===

OUTPUT 12

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MEM. STRG. USED   02122
01450   THRU   01463
01500   THRU   03605

LOK	INSTR	L1ID		LO	
		0	INT2	PROG*1219B*FACT*OC,*67	
		1		REMARK*1219B FACT MODIFIED FROM 1219 FACT	
		2		REMARK*INTEGRATED MEMORY TEST	
01450	46 1462	3	INT2	STRAU*INT21	SAVE AU AND AL INPUT PARAMETERS
01451	44 1463	4		STRAL*INT22	
01452	76 1477	5	INT20	RJP*SIZE-1	EXECUTE CONTROL MEMORY TEST
01453	10 1462	6		ENTAU*INT21	
01454	12 1463	7		ENTAL*INT22	
01455	76 3677	10		RJP*MAIN-1	EXECUTE MAIN MEMORY TEST
01456	50 5620	11		STOP*20	KEY 4
01457	10 1462	12		ENTAU*INT21	
01460	12 1463	13		ENTAL*INT22	
01461	34 1452	14		JP*INT20	CONTINUE TEST
01462	00 0000	15	INT21	0*	
01463	00 0000	16	INT22	0*	
		17	SIZE	PROG*1219B*FACT*OC,*67	
		20		REMARK*1219B FACT MODIFIED FROM 1219 FACT	
		21		REMARK*CONTROL MEMORY TEST	
01500	44 3114	22	SIZE	STRAL*ALPARM	SAVE INITIAL AL INPUT PARAMETER
01501	76 3512	23		RJP*TYPE	TYPT AND TYPC SETUP
01502	12 3114	24		ENTAL*ALPARM	INITIAL AL INPUT PARAMETER
01503	65 1505	25		JPALP*LOK+2	NON N+1 BUFFER TERMINATION
01504	76 3565	26		RJP*IOSET	N+1 BUFFER TERMINATION SETUP
01505	12 3114	27		ENTAL*ALPARM	INITIAL AL INPUT PARAMETER
01506	52 3605	30		SLCL*K3	000001
01507	44 1523	31		STRAL*SIZE1	SAVE SIZE INDEX
01510	12 1530	32		ENTAL*SIZE4	SET UP MEMORY LIMITS
01511	14 1523	33		ADDAL*SIZE1	

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01512    44 1516    34                STRAL*SIZE6
01513    12 1531    35                ENTAL*SIZE5

01514    14 1523    36                ADDAL*SIZE1
01515    44 1520    37                STRAL*SIZE7
01516    12 1524    40     SIZE6      ENTAL*SIZE2          SET UP THE VALUE
01517    44 3102    41                STRAL*PAR1           OF UPPFR LIMIT
01520    12 1526    42     SIZE7      ENTAL*SIZE3          SET UP THE MAIN MEMORY
01521    44 1737    43                STRAL*CHEK4          CHECKING SUBROUTINE
01522    34 1532    44                JP*CRANK
01523    00 0000    45     SIZE1      0*0

01524    00 0277    46     SIZE2      00*0277
01525    00 0677    47                00*0677
01526    34 1751    50     SIZE3      JP*CHEK5
01527    02 1756    51                CMAL*CHEK1
01530    12 1524    52     SIZE4      ENTAL*SIZE2
01531    12 1526    53     SIZE5      ENTAL*SIZE3
                    54     CRANK      PROG*MUELLER*60CT
01532    50 5020    55     CRANK      SKP*20               SET KEY 4 TO SUPRESS TYPEOUTS

01533    34 1535    56                JP*HEAD              NOT SET-TYPE OUT
01534    34 1546    57                JP*TRACK
01535    30 1536    60     HEAD       TYPT*$CR$CONTROL MEMORY TEST
01536    00 3115
01537    76 4320
01540    56 6462
01541    20 5400
01542    55 4555

01543    20 6271
01544    00 6445
01545    63 6477
01546    70 0001    61     TRACK      ENTALK*1             YES COUNT CYCLES
01547    14 1604    62                ADDAL*COUNT          UP DATE COUNT
01550    44 1604    63                STRAL*COUNT
01551    02 1605    64                CMAL*NUMB            FINISHED 10 CYCLES
01552    63 1777    65                JPNOT*TEST           NO

01553    40 1604    66                CL*COUNT             YES CLEAR COUNT FOR NEW START
01554    50 5020    67                SKP*20               SET SKIP KEY 4 TO SUPRESS TYPE  S
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01555   34 1557    70              JP*LOK+2
01556   34 1571    71              JP*PQXY              CHECK ERROR FLAG
01557   12 1606    72              ENTAL*BAER           TYPEOUT RECYCLE
01560   63 1575    73              JPALNZ*RECYL

01561   30 1562    74              TYPT*$CR$OK, END CYCLES
01562   00 3115
01563   76 2053
01564   14 0045
01565   56 4400
01566   43 7143
01567   54 4563
01570   77 7777

01571   50 5604    75     PQXY     STOP*04 ,φ           YES, SET STOP KEY FOR END OF TEST
01572   50 5004    76              SKP*04               SET SKIP 2 TO STAY INTEST
01573   55 1477    77              IJP*SIZE-1           EXIT
01574   34 1546    100             JP*TRACK             NOT SET
01575   30 1576    101    RECYL    TYPT*$CR$RECYCLE
01576   00 3115
01577   76 6245
01600   43 7143

01601   54 4577
01602   40 1606    102             CL*BAER              YES CLEAR ERROR FLAG
01603   34 1571    103             JP*PQXY
01604   00 0000    104    COUNT    0*0
01605   00 0013    105    NUMB     00*13
01606   00 0000    106    BAER     0*0
                   107    ERROUT   PROG*CASEY*8JUNE64
01607   00 0000    110    ERROUT   0*0

01610   72 1730    111             STRICR*SF            SAVE ICR
01611   50 7202    112             ENTICR*02            SET A TO 2
01612   50 7310    113             ENTSR*10
01613   12 0002    114             ENTAL*0002           SAVE B2
01614   75 3113    115             STRSR*WHERE
01615   44 1732    116             STRAL*ERRT1
01616   50 7310    117             ENTSR*10
01617   12 0040    120             ENTAL*0040           SAVE OUTPUT BUFFERS
```

```
01620   75 3113   121        STRSR*WHERE
01621   44 1733   122        STRAL*ERRT2
01622   50 7310   123        ENTSR*10
01623   12 0041   124        ENTAL*0041
01624   75 3113   125        STRSR*WHERE
01625   44 1734   126        STRAL*ERRT3

01626   30 1627   127        TYPT*$CR$ERROR
01627   00 3115
01630   76 4562
01631   62 2062
01632   77 7777
01633   30 1634   130        TYPT*$CR$LAST ADDRESS 1ST ADDRESS CORRECT INCORRECT
01634   00 3115
01635   76 5441

01636   63 6400
01637   41 4444
01640   62 4563
01641   63 0021
01642   63 6400
01643   41 4444
01644   62 4563
01645   63 0043

01646   20 6262
01647   45 4364
01650   00 5156
01651   43 2062
01652   62 4543
01653   64 7777
01654   70 7777   131        ENTALK*7777                    ERROR SET
01655   44 1606   132        STRAL*BAER                     ERROR FLAG

01656   30 1657   133        TYPC*$CR$*HERE* * .. * * . *THERE* * . * * * * * *
01657   00 3352
01660   10 0076
01661   60 3111
01662   10 0000
01663   10 0000
01664   1  )000
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01665   10 0000
01666   10 0000
01667   10 0000
01670   60 3112
01671   10 0000
01672   10 0000
01673   10 0000

01674   10 0000
01675   10 0000
01676   10 0000
01677   10 0000
01700   10 0000
01701   10 0000
01702   00 0000
01703   30 1704      134              TYPC*DIP* * * *DIP+1

01704   00 3352
01705   60 3107
01706   10 0000
01707   10 0000
01710   10 0000
01711   60 3110
01712   00 0000
01713   50 5604      135              STOP*04                  STOP AFTER TYPEOUT

01714   12 1732      136              ENTAL*ERRT1              RESTORE B2 AND OUTPUT BUFFERS
01715   50 7310      137              ENTSR*10
01716   44 0002      140              STRAL*0002
01717   75 3113      141              STRSR*WHERE
01720   12 1733      142              ENTAL*ERRT2
01721   50 7310      143              ENTSR*10
01722   44 0040      144              STRAL*0040
01723   75 3113      145              STRSR*WHERE

