

FP11

CMFF, CMPD
MD-11-DCFPE-B

EP-DCFPE-B-DL-A

OCT 1976

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FICHE 1 OF 1

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11
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48

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IDENTIFICATION

PRODUCT CODE: MAINDEC-11-DCFPE
PRODUCT NAME: FP11 BASIC INSTRUCTION TESTS
DATE CREATED: MARCH 12, 1973
MAINTAINER: DIAGNOSTIC GROUP
AUTHORS: BOB BRAIN & KEN CHAPMAN

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1973

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MAINDEC NO.

INSTRUCTIONS TESTED

DCFPA	LDFPS, STFPS, SETI, SETL SETF, SETD, CFCC
DCFPB	STST
DCFPC	LDF, LDD, STF, STC
DCFPD	ADD, ADD, SUBF, SUBC
DCFDE	CMDF, CMPD
DCFPF	MULF, MULD
DCFPG	DIVF, DIVD
DCFPH	CLRF, CLRD, TSTF, TSTD ABSF, ABSD, NEGF, NEGD
DCFPI	LDCF, LCCDF, STCF, STCDF
DCFPJ	LDCF, LDCLF, LDCID, LDCID STCFI, STCFL, STCDI, STCDL
DCFPK	LDEXP, STEXP
DCFP_	MDCF, MDCD

Vertical text on the left margin, possibly a page number or reference code, appearing as a series of characters and symbols.

FP11 BASIC INSTRUCTION TEST DCFPA - DCFPL
TABLE OF CONTENTS

PAGE 2

CONTENTS

1.	ABSTRACT
2.	REQUIREMENTS
2.1	EQUIPMENT
2.2	STORAGE
2.3	PRELIMINARY PROGRAMS
3.	LOADING PROCEDURE
4.	STARTING PROCEDURE
4.1	CONTROL SWITCH SETTINGS
4.2	STARTING ADDRESS
4.3	PROGRAM AND/OR OPERATOR ACTION
5.	OPERATING PROCEDURE
5.1	OPERATIONAL SWITCH SETTINGS
5.2	SUBROUTINE ABSTRACT
6.	ERRORS
7.	RESTRICTIONS
8.	MISCELLANEOUS
8.1	EXECUTION TIME
8.2	STACK POINTER
8.3	POWER FAIL
9.	PROGRAM DESCRIPTION

RE-TEST OF CMPF, CMPD
TEST OF CMPF, CMPD
DCFPE.P:1



FP11 BASIC INSTRUCTION TEST DCFPA - DCFPL
DESCRIPTION

PAGE 3

1. ABSTRACT

THESE PROGRAMS TEST THE FP11 IN ALL MODES WITH FIXED NUMBER PATTERNS. THE PROGRAMS SHOULD BE RUN IN ORDER FOR AT LEAST 2 PASSES WITH ALL SWITCHES DOWN.

2. REQUIREMENTS

2.1 EQUIPMENT

PDP11/45 STANDARD COMPUTER WITH FP11 OPTION

2.2 STORAGE

PROGRAM STORAGE - THE ROUTINES USE MEMORY 0 - 17776

2.3 PRELIMINARY PROGRAMS

NONE

3. LOADING PROCEDURE

USE STANDARD PROCEDURE FOR ABS TAPES.

4. STARTING PROCEDURE

4.1 CONTROL SWITCH SETTINGS

SEE 5.1.1 (ALL DOWN FOR WORST CASE TESTING)

4.2 STARTING ADDRESS

THE PROGRAM SHOULD ALWAYS BE STARTED AT 200.

4.3 PROGRAM AND/OR OPERATOR ACTION

- 1) LOAD PROGRAM INTO MEMORY USING ABS LOADER.
- 2) LOAD ADDRESS 200.
- 3) SET SWITCHES (SEE SEC 5.1.1) ALL DOWN FOR WORST CASE
- 4) PRESS START.
- 5) THE PROGRAM WILL LOOP AND BELL WILL RING ONCE EVERY PASS
- 6) A MINIMUM OF TWO PASSES SHOULD ALWAYS BE RUN.

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF. CMPD

E01
MACY11 27(732) 03-SEP-76 15:25 PAGE 4

162
163

7) THE DISPLAY ON THE 11/45 WILL SHOW THE ITERATION COUNT IN
THE LEFT BYTE AND TEST NUMBER IN THE RIGHT. TO USE, SET THE

FP11 BASIC INSTRUCTION TEST DCFPA - DCFPL
DESCRIPTION

5.2.3 TRTRAP

IF SW<12> IS ON A 0, THE T BIT WILL BE SET ON ALTERNATE PASSES. WHEN SET, IT CAUSES A TRAP AFTER EACH INSTRUCTION. THE FIRST INSTRUCTION EXECUTED UPON TRAPPING IS AN "RTT" WHICH RETURNS TO THE INTERRUPTED SEQUENCE OF INSTRUCTIONS. THIS SEQUENCE IS CONTINUED UNTIL THE END OF THE PROGRAM IS REACHED.

5.2.4 TRAPCATCHER

A ".+2" - "HALT" SEQUENCE IS REPEATED FROM 0 - 776 TO CATCH ANY UNEXPECTED TRAPS. THUS ANY UNEXPECTED TRAPS OR INTERRUPTS WILL HALT AT THE VECTOR + 2.

5.2.5 FLOATING POINT TRAP (TO 244)

THE FP11 INTERRUPT DISABLE BIT IS ALWAYS SET IN ALL OF THESE TESTS (EXCEPT DCFPA) SO NO TRAPS TO 244 SHOULD OCCUR. IF AN INTERRUPT OCCURS, THE PROGRAM WILL HALT AT 766 IN THE ROUTINE CALLED FLTERR AND DISPLAY THE FPS REGISTER IN RC.

6. ERRORS

6.1 ERROR PRINTOUT

THE FORMAT IS AS FOLLOWS:

ADR FPS ANS1 ANS2 ANS3 ANS4 ANS5 ANS6 ANS7 ANS8
FEC FEA

WHERE:

- ADR = ADDRESS OF ERROR HLT
- FPS = FLOATING POINT STATUS
- FEC = FLOATING EXCEPTION CODES (ERROR CODES)
- FEA = FLOATING EXCEPTION ADDRESS (ERROR ADDRESS)
- ANS1-8 = ERROR DATA READ FROM THE FP11. FROM 0-8 OF THESE MAY BE TYPED DEPENDING ON THE NUMBER FOLLOWING THE HLT; I.E., HLT+3 WOULD TYPE ANS1-ANS3.

TO FIND THE FAILING TEST, LOOK AT THE LISTING ABOVE THE ADDRESS TYPED.

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.TITLE MAINDEC-11-DCFPE-B TEST OF CMPF, CMPD
:COPYRIGHT 1972, DIGITAL EQUIPMENT CORP., MAYNARD, MASS
:PROGRAM BY KEN CHAPMAN
.REM*

SWITCH	USE
8	0 - LOAD UB REGISTER WITH SW<7:0> 1 - LOOP ON TEST IN SW<7:0>
9	LOOP ON ERROR
10	0 - BELL ON PASS COMPLETE 1 - BELL ON ERROR
11	INHIBIT ITERATIONS
12	INHIBIT TRACE TRAP
13	INHIBIT ERROR TYPEOUTS
14	LOOP ON TEST
15	HALT ON ERROR

OUTPUT FORM:

ADR FPS ANS1 ANS2 ANS3 ANS4 ANS5 ANS6 ANS7 ANS8
FEC FEA

BIT	FPS	REASON	CODE	FEC	ERROR
0		CARRY	0		ADDRESS ERROR
1		OVERFLOW	2		OPCODE ERROR
2		ZERO	4		DIVIDE BY ZERO
3		NEGATIVE	6		CONVERSION ERROR
4		MAINTAINANCE MODE	10		OVERFLOW
5		TRUNCATE MODE	12		UNDERFLOW
6		LONG INTEGER MODE	14		UNDEFINED VARIABLE (-0)
7		DOUBLE PRECISION MODE	16		UBREAK TRAP
8		INTERUPT ON CONVERSION ERROR			
9		INTERUPT ON OVERFLOW			
10		INTERUPT ON UNDERFLOW			
11		INTERUPT ON UNDEFINED VARIABLE			
12					
13					
14		INTERUPT DISABLE			
15		ERROR FLAG*			

000001			.ENABL	ABS	
177776			N=	1	
177570			PS=	177776	
177570			SWR=	177570	
104400			DISPLAY=	SWR	
104000			SCOPE=	TRAP	
000004			HLT=	EMT	
000207			TYPE=	10T	
000000			BELL=	207	
000000			FPS=	%0	
000000			RO=	%0	
000001			R1=	%1	
000002			R2=	%2	
000003			R3=	%3	
000004			R4=	%4	
000005			R5=	%5	
000005			TTY=	%5	
000006			SP=	%6	
000007			PC=	%7	
000000			AC0=	%0	
000001			AC1=	%1	
000002			AC2=	%2	
000003			AC3=	%3	
000004			AC4=	%4	
000005			AC5=	%5	
100000			SW15=	100000	
040000			SW14=	40000	
020000			SW13=	20000	
010000			SW12=	10000	
004000			SW11=	4000	
002000			SW10=	2000	
001000			SW09=	1000	
000400			SW08=	400	
170003			LDUB=	170003	
170005			STAO=	170005	
170007			STQ0=	170007	
170006			MRS=	170006	
170004			LDSC=	170004	
000000			. =	0	
000200			. =	200	
000200	000167	000622		JMP	BEG
000760	000760		. =	760	
000762	170200		F.TERR:	STFPS	FPS
000766	170367	000034		STST	FEC
000770	000000			HAL*	
000770	000002			RTI	

:TRAP CATCHER FROM 0 - 776

001000	001000			. =	1000			
001000	000000			ICNT:	0			; ITERATION COUNT - LH TEST NO. - PH
001002	000000			ANS1:	0			; FIRST ANSWER (SEE CODE)
001004	000000			ANS2:	0			
001006	000000			ANS3:	0			
001010	000000			ANS4:	0			
001012	000000			ANS5:	0			
001014	000000			ANS6:	0			
001016	000000			ANS7:	0			
001020	000000			ANS8:	0			
001022	000000			FEC:	0			; FLOATING EXCEPTION CODES
001024	000000			FEA:	0			; FLOATING EXECPTION ADDRESS
001026	012706	000600		BEG:	MOV	#600, SP		; ** STACK AT 600 **
001032	012737	001054	000004		MOV	#M1120, Q#4		; FIND OUT WHICH MACHINE THIS IS
001040	005737	177772			TST	Q#177772		; IS PIRQ THERE?
001044	012767	000006	015210		MOV	#6, YESRT		; FUDGE IN RTT IF 11/45
001052	000403				BR	BEGIN		
001054	016737	016344	000010	M1120:	MOV	FPTADR, Q#10		; LOAD THE ILLEGAL INSTRUCTION VECTOR
								; WITH THE ADDRESS OF THE FPU.
								; THE FPU WILL HANDLE THE BAD OPCODES
								; RESET 4
001062	012737	000006	000004	BEGIN:	MOV	#6, Q#4		
001070	012706	000600			MOV	#600, SP		
001074	012737	016262	000014		MOV	#YESRT, Q#14		; SET TRACE TRAP VECTOR
001102	012777	017122	016322		MOV	#POWDWN, QDOWNVEC		
001110	012777	000340	016316		MOV	#340, QDOWNVEC+2		
001116	012737	017322	000020		MOV	#. IOT, Q#20		; SET UP VECTOR 20
001124	012700	000030			MOV	#30, R0		; SET R0 TO VECTOR 30
001130	012720	016424			MOV	#. TRP, (0)+		; SET EMT VECTOR
001134	012720	000340			MOV	#340, (0)+		
001140	012720	016264			MOV	#. EMT, (0)+		; SET TRAP VECTOR
001144	012710	000340			MOV	#340, (0)		
001150	012777	000760	016250		MOV	#FLTERR, QFPVECT		; LOAD INTERRUPT VECTOR
001156	012777	000340	016244		MOV	#340, QFPVECT+2		; LOCK UP PROCESSOR
001164	005067	177610			CLR	ICNT		
001170	005067	016252			CLR	LAD		

```

*****
TEST 1:      TEST CMPF (COMPARE FLOATING POINT)
             COMPARE 140000,000000 TO 040000,000000
             FPS = 047410,   FSRC = M6-R7,   AC = AC2
*****

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001174 104400          SCOPE
001176 000404          BR      TST1

001200 040000 000000   DTA1:  040000,000000
001204 140000 000000   DTB1:  140000,000000

001210 170127 047400   TST1:  LDFPS  #047400      ;LOAD FLOATING POINT STATUS
001214 172667 177760   LDF    DTA1,   AC2      ;LOAD 040000,000000 INTO AC2
001220 173667 177760   CMPF   DTB1,   AC2      ;COMPARE 140000,000000 TO AC2
001224 170200          STFPS  FPS          ;STORE FLOATING POINT STATUS
001226 022700 047410   CMP    #047410,FPS     ;CHECK FLOATING POINT STATUS
001232 001401          BEQ    .+4             ;BRANCH IF OK
001234 104000          HLT                    ;FPS NOT EQUAL TO 047410

001236 174267 177540   STF    AC2,   ANS1     ;STORE AC2 IN ANS1, ANS2
001242 022767 040000 177532  CMP    #040000,ANS1    ;040000 STILL IN AC2?
001250 001401          BEQ    .+4             ;BRANCH IF OK
001252 104002          HLT+2                ;AC2 CHANGED

001254 022767 000000 177522  CMP    #000000,ANS2    ;000000 STILL IN AC2?
001262 001401          BEQ    .+4             ;BRANCH IF OK
001264 104002          HLT+2                ;AC2 CHANGED

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*****
TEST 2:      TEST CMPF (COMPARE FLOATING POINT)
             COMPARE 040000,000000 TO 140000,000000
             FPS = 047400,   FSRC = M6-R7,   AC = AC0
*****

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001266 104400          SCOPE
001270 000404          BR      TST2

001272 140000 000000   DTA2:  140000,000000
001276 040000 000000   DTB2:  040000,000000

001302 170127 047400   TST2:  LDFPS  #047400      ;LOAD FLOATING POINT STATUS
001306 172467 177760   LDF    DTA2,   AC0      ;LOAD 140000,000000 INTO AC0
001312 173467 177760   CMPF   DTB2,   AC0      ;COMPARE 040000,000000 TO AC0
001316 170200          STFPS  FPS          ;STORE FLOATING POINT STATUS
001320 022700 047400   CMP    #047400,FPS     ;CHECK FLOATING POINT STATUS
001324 001401          BEQ    .+4             ;BRANCH IF OK
001326 104000          HLT                    ;FPS NOT EQUAL TO 047400

001330 174067 177446   STF    AC0,   ANS1     ;STORE AC0 IN ANS1, ANS2
001334 022767 140000 177440  CMP    #140000,ANS1    ;140000 STILL IN AC0?
001342 001401          BEQ    .+4             ;BRANCH IF OK
001344 104002          HLT+2                ;AC0 CHANGED

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MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 12

001346 022767 000000 177430
001354 001401
001356 104002

CMP #000000,ANS2 ;000000 STILL IN AC0?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC0 CHANGED

:TEST 3: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 177777,177777 TO 077777,177777
: FPS = 047410, FSRC = M6-R7, AC = AC1
:*****

001360 104400
001362 000404

SCOPE
BR TST3

001364 077777 177777
001370 177777 177777

DTA3: 077777,177777
DTB3: 177777,177777

001374 170127 047400
001400 172567 177760
001404 173567 177760
001410 170200
001412 022700 047410
001416 001401
001420 104000

TST3: LDFPS #047400 ;LOAD FLOATING POINT STATUS
LDF DTA3, AC1 ;LOAD 077777,177777 INTO AC1
CMPF DTB3, AC1 ;COMPARE 177777,177777 TO AC1
STFPS FPS ;STORE FLOATING POINT STATUS
CMP #047410,FPS ;CHECK FLOATING POINT STATUS
BEQ .+4 ;BRANCH IF OK
HLT ;FPS NOT EQUAL TO 047410

001422 174167 177354
001426 022767 077777 177346
001434 001401
001436 104002

STF AC1, ANS1 ;STORE AC1 IN ANS1, ANS2
CMP #077777,ANS1 ;077777 STILL IN AC1?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC1 CHANGED

001440 022767 177777 177336
001446 001401
001450 104002

CMP #177777,ANS2 ;177777 STILL IN AC1?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC1 CHANGED

:TEST 4: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 077777,177777 TO 177777,177777
: FPS = 047400, FSRC = M6-R7, AC = AC3
:*****

001452 104400
001454 000404

SCOPE
BR TST4

001456 177777 177777
001462 077777 177777

DTA4: 177777,177777
DTB4: 077777,177777

001466 170127 047400
001472 172767 177760
001476 173767 177760
001502 170200
001504 022700 047400
001510 001401
001512 104000

TST4: LDFPS #047400 ;LOAD FLOATING POINT STATUS
LDF DTA4, AC3 ;LOAD 177777,177777 INTO AC3
CMPF DTB4, AC3 ;COMPARE 077777,177777 TO AC3
STFPS FPS ;STORE FLOATING POINT STATUS
CMP #047400,FPS ;CHECK FLOATING POINT STATUS
BEQ .+4 ;BRANCH IF OK
HLT ;FPS NOT EQUAL TO 047400

001514 174367 177262

STF AC3, ANS1 ;STORE AC3 IN ANS1, ANS2

001520 022767 177777 177254
001526 001401
001530 104002

CMP #177777,ANS1 ;177777 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC3 CHANGED

001532 022767 177777 177244
001540 001401
001542 104002

CMP #177777,ANS2 ;177777 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC3 CHANGED

:TEST 5: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 125252,125252 TO 052525,052525
: FPS = 047410, FSRC = M6-R7, AC = AC1
:*****

001544 104400
001546 000404

SCOPE
BR TST5

001550 052525 052525
001554 125252 125252

DTA5: 052525,052525
DTB5: 125252,125252

001560 170127 047400
001564 172567 177760
001570 173567 177760
001574 170200
001576 022700 047410
001602 001401
001604 104000

TST5: LDFPS #047400 ;LOAD FLOATING POINT STATUS
LDF DTA5, AC1 ;LOAD 052525,052525 INTO AC1
CMPF DTB5, AC1 ;COMPARE 125252,125252 TO AC1
STFPS FPS ;STORE FLOATING POINT STATUS
CMP #047410,FPS ;CHECK FLOATING POINT STATUS
BEQ .+4 ;BRANCH IF OK
HLT ;FPS NOT EQUAL TO 047410

001606 174167 177170
001612 022767 052525 177162
001620 001401
001622 104002

STF AC1, ANS1 ;STORE AC1 IN ANS1, ANS2
CMP #052525,ANS1 ;052525 STILL IN AC1?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC1 CHANGED

001624 022767 052525 177152
001632 001401
001634 104002

CMP #052525,ANS2 ;052525 STILL IN AC1?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC1 CHANGED

:TEST 6: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 052525,052525 TO 125252,125252
: FPS = 047400, FSRC = M6-R7, AC = AC0
:*****

001636 104400
001640 000404

SCOPE
BR TST6

001642 125252 125252
001646 052525 052525

DTA6: 125252,125252
DTB6: 052525,052525

001652 170127 047400
001656 172467 177760
001662 173467 177760
001666 170200
001670 022700 047400

TST6: LDFPS #047400 ;LOAD FLOATING POINT STATUS
LDF DTA6, AC0 ;LOAD 125252,125252 INTO AC0
CMPF DTB6, AC0 ;COMPARE 052525,052525 TO AC0
STFPS FPS ;STORE FLOATING POINT STATUS
CMP #047400,FPS ;CHECK FLOATING POINT STATUS

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001674 001401      BEQ      .+4      :BRANCH IF OK
001676 104000      HLT                      :FPS NOT EQUAL TO 047400

001700 174067 177076      STF      ACC      ANS1      :STORE ACC IN ANS1, ANS2
001704 022767 125252 177070      CMP      #125252, ANS1      :125252 STILL IN ACC?
001712 001401      BEQ      .+4      :BRANCH IF OK
001714 104002      HLT+2          :ACC CHANGED

001716 022767 125252 177060      CMP      #125252, ANS2      :125252 STILL IN ACC?
001724 001401      BEQ      .+4      :BRANCH IF OK
001726 104002      HLT+2          :ACC CHANGED

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:*****
:TEST 7:      TEST CMPF (COMPARE FLOATING POINT)
:      COMPARE 140052,125252 TO 040052,052525
:      FPS = 047410,   FSRC = M6-R7,   AC = AC1
:*****

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001730 104400      SCOPE
001732 000404      BR      TST7

001734 040052 052525      DTA7: 040052,052525
001740 140052 125252      DTB7: 140052,125252

001744 170127 047400      TST7: LDFPS      #047400      :LOAD FLOATING POINT STATUS
001750 172567 177760      LDF      DTA7,   AC1      :LOAD 040052,052525 INTO AC1
001754 173567 177760      CMPF     DTB7,   AC1      :COMPARE 140052,125252 TO AC1
001760 170200      STFPS     FPS      :STORE FLOATING POINT STATUS
001762 022700 047410      CMP      #047410, FPS      :CHECK FLOATING POINT STATUS
001766 001401      BEQ      .+4      :BRANCH IF OK
001770 104000      HLT                      :FPS NOT EQUAL TO 047410

001772 174167 177004      STF      AC1      ANS1      :STORE AC1 IN ANS1, ANS2
001776 022767 040052 176776      CMP      #040052, ANS1      :040052 STILL IN AC1?
002004 001401      BEQ      .+4      :BRANCH IF OK
002006 104002      HLT+2          :AC1 CHANGED

002010 022767 052525 176766      CMP      #052525, ANS2      :052525 STILL IN AC1?
002016 001401      BEQ      .+4      :BRANCH IF OK
002020 104002      HLT+2          :AC1 CHANGED

```

```

:*****
:TEST 10:     TEST CMPF (COMPARE FLOATING POINT)
:      COMPARE 040052,125252 TO 140052,052525
:      FPS = 047400,   FSRC = M6-R7,   AC = AC2
:*****

```

```

002022 104400      SCOPE
002024 000404      BR      TST10

002026 140052 052525      DTA10: 140052,052525
002032 040052 125252      DTB10: 040052,125252

002036 170127 047400      TST10: LDFPS      #047400      :LOAD FLOATING POINT STATUS

```

C02

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 15

002042	172667	177760		LDF	DTA10, AC2	:LOAD 140052,052525 INTO AC2
002046	173667	177760		CMPF	DTB10, AC2	:COMPARE 040052,125252 TO AC2
002052	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
002054	022700	047400		CMP	#047400,FPS	:CHECK FLOATING POINT STATUS
002060	001401			BEQ	+.4	:BRANCH IF OK
002062	104000			HLT		:FPS NOT EQUAL TO 047400
002064	174267	176712		STF	AC2, ANS1	:STORE AC2 IN ANS1, ANS2
002070	022767	140052	176704	CMP	#140052,ANS1	:140052 STILL IN AC2?
002076	001401			BEQ	+.4	:BRANCH IF OK
002100	104002			HLT+2		:AC2 CHANGED
002102	022767	052525	176674	CMP	#052525,ANS2	:052525 STILL IN AC2?
002110	001401			BEQ	+.4	:BRANCH IF OK
002112	104002			HLT+2		:AC2 CHANGED

```

:*****
:TEST 11: TEST CMPF (COMPARE FLOATING POINT)
:COMPARE 000525,052525 TO 000252,125252
:FPS = 047400, FSRC = M6-R7, AC = AC2
:*****

```

002114	104400			SCOPE		
002116	000404			BR	TST11	
002120	000252	125252		DTA11:	000252,125252	
002124	000525	052525		DTB11:	000525,052525	
002130	170127	047400		TST11:	LDFPS #047400	:LOAD FLOATING POINT STATUS
002134	172667	177760		LDF	DTA11, AC2	:LOAD 000252,125252 INTO AC2
002140	173667	177760		CMPF	DTB11, AC2	:COMPARE 000525,052525 TO AC2
002144	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
002146	022700	047400		CMP	#047400,FPS	:CHECK FLOATING POINT STATUS
002152	001401			BEQ	+.4	:BRANCH IF OK
002154	104000			HLT		:FPS NOT EQUAL TO 047400
002156	174267	176620		STF	AC2, ANS1	:STORE AC2 IN ANS1, ANS2
002162	022767	000252	176612	CMP	#000252,ANS1	:000252 STILL IN AC2?
002170	001401			BEQ	+.4	:BRANCH IF OK
002172	104002			HLT+2		:AC2 CHANGED
002174	022767	125252	176602	CMP	#125252,ANS2	:125252 STILL IN AC2?
002202	001401			BEQ	+.4	:BRANCH IF OK
002204	104002			HLT+2		:AC2 CHANGED

```

:*****
:TEST 12: TEST CMPF (COMPARE FLOATING POINT)
:COMPARE 037777,177777 TO 040000,000000
:FPS = 047410, FSRC = M6-R7, AC = AC2
:*****

```

002206	104400			SCOPE		
002208	000404			BR	TST12	

002212	040000	000000		DTA12:	040000,000000	
002216	037777	177777		DTB12:	037777,177777	
002222	170127	047400		TST12:	LDFPS	#047400 ;LOAD FLOATING POINT STATUS
002226	172667	177760			LDF	DTA12, AC2 ;LOAD 040000,000000 INTO AC2
002232	173667	177760			CMPF	DTB12, AC2 ;COMPARE 037777,177777 TO AC2
002236	170200				STFPS	FPS ;STORE FLOATING POINT STATUS
002240	022700	047410			CMP	#047410,FPS ;CHECK FLOATING POINT STATUS
002244	001401				BEQ	+.4 ;BRANCH IF OK
002246	104000				HLT	;FPS NOT EQUAL TO 047410
002250	174267	176526		STF	AC2, ANS1	;STORE AC2 IN ANS1, ANS2
002254	022767	040000	176520	CMP	#040000,ANS1	;040000 STILL IN AC2?
002262	001401			BEQ	+.4	;BRANCH IF OK
002264	104002			HLT+2		;AC2 CHANGED
002266	022767	000000	176510	CMP	#000000,ANS2	;000000 STILL IN AC2?
002274	001401			BEQ	+.4	;BRANCH IF OK
002276	104002			HLT+2		;AC2 CHANGED

```

:*****
:TEST 13: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 137777,177777 TO 140000,000000
: FPS = 047400, FSRC = M6-R7, AC = ACC
:*****

```

002300	104400			SCOPE		
002302	000404			BR	TST13	
002304	140000	000000		DTA13:	140000,000000	
002310	137777	177777		DTB13:	137777,177777	
002314	170127	047400		TST13:	LDFPS	#047400 ;LOAD FLOATING POINT STATUS
002320	172467	177760			LDF	DTA13, ACC ;LOAD 140000,000000 INTO ACC
002324	173467	177760			CMPF	DTB13, ACC ;COMPARE 137777,177777 TO ACC
002330	170200				STFPS	FPS ;STORE FLOATING POINT STATUS
002332	022700	047400			CMP	#047400,FPS ;CHECK FLOATING POINT STATUS
002336	001401				BEQ	+.4 ;BRANCH IF OK
002340	104000				HLT	;FPS NOT EQUAL TO 047400
002342	174067	176424		STF	ACC, ANS1	;STORE ACC IN ANS1, ANS2
002346	022767	140000	176426	CMP	#140000,ANS1	;140000 STILL IN ACC?
002354	001401			BEQ	+.4	;BRANCH IF OK
002356	104002			HLT+2		;ACC CHANGED
002360	022767	000000	176416	CMP	#000000,ANS2	;000000 STILL IN ACC?
002366	001401			BEQ	+.4	;BRANCH IF OK
002370	104002			HLT+2		;ACC CHANGED

```

:*****
:TEST 14: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 125525,052525 TO 125252,125252
: FPS = 047410, FSRC = M6-R7, AC = ACC
:*****

