205/02 00412
RC212/02 00426
RDWRTC8/02 00367
READ1A/02 00375
READ13/02 003FB
READ17/02 000AE
READ2/02 000CD

ANSCVT/02 0028A
BRCHK/02 0033E
CE8L/00000002
CMP11/02 004D4
CMP15/02 004E9
CMP5/02 004CC
CMP67/02 0050D
CMP75/02 0052E
CBT8TAL/00000360
CS#1/02 00327
CVT2/02 002AF
DEC10/02 0046A
DEC35/02 00483
DEC50/02 0049A
DEC70/02 004B8
D2/0000000D
EIERR/02 001D8
E8D2/02 00160
E8F1/02 0017E
E8F4/02 0019D
E8F8/02 001B5
FPTREL/02 0026A
IRDFPT/02 0024F
LINE20/02 005A7
NCCHKX/02 00309
NCS/02 00315
PFILE8/02 00231
PRINT2/02 00241
RCERR1/02 00456
RC206/02 00417
RC290/02 00421
READCOMP/02 00401
READ10/02 00385
READ14/02 00073
READ17A/02 000B9
READ20/02 003A6

BINVAL/02 003FF
BRKMSG/02 0035F
CITAB/02 0057B
CMP12/02 004DC
CMP17/02 004EF
CMP60/02 004FC
CMP68/02 0050F
CNBC1/00000005
COMPRESS/02 004BE
CS2/02 0032B
CVT4/02 0029F
DEC15/02 00473
DEC40/02 0048D
DEC60/02 0049E
DEC75/02 004BA
D3/0000000E
E8CV8L/02 0022A
E8D3/02 00171
E8F11/02 0018A
E8F5/02 001A1
E8F9/02 001B7
GETPG/02 00246
IWRTPPT/02 00256
LN/02 00332
NCC1/02 00313
NCS1/02 0031C
PREC/02 00233
PROMPT/02 0035D
RCERR2/02 00459
RC207/02 0041F
RDABN/02 0014F
READ0/02 0006A
READ11/02 00388
READ15/02 003BB
READ18/02 0039F
READ21/02 003AC

BLKTEST/02 0026D
CBLANK/00000007
CL8SE2/02 0022E
CMP13/02 004DE
CMP20/02 004F7
CMP62/02 004FF
CMP70/02 00514
CNBC65/00000006
C8TAB/02 00586
CVT0/02 00294
DECCVT/02 0029A
DEC20/02 00476
DEC45/02 00492
DEC65/02 004A8
DEVERR/02 001D6
D4/0000000F
E8CV8L2/02 0022C
E8D4/02 0017A
E8F2/02 0018D
E8F6/02 001B3
E8R/02 001C1
I8ERR1/02 00203
KEYX/02 0023A
MAXCLMN/0000008C
NCC2/02 00311
8RTBL/02 00600
PREC2/02 00235
PROMPTR/02 0035E
RC200/02 00406
RC210/02 00425
RDREPLY/02 00354
READ1/02 0006B
READ12/02 003F9
READ16/02 00019
READ19/02 003A3
READ22/02 003AF

READ23/02 000C1
 READ26A/02 0008B
 READ3/02 000A5
 READ4/02 00069
 READ43/02 00055
 READ7/02 003BE
 READ84/02 003DE
 READ9/02 00064
 RC/00000000
 R4/00000004
 R7/00000007
 SEQBUT/02 005DE
 SEQ100/02 0060F
 SETE8/02 0024B
 SHIFT/02 0061F
 SR3/0000000A
 TAB12/02 005C3
 TAB19/02 005D4
 ULBLCHK/02 001E6
 UNBF/02 002C3
 UNBV/02 002F5
 WCERR/02 00573
 WRC020/02 00569
 WRITE\$5B/02 0012E
 WRITE3/02 000EC
 WRITE7/02 00146
 WRTMSG/02 0034F

READ24/02 000CA
 READ27/02 00094
 READ30/02 0038A
 READ40/02 0005D
 READ44/02 0004B
 READ8/02 003CE
 READ85/02 003E1
 RETURN/02 0020A
 R1/00000001
 R4TAB/02 00627
 SCCTAB/02 00576
 SEQBUTB/02 00605
 SETBIN/02 003FD
 SETE8C/02 0059A
 SRS5/02 0053A
 SR4/0000000B
 TAB13/02 005C5
 TAB5/02 005B7
 UNBD/02 002D9
 UNBF2/02 002D2
 UNBV2/02 002FE
 WEOF/02 00227
 WRC030/02 0056C
 WRITEC8/02 00545
 WRITE4/02 000E0
 WRITE8/02 0013D

RDWRT

READ25/02 000BF
 READ28/02 00090
 READ32/02 0038C
 READ41/02 00031
 READ52/02 000D4
 READ81/02 003CF
 READ86/02 003E7
 RETURN1/02 0020F
 R2/00000002
 R5/00000005
 SEQID/02 00334
 SEQBUT1/02 005EA
 SETE1/02 00247
 SETE8D/02 00531
 SR1/00000008
 TABEXP/02 005AD
 TAB15/02 005C7
 TAB6/02 005B9
 UNBD2/02 002E8
 UNBLK/02 002B9
 VERSION/00000002
 WFPTSIZE/00000008
 WRC05/02 0055F
 WRITE1/02 00135
 WRITE5/02 00119
 WRTABN/02 001C8

READ26/02 00087
 READ29/02 0008E
 READ33/02 00082
 READ42/02 0003A
 READ6/02 0038E
 READ82/02 003EF
 READ87/02 003E9
 RETURN2/02 00224
 R3/00000003
 R6/00000006
 SEQID2/02 00339
 SEQBUT2/02 005F6
 SETEIC/02 00596
 SETE8DR/02 00540
 SR2/00000009
 TAB10/02 005C0
 TAB17/02 005CE
 TAB8/02 005BC
 UNBD3/02 002EF
 UNBTAB/02 002BD
 WCABN/02 00570
 WRC010/02 00560
 WRITE\$5A/02 00123
 WRITE2/02 000D6
 WRITE6/02 0010E
 WRTCR/02 00358

* EXTERNAL DEFINITIONS

CCTAB/02 00629

* PRIMARY REFERENCES

ANSBLK ATTRB
 BUF\$IZE CARDSEQ
 CL0SF8 L0BLEFT
 DEV\$IN DEV\$BUT
 I0BUF I0ERR
 LINEN0 MIEI
 NPAGE PRNTBUF

RDWRT/02 00000

BCD2BIN
 CIBLEFT
 C0BUSED
 DEVICE
 JIJIT
 MIE0
 PRTBUF

BIN2BCD
 CIBTOTAL
 CODE
 ERROR
 KEY
 MILE
 RDFPT

BLKBUFF
 CIBUSED
 C0PYSK
 GETPAGE
 LINE\$N0
 MIUC
 RECNUM

BLKSIZE
 CISEQ
 C0PYSTDF
 GRANCNT
 LINE\$N01
 MBS
 RECSIZE

BREAK
 CIW0RD
 C0W0RD
 HEXDUMP
 LINE\$N02
 M0DE
 RSSAVE

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SELECT SEQNUM
WRITEPT

TABSET

TBARG

RDWRT

TBSWT

UNBADR

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UNPRINT

- * NO SECONDARY REFERENCES
- * NO UNDEFINED SYMBOLS
- * ERROR SEVERITY LEVEL: 0
- * NO ERROR LINES