01724   12 1734      146              ENTAL*ERRT3
01725   50 7310      147              ENTSR*10
01726   44 0041      150              STRAL*0041
01727   75 3113      151              STRSR*WHERE
01730   50 7200      152     SF       ENTICR*0                 RESTORE B REG
```

01731	55 1607	153		IJP*ERROUT	BACK
01732	00 0000	154	ERRT1	0*0	
01733	00 0000	155	ERRT2	0*0	
01734	00 0000	156	ERRT3	0*0	
		157	CHEK	PROG*MUELLER*6OCT64	
01735	00 0000	160	CHEK	0*0	ENTRANCE
01736	12 3101	161		ENTAL*PAR	ENTER INDEX VALUE
01737	02 1756	162	CHEK4	CMAL*CHEK1	IS PAR EQUAL TO 577
01740	63 1744	163		JPNOT*LOK+4	NO
01741	71 7677	164		ADDALK*7677	YES DECREMENT PAR BY 100
01742	44 3101	165		STRAL*PAR	RESTORE NEW INDEX
01743	55 1735	166		IJP*CHEK	EXIT
01744	02 1757	167		CMAL*CHEK2	IS PAR EQUAL TO 377
01745	63 1751	170		JPNOT*LOK+4	NO
01746	71 7677	171		ADDALK*7677	YES DECREMENT PAR BY 100
01747	44 3101	172		STRAL*PAR	RESTORE NEW INDEX
01750	55 1735	173		IJP*CHEK	EXIT
01751	02 1760	174	CHEK5	CMAL*CHEK3	IS PAR EQUAL TO 177
01752	63 1755	175		JPNOT*LOK+3	NO
01753	71 7677	176		ADDALK*7677	YES DECREMENT PAR BY 100
01754	44 3101	177		STRAL*PAR	RESTORE NEW INDEX
01755	55 1735	200		IJP*CHEK	EXIT
01756	00 0577	201	CHEK1	00*0577	
01757	00 0377	202	CHEK2	00*0377	
01760	00 0177	203	CHEK3	00*0177	
01761	00 0000	204	PROOF	0*0	ENTRANCE
01762	12 3101	205		ENTAL*PAR	ENTER INDEX COUNT
01763	44 3112	206		STRAL*THERE	SAVE INDEX COUNT
01764	57 3101	207		ISK*PAR	KEEP CHECKING
01765	34 1770	210		JP*LOK+3	GO ON
01766	76 1607	211		RJP*ERROUT	ALL DONE
01767	55 1761	212		IJP*PROOF	GO BACK TO SR
01770	76 1735	213		RJP*CHEK	CHECK FOR WIRE AND MAIN MEMORY
01771	12 3101	214		ENTAL*PAR	ENTER CELL
01772	74 1773	215		STRADR*LOK+1	CONTENTS IN
01773	12 0000	216		ENTAL*0	AL

01774	02 3107	217		CMAL*DIP	IS IT CORRECT
01775	61 1766	220		JPEQ*PROOF+5	YES TYPEOUT ERRORS
01776	34 1762	221		JP*PROOF+1	NO CONTINUE PROOF SR
		222	TEST	PROG*MUELLER*70CT6A	
01777	12 3102	223	TEST	ENTAL*PAR1	SET UP
02000	44 3101	224		STRAL*PAR	INDEX COUNT
02001	12 3101	225		ENTAL*PAR	SET UP ADDRESS
02002	74 2003	226		STRADR*LOK+1	TO BE CLEARED
02003	40 0000	227		CL*0	SET ADDRESS TO ZERO
02004	57 3101	230		ISK*PAR	ALL SET TO ZERO
02005	34 2007	231		JP*HD0	NO CONTINUE
02006	34 2011	232		JP*HOCK	YES CHECK FOR ZERO HOLD
02007	76 1735	233	HD0	RJP*CHEK	CHECK FOR WIRE AND MAIN MEMORY
02010	34 2001	234		JP*TEST+2	UP DATE ADDRESS
02011	12 3102	235	HOCK	ENTAL*PAR1	SET UP
02012	44 3101	236		STRAL*PAR	INDEX COUNT
02013	12 3101	237		ENTAL*PAR	SET UP ADDRESS
02014	74 2015	240		STRADR*LOK+1	TO BE CLEARED
02015	12 0000	241		ENTAL*0	ENTER ADDRESS INTO AL
02016	63 2024	242		JPALNZ*HOCK1	CURRECT NO GO TO ERROR DISPLAY
02017	57 3101	243		ISK*PAR	ALL CHECKED
02020	34 2022	244		JP*LOK+2	NO CONTINUE
02021	34 2041	245		JP*HD1	YES GO TO NEXT SR
02022	76 1735	246		RJP*CHEK	CHECK FOR WIRED AND MAIN MEMORY
02023	34 2013	247		JP*HOCK+2	UPDATE ADDRESS
02024	10 3103	250	HOCK1	ENTAU*PAT	ERROR CORRECT IN AU
02025	46 3107	251		STRAU*DIP	SAVE FOR TYPEOUT
02026	44 3110	252		STRAL*DIP+1	SAVE FOR TYPEOUT
02027	50 5601	253		STOP*01	STOP KEY 0 FOR ERROR DISPLAY
02030	12 3101	254		ENTAL*PAR	SET FAILING ADDRESS IN AL
02031	44 3111	255		STRAL*HERE	SAVE ADDRESS
02032	10 3103	256		ENTAU*PAT	000000
02033	50 5601	257		STOP*01	DISPLAY ADDRESS IN AL
02034	50 5020	260		SKP*20	IS TYPEOUT SUPPRESSED
02035	76 1761	261		RJP*PROOF	NO GO TO ERROR TYPEOUT
02036	50 5001	262		SKP*01	SET SKIP KEY 0 TO REPEAT TEST

02037	34 2017	263		JP*HOCK+6	NOT SET CONTINUE TEST
02040	34 1777	264		JP*TEST	SET RECYCLE SR
		265	HD1	PROG*MUELLER*7OCT6	
02041	12 3102	266	HD1	ENTAL*PAR1	SET UP
02042	44 3101	267		STRAL*PAR	INDEX COUNT
02043	12 3101	270		ENTAL*PAR	SET UP ADDRESS
02044	74 2046	271		STRADR*LOK+2	TO BE SET TO ONES
02045	12 3104	272		ENTAL*PAT1	ENTER PATTERN
02046	44 0000	273		STRAL*0	STORE ALL ONES PER CELL COUNT
02047	57 3101	274		ISK*PAR	ALL SET TO ONES
02050	34 2052	275		JP*HLD1	NO CONTINUE
02051	34 2054	276		JP*HICK	YES CHECK LOAD
02052	76 1735	277	HLD1	RJP*CHEK	CHECK FOR WIRE AND MAIN MEMORY
02053	34 2043	300		JP*HD1+2	UPDATE ADDRESS
02054	12 3102	301	HICK	ENTAL*PAR1	SET UP
02055	44 3101	302		STRAL*PAR	INDEX COUNT
02056	12 3101	303		ENTAL*PAR	SET UP ADDRESS
02057	74 2060	304		STRADR*LOK+1	TO BE SET TO ONES
02060	12 0000	305		ENTAL*0	ENTER ADDRESS INTO AL
02061	02 3104	306		CMAL*PAT1	CHECK FOR CORRECT LOAD
02062	63 2070	307		JPNOT*HICK1	INCORRECT GO TO ERROR DISPLAY
02063	57 3101	310		ISK*PAR	CORRECT ARE ALL CHECKED
02064	34 2066	311		JP*LOK+2	NO CONTINUE
02065	34 2104	312		JP*HALT	YES GO TO NEXT SR
02066	76 1735	313		RJP*CHEK	CHECK FOR WIRED AND MAIN MEMORY
02067	34 2056	314		JP*HICK+2	UPDATE ADDRESS
02070	10 3104	315	HICK1	ENTAU*PAT1	ERROR CORRECT IN AU
02071	46 3107	316		STRAU*DIP	SAVE FOR TYPEOUT
02072	44 3110	317		STRAL*DIP+1	SAVE FOR TYPEOUT
02073	50 5601	320		STOP*01	STOP KEY 0 FOR ERROR DISPLAY
02074	12 3101	321		ENTAL*PAR	SET FAILING ADDRESS IN AL
02075	44 3111	322		STRAL*HERE	SAVE ADDRESS
02076	50 5601	323		STUP*01	DISPLAY ADDRESS IN AL
02077	50 5020	324		SKP*20	IS TYPEOUT SUPPRESSED
02100	76 1761	325		RJP*PROOF	NO GO TO ERROR TYPEOUT
02101	50 5001	326		SKP*01	SET SKIP KEY 0 TO REPEAT TEST
02102	34 2063	327		JP*HICK+7	NOT SET CONTINUE TEST

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02103   34 2041   330                   JP*HD1                      SET RECYCLE SR
                   331      HALT         PROG*MUELLER*7OCT6o
02104   12 3102   332      HALT         ENTAL*PAR1
02105   44 3101   333                   STRAL*PAR
02106   12 3101   334                   ENTAL*PAR
02107   74 2111   335                   STRADR*LOK+2

02110   12 3105   336                   ENTAL*PAL1
02111   44 0000   337                   STRAL*0
02112   57 3101   340                   ISK*PAR
02113   34 2115   341                   JP*ALT1
02114   34 2117   342                   JP*ATICK
02115   76 1735   343      ALT1         RJP*CHEK
02116   34 2106   344                   JP*HALT+2
02117   12 3102   345      ATICK        ENTAL*PAR1

02120   44 3101   346                   STRAL*PAR
02121   12 3101   347                   ENTAL*PAR
02122   74 2123   350                   STRADR*LOK+1
02123   12 0000   351                   ENTAL*0
02124   02 3105   352                   CMAL*PAL1
02125   63 2133   353                   JPNOT*ATICK1
02126   57 3101   354                   ISK*PAR
02127   34 2131   355                   JP*LOK+2

02130   34 2147   356                   JP*HALT0
02131   76 1735   357                   RJP*CHEK
02132   34 2121   360                   JP*ATICK+2
02133   10 3105   361      ATICK1       ENTAU*PAL1
02134   46 3107   362                   STRAU*DIP
02135   44 3110   363                   STRAL*DIP+1
02136   50 5601   364                   STOP*01
02137   12 3101   365                   ENTAL*PAR

02140   44 3111   366                   STRAL*HERE
02141   50 5601   367                   STOP*01
02142   50 5020   370                   SKP*20
02143   76 1761   371                   RJP*PROOF
02144   50 5001   372                   SKP*01
02145   34 2126   373                   JP*ATICK+7
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02146    34 2104    374              .          JP*HALT
                    375      HALTO              PROG*MUELLER*70CTb...
02147    12 3102    376      HALTO              ENTAL*PAR1
02150    44 3101    377                         STRAL*PAR
02151    12 3101    400                         ENTAL*PAR
02152    74 2154    401                         STRADR*LOK+2
02153    12 3106    402                         ENTAL*PALO
02154    44 0000    403                         STRAL*0

02155    57 3101    404                         ISK*PAR
02156    34 2160    405                         JP*ALTO
02157    34 2162    406                         JP*ATOCK
02160    76 1735    407      ALTO               RJP*CHEK
02161    34 2151    410                         JP*HALTO+2
02162    12 3102    411      ATOCK              ENTAL*PAR1
02163    44 3101    412                         STRAL*PAR
02164    12 3101    413                         ENTAL*PAR

02165    74 2166    414                         STRADR*LOK+1
02166    12 0000    415                         ENTAL*0
02167    02 3106    416                         CMAL*PALO
02170    63 2176    417                         JPNOT*ATOCK1
02171    57 3101    420                         ISK*PAR
02172    34 2174    421                         JP*LOK+2
02173    34 2212    422                         JP*WP1
02174    76 1735    423                         RJP*CHEK

02175    34 2164    424                         JP*ATOCK+2
02176    10 3106    425      ATOCK1             ENTAU*PALO
02177    46 3107    426                         STRAU*DIP
02200    44 3110    427                         STRAL*DIP+1
02201    50 5601    430                         STOP*01
02202    12 3101    431                         ENTAL*PAR
02203    44 3111    432                         STRAL*HERE
02204    50 5601    433                         STOP*01

02205    50 5020    434                         SKP*20
02206    76 1761    435                         RJP*PROOF
02207    50 5001    436                         SKP*01
02210    ( )2171    437                         JP*ATOCK+7
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02211    34 2147    440                 JP*HALTO
                     441       WP1       PROG*MUELLER*70CT6a

02212    10 2243    442       WP1       ENTAU*WP5           MASK TO AU- WORST PATTERN
02213    12 3102    443                 ENTAL*PAR1          SET UP
02214    44 3101    444                 STRAL*PAR           INDEX COUNT
02215    12 3101    445       WP2       ENTAL*PAR           ADDRESS TO AL
02216    50 5400    446                 SKPODD*00           IS ADDRESS PARITY ODD
02217    34 2221    447                 JP*WP3              NO-WRITE PATTERN
02220    34 2232    450                 JP*WP4              YES WRITE COMP PATTERN
02221    12 3101    451       WP3       ENTAL*PAR           SET UP

02222    74 2224    452                 STRADR*LOK+2        ADDRESS
02223    12 2345    453                 ENTAL*CKWP13        WRITE PATTERN
02224    44 0000    454                 STRAL*0
02225    57 3101    455                 ISK*PAR             IS WRITE COMPLETED
02226    34 2230    456                 JP*LOK+2            NO
02227    34 2244    457                 JP*CKWP             YES-CHECK PATTERN
02230    76 1735    460                 RJP*CHEK            CHEK FOR WIRED AND MAIN MEMORY
02231    34 2215    461                 JP*WP2              CONTINUE

02232    12 3101    462       WP4       ENTAL*PAR           SET UP
02233    74 2235    463                 STRADR*LOK+2        ADDRESS
02234    12 2346    464                 ENTAL*CKWP14        WRITE COMP PATTERN
02235    44 0000    465                 STRAL*0
02236    57 3101    466                 ISK*PAR             IS WRITE COMPLETED
02237    34 2241    467                 JP*LOK+2            NO
02240    34 2244    470                 JP*CKWP             YES-CHECK PATTERN
02241    76 1735    471                 RJP*CHEK            CHECK FOR WIRED AND MAIN MEMORY

02242    34 2215    472                 JP*WP2              CONTINUE
02243    00 0100    473       WP5       00*0100             PARITY MASK
02244    12 3102    474       CKWP      ENTAL*PAR1          SET UP
02245    44 3101    475                 STRAL*PAR           INDEX COUNT
02246    10 2243    476       CKWP1     ENTAU*WP5           MASK TO AU
02247    12 3101    477                 ENTAL*PAR           ADDRESS TO AL
02250    50 5400    500                 SKPODD*00           IS ADDRESS PARITY ODD
02251    34 2253    501                 JP*CKWP2            NO

02252    34 2270    502                 JP*CKWP4            YES
02253    12 3101    503       CKWP2     ENTAL*PAR           SET UP
```