```

002372 104400
002374 000404

SCOPE
BR TST14

002376 125252 125252
002402 125525 052525

DTA14: 125252,125252
DTB14: 125525,052525

002406 170127 047400
002412 172667 177760
002416 173667 177760
002422 170200
002424 022700 047410
002430 001401
002432 104000

TST14: LDFPS #047400 ;LOAD FLOATING POINT STATUS
LDF DTA14, AC2 ;LOAD 125252,125252 INTO AC2
CMPF DTB14, AC2 ;COMPARE 125525,052525 TO AC2
STFPS FPS ;STORE FLOATING POINT STATUS
CMP #047410,FPS ;CHECK FLOATING POINT STATUS
BEQ .+4 ;BRANCH IF OK
HLT ;FPS NOT EQUAL TO 047410

002434 174267 176342
002440 022767 125252 176334
002446 001401
002450 104002

STF AC2, ANS1 ;STORE AC2 IN ANS1, ANS2
CMP #125252,ANS1 ;125252 STILL IN AC2?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC2 CHANGED

002452 022767 125252 176324
002460 001401
002462 104002

CMP #125252,ANS2 ;125252 STILL IN AC2?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC2 CHANGED

:TEST 15: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 052725,052525 TO 052525,052525
: FPS = 047400, FSRC = M6-R7, AC = AC3
:*****

002464 104400
002466 000404

SCOPE
BR TST15

002470 052525 052525
002474 052725 052525

DTA15: 052525,052525
DTB15: 052725,052525

002500 170127 047400
002504 172767 177760
002510 173767 177760
002514 170200
002516 022700 047400
002522 001401
002524 104000

TST15: LDFPS #047400 ;LOAD FLOATING POINT STATUS
LDF DTA15, AC3 ;LOAD 052525,052525 INTO AC3
CMPF DTB15, AC3 ;COMPARE 052725,052525 TO AC3
STFPS FPS ;STORE FLOATING POINT STATUS
CMP #047400,FPS ;CHECK FLOATING POINT STATUS
BEQ .+4 ;BRANCH IF OK
HLT ;FPS NOT EQUAL TO 047400

002526 174367 176250
002532 022767 052525 176242
002540 001401
002542 104002

STF AC3, ANS1 ;STORE AC3 IN ANS1, ANS2
CMP #052525,ANS1 ;052525 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC3 CHANGED

002544 022767 052525 176232
002552 001401
002554 104002

CMP #052525,ANS2 ;052525 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC3 CHANGED

:TEST 16: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 125252,125252 TO 125052,125252
: FPS = 047410, FSRC = M6-R7, AC = ACC
:*****

002556 104400
002560 000404

SCOPE
BR TST16

002562 125052 125252
002566 125252 125252

DTA16: 125052,125252
DTB16: 125252,125252

002572 170127 047400
002576 172467 177760
002602 173467 177760
002606 170200
002610 022700 047410
002614 001401
002616 104000

TST16: LDFPS #047400 :LOAD FLOATING POINT STATUS
LDF DTA16, ACC :LOAD 125052,125252 INTO ACC
CMPF DTB16, ACC :COMPARE 125252,125252 TO ACC
STFPS FPS :STORE FLOATING POINT STATUS
CMP #047410,FPS :CHECK FLOATING POINT STATUS
BEQ .+4 :BRANCH IF OK
HLT :FPS NOT EQUAL TO 047410

002620 174067 176156
002624 022767 125052 176150
002632 001401
002634 104002

STF ACC, ANS1 :STORE ACC IN ANS1, ANS2
CMP #125052,ANS1 :125052 STILL IN ACC?
BEQ .+4 :BRANCH IF OK
HLT+2 :ACC CHANGED

002636 022767 125252 176140
002644 001401
002646 104002

CMP #125252,ANS2 :125252 STILL IN ACC?
BEQ .+4 :BRANCH IF OK
HLT+2 :ACC CHANGED

:*****
:TEST 17: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 052525,052525 TO 053525,052525
: FPS = 047410, FSRC = M6-R7, AC = AC1
:*****

002650 104400
002652 000404

SCOPE
BR TST17

002654 053525 052525
002660 052525 052525

DTA17: 053525,052525
DTB17: 052525,052525

002664 170127 047400
002670 172567 177760
002674 173567 177760
002700 170200
002702 022700 047410
002706 001401
002710 104000

TST17: LDFPS #047400 :LOAD FLOATING POINT STATUS
LDF DTA17, AC1 :LOAD 053525,052525 INTO AC1
CMPF DTB17, AC1 :COMPARE 052525,052525 TO AC1
STFPS FPS :STORE FLOATING POINT STATUS
CMP #047410,FPS :CHECK FLOATING POINT STATUS
BEQ .+4 :BRANCH IF OK
HLT :FPS NOT EQUAL TO 047410

002712 174167 176064
002716 022767 053525 176056
002724 001401
002726 104002

STF AC1, ANS1 :STORE AC1 IN ANS1, ANS2
CMP #053525,ANS1 :053525 STILL IN AC1?
BEQ .+4 :BRANCH IF OK
HLT+2 :AC1 CHANGED

002730 022767 052525 176046
002736 001401

CMP #052525,ANS2 :052525 STILL IN AC1?
BEQ .+4 :BRANCH IF OK

G02

MAINDEC-11-DCFPE-B
DCFPEB.F11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 19

002740 104002

HLT+2

:AC1 CHANGED

```
*****
:TEST 20: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 124252,125252 TO 125252,125252
: FPS = 047400, FSRC = M6-R7, AC = ACC
*****
```

002742 104400
002744 000404

SCOPE
BR TST20

002746 125252 125252
002752 124252 125252

DTA20: 125252,125252
DTB20: 124252,125252

002756 170127 047400
002762 172467 177760
002766 173467 177760
002772 170200
002774 022700 047400
003000 001401
003002 104000

TST20: LDFPS #047400 :LOAD FLOATING POINT STATUS
LDF DTA20, ACC :LOAD 125252,125252 INTO ACC
CMPF DTB20, ACC :COMPARE 124252,125252 TO ACC
STFPS FPS :STORE FLOATING POINT STATUS
CMP #047400,FPS :CHECK FLOATING POINT STATUS
BEQ .+4 :BRANCH IF OK
HLT :FPS NOT EQUAL TO 047400

003004 174067 175772
003010 022767 125252 175764
003016 001401
003020 104002

STF ACC, ANS1 :STORE ACC IN ANS1, ANS2
CMP #125252,ANS1 :125252 STILL IN ACC?
BEQ .+4 :BRANCH IF OK
HLT+2 :ACC CHANGED

003022 022767 125252 175754
003030 001401
003032 104002

CMP #125252,ANS2 :125252 STILL IN ACC?
BEQ .+4 :BRANCH IF OK
HLT+2 :ACC CHANGED

```
*****
:TEST 21: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 056525,052525 TO 052525,052525
: FPS = 047400, FSRC = M6-R7, AC = ACC
*****
```

003034 104400
003036 000404

SCOPE
BR TST21

003040 052525 052525
003044 056525 052525

DTA21: 052525,052525
DTB21: 056525,052525

003050 170127 047400
003054 172467 177760
003060 173467 177760
003064 170200
003066 022700 047400
003072 001401
003074 104000

TST21: LDFPS #047400 :LOAD FLOATING POINT STATUS
LDF DTA21, ACC :LOAD 052525,052525 INTO ACC
CMPF DTB21, ACC :COMPARE 056525,052525 TO ACC
STFPS FPS :STORE FLOATING POINT STATUS
CMP #047400,FPS :CHECK FLOATING POINT STATUS
BEQ .+4 :BRANCH IF OK
HLT :FPS NOT EQUAL TO 047400

003076 174067 175700
003102 022767 052525 175672
003110 001401

STF ACC, ANS1 :STORE ACC IN ANS1, ANS2
CMP #052525,ANS1 :052525 STILL IN ACC?
BEQ .+4 :BRANCH IF OK

H02

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 20

003112	104002			HLT+2		;ACO CHANGED
003114	022767	052525	175662	CMP	#052525,ANS2	:052525 STILL IN ACO?
003122	001401			BEQ	+.4	:BRANCH IF OK
003124	104002			HLT+2		:ACO CHANGED

```

:*****
:TEST 22: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 121252,125252 TO 125252,125252
: FPS = 047400, FSRC = M6-R7, AC = AC2
:*****

```

003126	104400			SCOPE		
003130	000404			BR	TST22	
003132	125252	125252		DTA22:	125252,125252	
003136	121252	125252		DTB22:	121252,125252	
003142	170127	047400		TST22:	LDFPS #047400	:LOAD FLOATING POINT STATUS
003146	172667	177760		LDF	DTA22, AC2	:LOAD 125252,125252 INTO AC2
003152	173667	177760		CMPF	DTB22, AC2	:COMPARE 121252,125252 TO AC2
003156	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
003160	022700	047400		CMP	#047400,FPS	:CHECK FLOATING POINT STATUS
003164	001401			BEQ	+.4	:BRANCH IF OK
003166	104000			HLT		:FPS NOT EQUAL TO 047400
003170	174267	175606		STF	AC2, ANS1	:STORE AC2 IN ANS1, ANS2
003174	022767	125252	175600	CMP	#125252,ANS1	:125252 STILL IN AC2?
003202	001401			BEQ	+.4	:BRANCH IF OK
003204	104002			HLT+2		:AC2 CHANGED
003206	022767	125252	175570	CMP	#125252,ANS2	:125252 STILL IN AC2?
003214	001401			BEQ	+.4	:BRANCH IF OK
003216	104002			HLT+2		:AC2 CHANGED

```

:*****
:TEST 23: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 040000,000001 TO 040000,000000
: FPS = 047400, FSRC = M6-R7, AC = AC3
:*****

```

003220	104400			SCOPE		
003222	000404			BR	TST23	
003224	040000	000000		DTA23:	040000,000000	
003230	040000	000001		DTB23:	040000,000001	
003234	170127	047400		TST23:	LDFPS #047400	:LOAD FLOATING POINT STATUS
003240	172767	177760		LDF	DTA23, AC3	:LOAD 040000,000000 INTO AC3
003244	173767	177760		CMPF	DTB23, AC3	:COMPARE 040000,000001 TO AC3
003250	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
003252	022700	047400		CMP	#047400,FPS	:CHECK FLOATING POINT STATUS
003256	001401			BEQ	+.4	:BRANCH IF OK
003260	104000			HLT		:FPS NOT EQUAL TO 047400

003262	174367	175514		STF	AC3,	ANS1	:STORE AC3 IN ANS1, ANS2
003266	022767	040000	175506	CMP	#040000,	ANS1	:040000 STILL IN AC3?
003274	001401			BEQ	+.4		:BRANCH IF OK
003276	104002			HLT+2			:AC3 CHANGED
003300	022767	000000	175476	CMP	#000000,	ANS2	:000000 STILL IN AC3?
003306	001401			BEQ	+.4		:BRANCH IF OK
003310	104002			HLT+2			:AC3 CHANGED

```

*****
:TEST 24: TEST CMPF (COMPARE FLOATING POINT)
:COMPARE 177777.177776 TO 177777.177777
:FPS = 047400, FSRC = M6-R7, AC = AC1
*****

```

003312	104400			SCOPE			
003314	000404			BR	TST24		
003316	177777	177777		DTA24:	177777.177777		
003322	177777	177776		DTB24:	177777.177776		
003326	170127	047400		TST24:	LDFPS	#047400	:LOAD FLOATING POINT STATUS
003332	172567	177760			LDF	DTA24, AC1	:LOAD 177777.177777 INTO AC1
003336	173567	177760			CMPF	DTB24, AC1	:COMPARE 177777.177776 TO AC1
003342	170200				STFPS	FPS	:STORE FLOATING POINT STATUS
003344	022700	047400			CMP	#047400,FPS	:CHECK FLOATING POINT STATUS
003350	001401				BEQ	+.4	:BRANCH IF OK
003352	104000				HLT		:FPS NOT EQUAL TO 047400
003354	174167	175422		STF	AC1,	ANS1	:STORE AC1 IN ANS1, ANS2
003360	022767	177777	175414	CMP	#177777,	ANS1	:177777 STILL IN AC1?
003366	001401			BEQ	+.4		:BRANCH IF OK
003370	104002			HLT+2			:AC1 CHANGED
003372	022767	177777	175404	CMP	#177777,	ANS2	:177777 STILL IN AC1?
003400	001401			BEQ	+.4		:BRANCH IF OK
003402	104002			HLT+2			:AC1 CHANGED

```

*****
:TEST 25: TEST CMPF (COMPARE FLOATING POINT)
:COMPARE 000010,011101 TO 000010,010101
:FPS = 047404, FSRC = M6-R7, AC = AC1
*****

```

003404	104400			SCOPE			
003406	000404			BR	TST25		
003410	000010	010101		DTA25:	000010,010101		
003414	000010	011101		DTB25:	000010,011101		
003420	170127	040000		TST25:	LDFPS	#040000	:LOAD FLOATING POINT STATUS
003424	172567	177760			LDF	DTA25, AC1	:LOAD 000010,010101 INTO AC1
003430	170127	047400			LDFPS	#047400	:LOAD FLOATING POINT STATUS

003434	173567	177754	CMPF	DTB25, AC1	;COMPARE 000010,011101 TO AC1
003440	170200		STFPS	FPS	;STORE FLOATING POINT STATUS
003442	022700	047404	CMP	#047404,FPS	;CHECK FLOATING POINT STATUS
003446	001401		BEQ	+.4	;BRANCH IF OK
003450	104000		HLT		;FPS NOT EQUAL TO 047404
003452	174167	175324	STF	AC1, ANS1	;STORE AC1 IN ANS1, ANS2
003456	005767	175320	TST	ANS1	;CHECK ANS1
003462	001401		BEQ	+.4	;BRANCH IF OK
003464	104002		HLT+2		;AC1 NOT EQUAL TO ZERO
003466	005767	175312	TST	ANS2	;CHECK ANS2
003472	001401		BEQ	+.4	;BRANCH IF OK
003474	104002		HLT+2		;AC1 NOT EQUAL TO ZERO

```

:*****
:TEST 26: TEST CMPF (COMPARE FLOATING POINT)
:COMPARE 135313,135313 TO 135213,135313
:FPS = 047410, FSRC = M6-R7, AC = AC1
:*****

```

003476	104400		SCOPE		
003500	000404		BR	TST26	
003502	135213	135313	DTA26:	135213,135313	
003506	135313	135313	DTB26:	135313,135313	
003512	170127	047400	TST26:	LDFPS #047400	;LOAD FLOATING POINT STATUS
003516	172567	177760	LDF	DTA26, AC1	;LOAD 135213,135313 INTO AC1
003522	173567	177760	CMPF	DTB26, AC1	;COMPARE 135313,135313 TO AC1
003526	170200		STFPS	FPS	;STORE FLOATING POINT STATUS
003530	022700	047410	CMP	#047410,FPS	;CHECK FLOATING POINT STATUS
003534	001401		BEQ	+.4	;BRANCH IF OK
003536	104000		HLT		;FPS NOT EQUAL TO 047410
003540	174167	175236	STF	AC1, ANS1	;STORE AC1 IN ANS1, ANS2
003544	022767	135213 175230	CMP	#135213,ANS1	;135213 STILL IN AC1?
003552	001401		BEQ	+.4	;BRANCH IF OK
003554	104002		HLT+2		;AC1 CHANGED
003556	022767	135313 175220	CMP	#135313,ANS2	;135313 STILL IN AC1?
003564	001401		BEQ	+.4	;BRANCH IF OK
003566	104002		HLT+2		;AC1 CHANGED

```

:*****
:TEST 27: TEST CMPF (COMPARE FLOATING POINT)
:COMPARE 071422,023456 TO 071422,123456
:FPS = 047410, FSRC = M6-R7, AC = AC2
:*****

```

003570	104400		SCOPE		
003572	000404		BR	TST27	
003574	071422	123456	DTA27:	071422,123456	

```

003600 071422 023456      DTB27: 071422,023456
003604 170127 047400      TST27: LDFPS  #047400      ;LOAD FLOATING POINT STATUS
003610 172667 177760      LDF  DTA27, AC2      ;LOAD 071422,123456 INTO AC2
003614 173667 177760      CMPF DTB27, AC2      ;COMPARE 071422,023456 TO AC2
003620 170200      STFPS FPS      ;STORE FLOATING POINT STATUS
003622 022700 047410      CMP  #047410,FPS      ;CHECK FLOATING POINT STATUS
003626 001401      BEQ  .+4      ;BRANCH IF OK
003630 104000      HLT      ;FPS NOT EQUAL TO 047410

003632 174267 175144      STF  AC2, ANS1      ;STORE AC2 IN ANS1, ANS2
003636 022767 071422 175136  CMP  #071422,ANS1      ;071422 STILL IN AC2?
003644 001401      BEQ  .+4      ;BRANCH IF OK
003646 104002      HLT+2      ;AC2 CHANGED

003650 022767 123456 175126  CMP  #123456,ANS2      ;123456 STILL IN AC2?
003656 001401      BEQ  .+4      ;BRANCH IF OK
003660 104002      HLT+2      ;AC2 CHANGED

```

```

:*****
:TEST 30: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 154323,071625 TO 154321,071625
: FPS = 047410, FSRC = M6-R7, AC = AC3
:*****

```

```

003662 104400      SCOPE
003664 000404      BR  TST30

003666 154321 071625      DTA30: 154321,071625
003672 154323 071625      DTB30: 154323,071625

003676 170127 047400      TST30: LDFPS  #047400      ;LOAD FLOATING POINT STATUS
003702 172767 177760      LDF  DTA30, AC3      ;LOAD 154321,071625 INTO AC3
003706 173767 177760      CMPF DTB30, AC3      ;COMPARE 154323,071625 TO AC3
003712 170200      STFPS FPS      ;STORE FLOATING POINT STATUS
003714 022700 047410      CMP  #047410,FPS      ;CHECK FLOATING POINT STATUS
003720 001401      BEQ  .+4      ;BRANCH IF OK
003722 104000      HLT      ;FPS NOT EQUAL TO 047410

003724 174367 175052      STF  AC3, ANS1      ;STORE AC3 IN ANS1, ANS2
003730 022767 154321 175044  CMP  #154321,ANS1      ;154321 STILL IN AC3?
003736 001401      BEQ  .+4      ;BRANCH IF OK
003740 104002      HLT+2      ;AC3 CHANGED

003742 022767 071625 175034  CMP  #071625,ANS2      ;071625 STILL IN AC3?
003750 001401      BEQ  .+4      ;BRANCH IF OK
003752 104002      HLT+2      ;AC3 CHANGED

```

```

:*****
:TEST 31: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 040000,000000 TO 040000,000000
: FPS = 047404, FSRC = M6-R7, AC = AC3
:*****

```



```

003754 104400          SCOPE
003756 000404          BR      TST31

003760 040000 000000    DTA31: 040000,000000
003764 040000 000000    DTB31: 040000,000000

003770 170127 047400    TST31: LDFPS  #047400      ;LOAD FLOATING POINT STATUS
003774 172767 177760    LDF      DTA31, AC3      ;LOAD 040000,000000 INTO AC3
004000 173767 177760    CMPF     DTB31, AC3      ;COMPARE 040000,000000 TO AC3
004004 170200          STFPS   FPS              ;STORE FLOATING POINT STATUS
004006 022700 047404    CMP      #047404,FPS      ;CHECK FLOATING POINT STATUS
004012 001401          BEQ      .+4             ;BRANCH IF OK
004014 104000          HLT                     ;FPS NOT EQUAL TO 047404

004016 174367 174760    STF      AC3, ANS1        ;STORE AC3 IN ANS1, ANS2
004022 022767 040000 174752  CMP      #040000,ANS1     ;040000 STILL IN AC3?
004030 001401          BEQ      .+4             ;BRANCH IF OK
004032 104002          HLT+2                ;AC3 CHANGED

004034 022767 000000 174742  CMP      #000000,ANS2     ;000000 STILL IN AC3?
004042 001401          BEQ      .+4             ;BRANCH IF OK
004044 104002          HLT+2                ;AC3 CHANGED

```

```

:*****
:TEST 32:      TEST CMPF (COMPARE FLOATING POINT)
:              COMPARE 140177,177777 TO 140177,177777
:              FPS = 047404, FSRC = M6-R7, AC = AC3
:*****

```

```

004046 104400          SCOPE
004050 000404          BR      TST32

004052 140177 177777    DTA32: 140177,177777
004056 140177 177777    DTB32: 140177,177777

004062 170127 047400    TST32: LDFPS  #047400      ;LOAD FLOATING POINT STATUS
004066 172767 177760    LDF      DTA32, AC3      ;LOAD 140177,177777 INTO AC3
004072 173767 177760    CMPF     DTB32, AC3      ;COMPARE 140177,177777 TO AC3
004076 170200          STFPS   FPS              ;STORE FLOATING POINT STATUS
004100 022700 047404    CMP      #047404,FPS      ;CHECK FLOATING POINT STATUS
004104 001401          BEQ      .+4             ;BRANCH IF OK
004106 104002          HLT                     ;FPS NOT EQUAL TO 047404

004110 174367 174666    STF      AC3, ANS1        ;STORE AC3 IN ANS1, ANS2
004114 022767 140177 174660  CMP      #140177,ANS1     ;140177 STILL IN AC3?
004122 001401          BEQ      .+4             ;BRANCH IF OK
004124 104002          HLT+2                ;AC3 CHANGED

004126 022767 177777 174650  CMP      #177777,ANS2     ;177777 STILL IN AC3?
004134 001401          BEQ      .+4             ;BRANCH IF OK
004136 104002          HLT+2                ;AC3 CHANGED

```

```

:*****
:TEST 33:      TEST CMPF .COMPARE FLOATING POINT.
:*****

```

M02

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 25

: COMPARE 002000,000000 TO 002000,000000
: FPS = 047404, FSRC = M6-R7, AC = AC3
:*****

004140 104400
004142 000404

SCOPE
BR TST33

004144 002000 000000
004150 002000 000000

DTA33: 002000,000000
DTB33: 002000,000000

004154 170127 047400
004160 172767 177760
004164 173767 177760
004170 170200
004172 022700 047404
004176 001401
004200 104000

TST33: LDFPS #047400 ;LOAD FLOATING POINT STATUS
LDF DTA33, AC3 ;LOAD 002000,000000 INTO AC3
CMPF DTB33, AC3 ;COMPARE 002000,000000 TO AC3
STFPS FPS ;STORE FLOATING POINT STATUS
CMP #047404,FPS ;CHECK FLOATING POINT STATUS
BEQ .+4 ;BRANCH IF OK
HLT ;FPS NOT EQUAL TO 047404

004202 174367 174574
004206 022767 002000 174566
004214 001401
004216 104002

STF AC3, ANS1 ;STORE AC3 IN ANS1, ANS2
CMP #002000,ANS1 ;002000 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC3 CHANGED

004220 022767 000000 174556
004226 001401
004230 104002

CMP #000000,ANS2 ;000000 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC3 CHANGED

:*****
:TEST 34: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 125252,125252 TO 125252,125252
: FPS = 047404, FSRC = M6-R7, AC = AC2
:*****

004232 104400
004234 000404

SCOPE
BR TST34

004236 125252 125252
004242 125252 125252

DTA34: 125252,125252
DTB34: 125252,125252

004246 170127 047400
004252 172667 177760
004256 173667 177760
004262 170200
004264 022700 047404
004270 001401
004272 104000

TST34: LDFPS #047400 ;LOAD FLOATING POINT STATUS
LDF DTA34, AC2 ;LOAD 125252,125252 INTO AC2
CMPF DTB34, AC2 ;COMPARE 125252,125252 TO AC2
STFPS FPS ;STORE FLOATING POINT STATUS
CMP #047404,FPS ;CHECK FLOATING POINT STATUS
BEQ .+4 ;BRANCH IF OK
HLT ;FPS NOT EQUAL TO 047404

004274 174267 174502
004300 022767 125252 174474
004306 001401
004310 104002

STF AC2, ANS1 ;STORE AC2 IN ANS1, ANS2
CMP #125252,ANS1 ;125252 STILL IN AC2?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC2 CHANGED

004312 022767 125252 174464
004320 001401
004322 104002

CMP #125252,ANS2 ;125252 STILL IN AC2?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC2 CHANGED

```

*****
:TEST 35:      TEST CMPF (COMPARE FLOATING POINT)
:              COMPARE 052525,052525 TO 052525,052525
:              FPS = 047404,  FSRC = M6-R7,  AC = AC2
*****

```

```

004324 104400          SCOPE
004326 000404          BR      TST35

004330 052525 052525   DTA35: 052525,052525
004334 052525 052525   DTB35: 052525,052525

004340 170127 047400   TST35: LDFPS #047400 ;LOAD FLOATING POINT STATUS
004344 172667 177760   LDF      DTA35, AC2 ;LOAD 052525,052525 INTO AC2
004350 173667 177760   CMPF    DTB35, AC2 ;COMPARE 052525,052525 TO AC2
004354 170200          STFPS   FPS ;STORE FLOATING POINT STATUS
004356 022700 047404   CMP     #047404,FPS ;CHECK FLOATING POINT STATUS
004362 001401          BEQ     .+4 ;BRANCH IF OK
004364 104000          HLT                    ;FPS NOT EQUAL TO 047404

004366 174267 174410   STF     AC2, ANS1 ;STORE AC2 IN ANS1, ANS2
004372 022767 052525 174402   CMP     #052525,ANS1 ;052525 STILL IN AC2?
004400 001401          BEQ     .+4 ;BRANCH IF OK
004402 104002          HLT+2 ;AC2 CHANGED

004404 022767 052525 174372   CMP     #052525,ANS2 ;052525 STILL IN AC2?
004412 001401          BEQ     .+4 ;BRANCH IF OK
004414 104002          HLT+2 ;AC2 CHANGED

```

```

*****
:TEST 36:      TEST CMPF (COMPARE FLOATING POINT)
:              COMPARE 120040,000200 TO 100040,000200
:              FPS = 047410,  FSRC = M6-R7,  AC = AC3
*****

```

```

004416 104400          SCOPE
004420 000404          BR      TST36

004422 100040 000200   DTA36: 100040,000200
004426 120040 000200   DTB36: 120040,000200

004432 170127 040000   TST36: LDFPS #040000 ;LOAD FLOATING POINT STATUS
004436 172767 177760   LDF     DTA36, AC3 ;LOAD 100040,000200 INTO AC3
004442 170127 047400   LDFPS   #047400 ;LOAD FLOATING POINT STATUS
004446 173767 177754   FPI36: CMPF    DTB36, AC3 ;COMPARE 120040,000200 TO AC3
004452 170200          STFPS   FPS ;STORE FLOATING POINT STATUS
004454 022700 047410   CMP     #047410,FPS ;CHECK FLOATING POINT STATUS
004460 001401          BEQ     .+4 ;BRANCH IF OK
004462 104000          HLT                    ;FPS NOT EQUAL TO 047410

004464 174367 174312   STF     AC3, ANS1 ;STORE AC3 IN ANS1, ANS2
004470 022767 100040 174304   CMP     #100040,ANS1 ;100040 STILL IN AC3?
004476 001401          BEQ     .+4 ;BRANCH IF OK

```

```

004500 104002          HLT+2          :AC3 CHANGED
004502 022767 000200 174274  CMP      #000200,ANS2  :000200 STILL IN AC3?
004510 001401          BEQ      .+4         :BRANCH IF OK
004512 104002          HLT+2          :AC3 CHANGED

```

```

:*****
:TEST 37:      TEST CMPF (COMPARE FLOATING POINT)
:      COMPARE 000010,000020 TO 001010,000020
:      FPS = 047410,   FSRC = M6-R7,   AC = AC2
:*****