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02254   74 2255    504              STRADR*LOK+1           ADDRESS
02255   12 0000    505              ENTAL*0                ENTER ADDRESS INTO AL
02256   02 2345    506              CMAL*CKWP13            IS PATTERN CORRECT
02257   61 2261    507              JPEQ*CKWP3             YES

02260   34 2305    510              JP*AIR                 NO
02261   57 3101    511    CKWP3     ISK*PAR                IS CHECK COMPLETED
02262   34 2264    512              JP*LOK+2               NO
02263   34 2266    513              JP*LOK+3               YES
02264   76 1735    514              RJP*CHEK               CHECK FOR WIRED AND MAIN MEMORY
02265   34 2246    515              JP*CKWP1               CONTINUE CHECK
02266   76 3050    516              RJP*FLUSH1             FLUSH CONTROL MEMORY
02267   34 2347    517              JP*CWP1                GO TO NEXT SR

02270   12 3101    520    CKWP4     ENTAL*PAR              SET UP
02271   74 2272    521              STRADR*LOK+1           ADDRESS
02272   12 0000    522              ENTAL*0                ENTER ADDRESS INTO AL
02273   02 2346    523              CMAL*CKWP14            IS PATTERN CORRECT
02274   61 2276    524              JPEQ*CKWP5             YES
02275   34 2325    525              JP*AIR1                NO
02276   57 3101    526    CKWP5     ISK*PAR                IS CHECK COMPLETED
02277   34 2301    527              JP*LOK+2               NO

02300   34 2303    530              JP*LOK+3               YES
02301   76 1735    531              RJP*CHEK               CHECK FOR WIRED AND MAIN MEMORY
02302   34 2246    532              JP*CKWP1               CONTINUE CHECK
02303   76 3050    533              RJP*FLUSH1             FLUSH CONTROL MEMORY
02304   34 2347    534              JP*CWP1                GO TO NEXT SR
                   535    AIR       PROG*MUELLER*70CT6
02305   12 3101    536    AIR       ENTAL*PAR              SET UP INCORRECT
02306   74 2307    537              STRADR*LOK+1           ADDRESS

02307   12 0000    540              ENTAL*0                INCORRECT INTO AL
02310   10 2345    541              ENTAU*CKWP13           CORRECT INTO AU
02311   46 3107    542              STRAU*DIP              SAVE FOR TYPEOUT
02312   44 3110    543              STRAL*DIP+1            SAVE FOR TYPEOUT
02313   50 5601    544              STOP*01                ERROR STOP KEY 0 SET
02314   12 3101    545              ENTAL*PAR              FAILING ADDRESS INTO AL
02315   44 3111    546              STRAL*HERE             SAVE FOR TYPEOUT
02316   44 3112    547              STRAL*THERE            SAVE FOR TYPEOUT
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```
02317    50 5601    550              STOP*01           SET STOP KEY 0 TO DISPLAY ADDRESS IN AL
02320    50 5020    551              SKP*20            SET SKIP KEY 4 TO SUPPRESS TYPEOUT
02321    76 1607    552              RJP*ERROUT        ERROR TYPEOUT
02322    50 5001    553              SKP*01            SKIP KEY 0 TO REPEAT TEST
02323    34 2261    554              JP*CKWP3          NOT SET CONTINUE
02324    34 2212    555              JP*WP1            SET REPEAT

02325    12 3101    556    AIR1      ENTAL*PAR         SET UP INCORRECT
02326    74 2327    557              STRADR*LOK+1      ADDRESS
02327    12 0000    560              ENTAL*0           INCORRECT INTO AL
02330    10 2346    561              ENTAU*CKWP14      CORRECT INTO AU
02331    46 3107    562              STRAU*DIP         SAVE FOR TYPEOUT
02332    44 3110    563              STRAL*DIP+1       SAVE FOR TYPEOUT
02333    50 5601    564              STOP*01           ERROR STOP KEY 0 SET
02334    12 3101    565              ENTAL*PAR         FAILING ADDRESS INTO AL