```

```

004514 104400          SCOPE
004516 000404          BR      TST37

004520 001010 000020  DTA37: 001010,000020
004524 000010 000020  DTB37: 000010,000020

004530 170127 047400  TST37: LDFPS  #047400      :LOAD FLOATING POINT STATUS
004534 172667 177760  LDF      DTA37, AC2  :LOAD 001010,000020 INTO AC2
004540 173667 177760  CMPF    DTB37, AC2  :COMPARE 000010,000020 TO AC2
004544 170200          STFPS  FPS          :STORE FLOATING POINT STATUS
004546 022700 047410  CMP      #047410,FPS :CHECK FLOATING POINT STATUS
004552 001401          BEQ      .+4         :BRANCH IF OK
004554 104002          HLT+2          :FPS NOT EQUAL TO 047410

004556 174267 174220  STF      AC2, ANS1   :STORE AC2 IN ANS1, ANS2
004562 022767 001010 174212  CMP      #001010,ANS1 :001010 STILL IN AC2?
004570 001401          BEQ      .+4         :BRANCH IF OK
004572 104002          HLT+2          :AC2 CHANGED

004574 022767 000020 174202  CMP      #000020,ANS2 :000020 STILL IN AC2?
004602 001401          BEQ      .+4         :BRANCH IF OK
004604 104002          HLT+2          :AC2 CHANGED

```

```

:*****
:TEST 40:      TEST CMPF (COMPARE FLOATING POINT)
:      COMPARE 100010,002000 TO 000004,000300
:      FPS = 147417,   FSRC = M6-R7,   AC = ACC
:      FEC = 14,      FEA = FPI40
:*****

```

```

004606 104400          SCOPE
004610 000404          BR      TST40

004612 000004 000300  DTA40: 000004,000300
004616 100010 002000  DTB40: 100010,002000

004622 170127 040000  TST40: LDFPS  #040000      :LOAD FLOATING POINT STATUS
004626 172467 177760  LDF      DTA40, ACC  :LOAD 000004,000300 INTO ACC
004632 170127 047417  LDFPS  #047417      :LOAD FLOATING POINT STATUS
004636 173467 177754  CMPF    DTB40, ACC  :COMPARE 100010,002000 TO ACC
004642 170200          STFPS  FPS          :STORE FLOATING POINT STATUS
004644 170367 174152  STST   FEC          :STORE EXCEPTION CODES

```

C03

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF. CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 28

004650	022700	147417		CMP	#147417,FPS	:CHECK FLOATING POINT STATUS
004654	001401			BEG	+.4	:BRANCH IF OK
004656	104000			HLT		:FPS NOT EQUAL TO 147417
004660	022767	000014	174134	CMP	#14, FEC	:CHECK FLOATING EXCEPTION CODE
004666	001401			BEG	+.4	:BRANCH IF OK
004670	104000			HLT		:FEC NOT EQUAL TO 14
004672	022767	004636	174124	CMP	#FPI40, FEA	:CHECK FLOATING EXCEPTION ADDRESS
004700	001401			BEG	+.4	:BRANCH IF OK
004702	104000			HLT		:FEA NOT EQUAL TO FPI40
004704	174067	174072		STF	AC0, ANS1	:STORE AC0 IN ANS1, ANS2
004710	022767	000004	174064	CMP	#000004,ANS1	:000004 STILL IN AC0?
004716	001401			BEG	+.4	:BRANCH IF OK
004720	104002			HLT+2		:AC0 CHANGED
004722	022767	000300	174054	CMP	#000300,ANS2	:000300 STILL IN AC0?
004730	001401			BEG	+.4	:BRANCH IF OK
004732	104002			HLT+2		:AC0 CHANGED

```

*****
:TEST 41: TEST CMPF (COMPARE FLOATING POINT)
:COMPARE 100004,000050 TO 006030,000020
:FPS = 147417, FSRC = M6-R7, AC = AC0
:FEC = 14, FEA = FPI41
*****

```

004734	104400			SCOPE		
004736	000404			BR	TST41	
004740	006030	000020		DTA41:	006030,000020	
004744	100004	000050		DTB41:	100004,000050	
004750	170127	040000		TST41:	LDFPS #040000	:LOAD FLOATING POINT STATUS
004754	172467	177760		LDF	DTA41 AC0	:LOAD 006030,000020 INTO AC0
004760	170127	047417		LDFPS	#047417	:LOAD FLOATING POINT STATUS
004764	173467	177754		FPI41:	CMPF DTB41, AC0	:COMPARE 100004,000050 TO AC0
004770	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
004772	170367	174024		STST	FEC	:STORE EXCEPTION CODES
004776	022700	147417		CMP	#147417,FPS	:CHECK FLOATING POINT STATUS
005002	001401			BEG	+.4	:BRANCH IF OK
005004	104000			HLT		:FPS NOT EQUAL TO 147417
005006	022767	000014	174006	CMP	#14, FEC	:CHECK FLOATING EXCEPTION CODE
005014	001401			BEG	+.4	:BRANCH IF OK
005016	104000			HLT		:FEC NOT EQUAL TO 14
005020	022767	004764	173776	CMP	#FPI41, FEA	:CHECK FLOATING EXCEPTION ADDRESS
005026	001401			BEG	+.4	:BRANCH IF OK
005030	104000			HLT		:FEA NOT EQUAL TO FPI41
005032	174067	173744		STF	AC0, ANS1	:STORE AC0 IN ANS1, ANS2
005036	022767	006030	173736	CMP	#006030,ANS1	:006030 STILL IN AC0?
005044	001401			BEG	+.4	:BRANCH IF OK

```

005046 104002          HLT+2          ;ACD CHANGED
005050 022767 000020 173726  CMP      #000020,ANS2  ;000020 STILL IN ACC?
005056 001401          BEQ      .+4          ;BRANCH IF OK
005060 104002          HLT+2          ;ACD CHANGED

```

```

*****
:TEST 42:          TEST CMPF (COMPARE FLOATING POINT)
:                COMPARE 000040,005000 TO 100002,000030
:                FPS = 047404,  FSRC = M6-R7,  AC = ACC
*****

```

```

005062 104400          SCOPE
005064 000404          BR      TST42
005066 100002 000030  DTA42: 100002,000030
005072 000040 005000  DTB42: 000040,005000
005076 170127 040000  TST42: LDFPS  #040000      ;LOAD FLOATING POINT STATUS
005102 172467 177760  LDF     DTA42,  ACC      ;LOAD 100002,000030 INTO ACC
005106 170127 047400  LDFPS  #047400      ;LOAD FLOATING POINT STATUS
005112 173467 177754  CMPF   DTB42,  ACC      ;COMPARE 000040,005000 TO ACC
005116 170200          STFPS  FPS            ;STORE FLOATING POINT STATUS
005120 022700 047404  CMP    #047404,FPS      ;CHECK FLOATING POINT STATUS
005124 001401          BEQ    .+4            ;BRANCH IF OK
005126 104000          HLT                    ;FPS NOT EQUAL TO 047404
005130 174067 173646  STF    ACC,  ANS1       ;STORE ACC IN ANS1, ANS2
005134 005767 173642  TST    ANS1             ;CHECK ANS1
005140 001401          BEQ    .+4            ;BRANCH IF OK
005142 104002          HLT+2          ;ACD NOT EQUAL TO ZERO
005144 005767 173634  TST    ANS2             ;CHECK ANS2
005150 001401          BEQ    .+4            ;BRANCH IF OK
005152 104002          HLT+2          ;ACD NOT EQUAL TO ZERO

```

```

*****
:TEST 43:          TEST CMPF (COMPARE FLOATING POINT)
:                COMPARE 100300,004000 TO 000010,002000
:                FPS = 047410,  FSRC = M6-R7,  AC = ACC
*****

```

```

005154 104400          SCOPE
005156 000404          BR      TST43
005160 000010 002000  DTA43: 000010,002000
005164 100300 004000  DTB43: 100300,004000
005170 170127 047400  TST43: LDFPS  #047400      ;LOAD FLOATING POINT STATUS
005174 172467 177760  LDF     DTA43,  ACC      ;LOAD 000010,002000 INTO ACC
005200 173467 177760  CMPF   DTB43,  ACC      ;COMPARE 100300,004000 TO ACC
005204 170200          STFPS  FPS            ;STORE FLOATING POINT STATUS
005206 022700 047410  CMP    #047410,FPS      ;CHECK FLOATING POINT STATUS
005212 001401          BEQ    .+4            ;BRANCH IF OK

```

E03

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 30

```

005214 104000          HLT          ;FPS NOT EQUAL TO 047410
005216 174067 173560   STF      ACC,  ANS1   ;STORE ACC IN ANS1, ANS2
005222 022767 000010 173552  CMP      #000010,ANS1 ;:000010 STILL IN ACC?
005230 001401          BEQ      .+4          ;BRANCH IF OK
005232 104002          HLT+2        ;ACC CHANGED

005234 022767 002000 173542  CMP      #002000,ANS2 ;:002000 STILL IN ACC?
005242 001401          BEQ      .+4          ;BRANCH IF OK
005244 104002          HLT+2        ;ACC CHANGED

```

```

:*****
:TEST 44:      TEST CMPF (COMPARE FLOATING POINT)
:              COMPARE 100004,000050 TO 100002,000300
:              FPS = 147417,  FSRC = M6-R7,  AC = ACC
:              FEC = 14,      FEA = FPI44
:*****

```

```

005246 104400          SCOPE
005250 000404          BR      TST44

005252 100002 000300   DT44: 100002,000300
005256 100004 000050   DT844: 100004,000050

005262 170127 040000   *S*44: LDFPS  #040000   ;LOAD FLOATING POINT STATUS
005266 172467 177760   LDF     DT44,  ACC   ;LOAD 100002,000300 INTO ACC
005272 170127 047417   LDFPS  #047417   ;LOAD FLOATING POINT STATUS
005276 173467 177754   FPI44: CMPF   DT844,  ACC   ;COMPARE 100004,000050 TO ACC
005302 170200          STFPS  FPS          ;STORE FLOATING POINT STATUS
005304 170367 173512   STST   FEC          ;STORE EXCEPTION CODES
005310 022700 147417   CMP     #147417,FPS  ;CHECK FLOATING PCINT STATUS
005314 001401          BEQ     .+4          ;BRANCH IF OK
005316 104000          HLT          ;FPS NOT EQUAL TO 147417

005320 022767 000014 173474  CMP     #14,  FEC    ;CHECK FLOATING EXCEPTION CODE
005326 001401          BEQ     .+4          ;BRANCH IF OK
005330 104000          HLT          ;FEC NOT EQUAL TO 14

005332 022767 005276 173464  CMP     #FPI44, FEA  ;CHECK FLOATING EXCEPTION ADDRESS
005340 001401          BEQ     .+4          ;BRANCH IF OK
005342 104000          HLT          ;FEA NOT EQUAL TO FPI44

005344 174067 173432   STF     ACC,  ANS1   ;STORE ACC IN ANS1, ANS2
005350 022767 100002 173424  CMP     #100002,ANS1 ;:100002 STILL IN ACC?
005356 001401          BEQ     .+4          ;BRANCH IF OK
005360 104002          HLT+2        ;ACC CHANGED

005362 022767 000300 173414  CMP     #000300,ANS2 ;:000300 STILL IN ACC?
005370 001401          BEQ     .+4          ;BRANCH IF OK
005372 104002          HLT+2        ;ACC CHANGED

```

```

:*****
:TEST 45:      TEST CMPF (COMPARE FLOATING POINT)
:              COMPARE 100010,002000 TO 000004,000300
:*****

```

F03

MAINDEC-11-CCFPE-B
CCFPE.F11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 31

: FPS = 147417, FSRC = M6-R7, AC = ACC
: FEC = 14, FEA = FPI45
:*****

005374	104400			SCOPE			
005376	000404			BR	TST45		
005400	000004	000300		DTA45:	000004,000300		
005404	100010	002000		DTB45:	100010,002000		
005410	170127	040000		TST45:	LDFPS #040000	:LOAD FLOATING POINT STATUS	
005414	172467	177763		LDF	DTA45, ACC	:LOAD 000004,000300 INTO ACC	
005420	170127	047417		LDFPS	#047417	:LOAD FLOATING POINT STATUS	
005424	173467	177754		FPI45:	CMPF DTB45, ACC	:COMPARE 100010,002000 TO ACC	
005430	170200			STFPS	FPS -	:STORE FLOATING POINT STATUS	
005432	170367	173364		STST	FEC	:STORE EXCEPTION CODES	
005436	022700	147417		CMP	#147417,FPS	:CHECK FLOATING POINT STATUS	
005442	001401			BEQ	+.4	:BRANCH IF OK	
005444	104000			HLT		:FPS NOT EQUAL TO 147417	
005446	022767	000014	173346	CMP	#14, FEC	:CHECK FLOATING EXCEPTION CODE	
005454	001401			BEQ	+.4	:BRANCH IF OK	
005456	104000			HLT		:FEC NOT EQUAL TO 14	
005460	022767	005424	173336	CMP	#FPI45, FEA	:CHECK FLOATING EXCEPTION ADDRESS	
005466	001401			BEQ	+.4	:BRANCH IF OK	
005470	104000			HLT		:FEA NOT EQUAL TO FPI45	
005472	174067	173304		STF	ACC, ANS1	:STORE ACC IN ANS1, ANS2	
005476	022767	000004	173276	CMP	#000004,ANS1	:000004 STILL IN ACC?	
005504	001401			BEQ	+.4	:BRANCH IF OK	
005506	104002			HLT+2		:ACC CHANGED	
005510	022767	000300	173266	CMP	#000300,ANS2	:000300 STILL IN ACC?	
005516	001401			BEQ	+.4	:BRANCH IF OK	
005520	104002			HLT+2		:ACC CHANGED	

:*****
:TEST 46: TEST CMPF (COMPARE FLOATING POINT)
:COMPARE 100004,000050 TO 006030,000020
:FPS = 147417, FSRC = M6-R7, AC = ACC
:FEC = 14, FEA = FPI46
:*****

005522	104400			SCOPE			
005524	000404			BR	TST46		
005526	006030	000020		DTA46:	006030,000020		
005532	100004	000050		DTB46:	100004,000050		
005536	170127	040000		TST46:	LDFPS #040000	:LOAD FLOATING POINT STATUS	
005542	172467	177763		LDF	DTA46, ACC	:LOAD 006030,000020 INTO ACC	
005546	170127	047417		LDFPS	#047417	:LOAD FLOATING POINT STATUS	
005552	173467	177754		FPI46:	CMPF DTB46, ACC	:COMPARE 100004,000050 TO ACC	
005558	170200			STFPS	FPS	:STORE FLOATING POINT STATUS	

G03

MAZNOEC-11-DCFPE-B
DCFPEB.F11

TEST OF CMPF. CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 32

005560	170367	173236		STST	FEC		:STORE EXCEPTION CODES
005564	022700	147417		CMP	#147417.FPS		:CHECK FLOATING POINT STATUS
005570	001401			BEQ	+.4		:BRANCH IF OK
005572	104000			HLT			:FPS NOT EQUAL TO 147417
005574	022767	000014	173220	CMP	#14. FEC		:CHECK FLOATING EXCEPTION CODE
005602	001401			BEQ	+.4		:BRANCH IF OK
005604	104000			HLT			:FEC NOT EQUAL TO 14
005606	022767	005552	173210	CMP	#FPI46. FEA		:CHECK FLOATING EXCEPTION ADDRESS
005614	001401			BEQ	+.4		:BRANCH IF OK
005616	104000			HLT			:FEA NOT EQUAL TO FPI46
005620	174067	173156		STF	ACC, ANS1		:STORE ACC IN ANS1, ANS2
005624	022767	006030	173150	CMP	#006030,ANS1		:006030 STILL IN ACC?
005632	001401			BEQ	+.4		:BRANCH IF OK
005634	104002			HLT+2			:ACC CHANGED
005636	022767	000020	173140	CMP	#000020,ANS2		:000020 STILL IN ACC?
005644	001401			BEQ	+.4		:BRANCH IF OK
005646	104002			HLT+2			:ACC CHANGED

```

*****
:TEST 47: TEST CMPF (COMPARE FLOATING POINT)
:COMPARE 100004,000050 TO 100002,000300
:FPS = 147417, FSRC = M6-R7, AC = ACC
:FEC = 14, FEA = FPI47
*****

```

005650	104400			SCOPE			
005652	000404			BR	T5747		
005654	100002	000300		DTA47:	100002,000300		
005660	100004	000050		DTB47:	100004,000050		
005664	170127	040000		TST47:	LDFPS #040000		:LOAD FLOATING POINT STATUS
005670	172467	177760		LDF	DTA47 ACC		:LOAD 100002,000300 INTO ACC
005674	170127	047417		LDFPS	#047417		:LOAD FLOATING POINT STATUS
005700	173467	177754		FPI47:	DTB47, ACC		:COMPARE 100004,000050 TO ACC
005704	170200			STFPS	FPS		:STORE FLOATING POINT STATUS
005706	170367	173110		STST	FEC		:STORE EXCEPTION CODES
005712	022700	147417		CMP	#147417.FPS		:CHECK FLOATING POINT STATUS
005716	001401			BEQ	+.4		:BRANCH IF OK
005720	104000			HLT			:FPS NOT EQUAL TO 147417
005722	022767	000014	173072	CMP	#14. FEC		:CHECK FLOATING EXCEPTION CODE
005730	001401			BEQ	+.4		:BRANCH IF OK
005732	104000			HLT			:FEC NOT EQUAL TO 14
005734	022767	005700	173062	CMP	#FPI47. FEA		:CHECK FLOATING EXCEPTION ADDRESS
005742	001401			BEQ	+.4		:BRANCH IF OK
005744	104000			HLT			:FEA NOT EQUAL TO FPI47
005746	174067	173030		STF	ACC, ANS1		:STORE ACC IN ANS1, ANS2
005752	022767	000002	173022	CMP	#000002,ANS1		:000002 STILL IN ACC?

H03

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 33

005760 001401
005762 104002

BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC0 CHANGED

005764 022767 000300 173012
005772 001401
005774 104002

CMP #000300,ANS2 ;000300 STILL IN AC0?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC0 CHANGED

:TEST 50: TEST CMPF (COMPARE FLOATING POINT)
:COMPARE 052525,052525 TO 125252,125252
:FPS = 047400, FSRC = MO-AC2, AC = AC3

006000 104400
006000 000404

SCOPE
BR TST50

006002 125252 125252
006006 052525 052525

DTA50: 125252,125252
DTB50: 052525,052525

006012 170127 047400
006016 172767 177760
006022 172667 177760
006026 173702
006030 170200
006032 022700 047400
006036 001401
006040 104000

TST50: LDFPS #047400 ;LOAD FLOATING POINT STATUS
LDF DTA50, AC3 ;LOAD 125252,125252 INTO AC3
LDF DTB50, AC2 ;LOAD 052525,052525 INTO AC2
CMPF AC2, AC3 ;COMPARE AC2 TO AC3
STFPS FPS ;STORE FLOATING POINT STATUS
CMP #047400,FPS ;CHECK FLOATING POINT STATUS
BEQ .+4 ;BRANCH IF OK
HLT ;FPS NOT EQUAL TO 047400

006042 174367 172734
006046 022767 125252 172726
006054 001401
006056 104002

STF AC3, ANS1 ;STORE AC3 IN ANS1, ANS2
CMP #125252,ANS1 ;125252 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC3 CHANGED

006060 022767 125252 172716
006066 001401
006070 104002

CMP #125252,ANS2 ;125252 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+2 ;AC3 CHANGED

006072 174267 172710
006076 022767 052525 172702
006104 001401
006106 104004

STF AC2, ANS3 ;STORE AC2 IN ANS3, ANS4
CMP #052525,ANS3 ;052525 STILL IN AC2?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC2 CHANGED

006110 022767 052525 172672
006116 001401
006120 104004

CMP #052525,ANS4 ;052525 STILL IN AC2?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC2 CHANGED

:TEST 51: TEST CMPF (COMPARE FLOATING POINT)
:COMPARE 050525,052525 TO 052525,052525
:FPS = 047410, FSRC = MO-AC0, AC = AC3

006122 104400
006124 000404

SCOPE
BR TST51

006126	052525	052525		DTA51:	052525,052525	
006132	050525	052525		DTB51:	050525,052525	
006136	170127	047400		TS*51:	LDFPS #047400	:LOAD FLOATING POINT STATUS
006142	172767	177760		LDF	DTA51, AC3	:LOAD 052525,052525 INTO AC3
006146	172467	177760		LDF	DTB51, AC0	:LOAD 050525,052525 INTO AC0
006152	173700			CMPF	AC0, AC3	:COMPARE AC0 TO AC3
006154	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
006156	022700	047410		CMP	#047410,FPS	:CHECK FLOATING POINT STATUS
006162	001401			BEG	+.4	:BRANCH IF OK
006164	104000			HLT		:FPS NOT EQUAL TO 047410
006166	174367	172610		STF	AC3, ANS1	:STORE AC3 IN ANS1, ANS2
006172	022767	052525	172602	CMP	#052525,ANS1	:052525 STILL IN AC3?
006200	001401			BEG	+.4	:BRANCH IF OK
006202	104002			HLT+2		:AC3 CHANGED
006204	022767	052525	172572	CMP	#052525,ANS2	:052525 STILL IN AC3?
006212	001401			BEG	+.4	:BRANCH IF OK
006214	104002			HLT+2		:AC3 CHANGED
006216	174067	172564		STF	AC0, ANS3	:STORE AC0 IN ANS3, ANS4
006222	022767	050525	172556	CMP	#050525,ANS3	:050525 STILL IN AC0?
006230	001401			BEG	+.4	:BRANCH IF OK
006232	104004			HLT+4		:AC0 CHANGED
006234	022767	052525	172546	CMP	#052525,ANS4	:052525 STILL IN AC0?
006242	001401			BEG	+.4	:BRANCH IF OK
006244	104004			HLT+4		:AC0 CHANGED

```

:*****
:TEST 52: TEST CMPF (COMPARE FLOATING POINT)
: COMPARE 071422,023456 TO 071422,123456
: FPS = 047410, FSRC = MC-AC3, AC = AC1
:*****

```

006246	104400			SCOPE		
006250	000404			BR	TST52	
006252	071422	123456		DTA52:	071422,123456	
006256	071422	023456		DTB52:	071422,023456	
006262	170127	047400		TST52:	LDFPS #047400	:LOAD FLOATING POINT STATUS
006266	172567	177760		LDF	DTA52, AC1	:LOAD 071422,123456 INTO AC1
006272	172767	177760		LDF	DTB52, AC3	:LOAD 071422,023456 INTO AC3
006276	173503			CMPF	AC3, AC1	:COMPARE AC3 TO AC1
006300	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
006302	022700	047410		CMP	#047410,FPS	:CHECK FLOATING POINT STATUS
006306	001401			BEG	+.4	:BRANCH IF OK
006310	104000			HLT		:FPS NOT EQUAL TO 047410
006312	174167	172464		STF	AC1, ANS1	:STORE AC1 IN ANS1, ANS2
006316	022767	071422	172456	CMP	#071422,ANS1	:071422 STILL IN AC1?
006324	001401			BEG	+.4	:BRANCH IF OK

```

006326 104002          HLT+2          ;AC1 CHANGED
006330 022767 123456 172446  CMP      #123456,ANS2  ;123456 STILL IN AC1?
006336 001401          BEQ      .+4        ;BRANCH IF OK
006340 104002          HLT+2          ;AC1 CHANGED
006342 174367 172440 071422 172432  STF      AC3, ANS3    ;STORE AC3 IN ANS3, ANS4
006346 022767 071422 172432  CMP      #071422,ANS3 ;071422 STILL IN AC3?
006354 001401          BEQ      .+4        ;BRANCH IF OK
006356 104004          HLT+4          ;AC3 CHANGED
006360 022767 023456 172422  CMP      #023456,ANS4 ;023456 STILL IN AC3?
006366 001401          BEQ      .+4        ;BRANCH IF OK
006370 104004          HLT+4          ;AC3 CHANGED

```

```

:*****
:TEST 53:      TEST CMPF (COMPARE FLOATING POINT)
:      COMPARE 125252,125252 TO 125252,125252
:      FPS = 047404, FSRC = MC-AC1, AC = AC2
:*****

```

```

006372 10440C          SCOPE
006374 000404          BR      TST53
006376 125252 125252  DTA53: 125252,125252
006402 125252 125252  DTB53: 125252,125252
006406 170127 047400  T53:  LDFPS  #047400    ;LOAD FLOATING POINT STATUS
006412 172667 177760  LDF      DTA53, AC2  ;LOAD 125252,125252 INTO AC2
006416 172567 177760  LDF      DTB53, AC1  ;LOAD 125252,125252 INTO AC1
006422 173601          CMPF     AC1, AC2    ;COMPARE AC1 TO AC2
006424 170200          STFPS   FPS          ;STORE FLOATING POINT STATUS
006426 022700 047404  CMP      #047404,FPS ;CHECK FLOATING POINT STATUS
006432 001401          BEQ      .+4        ;BRANCH IF OK
006434 104000          HLT          ;FPS NOT EQUAL TO 047404
006436 174267 172340  STF      AC2, ANS1    ;STORE AC2 IN ANS1, ANS2
006442 022767 125252 172332  CMP      #125252,ANS1 ;125252 STILL IN AC2?
006450 001401          BEQ      .+4        ;BRANCH IF OK
006452 104002          HLT+2          ;AC2 CHANGED
006454 022767 125252 172322  CMP      #125252,ANS2 ;125252 STILL IN AC2?
006462 001401          BEQ      .+4        ;BRANCH IF OK
006464 104002          HLT+2          ;AC2 CHANGED
006466 174167 172314  STF      AC1, ANS3    ;STORE AC1 IN ANS3, ANS4
006472 022767 125252 172306  CMP      #125252,ANS3 ;125252 STILL IN AC1?
006500 001401          BEQ      .+4        ;BRANCH IF OK
006502 104004          HLT+4          ;AC1 CHANGED
006504 022767 125252 172276  CMP      #125252,ANS4 ;125252 STILL IN AC1?
006512 001401          BEQ      .+4        ;BRANCH IF OK
006514 104004          HLT+4          ;AC1 CHANGED

```

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*****
:TEST 54:      TEST CMPD (COMPARE DOUBLE PRECISION)
:      COMPARE 140000,000000,000000,000000 TO 040000,000000,000000,000000
:      FPS = 047610,   FSRC = M6-R7,   AC = AC1
*****

```

```

006516 104400          SCOPE
006520 000410          BR      TST54

006522 040000 000000 000000 DTA54: 040000,000000,000000,000000
006530 000000
006532 140000 000000 000000 DTB54: 140000,000000,000000,000000
006540 000000

006542 170127 047600      TST54: LDFPS   #047600      ;LOAD FLOATING POINT STATUS
006546 172567 177750      LDD     DTA54, AC1      ;LOAD 040000,000000,000000,000000 INTO AC1
006552 173567 177754      CMPD   DTB54, AC1      ;COMPARE 140000,000000,000000,000000 TO AC1
006556 170200      STFPS  FPS             ;STORE FLOATING POINT STATUS
006560 022700 047610      CMP    #047610,FPS     ;CHECK FLOATING POINT STATUS
006564 001401      BEQ    .+4             ;BRANCH IF OK
006566 104000      HLT                    ;FPS NOT EQUAL TO 047610

006570 174167 172206      STD    AC1, ANS1       ;STORE AC1 IN ANS1 THRU ANS4
006574 022767 040000 172200      CMP    #040000,ANS1    ;040000 STILL IN AC1?
006602 001401      BEQ    .+4             ;BRANCH IF OK
006604 104004      HLT+4                 ;AC1 CHANGED

006606 022767 000000 172170      CMP    #000000,ANS2    ;000000 STILL IN AC1?
006614 001401      BEQ    .+4             ;BRANCH IF OK
006616 104004      HLT+4                 ;AC1 CHANGED

006620 022767 000000 172160      CMP    #000000,ANS3    ;000000 STILL IN AC1?
006626 001401      BEQ    .+4             ;BRANCH IF OK
006630 104004      HLT+4                 ;AC1 CHANGED

006632 022767 000000 172150      CMP    #000000,ANS4    ;000000 STILL IN AC1?
006640 001401      BEQ    .+4             ;BRANCH IF OK
006642 104004      HLT+4                 ;AC1 CHANGED

```

```

*****
:TEST 55:      TEST CMPD (COMPARE DOUBLE PRECISION)
:      COMPARE 040000,000000,000000,000000 TO 140000,000000,000000,000000
:      FPS = 047600,   FSRC = M6-R7,   AC = AC2
*****

```

```

006644 104400          SCOPE
006646 000410          BR      TST55

006650 140000 000000 000000 DTA55: 140000,000000,000000,000000
006656 000000
006660 040000 000000 000000 DTB55: 040000,000000,000000,000000
006666 000000

006670 170127 047600      TST55: LDFPS   #047600      ;LOAD FLOATING POINT STATUS
006674 172567 177750      LDD     DTA55, AC2      ;LOAD 140000,000000,000000,000000 INTO AC2

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L03

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 37

006700	173667	177754		CMPD	DTB55, AC2	; COMPARE 040000,000000,000000,000000 TO AC2
006704	170200			STFPS	FPS	; STORE FLOATING POINT STATUS
006706	022700	047600		CMP	#047600,FPS	; CHECK FLOATING POINT STATUS
006712	001401			BEQ	.+4	; BRANCH IF OK
006714	104000			HLT		; FPS NOT EQUAL TO 047600
006716	174267	172060		STD	AC2, ANS1	; STORE AC2 IN ANS1 THRU ANS4
006722	022767	140000	172052	CMP	#140000,ANS1	; 140000 STILL IN AC2?
006730	001401			BEQ	.+4	; BRANCH IF OK
006732	104004			HLT+4		; AC2 CHANGED
006734	022767	000000	172042	CMP	#000000,ANS2	; 000000 STILL IN AC2?
006742	001401			BEQ	.+4	; BRANCH IF OK
006744	104004			HLT+4		; AC2 CHANGED
006746	022767	000000	172032	CMP	#000000,ANS3	; 000000 STILL IN AC2?
006754	001401			BEQ	.+4	; BRANCH IF OK
006756	104004			HLT+4		; AC2 CHANGED
006760	022767	000000	172022	CMP	#000000,ANS4	; 000000 STILL IN AC2?
006766	001401			BEQ	.+4	; BRANCH IF OK
006770	104004			HLT+4		; AC2 CHANGED

: TEST S6: TEST CMPD (COMPARE DOUBLE PRECISION)
: COMPARE 177777,177777,177777,177777 TO 077777,177777,177777,177777
: FPS = 047610, FSRC = M6-R7, AC = AC1

006772	104400			SCOPE		
006774	000410			BR	TST56	
006776	077777	177777	177777	DTA56:	077777,177777,177777,177777	
007004	177777					
007006	177777	177777	177777	DTB56:	177777,177777,177777,177777	
007014	177777					
007016	170127	047600		TST56:	LCFPS #047600	; LOAD FLOATING POINT STATUS
007022	172567	177750		LDD	DTA56, AC1	; LOAD 077777,177777,177777,177777 INTO AC1
007026	173567	177754		CMPD	DTB56, AC1	; COMPARE 177777,177777,177777,177777 TO AC1
007032	170200			STFPS	FPS	; STORE FLOATING POINT STATUS
007034	022700	047610		CMP	#047610,FPS	; CHECK FLOATING POINT STATUS
007040	001401			BEQ	.+4	; BRANCH IF OK
007042	104000			HLT		; FPS NOT EQUAL TO 047610
007044	174167	171732		STD	AC1, ANS1	; STORE AC1 IN ANS1 THRU ANS4
007050	022767	077777	171724	CMP	#077777,ANS1	; 077777 STILL IN AC1?
007056	001401			BEQ	.+4	; BRANCH IF OK
007060	104004			HLT+4		; AC1 CHANGED
007062	022767	177777	171714	CMP	#177777,ANS2	; 177777 STILL IN AC1?
007070	001401			BEQ	.+4	; BRANCH IF OK
007072	104004			HLT+4		; AC1 CHANGED
007074	022767	177777	171704	CMP	#177777,ANS3	; 177777 STILL IN AC1?

M03

MAINDEC-11-DCPE-B
DCPEB.P11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 38

007102 001401
007104 104004

BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC1 CHANGED

007106 022767 177777 171674
007114 001401
007116 104004

CMP #177777,ANS4 ;177777 STILL IN AC1?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC1 CHANGED

:TEST 5: TEST CMPD (COMPARE DOUBLE PERCISION)
: COMPARE 077777,177777,177777,177777 TO 177777,177777,177777,177777
: FPS = 047600, FSRC = M6-R7, AC = AC3
:*****

007120 104400
007122 000410

SCOPE
BR TST57

007124 177777 177777 177777
007132 177777
007134 077777 177777 177777
007142 177777

DTA57: 177777,177777,177777,177777
DTB57: 077777,177777,177777,177777

007144 170127 047600
007150 172767 177750
007154 173767 177754
007160 170200
007162 022700 047600
007166 001401
007170 104000

TST57: LDFPS #047600 ;LOAD FLOATING POINT STATUS
LDD DTA57, AC3 ;LOAD 177777,177777,177777,177777 INTO AC3
CMPD DTB57, AC3 ;COMPARE 077777,177777,177777,177777 TO AC3
STFPS FPS ;STORE FLOATING POINT STATUS
CMP #047600,FPS ;CHECK FLOATING POINT STATUS
BEQ .+4 ;BRANCH IF OK
HLT ;FPS NOT EQUAL TO 047600

007172 174367 171604
007176 022767 177777 171576
007204 001401
007206 104004

STD AC3, ANS1 ;STORE AC3 IN ANS1 THRU ANS4
CMP #177777,ANS1 ;177777 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC3 CHANGED

007210 022767 177777 171566
007216 001401
007220 104004

CMP #177777,ANS2 ;177777 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC3 CHANGED

007222 022767 177777 171556
007230 001401
007232 104004

CMP #177777,ANS3 ;177777 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC3 CHANGED

007234 022767 177777 171546
007242 001401
007244 104004

CMP #177777,ANS4 ;177777 STILL IN AC3?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC3 CHANGED

:TEST 6: TEST CMPD (COMPARE DOUBLE PERCISION)
: COMPARE 125252,125252,125252,125252 TO 052525,052525,052525,052525
: FPS = 047610, FSRC = M6-R7, AC = AC1
:*****

007246 104400
007250 000410

SCOPE
BR TST60

007252 052525 052525 052525 DTA60: 052525,052525,052525,052525
 007260 052525
 007262 125252 125252 125252 DTB60: 125252,125252,125252,125252
 007270 125252

007272 170127 047600 TST60: LDFPS #047600 ;LOAD FLOATING POINT STATUS
 007276 172557 177750 LDD DTA60, AC1 ;LOAD 052525,052525,052525,052525 INTO AC1
 007302 173567 177754 CMPD DTB60, AC1 ;COMPARE 125252,125252,125252,125252 TO AC1
 007306 170200 STFPS FPS ;STORE FLOATING POINT STATUS
 007310 022700 047610 CMP #047610,FPS ;CHECK FLOATING POINT STATUS
 007314 001401 BEQ .+4 ;BRANCH IF OK
 007316 104000 HLT ;FPS NOT EQUAL TO 047610

007320 174167 171456 STD AC1, ANS1 ;STORE AC1 IN ANS1 THRU ANS4
 007324 022767 052525 171450 CMP #052525,ANS1 ;052525 STILL IN AC1?
 007332 001401 BEQ .+4 ;BRANCH IF OK
 007334 104004 HLT+4 ;AC1 CHANGED

007336 022767 052525 171440 CMP #052525,ANS2 ;052525 STILL IN AC1?
 007344 001401 BEQ .+4 ;BRANCH IF OK
 007346 104004 HLT+4 ;AC1 CHANGED

007350 022767 052525 171430 CMP #052525,ANS3 ;052525 STILL IN AC1?
 007356 001401 BEQ .+4 ;BRANCH IF OK
 007360 104004 HLT+4 ;AC1 CHANGED

007362 022767 052525 171420 CMP #052525,ANS4 ;052525 STILL IN AC1?
 007370 001401 BEQ .+4 ;BRANCH IF OK
 007372 104004 HLT+4 ;AC1 CHANGED

 :TEST 61: TEST CMPD (COMPARE DOUBLE PRECISION)
 : COMPARE 052525,052525,052525,052525 TO 125252,125252,125252,125252
 : FPS = 047600, FSRC = M6-R7, AC = ACO
 :*****

007374 104400 SCOPE
 007376 000410 BR TST61

007400 125252 125252 125252 DTA61: 125252,125252,125252,125252
 007406 125252
 007410 052525 052525 052525 DTB61: 052525,052525,052525,052525
 007416 052525

007420 170127 047600 TST61: LDFPS #047600 ;LOAD FLOATING POINT STATUS
 007424 172467 177750 LDD DTA61, ACO ;LOAD 125252,125252,125252,125252 INTO ACO
 007430 173467 177754 CMPD DTB61, ACO ;COMPARE 052525,052525,052525,052525 TO ACO
 007434 170200 STFPS FPS ;STORE FLOATING POINT STATUS
 007436 022700 047600 CMP #047600,FPS ;CHECK FLOATING POINT STATUS
 007442 001401 BEQ .+4 ;BRANCH IF OK
 007444 104000 HLT ;FPS NOT EQUAL TO 047600

007446 174067 171330 STD ACO, ANS1 ;STORE ACO IN ANS1 THRU ANS4
 007452 022767 125252 171322 CMP #125252,ANS1 ;125252 STILL IN ACO?

007460	001401			BEQ	+.4	:BRANCH IF OK
007462	104004			HLT+4		:ACC CHANGED
007464	022767	125252	171312	CMP	#125252,ANS2	:125252 STILL IN ACC?
007472	001401			BEQ	+.4	:BRANCH IF OK
007474	104004			HLT+4		:ACC CHANGED
007476	022767	125252	171302	CMP	#125252,ANS3	:125252 STILL IN ACC?
007504	001401			BEQ	+.4	:BRANCH IF OK
007506	104004			HLT+4		:ACC CHANGED
007510	022767	125252	171272	CMP	#125252,ANS4	:125252 STILL IN ACC?
007516	001401			BEQ	+.4	:BRANCH IF OK
007520	104004			HLT+4		:ACC CHANGED

```

:*****
:TEST 62: TEST CMPD (COMPARE DOUBLE PRECISION,
: COMPARE 140052,125252,125252,125252 TO 040052,052522,052522,052525
: FPS = 047610, FSRC = M6-R7, AC = AC3
:*****

```

007522	104400			SCOPE		
007524	000410			BR	TST62	
007526	040052	052522	052522	DTA62:	040052,052522,052522,052525	
007534	052525					
007536	140052	125252	125252	DTB62:	140052,125252,125252,125252	
007544	125252					
007546	170127	047600		TST62:	LDFPS #047600	:LOAD FLOATING POINT STATUS
007552	172767	177750			LDC DTA62, AC3	:LOAD 040052,052522,052522,052525 INTO AC3
007556	173767	177754			CMPD DTB62, AC3	:COMPARE 140052,125252,125252,125252 TO AC3
007562	170200				STFPS FPS	:STORE FLOATING POINT STATUS
007564	022700	047610			CMP #047610,FPS	:CHECK FLOATING POINT STATUS
007570	001401				BEQ .+4	:BRANCH IF OK
007572	104000				HLT	:FPS NOT EQUAL TO 047610
007574	174367	171202		STD	AC3, ANS1	:STORE AC3 IN ANS1 THRU ANS4
007600	022767	040052	171174	CMP	#040052,ANS1	:040052 STILL IN AC3?
007606	001401			BEQ	+.4	:BRANCH IF OK
007610	104004			HLT+4		:AC3 CHANGED
007612	022767	052522	171164	CMP	#052522,ANS2	:052522 STILL IN AC3?
007620	001401			BEQ	+.4	:BRANCH IF OK
007622	104004			HLT+4		:AC3 CHANGED
007624	022767	052522	171154	CMP	#052522,ANS3	:052522 STILL IN AC3?
007632	001401			BEQ	+.4	:BRANCH IF OK
007634	104004			HLT+4		:AC3 CHANGED
007636	022767	052525	171144	CMP	#052525,ANS4	:052525 STILL IN AC3?
007644	001401			BEQ	+.4	:BRANCH IF OK
007646	104004			HLT+4		:AC3 CHANGED

C04

MAINDEC-11-DCFPE-B
DCFPEB.F11

TEST OF CMPF. CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 41

:TEST 63: TEST CMPD (COMPARE DOUBLE PERCISION)
: COMPARE 040052,125252,125252,125252 TO 140052,052522,052522,052525
: FPS = 047600, FSRC = M6-R7, AC = AC1
:*****

007650 104400
007652 000410

SCOPE
BR TST63

007654 140052 052522 052522 DT63: 140052,052522,052522,052525
007662 052525
007664 040052 125252 125252 DT63: 040052,125252,125252,125252
007672 125252

007674 170127 047600
007700 172567 177750
007704 173567 177754
007710 170200
007712 022700 047600
007716 001401
007720 104000

TST63: LDFPS #047600 :LOAD FLOATING POINT STATUS
LDD DT63, AC1 :LOAD 140052,052522,052522,052525 IN AC1
CMP DT63, AC1 :COMPARE 040052,125252,125252,125252 TO AC1
STFPS FPS :STORE FLOATING POINT STATUS
CMP #047600,FPS :CHECK FLOATING POINT STATUS
BEQ .+4 :BRANCH IF OK
HLT :FPS NOT EQUAL TO 047600

007722 174167 171054
007726 022767 140052 171046
007734 001401
007736 104004

STD AC1,ANS1 :STORE AC1 IN ANS1 THRU ANS4
CMP #140052,ANS1 :140052 STILL IN AC1?
BEQ .+4 :BRANCH IF OK
HLT+4 :AC1 CHANGED

007740 022767 052522 171036
007746 001401
007750 104004

CMP #052522,ANS2 :052522 STILL IN AC1?
BEQ .+4 :BRANCH IF OK
HLT+4 :AC1 CHANGED

007752 022767 052522 171026
007760 001401
007762 104004

CMP #052522,ANS3 :052522 STILL IN AC1?
BEQ .+4 :BRANCH IF OK
HLT+4 :AC1 CHANGED

007764 022767 052525 171016
007772 001401
007774 104004

CMP #052525,ANS4 :052525 STILL IN AC1?
BEQ .+4 :BRANCH IF OK
HLT+4 :AC1 CHANGED

:TEST 64: TEST CMPD (COMPARE DOUBLE PERCISION)
: COMPARE 000252,052525,052525,052525 TO 000252,125252,125252,125252
: FPS = 047600, FSRC = M6-R7, AC = AC2
:*****

007776 104400
010000 000410

SCOPE
BR TST64

010002 000252 125252 125252 DT64: 000252,125252,125252,125252
010010 125252
010012 000252 052525 052525 DT64: 000252,052525,052525,052525
010020 052525

010022 170127 047600
010026 172567 177750

TST64: LDFPS #047600 :LOAD FLOATING POINT STATUS
LDD DT64, AC2 :LOAD 000252,125252,125252,125252 IN AC2

010032	173667	177754		CMPD	DTB64, AC2	:COMPARE 000525,052525,052525,052525 TO AC2
010036	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
010040	022700	047600		CMP	#047600,FPS	:CHECK FLOATING POINT STATUS
010044	001401			BEQ	+.4	:BRANCH IF OK
010046	104000			HLT		:FPS NOT EQUAL TO 047600
010050	174267	170726		STD	AC2, ANS1	:STORE AC2 IN ANS1 THRU ANS4
010054	022767	000252	170720	CMP	#000252,ANS1	:000252 STILL IN AC2?
010062	001401			BEQ	+.4	:BRANCH IF OK
010064	104004			HLT+4		:AC2 CHANGED
010066	022767	125252	170710	CMP	#125252,ANS2	:125252 STILL IN AC2?
010074	001401			BEQ	+.4	:BRANCH IF OK
010076	104004			HLT+4		:AC2 CHANGED
010100	022767	125252	170700	CMP	#125252,ANS3	:125252 STILL IN AC2?
010106	001401			BEQ	+.4	:BRANCH IF OK
010110	104004			HLT+4		:AC2 CHANGED
010112	022767	125252	170670	CMP	#125252,ANS4	:125252 STILL IN AC2?
010120	001401			BEQ	+.4	:BRANCH IF OK
010122	104004			HLT+4		:AC2 CHANGED

:TEST 55: TEST CMPD (COMPARE DOUBLE PRECISION)
:COMPARE 037777,177777,177777,177777 TO 040000,000000,000000,000000
:FPS = 047610, FSRC = M6-R7, AC = AC2

010124	104400			SCOPE		
010126	000410			BR	TST65	
010130	040000	000000	000000	DTA65:	040000,000000,000000,000000	
010136	000000					
010140	037777	177777	177777	DTB65:	037777,177777,177777,177777	
010146	177777					
010150	170127	047600		TST65:	LOFPS	#047600
010154	172667	177750		LDD	DTA65, AC2	:LOAD FLOATING POINT STATUS
010160	173667	177754		CMPD	DTB65, AC2	:LOAD 040000,000000,000000,000000 INTO AC2
010164	170200			STFPS	FPS	:COMPARE 037777,177777,177777,177777 TO AC2
010166	022700	047610		CMP	#047610,FPS	:STORE FLOATING POINT STATUS
010172	001401			BEQ	+.4	:CHECK FLOATING POINT STATUS
010174	104000			HLT		:BRANCH IF OK
						:FPS NOT EQUAL TO 047610
010176	174267	170600		STD	AC2, ANS1	:STORE AC2 IN ANS1 THRU ANS4
010202	022767	040000	170572	CMP	#040000,ANS1	:040000 STILL IN AC2?
010210	001401			BEQ	+.4	:BRANCH IF OK
010212	104004			HLT+4		:AC2 CHANGED
010214	022767	000000	170562	CMP	#000000,ANS2	:000000 STILL IN AC2?
010222	001401			BEQ	+.4	:BRANCH IF OK
010224	104004			HLT+4		:AC2 CHANGED
010226	022767	000000	170552	CMP	#000000,ANS3	:000000 STILL IN AC2?

E04

MAINDEC-11-DCFPE-B
DCFPEB.P:1

TEST OF CMPF. CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 43

010234 001401
010236 104004

BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC2 CHANGED

010240 022767 000000 170542
010246 001401
010250 104004

CMP #000000,ANS4 ;000000 STILL IN AC2?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC2 CHANGED

:TEST 66: TEST CMPD (COMPARE DOUBLE PERCISION)
:COMPARE 137777,177777,177777,177777 TO 140000,000000,000000,000000
:FPS = 047600, FSRC = M6-R7, AC = AC1
:*****

010252 104400
010254 000410

SCOPE
BR TST66

010256 140000 000000 000000
010264 000000
010266 137777 177777
010274 177777

DTA66: 140000,000000,000000,000000
DTB66: 137777,177777,177777,177777

010276 170127 047600
010302 172567 177750
010306 173567 177754
010312 170200
010314 022700 047600
010320 001401
010322 104000

TST66: LDFPS #047600 ;LOAD FLOATING POINT STATUS
LDD DTA66, AC1 ;LOAD 140000,000000,000000,000000 INTO AC1
CMPD DTB66, AC1 ;COMPARE 137777,177777,177777,177777 TO AC1
STFPS FPS ;STORE FLOATING POINT STATUS
CMP #047600,FPS ;CHECK FLOATING POINT STATUS
BEQ .+4 ;BRANCH IF OK
HLT ;FPS NOT EQUAL TO 047600

010324 174167 170452
010330 022767 140000 170444
010336 001401
010340 104004

STD AC1,ANS1 ;STORE AC1 IN ANS1 THRU ANS4
CMP #140000,ANS1 ;140000 STILL IN AC1?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC1 CHANGED

010342 022767 000000 170434
010350 001401
010352 104004

CMP #000000,ANS2 ;000000 STILL IN AC1?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC1 CHANGED

010354 022767 000000 170424
010362 001401
010364 104004

CMP #000000,ANS3 ;000000 STILL IN AC1?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC1 CHANGED

010366 022767 000000 170414
010374 001401
010376 104004

CMP #000000,ANS4 ;000000 STILL IN AC1?
BEQ .+4 ;BRANCH IF OK
HLT+4 ;AC1 CHANGED

:TEST 67: TEST CMPD (COMPARE DOUBLE PERCISION)
:COMPARE 052725,052525,052525,052525 TO 052525,052525,052525,052525
:FPS = 047600, FSRC = M6-R7, AC = AC0
:*****

010400 104400
010402 000410

SCOPE
BR TST67

F04

MACYNO50-11-00FPE-B
00FPEB.F11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 44

010404	052525	052525	052525	DTA67:	052525,052525,052525,052525
010412	052525				
010414	052725	052525	052525	DTB67:	052725,052525,052525,052525
010422	052525				
010424	170127	047600		TST67:	LDFPS #047600 ;LOAD FLOATING POINT STATUS
010430	172467	177750		LDD	DTA67, ACC ;LOAD 052525,052525,052525,052525 INTO ACC
010434	173467	177754		CMPD	DTB67, ACC ;COMPARE 052725,052525,052525,052525 TO ACC
010440	170200			STFPS	FPS ;STORE FLOATING POINT STATUS
010442	022700	047600		CMP	#047600,FPS ;CHECK FLOATING POINT STATUS
010446	001401			BEQ	.+4 ;BRANCH IF OK
010450	104000			HLT	;FPS NOT EQUAL TO 047600
010452	174067	170324		STD	ACC, ANS1 ;STORE ACC IN ANS1 THRU ANS4
010456	022767	052525	170316	CMP	#052525,ANS1 ;052525 STILL IN ACC?
010464	001401			BEQ	.+4 ;BRANCH IF OK
010466	104004			HLT+4	;ACC CHANGED
010470	022767	052525	170306	CMP	#052525,ANS2 ;052525 STILL IN ACC?
010476	001401			BEQ	.+4 ;BRANCH IF OK
010500	104004			HLT+4	;ACC CHANGED
010502	022767	052525	170276	CMP	#052525,ANS3 ;052525 STILL IN ACC?
010510	001401			BEQ	.+4 ;BRANCH IF OK
010512	104004			HLT+4	;ACC CHANGED
010514	022767	052525	170266	CMP	#052525,ANS4 ;052525 STILL IN ACC?
010522	001401			BEQ	.+4 ;BRANCH IF OK
010524	104004			HLT+4	;ACC CHANGED

:TEST 70: TEST CMPD (COMPARE DOUBLE PRECISION)
: COMPARE 125252,125252,125252,125252 TO 125052,125252,125252,125252
: FPS = 047610, FSRC = M6-R7, AC = AC2
:*****

010526	104400			SCOPE	
010530	000410			BR	TST70
010532	125052	125252	125252	DTA70:	125052,125252,125252,125252
010540	125252				
010542	125252	125252	125252	DTB70:	125252,125252,125252,125252
010550	125252				
010552	170127	047600		TST70:	LDFPS #047600 ;LOAD FLOATING POINT STATUS
010556	172667	177750		LDD	DTA70, ACC ;LOAD 125052,125252,125252,125252 INTO ACC
010562	173667	177754		CMPD	DTB70, ACC ;COMPARE 125252,125252,125252,125252 TO ACC
010566	170200			STFPS	FPS ;STORE FLOATING POINT STATUS
010570	022700	047610		CMP	#047610,FPS ;CHECK FLOATING POINT STATUS
010574	001401			BEQ	.+4 ;BRANCH IF OK
010576	104000			HLT	;FPS NOT EQUAL TO 047610
010600	174267	170176		STD	ACC, ANS1 ;STORE ACC IN ANS1 THRU ANS4
010604	022767	125052	170170	CMP	#125052,ANS1 ;125052 STILL IN ACC?