02335    44 3111    566              STRAL*HERE        SAVE FOR TYPEOUT
02336    44 3112    567              STRAL*THERE       SAVE FOR TYPEOUT
02337    50 5601    570              STOP*01           SET STOP KEY 0 TO DISPLAY ADDRESS
02340    50 5020    571              SKP*20            SET SKIP KEY 4 TO SUPPRESS TYPEOUT
02341    76 1607    572              RJP*ERROUT        ERROR TYPEOUT
02342    50 5001    573              SKP*01            SKIP KEY 0 TO REPEAT TEST
02343    34 2276    574              JP*CKWP5          NOT SET CONTINUE
02344    34 2212    575              JP*WP1            SET REPEAT

02345    00 0000    576    CKWP13    00*0000
02346    77 7777    577    CKWP14    77*7777
                    600    CWP1      PROG*MUELLER*8OCT6.   THIS IS THE COMPLEMENTED
02347    10 2243    601    CWP1      ENTAU*WP5         WORST PATTER TEST
02350    12 3102    602              ENTAL*PAR1
02351    44 3101    603              STRAL*PAR
02352    12 3101    604    CWP2      ENTAL*PAR
02353    50 5500    605              SKPEVN*00

02354    34 2356    606              JP*CWP3
02355    34 2367    607              JP*CWP4
02356    12 3101    610    CWP3      ENTAL*PAR
02357    74 2361    611              STRADR*LOK+2
02360    12 2345    612              ENTAL*CKWP13
02361    44 0000    613              STRAL*0
02362    57 3101    614              ISK*PAR
```

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02363   34 2365    615              JP*LOK+2
02364   34 2400    616              JP*CCKWP
02365   76 1735    617              RJP*CHEK
02366   34 2352    620              JP*CWP2
02367   12 3101    621      CWP4    ENTAL*PAR
02370   74 2372    622              STRADR*LOK+2
02371   12 2346    623              ENTAL*CKWP14

02372   44 0000    624              STRAL*0
02373   57 3101    625              ISK*PAR
02374   34 2376    626              JP*LOK+2
02375   34 2400    627              JP*CCKWP
02376   76 1735    630              RJP*CHEK
02377   34 2352    631              JP*CWP2
02400   12 3102    632      CCKWP   ENTAL*PAR1
02401   44 3101    633              STRAL*PAR

02402   10 2243    634      CCKWP1  ENTAU*WP5
02403   12 3101    635              ENTAL*PAR
02404   50 5500    636              SKPEVN*00
02405   34 2407    637              JP*CCKWP2
02406   34 2424    640              JP*CCKWP4
02407   12 3101    641      CCKWP2  ENTAL*PAR
02410   74 2411    642              STRADR*LOK+1
02411   12 0000    643              ENTAL*0

02412   02 2345    644              CMAL*CKWP13
02413   61 2415    645              JPEQ*CCKWP3
02414   34 2441    646              JP*CAIR
02415   57 3101    647      CCKWP3  ISK*PAR
02416   34 2420    650              JP*LOK+2
02417   34 2422    651              JF*LOK+3
02420   76 1735    652              RJP*CHEK
02421   34 2402    653              JP*CCKWP1

02422   76 3050    654              RJP*FLUSH1
02423   34 2501    655              JP*RW
02424   12 3101    656      CCKWP4  ENTAL*PAR
02425   74 2426    657              STRADR*LOK+1
02426   12 0000    660              ENTAL*0
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02427    02 2346     661                    CMAL*CKWP14

02430    61 2432     662                    JPEQ*CCKWP5
02431    34 2461     663                    JP*CAIR1
02432    57 3101     664      CCKWP5        ISK*PAR
02433    34 2435     665                    JP*LOK+2
02434    34 2437     666                    JP*LOK+3
02435    76 1735     667                    RJP*CHEK
02436    34 2402     670                    JP*CCKWP1
02437    76 3050     671                    RJP*FLUSH1

02440    34 2501     672                    JP*RW
                     673      CAIR          PROG*MUELLER*70CT6
02441    12 3101     674      CAIR          ENTAL*PAR
02442    74 2443     675                    STRADR*LOK+1
02443    12 0000     676                    ENTAL*0
02444    10 2345     677                    ENTAU*CKWP13
02445    46 3107     700                    STRAU*DIP
02446    44 3110     701                    STRAL*DIP+1

02447    50 5601     702                    STOP*01
02450    12 3101     703                    ENTAL*PAR
02451    44 3111     704                    STRAL*HERE
02452    44 3112     705                    STRAL*THERE
02453    50 5601     706                    STOP*01
02454    50 5020     707                    SKP*20
02455    76 1607     710                    RJP*ERROUT
02456    50 5001     711                    SKP*01

02457    34 2415     712                    JP*CCKWP3
02460    34 2347     713                    JP*CWP1
02461    12 3101     714      CAIR1         ENTAL*PAR
02462    74 2463     715                    STRADR*LOK+1
02463    12 0000     716                    ENTAL*0
02464    10 2346     717                    ENTAU*CKWP14
02465    46 3107     720                    STRAU*DIP
02466    44 3110     721                    STRAL*DIP+1

02467    50 5601     722                    STOP*01
02470    12 3101     723                    ENTAL*PAR
02471    44 3111     724                    STRAL*HERE
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02472	44 3112	725			STRAL*THERE	
02473	50 5601	726			STOP*01	
02474	50 5020	727			SKP*20	
02475	76 1607	730			RJP*ERROUT	
02476	50 5001	731			SKP*01	
02477	34 2432	732			JP*CCKWF5	
02500	34 2347	733			JP*CWP1	
		734		RW	PROG*MUELLER*8OCT64	
02501	12 2605	735		RW	ENTAL*RW30	PRESTORE IMAGE
02502	44 2513	736			STRAL*RW21	STORAGE INSTRUCTIONS
02503	12 2606	737			ENTAL*RW31	
02504	44 2547	740			STRAL*RW22	
02505	12 3102	741			ENTAL*PAR1	SET UP INDEX COUNT
02506	44 3101	742			STRAL*PAR	
02507	12 3101	743		RW2	ENTAL*PAR	SET UP ADDRESS TO
02510	74 2512	744			STRADR*LOK+2	BE LOADED
02511	76 2607	745			RJP*RAN	GENERATE RANDOM NUMBER
02512	44 0000	746			STRAL*0	STORE PATTERN
02513	44 7000	747		RW21	STRAL*IMAGE	STORE IMAGE
02514	12 2513	750			ENTAL*RW21	ADVANCE IMAGE
02515	71 0001	751			ADDALK*0001	ADDRESS
02516	44 2513	752			STRAL*RW21	
02517	57 3101	753			ISK*PAR	IS PATTERN WRITTEN
02520	34 2522	754			JP*LOK+2	NO
02521	34 2524	755			JP*LOK+3	YES
02522	76 1735	756			RJP*CHEK	CHECK FOR WIRED AND CONTROL MEMORY
02523	34 2507	757			JP*RW2	CONTINUE
02524	12 3102	760			ENTAL*PAR1	READ EACH WORD IN
02525	44 3101	761			STRAL*PAR	PATTERN 50 TIMES
02526	12 3101	762		RW3	ENTAL*PAR	SET UP ADDRESS
02527	74 2532	763			STRADR*RW4	TO BE READ
02530	12 2603	764			ENTAL*RW10	PRESTORE WORD READ INDEX
02531	44 2604	765			STRAL*RW11	
02532	12 0000	766		RW4	ENTAL*0	READ WORD
02533	57 2604	767			ISK*RW11	IS WORD READ 50 TIMES
02534	? 2532	770			JP*RW4	NO CONTINUE TO READ

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02535    57 3101    771              ISK*PAR          ALL WORDS READ 50 TIMES
02536    34 2540    772              JP*LOK+2         NO
02537    34 2542    773              JP*LOK+3         YES-VERIFY
02540    76 1735    774              RJP*CHEK
02541    34 2526    775              JP*RW3           CONTINUE

02542    12 3102    776              ENTAL*PAR1       VERIFY NOW
02543    44 3101    777              STRAL*PAR        SET UP INDEX COUNT
02544    12 3101    1000     RW5     ENTAL*PAR        SET UP ADDRESS TO VERIFY
02545    74 2546    1001             STRADR*RW6
02546    12 0000    1002     RW6     ENTAL*0          ENTER WORD
02547    02 7000    1003     RW22    CMAL*IMAGE       IS WORD CORRECT
02550    63 2561    1004             JPNOT*RW20       NO
02551    12 2547    1005             ENTAL*RW22       YES ADVANCE

02552    71 0001    1006             ADDALK*0001      COMPARISON ADDRESS
02553    44 2547    1007             STRAL*RW22