G04

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPD, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 45

010612	001401			BEG	.+4	:BRANCH IF OK
010614	104004			HLT+4		:AC2 CHANGED
010616	022767	125252	170160	CMP	#125252,ANS2	:125252 STILL IN AC2?
010624	001401			BEG	.+4	:BRANCH IF OK
010626	104004			HLT+4		:AC2 CHANGED
010630	022767	125252	170150	CMP	#125252,ANS3	:125252 STILL IN AC2?
010636	001401			BEG	.+4	:BRANCH IF OK
010640	104004			HLT+4		:AC2 CHANGED
010642	022767	125252	170140	CMP	#125252,ANS4	:125252 STILL IN AC2?
010650	001401			BEG	.+4	:BRANCH IF OK
010652	104004			HLT+4		:AC2 CHANGED

```
*****  
:TEST 71: TEST CMPD (COMPARE DOUBLE PRECISION)  
: COMPARE 056525,052525,052525,052525 TO 052525,052525,052525,052525  
: FPS = 047600, FSRC = M6-R7, AC = AC2  
*****
```

010654	104400			SCOPE		
010656	000410			BR	TST71	
010660	052525	052525	052525	DTA71:	052525,052525,052525,052525	
010666	052525					
010670	056525	052525	052525	DTB71:	056525,052525,052525,052525	
010676	052525					
010700	170127	047600		TST71:	LDFPS #047600	:LOAD FLOATING POINT STATUS
010704	172667	177750		LDC	DTA71, AC2	:LOAD 052525,052525,052525,052525 INTO AC2
010710	173667	177754		CMPD	DTB71, AC2	:COMPARE 056525,052525,052525,052525 TO AC2
010714	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
010716	022700	047600		CMP	#047600,FPS	:CHECK FLOATING POINT STATUS
010722	001401			BEG	.+4	:BRANCH IF OK
010724	104000			HLT		:FPS NOT EQUAL TO 047600
010726	174267	170050		STD	AC2, ANS1	:STORE AC2 IN ANS1 THRU ANS4
010732	022767	052525	170042	CMP	#052525,ANS1	:052525 STILL IN AC2?
010740	001401			BEG	.+4	:BRANCH IF OK
010742	104004			HLT+4		:AC2 CHANGED
010744	022767	052525	170032	CMP	#052525,ANS2	:052525 STILL IN AC2?
010752	001401			BEG	.+4	:BRANCH IF OK
010754	104004			HLT+4		:AC2 CHANGED
010756	022767	052525	170022	CMP	#052525,ANS3	:052525 STILL IN AC2?
010764	001401			BEG	.+4	:BRANCH IF OK
010766	104004			HLT+4		:AC2 CHANGED
010770	022767	052525	170012	CMP	#052525,ANS4	:052525 STILL IN AC2?
010776	001401			BEG	.+4	:BRANCH IF OK
010780	104004			HLT+4		:AC2 CHANGED

:TEST 72: TEST CMPD (COMPARE DOUBLE PRECISION)
: COMPARE 052525,052525,052525,052525 TO 072525,052525,052525,052525
: FPS = 047610, FSRC = M6-R7, AC = AC1
:*****

011002 104400
011004 000410

SCOPE
BR TST72

011006 072525 052525 052525 DTA72: 072525,052525,052525,052525
011014 052525
011016 052525 052525 052525 DTB72: 052525,052525,052525,052525
011024 052525

011026 170127 047600
011032 172567 177750
011036 173567 177754
011042 170200
011044 022700 047610
011050 001401
011052 104000

TST72: LDFPS #047600 :LOAD FLOATING POINT STATUS
LDD DTA72, AC1 :LOAD 072525,052525,052525,052525 INTO AC1
CMP DTB72, AC1 :COMPARE 052525,052525,052525,052525 TO AC1
STFPS FPS :STORE FLOATING POINT STATUS
CMP #047610,FPS :CHECK FLOATING POINT STATUS
BEQ .+4 :BRANCH IF OK
HLT :FPS NOT EQUAL TO 047610

011054 174167 167722
011060 022767 072525 167714
011066 001401
011070 104004

STD AC1, ANS1 :STORE AC1 IN ANS1 THRU ANS4
CMP #072525,ANS1 :072525 STILL IN AC1?
BEQ .+4 :BRANCH IF OK
HLT+4 :AC1 CHANGED

011072 022767 052525 167704
011100 001401
011102 104004

CMP #052525,ANS2 :052525 STILL IN AC1?
BEQ .+4 :BRANCH IF OK
HLT+4 :AC1 CHANGED

011104 022767 052525 167674
011112 001401
011114 104004

CMP #052525,ANS3 :052525 STILL IN AC1?
BEQ .+4 :BRANCH IF OK
HLT+4 :AC1 CHANGED

011116 022767 052525 167664
011124 001401
011126 104004

CMP #052525,ANS4 :052525 STILL IN AC1?
BEQ .+4 :BRANCH IF OK
HLT+4 :AC1 CHANGED

:TEST 73: TEST CMPD (COMPARE DOUBLE PRECISION)
: COMPARE 125252,125252,125252,125252 TO 105252,125252,125252,125252
: FPS = 047610, FSRC = M6-R7, AC = AC3
:*****

011130 104400
011132 000410

SCOPE
BR TST73

011134 105252 125252 125252 DTA73: 105252,125252,125252,125252
011142 125252
011144 125252 125252 125252 DTB73: 125252,125252,125252,125252
011152 125252

011154 170127 047600
011162 172767 177750

TST73: LDFPS #047600 :LOAD FLOATING POINT STATUS
LDD DTA73, AC3 :LOAD 105252,125252,125252,125252 INTO AC3

011164	173767	177754		CMPD	DTB73, AC3	:COMPARE 125252,125252,125252,125252 TO AC3
011170	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
011172	022700	047610		CMP	#047610,FPS	:CHECK FLOATING POINT STATUS
011176	001401			BEQ	+.4	:BRANCH IF OK
011200	104000			HLT		:FPS NOT EQUAL TO 047610
011202	174367	167574		STD	AC3, ANS1	:STORE AC3 IN ANS1 THRU ANS4
011206	022767	105252	167566	CMP	#105252,ANS1	:105252 STILL IN AC3?
011214	001401			BEQ	+.4	:BRANCH IF OK
011216	104004			HLT+4		:AC3 CHANGED
011220	022767	125252	167556	CMP	#125252,ANS2	:125252 STILL IN AC3?
011226	001401			BEQ	+.4	:BRANCH IF OK
011230	104004			HLT+4		:AC3 CHANGED
011232	022767	125252	167546	CMP	#125252,ANS3	:125252 STILL IN AC3?
011240	001401			BEQ	+.4	:BRANCH IF OK
011242	104004			HLT+4		:AC3 CHANGED
011244	022767	125252	167536	CMP	#125252,ANS4	:125252 STILL IN AC3?
011252	001401			BEQ	+.4	:BRANCH IF OK
011254	104004			HLT+4		:AC3 CHANGED

```

:*****
:TEST 74:      TEST CMPD (COMPARE DOUBLE PRECISION)
:      COMPARE 165252,125252,125252,125252 TO 125252,125252,125252,125252
:      FPS = 047610,  FSRC = M6-R7,  AC = AC2
:*****

```

011256	104400			SCOPE		
011260	000410			BR	TST74	
011262	125252	125252	125252	DTA74:	125252,125252,125252,125252	
011270	125252					
011272	165252	125252	125252	DTB74:	165252,125252,125252,125252	
011300	125252					
011302	170127	047600		TST74:	LDFPS #047600	:LOAD FLOATING POINT STATUS
011306	172667	177750		LDD	DTA74, AC2	:LOAD 125252,125252,125252,125252 INTO AC2
011312	173667	177754		CMPD	DTB74, AC2	:COMPARE 165252,125252,125252,125252 TO AC2
011316	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
011320	022700	047610		CMP	#047610,FPS	:CHECK FLOATING POINT STATUS
011324	001401			BEQ	+.4	:BRANCH IF OK
011326	104000			HLT		:FPS NOT EQUAL TO 047610
011330	174267	167446		STD	AC2, ANS1	:STORE AC2 IN ANS1 THRU ANS4
011334	022767	125252	167440	CMP	#125252,ANS1	:125252 STILL IN AC2?
011342	001401			BEQ	+.4	:BRANCH IF OK
011344	104004			HLT+4		:AC2 CHANGED
011346	022767	125252	167430	CMP	#125252,ANS2	:125252 STILL IN AC2?
011354	001401			BEQ	+.4	:BRANCH IF OK
011356	104004			HLT+4		:AC2 CHANGED
011360	022767	125252	167420	CMP	#125252,ANS3	:125252 STILL IN AC2?


```

011366 001401      BEQ      .+4      ;BRANCH IF OK
011370 104004      HLT+4      ;AC2 CHANGED

011372 022767 125252 167410  CMP      #125252,ANS4 ;125252 STILL IN AC2?
011400 001401      BEQ      .+4      ;BRANCH IF OK
011402 104004      HLT+4      ;AC2 CHANGED

```

```

:*****
:TEST 75:      TEST CMPD (COMPARE DOUBLE PERCISION)
:      COMPARE 040000,000000,000000,000001 TO 040000,000000,000000,000000
:      FPS = 047600, FSRC = M6-R7, AC = AC3
:*****

```

```

011404 104400      SCOPE
011406 000410      BR      TST75

011410 040000 000000 000000 040000,000000,000000,000000  DTA75:
011416 000000
011420 040000 000000 000000 040000,000000,000000,000001  DTB75:
011426 000001

011430 170127 047600      TST75:  LDFPS  #047600      ;LOAD FLOATING POINT STATUS
011434 172767 177750      LDD   DTA75, AC3      ;LOAD 040000,000000,000000,000000 INTO AC3
011440 173767 177754      CMPD  DTB75, AC3      ;COMPARE 040000,000000,000000,000001 TO AC3
011444 170200      STFPS  FPS           ;STORE FLOATING POINT STATUS
011446 022700 047600      CMP   #047600,FPS     ;CHECK FLOATING POINT STATUS
011452 001401      BEQ   .+4            ;BRANCH IF OK
011454 104000      HLT   ;FPS NOT EQUAL TO 047600

011456 174367 167320      STD   AC3, ANS1      ;STORE AC3 IN ANS1 THRU ANS4
011462 022767 040000 167312  CMP   #040000,ANS1   ;040000 STILL IN AC3?
011470 001401      BEQ   .+4            ;BRANCH IF OK
011472 104004      HLT+4      ;AC3 CHANGED

011474 022767 000000 167302  CMP   #000000,ANS2   ;000000 STILL IN AC3?
011502 001401      BEQ   .+4            ;BRANCH IF OK
011504 104004      HLT+4      ;AC3 CHANGED

011506 022767 000000 167272  CMP   #000000,ANS3   ;000000 STILL IN AC3?
011514 001401      BEQ   .+4            ;BRANCH IF OK
011516 104004      HLT+4      ;AC3 CHANGED

011520 022767 000000 167262  CMP   #000000,ANS4   ;000000 STILL IN AC3?
011526 001401      BEQ   .+4            ;BRANCH IF OK
011530 104004      HLT+4      ;AC3 CHANGED

```

```

:*****
:TEST 76:      TEST CMPD (COMPARE DOUBLE PERCISION)
:      COMPARE 177777,177777,177777,177776 TO 177777,177777,177777,177777
:      FPS = 047600, FSRC = M6-R7, AC = AC1
:*****

```

```

011532 104400      SCOPE
011534 000410      BR      TST76

```

011536 177777 177777 177777 DTA76: 177777,177777,177777,177777
 011544 177777
 011546 177777 177777 177777 DTB76: 177777,177777,177777,177776
 011554 177776

011556 170127 047600 TST76: LDFPS #047600 ;LOAD FLOATING POINT STATUS
 011562 172567 177750 LDD DTA76, AC1 ;LOAD 177777,177777,177777,177777 INTO AC1
 011566 173567 177754 CMPD DTB76, AC1 ;COMPARE 177777,177777,177777,177776 TO AC1
 011572 170200 STFPS FPS ;STORE FLOATING POINT STATUS
 011574 022700 047600 CMP #047600,FPS ;CHECK FLOATING POINT STATUS
 011600 001401 BEQ .+4 ;BRANCH IF OK
 011602 104000 HLT ;FPS NOT EQUAL TO 047600

011604 174167 167172 STD AC1, ANS1 ;STORE AC1 IN ANS1 THRU ANS4
 011610 022767 177777 167164 CMP #177777,ANS1 ;177777 STILL IN AC1?
 011616 001401 BEQ .+4 ;BRANCH IF OK
 011620 104004 HLT+4 ;AC1 CHANGED

011622 022767 177777 167154 CMP #177777,ANS2 ;177777 STILL IN AC1?
 011630 001401 BEQ .+4 ;BRANCH IF OK
 011632 104004 HLT+4 ;AC1 CHANGED

011634 022767 177777 167144 CMP #177777,ANS3 ;177777 STILL IN AC1?
 011642 001401 BEQ .+4 ;BRANCH IF OK
 011644 104004 HLT+4 ;AC1 CHANGED

011646 022767 177777 167134 CMP #177777,ANS4 ;177777 STILL IN AC1?
 011654 001401 BEQ .+4 ;BRANCH IF OK
 011656 104004 HLT+4 ;AC1 CHANGED

 :TEST 77: TEST CMPD (COMPARE DOUBLE PERCISION)
 : COMPARE 000010,011100,011100,011101 TO 000010,010100,010100,010101
 : FPS = 047604, FSRC = M6-R7. AC = AC1
 :*****

011660 104400 SCOPE
 011662 000410 BR TST77

011664 000010 010100 010100 DTA77: 000010,010100,010100,010101
 011672 010101
 011674 000010 011100 011100 DTB77: 000010,011100,011100,011101
 011702 011101

011704 170127 040200 TST77: LDFPS #040200 ;LOAD FLOATING POINT STATUS
 011710 172567 177750 LDD DTA77, AC1 ;LOAD 000010,010100,010100,010101 INTO AC1
 011714 170127 047600 LDFPS #047600 ;LOAD FLOATING POINT STATUS
 011720 173567 177750 CMPD DTB77, AC1 ;COMPARE 000010,011100,011100,011101 TO AC1
 011724 170200 STFPS FPS ;STORE FLOATING POINT STATUS
 011726 022700 047604 CMP #047604,FPS ;CHECK FLOATING POINT STATUS
 011732 001401 BEQ .+4 ;BRANCH IF OK
 011734 104000 HLT ;FPS NOT EQUAL TO 047604

011736 174167 167040 STD AC1, ANS1 ;STORE AC1 IN ANS1 THRU ANS4

011742	005767	167034	TST	ANS1	;CHECK ANS1
011746	001401		BEQ	+.4	;BRANCH IF OK
011750	104004		HLT+4		;AC1 NOT EQUAL TO ZERO
011752	005767	167026	TST	ANS2	;CHECK ANS2
011756	001401		BEQ	+.4	;BRANCH IF OK
011760	104004		HLT+4		;AC1 NOT EQUAL TO ZERO
011762	005767	167020	TST	ANS3	;CHECK ANS3
011766	001401		BEQ	+.4	;BRANCH IF OK
011770	104004		HLT+4		;AC1 NOT EQUAL TO ZERO
011772	005767	167012	TST	ANS4	;CHECK ANS4
011776	001401		BEQ	+.4	;BRANCH IF OK
012000	104004		HLT+4		;AC1 NOT EQUAL TO ZERO

```

:*****
:TEST 100: TEST CMPD (COMPARE DOUBLE PRECISION)
: COMPARE 135313,135313,135313,135313 TO 135213,135313,135313,135313
: FPS = 047610, FSRC = M6-R7, AC = AC2
:*****

```

012002	104400		SCOPE		
012004	000410		BR	TST100	
012006	135213	135313	DTA100:	135213,135313,135313,135313	
012014	135313				
012016	135313	135313	DTB100:	135313,135313,135313,135313	
012024	135313				
012026	170127	047600	TST100:	LDFPS #047600	;LOAD FLOATING POINT STATUS
012032	172667	177750	LDD	DTA100, AC2	;LOAD 135213,135313,135313,135313 INTO AC2
012036	173667	177754	CMPD	DTB100, AC2	;COMPARE 135313,135313,135313,135313 TO AC2
012042	170200		STFPS	FPS	;STORE FLOATING POINT STATUS
012044	022700	047610	CMP	#047610,FPS	;CHECK FLOATING POINT STATUS
012050	001401		BEQ	+.4	;BRANCH IF OK
012052	104000		HLT		;FPS NOT EQUAL TO 047610
012054	174267	166722	STD	AC2, ANS1	;STORE AC2 IN ANS1 THRU ANS4
012060	022767	135213	CMP	#135213,ANS1	;135213 STILL IN AC2?
012066	001401		BEQ	+.4	;BRANCH IF OK
012070	104004		HLT+4		;AC2 CHANGED
012072	022767	135313	CMP	#135313,ANS2	;135313 STILL IN AC2?
012100	001401		BEQ	+.4	;BRANCH IF OK
012102	104004		HLT+4		;AC2 CHANGED
012104	022767	135313	CMP	#135313,ANS3	;135313 STILL IN AC2?
012112	001401		BEQ	+.4	;BRANCH IF OK
012114	104004		HLT+4		;AC2 CHANGED
012116	022767	135313	CMP	#135313,ANS4	;135313 STILL IN AC2?
012124	001401		BEQ	+.4	;BRANCH IF OK
012126	104004		HLT+4		;AC2 CHANGED

;TEST 101: TEST CMPD (COMPARE DOUBLE PERCISION)
;COMPARE 071422,023452,023452,023456 TO 071422,123452,123452,123456
;FPS = 047610, FSRC = M6-R7, AC = AC1

012130	104400			SCOPE				
012132	000410			BR	TST101			
012134	071422	123452	123452	DTA101:	071422,123452,123452,123456			
012142	123456							
012144	071422	023452	023452	DTB101:	071422,023452,023452,023456			
012152	023456							
012154	170127	047600		TST101:	LDFPS #047600		;LOAD FLOATING POINT STATUS	
012160	172567	177750			LDD DTA101, AC1		;LOAD 071422,123452,123452,123456 INTO AC1	
012164	173567	177754			CMPD DTB101, AC1		;COMPARE 071422,023452,023452,023456 TO AC1	
012170	170200				STFPS FPS		;STORE FLOATING POINT STATUS	
012172	022700	047610			CMP #047610,FPS		;CHECK FLOATING POINT STATUS	
012176	001401				BEQ .+4		;BRANCH IF OK	
012200	104000				HLT		;FPS NOT EQUAL TO 047610	
012202	174167	166574			STD AC1 ANS1		;STORE AC1 IN ANS1 THRU ANS4	
012206	022767	071422	166566		CMP #071422,ANS1		;071422 STILL IN AC1?	
012214	001401				BEQ .+4		;BRANCH IF OK	
012216	104004				HLT+4		;AC1 CHANGED	
012220	022767	123452	166556		CMP #123452,ANS2		;123452 STILL IN AC1?	
012226	001401				BEQ .+4		;BRANCH IF OK	
012230	104004				HLT+4		;AC1 CHANGED	
012232	022767	123452	166546		CMP #123452,ANS3		;123452 STILL IN AC1?	
012240	001401				BEQ .+4		;BRANCH IF OK	
012242	104004				HLT+4		;AC1 CHANGED	
012244	022767	123456	166536		CMP #123456,ANS4		;123456 STILL IN AC1?	
012252	001401				BEQ .+4		;BRANCH IF OK	
012254	104004				HLT+4		;AC1 CHANGED	

;TEST 102: TEST CMPD (COMPARE DOUBLE PERCISION)
;COMPARE 154323,071623,071623,071625 TO 154321,071621,071621,071625
;FPS = 047610, FSRC = M6-R7, AC = AC1

012256	104400			SCOPE				
012260	000410			BR	TST102			
012262	154321	071621	071621	DTA102:	154321,071621,071621,071625			
012270	071625							
012272	154323	071623	071623	DTB102:	154323,071623,071623,071625			
012300	071625							
012302	170127	047600		TST102:	LDFPS #047600		;LOAD FLOATING POINT STATUS	

```

012306 172567 177750 LDD DTA102, AC1 ;LOAD 154321,071621,071621,071625 INTO AC1
012312 173567 177754 CMPD DTB102, AC1 ;COMPARE 154323,071623,071623,071625 TO AC1
012316 170200 STFPS FPS ;STORE FLOATING POINT STATUS
012320 022700 047610 CMP #047610,FPS ;CHECK FLOATING POINT STATUS
012324 001401 BEQ .+4 ;BRANCH IF OK
012326 104000 HLT ;FPS NOT EQUAL TO 047610

012330 174167 166446 STD AC1, ANS1 ;STORE AC1 IN ANS1 THRU ANS4
012334 022767 154321 166440 CMP #154321,ANS1 ;154321 STILL IN AC1?
012342 001401 BEQ .+4 ;BRANCH IF OK
012344 104004 HLT+4 ;AC1 CHANGED

012346 022767 071621 166430 CMP #071621,ANS2 ;071621 STILL IN AC1?
012354 001401 BEQ .+4 ;BRANCH IF OK
012356 104004 HLT+4 ;AC1 CHANGED

012360 022767 071621 166420 CMP #071621,ANS3 ;071621 STILL IN AC1?
012366 001401 BEQ .+4 ;BRANCH IF OK
012370 104004 HLT+4 ;AC1 CHANGED

012372 022767 071625 166410 CMP #071625,ANS4 ;071625 STILL IN AC1?
012400 001401 BEQ .+4 ;BRANCH IF OK
012402 104004 HLT+4 ;AC1 CHANGED

```

```

*****
:TEST 103: TEST CMPD (COMPARE DOUBLE PERCISION)
: COMPARE 040000,000000,000000,000000 TO 040000,000000,000000,000000
: FPS = 047604, FSRC = M6-R7, AC = AC2
*****

```

```

012404 104400 SCOPE
012406 000410 BR TST103

012410 040000 000000 000000 DTA103: 040000,000000,000000,000000
012416 000000
012420 040000 000000 000000 DTB103: 040000,000000,000000,000000
012426 000000

012430 170127 047600 TST103: LDFPS #047600 ;LOAD FLOATING POINT STATUS
012434 172667 177750 LDD DTA103, AC2 ;LOAD 040000,000000,000000,000000 INTO AC2
012440 173667 177754 CMPD DTB103, AC2 ;COMPARE 040000,000000,000000,000000 TO AC2
012444 170200 STFPS FPS ;STORE FLOATING POINT STATUS
012446 022700 047604 CMP #047604,FPS ;CHECK FLOATING POINT STATUS
012452 001401 BEQ .+4 ;BRANCH IF OK
012454 104000 HLT ;FPS NOT EQUAL TO 047604

012456 174267 166320 STD AC2, ANS1 ;STORE AC2 IN ANS1 THRU ANS4
012462 022767 040000 166312 CMP #040000,ANS1 ;040000 STILL IN AC2?
012470 001401 BEQ .+4 ;BRANCH IF OK
012472 104004 HLT+4 ;AC2 CHANGED

012474 022767 000000 166302 CMP #000000,ANS2 ;000000 STILL IN AC2?
012502 001401 BEQ .+4 ;BRANCH IF OK
012504 104004 HLT+4 ;AC2 CHANGED

```

B05

MA:NDCC-11-DOFPE-8
DOFPEB.P:1

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 53

012506	022767	000000	166272	CMP	#000000,ANS3	:000000 STILL IN AC2?
012514	001401			BEG	+.4	:BRANCH IF OK
012516	104004			HLT+4		:AC2 CHANGED
012520	022767	000000	166262	CMP	#000000,ANS4	:000000 STILL IN AC2?
012526	001401			BEG	+.4	:BRANCH IF OK
012530	104004			HLT+4		:AC2 CHANGED

```

:*****
:TEST 104: TEST CMPD (COMPARE DOUBLE PERCISION)
:          COMPARE 140177,177777,177777,177777 TO 140177,177777,177777,177777
:          FPS = 047604, FSRC = M6-R7, AC = AC3
:*****

```

012532	104400			SCOPE		
012534	000410			BR	TST104	

012536	140177	177777	177777	DTA104:	140177,177777,177777,177777
012544	177777				
012546	140177	177777	177777	DTB104:	140177,177777,177777,177777
012554	177777				

012556	170127	047600		TST104:	LDFPS	#047600	:LOAD FLOATING POINT STATUS
012562	172767	177750			LDD	DTA104, AC3	:LOAD 140177,177777,177777,177777 INTO AC3
012566	173767	177754			CMPD	DTB104, AC3	:COMPARE 140177,177777,177777,177777 TO AC3
012572	170200				STFPS	FPS	:STORE FLOATING POINT STATUS
012574	022700	047604			CMP	#047604,FPS	:CHECK FLOATING POINT STATUS
012600	001401				BEG	+.4	:BRANCH IF OK
012602	104000				HLT		:FPS NOT EQUAL TO 047604

012604	174367	166172		STD	AC3, ANS1	:STORE AC3 IN ANS1 THRU ANS4
012610	022767	140177	166164	CMP	#140177,ANS1	:140177 STILL IN AC3?
012616	001401			BEG	+.4	:BRANCH IF OK
012620	104004			HLT+4		:AC3 CHANGED

012622	022767	177777	166154	CMP	#177777,ANS2	:177777 STILL IN AC3?
012630	001401			BEG	+.4	:BRANCH IF OK
012632	104004			HLT+4		:AC3 CHANGED

012634	022767	177777	166144	CMP	#177777,ANS3	:177777 STILL IN AC3?
012642	001401			BEG	+.4	:BRANCH IF OK
012644	104004			HLT+4		:AC3 CHANGED

012646	022767	177777	166134	CMP	#177777,ANS4	:177777 STILL IN AC3?
012654	001401			BEG	+.4	:BRANCH IF OK
012656	104004			HLT+4		:AC3 CHANGED

```

:*****
:TEST 105: TEST CMPD (COMPARE DOUBLE PERCISION)
:          COMPARE 002000,000000,000000,000000 TO 002000,000000,000000,000000
:          FPS = 047604, FSRC = M6-R7, AC = AC3
:*****

```

012660	104400			SCOPE		
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012662 000410 BR TST105
012664 002000 000000 000000 DTA105: 002000,000000,000000,000000
012672 000000
012674 002000 000000 000000 DTB105: 002000,000000,000000,000000
012702 000000

012704 170127 047600 TST105: LDFPS #047600 ;LOAD FLOATING POINT STATUS
012710 172767 177750 LDD DTA105, AC3 ;LOAD 002000,000000,000000,000000 INTO AC3
012714 173767 177754 CMPD DTB105, AC3 ;COMPARE 002000,000000,000000,000000 TO AC3
012720 170200 STFPS FPS ;STORE FLOATING POINT STATUS
012722 022700 047604 CMP #047604, FPS ;CHECK FLOATING POINT STATUS
012726 001401 BEQ .+4 ;BRANCH IF OK
012730 104000 HLT ;FPS NOT EQUAL TO 047604

012732 174367 166044 STD AC3, ANS1 ;STORE AC3 IN ANS1 THRU ANS4
012736 022767 002000 166036 CMP #002000, ANS1 ;002000 STILL IN AC3?
012744 001401 BEQ .+4 ;BRANCH IF OK
012746 104004 HLT+4 ;AC3 CHANGED

012750 022767 000000 166026 CMP #000000, ANS2 ;000000 STILL IN AC3?
012756 001401 BEQ .+4 ;BRANCH IF OK
012760 104004 HLT+4 ;AC3 CHANGED

012762 022767 000000 166016 CMP #000000, ANS3 ;000000 STILL IN AC3?
012770 001401 BEQ .+4 ;BRANCH IF OK
012772 104004 HLT+4 ;AC3 CHANGED

012774 022767 000000 166006 CMP #000000, ANS4 ;000000 STILL IN AC3?
013002 001401 BEQ .+4 ;BRANCH IF OK
013004 104004 HLT+4 ;AC3 CHANGED

```

```

:*****
:TEST 106: TEST CMPD (COMPARE DOUBLE PRECISION)
:COMPARE 125252,125252,125252,125252 TO 125252,125252,125252,125252
:FPS = 047604, FSRC = M6-R7, AC = AC3
:*****

```

```

013006 104400 SCOPE
013010 000410 BR TST106

013012 125252 125252 125252 DTA106: 125252,125252,125252,125252
013020 125252
013022 125252 125252 125252 DTB106: 125252,125252,125252,125252
013030 125252

013032 170127 047600 TST106: LDFPS #047600 ;LOAD FLOATING POINT STATUS
013036 172767 177750 LDD DTA106, AC3 ;LOAD 125252,125252,125252,125252 INTO AC3
013042 173767 177754 CMPD DTB106, AC3 ;COMPARE 125252,125252,125252,125252 TO AC3
013046 170200 STFPS FPS ;STORE FLOATING POINT STATUS
013050 022700 047604 CMP #047604, FPS ;CHECK FLOATING POINT STATUS
013054 001401 BEQ .+4 ;BRANCH IF OK
013056 104000 HLT ;FPS NOT EQUAL TO 047604

013060 174367 165716 STD AC3, ANS1 ;STORE AC3 IN ANS1 THRU ANS4

```

M21NDEC-11-00FPE-B
00FPEB.F11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27.732) 03-SEP-76 15:25 PAGE 55

013064	022767	125252	165710	CMP	#125252,ANS1	:125252 STILL IN AC3?
013072	001401			BEG	.+4	:BRANCH IF OK
013074	104004			HLT+4		:AC3 CHANGED
013076	022767	125252	165700	CMP	#125252,ANS2	:125252 STILL IN AC3?
013104	001401			BEG	.+4	:BRANCH IF OK
013106	104004			HLT+4		:AC3 CHANGED
013110	022767	125252	165670	CMP	#125252,ANS3	:125252 STILL IN AC3?
013116	001401			BEG	.+4	:BRANCH IF OK
013120	104004			HLT+4		:AC3 CHANGED
013122	022767	125252	165660	CMP	#125252,ANS4	:125252 STILL IN AC3?
013130	001401			BEG	.+4	:BRANCH IF OK
013132	104004			HLT+4		:AC3 CHANGED

```

:*****
:TEST 107: TEST CMPD (COMPARE DOUBLE PRECISION)
:COMPARE 000005,002000,100005,002000 TO 100205,002000,100005,002000
:FPS = 047600, FSRC = M6-R7, AC = AC2
:*****

```

013134 104400
013136 000410

SCOPE
BR TST107

013140	100205	002000	100005	DTA107:	100205,002000,100005,002000
013146	002000				
013150	000005	002000	100005	DTB107:	000005,002000,100005,002000
013156	002000				

013160	170127	047600		TST107: LDFPS	#047600	:LOAD FLOATING POINT STATUS
013164	172667	177750		LDD	DTA107, AC2	:LOAD 100205,002000,100005,002000 INTO AC2
013170	173667	177754		CMPD	DTB107, AC2	:COMPARE 000005,002000,100005,002000 TO AC2
013174	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
013176	022700	047600		CMP	#047600,FPS	:CHECK FLOATING POINT STATUS
013202	001401			BEG	.+4	:BRANCH IF OK
013204	104000			HLT		:FPS NOT EQUAL TO 047600

013206	174267	165570		STD	AC2, ANS1	:STORE AC2 IN ANS1 THRU ANS4
013212	022767	100205	165562	CMP	#100205,ANS1	:100205 STILL IN AC2?
013220	001401			BEG	.+4	:BRANCH IF OK
013222	104004			HLT+4		:AC2 CHANGED

013224	022767	002000	165552	CMP	#002000,ANS2	:002000 STILL IN AC2?
013232	001401			BEG	.+4	:BRANCH IF OK
013234	104004			HLT+4		:AC2 CHANGED

013236	022767	100005	165542	CMP	#100005,ANS3	:100005 STILL IN AC2?
013244	001401			BEG	.+4	:BRANCH IF OK
013246	104004			HLT+4		:AC2 CHANGED

013250	022767	002000	165532	CMP	#002000,ANS4	:002000 STILL IN AC2?
013256	001401			BEG	.+4	:BRANCH IF OK
013258	104004			HLT+4		:AC2 CHANGED

:TEST 110: TEST CMPD (COMPARE DOUBLE PERCISION)
: COMPARE 004030,000010,000200,000040 TO 000030,000010,000200,000040
: FPS = 047600, FSRC = M6-R7, AC = AC2
:*****

013262	104400				SCOPE		
013264	000410				BR	TST110	
013266	000030	000010	000200	DTA110:	000030,000010,000200,000040		
013274	000040						
013276	004030	000010	000200	DTB110:	004030,000010,000200,000040		
013304	000040						
013306	170127	047600		TST110:	LDFPS	#047600	:LOAD FLOATING POINT STATUS
013312	172667	177750			LDD	DTA110, AC2	:LOAD 000030,000010,000200,000040 INTO AC2
013316	173657	177754			CMPD	DTB110, AC2	:COMPARE 004030,000010,000200,000040 TO AC2
013322	170200				STFPS	FPS	:STORE FLOATING POINT STATUS
013324	022700	047600			CMP	#047600,FPS	:CHECK FLOATING POINT STATUS
013330	001401				BEG	+.4	:BRANCH IF OK
013332	104000				HLT		:FPS NOT EQUAL TO 047600
013334	174267	165442			STC	AC2, ANS1	:STORE AC2 IN ANS1 THRU ANS4
013340	022767	000030	165434		CMP	#000030,ANS1	:000030 STILL IN AC2?
013346	001401				BEG	+.4	:BRANCH IF OK
013350	104004				HLT+4		:AC2 CHANGED
013352	022767	000010	165424		CMP	#000010,ANS2	:000010 STILL IN AC2?
013360	001401				BEG	+.4	:BRANCH IF OK
013362	104004				HLT+4		:AC2 CHANGED
013364	022767	000200	165414		CMP	#000200,ANS3	:000200 STILL IN AC2?
013372	001401				BEG	+.4	:BRANCH IF OK
013374	104004				HLT+4		:AC2 CHANGED
013376	022767	000040	165404		CMP	#000040,ANS4	:000040 STILL IN AC2?
013404	001401				BEG	+.4	:BRANCH IF OK
013406	104004				HLT+4		:AC2 CHANGED

:TEST 111: TEST CMPD (COMPARE DOUBLE PERCISION)
: COMPARE 006000,007000,000100,020000 TO 100020,000300,000004,000500
: FPS = 047600, FSRC = M6-R7, AC = AC3
:*****

013410	104400				SCOPE		
013412	000410				BR	TST111	
013414	100020	000300	000004	DTA111:	100020,000300,000004,000500		
013422	000500						
013424	006000	007000	000100	DTB111:	006000,007000,000100,020000		
013432	020000						
013434	170127	040200		TST111:	LDFPS	#040200	:LOAD FLOATING POINT STATUS

F05

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF, CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 57

013440	172767	177750		LDD	DTA111, AC3	:LOAD 100020,000300,000004,000500 INTO AC3
013444	170127	047600		LDFPS	#047600	:LOAD FLOATING POINT STATUS
013450	173767	177750		FPI111: CMPD	DTB111, AC3	:COMPARE 006000,007000,000100,020000 TO AC3
013454	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
013456	022700	047600		CMP	#047600,FPS	:CHECK FLOATING POINT STATUS
013462	001401			BEQ	.+4	:BRANCH IF OK
013464	104000			HLT		:FPS NOT EQUAL TO 047600
013466	174367	165310		STD	AC3, ANS1	:STORE AC3 IN ANS1 THRU ANS4
013472	022767	100020	165302	CMP	#100020,ANS1	:100020 STILL IN AC3?
013500	001401			BEQ	.+4	:BRANCH IF OK
013502	104004			HLT+4		:AC3 CHANGED
013504	022767	000300	165272	CMP	#000300,ANS2	:000300 STILL IN AC3?
013512	001401			BEQ	.+4	:BRANCH IF OK
013514	104004			HLT+4		:AC3 CHANGED
013516	022767	000004	165262	CMP	#000004,ANS3	:000004 STILL IN AC3?
013524	001401			BEQ	.+4	:BRANCH IF OK
013526	104004			HLT+4		:AC3 CHANGED
013530	022767	000500	165252	CMP	#000500,ANS4	:000500 STILL IN AC3?
013536	001401			BEQ	.+4	:BRANCH IF OK
013540	104004			HLT+4		:AC3 CHANGED

:TEST 112: TEST CMPD (COMPARE DOUBLE PRECISION)
: COMPARE 100050,060000,007000,000011 TO 010000,000200,003000,040000
: FPS = 147617, FSRC = M6-R7, AC = AC3
: FEC = 14, FEA = FPI112

013542	104400			SCOPE		
013544	000410			BR	TST112	
013546	010000	000200	003000	DTA112:	010000,000200,003000,040000	
013554	040000					
013556	100050	060000	007000	DTB112:	100050,060000,007000,000011	
013564	000011					
013566	170127	040200		TST112: LDFPS	#040200	:LOAD FLOATING POINT STATUS
013572	172767	177750		LDD	DTA112, AC3	:LOAD 010000,000200,003000,040000 INTO AC3
013576	170127	047617		LDFPS	#047617	:LOAD FLOATING POINT STATUS
013602	173767	177750		FPI112: CMPD	DTB112, AC3	:COMPARE 100050,060000,007000,000011 TO AC3
013606	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
013610	170367	165206		STST	FEC	:STORE EXCEPTION CODES
013614	022700	147617		CMP	#147617,FPS	:CHECK FLOATING POINT STATUS
013620	001401			BEQ	.+4	:BRANCH IF OK
013622	104000			HLT		:FPS NOT EQUAL TO 147617
013624	022767	000014	165170	CMP	#14, FEC	:CHECK FLOATING EXCEPTION CODE
013632	001401			BEQ	.+4	:BRANCH IF OK
013634	104000			HLT		:FEC NOT EQUAL TO 14
013636	022767	013602	165160	CMP	#FPI112, FEA	:CHECK FLOATING EXCEPTION ADDRESS

G05

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF. CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 58

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013644 001401      BEQ      .+4      ;BRANCH IF OK
013646 104000      HLT                      ;FEA NOT EQUAL TO FPI112

013650 174367 165126  STD      AC3      ANS1      ;STORE AC3 IN ANS1 THRU ANS4
013654 022767 010000 165120  CMP      #010000,ANS1      ;010000 STILL IN AC3?
013662 001401      BEQ      .+4      ;BRANCH IF OK
013664 104004      HLT+4      ;AC3 CHANGED

013666 022767 000200 165110  CMP      #000200,ANS2      ;000200 STILL IN AC3?
013674 001401      BEQ      .+4      ;BRANCH IF OK
013676 104004      HLT+4      ;AC3 CHANGED

013700 022767 003000 165100  CMP      #003000,ANS3      ;003000 STILL IN AC3?
013706 001401      BEQ      .+4      ;BRANCH IF OK
013710 104004      HLT+4      ;AC3 CHANGED

013712 022767 040000 165070  CMP      #040000,ANS4      ;040000 STILL IN AC3?
013720 001401      BEQ      .+4      ;BRANCH IF OK
013722 104004      HLT+4      ;AC3 CHANGED

```

```

:*****
:TEST 113: TEST CMPD (COMPARE DOUBLE PRECISION)
:COMPARE 100005,000600,007000,000100 TO 000010,000200,003000,004000
:FPS = 147617, FSRC = M6-R7, AC = AC3
:FEC = 14, FEA = FPI113
:*****

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```

013724 104400      SCOPE
013726 000410      BR      TST113

013730 000010 000200 003000  DTA113: 000010,000200,003000,004000
013736 004000
013740 100005 000600 007000  DTB113: 100005,000600,007000,000100
013746 000100

013750 170127 040200  TST113: LDFPS  #040200      ;LOAD FLOATING POINT STATUS
013754 172767 177750  LDD      DTA113, AC3      ;LOAD 000010,000200,003000,004000 INTO AC3
013760 170127 047617  LDFPS  #047617      ;LOAD FLOATING POINT STATUS
013764 173767 177750  FPI113: CMPD  DTB113, AC3      ;COMPARE 100005,000600,007000,000100 TO AC3
013770 170200  STFPS  FPS      ;STORE FLOATING POINT STATUS
013772 170367 165024  STST   FEC      ;STORE EXCEPTION CODES
013776 022700 147617  CMP      #147617,FPS      ;CHECK FLOATING POINT STATUS
014002 001401      BEQ      .+4      ;BRANCH IF OK
014004 104000      HLT                      ;FPS NOT EQUAL TO 147617

014006 022767 000014 165006  CMP      #14, FEC      ;CHECK FLOATING EXCEPTION CODE
014014 001401      BEQ      .+4      ;BRANCH IF OK
014016 104000      HLT                      ;FEC NOT EQUAL TO 14

014020 022767 013764 164776  CMP      #FPI113, FEA      ;CHECK FLOATING EXCEPTION ADDRESS
014026 001401      BEQ      .+4      ;BRANCH IF OK
014030 104000      HLT                      ;FEA NOT EQUAL TO FPI113

014032 174367 164744  STD      AC3      ANS1      ;STORE AC3 IN ANS1 THRU ANS4
014036 022767 000010 164736  CMP      #000010,ANS1      ;000010 STILL IN AC3?

```

014044	001401			BEQ	.+4		:BRANCH IF OK
014046	104004			HLT+4			:AC3 CHANGED
014050	022767	000200	164726	CMP	#000200,ANS2		:000200 STILL IN AC3?
014056	001401			BEQ	.+4		:BRANCH IF OK
014060	104004			HLT+4			:AC3 CHANGED
014062	022767	000300	164715	CMP	#003000,ANS3		:003000 STILL IN AC3?
014070	001401			BEQ	.+4		:BRANCH IF OK
014072	104004			HLT+4			:AC3 CHANGED
014074	022767	000400	164706	CMP	#004000,ANS4		:004000 STILL IN AC3?
014102	001401			BEQ	.+4		:BRANCH IF OK
014104	104004			HLT+4			:AC3 CHANGED

```

:*****
:TEST 114: TEST CMPD (COMPARE DOUBLE PERCISION)
: COMPARE 100006,007000,000200,003000 TO 100020,000300,040000,000050
: FPS = 147617, FSRC = M6-R7, AC = AC3
: FEC = 14, FEA = FPI114
:*****

```

014106	104400			SCOPE			
014110	000410			BR	TST114		
014112	100020	000300	040000	DTA114:	100020,000300,040000,000050		
014120	000050						
014122	100006	007000	000200	DTB114:	100006,007000,000200,003000		
014130	003000						
014132	170127	040200		TST114:	LDFPS #040200		:LOAD FLOATING POINT STATUS
014136	172767	177750			LD DTA114, AC3		:LOAD 100020,000300,040000,000050 INTO AC3
014142	170127	047617			LDFPS #C47617		:LOAD FLOATING POINT STATUS
014146	173767	177750		FPI114:	CMPD DTB114, AC3		:COMPARE 100006,007000,000200,003000 TO AC3
014152	170200				STFPS FPS		:STORE FLOATING POINT STATUS
014154	170367	164642			STST FEC		:STORE EXCEPTION CODES
014160	022700	147617			CMP #147617,FPS		:CHECK FLOATING POINT STATUS
014164	001401				BEQ .+4		:BRANCH IF OK
014166	104000				HLT		:FPS NOT EQUAL TO 147617
014170	022767	000014	164624	CMP	#14, FEC		:CHECK FLOATING EXCEPTION CODE
014176	001401			BEQ	.+4		:BRANCH IF OK
014200	104000			HLT			:FEC NOT EQUAL TO 14
014202	022767	014146	164614	CMP	#FPI114, FEA		:CHECK FLOATING EXCEPTION ADDRESS
014210	001401			BEQ	.+4		:BRANCH IF OK
014212	104000			HLT			:FEA NOT EQUAL TO FPI114
014214	174367	164562		STD	AC3, ANS1		:STORE AC3 IN ANS1 THRU ANS4
014220	022767	100020	164554	CMP	#100020,ANS1		:100020 STILL IN AC3?
014226	001401			BEQ	.+4		:BRANCH IF OK
014230	104004			HLT+4			:AC3 CHANGED
014232	022767	000300	164544	CMP	#000300,ANS2		:000300 STILL IN AC3?
014240	001401			BEQ	.+4		:BRANCH IF OK

```

014242 104004          HLT+4          ;AC3 CHANGED
014244 022767 040000 164534  CMP      #040000,ANS3  ;040000 STILL IN AC3?
014252 001401          BEQ      .+4          ;BRANCH IF OK
014254 104004          HLT+4          ;AC3 CHANGED
014256 022767 000050 164524  CMP      #000050,ANS4  ;000050 STILL IN AC3?
014264 001401          BEQ      .+4          ;BRANCH IF OK
014266 104004          HLT+4          ;AC3 CHANGED

```

```

;*****
:TEST 115:      TEST CMPD (COMPARE DOUBLE PERCISION)
:              COMPARE 100050,060000,007000,000011 TO 010000,000200,003000,040000
:              FPS = 147617,  FSRC = M6-R7,  AC = AC3
:              FEC = 14,      FEA = FPI115
;*****

```

```

014270 104400          SCOPE
014272 000410          BR      TST115
014274 010000 000200 003000 DTA115: 010000,000200,003000,040000
014302 040000
014304 100050 060000 007000 DTB115: 100050,060000,007000,000011
014312 000011
014314 170127 040200  TST115: LDFPS  #040200      ;LOAD FLOATING POINT STATUS
014320 172767 177750  LDD     DTA115, AC3  ;LOAD 010000,000200,003000,040000 INTO AC3
014324 170127 047617  LDFPS  #047617      ;LOAD FLOATING POINT STATUS
014330 173767 177750  FPI115: CMPD    DTB115, AC3  ;COMPARE 100050,060000,007000,000011 TO AC3
014334 170200          STFPS  FPS          ;STORE FLOATING POINT STATUS
014336 170367 164460  STST   FEC          ;STORE EXCEPTION CODES
014342 022700 147617  CMP     #147617,FPS  ;CHECK FLOATING POINT STATUS
014346 001401          BEQ     .+4          ;BRANCH IF OK
014350 104000          HLT     ;FPS NOT EQUAL TO 147617
014352 022767 000014 164442  CMP     #14,  FEC    ;CHECK FLOATING EXCEPTION CODE
014360 001401          BEQ     .+4          ;BRANCH IF OK
014362 104000          HLT     ;FEC NOT EQUAL TO 14
014364 022767 014330 164432  CMP     #FPI115, FEA  ;CHECK FLOATING EXCEPTION ADDRESS
014372 001401          BEQ     .+4          ;BRANCH IF OK
014374 104000          HLT     ;FEA NOT EQUAL TO FPI115
014376 174367 164400          STD     AC3,  ANS1    ;STORE AC3 IN ANS1 THRU ANS4
014402 022767 010000 164372  CMP     #010000,ANS1  ;010000 STILL IN AC3?
014410 001401          BEQ     .+4          ;BRANCH IF OK
014412 104004          HLT+4    ;AC3 CHANGED
014414 022767 000200 164362  CMP     #000200,ANS2  ;000200 STILL IN AC3?
014422 001401          BEQ     .+4          ;BRANCH IF OK
014424 104004          HLT+4    ;AC3 CHANGED
014426 022767 003000 164352  CMP     #003000,ANS3  ;003000 STILL IN AC3?
014434 001401          BEQ     .+4          ;BRANCH IF OK
014436 104004          HLT+4    ;AC3 CHANGED

```

```

014440 022767 040000 164342      CMP      #040000,ANS4      ;040000 STILL IN AC3?
014446 001401      BEQ      .+4              ;BRANCH IF OK
014450 104004      HLT+4          ;AC3 CHANGED

```

```

*****
:TEST 116:      TEST CMPD (COMPARE DOUBLE PERCISION)
:              COMPARE 100005,000600,007000,000100 TO 000010,000200,003000,004000
:              FPS = 147617,  FSRC = M6-R7,  AC = AC3
:              FEC = 14,      FEA = FPI116
*****

```

```

014452 104400      SCOPE
014454 000410      BR      TST116

014456 000010 000200 003000  DTA116: 000010,000200,003000,004000
014464 004000
014466 100005 000600 007000  DTB116: 100005,000600,007000,000100
014474 000100

014476 170127 040200      TST116: LDFPS      #040200      ;LOAD FLOATING POINT STATUS
014502 172767 177750      LDD      DTA116, AC3      ;LOAD 000010,000200,003000,004000 INTO AC3
014506 170127 047617      LDFPS      #047617      ;LOAD FLOATING POINT STATUS
014512 173767 177750      FPI116: CMPD      DTB116, AC3      ;COMPARE 100005,000600,007000,000100 TO AC3
014516 170200      STFPS     FPS            ;STORE FLOATING POINT STATUS
014520 170367 164276      STST     FEC            ;STORE EXCEPTION CODES
014524 022700 147617      CMP      #147617,FPS      ;CHECK FLOATING POINT STATUS
014530 001401      BEQ      .+4              ;BRANCH IF OK
014532 104000      HLT              ;FPS NOT EQUAL TO 147617

014534 022767 000014 164260      CMP      #14,  FEC        ;CHECK FLOATING EXCEPTION CODE
014542 001401      BEQ      .+4              ;BRANCH IF OK
014544 104000      HLT              ;FEC NOT EQUAL TO 14

014546 022767 014512 164250      CMP      #FPI116, FEA      ;CHECK FLOATING EXCEPTION ADDRESS
014554 001401      BEQ      .+4              ;BRANCH IF OK
014556 104000      HLT              ;FEA NOT EQUAL TO FPI116

014560 174367 164216      STD      AC3,  ANS1        ;STORE AC3 IN ANS1 THRU ANS4
014564 022767 000010 164210      CMP      #000010,ANS1      ;000010 STILL IN AC3?
014572 001401      BEQ      .+4              ;BRANCH IF OK
014574 104004      HLT+4          ;AC3 CHANGED

014576 022767 000200 164200      CMP      #000200,ANS2      ;000200 STILL IN AC3?
014604 001401      BEQ      .+4              ;BRANCH IF OK
014606 104004      HLT+4          ;AC3 CHANGED

014610 022767 003000 164170      CMP      #003000,ANS3      ;003000 STILL IN AC3?
014616 001401      BEQ      .+4              ;BRANCH IF OK
014620 104004      HLT+4          ;AC3 CHANGED

014622 022767 004000 164160      CMP      #004000,ANS4      ;004000 STILL IN AC3?
014630 001401      BEQ      .+4              ;BRANCH IF OK
014632 104004      HLT+4          ;AC3 CHANGED

```

```

*****
:TEST 117: TEST CMPD (COMPARE DOUBLE PERCISION)
: COMPARE 100006,007000,000200,003000 TO 100020,000300,040000,000050
: FPS = 147617, FSRC = M6-R7, AC = AC3
: FEC = 14, FEA = FPI117
*****

```

```

014634 104400          SCOPE
014636 000410          BR      TST117

014640 100020 000300 040000 DTA117: 100020,000300,040000,000050
014646 000050
014650 100006 007000 000200 DTB117: 100006,007000,000200,003000
014656 003000

014660 170127 040200 TST117: LDFPS #040200 ;LOAD FLOATING POINT STATUS
014664 172767 177750 LDD DTA117, AC3 ;LOAD 100020,000300,040000,000050 INTO AC3
014670 170127 047617 LDFPS #047617 ;LOAD FLOATING POINT STATUS
014674 173767 177750 FPI117: CMPD DTB117, AC3 ;COMPARE 100006,007000,000200,003000 TO AC3
014700 170200 STFPS FPS ;STORE FLOATING POINT STATUS
014702 170367 164114 STST FEC ;STORE EXCEPTION CODES
014706 022700 147617 CMP #147617,FPS ;CHECK FLOATING POINT STATUS
014712 001401 BEQ .+4 ;BRANCH IF OK
014714 104000 HLT ;FPS NOT EQUAL TO 147617

014716 022767 000014 164076 CMP #14, FEC ;CHECK FLOATING EXCEPTION CODE
014724 001401 BEQ .+4 ;BRANCH IF OK
014726 104000 HLT ;FEC NOT EQUAL TO 14

014730 022767 014674 164066 CMP #FPI117, FEA ;CHECK FLOATING EXCEPTION ADDRESS
014736 001401 BEQ .+4 ;BRANCH IF OK
014740 104000 HLT ;FEA NOT EQUAL TO FPI117

014742 174367 164034 STD AC3, ANS1 ;STORE AC3 IN ANS1 THRU ANS4
014746 022767 103020 164026 CMP #100020,ANS1 ;103020 STILL IN AC3?
014754 001401 BEQ .+4 ;BRANCH IF OK
014756 104004 HLT+4 ;AC3 CHANGED

014760 022767 000300 164016 CMP #000300,ANS2 ;000300 STILL IN AC3?
014766 001401 BEQ .+4 ;BRANCH IF OK
014770 104004 HLT+4 ;AC3 CHANGED

014772 022767 040000 164006 CMP #040000,ANS3 ;040000 STILL IN AC3?
015000 001401 BEQ .+4 ;BRANCH IF OK
015002 104004 HLT+4 ;AC3 CHANGED

015004 022767 000050 163776 CMP #000050,ANS4 ;000050 STILL IN AC3?
015012 001401 BEQ .+4 ;BRANCH IF OK
015014 104004 HLT+4 ;AC3 CHANGED

```

```

*****
:TEST 120: TEST CMPD (COMPARE DOUBLE PERCISION)
: COMPARE 000060,007000,000020,000030 TO 100002,000030,004000,000005
: FPS = 047604, FSRC = M6-R7, AC = AC3

```

```

015016 104400          SCOPE
015020 000410          BR      TST120

015022 100002 000030 004000 DTA120: 100002,000030,004000,000005
015030 000005
015032 000060 007000 000020 DTB120: 000060,007000,000020,000030
015040 000030

015042 170127 040200      TST120: LDFPS  #040200      ;LOAD FLOATING POINT STATUS
015046 172767 177750      LOD      DTA120, AC3      ;LOAD 100002,000030,004000,000005 INTO AC3
015052 170127 047600      LDFPS  #047600      ;LOAD FLOATING POINT STATUS
015056 173767 177750      CMPD   DTB120, AC3      ;COMPARE 000060,007000,000020,000030 TO AC3
015062 170200      STFPS  FPS           ;STORE FLOATING POINT STATUS
015064 022700 047604      CMP     #047604, FPS      ;CHECK FLOATING POINT STATUS
015070 001401      BEQ    .+4           ;BRANCH IF OK
015072 104000      HLT                    ;FPS NOT EQUAL TO 047604

015074 174367 163702      STD     AC3,   ANS1      ;STORE AC3 IN ANS1 THRU ANS4
015100 005767 163676      TST    ANS1           ;CHECK ANS1
015104 001401      BEQ    .+4           ;BRANCH IF OK
015106 104004      HLT+4                ;AC3 NOT EQUAL TO ZERO

015110 005767 163670      TST    ANS2           ;CHECK ANS2
015114 001401      BEQ    .+4           ;BRANCH IF OK
015116 104004      HLT+4                ;AC3 NOT EQUAL TO ZERO

015120 005767 163662      TST    ANS3           ;CHECK ANS3
015124 001401      BEQ    .+4           ;BRANCH IF OK
015126 104004      HLT+4                ;AC3 NOT EQUAL TO ZERO

015130 005767 163654      TST    ANS4           ;CHECK ANS4
015134 001401      BEQ    .+4           ;BRANCH IF OK
015136 104004      HLT+4                ;AC3 NOT EQUAL TO ZERO

```

```

*****
;TEST 121:      TEST CMPD (COMPARE DOUBLE PRECISION)
;              COMPARE 052525,052525,052525,052525 TO 125252,125252,125252,125252
;              FPS = 047600,  FSRC = MO-AC2,  AC = AC1
*****

```

```

015140 104400          SCOPE
015142 000410          BR      TST121

015144 125252 125252 125252 DTA121: 125252,125252,125252,125252
015152 125252
015154 052525 052525 052525 DTB121: 052525,052525,052525,052525
015162 052525

015164 170127 047600      TST121: LDFPS  #047600      ;LOAD FLOATING POINT STATUS
015170 172567 177750      LOD      DTA121, AC1      ;LOAD 125252,125252,125252,125252 INTO AC1
015174 172667 177754      LOD      DTB121, AC2      ;LOAD 052525,052525,052525,052525 INTO AC2
015200 173502      CMPD   AC2,   AC1      ;COMPARE AC2 TO AC1
015202 170200      STFPS  FPS           ;STORE FLOATING POINT STATUS

```


M05

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF. CMPD
TEST SECTION

MACY11 27(732) 03-SEP-76 15:25 PAGE 64

015204	022700	047600		CMP	#047600,FPS	;CHECK FLOATING POINT STATUS
015210	001401			BEQ	.+4	;BRANCH IF OK
015212	104000			HLT		;FPS NOT EQUAL TO 047600
015214	174167	163562		STD	AC1, ANS1	;STORE AC1 IN ANS1 THRU ANS4
015220	022767	125252	163554	CMP	#125252,ANS1	;125252 STILL IN AC1?
015226	001401			BEQ	.+4	;BRANCH IF OK
015230	104004			HLT+4		;AC1 CHANGED
015232	022767	125252	163544	CMP	#125252,ANS2	;125252 STILL IN AC1?
015240	001401			BEQ	.+4	;BRANCH IF OK
015242	104004			HLT+4		;AC1 CHANGED
015244	022767	125252	163534	CMP	#125252,ANS3	;125252 STILL IN AC1?
015252	001401			BEQ	.+4	;BRANCH IF OK
015254	104004			HLT+4		;AC1 CHANGED
015256	022767	125252	163524	CMP	#125252,ANS4	;125252 STILL IN AC1?
015264	001401			BEQ	.+4	;BRANCH IF OK
015266	104004			HLT+4		;AC1 CHANGED
015270	174267	163516		STD	AC2, ANS5	;STORE AC2 IN ANS5 THRU ANS8
015274	022767	052525	163510	CMP	#052525,ANS5	;052525 STILL IN AC2?
015302	001401			BEQ	.+4	;BRANCH IF OK
015304	104010			HLT+10		;AC2 CHANGED
015306	022767	052525	163500	CMP	#052525,ANS6	;052525 STILL IN AC2?
015314	001401			BEQ	.+4	;BRANCH IF OK
015316	104010			HLT+10		;AC2 CHANGED
015320	022767	052525	163470	CMP	#052525,ANS7	;052525 STILL IN AC2?
015326	001401			BEQ	.+4	;BRANCH IF OK
015330	104010			HLT+10		;AC2 CHANGED
015332	022767	052525	163460	CMP	#052525,ANS8	;052525 STILL IN AC2?
015340	001401			BEQ	.+4	;BRANCH IF OK
015342	104010			HLT+10		;AC2 CHANGED

```

;*****
;TEST 122: TEST CMPD (COMPARE DOUBLE PRECISION)
;COMPARE 050525,052525,052525,052525 TO 052525,052525,052525,052525
;FPS = 047610, FSRC = MO-AC0, AC = AC1
;*****