02554    57 3101    1010     RW7     ISK*PAR          IS PATTERN COMPLETE
02555    34 2557    1011             JP*LOK+2         NO
02556    34 2622    1012             JP*LCON          YES
02557    76 1735    1013             RJP*CHEK
02560    34 2544    1014             JP*RW5           CONTINUE
02561    12 2547    1015     RW20    ENTAL*RW22       ERROR DISPLAY

02562    74 2563    1016             STRADR*RW23
02563    10 0000    1017     RW23    ENTAU*0          CORRECT INTO AU
02564    46 3107    1020             STRAU*DIP        SAVE FOR TYPEOUT
02565    12 3101    1021             ENTAL*PAR
02566    74 2567    1022             STRADR*LOK+1
02567    12 0000    1023             ENTAL*0          INCORRECT INTO AL
02570    44 3110    1024             STRAL*DIP+1      SAVE FOR TYPEOUT
02571    50 5601    1025             STOP*01          SET STOP FOR ERROR DISPLAY

02572    12 3101    1026             ENTAL*PAR        FAILING ADDRESS INTO AL
02573    44 3111    1027             STRAL*HERE       SAVE FOR TYPEOUT
02574    44 3112    1030             STRAL*THERE      SAVE FOR TYPEOUT
02575    50 5601    1031             STOP*01          SET STOP 0 TO DISPLAY FAILING ADDRESS
02576    50 5020    1032             SKP*20           SET SKIP 4 TO SUPPRESS TYPEOUT
02577    76 1607    1033             RJP*ERROUT       NOT SET TYPEOUT
02600    50 5001    1034             SKP*01           SET SKIP 0 TO REPEAT SR
02601    34 2551    1035             JP*RW7-3
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02602	34 2501	1036		JP*RW	SET REPEAT SR
02603	00 0050	1037	RW10	00*0050	
02604	00 0050	1040	RW11	00*0050	
02605	44 7000	1041	RW30	STRAL*IMAGE	
02606	02 7000	1042	RW31	CMAL*IMAGE	
		1043	RAN	PROG*CASEY*29JUNE6.	
02607	34 0000	1044	RAN	JP*0	RANDOM NUMBER GENERATOR
02610	12 2620	1045	RAN1	ENTAL*RAN2	
02611	24 2620	1046		MULAL*RAN2	
02612	26 2621	1047		DIVA*RAN3	
02613	62 2616	1050		JPAUNZ*RAN4	
02614	44 2620	1051		STRAL*RAN2	
02615	55 2607	1052		IJP*RAN	
02616	46 2620	1053	RAN4	STRAU*RAN2	
02617	55 2607	1054		IJP*RAN	
02620	00 0703	1055	RAN2	00*0703	
02621	37 7775	1056	RAN3	37*7775	
02622	40 3047	1057	LCON	CL*LPAT	INIT PATTERN STORE=0
02623	70 0020	1060	LCONA	ENTALK*20	INIT ADDR CTR=020
02624	44 3045	1061		STRAL*LACTR	
02625	40 3046	1062	LCONB	CL*LOOP	INIT LOOP CTR=0
02626	76 3022	1063	LCONC	RJP*LINIT	INIT B.PICK UP INIT ADDR
02627	74 2631	1064		STRADR*LCOND	SET ADDR FOR USE
02630	12 3047	1065		ENTAL*LPAT	
02631	45 0000	1066	LCOND	STRALB*0000	STORE ZERO OR -ZERO
02632	56 3035	1067		BSK*L77	ALL CELLS IN SEGMENT SET
02633	34 2631	1070		JP*LCOND	NO
02634	12 3046	1071		ENTAL*LOOP	YES-PICK UP LOOP CTR
02635	10 1523	1072		ENTAU*SIZE1	128 WORD CONTROL
02636	62 2642	1073		JPAUNZ*LCONE	NO
02637	02 3032	1074		CMAL*L01	YES-LOOP CTR=1
02640	63 2644	1075		JPNOT*LCONE1	NO
02641	34 2647	1076		JP*LCONF	YES-DONE STORING
02642	02 3033	1077	LCONE	CMAL*L03	LOOP CTR=3
02643	61 2647	1100		JPEQ*LCONF	YES-DONE STORING
02644	) 0001	1101	LCONE1	ADDALK*1	

02645	44 3046	1102		STRAL*LOOP	INCR LOOP CTR
02646	34 2626	1103		JP*LCONC	STORE INTO NEXT SEGMENT
02647	32 3045	1104	LCONF	ENTB*LACTR	SET B-INDEX WITH ADDR CTR
02650	40 3046	1105		CL*LOOP	INIT LOOP CTR=0
02651	10 3041	1106		ENTAU*L677	
02652	47 0000	1107	LCONG	STRAUB*0000	STORE NEW PATTERN
02653	12 3046	1110		ENTAL*LOOP	
02654	02 3034	1111		CMAL*L9	DONE 10 TIMES YET
02655	61 2661	1112		JPEQ*LCONH	YES-ENUF
02656	71 0001	1113		ADDALK*1	
02657	44 3046	1114		STRAL*LOOP	INCR LOOP CTR
02660	34 2652	1115		JP*LCONG	
02661	12 3047	1116	LCONH	ENTAL*LPAT	
02662	45 0000	1117		STRALB*0000	STORE ORIG PATTERN AGAIN
02663	40 3046	1120		CL*LOOP	INIT LOOP CTR=0
02664	76 3022	1121	LCONI	RJP*LINIT	INIT B,PICK UP INIT ADDR
02665	74 2667	1122		STRADR*LCONJ	SET ADDR FOR USE
02666	74 2677	1123		STRADR*LCONK	SET FOR POSSIBLE ERROR USE ALSO
02667	13 0000	1124	LCONJ	ENTALB*0000	PICK UP CELL VALUE
02670	02 3047	1125		CMAL*LPAT	SAME AS PATTERN STORED
02671	61 2754	1126		JPEQ*LCONM	YES
02672	10 3047	1127		ENTAU*LPAT	CORRECT DATA TO AU
02673	46 3043	1130		STRAU*LCORR	
02674	44 3044	1131		STRAL*LICORR	SAVE AU,AL FOR TYPEOUT
02675	50 5601	1132		STOP*01	STOP TO DISPLAY IF KEY 0
02676	42 3042	1133		STRB*LADD	SAVE ADDR BIAS
02677	70 0000	1134	LCONK	ENTALK*0000	BASE ADDR OF SEGMENT
02700	14 3042	1135		ADDAL*LADD	PLUS BIAS TO GET TRUE ADDR
02701	44 3042	1136		STRAL*LADD	SAVE ADDR FOR TYPEOUT
02702	50 5601	1137		STOP*01	STOP TO DISPLAY IF KEY 0
02703	50 5020	1140		SKP*020	SKIP 4 SET
02704	34 2706	1141		JP*LOK+2	NO
02705	34 2751	1142		JP*LCONL	YES-SUPPRESS TYPEOUT
02706	44 1606	1143		STRAL*BAER	SET ERROR FLAG WITH ADDR(NEVER 0)
02707	30 2710	1144		TYPT*CRERRORCR ADRESS=	
02710	00 3115				

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02711    76 4562
02712    62 2062

02713    76 4144
02714    44 6245
02715    63 6335
02716    77 7777
02717    30 2720      1145                    TYPC*LADD
02720    00 3352
02721    60 3042
02722    00 0000

02723    30 2724      1146                    TYPT*    CORRECT=
02724    00 3115
02725    00 0000
02726    43 2062
02727    62 4543
02730    64 3577
02731    30 2732      1147                    TYPC*LCURR
02732    00 3352

02733    60 3043
02734    00 0000
02735    30 2736      1150                    TYPT*    INCORRECT=
02736    00 3115
02737    00 0000
02740    51 5643
02741    20 6262
02742    45 4364

02743    35 7777
02744    30 2745      1151                    TYPC*L1CORR
02745    00 3352
02746    60 3044
02747    00 0000
02750    50 5604      1152                    STOP*04              STOP FF TYPEOUT IF KEY 2
02751    50 5001      1153     LCONL          SKP*01               SKIP 0 SET
02752    34 2754      1154                    JP*LOK+2             NO

02753    34 2622      1155                    JP*LCON              YES-RECYCLE TEST
02754     ( )3035     1156     LCONM          BSK*L77        )     ALL CELLS IN SEGMENT CHECKED     )
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02755	34 2667	1157		JP*LCONJ	NO
02756	12 3046	1160		ENTAL*LOOP	YES-PICK UP LOOP CTR
02757	10 1523	1161		ENTAU*SIZE1	128 WORD CONTROL
02760	62 2764	1162		JPAUNZ*LCONN	NO
02761	02 3032	1163		CMAL*L01	YES-LOOP CTR=1
02762	63 2766	1164		JPNOT*LCONN1	NO
02763	34 2771	1165		JP*LCONO	YES-DONE CHECKING
02764	02 3033	1166	LCONN	CMAL*L03	LOOP CTR=3
02765	61 2771	1167		JPEQ*LCONO	YES-DONE CHECKING
02766	71 0001	1170	LCONN1	ADDALK*1	
02767	44 3046	1171		STRAL*LOOP	INCR LOOP CTR
02770	34 2664	1172		JP*LCONI	CHECK NEXT SEGMENT
02771	12 3045	1173	LCONO	ENTAL*LACTR	ADDRESS COUNTER
02772	02 3035	1174		CMAL*L77	END OF SEGMENT 1
02773	63 2776	1175		JPNOT*LCONO1	NO
02774	70 0200	1176		ENTALK*200	YES-ADDR 200 STARTS SEGM 2
02775	34 3013	1177		JP*LCONO4	
02776	02 3037	1200	LCONO1	CMAL*L277	END OF SEGMENT 2
02777	63 3004	1201		JPNOT*LCONO2	NO
03000	12 1523	1202		ENTAL*SIZE1	YES-128 WORD CONTROL
03001	61 3015	1203		JPALZ*LCONP	YES-DONE WITH THIS PATTERN
03002	70 0400	1204		ENTALK*400	NO-ADDR 400 STARTS SEGM 3
03003	34 3013	1205		JP*LCONO4	
03004	02 3040	1206	LCONO2	CMAL*L477	END OF SEGMENT 3
03005	63 3010	1207		JPNOT*LCONO3	NO
03006	70 0600	1210		ENTALK*600	YES-ADDR 600 STARTS SEGM 4
03007	34 3013	1211		JP*LCONO4	
03010	02 3041	1212	LCONO3	CMAL*L677	END OF SEGMENT 4
03011	61 3015	1213		JPEQ*LCONP	YES-DONE WITH THIS PATTERN
03012	71 0001	1214		ADDALK*1	NO-INCR ADDR CTR BY 1
03013	44 3045	1215	LCONO4	STRAL*LACTR	MODIFY ADDR CTR
03014	34 2625	1216		JP*LCONO	REPEAT,CHANGING NEW ADDR
03015	12 3047	1217	LCONP	ENTAL*LPAT	PATTERN OF ZEROES USED
03016	63 3076	1220		JPALNZ*FLUSH	NO-THROUGH WITH TEST
03017	70 7777	1221		ENTALK*7777	YES
03020	44 3047	1222		STRAL*LPAT	RESET PATTERN STORE=777777

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03021   34 2623    1223               JP*LCONA              RECYCLE WITH NEW PATTERN
03022   00 0000    1224    LINIT      0*0
03023   12 3046    1225               ENTAL*LOOP            LOOP CTR
03024   63 3027    1226               JPALNZ*LOK+3          IS 1,2,OR 3
03025   36 0020    1227               ENTBK*20             IF 0,SET B=20 AND LEAVE AL=0
03026   55 3022    1230               IJP*LINIT            EXIT

03027   24 3036    1231               MULAL*L200           SET AL=200,400,OR 600
03030   36 0000    1232               ENTBK*0              SET B=0
03031   55 3022    1233               IJP*LINIT            EXIT
03032   00 0001    1234    LG1        000001*
03033   00 0003    1235    L03        000003*
03034   00 0011    1236    L9         000011*
03035   00 0077    1237    L77        000077*
03036   00 0200    1240    L200       000200*

03037   00 0277    1241    L277       000277*
03040   00 0477    1242    L477       000477*
03041   00 0677    1243    L677       000677*
03042   00 0000    1244    LADD       000000*              HOLDS ADDRESS FOR TYPEOUT
03043   00 0000    1245    LCORR      000000*              HOLDS CORRECT DATA FOR TYPEOUT
03044   00 0000    1246    LICORR     000000*              HOLDS INCORRECT DATA FOR TYPEOUT
03045   00 0000    1247    LACTR      000000*              ADDRESS COUNTER
03046   00 0000    1250    LOOP       000000*              LOOP COUNTER

03047   00 0000    1251    LPAT       000000*              PATTERN STORE
                   1252    FLUSH1     PROG*MUELLER*80CTD
03050   00 0000    1253    FLUSH1     0*0                  SR ENTRANCE
03051   12 3102    1254               ENTAL*PAR1           SET CONTROL MEMORY TO ALL ONES
03052   44 3101    1255               STRAL*PAR            SET UP INDEX COUNT
03053   12 3101    1256               ENTAL*PAR
03054   74 3056    1257               STRADR*LOK+2
03055   12 3104    1260               ENTAL*PAT1

03056   44 0000    1261               STRAL*0              SET ADDRESS TO ONES
03057   57 3101    1262               ISK*PAR              THROUGH
03060   34 3062    1263               JP*LOK+2             NO
03061   34 3064    1264               JP*LOK+3             YES-NOW CLEAR MEMORY
03062   76 1735    1265               RJP*CHEK
03063   34 3053    1266               JP*FLUSH1+3          CONTINUE
03064   1  )102    1267               ENTAL*PAR1           SET CONTROL MEMORY TO ALL ZEROE'
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03065   44 3101   1270            STRAL*PAR              SET UP INDEX COUNT
03066   12 3101   1271   FLUSH2   ENTAL*PAR
03067   74 3070   1272            STRADR*LOK+1
03070   40 0000   1273            CL*0                   SET ADDRESS TO ZEROES
03071   57 3101   1274            ISK*PAR                THROUGH
03072   34 3074   1275          , JP*LOK+2               NO
03073   55 3050   1276            IJP*FLUSH1             YES EXIT

03074   76 1735   1277            RJP*CHEK
03075   34 3066   1300            JP*FLUSH2             CONTINUE
                  1301   FLUSH    PROG*MUELLER*8OCT64
03076   76 3050   1302   FLUSH    RJP*FLUSH1            FLUSH CONTROL MEMORY
03077   50 5602   1303            STOP*02              SET STOP KEY1 TO STOP TEST
03100   34 1546   1304            JP*TRACK
                  1305   PAR      PROG*MUELLER          8 OCT 64
03101   00 0000   1306   PAR      0*0

03102   00 0000   1307   PAR1     0*0
03103   00 0000   1310   PAT      00*0000
03104   77 7777   1311   PAT1     77*7777
03105   52 5252   1312   PAL1     52*5252
03106   25 2525   1313   PAL0     25*2525
03107   00 0000   1314   DIP      00*0000
03110   00 0000   1315            00*0000
03111   00 0000   1316   HERE     00*0000

03112   00 0000   1317   THERE    00*0000
03113   00 0000   1320   WHERE    0*0
03114   00 0000   1321   ALPARM   0*
                  1322            REMARK*TYPT FOR 12.2 OR  532
03115   00 0000   1323   TYPT     0*
03116   75 3157   1324            STRSR*T$PT20
03117   46 3206   1325            STRAU*T$PT3
03120   44 3207   1326            STRAL*T$PT4

03121   42 3210   1327            STRB*T$PT5
03122   70 0003   1330            ENTALK*3
03123   76 3171   1331            RJP*T$PT12
03124   32 3115   1332   T$PT1    ENTB*TYPT
03125   37 0001   1333            ENTBKB*1
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03126    42 3115      1334                STRB*TYPT

03127    50 7310      1335                ENTSR*10
03130    11 0000      1336                ENTAUB*0
03131    50 7300      1337                ENTSR*0
03132    36 0002      1340                ENTBK*2
03133    70 0000      1341      T$PT2     ENTALK*0
03134    50 4706      1342                LSHA*6
03135    02 3211      1343                CMAL*T$PT6
03136    61 3150      1344                JPEQ*T$PT22

03137    71 0040      1345      RNOOP     ADDALK*40         MODIFIED TO RJP*CONVER IF 1232 SELECTED I
03140    02 3247      1346                CMAL*M136         CR-LF?
03141    63 3145      1347                JPNOT*LOK+4       NO
03142    70 0015      1350                ENTALK*15         CR
03143    76 3162      1351                RJP*T$PT7
03144    70 0012      1352                ENTALK*12         LF
03145    76 3162      1353                RJP*T$PT7
03146    73 3133      1354      T$PT21    BJP*T$PT2

03147    34 3124      1355                JP*T$PT1
03150    70 0001      1356      T$PT22    ENTALK*1
03151    76 3171      1357                RJP*T$PT12
03152    14 3115      1360                ADDAL*TYPT
03153    44 3115      1361                STRAL*TYPT
03154    10 3206      1362                ENTAU*T$PT3
03155    12 3207      1363                ENTAL*T$PT4
03156    32 3210      1364                ENTB*T$PT5

03157    50 7300      1365      T$PT20    ENTSR*0
03160    76 3200      1366                RJP*T$PT13
03161    55 3115      1367                IJP*TYPT
03162    00 0000      1370      T$PT7     0*
03163    76 3200      1371                RJP*T$PT13
03164    44 3213      1372                STRAL*T$PT11
03165    50 1200      1373      T$1       BUFOUT*CHAN*AD*1*T$PT11
03166    00 3213

03167    00 3213
03170    55 3162      1374                IJP*T$PT7
03171    (  )0000     1375      T$PT12    0*
```

```
03172   76 3200    1376              RJP*T$PT13
03173   44 3213    1377              STRAL*T$PT11
03174   50 1300    1400    T$2       EXFCT*CHAN*AD*1*T$.T11

03175   00 3213
03176   00 3213
03177   55 3171    1401              IJP*T$PT12
03200   00 0000    1402    T$PT13    0*
03201   50 2300    1403    T$3       SKPFI11*CHAN
03202   34 3201    1404              JP*LOK-1
03203   50 2200    1405    T$4       SKPOIN*CHAN
03204   34 3203    1406              JP*LOK-1

03205   55 3200    1407              IJP*T$PT13
03206   00 0000    1410    T$PT3     0*
03207   00 0000    1411    T$PT4     0*
03210   00 0000    1412    T$PT5     0*
03211   00 0077    1413    T$PT6     77*
03212   00 0136    1414    T$PT61    0*136
03213   00 0000    1415    T$PT11    0*
03214   00 0000    1416    CONVER    0*

03215   42 3244    1417              STRB*COUNTR
03216   36 0000    1420              ENTBK*0
03217   71 0040    1421              ADDALK*40           ADD ASCII BIAS
03220   02 3247    1422              CMAL*M136           CR-LF
03221   63 3226    1423              JPNOT*LOK+5         NO
03222   70 0004    1424              ENTALK*4            CR
03223   76 3162    1425              RJP*T$PT7
03224   70 0003    1426              ENTALK*3            LF

03225   34 3242    1427              JP*CONV3
03226   44 3250    1430              STRAL*MDUM