```

015344 104400
015346 000410

SCOPE
BR TST122

015350 052525 052525 052525 DTA122: 052525,052525,052525,052525
015356 052525
015360 050525 052525 052525 DTB122: 050525,052525,052525,052525
015366 052525

015370 170127 047600 TST122: LDFPS #047600 ;LOAD FLOATING POINT STATUS
015374 172567 177750 LDD DTA122, AC1 ;LOAD 052525,052525,052525,052525 INTO AC1
015400 172467 177754 LDD DTB122, AC0 ;LOAD 050525,052525,052525,052525 INTO AC0

015404	173500			CMPD	AC0, AC1	;COMPARE AC0 TO AC1
015406	170200			STFPS	FPS	;STORE FLOATING POINT STATUS
015410	022700	047610		CMP	#047610,FPS	;CHECK FLOATING POINT STATUS
015414	001401			BEQ	.+4	;BRANCH IF OK
015416	104000			HLT		;FPS NOT EQUAL TO 047610
015420	174167	163356		STD	AC1, ANS1	;STORE AC1 IN ANS1 THRU ANS4
015424	022767	052525	163350	CMP	#052525,ANS1	;052525 STILL IN AC1?
015432	001401			BEQ	.+4	;BRANCH IF OK
015434	104004			HLT+4		;AC1 CHANGED
015436	022767	052525	163340	CMP	#052525,ANS2	;052525 STILL IN AC1?
015444	001401			BEQ	.+4	;BRANCH IF OK
015446	104004			HLT+4		;AC1 CHANGED
015450	022767	052525	163330	CMP	#052525,ANS3	;052525 STILL IN AC1?
015456	001401			BEQ	.+4	;BRANCH IF OK
015460	104004			HLT+4		;AC1 CHANGED
015462	022767	052525	163320	CMP	#052525,ANS4	;052525 STILL IN AC1?
015470	001401			BEQ	.+4	;BRANCH IF OK
015472	104004			HLT+4		;AC1 CHANGED
015474	174067	163312		STD	AC0, ANS5	;STORE AC0 IN ANS5 THRU ANS8
015500	022767	050525	163304	CMP	#050525,ANS5	;050525 STILL IN AC0?
015506	001401			BEQ	.+4	;BRANCH IF OK
015510	104010			HLT+10		;AC0 CHANGED
015512	022767	052525	163274	CMP	#052525,ANS6	;052525 STILL IN AC0?
015520	001401			BEQ	.+4	;BRANCH IF OK
015522	104010			HLT+10		;AC0 CHANGED
015524	022767	052525	163264	CMP	#052525,ANS7	;052525 STILL IN AC0?
015532	001401			BEQ	.+4	;BRANCH IF OK
015534	104010			HLT+10		;AC0 CHANGED
015536	022767	052525	163254	CMP	#052525,ANS8	;052525 STILL IN AC0?
015544	001401			BEQ	.+4	;BRANCH IF OK
015546	104010			HLT+10		;AC0 CHANGED

```

;*****
;TEST 123: TEST CMPD (COMPARE DOUBLE PRECISION)
; COMPARE 071422,023422,023422,023456 TO 071422,123422,123422,123456
; FPS = 047610, FSRC = MO-AC1, AC = AC0
;*****

```

015550	104400			SCOPE		
015552	000410			BR	TST123	
015554	071422	123422	123422	DTA123:	071422,123422,123422,123456	
015562	123456					
015564	071422	023422	023422	DTB123:	071422,023422,023422,023456	
015572	023456					
015574	170127	047600		TST123:	LDFPS #047600	;LOAD FLOATING POINT STATUS

015600	172467	177750		LDL	DTA123, ACO	:LOAD 071422,123422,123422,123456 INTO ACO
015604	172567	177754		LDD	DTB123, AC1	:LOAD 071422,023422,023422,023456 INTO AC1
015610	173401			CMPD	AC1, ACO	:COMPARE AC1 TO ACO
015612	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
015614	022700	047610		CMP	#047610,FPS	:CHECK FLOATING POINT STATUS
015620	001401			BEQ	.+4	:BRANCH IF OK
015622	104000			HLT		:FPS NOT EQUAL TO 047610
015624	174067	163152		STD	ACO, ANS1	:STORE ACO IN ANS1 THRU ANS4
015630	022767	071422	163144	CMP	#071422,ANS1	:071422 STILL IN ACO?
015636	001401			BEQ	.+4	:BRANCH IF OK
015640	104004			HLT+4		:ACO CHANGED
015642	022767	123422	163134	CMP	#123422,ANS2	:123422 STILL IN ACO?
015650	001401			BEQ	.+4	:BRANCH IF OK
015652	104004			HLT+4		:ACO CHANGED
015654	022767	123422	163124	CMP	#123422,ANS3	:123422 STILL IN ACO?
015662	001401			BEQ	.+4	:BRANCH IF OK
015664	104004			HLT+4		:ACO CHANGED
015666	022767	123456	163114	CMP	#123456,ANS4	:123456 STILL IN ACO?
015674	001401			BEQ	.+4	:BRANCH IF OK
015676	104004			HLT+4		:ACO CHANGED
015700	174167	163106		STD	AC1, ANS5	:STORE AC1 IN ANS5 THRU ANS8
015704	022767	071422	163100	CMP	#071422,ANS5	:071422 STILL IN AC1?
015712	001401			BEQ	.+4	:BRANCH IF OK
015714	104010			HLT+10		:AC1 CHANGED
015716	022767	023422	163070	CMP	#023422,ANS6	:023422 STILL IN AC1?
015724	001401			BEQ	.+4	:BRANCH IF OK
015726	104010			HLT+10		:AC1 CHANGED
015730	022767	023422	163060	CMP	#023422,ANS7	:023422 STILL IN AC1?
015736	001401			BEQ	.+4	:BRANCH IF OK
015740	104010			HLT+10		:AC1 CHANGED
015742	022767	023456	163050	CMP	#023456,ANS8	:023456 STILL IN AC1?
015750	001401			BEQ	.+4	:BRANCH IF OK
015752	104010			HLT+10		:AC1 CHANGED

```

*****
:TEST 124: TEST CMPD (COMPARE DOUBLE PRECISION)
: COMPARE 125252,125252,125252,125252 TO 125252,125252,125252,125252
: FPS = 047604, FSRC = MO-AC3, AC = AC1
*****

```

015754	104400			SCOPE	
015756	000410			BR	TST124
015760	125252	125252	125252	DTA124:	125252,125252,125252,125252
015766	125252				
015770	125252	125252	125252	DTB124:	125252,125252,125252,125252
015776	125252				

016000	170127	047600		TST124: LOFPS	#047600	:LOAD FLOATING POINT STATUS
016004	172567	177750		LDD	DTA124, AC1	:LOAD 125252,125252,125252,125252 INTO AC1
016010	172767	177754		LDD	DTB124, AC3	:LOAD 125252,125252,125252,125252 INTO AC3
016014	173503			CMPD	AC3, AC1	:COMPARE AC3 TO AC1
016016	170200			STFPS	FPS	:STORE FLOATING POINT STATUS
016020	022700	047604		CMP	#047604, FPS	:CHECK FLOATING POINT STATUS
016024	001401			BEG	.+4	:BRANCH IF OK
016026	104000			HLT		:FPS NOT EQUAL TO 047604
016030	174167	162746		STD	AC1 ANS1	:STORE AC1 IN ANS1 THRU ANS4
016034	022767	125252	162740	CMP	#125252, ANS1	:125252 STILL IN AC1?
016042	001401			BEG	.+4	:BRANCH IF OK
016044	104004			HLT+4		:AC1 CHANGED
016046	022767	125252	162730	CMP	#125252, ANS2	:125252 STILL IN AC1?
016054	001401			BEG	.+4	:BRANCH IF OK
016056	104004			HLT+4		:AC1 CHANGED
016060	022767	125252	162720	CMP	#125252, ANS3	:125252 STILL IN AC1?
016066	001401			BEG	.+4	:BRANCH IF OK
016070	104004			HLT+4		:AC1 CHANGED
016072	022767	125252	162710	CMP	#125252, ANS4	:125252 STILL IN AC1?
016100	001401			BEG	.+4	:BRANCH IF OK
016102	104004			HLT+4		:AC1 CHANGED
016104	174367	162702		STD	AC3 ANS5	:STORE AC3 IN ANS5 THRU ANS8
016110	022767	125252	162674	CMP	#125252, ANS5	:125252 STILL IN AC3?
016116	001401			BEG	.+4	:BRANCH IF OK
016120	104010			HLT+10		:AC3 CHANGED
016122	022767	125252	162664	CMP	#125252, ANS6	:125252 STILL IN AC3?
016130	001401			BEG	.+4	:BRANCH IF OK
016132	104010			HLT+10		:AC3 CHANGED
016134	022767	125252	162654	CMP	#125252, ANS7	:125252 STILL IN AC3?
016142	001401			BEG	.+4	:BRANCH IF OK
016144	104010			HLT+10		:AC3 CHANGED
016146	022767	125252	162644	CMP	#125252, ANS8	:125252 STILL IN AC3?
016154	001401			BEG	.+4	:BRANCH IF OK
016156	104010			HLT+10		:AC3 CHANGED

016160	104400			DONE:	SCOPE		
016162	032737	002000	177570		BIT	#SW10,2#SWR	:RING THE BELL?
016170	001005				BNE	1\$:NO!
016172	012767	000207	001242		MOV	#BELL,TYPE	:TYPE A BELL
016200	000004	017442			TYPE	..TYPE	
016204	005046			1\$:	CLR	-(6)	:CLEAR TRACE TRAP
016206	032737	010000	177570		BIT	#SW12,2#SWR	:RUN WITH TRT?
016214	001010				BNE	2\$	
016216	005167	001222			COM	TRPB	
016222	100005				BPL	2\$	
016224	052716	000020			BIS	#20,(6)	:SET TRACE TRAP
016230	012746	001062			MOV	#BEGIN,-(6)	:JUMP TO START OF TEST
016234	000412				BR	YESRT	
016236	012746	001062		2\$:	MOV	#BEGIN,-(6)	:JUMP TO START OF TEST
016242	013700	000042			MOV	#42,R0	:GET MONITOR ADDRESS
016246	001404				BEQ	3\$:IF NONE
016250	004710				JSR	7,(0)	:GO TO MONITOR
016252	000240				NOP		
016254	000240				NOP		
016256	000240				NOP		
016260	000002			3\$:	RTI		
016262	000002			YESRT:	RTI		:RETURN TO PROGRAM FROM TRAP
016264	032737	000400	177570	.EMT:	BIT	#SW08,2#SWR	:KILL LDUB OR LOOP ON SPEC. TEST
016272	001404				BEQ	1\$	
016274	123767	177570	162476		CMPB	2#SWR,ICNT	:ON RIGHT TEST? #SW7-C#
016302	001437				BEQ	OVER	
016304	113703	177570		1\$:	MOVB	2#SWR,R3	:GET JB BITS
016310	170003				LDUB		
016312	032737	040000	177570		BIT	#SW14,2#SWR	:LOOP ON TEST
016320	001026				BNE	KIT	
016322	032737	004000	177570		BIT	#SW11,2#SWR	:KILL ITERATIONS
016330	001012				BNE	SAVLAD	
016332	105767	162443			TSTB	ICNT+1	
016336	001404				BEQ	2\$:BRANCH IF FIRST
016340	126767	001106	162433		CMPB	TIMES,ICNT+1	:DONE?
016346	001013				BNE	KIT	:BRANCH IF NOT
016350	112767	000001	162423	2\$:	MOVB	#1,ICNT+1	:FIRST ITERATION
016356	105267	162416		SAVLAD:	INCB	ICNT	:COUNT TEST NUMBERS
016362	011667	001060			MOV	(6),LAD	:SAVE LOOP ADDRESS
016366	016737	162406	177570		MOV	ICNT,2#DISPLAY	:DISPLAY TEST NO. AND ITERATION COUNT
016374	000002				RTI		:RETURN
016376	105267	162377		KIT:	INCB	ICNT+1	
016382	016737	162372	177570	OVER:	MOV	ICNT,2#DISPLAY	:SET JP DISPLAY
016410	005767	001032			TST	LAD	:FIRST ONE?
016414	001760				BEQ	SAVLAD	
016416	016716	001024			MOV	LAD,(6)	:FUDGE RETURN ADDRESS
016422	000002				RTI		:FIXES PS

E06

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF, CMPD MACY11 27(732) 03-SEP-76 15:25 PAGE 59
HLT ROUTINE (ERROR TIMEOUT)

016424	032737	002000	177570	.TRP:	BIT	#SW10,2#SWR	:BELL ON ERROR?
016432	001405				BEQ	1\$:NO - SKIP
016434	012767	000207	001000		MOV	#BELL,.TYPE	:TYPE A BELL
016442	000004	017442			TYPE	.TYPE	
016446	004767	000406		1\$:	JSR	PC.ERROR	:COUNT THE NUMBER OF EPCPS
016452	010446				MOV	R4,-(6)	
016454	032737	020000	177570		BIT	#SW13,2#SWR	:SKIP TIMEOUT IF SET
016462	001072				BNE	4\$	
016464	000004	017410			TYPE	.RETURN	
016470	016646	000002			MOV	2(6),-(6)	:PUT ADDRESS OF INSTFUCION ON STACK
016474	162716	000002			SUB	#2,(6)	
016500	011605				MOV	(6),TTY	:TYPE (6) IN OCTAL
016502	004767	000212			JSR	%7,PRINTR	:TYPE LEADING ZERO'S
016506	000004	017416			TYPE	.SPACE+3	
016512	010005				MOV	R0,TTY	:TYPE R0 IN OCTAL
016514	004767	000200			JSR	%7,PRINTR	:TYPE LEADING ZERO'S
016520	000004	017417			TYPE	.SPACE+4	
016524	012703	001002			MOV	#ANS1,R3	:ADDRESS OF DATA
016530	113604				MOVB	2(6)+,R4	:AMOUNT OF DATA IN TABLE
016532	001426				BEQ	3\$	
016534	100016				BPL	2\$:TYPE STACK?
016536	016667	000006	162236		MOV	6(6),ANS1	
016544	016667	000010	162232		MOV	10(6),ANS2	
016552	016667	000012	162226		MOV	12(6),ANS3	
016560	016667	000014	162222		MOV	14(6),ANS4	
016566	042704	177600			BIC	#177600,R4	:CLEAR SIGN
016572	000004	017417		2\$:	TYPE	.SPACE+4	
016576	012305				MOV	(3)+,TTY	:TYPE (3)+ IN OCTAL
016600	004767	000114			JSR	%7,PRINTR	:TYPE LEADING ZERO'S
016604	005304				DEC	R4	
016606	001371				BNE	2\$	
016610	005700			3\$:	TST	FPS	
016612	100016				BPL	4\$	
016614	000004	017413			TYPE	.SPACE	
016620	170367	162176			STST	FEC	
016624	016705	162172			MOV	FEC,TTY	:TYPE FEC IN OCTAL
016630	004767	000064			JSR	%7,PRINTR	:TYPE LEADING ZERO'S
016634	000004	017416			TYPE	.SPACE+3	
016640	016705	162160			MOV	FEA,TTY	:TYPE FEA IN OCTAL
016644	004767	000050			JSR	%7,PRINTR	:TYPE LEADING ZERO'S
016650	012604			4\$:	MOV	(6)+,R4	
016652	005737	177570			TST	2#SWR	:HALT ON ERROR
016656	100001				BPL	.+4	:SKIP IF CONTINUE
016660	000000				HALT		:HALT ON ERROR!
016662	032737	001000	177570		BIT	#SW09,2#SWR	:CHECK FOR INHIBIT LOOP ON ERROR
016670	001001				BNE	.+4	:SKIP IF LOOP ON ERROR
016672	000002				RTI		
016674	105067	162101			CLRB	ICNT+1	
016700	032737	000400	177570		BIT	#SW08,2#SWR	:CHECK FOR LOAD MICROBREAK
016706	001233				BNE	KIT	:BRANCH IF NOT
016710	113703	177570			MOVB	2#SWR,R3	:PUT MICROBREAK ADDRESS IN R3
016714	170003				LDJUB		:LOAD MICROBREAK
016716	000627				BR	KIT	:LOOP ON TEST UNTIL NO ERRORS

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016720 112767 000001 000130 PRINTR: MOVB #1,R4S :SET ZERO FILL SWITCH
016726 000402 BR .+6
016730 005067 000122 PRINTS: CLR R4S :SUPRESS LEADING ZERC'S
016734 112767 177772 000115 MOVB #-6,R4S+1 :SET COUNT
016742 010446 MOV R4,-(6) :SAVE R4
016744 012704 017046 MOV #35,R4 :SET POINTER TO FIRST ASCII CHAR.
016750 105014 CLRB (4) :CLEAR FIRST BYTE
016752 000405 BR 25 :ROTATE FIRST BIT
016754 105014 :S: CLRB (4) :CLEAR BYTE OF CHARACTER
016756 006105 ROL TTY :ROTATE BIT INTO C
016760 106114 ROLB (4) :PACK IT
016762 006105 ROL TTY :ROTATE BIT INTO C
016764 106114 ROLB (4) :PACK IT
016766 006105 :2S: ROL TTY :ROTATE BIT INTO C
016770 106114 ROLB (4) :PACK IT
016772 105714 TSTB (4)
016774 001402 BEQ .+6
016776 105267 000054 INCB R4S+56
017002 105767 000050 TSTB R4S+56 :CHECK FILL SWITCH
017006 001402 BEQ .+6
017010 152724 000060 BITB #10,R4S+4 :MAKE INTO ASCII CHAR
017014 105267 000037 INCB R4S+4
017020 001355 BNE #5,R4S :REPEAT
017022 022704 017046 CMP #35,R4
017026 001002 BNE .+6
017030 112724 000060 MOVB #10,R4S+4
017034 105014 CLRB (4)
017036 000004 017046 TYPE #35 :TYPE IT
017042 012604 MOV #51,R4 :RESTORE R4
017044 000207 RTS PC

017046 000004 :3S: .BLKW 4
017056 000000 :4S: 0

017060 005267 000364 ERROR: INC ERRORS :COUNT ERRORS
017064 132737 000001 000041 BITB #1,R4S :AUTO MODE?
017072 001412 BEQ #5 :NO!
017074 022767 000010 000346 CMP #10,ERRORS :TOO MANY?
017102 001006 BNE #5 :NOT YET
017104 013700 000042 MOV #42,R0 :GET ADDRESS
017110 001403 BEQ #5 :FORGET IT IF ZERO
017112 005037 000042 CLRB #42 :ZAP 42
017116 004710 JSR #0 :CALL THE MONITOR
017120 000207 :S: RTS :RETURN

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017122 012777 017316 000306 POWDOWN: MOV #ILLUP, JUPVEC :SET FOR FAST UP
017130 012777 000340 000302 MOV #340, JUPVEC+2 :PRIO:7
017136 170246 STFPS -(6) :GET THE FPS
017140 170011 SETD :
017142 174046 STD ACC, -(6) :SAVE AC'S
017144 174146 STD AC1, -(6)
017146 174246 STD AC2, -(6)
017150 174346 STD AC3, -(6)
017152 172404 LDD ACC, ACC
017154 174046 STD ACC, -(6)
017156 172405 LDD ACC5, ACC
017160 174046 STD ACC, -(6)
017162 010046 MOV R0, -(6) :SAVE REGISTERS
017164 010146 MOV R1, -(6)
017166 010246 MOV R2, -(6)
017170 010346 MOV R3, -(6)
017172 010446 MOV R4, -(6)
017174 010546 MOV R5, -(6)
017176 010667 000220 MOV SP, SAVE6 :SAVE SP
017202 012777 017212 000226 MOV #POWUP, JUPVEC :SET JP VECTOR
017210 000000 HALT

017212 016706 000204 POWUP: MOV SAVE6, SP :GET SP
017216 005001 CLR R1 :WAIT LOOP FOR THE TTY
017220 005201 18: INC R1
017222 001376 BNE 18
017224 012605 MOV (6)+, R5 :GET THE REGISTERS
017226 012604 MOV (6)+, R4
017230 012603 MOV (6)+, R3
017232 012602 MOV (6)+, R2
017234 012601 MOV (6)+, R1
017236 012600 MOV (6)+, R0
017240 170011 SETD :
017242 172426 LDD (6)+, ACC :RESTORE THE AC'S
017244 174005 STD ACC, ACC5
017246 172426 LDD (6)+, ACC
017250 174004 STD ACC, ACC4
017252 172726 LDD (6)+, ACC3
017254 172626 LDD (6)+, ACC2
017256 172526 LDD (6)+, ACC1
017260 172426 LDD (6)+, ACC
017262 170126 LDFPS (6)+ :RESTORE FPS
017264 012777 017122 000140 MOV #POWDOWN, JDOWNVEC :SET UP THE POWER DOWN VECTOR
017272 012777 000340 000134 MOV #340, JDOWNVEC+2
017300 000004 017304 TYPE :ASCIZ (15)(12)"POWER"
017314 000002 RTI

017316 000000 017320 000776 :THE POWER UP SEQUENCE WAS STARTED
: BEFORE THE POWER DOWN WAS COMPLETE
  
```


H06

MAINDEC-11-DCFPE-B
DCFPEB.P11

TEST OF CMPF, CMPD MACY11 27(732) 03-SEP-76 15:25 PAGE 72
TYPE ROUTINE AND DATA AREA

017322	010546			.IOT:	MOV	TTY, -(6,	:SAVE TTY
017324	017605	000002			MOV	22(6), TTY	:GET ADDRESS TO BE TYPED
017330	105715			IS:	TSTB	(TTY)	:TERMINATOR?
017332	001406				BEQ	25	
017334	112537	177566			MOVB	(TTY)+, 2#177566	:LOAD AND TYPE THE CHARACTER
017340	105737	177564			TSTB	2#177564	:IS THE PRINTER READY
017344	100375				BPL	:-4	
017346	000770				BR	IS	:GET THE NEXT CHARACTER
017350	017646	000002		2S:	MOV	22(6), -(6)	:GET ADDRESS TO BE TYPED
017354	062766	000002	000004		ADD	2, 4(6)	:ADD 2 TO THE ADDRESS
017362	022666	000002			CMP	(6)+, 2(6)	:IS IT .+2?
017366	001006				BNE	3S	:NO
017370	062705	000002			ADD	2, TTY	:ADD 2 TO THE ADDRESS
017374	042705	000001			BIC	1, TTY	:BACK UP TO AN EVEN BYTE
017400	010566	000002			MOV	TTY, 2(6)	:RESTORE ADDRESS
017404	012605			3S:	MOV	(6)+, TTY	:RESTORE TTY
017406	000002				RTI		:RETURN
017410	005015	000		RETURN:	.ASCIZ	<15><12>	:RETURN AND LINEFEED
017413	015	020012	020040	SPACE:	.ASCIZ	<15><12>" "	:RETURN AND 3 SPACES
017420	000						
017422	017422			.EVEN			
017422	000000			SAVE6:	0		
017424	172160			FPTADR:	172160		:FLOATING POINT ADDRESS ON THE : : 20
017426	000244	000246		FPVECT:	244, 246		:FLOATING POINT VECTOR ADDRESS
017432	000024	000026		DWNVEC:	24, 26		:POWER DOWN VECTOR ADDRESS
017436	000024	000026		UPVEC:	24, 26		:POWER UP VECTOR ADDRESS
017442	000000			.TYPE:	0		
017444	000000			TRPB:	0		
017446	000000			LAD:	0		:LOOP ADDRESS
017450	000000			ERRORS:	0		:ERROR COUNT
017452	000377			TIMES:	377		:ITERATION COUNT
	000001			.END			

ANS5	001012	429#	3449*	3450	3507*	3508	3565*	3566	3623*	3624
ANS6	001014	430#	3454	3512	3570	3628				
ANS7	001016	431#	3458	3516	3574	3632				
ANS8	001020	432#	3462	3520	3578	3636				
ANS	017056	3743*	3745*	3746*	3760*	3761	3764*	3775*		
BEG	001026	415	436#							
BEGIN	001062	440	445#	3652	3654					
BELL =	000207	380#	3644	3692						
DISPLA =	177570	376#	3681*	3685*						
DOONE	016160	3641#								
DTA1	001200	470#	474							
DTA10	002026	680#	684							
DTA100	012006	2670#	2676							
DTA101	012134	2710#	2716							
DTA102	012262	2750#	2756							
DTA103	012410	2790#	2796							
DTA104	012536	2830#	2836							
DTA105	012664	2870#	2876							
DTA106	013012	2910#	2916							
DTA107	013140	2950#	2956							
DTA11	002120	710#	714							
DTA110	013266	2990#	2996							
DTA111	013414	3030#	3036							
DTA112	013546	3072#	3078							
DTA113	013730	3123#	3129							
DTA114	014112	3174#	3180							
DTA115	014274	3225#	3231							
DTA116	014456	3276#	3282							
DTA117	014640	3327#	3333							
DTA12	002212	740#	744							
DTA120	015022	3377#	3383							
DTA121	015144	3418#	3424							
DTA122	015350	3476#	3482							
DTA123	015554	3534#	3540							
DTA124	015760	3592#	3598							
DTA13	002304	770#	774							
DTA14	002376	800#	804							
DTA15	002470	830#	834							
DTA16	002562	860#	864							
DTA17	002654	890#	894							
DTA2	001272	500#	504							
DTA20	002746	920#	924							
DTA21	003040	950#	954							
DTA22	003132	980#	984							
DTA23	003224	1010#	1014							
DTA24	003316	1040#	1044							
DTA25	003410	1070#	1074							
DTA26	003502	1101#	1105							
DTA27	003574	1131#	1135							
DTA3	001364	530#	534							
DTA30	003666	1161#	1165							
DTA31	003760	1191#	1195							
DTA32	004052	1221#	1225							
DTA33	004144	1251#	1255							
DTA34	004236	1281#	1285							
DTA35	004330	1311#	1315							

DTA36	004422	1341#	1345
DTA37	004520	1372#	1376
DTA4	001456	560#	564
DTA40	004612	1403#	1407
DTA41	004740	1444#	1448
DTA42	005066	1484#	1488
DTA43	005160	1515#	1519
DTA44	005252	1546#	1550
DTA45	005400	1587#	1591
DTA46	005526	1628#	1632
DTA47	005654	1669#	1673
DTA5	001350	590#	594
DTA50	006002	1709#	1713
DTA51	006126	1749#	1753
DTA52	006252	1789#	1793
DTA53	006376	1829#	1833
DTA54	006522	1869#	1873
DTA55	006650	1909#	1913
DTA56	006776	1949#	1953
DTA57	007124	1989#	1993
DTA6	001642	620#	624
DTA60	007252	2029#	2033
DTA61	007400	2069#	2073
DTA62	007526	2109#	2113
DTA63	007654	2149#	2153
DTA64	010002	2189#	2193
DTA65	010130	2229#	2233
DTA66	010256	2269#	2273
DTA67	010404	2309#	2313
DTA7	001734	650#	654
DTA70	010532	2349#	2353
DTA71	010660	2389#	2393
DTA72	011006	2429#	2433
DTA73	011134	2469#	2473
DTA74	011262	2509#	2513
DTA75	011410	2549#	2553
DTA76	011536	2589#	2593
DTA77	011664	2629#	2633
DTB1	001204	471#	475
DTB10	002032	681#	685
DTB100	012016	2672#	2676
DTB101	012144	2712#	2716
DTB102	012272	2752#	2756
DTB103	012420	2792#	2796
DTB104	012546	2832#	2836
DTB105	012674	2872#	2876
DTB106	013022	2912#	2916
DTB107	013150	2952#	2956
DTB11	002124	711#	715
DTB110	013276	2992#	2996
DTB111	013424	3032#	3036
DTB112	013556	3074#	3078
DTB113	013740	3125#	3129
DTB114	014122	3176#	3180
DTB115	014304	3227#	3231
DTB116	014466	3278#	3282

DTB117	014650	3329#	3335
DTB12	002216	741#	745
DTB120	015032	3379#	3385
DTB121	015154	3420#	3425
DTB122	015360	3478#	3483
DTB123	015564	3536#	3541
DTB124	015770	3594#	3599
DTB13	002310	771#	775
DTB14	002402	801#	805
DTB15	002474	831#	835
DTB16	002566	861#	865
DTB17	002660	891#	895
DTB2	001276	501#	505
DTB20	002752	921#	925
DTB21	003044	951#	955
DTB22	003136	981#	985
DTB23	003230	1011#	1015
DTB24	003322	1041#	1045
DTB25	003414	1071#	1076
DTB26	003506	1102#	1106
DTB27	003600	1132#	1136
DTB3	001370	531#	535
DTB30	003672	1162#	1166
DTB31	003764	1192#	1196
DTB32	004056	1222#	1226
DTB33	004150	1252#	1256
DTB34	004242	1282#	1286
DTB35	004334	1312#	1316
DTB36	004426	1342#	1347
DTB37	004524	1373#	1377
DTB4	001462	561#	565
DTB40	004616	1404#	1409
DTB41	004744	1445#	1450
DTB42	005072	1485#	1490
DTB43	005164	1516#	1520
DTB44	005256	1547#	1552
DTB45	005404	1588#	1593
DTB46	005532	1629#	1634
DTB47	005660	1670#	1675
DTB5	001554	591#	595
DTB50	006006	1710#	1714
DTB51	006132	1750#	1754
DTB52	006256	1790#	1794
DTB53	006402	1830#	1834
DTB54	006532	1871#	1876
DTB55	006660	1911#	1916
DTB56	007006	1951#	1955
DTB57	007134	1991#	1996
DTB6	001646	621#	625
DTB60	007262	2031#	2036
DTB61	007410	2071#	2076
DTB62	007536	2111#	2116
DTB63	007664	2151#	2156
DTB64	010012	2191#	2196
DTB65	010140	2231#	2236
DTB66	010266	2271#	2276

DTB67	010414	2311*	2316											
DTB7	001740	651*	655											
DTB70	010542	2351*	2356											
DTB71	010670	2391*	2396											
DTB72	011016	2431*	2436											
DTB73	011144	2471*	2476											
DTB74	011272	2511*	2516											
DTB75	011420	2551*	2556											
DTB76	011546	2591*	2596											
DTB77	011674	2631*	2637											
DWNVEC	017432	448*	449*	3829*	3830*	3861*								
ERRJR	017060	3694	3777*											
ERRORS	017450	3777*	3780	3866*										
FEA	001024	434*	1420	1461	1563	1604	1645	1686	3091	3142	3193	3244	3295	3346
		3728												
FEC	001022	419*	433*	1411*	1416	1452*	1457	1554*	1559	1595*	1600	1636*	1641	1677*
		1682	3082*	3087	3133*	3138	3184*	3189	3235*	3240	3286*	3291	3337*	3342
		3724*	3725											
FLTERR	000760	418*	456											
FPI111	013450	3038*												
FPI112	013602	3080*	3091											
FPI113	013764	3131*	3142											
FPI114	014146	3182*	3193											
FPI115	014330	3233*	3244											
FPI116	014512	3284*	3295											
FPI117	014674	3335*	3346											
FPI36	004446	1347*												
FPI40	004636	1409*	1420											
FPI41	004764	1450*	1461											
FPI44	005276	1552*	1563											
FPI45	005424	1593*	1604											
FPI46	005552	1634*	1645											
FPI47	005700	1675*	1686											
FPS	=%000000	381*	418*	476*	477	506*	507	536*	537	566*	567	596*	597	626*
		627	656*	657	686*	687	716*	717	746*	747	776*	777	806*	807
		836*	837	866*	867	896*	897	926*	927	956*	957	986*	987	1016*
		1017	1046*	1047	1077*	1078	1107*	1108	1137*	1138	1167*	1168	1197*	1198
		1227*	1228	1257*	1258	1287*	1288	1317*	1318	1348*	1349	1378*	1379	1410*
		1412	1451*	1453	1491*	1492	1521*	1522	1553*	1555	1594*	1596	1635*	1637
		1676*	1678	1716*	1717	1756*	1757	1796*	1797	1836*	1837	1877*	1878	1917*
		1918	1957*	1958	1997*	1998	2037*	2038	2077*	2078	2117*	2118	2157*	2158
		2197*	2198	2237*	2238	2277*	2278	2317*	2318	2357*	2358	2397*	2398	2437*
		2438	2477*	2478	2517*	2518	2557*	2558	2597*	2598	2638*	2639	2678*	2679
		2718*	2719	2758*	2759	2798*	2799	2838*	2839	2878*	2879	2919*	2919	2958*
		2959	2998*	2999	3039*	3040	3081*	3083	3132*	3134	3183*	3185	3234*	3236
		3285*	3287	3336*	3338	3386*	3387	3427*	3428	3485*	3486	3543*	3544	3601*
		3602	3721											
		442	3859*											
FPTADR	017424	456*	457*	3860*										
FPVECT	017426	378*	479	484	488	509	514	518	539	544	548	559	574	578
HLT	= 104000	599	604	608	629	634	638	659	664	668	689	694	698	719
		724	728	749	754	758	779	784	788	809	814	818	839	844
		848	869	874	878	899	904	908	929	934	938	959	964	968
		989	994	998	1019	1024	1028	1049	1054	1058	1080	1085	1089	1110
		1115	1119	1140	1145	1149	1170	1175	1179	1200	1205	1209	1230	1235
		1239	1260	1265	1269	1290	1295	1299	1320	1325	1329	1351	1356	1360

1381	1386	1390	1414	1418	1422	1427	1431	1455	1459	1463	1468	1472		
1494	1499	1503	1524	1529	1533	1557	1561	1565	1570	1574	1598	1602		
1606	1611	1615	1639	1643	1647	1652	1656	1680	1684	1688	1693	1697		
1719	1724	1728	1733	1737	1759	1764	1768	1773	1777	1799	1804	1808		
1813	1817	1839	1844	1848	1853	1857	1880	1885	1889	1893	1897	1920		
1925	1929	1933	1937	1960	1965	1969	1973	1977	2000	2005	2009	2013		
2017	2040	2045	2049	2053	2057	2080	2085	2089	2093	2097	2120	2125		
2129	2133	2137	2160	2165	2169	2173	2177	2200	2205	2209	2213	2217		
2240	2245	2249	2253	2257	2280	2285	2289	2293	2297	2320	2325	2329		
2333	2337	2360	2365	2369	2373	2377	2400	2405	2409	2413	2417	2440		
2445	2449	2453	2457	2480	2485	2489	2493	2497	2520	2525	2529	2533		
2537	2560	2565	2569	2573	2577	2600	2605	2609	2613	2617	2641	2646		
2650	2654	2658	2681	2686	2690	2694	2698	2721	2726	2730	2734	2738		
2761	2766	2770	2774	2778	2801	2806	2810	2814	2818	2841	2846	2850		
2854	2858	2881	2886	2890	2894	2898	2921	2926	2930	2934	2938	2361		
2966	2970	2974	2978	3001	3006	3010	3014	3018	3042	3047	3051	3055		
3059	3085	3089	3093	3098	3102	3106	3110	3136	3140	3144	3149	3153		
3157	3161	3187	3191	3195	3200	3204	3208	3212	3238	3242	3246	3251		
3255	3259	3263	3289	3293	3297	3302	3306	3310	3314	3340	3344	3348		
3353	3357	3361	3365	3389	3394	3398	3402	3406	3430	3435	3439	3443		
3447	3452	3456	3460	3464	3488	3493	3497	3501	3505	3510	3514	3518		
3522	3546	3551	3555	3559	3563	3568	3572	3576	3580	3604	3609	3613		
3617	3621	3626	3630	3634	3638									
ICNT	001000	424#	458*	3666	3674	3676	3678*	3679*	3681	3684*	3685	3737*		
ILLUP	017316	3787	3834#											
KIT	016376	3671	3677	3684#	3739	3742								
LAD	017446	459*	3680*	3686	3688	3865#								
LDSC	= 170004	409#												
LDUB	= 170003	405#												
MRS	= 170006	408#												
M1120	001054	437	442#											
N	= 000125	373#	460	490#	520#	550#	580#	610#	640#	670#	700#	730#	760#	790#
		820#	850#	880#	910#	940#	970#	1000#	1030#	1060#	1091#	1121#	1151#	1181#
		1211#	1241#	1271#	1301#	1331#	1362#	1392#	1433#	1474#	1505#	1535#	1576#	1617#
		1658#	1699#	1739#	1779#	1819#	1859#	1899#	1939#	1979#	2019#	2059#	2099#	2139#
		2179#	2219#	2259#	2299#	2339#	2379#	2419#	2459#	2499#	2539#	2579#	2619#	2660#
		2700#	2740#	2780#	2820#	2860#	2900#	2940#	2980#	3020#	3061#	3112#	3163#	3214#
		3265#	3316#	3367#	3408#	3466#	3524#	3582#	3640#					
OVER	016402	3667	3685#											
PC	=%000007	390#	3694*	3772*	3785*	3786*								
POWDWN	017122	448	3787#	3829										
POWUP	017212	3806	3809#											
PRINTR	016720	3702	3705	3718	3726	3729	3743#							
PRINTS	016730	3745#												
PS	= 177776	374#												
RETURN	017410	3698	3854#											
RO	=%000000	382#	451*	3655*	3704	3782*	3799	3818*						
R1	=%000001	383#	3800	3810*	3811*	3817*								
R2	=%000002	384#	3801	3816*										
R3	=%000003	385#	3668*	3707*	3740*	3802	3815*							
R4	=%000004	386#	3695	3708*	3715*	3719*	3730*	3747	3748*	3766	3771*	3803	3814*	
R5	=%000005	387#	3804	3813*										
SAVE6	017422	3805#	3809	3858#										
SAVLAD	016356	3673	3679#	3687										
SCOPE	= 104400	377#	467	497	527	557	587	617	647	677	707	737	767	797
		827	857	887	917	947	977	1007	1037	1067	1098	1128	1158	1189

	3728	3701	3704	3717	3725	3728									
JUMP	3728	3701	3704	3717	3725	3728									
PRINT	3728	3831													
SDUMP	3728														
STATUS	3728														
	3728	476	506	536	566	596	626	656	686	716	746	776	806	836	866
	3728	926	956	986	1016	1046	1077	1107	1137	1167	1197	1227	1257	1287	1317
	3728	1378	1410	1451	1491	1521	1553	1594	1635	1676	1716	1756	1796	1836	1877
	3728	1917	1997	2037	2077	2117	2157	2197	2237	2277	2317	2357	2397	2437	2477
	3728	2557	2597	2638	2678	2718	2758	2798	2838	2878	2918	2958	2998	3039	3080
	3728	3183	3234	3285	3336	3386	3427	3485	3543	3601					
	3728	3644	3692												
	3728	3644	3692	1939	1979	2019	2059	2099	2139	2179	2219	2259	2299	2339	2379
	3728	1859	1899	2539	2579	2660	2700	2740	2780	2820	2860	2900	2940	2980	
	3728	2419	2499	3524	3582										
	3728	3408	3466	3524	3582										
	3728	4900	520	550	580	610	640	670	700	730	760	790	820	850	880
	3728	940	970	1000	1030	1091	1121	1151	1181	1211	1241	1271	1301	1332	1362
	3728	1699	1739	1779	1819										
	3728	2619	3367												
	3728	3020	3061	3112	3163	3214	3265	3316							
	3728	1060	1474												
	3728	1331	1392	1433	1535	1576	1617	1658							

TEST OF CMPS CROSS REFERENCE TABLE -- PERMANENT SYMBOLS

3848	4833	487	508	513	517	538	543	547	568	573	577	598	603	607
1084	1088	1088	1109	1114	1118	1139	1144	1148	1169	1174	1178	1199	1204	1207
1234	1235	1235	1259	1264	1268	1289	1294	1298	1319	1324	1328	1350	1355	1358
1523	1528	1528	1532	1556	1560	1564	1569	1573	1597	1601	1605	1610	1614	1617
1767	1772	1772	1776	1798	1803	1807	1812	1816	1838	1843	1847	1852	1856	1859
1888	1892	1892	1896	1919	1924	1928	1932	1936	1959	1964	1968	1972	1976	1979
2008	2012	2012	2016	2039	2044	2048	2052	2056	2079	2084	2088	2092	2096	2099
2133	2137	2137	2136	2159	2164	2168	2172	2176	2199	2204	2208	2212	2216	2219
2248	2252	2252	2256	2279	2284	2288	2292	2296	2319	2324	2328	2332	2336	2339
2376	2376	2376	2376	2399	2404	2408	2412	2416	2439	2444	2448	2452	2456	2459
2496	2500	2500	2504	2527	2532	2536	2540	2544	2567	2572	2576	2580	2584	2587
2616	2620	2620	2624	2647	2652	2656	2660	2664	2687	2692	2696	2700	2704	2707
2737	2741	2741	2745	2768	2773	2777	2781	2785	2808	2813	2817	2821	2825	2828
2857	2861	2861	2865	2888	2893	2897	2901	2905	2928	2933	2937	2941	2945	2948
2977	2981	2981	2985	3008	3013	3017	3021	3025	3048	3053	3057	3061	3065	3068
3097	3101	3101	3105	3128	3133	3137	3141	3145	3168	3173	3177	3181	3185	3188
3207	3211	3211	3215	3238	3243	3247	3251	3255	3278	3283	3287	3291	3295	3298
3312	3316	3316	3320	3343	3348	3352	3356	3360	3383	3388	3392	3396	3400	3403
3438	3442	3442	3446	3469	3474	3478	3482	3486	3509	3514	3518	3522	3526	3529
3521	3525	3525	3529	3552	3557	3561	3565	3569	3592	3597	3601	3605	3609	3612
3625	3629	3629	3633	3656	3661	3665	3669	3673	3696	3701	3705	3709	3713	3716
3828	3832	3832	3836	3859	3864	3868	3872	3876	3899	3904	3908	3912	3916	3919
3949	3953	3953	3957	3980	3985	3989	3993	3997	4020	4025	4029	4033	4037	4040
4071	4075	4075	4079	4102	4107	4111	4115	4119	4142	4147	4151	4155	4159	4162
4176	4180	4180	4184	4207	4212	4216	4220	4224	4247	4252	4256	4260	4264	4267
4299	4303	4303	4307	4330	4335	4339	4343	4347	4370	4375	4379	4383	4387	4390
4422	4426	4426	4430	4453	4458	4462	4466	4470	4493	4498	4502	4506	4510	4513
4546	4550	4550	4554	4577	4582	4586	4590	4594	4617	4622	4626	4630	4634	4637
4670	4674	4674	4678	4701	4706	4710	4714	4718	4741	4746	4750	4754	4758	4761
4794	4798	4798	4802	4825	4830	4834	4838	4842	4865	4870	4874	4878	4882	4885
4918	4922	4922	4926	4949	4954	4958	4962	4966	4989	4994	4998	5002	5006	5009
5042	5046	5046	5050	5073	5078	5082	5086	5090	5113	5118	5122	5126	5130	5133
5166	5170	5170	5174	5197	5202	5206	5210	5214	5237	5242	5246	5250	5254	5257
5291	5295	5295	5299	5322	5327	5331	5335	5339	5362	5367	5371	5375	5379	5382
5416	5420	5420	5424	5447	5452	5456	5460	5464	5487	5492	5496	5500	5504	5507
5541	5545	5545	5549	5572	5577	5581	5585	5589	5612	5617	5621	5625	5629	5632
5666	5670	5670	5674	5697	5702	5706	5710	5714	5737	5742	5746	5750	5754	5757
5791	5795	5795	5799	5822	5827	5831	5835	5839	5862	5867	5871	5875	5879	5882
5916	5920	5920	5924	5947	5952	5956	5960	5964	5987	5992	5996	6000	6004	6007
6041	6045	6045	6049	6072	6077	6081	6085	6089	6112	6117	6121	6125	6129	6132
6166	6170	6170	6174	6197	6202	6206	6210	6214	6237	6242	6246	6250	6254	6257
6291	6295	6295	6299	6322	6327	6331	6335	6339	6362	6367	6371	6375	6379	6382
6416	6420	6420	6424	6447	6452	6456	6460	6464	6487	6492	6496	6500	6504	6507
6541	6545	6545	6549	6572	6577	6581	6585	6589	6612	6617	6621	6625	6629	6632
6666	6670	6670	6674	6697	6702	6706	6710	6714	6737	6742	6746	6750	6754	6757
6791	6795	6795	6799	6822	6827	6831	6835	6839	6862	6867	6871	6875	6879	6882
6916	6920	6920	6924	6947	6952	6956	6960	6964	6987	6992	6996	7000	7004	7007
7041	7045	7045	7049	7072	7077	7081	7085	7089	7112	7117	7121	7125	7129	7132
7166	7170	7170	7174	7197	7202	7206	7210	7214	7237	7242	7246	7250	7254	7257
7291	7295	7295	7299	7322	7327	7331	7335	7339	7362	7367	7371	7375	7379	7382
7416	7420	7420	7424	7447	7452	7456	7460	7464	7487	7492	7496	7500	7504	7507
7541	7545	7545	7549	7572	7577	7581	7585	7589	7612	7617	7621	7625	7629	7632
7666	7670	7670	7674	7697	7702	7706	7710	7714	7737	7742	7746	7750	7754	7757
7791	7795	7795	7799	7822	7827	7831	7835	7839	7862	7867	7871	7875	7879	7882
7916	7920	7920	7924	7947	7952	7956	7960	7964	7987	7992	7996	8000	8004	8007
8041	8045	8045	8049	8072	8077	8081	8085	8089	8112	8117	8121	8125	8129	8132
8166	8170	8170	8174	8197	8202	8206	8210	8214	8237	8242	8246	8250	8254	8257
8291	8295	8295	8299	8322	8327	8331	8335	8339	8362	8367	8371	8375	8379	8382
8416	8420	8420	8424	8447	8452	8456	8460	8464	8487	8492	8496	8500	8504	8507
8541	8545	8545	8549	8572	8577	8581	8585	8589	8612	8617	8621	8625	8629	8632
8666	8670	8670	8674	8697	8702	8706	8710	8714	8737	8742	8746	8750	8754	8757
8791	8795	8795	8799	8822	8827	8831	8835	8839	8862	8867	8871	8875	8879	8882
8916	8920	8920	8924	8947	8952	8956	8960	8964	8987	8992	8996	9000	9004	9007
9041	9045	9045	9049	9072	9077	9081	9085	9089	9112	9117	9121	9125	9129	9132
9166	9170	9170	9174	9197	9202	9206	9210	9214	9237	9242	9246	9250	9254	9257
9291	9295	9295	9299	9322	9327	9331	9335	9339	9362	9367	9371	9375	9379	9382
9416	9420	9420	9424	9447	9452	9456	9460	9464	9487	9492	9496	9500	9504	9507
9541	9545	9545	9549	9572	9577	9581	9585	9589	9612	9617	9621	9625	9629	9632
9666	9670	9670	9674	9697	9702	9706	9710	9714	9737	9742	9746	9750	9754	9757
9791	9795	9795	9799	9822	9827	9831	9835	9839	9862	9867	9871	9875	9879	9882
9916	9920	9920	9924	9947	9952	9956	9960	9964	9987	9992	9996	10000	10004	10007

TEST OF CMPF COMPD MACY11 27(732)
CROSS REFERENCE TABLE -- PERMANENT SYMBOLS

Table with 15 columns of numerical data. The columns contain various numbers, some of which are repeated or related. The numbers range from approximately 100 to 400. The table is organized into several vertical sections, with some numbers appearing in multiple columns.

TEST OF CMPD	MACY11 27(732)	2042	2082	2122	2162	2202	2242	2282	2322	2362	2402	2442	
3819	1962	2002	2042	2082	2122	2162	2202	2242	2282	2322	2362	2402	2442
1922	2562	2602	2642	2682	2722	2762	2802	2842	2882	2922	2962	3002	3042
2522	3197	3248	3299	3350	3391	3432	3449	3490	3507	3548	3565	3606	3623
3095	3792	3794	3796	3798	3821	3823							
3481	511	571	601	631	661	691	721	751	781	811	841	871	901
3931	961	991	1021	1051	1112	1142	1172	1202	1232	1262	1292	1322	1352
4381	1424	1465	1496	1526	1567	1608	1649	1690	1721	1761	1770	1801	1810
481	1850												
5291	476	506	536	565	596	626	656	686	716	746	776	806	836
5741	926	956	986	1016	1046	1077	1107	1137	1167	1197	1227	1257	1287
6191	1378	1410	1451	1491	1521	1553	1594	1635	1676	1716	1756	1796	1836
6641	1957	1997	2037	2077	2117	2157	2197	2237	2277	2317	2357	2397	2437
7091	2517	2557	2597	2638	2678	2718	2758	2798	2838	2878	2918	2958	2998
7541	3132	3183	3234	3285	3336	3386	3427	3485	3543	3601	3659	3719	3779
7991	419	1411	1452	1554	1595	1636	1677	3082	3132	3184	3235	3286	3337
8441	3700												
8891	438	1083	1087	1497	1501	2644	2648	2652	2655	3392	3396	3400	3404
9341	3731												
9791	3674	3758	3761	3838	3841								
10241	3832	3854	3855										
10691	3774												
11141	3724												
11591	3868												
12041	465	477	481	495	507	511	525	537	541	555	567	571	585
12491	615	627	631	645	657	661	675	687	691	705	717	721	735
12941	765	777	781	795	807	811	825	837	841	855	867	871	885
13391	915	927	931	945	957	961	975	987	991	1005	1017	1021	1035
13841	1065	1078	1082	1096	1108	1112	1126	1138	1142	1156	1168	1172	1186
14291	1216	1229	1232	1246	1258	1262	1276	1288	1292	1306	1318	1322	1336
14741	1367	1379	1383	1398	1412	1424	1439	1453	1465	1479	1492	1496	1510
15191	1517	1555	1567	1582	1596	1608	1623	1637	1649	1664	1678	1690	1704
15641	1744	1757	1761	1784	1797	1801	1824	1837	1841	1864	1878	1882	1904
16091	1944	1958	1962	1984	1998	2002	2024	2038	2042	2064	2078	2082	2104
16541	2144	2158	2162	2184	2198	2202	2224	2238	2242	2264	2278	2282	2304
16991	2344	2358	2362	2384	2398	2402	2424	2438	2442	2464	2478	2482	2504
17441	2544	2558	2562	2584	2598	2602	2624	2639	2643	2665	2679	2683	2705
17891	2744	2759	2763	2785	2799	2803	2825	2839	2843	2865	2879	2883	2905
18341	2944	2959	2963	2985	2999	3003	3025	3040	3044	3067	3083	3095	3118
18791	3144	3185	3197	3220	3236	3248	3271	3287	3299	3322	3338	3350	3372
19241	3344	3428	3432	3471	3486	3490	3529	3544	3548	3587	3602	3606	
19691	3832	3857											
20141	465	477	495	507	525	537	555	567	585	597	615	627	645
20591	687	705	717	735	747	765	777	795	807	825	837	855	867
21041	927	945	957	975	987	1005	1017	1035	1047	1065	1078	1096	1108
21491	1156	1168	1186	1198	1216	1228	1246	1258	1276	1288	1306	1318	1336
21941	1367	1379	1397	1411	1438	1452	1479	1492	1510	1522	1540	1554	1591
22391	1517	1663	1677	1704	1717	1744	1757	1784	1797	1824	1837	1864	1878
22841	1944	1958	1984	1998	2024	2038	2064	2078	2104	2118	2144	2158	2184
23291	2344	2358	2378	2398	2418	2434	2458	2478	2498	2524	2538	2564	2578
23741	2744	2759	2779	2799	2824	2839	2865	2879	2905	2919	2945	2959	2985
24191	2944	2959	2979	2999	3024	3045	3065	3085	3099	3125	3140	3166	3180
24641	3144	3159	3179	3205	3220	3235	3261	3276	3302	3317	3343	3358	3384
25091	3344	3359	3379	3405	3420	3446	3461	3487	3502	3528	3543	3569	3584
25541	3744	3759	3779	3805	3820	3846	3861	3887	3902	3928	3943	3969	3984
25991	4144	4159	4179	4205	4220	4246	4261	4287	4302	4328	4343	4369	4384
26441	4544	4559	4579	4605	4620	4646	4661	4687	4702	4728	4743	4769	4784
26891	4944	4959	4979	5005	5020	5046	5061	5087	5102	5128	5143	5169	5184
27341	5344	5359	5379	5405	5420	5446	5461	5487	5502	5528	5543	5569	5584
27791	5744	5759	5779	5805	5820	5846	5861	5887	5902	5928	5943	5969	5984
28241	6144	6159	6179	6205	6220	6246	6261	6287	6302	6328	6343	6369	6384
28691	6544	6559	6579	6605	6620	6646	6661	6687	6702	6728	6743	6769	6784
29141	6944	6959	6979	7005	7020	7046	7061	7087	7102	7128	7143	7169	7184
29591	7344	7359	7379	7405	7420	7446	7461	7487	7502	7528	7543	7569	7584
30041	7744	7759	7779	7805	7820	7846	7861	7887	7902	7928	7943	7969	7984
30491	8144	8159	8179	8205	8220	8246	8261	8287	8302	8328	8343	8369	8384
30941	8544	8559	8579	8605	8620	8646	8661	8687	8702	8728	8743	8769	8784
31391	8944	8959	8979	9005	9020	9046	9061	9087	9102	9128	9143	9169	9184
31841	9344	9359	9379	9405	9420	9446	9461	9487	9502	9528	9543	9569	9584
32291	9744	9759	9779	9805	9820	9846	9861	9887	9902	9928	9943	9969	9984
32741	10144	10159	10179	10205	10220	10246	10261	10287	10302	10328	10343	10369	10384
33191	10544	10559	10579	10605	10620	10646	10661	10687	10702	10728	10743	10769	10784
33641	10944	10959	10979	11005	11020	11046	11061	11087	11102	11128	11143	11169	11184
34091	11344	11359	11379	11405	11420	11446	11461	11487	11502	11528	11543	11569	11584
34541	11744	11759	11779	11805	11820	11846	11861	11887	11902	11928	11943	11969	11984
34991	12144	12159	12179	12205	12220	12246	12261	12287	12302	12328	12343	12369	12384
35441	12544	12559	12579	12605	12620	12646	12661	12687	12702	12728	12743	12769	12784
35891	12944	12959	12979	13005	13020	13046	13061	13087	13102	13128	13143	13169	13184
36341	13344	13359	13379	13405	13420	13446	13461	13487	13502	13528	13543	13569	13584
36791	13744	13759	13779	13805	13820	13846	13861	13887	13902	13928	13943	13969	13984
37241	14144	14159	14179	14205	14220	14246	14261	14287	14302	14328	14343	14369	14384
37691	14544	14559	14579	14605	14620	14646	14661	14687	14702	14728	14743	14769	14784
38141	14944	14959	14979	15005	15020	15046	15061	15087	15102	15128	15143	15169	15184
38591	15344	15359	15379	15405	15420	15446	15461	15487	15502	15528	15543	15569	15584
39041	15744	15759	15779	15805	15820	15846	15861	15887	15902	15928	15943	15969	15984
39491	16144	16159	16179	16205	16220	16246	16261	16287					