03227   13 3251    1431    CONV1     ENTALB*CONST
03230   52 3245    1432              SLCL*CT177
03231   50 4211    1433              RSHAL*9D
03232   02 3250    1434              CMAL*MDUM
03233   61 3240    1435              JPEQ*CONV2
03234   56 3246    1436              BSK*M76

03235   34 3227    1437              JP*CONV1
```

```
03236   12 3250    1440                   ENTAL*MDUM
03237   50 5640    1441                   STOP*40
03240   13 3251    1442      CONV2        ENTALB*CONST
03241   52 3211    1443                   SLCL*T$PT6
03242   32 3244    1444      CONV3        ENTB*COUNTR

03243   55 3214    1445                   1JP*CONVER
03244   00 0000    1446      COUNTR       0*
03245   17 7000    1447      CT177        177000*
03246   00 0100    1450      M76          000100*
03247   00 0136    1451      M136         000136*
03250   00 0000    1452      MDUM         0*
03251   10 1006    1453      CONST        101006*
03252   10 2007    1454                   102007*

03253   10 3010    1455                   103010*
03254   10 4011    1456                   104011*
03255   10 5012    1457                   105012*
03256   10 6013    1460                   106013*
03257   10 7014    1461                   107014*
03260   11 0015    1462                   110015*
03261   11 1016    1463                   111016*
03262   11 2017    1464                   112017*

03263   11 3020    1465                   113020*
03264   11 4021    1466                   114021*
03265   11 5022    1467                   115022*
03266   11 6023    1470                   116023*
03267   11 7024    1471                   117024*
03270   12 0025    1472                   120025*
03271   12 1026    1473                   121026*
03272   12 2027    1474                   122027*

03273   12 3030    1475                   123030*
03274   12 4031    1476                   124031*
03275   12 5032    1477                   125032*
03276   12 6033    1500                   126033*
03277   12 7034    1501                   127034*
03300   13 0035    1502                   130035*
03301   13 1036    1503                   131036*
03302      2037    1504                   132037*
```

```
03303   01 5004    1505        015004*
03304   01 2003    1506        012003*
03305   13 7076    1507        137076*
03306   05 2050    1510        052050*
03307   04 7072    1511        047072*
03310   05 6075    1512        056075*

03311   04 0005    1513        040005*
03312   17 7077    1514        177077*
03313   06 0060    1515        060060*
03314   06 1061    1516        061061*
03315   06 2062    1517        062062*
03316   06 3063    1520        063063*
03317   06 4064    1521        064064*
03320   06 5065    1522        065065*

03321   06 6066    1523        066066*
03322   06 7067    1524        067067*
03323   07 0070    1525        070070*
03324   07 1071    1526        071071*
03325   05 0051    1527        050051*
03326   05 1040    1530        051040*
03327   05 3042    1531        053042*
03330   05 4056    1532        054056*

03331   05 5041    1533        055041*
03332   05 7074    1534        057074*
03333   07 2053    1535        072053*
03334   07 3073    1536        073073*
03335   07 4043    1537        074043*
03336   07 5044    1540        075044*
03337   07 6045    1541        076045*
03340   07 7054    1542        077054*

03341   10 0057    1543        100057*
03342   04 4047    1544        044047*
03343   05 2050    1545        052050*
03344   13 5046    1546        135046*
03345   13 4001    1547        134001*
03346   04 5002    1550        045002*
```

```
03347    04 2052     1551                    042052*
03350    04 1055     1552                    041055*
03351    13 0050     1553                    136050*
                     1554                    REMARK*TYPC FOR 12.2 OR 153?
03352    00 0000     1555         TYPC       0*
03353    75 3443     1556                    STRSR*T$PC20
03354    46 3445     1557                    STRAU*T$PC12
03355    44 3446     1560                    STRAL*T$PC13

03356    42 3447     1561                    STRB*T$PC14
03357    70 0003     1562                    ENTALK*3
03360    76 3474     1563                    RJP*T$PC24          ENABLE KEYBOARD
03361    32 3352     1564         T$PC1      ENTB*TYPC           ADVANCE EXIT ADDR
03362    37 0001     1565                    ENTBKB*1
03363    42 3352     1566                    STRB*TYPC
03364    50 7310     1567                    ENTSR*10
03365    11 0000     1570                    ENTAUB*0            NEXT CODE WORD TO AU

03366    50 7300     1571                    ENTSR*0             CLR SR ACTIVE
03367    70 0000     1572                    ENTALK*0
03370    50 4703     1573                    LSHA*3              CODE DIGIT TO AL
03371    61 3435     1574                    JPALZ*T$PC11        ALL DONE IF ZERO
03372    44 3450     1575                    STRAL*T$PC15        TEMP STORE
03373    32 3450     1576                    ENTB*T$PC15
03374    35 3374     1577         T$PC2      JPB*T$PC2
03375    34 3412     1600                    JP*T$PC3            KYBD COMMAND

03376    34 3424     1601                    JP*T$PC4            A
03377    34 3430     1602                    JP*T$PC6            A UPPER
03400    34 3426     1603                    JP*T$PC5            A LOWER
03401    34 3432     1604                    JP*T$PC7            B
03402    70 0000     1605                    ENTALK*0            Y
03403    50 4717     1606                    LSHA*17
03404    44 3450     1607                    STRAL*T$PC15
03405    32 3450     1610                    ENTB*T$PC15

03406    50 7310     1611                    ENTSR*10
03407    11 0000     1612                    ENTAUB*0            CONTENTS OF Y
03410    50 7300     1613                    ENTSR*0
03411    '  3433     1614                    JP*T$PC10
```

```
03412    70 0000    1615    T$PC3     ENTALK*0
03413    50 4717    1616              LSHA*15D

03414    61 3422    1617              JPALZ*T$PCSP
03415    70 0015    1620    T$$$1     ENTALK*15
03416    76 3463    1621              RJP*T$PC21
03417    70 0012    1622    T$$$2     ENTALK*12
03420    76 3463    1623              RJP*T$PC21
03421    34 3361    1624              JP*T$PC1
03422    70 0040    1625    T$PCSP    ENTALK*40
03423    34 3420    1626              JP*LOK-3

03424    10 3445    1627    T$PC4     ENTAU*T$PC12
03425    76 3451    1630              RJP*T$PC16
03426    10 3446    1631    T$PC5     ENTAU*T$PC13
03427    34 3433    1632              JP*T$PC10
03430    10 3445    1633    T$PC6     ENTAU*T$PC12
03431    34 3433    1634              JP*T$PC10
03432    10 3447   ·1635    T$PC7     ENTAU*T$PC14
03433    76 3451    1636    T$PC10    RJP*T$PC16

03434    34 3361    1637              JP*T$PC1
03435    70 0001    1640    T$PC11    ENTALK*1
03436    14 3352    1641              ADDAL*TYPC
03437    44 3352    1642              STRAL*TYPC
03440    10 3445    1643              ENTAU*T$PC12
03441    12 3446    1644              ENTAL*T$PC13
03442    32 3447    1645              ENTB*T$PC14
03443    50 7300    1646    T$PC20    ENTSR*0

03444    55 3352    1647              IJP*TYPC
03445    00 0000    1650    T$PC12    0*
03446    00 0000    1651    T$PC13    0*
03447    00 0000    1652    T$PC14    0*
03450    00 0000    1653    T$PC15    0*
03451    00 0000    1654    T$PC16    0*
03452    70 0005    1655              ENTALK*5
03453    44 3450    1656              STRAL*T$PC15

03454    70 0000    1657    T$PC17    ENTALK*0
03455    50 4703    1660              LSHA*3
```

CONV 6 OCT DIGITS TO KYBD CD-TYPE

CONVERT-TYPE 6 OCT DIGITS

```
03456   71 0060    1661                      ADDALK*60              MAKE FIELD DATA DIGIT
03457   76 3463    1662                      RJP*T$PC21             TYPE IT
03460   57 3450    1663                      ISK*T$PC15             ARE 6 TYPED
03461   34 3454    1664                      JP*T$PC17              NO

03462   55 3451    1665                      IJP*T$PC16             YES
03463   00 0000    1666    T$PC21           0*                     SEND KYBD CODE IN AL
03464   76 3504    1667                      RJP*T$PC25
03465   44 3473    1670                      STRAL*T$PC23
03466   50 1200    1671    T$$1             BUFOUT*CHAN*AD*1*T.PC23
03467   00 3473
03470   00 3473
03471   76 3504    1672                      RJP*T$PC25

03472   55 3463    1673                      IJP*T$PC21
03473   00 0000    1674    T$PC23           0*
03474   00 0000    1675    T$PC24           0*                     DO KYBD FCT CODE
03475   76 3504    1676                      RJP*T$PC25
03476   44 3473    1677                      STRAL*T$PC23
03477   50 1300    1700    T$$2             EXFCT*CHAN*AD*1*T$.C23
03500   00 3473
03501   00 3473

03502   76 3504    1701                      RJP*T$PC25
03503   55 3474    1702                      IJP*T$PC24
03504   00 0000    1703    T$PC25           0*                     WAIT ON ACT FCT-DATA BUFS
03505   50 2300    1704    T$$3             SKPFIN*CHAN
03506   34 3505    1705                      JP*LOK-1
03507   50 2200    1706    T$$4             SKPOIN*CHAN
03510   34 3507    1707                      JP*LOK-1
03511   55 3504    1710                      IJP*T$PC25

                   1711                      REMARK*INSERT SELECTED I/O CHANNEL NUMBER
                   1712                      REMARK*IN ALL I/O COMMANDS.
                   1713                      REMARK*MODIFIED FO. 1232/1532 INTERCHANGE
03512   00 0000    1714    TYPE             0*                     INITIAL AL INPUT PARAMETER
03513   12 3114    1715                      ENTAL*ALPARM           CHANNEL NO. TO BITS 5-0
03514   50 4203    1716                      RSHAL*3                000047
03515   52 3603    1717                      SLCL*K1                777700
03516   10 3604    1720                      ENTAU*K2
```

```
03517    04 3165    1721              SLSU*T$1
03520    44 3165    1722              STRAL*T$1
03521    04 3174    1723              SLSU*T$2
03522    44 3174    1724              STRAL*T$2
03523    04 3201    1725              SLSU*T$3
03524    44 3201    1726              STRAL*T$3

03525    04 3203    1727              SLSU*T$4
03526    44 3203    1730              STRAL*T$4
03527    04 3466    1731              SLSU*T$$1
03530    44 3466    1732              STRAL*T$$1
03531    04 3477    1733              SLSU*T$$2
03532    44 3477    1734              STRAL*T$$2
03533    04 3505    1735              SLSU*T$$3
03534    44 3505    1736              STRAL*T$$3

03535    04 3507    1737              SLSU*T$$4
03536    44 3507    1740              STRAL*T$$4
03537    12 3114    1741              ENTAL*ALPARM           INITIAL AL INPUT PARAMETER
03540    50 4612    1742              LSHAL*10D              1232/1532 BIT TO BIT 0
03541    52 3605    1743              SLCL*K3                000001
03542    74 3543    1744              STRADR*LOK+1
03543    36 0000    1745              ENTBK*0                B IS 0 FOR 1232, 1 FOR 1532
03544    13 3555    1746              ENTALB*TYPE1           TABLE OF MODIFIED INSTRUCTIONS

03545    44 3137    1747              STRAL*RNOOP
03546    13 3557    1750              ENTALB*TYPE1+2
03547    44 3415    1751              STRAL*T$$$1
03550    13 3561    1752              ENTALB*TYPE1+4
03551    44 3417    1753              STRAL*T$$$2
03552    13 3563    1754              ENTALB*TYPE1+6
03553    44 3422    1755              STRAL*T$PCSP
03554    55 3512    1756              IJP*TYPE

                    1757              REMARK*TABLE OF 1232/1532 MODIFIED INSTRUCTIONS
03555    76 3214    1760    TYPE1     RJP*CONVER             1232
03556    71 0040    1761              ADDALK*40              1532
03557    70 0004    1762              ENTALK*04              1232
03560    70 0015    1763              ENTALK*15              1532
03561    70 0003    1764              ENTALK*03              1232
03562    70 0012    1765              ENTALK*12              1532
```

```
03563   70 0005   1766           ENTALK*05                          1232
03564   70 0040   1767           ENTALK*40                          1532
                  1770           REMARK*MODIFY OUTPUT AND EXF BUFFERS FOR N+1 TERMINATION
03565   00 0000   1771   IOSET   0*
03566   12 3167   1772           ENTAL*T$1+2
03567   71 0001   1773           ADDALK*1
03570   44 3166   1774           STRAL*T$1+1

03571   12 3176   1775           ENTAL*T$2+2
03572   71 0001   1776           ADDALK*1
03573   44 3175   1777           STRAL*T$2+1
03574   12 3470   2000           ENTAL*T$$1+2
03575   71 0001   2001           ADDALK*1
03576   44 3467   2002           STRAL*T$$1+1
03577   12 3501   2003           ENTAL*T$$2+2
03600   71 0001   2004           ADDALK*1

03601   44 3500   2005           STRAL*T$$2+1
03602   55 3565   2006           IJP*IOSET
03603   00 0037   2007   K1      000037*
03604   77 7700   2010   K2      777700*
03605   00 0001   2011   K3      000001*
                  2012           ENDATA*
```

LABELS AND ADDRESSES

Label	Addr	Label	Addr	Label	Addr	Label	Addr	Label	Addr
AIR	02305	AIR1	02325	ALPARM	03114	ALTO	02160	ALT1	02115
AIOCK	02162	ATOCK1	02176	ATICK	02117	ATICK1	02133	BAER	01606
CUNST	03251	CONV1	03227	CONV2	03240	CONV3	03242	CONVER	03214
COUNT	01604	COUNTR	03244	CAIR	02441	CAIR1	02461	CCKWP	02400
CCKWP1	02402	CCKWP2	02407	CCKWP3	02415	CCKWP4	02424	CCKWP5	02432
CHAN	00000	CHEK	01735	CHEK1	01756	CHEK2	01757	CHEK3	01760
CHEK4	01737	CHEK5	01751	CKWP	02214	CKWP1	02246	CKWP13	02345
CKWP14	02346	CKWP2	02253	CKWP3	02241	CKWP4	02270	CKWP5	02276
CRANK	01532	CT177	03245	CWP1	02347	CWP2	02352	CWP3	02356
CWP4	02367	DIP	03107	ERROUT	01607	ERRT1	01732	ERRT2	01733
ERRT3	01734	FLUSH	03076	FLUSH1	03050	FLUSH2	03066	HOCK	02011
HOCK1	02024	HALT	02104	HALTO	02147	HDO	02007	HD1	02041
HEAD	01535	HERE	03111	HICK	02054	HICK1	02070	HLD1	02052
IUSET	03565	IMAGE	07000	INT2	01450	INT20	01452	INT21	01462
INT22	01463	K1	03603	K2	03604	K3	03605	LOOP	03046
L01	03032	L03	03033	L200	03036	L277	03037	L477	03040
L677	03041	L77	03035	L9	03034	LACTR	03045	LADD	03042
LCON	02622	LCON0	02771	LCON01	02776	LCON02	03004	LCON03	03010
LCON04	03013	LCONA	02623	LCONB	02625	LCONC	02626	LCOND	02631
LCONE	02642	LCONE1	02644	LCONF	02647	LCONG	02652	LCONH	02661
LCONI	02664	LCONJ	02667	LCONK	02677	LCONL	02751	LCONM	02754
LCONN	02764	LCONN1	02766	LCONP	03015	LCORR	03043	LICORR	03044
LINIT	03022	LPAT	03047	M136	03247	M76	03246	MAIN	03700
MDUM	03250	NUMB	01605	PALO	03106	PAL1	03105	PAR	03101
PAR1	03102	PAT	03103	PAT1	03104	PQXY	01571	PROOF	01761
RAN	02607	RAN1	02610	RAN2	02620	RAN3	02621	RAN4	02616
RECYL	01575	RNOOP	03137	RW	02501	RW10	02603	RW11	02604
RW2	02507	RW20	02561	RW21	02513	RW22	02547	RW23	02563
RW3	02526	RW30	02605	RW31	02606	RW4	02532	RW5	02544
RW6	02546	RW7	02554	SF	01730	SIZE	01500	SIZE1	01523
SIZE2	01524	SIZE3	01526	SIZE4	01530	SIZE5	01531	SIZE6	01516
SIZE7	01520	T$$$1	03415	T$$$2	03417	T$$1	03466	T$$2	03477
T$$3	03505	T$$4	03507	T$1	03165	T$2	03174	T$3	03201
T$4	03203	T$PC1	03301	T$PC10	03433	T$PC11	03435	T$PC12	03445

T$PC13	0344b	T$PC1.	03447	T$PC15	03450	T$PC16	03451	T$PC17	03454
T$PC2	03374	T$PC20	03443	T$PC21	03463	T$PC23	03473	T$PC24	03474
T$PC25	03504	T$PC3	03412	T$PC4	03424	T$PC5	03426	T$PC6	03430
T$PC7	03432	T$PCS.	03422	T$PT1	0314	T$PT11	03213	T$PT12	03171
T$PT13	03200	T$PT2	03133	T$PT20	0317	T$PT21	03146	T$PT22	03150
T$PT3	03206	T$PT4	03207	I$PT5	0321.0	T$PT6	03211	T$PT61	03212
T$PT7	03162	TEST	01777	THERE	0311.2	TRACK	01546	TYPC	03352
TYPE	03512	TYPE1	03555	TYPT	0311.5	WHERE	03113	WP1	02212
WP2	02215	WP3	02221	WP4	02242	WP5	02243		